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Field Note

Hydrolithon sp. (Rhodophyta, Corallinales): A new threat to the massive coral *Porites lutea* at Reunion Island, Western Indian Ocean

M.G. Séré[1, 2], M.H. Schleyer[2], P. Chabanet[3] and J.P.Quod[1]

[1]ARVAM, 2 rue Maxime Rivière, CYROI, Technopole de La Réunion, 97490 Ste Clotilde, Reunion Island;
[2]Oceanographic Research Institute (ORI), PO Box 10712, Marine Parade, 4056 Durban, South Africa;
[3]IRD Centre Réunion, BP 50172, 97492 Sainte Clotilde Cedex, Reunion Island.

Corresponding author: MGS

Email: mathieu.sere@arvam.com

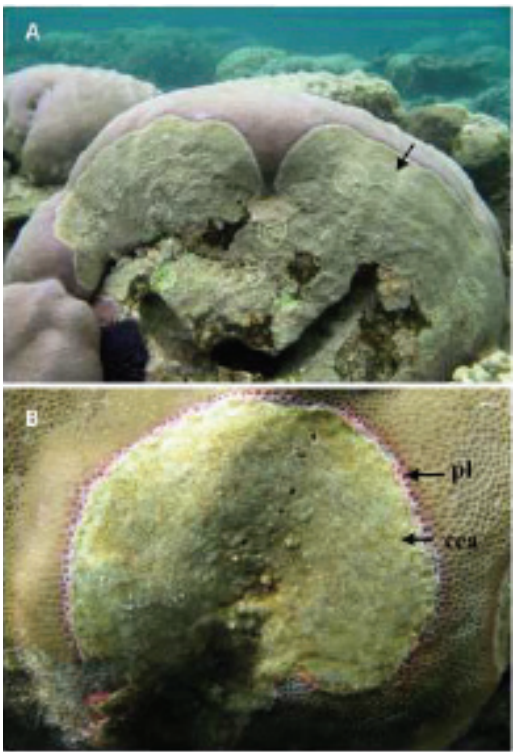

Figure 1. *Hydrolithon* sp. overgrowing *P. lutea* and exhibiting A) smooth to undulating growth (black arrow) and B) a pink line (pl) of swollen tissue separating healthy coral tissue from the calcareous algae (cca).

A crustose coralline alga (CCA) belonging to the genus *Hydrolithon* (Fig.1) was observed to overgrow and kill the dominant scleractinian coral *P. lutea* on the reef slope (8-10 m deep) at Saint-Leu (21.165940°S; 55.281930°E) on Reunion Island. Up to 67% of the total hardcoral cover is comprised of *P. lutea* at this site. The calcareous alga was beige to light brown, smooth to undulating in its growth, and central to peripheral on the colony (Fig.1A). A welldefined, pink to purple line of swollen tissue separated intact coral tissue from the algaecovered skeleton (Fig.1B). Surveys using belt transects (five 10 x 2 m, perpendicular to the shore) and photo-quadrats (1 x 1 m) conducted in January 2012, revealed that 66.3% of the *P. lutea* were infested by this CCA. Examination of photographs also revealed that the surface of P. lutea colonies overgrown by the CCA (24.7%) was devoid of coral recruits; only a few pocilloporids appeared capable of growing on this apparently antifouling substratum. Benthic CCA are known to play a fundamental role in coral-reef building by binding the substratum, providing a consolidated matrix that attracts coral settlement (Birrel *et al.* 2010). However, only one study conducted in Yemen has previously described such an aggressive and destructive behaviour by this genus (Benzoni *et al.* 2011). Long-term monitoring is needed to investigate the effects of this potential threat that may spread to other Reunion Island reefs.

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References

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