

## **OSTEOLOGICAL DEVELOPMENT IN THE SURFPERCH, *DITREMA VIRIDIS* (PISCES, EMBIOTOCIDAE).**

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A total of 102 embryos taken from 12 gravid females was cleared and stained for observing skeletal development. Length of embryos examined were: Yolk sac larvae 4.5-4.7 mm NL; Preflexion larvae 6.8-8.7 mm NL; Flexion larvae 8.8-13.7 mm NL; Postflexion larvae 14.8-26.3 mm SL; Juveniles 29.5-41.2 mm SL. Hyoid and branchial arches: all elements were present at 6.8 mm NL, and remained cartilaginous at 11.2 mm NL. Ossification occurred at 14.8 mm SL. Initial branchiostegal ray was first observed at 8.7 mm NL, the full complement of 6 rays being attained by 18.0 mm SL. Jaws: at 6.8 mm NL, maxilla, Meckel's cartilage and dentary were observed. All elements were formed by 12.3 mm NL. Suspensorium: hyomandibular-symplectic and quadrate cartilages had formed at 6.8 mm NL, palatine and metapterygoid at 9.5 mm NL. All elements had formed by 15.5 mm SL. Opercular bones: opercle first appeared at 9.0 mm NL, followed by preopercle at 12.3 mm NL, interopercle at 12.8 mm NL, and subopercle at 14.8 mm SL. Vertebral column: vertebrae 35-37 (usually 36). Precaudal vertebrae 15. Several cartilaginous neural and hemal arches had appeared at 7.5 mm and 9.0 mm NL, respectively, the full complement of both being attained by 14.7 mm NL. Anteriormost 10 centra were first seen at 10.7 mm NL, all centra including urostyle being completed by 14.8 mm SL. Fin and fin supports: dorsal and anal proximal pterygiophores were first seen at 8.7 mm NL, the full complement of the former being completed by 12.7 mm NL, the latter by 14.8 mm SL. At 12.3 mm NL, dorsal and anal rays were first observed, the full complement of the former being attained by 15.8 mm SL, the latter by 18.0 mm SL. Yolk sac larvae possessed cleithrum. Coraco-scapular cartilage and fin plate were seen at 6.8 mm NL. Pectoral rays were first seen at 14.8 mm SL and completed by 29.5 mm SL. Pelvic girdle first appeared at 9.3 mm NL. Pelvic rays first appeared at 18.0 mm SL and completed by 21.7 mm SL. At 7.5 mm NL, hypurals 1 and 2 were present as cartilage. Caudal complex was formed by 14.8 mm SL. Caudal rays were first seen at 9.0 mm NL and completed by 25.5 mm SL.

## **ADULT REEF-FISH COMMUNITIES IN THE CLOSED LAGOON OF TAIARO ATOLL, FRENCH POLYNESIA.**

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Species composition and abundance of the reef fish communities were investigated in the closed lagoon of Taiaro, Tuamotu archipelago. Surveys were made in 1972, 1992, 1994 and 1996. A total of 134 species of fishes were identified. Twenty-one fish species were common to all four surveys; 34 species were common to the last three surveys; 9 were found only in 1972; 2 only in 1992; 17 only in 1994 and 13 only in 1996. Five species represented 70% of the total number of individuals inside the lagoon during the 1994 and 1996 surveys. The small size of Taiaro and the isolation of its lagoonal waters, which generate harsh environmental conditions, are likely to be the major causes of the very low diversity observed. These data on adult reef-fish community suggest that some species may complete their entire life-cycle inside the lagoon, but in the absence of additional data on recruitment and genetic evidence, such an hypothesis is still speculative.

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