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GIANT CLAMS (BIVALVIA: CARDIIDAE: TRIDACNINAE): A COMPREHENSIVE UPDATE OF SPECIES AND THEIR DISTRIBUTION, CURRENT THREATS AND CONSERVATION STATUS

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Giant clams, the largest living bivalves, play important ecological roles in coral reef ecosystems and provide a source of nutrition and income for coastal communities; however, all species are under threat and intervention is required. Here, we re-examine and update their taxonomy, distribution, abundance and conservation status as a contribution to the protection, rebuilding and management of declining populations. Since the first comprehensive review of the Tridacnidae by Rosewater (1965), the taxonomy and phylogeny of giant clams have evolved, with three new species descriptions and rediscoveries since 1982 represented by *Tridacna squamosina* (formerly known as *T. costata*), *T. noae* and *T. lorenzi*. Giant clams are distributed along shallow coasts and coral reefs from South

Africa to the Pitcairn Islands (32°E to 128°W), and from southern Japan to Western Australia (24°N to 15°S). Geographic distribution of the 12 currently recognized species is not even across the 66 localities we review here. *Tridacna maxima* and *T. squamosa* are the most widespread, followed by the intermediate-range species, *T. gigas*, *T. derasa*, *T. noae*, *T. crocea* and *Hippopus hippopus*, and the restricted-range species, *Tridacna lorenzi*, *T. mbalavuana*, *T. squamosina*, *T. rosewateri* and *Hippopus porcellanus*. The larger species, *Tridacna gigas* and *T. derasa* are the most endangered, with >50% of wild populations either locally extinct or severely depleted. The smaller and boring species, such as *T. maxima* and *T. crocea*, remain relatively abundant despite ongoing fishing activities. Population density also varies across localities. Areas with the lowest densities generally correspond with evidence of high historical exploitation intensity, while areas with the highest densities tend to be within marine reserves, remote from human populations or have low historical fishing pressures. Exploitation continues to be the main threat and conservation challenge for giant clams. Harvesting for subsistence use or local sale remains an important artisanal fishery in many localities; however, increased commercial demand as well as advances in fishing, transport and storage practices, are in large part responsible for the ongoing loss of wild populations. Habitat loss and a suite of other anthropogenic stressors, including climate change, are potentially accelerating stock depletions. Despite these challenges, global efforts to protect giant clams have gained momentum. CITES Appendix II listings and IUCN conservation categories have raised awareness of the threats to giant clams and have contributed to stemming their decline. The continued development of mariculture techniques may also help improve stock numbers and lend populations additional resilience. However, more effective implementation of conservation measures and enforcement of national and international regulations are needed. It is clear that active management is necessary to prevent the extinction of giant clam species as they continue to face threats associated with human behaviours.

Introduction

Giant clams ('tridacnines', of the subfamily Tridacninae) are the largest and most conspicuous sessile molluscs on coral reefs, where their presence can be traced back to possibly the Upper Cretaceous (Keen 1969), and from the late Eocene and Oligocene (Oppenheim 1901, Cox 1941, Harzhauser et al. 2008). These highly specialized bivalves have the ability to both filter feed and photosynthesize via symbionts (zooxanthellae, *Symbiodinium* spp.) living within their mantle tissues (Yonge 1936, 1982, Fankboner 1971, Fitt 1988). All species of giant clams are considerably larger than most other bivalves, from the smallest species, *Tridacna crocea*, that measures up to 15 cm, to the largest, *T. gigas*, that can grow to over 1 m long and weigh over 300 kg (Rosewater 1965). Tridacnines are effective ecosystem engineers that play numerous ecological roles on coral reefs (Neo et al. 2015a). For example, the high tissue biomass of giant clams makes them attractive to a wide range of predators (Perron et al. 1985, Alcazar 1986, Cumming 1988, Heslinga et al. 1990, Govan 1992), while opportunistic feeders exploit their expelled zooxanthellae, gametes and faeces (Ricard & Salvat 1977, Maboloc & Mingoa-Licuanan 2011). Tridacnine shells provide extensive surfaces for epibiont colonization (Vicentuan-Cabaitan et al. 2014), and their large mantle cavities host a diversity of reef fish, as well as commensal and parasitic organisms (Rosewater 1965, Bruce 2000). Collectively, giant clams can increase topographic relief of coral reefs (Cabaitan et al. 2008), act as reservoirs of zooxanthellae (DeBoer et al. 2012), and potentially counteract eutrophication via water filtering (Klumpp & Griffiths 1994). Finally, dense populations of tridacnines produce large quantities of calcium carbonate shell material that may eventually become incorporated into the reef framework (Gilbert et al. 2006a). Given the wide range of ecological contributions giant clams make to coral reefs, they are unique among reef organisms and their conservation yields benefits beyond the preservation of a single taxon.

Giant clams have been utilized by humans for millennia. Human artefacts (at least 2500 years old) made from their shells, such as adzes and engraved shell discs, have featured strongly in numerous excavation finds in the Middle East, Italy and Japan (Reese 1988, Asato 1991, Reese & Sease 1993). In modern times, tridacnine shells have been used to make terrazzo/terasa tiles (Brown & Muskanofola 1985, Juinio et al. 1989), domestic tools (Hviding 1993, Richards & Roga 2004), beads and other craft ware (Lai 2015, Gomez 2015a). Tridacnines are also commercially valuable in the aquarium trade (Brown & Muskanofola 1985, Teitelbaum & Friedman 2008) and the flesh is a popular food (Hviding 1993). During the past few decades, the increase in demand for their adductor muscles as an ingredient in Asian gastronomy, and their shells for carving and for the preparation of seed used in the freshwater pearl-farming industry have made giant clams highly valuable (Dawson & Philipson 1989, Shang et al. 1991, Heslinga 1995, Kinch & Teitelbaum 2010, Hambrey Consulting 2013, Larson 2016). This has resulted in a period of intensive exploitation by locals and illegal harvesting by foreign fishers, and has been responsible for rapid stock reductions across the Indo-Pacific (Bryan & McConnell 1976, Pearson 1977, Gomez 2015a, Larson 2016). Increased fishing pressure can result in tridacnine densities below levels required for successful reproduction and recruitment (Lucas 1988, Munro 1992), thereby impeding natural recovery of stocks and the possible collapse of entire populations (Neo et al. 2013a).

Early concerns over the heavy exploitation of giant clams and their threatened status throughout the Indo-Pacific fuelled scientific interest, particularly in the development of mariculture techniques to assist in their conservation (Jameson 1976, Yamaguchi 1977, Beckvar 1981, Heslinga et al. 1984, 1990, Crawford et al. 1987, Heslinga & Fitt 1987, Braley et al. 1988), symbiosis as a biological phenomenon (Fitt & Trench 1981, Trench et al. 1981, Norton et al. 1992, Maruyama & Heslinga 1997), physiology (Yonge 1936, Morton 1978) and biochemistry (Baldo & Uhlenbruck 1975, Reid et al. 1984). Yamaguchi (1977) was the first to mention the lack of conservation measures to curb extensive exploitation of giant clams. The International Union for Conservation of Nature (IUCN) first engaged with this issue in 'The IUCN Invertebrate Red Data Book' (Wells et al. 1983), which highlighted the various human pressures on tridacnine populations, and how each species was threatened worldwide. The IUCN Red List of Threatened Species then re-assessed nine species in 1996 and listed them as either 'Least Concern' or 'Vulnerable'. The IUCN status of tridacnine species, however, is in need of updating. The first giant clams to be listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) were *Tridacna derasa* and *T. gigas* in 1983. The other species, *Hippopus hippopus*, *H. porcellanus*, *Tridacna squamosa*, *T. maxima* and *T. crocea*, were listed in 1985—regulating international trade in any of their parts (shells, tissues, alive or dead). In 1988, CITES re-examined whether trade levels could pose problems for wild populations (Wells 1997). Key literature reviews on giant clams reiterated their threatened status, and highlighted the role that mariculture could play in sustainable exploitation and restocking (Munro & Heslinga 1983, Heslinga & Fitt 1987, Munro 1989, Lucas 1994, 1997, Braley 1996, Bell et al. 2005). Based on results from earlier hatchery programmes in the Pacific Islands (Heslinga et al. 1990), Australia (Braley 1992) and the Philippines (Calumpong & Solis-Duran 1993), these studies emphasized domestication as an aid to giant clam conservation.

Despite the efforts to promote the sustainable exploitation and conservation of giant clams outlined above, Lucas (2014, p. R184) highlighted that "giant clams species are extinct or in danger of extinction in many parts of their distributions". Othman et al. (2010) published the most recent review on the status of giant clams worldwide but, while cited widely, it requires significant updates. Moreover, there remains a paucity of published data on tridacnines from lesser-known regions such as East Asia, the Indian Ocean and East Africa. Here we synthesize the recent taxonomy of giant clams and their global distribution, collate the information available on their exploitation and the laws that protect them, review the impacts that harvesting rates may have on wild populations, and summarize the outcomes of past and ongoing mariculture programmes. We also re-examine the current conservation approaches for all tridacnine species and identify key knowledge gaps for future research.

Taxonomy

Giant clams are morphologically derived cardiids (true cockles) which have evolved an obligate symbiotic association with photosynthetic dinoflagellate algae (Schneider 1998, Morton 2000). The current, and most widely accepted, scientific classification of giant clams is: Order Venerida Gray, 1854, Family Cardiidae Lamarck, 1809, Subfamily Tridacninae Lamarck, 1819, and two genera: *Hippopus* Lamarck, 1799 and *Tridacna* Bruguière, 1797 (Rosewater 1965, 1982, Schneider 1998, Schneider & Ó Foighil 1999). Giant clams, however, were formerly regarded as a distinct family, Tridacnidae Lamarck, 1819, within the Order Venerida. Lamarck (1809) was the first to recognize a close relationship between cardiids and giant clams. Yonge (1936) and Stasek (1962), using anatomical characters, similarly proposed that the ancestry of *Tridacna*, was close to that of *Cerastoderma* Poli, 1795, which is the least derived of the Lymnocardiinae Stoliczka, 1870. The results of successive cladistic analyses of shell, anatomical, sperm ultrastructural, and molecular characters have revealed that giant clams indeed form a monophyletic group within the Cardiidae (Schneider 1992, 1998, Braley & Healy 1998, Maruyama et al. 1998, Schneider & Ó Foighil 1999, Keys & Healy 2000, Herrera et al. 2015). Tree topologies by Schneider (1992, 1998) also suggested sister taxa relationships between the azooxanthellate Lymnocardiinae (*Cerastoderma*) and the zooxanthellate Tridacninae (*Hippopus* and *Tridacna*) and Fragiinae Stewart, 1930 (*Fragum* Röding, 1798), although Herrera et al. (2015) cast some doubts over this possibility as only a single representative and a single genetic marker (18S rRNA) were used for the analysis. In general, evidence over the last two decades supports earlier proposals that giant clams should be considered a subfamily (Tridacninae) of the Cardiidae, but the sister taxa relationships within cardiids still need to be resolved. It must be noted that others have argued to maintain Tridacnidae as a full family, based mainly on its highly distinct morphology (Huber 2010, Huber & Eschner 2011, Penny & Willan 2014).

The number of described tridacnine species continues to expand with some new additions since Rosewater's (1965) seminal paper listing *Hippopus hippopus*, *Tridacna gigas*, *T. derasa*, *T. squamosa*, *T. maxima* and *T. crocea*. In 1982, a new *Hippopus* species, *H. porcellanus*, was described from the Sulu Archipelago, Philippines (Rosewater 1982) and in 1991, a new *Tridacna* species, *T. rosewateri* was described from the Saya de Malha Bank, Indian Ocean (Sirenko & Scarlato 1991). Lucas et al. (1990, 1991) also discovered and described a new species '*Tridacna tevoroa*' in 1991, apparently unaware of an earlier description of the same species as *Tridacna mbalavuana*. *T. mbalavuana* was first described from fossils on Viti Levu, Fiji (Ladd 1934), and was already commonly known to the locals as 'tevoro', the devil clam. After closer examination of their morphological characters the two species are now considered synonymous, with *T. tevoroa* the junior synonym of *T. mbalavuana* (Newman & Gomez 2000). In the late 2000s, Richter et al. (2008) discovered a new Red Sea species '*Tridacna costata*'. A subsequent morphological comparison of *T. squamosina* of Sturany (1899) and *T. costata* of Richter et al. (2008) suggest, however, that the two species are identical (Huber & Eschner 2011). Hence, *T. squamosina* is now recognized as the lectotype and *T. costata* as a junior synonym.

Finally, the recent use of molecular tools has led to the rediscovery of a cryptic species: *Tridacna noae* (Su et al. 2014, Borsa et al. 2015a). *Tridacna noae* was previously relegated as one of the many variants of *T. maxima* (McLean 1947, Rosewater 1965) owing to morphological similarity. However, McLean (1947) pointed out that *T. noae* had well-spaced scutes on the upper (i.e. ventral) shell compared to the close-set scutes of *T. maxima*. Moreover, in living specimens *T. noae* can also generally be distinguished from *T. maxima* through the presence of discrete teardrop-shaped markings on the mantle, typically bounded by white margins (Wabnitz & Fauvelot 2014). Furthermore, genetic analyses showed that *T. noae* and *T. maxima* are distinct (Su et al. 2014). Another newly described species, '*Tridacna ningaloo*' from Western Australia (Penny & Willan 2014), is similar in appearance to *T. maxima* and *T. noae*, and Borsa et al. (2015a) established that *T. noae* and *T. ningaloo* have no apparent genetic or morphological differences (except, possibly, in mantle patterns). Hence, *T. ningaloo* should be regarded as a junior synonym of *T. noae*. Lastly, the most recent species to be described, based purely on morphology, is *T. lorenzi*. *Tridacna lorenzi* is so far recorded only from the outlying territories of Mauritius (Monsecour 2016). It is morphologically similar to *T. maxima* and *T. rosewateri*, but can still be distinguished from both species by its triangular primary ribs and more globose shell (Monsecour 2016). However, considering the high variation typically observed in tridacnine shell morphology, future studies should include genetic comparisons when delimiting Tridacninae species.

Both genera, *Hippopus* and *Tridacna*, were thought to have evolved independently from a now-extinct *Byssocardium*-like ancestor in the early Miocene. *Hippopus* is considered more primitive as it has retained more *Byssocardium*-like ancestral characters than *Tridacna* (Stasek 1962, Schneider 1998). *Hippopus* and *Tridacna* are reciprocally monophyletic sister taxa (Benzie & Williams 1998, Herrera et al. 2015). *Tridacna* is subdivided into three subgenera: *Tridacna* (comprising *T. gigas*), *Persikima* Iredale, 1937 (comprising *Tridacna derasa* and *T. mbalavuana*), and *Chametrachea* Herrmannsen, 1846 (comprising *Tridacna squamosa*, *T. maxima*, *T. crocea*, *T. squamosina* and *T. noae*) (Rosewater 1965, 1982, Lucas et al. 1991, Benzie & Williams 1998, Schneider & Ó Foighil 1999, Nuryanto et al. 2007, Richter et al. 2008, Lizano & Santos 2014, Su et al. 2014, Borsa et al. 2015b). While the phylogenetic relationships among the subgenera remain equivocal, most tree topologies suggest that *T. gigas* is an intermediate between *Chametrachea* and *Persikima* on the basis of morphological characters and genetic markers (Benzie & Williams 1998, Herrera et al. 2015). In addition, the relationship within *Chametrachea* for *Tridacna squamosa*, *T. maxima* and *T. crocea* has been inconsistent across studies using different genetic markers (Benzie & Williams 1998, Maruyama et al. 1998, Schneider & Ó Foighil 1999, Nuryanto et al. 2007, Herrera et al. 2015, see Table 1 for details). However, the latest molecular analysis (using 16S gene sequences), including all five known species from the subgenus *Chametrachea*, place *Tridacna squamosa* and *T. crocea* as sister taxa with a high degree of statistical confidence (Huelsken et al. 2013, DeBoer et al. 2014, Lizano & Santos 2014, Su et al. 2014, Borsa et al. 2015b). These ongoing updates and debates illustrate the need for more robust datasets and analyses (Herrera et al. 2015).

Table 1 Chronology of giant clam taxonomic changes

Year	Description	Character traits	Taxonomic level	Reference
1809	Recognized a close relationship between cardiids and giant clams	Morphology	Familial	Lamarck (1809)
1921	Classified giant clams as family Tridacnidae	Morphology	Familial	Hedley (1921)
1936	Proposed that the ancestry of *Tridacna* was close to that of *Cerastoderma* (family Cardiidae)	Morphology	Familial	Yonge (1936)
1947	Classified giant clams as family Tridacnidae	Morphology	Familial	McLean (1947)
1962	Proposed that the ancestry of *Tridacna* was close to that of *Cerastoderma* (family Cardiidae)	Morphology	Familial	Stasek (1962)
1965	Classified giant clams as family Tridacnidae	Morphology	Familial	Rosewater (1965)
1969	Proposed superfamily Tridacnoidea	Morphology	Familial	Keen (1969)
1982	New species described, *Hippopus porcellanus*	Morphology	Species	Rosewater (1982)
1991	New species described, *Tridacna tevoroa*	Morphology	Species	Lucas et al. (1991)
1991	New species described, *Tridacna rosewateri*	Morphology	Species	Sirenko & Scarlato (1991)
1992	Giant clams formed a monophyletic group within family Cardiidae	Morphology	Familial	Schneider (1992)

Continued

Table 1 (Continued) Chronology of giant clam taxonomic changes

Year	Description	Character traits	Taxonomic level	Reference
1998	Giant clams formed a monophyletic group within family Cardiidae	Morphology	Familial	Schneider (1998)
1998	Proposed relationship within subgenus *Chametrachea*: (*Tridacna squamosa* (*T. crocea* + *T. maxima*)), (*T. maxima* (*T. crocea* + *T. squamosa*)), (*T. crocea* (*T. squamosa* + *T. maxima*))	Genetic markers (18S)	Genus	Maruyama et al. (1998)
1998	Proposed relationship within subgenus *Chametrachea*: (*Tridacna squamosa* (*T. crocea* + *T. maxima*))	Allozyme variations	Genus	Benzie & Williams (1998)
1999	Proposed relationship within subgenus *Chametrachea*: (*Tridacna maxima* (*T. crocea* + *T. squamosa*))	Genetic markers (partial 16S)	Genus	Schneider & Ó Foighil (1999)
2000	Giant clams formed a monophyletic group within family Cardiidae	Sperm ultrastructure	Familial	Keys & Healy (2000)
2000	Proposed that *Tridacna rosewateri* belong to subgenus *Chametrachea*	Morphology	Genus	Newman & Gomez (2000)
	Tridacna tevoroa a junior synonym of *T. mbalavuana*	Morphology	Species	
2007	Discovered a '*Tridacna maxima*' lookalike in Japan waters but did not identify species	Morphology	Species	Kubo & Iwai (2007)
2007	Proposed relationship within subgenus *Chametrachea*: (*Tridacna maxima* (*T. crocea* + *T. squamosa*))	Genetic markers (CO1)	Genus	Nuryanto et al. (2007)
2008	New species described, *Tridacna costata*	Morphology, Genetic markers (16S)	Species	Richter et al. (2008)
2011	*Tridacna costata* a junior synonym of *T. squamosina*	Morphology	Species	Huber & Eschner (2011)
2014	Rediscovered species, *Tridacna noae*	Morphology, Genetic markers (CO1, 16S, 18S)	Species	Su et al. (2014)
2014	Proposed that *Tridacna noae* and *T. squamosina* belong to subgenus *Chametrachea*	Genetic markers (CO1, 16S)	Species	Lizano & Santos (2014)
2014	New species described, *Tridacna ningaloo*	Morphology, Genetic markers (CO1, 16S)	Species	Penny & Willan (2014)
2015	*Tridacna ningaloo* a junior synonym of *T. noae*	Genetic markers (CO1)	Species	Borsa et al. (2015a)
2015	Giant clams formed a monophyletic group within family Cardiidae	Genetic markers (H3, 16S, 28S)	Familial	Herrera et al. (2015)
	Proposed relationship within subgenus *Chametrachea*: (*Tridacna maxima* (*T. crocea* + *T. squamosa*))		Genus	
2016	New species described, *Tridacna lorenzi*	Morphology	Species	Monsecour (2016)

Distribution of giant clam species

Since Rosewater's (1965) paper, only a few publications have attempted to consolidate global distribution data for giant clams. Early surveys by Dawson (1986) and Munro (1989) list the presence or absence of tridacnine species in 18 and 32 countries, respectively (Table 2), while others provide broad geographic descriptions for individual species (e.g. Wells 1996, Lucas 1997). Othman et al. (2010) compiled the geographic ranges and densities for ten species in 15 countries, but did not discuss the status of tridacnines in certain ranges (i.e. Red Sea, East Africa and the Indian Ocean). Van Wynsberge et al. (2016) extensively reviewed the status of *Tridacna maxima* using 59 studies that reported density estimates for 172 sites across 26 countries in the Indo-Pacific and Red Sea. The present study has identified 66 localities (defined as either countries or regions) globally where giant clams are present or have been present (Table 2, see Supplementary Tables A1 & A2). Tridacnines generally inhabit shallow coastal waters and coral reefs from South Africa to the Pitcairn Islands (32°E to 128°W), and from southern Japan to Western Australia (24°N to 15°S). The extent of the geographic range differs among the 12 known species, with the highest diversity (nine species) within the Coral Triangle (Figure 1). The most widespread species, *T. maxima* and *T. squamosa*, can be found in almost all of the 66 localities reviewed. These are followed by the species with an intermediate geographic range: *T. gigas*, *T. derasa*, *T. noae*, *T. crocea* and *Hippopus hippopus*, while the rare species *Tridacna lorenzi*, *T. mbalavuana*, *T. squamosina*, *T. rosewateri* and *Hippopus porcellanus* are each recorded from only one or a few locations.

In most surveyed areas, the density of tridacnine species typically ranges from 10^{-4} to 10^{-5} individuals per metre squared (m^{-2}), equivalent to 1–10 ha^{-1}, with occasional exceptions of >10 m^{-2} (see Supplementary Table A3). Such exceptions include atolls of the Eastern Tuamotu in French Polynesia that are characterized by natural densities of *Tridacna maxima* of up to 500 m^{-2} in the early 2000s (Andréfouët et al. 2005, Gilbert et al. 2006b). Reef Check surveys often report densities of 10^{-3} m^{-2} to 1 m^{-2} (10–10,000 ha^{-1}) (Reef Check Foundation 2016, see Supplementary Table A4), but these surveys group all *Tridacna* species together. In general, areas with the lowest densities correspond with evidence of high historical exploitation intensity, whereas areas with the highest densities tend to correspond to marine reserves, remoteness from human populations, or low historical fishing pressures (Table 3, see Supplementary Tables A3 and A4).

The following sections examine the 12 known giant clam species and their characteristics, with a summary of their individual geographic distribution, exploitation and conservation status. Table 4 presents species status, exploitation and conservation efforts (if any) by locality.

Table 2 A comparison of survey information on the global status of giant clam stocks provided by the current and past reviews that have considered all species

Study	Species list	Number of localities examined	Density data?
Dawson (1986)	Hh, Hp, Tg, Td, Ts, Tm (6)	18	×
Munro (1989)	Hh, Hp, Tg, Td, Ts, Tm (6)	32	×
Wells (1996)—IUCN	Hh, Hp, Tg, Td, Tmb, Ts, Tr, Tm, Tc (9)	46	×
Othman et al. (2010)	Hh, Hp, Tg, Td, Tmb, Ts, Tsi, Tr, Tm, Tc (10)	15	✓
Present study	Hh, Hp, Tg, Td, Tmb, Ts, Tsi, Tm, Tno, Tr, Tlz, Tc (12)	66	✓

Note: Abbreviations for species: Tg—*Tridacna gigas*, Td—*T. derasa*, Tmb—*T. mbalavuana* (previously *T. tevoroa*), Ts—*T. squamosa*, Tsi—*T. squamosina* (previously *T. costata*), Tr—*T. rosewateri*, Tlz—*T. lorenzi*, Tm—*T. maxima*, Tno—*T. noae*, Tc—*T. crocea*, Hh—*Hippopus hippopus*, Hp—*H. porcellanus*. A specific review on *Tridacna maxima* is provided by Van Wynsberge et al. (2016).

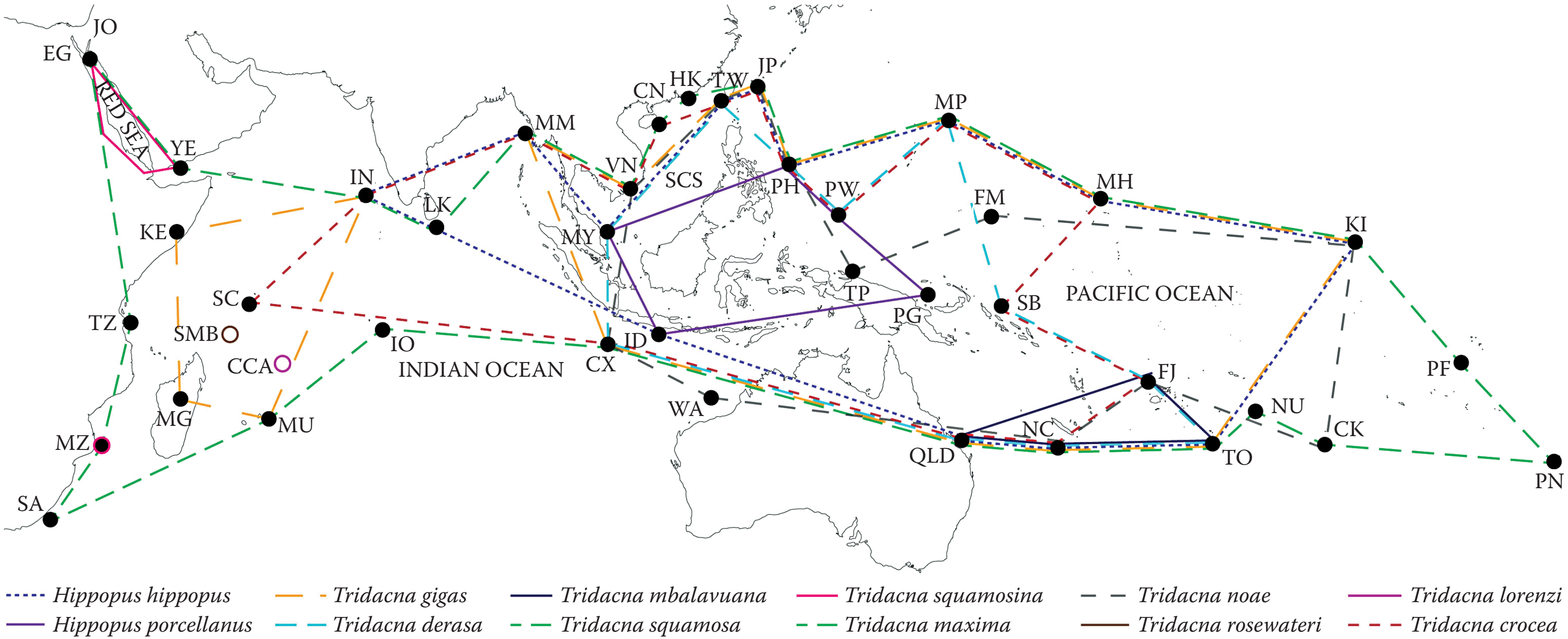

Figure 1 The natural geographic distribution of giant clam (tridacnine) species. Abbreviations for localities: EG—Egypt, JO—Jordan, YE—Yemen, KE—Kenya, TZ—Tanzania, MZ—Mozambique, SA—South Africa, MG—Madagascar, MU—Mauritius, CCA—Cargados Carajos Archipelago, SMB—Saya de Malha Bank, SC—Seychelles, IO—British Indian Ocean Territory, IN—India, LK—Sri Lanka, CX—Christmas Island, MM—Myanmar (Burma), VN—Viet Nam, MY—Malaysia, ID—Indonesia, CN—China, HK—Hong Kong, TW—Taiwan, JP—Japan, PH—Philippines, PW—Palau, TP—East Timor, PG—Papua New Guinea, MP—Northern Mariana Islands, FM—Federated States of Micronesia, MH—Marshall Islands, SB—Solomon Islands, KI—Republic of Kiribati, PF—French Polynesia, PN—Pitcairn Islands, CK—Cook Islands, NU—Niue, TO—Tonga, FJ—Fiji, NC—New Caledonia, QLD—Queensland, Australia, WA—Western Australia, Australia. Abbreviation for sea: SCS—South China Sea.

Table 3 An overview of global records of population density, presenting the highest and lowest densities recorded for all 12 tridacnine species

Species	Record	Locality	Year	Density (ha^{-1})	Reference
Hippopus hippopus	Lowest	Tarawa Atoll, Central Gilbert Islands Group, Republic of Kiribati	1985	0.2	Munro (1988)
	Highest	Helen Reef, Western Caroline Islands, Palau	1976	40.7	Hirschberger (1980)
Hippopus porcellanus	Lowest	Engineer and Conflict Group Islands, Papua New Guinea	1996	0.3	Kinch (2001)
	Highest	Tubbataha Reefs, Cagayancillo, Philippines	2008	97.6	Dolorosa & Jontila (2012)
Tridacna gigas	Lowest	Tarawa Atoll, Central Gilbert Islands Group, Republic of Kiribati	1985	0.2	Munro (1988)
	Highest	Michaelmas Reef, Great Barrier Reef, Australia	1978	431.9	Pearson & Munro (1991)
Tridacna derasa	Lowest	Milne Bay Province, Papua New Guinea	2001	0.3	Kinch (2002)
		North Eastern Lagoon (Poeubo to Hienghène), New Caledonia	2004	0.3	McKenna et al. (2008)
	Highest	Meara Island, Palawan, Philippines	2004	250	Gonzales et al. (2014)
Tridacna mbalavuana	Data Deficient				
Tridacna squamosa	Lowest	Helen Reef, Western Caroline Islands, Palau	1972	0.2	Hester & Jones (1974)
	Highest	Chiriyatapu, Andaman and Nicobar Island (S), India	?	10,000	Ramadoss (1983)
Tridacna squamosina	Lowest	Fayrouza, Nuweiba, Egypt	?	2.9	Richter et al. (2008)
	Highest	Marsa Abu Kalawa, Egypt	?	62.2	Richter et al. (2008)
Tridacna rosewateri	Data Deficient				
Tridacna maxima	Lowest	Pari Island, Indonesia	2003	0.3	Eliata et al. (2003)
	Highest	Tatakoto Atoll, Eastern Tuamotu Archipelago, French Polynesia	2004	5.44×10^6	Gilbert et al. (2005)
Tridacna noae	Lowest	Kavieng lagoonal system, New Ireland Province, Papua New Guinea	2015	27.3	Militz et al. (2015)
	Highest	Mandu Mandu, Ningaloo Marine Park, WA	2014	2,800	Johnson et al. (2016)
Tridacna lorenzi	Data Deficient				
Tridacna crocea	Lowest	Mare, New Caledonia	2010	0.2	Dumas et al. (2011)
	Highest	Cau Island, Con Dao Archipelago, Viet Nam	2011	250,000	Selin & Latypov (2011)

Note: Densities originally published as number of individuals per metre squared have been converted into number of individuals per hectare (ha^{-1}). For more information, please see Supplementary Table A3.

Table 4 Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Red Sea (22°N 38°E)													
Djibouti				+		++							Two widespread species, but surveys indicate generally small stock sizes. Commercial fisheries are limited, but subsistence fisheries are locally important. Major threats to reefs in Djibouti are coastal development, tourism and sewage discharges. Two marine protected areas (Moucha and Maskali) prohibit the collection of corals and molluscs (with the exception of artisanal fishing of edible species).
Egypt				+	+	++							Tm is most common in shallow waters, while Ts, Tsi inhabit deeper waters. Surveys noted major declines in giant clam populations between 1997 and 2002, attributed to increased sediment load from major construction work. Locals harvest the meat as fish bait while the shells are sold as ornaments. Live specimens are exported for local aquarium markets. Recent surveys indicated patchy distribution with localized declines. Near shore populations are exposed to human impacts such as pollution and tourism.
Eritrea	DD												Reef Check data only listed *Tridacna* spp. No documented data to assess status of giant clams.
Israel				DD[1]	DD[1]	DD[1]							No formal published data on giant clams in Israel, but diver, E. Pszczol (pers. comm.), noted three species (Tm, Ts and possibly Tsi). Coral reefs of Eilat are highly impacted by human pressures, causing damage to the reefs since the 1980s. While not specific to giant clams, pollution most likely caused considerable harm and high larval mortalities in marine invertebrates.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Jordan				+	+	+							Surveys suggest that all species are endangered, as they are rare along the Jordanian coast of the Gulf of Aqaba. The scarcity of clams is probably attributable to habitat loss, overfishing, and souvenir collecting. Other major threats include tourism, industry and construction along the coastline.
Saudi Arabia				+	DD[2]	++							Three species are present. A Tsi specimen was collected from Farasan Islands, Tiger Head Island, on 10 March 2013 (G. Paulay, pers. comm.). Tm is more abundant than Ts, but both species are subjected to heavy exploitation. Often collected for food and decorative purposes. Despite this, there are no reports of population decline yet.
Somalia				+		+							Populations are sparse. Locally collected for food by fishermen in coral reef areas. Human disruption and impacts are minimal. Due to the country's political instability, national conservation legislation is non-existent.
Sudan				++		++							*Tridacna* spp. are not common along the coastal and inshore reefs of Sudanese seas, except those found within Sanganeb Marine National Park, where they are very abundant and may represent an unexploited population. No information on clam fishing within Sudan.
Yemen				++	DD[3]	++							Three species recorded, with reported declines in clam abundance due to habitat loss and overfishing. Furthermore, coral reefs in Yemen are generally affected by coastal development such as dredging and land filling. Clam abundances are relatively higher in un-fished and protected areas, such as Socotra Archipelago.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
South-East Africa (7°N 21°E)													
Cargados Carajos Archipelago				+		+			++				Three species reported. Ts is rare in the archipelago; Tm is uncommon and typically embedded in corals. Tlz said to be locally common and often encountered in shallow waters. Local fishermen harvest giant clams for food and later used their shells as ornaments.
Comoros				++[4]		++[4]							Reef Check data only listed *Tridacna* spp., with two confirmed species (E. de Troyer, pers. comm.). Surveys suggest an abundance of clams, but the reefs also face high fishing pressures (e.g. blast fishing).
Kenya				+		+							Only two species are now observed, although fossilized Tg is omnipresent in the Pleistocene fossil reef complex of the Kenyan coast. In the 1970s, the over-collection of shells on the Kenyan coast denuded reefs, which included giant clam Tm. Both extant species are of interest to local fisheries and are generally harvested by hand.
Madagascar	DD[5]			++		++							Giant clams occurred widely but in small populations. Surveys indicate that offshore reefs (e.g. Nosy Hao, Nosy Fasy) support higher densities of giant clams. Ts is commercially fished, and considered a high-value food.
Mauritius	DD[6]			+		+							Three species recorded. Giant clams remain a major part of the artisanal fishery, where shells are used as birdbaths and holy fonts, and adductor muscles as food. Overfishing of Tm in lagoons has contributed to their low numbers.
Mayotte				DD[7]		DD[7]							Reef Check data only listed *Tridacna* spp., with two confirmed species. Ts is considered rare (S. Andréfouët, pers. obs.). Giant clams are not eaten by locals.
Mozambique				+	DD[8]	+							Two recorded species in the literature, but recent photographic evidence suggests the presence of Tsi in Mozambique waters. Subsistence harvesting reported for Ts.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
La Réunion				DD[9]		+[10]							Reef Check data only listed *Tridacna* spp., with two confirmed species. No status information.
Saya de Malha Banks								DD					Only one species recorded. Tr was found in a community of *Madrepora* corals and densely covered seagrass. Species record remains ambiguous with no recent living individuals.
Seychelles				+		+				+[11]			Early surveys in the 1960s indicated three species but generally not abundant. Exploitation of reef species is not a major problem, as locals prefer oceanic pelagic fishes. However, global change such as the bleaching event in 1998 devastated masses of corals, with slow recovery of cover. Efforts to restock clams began in 1980s, with a recent successful transplantation of 30 Tm onto the reefs of Praslin.
South Africa				DD		DD							Reef Check data only listed *Tridacna* spp., with two confirmed species. No status information.
Tanzania				+		++							Two species can still be found in Tanzania. Tm was mentioned as a traditional sea product harvested by local fishing communities. The lucrative shell curio business mainly drives the harvesting pressure on giant clams. Ts shells are frequently sold as curios (collection and trade), and the species may be locally depleted. Fossilized giant clam shell middens are common on Chumbe Island Coral Park (CHICOP), which has been a private nature reserve since 1991. Tm, Ts are found on intertidal areas of CHICOP.
Indian Ocean (20°S 80°E)													
Christmas Island	EX	+		+		++	DD[12]			+			Possibly six species, but reefs naturally have small stock sizes, perhaps due to the lack of suitable habitats (i.e. lagoons). Tg was last recorded in 1932 with no recent sightings. No records of subsistence fishing in appreciable quantities by the local population.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Cocos (Keeling) Islands	EX	EX		EX		+++				+			Possibly five species, but presence of Tc and Ts not verified in the later surveys. A culturally important species, Cocos-Malay fishers harvest *Tridacna* spp. for subsistence consumption. Artisanal overfishing appears to be directly responsible for the severe depletion of stocks. Only two Tg were found in 2001 and one Td was found in 2011. Recent surveys in 2014 conclusively identified only Tm, with no sightings of Td, Tg. Higher densities of Tm tend to be found in slightly deeper and less accessible reefs in the lagoon, and around ecotourism hotspots. Recreational harvest of giant clams is currently unregulated.
Chagos				DD		DD							One survey mentioned the presence of two species, with no further information on status. A reef relatively remote from large landmasses and human disturbances.
India	+			+		++				++	+		Five recorded species, but recent presence of Hh, Tg are unconfirmed. Tm is considerably widespread, but Ts appears to be uncommon. Three species (Hh, Tm, Ts) are included in Schedule 1 of Wildlife Protection Act of India (1972). No mention of Tc in Protection Act. Populations are not subjected to extensive commercial exploitation, with occasional subsistence consumption. Populations may be susceptible to local environmental variability.
Maldives				+		++							Only two species found in Maldives, traditionally not fished by locals. A commercial clam fishery started in 1990. The major target species is Ts, while Tm is occasionally taken. Concerns of unsustainable fishing arose when Ts stocks became depleted on numerous atolls. A recent survey in 2009 at Baa atoll suggested otherwise, where both Tm, Ts were widespread and more abundant at depths below 5 m.
Sri Lanka				DD		DD							Two species noted by Munro (1989), but no further status information.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
East Asia (35°N 136°E)													
China	EX			+		+				+			Three confirmed species within Chinese waters, and possibly Tg. Clam stocks were considered plentiful in the late 1950s, but sharply declined by the 1970s—possibly due to overfishing. By the late 1990s, Tg was no longer observed. Tg sought after for its adductor muscles and shells. First report of successful mariculture of Ts by the South China Sea Institute of Oceanology (SCSIO) in 2016. Imported and popular in the local aquarium trade: Tc, Tm, Tno, Ts.
Hong Kong						DD							Only one species has been definitively recorded, but no recent sightings (Morton & Morton 1983). A market survey in 1980s indicated no known market for giant clam meat and shells. Tm possibly locally extinct. Imported and popular in the local aquarium trade: Tc, Tm, Tno, Ts (M.L. Neo, pers. obs.).
Japan	+			+		++	+			++	+		All species definitively recorded in Japan, although there are no recent records of Hh, Tg. Clams were harvested to supply the demands of domestic market (meat and shells), with a preference for Tc, followed by Hh, Ts. Numbers have declined severely due to overfishing, and regulations are at hand to prevent further decline. Only protected within Okinawa Prefecture. Mariculture of Tc for release into Ryukyu Archipelago has been carried out. Imported and popular in the local aquarium trade: Tc, Tm, Tno, Ts.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Taiwan	EX	EX		+		++	++			+	EX		Hh, Td, Tg have not been recorded over the last three decades and may be locally extinct. Other species are moderately common, occurring in densities 1–5 ind. per 100 m^2 (Y. Su, pers. comm.). Since the early 1970s, Taiwan has had a well-established market for giant clam adductor muscle, but sources are not local. Taiwanese clam fishing vessels illegally harvest clams, activities which threatened the natural populations in the tropical Pacific (e.g. Australia, Palau, Solomon Islands). Taiwanese government now rejects all requests for clam fishing activities. Locally, reduction in population is attributed to overharvesting for shells by tourist divers and locals. Taitung and Penghu counties have banned the harvesting of their surrounding waters and listed giant clams as protected species. There is ongoing development of conservation plans for replenishing clam stocks. Small-scale mariculture of Tm, Tno has been carried out.
South China Sea (12°N 113°E)													
South China Sea (SCS)	+	+		++		++	+			++	+		,Published surveys of various SCS islands noted the presence of seven species. Harvesting of clams remains common, mainly by fishers from surrounding countries with territorial claims, such as China, Philippines, and Viet Nam. Due to overharvesting, Tg is likely locally extinct within the Spratly and Paracel Islands, and Scarborough Shoal. Illegal vessels have been caught off SCS carrying masses of Tg shells, presumably to be sold in the ornament trade. In recent years, the increasing demand for giant clam shells (particularly Tg) as handicraft decoration in China has led to the rapid extraction and depletion of both live and dead Tg shells within SCS. Island groups such as Swallow Reef (Layang Layang) and Pratas Islands (Dongsha Atoll) are 'claimed' by Malaysia and Taiwan, respectively, and these islands are 'protected' by the military of these countries.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
South Asia (12°N 105°E)													
Brunei				DD[13]									Reef Check data only listed *Tridacna* spp., with one confirmed species. No status information.
Cambodia	DD			++[14,15]						++[15]			Earlier surveys reported the presence of *Tridacna* spp., but recent papers mentioned Tg, Tc, Ts. However, the records for Tg cannot be verified. Reported subsistence consumption by locals, and overfishing for the trade has depleted stocks (e.g. Koh Rong). Following trade restrictions of wild caught clams for the aquarium trade in Viet Nam, wild live clam exports from Cambodia surged. It is possible that some giant clams from Viet Nam were rerouted for export through Cambodia. Alternatively, Cambodian fishermen may have seized the opportunity and increased extraction activity in Cambodian waters. However, exports have essentially ceased from 2013 onwards.
East Timor	DD[16]						DD[16]			DD[16]			Reef Check data listed only *Tridacna* spp., with three confirmed species (N. Hobgood, pers. comm.). No status information.
Indonesia	+	+		++		+++	+			+++	+	+	Hh, Hp, Td, Tg are presently extremely rare, while Tc, Tm, Tno, Ts can still be found in relatively healthy numbers. All eight species remain heavily exploited for their meat (domestic consumption) and shells, and some for live aquarium trade. The Indonesian government has declared giant clams as protected species. Since the 1990s, the Indonesian Institute of Science (LIPI) has been culturing giant clams (Hh, Td, Ts) for restocking reefs.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Malaysia	+	+		++		+++				+++	+	+	Tg is now only found in Sabah (east Malaysia). Hp and Td are restricted to Sabah and also in Pulau Bidong (east coast of Peninsular Malaysia). Hh is also rare and only reported in Johor Islands. Tc, Tm, Ts are still widespread. Populations are in a state of decline due to the combined effects of pollution, environmental degradation and harvesting for meat and shells. All species are protected under Malaysian Department of Fisheries. Universiti Sains Malaysia (USM) successfully spawned Hh and Ts onsite in 1997. The giant clams produced were restocked in Johor Islands located on the west coast of Peninsular Malaysia. The Marine Ecology Research Centre (MERC) at the Gayana Eco-Resort is the first to successfully produce and restock all seven species of giant clams found in Malaysian waters. Hatchery-produced Tg from the Philippines have been restocked in Johor Islands in 2012, and these Tg have now reached maturity for potential breeding.
Myanmar (Burma)	DD			DD		DD					DD		Four species reported by Munro (1989), which mentioned the presence of relict Tg populations. No further status information.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Philippines	+	+		++		+++	+			+++	+	+	Eight species can still be found in the Philippines. Native Tg populations are restricted to the Tubbataha reefs in extremely low abundances. While subsistence harvesting was widespread, commercial exploitation decimated populations of Hh, Hp, Tg, Ts (mainly for international shell trade). In 1996, exports of all species from Philippines were banned. The Bolinao Marine Laboratory pioneered the country's first giant clam mariculture for all native species in the late 1980s, with the aim to restock cultured clams onto denuded reefs. The programme has successfully reintroduced ~40,000 cultured Tg of Australia and Solomon Islands origins. Recent surveys showed Tg recruitment on nearby restocked reefs (E.D. Gomez, pers. obs.). All species are protected within the Philippines.
Singapore	EX			++		+				++	EX		Hh and Tg are locally extinct, while Tc, Tm, Ts occur in low abundances. Exploited since the mid 19th century, particularly for the curio trade. Subsequently, coastal development projects led to habitat degradation and pollution, which further impacted the already low stocks. Funded by the National Parks Board Singapore, the National University of Singapore (NUS) recently established a hatchery for culturing and restocking clams onto local reefs, with a focus on rearing Ts. There are no specific laws protecting giant clams within Singapore.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Thailand	EX			++		++				++			Tg has not been observed alive within Thai waters for at least a century, but their shells were found at Surin Islands and Racha Yai. Ts is rare, Tc and Tm can still be found in relatively good numbers. Consumption of clam meat is limited to locals living along the Thai coast. Mainly harvested for its shells (especially Ts) for ornamental trade, while the adductor muscles are exported. The demand for clam shells led to overexploitation of stocks. Since 1992, all species are protected by law, which has been enforced through CITES. Successful breeding of Ts at Prachuap Khiri Khan Coastal Aquaculture Development Center, with ongoing programmes to replenish depleted stocks off Thai waters.
Viet Nam	DD[17]			++		+				++			Though not formerly recorded, a pair of Tg shells was observed at Ha Long Bay (M.L. Neo, pers. obs.). Three other species are widespread across all reefs, but occur in low to moderate abundances. Long-term surveys noted a significant decrease in clam densities between 1998 and 2007, probably due to overfishing. Up to around 2012, Viet Nam was the most important exporter of live wild-caught clams for the aquarium trade with exports peaking in 2008 (85,561 specimens). The decline in exports from Viet Nam in recent years is related to concerns and regulations about sourcing wild specimens. Since then the government has introduced a quota system. The decline in exports from Viet Nam has been partly compensated by substantially increased exports from Cambodia. It is possible that there has been some re-routing of giant clams through Cambodia, where restrictions may be less tightly implemented. However, exports from Cambodia declined abruptly from 2013 onwards. Cön Dao Archipelago was declared a national park reserve in 1993, to protect the country's marine biodiversity. However, illegal harvesting of clams for sale on the black market remains a problem.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Australia (25°S 135°E)													
Australia	++	++	DD[18]	++		+++	+			+++	++		All eight species of giant clams found within Australia are protected. Carried out mariculture of Hh, Tg, Td in late 1980s. Despite the early complete protection afforded in Australian waters, extensive illegal harvesting by foreign vessels occurred in the 1970s to 1980s. Today, populations of giant clams in Australia can be considered healthy with some almost pristine examples, but poaching is still prevalent off the Great Barrier Reef. Important exporter of clams for the aquarium market (particularly through a farm at Cocos Keeling), especially in the mid 2000s. Exported important numbers of shells in 2001 and 2007. Sales to the domestic market are prohibited.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Pacific Ocean (0°S 160°W)													
Melanesia													
Fiji	REIN[19]	++	+	++		++	+			+[20]	REIN		Tmb is locally endemic. Hh, Tg are thought to be locally extinct, possibly due to previous overexploitation of stocks. While giant clams are still common, they are much less abundant than in the past. Tg specimens reintroduced in 1986, 1987 and 1990 from Australia, and Tg was translocated from Fiji to Samoa in 1999. Hh broodstock was imported from Palau in 1985 and Australia in 1992 to the Makogai hatchery; small village farms were also established in the 1990s. A significant food source for the locals, smaller species: Tm, Ts are still harvested for local subsistence. Ts specimens translocated to Samoa in 1992, 1993 and 1998. Td was not favourably harvested due to perception of toughness of meat and its coarse flavour. Td translocated to Fiji from Palau in 1985 and from Fiji to Samoa in 1992, 1993, 1998 and 1999. Village marine tenure rights regulate clam harvesting to some extent. Fiji bans commercial harvest and export, except domestic harvest of no more than three shells weighing no more than 3 kg per person. Cultured Hh, Tc, Tm, Ts, Td, Tg exported for the aquarium trade until 2002; although CITES records do indicate trade in large numbers of wild specimens until that time as well. Until 2003, Fiji also exported a number of shells of above listed species from both cultured and wild sources. Fiji is a party to CITES.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
New Caledonia	EX	++	+[21]	++		+++	+			+++	++		Tg only found as fossils. Tno only found in Loyalty Islands and north-eastern coast of New Caledonia. Hh, Td, Ts preferentially harvested for local consumption, with commercial market for meat only. Common practice to build giant clam 'gardens' for local consumption (mostly Hh and Ts): clams are collected at low tide on fringing reefs and aggregated in front of collectors' properties. Shells are by-products for domestic markets. Populations of larger species showing signs of declines. Some regulations exist in various provinces to control harvest. In the Northern Province: bag limits of five giant clams per vessel per trip for professional fishers, and two for others. In the Southern Province: a maximum bag limit of 40 kg.
Papua New Guinea (PNG)	+	+		+		++	++			++	+	+	Eight species can still be found in PNG, where Tc, Tm, Tno are most common. Previous surveys recorded sparse distributions at most sites, with occasional isolated patches of high population densities. Local extinctions at sites and general low stocks can be attributed to unsustainable practices from commercial harvesting, poaching, and long-standing exploitation observed from archaeological records through to colonial times. No monitoring of populations is taking place, and there are no restrictions regarding fishing seasons, fishing gear and size limits; but PNG now forbids the harvesting of giant clams at night using dive torches. Several other management plans have been proposed but are not yet suitably executed. A commercial fishery for giant clams previously operated in the Milne Bay Province until it closed in 2000. A ban on exports was implemented that same year and appears to have been successful in stemming trade in Tm, Td. Papua New Guinea is a party to CITES.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Solomon Islands	+	+		+++		+++	++			+++	++		One of the few island states in the region with relatively good stocks of Tc, Tm, Ts. Overall, however, recent surveys indicate lower densities than previously reported for these species. Td has limited distribution and recent surveys found depleted populations. Tg was formerly widespread and abundant but is now considered depleted. Harvesting for export, with large-scale commercial harvesting, took place in the 1970s to 1980s, and subsistence use was considered a major cause of population declines. Large populations of clams can be found within the only marine protected area: Arnavon Marine Conservation Area. In areas of high population density, there is high fishing pressure on larger species, such as Tg. Poaching off remote reefs was not uncommon in the 1960s to 1980s (Taiwanese vessels), which exacerbated stock depletion. Current legislation is no commercial-scale harvesting and exporting overseas (except for aquaculture species); however official records show trade in high quantities of some wild-sourced live specimens and shells. Td, Tc accounted for the majority of trade. The Solomon Islands is regarded as one of the pioneering countries in the development of clam mariculture: in the 1980s ICLARM (now World Fish Centre) established a hatchery at Aruligo near Honiara and started participatory grow-out trials in villages throughout the islands. Production initially targeted the meat market with a shift to culture clams mainly for the aquarium trade (especially Td). Hatchery production stopped in early 2010s with exports declining abruptly as a consequence, subsequently leading to livelihood loss. The Solomon Islands are a party to CITES.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Vanuatu (and New Hebrides)	REIN	+		+		++	+			+	++		A definitive survey in 1988 indicated the rarity of Tc, Td, Tg, Ts, while Hh, Tm were relatively common and abundant on most reefs. Td is believed to be locally extinct. It was always very rare in Vanuatu, and a number of individuals were translocated in 1998. Tg was reintroduced in 1998 and 2006. On most islands, giant clams, a prized subsistence food, especially Hh, Tm, are collected for household consumption. Only a small proportion of harvest is for sale in domestic markets. The Ministerial Order of 2000 enacted regulations to protect wild stocks of Tc and limit harvest of other clam species, but enforcement has not been effective. Vanuatu is signatory to CITES and implements its obligations through the International Trade (Flora and Fauna) Act No. 56, 1989, and several other pieces of legislation. The country also has a National Marine Aquarium Trade Management Plan and an Aquaculture Development Plan. The introduction of community-based coastal resource management (CBCRM) measures was relatively successful at a number of sites: giant clam farming in Aneityum, monitoring of Tg in Tassiriki and Sunae, and ocean nursery for Tm in Sunae. Significant numbers of live Tc, Tm, Ts were traded for the aquarium market between the late 1990s to 2007. In 2007, the Department of Fisheries imposed a ban on the harvest and export of wild giant clams (export of cultured specimens is allowed). From 2008 onwards cultured individuals of Tm, Ts were used for restocking of natural areas and for live exports. Between 2008 and 2011, Vanuatu was one of the most important sources of giant clam for the aquarium trade. Production has declined since.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Micronesia													
Federated States of Micronesia (FSM) – Kosrae, Pohnpei, Chuuk, Yap States	REIN	INT		++		++	++				++		Hh, Tm, Ts can still be found in the wild, while Tg only in very low numbers. Tn particularly abundant on Yap. Td was introduced from Palau, but wild stocks have only established in Yap. An important traditional resource throughout FSM: primarily collected as a food source and shells for curios. Previous commercial exploitation of wild stocks was mainly for adductor muscles sold to Southeast Asian markets. As a result, wild stock numbers have declined. Currently, seed clams from Palau are used in restocking and reintroduction programmes. In FSM, there is now a ban on commercial harvest and export. FSM has been a significant exporter of live giant clams (Td, Tm, Tc) for many years, contributing around 10% of global supply; though production has been erratic with more recent declines. There are two main production facilities, one in Kosrae and one in Pohnpei. There was, briefly, a third one in Yap from 2013 to 2014. CITES data suggests that most of the clams that are now exported have been farmed or ranched, although significant numbers still appear to be sourced from the wild.
Guam	EX	INT		+		++					EX		Tm is relatively common, Ts is rare. Hh, Tg were reintroduced respectively from Palau in 1982, but may be locally extinct. Td was introduced from Palau in 1984 and 1989. Clams are highly valued as a local delicacy, particularly for their adductor muscles. Harvesting regulations apply, and collection is only permitted for local consumption. The law now prohibits commercial harvest and export; harvesting for subsistence is limited to no more than three clams per person per day.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	Status of giant clams
Republic of Kiribati	+			++		++	+				+		Tg almost locally extinct in some areas while the remaining species are rare. Tm is still intensively harvested, possibly liable to overexploitation (despite healthy populations). Clam gardens were previously common in Kiribati seascape, but locals are less inclined to invest time in keeping clams. A traditionally important food and shell resource, subsistence fishing alone places a heavy pressure on clam stocks, particularly around South Tarawa. Two local companies are involved in the marketing of giant clams for local consumption. Local laws (e.g. Abemama) prohibit removal of clams by visitors. There is also a ban on commercial harvest and export (except for aquaculture species). One low investment enterprise cultures clams primarily supplying the aquarium trade. Exports began in 2002 and are mainly destined for Europe. Production has been limited in recent years.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Marshall Islands	+	INT		+		+					+		All species are widely harvested for subsistence use. Species are generally rare, especially near human population centres, except in the Outer Islands where stocks remain relatively healthy. Tg populations were severely reduced by illegal fishing, but one atoll (Ailinginae atoll) may still boast a healthy Tg population. Pristine populations (e.g. Ailinginae and Rongelap atolls), however remain vulnerable to illegal fishing. Td introduced from Palau in 1985 and 1990 as an aquaculture species. Marshall Islands has a longstanding history of aquaculture production with notable technical support from the US and Japan. Numerous giant clam hatcheries are successfully in operation on Majuro, Likiep, Mili and Arno atolls; production (Tg, Td, Ts, Tm) for restocking purposes and mainly for the aquarium trade through engagement with local community farmers. Over the last decade, Marshall Islands has contributed between 4% and 16% of global supply and has been the largest supplier of cultured giant clams to the global aquarium market. While, production has been erratic, there have been recent efforts to consolidate activities and maintain steadier supply and ensure the diversity of clam products. The government has developed a number of initiatives and regulations to control resource use, enforce policies and ensure protection, including an Aquarium Trade Management Plan.
Nauru						+	+						Previous surveys confirmed the presence of Tm only. However, recent surveys indicate that the specimens found are in fact Tno (D. Thoma, pers. comm.); Tm may therefore be extinct. Populations appear to have disappeared during 1980s, due to overfishing (for subsistence use). Marine areas have little to no protection and implementation of relevant legislation has been slow.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Northern Mariana Islands	REIN	INT		+		+				+	REIN		Six species were recorded on IUCN, but Tc, Td unconfirmed in published records. Td was introduced from Palau (1986, 1991); may now be locally extinct. Hh and Tg reintroduced from Palau (1986, 1991). Heavy exploitation resulted in local extinction of Hh, Tg. No commercial fishery, but subsistence harvesting of clams through gleaning. Existing Coral Reef Ecosystem Fisheries Management Plan to help manage the harvest of all reef organisms within Federal economic zone.
Palau	+	+		+		++				+	+	+	Published giant clam surveys for Palau are quite old, with no recent updates. Hh, Td, Tg were highly sought for their shells, while Tm, Ts are in demand for their meat. Tc was rarely utilized for either purpose. Population numbers of larger species (except Tc, Tm) have declined since 1972, mainly due to illegal foreign fishers. Established in the 1970s, the Micronesian Mariculture Demonstration Center (MMDC), later renamed as Palau Mariculture Demonstration Center (PMDC) in 2005, became one of the first institutions to succeed in mass production of giant clams. Cultured clams have been translocated as broodstock to many other countries; helped with natural stock enhancement; and exported for the meat and aquarium trade. Production and exports have been very erratic. All giant clams are protected within Palau, with a complete ban on commercial harvesting. The Marine Protection Act 1994 and its regulations prohibit the exports of wild clams. However, no management is in place to regulate wild harvests outside conservation areas. Palau is a party to CITES and has developed specific laws to address its obligations.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
United States Minor Outlying Islands						++[22]							Only one species recorded within the marine reserves—Palmyra atoll and Kingman Reef. Reefs are relatively remote with little human disturbance.
Polynesia													
American Samoa	INT	INT		++		+++					REIN		All species are heavily overfished for subsistence use, which has led to local extinction of Hh while Tm, Ts present only in low densities. Hh, has been reintroduced, and Tg and Td have been introduced. Rose Atoll National Wildlife Refuge holds one of the highest densities of Tm in the region. Overfishing and poaching by local and foreign fishers. Harvest regulations imposed in 2009 enforce harvest size limits of 180 mm shell length for all clam species.
Cook Islands	INT	INT		+		++	+[23]				INT		Tm is most common, Ts is rare on reefs. Subsequent to when the giant clam restoration project began in 1991, Td, Tg were given to the Cook Islands Ministry of Marine Resources as a gesture to promote both mariculture and tourism. Hh and Tg introduced from Australia (1991); Td introduced from Palau (1986). A culturally significant food item, Tm is often harvested for subsistence consumption. Previous overharvesting in Aitutaki greatly depleted stocks. Despite all efforts such as reserves, aquaculture and hatchery operations, Tm populations are not recovering in Aitutaki. Clam fishing is banned in Manihiki (except for special occasions, such as independence day, according to quota and size limits based on stock monitoring) and Tongareva (now Penrhyn). A local hatchery on Aitutaki provides clams for restocking purposes and small-scale exports of giant clams for the aquarium trade.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
French Polynesia				+		+++							High densities of Tm were reported for some atolls, but decreased during the last decade. Ts is rarer in French Polynesia and only found on outer reef slopes in Tuamotu-Gambier and Austral Archipelago, but not in any of the Society Islands. Tm is a traditional delicacy, and commercial exploitation increased during the past decades to supply the demand for Tahiti (main island of French Polynesia). International exports of wild clams are under CITES control, and allowed for the aquarium trade to some extent. Other threats for Tm include susceptibility to climate stress in enclosed lagoons of Tuamotu Archipelago. A harvest minimum size limit of 120 mm shell length has been implemented for Tm throughout French Polynesia. Large clams (30–45cm) are still collected as prized gifts to officials and families, especially in Tuamotu and Gambier. Current statutes refer only to Tm, and therefore protection measures may not apply to Ts. When Andréfouët et al. (2014) was published, a new text mentioning a harvest maximum legal size for all clams was discussed to protect large Ts, but this was not implemented. Spat collecting has been developed and legally authorized for two atolls of Tuamotu Archipelago (Tatakoto and Reao), and local management measures (No-Take Areas, quotas and restocking) are also implemented in these two atolls. The contribution of spat-collected cultured clams has significantly increased in the last couple of years. Regulations for giant clam farming (spat collection, grow-out, transport and reseeding) were implemented in 2008; they are strictly adhered to and operate within a traceability framework. From a CITES perspective spat-collected cultured clams are considered wild—they should probably be labelled 'ranched'. In 2014, French Polynesia was the largest exporter of clams for the aquarium market.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Pitcairn Islands				++		++							A survey in 1987 described Ts to be fairly common on Ducie Reef while Tm was reportedly intensively harvested near inhabited areas compared to pristine areas (e.g. Oeno Lagoon). Surveys also found an abundance of dead Tm shells embedded in the rocks, suggesting that they may have been more common in the past. Henderson Islanders had previously used giant clam shells to make tools or oven stones. Though present populations appear to be under low threat, large specimens are less frequently seen, while young specimens are occasionally seen.
Niue				+		++							Ts has been absent in surveys since 1998. Rather than for subsistence, clam meat is viewed as luxury food by Niueans. Clam stocks have dramatically reduced since the 1990s, with overharvesting the probable cause of decline. Pristine Tm populations in Niue do exist (e.g. Beveridge reef). Some harvesting bans have been instituted amongst villages (e.g. one-year ban to allow stock recovery from cyclone damage). The Niue Domestic Fisheries Regulations of 1996 also limits the harvest size (180 mm shell length) and catch of clams (a bag limit of ten clams per person per day for subsistence use).

