

Dugongs in Australian Waters

By Colin Bertram and Kate Bertram

In their 1965 survey of dugongs on the north-east Australian coast, Dr. Colin and Dr. Kate Bertram made the welcome discovery that these aquatic mammals, whose numbers were seriously reduced throughout their range in the last century and the early decades of this, are now holding their own here and may even in a few places be increasing. Dugong meat and oil are highly valued by some Australian native people, and the animals fill an important ecological niche as consumers of aquatic plants in shallow water.

THE exciting report by Russian sailors in the Bering Sea in 1962, which led to the hope that the extinct Steller's Sea-cow might still survive in small numbers, referred to in *ORYX* August 1964, p. 218, has now been doubted by the Russian scientist, V. G. Geptner. Writing in *Priroda* (1965, No. 7) he asserts mis-identification of female narwhals. If he is correct regret will be widespread. In contrast, however, we can report that the dugongs of the Indo-Pacific region are, in limited parts of their extensive range, less rare than was believed. We have just completed a preliminary survey, lasting several months, on the coasts of Queensland, in Torres Strait, and elsewhere in the Australasian region. As a result of personal observation, the questioning of innumerable individuals with local knowledge, and correspondence with coastal missions and native reserves, we have reached the encouraging conclusion that in parts of the Australian north-east the dugong is not a rare animal. Its aquatic and elusive nature is its great protection. Following the excessive hunting in the last century and the early decades of the present one, its numbers may now even be increasing. The world's stock of dugongs is certainly much greater than that of manatees.

On the other hand there seems to be no doubt of the rarity of the dugong over most of its range. Few now remain in the Red Sea, around Ceylon, Malaysia or on the east coast of Africa, apart from a small population still surviving near Kenya's northern border. In the opposite direction, there are still some east of Torres Strait, even to the Solomon Islands which the records indicate have always been the eastern extremity of the range. But the species's strength is round the Australian coast northward from Brisbane on the east and from Perth on the west, round the islands of Torres Strait, and on the southern coasts of New Guinea. (We should welcome correspondence with others having local or personal knowledge of dugongs.)

In Australia the hunting of dugongs is now wisely restricted to native peoples for whom they are part of the traditional diet. Dugongs are not easy to hunt because of their acute hearing. This difficulty, combined with the native peoples' progressive change-over to a wage basis and the buying of foodstuffs, seems to have relieved

the hunting pressures on the dugongs in some places, despite local increases of population. We believe that under present pressures the dugong stocks on the Australian coasts are maintaining themselves, though there may be a few places of excessive local killing. A small number of dugongs are killed inadvertently in fish traps, in official shark-netting programmes for the benefit of bathers, and a few by stupid 'sportsmen'.

Encouraging though these findings are, the stocks of dugongs in Australian waters are, of course, far smaller than once they were, and far smaller than these waters could properly support again. In the last century, even as far south as Moreton Bay, off Brisbane, there were enormous herds of dugongs, many thousands strong, which formed the basis of the intensive European fisheries for dugong products, mainly oil. The oil is still held in high repute by certain coastal aborigines and by the Torres Strait islanders, and, as a part of folk lore, by urban Australians. It is still sold in small quantities, for example in Queensland, through the Department of Native Affairs.

Very little is yet known about the breeding biology of the dugong, which grows to a maximum length of about ten feet, somewhat less than that of the related manatee of the Atlantic. Much vital data is still needed about the time-scale of the life history, and nothing is known about the age of maturity, length of gestation, period of suckling or rate of growth. But we do now know one or two places where sufficient data could effectively be collected, given time enough.

The chief present interest in the dugong springs from the fact that the sirenians are the only large mammals which fill a particular ecological niche, as huge consumers of aquatic higher plants in shallow water. Moreover, dugongs, which are wholly marine, still regularly supply good meat to a few thousand native people, and could do so on a much bigger scale given a period of stock regrowth under protection. This should be the immediate aim in many regions. The largely freshwater manatees are now, alas, so rare that they are really insignificant as meat producers, whatever may be their theoretical potential as weed controllers in man-made lakes and waterways under conditions of semi-domestication.

It is to be hoped that the present growth of interest in marine and freshwater productivity, within the ambit of the developing International Biological Programme, will hasten realisation of the important potentialities of the dugong as a meat animal in tropical coastal regions, and that further research will be followed by proper conservation action far beyond Australia.

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