

Modification of Fishing Traps for Commercial Lobster Industry

By Fabianus Haufiku

The spiny rock lobster, *Jasus lalandii*, is commercially exploited in Namibian waters between the Orange River mouth in the south and Meob Bay, midway between Lüderitz and Walvis Bay in the north.

Rock lobster is caught commercially in a standard rectangular trap without mesh size limitations, thus allowing lobster of all sizes to be caught. To avoid this, the Lüderitz Fisheries Research Laboratory is researching ways to allow undersized (sublegal) rock lobster to escape from conventional fishing traps during uphauling.

A size limit of 65 mm carapace length, introduced in Namibia in the early eighties, is still applicable. Animals smaller than 65 mm carapace length may not be processed commercially or caught by hobby divers.

Large numbers of rock lobster smaller than 65 mm are caught in the traps used by Namibian fishermen, landed on deck and handled before being returned to sea. In accordance with Namibian fisheries regulations, catches are to be sorted immediately once hauled on deck. Undersized rock lobster and females in berry are to be returned to sea at the same grounds where they were fished. This does not always occur in practise and under some conditions the pre-sorting period on deck is longer than is desirable.

Prolonged exposure out of the water and damage to the rock lobster, such as broken appendages due to handling, have long term adverse effects on the growth rate and reproduction of the individual rock lobster which survives after being returned to the sea. The onboard handling and sorting process is thought to be one of the main causes of mortality of undersized rock lobster returned to the sea, contributing to poor recruitment into the legal size range.

A feasible solution would be to modify the conventional fishing traps to enable lobster smaller than the legal size to escape from the traps at sea. Existing traps could be fitted with escape devices in the form of small gaps that would allow most

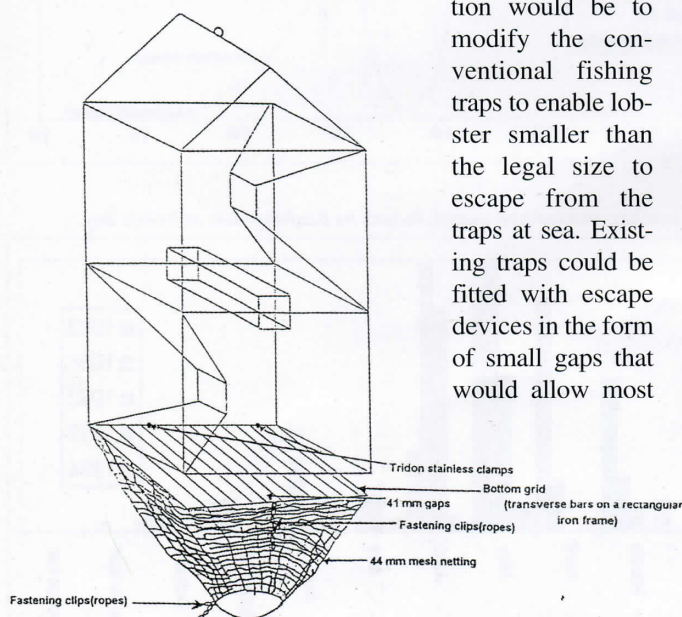


Figure 1: A commercial trap to which a bottom grid has been fitted as an escape device



Dirk Heinrich

Processing lobster at a Lüderitz factory. Modifying existing traps would allow undersized lobsters to escape.

of the undersized rock lobster to escape, but hold back legal-sized lobster. The number of undersized animals caught would be reduced and the sorting time of catches on board the fishing vessels shortened. In this way, the risk of discard mortality of the sub-legal sized rock lobster can be lowered.

Preliminary experiments, comparing various escape gap methods, have been carried out at the Lüderitz Fisheries Research Laboratory. Initial results have indicated that a bottom grid fitted to commercial traps (see Figure 1) is effective in reducing sublegal sized rock lobster in catches. Further field experiments will be undertaken before recommendations are made to the Ministry's management.

The author: Fabianus Haufiku was born in Walvis Bay in 1966. After obtaining his BSc degree at the University of the Western Cape in 1992, he joined the Lobster and Environment Section of the Ministry of Fisheries and Marine Resources at Lüderitz as a fisheries research technician. In 1997, he obtained an honours degree in marine biology through part-time studies from the University of Cape Town. He is now a fisheries biologist in the Rock Lobster Section at Lüderitz.

