



new info

beche-de-mer

The commercial use of *Thelenota rubralineata* in the Solomon Islands

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Thelenota rubralineata was first described in the late 1980s (Massin and Lane 1991). It is considered to be rare and sightings of it are generally of single individuals. *T. rubralineata* has a current described range over much of the “coral triangle”, and extends into the Pacific. In Southeast Asia it has been sighted in Indonesia, the Philippines, East Malaysia and islands of the South China Sea (Jeng 1998; Lane 1999). From the Pacific region, it has been reported in New Caledonia, Guam, the Solomon Islands and possibly Fiji, with most accounts coming from Papua New Guinea (PNG) (see Lane 1999; Gosliner et al. 1996; Skewes et al. 2002). To date, there have been no reports of *T. rubralineata* in the Indian Ocean.

Lane (1999) notes that the historical absence of *T. rubralineata* in the beche-de-mer trade may be due to the fact that this species has very low population densities. In Sulawesi, Indonesia, *T. rubralineata* was recorded by Lane (1999) to have an average density of one animal per 220 m² over an area of 3750 m². Massin and Lane (1991) recorded the sighting of only one *T. rubralineata* during 1200 dives at Laing Island in PNG. During the 2001 Milne Bay stock assessment conducted by the Commonwealth Science and Industry Research Organisation (CSIRO), the PNG National Fisheries Authority and Conservation International (see Kinch 2002), only four specimens of *T. rubralineata* were recorded during 1126 dives, covering a surveyed area of 256,000 km² (Skewes et al. 2002a). Even though it has been recorded on the south coast of PNG it has not yet been recorded in any surveys by CSIRO in the Torres Strait in northern Australia (Skewes et al. 2002b).

The current status of sea cucumber stocks in the Solomon Islands is poorly known, but the beche-de-mer fishery as a whole is declining (Kinch 2004). The Nature Conservancy has recently conducted a rapid ecological assessment (REA) of the Solomon Islands as part of its wider marine eco-regional conservation assessment for the Bismarck-Solomon Seas Eco-region (Hunnam et al. 2001). Although the REA is a biodiversity taxonomic survey and does not entail rigorous stock abundance work, the results from this survey may add to the distributional knowledge of *T. rubralineata* and other sea cucumber species in this part of the Pacific.



Figure 1. Live specimens of *Thelenota rubralineata*
Photos: CSIRO, 2001

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T. rubralineata is an exploited and targeted commercial beche-de-mer species in the Solomon Islands and is traded under the name lemonfish and is currently purchased by traders in the islands and in Honiara, the capital, for 25 Solomon Island dollars (USD 3.60) per kg (Kinch 2004). Unfortunately, it is not possible to quantify at present the scale of the fishery for *T. rubralineata* in the Solomon Islands because beche-de-mer purchasing and export figures are lumped together and not by individual species, and this makes it difficult to provide opinions on individual species status. The Licensing Branch of the Division of Fisheries and Marine Resources (DFMR) is slowly addressing this issue by determining the species names that companies use. DFMR also wishes to implement more in-depth export return sheets, which detail individual species. The return of these sheets yearly is a prerequisite for re-issuance of an export license. Once this is set in place, some assessment of the exploitation of *T. rubralineata* will be possible.



Figure 2. Processed *Thelenota rubralineata*
Photo: M. Bae, 2004

There have been recent moves to list some threatened sea cucumber species on either Appendices II or III of CITES (Anon. 2002). These moves culminated in a gathering of sea cucumber specialists in March 2004 at the CITES Technical Workshop on the Conservation of Sea Cucumbers in the families Holothuriidae and Stichopodidae, which was held in Kuala Lumpur, Malaysia. The focus of this meeting was to discuss the issues and to garner an assessment of the impacts or benefits of listing sea cucumbers with CITES. It may be possible that *T. rubralineata* could be considered for listing due to its rarity and low population densities, which unfortunately also makes it extremely vulnerable to overexploitation. Given the low monetary value of *T. rubralineata* in the Solomon Islands, DFMR should at least, consider banning the collection and harvest of this rare species.

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