

Target Phenomena on South Pacific Reefs: Strip Harvesting by Prudent Pathogens?

Mysterious circular patterns resembling targets, ranging from a few centimeters up to several meters in diameter, commonly occur on vertically-orientated coralline algal crusts (Fig. 1) throughout South Pacific coral reefs. At first, we thought the target-like concentric circular configurations might be related

to gastropod grazing or egg laying arrays, but closer microscopic examination eliminated these hypotheses. The conspicuous bright-white concentric bands (Fig. 2) appear to be CLOD-like pathogens^{1,2}, but unlike CLOD, which kills on a broad scale along a moving front, “target phenomena” attack

parallel strips of host material (hence the “prudent strip-harvesting” analogy).

To date, we have no evidence identifying the mechanisms responsible for the target-like patterns, but we suspect that they must be related to some unusual dispersal/settlement behavior of the putative pathogens. Since “target phenomena” are so conspicuous throughout the South Pacific, we would welcome any further insights/hypotheses from the readership—the suggestion of “alien crop circles in the sea” has already been proposed.

References

- ¹Littler MM, Littler DS (1995) Impact of CLOD pathogen on Pacific coral reefs. *Science* 267:1356-1360
²Littler MM, Littler DS (2003) *South Pacific Reef Plants*. OffShore Graphics, Inc., Washington DC 331 pp



Figure 1.



Figure 2.

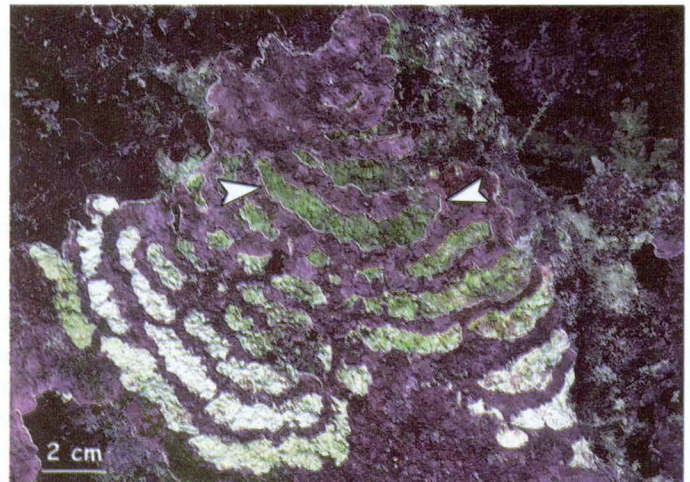


Figure 3.

CURRENTS

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