Stranding of porpoises in Malekula, New Hebrides.

THE STRANDING OF SEA MAMMALS IN THE SOUTH-WEST PACIFIC IN 1972

By PAUL RANCUREL*

The immensity of the Pacific, with its myriad islands, islets, atolls and reefs, its relatively low population density, and the fact that communications are often non-existent has, till very recently, made it next to impossible for any information concerning the stranding of sea mammals to be brought to the notice of the appropriate scientific authorities. Now, thanks to population growth, the widespread use of transistor radios bringing news to more and more people and the improvement of airline facilities, data concerning some marine phenomena is being made available to scientific circles. Of course, the progress of such information is still painfully slow, and it is often only long afterwards that laboratories are notified, which precludes the possibility of their making certain extremely useful and interesting observations that they might have done had they been alerted at once.

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This state of affairs is largely due to the fact that no attempt has been made to render coastal populations aware of the importance of strandings. As far as they are concerned, the occasional stranding of a whale is a remarkable but natural occurrence which, while being something to be reckoned with, is neither sensational nor spectacular. If they only knew!

Our information concerning both the large and small sea mammals that frequent this area is very incomplete, and a great many of them are known to us only because their skulls, considered extremely rare, are preserved in museums. Is 'rare' the proper word? It is often lack of information which leads one to the conclusion that things are rare, as we shall presently see.

Besides, the migrational behaviour and ecology of these rare animals is unknown, and it is only through repeated inspections carried out when strandings occur that one can hope to dispel such ignorance. This is why it is so important that any news of a stranding should be communicated as quickly as possible to the nearest scientific unit, so as to make precise and appropriate observations possible.

Since ORSTOM (Noumea) started being interested in this problem, a whole lot of strandings have come to light and, strangely enough, most of them involved rare animals; which only goes to show how subjective the term 'rare' really is!

Between June and July 1972, some people found stranded on a coral shelf in Poum, New Caledonia, a small whale about two metres long. They took photos which were given many months later to Professor François Doumenge who then passed them on to the author. The creature involved was a *Kogia simus*, a very special small cetacean, about which very little is known; it is often confused with a related species *K. breviceps* which grows to a greater size. These two species, which seem to be distributed all over the world, are known to us only through studies on the hundred or so captured or stranded since 1871!

In August 1972, two sea-lions were stranded, one in Yaté (pictured) and the other in the Isle of Pines, New Caledonia. The Yaté sea-lion, picked up alive, was affectionately tended by Dr and Mrs Catala. It was reared for nine months in the Aquarium of Noumea, where its playful and clownish antics made it the joy of young and old. Unfortunately, it died suddenly in March 1973 in a hitherto unaccountable manner.

The second specimen reached Gadgi beach dead. It was buried immediately, so that it was possible to collect the skeleton. The two animals, which were of similar size at the time of stranding, probably belonged to a herd of fur-seals from the south of New Zealand or Australia, cast out of their usual area by the uniformly bad weather prevailing in the Tasman Sea during July.

Two species of fur-seal frequent the lower latitudes of our regions: *Arctocephalus forsteri* in New Zealand and *A. doriferus*, south of Australia. The distinction between the two species, based on a study of adult skulls, is far from easy. The skull of the specimen from the Isle of Pines belonged to a very young animal and was of no help whatsoever. On the other hand, the body of the sea-lion reared in the Noumea Aquarium was sent deep-frozen to the Taxonomy Institute in Amsterdam which, possessing as it does excellent equipment for purpose of reference, may perhaps provide the key to the puzzle.

In November 1972 a herd of porpoises was stranded in the southern part of Malekula Island, in the New Hebrides. This mass stranding involved no less than 231 animals. Unfortunately, ORSTOM was only informed ten days later and it was not possible for the author to be on the spot till 22 days after the incident. Owing to this unfortunate delay, it was not possible to carry out the biological investigations, which would have been fascinating, into the probable causes of this large-scale stranding.

Once again, the mammalia involved, designated since 1966 by the name of *Peponocephala electra*, were little known and rare, and the strandings around the world may be easily counted. The Malekula Island stranding took place on the night of 15-16 November, at high tide. A first group of 32 porpoises, mostly males, ran aground while the rest of the herd remained in the bay. Then, at the next high tide, the 199 other porpoises rushed en masse on to the beach at the other end of the bay.

