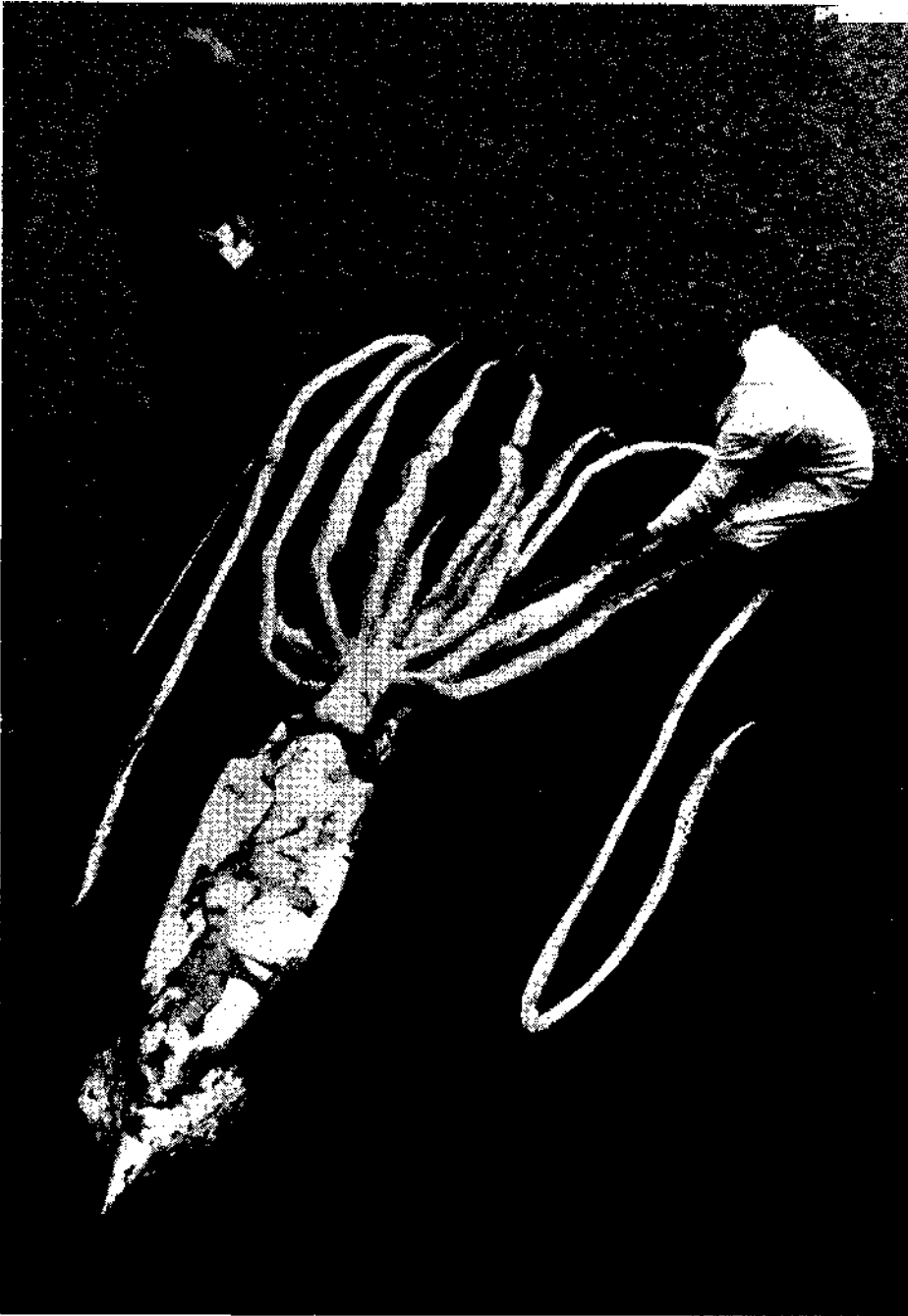


# GIANT SQUIDS



The existence of giant cephalopods has long haunted the imagination of sailors and naturalists. Ever since the classical era in Greece, there has been talk of gigantic octopuses capable of carrying off sailors from the decks of their ships, sometimes even capable of sinking the ships themselves.<sup>1</sup>

By Paul Rancurel, ORSTOM, Noumea

***Do  
they  
exist  
in***

*Architeuthis* sp. stranded at Ranheim, Norway, in October 1954—photo by E. Sivertsen, published in *Advances in Marine Biology*, ed. Sir Frederick S. Russell, Academic Press, 1966.

***NEW CALEDONIA ?***

We shall consider here only events that have taken place in the western Pacific.

Since 1879 regular strandings of giant squids in Cook Strait, New Zealand, have been reported. At that date, strandings were reported of animals more than 16 feet in length, weighing more than a ton. Since then, various accounts of strandings in this area so close to us have been published.

