

Observations of *Acropora* Spawning in the Mozambique Channel

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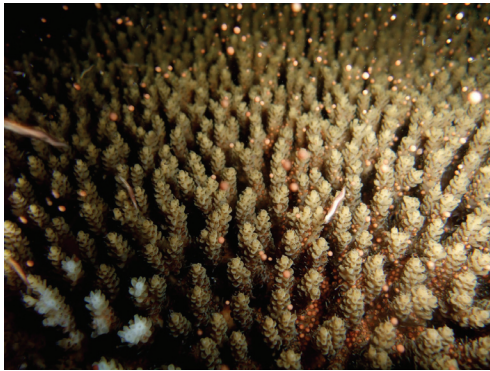


Figure 1. An *Acropora* colony spawning on 25 September 2013.

Thirteen *Acropora* species were monitored at 4-6 m depth at high tide on a reef at Andavadoaka in SW Madagascar. Although this genus is common throughout the western Indian Ocean, there is sparse information in the literature about its spawning pattern. *Acropora* oocytes are large (>300 µm diameter; Harrison & Wallace, 1990) and visible to the naked eye (Mangubhai, 2007).

The reproductive stage and oocyte colour of 53 coral fragments collected from 19 tagged colonies was determined from August to September 2013. The oocyte size increased and colour changed

from white to cream, then to an intense pink or orange in most of the species during the monitoring period. Small, immature white to cream-coloured oocytes were observed in *A. appresa*, *A. formosa* and *A. tenuis* but no spawning was witnessed. No oocyte development or spawning was detected in *A. pinguis* or *A. roseni*. Spawning of three species (*A. arabensis*, *A. divaricata* and *A. nasuta*) was observed during night-time observations of a 30 m x 30 m lagoonal reef patch dominated by *Acropora* spp. on 9 September 2015, four nights after the September new moon. On the fifth night after full moon two *A. ocellata* colonies spawned on 24 September 2015, and on the sixth night a major spawning event involving four species (*A. clathrata*, *A. squarrosa* and two unidentified *Acropora* species) was observed. Setting of the pink or orange-coloured gamete bundles (3 mm in diameter) began approximately 3 h after sunset; spawning occurred shortly after setting. Approximately 80% of *Acropora* colonies spawned that night, causing a noticeable spawn slick on the water surface.

These observations constitute the first documented in situ observations of coral spawning for Madagascar and the Mozambique Channel, close to the southernmost range in the global distribution of these *Acropora* species.

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References

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