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Samoa	INT	INT		++		++	++				REIN		Hh seems to be locally extinct. Tm, Ts mainly harvested for domestic consumption with giant clams considered a local delicacy. Shellfish data showed a long-term decline in both species. While Ts harvest has been small, the resource became functionally extinct in 2000. Collection of Tm continues. Overfishing is a major problem. Broodstock for Hh, Td, Tg, Tm, Ts has been translocated at various times since 1988 from various Pacific Island countries or territories including Fiji, Tonga, Palau, and American Samoa. Over the past 15 years, Samoa Department of Marine and Wildlife Resources (DMWR) has also successfully introduced cultured Td, Tg, and reintroduced Hh. Local mariculture has mainly provided for family needs rather than commercial business. For subsistence use, there are harvest size limits of 180 mm shell length for Tm and 160 mm shell length for Ts. Samoa is a recent party to CITES.
Tokelau				+		+++							Tm is still relatively abundant in most atolls, but Ts is very scarce as it is preferentially fished. Ts was translocated from Tokelau to Samoa in 1989. Tm is an important food item in Tokelau. Traditionally, clams are substitute seafood when locals are unable to fish in rough seas. While Tm has been relatively well managed for local use, Tm at Atafu need further management attention. However, the largest threat is harvesting for export to Western Samoa. Further reduction of clam numbers is intensified by the use of modern fishing methods. No laws to regulate traditional clam fishing in Tokelau; but community-based fisheries management plans exist.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Tonga	REIN	+	+	++		++				INT	REIN		Hh, Tg are locally extinct since mid 1970s, while Td is severely exploited. Tmb (endemic species) is typically a rare species. Reintroduced Hh, Tg in 1989–1991, with translocation of Tc from Vanuatu also taking place in 2006, as part of stock enhancement and aquaculture programmes. Tongans highly favour giant clam meat, with clams harvested on both subsistence and commercial basis. Larger species (Td) are commercially more valuable. Modern fishing techniques (hookah gear) have also accelerated fishing efforts. Today, Tm, Ts are most commonly traded. Tonga has cultured giant clams since the late 1990s with cultured individuals supporting local stock enhancement and supplying the aquarium trade market. However, hatchery production has been erratic and exports have significantly declined since the mid 2000s. Community-led initiatives to establish 'clam circles' have helped to promote the restoration of depleted stocks, but efforts have ceased. Tonga also imposed minimum harvest size limits for various species: 260 mm for Td, 155 mm for Tm, and 180 mm for Ts. A provision under the Fisheries Management Regulation 2008 prohibits the selling of giant clams on the local market without its shell to facilitate enforcement of size limits.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/ country	Species Presence and Abundance												Status of giant clams
	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	
Tuvalu	EX	INT		++		+++					DD		Early surveys found Tg shells but no recent live specimens. Some question whether Tg ever occurred naturally. Densities of Tm are high, while those of Ts are moderate (Siaosi e al. 2012). Hh was noted by Munro (1989) but not in other literature. Occasionally, clam meat harvested for local consumption. Surveys in 2010 indicated no living clams in Nanumea, Langi, Apinelu, and Naseli, except in Funafuti lagoon. In 1988, 1000 Td were introduced for restocking purposes, but due to exploitation only eight individuals remain in 2011. No regulations exist to protect the remaining clam stocks, though the creation of reserves was advised.
Wallis and Futuna Islands				+++		+++	+						No formal scientific survey conducted to determine population size of any species, but locals suggest that the stocks of clams around the coast of Wallis may be abundant. During low tides, women frequently glean for clam meat, while young men dive for them. However, clam meat does not constitute a significant dietary component, hence large populations of clams are virtually untouched (e.g. southwest of Wallis Island). The reefs however are presently threatened by anthropogenic impacts, especially dynamite fishing.

Continued

Table 4 (Continued) Giant clam species presence, abundance and status across their geographic ranges

Region/	Species Presence and Abundance												
country	Tg	Td	Tmb	Ts	Tsi	Tm	Tno	Tr	Tlz	Tc	Hh	Hp	Status of giant clams

Note: Abbreviations for species: Tg—*Tridacna gigas*, Td—*T. derasa*, Tmb—*T. mbalavuana* (formerly *T. tevoroa*), Ts—*T. squamosa*, Tsi—*T. squamosina* (formerly *T. costata*), Tm—*T. maxima*, Tno—*T. noae*, Tr—*T. rosewateri*, Tlz—*T. lorenzi*, Tc—*T. crocea*, Hh—*Hippopus hippopus*, Hp—*H. porcellanus*. Species abundance: +++, Abundant (0.01–1 m^{-2}); ++, Frequent (10^{-3}–10^{-4} m^{-2}); +, Rare (<10^{-5} m^{-2}); EX, locally extinct; INT, introduced species; REIN, reintroduced species; DD, data deficient.

[1] E. Pszczol, pers. comm. (Tm, Ts, Tsi).

[2] G. Paulay, pers. comm. (Tsi).

[3] Huber & Eschner (2011) mentioned that the largest *Tridacna squamosina* specimen examined originated in the southern Red Sea at Kamaran Island, off Yemen.

[4] E. de Troyer, pers. comm. (Tm, Ts).

[5] Hopkins (2009) mentioned Tg but cannot be verified.

[6] Michel et al. (1985) mentioned a 92 cm specimen, and a possible species match is Tg.

[7] S. Andréfouët, pers. obs. (Tm, Ts).

[8] N. Helgason, pers. comm. (Tsi).

[9] C. Peneau, pers. comm. (Ts).

[10] H. Magalon, pers. comm. (Tm).

[11] Only recorded for Cöetivy Island.

[12] Neo & Low (2017) reported five unique individuals sighted in 2010 and 2011.

[13] S. Ng, Oceanic Quest Company, pers. comm.

[14] J. Wong, pers. comm. (Ts).

[15] J.M. Savage, pers. comm. (Ts, Tc).

[16] N. Hobgood, pers. comm. (Tc, Tg, Tno).

[17] M.L. Neo, pers. obs. (shell specimen displayed at Ha Long Bay).

[18] A.M. Ayling, pers. comm. (Tmb).

[19] A Tg was photographed in 2007 (see Supplementary Table A2).

[20] Now very rare, only in Lakeba Island.

[21] Recently seen in Loyalty Islands (Bouchet et al. 2001) and on the north eastern outer reef of New Caledonia (Tiavouane & Fauvelot 2016).

[22] A. Pollock, pers. comm. (Tm).

[23] R. Mayston, pers. comm. and C.C.C. Wabnitz, pers. obs. (Tno).

Species characteristics, distribution, and status

Hippopus hippopus *(Linnaeus, 1758)*

Hippopus hippopus (Figure 2A) has several common names, such as the horse's hoof clam and strawberry clam. Individuals have been reported to grow up to 40 cm (Poutiers 1998), yet an individual within a marine protected area of the north-eastern lagoon in New Caledonia measured 47 cm (C. Fauvelot, pers. obs.) and another one at the Bolinao Marine Laboratory, Philippines, reached 50 cm (Mingoa-Licuanan & Gomez 2007). Unlike the *Tridacna* species, the *Hippopus* species lack hyaline organs (small pinhole eyes) in their mantles, which also do not extend over their shell margins, and they have a narrow byssal orifice with tight-fitting teeth (Rosewater 1965). The thick shells of *H. hippopus* have strong radial ribbing and display reddish blotches in irregular bands. Their mantles usually exhibit green, yellow-brown or grey mottled patterns, and their incurrent siphon bears no guard tentacles. Byssal attachment is present in young individuals, but older ones mostly lie unattached on the substratum (Rosewater 1965). *Hippopus hippopus* often inhabits shallow, nearshore patches of reef, sandy areas and seagrass beds that can be exposed during low tides. It is occasionally found as deep as 10 m (S. Andréfouët, pers. obs.). This species is common throughout the Indo-Pacific, except for the Red Sea and Western Indian Ocean (Figure 1). It has been recorded in at least 25 localities, but at ten of these *H. hippopus* has been reported to be locally extinct (Table 4). *Hippopus hippopus* is a popular species for local harvesting and consumption (Hviding 1993), as it is traditionally favoured as a delicacy, considered as 'high status food' for use on special occasions, or as a reserve food when times are difficult. The nearshore habitats where *H. hippopus* is found are accessible and the species is free-living (i.e. unattached to the substratum), making it an easy target for reef gleaners (Hviding 1993). Consequently, populations are widely depleted. It is currently listed as a species of 'Lower Risk/Conservation Dependent' under the IUCN Red List of threatened species. *Hippopus hippopus* has been cultured in Palau, Australia (Orpheus Island Research Station, north Queensland), Malaysia and the Philippines for purposes of translocation to other areas (e.g. from Palau to American Samoa, Yap, the Cook Islands, Samoa and Tonga) or restocking (Table 4). Maricultured *H. hippopus* specimens in Palau exhibited exceptional hardiness and a short generation time (three years), earning this species the distinction of being the most 'farmer-friendly' of the giant clams (Heslinga 2012, 2013).

Hippopus porcellanus *Rosewater, 1982*

Before its formal description, *Hippopus porcellanus* (Figure 2B), also referred to as the China clam, was already common in the shell trade (Rosewater 1982). Maximum shell length is typically ~40 cm, with the largest specimen recorded at 41.1 cm (Hutsell et al. 1997). Unlike the elaborate shells of *H. hippopus*, *H. porcellanus* has a smoother and thinner shell (Rosewater 1982). This species may be easily mistaken for *Tridacna derasa* due to its similar shell shape and texture, but the mantles of *Hippopus porcellanus* are generally grey or brown, lack hyaline organs, and the incurrent siphon has prominent guard tentacles (Rosewater 1982). As with *H. hippopus*, the mantle does not extend beyond the shell margins, and there is a narrow byssal orifice. *Hippopus porcellanus* is usually found free-living on intertidal reef flats (Pasaribu 1988), and on the shallow reefs along the edges of lagoons (Dolorosa et al. 2014). This species has only been recorded from the Sulu Archipelago and Palawan (Philippines), Sabah (Malaysia), Sulawesi and Raja Ampat (Indonesia), Palau, and Milne Bay Province (Papua New Guinea) (Table 4, Figure 1). Heavy exploitation, from both subsistence and commercial fishing, has decimated populations of *H. porcellanus*, leading to extirpations (Calumpong & Cadiz 1993, Dolorosa et al. 2014). Like *H. hippopus*, it is classified by IUCN as of 'Lower Risk/Conservation Dependent'. The few surveys conducted to date suggest that *H. porcellanus* is rare. Some of the healthiest populations are located within southeast Sulawesi (Indonesia) and the Tubbataha Reef Natural Park (Philippines). At the latter site, 100 individuals of

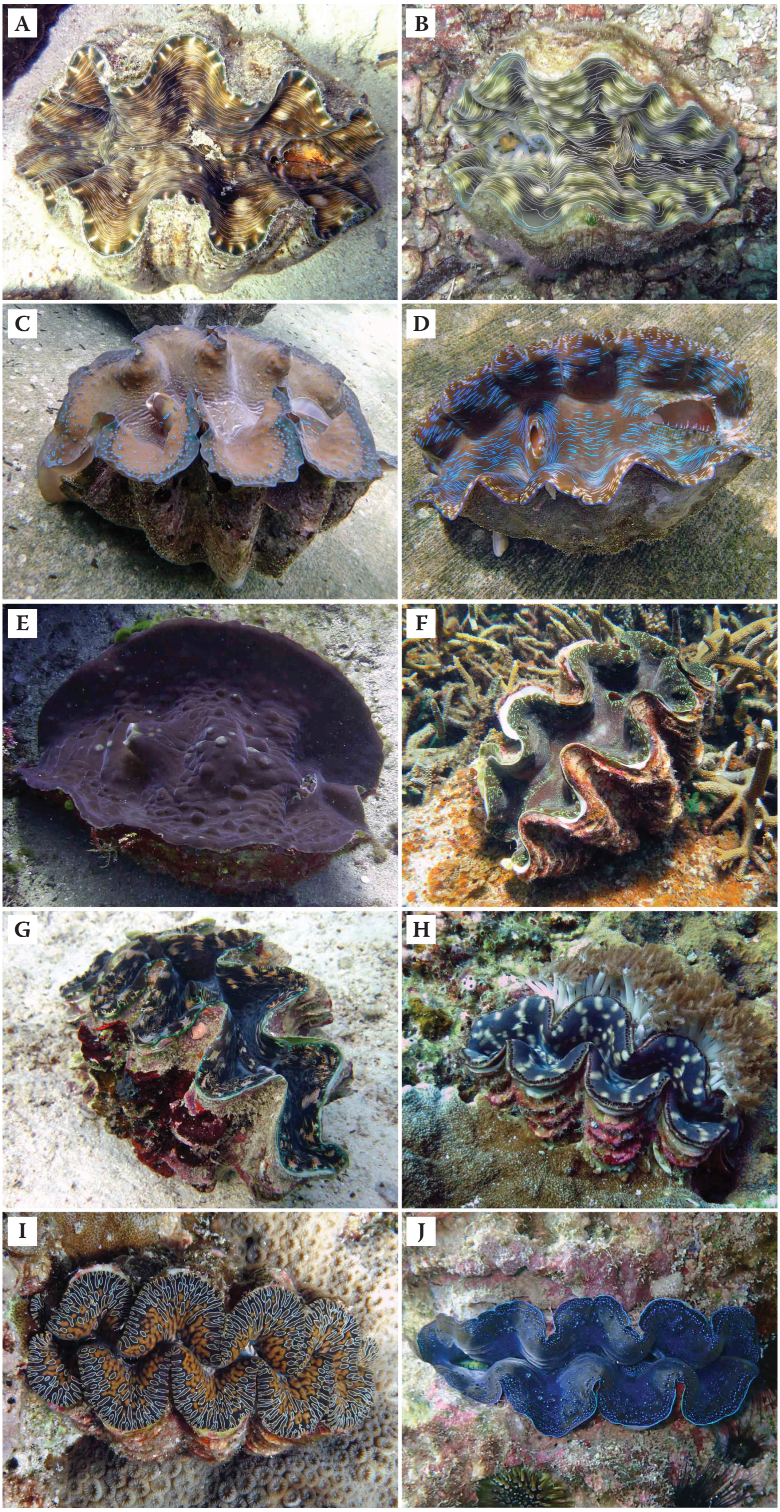

Figure 2 Giant clam species: (A) *Hippopus hippopus*, (B) *H. porcellanus*, (C) *Tridacna gigas*, (D) *T. derasa*, (E) *T. mbalavuana*, (F) *T. squamosa*, (G) *T. squamosina*, (H) *T. maxima*, (I) *T. noae*, (J) *T. crocea*.

various sizes (shell length = 8.2–31.3 cm) were found tagged and being monitored (Dolorosa et al. 2014). There are few published data on the reproduction of *H. porcellanus* (Alcazar et al. 1987, Calumpong et al. 1993), but ~2000 maricultured F1 *H. porcellanus* individuals were successfully raised to sexual maturity at Palau's Micronesian Mariculture Demonstration Center (MMDC) facility in the mid-1990s (G.A. Heslinga & T.C. Watson, pers. comm.). At present, the Marine Ecology Research Centre in Malaysia produces *H. porcellanus* in limited numbers (E.D. Gomez, pers. obs.).

Tridacna gigas *(Linnaeus, 1758)*

Tridacna gigas (Figure 2C) is the only truly gigantic giant clam species: the largest individual reported was 137 cm long (Rosewater 1965), while the heaviest known specimen (106 cm shell length) weighed approximately 500 kg (Lucas 1994). The species is easily identified by its size and distinctive elongate and triangular projections on the upper shell margins. Mantle colours are mostly dull brown and olive green, and the mantle edge bears numerous iridescent blue-green circles. Unlike the other *Tridacna* species, the incurrent siphon of *T. gigas* bears no tentacles. *Tridacna gigas* typically lives in coral reefs with good light penetration, and is usually free-living on either sand or hard reef substrata (Rosewater 1965). It occurs naturally from Myanmar (Burma) to the Republic of Kiribati (but not the Cook Islands), and the Ryukyus (southern Japan) to Queensland (Australia) (Figure 1). Anecdotal accounts suggest that the historical species range possibly extended to south-east Africa (Kenya: Accordi et al. 2010), Madagascar (Hopkins 2009) and Mauritius (Michel et al. 1985). A living *T. gigas* individual was observed on the fringing reefs of Tonumea Island, an uninhabited island in the southern Haápai group of Tonga in December 1973 (R.D. Braley, pers. obs.). Records have recently been discovered for Singapore, although no living individuals have been encountered in recent memory (Neo & Todd 2012a, 2013). Currently, there are at least 31 localities with natural wild populations of *T. gigas*, but at 26 of them this species is severely depleted, locally extinct or data deficient (Table 4). Globally, the IUCN classifies the conservation status of *T. gigas* as 'Vulnerable'. The Great Barrier Reef (GBR) in Australia is the most extensive area within the natural distribution of *T. gigas* that still supports relatively undisturbed populations (Braley 1984, 1986, 1987a,b, Table 5) and exhibits evidence of natural recruitment (Braley 1988, Braley & Muir

Table 5 A 25-year population data set for pristine populations of *Tridacna gigas* and *T. derasa* from five sites in the far northern Great Barrier Reef, Australia

Species	Site number	Survey area (hectares)	Clam abundance 1982–1985	Clam abundance 2007–2009	Percentage change
Tridacna gigas	1	0.550	136	158	+16.0%
	2	0.730	79	61	–22.7%
	3	0.561	61	28	–54.0%
	4	0.022	9	5	–44.0%
	5	0.120	89	71	–15.7%
Tridacna derasa	1	0.550	29	26	–10.0%
	2	0.730	22	26	+18.8%
	3	0.561	30	17	–43.3%
	4	0.022	6	1	–83.0%
	5	0.120	8	2	–62.5%

Note: Survey sites: 1—Watson's Bay, Lizard Island, 2—Palfrey-South Channel, Lizard Island, 3—West bommie of Rachel Carson Reef (formerly Northern Escape Reef), 4—Small east bommie of Rachel Carson Reef, 5—Southern end of Michaelmas Cay. (R.D. Braley, unpublished data)

1995). Samples of these populations have been monitored over a 25-year period and continue to be monitored today (Table 5). Generally, however, populations of *T. gigas* are dwindling. Extensive surveys in the Pacific Islands indicate that sometimes the presence of this species is limited to one individual (C.C.C. Wabnitz, pers. obs.). Populations typically face high levels of exploitation pressure and habitat deterioration (Gomez 2015a, Larson 2016). *Tridacna gigas* remains a valuable coastal resource for both domestic and commercial markets, as it is highly favoured for its meat as food and large shells for the ornament trade. To assist its conservation, *T. gigas* has been extensively cultivated and reintroduced (albeit in some areas, sometimes limited to a couple of individuals) to Peninsular Malaysia, Sabah, Philippines, Fiji, Northern Mariana Islands, Vanuatu and Tonga, as well as introduced to American Samoa, the Cook Islands, Hawaii (USA) and Samoa (Table 4). The oldest known maricultured *T. gigas* individual is 34 years old and was produced at Palau's MMDC in 1982. It is now on display at the Waikiki Aquarium in Honolulu (Carlson 2012, Heslinga 2013). Unfortunately, there is little information available regarding the outcomes of restocking in these areas (with a notable exception of the Philippines; Gomez & Mingoa-Licuanan 2006, Cabaitan & Conaco 2017).

Tridacna derasa *(Röding, 1798)*

The second largest species, *Tridacna derasa* (Figure 2D), grows up to 60 cm in shell length. It is known as the smooth giant clam because its valves have almost no ribbing (Lucas 1988). *Tridacna derasa* has brilliant mantle colours, displaying shades of blue and green with striped patterns. Its incurrent siphon bears relatively inconspicuous guard tentacles (Lucas et al. 1991). Mostly free-living as adults, this species can be found on reef flats, fore reefs, barrier reefs and in atoll lagoons (S. Andréfouët, pers. obs.) down to depths of 20 m. *Tridacna derasa* occurs from the Cocos (Keeling) Islands to Tonga, and from China to Queensland (Australia) (Figure 1). Of the 16 localities in which the presence of *T. derasa* has been recorded, in 12 of them wild populations are either severely exploited or locally extinct (Table 4). As with *T. gigas*, populations of *T. derasa* on the GBR are virtually undisturbed, and surveys of 57 reefs determined an average density of 4.4 ha^{-1}, with the highest density being 30 ha^{-1} (Braley 1986, Table 5). Similar to *T. gigas*, large *T. derasa* individuals are also highly valued for their meat and shells as food and curios, respectively. *Tridacna derasa* is classified as 'Vulnerable' by the IUCN. *Tridacna derasa* was one of the first giant clam species to be commercially bred, partly owing to its fast growth and durability (Hart et al. 1998) making it better suited for meat production (Heslinga et al. 1984, Leung et al. 1994). Mariculture of this species has been highly successful (e.g. Palau, Marshall Islands, Federated States of Micronesia, the Cook Islands and Solomon Islands). Spats tend to be produced for local enhancement, occasionally for translocation programmes to other countries, for sale 'live' in the aquarium trade and, in Palau, sometimes either as food for local restaurants or export to Japan for sale as sashimi (Table 4). For subsistence and conservation purposes, *T. derasa* has been introduced to island states in Micronesia and Polynesia, and reintroduced to Palau, Indonesia, Malaysia and the Philippines.

Tridacna mbalavuana *Ladd, 1934*

Previously described as *Tridacna tevoroa*, the devil clam has been hypothesized to be a transitional species between *Hippopus* and *Tridacna* due to overlapping characters (Schneider & Ó Foighil 1999). The species has *Hippopus*-like features, such as the absence of a byssal gape, no extension of the mantle over the shells, and the absence of hyaline organs (Lucas et al. 1991). *Tridacna mbalavuana* (Figure 2E) also resembles *T. derasa* in appearance, but is distinguished by its rugose mantle surface, prominent guard tentacles on the incurrent siphon, thinner shell valves, and coloured patches on the shell ribbing. Individuals can normally grow up to ~50 cm, with the largest specimen recorded at 56 cm long (Lucas et al. 1991). *Tridacna mbalavuana* inhabits relatively deep waters

(>20 m) compared to other tridacnines, and is apparently intolerant of conditions in shallow water (Lucas et al. 1991). Previously restricted to Fiji and Tonga, this species has been sighted in the Loyalty Islands, New Caledonia (Bouchet et al. 2001), the main island of New Caledonia (Tiavouane & Fauvelot 2016), and Australia (A.M. Ayling, pers. comm., Newman & Gomez 2000) (Figure 1). *Tridacna mbalavuana* is generally rare throughout its known range: Ledua et al. (1993) reported few live specimens (abundance, N = 20, 1989 to 1991) in the eastern Lau group of Fiji, and a slightly higher abundance in Tonga (N = 50, 1989 to 1992) (see Supplementary Table A3). In Haápai, Tonga, individuals were seen on live coral habitat at >30 m depth in clear water, whilst in the eastern Lau group of Fiji, individuals were never found on live coral habitat, but instead next to rocks on steep slopes (Ledua et al. 1993). Recently, only two living individuals have been reported from New Caledonia, despite exhaustive searches (Tiavouane & Fauvelot 2016). In Fiji, some *T. mbalavuana* have been 'accidentally' collected along with *T. derasa* for commercial exports of its meat (Lewis & Ledua 1988, Lewis et al. 1988). In Tonga, *T. mbalavuana* has been harvested for domestic markets either using SCUBA or traditional Pacific Islands fishing methods (Ledua et al. 1993). Even though their preference for deeper water habitats may have offered some protection from harvesting (Lewis & Ledua 1988, Lucas et al. 1991), the development of SCUBA and hookah gear has facilitated access to previously inaccessible *T. mbalavuana* stocks. The species is classified as 'Vulnerable' by the IUCN. There is little information regarding the mariculture of *T. mbalavuana*, but there was a successful spawning in December 1991 at the Tonga Fisheries Hatchery (Ledua et al. 1993).

Tridacna squamosa *Lamarck, 1819*

Tridacna squamosa (Figure 2F) is commonly known as the fluted giant clam. The valves have well-defined ribs and folds (the ribs also possess distinct protrusions called scutes). This species typically attains shell lengths of ~40 cm, but Hutsell et al. (1997) recorded an individual with a shell length of 42.9 cm. The mantle of *T. squamosa* usually exhibits mottled patterns in combinations of yellow, orange, blue, green and brown, and the incurrent siphon bears distinct tentacles. The valves are often coloured (yellow and orange-pink), which makes the species highly valued in the shell trade (Lucas 1988). Juvenile *T. squamosa* are typically byssally attached to coral rubble, while adults may be byssally attached or free-living. *Tridacna squamosa* inhabits a wide depth range, from reef flats to reef slopes down to 42 m (Jantzen et al. 2008), and is usually found in sheltered sites (e.g. wedged between corals) (Rosewater 1965). Globally, *T. squamosa* is the second most common tridacnine species, present from the Red Sea and eastern Africa in the west to the Pitcairn Islands, southern Japan and Queensland (Australia) in the east (Figure 1). New records for the central Pacific (Australes, Tuamotu and Gambier Archipelagos) have been added recently, although some gaps persist (such as Society Islands, French Polynesia) (Gilbert et al. 2007, Andréfouët et al. 2014). Despite ongoing exploitation, population numbers remain relatively stable across its range, with the exception of Cocos (Keeling) Islands and the Northern Mariana Islands where the species is locally extinct. *Tridacna squamosa* is classified by the IUCN as of 'Lower Risk/Conservation Dependent'. It is mainly harvested for subsistence use in local island communities and has been reported to be preferred in the shell trade due to its attractive colours, appearance and size. This species has been successfully cultured, mainly for restocking purposes in Indonesia, Malaysia, Philippines, Singapore, Thailand, Fiji, Palau, Federated States of Micronesia, Marshall Islands, Tonga, Vanuatu and Solomon Islands (Table 4), but there have been no reports of the outcomes of these endeavours. Individuals were also translocated from Palau to Guam and Tokelau, and Fiji to Samoa to help with local restocking initiatives (Kinch & Teitelbaum 2010). Juveniles from culture efforts in Australia, Palau, Federated States of Micronesia, Marshall Islands, Tonga, Vanuatu and Solomon Islands are (or have been) exported for the aquarium trade. As part of its larger research programme, the Darwin Aquaculture Centre (Northern Territory, Australia) also cultures *T. squamosa* to encourage farming as an economic opportunity for indigenous communities (Darwin Aquaculture Centre, pers. comm.).

Tridacna squamosina Sturany, 1899

Tridacna squamosina (Figure 2G) was originally collected during the 'Pola' expedition to the Red Sea in the 1890s (Huber & Eschner 2011). Sturany (1899) first published the results of this expedition, which noted the presence of three *Tridacna* species in the Red Sea: *T. maxima*, *T. squamosa* and a new species: *T. elongata* var. *squamosina*. The species was later rediscovered when living individuals were found in the Red Sea in the late 2000s (Richter et al. 2008), the largest recorded being 32 cm long. The species bears a strong resemblance to *T. squamosa*, but can be distinguished by its asymmetrical shells, crowded scutes, wider byssal orifice, and deep triangular radial folds (Roa-Quiaoit 2005). *Tridacna squamosina* strictly inhabits shallow reef areas and seagrass beds (~5 m depth), and is usually weakly byssally attached to the substratum (Roa-Quiaoit 2005). Presently only known from the Red Sea (i.e. Egypt, Israel, Jordan, Saudi Arabia and Yemen), recent anecdotal sightings of *T. squamosina* in Mozambique suggest that the species may also occur in the Indian Ocean (Table 4, Figure 1). Survey data suggest that live *T. squamosina* are generally rare. For example, only 13 individuals were identified during extensive surveys along the Jordanian Red Sea coastline (Richter et al. 2008). The current low numbers are postulated to be a result of overharvesting in the Red Sea, where it formed an important diet component of early coastal gatherers (>125,000 years ago) (Richter et al. 2008). As *Tridacna* exploitation remains prevalent in the Red Sea, *T. squamosina* is highly vulnerable to extinction. Mariculture of this species may have been carried out in Jordan (Roa-Quiaoit 2005), but the small number of individuals available for broodstock would make any mariculture effort a significant challenge.

Tridacna maxima (Röding, 1798)

The small giant clam, *Tridacna maxima* (Figure 2H), usually grows up to ~35 cm, with the largest individual collected (from Fanning Island, Republic of Kiribati) measuring 41.7 cm (Stasek 1965). *Tridacna maxima* is one of the three boring (sometimes referred to as 'burrowing') *Tridacna* species; juveniles are usually fully embedded in the reef substratum, but older individuals eventually outgrow the bored concavity and become partially embedded only. In areas characterized by high densities, such as the enclosed lagoons of French Polynesia, some individuals can be found on sand (Van Wynsberge et al. 2016). A persistent characteristic among the boring tridacnines is the tendency to byssally attach to the inside of the borehole. *Tridacna maxima* is also identified by its close-set scutes on the upper valves, the neat rows of tightly spaced hyaline organs along its mantle margin, and its brilliantly coloured and mottled mantle (usually blue, green and brown). It typically dwells in shallow areas of reefs and lagoons, rarely beyond a depth of 10 m (the deepest record is 21.2 m at the Dongsha atoll, South China Sea; M.L. Neo, pers. obs.). With a similar geographic range to *T. squamosa*, *T. maxima* is also a cosmopolitan species, but with more variable population densities across its range compared to *T. squamosa* (Van Wynsberge et al. 2016). Although *T. maxima* is harvested frequently for either subsistence or commercial purposes, it is still relatively common and hence classified by the IUCN as of 'Lower Risk/Conservation Dependent'. With rapid declines in the populations of larger tridacnine species, *T. maxima* is increasingly being extracted for local consumption and is likely to become more of a target for fisheries in the future (Van Wynsberge et al. 2016). Due to its attractively coloured mantle patterns it is, together with *T. crocea*, the most sought-after species for the aquarium trade. With a current ban on exports of wild-caught individuals for most countries within its range, the majority of individuals that enter the aquarium trade are cultured. While the species has been bred mainly for the aquarium trade (Wabnitz et al. 2003), wherever aquaculture and mariculture efforts exist (or were active), e.g. the Cook Islands (Waters et al. 2013), French Polynesia, Federated States of Micronesia, Samoa, Republic of Kiribati, Marshall Islands, Solomon Islands, Fiji, Vanuatu, Tonga, Palau and Taiwan (L.-L. Liu, pers. comm.), they have also contributed to reef restocking efforts (Table 4).

Tridacna noae *(Röding, 1798)*

The largest individual of *Tridacna noae* (Figure 2I) reported to date, from Kosrae, Micronesia, was 28 cm long (Borsa et al. 2015b). *Tridacna noae* cannot be readily identified by its shell traits, but it exhibits a highly distinctive mantle ornamentation including discrete teardrop patches typically bounded by white margins, sparsely distributed hyaline organs along the mantle margin, and the presence of papillae (Penny & Willan 2014, Su et al. 2014, Borsa et al. 2015a). Nevertheless, the mantle patterns of *T. noae* vary greatly in appearance among individuals (Borsa et al. 2015b). Because of its generally highly distinct and beautiful mantle, *T. noae*, long identified by aquarists as 'teardrop *maxima*', is highly desired for the aquarium trade (Wabnitz & Fauvelot 2014). The habitats of *T. noae* are generally similar to those of *T. maxima*, occupying depths of 1–15 m (Borsa et al. 2015b, Militz et al. 2015). Also a boring species, individuals are often found partially embedded within reef substrata. The known geographic distribution of *T. noae* extends from the Ryukyus (southern Japan), Taiwan, Southeast Asia, Western Australia and the Pacific Islands as far east as Christmas Island (Borsa et al. 2015b, Neo & Low 2017, Figure 1). As a newly resurrected species, data on the habitat and distribution of *T. noae* are scarce, but inferred to be similar to *T. maxima* due to morphological similarities and habitat preferences. A survey by Militz et al. (2015) determined that almost 42% of the specimens recorded as *T. maxima* within the Kavieng Lagoon system, Papua New Guinea, could now be classified as *T. noae*. Also, re-surveys of the Ningaloo Reef Marine Park revealed the presence of *T. noae* only, with no signs of *T. maxima* (Johnson et al. 2016); findings that challenge an earlier survey reporting the presence of (only) *T. maxima* (Black et al. 2011). Snorkel surveys on the reefs in Yap (Federated States of Micronesia), also identified high abundances of *T. noae*, which would have previously been recorded as *T. maxima* (C.C.C. Wabnitz, pers. obs.). Moreover, in Nauru, the only species found on the reefs during dedicated reef invertebrate surveys was recently re-identified as *T. noae* and not *T. maxima* (D. Thoma, pers. comm.). This inadvertent confusion of the two species highlights two problems: 1) the historical and current densities of *T. maxima* are likely to be overestimates in several locations, and 2) commercial exploitation that does not differentiate between the two species could interfere with local extinction risk calculations (Borsa et al. 2015b, Militz et al. 2015, Johnson et al. 2016). There have been a number of *ex situ* attempts to breed *T. noae* in Taiwan for restocking purposes (Su 2013) and some culture trials for mariculture grow-out and subsequent sale for the aquarium trade in the Federated States of Micronesia (C.C.C. Wabnitz, pers. obs.). Embryology, larval development and feeding ecology of *T. noae* in Papua New Guinea have recently been described (Southgate et al. 2016, 2017), while successful hatchery production has been reported in Fiji (P. Southgate, pers. comm.).

Tridacna rosewateri *Sirenko & Scarlato, 1991*

The first and only specimens of *Tridacna rosewateri* were collected from the Saya de Malha Bank (currently administered by Mauritius), Indian Ocean, during a 1984 expedition (Sirenko & Scarlato 1991). Nine individuals were collected measuring 6.7–19.1 cm shell length. The shell morphology of *T. rosewateri* shares features with both *T. maxima* (i.e. large byssal orifice) and *T. squamosa* (i.e. large scutes), but differs from those species in having thinner shell walls, deep triangular valve margin folds, and larger dense scutes on primary radial folds (Sirenko & Scarlato 1991, Monsecour 2016). Little is known about its habitat, but the *T. rosewateri* individuals were found among corals (*Madrepora* sp.) and dense beds of the seagrass *Thalassodendron ciliatum* (Sirenko & Scarlato 1991). *Tridacna rosewateri* is currently classified as 'Vulnerable' by the IUCN. The absence of living individuals makes the validity of *T. rosewateri* as a tridacnine species ambiguous. Benzie & Williams (1998) criticized the poor description of the species and proposed that it is a junior synonym of *T. squamosa*, while Newman & Gomez (2000) and Monsecour (2016) have argued that they could readily distinguish its shells from *T. squamosa* and concluded that it might be a distinct species endemic to Saya de Malha Banks.

Tridacna lorenzi *Monsecour, 2016*

Tridacna lorenzi is the newest species added to the list of Tridacninae. The species was described from the Cargados Carajos Archipelago (St. Brandon), Mascarene Plateau in the outlying territories of Mauritius (Monsecour 2016). A medium-sized species, ten of the largest type specimens measured between 11.3 and 26.0 cm shell length. Monsecour (2016) notes that both *T. maxima* and *T. rosewateri* are likely the closest congeners to *T. lorenzi* on the basis of some overlapping morphological characters. Similar to *T. maxima*, *T. lorenzi* has asymmetric shells, a large byssal orifice, and close-set scutes, but differs in the narrow interstices between primary ribs, its triangular valve margins, and the dull-coloured mantle that does not extend beyond the shell margins (Monsecour 2016). Commercially, this species has previously been misidentified as *T. rosewateri*, since the valve margins of both primary ribs and rib interstices are triangular in both species (Monsecour 2016). *Tridacna lorenzi* can, however, be distinguished from *T. rosewateri* by its more asymmetric, more globose, heavier shell valves, and closer-set scutes. The *T. lorenzi* individuals described by Monsecour (2016) were mostly collected from shallow waters in turbid lagoons of no more than 1 m depth, free-living on sand and among loose rubble. Distribution data are limited, although Monsecour (2016) suggested that *T. lorenzi* was locally common and encountered more often than the rarer *T. squamosa* and uncommon *T. maxima*. Local fishermen reportedly eat the species, and use their shells as saucers or ashtrays. A molecular analysis of *T. lorenzi* to determine its relationship with congeners has yet to be conducted.

Tridacna crocea *Lamarck, 1819*

Of all the tridacnine species, *Tridacna crocea* (Figure 2J) is the smallest with a maximum size of ~15 cm (Rosewater 1965). Commonly known as the 'burrowing' or 'boring' giant clam, *T. crocea* is a rock borer that embeds its entire body into the substratum, leaving only the mantle exposed (Yonge 1936). It appears to be well adapted to low salinity levels, often found in areas that experience freshwater runoff (Hart et al. 1998). As with *T. maxima* and *T. noae*, this species byssally attaches to its bored concavity. *Tridacna crocea* is usually identified by its boring habit, but it also develops well-spaced scutes that become eroded over time within the borehole. The mantles are brightly coloured, exhibiting various shades of blue, green, purple, white and brown (Todd et al. 2009). *Tridacna crocea* mostly inhabits reef flats in shallow waters of depths no more than 10 m (Hamner & Jones 1976, Hamner 1978). The species has a wide distribution (24 localities), ranging from Australia to Japan, east to Palau, and from Vanuatu to the Andaman Islands (Figure 1). It is possibly extinct in Guam and the Northern Mariana Islands (Wells 1997). In most areas, *T. crocea* is still considered reasonably abundant, probably due to its small size and the difficulty of extracting it from reef substrata. Even though *T. crocea* is one of the most easily accessible tridacnine species, exploitation is limited to domestic consumption. It is a popular delicacy in Okinawa, Japan (Okada 1997). The species was considered widespread in the Solomon Islands (Wells 1997) and was preferentially harvested as a source of food (Hviding 1993). More recent surveys indicate that it is much less common than it used to be in the Solomon Islands (Ramohia 2006). It is classified as of 'Lower Risk/Least Concern' by the IUCN. Mariculture of *T. crocea* is well established in Okinawa, Japan, where the spats are distributed to local fishermen for culture and release (Okada 1997). There have also been *ex situ* attempts to culture *T. crocea* in Brazil (Mies et al. 2012). Due to its bright colours, it is highly prized in the aquarium trade (Wabnitz et al. 2003), and mariculture efforts in Palau, the Marshall Islands and the Federated States of Micronesia, for example, have had some success breeding it (Heslinga 1995, 2013). However, because of its comparatively slow growth and poor early survival rates, it is often regarded as less suitable (not cost-effective) for aquaculture or mariculture operations, in spite of its desirability within the aquarium trade.

Contemporary threats and challenges

Throughout their geographic range, representatives of the Tridacninae remain an important and valuable coastal resource to both local fishing communities and commercial markets. The relative abundance, shallow distribution, conspicuous appearance, and sessile nature of giant clams make them easy to harvest with simple fishing gear. During reef gleaning and free-diving (Hviding 1993, Sant 1995), individuals are usually collected opportunistically in areas of low densities, but they can be the main target of fishing trips in areas where densities are high. Their flesh is excised from the shells with knives, wooden sticks or metal stakes (Kinch & Teitelbaum 2010). SCUBA and improvised diving apparatus such as hookah gear (a simple surface air-feed) are used to reach individuals in deeper waters (Hviding 1993, Ledua et al. 1993, Kinch & Teitelbaum 2010). Almost all species of the Tridacninae have been exploited for meat as food, fish bait or animal feed, their shells sold to the curio trade, and exported live for the aquarium trade (Heslinga 1995, Sant 1995, Kinch & Teitelbaum 2010, Neo & Loh 2014).

Prior to the 1980s, commercial exports of tridacnine adductor muscles to Asian markets and illegal poaching by long-range foreign vessels were responsible for the severe stock reductions occurring in the Indo-Pacific (Pearson 1977, Dawson & Philipson 1989, Shang et al. 1991, Sant 1995). Even though commercial exploitation of wild stocks is now banned in most countries, either poorly regulated or unregulated subsistence harvesting can still threaten remaining stocks (Tan & Zulfigar 2003). Large-scale poaching also poses a major and persistent threat for wild populations. Coastal resource authorities from various countries (Australia, Cambodia, Malaysia and the Philippines) have reported an increase in the number of fishing boats harvesting giant clams illegally within the last five years (Krell et al. 2011, Lee 2014, Colbeck 2015, Gomez 2015b). The scale of this harvest is substantial, with almost 20 tonnes of shells reportedly removed from protected areas (Lee 2014). One of the largest *Tridacna* shell markets today is China. Many of the local fishermen from Tanmen, Hainan, have converted from traditional fishing to the more lucrative tridacnine fishing as their main livelihood (Zhang 2014). Shells of giant clams may have become a substitute for ivory, the import of which is now regulated strictly (Gomez 2015a,b, Cavell 2016, Larson 2016). As the shell craft industry flourishes in Tanmen, large quantities of fossilized giant clam shells have been extracted from the sea beds of Scarborough Shoal, the Spratlys and Paracel Islands (South China Sea) to support the handicraft industry (Zhang 2014, Gomez 2015a,b, Larson 2016). Large shells are carved into sculptures, with medium-sized shells processed into beads for jewellery. It is also thought that giant clam shells are increasingly being used to manufacture nuclei for the Chinese freshwater pearl industry (X. Fan, pers. comm.). Even though recent sources suggest that the local Chinese government has banned the harvesting of dead shells (Master 2016), the intense extraction has devastated large tracts of coral reefs within the South China Sea.

The habitats of tridacnines are also threatened as corals reefs throughout the Indo-Pacific become degraded (Huang 2012, Neo & Todd 2012b). The pressure of anthropogenic activities threatens the health of reef environments and hence the survival and growth of the tridacnines that live in them. In a global meta-analysis for *Tridacna maxima*, Van Wynsberge et al. (2016) highlighted that, except for areas with very low human population density (<20 inhabitants ha^{-1} of reef), giant clam densities tended to decrease as human presence increased. Giant clam densities were also strongly dependent on the type of reef (atoll, island, continent)—which is an important natural cofactor. In the northern Red Sea (Egypt), Mekawy & Madkour (2012) showed that the abundance of *T. maxima* was higher at sites further away from anthropogenic sources and proposed that the main stressors were tourism, SCUBA diving, water pollution and contaminants, and the drilling for and production of oil. The survival, growth and photosynthetic performance of giant clams is significantly reduced when exposed to high copper concentration (tested at 50 $\mu g\ L^{-1}$) (Elfwing et al. 2001) and reduced salinities (Eckman et al. 2014). Coastal urbanization also has negative effects on giant clam populations. For example, in Singapore, many of the reefs where giant clams were previously found have been buried as a result of large-scale land reclamation projects (Guest et al. 2008, Neo & Todd 2012a,b). The impacts of sedimentation on tridacnines are not yet well understood, but, in addition to affecting photosynthetic performance, sediment stress has been hypothesized to divert energy away from maximizing photosynthesis (e.g. by transporting inorganic ions to the zooxanthellae) to supporting behavioural responses and increased respiratory demands (Elfwing et al. 2001). A preliminary study by Ang (2014) revealed that juvenile *T. squamosa* was more susceptible to chronic sedimentation than to acute deposition events.

Climate warming may lead to undesirable effects on giant clams, where extremes in either temperature or ultraviolet irradiation can lead to poor growth, bleaching (the expulsion of photosynthetic symbionts), and increased mortality (Buck et al. 2002, Andréfouët et al. 2013, Junchompoo et al. 2013), particularly near the equator (Chaudhary et al. 2016). The few studies relevant to the impacts of climate change on tridacnines have focused on the effects of thermal stress and bleaching responses (Norton et al. 1995, Blidberg et al. 2000, Buck et al. 2002, Leggat et al. 2003), which have been shown to affect their growth negatively. Warming oceans can also lead to bleaching of both juveniles and broodstock individuals, resulting in the loss of productivity or lower survival of ‘grow-out’ stocks (Wilkinson & Buddemeier 1994, Gomez & Mingoa-Licuanan 1998). In the 2016 global mass coral bleaching event, bleaching incidences among giant clams varied across geographic sites: *Tridacna maxima* did not bleach in Mauritius (R. Bhagooli, pers. comm.), but those in Singapore (M.L. Neo, pers. obs.), Guam (A. Miller, pers. comm.) and East Tuamotu (S. Andréfouët, pers. obs.) were bleached severely. Interestingly, surveys of giant clam populations at Lizard Island, Australia, showed that the 2016 mass coral bleaching event and cyclones during the previous three years resulted in a much lower mortality rate for *T. gigas* compared to either *T. derasa* or *T. squamosa*, suggesting that *T. gigas* may be best able to survive after major perturbations in the GBR (A.D. Lewis, pers. comm.).

The detrimental effects of ocean acidification have also been demonstrated in juvenile giant clams, with experimental evidence showing that they exhibit negative shell growth (dissolution) (Waters 2008) and lower survival rates (Watson et al. 2012) in acidic conditions (~600–1000 μatm [60.8–101.3 Pa] pCO_2). Studies testing the combined effects of increasing temperature and pCO_2 (based on climate projections for the end of this century) for 60 days showed that the shells of juvenile *Tridacna squamosa* were significantly altered with a decrease in calcium and magnesium ions (Armstrong et al. 2014), and lower survival rates (Watson et al. 2012, Watson 2015). Less is known about the effects of climate change stressors on early life-history stages, with only one study conducted to date. Neo et al. (2013b) tested the combined effects of temperature and salinity on *T. squamosa* fertilization and embryo development, and showed that salinity (27 psu and 32 psu) had no significant effect on survival but mortality increased at the higher of the two temperatures tested (22.5°C and 29.5°C). Climate change could also place additional economic and developmental pressures on giant clam mariculture operations. Increased temperatures in hatcheries can cause problems of algal overgrowth (M.L. Neo, pers. obs.), poor shell precipitation (Schwartzmann et al. 2011), and possibly premature spawning patterns, which are all undesired outcomes for spawning and rearing of juveniles.

Impacts due to the threats outlined above lead to the lowering of tridacnine population densities across their ranges in the wild, which has serious repercussions for their ability to reproduce successfully (Munro 1992). Fertilization success depends on the synchronized spawning of conspecifics (Lucas 1988, Gilbert et al. 2006a), as the trigger for sperm release is dependent on the chemical cues found on the eggs (Munro et al. 1983). Upon detection of the inducer, other neighbouring clams may also release eggs, thus encouraging progressive downstream fertilization. The tendency for tridacnines to aggregate has been attributed to their need to be close to each other to reproduce (Braley 1984, Huang et al. 2007, Soo & Todd 2012, 2014). Giant clam populations are therefore highly sensitive to stock depletion, where sparse spawning adult populations can lead to lowered (or zero) fertilization rates and consequently reduced or absent recruitment rates (Munro 1992, Tan & Zulfigar 1999, Neo et al. 2013a). To compound matters, as stocks become more scarce, harvesting size tends to decrease, meaning that individuals may be harvested even before reaching reproductive viability, thereby further affecting the availability of mates and limiting fertilization rates (i.e. component Allee effects) (Stephens et al. 1999). This could lead to the functional extinction and eventual collapse of the entire population (Frank & Brickman 2000, Petersen & Levitan 2001). Wild stocks may recover via the dispersal of planktonic larvae from other reefs brought in by prevailing currents (Benzie & Williams 1992a,b, Tan & Zulfigar 1999, 2001, Neo et al. 2013a). Such recovery, however, may take decades if coral reefs are isolated (due to the short [9-day] pelagic larval duration of giant clams), and/or currents are unfavourable (Yamaguchi 1977). Even in closed lagoons (with high retention rate) and with large stocks the recovery to initial population levels may still take decades. This is the case for Tatakoto Atoll, renowned for supporting the highest clam densities on record (Supplementary Table A3), but now depleted severely after a mass mortality event (Andréfouët et al. 2013). It may be many decades before densities such as those observed in 2004 (Gilbert et al. 2006a, Van Wynsberge 2016) will be witnessed again.

Cryptic species also present another challenge for the management and conservation of remaining tridacnine populations. When cryptic species become confused with contemporary common species, there are implications for commercial giant clam fisheries and their regulation due to the potential for misidentification (e.g. Rosewater 1982, Borsa et al. 2015b, Militz et al. 2015, Monsecour 2016). Additionally, the lack of knowledge regarding these species makes it difficult to implement appropriate conservation measures (Militz et al. 2015, Johnson et al. 2016). Previous systematic research on tridacnines relied heavily on morphological and behavioural characterization (e.g. Rosewater 1982, Lucas et al. 1991). These diagnostic characters can, however, be misleading in that giant clams generally are morphologically plastic and functionally similar (Benzie & Williams 1998, Neo & Todd 2011). During the last decade, the global use of genetic tools and breakthroughs in sequencing have led to the discovery of an increasing number of cryptic lineages (Pfenninger & Schwenk 2007) hidden behind one species name (morphologically close, but genetically divergent). Yet, the conversion of genetically unique lineages into robust and formally named taxonomic entities remains challenging. Considering the recognized variability in tridacnine morphology, they are good candidates for crypticity. In 2008, phylogenetics helped to identify a cryptic Red Sea species: first described as a new species, *Tridacna costata* (Richter et al. 2008) and later synonymized as *T. squamosina* (Huber & Eschner 2011). Subsequently, there has been the rediscovery of *T. noae* using various genetic markers (Su et al. 2014), and *T. noae* has turned out to be a widespread cryptic species in the Indo-Pacific (Borsa et al. 2015a,b, Militz et al. 2015, Johnson et al. 2016). Given the ambiguity of morphological characters among cryptic individuals, the growing body of molecular evidence can help reveal deep lineages across taxa and lead to the (re)discovery of species (Wilson & Kirkendale 2016).

Conservation and management

Legislation and regulations

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is recognized internationally as the governing body that oversees the trade exports and imports of selected endangered species. Giant clams are currently listed on Appendix II of CITES, which comprises species that are not necessarily now threatened with extinction, but that may become so unless trade is closely monitored. *Tridacna gigas* and *T. derasa* were first listed in 1983, and the other members of the family Tridacnidae (now subfamily Tridacninae) were listed in 1985 on the basis of so-called 'look alike species', i.e. species whose specimens in trade look like those of species listed for conservation reasons (Wells 1997). CITES states that the international trade in giant clams (whole or any part of the animal) is permitted only if the relevant export/import certifications are issued. The effectiveness of enforcing CITES is, however, largely dependent on whether the countries involved in the trade are signatories to the Treaty, or if a non-signatory is trading with the signatories (Wells 1997). In the past, countries such as Taiwan and the Maldives were involved heavily in the giant clam trade but were not CITES Parties, which impeded the implementation of CITES legislation (Wells 1997). Even in instances where exporting countries are CITES Parties, the trade data provided may be unreliable. In a number of examples capacity within relevant offices has been reduced, at times resulting in omissions, erroneous data entry (e.g. wrong source code, and submission of number of permits issued instead of actual numbers traded), and failure to submit or significant delays in providing trade statistics to the Secretariat (UNEP-WCMC 2011, C.C.C. Wabnitz, pers. obs.). Various workshops and other initiatives have been conducted to strengthen CITES capacity for countries in Oceania, including non-parties to the Convention (Table 4). Another concern, however, is that the scope of the CITES Treaty does not include localized collection and trade of giant clams within countries (which can be substantial), regardless of their status as a party to the convention. Relatedly, these countries may allow a quota of wild tridacnines to be collected and sold for the aquarium trade, but suppliers will usually collect only specimens with the highest value colours. This can result in genes for colour being reduced or lost from wild populations. Although not well understood, it is likely that mantle colours and their varieties (colour polymorphism) are ecologically important in natural reef settings (Todd et al. 2009).