When speaking of cephalopods, people often confuse octopuses, cuttlefish and squids. To make things clear, it should be noted that the only feature which these three types of animals have in common are those extremely characteristic organs, sucker-bearing arms. The *Nautilus*, which is a primitive cephalopod, is an exception: its arms have sticky organs instead of suckers. Except for this readily perceptible characteristic, the three groups are quite different.

*Octopuses* have oval, sack-like bodies, with no apparent support, and eight arms that are generally long and

powerful. This latter characteristic is implied in the Latin name *Octopus* applied to the more common species. *Cuttle-fish* may be easily identified through their white calcified 'bone', which is found beneath the skin of the back, while *squids* are longer, their bodies being supported only by a horny and transparent 'pen' or 'gladius' found under the dorsal skin.

Squids are known to be beasts of prey, flesh-eating and ferocious predators. One has only to see them at night, with the aid of a spotlight from the deck of a boat, appearing from nowhere, gliding up, snapping up a fish on the surface and vanishing backwards into the half-light, all in a few seconds, to have an idea of the agility and cunning of these creatures. Their brains are by far the most highly evolved among molluscs.

Their predatory habits are assisted by a highly specialized capture mechanism, starting with the suckers. This suction apparatus has edges specialized for attachment by the presence of a horny rim, which is either smooth and

sharp-edged or hooked and denticulated. The rims are sometimes modified into terrible fangs, as sharp as cat's claws. These prehensile organs meet in the centre of the circle of arms at a powerful parrot-like beak which is capable of slashing any kind of prey into tiny fragments. The beak is provided with poison glands.

The combination of these features in an engine of death propelled by a powerful, omni-directional 'aquajet', with only the dimensions of something sold in a fish-monger's stall or perhaps even smaller, does not excite one inordinately. But for the same engine to attain a size equal to and sometimes greater than that of man, jolts one's imagination.

Fortunately, a study of the main species of 'giant squids' has shown that these creatures seem to be relatively slow, attacking only small prey, consonant with their brachial system comprising suckers that are quite small. But books give accounts of combats between squids and sperm-whales which left the cetacea with enormous

*A squid with scales found in the stomach of a sperm-whale. Photographed in Madiera by J. Cadenat.*



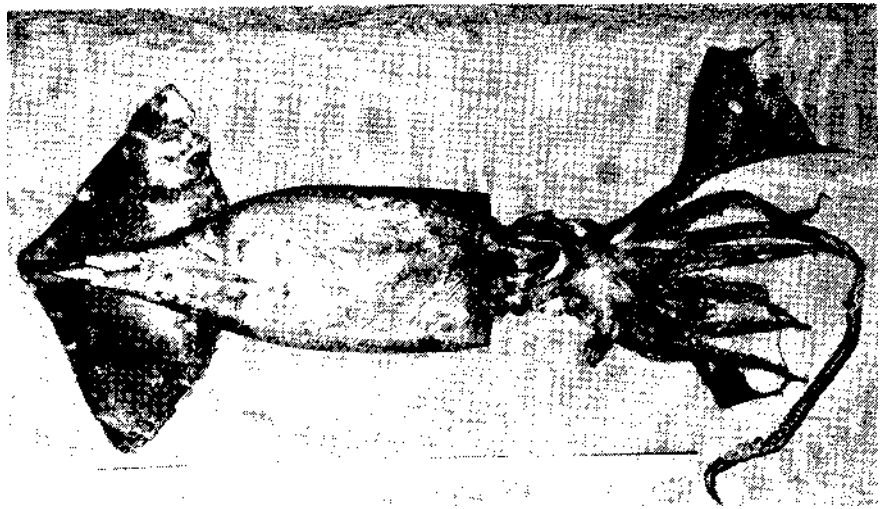
scars on their skin, mute witness to the fighting qualities of the cephalopod. There are also accounts of sailors swept off decks by a squid off the African coast, and of castaways in the Atlantic attacked and carried away by squids of enormous proportions.<sup>2</sup>

There are, therefore, different kinds of so-called giant squids. The largest belong to the genus *Architeuthis* which attains an impressive size. Their total lengths have been measured officially at anything up to 20 feet. It is quite possible that even bigger specimens may be found. It would appear however that such giants are among the least active of squids. These are the ones that are found stranded in New Zealand, Newfoundland and the northern part of the North Sea (Norway, Scotland, Iceland).

But there are others, such as the *Ommatostrephes*, which, though they are smaller, are still among the large marine species. The more common species of *Ommatostrephes* caught generally off the African coast and less frequently in the Pacific, attain a length of 5 feet. Among the *Ommatostrephes*, *O. gigas*, commonly occurring in the Humboldt current, down the Chilean coast, and *O. caroli* are remarkable for their size.

The last-named species was not known until this year to occur outside the North Atlantic. Its size is considerable, with total lengths of more than 7 feet, and it had been found only when stranded, generally after the sea had been rough. *O. caroli* has been known for a long time: in 1661, a specimen was captured in Holland, described and offered as a rare gift to the King of Denmark, but it was not described scientifically until 1887 by the Portuguese zoologist Furtado, who studied specimens that were stranded in Portugal. These animals, whose tentacles are armed with huge denticulated suckers, are magnificent swimmers with powerful muscles that enable them to escape the slow boats and the nets of fishermen and scientists. This would explain why they are not present when nets are emptied of catches, and why they only appear, from time to time, following bad weather.

