



## Differentiating between juvenile *Trochus niloticus* and *Trochus histrio* in the field

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Searching for small juvenile *Trochus niloticus* in complex coral structures is a difficult task at the best of times, but it is made even more difficult by the presence of other similar juvenile gastropods. Differentiating between small juvenile *Trochus* spp. in the field is often hard and can lead to the unnecessary collection of specimens for later examination.

During surveys on reefs of northwestern Australia, the principal confusion lay between *Trochus niloticus* and *Trochus histrio*. A reliable character to differentiate between the two in the field was found to be the number of parallel ridges on the base of the shell (Fig. 1). *T. histrio* has six or seven distinct and strongly nodulous ridges, whereas *T. niloticus* has 13–16 weak ridges becoming less distinct toward the outer edge of the shell. The ridges were easily checked by running a thumb nail across the shell base.

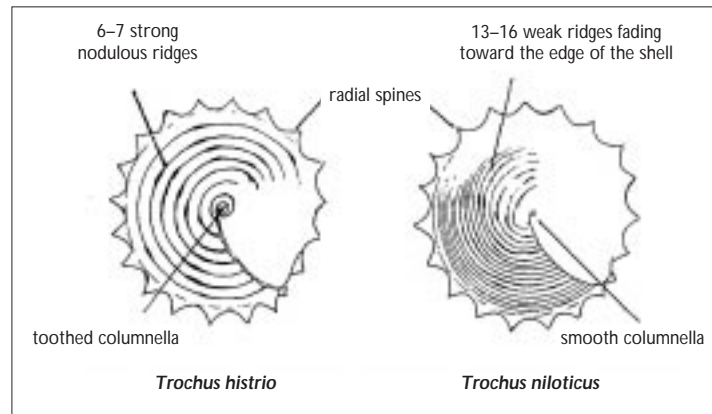


Figure 1. The number and strength of ridges differentiate *Trochus niloticus* from *T. histrio*.

When juvenile *T. niloticus* grow to about 20 mm shell width, the ridging is lost; however, at this size they can be readily and reliably identified by colouration and patterning.



## Using underwater metal detectors for research into trochus reseedling

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Researchers involved in stock enhancement, fisheries and ecology must use a range of techniques to recapture tagged animals effectively. One of the more challenging situations is when a comparatively small and cryptic animal must be recaptured in a complex habitat, particularly when the animal is mobile and may range over a wide area. As part of the Australian Centre for International Agricultural Research (ACIAR) Trochus Reseeding Research Project, it was necessary to mark juvenile trochus in the size range of 16–25 mm and recapture them over wide areas of

complex coral reef in Australia, Indonesia and Vanuatu (Crowe et al. in review). After release, the animals often moved into and under the substratum (e.g. live coral or coral rubble) and could not be reliably found using visual searches (see also Castell et al. 1996).

To solve this problem, we used underwater metal detectors to locate metal tags fixed to the animals. The metal detector used was a *Pulse 8X* with a 7.5 inch detecting coil, supplied by JW Fishers Mfg (1953 County St., E. Taunton, MA 02718, USA). This

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