

THE VULNERABILITY OF THE BIODIVERSITY OF THE NORFOLK RIDGE SEAMOUNTS (POSTER)

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The Norfolk Ridge Seamounts, located in the eastern part of the Economic Zone of New Caledonia were sampled by dredging and trawling during several deep sea surveys. Further to studies carried out by taxonomists on the zoological collections the results of which were published in the MUSORSTOM series, a deep sea data-base was built up. The analysis show that some well mapped and intensively sampled seamounts have a very high specific richness in invertebrates and dwell large concentrations of fish. About 60 % of the invertebrates species were described as new to science. Several species known from only one seamount are possibly endemic. This area is particularly rich in archaic organisms considered as living fossils: stalk crinoid *Gymnocrinus richeri*, mollusc gastropod *Peretrochus* sp., Sphinctozoid sponges, etc. ... The seamounts the top of which is ranging from 300 to 600 m deep are covered by communities dominated by sponges, stylasterid corals, large gorgonians (bamboo corals) and antipatharians (black corals). Although no data are available on the longevity of such organisms, their growth rate is probably slow in this cold water environment. The first information obtained about sphinctozoid calcified sponges shown a growth of one cm by century and life span of more than 600 years ! Preliminary study on the glass rod of a sponge has provided an estimated age between 200 and 400 years ! There is also no doubt that gorgonians with several cm trunk diameter could be as old as large trees ! Fish resources were discovered by trawling on the summit of these seamounts. Subsequently, a bottom longline fishery targeting alfonsino (*Beryx spendens*) and bluenose (*Hyperoglyphe antarctica*) operated in this area from 1988 to 1991. An ORSTOM scientific programme was devoted to the study of the biology and populations dynamic of alfonsino. The fishery collapsed after four years for economical reason but not from overexploitation. Unfortunately, no control was carried out on the effect of the fishery on the benthos.

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