One of the lateral arms of the squids belonging to this species has a broad triangular membrane with the same beautiful reddish-brown colour as the body and which when unfolded in the



A small specimen of *Ommatostrephes caroli* Furtado, Isle of Pines. The characteristic triangular membrane may be very clearly seen.

water, undulates like a piece of fabric. The utility of this membrane is altogether obscure and there is at present no explanation for it, but it helps zoologists in that it is an obviously distinguishing characteristic of the species.

In August 1973, there was delivered to me in the Fishermen's Co-operative in Noumea, a crate of squids to be used as bait, which appeared to me to be different from the species commonly found in New Caledonia. Imagine my surprise on de-freezing them to see unfurled the lateral-arm sail so typical of the great Atlantic squid, *Ommatostrephes caroli*.

These animals had been collected on a beach in the Isle of Pines by a fisherman, among 40 or so animals of three to seven feet in length that had been stranded one morning on the shore. The sea had been very rough for some days, with a heavy swell from the south.

This species, which is still under study, is identical to the one met in the North Atlantic, where it attains considerable proportions. Its presence in New Caledonia throws some light on rumours and reports of events that I have lately been able to collect. Although these do not contribute positive evidence of authenticity, it is

highly likely that they will be accepted—at least in their general aspects,—owing to the proven presence of *O. caroli*.

In the course of investigations carried out on this species in the Isle of Pines, I was able to gather from islanders, whose statements could be considered as reliable and which tallied with those made during other surveys, that about 20 years ago, on this very beach where the strandings of *O. caroli* had occurred that day, was found one fine moroing an enormous red 'squid' still alive. Its total length was estimated, according to the indications given by the people relating the incident, at more than 16 feet; a horse had to be brought to haul the body of the squid on to the beach with a chain. It is, of course, impossible to identify the animal at present, but it is extremely likely that it was a large specimen of *O. caroli*, or of a closely related species.

A little while later, there was another report, which was also made by a thoroughly reliable person and further confirmed by top administrative authorities. This related to the presence, in Vanua Lava island, in the northern New Hebrides, of a monster 'octopus', with arms as big 'as the trunks of coconut trees', from which fishermen kept a respectful distance. This animal

In the distance, a great white mass lazily rose, and rising higher and higher, and disentangling itself from the azure, at last gleamed before our prow like a snow-slide, new slid from the hills. Thus glistening for a moment, as slowly it subsided and sank. Then once more arose, and silently gleamed . . . we now gazed at the most wondrous phenomenon which the secret seas have hitherto revealed to mankind. A vast pulpy mass, furlongs in length and breadth, of a glancing cream-color, lay floating on the water, innumerable long arms radiating from its centre, and curling and twisting like a nest of anacondas, as if blindly to catch at any hapless object within reach. No perceptible face or front did it have; no conceivable token of either sensation or instinct; but undulated there on the billows, an unearthly, formless, chance-like apparition of life. . . .

"What was it. Sir?" said Flask.

"The great live squid, which, they say, few whale-ships ever beheld, and returned to their ports to tell of it."

*Moby-Dick*, Herman Melville

was twice seen by women and by a pastor on the island.

I do not think it was actually an octopus, but rather another squid, the reddish colour of which, as in other observations recorded in the report, inclines me once more to relate it to *O. caroli*. It is of course impossible to get a reasonable idea of the size of an animal that is under water and observed from a distance, but I believe that if an animal as big as the one stranded on the Isle of Pines 20 years ago were to haunt the approaches to a reef, it could provoke the same reactions as did the 'octopus' of Vanua Lava.

Lastly, a fisherman quite recently told me that in January 1974 he had picked up near Canala, on the East coast of New Caledonia, the headless body of a reddish 'squid' about 3 feet long, weighing 30 to 40 kg. From his description it seems certain that he had come across the remains of a large squid. Unfortunately, the specimen was in such an advanced state of decomposition that he was obliged to throw it back into the sea and could not send it to me through the gendarmerie.

It seems obvious, therefore, that there are found in the western, subtropical Pacific, squids of a size exceeding the dimensions normally accepted for these animals. It should not be surprising if we come across the remains of such animals cast up along the coast: animals about which science is extremely ill-informed. ORSTOM, Noumea, would be extremely happy to have reports of any cases of such animals being stranded or captured. ORSTOM's address:

Boite Postale A5  
NOUMEA CEDEX  
New Caledonia  
Telephone: 610 00

## REFERENCES

<sup>1</sup> Among the well-documented works on this subject, is the book by B. Heuvelmans (*Dans le sUlage des monstres marins*. Plon. Pub. 1958) to which we refer the reader. The author deals with this subject thoroughly, using arguments of scientific interest.

\* Heuvelmans *op. cit.* pp. 266 and 417.

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