International Union for Conservation of Nature (IUCN) Red List categories of threat

Nine of the 12 species of Tridacninae are on the IUCN Red List of Threatened Species (Neo & Todd 2013). *Tridacna gigas*, *T. derasa* and *T. rosewateri* are listed as 'Vulnerable', due to the rate of decline of remaining wild stocks. *Tridacna mbalavuana* is also listed as 'Vulnerable' on the basis of its small and declining area of occupancy, although it has been suggested that it should be categorized as 'Endangered' (Wells 1997). *Hippopus hippopus*, *H. porcellanus*, *Tridacna maxima* and *T. squamosa* are listed as 'Lower Risk/Conservation Dependent' due to the decline and disappearance of many populations. *Tridacna crocea* was initially excluded in the earlier Red Lists due to insufficient data (Wells 1997), but was reinstated in 1996 and listed as 'Lower Risk/Least Concern' (Molluscs Specialist Group 1996). The IUCN Red List of Threatened Species draws attention to species at risk of extinction and promotes their conservation (Collar 1996), and is frequently used to guide the management of resources (Rodrigues et al. 2006). It is, however, important to point out that 1) the global IUCN classifications for tridacnines are outdated as they were last reviewed by Wells (1996); 2) the reported status may not accurately reflect the situation within individual countries, e.g. Neo & Todd (2013) for Singapore; and 3) recent species, i.e. *T. lorenzi*, *T. noae* and *T. squamosina*, are not yet on the IUCN Red List as their ecology, habitat occupancy and density have not been assessed. Given the decline in tridacnine stocks and their habitat, it is important to produce a definitive update of IUCN classifications for all 12 species, including promoting the use of localized or regional classifications to better represent situations 'on the ground' that are of greater value when planning conservation strategies (Neo & Todd 2013).

Local mitigation measures

Regional efforts to initiate cooperation and collaboration among nations towards the management of sustainable giant clam fisheries have been few (e.g. Kinch & Teitelbaum 2010), but much has been done locally to reduce exploitation. The conservation efforts implemented throughout the Indo-Pacific are listed in Table 4. The localities of Red Sea, Southeast Africa and the Indian Ocean generally lack specific laws to regulate recreational fishing of giant clams. In East Asia, restoration of impacted populations has begun, but mariculture there (except in Japan) is still in its infancy. In the South China Sea, tridacnines are, unfortunately, within disputed territorial waters, which makes agreeing and coordinating ocean governance among the numerous neighbours a substantial challenge. There have been a number of restocking efforts using mariculture in Southeast Asia, but the success of programmes has been variable at each locality (Indonesia, Malaysia, the Philippines, Singapore and Thailand). The management of tridacnine populations is most advanced in Australia and the Pacific Island nations. For example, some coastal communities in the South Pacific have put in place stricter measures to alleviate tridacnine fishing pressures (Table 4), including banning commercial fishing (Fiji, Papua New Guinea, Solomon Islands, Vanuatu, Federated States of Micronesia, Guam, Republic of Kiribati and Palau), setting minimum size limits for subsistence harvesting (French Polynesia, Niue, Samoa and Tonga), imposing harvesting quotas or bag limits (New Caledonia, American Samoa and the Cook Islands), restricting fishing to free diving only and banning the use of mechanical fishing equipment (Chambers 2008, Kinch & Teitelbaum 2010, Andréfouët et al. 2013). Outcomes of these measures vary among the South Pacific nations as they depend on the degree of exploitation (i.e. a highly exploited population will take a longer recovery time), local enforcement measures and capacity, as well as community willingness to adopt these practices (Munro 1989, Lucas 1997). For instance, some Tongan communities set up giant clam 'circles' (i.e. aggregating adult clams into rings) to facilitate reproduction among individuals, and were able to repopulate nearby reefs with juveniles within ten months (Chesher 1993). Unfortunately, efforts do not appear to have been maintained and stocks in Tonga are severely depleted (C.C.C. Wabnitz, pers. obs.)—it is hoped that the regulation of selling giant clams in their shells to enforce size limits, which is widely respected, will help resolve this issue. In general, surveys throughout the region continue to indicate that populations are under severe stress (K. Pakoa, pers. comm.). Australia, India, China, Mauritius, Taiwan, and Japan have their own national protection acts that include giant clams (Table 4). Within Southeast Asia, it is generally recognized that tridacnines need protection, but only the Philippines, Malaysia and Thailand have national legislation regulating their exploitation (Knight et al. 2010, Gomez 2015a). Illegal fishing by coastal communities, however, remains prevalent in many of these countries, probably because of the traditional importance of giant clams as a coastal resource coupled with the lack of manpower and funding to support long-term monitoring, surveillance and law enforcement.

Mariculture for restocking

Giant clam breeding was pioneered in the 1970s at the University of Guam Marine Laboratory and the Micronesian Mariculture Demonstration Centre (MMDC) in Palau. It was further complemented by the work of John Lucas in Australia supported by the Australian Centre for International Agricultural Research in the 1980s, and consolidated by the work of ICLARM (now WorldFish) in the Solomon Islands in the late 1980s and early 1990s and, subsequently, supported the extensive research and technical training throughout the Pacific and Southeast Asia (e.g. Heslinga et al. 1984, Heslinga & Fitt 1987, Heslinga 1991, Copland & Lucas 1988, Braley 1992, Calumpong 1992, Norton & Jones 1992, Tisdell 1992, Fitt 1993). Mariculture is being adopted increasingly for mass production of individuals for the aquarium trade (Heslinga et al. 1990, O'Callaghan 1995, Bell et al. 1997, Heslinga 2013) as well as the restocking of rare species (Neo et al. 2009, 2011, Neo & Todd 2012a, Heslinga 2013) or extirpated populations (Braley & Muir 1995, Gomez & Mingoa-Licuanan 2006). Tridacnine mariculture has no apparent deleterious environmental effects (Lucas 1997), but there remains the possibility of inadvertently introducing exotic parasites, diseases and other biota (Newman & Gomez 2000), especially if broodstocks are imported without appropriate quarantines. Combined with local community farm grow-out operations, such mariculture activities can provide sustainable livelihood opportunities in localities where there are few alternatives (e.g. remote atolls in French Polynesia, remote locations in the Solomon Islands, and outlying islands in the Marshall Islands), as long as projects are conceived and run as sustainable and cost-effective enterprises or projects. In many cases, however, poor survival, limited production, and hatchery expenses result in cost-ineffective production and eventual termination of activities. Nevertheless, as of 2016, there were at least 34 functioning giant clam hatcheries in 25 countries, and hundreds of ocean nurseries and reserves (G.A. Heslinga, pers. obs.).

While most giant clam hatcheries operate on some commercial (or semi-commercial) basis, some, generally with the support of foreign aid or other forms of subsidies, also function as a means to support conservation and facilitate sustainable harvesting (Lucas 1997, Heslinga 2012, see Table 4). In general, the success of these initiatives is neither well studied nor well documented (Teitelbaum & Friedman 2008). Restocking programmes often do not have a set of protocols for fisheries officers and managers to follow, nor do they tend to be accompanied by regular monitoring to ascertain the success of such efforts over time (C.C.C. Wabnitz, pers. obs.). The survivorship of restocked clams varies widely within and among localities, with the main causes of mortality being predators, storms, poaching, and the lack of continuous husbandry (Lucas 1997, Southward et al. 2005, Heslinga 2013). In addition, hatchery-produced juveniles may be less genetically variable, which could increase vulnerability to parasites and diseases (Benzie & Williams 1996). High mortality rates, coupled with the high costs and intensive labour of rearing giant clams to reach 'escape size' (typically ~25 mm long, at which point they are less vulnerable to predators), may explain the waning enthusiasm and funding for restocking in some areas, notably Queensland (Australia) and the Solomon Islands, since the late 1980s (Bell 1999, Southward et al. 2005).

Restocking giant clams requires long-term commitment and monitoring, with examples of this mainly occurring in Palau, the Philippines and Japan, where mariculture, domestication and restocking have maintained momentum for over 20 years (Murakoshi 1986, Bell 1999, Gomez & Mingoa-Licuanan 2006, Heslinga 2013). There are also many examples of maricultured giant clams being shipped around the Indo-Pacific region as juveniles in the 1980s and 1990s, matured in ocean nurseries in the destination countries, and then used as breeding stock in local hatcheries. Firm evidence that restocked clams have produced local juvenile recruitment is either absent of or poorly documented, probably owing in part to the remoteness of the areas under study, and the difficulty and expense of conducting authoritative surveys. Exceptions to this may be found in Yap (Federated States of Micronesia) and the Philippines, where *Tridacna derasa* and *T. gigas*, respectively, were restocked (Table 6) and where new recruits have been reported (Cabitan & Conaco 2017). This is encouraging, as restocking without the creation of new generations will provide few long-term conservation benefits. How to ensure that restocked populations successfully reproduce and recruit is a major challenge for giant clam restoration efforts globally.

Recent conservation approaches

Biophysical modelling for conservation

At national and local (archipelago, island, reef) scales, giant clam conservation management has focused on fishing regulations and restocking (see previous sections). Assessing the effectiveness of such conservation efforts for a particular location requires an understanding, and ideally modelling, of processes and factors that influence their distribution and abundance. These include aspects of the species' biology, population dynamics (e.g. size-structure, density, recruitment, mortality), life-history traits (e.g. growth-fertility, reproduction and spawning occurrences) (Apte & Dutta 2010, Black et al. 2011, Yau et al. 2014, Dolorosa et al. 2014, Neo et al. 2013b, 2015b, Menoud et al. 2016, Van Wynsberge et al. 2017), and larval flux (Neo et al. 2013a). Human uses and impacts are also important factors to consider (Van Wynsberge et al. 2015, 2016). Recently, mass mortality in semi-enclosed atolls due to unusual physical oceanographic conditions has been identified as a key driver of population dynamics (Andréfouët et al. 2013) and climate change is likely to make these events more frequent (Andréfouët et al. 2015). These examples highlight the importance of monitoring physical conditions and their integration into models (Neo et al. 2015b, Van Wynsberge et al. 2017).

Table 6 An overview of reports of local recruitment after restocking efforts

Locality	Restocked species	Restocking period	Number of restocked individuals (life stage; size range)	Recruitment monitoring period	Remarks
Yap, Federated States of Micronesia	*Tridacna derasa*	1984–1991	1984–1989: 8000 (8–11 cm) 1988–1989: 3500 (6–8 cm) April 1991: 2000 (5–6 cm) Nov. 1991: 2000 (10 cm)	1991–2014 (ongoing)	*Tridacna derasa* juveniles were found by local fishermen and international experts from the Secretariat of the Pacific Community (SPC) in the early 1990s (J.O. Fagolimul & P. Dor, pers. comm.) after an extensive reintroduction program initiated in the mid-1980s undertaken with clams cultured at Palau's MMDC (Price & Fagolimul 1988, Heslinga 1991, 1993a,b, 2013, Lindsay 1995, Teitelbaum & Friedman 2008). In 2013–2014, some of these Yapese *T. derasa* recruits reached full maturity and were used with replicated success as breeding stock in a local hatchery managed by Mr. Philip Dor (P. Dor, pers. comm.). Mr. Dor has successfully produced commercial numbers (hundreds of thousands) of macroscopic *T. derasa* juveniles in the Yap hatchery, as verified by international experts.
Philippines	*Tridacna gigas*	1990s to present-day	~45,000 (Sub-adults; >20 cm)	2007–2015 (ongoing)	For >20 years, the Marine Science Institute, University of the Philippines, has been culturing giant clam species for restoration of depleted populations in the Philippines. Several species were initially restocked, but later efforts focused on *Tridacna gigas* (Gomez & Mingoa-Licuanan 2006). Recruits of *T. gigas* were first observed in the vicinity of Bolinao, Pangasinan, where the broodstock are placed (Cabitan & Conaco 2017). Subsequently, occasional reports have been received from at least two other localities where restocking was carried out.

Finally, but this has never been attempted, an ecosystem-based characterization including spatio-temporal variation in predation, competition, and food availability, is also likely to influence the accuracy of models simulating the effectiveness of conservation measures.

A pilot fishery-oriented modelling study on what could be the effects of management measures such as no-take areas, rotational closures, fishing quotas, and maximum or minimum catch sizes, on giant clam populations was undertaken by Van Wynsberge et al. (2013) for two islands of the Austral Archipelago in French Polynesia (Tubuai and Raivavae). This was the first spatially explicit model of giant clam population dynamics, based on maps of densities and habitat-specific age structure of populations. It was calibrated according to stock data quantified a few years apart, and parameterized and validated using limited local life-history traits and population dynamics data. More recently, the initial model was improved by including spatial patterns of fishing, mass mortality occurrences, size-structure per habitats, and refined population dynamics parameters following two years of surveys during which physical conditions were monitored (Van Wynsberge 2016). This more realistic model has been used to test the effects of conservation measures on *Tridacna maxima* populations. While such modelling opens new pathways for conservation and research, it requires intensive fieldwork for calibration/validation and substantial computing resources.

The models described above cannot be implemented easily and duplication at new sites needs caution, but staged efforts and priorities can be recommended. An important aspect is spatial variability. Different locations along either a reef or lagoon, for example, can display different tridacnine densities as a result of the combination of a number of biophysical processes, such as those associated with coastal hydrodynamics, climate change and pollution (Zuschin & Piller 1997, Green & Craig 1999, Andréfouët et al. 2005, Neo & Todd 2012b, Ullmann 2013). It is, therefore, desirable to first map the continuum of giant clam density across a reef system together with the clam size-structure (Andréfouët et al. 2005, 2009, Gilbert et al. 2006b). Ideally, the spatial characterization of density and size-structure should be used to determine where to monitor population dynamics and life traits and, if there is ongoing human exploitation, focal sites should be selected to represent both exploited and refuge areas.

Information about larval dispersal is another critical input for conservation modelling. The priority level for such work is dependent on the degree of closure and isolation of the studied reef, or sets of reefs. In Singapore, for instance, there is a continuum of reefs along the continent and island shores organized in a dense matrix, and understanding larval dispersal of *Tridacna squamosa* among reefs and (meta-)populations is necessary for the sound management of this species (Neo et al. 2013a). Conversely, the populations of *T. maxima* in the east Tuamotu archipelago of French Polynesia presents an opposing scenario, where remote and hydrodynamically closed atoll lagoons are more self-recruiting with limited flux from outside compared to open lagoons. While fluxes between atolls may be important for genetics, they are negligible in term of demography and fishery management (Van Wynsberge et al. 2016).

Biophysical modelling for conservation of giant clams is a new, complex and exciting task; however, it requires diverse spatial and temporal information that is difficult and costly to acquire. Nevertheless, population dynamics modelling and connectivity modelling are needed to create a holistic dynamic framework that can be applied to multiple locations, as well as to foster ambitious informative multidisciplinary studies to enhance knowledge for giant clam conservation.

Genetic information and evolutionary relationships for conservation planning

As molecular genetics techniques become more efficient and cost-effective, it is increasingly common for conservation managers to use genetic data in prioritizing species conservation (e.g. Huang 2012, Neo & Todd 2012b, Beger et al. 2014, von der Heyden et al. 2014). Fundamentally, genetic data offer insights into genetic diversity, population connectivity, and the evolutionary history of species (Beger et al. 2014). Such information provides the opportunity to investigate cryptic species diversity (discussed earlier in 'Contemporary threats and challenges'), spatial ecological interactions (Selkoe et al. 2008), as well as the evolutionary potential of species (Peijnenburg & Goetze 2013). The genetic structure of giant clam populations has been of interest since the 1990s, mainly to differentiate populations (e.g. Benzie & Williams 1992a,b, 1995, Macaranas et al. 1992), although none of these previous studies mentioned the incorporation of genetic information for spatial conservation prioritization. Subsequent giant clam population genetic studies have provided opportunities to develop phylogenetically-informed management strategies (e.g. DeBoer et al. 2008, Kochzius & Nuryanto 2008, Neo & Todd 2012b).

Another genetic-based conservation approach is the consideration of evolutionary relationships within a clade of target species (Faith 1992, 2007), especially for species that may be at risk of extinction and thus lead to loss of phylogenetic diversity (Huang & Roy 2013, Curnick et al. 2015). One such platform is the EDGE (Evolutionarily Distinct and Globally Endangered) of Existence programme that converts IUCN threat categories to probabilities of extinction for phylogenetic conservation prioritization (Redding & Mooers 2006, Mooers et al. 2008). The current programme has applied these metrics to major taxonomic groups such as mammals (Isaac et al. 2007, Safi et al. 2013) and amphibians (Isaac et al. 2012, Safi et al. 2013), but not to invertebrate taxa, with the exception of the Scleractinia (Huang 2012, Huang & Roy 2013). Given that wild tridacnines today are facing an array of threats, the use of phylogenetic diversity and evolutionary distinctiveness could help to hasten the evaluation of species' extinction risk.

Beyond phylogeny, in principle, larval dispersal and population genetic information can contribute to the design of more effective reserve networks by ensuring that all identified (meta-)populations are represented within them and by protecting source areas (Fogarty & Botsford 2007). All published studies thus far have used water circulation models and simulation of passive drifters to predict and explain (or not) the spatial patterns in genetic or demographic observations. In Indonesia, DeBoer et al. (2008) found poor agreement between larval dispersal distances of *Tridacna crocea* inferred from passive larval dispersal modelling and from genetic data. Van Wynsberge (2016) showed that biophysical models are in better agreement with *T. maxima* genetic observations in New Caledonia if habitat distribution and population densities are taken into account. Reaching an agreement between models and empirical *in situ* data is also likely largely dependent on enhanced realistic biophysical model forcing, with the necessary future inclusion of larval behaviour, settlement processes, fine-scale coastal hydrodynamics, habitat distribution, and so on (Dumas et al. 2014, Neo et al. 2013a, 2015b, Soo & Todd 2014, Van Wynsberge 2016). All these represent significant long-term challenges.

The future of giant clams?

This review synthesizes the current state of knowledge on giant clam taxonomy, distribution and abundance, exploitation and other threats, and conservation issues. In general, there exists a global consensus that tridacnines in many localities are endangered, especially the larger species, *Tridacna gigas* and *T. derasa*, where >50% of naturally occurring populations are severely depleted, locally extinct, or data deficient. The combination of increased commercial demand (including large-scale illegal fisheries) coupled with advances in fishing techniques, transport and storage have had significant negative impacts. Overharvesting for human use (consumption and materials) is probably the greatest driver of decline. Climate change, pollution, habitat loss and coastal development are additional factors that can deleteriously influence the survival of remaining stocks. As a result of lowered densities, populations are potentially experiencing component Allee effects (i.e. low-density constraints on fertilization efficacy), thus impairing their capacity to reproduce successfully in the wild (Neo et al. 2013a). Furthermore, the genetic diversity of populations may already have been reduced irretrievably in many areas. CITES listings and the IUCN Red List of Threatened categories have helped to raise awareness of the threats giant clams face, regulate trade and mitigate the decline of remnant populations. Local measures such as the enforcement of laws to regulate (or ban) both subsistence and commercial fishing (i.e. South Pacific), as well as mariculture and restocking to help maintain population numbers (i.e. Southeast Asia, Australia and the Pacific) have had some success. There is, however, a lack of standard protocols and regular monitoring to ascertain success of these mitigation measures on a local scale. Decades of giant clam research have also contributed to our understanding of their systematics, biology, physiology and ecological significance, which has helped to reinforce the case for protecting these charismatic molluscs (Neo et al. 2015a).

Even though substantial effort and resources have been injected into giant clam conservation since the 1970s, positive results are limited. Successes are generally due to the availability of large sums of financial aid to support the continuity of programmes, strong governance to implement fishery policies, as well as the involvement of local communities to take ownership of their coastal resources and help manage them. Updated data and new conservation approaches such as biophysical modelling and molecular genetic tools will be needed to help resolve fundamental issues such as larval dispersal and connectivity, fishery projections, cryptic species and population genetics. Mariculture also has a complementary role in the conservation of giant clams, as it is capable of producing large numbers of individuals to assist the restoration of depleted populations, and it may relieve some fishing pressures. Collectively, these approaches should help to prevent local extinctions of larger species (e.g. *Tridacna gigas* and *T. derasa*) and avoid the population collapse of smaller ones (e.g. *T. maxima*). Towards these important goals, the following fundamental ecological questions need to be resolved:

- What is the minimum number and density of giant clams (i.e. minimum viable population) needed to ensure that a population remains reproductive and yield genetically diverse progeny in the wild? Sexually mature individuals are becoming rare, and are therefore a limiting factor in reproductive success. These data are also key for restocking endeavours.
- Where and how should aggregations of restocked individuals be spatially arranged on reefs to optimize both fertilization success, survival and dispersal of larvae? Giant clams are broadcast spawners and aggregation is necessary to promote both spawning and fertilization success. However, data such as the minimum distances required between spawning individuals remain limited.
- What is the genetic connectivity, and larval dispersal extent, of wild giant clam populations locally, regionally and globally? An understanding of how populations are related promotes appropriate boundary management among populations. Such data can also contribute towards the maintenance of genetic diversity within regions, and will be especially useful for informing translocation and restocking endeavours.
- What are the phylogenetic relationships among giant clam species? This information is fundamental to the correct identification of species and subsequent planning of species-specific policies.
- How might giant clams (both in the wild and mariculture) acclimatize/adapt to anthropogenic threats, such as warming oceans and ocean acidification? There has been some progress on this front, mostly via manipulative experiments, but impacts on wild stocks and mariculture production are poorly understood.

These questions highlight the paucity of essential ecological data available to resource managers trying to improve the success of restocking giant clams, as well as conservation planners designing legislation to ensure sustainable exploitation. In addition to science-based conservation and management, it is critical to engage all stakeholders and increase conservation literacy through education, outreach and capacity building. Emphasizing the ecological benefits of giant clams and the consequences of overexploitation can help bring about changes in attitude and lead to improved fishing practices. Enforcement of existing regulations and the implementation of locally-appropriate new legislation is also crucial if populations are to be protected.

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Appendix A: Supplementary materials

Table A1 List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
American Samoa	Rose Atoll	Radtke (1985)	Y (survey data)	Y (Table A3)
	—	Bell (1993)	Y	
	—	Nagaoka (1993)	Y	
	Rose Atoll	Green & Craig (1999)	Y (survey data)	Y (Table A3)
	—	Green (2002)	Y	
	—	Kelty & Kuartei (2004)	Y	
	—	Craig (2009)	Y	
	—	Reef Check (1997, 2003)	Y (survey data)	Y (Table A4)
Australia	One Tree Island, Capricorn Group, QL	McMichael (1974)	Y (survey data)	Y (Table A3)
	Orpheus Island, Palm Island Group, QL	Hamner & Jones (1976)	Y (survey data)	Y (Table A3)
	Great Barrier Reef (North & South)	Braley (1987a, b)	Y (survey data)	Y (Table A3)
	Lizard Island, Great Barrier Reef	Alder & Braley (1989)	Y	
	Michaelmas Reef, Great Barrier Reef	Pearson & Munro (1991)	Y (survey data)	Y (Table A3)
	Lizard Island, Great Barrier Reef	Braley & Muir (1995)	Y (insufficient data)	
	Montebello Islands, Western Australia	Wells et al. (2000)	Y	
	Mermaid Reef, Cartier Reef, and Ashmore Reef	Rees et al. (2003)	Y (survey data)	Y (Table A3)
	Heron Island, southern Great Barrier Reef	Strotz et al. (2010)	Y	
	Ningaloo Marine Park, WA	Black et al. (2011)	Y (survey data)	Y (Table A3)
	Solitary Islands Marine Park, NSW	Smith (2011)	Y	
	Ningaloo Marine Park, WA	Penny & Willan (2014)	Y	
	Western Australia	Borsa et al. (2015)	Y (DNA)	
	Ningaloo Marine Park, WA	Johnson et al. (2016)	Y (survey data)	Y (Table A3)
	—	Reef Check (1997–2014)	Y (survey data)	Y (Table A4)
British Indian Ocean Territory	Chagos Archipelago	Sheppard (1984)	Y	
	Chagos Archipelago (Salomon and Peros Banhos atolls)	Chagos Conservation Trust (FaceBook) (2014)	Y	
Brunei	—	Reef Check		
Cambodia	—	Vibol (N.D.)	Y (survey data)	Y (Table A3)
	Koh Rong	Chou (2000)	Y (exploitation)	
	—	Chou et al. (2002)	Y (survey data)	Y (Table A3)
	—	Kim et al. (2004)	Y (survey data)	Y (Table A3)
	—	Van Bochove et al. (2011)	Y (survey data)	Y (Table A3)

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Cambodia *(Continued)*	Song Saa Private Island, Koh Rong Archipelago	Savage et al. (2013)	Y (survey data)	Y (Table A3)
	Koh Rong and Koh Koun, Koh Rong Archipelago	Thorne et al. (2015)	Y (survey data)	Y (Table A3)
	—	Reef Check (1998, 2001, 2003, 2009–2010)	Y (survey data)	Y (Table A4)
Cargados Carajos Archipelago	—	Monsecour (2016)	Y (exploitation)	Y
China	Hainan Islands	Hutchings & Wu (1987)	Y	
	Hainan Islands	Fiege et al. (1994)	Y	
	—	Qi (2004)	Y	
	Sanya waters	Tadashi et al. (2008)	Y	
	—	Liu (2013)	Y	
	—	Reef Check (2000, 2002)	Y (survey data)	Y (Table A4)
Christmas Island	Flying Fish Cove	Andrews et al. (1900)	Y	
	—	Tomlin (1934)	Y	
	—	Wells & Slack-Smith (2000)	Y	
	—	Gilligan et al. (2008)	Y (survey data)	Y (Table A3)
	—	Hourston (2010)	Y (survey data)	Y (Table A3)
	—	Huber (2010)	Y	
	—	Tan & Low (2014)	Y	
	—	Reef Check (2003–2007)	Y (survey data)	Y (Table A4)
Cocos (Keeling) Islands	—	Gibson-Hill (1946)	Y	
	—	Abbott (1950)	Y	
	—	Maes (1967)	Y	
	—	Wells (1994)	Y	
	—	Hender et al. (2001)	Y (survey data)	Y (Table A3)
	—	Australian Government (2005)	Y (survey data)	Y (Table A3)
	—	Hourston (2010)	Y (survey data)	Y (Table A3)
	—	Huber (2010)	Y	
	—	Bellchambers & Evans (2013)	Y (survey data)	Y (Table A3)
	—	Tan & Low (2014)	Y	
	—	Evans et al. (2016)	Y (survey data)	Y (Table A3)
	—	Reef Check (1997–1999, 2001–2005, 2007–2008)	Y (survey data)	Y (Table A4)
Comoros	Nioumachouoi site; Ouenefou reef	Bigot et al. (2000)	Y	
Cook Islands	—	Paulay (1987)	Y	
	Aitutaki Lagoon, Manihiki Lagoon, Suwarrow Lagoon, and Penrhyn Lagoon	Sims & Howard (1988)	Y (survey data)	Y (Table A3)
	—	Tisdell & Wittenberg (1992)	Y	

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Cook Islands *(Continued)*	Tongareva Lagoon	Chambers (2007)	Y (survey data)	Y (Table A3)
	Tongareva Lagoon	Chambers (2008)	Y (insufficient data)	
	—	Reef Check (2005)	Y	Y (Table A4)
Djibouti	—	Pilcher & Djama (2000)	Y (survey data)	Y (Table A3)
	—	PERSGA (2010)	Y (survey data)	Y (Table A3)
East Timor	Dili	Flickr	Y	
	—	Reef Check (2004, 2008)	Y (survey data)	Y (Table A4)
Egypt	Northern Bay of Safaga, Red Sea	Zuschin & Pillar (1997)	Y (survey data)	Y (Table A3)
	Northern Red Sea	Kilada et al. (1998)	Y (survey data)	Y (Table A3)
	Northern Red Sea	Ullmann (2013)	Y (survey data)	Y (Table A3)
	Egyptian Red Sea	Mekawy (2014)	Y	
	Red Sea area	Richter et al. (2008)	Y (survey data)	Y (Table A3)
	Red Sea area	Huber & Eschner (2011)	Y	
	Northern Red Sea	Mekawy & Madkour (2012)	Y	
	—	Reef Check (1997, 2000–2015)	Y (survey data)	Y (Table A4)
Eritrea	—	Reef Check (2000)	Y (survey data)	Y (Table A4)
Federated States of Micronesia	Yap State	Price & Fagolimul (1988)	Y	
	—	Smith (1992)	Y	
	Kosrae, part of the Caroline Islands	Borsa et al. (2015)	Y	
	—	Reef Check (2000–2008)	Y (survey data)	Y (Table A4)
Fiji	—	Lewis et al. (1988)	Y	
	Eastern islands (Lau)	Lewis & Ledua (1988)	Y	
	Eastern islands (Lau)	Lucas et al. (1991)	Y	
	Eastern islands (Lau)	Vuki et al. (1992)	Y	
	—	Tacconi & Tisdell (1992) Chapter 13	Y	
	—	Tisdell & Wittenberg (1992)	Y	
	Eastern islands (Lau)	Ledua et al. (1993)	Y (survey data)	Y (Table A3)
	Southwest Viti Levu Island	Seeto et al. (2012)	Y (exploitation)	
	Viti-Levu	Borsa et al. (2015)	Y	
	—	Reef Check (1997, 1999–2011)	Y (survey data)	Y (Table A4)
French Polynesia	Takapoto Atoll	Jaubert (1977)	Y	
	Takapoto Atoll	Richard (1977)	Y (survey data)	Y (Table A3)
	Bora Bora Lagoon	Planes et al. (1993)	Y	
	Moorea, Takapoto, and Anaa	Laurent (2001)	Y (survey data)	Y (Table A3)
	Tatakoto Atoll, Eastern Tuamotu	Gilbert et al. (2005)	Y (survey data)	Y (Table A3)

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
French Polynesia *(Continued)*	Fangatau Atoll, Eastern Tuamotu	Andréfouët et al. (2005)	Y (survey data)	Y (Table A3)
	Tubuai, Austral Islands	Larrue (2006)	Y	
	Reao, Pukarua, and Raivavae	Gilbert et al. (2006a)	Y (survey data)	Y (Table A3)
	Fangatau Atoll, Tatakoto Atoll, and Tubuai	Gilbert et al. (2006b)	Y (survey data)	Y (Table A3)
	Tubuai, Austral Islands	Newman & Gomez (2007)	Y	
	—	Gilbert et al. (2007)	Y	
	Raivavae Island	Andréfouët et al. (2009)	Y (survey data)	Y (Table A3)
	Tatakoto Atoll	Andréfouët et al. (2013)	Y (survey data)	Y (Table A3)
	—	Van Wynsberge et al. (2013)	Y (survey data)	Y (Table A3)
	Tuamotu and Gambier Archipelago	Andréfouët et al. (2014)	Y	
	—	Reef Check (1999–2014)	Y (survey data)	Y (Table A4)
Guam	—	Stojkovich (1977)	Y	
	—	Munro (1989)	Y	
	—	Hensley & Sherwood (1993)	Y	
	—	Anonymous (1994)	Y	
	—	Paulay (2003)	Y	
	—	Reef Check (1998–1999, 2001, 2004)	Y (survey data)	Y (Table A4)
Hong Kong	Mirs Bay	Morton & Morton (1983)	Y	
	—	Reef Check (2003, 2006, 2011)	Y (survey data)	Y (Table A4)
India	Andaman and Nicobar Islands	Rosewater (1965)	Y	
	Kavaratti Atoll	Namboodiri & Sivadas (1979)	Y	
	Andaman and Nicobar Islands	Ramadoss (1983)	Y (survey data)	Y (Table A3)
	Lakshadweep	George et al. (1986)	Y	
	Lakshadweep	Apte & Dutta (2010)	Y	
	Lakshadweep	Apte et al. (2010)	Y (survey data)	Y (Table A3)
	Lakshadweep	Bijukumar et al. (2015)	Y (legislation)	
	—	Reef Check (1998)	Y (survey data)	Y (Table A4)
Indonesia	Karimun Java	Brown & Muskanofola (1985)	Y (survey data)	Y (Table A3)
	—	Pasaribu (1988)	Y	
	Karimunjawa Islands	Pringgenies et al. (1995)	Y	
	Gulf of Tomini, Sulawesi	Wells (2001)	Y	
	Rajah Ampat Islands, Papua Province	Wells (2002)	Y	
	Pari Island	Eliata et al. (2003)	Y (survey data)	Y (Table A3)

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Indonesia *(Continued)*	Anambas and Natuna Islands	Tan & Kastoro (2004)	Y	
	Pari Island	Panggabean (2007)	Y	
	Seribu Islands and Manado waters	Yusuf et al. (2009)	Y (survey data)	Y (Table A3)
	Kei Kecil, Southeast Maluku	Kusnadi et al. (2008)	Y	
	Kei Kecil, Southeast Maluku	Hernawan (2010)	Y (survey data)	Y (Table A3)
	Savu Sea, East Nusa Tenggara Province	Naguit et al. (2012)	Y (survey data)	Y (Table A3)
	Bunaken, Manado and Alor Archipelago, Savu Sea and Doi Island	Borsa et al. (2015)	Y	
	—	Reef Check (1997–2014)	Y (survey data)	Y (Table A4)
Israel	Eilat (southernmost Israel)	Flickr	Y	
	—	Reef Check (1997–1998, 2001)	Y (survey data)	Y (Table A4)
Japan	—	Hirase (1954)	Y	
	Okinawa	Kanno et al. (1976)	Y	
	Okinawa	Okada (1997)	Y	
	Ogasawara National Park	Fujiwara et al. (2000)	Y	
	Okinawa and Ishigaki Islands	Kubo & Iwai (2007)	Y	
	—	Reef Check (1997–2012, 2014)	Y (survey data)	Y (Table A4)
Jordan	Northern Gulf of Aqaba	Roa-Quaoit (2005)	Y (survey data)	Y (Table A3)
	Jordanian coast of Gulf of Aqaba	Al-Horani et al. (2006)	Y (survey data)	Cannot be easily retrieved
	Red Sea area	Richter et al. (2008)	Y (survey data)	Y (Table A3)
	Red Sea area	Huber & Eschner (2011)	Y	
	—	Reef Check (2007)	Y (survey data)	Y (Table A4)
Kenya	—	Evans et al. (1977)	Y (exploitation)	
	Kenyan coastline	Accordi et al. (2010)	Y	
	—	Anam & Mostarda (2012)	Y	
	—	Reef Check (2003–2004)	Y (survey data)	Y (Table A4)
La Réunion	—	Flickr	Y	
	—	Reef Check (2003–2013)	Y (survey data)	Y (Table A4)
Madagascar	Northwest Madagascar	Wells (2003)	Y	
	Andavadoaka region	Harding et al. (2006)	Y (survey data)	Y (Table A3)
	Andavadoaka region	Nadon et al. (2007)	Y (survey data)	Y (Table A3)
	Northern Madagascar	Harding & Randriamanantsoa (2008)	Y (survey data)	Y (Table A3)
	Southwest Madagascar	Barnes & Rawlinson (2009)	Y	

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Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Madagascar *(Continued)*	Andavadoaka region	Hopkins (2009)	Y (survey data)	Y (Table A3)
	—	Reef Check (2001, 2003–2005, 2007, 2009–2011)	Y (survey data)	Y (Table A4)
Malaysia	Pulau Redang	Mohamed-Pauzi et al. (1994)	Y	
	Pulau Tioman	Tan et al. (1998)	Y (survey data)	Y (Table A3)
	Johore Islands	Zulfigar & Tan (2000)	Y	
	Johore Islands	Tan & Zulfigar (2001)	Y	
	—	Tan & Zulfigar (2003)	Y	
	Tun Sakaran Marine Park, East Sabah	Montagne et al. (2013)	Y (survey data)	Y (Table A3)
	—	Reef Check (1997–2000, 2003–2012, 2014)	Y (survey data)	Y (Table A4)
Maldives	—	Basker (1991)	Y (survey data)	Y
	Baa Atoll	Andréfouët et al. (2012)	Y	
	—	Reef Check (1997, 2001, 2005–2014)	Y (survey data)	Y (Table A4)
Marshall Islands	Rongelap Island	Pinca & Beger (2002)	Y (survey data)	Y (Table A3)
	Mili Atoll, Rongelap Atoll	Beger & Pinca (2003)	Y (survey data)	Cannot be easily retrieved
	—	Beger et al. (2008) [http://www.nras-conservation.org/publications.html]	Y	
	—	Reef Check (2002)	Y (survey data)	Y (Table A4)
Mauritius	—	Michel et al. (1985)	Y	
	Rodrigues Island	Oliver et al. (2004)	Y	
	—	Reef Check (1999–2003)	Y (survey data)	Y (Table A4)
Mayotte	Mayotte	Jana Around the World (2010)	Y	
	—	Reef Check (2003–2007, 2009–2010, 2014)	Y (survey data)	Y (Table A4)
Mozambique	Quirimba Archipelago	Barnes et al. (1998)	Y	
	—	ReefBuilders.com (2015)	Y	
	—	Reef Check (1997, 2000–2002)	Y (survey data)	Y (Table A4)
Myanmar	—	Wells (1997)	Y	
	—	Reef Check (2001, 2003–2005, 2013)	Y (survey data)	Y (Table A4)
Nauru	—	Jacob (2000)	Y	
	—	South & Skelton (2000)	Y	
	—	Chin et al. (2011)	Y	
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Virly (2004)	Y (survey data)	Y (Table A3)
	North Eastern Lagoon (Poeubo to Hienghène)	McKenna et al. (2006)	Y (survey data)	Y (Table A3)

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
New Caledonia *(Continued)*	Poum	Vieux (2009)	Y (survey data)	Y (Table A3)
	Corne Sud	Wantiez et al. (2007a)	Y (survey data)	Y (Table A3)
	Ile des Pins	Wantiez et al. (2007b)	Y (survey data)	Y (Table A3)
	Bourail	Wantiez et al. (2007c)	Y (survey data)	Y (Table A3)
	Grand Lagon Nord	Wantiez et al. (2008a)	Y (survey data)	Y (Table A3)
	Merlet	Wantiez et al. (2008b)	Y (survey data)	Y (Table A3)
	Ducos Island, Bay of Saint Vincent	Aubert et al. (2009)	Y	
	New Caledonia (50 sites)	Purcell et al. (2009)	Y (survey data)	Y (Table A3)
	Noumea	Chin et al. (2011)	Y	
	New Caledonia	Dumas et al. (2011)	Y (survey data)	Y (Table A3)
	Ioro reef	Schwartzmann et al. (2011)	Y	
	—	Dumas et al. (2013)	Y (survey data)	Y (Table A3)
	and Loyalty Islands	Borsa et al. (2015)	Y	
	Northeastern coast of New Caledonia	Tiavouane & Fauvelot (2016)	Y (DNA)	
	—	Reef Check (1997–1998, 2001, 2003–2011)	Y (survey data)	Y (Table A4)
Niue	—	Dalzell et al. (1993)	Y (survey data)	Y (Table A3)
	—	Vieux et al. (2004)	Y	
	—	Kronen et al. (2008)	Y (survey data)	Y (Table A3)
Northern Mariana Islands	Saipan Island	Flickr	Y	
	Maug Island	Flickr	Y	
Palau	South of Kokor, Western Caroline Islands	Hardy & Hardy (1969)	Y (survey data)	Y (Table A3)
	Helen Reef, Western Caroline Islands	Hester & Jones (1974)	Y (survey data)	Y (Table A3)
	Helen Reef, Western Caroline Islands	Bryan & McConnell (1976)	Y (survey data)	Y (Table A3)
	Helen Reef, Western Caroline Islands	Hirshberger (1980)	Y (survey data)	Y (Table A3)
	—	Isamu (2008)	Y (insufficient data)	
	—	Reef Check (1997, 2000–2003, 2006)	Y (survey data)	Y (Table A4)
Papua New Guinea	Milne Bay Province	Kinch (2001)	Y (survey data)	Y (Table A3)
	Milne Bay Province	Kinch (2002)	Y (survey data)	Y (Table A3)
	Milne Bay Province	Wells & Kinch (2003)	Y	
	Milne Bay Province	Miller & Sweatman (2004)	Y	
	—	Berzunza-Sanchez et al. (2013)	Y (history)	
	Madang and Kavieng	Borsa et al. (2015)	Y	
	Kavieng, New Ireland	Militz et al. (2015)	Y (survey data)	Y (Table A3)
	—	Reef Check (1998–2000, 2002, 2004, 2008–2009)	Y (survey data)	Y (Table A4)

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Philippines	Sulu Archipelago	Rosewater (1982)	Y	
	South-Central Philippines	Alcala (1986)	Y (survey data)	Y (Table A3)
	—	Alcala & Alcazar (1987)	Y (insufficient data)	
	Sulu Archipelago and Southern Palawan	Villanoy et al. (1988)	Y	
	—	Gomez & Alcala (1988)	Y (survey data)	see Juinio et al. (1989)
	—	Juinio et al. (1989)	Y (survey data)	Y (Table A3)
	—	Calumpong & Cadiz (1993)	Y (survey data)	Y (Table A3)
	—	Gomez et al. (2000)	Y (insufficient data)	
	—	Calumpong et al. (2002)	Y	
	Tubbataha Reefs Natural Park	Dolorosa & Schoppe (2005)	Y (survey data)	Y (Table A3)
	—	Gomez & Mingoa-Licuanan (2006)	Y (insufficient data)	
	Caniogan Marine Sanctuary, NW Philippines	Cabaitan et al. (2008)	Y (insufficient data)	
	Bolinao Reef System	Dizon et al. (2008)	Y (insufficient data)	
	Tubbataha Reefs Natural Park	Dolorosa (2010)	Y (survey data)	Y (Table A3)
	Tubbataha Reefs Natural Park	Dolorosa & Jontila (2012)	Y (survey data)	Y
	Island of Hadji Panglima Tahil, Sulu	Tabugo et al. (2013)	Y	
	Tubbataha Reefs Natural Park	Dolorosa et al. (2014)	Y	
	Sibulan, Negos, Philippines	Borsa et al. (2015)	Y (DNA)	
	Sabang Reef Fish Sanctuary, Honda Bay	Gonzales et al. (2014a)	Y (survey data)	Y (Table A3)
	Apulit Island, West Sulu Sea, Palawan	Gonzales et al. (2014a)	Y (survey data)	Y (Table A3)
	Apulit Island, Taytay Bay, Palawan	Gonzales et al. (2014b)	Y (survey data)	Y (Table A3)
	Tubbataha Reefs Natural Park	Dolorosa et al. (2015)	Y	
	Tubbataha Reefs Natural Park	Conales et al. (2015)	Y (survey data)	Y (Table A3)
	—	Reef Check (1997–2008, 2010–2014)	Y (survey data)	Y (Table A4)
Pitcairn Islands	—	Paulay (1989)	Y	
	Oeno Atoll	Irving & Dawson (2013)	Y (survey data)	Y (Table A3)
Republic of Kiribati	Fanning Atoll	Kay (1970)	Y	
	—	Taniera (1988)	Y	

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Republic of Kiribati *(Continued)*	Central Gilbert Islands	Munro (1988)	Y (survey data)	Y (Table A3)
	Caroline Atoll (formerly Gilbert Islands)	Kepler & Kepler (1994)	Y (survey data)	Y (Table A3)
	Gilbert Islands	Thomas (2001)	Y	
	Northern Line Islands	Sandin et al. (2008)	Y (survey data)	Y (Table A3)
	Millenium Atoll	Barott et al. (2010)	Y (survey data)	Y (Table A3)
	Northern Line Islands	Williams et al. (2013)	Y	
	Kiritimati, Northern Line Islands	Borsa et al. (2015)	Y	
	—	Thomas (2014)	Y (history)	
Samoa	—	Zann (1989)	Y	
	Upolu, Western Samoa	Zann (1991)	Y	
	Western Samoa	Tacconi & Tisdell (1992) Chapter 13	Y	
	—	Tisdell & Wittenberg (1992)	Y	
	—	South & Skelton (2000)	Y	
	—	Tiitii et al. (2014)	Y	
	—	Flickr	Y	
Saudi Arabia	Jeddah	Hughes (1977)	Y	
	Jeddah	Bodoy (1984)	Y (survey data)	Y (Table A3)
	—	PERSGA (2010)	Y (survey data)	Y (Table A3)
	—	Reef Check (1999,2008–2009)	Y (survey data)	Y (Table A4)
Saya de Malha Banks (currently administered by Mauritius)	—	Sirenko & Scarlato (1991)	Y	
Seychelles	Mahe	Taylor (1968)	Y	
	Seychelle Islands	Selin et al. (1992)	Y (survey data)	Y (Table A3)
	Aride Island Beach	Agombar et al. (2003)	Y (survey data)	Y (Table A3)
	Silhouette Island	Gerlach & Gerlach (2004)	Y	
	—	Reef Check (1997, 2001)	Y (survey data)	Y (Table A4)
Singapore	Singapore	Courtois de Vicose & Chou (1999)	Y (insufficient data)	
	Southern Islands	Guest et al. (2008)	Y (survey data)	Y (Table A3)
	—	Todd & Guest (2008)	Y (insufficient data)	
	—	Soo et al. (2010)	Y (insufficient data)	
	Southern Islands	Neo & Todd (2012a,b)	Y (survey data)	Y (Table A3)
	—	Neo et al. (2013)	Y (insufficient data)	
	—	Neo & Todd (2013)	Y (survey data)	Y (Table A3)

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Solomon Islands	—	Govan et al. (1988)	Y	
	—	Skewes (1990)	Y (insufficient data)	
	—	Bell et al. (1997)	Y (insufficient data)	
	—	Bell (1999)	Y (insufficient data)	
	Arnavon Marine Conservation Area	Lovell et al. (2004)	Y	
	—	Ramohia (2006)	Y (survey data)	Y (Table A3)
	Bellona (Mungiki) Island	Thaman et al. (2011)	Y	
	—	Borsa et al. (2015)	Y (DNA)	
	—	Reef Check (2005–2012)	Y (survey data)	Y (Table A4)
Somalia	—	Sommer et al. (1996)	Y	
	—	Pilcher & Alsuhaibany (2000)	Y	
South Africa	—	Reef Check (2000–2002, 2005)	Y (survey data)	Y (Table A4)
South China Sea	Xisha Islands (Paracel Islands)	Zhuang (1978)	Y	
	Xisha (Paracel Islands) and Nansha Islands (Spratly Islands)	Bernard et al. (1993)	Y	
	Xisha Islands (Paracel Islands)	Pan & Lan (1998)	Y	
	Pulau Layang Layang (Swallow Reef) (Malaysia)	Sahari et al. (2002)	Y (survey data)	Y (Table A3)
	North Spratly Islands	Van Long et al. (2008)	Y (survey data)	Y (Table A3)
	North Danger Reef and Jackson Atoll	Calumpong et al. (2008)	Y	
	North Danger Reef and Trident Shoal	Lasola & Hoang (2008)	Y (survey data)	Y (Table A3)
	North Danger Reef and Jackson Atoll	Calumpong & Macansantos (2008)	Y (survey data)	Y (Table A3)
	Dongsha Atoll (Pratas Islands) (Taiwan)	Borsa et al. (2015)	Y	
	Taiping Island (Itu Aba Island, Spratly group)	A Frontier in the South China Sea: Biodiversity of Taiping Island, Nansha Islands (2014)	Y	
Sri Lanka	—	Reef Check (2003)	Y (survey data)	Y (Table A4)
Sudan	Harvey reef, Baraja reef, Lighthouse reef, Mersa Towartit	Taylor & Reid (1984)	Y	
	Sanganeb Atoll	CBD Report (N.D.)	Y	
	—	Reef Check (2004, 2009)	Y (survey data)	Y (Table A4)

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Taiwan	—	Wu (1999)	Y	
	Northern and Southern Taiwan, Orchid Island, Green Island, Hsiaoliuchiu, Penghu	Tang (2005)	Y	
	Gueishan Island	Huang et al. (2013)	Y	
	Northern and Southern Taiwan, Orchid Island, Green Island, Hsiaoliuchiu, Penghu	Su et al. (2014)	Y	
	—	Reef Check (1998, 2008–2010)	Y (survey data)	Y (Table A4)
Tanzania	Zanzibar	Gossling et al. (2004)	Y	
	Chumbe Island	Daniels (2004)	Y (survey data)	Y (Table A3)
	Kilwa Island, southern Swahili coast	Nakamura (2013)	Y	
	—	Reef Check (1997–1998, 2003–2008)	Y (survey data)	Y (Table A4)
Thailand	Lee-Pae Island, Andaman Seas	Chantrapornsyl et al. (1996)	Y (survey data)	Y (Table A3)
	Surin Islands	Kittiwattanawong (1997)	Y	
	Surin Islands, Andaman Sea and Racha Yai Island, Phuket	Kittiwattanawong (2001)	Y	
	Andaman Seas, Gulf of Thailand	Kittiwattanawong et al. (2001)	Y	
	Surin Islands	Koh et al. (2003)	Y (survey data)	Y (Table A3)
	Surin Islands	Loh et al. (2004)	Y (survey data)	Y (Table A3)
	Mannai Island, Rayong province	Junchompoo et al. (2013)	Y (survey data)	Y (Table A3)
	—	Reef Check (1998–2001, 2003–2015)	Y (survey data)	Y (Table A4)
Tokelau	—	Braley (1989)	Y (survey data)	Y (Table A3)
	—	Tisdell & Wittenberg (1992)	Y	
	—	Vieux et al. (2004)	Y	
Tonga	—	Langi & Hesitoni ‘Aloua (1988)	Y (survey data)	Y (Table A3)
	Ha’apai, Vava’u Islands	Lucas et al. (1991)	Y	
	—	Tacconi & Tisdell (1992) Chapter 13	Y	
	—	Tisdell & Wittenberg (1992)	Y	
	—	Chesher (1993): p. 31	Y (survey data)	Y (Table A3)
	Ha’apai, Vava’u Islands	Ledua et al. (1993)	Y (survey data)	Y (Table A3)
	—	Sone & Loto’ahea (1995)	Y	

Continued

Table A1 (Continued) List of localities with giant clams (in alphabetical order)

Locality	Locality	Citations	Was data useful for review?	Was data extracted?
Tonga *(Continued)*	Tongatapu Island	Tu'avao et al. (1995)	Y (survey data)	Y (Table A3)
	—	Salvat (2000)	Y	
	—	Reef Check (2002, 2013)	Y (survey data)	Y (Table A4)
Tuvalu	Nukufetau, Nukulaelae, Funafuti	Braley (1988)	Y (survey data)	Y (Table A3)
	Nanumea, Nui	Langi (1990)	Y (survey data)	Y (Table A3)
	—	Lovell et al. (2004)	Y	
	—	Sauni et al. (2008)	Y (survey data)	Y (Table A3)
	—	Job & Ceccarelli (2012)	Y (survey data)	Y (Table A3)
	Funafuti	Siaosi et al. (2012)	Y (survey data)	Y (Table A3)
United States Minor Outlying Islands	Palmyra Atoll	Flickr	Y	
	Kingman Reef National Wildlife Refuge	Flickr	Y	
Vanuatu	—	Zann & Ayling (1988)	Y (survey data)	Y (Table A3)
	—	Bell & Amos (1993)	Y (survey data)	Y [same as Zann & Ayling (1988)]
	—	Lovell et al. (2004)	Y	
	—	Nimoho et al. (2013)	Y (survey data)	Y (Table A3)
	Efate	Borsa et al. (2015)	Y	
	—	Reef Check (2004, 2008, 2011–2012)	Y (survey data)	Y (Table A4)
Viet Nam	An Thoi Archipelago	Latypov (2000)	Y	
	Central Viet Nam	Latypov (2001)	Y	
	Mju and Moon Islands	Latypov (2006)	Y (survey data)	Y (Table A3)
	Con Dao Islands	Selin & Latypov (2011)	Y (survey data)	Y (Table A3)
	Gulf of Siam and South Viet Nam	Latypov & Selin (2011)	Y (survey data)	Y (Table A3)
	Ku Lao Cham Islands	Latypov & Selin (2012a)	Y	
	Cam Ranh Bay	Latypov & Selin (2012b)	Y (survey data)	Y (Table A3)
	—	Latypov (2013)	Y (survey data)	Y (Table A3)
	Khanh Hoa Province	Latypov & Selin (2013)	Y (survey data)	Y
	—	Long & Vo (2013)	Y (survey data)	Cannot be easily retrieved
	—	Reef Check (1998–2006)	Y (survey data)	Y (Table A4)
Wallis and Futuna Islands	Wallis Island	Pollock (1992)	Y	
	Wallis Island	Borsa et al. (2015)	Y	
Yemen	—	PERSGA (2010)	Y (survey data)	Y (Table A3)
	Kamaran Island	Huber & Eschner (2011)	Y	
	—	Reef Check (1999, 2001, 2008)	Y (survey data)	Y (Table A4)

Note: Full reference list in Appendix B.

