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THE BIOLOGY OF EXPLOITABLE HOLOTHURIAN POPULATIONS OF  
THE LAGOON OF NEW CALEDONIA

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SUMMARY

Bêche-de-mer is an extremely popular delicacy among oriental populations obtained by boiling and drying the body wall of holothurians. In New Caledonia, this practice flourished in the nineteenth century and then declined, but it has in recent years been revived to some extent with a view to diversifying exports from the Territory.

Out of approximately sixty indexed species, about 10 could be harvested on an artisanal-type scale. They are described and classified according to the quality of the product obtained; their abundance and easy capture sometimes make up for their overseas market value.

Biological and population dynamic studies in progress at ORSTOM since October 1978 are aimed at optimizing production through sound management.

On-the-spot observations and collection of samples of these ten species is conducted at set points in the lagoon at low tide or by free or scuba diving. It enables assessment of density and catch per unit effort or total harvest in relation to diving time for the different species.

Laboratory analysis of samples serves to determine demographic structure, sex ratio and various biometric relations. The reproductive cycles are studied by analysing variations in the gonads-somatic index, the form of the genital organs, and the distribution of oocyte diameter frequencies in females.

A five-stage maturity scale makes it possible to determine the size at first maturity of females. Animal mortality will be calculated from information obtained from fisheries and export surveys.