The shape of this bay is such that it was possible to deduce the probable cause of the stranding, but owing to the lapse of time between the date of the accident and the actual inspection, the assumption could not be confirmed. The suggestion was that these animals, which by night move about with the help of an echolocation organ working on the same principle as the sonar,

Kaia, sea-lion stranded in Yaté (New Caledonia) and reared till March 1973 in the Aquarium of Noumea.

Globicephala macrorhyncha, *Efate Island, New Hebrides.*

might have been misled by strata of warm fresh water, formed by rivers and streams having their outfall in the bay. The presence of these layers of water could have fouled-up their sonar beams, making depth-assessment impossible. Taken unawares when they hit the bottom, these porpoises, which normally live on the high seas, must have panicked. Then, the retreating tide left them high and dry.

Probably, the animals first stranded were the leaders of the herd. The others, mainly females, remained nearby, listening to their cries of distress; and at the next high tide, impelled by their gregarious instinct and probably still deceived by the false bottom, the remainder of the herd also ran aground. Such an assumption, which could throw light on many strandings, called for immediate verification through an analysis of the water in the bay. Twenty days later, of course, sea and weather conditions had completely changed.

In December 1972, in the island of Efate, in the New Hebrides, a female of the species *Globicephala macrorhyncha* was stranded on the reef, where it was killed by a fisherman. The animal was buried, and it may be possible to acquire the skeleton for study.

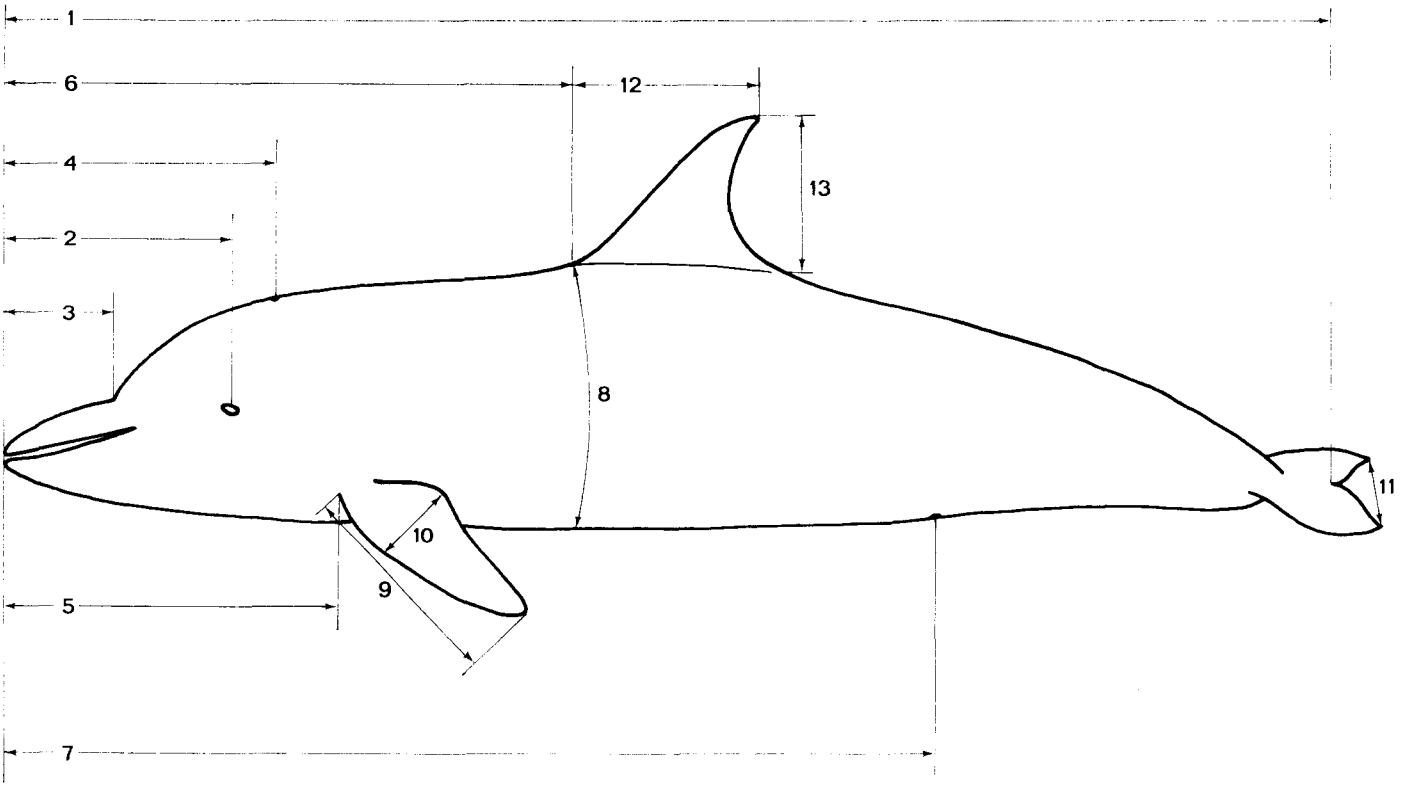
At the same time, in Ouvea, one of the Loyalty Islands, two long-beaked dolphins (probably *Prodelphinus*) were stranded on a beach, but the local people were able to refloat both the animals, which succeeded in reaching the open sea. This is just the opposite of what occurs during mass strandings.