Table A2 Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Red Sea			
Djibouti	TM	Djibouti	PERSGA (2010)
	TS	Djibouti	PERSGA (2010)
Egypt	TM	Egypt	Wells et al. (1983); PERSGA (2010); Mekawy & Madkour (2012); Mekawy (2014)
		Coral carpets, Northern Bay of Safaga	Zuschin & Pillar (1997)
		Gulf of Aqaba	Kilada (1998); Zuschin & Stachowitsch (2007)
		Abu Sauatir, Northern Red Sea	Ullmann (2013)
	TS	Egypt	Wells et al. (1983); PERSA (2010)
		Gulf of Aqaba	Kilada (1998)
	TSI (previously TCO)	Sinai coast, western Gulf of Aqaba; Northern Red Sea, Egyptian mainland	Richter et al. (2008); Huber & Eschner (2011)
Eritrea	*Tridacna* spp.	No data	Reef Check
Israel	TM	Eilat (southernmost of Israel, Red Sea)	Flickr Eduardo Pszczol (2006)
	TS	Eilat (southernmost of Israel, Red Sea)	Flickr Eduardo Pszczol (2005)
	TSI (previously TCO)	Eilat (southernmost of Israel, Red Sea)	Flickr Eduardo Pszczol (2006)
Jordan	TM	Jordanian coast of Gulf of Aqaba	Roa-Quiaoit (2005); PERSGA (2010)
	TS	Jordanian coast of Gulf of Aqaba	Roa-Quiaoit (2005); PERSGA (2010)
	TSI (previously TCO)	Jordanian Red Sea coast	Richter et al. (2008); Huber & Eschner (2011)
	Tridacna spp.	Jordanian coast of Gulf of Aqaba	Al-Horani et al. (2006)
Saudi Arabia	TM	Jeddah	Hughes (1977); Bodoy (1984)
		Saudi Arabia	Wells et al. (1983); Munro (1989); PERSGA (2010)
	TS	Jeddah	Hughes (1977)
		Saudi Arabia	Wells et al. (1983); PERSGA (2010)
	TSI (previously TCO)	Aqaba, Tabouk	Flickr Magnus Franklin (2010)
Sudan	TM	Harvey reef, Towartit	Taylor & Reid (1984)
		Baraja (patch reef)	Taylor & Reid (1984)
		Sudan	PERSGA (2010)
	TS	Harvey reef, Towartit	Taylor & Reid (1984)
		Sudan	PERSGA (2010)
Yemen	TM	Yemen	PERSGA (2010)
	TS	Yemen	PERSGA (2010)
	TSI (previously TCO)	Kamaran Island	Huber & Eschner (2011)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
South-East Africa			
Comoros	TM	Itsandra Plongee	Flickr Eric de Troyer
	TS	Itsandra Plongee	Flickr Eric de Troyer
	Tridacna spp.	Nioumachouoi site and Ouenefou reef	Wilkinson (2000)
Kenya	TG?	Kenya	Accordi et al. (2010)
	TM	Kenya	Evans et al. (1977); Wells et al. (1983); Anam & Mostarda (2012)
	TS	Kenya	Wells et al. (1983); Anam & Mostarda (2012)
Madagascar	TG?	Andavadoaka region	Hopkins (2009)
	TM	Madagascar	Wells et al. (1983); Wells (2003), C. Gough (BlueVentures), pers. comm.
	TS	Madagascar	Wells et al. (1983); Wells (2003), C. Gough (BlueVentures), pers. comm.
		Northern Madagascar	Harding & Randriamanantsoa (2008)
		Southwestern Madagascar	Barnes & Rawlinson (2009)
	Tridacna spp.	Andavadoaka region	Harding et al. (2006)
	Giant clams	Andavadoaka region	Nadon et al. (2007)
Mauritius	TG?	Mauritius (Text: “specimen 92 cm long”)	Michel et al. (1985)
	TM	Mauritius	Wells et al. (1983); Michel et al. (1985)
		Rodrigues Island	Oliver et al. (2004)
	TS	Mauritius	Wells et al. (1983); Michel et al. (1985)
Mayotte	TM	Mayotte	Blog: Jana around the world; S. Andréfouët, pers. obs.
	TS	Mayotte	Blog: Jana around the world; S. Andréfouët, pers. obs.
Mozambique	TM	Mozambique	Wells et al. (1983)
		Azura Benguerra Island	Unknown
	TS	Mozambique	Wells et al. (1983)
		Quirimba Archipelago	Barnes et al. (1998)
		Paindane Coral Garden	P. Southwood, pers. comm. (2009)
	TSI (previously TCO)	Bazurato Island	Flickr Mark van Malsen (2008)
		Creche, Southern Mozambique	C. Lindeque, pers. comm. (2012)
		Inhambane Province	Flickr Vera & Gordon (2012)
		Mozambique	ReefBuilders.com (2015), N. Helgason, pers. comm. (2015)
La Réunion	TS	La Réunion	Flickr Cedric Peneau (2014)
Seychelles	TC	Coetivy Island	Selin et al. (1992)
	TM	Mahe	Taylor (1968); Selin et al. (1992)
		Seychelles	Wells et al. (1983)
		Aride Island Beach	Agombar et al. (2003)
		Silhouette Island	Gerlach & Gerlach (2004)
	TS	Mahe	Taylor (1968)
		Seychelles	Wells et al. (1983)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Seychelles *(Continued)*		Aride Island Beach	Agombar et al. (2003)
		Silhouette Island	Gerlach & Gerlach (2004)
Somalia	TM	Somalia	Sommer et al. (1996)
	TS	Somalia	Sommer et al. (1996)
	Tridacna spp.	Somalia	Pilcher & Alsuhaibany (2000)
South Africa	TM	South Africa	Wells et al. (1983); Munro (1989)
	TS	South Africa	Munro (1989)
Tanzania	TM	Kilwa Island	Nakamura (2013)
		Chumbe Island	Daniels (2004)
	TS	Zanzibar	Gossling et al. (2004)
		Chumbe Island	Daniels (2004)
Indian Ocean			
Cargados Carajos Archipelago	TLZ	Cargados Carajos Archipelago	Monsecour (2016)
	TM	Cargados Carajos Archipelago	Monsecour (2016)
	TS	Cargados Carajos Archipelago	Monsecour (2016)
Christmas Island	TC	Christmas Island	Sources found in Tan & Low (2014)
	TD	Christmas Island	Sources found in Tan & Low (2014)
	TG	Christmas Island (EXTINCT)	Andrews et al. (1900); Tomlin (1934); Wells & Slack-Smith (2000); Hourston (2010)
	TM	Christmas Island	Tomlin (1934); Wells & Slack-Smith (2000); Hourston (2010)
	TNO	Christmas Island	Neo & Low (2017)
	TS	Christmas Island	Wells & Slack-Smith (2000); Hourston (2010)
Cocos (Keeling) Islands (Australia Territory)	TC	Cocos (Keeling) Islands	Abbott (1950)
	TD	Cocos (Keeling) Islands	Maes (1967); Wells et al. (1983); Munro (1989); Wells (1994); Hourston (2010)
	TG	Cocos (Keeling) Islands (EXTINCT)	Wells (1994); Hender et al. (2001); Hourston (2010)
	TM	Cocos (Keeling) Islands	Maes (1967); Wells (1994); Australian Government (2005); Hourston (2010); Bellchambers & Evans (2013); Evans et al. (2016)
	TS	Cocos (Keeling) Islands (EXTINCT)	Gibson-Hill (1946)
British Indian Ocean Territory	TM	Chagos Archipelago	Wells et al. (1983); Sheppard (1984); Chagos Conservation Trust (2014)
	TS	Chagos Archipelago	Wells et al. (1983); Sheppard (1984); Chagos Conservation Trust (2014)
India	HH	Andaman Islands	Rosewater (1965)
		Nicobar Islands	Rosewater (1965)
	TC	Kavaratti	Namboodiri & Sivadas (1979)
		Andaman Islands	Ramadoss (1983)
		Nicobar Islands	Ramadoss (1983)
	TG	Andaman and Nicobar Islands	Apte et al. (2010)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
India *(Continued)*	TM	Andaman Islands	Ramadoss (1983); Wells et al. (1983); Munro (1989)
		Nicobar Islands	Ramadoss (1983); Munro (1989)
		Laccadives	Munro (1989)
		Lakshadweep Archipelago	George et al. (1986); Apte & Dutta (2010); Apte et al. (2010)
	TS	Andaman Islands	Ramadoss (1983); Munro (1989)
		Nicobar Islands	Ramadoss (1983); Munro (1989)
		Laccadives	Munro (1989)
Maldives	TM	Maldives	Wells et al. (1983)
		Central and northern atolls	Basker (1991)
		Baa Atoll	Andréfouët et al. (2012)
	TS	Maldives	Wells et al. (1983)
		Central and northern atolls	Basker (1991)
		Baa Atoll	Andréfouët et al. (2012)
Saya de Malha Bank	TR	Saya de Malha Bank	Sirenko & Scarlato (1991)
Sri Lanka	TM	Sri Lanka	Wells et al. (1983); Munro (1989)
	TS	Sri Lanka	Munro (1989)
East Asia			
China	TC	Sanya	Qi (2004)
		Xincun	Qi (2004)
	TM	China	Wells et al. (1983)
	TS	Hainan Island (Shalao, Xiaodonghai, Xizhou Islet, Dongzhou Islet, Yezhu Island)	Fiege et al. (1994)
		Sanya	Qi (2004)
		Xincun	Qi (2004)
	Tridacna spp.	Lunya Bay, Hainan Island	Hutchings & Wu (1987)
		Sanya waters	Tadashi et al. (2008)
Hong Kong	TM	Mirs Bay	Morton & Morton (1983)
Japan	HH	Ryukyu	Hirase (1954); Wells et al. (1983)
		Okinawa	Bernard et al. (1993); Okada (1997)
	TC	Amami-oshima	Hirase (1954); Miklos Kazmer, pers. comm. (2015)
		Ishigaki	Kanno et al. (1976)
		Ryukyu	Wells et al. (1983); Munro (1989)
		Okinawa	Bernard et al. (1993); Okada (1997)
		Sesoko Island, Okinawa	Flickr Jin-Yao Ong (2013)
	TG	Yaeyama, Ryukyu	Hirase (1954); Wells et al. (1983)
	TM	Amami-oshima	Hirase (1954)
		Ishigaki	Kanno et al. (1976)
		Japan	Wells et al. (1983)
		Ryukyu (EXTINCT)	Munro (1989)
		Okinawa	Bernard et al. (1993); Okada (1997)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Japan *(Continued)*		Ogasawara National Park (Chichi and Haha Islands)	Fujiwara et al. (2000)
		Tokashiki-son, Okinawa	Flickr Nemo's great uncle (2009)
		Clothesline, Okinawa	Flickr chino1138 (2012)
	TNO	Okinawa and Ishigaki Islands	Kubo & Iwai (2007)
	TS	Ryukyu	Hirase (1954); Munro (1989)
		Ishigaki	Kanno et al. (1976)
		Japan	Wells et al. (1983)
		Okinawa	Bernard et al. (1993); Okada (1997)
Taiwan	HH	EXTINCT	Bernard et al. (1993); Munro (1989)
		Hengchun, Lanyu	Wu (1999)
	TC	Taiwan	Bernard et al. (1993)
		Hengchun, Lanyu	Wu (1999)
		Gueishan Island	Huang et al. (2013)
	TD	EXTINCT	Bernard et al. (1993)
		Hengchun, Lanyu	Wu (1999)
	TG	EXTINCT	Bernard et al. (1993); Munro (1989)
		Hengchun, Lanyu	Wu (1999)
		Gueishan Island	Huang et al. (2013)
	TM	Taiwan	Wells et al. (1983); Bernard et al. (1993)
		Taipei, Suao, Daikanko, Kaohsiung, Shaoliuchiu, Penghu, Hengchun, Lanyu	Wu (1999)
		Gueishan Island	Huang et al. (2013)
		Lamay Island	Flickr Dennis Wong (2013)
		Lanyu, Orchid Island	Flickr Blowing Puffer Fish (2015)
	TNO	Northern and Southern Taiwan, Orchid Island, Green Island, Hsiaoliuchiu, Penghu	Tang (2005); Su et al. (2014)
	TS	Taiwan	Bernard et al. (1993)
		Hengchun, Lanyu	Wu (1999)
		Green Island	Flickr Michael Huang (2007); Flickr rcmlee99 (2015)
South China Sea	HH	Xisha Islands (Paracel Islands)	Zhuang (1978); Pan & Lan (1998); Qi (2004)
		Xisha (Paracel Islands) and Nansha Islands (Spratly Islands)	Bernard et al. (1993); Liu (2013)
		Pulau Layang Layang (Swallow Reef)	Sahari et al. (2002)
		North Danger Reef (Spratly Islands)	Calumpong et al. (2008); Calumpong & Macansantos (2008)
		Jackson Atoll (Spratly Islands)	Calumpong et al. (2008)
		Taiping Island (Itu Aba Island)	A Frontier in the SCS (2014)
	TC	Xisha Islands (Paracel Islands)	Zhuang (1978); Qi (2004)
		Nansha Islands (Spratly Islands)	Bernard et al. (1993); Liu (2013)
		Pulau Layang Layang (Swallow Reef)	Sahari et al. (2002)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
South China Sea *(Continued)*		North Spratly Islands	Van Long et al. (2008)
		North Danger Reef (Spratly Islands)	Calumpong et al. (2008); Lasola & Hoang (2008); Calumpong & Macansantos (2008)
		Jackson Atoll (Spratly Islands)	Calumpong et al. (2008); Calumpong & Macansantos (2008)
		Trident Shoal (Spratly Islands)	Lasola & Hoang (2008)
		Taiping Island (Itu Aba Island)	A Frontier in the SCS (2014)
	TD	Xisha Islands (Paracel Islands)	Zhuang (1978); Qi (2004)
		Xisha (Paracel Islands) and Nansha Islands (Spratly Islands)	Bernard et al. (1993); Liu (2013)
	TG	Xisha Islands (Paracel Islands)	Zhuang (1978); Qi (2004)
		Xisha (Paracel Islands) and Nansha Islands (Spratly Islands)	Bernard et al. (1993); Liu (2013)
		Pulau Layang Layang (Swallow Reef)	Sahari et al. (2002)
	TM	Xisha Islands (Paracel Islands)	Zhuang (1978); Qi (2004)
		Xisha (Paracel Islands) and Nansha Islands (Spratly Islands)	Bernard et al. (1993); Liu (2013)
		Pulau Layang Layang (Swallow Reef)	Sahari et al. (2002)
		North Danger Reef (Spratly Islands)	Calumpong et al. (2008); Calumpong & Macansantos (2008)
		Jackson Atoll (Spratly Islands)	Calumpong et al. (2008); Calumpong & Macansantos (2008)
		Taiping Island (Itu Aba Island)	A Frontier in the SCS (2014)
	TNO	Dongsha Atoll (Pratas Islands)	Borsa et al. (2015)
	TS	Xisha Islands (Paracel Islands)	Zhuang (1978); Qi (2004)
		Xisha (Paracel Islands) and Nansha Islands (Spratly Islands)	Bernard et al. (1993); Liu (2013)
		Pulau Layang Layang (Swallow Reef)	Sahari et al. (2002)
		North Spratly Islands	Van Long et al. (2008)
		North Danger Reef (Spratly Islands)	Calumpong et al. (2008); Lasola & Hoang (2008); Calumpong & Macansantos (2008)
		Jackson Atoll (Spratly Islands)	Calumpong et al. (2008); Calumpong & Macansantos (2008)
		Trident Shoal (Spratly Islands)	Lasola & Hoang (2008)
		Taiping Island (Itu Aba Island)	A Frontier in the SCS (2014)
South-East Asia			
Brunei	*Tridacna* spp.	No data	Reef Check
Cambodia	TG?	Song Saa Private Island, Koh Rong Archipelago	Savage et al. (2013)
		Koh Rong and Koh Koun, Koh Rong Archipelago	Thorne et al. (2015)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Cambodia *(Continued)*	TC	Song Saa Private Island, Koh Rong Archipelago	J.M. Savage, pers. comm.
	TS	Song Saa Private Island, Koh Rong Archipelago	J. Wong, pers. comm.
	Tridacna spp.	Cambodia	Chou et al. (2002)
		Koh Kong	Vibol (N.D.); Kim et al. (2004)
		Koh Sdach	Vibol (N.D.); Kim et al. (2004)
		Koh Rong	Vibol (N.D.); Kim et al. (2004); Van Bochove et al. (2011)
		Koh Tang	Vibol (N.D.); Kim et al. (2004)
East Timor	TC	Dili Rock	Flickr Nick Hobgood (2006)
	TG	Dili Rock	Flickr Nick Hobgood (2006)
	TNO	Dili Rock	Flickr Nick Hobgood (2006)
Indonesia	HH	Indonesia	Wells et al. (1983); Pasaribu (1988); Munro (1989)
		Karimun Jawa, Central Indonesia	Brown & Muskanofola (1985)
		Genting Island	Pringgenies et al. (1995)
		Gulf of Tomini, Sulawesi	Wells (2001)
		Rajah Ampat Islands, Papua Province	Wells (2002); Flickr Raja Ampat Biodiversity (2013)
		Pari Island	Eliata et al. (2003); Panggabean (2007)
		Kei Kecil waters, Southeast Maluku	Kusnadi et al. (2008); Hernawan (2010)
		Savu Sea, East Nusa Tenggara Province	Naguit et al. (2012)
	HP	Northeastern Indonesia	Wells et al. (1983); Pasaribu (1988); Munro (1989)
		Seruni Island	Pringgenies et al. (1995)
		Gulf of Tomini, Sulawesi	Wells (2001)
		Rajah Ampat Islands, Papua Province	Wells (2002)
	TC	Indonesia	Wells et al. (1983); Pasaribu (1988); Munro (1989)
		Karimun Jawa, Central Indonesia	Brown & Muskanofola (1985)
		Genting Island	Pringgenies et al. (1995)
		Seruni Island	Pringgenies et al. (1995)
		Sambangan Island	Pringgenies et al. (1995)
		Gulf of Tomini, Sulawesi	Wells (2001)
		Rajah Ampat Islands, Papua Province	Wells (2002)
		Pari Island	Eliata et al. (2003)
		Seribu Islands	Yusuf et al. (2009)
		Manado waters	Yusuf et al. (2009)
		Kei Kecil waters, Southeast Maluku	Kusnadi et al. (2008); Hernawan (2010)
		Savu Sea, East Nusa Tenggara Province	Naguit et al. (2012)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Indonesia *(Continued)*	TD	Irian Jaya	Wells et al. (1983)
		Indonesia	Wells et al. (1983); Pasaribu (1988); Munro (1989)
		Karimun Jawa, Central Indonesia	Brown & Muskanofola (1985)
		Rajah Ampat Islands, Papua Province	Wells (2002)
		Kei Kecil waters, Southeast Maluku	Hernawan (2010)
		Komodo	Flickr yudas_net (2009)
	TG	Indonesia	Wells et al. (1983); Pasaribu (1988); Munro (1989)
		Karimun Jawa, Central Indonesia	Brown & Muskanofola (1985)
		Gulf of Tomini, Sulawesi	Wells (2001)
		Rajah Ampat Islands, Papua Province	Wells (2002)
		Bunaken, Manado waters	Yusuf et al. (2009); Flickr Matt Kieffer (2010)
		Kei Kecil waters, Southeast Maluku	Kusnadi et al. (2008); Hernawan (2010)
		Kri Island, Irian Jaya	Flickr Eric Cheng (2004)
		Current City, Komodo	Flickr Maximilian Hand (2008)
		West Papua	Flickr Paul Cowell (2011)
	TM	Indonesia	Wells et al. (1983); Pasaribu (1988); Munro (1989)
		Karimun Jawa, Central Indonesia	Brown & Muskanofola (1985)
		Genting Island	Pringgenies et al. (1995)
		Seruni Island	Pringgenies et al. (1995)
		Sambangan Island	Pringgenies et al. (1995)
		Gulf of Tomini, Sulawesi	Wells (2001)
		Rajah Ampat Islands, Papua Province	Wells (2002)
		Pari Island	Eliata et al. (2003)
		Anambas and Natuna Islands	Tan & Kastoro (2004); Flickr Fauzan Rizki (2015)
		Seribu Islands	Yusuf et al. (2009)
		Manado waters	Yusuf et al. (2009)
		Kei Kecil waters, Southeast Maluku	Hernawan (2010)
		Savu Sea, East Nusa Tenggara Province	Naguit et al. (2012)
		Komodo National Park, East Nusa Tenggara	Flickr Nick Hobgood (2006)
	TNO	Bunaken and Alor Archipelago	Borsa et al. (2015)
		Doi Island, Molucca Sea	Borsa et al. (2015)
	TS	Indonesia	Wells et al. (1983); Pasaribu (1988); Munro (1989)
		Karimun Jawa, Central Indonesia	Brown & Muskanofola (1985)
		Gulf of Tomini, Sulawesi	Wells (2001)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Indonesia *(Continued)*		Rajah Ampat Islands, Papua Province	Wells (2002)
		Pari Island	Eliata et al. (2003)
		Seribu Islands	Yusuf et al. (2009)
		Manado waters	Yusuf et al. (2009)
		Kei Kecil waters, Southeast Maluku	Kusnadi et al. (2008); Hernawan (2010)
		Savu Sea, East Nusa Tenggara Province	Naguit et al. (2012)
		Wakatobi	Flickr Richard Johnson (2007)
		Aceh	Flickr iderq_shai (2010)
		Komodo	Flickr Brandon (2011)
		Cenderawasih Bay	Flickr lcn2012a (2012)
		West Papua	Flickr Sailendivers (2012)
Malaysia	HP	Sabah, East Malaysia	Tan & Zulfigar (2001, 2003)
	HH	North Borneo	Wells et al. (1983)
		Malaysia	Munro (1989); Tan & Zulfigar (2001, 2003)
		Johore Islands	Zulfigar & Tan (2000)
	TC	Western coast of the Malay Peninsula	Wells et al. (1983)
		North Borneo	Wells et al. (1983)
		Malaysia	Munro (1989); Tan & Zulfigar (2001, 2003)
		Pulau Redang (Terengganu)	Mohamed-Pauzi et al. (1994)
		Pulau Tioman (Pahang)	Tan et al. (1998)
		Johore Islands	Zulfigar & Tan (2000)
	TD	Sabah, East Malaysia	Tan & Zulfigar (2003)
	TG	Malaysia	Munro (1989); Tan & Zulfigar (2001, 2003)
		Pulau Redang (Terengganu)	Mohamed-Pauzi et al. (1994)
		Pulau Tioman (Pahang)	Tan et al. (1998)
	TM	Malaysia	Wells et al. (1983); Munro (1989); Tan & Zulfigar (2001, 2003)
		North Borneo	Wells et al. (1983)
		Pulau Redang (Terengganu)	Mohamed-Pauzi et al. (1994)
		Pulau Tioman (Pahang)	Tan et al. (1998)
		Johore Islands	Zulfigar & Tan (2000)
	TS	Malaysia	Wells et al. (1983); Munro (1989); Tan & Zulfigar (2001, 2003)
		North Borneo	Wells et al. (1983)
		Pulau Redang (Terengganu)	Mohamed-Pauzi et al. (1994)
		Pulau Tioman (Pahang)	Tan et al. (1998)
		Johore Islands	Zulfigar & Tan (2000)
	Tridacna spp.	Tun Sakaran Marine Park, East Sabah	Montagne et al. (2013)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Myanmar (Burma)	HH	Burma	Munro (1989); Wells (1997)
	TG	Burma	Munro (1989)
	TM	Burma	Munro (1989)
	TS	Burma	Munro (1989)
Philippines	HH	Philippines	Wells et al. (1983); Gomez & Alcala (1988); Juinio et al. (1989); Munro (1989)
		Central Visayas	Alcala (1986)
		Palawan	Alcala (1986)
		Cagayan	Alcala (1986)
		Sulu Archipelago and Southern Palawan	Villanoy et al. (1988)
		Tubbataha	Dolorosa & Schoppe (2005); Dolorosa (2010); Dolorosa et al. (2015)
		Hadji Panglima Tahil, Sulu	Tabugo et al. (2013)
	HP	Sulu Archipelago, Southern Philippines	Rosewater (1982); Wells et al. (1983); Gomez & Alcala (1988); Juinio et al. (1989); Munro (1989)
		Cagayan	Alcala (1986)
		Tubbataha	Calumpong & Cadiz (1993); Dolorosa (2010); Dolorosa & Jontila (2012); Dolorosa et al. (2014, 2015)
		Sulu Archipelago and Southern Palawan	Villanoy et al. (1988)
	TC	Philippines	Wells et al. (1983); Gomez & Alcala (1988); Juinio et al. (1989); Munro (1989)
		Central Visayas	Alcala (1986)
		Western Visayas	Alcala (1986)
		Palawan	Alcala (1986)
		Cagayan	Alcala (1986); Calumpong & Cadiz (1993)
		Tubbataha	Calumpong & Cadiz (1993); Dolorosa & Schoppe (2005); Dolorosa (2010); Dolorosa & Jontila (2012); Gonzales et al. (2014b); Dolorosa et al. (2015); Conales et al. (2015)
		Sumilon Island	Calumpong & Cadiz (1993)
		Balicasag Island	Calumpong & Cadiz (1993)
		Pamilacan Island	Calumpong & Cadiz (1993)
		Bolisong, Negros Oriental	Calumpong et al. (2002)
	TD	Philippines	Wells et al. (1983); Gomez & Alcala (1988); Juinio et al. (1989); Munro (1989)
		Palawan	Alcala (1986)
		Cagayan	Alcala (1986)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Philippines *(Continued)*		Tubbataha	Dolorosa et al. (2010, 2015)
		Sabang Reef Fish Sanctuary, Honda Bay, Palawan	Gonzales et al. (2014a)
	TG	Philippines	Wells et al. (1983); Gomez & Alcala (1988); Juinio et al. (1989); Munro (1989)
		Palawan	Alcala (1986)
		Cagayan	Alcala (1986)
		Sulu Archipelago and Southern Palawan	Villanoy et al. (1988)
		Sabang Reef Fish Sanctuary, Honda Bay, Palawan	Gonzales et al. (2014a)
		Tubbataha	Dolorosa et al. (2015)
	TM	Philippines	Wells et al. (1983); Gomez & Alcala (1988); Junio et al. (1989); Munro (1989)
		Central Visayas	Alcala (1986)
		Western Visayas	Alcala (1986)
		Palawan	Alcala (1986)
		Cagayan	Alcala (1986); Calumpong & Cadiz (1993)
		Tubbataha	Calumpong & Cadiz (1993); Dolorosa & Schoppe (2005); Dolorosa (2010); Dolorosa & Jontila (2012); Dolorosa et al. (2015)
		Sumilon Island	Calumpong & Cadiz (1993)
		Apo Island	Calumpong et al. (2002)
	TNO	Sibulan, Negros (Lizano & Santos, 2014)	Borsa et al. (2015)
	TS	Philippines	Wells et al. (1983); Gomez & Alcala (1988); Juinio et al. (1989); Munro (1989)
		Central Visayas	Alcala (1986)
		Western Visayas	Alcala (1986)
		Palawan	Alcala (1986)
		Cagayan	Alcala (1986)
		Sulu Archipelago and Southern Palawan	Villanoy et al. (1988)
		Tubbataha	Calumpong & Cadiz (1993); Dolorosa & Schoppe (2005); Dolorosa (2010); Dolorosa & Jontila (2012); Dolorosa et al. (2015)
		Bolisong, Negros Oriental	Calumpong et al. (2002)
		Apo Island	Calumpong et al. (2002)
		Hadji Panglima Tahil, Sulu	Tabugo et al. (2013)
		Sabang Reef Fish Sanctuary, Honda Bay, Palawan	Gonzales et al. (2014a)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Singapore	HH	Singapore	Wells et al. (1983); Munro (1989); Neo & Todd (2012a,b, 2013)
	TC	Singapore	Wells et al. (1983); Munro (1989); Guest et al. (2008); Neo & Todd (2012a,b, 2013)
	TG	Singapore	Neo & Todd (2012a,b, 2013)
	TM	Singapore	Munro (1989); Guest et al. (2008); Neo & Todd (2012a,b, 2013)
	TS	Singapore	Munro (1989); Guest et al. (2008); Neo & Todd (2012a,b, 2013)
Thailand	TC	Thailand	Wells et al. (1983); Munro (1989)
		Lee-Pae Island	Chantrapornsyl et al. (1996)
		Surin Islands	Koh et al. (2003); Loh et al. (2004)
		Mannai Island, Rayong Province	Junchompoo et al. (2013)
	TG	Thailand	Munro (1989)
		EXTINCT	Kittiwattanawong (2001)
	TM	Thailand	Wells et al. (1983); Munro (1989)
		Lee-Pae Island	Chantrapornsyl et al. (1996)
		Surin Islands	Kittiwattanawong (1997); Koh et al. (2003)
		Phuket Islands	Kittiwattanawong (1997)
		Adang Rawii Islands	Kittiwattanawong (1997)
	TS	Thailand	Wells et al. (1983); Munro (1989)
		Lee-Pae Island	Chantrapornsyl et al. (1996)
		Surin Islands	Kittiwattanawong et al. (2001); Koh et al. (2003)
		Gulf of Thailand	Kittiwattanawong et al. (2001)
		Mannai Island, Rayong Province	Junchompoo et al. (2013)
Viet Nam	TC	An Thoi Archipelago, South China Sea	Latypov (2000)
		Mju Island	Latypov (2006)
		Hon Bay Canh Island and Hon Cau Island, Con Dao	Latypov & Selin (2011)
		Con Dao Archipelago	Selin & Latypov (2011)
		Khanh Hoa Province	Latypov & Selin (2013)
		Giang Bo Reef	Latypov (2013)
		Re Island	Latypov (2013)
		Bath Long Vi Reef	Latypov (2013)
	TG	Ha Long Bay (shells)	M.L. Neo, pers. obs. (2014)
	TM	Cham Islands, Central Viet Nam	Latypov (2001)
		Tho Chau, Con Dao, Thu Islands	Latypov & Selin (2011)
		Ku Lao Cham Islands	Latypov & Selin (2012a)
		Hon Nai Island, Cam Ranh Bay	Latypov & Selin (2012b)
	TS	An Thoi Archipelago, South China Sea	Latypov (2000)
		Tho Chau, Con Dao, Thu Islands	Latypov & Selin (2011)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Viet Nam *(Continued)*		Khanh Hoa Province	Latypov & Selin (2013)
		Giang Bo Reef	Latypov (2013)
		Re Island	Latypov (2013)
		Bath Long Vi Reef	Latypov (2013)
Australia			
Australia	HH	Western Australia	Wells et al. (1983); Rees et al. (2003)
		Queensland	Wells et al. (1983)
		Australia	Munro (1989)
	TC	Orpheus Island, Palm Island Group, Queensland	Hamner & Jones (1976)
		Great Barrier Reef, Queensland	Wells et al. (1983)
		Australia	Munro (1989)
		Western Australia	Rees et al. (2003)
	TD	Australia	Wells et al. (1983); Munro (1989)
		Great Barrier Reef, Queensland	Braley (1987a,b); Alder & Braley (1989); Pearson & Munro (1991)
		Western Australia	Rees et al. (2003)
	TG	Western Australia	Wells et al. (1983); Rees et al. (2003)
		Great Barrier Reef, Queensland	Wells et al. (1983); Braley (1987a,b); Alder & Braley (1989); Pearson & Munro (1991)
		Australia	Munro (1989)
		Heron Island, southern Great Barrier Reef	Strotz et al. (2010)
	TM	One Tree Island, Queensland	McMichael (1974)
		Australia	Wells et al. (1983); Munro (1989)
		Lord Howe Island, New South Wales	Wells et al. (1983)
		Western Australia	Rees et al. (2003)
		Montebello Islands, Western Australia	Wells et al. (2000)
		Solitary Islands Marine Park, northern New South Wales	Smith (2011)
	TMB (previously TT)	No data	Newman & Gomez (2000)
	TNI (now TNO)	Five Finger Reef, south of Coral Bay, WA	Penny & Willan (2014); Borsa et al. (2015)
	TNO	Western Australia (Huelsken et al., 2013)	Borsa et al. (2015)
		Ningaloo Marine Park, WA	Black et al. (2011); Johnson et al. (2016)
	TS	Australia	Wells et al. (1983); Munro (1989)
		Montebello Islands, Western Australia	Wells et al. (2000)
		Western Australia	Rees et al. (2003)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Pacific Ocean			
Melanesia			
Fiji	HH	EXTINCT	Wells et al. (1983); Munro (1989); Tisdell & Wittenberg (1992); Seeto et al. (2012)
	TC	Lakeba Island	Vuki et al. (1992)
		Cicia Island	Vuki et al. (1992)
	TD	Fiji	Lewis et al. (1988); Munro (1989); Tacconi & Tisdell (1992b); Tisdell & Wittenberg (1992)
		Lakeba Island	Vuki et al. (1992)
		Tuvuca Island	Vuki et al. (1992)
		Cicia Island	Vuki et al. (1992)
		Balavu Island	Vuki et al. (1992)
		Ono Island	Flickr avipoodle (2010)
	TG	EXTINCT	Lewis et al. (1988); Munro (1989); Tisdell & Wittenberg (1992)
		Fiji	Flickr Jex207 (2007)
	TM	Fiji	Wells et al. (1983); Lewis et al. (1988); Munro (1989); Tacconi & Tisdell (1992b); Tisdell & Wittenberg (1992)
		Lakeba Island	Vuki et al. (1992)
		Tuvuca Island	Vuki et al. (1992)
		Cicia Island	Vuki et al. (1992)
		Balavu Island	Vuki et al. (1992)
	TNO	Moon Reef, Viti Levu	Borsa et al. (2015)
		Bega Lagoon Resort	Flickr CrashDiver (2010); Flickr scuba_dot_com (2014)
	TS	Fiji	Wells et al. (1983); Lewis et al. (1988); Munro (1989); Tacconi & Tisdell (1992b); Tisdell & Wittenberg (1992)
		Lakeba Island	Vuki et al. (1992)
		Tuvuca Island	Vuki et al. (1992)
		Cicia Island	Vuki et al. (1992)
		Balavu Island	Vuki et al. (1992)
		Wakaya, Koro Sea	Flickr Paul & Jill (2011)
	TMB (previously TT)	Eastern Islands (Lau)	Lewis & Ledua (1988); Lucas et al. (1991); Ledua et al. (1993)
		Fiji	Tacconi & Tisdell (1992b)
		Matokana	Ledua et al. (1993)
New Caledonia	HH	New Caledonia	Wells et al. (1983); Munro (1989); Dumas et al. (2011, 2013)
		North Eastern Lagoon (Poeubo to Hienghène)	McKenna et al. (2006)
		Bourail	Wantiez et al. (2007c)
		Grand Lagon Nord	Wantiez et al. (2008a)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
New Caledonia *(Continued)*		Ducos Island, Bay of Saint Vincent	Aubert et al. (2009)
		Ioro Reef	Schwartzmann et al. (2011)
	TC	North Eastern Lagoon (Poeubo to Hienghène)	McKenna et al. (2006)
		Poum	Vieux (2009)
		Bourail	Wantiez et al. (2007c)
		Grand Lagon Nord	Wantiez et al. (2008a)
		Merlet	Wantiez et al. (2008b)
		New Caledonia	Dumas et al. (2011)
	TD	New Caledonia	Wells et al. (1983); Munro (1989); Purcell et al. (2009); Dumas et al. (2011)
		North Eastern Lagoon (Poeubo to Hienghène)	McKenna et al. (2006)
		Corne Sud	Wantiez et al. (2007a)
		Ile des Pins	Wantiez et al. (2007b)
		Bourail	Wantiez et al. (2007c)
		Grand Lagon Nord	Wantiez et al. (2008a)
		Merlet	Wantiez et al. (2008b)
	TG	FOSSIL TG FOUND / EXTINCT	Munro (1989)
	TM	New Caledonia	Wells et al. (1983); Munro (1989); Purcell et al. (2009); Dumas et al. (2011, 2013)
		North Eastern Lagoon (Poeubo to Hienghène)	McKenna et al. (2006)
		Poum	Vieux (2009)
		Corne Sud	Wantiez et al. (2007a)
		Ile des Pins	Wantiez et al. (2007b)
		Bourail	Wantiez et al. (2007c)
		Grand Lagon Nord	Wantiez et al. (2008a)
		Merlet	Wantiez et al. (2008b)
	TMB (previously TT)	Loyalty Islands	Bouchet et al. (2001); Tiavouane & Fauvelot (2016)
	TNO	Loyalty Islands	Borsa et al. (2015)
		Hienghene, northeastern coast	Borsa et al. (2015)
	TS	New Caledonia	Wells et al. (1983); Munro (1989); Purcell et al. (2009); Dumas et al. (2011, 2013)
		North Eastern Lagoon (Poeubo to Hienghène)	McKenna et al. (2006)
		Poum	Vieux (2009)
		Corne Sud	Wantiez et al. (2007a)
		Ile des Pins	Wantiez et al. (2007b)
		Bourail	Wantiez et al. (2007c)
		Grand Lagon Nord	Wantiez et al. (2008a)
		Merlet	Wantiez et al. (2008b)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Papua New Guinea	HH	PNG	Wells et al. (1983); Munro (1989)
		Milne Bay Province	Kinch (2001, 2002); Wells & Kinch (2003)
	HP	Milne Bay Province	Kinch (2001, 2002)
	TC	PNG	Wells et al. (1983)
		Milne Bay Province	Kinch (2001, 2002); Wells & Kinch (2003)
	TD	PNG	Wells et al. (1983); Munro (1989)
		Milne Bay Province	Kinch (2002); Wells & Kinch (2003)
	TG	PNG	Wells et al. (1983); Munro (1989)
		Milne Bay Province	Kinch (2001, 2002); Wells & Kinch (2003)
	TM	PNG	Wells et al. (1983); Munro (1989)
		Milne Bay Province	Kinch (2001, 2002); Wells & Kinch (2003)
	TNO	Madang Province, Kavieng	Borsa et al. (2015)
	TS	PNG	Wells et al. (1983); Munro (1989)
		Milne Bay Province	Kinch (2001, 2002); Wells & Kinch (2003)
Solomon Islands	HH	Solomon Islands	Wells et al. (1983); Govan et al. (1988); Munro (1989); Ramohia (2006)
		Bellona (Mungiki) Island	Thaman et al. (2011)
	TC	Solomon Islands	Wells et al. (1983); Govan et al. (1988); Munro (1989); Ramohia (2006)
		Bellona (Mungiki) Island	Thaman et al. (2011)
	TD	Solomon Islands	Govan et al. (1988); Munro (1989); Ramohia (2006)
		Bellona (Mungiki) Island	Thaman et al. (2011)
	TG	Solomon Islands	Wells et al. (1983); Govan et al. (1988); Munro (1989); Ramohia (2006); Flickr Artefacque (2014)
		Bellona (Mungiki) Island	Thaman et al. (2011)
		Arnavon Island	Flickr LMMA Network (2006)
	TM	Solomon Islands	Wells et al. (1983); Govan et al. (1988); Munro (1989); Ramohia (2006)
		Bellona (Mungiki) Island	Thaman et al. (2011)
		Gizo	Flickr Shea Pletz (2011)
	TNO	Solomon Islands (Huelsken et al., 2013)	Borsa et al. (2015)
	TS	Solomon Islands	Govan et al. (1988); Munro (1989); Ramohia (2006)
		Bellona (Mungiki) Island	Thaman et al. (2011)
		Bulo Island, off SE Gatokae Island, Mbatuna	Flickr Jose B (2015)
Vanuatu (and New Hebrides)	HH	Vanuatu (and New Hebrides)	Wells et al. (1983); Munro (1989); Zann & Ayling (1988); Bell & Amos (1993)
	TC	Vanuatu	Zann & Ayling (1988); Bell & Amos (1993)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Vanuatu (and New Hebrides) *(Continued)*	TD	EXTINCT	Munro (1989); Bell & Amos (1993)
	TG	EXTINCT	Wells et al. (1983); Munro (1989); Bell & Amos (1993)
	TM	Vanuatu (and New Hebrides)	Wells et al. (1983); Munro (1989); Zann & Ayling (1988); Bell & Amos (1993)
	TNO	Efate	Borsa et al. (2015)
	TS	Vanuatu	Munro (1989); Zann & Ayling (1988); Bell & Amos (1993)
Micronesia			
Federated States of Micronesia (FSM)	HH	LOW NUMBERS (REINTRODUCTION)	Munro (1989); Smith (1992)
	TD	NO WILD STOCKS (INTRODUCTION)	Munro (1989); Smith (1992)
	TG	Lamotrek and West Fayu Atolls (relict)	Price & Fagolimul (1988); Munro (1989)
		FSM	Smith (1992)
	TM	FSM	Munro (1989); Smith (1992)
	TNO	Kosrae, part of the Caroline Islands	Borsa et al. (2015)
	TS	FSM	Munro (1989); Smith (1992)
Guam	HH	EXTINCT	Munro (1989); Anonymous (1994); Paulay (2003)
	TD	INTRODUCED FROM PALAU	Wells et al. (1983); Anonymous (1994); Paulay (2003)
	TG	EXTINCT	Munro (1989); Anonymous (1994); Paulay (2003)
	TM	Guam	Munro (1989); Stojkovich (1977); Anonymous (1994); Paulay (2003)
		Mariana Islands	Flickr NOAA Photo Library, David Burdick (2010)
	TS	Guam	Anonymous (1994); Paulay (2003)
		Cocos West Island	Flickr GingrichCrew (2011)
Republic of Kiribati	HH	Gilbert Islands	Wells et al. (1983); Munro (1988, 1989); Thomas (2001)
		Kiribati Islands	Taniera (1988); Thomas (2014)
	TG	Gilbert Islands	Wells et al. (1983); Munro (1988, 1989); Thomas (2001)
		Kiribati Islands	Taniera (1988); Thomas (2014)
	TM	Fanning Island	Kay (1970)
		Gilbert Islands	Wells et al. (1983); Munro (1988, 1989); Kepler & Kepler (1994); Thomas (2001)
		Northern Line Islands	Kay (1970); Wells et al. (1983); Munro (1989); Sandin et al. (2008); Williams et al. (2013)
		Phoenix Islands	Munro (1989)
		Kiribati Islands	Taniera (1988); Thomas (2014)
		Millennium Atoll Lagoon	Barott et al. (2010)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Republic of Kiribati *(Continued)*	TNO	Kiritimati, Northern Line Islands	Borsa et al. (2015)
	TS	Gilbert Islands	Wells et al. (1983); Munro (1988,t 1989); Thomas (2001)
		Kiribati Islands	Taniera (1988)
Marshall Islands	HH	Marshall Islands	Wells et al. (1983); Munro (1989); Pinca & Beger (2002)
		Rongelap Atoll	Pinca & Beger (2003)
		Namu Atoll	Beger et al. (2008)
	TD	INTRODUCED FROM PALAU	Munro (1989); Pinca & Beger (2002)
		Mili Atoll	Pinca & Beger (2003)
		Rongelap Atoll	Pinca & Beger (2003)
		Arno Atoll	Beger et al. (2008)
	TG	Marshall Islands	Wells et al. (1983); Munro (1989); Pinca & Beger (2002)
		Mili Atoll	Pinca & Beger (2003)
		Rongelap Atoll	Pinca & Beger (2003)
		Namu Atoll	Beger et al. (2008)
	TM	Marshall Islands	Wells et al. (1983); Munro (1989); Pinca & Beger (2002)
		Mili Atoll	Pinca & Beger (2003)
		Rongelap Atoll	Pinca & Beger (2003)
		Namu Atoll	Beger et al. (2008)
		Majuro Atoll	Beger et al. (2008)
	TS	Marshall Islands	Wells et al. (1983); Munro (1989); Pinca & Beger (2002)
		Mili Atoll	Pinca & Beger (2003)
		Rongelap Atoll	Pinca & Beger (2003)
		Namu Atoll	Beger et al. (2008)
		Majuro Atoll	Beger et al. (2008)
Nauru	TM	LOCALLY EXTINCT	Jacob (2000); South & Skelton (2000)
Northern Mariana Islands	HH	LOCALLY EXTINCT	Munro (1989)
	TC	POSSIBLY EXTINCT	IUCN Red List
	TD	POSSIBLY EXTINCT	IUCN Red List
	TG	LOCALLY EXTINCT	Munro (1989)
	TM	Mariana Islands	Wells et al. (1983); Munro (1989)
		Maug Island, Marianas Trench Marine National Monument	Flickr lucidlou (2007)
		Saipan Island	Flickr Chris (2008)
	TS	Mariana Islands	Wells et al. (1983)
Palau	HH	Caroline Islands	Hardy & Hardy (1969); Hester & Jones (1974); Bryan & McConnell (1976); Hirshberger (1980); Wells et al. (1983)
		Palau	Wells et al. (1983); Munro (1989)
	HP	Palau	Munro (1989)
	TC	Caroline Islands	Hardy & Hardy (1969); Hester & Jones (1974); Wells et al. (1983)
		Palau	Munro (1989)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Palau *(Continued)*	TD	Caroline Islands	Hardy & Hardy (1969); Hester & Jones (1974); Bryan & McConnell (1976); Hirshberger (1980); Wells et al. (1983)
		Palau	Munro (1989)
	TG	Caroline Islands	Hardy & Hardy (1969); Hester & Jones (1974); Bryan & McConnell (1976); Hirshberger (1980); Wells et al. (1983)
		Palau	Munro (1989)
	TM	Caroline Islands	Hardy & Hardy (1969); Hester & Jones (1974); Bryan & McConnell (1976); Hirshberger (1980); Wells et al. (1983)
		Palau	Munro (1989)
	TS	Caroline Islands	Hardy & Hardy (1969); Hester & Jones (1974); Bryan & McConnell (1976); Hirshberger (1980); Wells et al. (1983)
		Palau	Munro (1989)
United States Minor Outlying Islands	TM	Wake Island	Wells et al. (1983)
Polynesia			
American Samoa	HH	LOCALLY EXTINCT and REINTRODUCED	Nagaoka (1993); Craig (2009)
	TD	INTRODUCED	Bell (1993)
	TG	INTRODUCED	Bell (1993)
	TM	Rose Atoll	Radtke (1985); Munro (1989); Green & Craig (1999); Craig (2009)
	TS	American Samoa	Munro (1989); Craig (2009)
Cook Islands	TD	INTRODUCED FROM PALAU	Munro (1989); Tisdell & Wittenberg (1992)
	TG	INTRODUCED	Flickr Richard Mayston (2008); Flickr RDPixelShop (2011)
	TM	Cook Islands	Munro (1989); Tisdell & Wittenberg (1992)
		Suwarrow Atoll	Sims & Howard (1988)
		Manihiki Atoll	Sims & Howard (1988)
		Penrhyn Atoll	Sims & Howard (1988)
		Aitutaki	Paulay (1987); Sims & Howard (1988)
		Tongareva Lagoon	Chambers (2007)
	TNO	Rarotonga	Flickr Richard Mayston (2008)
	TS	Cook Islands	Paulay (1987); Tisdell & Wittenberg (1992)
		Aitutaki (RARE)	Sims & Howard (1988); Munro (1989)
French Polynesia	TM	Takapoto Atoll	Jaubert (1977); Richard (1977); Laurent (2001)
		Tuamotu	Wells et al. (1983)
		Polynesie Francaise	Munro (1989)
		Bora Bora Island	Planes et al. (1993)
		Moorea	Laurent (2001)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
French Polynesia *(Continued)*		Anaa	Laurent (2001)
		Tatakoto Atoll	Gilbert et al. (2005, 2006b); Andréfouët et al. (2013)
		Fangatau Atoll	Andréfouët et al. (2005); Gilbert et al. (2006b)
		Reao	Gilbert et al. (2006a)
		Pukarua	Gilbert et al. (2006a)
		Raivavae	Gilbert et al. (2006a); Andréfouët et al. (2009); Van Wynsberge et al. (2013)
		Tubuai, Austral Islands	Larrue (2006); Gilbert et al. (2006b); Van Wynsberge et al. (2013)
	TS	Tuamotu	Wells et al. (1983); Andréfouët et al. (2014)
		Tubuai, Austral Islands	Gilbert et al. (2007); Newman & Gomez (2007)
		Gambier	Andréfouët et al. (2014)
Pitcairn Islands	TM	Henderson Island	Wells et al. (1983); Paulay et al. (1989)
		Oeno Lagoon	Paulay et al. (1989); Irving & Dawson (2013)
		Pitcairn Islands	Palomares et al. (2011)
	TS	Ducie Atoll	Paulay et al. (1989)
		Henderson Island	Paulay et al. (1989)
		Pitcairn Islands	Palomares et al. (2011)
Niue	TM	Niue	Dalzell et al. (1993); Kronen et al. (2008)
	TS	LOCALLY EXTINCT	Dalzell et al. (1993); absent in Kronen et al. (2008) surveys
		Niue	Flickr orbitonline (2009); Flickr Sam & Fanny (2012)
Samoa	HH	LOCALLY EXTINCT	Munro (1989); Zann (1991); Tacconi & Tisdell (1992b); South & Skelton (2000)
		REINTRODUCED	Flickr Richard Mayston (2015)
	TD	INTRODUCED	Fisheries Newsletter (2014)
	TG	INTRODUCED	Fisheries Newsletter (2014)
	TM	Samoa	Wells et al. (1983); Munro (1989); Zann (1989); Tisdell & Wittenberg (1992)
		Upolu, Western Samoa	Zann (1991); Tacconi & Tisdell (1992b)
	TS	Samoa	Wells et al. (1983); Munro (1989); Zann (1989); Tisdell & Wittenberg (1992)
		Upolu, Western Samoa	Zann (1991); Tacconi & Tisdell (1992b)
Tokelau	TM	Tokelau	Munro (1989); Tisdell & Wittenberg (1992)
		Fakaofo	Braley (1989)
		Nukunonu	Braley (1989)
		Atafu	Braley (1989)
	TS	Fakaofo	Braley (1989)
		Nukunonu	Braley (1989)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Tonga	HH	LOCALLY EXTINCT	Wells et al. (1983); Langi & Hesitoni 'Aloua (1988); Munro (1989); Tacconi & Tisdell (1992b); Loto'ahea & Sone (1995); Salvat (2000)
		Vava'u (EXTINCT)	Chesher (1993)
	TG	LOCALLY EXTINCT	Salvat (2000)
	TD	Tonga	Langi & Hesitoni 'Aloua (1988); Munro (1989); Tacconi & Tisdell (1992b); Tisdell & Wittenberg (1992); Loto'ahea & Sone (1995)
		Vava'u	Chesher (1993)
		Tongatapu Island	Tu'avao et al. (1995)
	TM	Tonga	Wells et al. (1983); Langi & Hesitoni 'Aloua (1988); Munro (1989); Tacconi & Tisdell (1992b); Tisdell & Wittenberg (1992); Loto'ahea & Sone (1995)
		Vava'u	Chesher (1993)
		Tongatapu Island	Tu'avao et al. (1995)
	TS	Tonga	Wells et al. (1983); Langi & Hesitoni 'Aloua (1988); Munro (1989); Tacconi & Tisdell (1992b); Tisdell & Wittenberg (1992); Loto'ahea & Sone (1995)
		Vava'u	Chesher (1993)
		Tongatapu Island	Tu'avao et al. (1995)
	TMB (previously TT)	Vava'u and Ha'apai Islands	Lucas et al. (1991)
		Main islands of Tonga	Tacconi & Tisdell (1992b); Ledua et al. (1993)
Tuvalu	HH	Tuvalu	Munro (1989)
	TD	INTRODUCED	Job & Ceccarelli (2012)
	TG	Tuvalu	Munro (1989); Tacconi & Tisdell (1992a); Sauni et al. (2008)
	TM	Ellice Islands	Wells et al. (1983)
		Nukufetau	Braley (1988); Sauni et al. (2008)
		Funafuti	Braley (1988); Sauni et al. (2008); Job & Ceccarelli (2012); Siaosi et al. (2012)
		Nukulaelae	Braley (1988); Job & Ceccarelli (2012)
		Tuvalu	Munro (1989)
		Nanumea	Langi (1990)
		Nui	Langi (1990)
		Niutao	Sauni et al. (2008)
		Vaitupu	Sauni et al. (2008)
	TS	Ellice Islands	Wells et al. (1983)
		Nukufetau	Braley (1988); Sauni et al. (2008)

Continued

Table A2 (Continued) Checklist of giant clam species

Recorded localities	Species	Localities	Reference(s)
Tuvalu *(Continued)*		Funafuti	Braley (1988); Sauni et al. (2008); Job & Ceccarelli (2012); Siaosi et al. (2012)
		Tuvalu	Munro (1989)
Wallis and Futuna Islands	TM	Wallis and Futuna	Pollock (1992)
	TNO	Wallis Island	Borsa et al. (2015)
	TS	Wallis and Futuna	Pollock (1992)

Note: Full reference list found in Appendix B. Tg—*Tridacna gigas*; Td—*T. derasa*; Tmb—*T. mbalavuana* (previously *T. tevoroa*); Ts—*T. squamosa*; Tsi—*T. squamosina* (previously *T. costata*); Tr—*T. rosewateri*; Tm—*T. maxima*; Tlz—*T. lorenzi*; Tno—*T. noae*; Tc—*T. crocea*; Hh—*Hippopus hippopus*; Hp—*H. porcellanus*.

