

Dugongs in Ceylon

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The Ceylon Government, in February 1970, gave the dugong complete protection. Nevertheless, the authors conclude, following their three-month investigation this year, that this valuable and once abundant marine mammal is in grave danger in Ceylon, largely as a result of the intensive fishing with modern equipment, notably the nylon nets in which many dugongs are accidentally drowned. As the dugongs are confined to waters off the north-western coast of Ceylon, they suggest that these nets be forbidden in the area and that it should become, in effect, a sanctuary for the dugong and a marine extension of the Wilpattu National Park.

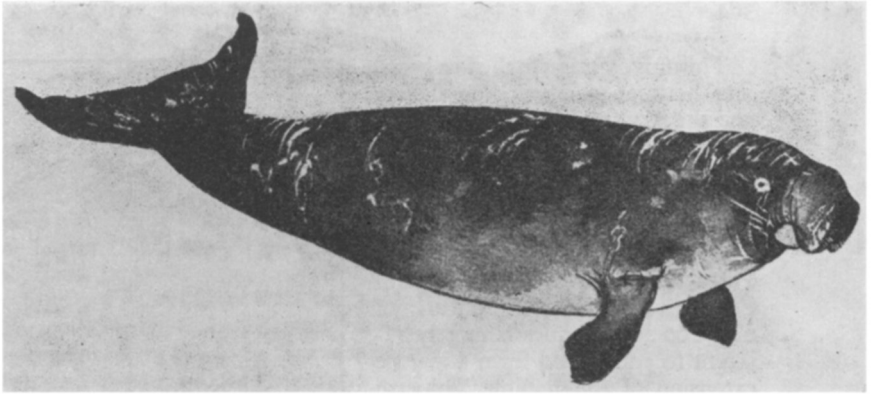
To summarise at once, dugongs are now increasingly rare in Ceylon waters and markedly more rare, we believe, than they were as little as five or ten years ago. This is our conclusion following a survey around the coasts of Ceylon in the first three months of 1970. At a very tentative estimate, dugong now reach the market in Ceylon at the rate of perhaps one hundred a year, a fast-dropping figure—not because of increased protection but because of their increasing rarity; numbers would have dropped faster still had not there been a parallel great increase in the intensity of the normal marine fishery.*

The importance of the dugong is that it is the only large mammal (except the related manatees of the Atlantic) capable of converting marine higher plants into meat for man. For this reason it is of especial interest in relation to certain aspects of the work of the International Biological Programme, and its near extinction over a large part of its range is a matter of regret to biologists and nutritionists alike.

The dugong's range extends from the Solomon Islands (or beyond) in the east to the head of the Red Sea in the west, and from the Philippines in the north to Moreton Bay and Perth, and even Madagascar in the south. The largest residual stock is in north-eastern Australian waters and Torres Strait. (Bertram and Bertram, 1966, 1968). Thus Ceylon and the Indian peninsula are nearly central in this extensive range. Along the southern coasts of India there are large areas of the appropriate ecological niche (i.e. marine higher plants in depths between two and ten fathoms); once, and potentially again, dugongs could be numerous and useful in this region, and their present status in Indian waters needs early investigation.† But round Ceylon itself the potential dugong areas are small, and limited to the north-west of the island, from Jaffna to Puttalam, where the water is sufficiently shallow for their food plants to grow.

* In *Loris*, the Journal of the Ceylon Wildlife Protection Society, we have set out our preliminary findings in the local setting. In press 1970.

† Two dugongs have long been kept in a tank at the Central Marine Fisheries Research Institute, Mandapam Camp. See Jones in *International Zoo Yearbook*, 1967.



Dugong by Maurice Wilson

In Ceylon, in truth a very crowded island whose population is expected to double again before the end of the century, the dugong has long been a highly favoured meat with certain sections of the population, so favoured, in fact, that, now it is scarce, it seems that the traditionally unsought porpoise meat is being sold in its place to the ignorant in island markets. In former times, if not still occasionally today, unfortunate dugongs were sent alive to distant markets by train. Surprisingly, a dugong butchered in the market is completely chopped into small pieces: there is no waste at all, despite the extreme toughness of the skin and the high density of the bones.

The conservation of the dugong in Ceylon is largely an organisational matter, for the good sense of conserving it is quite widely accepted. A start has been made in that under the Fauna and Flora (Amendment) Act No. 1 of 1970 it has been declared a protected animal. The problem, however, is this: dugongs are already too rare to make deliberate hunting for them attractive, but Ceylon Government policy inevitably must be, and in fact successfully is, to develop local marine fisheries, and one innovation is the increasing use of enormous nylon set nets, hundreds of metres long and even twenty metres deep, with a mesh size of anything up to fifteen cms knot to knot. Such huge nets are powerful catching instruments, especially in darkness, taking any large marine species which may swim into them—tunny, turtle, shark, porpoise or dugong. Moreover, they often extend virtually to the bottom in vegetated regions where dugongs may well be feeding. Once entangled, even so powerful an animal as a twelve-foot dugong cannot break the nylon netting, as it could a net of natural fibres in earlier days, nor can it carry the net with it when it surfaces to breathe which would enable it to be captured alive (and perhaps theoretically to be released); inevitably it is drowned. The fishery is entirely legitimate; the effect on the residual dugongs disastrous. This is not to deny that local populations of sharks and rays may soon much diminish, so stressing the need, already recognised, for longer term fishery developments to extend to much more distant waters. It seems also that the practice of dynamiting for fish is spreading, especially in the dugong's area, despite the efforts of the Fisheries Department to stop it.

The only solution to the local conflict between a developing fishery and the requirements for preserving and conserving the dugong is by geographical separation of the two. Fortunately this could be done, in principle, if the large nylon nets were prohibited in the Dutch and Portugal Bay areas (together with Puttalam Lagoon). The total area of near 100 square miles is largely adjacent to and would form a marine extension of the notable Wilpattu National Park. In fact, the exclusion of these nets if it were done quickly could not cause real hardship locally, because few are being used here; but it needs to be done before more 'squatter' fishermen move in. We have made detailed suggestions.

As so often the world over, the organisational and administrative problems and requirements are far more difficult of solution than is the wide acceptance of a plan in principle. Without effective implementation of this project the residual dugongs in Ceylon waters are indubitably doomed; with effective implementation they may have a useful future provided too big a proportion of them do not wander too frequently. On this last point there is still no sound evidence as to whether the species is fully static or migratory. We have tried to promote a system whereby the skulls of dugongs that have been caught inadvertently shall be available for detailed investigation, that being one of the few remaining sources of information about dugongs in Ceylon.

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References

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