Finally, following the request for information that Mr Baird, the SPC Fisheries Specialist, sent out to various Fisheries Departments in the Western Pacific, the author was informed by Dr Gregory of the Honiara Fisheries Department that a 'whale' had been stranded in the Solomon Islands. This animal, which had probably been wounded by a ship, appeared to have died of its wounds and drifted, being subsequently beached on Kennedy Island, near Gizo. Unfortunately, due to transport difficulties and to bad weather conditions that led to a refloating of the animal, no study could be made of this particular stranding.

Lastly, there were in January 1973, newspaper reports of a stranding in Mahina, Tahiti, involving a 5-metre whale, which, judging from the photographs, is a *Globicephala*. It would appear that this also belongs to the species *macrorhyncha*.

Call for participation in a survey: It is easy to understand that, as the population of the islands increases, more cases of strandings are reported. But people must be made more keenly alive to this matter, if the information and very valuable observations likely to be made during or just after strandings are not to be lost to us.

In order that the maximum data may be gathered on the biology of the animals, it is essential that persons dealing with the subject concerned examine the animals' stomachs, their sexual status and the composition of the herd as quickly as possible.



Measurements to be taken:

1. Total length; **2.** Distance in front of eyes; **3.** Length of the beak; **4.** Distance in front of blow-hole; **5.** Distance in front of flipper; **6.** Distance in front of dorsal fin; **7.** Distance from beak to anus; **8.** Half the circumference of the body; **9.** Length of flipper; **10.** Width of flipper; **11.** Width of tail; **12.** Length of dorsal fin; **13.** Height of dorsal fin. Also to be noted: number of teeth on upper and lower jaw; colour; sex.

Similarly, the place and environment involved must be studied immediately. So that this may be done, the nearest scientific units must be informed as soon as possible. Then only can some attempt be made to ascertain the unknown factor which may provide a key to a better understanding of sea mammal biology.

When strandings of cetacea occur, we would request observers to carry out, whenever possible and pending the arrival of a scientist, the following checks:

1. If possible, photos of the animal/s. Photos should be taken perpendicular to the subjects, so as to preserve due proportion. A scale should be added (some familiar object of known dimensions).
2. Measurements of the animals and proportion of sexes.
3. In the case of isolated findings, collect as many bony parts as possible (skull and teeth). These can be sent to the Taxonomy Museum in Amsterdam to be studied by Dr Van Bree.
4. Particular sea or weather conditions at the time of the stranding.

While indicating the best way of reaching the place of the stranding as quickly as possible, please specify the name of the person to be contacted and the exact location of the occurrence.

This information should be sent to:

Dr Paul Rancurel (if away, Mr Rene Grandperrin)

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Telephone 610.00; 624.55; 626.77.
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