Table A3 Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
American Samoa	Rose Atoll	Tm	1982–1984	Belt transects; 30 × 2 m	392	3,920,000	1,338,700	0.34151	Radtke (1985)
American Samoa	Rose Atoll	Tm	1994–1995	Belt transects; 50 × 2 m	615	6,150,000	27,845	0.00453	Green & Craig (1999)
American Samoa	Rose Atoll	Tm, Ts	1994–1995	Belt transects; 50 × 2 m	21	213,000	2,765	0.01298	Green & Craig (1999)
Australia	One Tree Island, Queensland	Tm	1966	Quadrat; 25 × 28 m	—	450	359	0.79778	McMichael (1974)
Australia	One Tree Island, Queensland	Tm	1968	Quadrat; 25 × 28 m	—	450	345	0.76667	McMichael (1974)
Australia	One Tree Island, Queensland	Tm	1969	Quadrat; 25 × 28 m	—	450	374	0.83111	McMichael (1974)
Australia	Orpheus Island, Queensland	Tc	1974–1975	Belt transects; Coral head surface	—	16	70	4.37500	Hamner & Jones (1976)
Australia	Escape reefs (west reef, north reef, east bommie, south reef)	Td	1981	Census of fixed area	3	33,720	205	0.00608	Braley (1987b)
Australia	Escape reefs (west reef, north reef, east bommie, south reef)	Tg	1981	Census of fixed area	3	33,720	254	0.00753	Braley (1987b)
Australia	Escape reefs (west reef, north reef-a, north reef-b, east bommie)	Td	1982	Census of fixed area	1	10,510	97	0.00923	Braley (1987b)
Australia	Escape reefs (west reef, north reef-a, north reef-b, east bommie)	Tg	1982	Census of fixed area	1	10,510	141	0.01342	Braley (1987b)
Australia	Great Barrier Reef (northern)	Td	1983	Quadrat; 50 × 20 m	—	—	—	0.00029	Braley (1987a)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Australia	Great Barrier Reef (northern)	Tg	1983	Quadrat; 50 × 20 m	—	—	—	0.00078	Braley (1987a)
Australia	Great Barrier Reef (southern)	Td	1983	Quadrat; 50 × 20 m	—	—	—	0.00059	Braley (1987a)
Australia	Great Barrier Reef (southern)	Tg	1983	Quadrat; 50 × 20 m	—	—	—	0.00006	Braley (1987a)
Australia	Michaelmas Reef, GBR	Tg	1978	Quadrat; 180 × 150 m	—	27,000	1,166	0.04319	Pearson & Munro (1991)
Australia	Michaelmas Reef, GBR	Tg	1980–1981	Quadrat; 180 × 150 m	—	27,000	1,120	0.04148	Pearson & Munro (1991)
Australia	Michaelmas Reef, GBR	Tg	1985	Quadrat; 180 × 150 m	—	27,000	764	0.02830	Pearson & Munro (1991)
Australia	Michaelmas Reef, GBR	Td	1978	Quadrat; 180 × 150 m	—	27,000	46	0.00170	Pearson & Munro (1991)
Australia	Michaelmas Reef, GBR	Td	1980–1981	Quadrat; 180 × 150 m	—	27,000	46	0.00170	Pearson & Munro (1991)
Australia	Michaelmas Reef, GBR	Td	1985	Quadrat; 180 × 150 m	—	27,000	31	0.00115	Pearson & Munro (1991)
Australia	Ashmore Reef	Tm	2003	Distance swim transects; 500 × 5 m	40	397,500	456	0.00115	Rees et al. (2003)
Australia	Cartier Reef	Tm	2003	Distance swim transects; 500 × 5 m	18	180,000	110	0.00061	Rees et al. (2003)
Australia	Mermaid Reef	Tm	2003	Distance swim transects; 500 × 5 m	23	232,500	793	0.00341	Rees et al. (2003)
Australia	Ashmore Reef	Tg	2003	Distance swim transects; 500 × 5 m	40	397,500	49	0.00012	Rees et al. (2003)
Australia	Cartier Reef	Tg	2003	Distance swim transects; 500 × 5 m	18	180,000	0	0.00000	Rees et al. (2003)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Australia	Mermaid Reef	Tg	2003	Distance swim transects; 500 × 5 m	23	232,500	79	0.00034	Rees et al. (2003)
Australia	Ashmore Reef	Hh	2003	Distance swim transects; 500 × 5 m	40	397,500	740	0.00186	Rees et al. (2003)
Australia	Cartier Reef	Hh	2003	Distance swim transects; 500 × 5 m	18	180,000	715	0.00397	Rees et al. (2003)
Australia	Mermaid Reef	Hh	2003	Distance swim transects; 500 × 5 m	23	232,500	46	0.00020	Rees et al. (2003)
Australia	Ningaloo Marine Park, WA	Tm (Tno)	2010	Belt transects; varied lengths (10–38 m) and widths (2–5 m)	—	15,173	3,119	0.20556	Black et al. (2011) [Also see Johnson et al. (2016)]
Australia	Surfers South, Ningaloo Marine Park, WA	Tno	2014	Randomized sampling	—	—	—	0.05000	Johnson et al. (2016)
Australia	Mandu Mandu, Ningaloo Marine Park, WA	Tno	2014	Randomized sampling	—	—	—	0.28000	Johnson et al. (2016)
Cambodia	Koh Kong	T	?	Belt transects	—	—	—	2.00000	Vibol (N.D.); Kim et al. (2004)
Cambodia	Koh Sdach	T	?	Belt transects	—	—	—	1.20000	Vibol (N.D.); Kim et al. (2004)
Cambodia	Koh Rong	T	?	Belt transects	—	—	—	0.30000	Vibol (N.D.); Kim et al. (2004)
Cambodia	Koh Tang	T	?	Belt transects	—	—	—	0.30000	Vibol (N.D.); Kim et al. (2004)
Cambodia	Koh Chann, Koh Sdach group	T	2001	Belt transects; 20 × 5 m	—	500	3	0.00600	Chou et al. (2002)
Cambodia	Koh Poi Jepon, Koh Sdach group	T	2001	Belt transects; 20 × 5 m	—	500	30	0.06000	Chou et al. (2002)
Cambodia	Koh Toutint, Koh Sdach group	T	2001	Belt transects; 20 × 5 m	—	500	3	0.00600	Chou et al. (2002)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Cambodia	Koh Dom Long, Koh Sdach group	T	2001	Belt transects; 20 × 5 m	—	500	7	0.01400	Chou et al. (2002)
Cambodia	Poi Chheng Lek, Koh Sdach group	T	2001	Belt transects; 20 × 5 m	—	500	30	0.06000	Chou et al. (2002)
Cambodia	Koh Sdach (south), Koh Sdach group	T	2002	Belt transects; 20 × 5 m	—	500	25	0.05000	Chou et al. (2002)
Cambodia	Koh Ampil Toch, Koh Sdach group	T	2002	Belt transects; 20 × 5 m	—	500	12	0.02400	Chou et al. (2002)
Cambodia	Koh Kmauch, Koh Sdach group	T	2002	Belt transects; 20 × 5 m	—	500	6	0.01200	Chou et al. (2002)
Cambodia	Koh Rong, Koh Kon, Koh Rong Samloem, Phreah Sihanouk Province	T	2010	Belt transects; 20 × 5 m	—	—	—	0–1.35	Van Bochove et al. (2011)
Cambodia	Song Saa Private Island Resort, Koh Rong Archipelago (MPA)	Tg?	2013	Belt transects; 20 × 5 m	—	—	—	0.72000	Savage et al. (2013)
Cambodia	Song Saa Private Island Resort, Koh Rong Archipelago (Surrounding sites)	Tg?	2013	Belt transects; 20 × 5 m	—	—	—	0.26500	Savage et al. (2013)
Cambodia	Song Saa Private Island Resort, Koh Rong Archipelago (Geographically isolated sites)	Tg?	2013	Belt transects; 20 × 5 m	—	—	—	0.13000	Savage et al. (2013)
Cambodia	Koh Rong Archipelago	T	2010–2014	Belt transects; 20 × 5 m	—	—	—	0.02000	Thorne et al. (2015)
Christmas Island	—	T	2005	Belt transects; 50 × 1 m	—	3,300	29	0.00879	Gilligan et al. (2008)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Cocos (Keeling) Islands	—	Td, Tm	?	?	—	—	—	0.03000	Hender et al. (2001)
Cocos (Keeling) Islands	Cabbage Patch 10 m	Tm	1999	Reef Check Survey methods	—	—	—	0.15000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 10 m	Tm	2000	Reef Check Survey methods	—	—	—	0.00000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 10 m	Tm	2001	Reef Check Survey methods	—	—	—	0.08000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 10 m	Tm	2003	Reef Check Survey methods	—	—	—	0.00000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 10 m	Tm	2004	Reef Check Survey methods	—	—	—	0.07750	Australian Government (2005)
Cocos (Keeling) Islands	100th Site	Tm	2002	Reef Check Survey methods	—	—	—	0.10500	Australian Government (2005)
Cocos (Keeling) Islands	100th Site	Tm	2004	Reef Check Survey methods	—	—	—	0.20250	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 3 m	Tm	1997	Reef Check Survey methods	—	—	—	0.28250	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 3 m	Tm	1999	Reef Check Survey methods	—	—	—	0.28000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 3 m	Tm	2001	Reef Check Survey methods	—	—	—	0.08000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 3 m	Tm	2002	Reef Check Survey methods	—	—	—	0.15000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 3 m	Tm	2003	Reef Check Survey methods	—	—	—	0.17000	Australian Government (2005)
Cocos (Keeling) Islands	Cabbage Patch 3 m	Tm	2004	Reef Check Survey methods	—	—	—	0.24000	Australian Government (2005)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Cocos (Keeling) Islands	77 sites in Cocos (Keeling) Islands	Tm	2011	Belt transect; 50 × 2 m	—	—	—	0.05400	Bellchambers & Evans (2013)
Cocos (Keeling) Islands	The Rip (no-take site)	Tm	2011	Belt transect; 50 × 2 m	—	—	—	1.05500	Bellchambers & Evans (2013)
Cocos (Keeling) Islands	70 sites in Cocos (Keeling) Islands	Tm	2014	Belt transect; 50 × 2 m	—	—	—	0.06600	Evans et al. (2016)
Cocos (Keeling) Islands	The Rip (no-take site)	Tm	2014	Belt transect; 50 × 2 m	—	—	—	0.82500	Evans et al. (2016)
Cook Islands	Aitutaki	Tm	?	Swathe transects	—	80	382	4.77500	Sims & Howard (1988)
Cook Islands	Manihiki	Tm	?	Swathe transects	—	825	216	0.26182	Sims & Howard (1988)
Cook Islands	Suwarrow	Tm	?	Swathe transects	—	2,240	130	0.05804	Sims & Howard (1988)
Cook Islands	Tongareva Lagoon	Tm	2006	Quadrat; 50 × 50 m	—	67,500	28,066	0.41579	Chambers (2007)
Djibouti	—	T	1998	Quadrat 10 × 10 m; and 20-minute time swim	—	3,500	348	0.09943	PERSGA (2000)
Djibouti	Maskali Island, Moucha Island, Tadjoura Bay, 7-Brothers Island	T	2002	Belt transects; 20 × 5 m	—	—	—	0.02550	PERSGA (2010)
Djibouti	Maskali Island, Moucha Island, 7-Brothers Island	Tm, Ts	2008	Belt transects; 20 × 5 m	—	2,800	—	0.01040	PERSGA (2010)
Egypt	Northern Bay of Safaga	Tm	?	Random quadrats; 0.25 m^2	—	40	66	1.67266	Zuschin & Pillar (1997)
Egypt	SW of Gulf of Aqaba, between Ras Nosrani and Ras Mohammed	Tm	1994	Belt transects; 30 × 2 m	—	1,440	6,709	4.65903	Kilada et al. (1998)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Egypt	SW of Gulf of Aqaba, between Ras Nosrani and Ras Mohammed	Ts	1994	Belt transects; 30 × 2 m	—	1,440	45	0.03125	Kilada et al. (1998)
Egypt	Abu Sauatir, Northern Red Sea	Tm	2012	Random quadrats; 0.25 m^2	—	491	159	0.32383	Ullmann (2013)
Egypt	Pharaoh Island/Coral Island, Taba	Tm	?	Belt transects; 50 × 5 m	—	750	4	0.00533	Richter et al. (2008)
Egypt	Pharaoh Island/Coral Island, Taba	Ts	?	Belt transects; 50 × 5 m	—	750	2	0.00320	Richter et al. (2008)
Egypt	Ras Amira/Taba Heights, Taba	Tm	?	Belt transects; 50 × 5 m	—	750	3	0.00333	Richter et al. (2008)
Egypt	Ras Amira/Taba Heights, Taba	Ts	?	Belt transects; 50 × 5 m	—	750	2	0.00220	Richter et al. (2008)
Egypt	Buoy, Nuweiba	Tm	?	Belt transects; 50 × 5 m	—	500	1	0.00200	Richter et al. (2008)
Egypt	Buoy, Nuweiba	Ts	?	Belt transects; 50 × 5 m	—	750	1	0.00150	Richter et al. (2008)
Egypt	Fayrouza, Nuweiba	Tm	?	Belt transects; 50 × 5 m	—	500	22	0.04405	Richter et al. (2008)
Egypt	Fayrouza, Nuweiba	Ts	?	Belt transects; 50 × 5 m	—	500	0	0.00030	Richter et al. (2008)
Egypt	Fayrouza, Nuweiba	Tsi	?	Belt transects; 50 × 5 m	—	500	0	0.00029	Richter et al. (2008)
Egypt	Towers, Nuweiba	Tm	?	Belt transects; 50 × 5 m	—	1,500	8	0.00565	Richter et al. (2008)
Egypt	Towers, Nuweiba	Ts	?	Belt transects; 50 × 5 m	—	1,500	4	0.00248	Richter et al. (2008)
Egypt	Blue Hole, Dahab	Tm	?	Belt transects; 50 × 5 m	—	750	55	0.07397	Richter et al. (2008)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Egypt	Blue Hole, Dahab	Ts	?	Belt transects; 50 × 5 m	—	750	6	0.00800	Richter et al. (2008)
Egypt	Blue Hole, Dahab	Tsi	?	Belt transects; 50 × 5 m	—	750	0	0.00047	Richter et al. (2008)
Egypt	InMo, Dahab	Tm	?	Belt transects; 50 × 5 m	—	750	54	0.07207	Richter et al. (2008)
Egypt	InMo, Dahab	Ts	?	Belt transects; 50 × 5 m	—	750	3	0.00453	Richter et al. (2008)
Egypt	Lagona, Dahab	Tm	?	Belt transects; 50 × 5 m	—	250	95	0.38150	Richter et al. (2008)
Egypt	Lagona, Dahab	Ts	?	Belt transects; 50 × 5 m	—	250	1	0.00470	Richter et al. (2008)
Egypt	Lagona, Dahab	Tsi	?	Belt transects; 50 × 5 m	—	250	0	0.00117	Richter et al. (2008)
Egypt	Shark Point, Ras Mohammed	Tm	?	Belt transects; 50 × 5 m	—	500	2	0.00480	Richter et al. (2008)
Egypt	Shark Point, Ras Mohammed	Ts	?	Belt transects; 50 × 5 m	—	500	0	0.00030	Richter et al. (2008)
Egypt	Yolanda Bay, Ras Mohammed	Tm	?	Belt transects; 50 × 5 m	—	250	18	0.07390	Richter et al. (2008)
Egypt	Yolanda Bay, Ras Mohammed	Ts	?	Belt transects; 50 × 5 m	—	250	0	0.00150	Richter et al. (2008)
Egypt	Marsa Abu Kalawa, Hurghada	Tm	?	Belt transects; 50 × 5 m	—	250	29	0.11700	Richter et al. (2008)
Egypt	Marsa Abu Kalawa, Hurghada	Ts	?	Belt transects; 50 × 5 m	—	250	1	0.00250	Richter et al. (2008)
Egypt	Marsa Abu Kalawa, Hurghada	Tsi	?	Belt transects; 50 × 5 m	—	250	2	0.00622	Richter et al. (2008)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Egypt	Sachwa, Hurghada	Tm	?	Belt transects; 50 × 5 m	—	500	40	0.07905	Richter et al. (2008)
Egypt	Sachwa, Hurghada	Tsi	?	Belt transects; 50 × 5 m	—	500	1	0.00165	Richter et al. (2008)
Egypt	Shab Abu Nuga, Hurghada	Tm	?	Belt transects; 50 × 5 m	—	250	210	0.84000	Richter et al. (2008)
Egypt	Shab Abu Nuga, Hurghada	Ts	?	Belt transects; 50 × 5 m	—	250	1	0.00250	Richter et al. (2008)
Egypt	Shab El Erg (South), Hurghada	Tm	?	Belt transects; 50 × 5 m	—	750	147	0.19570	Richter et al. (2008)
Egypt	Shab El Erg (South), Hurghada	Ts	?	Belt transects; 50 × 5 m	—	750	3	0.00343	Richter et al. (2008)
Egypt	Shab Shabina, Hurghada	Tm	?	Belt transects; 50 × 5 m	—	250	72	0.28670	Richter et al. (2008)
Egypt	Stone Beach/Hamda, Hurghada	Tm	?	Belt transects; 50 × 5 m	—	250	15	0.06090	Richter et al. (2008)
Egypt	Stone Beach/Hamda, Hurghada	Tsi	?	Belt transects; 50 × 5 m	—	250	1	0.00210	Richter et al. (2008)
Egypt	Dahab, Nabq, Ras Norani, Ras Mohamed, Hurghada, Safaga, Hamrawin, Qusier, Marsa Alam	Tm, Ts	2002	Belt transects; 20 × 5 m	—	—	—	0.02150	PERSGA (2010)
Egypt	Nuweiba, Dahab, Sharm El-Sheikh, Hurghada, Safaga, Qusier, Marsa Alam	Tm, Ts	2008	Belt transects; 20 × 5 m	—	5,600	—	0.02930	PERSGA (2010)
Fiji	Cakau Tabu Reef, Lau	Tmb	1986	SCUBA search (per man hour effort)	—	—	1	0.25 clam per man hour	Ledua et al. (1993)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Fiji	Vatoa Island, Lau	Tmb	1989	SCUBA search (per man hour effort)	—	—	6	0.30 clam per man hour	Ledua et al. (1993)
Fiji	Vatoa Island, Lau	Tmb	1990	SCUBA search (per man hour effort)	—	—	5	0.20 clam per man hour	Ledua et al. (1993)
Fiji	Vatoa Island, Lau	Tmb	1991	SCUBA search (per man hour effort)	—	—	2	0.30 clam per man hour	Ledua et al. (1993)
French Polynesia	Orapa, Takapoto Lagoon	Tm	1974–1975	Belt transects; 200 × 2.5 m	—	—	—	0.74000	Richard (1977)
French Polynesia	Village, Takapoto Lagoon	Tm	1975–1975	Belt transects; 262.5 × 2.5 m	—	—	—	1.28000	Richard (1977)
French Polynesia	Vairua, Takapoto Lagoon	Tm	1976–1975	Belt transects; 230 × 2.5 m	—	—	—	0.79000	Richard (1977)
French Polynesia	Gnake, Takapoto Lagoon	Tm	1977–1975	Belt transects; 265 × 2.5 m	—	—	—	0.62000	Richard (1977)
French Polynesia	Moorea, Society Islands	Tm	?	Point Centered Quarter Method	—	20,000	700	0.03500	Laurent (2001)
French Polynesia	Takapoto Lagoon, W Tuamotu Islands	Tm	?	Belt transects	—	1,150	161	0.14000	Laurent (2001)
French Polynesia	Anaa, W Tuamotu Islands	Tm	?	Belt transects	—	2,735	55	0.02000	Laurent (2001)
French Polynesia	Reao, E Tuamotu Islands	Tm	2003	Belt transects	—	3,200	26,080	8.15000	Gilbert et al. (2006a)
French Polynesia	Pukarua, E Tuamotu Islands	Tm	2003	Belt transects	—	1,305	17,043	13.06000	Gilbert et al. (2006a)
French Polynesia	Raivavae, Austral Islands	Tm	2003	Belt transects	—	5,485	7,185	1.31000	Gilbert et al. (2006a)
French Polynesia	Fangatau Atoll	Tm	2004	*In situ* data	—	99	3,781	38.19192	Andréfouët et al. (2005); Gilbert et al. (2006b)
French Polynesia	Tatakoto Atoll	Tm	2004	*In situ* data	—	70	6,389	90.94662	Gilbert et al. (2006b)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
French Polynesia	Tubuai Island	Tm	2004	*In situ* data	—	82	6,400	78.28746	Gilbert et al. (2006b)
French Polynesia	Tatakoto Atoll, Eastern Tuamotu Archipelago	Tm	2004–2005	Remote sensing	—	—	—	544.00000	Gilbert et al. (2005)
French Polynesia	Raivavae, Austral Islands	Tm	2004–2005	Manta tows	—	—	—	0.00–10.67	Andréfouët et al. (2009)
French Polynesia	Raivavae, Austral Islands	Tm	2004–2005	Broad-scale survey—Reef benthos transect surveys	—	—	—	0.05–2.79	Andréfouët et al. (2009)
French Polynesia	Raivavae, Austral Islands	Tm	2004–2005	Remote sensing	—	—	—	0.06–7.40	Andréfouët et al. (2009)
French Polynesia	Tatakoto Atoll	Tm	2012	*In situ* data	—	—	—	38.00000	Andréfouët et al. (2013)
French Polynesia	Tubuai Island (southern ridge)	Tm	2004	Belt transects	—	—	—	3.70000	Van Wynsberge et al. (2013)
French Polynesia	Tubuai Island (reef flat)	Tm	2004	Belt transects	—	—	—	5.80000	Van Wynsberge et al. (2013)
French Polynesia	Tubuai Island (southern ridge)	Tm	2010	Belt transects	—	—	—	4.60000	Wynsberge et al. (2013)
French Polynesia	Tubuai Island (reef flat)	Tm	2010	Belt transects	—	—	—	3.80000	Wynsberge et al. (2013)
French Polynesia	Raivavae, Austral Islands (SW reef flat)	Tm	2005	Belt transects	—	—	—	7.40000	Van Wynsberge et al. (2013)
French Polynesia	Raivavae, Austral Islands (N reef flat)	Tm	2005	Belt transects	—	—	—	0.17000	Van Wynsberge et al. (2013)
French Polynesia	Raivavae, Austral Islands (SW reef flat)	Tm	2010	Belt transects	—	—	—	6.20000	Van Wynsberge et al. (2013)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
French Polynesia	Raivavae, Austral Islands (N reef flat)	Tm	2010	Belt transects	—	—	—	0.35000	Van Wynsberge et al. (2013)
India	Diglipur, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	10.00000	Ramadoss (1983)
India	Diglipur, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	3.00000	Ramadoss (1983)
India	Diglipur, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Diglipur, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Mayabunder, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Mayabunder, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Mayabunder, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Mayabunder, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	0.50000	Ramadoss (1983)
India	Havelock Island, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	15.00000	Ramadoss (1983)
India	Havelock Island, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	5.00000	Ramadoss (1983)
India	Havelock Island, Andaman and Nicobar Island (I)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
India	Havelock Island, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Havelock Island, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	0.10000	Ramadoss (1983)
India	Neill Island, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Neill Island, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Neill Island, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	0.50000	Ramadoss (1983)
India	Rangat, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Rangat, Andaman and Nicobar Island (I)	Tm	?	?	—	—	—	0.50000	Ramadoss (1983)
India	Long Island, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Long Island, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	0.50000	Ramadoss (1983)
India	Long Island, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Long Island, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	0.50000	Ramadoss (1983)
India	Port Blair, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Port Blair, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	2.00000	Ramadoss (1983)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m²)	Number of ind.	Density (m⁻²)	Reference (population survey)
India	Port Blair, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Port Blair, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Ross Island, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	3.00000	Ramadoss (1983)
India	Ross Island, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Ross Island, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Chiriyatapu, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	3.00000	Ramadoss (1983)
India	Chiriyatapu, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Chiriyatapu, Andaman and Nicobar Island (I)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Chiriyatapu, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Chiriyatapu, Andaman and Nicobar Island (I)	Ts	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Chiriyatapu, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Little Andaman, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	2.00000	Ramadoss (1983)
India	Little Andaman, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Little Andaman, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	0.50000	Ramadoss (1983)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
India	Car Nicobar, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Car Nicobar, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Car Nicobar, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	0.50000	Ramadoss (1983)
India	Car Nicobar, Andaman and Nicobar Island (S)	Ts	?	?	—	—	—	0.50000	Ramadoss (1983)
India	East Bay (Katchall), Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	East Bay (Katchall), Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Camorta area, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Camorta area, Andaman and Nicobar Island (I)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Camorta area, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Campbell Bay, Andaman and Nicobar Island (I)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Campbell Bay, Andaman and Nicobar Island (S)	Tc	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Campbell Bay, Andaman and Nicobar Island (S)	Tm	?	?	—	—	—	1.00000	Ramadoss (1983)
India	Lakshadweep Archipelago	Tm	2005	Belt transects; 100 × 20 m	—	330,000	2,748	0.00833	Apte et al. (2010)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
India	Lakshadweep Archipelago	Tm	2006	Belt transects; 100 × 20 m	—	268,000	1,948	0.00727	Apte et al. (2010)
Indonesia	Gelean, Karimun Java	Tm	1983	Belt transects; 100 × 10 m	—	2,000	2	0.00100	Brown & Muskanofola (1985)
Indonesia	Gelean, Karimun Java	Ts	1983	Belt transects; 100 × 10 m	—	2,000	1	0.00050	Brown & Muskanofola (1985)
Indonesia	Bengkoang, Karimun Java	Tc	1983	Belt transects; 100 × 10 m	—	5,000	9	0.00180	Brown & Muskanofola (1985)
Indonesia	Bengkoang, Karimun Java	Tm	1983	Belt transects; 100 × 10 m	—	5,000	28	0.00560	Brown & Muskanofola (1985)
Indonesia	Bengkoang, Karimun Java	Ts	1983	Belt transects; 100 × 10 m	—	5,000	9	0.00180	Brown & Muskanofola (1985)
Indonesia	Menjangan Kecil, Karimun Java	Tc	1983	Belt transects; 100 × 10 m	—	3,000	93	0.03100	Brown & Muskanofola (1985)
Indonesia	Menjangan Kecil, Karimun Java	Tm	1983	Belt transects; 100 × 10 m	—	3,000	185	0.06167	Brown & Muskanofola (1985)
Indonesia	Menjangan Kecil, Karimun Java	Ts	1983	Belt transects; 100 × 10 m	—	3,000	27	0.00900	Brown & Muskanofola (1985)
Indonesia	Karang Besi, Karimun Java	Tc	1983	Belt transects; 100 × 10 m	—	1,000	5	0.00500	Brown & Muskanofola (1985)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Indonesia	Karang Besi, Karimun Java	Td	1983	Belt transects; 100 × 10 m	—	1,000	1	0.00100	Brown & Muskanofola (1985)
Indonesia	Karang Besi, Karimun Java	Tm	1983	Belt transects; 100 × 10 m	—	1,000	28	0.02800	Brown & Muskanofola (1985)
Indonesia	Karang Besi, Karimun Java	Ts	1983	Belt transects; 100 × 10 m	—	1,000	10	0.01000	Brown & Muskanofola (1985)
Indonesia	Katang Island, Karimun Java	Tc	1983	Belt transects; 50 × 10 m	—	500	2	0.00400	Brown & Muskanofola (1985)
Indonesia	Katang Island, Karimun Java	Tm	1983	Belt transects; 50 × 10 m	—	500	11	0.02200	Brown & Muskanofola (1985)
Indonesia	Katang Island, Karimun Java	Ts	1983	Belt transects; 50 × 10 m	—	500	3	0.00600	Brown & Muskanofola (1985)
Indonesia	Cemara Kecil, Karimun Java	Tc	1983	Belt transects; 100 × 10 m	—	3,000	6	0.00200	Brown & Muskanofola (1985)
Indonesia	Cemara Kecil, Karimun Java	Tm	1983	Belt transects; 100 × 10 m	—	3,000	17	0.00567	Brown & Muskanofola (1985)
Indonesia	Cemara Kecil, Karimun Java	Ts	1983	Belt transects; 100 × 10 m	—	3,000	19	0.00633	Brown & Muskanofola (1985)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Indonesia	Pari Island	Hh	1984	Belt transects; variable lengths × 5 m	—	13,036	25	0.00192	Eliata et al. (2003)
Indonesia	Pari Island	Tc	1984	Belt transects; variable lengths × 5 m	—	13,036	53	0.00407	Eliata et al. (2003)
Indonesia	Pari Island	Tm	1984	Belt transects; variable lengths × 5 m	—	13,036	3	0.00023	Eliata et al. (2003)
Indonesia	Pari Island	Ts	1984	Belt transects; variable lengths × 5 m	—	13,036	3	0.00023	Eliata et al. (2003)
Indonesia	Pari Island	Hh	2003	Belt transects; variable lengths × 5 m	—	31,692	5	0.00016	Eliata et al. (2003)
Indonesia	Pari Island	Tc	2003	Belt transects; variable lengths × 5 m	—	31,692	76	0.00240	Eliata et al. (2003)
Indonesia	Pari Island	Tm	2003	Belt transects; variable lengths × 5 m	—	31,692	1	0.00003	Eliata et al. (2003)
Indonesia	Pari Island	Ts	2003	Belt transects; variable lengths × 5 m	—	31,692	1	0.00003	Eliata et al. (2003)
Indonesia	Kepulauan Seribu	Tc	?	Belt transects; 100 × 5 m	—	1,500	41	0.02733	Yusuf et al. (2009)
Indonesia	Kepulauan Seribu	Tm	?	Belt transects; 100 × 5 m	—	1,500	25	0.01667	Yusuf et al. (2009)
Indonesia	Kepulauan Seribu	Ts	?	Belt transects; 100 × 5 m	—	1,500	40	0.02667	Yusuf et al. (2009)
Indonesia	Manado	Tc	?	Belt transects; 100 × 5 m	—	2,000	17	0.00850	Yusuf et al. (2009)
Indonesia	Manado	Tg	?	Belt transects; 100 × 5 m	—	2,000	1	0.00050	Yusuf et al. (2009)
Indonesia	Manado	Tm	?	Belt transects; 100 × 5 m	—	2,000	3	0.00150	Yusuf et al. (2009)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Indonesia	Manado	Ts	?	Belt transects; 100 × 5 m	—	2,000	40	0.02000	Yusuf et al. (2009)
Indonesia	Kei Kecil waters, Southeast Maluku	Hh	2009	Quadrat-Transect method; within a 50 × 50 m quadrat	—	22,500	25	0.00111	Hernawan (2010)
Indonesia	Kei Kecil waters, Southeast Maluku	Tc	2009	Quadrat-Transect method; within a 50 × 50 m quadrat	—	22,500	227	0.01009	Hernawan (2010)
Indonesia	Kei Kecil waters, Southeast Maluku	Td	2009	Quadrat-Transect method; within a 50 × 50 m quadrat	—	22,500	2	0.00009	Hernawan (2010)
Indonesia	Kei Kecil waters, Southeast Maluku	Tg	2009	Quadrat-Transect method; within a 50 × 50 m quadrat	—	22,500	1	0.00004	Hernawan (2010)
Indonesia	Kei Kecil waters, Southeast Maluku	Tm	2009	Quadrat-Transect method; within a 50 × 50 m quadrat	—	22,500	67	0.00298	Hernawan (2010)
Indonesia	Kei Kecil waters, Southeast Maluku	Ts	2009	Quadrat-Transect method; within a 50 × 50 m quadrat	—	22,500	14	0.00062	Hernawan (2010)
Indonesia	Savu Sea, East Nusa Tenggara	Hh	2010	Belt transects; 50 × 5 m	—	6,750	11	0.00163	Naguit et al. (2012)
Indonesia	Savu Sea, East Nusa Tenggara	Tc	2010	Belt transects; 50 × 5 m	—	6,750	91	0.01348	Naguit et al. (2012)
Indonesia	Savu Sea, East Nusa Tenggara	Tm	2010	Belt transects; 50 × 5 m	—	6,750	42	0.00622	Naguit et al. (2012)
Indonesia	Savu Sea, East Nusa Tenggara	Ts	2010	Belt transects; 50 × 5 m	—	6,750	17	0.00256	Naguit et al. (2012)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Jordan	City Beach	Tm	?	Belt transects; 50 × 5 m	—	250	2	0.00800	Roa-Quaoit (2005)
Jordan	City Beach	Ts	?	Belt transects; 50 × 5 m	—	250	1	0.00200	Roa-Quaoit (2005)
Jordan	Clinker	Tm	?	Belt transects; 50 × 5 m	—	750	3	0.00333	Roa-Quaoit (2005)
Jordan	Clinker	Ts	?	Belt transects; 50 × 5 m	—	750	3	0.00367	Roa-Quaoit (2005)
Jordan	MSS Reserve	Tm	?	Belt transects; 50 × 5 m	—	750	5	0.00700	Roa-Quaoit (2005)
Jordan	MSS Reserve	Ts	?	Belt transects; 50 × 5 m	—	750	4	0.00467	Roa-Quaoit (2005)
Jordan	Tourist Camp	Tm	?	Belt transects; 50 × 5 m	—	750	4	0.00533	Roa-Quaoit (2005)
Jordan	Tourist Camp	Ts	?	Belt transects; 50 × 5 m	—	750	1	0.00177	Roa-Quaoit (2005)
Jordan	Japanese Garden	Tm	?	Belt transects; 50 × 5 m	—	750	7	0.00967	Roa-Quaoit (2005)
Jordan	Japanese Garden	Ts	?	Belt transects; 50 × 5 m	—	750	5	0.00663	Roa-Quaoit (2005)
Jordan	Gorgon	Tm	?	Belt transects; 50 × 5 m	—	500	2	0.00450	Roa-Quaoit (2005)
Jordan	Gorgon	Ts	?	Belt transects; 50 × 5 m	—	500	2	0.00395	Roa-Quaoit (2005)
Jordan	Big Bay	Tm	?	Belt transects; 50 × 5 m	—	500	2	0.00450	Roa-Quaoit (2005)
Jordan	Big Bay	Ts	?	Belt transects; 50 × 5 m	—	500	2	0.00400	Roa-Quaoit (2005)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Jordan	North Royal Dive	Tm	?	Belt transects; 50 × 5 m	—	750	3	0.00367	Roa-Quaoit (2005)
Jordan	North Royal Dive	Ts	?	Belt transects; 50 × 5 m	—	750	1	0.00077	Roa-Quaoit (2005)
Jordan	Intelligence	Ts	?	Belt transects; 50 × 5 m	—	500	3	0.00515	Roa-Quaoit (2005)
Jordan	Thermal Plant	Tm	?	Belt transects; 50 × 5 m	—	500	3	0.00500	Roa-Quaoit (2005)
Jordan	Thermal Plant	Ts	?	Belt transects; 50 × 5 m	—	500	2	0.00300	Roa-Quaoit (2005)
Jordan	Gas Pipeline	Tm	?	Belt transects; 50 × 5 m	—	500	3	0.00500	Roa-Quaoit (2005)
Jordan	Gas Pipeline	Ts	?	Belt transects; 50 × 5 m	—	500	1	0.00110	Roa-Quaoit (2005)
Jordan	Jordan Fertilizer Complex	Tm	?	Belt transects; 50 × 5 m	—	500	1	0.00100	Roa-Quaoit (2005)
Jordan	Jordan Fertilizer Complex	Ts	?	Belt transects; 50 × 5 m	—	500	1	0.00230	Roa-Quaoit (2005)
Jordan	Saudi Arabia Border	Tm	?	Belt transects; 50 × 5 m	—	750	8	0.01000	Roa-Quaoit (2005)
Jordan	Saudi Arabia Border	Ts	?	Belt transects; 50 × 5 m	—	750	2	0.00310	Roa-Quaoit (2005)
Jordan	Aqaba	Tm, Ts	2008	Belt transects; 20 × 5 m	—	2,400	—	0.00750	PERSGA (2010)
Madagascar	Nosy Fasy, Andavadoaka	T	2006	Belt transects; 50 × 5 m	—	750	7	0.00933	Harding et al. (2006)
Madagascar	Shark Alley, Andavadoaka	T	2006	Belt transects; 50 × 5 m	—	750	3	0.00400	Harding et al. (2006)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Madagascar	Valleys, Andavadoaka	T	2006	Belt transects; 50 × 5 m	—	750	2	0.00267	Harding et al. (2006)
Madagascar	THB, Andavadoaka	T	2006	Belt transects; 50 × 5 m	—	500	1	0.00267	Harding et al. (2006)
Madagascar	Coco Beach, Andavadoaka	T	2006	Belt transects; 50 × 5 m	—	750	1	0.00133	Harding et al. (2006)
Madagascar	Andavadoaka Rock, Andavadoaka	T	2006	Belt transects; 50 × 5 m	—	750	4	0.00533	Harding et al. (2006)
Madagascar	Andavadoaka, SW Madagascar	T	2004–2005	Belt transects; 10 × 2 m	—	5,440	32	0.00533	Nadon et al. (2007)
Madagascar	Sahamalaza, Northern Madagascar	T	2005–2006	Belt transects; 50 × 5 m	—	2,000	—	0.00550	Harding & Randriamanantsoa (2008)
Madagascar	Tanjona, Northern Madagascar	T	2005–2006	Belt transects; 50 × 5 m	—	2,000	—	0.00050	Harding & Randriamanantsoa (2008)
Madagascar	Cap Masoala, Northern Madagascar	T	2005–2006	Belt transects; 50 × 5 m	—	2,000	—	0.00400	Harding & Randriamanantsoa (2008)
Madagascar	Tampolo, Northern Madagascar	T	2005–2006	Belt transects; 50 × 5 m	—	2,000	—	0.00800	Harding & Randriamanantsoa (2008)
Madagascar	Mananara, Northern Madagascar	T	2005–2006	Belt transects; 50 × 5 m	—	2,000	—	0.00350	Harding & Randriamanantsoa (2008)
Madagascar	Andavadoaka, SW Madagascar	Tg	2005	Belt transects; 10 × 2 m	—	—	—	0.05000	Hopkins (2009)
Madagascar	Andavadoaka, SW Madagascar	Tg	2006	Belt transects; 10 × 2 m	—	—	—	0.04000	Hopkins (2009)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Madagascar	Andavadoaka, SW Madagascar	Tg	2007	Belt transects; 10 × 2 m	—	—	—	0.03500	Hopkins (2009)
Madagascar	Andavadoaka, SW Madagascar	Tg	2008	Belt transects; 10 × 2 m	—	—	—	0.02000	Hopkins (2009)
Malaysia	Pulau Tioman	Tc	1996	Line intercept transects (density presented is # per 100 m)	—	1,410	26	0.01844	Tan et al. (1998); no area provided but Othman et al. (2010) provided a survey area
Malaysia	Pulau Tioman	Tm	1997	Line intercept transects (density presented is # per 100 m)	—	1,410	141	0.10000	Tan et al. (1998); no area provided but Othman et al. (2010) provided a survey area
Malaysia	Pulau Tioman	Ts	1998	Line intercept transects (density presented is # per 100 m)	—	1,410	66	0.04681	Tan et al. (1998); no area provided but Othman et al. (2010) provided a survey area
Malaysia	Gaya West-mesh reef, Tun Sakaran Marine Park, Semporna Islands Park, Sabah	T	2011	Belt transects; 50 × 1 m	—	—	—	0.01000	Montagne et al. (2013)
Malaysia	Gaya West-outer slope, Tun Sakaran Marine Park, Semporna Islands Park, Sabah	T	2011	Belt transects; 50 × 1 m	—	—	—	0.02000	Montagne et al. (2013)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Malaysia	Gaya East-reef flat, Tun Sakaran Marine Park, Semporna Islands Park, Sabah	T	2011	Belt transects; 50 × 1 m	—	—	—	0.20000	Montagne et al. (2013)
Malaysia	Gaya East-inner slope, Tun Sakaran Marine Park, Semporna Islands Park, Sabah	T	2011	Belt transects; 50 × 1 m	—	—	—	0.09000	Montagne et al. (2013)
Malaysia	Mantabuan-mesh reef, Tun Sakaran Marine Park, Semporna Islands Park, Sabah	T	2011	Belt transects; 50 × 1 m	—	—	—	0.11000	Montagne et al. (2013)
Malaysia	Mantabuan-outer slope, Tun Sakaran Marine Park, Semporna Islands Park, Sabah	T	2011	Belt transects; 50 × 1 m	—	—	—	0.07000	Montagne et al. (2013)
Maldives	Fished reefs: Raa Atoll (Beriyanfaru, Hurasfaru, Maadhaffaru, Dhigufaru, Maadhunifaru reefs) and Shaviyani Atoll (Bolissafaru reef)	Tm	1991	Manta tows	—	38,700	125	0.00322	Basker (1991)
Maldives	Fished reefs: Raa Atoll (Beriyanfaru, Hurasfaru, Maadhaffaru, Dhigufaru, Maadhunifaru reefs) and Shaviyani Atoll (Bolissafaru reef)	Ts	1991	Manta tows	—	38,700	15	0.00039	Basker (1991)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Maldives	Unfished reefs: Shaviyani Atoll (Hurasfaru, Kilisfaru, Mathikomandoo reefs) and Lhaviyani Atoll (Gaa en faru, Madivaru, Felivaru reefs)	Tm	1991	Manta tows	—	44,050	174	0.00395	Basker (1991)
Maldives	Unfished reefs: Shaviyani Atoll (Hurasfaru, Kilisfaru, Mathikomandoo reefs) and Lhaviyani Atoll (Gaa en faru, Madivaru, Felivaru reefs)	Ts	1991	Manta tows	—	44,050	48	0.00109	Basker (1991)
Maldives	Kaafu Atoll	Tm	1991	Manta tows	—	42,400	78	0.00185	Basker (1991)
Maldives	Kaafu Atoll	Ts	1991	Manta tows	—	42,400	14	0.00033	Basker (1991)
Marshall Islands	Shark Alley, Jaboan Point, Rongelap Atoll	T	2002	Belt transects; 50 × 5 m	—	500	4	0.00800	Pinca & Beger (2002)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Hh	2004	Belt transects; 40 × 1 m	—	8,640	—	0.00151	Virly (2004) (Also see Dumas et al. 2011)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Hh	2004	Manta tows; 300 × 2 m	—	83,400	—	0.00007	Virly (2004) (Also see Dumas et al. 2011)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Td	2004	Belt transects; 40 × 1 m	—	8,640	—	0.00035	Virly (2004) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Td	2004	Manta tows; 300 × 2 m	—	83,400	—	0.00022	Virly (2004) (Also see Dumas et al. 2011)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Tm	2004	Belt transects; 40 × 1 m	—	8,640	—	0.03981	Virly (2004) (Also see Dumas et al. 2011)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Tm	2004	Manta tows; 300 × 2 m	—	83,400	—	0.00752	Virly (2004) (Also see Dumas et al. 2011)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Ts	2004	Belt transects; 40 × 1 m	—	8,640	—	0.00081	Virly (2004) (Also see Dumas et al. 2011)
New Caledonia	North Province (Kone, Koumac, Touho, Hienghène)	Ts	2004	Manta tows; 300 × 2 m	—	83,400	—	0.00018	Virly (2004) (Also see Dumas et al. 2011)
New Caledonia	North Eastern Lagoon (Poeubo to Hienghène)	Hh	2004	Time swim transects	—	165,400	—	0.00003	McKenna et al. (2006) (Also see Dumas et al. 2011)
New Caledonia	North Eastern Lagoon (Poeubo to Hienghène)	Tc	2004	Time swim transects	—	165,400	—	0.00274	McKenna et al. (2006) (Also see Dumas et al. 2011)
New Caledonia	North Eastern Lagoon (Poeubo to Hienghène)	Td	2004	Time swim transects	—	165,400	—	0.00003	McKenna et al. (2006) (Also see Dumas et al. 2011)
New Caledonia	North Eastern Lagoon (Poeubo to Hienghène)	Tm	2004	Time swim transects	—	165,400	—	0.00787	McKenna et al. (2006) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	North Eastern Lagoon (Poeubo to Hienghène)	Ts	2004	Time swim transects	—	165,400	—	0.00077	McKenna et al. (2006) (Also see Dumas et al. 2011)
New Caledonia	Poum	Tc	2007	Belt transects; 25 × 5 m	—	13,125	—	0.03733	Vieux (2009) (Also see Dumas et al. 2011)
New Caledonia	Poum	Tm	2007	Belt transects; 25 × 5 m	—	13,125	—	0.02080	Vieux (2009) (Also see Dumas et al. 2011)
New Caledonia	Poum	Ts	2007	Belt transects; 25 × 5 m	—	13,125	—	0.00305	Vieux (2009) (Also see Dumas et al. 2011)
New Caledonia	Corne Sud	Td	2006	Belt transects; 50 × 10 m	—	7,500	—	0.00067	Wantiez et al. (2007a) (Also see Dumas et al. 2011)
New Caledonia	Corne Sud	Tm	2006	Belt transects; 50 × 10 m	—	7,500	—	0.02320	Wantiez et al. (2007a) (Also see Dumas et al. 2011)
New Caledonia	Corne Sud	Ts	2006	Belt transects; 50 × 10 m	—	7,500	—	0.00080	Wantiez et al. (2007a) (Also see Dumas et al. 2011)
New Caledonia	Ile des Pins	Td	2006	Belt transects; 50 × 10 m	—	11,500	—	0.00070	Wantiez et al. (2007b) (Also see Dumas et al. 2011)
New Caledonia	Ile des Pins	Tm	2006	Belt transects; 50 × 10 m	—	11,500	—	0.00983	Wantiez et al. (2007b) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	Ile des Pins	Ts	2006	Belt transects; 50 × 10 m	—	11,500	—	0.00009	Wantiez et al. (2007b) (Also see Dumas et al. 2011)
New Caledonia	Bourail	Hh	2007	Belt transects; 50 × 10 m	—	3,750	—	0.00053	Wantiez et al. (2007c) (Also see Dumas et al. 2011)
New Caledonia	Bourail	Tc	2007	Belt transects; 50 × 10 m	—	3,750	—	0.00320	Wantiez et al. (2007c) (Also see Dumas et al. 2011)
New Caledonia	Bourail	Td	2007	Belt transects; 50 × 10 m	—	3,750	—	0.00027	Wantiez et al. (2007c) (Also see Dumas et al. 2011)
New Caledonia	Bourail	Tm	2007	Belt transects; 50 × 10 m	—	3,750	—	0.02933	Wantiez et al. (2007c) (Also see Dumas et al. 2011)
New Caledonia	Bourail	Ts	2007	Belt transects; 50 × 10 m	—	3,750	—	0.00080	Wantiez et al. (2007c) (Also see Dumas et al. 2011)
New Caledonia	Grand Lagon Nord	Hh	2007	Belt transects; 50 × 5 m	—	7,250	—	0.00055	Wantiez et al. (2008a) (Also see Dumas et al. 2011)
New Caledonia	Grand Lagon Nord	Tc	2007	Belt transects; 50 × 5 m	—	7,250	—	0.00083	Wantiez et al. (2008a) (Also see Dumas et al. 2011)
New Caledonia	Grand Lagon Nord	Td	2007	Belt transects; 50 × 5 m	—	7,250	—	0.00028	Wantiez et al. (2008a) (Also see Dumas et al. 2011)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	Grand Lagon Nord	Tm	2007	Belt transects; 50 × 5 m	—	7,250	—	0.01779	Wantiez et al. (2008a) (Also see Dumas et al. 2011)
New Caledonia	Grand Lagon Nord	Ts	2007	Belt transects; 50 × 5 m	—	7,250	—	0.00069	Wantiez et al. (2008a) (Also see Dumas et al. 2011)
New Caledonia	Reefs of Noumea	Tm	2007	Belt transects	—	2,580	—	0.04729	Dumas et al. (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Merlet	Tc	2008	Belt transects; 50 × 5 m	—	5,250	—	0.00152	Wantiez et al. (2008b) (Also see Dumas et al. 2011)
New Caledonia	Merlet	Td	2008	Belt transects; 50 × 5 m	—	5,250	—	0.00076	Wantiez et al. (2008b) (Also see Dumas et al. 2011)
New Caledonia	Merlet	Tm	2008	Belt transects; 50 × 5 m	—	5,250	—	0.01029	Wantiez et al. (2008b) (Also see Dumas et al. 2011)
New Caledonia	Merlet	Ts	2008	Belt transects; 50 × 5 m	—	5,250	—	0.00057	Wantiez et al. (2008b) (Also see Dumas et al. 2011)
New Caledonia	New Caledonia (50 sites)	Hh	2005–2008	Manta tows; 100 × 2 m	—	227,799	—	0.00003	Purcell et al. (2009) (Also see Dumas et al. 2011)
New Caledonia	New Caledonia (50 sites)	Td	2006–2008	Manta tows; 100 × 2 m	—	227,800	—	0.00013	Purcell et al. (2009) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	New Caledonia (50 sites)	Tm	2006–2008	Manta tows; 100 × 2 m	—	227,800	—	0.00170	Purcell et al. (2009) (Also see Dumas et al. 2011)
New Caledonia	New Caledonia (50 sites)	Ts	2006–2008	Manta tows; 100 × 2 m	—	227,800	—	0.00038	Purcell et al. (2009) (Also see Dumas et al. 2011)
New Caledonia	Noumea	Hh, Tm, Ts	2007–2009	Belt transects; 20 × 1 m	—	5,000	280	0.05600	Dumas et al. (2013)
New Caledonia	Noumea	Tm	2007–2009	Belt transects; 20 × 1 m	—	5,000	276	0.05522	Dumas et al. (2013)
New Caledonia	Noumea	Hh, Ts	2007–2009	Belt transects; 20 × 1 m	—	5,000	4	0.00078	Dumas et al. (2013)
New Caledonia	Corne Sud	Hh	2010	Belt transects; 50 × 2 m	4.42	44,200	—	0.00018	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Corne Sud	Tc	2010	Belt transects; 50 × 2 m	4.42	44,200	—	0.00013	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Corne Sud	Td	2010	Belt transects; 50 × 2 m	4.42	44,200	—	0.00091	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	Corne Sud	Tm	2010	Belt transects; 50 × 2 m	4.42	44,200	—	0.02038	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Corne Sud	Ts	2010	Belt transects; 50 × 2 m	4.42	44,200	—	0.00013	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Reserve Merlet	Hh	2010	Belt transects; 50 × 2 m	3.79	37,900	—	0.00055	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Reserve Merlet	Tc	2010	Belt transects; 50 × 2 m	3.79	37,900	—	0.00011	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Reserve Merlet	Td	2010	Belt transects; 50 × 2 m	3.79	37,900	—	0.00087	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Reserve Merlet	Tm	2010	Belt transects; 50 × 2 m	3.79	37,900	—	0.01047	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	Reserve Merlet	Ts	2010	Belt transects; 50 × 2 m	3.79	37,900	—	0.00062	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Kone (plateau de Koniene)	Hh	2010	Belt transects; 50 × 2 m	2.51	25,100	—	0.00045	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Kone (plateau de Koniene)	Tc	2010	Belt transects; 50 × 2 m	2.51	25,100	—	0.00003	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Kone (plateau de Koniene)	Td	2010	Belt transects; 50 × 2 m	2.51	25,100	—	0.00045	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Kone (plateau de Koniene)	Tm	2010	Belt transects; 50 × 2 m	2.51	25,100	—	0.04063	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Kone (plateau de Koniene)	Ts	2010	Belt transects; 50 × 2 m	2.51	25,100	—	0.00036	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	Pouebo	Hh	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.00118	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Pouebo	Tc	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.00597	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Pouebo	Td	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.00005	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Pouebo	Tm	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.02194	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Pouebo	Ts	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.00094	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Hienghene	Hh	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.00005	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	Hienghene	Tc	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.00175	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Hienghene	Tm	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.01437	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Hienghene	Ts	2010	Belt transects; 50 × 2 m	2.86	28,600	—	0.00047	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Lagon Sud-Ouest	Hh	2010	Belt transects; 50 × 2 m	1.58	15,800	—	0.00002	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Lagon Sud-Ouest	Td	2010	Belt transects; 50 × 2 m	1.58	15,800	—	0.00007	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Lagon Sud-Ouest	Tm	2010	Belt transects; 50 × 2 m	1.58	15,800	—	0.00444	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
New Caledonia	Lagon Sud-Ouest	Ts	2010	Belt transects; 50 × 2 m	1.58	15,800	—	0.00075	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Mare	Tc	2010	Belt transects; 50 × 2 m	4.72	47,200	—	0.00002	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Mare	Td	2010	Belt transects; 50 × 2 m	4.72	47,200	—	0.00008	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Mare	Tm	2010	Belt transects; 50 × 2 m	4.72	47,200	—	0.00398	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
New Caledonia	Mare	Ts	2010	Belt transects; 50 × 2 m	4.72	47,200	—	0.00011	Dumas & Andréfouët (Unpublished) (Also see Dumas et al. 2011)
Niue	Niue	Tm	1990	Manta tows	9.24	92,400	641	0.00694	Dalzell et al. (1993)
Niue	Niue	Ts	1990	Manta tows	9.24	92,400	80	0.00087	Dalzell et al. (1993)
Niue	Niue	Tm	?	Manta tows	—	33,840	72	0.00213	Kronen et al. (2008)
Niue	Niue	Ts	?	Manta tows	—	33,840	0	0.00000	Kronen et al. (2008)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Palau	South of Koror	Hh	1968	Belt transects	—	1,100	4	0.00364	Hardy & Hardy (1969)
Palau	South of Koror	Tc	1968	Belt transects	—	1,100	153	0.13909	Hardy & Hardy (1969)
Palau	South of Koror	Td	1968	Belt transects	—	1,100	6	0.00545	Hardy & Hardy (1969)
Palau	South of Koror	Tg	1968	Belt transects	—	1,100	2	0.00182	Hardy & Hardy (1969)
Palau	South of Koror	Tm	1968	Belt transects	—	1,100	6	0.00545	Hardy & Hardy (1969)
Palau	South of Koror	Ts	1968	Belt transects	—	1,100	7	0.00636	Hardy & Hardy (1969)
Palau	Helen Reef, Western Caroline Islands	Hh	1972	Line transects, Areal, Drift transects, Towing, Power tows	—	43,800	58	0.00132	Hester & Jones (1974)
Palau	Helen Reef, Western Caroline Islands	Tc	1972	Line transects, Areal, Drift transects, Towing, Power tows	—	43,800	Ubiquitous	Ubiquitous	Hester & Jones (1974)
Palau	Helen Reef, Western Caroline Islands	Td	1972	Line transects, Areal, Drift transects, Towing, Power tows	—	43,800	101	0.00231	Hester & Jones (1974)
Palau	Helen Reef, Western Caroline Islands	Tg	1972	Line transects, Areal, Drift transects, Towing, Power tows	—	43,800	82	0.00187	Hester & Jones (1974)
Palau	Helen Reef, Western Caroline Islands	Tm	1972	Line transects, Areal, Drift transects, Towing, Power tows	—	43,800	Ubiquitous	Ubiquitous	Hester & Jones (1974)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Palau	Helen Reef, Western Caroline Islands	Ts	1972	Line transects, Areal, Drift transects, Towing, Power tows	—	43,800	1	0.00002	Hester & Jones (1974)
Palau	Helen Reef, Western Caroline Islands	Hh	1975	Line transects, Areal tows	—	24,800	22	0.00089	Bryan & McConnell (1976)
Palau	Helen Reef, Western Caroline Islands	Tc	1975	Line transects, Areal tows	—	24,800	Ubiquitous	Ubiquitous	Bryan & McConnell (1976)
Palau	Helen Reef, Western Caroline Islands	Td	1975	Line transects, Areal tows	—	24,800	6	0.00024	Bryan & McConnell (1976)
Palau	Helen Reef, Western Caroline Islands	Tg	1975	Line transects, Areal tows	—	24,800	4	0.00016	Bryan & McConnell (1976)
Palau	Helen Reef, Western Caroline Islands	Tm	1975	Line transects, Areal tows	—	24,800	629	0.02536	Bryan & McConnell (1976)
Palau	Helen Reef, Western Caroline Islands	Ts	1975	Line transects, Areal tows	—	24,800	2	0.00008	Bryan & McConnell (1976)
Palau	Helen Reef, Western Caroline Islands	Hh	1976	Line transects, Areal tows	—	15,470	63	0.00407	Hirschberger (1980)
Palau	Helen Reef, Western Caroline Islands	Tc	1976	Line transects, Areal tows	—	15,470	Ubiquitous	Ubiquitous	Hirschberger (1980)
Palau	Helen Reef, Western Caroline Islands	Td	1976	Line transects, Areal tows	—	15,470	7	0.00045	Hirschberger (1980)
Palau	Helen Reef, Western Caroline Islands	Tg	1976	Line transects, Areal tows	—	15,470	4	0.00026	Hirschberger (1980)
Palau	Helen Reef, Western Caroline Islands	Tm	1976	Line transects, Areal tows	—	15,470	312	0.02017	Hirschberger (1980)
Palau	Helen Reef, Western Caroline Islands	Ts	1976	Line transects, Areal tows	—	15,470	3	0.00019	Hirschberger (1980)
Papua New Guinea	Longman/Kosmann reef	Tg	1980	?	—	—	—	0.00090	Chesher (1980)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Papua New Guinea	Siata reef, Nuakata	Tg	?	?	—	—	—	0.00100	Tarnasky (1980)
Papua New Guinea	Engineer and Conflict Group islands	Hh	1996	?	—	—	—	0.00201	Kinch (2001)
Papua New Guinea	Engineer and Conflict Group islands	Hp	1996	?	—	—	—	0.00003	Kinch (2001)
Papua New Guinea	Engineer and Conflict Group islands	Tc	1996	?	—	—	—	0.00119	Kinch (2001)
Papua New Guinea	Engineer and Conflict Group islands	Td	1996	?	—	—	—	0.00053	Kinch (2001)
Papua New Guinea	Engineer and Conflict Group islands	Tg	1996	?	—	—	—	0.00004	Kinch (2001)
Papua New Guinea	Engineer and Conflict Group islands	Tm	1997	?	—	—	—	0.00179	Kinch (2001)
Papua New Guinea	Engineer and Conflict Group islands	Ts	1998	?	—	—	—	0.00058	Kinch (2001)
Papua New Guinea	Milne Bay Province	Hh	2001	1126 sites were surveyed	—	—	—	0.00004	Kinch (2002)
Papua New Guinea	Milne Bay Province	Tc	2001	1126 sites were surveyed	—	—	—	0.00149	Kinch (2002)
Papua New Guinea	Milne Bay Province	Td	2001	1126 sites were surveyed	—	—	—	0.00003	Kinch (2002)
Papua New Guinea	Milne Bay Province	Tg	2001	1126 sites were surveyed	—	—	—	0.00008	Kinch (2002)
Papua New Guinea	Milne Bay Province	Tm	2001	1126 sites were surveyed	—	—	—	0.00018	Kinch (2002)
Papua New Guinea	Milne Bay Province	Ts	2001	1126 sites were surveyed	—	—	—	0.00014	Kinch (2002)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Papua New Guinea	Kavieng lagoonal system, New Ireland Province	Tm	2015	Belt transects; 50 × 8 m	—	48,000	181	0.00377	Militz et al. (2015)
Papua New Guinea	Kavieng lagoonal system, New Ireland Province	Tno	2015	Belt transects; 50 × 8 m	—	48,000	131	0.00273	Militz et al. (2015)
Philippines	Central Visayas, Visayas	Tc	1984–1985	Quadrat	3	30,000	49	0.00163	Alcala (1986)
Philippines	Central Visayas, Visayas	Tm	1984–1985	Quadrat	3	30,000	24	0.00080	Alcala (1986)
Philippines	Central Visayas, Visayas	Ts	1984–1985	Quadrat	3	30,000	20	0.00067	Alcala (1986)
Philippines	West Visayas, Visayas	Tc	1984–1985	Flowmeter method	0.7	7,000	16	0.00229	Alcala (1986)
Philippines	West Visayas, Visayas	Tm	1984–1985	Flowmeter method	0.7	7,000	21	0.00300	Alcala (1986)
Philippines	West Visayas, Visayas	Ts	1984–1985	Flowmeter method	0.7	7,000	92	0.01314	Alcala (1986)
Philippines	Cagayan, Sulu Seas	Tc	1984–1985	Flowmeter method	0.5645	5,645	102	0.01807	Alcala (1986)
Philippines	Cagayan, Sulu Seas	Tm	1984–1985	Flowmeter method	0.5645	5,645	144	0.02551	Alcala (1986)
Philippines	Cagayan, Sulu Seas	Ts	1984–1985	Flowmeter method	0.5645	5,645	7	0.00124	Alcala (1986)
Philippines	Palawan	Hh	1984–1985	Flowmeter method	2.1	21,000	29	0.00138	Alcala (1986)
Philippines	Palawan	Tc	1984–1985	Flowmeter method	2.1	21,000	6,901	0.32862	Alcala (1986)
Philippines	Palawan	Td	1984–1985	Flowmeter method	2.1	21,000	8	0.00038	Alcala (1986)
Philippines	Palawan	Tm	1984–1985	Flowmeter method	2.1	21,000	56	0.00267	Alcala (1986)
Philippines	Palawan	Ts	1984–1985	Flowmeter method	2.1	21,000	57	0.00271	Alcala (1986)
Philippines	Western Pangasinan, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	5.3	53,000	39	0.00074	Juinio et al. (1989)
Philippines	Western Pangasinan, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	5.3	53,000	6	0.00011	Juinio et al. (1989)
Philippines	Western Pangasinan, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	5.3	53,000	17	0.00032	Juinio et al. (1989)
Philippines	Polillo, Quezon, Luzon	Hh	1984–1986	Belt transects; 100 × 5 m	2.1	21,000	5	0.00024	Juinio et al. (1989)
Philippines	Polillo, Quezon, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	2.1	21,000	7,138	0.33990	Juinio et al. (1989)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Philippines	Polillo, Quezon, Luzon	Td	1984–1986	Belt transects; 100 × 5 m	2.1	21,000	6	0.00029	Juinio et al. (1989)
Philippines	Polillo, Quezon, Luzon	Tg	1984–1986	Belt transects; 100 × 5 m	2.1	21,000	2	0.00010	Juinio et al. (1989)
Philippines	Polillo, Quezon, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	2.1	21,000	112	0.00533	Juinio et al. (1989)
Philippines	Polillo, Quezon, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	2.1	21,000	147	0.00700	Juinio et al. (1989)
Philippines	Zambales, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	1.04	10,400	19	0.00183	Juinio et al. (1989)
Philippines	Zambales, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	1.04	10,400	7	0.00067	Juinio et al. (1989)
Philippines	Zambales, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	1.04	10,400	1	0.00010	Juinio et al. (1989)
Philippines	Albay, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	1.45	14,500	119	0.00821	Juinio et al. (1989)
Philippines	Albay, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	1.45	14,500	102	0.00703	Juinio et al. (1989)
Philippines	Albay, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	1.45	14,500	60	0.00414	Juinio et al. (1989)
Philippines	Sorsogon, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	1.48	14,800	46	0.00311	Juinio et al. (1989)
Philippines	Sorsogon, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	1.48	14,800	121	0.00818	Juinio et al. (1989)
Philippines	Sorsogon, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	1.48	14,800	4	0.00027	Juinio et al. (1989)
Philippines	Calatagan, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	1.11	11,100	14	0.00126	Juinio et al. (1989)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Philippines	Calatagan, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	1.11	11,100	12	0.00108	Juinio et al. (1989)
Philippines	Calatagan, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	1.11	11,100	29	0.00261	Juinio et al. (1989)
Philippines	Lubang Island, Luzon	Hh	1984–1986	Belt transects; 100 × 5 m	1.49	14,900	1	0.00007	Juinio et al. (1989)
Philippines	Lubang Island, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	1.49	14,900	84	0.00564	Juinio et al. (1989)
Philippines	Lubang Island, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	1.49	14,900	22	0.00148	Juinio et al. (1989)
Philippines	Lubang Island, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	1.49	14,900	20	0.00134	Juinio et al. (1989)
Philippines	Ambil Island, Luzon	Hh	1984–1986	Belt transects; 100 × 5 m	2.5	25,000	2	0.00008	Juinio et al. (1989)
Philippines	Ambil Island, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	2.5	25,000	67	0.00268	Juinio et al. (1989)
Philippines	Ambil Island, Luzon	Td	1984–1986	Belt transects; 100 × 5 m	2.5	25,000	9	0.00036	Juinio et al. (1989)
Philippines	Ambil Island, Luzon	Tg	1984–1986	Belt transects; 100 × 5 m	2.5	25,000	1	0.00004	Juinio et al. (1989)
Philippines	Ambil Island, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	2.5	25,000	112	0.00448	Juinio et al. (1989)
Philippines	Ambil Island, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	2.5	25,000	82	0.00328	Juinio et al. (1989)
Philippines	Apo Reef, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	0.88	8,800	26	0.00295	Juinio et al. (1989)
Philippines	Apo Reef, Luzon	Td	1984–1986	Belt transects; 100 × 5 m	0.88	8,800	1	0.00011	Juinio et al. (1989)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Philippines	Apo Reef, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	0.88	8,800	83	0.00943	Juinio et al. (1989)
Philippines	Apo Reef, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	0.88	8,800	1	0.00011	Juinio et al. (1989)
Philippines	Puerto Galera, Luzon	Tc	1984–1986	Belt transects; 100 × 5 m	1.46	14,600	4	0.00027	Juinio et al. (1989)
Philippines	Puerto Galera, Luzon	Tm	1984–1986	Belt transects; 100 × 5 m	1.46	14,600	14	0.00096	Juinio et al. (1989)
Philippines	Puerto Galera, Luzon	Ts	1984–1986	Belt transects; 100 × 5 m	1.46	14,600	14	0.00096	Juinio et al. (1989)
Philippines	NE Negros, Visayas	Tc	1984–1986	Belt transects; 100 × 5 m	0.29	2,900	2	0.00069	Juinio et al. (1989)
Philippines	NE Negros, Visayas	Tm	1984–1986	Belt transects; 100 × 5 m	0.29	2,900	1	0.00034	Juinio et al. (1989)
Philippines	NE Negros, Visayas	Ts	1984–1986	Belt transects; 100 × 5 m	0.29	2,900	1	0.00034	Juinio et al. (1989)
Philippines	El Nido, Palawan	Hh	1984–1986	Belt transects; 100 × 5 m	2.55	25,500	12	0.00047	Juinio et al. (1989)
Philippines	El Nido, Palawan	Hp	1984–1986	Belt transects; 100 × 5 m	2.55	25,500	1	0.00004	Juinio et al. (1989)
Philippines	El Nido, Palawan	Tc	1984–1986	Belt transects; 100 × 5 m	2.55	25,500	280	0.01098	Juinio et al. (1989)
Philippines	El Nido, Palawan	Tm	1984–1986	Belt transects; 100 × 5 m	2.55	25,500	23	0.00090	Juinio et al. (1989)
Philippines	El Nido, Palawan	Ts	1984–1986	Belt transects; 100 × 5 m	2.55	25,500	125	0.00490	Juinio et al. (1989)
Philippines	Inagauan-Aborlan, Palawan	Td	1984–1986	Belt transects; 100 × 5 m	0.45	4,500	1	0.00022	Juinio et al. (1989)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Philippines	Inagauan-Aborlan, Palawan	Tm	1984–1986	Belt transects; 100 × 5 m	0.45	4,500	3	0.00067	Juinio et al. (1989)
Philippines	Inagauan-Aborlan, Palawan	Ts	1984–1986	Belt transects; 100 × 5 m	0.45	4,500	1	0.00022	Juinio et al. (1989)
Philippines	Sombrero Island, Palawan	Hh	1984–1986	Belt transects; 100 × 5 m	0.2	2,000	1	0.00050	Juinio et al. (1989)
Philippines	Sombrero Island, Palawan	Tc	1984–1986	Belt transects; 100 × 5 m	0.2	2,000	50	0.02500	Juinio et al. (1989)
Philippines	Sombrero Island, Palawan	Tm	1984–1986	Belt transects; 100 × 5 m	0.2	2,000	13	0.00650	Juinio et al. (1989)
Philippines	Sombrero Island, Palawan	Ts	1984–1986	Belt transects; 100 × 5 m	0.2	2,000	2	0.00100	Juinio et al. (1989)
Philippines	Cagayan Island, Palawan	Hh	1984–1986	Belt transects; 100 × 5 m	0.64	6,400	5	0.00078	Juinio et al. (1989)
Philippines	Cagayan Island, Palawan	Tc	1984–1986	Belt transects; 100 × 5 m	0.64	6,400	33	0.00516	Juinio et al. (1989)
Philippines	Cagayan Island, Palawan	Tg	1984–1986	Belt transects; 100 × 5 m	0.64	6,400	1	0.00016	Juinio et al. (1989)
Philippines	Cagayan Island, Palawan	Tm	1984–1986	Belt transects; 100 × 5 m	0.64	6,400	167	0.02609	Juinio et al. (1989)
Philippines	Cagayan Island, Palawan	Ts	1984–1986	Belt transects; 100 × 5 m	0.64	6,400	3	0.00047	Juinio et al. (1989)
Philippines	Camiguin Island, Mindanao	Tc	1984–1986	Belt transects; 100 × 5 m	2.13	21,300	24	0.00113	Juinio et al. (1989)
Philippines	Camiguin Island, Mindanao	Tm	1984–1986	Belt transects; 100 × 5 m	2.13	21,300	66	0.00310	Juinio et al. (1989)
Philippines	Camiguin Island, Mindanao	Ts	1984–1986	Belt transects; 100 × 5 m	2.13	21,300	33	0.00155	Juinio et al. (1989)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Philippines	Central Visayas, Visayas (Sumilon Island, Balicasag Island, Pamilacan Island)	Tc	1992	Belt transects with 1 × 1 m quadrats	—	10	41	4.10000	Calumpong & Cadiz (1993)
Philippines	Central Visayas, Visayas (Sumilon Island, Balicasag Island, Pamilacan Island)	Tm	1992	Belt transects with 1 × 1 m quadrats	—	10	2	0.20000	Calumpong & Cadiz (1993)
Philippines	Cagayan Island, Palawan	Tc	1992	Belt transects with 1 × 1 m quadrats	—	10	7	0.70000	Calumpong & Cadiz (1993)
Philippines	Cagayan Island, Palawan	Tm	1992	Belt transects with 1 × 1 m quadrats	—	10	5	0.50000	Calumpong & Cadiz (1993)
Philippines	Tubbataha reefs	Tc	1992	Belt transects with 1 × 1 m quadrats	—	10	36	3.60000	Calumpong & Cadiz (1993)
Philippines	Tubbataha reefs	Tm	1992	Belt transects with 1 × 1 m quadrats	—	10	7	0.70000	Calumpong & Cadiz (1993)
Philippines	Tubbataha reefs	Hh	2005	Belt transects; 150 × 2 m	—	4,500	10	0.00222	Dolorosa & Schoppe (2005)
Philippines	Tubbataha reefs	Tc	2005	Belt transects; 150 × 2 m	—	4,500	104	0.02311	Dolorosa & Schoppe (2005)
Philippines	Tubbataha reefs	Tm	2005	Belt transects; 150 × 2 m	—	4,500	29	0.00644	Dolorosa & Schoppe (2005)
Philippines	Tubbataha reefs	Ts	2005	Belt transects; 150 × 2 m	—	4,500	2	0.00044	Dolorosa & Schoppe (2005)
Philippines	Tubbataha reefs	H spp.	2009–2010	Belt transects; 20 × 2 m	—	8,320	26	0.00313	Dolorosa (2010)
Philippines	Tubbataha reefs	Tc	2010–2010	Belt transects; 20 × 2 m	—	8,320	541	0.06502	Dolorosa (2010)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Philippines	Tubbataha reefs	Tm	2011–2010	Belt transects; 20 × 2 m	—	8,320	32	0.00385	Dolorosa (2010)
Philippines	Tubbataha reefs	Hp	2008	Belt transects; 100 × 2 m	—	4,200	41	0.00976	Dolorosa & Jontila (2012)
Philippines	Tubbataha reefs	Tc	2008	Belt transects; 100 × 2 m	—	4,200	287	0.06833	Dolorosa & Jontila (2012)
Philippines	Tubbataha reefs	Tm	2008	Belt transects; 100 × 2 m	—	4,200	23	0.00548	Dolorosa & Jontila (2012)
Philippines	Sabang Reef Fish Sanctuary (inside), Honda Bay, Puerto Princesa City, Palawan	Td	2004	Belt transects; 100 × 2 m and two permanent quadrats; 5 × 20 m	—	—	—	0.01000	Gonzales et al. (2014)
Philippines	Sabang Reef Fish Sanctuary (inside), Honda Bay, Puerto Princesa City, Palawan	Ts	2004	Belt transects; 100 × 2 m and two permanent quadrats; 5 × 20 m	—	—	—	0.01500	Gonzales et al. (2014a)
Philippines	Meara Island	Td	2004	Belt transect; 100 × 2 m	—	—	—	0.02500	Gonzales et al. (2014a)
Philippines	Meara Island	Tg	2004	Belt transect; 100 × 2 m	—	—	—	0.01500	Gonzales et al. (2014a)
Philippines	Meara Island	Ts	2004	Belt transect; 100 × 2 m	—	—	—	0.05500	Gonzales et al. (2014a)
Philippines	Apulit Island, Taytay Bay, Palawan	Tc	2006	Belt transect; 100 × ? m	—	—	—	0.06810	Gonzales et al. (2014b)
Philippines	Ranger Station, Tubbataha Reefs Natural Park, Cagayancillo, Palawan	Tc	2009	Belt transects; 20 × 2 m	—	1,600.00	—	0.39250	Conales et al. (2015) [Dolorosa unpublished data]

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Philippines	Ranger Station, Tubbataha Reefs Natural Park, Cagayancillo, Palawan	Tc	2010	Coral head surveys (n=10)	—	40.75	236	5.79141	Conales et al. (2015)
Pitcairn Islands	Oeno Atoll	Tm	?	—	—	—	—	8 to 10	Irving & Dawson (2013)
Republic of Kiribati	Abemama Atoll, Central Gilbert Islands group	Hh	1985	Manta tows	2860	28,600,000	10,050	0.00035	Munro (1988)
Republic of Kiribati	Abemama Atoll, Central Gilbert Islands group	Tg	1985	Manta tows	2860	28,600,000	6,592	0.00023	Munro (1988)
Republic of Kiribati	Abemama Atoll, Central Gilbert Islands group	Ts	1985	Manta tows	2860	28,600,000	137	0.00000	Munro (1988)
Republic of Kiribati	Abiang Atoll, Central Gilbert Islands group	Hh	1985	Manta tows	8990	89,900,000	19,846	0.00005	Munro (1988)
Republic of Kiribati	Abiang Atoll, Central Gilbert Islands group	Tg	1985	Manta tows	8990	89,900,000	4,931	0.00005	Munro (1988)
Republic of Kiribati	Abiang Atoll, Central Gilbert Islands group	Ts	1985	Manta tows	8990	89,900,000	5,319	0.00006	Munro (1988)
Republic of Kiribati	Maiana Atoll, Central Gilbert Islands group	Hh	1985	Manta tows	2800	28,000,000	1,600	0.00006	Munro (1988)
Republic of Kiribati	Maiana Atoll, Central Gilbert Islands group	Tg	1985	Manta tows	2800	28,000,000	2,150	0.00008	Munro (1988)
Republic of Kiribati	Maiana Atoll, Central Gilbert Islands group	Ts	1985	Manta tows	2800	28,000,000	2,580	0.00009	Munro (1988)
Republic of Kiribati	Tarawa Atoll, Central Gilbert Islands group	Hh	1985	Manta tows	2960	29,600,000	500	0.00002	Munro (1988)
Republic of Kiribati	Tarawa Atoll, Central Gilbert Islands group	Tg	1985	Manta tows	2960	29,600,000	560	0.00002	Munro (1988)
Republic of Kiribati	Tarawa Atoll, Central Gilbert Islands group	Ts	1985	Manta tows	2960	29,600,000	780	0.00003	Munro (1988)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Republic of Kiribati	Caroline Atoll (formerly Gilbert Islands)	Tm	?	—	—	—	—	35.00000	Kepler & Kepler (1994)
Republic of Kiribati	Kingman Atoll, Northern Line Islands	Tm	2005	Belt transects; 60 × 2 m	—	1,200	—	0.00750	Sandin et al. (2008)
Republic of Kiribati	Palmyra Atoll, Northern Line Islands	Tm	2005	Belt transects; 60 × 2 m	—	1,200	—	0.00080	Sandin et al. (2008)
Republic of Kiribati	Kiritimati Atoll, Northern Line Islands	Tm	2005	Belt transects; 60 × 2 m	—	600	—	0.00450	Sandin et al. (2008)
Republic of Kiribati	Millennium Atoll (Caroline Atoll)	Tm	2009	Belt transects; 25 × 1 m	174	—	—	1.50000	Barott et al. (2010)
Samoan Archipelago	Upolu, Tutuila, Aunu'u, Ofu-Olosega, Ta'u	Tm, Ts	1994–1995	Belt transects; 50 × 2 m	29	292,000	88	0.00030	Green & Craig (1999)
Saudi Arabia	Tuwwal, Jeddah	Tm	?	Belt transects; 10 × 5 m (varied number of plots)	—	300	63	0.21000	Bodoy (1984)
Saudi Arabia	Shoiba, South of Jeddah	Tm	?	Belt transects; 10 × 5 m (varied number of plots)	—	500	19	0.03800	Bodoy (1984)
Saudi Arabia	North of Sharm-el-Abhur, Jeddah	Tm	?	Belt transects; 10 × 5 m (varied number of plots)	—	300	40	0.13333	Bodoy (1984)
Saudi Arabia	Jeddah northern Corniche	Tm	?	Belt transects; 10 × 5 m (varied number of plots)	—	250	6	0.02400	Bodoy (1984)
Saudi Arabia	Al-Wajh, Jeddah, Farasan Islands	Tm, Ts	2002	Belt transects; 20 × 5 m	—	—	—	0.01410	PERSGA (2010)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Saudi Arabia	Haql, Maqna, Duba, Umm Lajj, Mastura, Jeddah, Al Lith, Assir, Farasan	Tm, Ts	2008	Belt transects; 20 × 5 m	—	6,400	—	0.03850	PERSGA (2010)
Seychelles	Seychelles Islands	Tc	1989	Belt transects	—	—	—	1 to 10	Selin et al. (1992)
Seychelles	Aride Island Beach	Tm	2001–2002	Daily 30-min walk at low tide	—	—	—	3—Occasional (9 to 20 specimens)	Agombar et al. (2003)
Seychelles	Aride Island Beach	Ts	2001–2002	Daily 30-min walk at low tide	—	—	—	4—Fairly common (21 to 30 specimens)	Agombar et al. (2003)
Singapore	Southern Islands (7 sites)	Tc	2003	Belt transects; 2 m wide	—	9,670	7	0.00072	Guest et al. (2008)
Singapore	Southern Islands (7 sites)	Tm	2003	Belt transects; 2 m wide	—	9,670	1	0.00010	Guest et al. (2008)
Singapore	Southern Islands (7 sites)	Ts	2003	Belt transects; 2 m wide	—	9,670	15	0.00155	Guest et al. (2008)
Singapore	Southern Islands (29 sites)	Tc	2009–2010	Belt transects; 6 m wide and quadrats; 10 × 10 to 20 × 20 m^2	—	87,515	31	0.00035	Neo & Todd (2012, 2013)
Singapore	Southern Islands (29 sites)	Ts	2009–2010	Belt transects; 6 m wide and quadrats; 10 × 10 to 20 × 20 m^2	—	87,515	28	0.00032	Neo & Todd (2012, 2013)
Solomon Islands	Solomon Islands	Hh	2004	Belt transects; 300 × 2 m (shallow) and 250 × 50 m (deep)	—	118,350	4	0.00003	Ramohia (2006)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Solomon Islands	Solomon Islands	Tc	2004	Belt transects; 300 × 2 m (shallow) and 250 × 50 m (deep)	—	118,350	60	0.00051	Ramohia (2006)
Solomon Islands	Solomon Islands	Td	2004	Belt transects; 300 × 2 m (shallow) and 250 × 50 m (deep)	—	118,350	17	0.00014	Ramohia (2006)
Solomon Islands	Solomon Islands	Tg	2004	Belt transects; 300 × 2 m (shallow) and 250 × 50 m (deep)	—	118,350	12	0.00010	Ramohia (2006)
Solomon Islands	Solomon Islands	Tm	2004	Belt transects; 300 × 2 m (shallow) and 250 × 50 m (deep)	—	118,350	115	0.00097	Ramohia (2006)
Solomon Islands	Solomon Islands	Ts	2004	Belt transects; 300 × 2 m (shallow) and 250 × 50 m (deep)	—	118,350	95	0.00080	Ramohia (2006)
South China Sea (Malaysia)	Pulau Layang Layang, Sabah	Hh	2002	Timed Roving Diver technique; 1 hour; 9 sampling sites	—	—	1	?	Sahari et al. (2002)
South China Sea (Malaysia)	Pulau Layang Layang, Sabah	Tc	2002	Timed Roving Diver technique; 1 hour; 9 sampling sites	—	—	71	?	Sahari et al. (2002)
South China Sea (Malaysia)	Pulau Layang Layang, Sabah	Tg	2002	Timed Roving Diver technique; 1 hour; 9 sampling sites	—	—	6	?	Sahari et al. (2002)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
South China Sea (Malaysia)	Pulau Layang Layang, Sabah	Tm	2002	Timed Roving Diver technique; 1 hour; 9 sampling sites	—	—	8	?	Sahari et al. (2002)
South China Sea (Malaysia)	Pulau Layang Layang, Sabah	Ts	2002	Timed Roving Diver technique; 1 hour; 9 sampling sites	—	—	37	?	Sahari et al. (2002)
South China Sea (North Spratly Islands)	Trident—JOMSRE III	Tc	2005	Belt transects; 20 × 10 m	—	800	4	0.00500	Van Long et al. (2008)
South China Sea (North Spratly Islands)	Trident—JOMSRE III	Ts	2005	Belt transects; 20 × 10 m	—	800	10	0.01250	Van Long et al. (2008)
South China Sea (North Spratly Islands)	NE North East Cay	Tc	2005	Belt transects; 20 × 10 m	—	800	5	0.00625	Van Long et al. (2008)
South China Sea (North Spratly Islands)	NE North East Cay	Ts	2005	Belt transects; 20 × 10 m	—	800	8	0.01000	Van Long et al. (2008)
South China Sea (North Spratly Islands)	E North East Cay	Tc	2005	Belt transects; 20 × 10 m	—	800	7	0.00875	Van Long et al. (2008)
South China Sea (North Spratly Islands)	E North East Cay	Ts	2005	Belt transects; 20 × 10 m	—	800	6	0.00750	Van Long et al. (2008)
South China Sea (North Spratly Islands)	SW North East Cay	Tc	2005	Belt transects; 20 × 10 m	—	800	3	0.00375	Van Long et al. (2008)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
South China Sea (North Spratly Islands)	SW North East Cay	Ts	2005	Belt transects; 20 × 10 m	—	800	9	0.01125	Van Long et al. (2008)
South China Sea (North Spratly Islands)	NE South West Cay	Tc	2005	Belt transects; 20 × 10 m	—	800	4	0.00500	Van Long et al. (2008)
South China Sea (North Spratly Islands)	NE South West Cay	Ts	2005	Belt transects; 20 × 10 m	—	800	11	0.01375	Van Long et al. (2008)
South China Sea (North Spratly Islands)	SW South West Cay	Tc	2005	Belt transects; 20 × 10 m	—	800	4	0.00500	Van Long et al. (2008)
South China Sea (North Spratly Islands)	SW South West Cay	Ts	2005	Belt transects; 20 × 10 m	—	800	6	0.00750	Van Long et al. (2008)
South China Sea (Spratly Islands)	Trident Shoal; Station 1	Tc	2005	Belt transects; 20 × 10 m	—	800	2	0.00250	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	Trident Shoal; Station 1	Ts	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	5	0.00625	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	South West Cay; Station 2	Tc	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	4	0.00500	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	South West Cay; Station 2	Ts	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	6	0.00750	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	North East Cay; Station 3	Tc	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	5	0.00625	Lasola & Hoang (2008)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
South China Sea (Spratly Islands)	North East Cay; Station 3	Ts	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	8	0.01000	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	North East Cay; Station 4	Tc	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	7	0.00875	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	North East Cay; Station 4	Ts	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	6	0.00750	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	South West Cay; Station 5	Tc	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	4	0.00500	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	South West Cay; Station 5	Ts	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	11	0.01375	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	North East Cay; Station 6	Tc	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	3	0.00375	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	North East Cay; Station 6	Ts	2005	Belt transects; 20 × 10 m (10 m depth)	—	800	9	0.01125	Lasola & Hoang (2008)
South China Sea (Spratly Islands)	NE Cay; North Danger Reef	Hh	2007	Belt transects; 500 × 1 m	—	1,500	—	0.00060	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	NE Cay; North Danger Reef	Tc	2007	Belt transects; 500 × 1 m	—	1,500	—	0.01000	Calumpong & Macansantos (2008)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
South China Sea (Spratly Islands)	NE Cay; North Danger Reef	Tm	2007	Belt transects; 500 × 1 m	—	1,500	—	0.00400	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	NE Cay; North Danger Reef	Ts	2007	Belt transects; 500 × 1 m	—	1,500	—	0.00060	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	S Reef; North Danger Reef	Tm	2007	Belt transects; 500 × 1 m	—	1,000	—	0.01200	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	S Reef; North Danger Reef	Ts	2007	Belt transects; 500 × 1 m	—	1,000	—	0.00200	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	N Reef; North Danger Reef	Hh	2007	Belt transects; 500 × 1 m	—	1,000	—	0.00100	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	N Reef; North Danger Reef	Tc	2007	Belt transects; 500 × 1 m	—	1,000	—	0.00300	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	N Reef; North Danger Reef	Tm	2007	Belt transects; 500 × 1 m	—	1,000	—	0.01300	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	N Reef; North Danger Reef	Ts	2007	Belt transects; 500 × 1 m	—	1,000	—	0.00100	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Jenkins Reef; North Danger Reef	Tc	2007	Belt transects; 500 × 1 m	—	500	11	0.02200	Calumpong & Macansantos (2008)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
South China Sea (Spratly Islands)	Jenkins Reef; North Danger Reef	Tm	2007	Belt transects; 500 × 1 m	—	500	23	0.04600	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Jenkins Reef; North Danger Reef	Ts	2007	Belt transects; 500 × 1 m	—	500	2	0.00400	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Dickinson Reef; Jackson Atoll	Tm	2007	Belt transects; 500 × 1 m	—	500	3	0.00600	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Hoare Reef; Jackson Atoll	Tc	2007	Belt transects; 500 × 1 m	—	500	1	0.00200	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Hoare Reef; Jackson Atoll	Tm	2007	Belt transects; 500 × 1 m	—	500	1	0.00200	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Danger Reef; Jackson Atoll	Tc	2007	Belt transects; 500 × 1 m	—	500	2	0.00400	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Danger Reef; Jackson Atoll	Tm	2007	Belt transects; 500 × 1 m	—	500	4	0.00800	Calumpong & Macansantos (2008)
South China Sea (Spratly Islands)	Patch Reef; Jackson Atoll	Ts	2007	Belt transects; 500 × 1 m	—	500	1	0.00200	Calumpong & Macansantos (2008)
Sudan	Wingate, Sanganeb, Tawartit, Suakin, Tala Tala Saghir	Tm, Ts	2002	Belt transects; 20 × 5 m	—	—	—	0.01480	PERSGA (2010)
Sudan	O'Seif, Arkiyai, Port-Sudan, Suakin	Tm, Ts	2008	Belt transects; 20 × 5 m	—	3,200	—	0.03250	PERSGA (2010)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Tanzania	North; Chumbe's reef sanctuary	T	2004	Belt transects; 20 × 5 m	—	400	6	0.01500	Daniels (2004)
Tanzania	Middle; Chumbe's reef sanctuary	T	2004	Belt transects; 20 × 5 m	—	400	5	0.01250	Daniels (2004)
Tanzania	South; Chumbe's reef sanctuary	T	2004	Belt transects; 20 × 5 m	—	400	14	0.03500	Daniels (2004)
Thailand	Lee-Pae Island, Andaman Sea	Tc	?	Belt transects; 100 × 4 m	—	6,400	1,562	0.24406	Chantrapornsyl et al. (1996)
Thailand	Lee-Pae Island, Andaman Sea	Tm	?	Belt transects; 100 × 4 m	—	6,400	403	0.06297	Chantrapornsyl et al. (1996)
Thailand	Lee-Pae Island, Andaman Sea	Ts	?	Belt transects; 100 × 4 m	—	6,400	1	0.00016	Chantrapornsyl et al. (1996)
Thailand	Surin Islands (11 sites)	mostly Tc; Tm, Ts scarce	2003	Belt transects; 20 × 5 m	—	6,000	210	0.03500	Koh et al. (2003)
Thailand	Surin Islands (16 sites)	mostly Tc; Tm, Ts scarce	2004	Belt transects; 20 × 5 m	—	10,400	154	0.01481	Loh et al. (2004)
Thailand	Mannai Island, Rayong Province	Tc	2009–2010	Belt transect; 100 × 2 m	—	200	117	0.58500	Junchompoo et al. (2013)
Thailand	Mannai Island, Rayong Province	Ts	2010–2010	Belt transect; 100 × 2 m	—	200	12	0.06000	Junchompoo et al. (2013)
Tokelau	Fakaofo Atoll	Tm	1989	Surface tow and reef flat transects	21.44	214,400	34,312	0.16004	Braley (1989)
Tokelau	Nukunonu Atoll	Tm	1989	Surface tow and reef flat transects	19.67	196,700	44,318	0.22531	Braley (1989)
Tokelau	Atafu Atoll	Tm	1989	Surface tow and reef flat transects	11.1	111,000	11,048	0.09953	Braley (1989)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m²)	Number of ind.	Density (m⁻²)	Reference (population survey)
Tokelau	Fakaofo Atoll	Ts	1989	Surface tow and reef flat transects	21.44	214,400	25	0.00012	Braley (1989)
Tokelau	Nukunonu Atoll	Ts	1989	Surface tow and reef flat transects	19.67	196,700	206	0.00105	Braley (1989)
Tokelau	Atafu Atoll	Ts	1989	Surface tow and reef flat transects	11.1	111,000	0	0.00000	Braley (1989)
Tonga	East Malinoa Island	T	1978–1979	Snorkelling and SCUBA (time-based surveys)	—	—	—	6.5 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	West Malinoa Island	T	1979–1979	Snorkelling and SCUBA (time-based surveys)	—	—	—	4 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	NW Fafa Island	T	1980–1979	Snorkelling and SCUBA (time-based surveys)	—	—	—	2 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	SW Fafa Island	T	1981–1979	Snorkelling and SCUBA (time-based surveys)	—	—	—	1.5 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	NW Makaha’a Island	T	1982–1979	Snorkelling and SCUBA (time-based surveys)	—	—	—	3.5 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	Hakau Mamao 1	T	1983–1979	Snorkelling and SCUBA (time-based surveys)	—	—	—	9.5 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	Hakau Mamao 2	T	1984–1979	Snorkelling and SCUBA (time-based surveys)	—	—	—	7 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m²)	Number of ind.	Density (m⁻²)	Reference (population survey)
Tonga	East Malinoa Island	Tm, Ts	1987	Snorkelling and SCUBA (time-based surveys)	—	—	—	1 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	West Malinoa Island	Tm, Ts	1988	Snorkelling and SCUBA (time-based surveys)	—	—	—	0.7 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	NW Fafa Island	Tm, Ts	1989	Snorkelling and SCUBA (time-based surveys)	—	—	—	4.4 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	NW Makaha’a Island	Tm, Ts	1990	Snorkelling and SCUBA (time-based surveys)	—	—	—	3.3 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	Hakau Mamao 1	Tm, Ts	1991	Snorkelling and SCUBA (time-based surveys)	—	—	—	19 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	Hakau Mamao 2	Tm, Ts	1992	Snorkelling and SCUBA (time-based surveys)	—	—	—	22.8 clam per man 0.5 hour	Langi & Hesitoni ‘Aloua (1988)
Tonga	Vava’u Island Group	Td	1987	Timed surveys (64.35 h)	—	—	0	0 clam per man hour	Chesher (1993)
Tonga	Vava’u Island Group	Tm	1987	Timed surveys (64.35 h)	—	—	1,183	18.4 clam per man hour	Chesher (1993)
Tonga	Vava’u Island Group	Ts	1987	Timed surveys (64.35 h)	—	—	132	2.1 clam per man hour	Chesher (1993)
Tonga	Vava’u Island Group	Td	1988	Timed surveys (69.92 h)	—	—	2	0.03 clam per man hour	Chesher (1993)
Tonga	Vava’u Island Group	Tm	1988	Timed surveys (69.92 h)	—	—	1,032	14.8 clam per man hour	Chesher (1993)
Tonga	Vava’u Island Group	Ts	1988	Timed surveys (69.92 h)	—	—	99	1.4 clam per man hour	Chesher (1993)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Tonga	Vava'u Island Group	Td	1989	Timed surveys (64.75 h)	—	—	45	0.7 clam per man hour	Chesher (1993)
Tonga	Vava'u Island Group	Tm	1989	Timed surveys (64.75 h)	—	—	1,336	20.6 clam per man hour	Chesher (1993)
Tonga	Vava'u Island Group	Ts	1989	Timed surveys (64.75 h)	—	—	161	2.5 clam per man hour	Chesher (1993)
Tonga	Vava'u Island Group	Td	1990	Timed surveys (55.37 h)	—	—	82	1.5 clam per man hour	Chesher (1993)
Tonga	Vava'u Island Group	Tm	1990	Timed surveys (55.37 h)	—	—	1,044	18.9 clam per man hour	Chesher (1993)
Tonga	Vava'u Island Group	Ts	1990	Timed surveys (55.37 h)	—	—	266	4.8 clam per man hour	Chesher (1993)
Tonga	Lofanga, Ha'apai	Tmb	1989	SCUBA search (per man hour effort)	—	—	1	1 clam per man hour	Ledua et al. (1993)
Tonga	Auhangamea channel, Uiha Island, Ha'apai	Tmb	1989	SCUBA search (per man hour effort)	—	—	12	2.5 clam per man hour	Ledua et al. (1993)
Tonga	Kahefahefa Island, Vava'u	Tmb	1990	SCUBA search (per man hour effort)	—	—	5	0.35 clam per man hour	Ledua et al. (1993)
Tonga	Kahefahefa Island, Vava'u	Tmb	1991	SCUBA search (per man hour effort)	—	—	6	0.04 clam per man hour	Ledua et al. (1993)
Tonga	Kahefahefa Island, Vava'u	Tmb	1991	SCUBA search (per man hour effort)	—	—	1	2 clam per man hour	Ledua et al. (1993)
Tonga	Faka'osi Reef, Pangai, Ha'apai	Tmb	1992	SCUBA search (per man hour effort)	—	—	16	0.33 clam per man hour	Ledua et al. (1993)
Tonga	Luahoko Island, Ha'apai	Tmb	1992	SCUBA search (per man hour effort)	—	—	21	9.1 clam per man hour	Ledua et al. (1993)
Tonga	Atata Island, Tongatapu Island Group	Tm	1993	Towing, Free swimming, SCUBA (90 minutes)	—	—	12	4 clam per man 0.5 hour	Tu'avao et al. (1995)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Tonga	Atata Island, Tongatapu Island Group	Ts	1993	Free swimming, SCUBA (60 minutes)	—	—	4	2 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	NW Fafa Island, Tongatapu Island Group	Td	1993	Towing (40 minutes)	—	—	1	0.75 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	NW Fafa Island, Tongatapu Island Group	Tm	1993	Towing (40 minutes)	—	—	4	3 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	NW Fafa Island, Tongatapu Island Group	Ts	1993	Towing (40 minutes)	—	—	2	1.5 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Hakau Mamao Reef, Tongatapu Island Group	Td	1993	Towing (30 minutes)	—	—	2	2 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Hakau Mamao Reef, Tongatapu Island Group	Tm	1993	Towing (90 minutes)	—	—	9	3 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Hakau Mamao Reef, Tongatapu Island Group	Ts	1993	Towing (60 minutes)	—	—	1	0.5 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Niutoua, Tongatapu Island Group	Tm	1993	Towing (60 minutes)	—	—	0.5	0.25 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Haveluliku, Tongatapu Island Group	Tm	1993	Towing (60 minutes)	—	—	1.5	0.75 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Haveluliku, Tongatapu Island Group	Ts	1993	Towing (60 minutes)	—	—	0.5	0.25 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Monotapu, Tongatapu Island Group	Td	1993	Towing (60 minutes)	—	—	3	1.5 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Monotapu, Tongatapu Island Group	Tm	1993	Towing (60 minutes)	—	—	4	2 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Ha'atafu, Tongatapu Island Group	Tm	1993	Towing (60 minutes)	—	—	31.5	15.75 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Ha'atafu, Tongatapu Island Group	Ts	1993	Towing (60 minutes)	—	—	1	0.5 clam per man 0.5 hour	Tu'avao et al. (1995)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Tonga	Hakauiki Reef, Tongatapu Island Group	Tm	1993	Towing (60 minutes)	—	—	33.5	16.75 clam per man 0.5 hour	Tu'avao et al. (1995)
Tonga	Malinoa Island, Tongatapu Island Group	Tm	1994	Free swimming (180 minutes)	—	—	8	1.33 clam per man 0.5 hour	Tu'avao et al. (1995)
Tuvalu	Nukufetau Atoll	Tm	?	?	—	—	—	0.00630	Braley (1988)
Tuvalu	Funafuti Atoll	Tm	?	?	—	—	—	0.01010	Braley (1988)
Tuvalu	Nukulaelae Atoll	Tm	?	?	—	—	—	0.00031	Braley (1988)
Tuvalu	Nukufetau Atoll	Ts	?	?	—	—	—	0.00007	Braley (1988)
Tuvalu	Funafuti Atoll	Ts	?	?	—	—	—	0.00014	Braley (1988)
Tuvalu	Nukulaelae Atoll	Ts	?	?	—	—	—	0.00000	Braley (1988)
Tuvalu	Nanumea Atoll	Tm	?	?	—	—	—	0.00006	Langi (1990)
Tuvalu	Nui Atoll	Tm	?	?	—	—	—	0.00027	Langi (1990)
Tuvalu	Funafuti Atoll	Tm	2004	Belt transects; 300 × 2 m and 40 × 1 m	—	54,120	164	0.00303	Sauni et al. (2008)
Tuvalu	Funafuti Atoll	Ts	2004	Belt transects; 300 × 2 m and 40 × 1 m	—	54,120	16	0.00030	Sauni et al. (2008)
Tuvalu	Nukufetau Atoll	Tm	2004	Belt transects; 300 × 2 m and 40 × 1 m	—	46,320	125	0.00271	Sauni et al. (2008)
Tuvalu	Nukufetau Atoll	Ts	2004	Belt transects; 300 × 2 m	—	43,200	5	0.00012	Sauni et al. (2008)
Tuvalu	Vaitupu Islands (central group)	Tm	2005	Belt transects; 300 × 2 m	—	43,200	37	0.00086	Sauni et al. (2008)
Tuvalu	Niutao Islands (northern group)	Tm	2005	Belt transects; 300 × 2 m and 40 × 1 m	—	17,280	3	0.00017	Sauni et al. (2008)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Tuvalu	Nanumea Atoll	Td, Tm, Ts	2010	Belt transects; 50 × 4 m	—	5,400	0	0.00000	Job & Ceccarelli (2012)
Tuvalu	Nukulaelae Atoll	Td, Tm, Ts	2010	Belt transects; 50 × 4 m	—	6,000	0	0.00000	Job & Ceccarelli (2012)
Tuvalu	Funafuti Atoll	Td, Tm, Ts	2010	Belt transects; 25 × 4 m	—	12,600	114	0.00904	Job & Ceccarelli (2012)
Tuvalu	Funafuti Conservation Area (FCA), Funafuti Atoll	Tm	2011	Manta tows; 300 × 6 m	—	21,600	—	0.00238	Siaosi et al. (2012)
Tuvalu	Funafuti Conservation Area (FCA), Funafuti Atoll	Ts	2011	Manta tows; 300 × 6 m	—	21,600	—	0.00046	Siaosi et al. (2012)
Tuvalu	Fongafale, Funafuti Atoll	Tm	2011	Belt transects; 40 × 6 m	—	2,400	—	0.00500	Siaosi et al. (2012)
Tuvalu	Fongafale, Funafuti Atoll	Ts	2011	Belt transects; 40 × 6 m	—	2,400	—	0.00167	Siaosi et al. (2012)
Tuvalu	Funafuti Conservation Area (FCA), Funafuti Atoll	Tm	2011	Belt transects; 40 × 6 m	—	1,440	—	0.01250	Siaosi et al. (2012)
Vanuatu	Inyeug Island, Anatom (Lagoon patch reef)	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00100	Zann & Ayling (1988)
Vanuatu	Moso Island, Efate	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00030	Zann & Ayling (1988)
Vanuatu	Cook's Reef, Efate (Lagoon)	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00250	Zann & Ayling (1988)
Vanuatu	Cook's Reef, Efate (Slope)	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00010	Zann & Ayling (1988)
Vanuatu	SE Reef, Pentecost	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00090	Zann & Ayling (1988)

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Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Vanuatu	Lesalav Bay, Pentecost	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00010	Zann & Ayling (1988)
Vanuatu	Reef Islands, Pentecost	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00230	Zann & Ayling (1988)
Vanuatu	Hog Bay, Espiritu Santo	Hh	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00020	Zann & Ayling (1988)
Vanuatu	Moso Island, Efate	Tc	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00030	Zann & Ayling (1988)
Vanuatu	Port Anatom, Anatom	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00160	Zann & Ayling (1988)
Vanuatu	Inyeug Island, Anatom (Reef slope)	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00500	Zann & Ayling (1988)
Vanuatu	Inyeug Island, Anatom (Lagoon patch reef)	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00200	Zann & Ayling (1988)
Vanuatu	Port Patrick, Anatom	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00160	Zann & Ayling (1988)
Vanuatu	Lakariata, Tanna	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00050	Zann & Ayling (1988)
Vanuatu	Lelepa, Efate	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00030	Zann & Ayling (1988)
Vanuatu	Moso Island, Efate	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00070	Zann & Ayling (1988)
Vanuatu	Cook's Reef, Efate (Lagoon)	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00100	Zann & Ayling (1988)
Vanuatu	Cook's Reef, Efate (Slope)	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00050	Zann & Ayling (1988)
Vanuatu	SE Reef, Pentecost	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00060	Zann & Ayling (1988)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Vanuatu	Loltong Bay, Pentecost	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00200	Zann & Ayling (1988)
Vanuatu	Lesalav Bay, Pentecost	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00090	Zann & Ayling (1988)
Vanuatu	Reef Islands, Pentecost	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00130	Zann & Ayling (1988)
Vanuatu	Hog Bay, Espiritu Santo	Tm	1988	Spot dives, manta tows, or belt transects	—	—	—	0.00020	Zann & Ayling (1988)
Vanuatu	Maskelynes, Malekula Group	Tc	1988	Belt transects; 50 × 5 m	—	18,750	7	0.00075	Zann & Ayling (1988)
Vanuatu	Maskelynes, Malekula Group	Tm	1988	Belt transects; 50 × 5 m	—	18,750	14	0.00075	Zann & Ayling (1988)
Vanuatu	Atchin Island, Malekula Group	Tm	1988	Belt transects; 50 × 5 m	—	3,750	2	0.00053	Zann & Ayling (1988)
Vanuatu	Malecula, Malekula Group	Tm	1988	Belt transects; 50 × 5 m	—	7,500	2	0.00027	Zann & Ayling (1988)
Vanuatu	Maskelynes, Malekula Group	Ts	1988	Belt transects; 50 × 5 m	—	18,750	4	0.00021	Zann & Ayling (1988)
Vanuatu	Malecula, Malekula Group	Ts	1988	Belt transects; 50 × 5 m	—	7,500	1	0.00013	Zann & Ayling (1988)
Vanuatu	Inside taboo area; Analcauhat, Aneityum	Tm	2011–2012	—	—	—	—	0.00733	Nimoho et al. (2013)
Vanuatu	Outside taboo area; Analcauhat, Aneityum	Tm	2011–2012	—	—	—	—	0.00275	Nimoho et al. (2013)
Vanuatu	Inside taboo area; Mangaliliu, Efate	Tm	2011–2012	—	—	—	—	0.01214	Nimoho et al. (2013)
Vanuatu	Outside taboo area; Mangaliliu, Efate	Tm	2011–2012	—	—	—	—	0.01412	Nimoho et al. (2013)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Viet Nam	Mju Island, Nha Trang Bay, Khanh Hoa Province	Tc	1981	—	—	—	—	0.50000	Latypov (2006)
Viet Nam	Hon Bay Canh Island and Hon Cau Island, Con Dao Islands (Lagoons)	Tc	2010	—	—	—	—	15–20 clams per m^2	Latypov & Selin (2011)
Viet Nam	Tho Chau, Con Dao, and Thu Islands (Reef slope)	Tm	2010	—	—	—	—	0.08–0.1 clams per m^2	Latypov & Selin (2011)
Viet Nam	Tho Chau, Con Dao, and Thu Islands (Reef flat)	Ts	2010	—	—	—	—	0.10000	Latypov & Selin (2011)
Viet Nam	Tho Chau, Con Dao, and Thu Islands (Reef slope)	Ts	2010	—	—	—	—	0.2–0.5 clams per m^2	Latypov & Selin (2011)
Viet Nam	Bay Canh Island, Con Dao Archipelago	Tc	2010	Belt transects	—	—	—	23.00000	Selin & Latypov (2011)
Viet Nam	Cau Island, Con Dao Archipelago	Tc	2011	Belt transects	—	—	—	25.00000	Selin & Latypov (2011)
Viet Nam	Hon Nai Island, Cam Ranh Bay, southern Viet Nam	Tm	?	1 m^2 quadrats along 100 m transect	—	—	—	0.20000	Latypov & Selin (2012b)
Viet Nam	Giang Bo Reef	Tc	2004–2007	1 m^2 quadrats along 100–200 m transect	—	—	—	2.00000	Latypov (2013)
Viet Nam	Giang Bo Reef	Ts	2004–2007	1 m^2 quadrats along 100–200 m transect	—	—	—	0.10000	Latypov (2013)
Viet Nam	Mju Island, Nha Trang, Khanh Hoa Province	Tc	2004–2005	1 m^2 quadrats along 100 m transect	—	5	—	0.50000	Latypov & Selin (2013)

Continued

Table A3 (Continued) Global density patterns of wild giant clam populations

Country	Localities surveyed	Species	Year of survey	Method of survey	Approximate area of surveys (ha)	Approximate area of surveys (m^2)	Number of ind.	Density (m^{-2})	Reference (population survey)
Viet Nam	Mju Island, Nha Trang Bay, Khanh Hoa Province	Ts	2005–2005	1 m^2 quadrats along 100 m transect	—	5	—	0.10000	Latypov & Selin (2013)
Yemen	Tiqfash Island, Shalatem Island, Myyun Island, Shaqraa coast, Sikha Island, Macroqha Island, Socotra Island	Tm, Ts	2008	Belt transects; 20 × 5 m	—	4,800	—	0.00020	PERSGA (2010)

Notes: Full reference list in Appendix B. ? denotes information is unknown or unverified. Hh — *Hipposus hipposus*; Hp — *H. porcellanus*; T —*Tridacna*; Tc — *T. costata*; Td — *T. derasa*; Tg — *T. gigas*; Tm — *T. maxima*; Tmb — *T. mbalavuana* (previously *T. tevoroa*); Tno — *T. noae*; Ts — *T. squamosa*; Tsi — *T. squamosina* (previously *T. costata*).

Original density figures were erroneous and corrected in this table: Black et al. 2011 (Tno), Brown & Muskanofola 1985 (Tc, Tm, Ts), Junchompoo et al. 2013 (Tc), Munro 1988 (Hh, Tg, Ts), Tan et al. 1998 (Tc, Tm, Ts), Yusuf et al. 2009 (Tg)

Density figures computed based on average of all densities from individual surveys: Barott et al. 2010 (Tm), Bellchambers & Evans 2013 (Tm), Braley 1987a (Td, Tg), Braley 1988 (Tm, Ts), Calumpong & Macansantos 2008 (Hh, Tc, Tm, Ts), Dumas & Andréfouët 2011 (Hh, Tc, Td, Tm, Ts), Dumas et al. unpublished (Tm), Dumas et al. 2013 (Hh, Tm, Ts), Evans et al. 2006 (Tm), Gonzales et al. 2014b (Tc), Harding & Randriamanantsoa 2008 (T), Hender et al. 2001 (Td, Tm), Hopkins 2009 (Tg), Kepler & Kepler 1994 (Tm), Langi 1990 (Tm), McKenna et al. 2006 (Hh, Tc, Td, Tm, Ts), Montagne et al. 2013 (T), PERSGA 2010 (Tm, Ts), Purcell et al. 2009 (Hh, Td, Tm, Ts), Sandin et al. 2008 (Tm), Siaosi et al. 2012 (Tm, Ts), Thorne et al. 2015 (T), Vieux 2009 (Tc, Tm, Ts), Virly 2004 (Hh, Td, Tm, Ts), Wantiez et al. 2007a,b,c, 2008a,b (Hh, Tc, Td, Tm, Ts)

Table A4 Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
American Samoa	Amalau Bay	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Samoa	Bait Reef—The Trench (Back reef crest) Site 1	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Agincourt Reef—12 Apostles (Back reef slope) Site 1	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Agincourt Reef—Agincourt 2D (Pontoon) (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—
Australia	Agincourt Reef—Agincourt 3D (Pontoon) (Back reef slope) Site 1	—	—	—	—	—	—	9.75	3.75	—	—	—	—	—	3.25	1.88	0.5	0.75	—	—
Australia	Agincourt Reef—Agincourt 3D (Pontoon) (Back reef slope) Site 2	—	—	—	—	—	—	—	2.75	—	—	—	—	4.25	4.25	3.25	2.5	2.5	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Agincourt Reef—Agincourt 3D (Pontoon) (Back reef slope) Site 3	—	—	—	—	—	—	—	4.75	6.0	5.25	—	—	—	—	—	—	—	—	—
Australia	Agincourt Reef—Barracuda Bommie (Back reef crest) Site 1	—	—	—	—	—	—	4.0	—	—	—	4.0	—	—	—	—	—	—	—	—
Australia	Agincourt Reef—End of the World (Back reef slope) Site 1	—	—	—	—	—	4.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Agincourt Reef—Harry's Bommie (Back reef slope) Site 1	—	—	—	—	—	—	3.5	—	—	—	—	—	3.25	—	—	—	—	—	—
Australia	Agincourt Reef—Phil's Reef (Back reef slope) Site 1	—	—	—	—	—	—	0.75	—	—	—	—	—	0.25	—	—	—	—	—	—
Australia	Agincourt Reef—Phil's Reef (Back reef slope) Site2	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m²)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Agincourt Reef—Playground (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	0.75	1.5	—	—	—	—	—	—	—	—
Australia	Agincourt Reef—The Point (Back reef slope) Site 1	—	—	—	—	—	—	—	3.25	—	—	12.0	—	3.25	—	—	—	—	—	—
Australia	Agincourt Reef—Turtle Bay (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.25	—	—	—	—	—
Australia	Arlington Reef	—	—	—	—	—	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Bait Reef—The Clusters (Back reef crest) Site 1	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Barolin Rocks Reef—Barolin Rocks (Woongarra Marine Park) (Fringing reef seaward) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—
Australia	Bashful Bommie	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Bashful Bommie Haba	—	—	—	—	—	—	—	—	3.75	2.0	1.25	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Bashful Bommie Site 1	—	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—
Australia	Blue Buoy Bashful Bommie	—	—	—	—	—	—	—	—	1.88	1.0	—	—	—	—	—	—	—	—	—
Australia	Blue Pearl Bay rocks	—	—	—	—	—	—	1.5	—	—	—	5.5	—	—	—	—	—	—	—	—
Australia	Blue Pearl Bay Site 2	—	—	—	—	—	—	—	—	47.25	19.75	—	—	—	—	—	—	—	—	—
Australia	Briggs Reef—Briggs Reef (Back reef slope) Site 1	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Briggs Reef—Fish Bowl (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—
Australia	Bundegi	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Cod Hole Ribbon Reef #10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Coral Cay Beach	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Currimundi Reef—Currimundi Reef (Back reef slope) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Australia	Davies Reef	—	—	—	—	—	—	—	—	7.25	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Davies Reef—The Lost World (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	7.0	3.25	—	—	—	—	—	—	—	—
Australia	Fantasea ReefWorld Pantoon (Hardy Reef)	—	—	—	—	—	—	7.0	—	—	—	1.5	—	—	—	—	—	—	—	—
Australia	Fitzroy Beach Dive	—	—	—	—	—	4.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Fitzroy Sandy Patches Dive	—	—	—	—	—	7.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Flat Rock Island—Shark Gulley (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	1.0	—	—	—	—
Australia	Flat Rock Island—The Nursery (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25	—	—	—
Australia	Flinders Reef—Aladdin's Cave (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	0.75	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Flinders Reef—Aladdin's Cave (Other) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Australia	Flinders Reef—Nursery (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	0.5	—	—	—
Australia	Flinders Reef—Nursery (Back reef slope) Site 3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—
Australia	Flinders Reef—Nursery (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	—	—	—	0.25	0.5	0.5	—	—	—	—	—
Australia	Flinders Reef—Nursery (Fringing reef leeward) Site 3	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Australia	Flynns Reef—Gordon's Mooring (Missing Habitat) Site 1	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Flynns Reef—Yellow Mooring (aka Fish bowl) (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Australia	Hardy Reef—Hardy Reef (Back reef wall) Site 1	—	—	—	—	—	3.75	—	—	—	—	—	—	5.0	4.5	—	—	—	—	—
Australia	Hardy Reef—Hardy Reef (Back reef wall) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	6.5	3.0	—	—	—	—	—
Australia	Hardy Reef—Hardy Reef (Back reef wall) Site 3	—	—	—	—	—	—	—	—	—	—	—	—	1.25	8.0	1.25	—	6.25	—	—
Australia	Hardy Reef, Fantasea Reef World, Whitsundays	—	—	—	—	—	—	—	—	19.75	5.75	—	—	—	—	—	—	—	—	—
Australia	Hastings Reef—North Hastings A (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.5	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Hastings Reef—North Hastings A (Lagoon) Site 1	—	—	—	—	—	—	1.25	—	—	—	—	—	—	1.0	—	—	—	—	—
Australia	Hastings Reef—North Hastings B (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	—	—	3.25	0.5	—	—	—	—	—	—
Australia	Hastings Reef—South Hastings (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Australia	Hastings Reef (North) Down Under Dive Site 1	—	—	—	—	—	—	—	—	—	3.75	—	—	—	—	—	—	—	—	—
Australia	Hastings Reef (North) Down Under Dive Site 3	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—
Australia	Hayman Island Reefs—Blue Pearl Bay (Fringing reef leeward) Site 1	—	—	—	—	2.0	—	—	—	—	—	—	—	2.0	12.75	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Hayman Island Reefs—Blue Pearl Bay (Fringing reef leeward) Site 3	—	—	—	—	—	—	—	—	—	13.5	—	—	—	7.5	—	—	—	—	—
Australia	Herald Cay	6.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Heron Island	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Heron Reef—Canyons (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—
Australia	Heron Reef—Cappuccino Express (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—
Australia	Heron Reef—Coral Garden (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—
Australia	Heron Reef—Coral Grotto (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	1.0	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Heron Reef—Harry's Bommie (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.5	—	—
Australia	Heron Reef—Last Resort (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—
Australia	Heron Reef- Heron Bommie (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	0.5	—	—
Australia	Heron Reef- Jetty Flat (Reef flate) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	1.0	0.25	—	—
Australia	Heron Reef- Libby's Lair (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	0.5	—	—
Australia	Heron Reef- North Bommie (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	0.25	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Heron Reef- Research Zone (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	0.75	—	—
Australia	Heron Reef- Shark Bay (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	0.5	1.5	—	—
Australia	Hook Island—Luncheon Bay (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.5	—	—
Australia	Inner Gneerings—The Caves (Other) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Australia	Inner Gneerings—The Caves (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25	0.25	—	0.25	—	—
Australia	John Brewer Reef—John Brewer (Back reef crest) Site 1	—	—	—	—	—	—	—	18.5	6.25	1.75	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	John Brewer Reef—John Brewer (Back reef crest) Site 2	—	—	—	—	—	—	—	10.75	4.0	—	—	—	—	—	—	—	—	—	—
Australia	John Brewer Reef site 3	—	—	—	—	—	—	—	13.25	—	—	—	—	—	—	—	—	—	—	—
Australia	Keeper Reef—Keeper Reef (Back reef slope) Site 1	—	—	—	—	—	—	0.5	2.5	—	4.25	—	—	—	—	—	—	—	—	—
Australia	Kelso Reef	8.0	—	—	—	—	15.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Knuckle Reef—Knuckle Reef (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	22.75	—	12.25	7.5	11.75	6.5	—	—	—	—
Australia	Knuckle Reef—Knuckle Reef (Back reef slope) Site 2	—	—	—	—	—	—	—	—	—	22.0	—	—	6.0	10.5	—	—	—	—	—
Australia	Lady Elliot Island—Coral Gardens (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—
Australia	Lady Elliot Island—Lady Elliot Reef Lagoon 2 (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m²)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Lady Elliot Island—Reefy Seconds (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Australia	Lady Elliot Island- Lady Elliot Reef Lagoon (Lagoon) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	—	11.5	—	—
Australia	Lodestone Reef	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Low Isles	1.0	—	3.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Low Isles “Lagoon West”	—	—	—	—	11.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Low Isles Reef—Low Isles (Fringing reef leeward) Site 1	—	—	—	—	—	2.75	—	1.0	15.25	8.25	—	11.75	3.5	1.0	—	—	8.25	—	—
Australia	Low Isles Reef—Low Isles (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	39.5	26.75	—	—	3.75	0.25	—	—	—	—	—
Australia	Magnetic Island Reefs—Alma Bay (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Magnetic Island Reefs—Florence Bay (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Australia	Magnetic Island Reefs—Middle Reef (Fringing reef seaward) Site 3	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Australia	Magnetic Island Reefs—Middle Reef (Reef flat) Site 2	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Australia	Magnetic Island Reefs—Nelly Bay (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Australia	Magnetic Island Reefs—Picnic Reef (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	0.25	0.12	—	—	—	—	—	—	—	—	—
Australia	Magnetic Island Reefs—Picnic Reef (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Magnetic Island Reefs—Picnic Reef (Fringing reef leeward) Site 3	—	—	—	—	—	—	—	—	—	0.38	—	—	—	—	—	—	—	—	—
Australia	Maureens Cove	4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Michaelmas Cay	—	—	—	—	—	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Michaelmas Reef—Breaking Patches (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Australia	Michaelmas Reef—Breaking Patches (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Australia	Michaelmas Reef—Breaking Patches (Reef flat) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Australia	Michaelmas Reef—Long Bommie (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Milne Reef—Swimming Pool (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	0.5	—	—	0.5	—	—	—	—	—	—
Australia	Moore Reef—Reef Magic Pontoon (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Australia	Moore Reef—Reef Magic Pontoon (Back reef wall) Site 1	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.5	—	—	—	—	—
Australia	Moore Reef—Reef Magic Pontoon (Back reef wall) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Australia	Moore Reef—Sunlover cruises pontoon (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Moore Reef—Sunlover cruises pontoon (Back reef slope) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	—	3.75	—	—	—	—	—
Australia	Moore Reef (Reef Magic) Site 1	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—
Australia	Moore Reef (Reef Magic) Site 1	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Australia	Moore Reef (Reef Magic) Site 3	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—
Australia	Moore Reef Site 2	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Australia	Mudjimba (Old Woman) Island—Mudjimba Island (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Mudjimba (Old Woman) Island—The Ledge (Mudjimba Island) (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Australia	Norman Reef—Norman Reef North (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—
Australia	Norman Reef—Norman Reef North (Back reef slope) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Australia	Norman Reef—Norman Reef North (Back reef wall) Site 1	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Norman Reef—Norman Reef South (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	0.75	—	—	—	2.5	—	—	—	—	—
Australia	Normandy Island	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	North Hastings	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Australia	North Horn-Osprey Reef	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Opal Reef	—	—	1.0	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Opal Reef—Bashful Bommie (Back reef slope) Site 1	—	—	—	—	—	1.5	—	—	—	—	—	1.38	0.62	3.25	4.25	3.25	5.75	—	—
Australia	Opal Reef—Bashful Bommie (Back reef slope) Site 2	—	—	—	—	—	—	—	3.25	—	—	—	—	—	3.0	—	—	—	—	—
Australia	Opal Reef—Cathedrals (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	1.25	—	—	1.0	—	—	—	—	—	—
Australia	Opal Reef—SNO (South North Opal) (Back reef crest) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.75	1.0	1.75	—	—	—	—
Australia	Opal Reef—SNO (South North Opal) (Back reef slope) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Opal Reef—SNO (South North Opal) (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—
Australia	Opal Reef—Split Bommie (Back reef wall) Site1	—	—	—	—	—	—	—	1.0	1.5	1.0	0.25	0.5	1.25	0.38	—	—	—	—	—
Australia	Opal Reef—The Wedge (Back reef slope) Site 1	—	—	—	—	—	—	—	1.5	1.25	1.0	1.5	1.25	0.75	2.5	—	2.5	1.0	—	—
Australia	Opal Reef—Two Tone (Reef flat) Site 1	—	—	—	—	—	—	2.5	3.5	—	—	4.75	—	2.0	1.75	—	2.5	2.25	—	—
Australia	Osprey Reef—Admiralty Anchor (Back reef wall) Site 1	17.5	—	—	—	—	9.25	16.0	16.0	23.5	8.0	14.5	13.5	—	—	—	—	—	—	—
Australia	Osprey Reef—North Horn (Back reef wall) Site 1	—	—	—	—	1.25	1.75	1.5	1.75	8.75	—	—	4.25	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Oyster Stacks—Oyster Stacks North (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—
Australia	Oyster Stacks—Oyster Stacks South (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—
Australia	Palm Beach Reef—Palm Beach Reef (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—
Australia	Palm Island Reefs—Cattle Bay (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	94.5	18.5	—	—	—	7.75	—	—	—	—	—
Australia	Palm Island Reefs—Cattle Bay (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	84.75	77.5	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Cattle Bay (Fringing reef leeward) Site3	—	—	—	—	—	—	—	—	164.5	29.25	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Palm Island Reefs—Curacoa Island (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	3.62	—	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Curacoa Island (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	8.75	—	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Curacoa Island (Fringing reef leeward) Site 3	—	—	—	—	—	—	—	—	2.75	0.25	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Fantome (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	9.5	8.5	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Fantome (Fringing reef seaward) Site 2	—	—	—	—	—	—	—	—	15.75	4.0	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Fantome (Fringing reef seaward) Site 3	—	—	—	—	—	—	—	—	39.5	5.0	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Palm Island Reefs—Juno Bay (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	119.75	191.75	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Juno Bay (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	91.75	121.75	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Juno Bay (Fringing reef leeward) Site 3	—	—	—	—	—	—	—	—	45.75	244.75	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Pelorus (Fringing reef leeward) Site 1	—	—	—	—	—	—	—	—	6.25	24.5	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Pelorus (Fringing reef leeward) Site 2	—	—	—	—	—	—	—	—	6.5	8.75	—	—	—	—	—	—	—	—	—
Australia	Palm Island Reefs—Pelorus (Fringing reef leeward) Site 3	—	—	—	—	—	—	—	—	19.5	22.0	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Peel Island-South Peel (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—
Australia	Phil's Bommie	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Radical Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Rainbow Reef Keeper Reef	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Rat Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Reef	3.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Ribbon Reef #5 southern patch	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Ribbon Reef 10—Challenger Bay (Back reef crest) Site 1	—	3.75	2.5	—	—	4.75	—	8.38	12.5	—	—	3.5	—	—	—	—	—	—	—
Australia	Ribbon Reef 10—Challenger Bay (Back reef crest) Site 2	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Ribbon Reef 10—No Name Reef (Back reef slope) Site 1	—	3.25	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Ribbon Reef 10—Pixie Gardens (Back reef wall) Site 1	—	—	—	—	—	—	—	1.5	1.5	—	—	1.5	—	—	—	—	—	—	—
Australia	Ribbon Reef 3—Clam Beds (Back reef slope) Site 1	—	—	—	—	—	2.5	2.75	—	4.25	5.25	—	4.0	—	—	—	—	—	—	—
Australia	Ribbon Reef 3—Flare Point (Back reef slope) Site 1	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Australia	Ribbon Reef 3—Tracey's Wonderland (Joanies Joy) (Back reef slope) Site 1	—	—	—	—	—	—	—	—	3.75	1.25	—	2.0	—	—	—	—	—	—	—
Australia	Sandy Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Saxon Reef—Saxon Reef (Back reef slope) Site 1	—	—	—	—	—	—	2.25	—	—	—	—	—	1.0	0.75	—	—	0.5	—	—
Australia	Saxon Reef—Saxon Reef (Back reef slope) Site 2	—	—	—	—	—	2.75	—	—	—	—	—	—	—	1.0	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Shag Rock Island—Shag Rock North (Fringing reef seaward) Site 2	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	0.25	—	—	—	—
Australia	Shag Rock Island—Shag Rock South (Back reef crest) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Australia	Shag Rock Island—Shag Rock South (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	—	—	—	—
Australia	South Mandu Reef—South Mandu Reef 1 (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Australia	South Mandu Reef—South Mandu Reef 2 (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—
Australia	St Crispin Reef—North Point (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	2.25	4.25	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	Tantabiddi	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Tantabiddi Reef—Tantabiddi Sanctuary Zone (Fringing reef seaward) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—
Australia	Thetford Reef—Thetford Reef (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Australia	Thetford Reef—Thetford Reef (Reef flat) Site 1	—	—	—	—	—	—	—	—	—	—	—	—	3.25	—	—	—	—	—	—
Australia	Upulo Cay	—	—	—	—	—	3.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Vlasoff Reef	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	Wheeler Reef—Students Bommie (Back reef slope) Site 1	—	—	—	—	—	—	—	—	—	—	6.5	—	—	—	—	—	—	—	—
Australia	Wheeler Reef—The Mooring (Back reef slope) Site 1	—	—	—	—	—	—	1.25	3.0	4.25	3.25	—	—	—	1.75	—	0.5	—	—	—
Australia	Zodiac Rock/ Groote Eylandt	—	—	—	2.5	5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cambodia	Fishing Bay	—	—	—	—	—	—	—	—	—	—	—	—	0.69	—	—	—	—	—	—
Cambodia	KK01A	—	—	—	—	—	—	—	—	—	—	—	—	0.25	1.25	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cambodia	KK03	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—
Cambodia	KK03A	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—
Cambodia	KK03B	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Cambodia	KK03C	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Cambodia	KK04A	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Cambodia	KK06A	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Cambodia	Koh Krosa Kandal	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—
Cambodia	Koh Mano (channel)	—	—	—	—	—	—	3.25	—	—	—	—	—	—	—	—	—	—	—	—
Cambodia	Koh Poah (Site 7)	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Cambodia	Koh Rong Samlem/Koh Samlem Straits	—	0.25	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cambodia	KR02A	—	—	—	—	—	—	—	—	—	—	—	—	5.0	—	—	—	—	—	—
Cambodia	KR05C	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Cambodia	KR06A	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—
Cambodia	KR06B	—	—	—	—	—	—	—	—	—	—	—	—	4.0	—	—	—	—	—	—
Cambodia	KR17A	—	—	—	—	—	—	—	—	—	—	—	—	0.25	1.25	—	—	—	—	—
Cambodia	KR18A	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—
Cambodia	KR22A	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—	—	—	—	—
Cambodia	KS02	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—
Cambodia	KS03A	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—
Cambodia	KS03B	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—
Cambodia	KS04A	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Cambodia	KS05A	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Cambodia	KS12A	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cambodia	KS12B	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—
Cambodia	Tuear Khang Cherng	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—
Cambodia	Vietnamese Bay	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
China	Dadonghai 1	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China	Dadonghai 2	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China	Dadonghai 3	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China	Dadonghai 4	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China	Xiao Dong Hai	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—
Christmas Island	Chicken Farm	—	—	—	—	—	—	5.5	6.0	4.0	1.75	6.25	—	—	—	—	—	—	—	—
Christmas Island	Flying Fish Cove	—	—	—	—	—	—	9.5	10.0	8.0	3.5	3.38	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	100th	—	—	—	—	—	10.5	19.25	20.25	—	—	21.5	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Banyak Coral	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Banyak Coral—Pulu Keeling National Park	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Cabbage Patch	38.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Cabbage Patch (10m)	—	9.25	15.0	—	8.0	2.25	—	7.75	—	—	8.25	8.0	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cocos (Keeling) Islands	Cabbage Patch (3m)	—	—	27.5	—	13.75	14.25	17.25	23.5	—	—	27.5	34.5	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Cologne Gardens	—	—	—	—	—	1.5	1.25	—	1.5	—	2.0	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Horsburgh Island North	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	North Point	—	—	—	—	—	—	0.25	—	—	—	0.25	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Prison Gardens	—	—	—	—	—	1.25	1.0	2.25	—	—	4.5	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Pulu Chepelok	—	—	—	—	—	1.0	—	1.5	—	—	1.75	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Soft Coral Garden	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Cocos (Keeling) Islands	Two Trees	—	—	—	—	—	—	0.25	—	0.25	—	0.5	—	—	—	—	—	—	—	—
Cook Islands	Amuri 2	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Cook Islands	Atuatane	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Cook Islands	Maina	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Cook Islands	North of pass 2—outreef	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cook Islands	Northwest Corner	—	—	—	—	—	—	—	—	5.5	—	—	—	—	—	—	—	—	—	—
Cook Islands	South of pass—outreef	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Cook Islands	Southwest Manuae	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Cook Islands	Tongarutu	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—
East Timor	Acrema	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—
East Timor	K41	—	—	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—
East Timor	North of Tanjung Reta	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
East Timor	South of Barstool	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—
East Timor	South of Tanjung Reta	—	—	—	—	—	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—
Egypt	3 islands	—	—	—	—	—	—	—	18.25	—	—	—	—	—	—	—	—	—	—	—
Egypt	Abu Hashish	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Abu Hashish South	—	—	—	—	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Abu Helal	—	—	—	—	—	—	—	—	—	—	2.57	—	3.0	—	4.0	—	4.38	5.92	—
Egypt	Abu Lakkany	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Abu Muchadi	7.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Abu Talha	—	—	—	—	—	—	4.75	2.0	7.0	3.25	—	—	—	—	—	—	—	—	—
Egypt	Amphoras	7.13	—	—	11.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Blue Hole	—	—	—	—	—	—	—	—	—	—	8.25	—	9.5	7.63	3.5	6.0	10.0	7.88	—
Egypt	Canyon North	—	—	—	—	—	—	—	—	—	—	2.25	—	5.63	3.25	3.5	—	—	5.63	—
Egypt	Canyon South-Coral Garden	—	—	—	—	—	—	—	3.0	18.5	—	3.75	—	3.0	0.5	—	—	—	2.75	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Egypt	Castle Beach-Ras Shitan	—	—	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—
Egypt	Checkpoint	—	—	—	—	—	—	2.25	—	—	—	1.0	—	—	—	—	—	3.5	—	—
Egypt	Dahab Lighthouse	—	—	—	—	—	3.0	—	—	5.25	6.25	—	—	11.5	8.88	7.25	9.0	—	5.58	3.75
Egypt	Dahab Moray Garden	—	—	—	—	—	2.0	—	6.2	28.0	5.58	—	—	8.63	14.88	8.15	11.75	16.94	18.75	25.88
Egypt	Disha Outside	0.75	—	—	—	5.5	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—
Egypt	Eel Garden North	—	—	—	—	—	—	—	9.0	—	—	—	—	—	—	—	—	—	—	—
Egypt	El Quadim Bay inside the bay	—	—	—	—	—	—	—	—	8.22	—	—	—	—	—	—	—	—	—	—
Egypt	El Quadim Bay outside the bay	—	—	—	—	—	—	—	—	3.38	—	—	—	—	—	—	—	—	—	—
Egypt	Falfulea	4.5	—	—	—	25.63	—	—	—	—	14.0	—	—	—	—	—	—	—	—	—
Egypt	Fanadir	0.88	—	—	—	3.25	—	—	—	—	—	—	0.75	0.25	—	—	—	—	—	—
Egypt	Far Garden	12.25	—	—	4.25	—	—	3.75	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Gabr el Bint	—	—	—	—	—	—	—	—	—	—	—	—	6.38	7.63	6.5	10.25	—	8.75	—
Egypt	Gabr el Bint North	—	—	—	—	—	—	—	16.75	7.25	5.38	10.63	—	—	—	—	—	—	—	—
Egypt	Gabr el Bint South	—	—	—	—	—	—	—	19.13	—	—	—	—	—	—	—	—	—	—	—
Egypt	Gamul Kebir	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Gamul Soraya	4.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Gebel el Rosas North	—	—	—	—	—	—	—	—	93.5	—	—	—	—	—	—	—	—	—	—
Egypt	Godda Abu Ramada	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Egypt	Gordon Reef Tiran	7.5	—	—	—	—	—	—	—	—	—	4.0	—	4.13	—	—	—	—	—	—
Egypt	Gota Abu Ramada	—	—	—	—	—	—	—	—	—	—	—	3.5	—	—	—	—	—	—	—
Egypt	Gotta Nakari	—	—	—	—	—	—	—	—	2.38	0.5	—	—	—	—	—	—	—	—	—
Egypt	Islands	—	—	—	—	—	—	—	20.08	—	—	—	10.75	—	—	—	—	—	—	—
Egypt	Islands North	—	—	—	—	—	—	—	—	—	—	—	—	6.75	5.0	6.0	12.25	11.25	—	—
Egypt	Islands South	—	—	—	—	—	—	—	—	—	—	—	—	4.25	6.25	8.25	—	11.75	8.67	—
Egypt	Jackfish Alley	6.75	—	—	5.75	—	7.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Jackson Reef Tiran	4.38	—	—	—	2.63	—	1.13	2.5	—	—	0.25	—	3.13	—	—	—	—	—	—
Egypt	Jolanda Reef	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Kalawy A	—	—	—	—	—	—	—	—	—	—	—	10.13	10.88	—	—	—	—	—	—
Egypt	Kalawy B	—	—	—	—	—	—	—	—	—	—	—	3.88	2.75	—	—	—	—	—	—
Egypt	Maagana	2.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Markaz Ratz	—	—	—	—	—	—	40.0	—	1.25	—	2.0	—	—	—	—	—	—	—	—
Egypt	Markaz Ratz South	—	—	—	—	—	—	—	—	—	—	7.75	—	—	—	—	—	—	—	—
Egypt	Marsa Abu Dabab North	—	—	—	—	13.75	—	—	14.38	—	—	—	—	—	—	—	—	—	—	—
Egypt	Marsa Assalaya North	—	—	—	—	—	—	—	7.0	11.75	—	5.0	—	—	—	—	—	—	—	4.63
Egypt	Marsa Egla North	—	—	—	—	—	—	27.0	6.63	15.0	—	10.25	—	—	5.63	—	10.19	—	—	—
Egypt	Marsa Gabel El Rosas	—	—	—	—	—	—	—	—	—	—	—	—	—	5.38	—	7.25	—	—	—
Egypt	Marsa Nakari North	—	—	—	—	—	—	—	—	—	—	—	—	—	1.88	4.38	—	4.25	—	8.63

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Egypt	Marsa Nakari South	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	5..0	—	5.88	—	10.5
Egypt	Marsa Samadai North	—	—	—	—	—	—	15.13	11.25	7.75	—	8.25	—	9.0	—	—	14.0	3.5	—	—
Egypt	Marsa Shagra North Reef	—	—	—	—	—	—	—	—	—	—	—	—	5.0	—	5.5	—	7.13	—	8.75
Egypt	Marsa Shagra South Reef	—	—	—	—	—	—	—	—	—	—	—	—	15.88	—	5.0	—	24.33	—	19.5
Egypt	Marsa Shaqraa-Hosam Helmy Camp	—	—	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—
Egypt	Marsa Shuni North	—	—	—	—	21.75	—	—	3.25	—	—	—	—	—	—	—	—	—	—	—
Egypt	Marsa Tondoba (3 Sisters)	—	—	—	—	—	—	—	—	49.5	—	66.5	—	—	—	—	56.5	—	—	—
Egypt	Marsa Tondoba North	—	—	—	—	—	—	32.75	43.38	49.5	37.25	40.75	—	48.75	—	—	63.63	56.5	—	—
Egypt	Marsa Um Tondoba North Entrance	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	146.5	—	—
Egypt	Marsa Wizr-Mangrove Bay Resort Beach	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—	—	—	—	—	—
Egypt	Mashraba-Nesima	—	—	—	—	—	—	—	—	—	—	8.25	—	—	—	—	—	—	—	—
Egypt	Melia Sinai Beach	—	—	—	—	—	—	—	—	—	—	—	3.25	—	—	—	—	—	—	—
Egypt	Middle Garden	21.25	—	—	17.0	12.75	4.0	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Egypt	Middle-far Garden	15.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Moray Garden	—	—	—	—	—	—	—	10.0	—	—	—	—	—	—	—	—	—	—	—
Egypt	Nuweiba Hilton	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Panorama Reef	—	—	—	—	—	—	—	—	—	—	—	—	13.0	—	—	—	—	—	—
Egypt	Pharoah's Island	3.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Abre El Bint	3.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Abu Soma	0.69	—	—	—	—	—	—	—	—	—	—	2.13	—	—	—	—	—	—	—
Egypt	Ras Bob	48.13	—	—	—	—	—	10.5	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Gamila	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Ghaloum North	—	—	—	—	—	—	—	5.5	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Ghaloum South	—	—	—	—	—	—	—	10.25	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Ghozlani	—	—	—	—	8.0	—	5.75	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Gumilla	9.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Katy	1.75	—	—	—	—	—	6.5	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Ras Mohamed-Anemone City	—	—	—	—	—	—	—	—	—	—	—	0.88	—	—	—	—	—	—	—
Egypt	Ras Nusrani	8.0	—	—	19.75	—	6.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Rick's Reef	—	—	—	—	—	—	—	11.67	23.0	12.38	—	—	7.88	5.38	5.88	13.33	13.5	16.94	—
Egypt	Samaka Mogeha (North Marsa Nakari)	—	—	—	—	—	—	3.5	—	6.75	—	—	—	—	—	—	—	—	—	—
Egypt	Sha'ab Abu Danab	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—
Egypt	Shaab Shagra "Elphinstone"	—	—	—	—	—	—	—	—	—	—	—	—	—	2.38	—	2.88	—	—	—
Egypt	Shaab Claude	3.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Egypt	Shaab Samadai-Pinacle Kebir	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—
Egypt	Shaab Shear	4.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Shabrul	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Shark Bay	7.88	—	—	—	8.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Sharm Abu Dabab South	—	—	—	—	—	—	—	—	—	—	—	—	18.25	—	23.88	—	34.63	—	—
Egypt	Sharm Fukeri North	—	—	—	—	—	—	—	1.38	2.25	—	6.75	—	—	—	—	5.25	—	—	—
Egypt	Southern Oasis	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—
Egypt	Stone Beach	3.13	—	—	—	8.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Temple	5.5	—	—	—	9.0	31.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Thomas Reef	7.5	—	—	—	—	3.38	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Three Pools	—	—	—	—	—	—	—	—	25.5	26.0	—	—	—	—	—	—	—	—	—
Egypt	Tobia Gebir	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—	—	—	—	—
Egypt	Tondoba Bay, outer reef North	—	—	—	—	—	—	—	66.75	18.25	—	—	—	—	—	—	62.75	150.25	—	—
Egypt	Torfa Fanous East	—	—	—	—	—	—	—	—	—	—	—	4.33	—	—	—	—	—	—	—
Egypt	Torfa Heaven	—	—	—	—	—	—	—	21.75	10.38	26.0	—	—	—	—	—	—	—	—	—
Egypt	Torfa Mekki	—	—	—	—	—	—	12.0	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Tower	9.88	—	—	9.25	—	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Tubya Kebir	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	Umm Sid	—	—	—	—	—	—	—	—	—	2.5	3.25	—	5.63	7.5	4.13	—	—	9.13	—
Egypt	Wadi Lahami House Reef 1	—	—	—	—	—	—	—	—	—	—	—	—	2.5	—	—	12.0	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Egypt	Wadi Lahami House Reef 2	—	—	—	—	—	—	—	—	—	—	—	—	2.88	—	—	4.67	—	—	—
Egypt	White Knight	21.5	—	—	—	4.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eritrea	Dur Gaam Island	—	—	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Buoy 16 (Inpuspusa)	—	—	—	0.75	—	0.5	0.25	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Buoy 18	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Buoy 23	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Buoy 27 (Tukunsru N.)	—	—	—	2.0	0.5	1.5	—	0.75	0.25	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Buoy 29 Sroac	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Buoy 39 (Shark Island)	—	—	—	—	0.25	—	—	—	0.25	0.25	—	0.25	—	—	—	—	—	—	—
Federated States of Micronesia	EMB #31 Panyacah	—	—	—	—	0.75	—	—	—	—	1.25	—	0.75	—	—	—	—	—	—	—
Federated States of Micronesia	EMB #34 Molsron Mwot West	—	—	—	—	0.25	0.5	—	—	3.25	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Federated States of Micronesia	EMB #43 Tafunsak Srisrik	—	—	—	—	—	1.25	—	—	1.25	—	0.5	—	—	—	—	—	—	—	—
Federated States of Micronesia	EMB #47 Kisacs	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Federated States of Micronesia	EMB #49 Inkaratoah	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	EMB #53 Metais	—	—	—	—	1.0	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	EMB 16 Inpuspusa	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	EMB 16 Inpuspusa	—	—	—	—	—	—	—	—	—	0.25	—	0.5	—	—	—	—	—	—	—
Federated States of Micronesia	Kisacs EMB 47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Molsron Malem EMB#8	—	—	—	—	0.25	—	—	—	—	0.25	0.25	—	—	—	—	—	—	—	—
Federated States of Micronesia	North Tukunsruh EMB 27	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Federated States of Micronesia	Sunrise Reef	—	—	—	—	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Federated States of Micronesia	Trochus Sanctuary	—	—	—	0.75	0.5	0.62	0.25	—	0.38	—	—	0.12	—	—	—	—	—	—	—
Federated States of Micronesia	Wanyan	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	2 Thumbs Up Arch Bommie	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—
Fiji	Aanuya Reef Edge	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Alice Reef	—	—	—	—	—	—	0.25	—	0.25	—	—	—	—	—	—	—	—	—	—
Fiji	Angel Reef	0.25	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Anthias Avenue	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Fiji	Aquaventure Dive Shop	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Back Reef, Magic Mushrooms, South Save-a-Tack	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Fiji	Barracuda Point	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Fiji	Bella’s Reef Nadogo	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Big Blue 3	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Big Blue 6	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Bird Rock	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Black Magic Mountain	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fiji	Blue Ribbon Eel Reef	—	—	—	—	—	0.5	—	0.75	0.25	—	—	—	—	—	—	—	—	—	—
Fiji	Blue Wall	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Buca Bay Channel Marker	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Castaway House Reef	—	—	—	—	4.5	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—
Fiji	Castaway Pinnacles	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Castaway Resort House Reef	—	—	—	—	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Cat's Meow Shoal	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Fiji	Cousteau Jetty shallow	—	—	—	—	—	0.25	0.25	—	—	0.75	0.75	—	—	—	—	—	—	—	—
Fiji	Cousteau Lighthouse	—	—	—	—	—	—	—	0.12	—	0.25	0.5	0.12	—	—	—	—	—	—	—
Fiji	Cowrie Crawl	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Fiji	Cukini/Nadogo Mangrove Island	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Dennis Patch	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Dreadlocks	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Fiji	E6	—	—	—	—	—	—	—	—	—	—	0.75	0.5	—	—	—	—	—	—	—
Fiji	Fish Factory	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Fragle Rock	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	G-6 Reef	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fiji	Garden of Eden	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Golden Nuggets	—	—	—	—	—	0.25	0.38	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Fiji	Golden Nuggets Deep	—	—	—	—	—	—	0.38	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Golden Reef	—	—	—	1.5	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Great White Wall	—	—	—	—	—	0.25	—	0.5	—	—	—	—	0.25	0.25	0.25	—	—	—	—
Fiji	Honeymoon	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Honeymoon Island	—	—	—	—	—	—	—	0.08	—	—	—	—	—	—	—	—	—	—	—
Fiji	House Reef Raviniake	—	—	—	—	—	—	4.25	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	House Reef Raviniake 2	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Inner Barrier SW Qalito Island	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Instant Replay	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Islet off Kia	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Fiji	Jacky’s Reef	—	—	—	—	—	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Jerry’s Jelly	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Fiji	Jerry’s Jelly/ Blue Ribbon Eel Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Fiji	Jimmy’s Reef	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Korovou	—	—	—	—	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Kosova Point	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Lawaki Beach House	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fiji	Lawaki Beach Resort (Deeper Reef Edge)	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Lawaki Beach Resort House Reef North	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Lawaki Beach Resort House Reef South	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Lighthouse	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Likuliku 1	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Likuliku 4	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Likuri Pass South outer wall	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Lomanisue North	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Maccadame Reef	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Magic Mushrooms	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Makamaka Point	—	—	—	—	—	0.38	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Malamala	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Mali Passage	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Malolo 2	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Manta Ray Point	—	—	—	—	—	0.25	0.33	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Motuli Bawa	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Mount Mutiny	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	0.25	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fiji	Muiavuso Flats	—	—	—	—	—	—	0.5	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Mystery Reef	0.75	—	—	—	—	—	—	—	0.25	0.12	0.12	—	—	—	—	—	—	—	—
Fiji	Naivua Keraquma Reef	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Naiyacayaca	—	—	—	—	—	0.12	0.92	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Nakubu Reef	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Nakubu Reef site A	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Namoa Reef	—	—	—	—	—	—	—	5.75	—	—	—	—	—	—	—	—	—	—	—
Fiji	Navini Southwest-subsurface beachcomber	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	North Castaway	—	—	—	—	—	—	2.75	1.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	North Reef	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Fiji	Oarmans Bay	—	—	—	—	—	—	—	—	—	—	0.25	—	1.25	—	—	—	—	—	—
Fiji	OJ's	—	—	—	—	—	0.25	0.44	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Outer side of Inner Barrier	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Outer wall near south Kaibu opposite Pres Vale	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—
Fiji	Outer wall South Kaibu Island	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—
Fiji	Ovulavula Reef	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Pinnacle	—	—	—	—	—	1.0	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Pleasure Point	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fiji	Purple Haze Reef	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Rainbow Reef: The Corner	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—
Fiji	Ravanaki House Reef	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Raviravi Naku Pass Inner Reef	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	RCA1	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	RCA4	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Rocky Bay	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Ronnie's Bommies	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Fiji	Runners Bay	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Sea Fan, Storm Island	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Fiji	Sem's Point (Blue Ribbon Eel)	—	—	—	—	—	—	0.5	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Shark Alley	—	—	—	—	—	0.44	0.19	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Small White Wall	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Sunflower	—	—	—	—	—	—	0.12	0.38	—	—	—	—	—	0.25	—	—	—	—	—
Fiji	Supermarket	—	—	—	—	—	—	0.5	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Talailau	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Tavewa Island	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Tetons	—	—	—	—	—	—	—	—	—	—	1.0	0.25	—	—	0.75	—	—	—	—
Fiji	The Corner	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fiji	The End of the World	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Timeless	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Fiji	Tokoriki Wall	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Treasure Island	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Tukituki, Vatukarasa Reef	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Fiji	Vatuka Island	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Vesi Bay	—	—	—	—	—	—	—	—	—	0.5	0.25	—	—	—	0.25	—	—	—	—
Fiji	Vuna Qiliqili	—	—	—	—	—	2.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Waidigi	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Wainalovo East	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Wainalovo West	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Wainimaloro Bay/Safari Lodge Reef Slope	—	—	—	—	—	—	2.25	—	0.5	—	—	—	—	—	—	—	—	—	—
Fiji	Waitabu Cut	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Fiji	Waitabu Fishing Grounds	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Waitabu MPA reef flat	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Fiji	Waitabu MPA Slope	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Fiji	Wakaya Lion's Den	—	—	—	—	—	—	—	—	—	—	0.5	0.25	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fiji	Watu Express Reef (destroyed)	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Fiji	Whiskey Reef (off western shore of Macatawa Levu Island)	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Fiji	Wilkes Passage	—	—	—	—	—	—	2.75	0.25	—	—	—	—	—	—	—	—	—	—	—
Fiji	Yanu Somila	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
French Polynesia	12 Apotres	—	—	—	—	—	—	—	—	—	—	0.5	0.5	0.25	0.25	—	—	—		—
French Polynesia	Aquarium	—	—	—	—	44.0	30.5	28.88	45.25	63.5	96.75	99.0	130.38	277.5	301.25	—	225.25	—	325.0	—
French Polynesia	Bora Bora Nui Resort (fringing reef)	—	—	—	—	—	—	—	—	19.75	26.75	34.5	85.25	83.5	58.62	71.5	66.25	—	43.0	—
French Polynesia	Bora Bora Resort (fringing reef)	—	—	—	—	—	—	—	—	1.0	26.5	34.0	27.5	38.0	40.5	40.88	35.5	—	31.0	—
French Polynesia	Club Med (fringing reef)	—	—	—	—	—	—	—	—	3.0	4.5	2.75	9.75	11.25	13.5	13.25	13.5	—	6.0	—
French Polynesia	College	—	—	—	—	28.0	20.0	—	—	—	—	—	—	—	—	—	—	—	—	—
French Polynesia	Eboulement	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
French Polynesia	Faaa/La Faille St Etienne	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
French Polynesia	Fakarava Atoll	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
French Polynesia	Fausse Passe (Teraea)	—	—	—	—	—	—	—	—	—	—	31.0	21.75	21.25	—	—	—	—	—	—
French Polynesia	Haapiti	—	—	—	—	—	—	—	—	—	7.75	—	—	—	—	—	—	—	—	—
French Polynesia	Haramea	—	—	—	—	—	—	—	—	—	138.75	—	—	—	—	—	—	—	—	—
French Polynesia	Hart	—	—	—	—	—	—	—	—	—	—	17.0	55.0	50.5	—	—	—	—	—	—
French Polynesia	Hawaiki Nui at Raiatea	—	—	—	—	—	—	—	—	—	—	—	10.25	—	—	—	—	—	—	—
French Polynesia	Hotel Bora Bora	—	—	—	—	—	—	—	—	1.75	4.5	5.75	14.0	19.5	8.25	11.5	10.25	—	—	—
French Polynesia	Huahine Pearl Farm	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—
French Polynesia	Jardin de Corail (Coral Garden)	—	—	—	—	—	32.25	173.25	319.88	366.25	387.5	305.0	247.5	172.5	125.62	88.12	61.25	—	58.5	—
French Polynesia	Jardin de Fitii	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
French Polynesia	Kopuapiro	—	—	—	—	—	—	—	—	36.0	—	—	—	—	—	—	—	—	—	—
French Polynesia	Le Meridien/ Manta (Pinacle)	—	—	—	—	—	—	—	—	3.25	3.0	3.0	8.0	10.75	8.38	9.25	12.0	—	15.75	—
French Polynesia	Maharepa	—	—	—	7.0	3.0	8.5	6.25	—	12.5	15.25	—	—	26.75	—	—	—	—	—	—
French Polynesia	Mahu	—	—	—	—	—	—	—	—	—	153.25	291.75	268.0	263.5	—	—	—	—	—	—
French Polynesia	Matira	—	—	—	—	—	—	190.12	433.0	424.0	583.75	463.75	225.0	182.5	61.88	43.5	21.5	—	19.25	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
French Polynesia	Mohio	—	—	—	—	—	133.0	116.12	240.88	123.5	133.75	176.25	196.25	170.25	167.0	172.25	177.0	—	92.5	—
French Polynesia	Motu Haapiti	—	—	—	—	—	—	—	—	—	—	11.5	136.75	151.25	230.38	249.12	254.0	—	233.25	—
French Polynesia	Motu Ome	—	—	—	—	—	—	—	—	—	—	3.75	28.25	30.5	—	—	—	—	—	—
French Polynesia	Motu Tane	—	—	—	—	—	—	—	—	—	—	54.0	166.0	139.25	128.0	143.25	151.25	—	153.5	—
French Polynesia	Motu Tapu	—	—	—	—	—	—	—	—	—	—	5.0	67.0	78.5	64.0	71.25	74.5	—	74.5	—
French Polynesia	Motu Te Avapiti	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—
French Polynesia	Motu Vahapiapia	—	—	—	—	—	—	—	—	66.25	—	—	—	—	—	—	—	—	—	—
French Polynesia	Napoleon	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—
French Polynesia	Nuhinuhi	—	—	—	—	—	—	—	—	—	—	3.5	3.5	3.0	2.5	—	—	—	—	—
French Polynesia	Otaha	—	—	—	—	—	—	—	—	—	71.75	44.0	60.0	60.0	96.5	—	—	—	—	—
French Polynesia	Paea	—	—	—	—	—	—	—	—	—	22.5	16.75	—	—	—	—	—	—	—	—
French Polynesia	Papa Mahuea	—	—	—	—	—	—	—	—	—	—	81.75	91.0	89.0	—	—	—	—	—	—
French Polynesia	Papetoai/ Christian	—	—	—	—	—	—	—	1.25	0.25	1.0	—	—	—	—	—	—	—	—	—
French Polynesia	Patito	—	—	—	—	—	—	—	—	—	—	3.75	6.75	6.25	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
French Polynesia	Pinacle Marara	—	—	—	—	—	2.5	1.5	2.38	—	1.0	2.0	2.25	1.25	4.75	4.5	4.75	—	4.5	—
French Polynesia	Povai	—	—	—	—	—	24.75	14.12	11.12	11.25	4.75	7.75	18.0	26.5	17.12	11.5	14.25	—	13.0	—
French Polynesia	Pufana	—	—	—	—	—	—	—	—	23.5	—	—	—	—	—	—	—	—	—	—
French Polynesia	Pukatoa	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—
French Polynesia	Requin de Feu	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
French Polynesia	Revatua (fringing reef)	—	—	—	—	—	—	—	—	2.75	3.0	1.5	9.5	12.0	18.88	26.5	24.75	—	20.25	—
French Polynesia	Sofitel Marara	—	—	—	—	—	—	—	—	0.5	—	0.25	1.0	1.25	1.25	1.38	1.75	—	1.0	—
French Polynesia	Sofitel Motu	—	—	—	—	—	0.5	0.62	1.38	—	0.5	0.5	6.75	8.5	13.75	17.75	20.5	—	35.5	—
French Polynesia	Tapu	—	—	—	—	—	5.0	10.0	—	—	—	—	—	—	—	—	—	—	—	—
French Polynesia	Tapu (external slope)	—	—	—	—	—	—	—	—	—	1.5	2.0	3.25	8.5	5.62	5.38	7.0	—	5.75	—
French Polynesia	Te Tamanu	—	—	—	—	—	—	—	—	—	—	—	1.25	0.75	0.75	—	—	—	—	—
French Polynesia	Temae	—	—	—	—	—	—	—	—	—	1.25	1.75	—	—	—	—	—	—	—	—
French Polynesia	The Aquarium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.25	—	—
French Polynesia	Tiahura	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—
French Polynesia	Tiger Shark	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
French Polynesia	Toau North West outreef	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
French Polynesia	Toau South Lagoon	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—
French Polynesia	Togamaitu-i-uta	—	—	—	—	—	—	—	—	92.25	—	—	—	—	—	—	—	—	—	—
French Polynesia	Tohea NE	—	—	—	—	—	—	—	—	98.0	—	—	—	—	—	—	—	—	—	—
French Polynesia	Tohea SE	—	—	—	—	—	—	—	—	11.0	—	—	—	—	—	—	—	—	—	—
French Polynesia	Top Dive (fringing reef)	—	—	—	—	—	—	—	—	15.0	9.25	19.5	20.75	25.0	35.0	34.88	30.25	—	18.25	—
French Polynesia	Turiroa	—	—	—	—	—	—	102.12	291.38	205.75	—	280.0	64.5	47.5	34.12	—	32.5	—	45.0	—
French Polynesia	Vaioue	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
French Polynesia	Vavaratea	—	—	—	—	—	—	—	—	—	20.25	—	—	—	—	—	—	—	—	—
Guam	Double Reef	—	1.0	4.0	—	3.5	—	—	1.38	—	—	—	—	—	—	—	—	—	—	—
Guam	Facpi Point	—	1.0	0.5	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hong Kong	Crescent Island East (Ngo Mei Chau)	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Hong Kong	Double Island	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—
Hong Kong	Siu Long Kei	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—
India	Kadmat	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Ahe Dive Resort Housereef	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—
Indonesia	Air Karang	—	—	—	—	—	—	—	—	1.0	—	—	—	1.25	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Air Tejun, Mursala Island	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Indonesia	Amed	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Ampalas	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Ampana Tete (Tete B)	—	—	—	—	—	—	4.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Asu	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Baiya	—	—	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—
Indonesia	Bama	—	—	—	—	—	0.5	—	—	—	—	—	—	2.5	—	—	—	—	—	—
Indonesia	Bangkaru	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Indonesia	Bangkaru 2	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Indonesia	Barranglompo (Site 1) Tenggara	—	—	—	—	—	—	—	2.0	0.5	—	—	—	—	—	—	—	—	—	—
Indonesia	Barranglompo (Site 2) Barat	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Barrier Reef	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Batee Gla	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Benteng	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—
Indonesia	Benteng Reef 1	—	—	10.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Benteng Reef 2	—	—	12.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Berakit	—	—	—	—	—	—	—	0.12	0.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Bida Dari	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—
Indonesia	Bilik	—	—	—	—	—	0.25	—	—	1.0	—	—	—	1.75	—	—	—	—	—	—
Indonesia	Bingin Bondalem	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—	—	—	—	—
Indonesia	Binongko Island (site 13)	—	—	—	4.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Bisabora	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Blue Coral	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Budo	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Bulan Madu Gili Air	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Buoy 4 Hoga Island	—	—	—	—	5.0	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Buoy 5	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Burung Island	—	—	0.5	4.5	1.0	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Cemara Besar	—	—	—	—	—	—	—	2.75	1.0	0.5	—	—	—	—	—	—	—	—	—
Indonesia	Cemara Kecil Island	1.75	—	—	4.75	1.75	—	3.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Coast	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Coral Eye House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—
Indonesia	Coral Garden	—	—	—	—	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Coral Meadow	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Indonesia	East Bauluang Island	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	East Kapoposang	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Fan Garden	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—
Indonesia	Fukui	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Gangga Jetty (Gangga Island)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.75	—	0.25	0.5	—
Indonesia	Gangga Village (Gangga Island)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	0.25	—	—
Indonesia	Gapang Beach	—	—	—	—	—	—	—	13.75	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Garden Eel	—	—	1.0	—	—	2.5	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Geleang Island	—	—	1.25	1.5	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Gili Sulat	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Gosong Bira Besar	—	—	—	—	—	—	—	—	—	—	5.0	—	—	—	—	—	—	—	—
Indonesia	Gosong Kapas Reef	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Gosong Sawo	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Grand Ika Gili Air	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Grubby's	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Gusung Tarojaya, Salemo Island	—	—	—	—	—	—	—	3.25	—	—	—	—	—	—	—	—	—	—	—
Indonesia	H. Kasim	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Hans Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—
Indonesia	Halik	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	1.0	—
Indonesia	Hidden Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Indonesia	Hoga Buoy 3	—	—	—	—	2.75	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Hoga Buoy 4	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Indonesia	Hoga Island Buoy 2	—	—	—	7.5	8.25	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Horuo Reef	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Indonesia	Ilona Bondalem	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—
Indonesia	Indaa Atoll	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—
Indonesia	Indah Reef	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Jeladi Wilis	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Jepun	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Kahuku (Bangka Island)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.25	0.13	—
Indonesia	Kajang	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—
Indonesia	Kakafu	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa 2	—	—	—	—	2.0	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa Buoy 1	—	—	—	—	—	—	1.75	1.75	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa Double Spur	—	—	—	—	2.5	—	0.25	1.0	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa Double Spur (site 18)	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa near Matingola Village (site 12)	—	—	—	3.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa North Coast	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa opposite Hoga (site 33)	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa SW tip (site 16)	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kaledupa West (site 11)	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kanawa Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	—
Indonesia	Kapaenaue (reef on right)	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kapota 2	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—
Indonesia	Kapota Ollo	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Kapote (reef on right)	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kapote Island (reef on right)	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Kaledupa	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Kaledupa (Atoll)	—	—	—	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Kaledupa (reef on right)	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Kaledupa (west-reef on right)	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Kaledupa atoll (site 6)	—	—	—	5.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Kapote SW (site 21)	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Kasih	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Indonesia	Karang Mayit	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—
Indonesia	Katiet Patch Reef	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kayu Duwi Tejakula	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Indonesia	Kayunyole	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—
Indonesia	Kecil Island	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Kollozoa Reef	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Kondang Buntung	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Kuburan Cina	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Indonesia	Kulati Wreck	—	—	—	—	—	—	—	—	4.0	—	—	—	—	—	—	—	—	—	—
Indonesia	Labuana 1	—	—	—	—	—	5.25	2.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Labuana 2	—	—	—	—	—	2.75	3.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Labuana 3	—	—	—	—	—	0.5	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Labuhan Kapal, Mursala Island	—	—	—	—	—	—	—	—	3.5	—	—	—	—	—	—	—	—	—	—
Indonesia	Latondu	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Legon Waru-Sangyang	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Lekuan 3	—	—	—	0.75	1.5	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Lempuyang	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—
Indonesia	Lhok Me	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—
Indonesia	Lighthouse Point	0.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Linggan	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Lintea Atoll (reef on right)	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Lintea Atoll, reef on left	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Lintea Kaledupa	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Luna Park	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Makmur	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Malenge Reef 2	—	—	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Malotong	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—
Indonesia	Manga Tasik	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Mangkasa Point	—	—	—	—	—	—	—	—	—	—	11.0	—	—	—	—	—	—	—	—
Indonesia	Manta Avenue	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Manta Point	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.88	—	—
Indonesia	Mari Mabuk Reef	—	—	—	—	—	—	—	—	3.75	—	—	—	—	1.0	—	—	—	—	—
Indonesia	Matingola Village	—	—	—	—	2.0	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Mendati Village (reef on left)	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Menjangan Besar Island	—	—	0.5	0.25	—	—	—	8.25	1.5	—	—	0.75	—	—	—	—	—	—	—
Indonesia	Menjangan Kecil Island	0.25	—	3.5	1.0	—	—	0.75	2.5	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Menyawakan	—	—	1.25	2.75	0.25	—	1.0	—	—	0.12	—	—	—	—	—	—	—	—	—
Indonesia	Meras	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Moor	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—
Indonesia	Negeri Lima	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	North Barang Caddi	—	—	—	—	—	—	—	—	0.75	—	—	2.5	—	—	—	—	—	—	—
Indonesia	North side of Pulau Rondo	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Nusa Penida	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Nusa Tiga	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	P. Kumbur	4.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	P. Nuburi	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	P. Pari (selatan)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	P. Pepaya	7.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	P. Pramuka (timur)	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	P. Rajuni Kecil	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	P. Rajuni Kecil (selatan)	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	P. Rajuni Kecil (timur)	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pagang Island	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Indonesia	Pahawang Island	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pak Kasims	—	—	—	—	3.0	—	0.75	1.5	0.75	—	—	—	—	—	—	—	—	—	—
Indonesia	Palau Langkai	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Palau Lanyukang	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pangempa Reef	—	—	10.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Panjang Island (North site)	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Indonesia	Panjang Island (South site)	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—
Indonesia	Pantai Gapang	—	—	—	—	—	—	11.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pasir Putih	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Pasoso 1	—	—	—	—	4.0	2.38	2.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pasoso 2	—	—	—	—	2.75	1.12	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pasoso 3	—	—	—	—	1.5	2.12	2.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pasoso 4	—	—	—	—	—	1.25	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pastel	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pelabuhan Lahewa	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—
Indonesia	Pemuteran (Pertemuan Dekat)	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Poncan Gadang Island	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Pos 1	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pulau Bagu	—	—	—	—	—	—	—	—	2.75	—	—	—	—	—	—	—	—	—	—
Indonesia	Pulau Belanda	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—
Indonesia	Pulau Bira Besar	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—
Indonesia	Pulau Buro	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Pulau Kalong 1	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pulau Kalong 2	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pulau Kayu Angin Bira	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Indonesia	Pulau Panjang 1	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pulau Panjang 2	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Pulo Rondo II	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Putih Island	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Ridge 1 Hoga Island	—	—	—	—	0.75	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Roine Selatan (South)	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—
Indonesia	Rubiah Pier	—	—	—	—	—	—	1.25	28.0	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Rumah Merah	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—
Indonesia	Saboloh Besar	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Saboloh Kecil	—	—	—	4.25	—	—	—	—	—	—	—	—	—	—	—	—	—	0.88	—
Indonesia	Sahaong	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	0.25	—	—
Indonesia	Samalona Island	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sambangan Island	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—
Indonesia	Sampela 3	—	—	—	—	—	—	—	—	3.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Sampela 4	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Sampela Buoy 1	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sampela Buoy 2 (reef on right)	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sampela Outer	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—
Indonesia	Sampela Village	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sangyang Island	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sanur	—	—	—	—	0.25	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Saponda Laut 3	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—
Indonesia	Saponda Laut 4	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Indonesia	Sawah (West of Tokobao Island)	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—
Indonesia	SE Barrang Lompo	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—
Indonesia	Sea Garden Point	4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sebayor Kecil	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Indonesia	Semak Daun Island (east)	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Semak Daun Island (south)	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Semak Daun Island (west)	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Shark Point	—	—	—	—	—	—	—	—	—	—	—	0.25	1.25	—	0.5	0.5	1.0	—	—
Indonesia	Sianas	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Simacan	—	—	—	—	—	—	—	—	0.75	—	—	—	2.0	—	—	—	—	—	—
Indonesia	Sintok Island	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sironjong Island	—	—	—	7.75	—	—	—	—	5.5	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Site 7 Tokabao Island	—	—	—	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sombano Reef	—	—	—	—	4.0	—	1.0	4.0	1.5	—	—	—	—	—	—	—	—	—	—
Indonesia	Sombu	—	—	—	—	—	—	—	0.5	—	—	—	—	—	0.75	—	—	—	—	—
Indonesia	South Barrang Caddi	—	—	—	—	—	—	—	—	1.0	—	—	1.75	—	—	—	—	—	—	—
Indonesia	South Bauluang Island	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	South Kapoposang	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Stasiun 4 (Tanjung Besar)	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Stasiun 3 (Tanjung Kecil)	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Stasiun II Bokori	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Stasiun III Bokori	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Indonesia	Statsiun I Bokori	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Indonesia	Sumanga Island	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sumpat	—	—	—	—	—	0.25	0.12	0.38	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Sumpat Island	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	SW Kaledupa	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Table Coral City	—	—	—	1.75	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tahu	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Taka Malang	—	—	—	—	—	—	—	—	—	—	—	1.0	0.75	—	—	—	—	—	—
Indonesia	Tambu Bay 1—Pulau Katupat	—	—	—	—	—	—	—	—	—	—	4.0	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Tambu Bay 3—Awesang	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—
Indonesia	Tambu Bay 4—Palau (Santigi)	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—
Indonesia	Tambu Bay 5—Sibualong	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—
Indonesia	Tanjong Berakit	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tanjung Api 1	—	—	—	—	—	3.0	2.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tanjung Api 2	—	—	—	—	—	3.25	2.0	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tanjung Api 4	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tanjung Gelam	—	—	—	—	—	—	—	1.5	2.25	—	—	—	—	—	—	—	—	—	—
Indonesia	Tanjung Husi II (Bangka Island)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	—
Indonesia	Tanjung Patok	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—
Indonesia	Tanjung Pisok	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tawaeli Talise	—	—	—	—	—	1.25	1.25	—	—	0.5	—	—	—	—	—	—	—	—	—
Indonesia	Teluk Krueng Raya	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Indonesia	Tengah Island	3.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tenggara P. Putri	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—
Indonesia	Tete B	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—
Indonesia	Tokabao Island	—	—	—	16.5	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tokabao Island (site 15)	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tokobao Atoll	—	—	—	—	—	—	0.5	0.5	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tolandano	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Tolandano Island (reef on right)	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tomea Island (near boat mooring)	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tomea Island (north side)	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tomea island (waha village)	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tomea near Waha (reef on right)	—	—	—	—	1.0	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tomea Village (site 9)	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Toyopakeh Pontoon	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tulamben	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Tulamben House Reef	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—
Indonesia	Tunang Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Indonesia	Turtle Street	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Uebone	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—
Indonesia	Ujung Aramanyang	—	—	—	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—
Indonesia	Ujung Batu Kapal 2	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Indonesia	Ulasa Island	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Waha Jetty	—	—	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indonesia	Waha Jetty Tomea	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Waha Jetty Tomea (site 4)	—	—	—	7.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Waha Pinnacle	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Waha Selatan	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—
Indonesia	Waha Wanci	—	—	—	—	—	—	0.38	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Wanci Sombu Village (reef on right)	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Wandoka	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—
Indonesia	Wandoka Wanci (reef on left)	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Watu Lawang	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Indonesia	Watuno	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—
Indonesia	Waworaha Beach site 1	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Waworaha Beach site 2	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Waworaha Beach Site 3	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Indonesia	Wayag	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	—	—
Indonesia	West Barrang Lompo	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—
Indonesia	West Bauluang Island	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	West Samalona	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Israel	Coral Beach Nature Reserve	0.13	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Israel	Nature Reserve	—	—	—	—	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Israel	North Princess Hotel	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Israel	South Princess Hotel	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Airport North	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Airport North (10 m)	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Akashita	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Akazumijuki, Yabiji	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Japan	Anadomari-oki	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Ankyaba	—	—	—	—	7.75	4.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Arakawasita	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Byobudani, Chichijima Is	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Japan	Fugausa	—	—	—	—	—	—	0.5	—	—	—	0.25	1.0	0.5	—	—	—	—	—	—
Japan	Gahi	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—
Japan	Hirashima	—	0.5	—	0.25	0.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Miyako Island	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Nakanose	—	—	7.25	—	2.5	3.5	2.5	2.12	2.5	1.0	—	0.75	0.5	1.75	1.5	1.75	—	0.75	—
Japan	Nakanose Kanokawa Bay	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Nishi-hama	—	—	5.5	8.75	6.0	3.25	—	—	—	2.5	—	—	—	—	—	—	—	—	—
Japan	Nishiumi	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—
Japan	Nita-hama	—	—	1.5	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Japan	North reef of Kohama Island	—	—	—	0.75	1.0	1.75	1.5	—	0.75	—	0.5	0.75	0.25	—	—	1.75	—	0.38	—
Japan	North west offing of Chabana	—	—	—	—	—	4.75	—	—	—	—	—	—	2.75	3.5	—	—	—	—	—
Japan	Northern west of Doo-Reef	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Offing of Ara Beach	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Offing of Tomori New Harbor	—	—	—	—	5.5	7.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Oganzaki Ishigaki Island	—	—	0.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Oganzaki Toudaishita	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Ohgamijima Northwest	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Japan	Oodo	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Sakieda	0.5	—	2.5	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Sakuraguchi	—	—	—	—	—	—	0.75	0.75	—	—	—	—	—	—	—	—	—	—	—
Japan	South of Fukapanari	—	—	—	—	—	—	4.5	6.5	—	—	—	—	—	—	—	—	—	—	—
Japan	South of Futami-iwa	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Southern offing of Hatenohama	—	—	—	—	0.75	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Sunabe	—	—	—	—	—	—	—	—	5.5	10.12	—	—	—	—	—	—	—	—	—
Japan	Tamaruru Point	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m²)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Japan	Tomori (Kumanomi Paradise) group A data	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Tomori (Kumanomi Paradise) Group B data	—	—	—	5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Uentoro	—	—	—	1.25	1.75	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Yabiji	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	Yonasone of Iriomote Island	1.0	—	0.5	—	1.0	2.0	—	1.25	—	—	—	—	—	—	—	—	—	—	—
Jordan	Aquarium	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—
Jordan	First Bay	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—
Jordan	Japanese Garden	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—
Kenya	Lobster Malindi	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Kenya	Malindi Barracuda Channel	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Kenya	Malindi Coral Garden	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Kenya	Malindi North Reef	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—
Kenya	Navy Malindi	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
La Réunion	Bleu Marine	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
La Réunion	Boucan Canot Lagon	—	—	—	—	—	—	—	—	—	—	—	—	1.25	1.75	—	0.88	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
La Réunion	Boucan Canot PE	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	0.75	0.75	—	—	—
La Réunion	Cap la Houssaye	—	—	—	—	—	—	—	—	—	—	1.25	0.5	—	0.5	—	0.25	—	—	—
La Réunion	Ermitage PE	—	—	—	—	—	—	—	—	—	—	—	—	0.5	1.0	—	0.5	1.25	—	—
La Réunion	Etang Sale Lagon	—	—	—	—	—	—	—	—	—	—	—	—	—	12.0	—	2.75	1.25	—	—
La Réunion	Etang Sale Sud	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—
La Réunion	Grand Fond	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—
La Réunion	Hermitage Lagon	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.25	—	—	—	—	—
La Réunion	Livingstone Lagon	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	0.25	—	—	—
La Réunion	Livingstone PE	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	0.62	—	—	—
La Réunion	Novotel	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—
La Réunion	Plage Saint Leu	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.75	—	—	—	—
La Réunion	Roches Noires Lagon	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	1.25	0.62	—	—	—
La Réunion	Roches Noires PE	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25	—	0.75	—	—	—
La Réunion	Saline Nord Lagon	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	0.25	1.0	—	—	—
La Réunion	Saline Nord PE	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25	—	—	—	—	—
La Réunion	Spot de Saint-Leu	—	—	—	—	—	—	0.75	—	—	0.25	1.25	0.75	0.5	—	—	—	—	—	—
La Réunion	Spot del'Hermitage	—	—	—	—	—	—	—	0.75	0.25	0.5	1.0	—	—	—	—	—	—	—	—
La Réunion	Spot Etang Sale	—	—	—	—	—	—	0.5	1.5	0.5	0.5	0.5	2.75	0.75	—	0.75	1.0	0.25	—	—
La Réunion	Spot Perroquet	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	0.25	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
La Réunion	Tessier PE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—
La Réunion	Trou d'eau Lagon	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	0.5	—	—	—
La Réunion	Trou d'eau PE	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	0.5	0.62	—	—	—
Madagascar	Ankarea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.0	—	—	—	—
Madagascar	Chesterfield Island	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Madagascar	Coral Garden	—	—	—	—	—	—	—	—	—	—	—	—	0.88	0.25	—	—	—	—	—
Madagascar	Coral Garden, Bay of Ranobe	—	—	—	—	—	—	—	—	—	—	—	—	0.88	—	—	—	—	—	—
Madagascar	East Nosy Fasy	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Madagascar	East Nosy Hao	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Madagascar	Fred's Reef	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Madagascar	La Piscine	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—
Madagascar	North Nosy Fasy	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Madagascar	North Nosy Hao	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Madagascar	Olaf's Reef	—	—	—	—	—	—	—	2.25	—	—	2.25	—	—	—	—	—	—	—	—
Madagascar	Recruitment Complex	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Madagascar	Seven Little Sharks	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Madagascar	Tanikely 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—
Madagascar	Tanikely 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—
Madagascar	Tsara 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.5	—	—	—	—
Madagascar	Tsara 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—	—	—
Madagascar	West Nosy Fasy	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Abalone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Malaysia	Abect House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Adam's Point	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—
Malaysia	Ali Baba Rock	—	—	—	—	—	—	—	—	—	—	—	—	4.75	—	—	—	—	—	—
Malaysia	Anemone Centre	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.5	—	—	—
Malaysia	Anemone Garden	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Malaysia	Atlantis Bay House Reef	—	—	—	—	—	—	—	—	—	—	—	0.25	5.0	—	—	—	—	—	—
Malaysia	Banggi Outer Northeast Reef 1	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Banggi Outer Northeast Reef 2	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bankawan 1	—	—	—	—	—	—	8.0	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bankawan 2	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bankawan East	—	—	—	—	—	—	11.0	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bankawan Reef (SW)	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bankawan Reef 3	—	—	—	—	—	—	13.75	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bankawan South	—	—	—	—	—	—	16.0	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Baratua	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—
Malaysia	Base Camp	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	0.25	—
Malaysia	Batik	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—
Malaysia	Batu Layar	—	—	—	—	—	—	—	—	—	—	—	0.25	1.75	—	1.0	1.25	—	1.0	—
Malaysia	Batu Malang	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	2.12	1.38	—	—	—
Malaysia	Batu Nisan	—	—	—	—	—	—	—	—	—	—	44.0	37.75	30.25	31.25	47.25	31.75	—	20.25	—
Malaysia	Batu Tabir	—	—	—	—	—	—	—	—	—	—	—	1.0	1.5	—	3.75	0.25	—	5.25	—
Malaysia	Beach 3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Bimbo Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.25	—	—	—
Malaysia	Black Coral Garden	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bodgaya Dead End Channel	—	2.5	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bodgaya South Rim	—	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bodgaya South Rim Outer Reef	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Bohayan Island	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	Bugis Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—
Malaysia	Bumphead Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.75	—	0.5	—
Malaysia	Bum-Bum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	Cabbage Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—
Malaysia	Cahaya Way, Bohayan Island	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.25	0.5	—	1.5	—
Malaysia	Chagar Hutan	8.5	—	—	—	—	—	—	—	—	—	6.25	—	—	—	—	21.25	—	1.5	—
Malaysia	Chagar Hutang (R2)	—	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Chagar Hutang East	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	0.25	—
Malaysia	Chebah	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Malaysia	Chebeh	—	—	—	—	—	—	—	—	—	—	—	1.25	1.25	—	1.25	2.0	—	4.5	—
Malaysia	Cliff Hanger	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—
Malaysia	Coral Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.5	—	—	—
Malaysia	Coral Garden 1, Kapas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	1.75	—	—	—
Malaysia	Coral Garden 3, Kapas	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.5	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Coral Garden, Mataking Besar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	2.75	—
Malaysia	Coral Garden, Mataking Island	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	2.75	—	—	—	—
Malaysia	Coral Heaven	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Coral Redang House Reef North	—	—	—	—	—	—	5.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Coral Resort House Reef, Redang Island	—	—	—	—	—	—	—	5.25	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Coral View Reef	—	—	—	—	—	—	—	—	—	—	5.75	—	—	—	—	2.5	—	—	—
Malaysia	Coral Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Malaysia	Danawan Reef, Siamil, Kapalai	—	—	—	—	—	—	—	—	—	—	—	—	—	36.5	—	—	—	—	—
Malaysia	Denawan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Dead End Channel	—	—	—	—	—	—	—	4.5	—	—	—	—	—	—	—	—	—	3.0	—
Malaysia	Diver's Lodge House Reef	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Malaysia	Drop-off	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Malaysia	East Palau Pinang	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Edwin Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.75	9.75	—	0.25	—
Malaysia	Eve's Garden	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	—	—	—	—	—
Malaysia	Fan Canyon	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	1.75	—	3.5	—
Malaysia	Fly Rock	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Fish Eye	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Fresh Water Bay, Tenggol	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	0.75	0.5	—	0.5	—
Malaysia	Fringe Reef NE Patanunan	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Fringing Reef S of Karakit	—	—	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Fringing Reef S. Molleangan Besar	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Fringing Reef SE Balak	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Fringing Reef SE side of Balak	—	—	—	1.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Fringing Reef SW Balak	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Froggie Fort	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.25	2.0	0.25	—	0.5	—
Malaysia	Goby Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Great Wall, Kapalai	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—
Malaysia	Gua Rajawali	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	3.25	1.25	—	1.75	—
Malaysia	Gua Sumbang	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—
Malaysia	Gusung-gusung	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Malaysia	Hanging Garden	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	Heritage Row (P. Bidong)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	0.5	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	House Reef, Mataking Besar Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	0.75	—
Malaysia	Italian Place	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	0.5	—
Malaysia	Jahat North	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.75	—	—	—
Malaysia	Jahat East	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—
Malaysia	Japanese Garden P. Payar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Malaysia	Jawfish	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.75	—	—	—	—	—
Malaysia	Juara Rocks	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.0	—	—	—
Malaysia	Juara South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—
Malaysia	Kador Bay/ Teluk Kador	—	—	—	—	—	—	—	—	—	—	9.25	5.88	4.75	—	5.0	2.25	—	6.25	—
Malaysia	Kampong Dogoton (Pulau Banggi)	—	—	—	—	—	—	16.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Kapalai Rock, Kapalai Island	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Malaysia	Kapikan NE	—	0.25	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	0.63	—
Malaysia	Karakit Reef	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Ken Point	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Ken's Rock	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.25	1.25	0.25	—	0.75	—
Malaysia	Kerengga Kecil North West	—	—	—	—	—	—	—	—	—	—	—	—	5.75	—	7.5	—	—	—	—
Malaysia	Labas	—	—	—	—	—	—	—	—	—	—	—	—	7.25	—	1.75	2.12	—	2.5	—
Malaysia	Lam's Point	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Lighthouse Front	—	—	—	—	—	—	—	—	—	—	—	2.25	2.0	—	0.5	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Limau Jambongan	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Malaysia	Linggisan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	3.0	—
Malaysia	Lobster Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Lobster Rock, Kapalai	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	—	—	—	—	—
Malaysia	Lubani Reef	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Malaysia	Lycia Garden	—	—	—	—	—	—	—	—	—	—	—	—	1.5	0.25	1.25	1.5	—	0.5	—
Malaysia	Macromania Baturua	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	Madidarah South	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—
Malaysia	Maganting Island	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Mak Simpan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—
Malaysia	Malang Rock	—	—	—	—	—	—	—	—	—	—	2.12	1.62	2.5	—	—	—	—	0.5	—
Malaysia	Mamutik Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	0.5	—
Malaysia	Mandarin Valley, Kapalai	—	—	—	—	—	—	—	—	—	—	—	—	—	8.75	—	—	—	—	—
Malaysia	Mandidarah East	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—
Malaysia	Manimpan	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Malaysia	Mantabuan Channel	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Malaysia	Mantabuan North-East	—	7.75	3.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—
Malaysia	Manukan West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	3.25	—
Malaysia	Mari-Mari House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Mataking House Reef	—	—	—	—	—	—	—	—	—	—	—	—	1.5	2.0	2.0	—	—	0.75	—
Malaysia	Mel’s Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.25	—	—	—
Malaysia	Melina Undisturbed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.63	—
Malaysia	Merrangis Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Malaysia	Mid Reef (left)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	0.17	—
Malaysia	Mid Reef (right)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—
Malaysia	Mid Rock, Roach Reef	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Malaysia	Moray Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Malaysia	Munjor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	North Point, Pulau Sipadan	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Northern Valley	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Malaysia	Nyak (Tioman East)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	Old Man of the Sea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.0	—	—	—
Malaysia	P. Kerengga Kecil	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.75	—	7.0	—
Malaysia	P. Nanga	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	P. Rawa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—
Malaysia	P. Tinggi/ Tanjung Gua Sumbang	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Pandan-Pandan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Pandanan Bay, Pandanan Island	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.75	0.25	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Panglima 1	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Paradise	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	Paradise 2, Mabul	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	2.75	—	—	—	—
Malaysia	Pasir Akar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	—	0.25	—
Malaysia	Pasir Tenggara	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	2.0	—
Malaysia	Pasir Tenggara (P. Bidong)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	0.5	—
Malaysia	Patch Reef 2km SW Balak	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Patch Reef b/w Balak and Panukaran	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Patch Reef NE Surundang Reef	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pegaso Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.5	—
Malaysia	Pelangi House Reef South	—	—	—	—	—	—	7.75	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Penut (Tioman East Side)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Pertigi Bay, Redang Island	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pinang	—	—	—	—	—	—	—	—	—	—	—	2.0	2.0	—	—	—	—	—	—
Malaysia	Pinnacle 3	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pirates Reef	—	—	—	—	—	—	—	1.5	—	4.5	4.58	6.62	2.5	4.25	1.25	0.88	—	0.25	—
Malaysia	Police Beach	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	0.25	—
Malaysia	Police Gate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	0.25	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Pom Pom Jetty	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	1.75	—	0.25	—
Malaysia	Pu Manatbuan NE	—	—	—	—	—	—	—	9.0	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Bohayan	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Burung	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Pulau Guhan	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Kalangkaman 1	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Kalangkaman 2	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Karah	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	1.0	—
Malaysia	Pulau Kerengga Besar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	37.5	—	22.75	—
Malaysia	Pulau Kerengga East	—	—	—	—	—	—	—	—	—	—	—	43.75	44.25	—	—	—	—	—	—
Malaysia	Pulau Kerengga West	—	—	—	—	—	—	—	—	—	—	—	1.25	2.25	—	—	—	—	—	—
Malaysia	Pulau Laila	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Malaysia	Pulau Lang (off Pulau Aur)	—	—	—	—	—	—	—	—	—	1.62	—	1.5	—	13.5	—	—	—	—	—
Malaysia	Pulau Lang Tengah	—	—	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Latoan (Bankawan Reef)	—	—	—	—	—	—	13.0	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Lima	2.5	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Lima Southern Tip	—	—	—	—	—	—	—	—	—	—	0.12	0.25	—	—	0.75	—	—	—	—
Malaysia	Pulau Lima, R4	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m²)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Pulau Lima, Southern Tip	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Pulau Ling	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Ling, R3A	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Maganting	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Paku Besar	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25	—	2.5	0.25	—	2.0	—
Malaysia	Pulau Paku Kecil	—	—	—	—	—	—	7.5	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Paku Kecil SW	—	—	—	—	—	—	—	—	—	—	0.38	0.75	0.25	—	1.25	1.25	—	0.5	—
Malaysia	Pulau Perhentian Kecil/ D'Lagoon	—	—	—	—	—	—	32.0	—	—	—	19.25	34.5	22.0	—	31.0	9.0	—	11.75	—
Malaysia	Pulau Pinang Marine Park	—	—	—	—	—	—	—	—	—	—	0.75	1.0	—	—	1.5	2.0	—	1.75	—
Malaysia	Pulau Rawa, Coral Garden	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	0.75	—	—	—	—
Malaysia	Pulau Silumpat	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Susu Dara Besar	—	—	—	—	—	—	5.75	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Tabawan	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Pulau Tabun	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Pulau Tengkorak	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	2.0	—
Malaysia	Pulau Yu Besar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	0.5	—
Malaysia	Pulau Yu Kecil	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	1.0	—
Malaysia	Pygmy Rock, Siamil, Kapalai	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Rajawali Reef	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—
Malaysia	Rayner's Rock	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Malaysia	Redang Kalong House Reef	—	—	—	—	—	—	3.75	—	—	—	—	—	1.5	—	2.25	4.25	—	8.75	—
Malaysia	Reef 38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.5	—
Malaysia	Reef 77	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.75	—	1.75	—	0.25	—
Malaysia	Renggis Island North Side	—	—	—	—	—	—	—	—	—	0.5	3.12	0.92	—	—	0.38	0.38	—	0.75	—
Malaysia	Renggis Island South Side	—	—	—	—	—	—	—	—	—	—	1.62	—	—	—	—	—	—	1.25	—
Malaysia	Renggis West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Malaysia	Ribbon Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.08	—
Malaysia	Ribbon Valley	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Rizal/Riza Garden	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	0.25	—
Malaysia	Roach Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Rock 'n' Roll Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—	—
Malaysia	S1-D2 Pulau Lang	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Malaysia	Sahara	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	0.25	—
Malaysia	Sandbar North	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.25	—	—	—	—
Malaysia	Sandbar South	—	—	—	—	—	—	—	—	—	—	—	—	—	4.25	6.25	2.5	—	4.25	—
Malaysia	Sapi Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	1.25	—
Malaysia	Scuba Junkie House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—
Malaysia	Scubasa Reef	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Sea Bell	—	—	—	—	—	—	—	—	—	—	0.5	1.75	1.0	0.75	0.5	1.5	—	0.25	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m²)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Semaggot	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Malaysia	Sepoi	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	1.5	1.75	—	1.5	—
Malaysia	Sepoi Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—
Malaysia	Shark Point	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Si Amil	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Malaysia	Sibuang Point	—	—	—	9.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Silent Reef, Kapas	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25	1.25	—	—	—
Malaysia	Silumpat Island	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Sipindung Reef	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—
Malaysia	Siwa	—	—	—	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—
Malaysia	Siwa 4	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.75	—	—	0.25	—
Malaysia	Siwa Penyu	—	—	—	—	—	—	—	—	0.25	—	—	—	0.25	0.12	—	0.5	—	0.25	—
Malaysia	Siwa Sunday	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Malaysia	Slasher Beach	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Malaysia	Small Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	South Lanting	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Malaysia	South Pinang	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—
Malaysia	South Rim	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.38	—
Malaysia	Soyak Island	—	—	—	—	—	—	—	—	—	—	2.25	4.0	5.75	4.25	10.58	—	—	—	—
Malaysia	Soyak Island South	—	—	—	—	—	—	—	—	—	—	3.75	—	1.75	4.25	13.25	—	—	—	—
Malaysia	Soyak North/ Tridacna Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	1.25	—
Malaysia	Soyak South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.75	—	4.25	—
Malaysia	Sting Ray City, Kapalai	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Stingray City, Timba—Timba Island	—	—	—	—	—	—	—	—	—	—	—	—	—	5.75	—	3.0	—	6.5	—
Malaysia	Sulug	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	1.5	—
Malaysia	SW corner of palau balak	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Sweetlips Rock, Mataking Island	—	—	—	—	—	—	—	—	—	—	—	—	—	3.75	1.25	—	—	6.5	—
Malaysia	Sweetlips Rock, Mataking Kecil Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—	—
Malaysia	Tabawan Island	—	1.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Tahingan	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Malaysia	Takon	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Takun	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Talang Besar East	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Malaysia	Tanjung Besi	—	—	—	—	—	—	—	—	—	—	—	3.75	3.0	1.5	0.75	—	—	1.75	—
Malaysia	Tanjung Kenangan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Malaysia	Tanjung Wokong	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Malaysia	Telok Dalam	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.25	—	—	—
Malaysia	Teluk Gadung	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—
Malaysia	Teluk Jawa, Kapas	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.5	—	—	—	—
Malaysia	Teluk Nakhoda	—	—	—	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—
Malaysia	Teluk Rajawali	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	—	1.75	—
Malaysia	Teluran	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Tekek House Reef	—	—	—	—	—	—	—	—	—	—	10.25	9.62	—	—	10.25	—	—	3.63	—
Malaysia	w	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Terumbu Kili	0.25	0.5	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	0.5	—
Malaysia	Tg Tengah Southside, Pasir Panjang, Redang Island	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Tiga Ruang Reef	—	—	—	—	—	—	—	—	—	—	—	—	2.88	0.5	1.25	1.75	—	3.75	—
Malaysia	Timba Timba	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	—	—	0.5	—
Malaysia	Tk Miyang	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Malaysia	Tk. Jawa, Dayang	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Malaysia	Toby Reef	—	—	2.25	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Tokong Burung	—	—	—	—	—	—	4.25	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Tomok	—	—	—	—	—	—	—	—	—	—	—	1.75	2.75	1.0	2.75	1.0	—	0.75	—
Malaysia	Treasure Hunt, Pandanan Island	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	1.13	—
Malaysia	Tukas Laut	—	—	—	—	—	—	—	—	—	—	—	1.0	11.75	—	2.5	—	—	—	—
Malaysia	Turtle Bay, Tenggol	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	1.75	—	—	—	—
Malaysia	Turtle Point	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	—	1.0	—
Malaysia	Veron/Veron Fan Garden	—	—	—	—	—	—	—	—	—	—	—	—	8.0	1.0	2.75	3.75	—	0.5	—
Malaysia	West End of Serundang Reef	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaysia	Yoshi Point	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaysia	Zorro	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.25	—	4.75	—
Malaysia	Zorro East	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68.75	—	—	—	—
Maldives	Addoo	9.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Angaga Housereef Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—
Maldives	Angaga Housereef Southwest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—
Maldives	Aquarium	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Banana Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	0.25	—
Maldives	Banyan Tree House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—
Maldives	Baros House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	2.25	2.0	—	0.63	—
Maldives	Bathalaa Maagaa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.25	—	—
Maldives	Bathalaa Maagaa Kanthila	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—
Maldives	Bathalaa Maagaa South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	—	—	—	—
Maldives	Biyadhoo House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.75	—	—	—
Maldives	Bodu Giri	7.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Dega Giri	—	—	—	—	—	—	—	—	—	—	—	11.5	—	—	—	—	—	—	—
Maldives	Dega Giri, Ari Atoll	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—
Maldives	Dega Thila	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Maldives	Deh Giri	5.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—
Maldives	Dhigga Thila	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.5	—	—
Maldives	Digga Thilla	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—
Maldives	Ellaidhoo Giri Nord	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Ellaidhoo House Reef	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—
Maldives	Embudhoo	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.75	—	—	—
Maldives	Fan Reef	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Flat Reef	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Gangehi Island House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	—	—	—	—
Maldives	Gangehi North backreef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—
Maldives	Hembadhoo Hohola	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Holiday Thila North	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	—	—	—	—
Maldives	Holiday Thila South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—
Maldives	Honkey’s	—	—	—	—	7.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	House reef Angaga	0.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	HP Reef	—	—	—	—	—	—	—	—	—	0.25	0.5	—	—	—	—	—	—	—	—
Maldives	Hufi Faru	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—
Maldives	Hurasdhoo	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Kahanbu Thila	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—
Maldives	Kahanbu Thila Fahru	—	—	—	—	—	—	—	—	—	3.5	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Maldives	Kuda Falhu	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—
Maldives	Kuda Faru	9.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—
Maldives	Kudafalu	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—
Maldives	Kuramathi, Rasdhoo	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—
Maldives	Kuredu House Reef	7.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Kuredu Zafari	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Laguna Beyru House Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.25	—	—	—	—
Maldives	LGT1	—	—	—	—	—	—	—	—	—	—	12.92	8.0	3.25	—	—	—	—	—	—
Maldives	LGT2	—	—	—	—	—	—	—	—	—	—	4.5	4.08	0.5	—	—	—	—	—	—
Maldives	LGT3	—	—	—	—	—	—	—	—	—	—	6.33	5.33	1.0	—	—	—	—	—	—
Maldives	LGT4	—	—	—	—	—	—	—	—	—	—	1.33	1.42	1.25	—	—	—	—	—	—
Maldives	Lohifushi 1	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Lohifushi 2	—	—	—	—	4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Maamigili	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Maldives	Maaya Thila	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Maldives	Madi Gaa	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.38	—
Maldives	Maduvaree Island Reef	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Meddu Faru Nord	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Musa	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Niumath Thilla	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—
Maldives	Orimas Faru Nord	3.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Orimas Faru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Maldives	Panettone Reef	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Maldives	Rasdhoo Madivaru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.75	—	—	—	—
Maldives	Rasdhoo Madivaru Beyru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.5	—	—
Maldives	Rasdhoo North Ari	—	—	—	—	—	—	—	—	10.75	—	6.5	7.75	—	—	—	—	—	—	—
Maldives	Rashdoo Madivaru	—	—	—	—	—	—	—	—	—	2.62	—	—	—	—	—	—	—	—	—
Maldives	Reethi Faru	6.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Maldives	Remas Faru	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Salomon Isle 1	—	—	—	—	249.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Sultans	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Tasdhoo Madivaru West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—
Maldives	Thuvaru Island Reef	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maldives	Vilm05/ Vilamendhoo southwest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.25	—	—	—
Maldives	Weng Gaa	6.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Marshall Islands	Ajejen	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Marshall Islands	Ajejen 2	—	—	—	—	—	10.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Marshall Islands	Enijet Bar	—	—	—	—	—	16.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Mauritius	Chaland, Passe Armand (10m)	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Mauritius	Chaland, Passe Armand (3m)	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mauritius	Island Reef, Anse La Raie	—	—	6.5	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mauritius	Passe Armand	—	—	1.75	—	—	0.5	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Mauritius	Patte Cappor	—	—	2.75	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Mauritius	Petit Brisane	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mayotte	Boa Sadia Reef	—	—	—	—	—	—	—	—	4.25	1.25	—	—	1.75	1.25	—	—	—	—	—
Mayotte	Boueni Village	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—
Mayotte	Longoni Reef	—	—	—	—	—	—	1.75	2.25	0.75	—	1.25	—	1.75	2.75	—	—	—	1.0	—
Mayotte	Passe Boueni	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—
Mayotte	Passe en S- Bouee 2	—	—	—	—	—	—	—	8.5	7.75	—	5.75	—	1.25	—	—	—	—	2.75	—
Mayotte	Passe en S, bouee 11	—	—	—	—	—	—	4.0	2.5	—	7.25	9.0	—	10.0	—	—	—	—	3.5	—
Mayotte	Reserve Naturelle de Mbouzi	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—
Mayotte	Sakouli	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—
Mayotte	Tanaraki	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—
Mayotte	Ngouja	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.5	—
Mozambique	Baixo Vadiazi	—	—	—	—	—	8.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Cabo Pequeve	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Doodles Reef	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Ilha Matemo	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Ilha Medjumbi	—	—	—	—	—	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Ilha Quilaluia	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Ilha Quissanga	—	—	—	—	—	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Ilha Rongui	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Mozambique	Ilha Tecomangi	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Ilha Vamizi	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Malongane	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mozambique	Quirimba Outer Reef	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Myanmar	Bo Yar Nunt/ Poni Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—
Myanmar	Island 115	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Myanmar	Kunn Thee Island	—	—	—	—	4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Myanmar	Kya Haing Island, W-Beach	—	—	—	—	—	—	—	—	3.5	—	—	—	—	—	—	—	—	—	—
Myanmar	Kyunn Me Gyee	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Myanmar	Kyunn Phi Lar/ Pi La Kyun/ Great Swinton Island	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	0.25	—	—
Myanmar	Kyunn Thone Lon	—	—	—	—	0.5	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—
Myanmar	Lampi Island	—	—	—	—	—	—	0.75	6.0	—	—	—	—	—	—	—	—	—	—	—
Myanmar	Lampi Island North	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Myanmar	McLeod Island (Kho Yinn Khwa)	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	0.25	—	—
Myanmar	Say Tan Island	—	—	—	—	—	—	—	—	3.5	—	—	—	—	—	—	—	—	—	—
Myanmar	St. Paul’s Island	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Myanmar	Tar Yar Island	—	—	—	—	7.5	—	1.25	1.5	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Myanmar	Than Yoke (Potter) Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
New Caledonia	Abore Reef	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Caledonia	Akaia	—	—	—	—	—	—	—	—	—	0.5	—	0.25	—	—	—	—	—	—	—
New Caledonia	Beco	—	—	—	—	—	—	4.5	9.0	9.75	—	11.5	12.25	—	11.5	16.0	—	—	—	—
New Caledonia	Bonne Anse	—	0.25	—	—	—	—	0.25	0.75	0.75	—	0.25	0.62	—	2.0	2.5	—	—	—	—
New Caledonia	Casy	—	0.25	—	—	—	—	—	0.75	—	—	—	0.25	—	0.25	—	—	—	—	—
New Caledonia	Donga Hienga	—	—	—	—	—	—	2.75	2.75	3.5	3.0	3.25	—	3.5	2.5	2.0	—	—	—	—
New Caledonia	Ever Prosperity	—	—	—	—	—	—	0.25	1.25	—	—	0.25	—	—	—	—	—	—	—	—
New Caledonia	Fausse Passe	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Caledonia	Fausse Passe Pouembout	—	—	—	—	—	—	1.25	1.0	2.0	1.75	2.75	1.5	—	3.5	7.25	—	—	—	—
New Caledonia	Goro	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Caledonia	Grand Recif Thio	—	—	—	—	—	—	2.75	3.25	4.25	1.5	—	2.25	4.25	—	9.0	—	—	—	—
New Caledonia	Hiengabat	—	—	—	—	—	—	6.5	14.25	11.5	16.0	11.5	—	9.5	10.25	7.0	—	—	—	—
New Caledonia	Hnapalu/Qanono	—	—	—	—	—	—	2.25	—	1.12	2.0	—	—	—	2.75	3.5	—	—	—	—
New Caledonia	Ile Verte	—	—	—	—	—	—	8.0	7.75	8.0	5.75	—	5.25	—	4.75	7.25	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
New Caledonia	Jinek	—	—	—	—	—	—	3.0	1.0	1.25	—	1.25	0.25	—	7.25	6.25	—	—	—	—
New Caledonia	Koniene	—	—	—	—	—	—	7.75	10.5	13.5	9.0	8.5	6.75	—	10.0	10.75	—	—	—	—
New Caledonia	Koulnoue	—	—	—	—	—	—	—	—	0.25	0.25	0.25	—	—	—	0.25	—	—	—	—
New Caledonia	Luecilla 2	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
New Caledonia	Luengoni 1	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.25	—	—	—	—
New Caledonia	Luengoni 2	—	—	—	—	—	—	0.75	2.0	1.0	—	—	—	—	1.0	—	—	—	—	—
New Caledonia	M'Bere Reef	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Caledonia	Maitre	—	—	—	—	0.5	—	0.5	—	—	—	0.5	—	0.25	—	—	—	—	—	—
New Caledonia	Mbere	—	—	—	—	—	—	3.75	1.5	—	1.5	2.25	—	2.75	—	—	—	—	—	—
New Caledonia	Moara	—	—	—	—	—	—	0.75	1.25	—	0.5	—	1.0	0.5	—	—	—	—	—	—
New Caledonia	Nouville	—	—	—	—	—	—	—	0.25	—	—	—	—	1.5	—	—	—	—	—	—
New Caledonia	Pindai	—	—	—	—	—	—	0.75	0.75	1.0	—	1.0	0.25	—	0.75	1.0	—	—	—	—
New Caledonia	Pinjien	—	—	—	—	—	—	0.25	0.25	0.25	0.25	—	—	—	0.25	—	—	—	—	—
New Caledonia	Recif interieur Thio	—	—	—	—	—	—	1.0	0.5	0.75	0.5	—	0.25	—	0.5	0.75	—	—	—	—
New Caledonia	Ricaudy	0.25	—	—	—	—	—	—	—	—	0.25	0.25	—	0.75	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
New Caledonia	Sable	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Caledonia	Santal 1	—	—	—	—	—	—	1.25	1.0	1.5	—	1.0	1.0	—	2.5	0.5	—	—	—	—
New Caledonia	Santal 2	—	—	—	—	—	—	0.75	0.5	1.5	—	0.25	0.5	—	2.75	1.0	—	—	—	—
New Caledonia	Siande	—	2.0	—	—	—	—	3.0	9.5	9.75	6.75	—	5.75	—	10.5	8.25	—	—	—	—
New Caledonia	Signal	—	—	—	—	—	—	0.25	0.25	—	0.75	0.75	—	1.25	—	—	—	—	—	—
New Caledonia	Tabou	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Caledonia	Thio Barrier Reef	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Caledonia	We Port	—	—	—	—	—	—	0.25	—	0.5	—	—	—	—	0.75	0.5	—	—	—	—
Palau	Cemetery Reef	—	—	—	—	—	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Palau	Ngederak Reef	5.75	—	—	7.25	2.0	0.75	1.25	—	—	1.25	—	—	—	—	—	—	—	—	—
Palau	Short Drop Off	3.75	—	—	3.38	1.38	3.75	1.62	—	—	1.0	—	—	—	—	—	—	—	—	—
Papua New Guinea	Anemone Patch	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Annsophie's Reef	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	B25 Bomber	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Cape Hewsner	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Chermain's Reef	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m²)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Papua New Guinea	Cyclone Reef	—	1.0	1.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	First Reef	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Jais Aben alpha	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Jais Aben bravo	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Kaleu 1	—	—	—	—	—	—	—	—	—	—	—	—	15.25	—	—	—	—	—	—
Papua New Guinea	Kaleu 2	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—
Papua New Guinea	Kaleu 3	—	—	—	—	—	—	—	—	—	—	—	—	9.0	—	—	—	—	—	—
Papua New Guinea	Keng MPA 1	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Papua New Guinea	Lumu Reef	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Maclaren’s Reef	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Magic Passage	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Marangis Reef 1	—	—	—	—	—	—	—	—	—	—	—	0.75	0.12	—	—	—	—	—	—
Papua New Guinea	Marangus MPA 2	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—
Papua New Guinea	Marangus MPA 3	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Papua New Guinea	Mata-Limut Reef	—	—	—	—	—	—	—	—	—	—	—	0.25	1.0	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Papua New Guinea	Midway Reef	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Motupore Island	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Nago 2	—	—	—	—	—	—	—	—	—	—	—	—	3.25	—	—	—	—	—	—
Papua New Guinea	Nago Island Reef 1	—	—	—	—	—	—	—	—	—	—	—	0.75	1.5	—	—	—	—	—	—
Papua New Guinea	Nago Island Reef Site 2	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—
Papua New Guinea	Nonovaul Island No Take Area Reef	—	—	—	—	—	—	—	—	—	—	—	1.75	1.75	—	—	—	—	—	—
Papua New Guinea	Nusa Island Reef	—	—	—	—	—	—	—	—	—	—	—	0.5	0.25	—	—	—	—	—	—
Papua New Guinea	Nusa Lik Reef	—	—	—	—	—	—	—	—	—	—	—	0.5	0.75	—	—	—	—	—	—
Papua New Guinea	Oinari Point	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Pig Island Drop Off	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Pig Island Passage	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Sinub Island Northside	—	—	—	—	—	0.42	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Tabat Exposed	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Papua New Guinea	Tufi Harbour Point	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Papua New Guinea	Usen	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Philippines	3rd Plateau/ Coral Garden	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.75	1.75	—
Philippines	7th Commando Outside	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.75	—
Philippines	Abdeen's Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	1.13	—
Philippines	Acacia Resort and Dive Center	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	1.0	—	1.0	—
Philippines	Albaguen Island	—	1.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Alegre Beach Resort 2	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Philippines	Alegre Beach Resort 5	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Philippines	Alegre Beach Resort 6	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Philippines	AMPO- AM01	—	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—
Philippines	AMPO- AM02	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Philippines	AMPO- AM05	—	—	—	—	—	—	—	—	—	—	0.06	—	—	—	—	—	—	—	—
Philippines	AMPO- AM06	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—
Philippines	AMPO- AM07	—	—	—	—	—	—	—	—	—	0.25	0.08	—	—	—	—	—	—	—	—
Philippines	AMPO- AM08	—	—	—	—	—	—	—	—	—	0.08	—	—	—	—	—	—	—	—	—
Philippines	AMPO- AM09	—	—	—	—	—	—	—	—	—	0.12	—	0.25	—	—	—	—	—	—	—
Philippines	AMPO- AM10	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Philippines	AMPO- AM13	—	—	—	—	—	—	—	—	—	—	0.08	—	—	—	—	—	—	—	—
Philippines	Apid Marine Sanctuary	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Apid MPA	—	—	—	—	—	—	—	—	—	0.25	0.25	0.5	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Apo Island Marine Reserve	—	—	—	0.12	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Apo Reef 1	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Apo Reef 3	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Philippines	Apo Reef 4	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Arraceife Island	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Aslom Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Philippines	Atop-Atop	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—
Philippines	Balabag Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—
Philippines	Balabagon	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—
Philippines	Balangingi Eastside	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—	—	—	—
Philippines	Balangingi Westside	—	—	—	—	—	—	—	—	—	0.38	—	—	—	—	—	—	—	—	—
Philippines	Balatasan MPA North	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Philippines	Balatasan MPA South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	—	—
Philippines	Balicasag	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Balicasag MPA	—	—	—	—	—	—	—	—	—	0.25	0.25	—	—	—	—	—	—	—	—
Philippines	Bancoro	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—
Philippines	Banlot Tongo Basdiot	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Barangay Talima 2	—	—	—	—	—	0.75	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Barge Centro/ Roberto	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.5	—
Philippines	Barge Laot/ Sabino	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.25	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Barge Tandol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—
Philippines	Baring	—	—	—	—	—	—	—	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Basdiot (North)	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Big Apple	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Philippines	Big Manta Rock	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Binubusan Shoal	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Bitayan	—	—	—	—	—	—	—	0.25	—	—	0.25	—	—	—	—	—	—	—	—
Philippines	Bitoon	—	—	—	—	—	—	—	—	—	—	—	0.38	—	—	—	—	—	—	—
Philippines	Black Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.75	—	—	—
Philippines	Blue Water	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	BRGY, POOC	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Philippines	Bugor MPA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.88	2.0	—
Philippines	Bukal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	2.0	—
Philippines	Bulalakaw (Ulogan Bay) Transect 1	—	—	—	—	—	—	—	—	—	—	—	9.5	—	—	—	—	—	—	—
Philippines	Bulalakaw (Ulogan Bay) Transect 2	—	—	—	—	—	—	—	—	—	—	—	12.25	—	—	—	—	—	—	—
Philippines	Buyayao Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5		—
Philippines	Caalan MPA A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	3.75	—
Philippines	Caalan MPA B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—
Philippines	Cagdanao Island	—	—	3.5	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Calanggaman	—	—	—	—	—	—	—	—	—	1.75	0.5	—	—	—	—	—	—	—	—
Philippines	Campomanes Bay	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Capitancillo	—	—	—	—	—	—	—	—	0.12	0.5	0.25	—	—	—	—	—	—	—	—
Philippines	Capitancillo Transect 2	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Centro Site 1(shallow)	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Centro Site 2 (deep)	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Philippines	Centro Site 2 (shallow)	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Coral Gardens	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	0.25	—
Philippines	Costabella	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Cueva Calintaan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—
Philippines	CYC East Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.75	—
Philippines	CYC West Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.5	—
Philippines	Dakit Dakit (Logon)	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—
Philippines	Danjugan Island	—	—	0.25	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Dive and Trek Marine Sanctuary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	—
Philippines	Dungon Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.25	—
Philippines	East Outside Proposed MPA, Caubian Dako	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Philippines	East Sangat Japanese Gunboat	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—
Philippines	Fondeado Island	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Fusiliro Sombrero	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Grande	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Giant Clam	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m²)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Helens Reef	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Hidden Beach (Shallow)	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Philippines	Hilantagaan (Outside MPA)	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Philippines	Hilantagaan Diyot	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—
Philippines	Hilantagaan Diyot MPA	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—
Philippines	Himokilan	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Himokilan (outside MPA)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Himokilan Marine Sanctuary	—	—	—	—	—	—	—	—	—	0.75	—	0.38	—	—	—	—	—	—	—
Philippines	Inside Talima MPA Site 1	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Inside Talima MPA Site 2	—	—	—	—	—	—	—	0.25	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Ipil MPA (Inside) Brgy. Buena Suerte	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—
Philippines	Isla Rita Transect 1	—	—	—	—	—	—	—	—	—	—	—	26.25	—	—	—	—	—	—	—
Philippines	Isla Rita Transect 2	—	—	—	—	—	—	—	—	—	—	—	34.75	—	—	—	—	—	—	—
Philippines	Jahikan	—	—	—	—	—	—	—	—	—	0.25	3.25	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Jahikan Site 1—Hilantangaan Island	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Jahikan Site 2—Hilantangaan Island	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
Philippines	Jilatagaan Is, Bantayan, Outside MPA	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Philippines	Jilatagaan MPA Site 2	—	—	—	—	—	—	—	3.0	1.25	1.5	0.25	—	—	—	—	—	—	—	—
Philippines	Juag Southeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—
Philippines	Kakulasian	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Philippines	Kalanggaman 1	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Philippines	Kalanggaman 2	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Kalingaw Beach Resort (Barangay Marigondon)	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Kasabangan Eastside	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—
Philippines	Kasabangan North	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Kasabangan South	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—
Philippines	Kawayan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	—
Philippines	Koala, Bagalangit	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	3.75	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Kontiki	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Philippines	Labangtaytay 1	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Lapus Lapus MPA	—	—	—	—	—	—	—	—	1.0	0.25	0.25	—	—	—	—	—	—	—	—
Philippines	Layag Layag Lot 19 West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Philippines	Liloan Analao	—	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—
Philippines	Liloan Reef	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Lutoban Reef	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Maalequenquen Island	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Maapdit	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Philippines	Maasin Island, Bulalacao	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—
Philippines	Maca Reef 1 VSS Dive 1	—	—	—	—	—	—	—	—	—	2.75	—	—	—	—	—	—	—	—	—
Philippines	Magransing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	2.75	—
Philippines	Mahaba Marine Sanctuary	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Maitre MPA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	—
Philippines	Maitre MPA (Outside)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—
Philippines	Malbago	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—
Philippines	Maliit na Tapik	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	7.25	—
Philippines	Manalo MPA (Honda Bay) Transect 1	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Manalo MPA (Honda Bay) Transect 2	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—
Philippines	Mantaray Reef	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Marigondon	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Philippines	Masigasig/ Esteban Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.25	—
Philippines	Medicare-MC05	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Medicare-MC06	—	—	—	—	—	—	—	—	—	0.08	—	—	—	—	—	—	—	—	—
Philippines	Nalusuan MPA Transect 2	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—
Philippines	Napantao	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	—	—	—	—	—
Philippines	Napantao 12	—	—	—	—	—	—	—	—	—	—	—	—	—	0.62	—	—	—	—	—
Philippines	Napantao 9	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—
Philippines	North Wall	—	—	1.25	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Outside Lapus—Lapus MPA Site 1	—	—	—	—	—	—	—	0.5	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Outside Lapus—Lapus MPA Site 2	—	—	—	—	—	—	—	0.75	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Panal Reef 1	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Panal Reef 2	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Pangan-an Islet	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Paraiso Reef	—	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Pinagbakahan Central, Barangay Pagkilatan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Philippines	Plantation Bay	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Philippines	Poblacion	—	—	—	—	—	—	—	—	—	0.25	—	0.25	—	—	—	—	—	—	—
Philippines	Poblacion East	—	—	—	—	—	—	—	—	0.75	—	2.25	—	—	—	—	—	—	—	—
Philippines	Poblacion West	—	—	—	—	—	—	—	—	0.5	0.75	17.25	—	—	—	—	—	—	—	—
Philippines	Pooc MPA	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—
Philippines	Portulano Marine Sanctuary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—
Philippines	Puntod Ilis	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Philippines	Puting Buhangin	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—
Philippines	Rakit-Rakit Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—
Philippines	Rawis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	—
Philippines	Rizal Site 2	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Philippines	Saavedra	—	—	—	—	—	—	—	—	—	0.25	0.25	—	—	—	—	—	—	—	—
Philippines	Saavedra Site 2	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	San Diego North	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Philippines	San Diego Station A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Philippines	San Isidro MPA	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—
Philippines	San Isidro- Dao MPA	—	—	—	—	—	—	—	—	1.25	0.25	—	—	—	—	—	—	—	—	—
Philippines	San Miguel MPA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.38	—	—
Philippines	Santelmo North	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Sawang Gamay, E side of proposed Caubian Dako MPA	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—
Philippines	Secret Garden	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Shangri-La	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Siete Pecados Islands	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—
Philippines	Silad Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—
Philippines	Sillon	—	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—
Philippines	Sillon Site 1	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Sillon Site 2	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Silonay Island 1A	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Philippines	Sigayan 02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—
Philippines	Sitio Pinagbakahan, Barangay Pagkilatan	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—
Philippines	Susan’s Reef, Bantayan	—	—	—	—	—	—	—	0.5	0.75	0.25	0.75	—	—	—	—	—	—	—	—
Philippines	Tabalong	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—
Philippines	Tagbac Sanctuary	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Talangnan Site 2	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Talim Outer Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	1.0	—
Philippines	Talima D1	—	—	—	—	—	—	—	0.25	—	—	0.25	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	Talisay Tree, Cabilao Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	0.25	—
Philippines	Tambuli	—	—	—	—	—	0.12	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	Tandol Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	7.0	—
Philippines	Tanglaw	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.75	7.25	—
Philippines	Tapik Centro	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.5	—
Philippines	Tingo (shallow)	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Philippines	Tomonoy	—	—	—	—	—	—	—	—	3.0	0.5	4.25	—	—	—	—	—	—	—	—
Philippines	Tongo	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Philippines	Tony's Reef	—	—	—	—	—	—	—	—	—	—	10.25	—	—	—	—	—	—	—	—
Philippines	Tony's Reef, Jilatagaan Is, Bantayan	—	—	—	—	—	—	—	0.5	3.25	9.5	—	—	—	—	—	—	—	—	—
Philippines	Tres Marias	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—
Philippines	Twinpeaks	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—
Philippines	Very West Caubian Dako	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Philippines	White Beach, Puerto Princesa Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Philippines	White Sand Island Sanctuary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	—
Saudi Arabia	Allith	—	—	—	—	—	—	—	—	—	—	—	—	0.13	—	—	—	—	—	—
Saudi Arabia	Amaq-Hali	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—
Saudi Arabia	Channel Slope	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Chornich	—	—	—	—	—	—	—	—	—	—	—	4.5	—	—	—	—	—	—	—
Saudi Arabia	Duba (Cement Tabouk)	—	—	—	—	—	—	—	—	—	—	—	5.75	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Saudi Arabia	Farasan-Zfaf	—	—		—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Saudi Arabia	Hagal (Dora)	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—
Saudi Arabia	Inner patch, J. Umm Rumah	—	—	66.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	J. Qumma'an fringing, E	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	J. Qumma'an fringing, SW	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	J. Qumma'an fringing, W	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	J. Shaybara barrier	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	J. Shaybara inner	—	—	21.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Magna	—	—	—	—	—	—	—	—	—	—	—	1.38	—	—	—	—	—	—	—
Saudi Arabia	Masturah	—	—	—	—	—	—	—	—	—	—	—	1.63	—	—	—	—	—	—	—
Saudi Arabia	Mid-Bank Patch	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Mid-Bank slope, outside channel	—	—	27.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Outer barrier, central bank	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Outer barrier, J. Mizab	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Outer patch SW of J. Jusur Shurayrat	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Outer-Bank Patch	—	—	3.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saudi Arabia	Patch NE J. Qumma'an	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Saudi Arabia	Umlajj	—	—	—	—	—	—	—	—	—	—	—	34.0	—	—	—	—	—	—	—
Seychelles	Baie Ternay	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seychelles	Big Sister Island	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seychelles	Corsair Reef	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seychelles	Danzil Reef	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seychelles	Farquar	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seychelles	Turtle Reef	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Solomon Islands	Field Station 1	—	—	—	—	—	—	—	—	—	—	—	0.75	3.0	—	—	—	—	—	—
Solomon Islands	Inside 5 yr MPA shallow	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.62	—	—	—	—
Solomon Islands	Inside Perm MPA shallow	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Solomon Islands	Mbo	—	—	—	—	—	—	—	—	—	—	—	0.25	0.5	—	—	—	—	—	—
Solomon Islands	MLPP01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—
Solomon Islands	MLPP02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Solomon Islands	MLPT01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—
Solomon Islands	MLPT02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Solomon Islands	MLPT04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—
Solomon Islands	MLPT05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—
Solomon Islands	MLPT06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Solomon Islands	No. 5, Site 1	—	—	—	—	—	—	—	—	0.75	—	1.25	1.0	1.5	—	—	—	—	—	—
Solomon Islands	No. 6	—	—	—	—	—	—	—	—	1.5	—	1.25	—	1.25	—	—	—	—	—	—
Solomon Islands	Number 4	—	—	—	—	—	—	—	—	—	—	—	—	0.12	—	—	—	—	—	—
Solomon Islands	Perm MPA shallow inside	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Solomon Islands	Plantation	—	—	—	—	—	—	—	—	0.25	—	0.25	—	—	—	—	—	—	—	—
Solomon Islands	Sanbis Reef	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—
Solomon Islands	Singi 1	—	—	—	—	—	—	—	—	—	0.5	0.25	—	0.25	—	—	—	—	—	—
Solomon Islands	Singi 3	—	—	—	—	—	—	—	—	3.25	2.5	—	—	—	—	—	—	—	—	—
Solomon Islands	Soe	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—
Solomon Islands	Station 1	—	—	—	—	—	—	—	—	1.25	0.25	—	—	—	—	—	—	—	—	—
Solomon Islands	Station 2	—	—	—	—	—	—	—	—	1.75	0.62	—	2.5	0.62	—	—	—	—	—	—
Solomon Islands	Tehakatu'u	—	—	—	—	—	—	—	—	—	—	—	—	15.5	—	—	—	—	—	—
Solomon Islands	Tuo Village Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	0.38	—	—	—	—	—
Solomon Islands	TUOO01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	—	—	—
Solomon Islands	TUOO02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.42	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Solomon Islands	TUOO03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—
Solomon Islands	TUOO04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.33	—	—	—
Solomon Islands	TUOP01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	—	—	—
Solomon Islands	TUOP02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—
Solomon Islands	TUOP03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.67	—	—	—
Solomon Islands	TUOT01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.83	—	—	—
Solomon Islands	TUOT02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	—	—	—
Solomon Islands	TUOT03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.08	—	—	—
South Africa	2 Mile Reef	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	4 Buoy Reef	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	Alliwal Shoal	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	Central Two-Mile Reef	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—
South Africa	Inner Central Two-Mile Reef	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—
South Africa	Limestone Reef	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	Raggie Cave	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sri Lanka	Coral Island	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Sri Lanka	Pigeon Island	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—
Sudan	Abu Hashish	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—
Sudan	Arkiyai	—	—	—	—	—	—	—	—	—	—	—	—	6.88	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sudan	Bashayer Marine Terminal	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—	—	—	—	—
Sudan	Damadma Fringing Reef	—	—	—	—	—	—	—	0.33	—	—	—	—	—	—	—	—	—	—	—
Sudan	Falamingo Fringing North	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Sudan	Gota Wingate North	—	—	—	—	—	—	—	3.5	—	—	—	—	—	—	—	—	—	—	—
Sudan	O’seif Bay	—	—	—	—	—	—	—	—	—	—	—	—	3.38	—	—	—	—	—	—
Sudan	Sanganeb South-west	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—
Sudan	Suakin	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—
Sudan	Wingate Reef-Police Station	—	—	—	—	—	—	—	4.5	—	—	—	—	—	—	—	—	—	—	—
Sudan	Winget Barrier Reef	—	—	—	—	—	—	—	14.63	—	—	—	—	—	—	—	—	—	—	—
Taiwan	Beauty Cave	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.0	—	—	—	—	—
Taiwan	Centre Sanyuan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taiwan	ChaiKou	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.25	—	—	—	—	—
Taiwan	Fanzaiao	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—
Taiwan	Gateway Rock	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—
Taiwan	Geban Bay	—	—	—	—	—	—	—	—	—	—	—	—	1.25	0.5	—	—	—	—	—
Taiwan	GeeChang	—	5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taiwan	General Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—
Taiwan	Gong-guan	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	—	—	—	—	—
Taiwan	Haishen Flats	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—	—	—	—
Taiwan	Hongtoe	—	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taiwan	Houshi	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Taiwan	Houshi Fringing Reef	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Taiwan	Kungkuan	—	—	—	—	—	—	—	—	—	—	—	—	4.75	—	—	—	—	—	—
Taiwan	Lion Couple Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—
Taiwan	MeiRenDong	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taiwan	Nanliao	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taiwan	Reef Outside Airport	—	—	—	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—
Taiwan	South Dongyuping	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Taiwan	South Shanyuan Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—
Taiwan	Tsaikou	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taiwan	Tudigong Temple	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Taiwan	Virgin Rock	—	—	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—
Taiwan	West Dongyuping	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—
Taiwan	Yeyou	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—
Taiwan	Yie-yin Village	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—
Tanzania	Chumba Cha Chumbo	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanzania	Chumbe Island Coral Park	—	—	—	—	—	—	—	2.08	—	—	—	—	—	—	—	—	—	—	—
Tanzania	Fungu Zinga Reef North	—	—	—	—	—	—	0.5	0.25	—	0.5	—	0.25	—	—	—	—	—	—	—
Tanzania	Fungu Zinga Reef South	—	—	—	—	—	—	—	—	0.25	1.25	—	0.25	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Tanzania	Maziwe Reef North	—	—	—	—	—	—	—	1.5	2.0	1.5	1.75	0.25	—	—	—	—	—	—	—
Tanzania	Maziwe Reef South	—	—	—	—	—	—	—	—	0.25	—	0.5	0.25	—	—	—	—	—	—	—
Tanzania	Mwan wa Mwana, near Tumbatu Island	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Tanzania	Ras Msimbati	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanzania	Ravula	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanzania	The Gap	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Ao Chong Kaad	—	—	—	—	—	—	—	—	6.25	—	—	—	—	—	—	—	—	—	—
Thailand	Ao Luek South Site	—	—	7.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Ao Mae Yai	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—
Thailand	Ao Tao 2	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—
Thailand	Aow Keuk, Koh Tao	—	—	—	—	—	—	—	—	—	—	—	7.75	—	—	—	—	—	—	—
Thailand	Aow Leuk	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—	4.25	—	—	3.5	—
Thailand	Bida Nog Island	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—
Thailand	Boulder City	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Hin Kong	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—
Thailand	Japanese Gardens, Koh Tao	—	—	—	—	—	—	—	—	—	—	—	—	3.5	—	—	—	—	—	—
Thailand	Ko Bai Dang	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—
Thailand	Ko Bai Dang North	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Thailand	Ko Khang	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Thailand	Ko Khlum	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Thailand	Ko Torinla	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Butang (East)	—	—	—	—	—	—	—	—	—	13.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Butang (South)	—	—	—	—	—	—	—	—	—	20.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Door East	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Jorakeh	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—
Thailand	Koh Jorakeh East	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—
Thailand	Koh Joung (lower)	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Joung (upper)	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Kata (South)	—	—	—	—	—	—	—	—	—	18.0	—	—	—	—	—	—	—	—	—
Thailand	Koh Khai Nok	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Kood	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Kra	—	—	—	—	—	—	—	—	—	14.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Lan	—	—	—	—	—	—	—	—	—	—	—	—	0.08	—	—	—	—	—	—
Thailand	Koh Lom	—	—	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—
Thailand	Koh Man Wichai	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Mapring	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—
Thailand	Koh Mattra	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Nangyuan Stretch	—	—	—	—	—	—	—	9.0	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Ngam Yai	—	—	—	—	—	—	—	—	—	6.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Payang	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Payu	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Thailand	Koh Payu- North East (lower)	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Pu	—	—	—	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Raya Yai	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Raya Yai- Staghorn Reef	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Koh Thong Lang	—	—	—	—	—	—	—	—	—	3.25	7.5	—	—	—	—	—	—	—	—
Thailand	Koh Tien/Koh Thain West	—	—	—	—	—	—	—	—	—	—	5.0	4.5	—	—	—	—	—	—	—
Thailand	Koh Yak	—	—	—	—	—	—	—	—	—	—	2.0	—	—	0.75	—	—	—	—	—
Thailand	Koh Yak Lek	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Thailand	Koh Yak Yai	—	—	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—
Thailand	Koh-Huyong	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	KuekBay (inner)	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Leum Island (Ko Luam)	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Lighthouse Bay	—	—	—	—	—	—	—	—	—	—	—	5.0	—	5.25	—	—	—	5.0	—
Thailand	Loh Samah Bay	—	—	11.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Mae Haad Reef	—	—	—	—	—	—	—	—	—	—	—	2.5	—	2.08	—	—	0.62	1.63	—
Thailand	Maeyai Bay (02)	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Maikhao	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Mango Bay	—	—	—	—	—	—	—	—	—	—	3.25	3.17	2.0	2.44	1.5	—	1.5	1.0	—
Thailand	Mango Bay (Aow Mamuang)	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Middle Ao-Leuk	—	—	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Moskito Island	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Thailand	North Ao-Leuk	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Thailand	North East Similan (01)	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	North East Similan (02)	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	North Maeyai (outer)	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	North Maeyai Bay (inner)	—	—	—	—	16.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	North Maeyai Bay (outer)	—	—	—	—	4.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	North Patong-shallow	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	North Sai Ree Beach	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—	—	—
Thailand	North-Koh-Yawasam	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Patong-south	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Racha Yai, Bungalow Bay	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Racha-Yai-East (01)	—	—	—	—	10.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Racha-Yai-East (02)	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Racha-Yai-North	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Saien Bay	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Sairee, Koh Tao	—	—	—	—	—	—	—	—	—	—	—	—	8.0	—	3.0	—	—	—	—
Thailand	Scubacat Bay/ Racha Yai East #1	—	—	—	—	—	—	—	—	—	66.5	64.75	94.5	—	—	104.25	229.5	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Thailand	Shark Island	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	South Ao Leuk	—	—	—	—	2.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	South East South Surin	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	South Maeyai Bay	—	—	—	—	4.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Suthep Bay	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Tao Bay	—	—	—	—	8.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Tanote Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.5	—
Thailand	Tonsai Bay West	—	—	—	—	—	—	—	—	6.5	6.75	—	—	—	—	—	—	—	—	—
Thailand	Torinla	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Twin Peaks	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	2.75	—	1.04
Thailand	Twins, Koh Tao	—	—	—	—	—	—	—	—	—	—	6.25	2.25	6.12	1.4	2.12	—	—	—	—
Thailand	Viking Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.0	29.75	—
Thailand	West-Koh-see	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	Yawasam Southwest	—	—	—	—	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—
Tonga	Kito si'I	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Tonga	Pangaimotu Reef Reserve (North)	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Tonga	The Coral Gardens	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—
Vanuatu	Asanvari	—	—	—	—	—	—	—	—	—	—	—	9.25	—	—	—	—	—	—	—
Vanuatu	Asanvari North	—	—	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Vanuatu	Devil's Point (Kawene Region) Location 2, Site 3	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Vanuatu	Hat Island- NW Coast	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Vanuatu	Laone	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—
Vanuatu	Netjanavigacas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	—	—	—	—
Vanuatu	Netjanisiecen	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Vanuatu	Netjanliluhu	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—
Vanuatu	Nijcanauan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	—	—	—	—
Vanuatu	Nuosinehei	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—
Vanuatu	Sakao Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—
Vanuatu	Suvu Bay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.25	—	—	—	—
Vanuatu	Takara	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Vanuatu	Vejel Reef	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	—	—	—	—
Viet Nam	Bai Bac	—	—	—	—	—	3.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Bai Dau Tai	—	—	—	—	—	2.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Bai Duong	—	4.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Bai Nhat	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Bai Ong Cuong	—	—	—	20.0	—	107.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Ben Dam	—	401.0	70.75	71.5	45.75	50.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Bong Lan	—	32.0	—	18.25	—	42.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CAN06	—	—	—	—	—	—	—	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Viet Nam	CDA01	—	—	—	—	—	—	—	32.5	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CDA02	—	—	—	—	—	—	—	20.5	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CDA03	—	—	—	—	—	—	—	76.25	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Viet Nam	CDA04	—	—	—	—	—	—	—	75.75	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CDA05	—	—	—	—	—	—	—	68.75	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CDA06	—	—	—	—	—	—	—	21.75	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CDA07	—	—	—	—	—	—	—	22.0	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Chim Chim	—	—	20.0	41.0	61.0	40.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC05	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC06	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC08	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC09	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC10	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC11	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC12	—	—	—	—	—	—	—	1.5	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC13	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	CLC15	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Con Chin	—	32.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Da Trang	—	—	107.0	135.25	81.75	106.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Dat Doc	—	—	169.5	108.25	84.75	17.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Dat Trang	—	122.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	DNA09	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Viet Nam	Dong Bac Hon Mun (site 3)	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hang Rai/Ninh Thuan Site 5	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Bo Tra	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Cau	—	—	—	—	0.5	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Dam	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

Country	Reef Site	Monitoring years (total clam density = number of individuals per 100 m^2)																		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Viet Nam	Hon Dam Ngang/Phu Quoc Site 8	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Giai	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Hoa Lu	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Mau	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Mun Site 1	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Mun Site 3	—	1.0	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Roi/Phu Quoc Site 2	—	—	—	—	—	1.5	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Rua	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Tai	—	—	—	—	23.5	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Tai 2	—	—	—	—	—	80.75	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Thom/Phu Quoc Site 3	—	—	—	—	—	0.25	0.75	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Hon Tu	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Luoi Dang/Ninh Thuan Site 3	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	May Rut Trong/PQO15/Phu Quoc Site 5	—	—	—	—	—	0.5	0.25	—	—	1.75	—	—	—	—	—	—	—	—	—
Viet Nam	Mong Tay/Phu Quoc Site 6	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	Mui Thi/Ninh Thuan Site 7	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	My Hoa/Ninh Thuan Site 8	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Viet Nam	NTA01/ Nhatrang Site 15	—	—	—	—	—	—	—	3.25	1.25	1.0	—	—	—	—	—	—	—	—	—
Viet Nam	NTA02/ Nhatrang Site 14	—	—	—	—	—	—	—	0.75	0.25	0.25	—	—	—	—	—	—	—	—	—
Viet Nam	NTA03/ Nhatrang Site 6	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—	—
Viet Nam	NTA04/ Nhatrang Site 5	—	—	—	—	—	—	—	4.75	1.5	3.25	—	—	—	—	—	—	—	—	—
Viet Nam	NTA06	—	—	—	—	—	—	—	—	0.25	1.25	—	—	—	—	—	—	—	—	—
Viet Nam	NTA07	—	—	—	—	—	—	—	0.5	0.5	—	—	—	—	—	—	—	—	—	—
Viet Nam	NTA07	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Viet Nam	NTA08	—	—	—	—	—	—	—	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Viet Nam	NTA09/ Nhatrang Site 8	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	NTA09/ Nhatrang Site 8	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Viet Nam	NTH01	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—	—
Viet Nam	NTH03	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Viet Nam	NTH05	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Viet Nam	NTH07	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Viet Nam	PQO02	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Viet Nam	PQO03	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Viet Nam	PQO04	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—
Viet Nam	PQO05	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—
Viet Nam	PQO06/Phu Quoc Site 1	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Viet Nam	PQO09	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—

Continued

Table A4 (Continued) Global distribution of giant clams (Reef Check)

		Monitoring years (total clam density = number of individuals per 100 m^2)																		
Country	Reef Site	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Viet Nam	PQO10	—	—	—	—	—	—	—	—	—	3.0	—	—	—	—	—	—	—	—	—
Viet Nam	PQO11	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—
Viet Nam	PQO13	—	—	—	—	—	—	—	—	—	0.75	—	—	—	—	—	—	—	—	—
Viet Nam	PQO14	—	—	—	—	—	—	—	—	—	1.75	—	—	—	—	—	—	—	—	—
Viet Nam	PQO16/Phu Quoc Site 7	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—
Viet Nam	PQO17	—	—	—	—	—	—	—	—	—	4.25	—	—	—	—	—	—	—	—	—
Viet Nam	PQO18	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Viet Nam	PQO19	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—
Viet Nam	PQO20/Phu Quoc Site 10	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—
Viet Nam	Thai An	—	—	—	—	0.25	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
Viet Nam	VPO06	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
Viet Nam	VPO07	—	—	—	—	—	—	—	0.25	0.25	0.25	—	—	—	—	—	—	—	—	—
Viet Nam	VPO09	—	—	—	—	—	—	—	0.25	0.5	0.5	—	—	—	—	—	—	—	—	—
Viet Nam	VPO10	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—	—
Viet Nam	CAN04	—	—	—	—	—	—	—	—	—	1.25	—	—	—	—	—	—	—	—	—
Viet Nam	CAN07	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—	—	—
Yemen	Alamah	—	—	—	—	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	—
Yemen	Di Hamri	—	2.25	—	—	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yemen	Dihamri	—	—	—	—	—	—	—	—	—	—	—	0.13	—	—	—	—	—	—	—
Yemen	Hawlaf	—	—	—	—	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Notes: Data extracted from Global Reef Tracker (Reef Check Worldwide)
Reef Check Survey Area = 400 m^2

Appendix B: Full list of literature reviewed

Refer to Tables A1–A3 for list of localities and species, respectively.

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