

FIRST RECORD OF FALSE KILLER WHALES (Pseudorca crassidens), IN NEW CALEDONIA, SOUTH PACIFIC.

On September 14, 1996, at 10:07 a group of false killer whales, Pseudorca crassidens, was observed in the waters of the south-western limit of the lagoon surrounding New Caledonia (22°38'8 S, 166°59'0 E). Observations were carried out during an annual humpback whale, Megaptera novaeangliae, research season. Sea conditions were very calm, visibility was hazy with over 75% cloud cover. The sea surface temperature taken at 09:00 was 22.75°C.

The animals were swimming towards the south-east when first sighted and did not deviate from this path when approached in a 5 m outboard boat. The group was large, comprising more than 100 individuals and consisting of many subgroups containing between 5 and 10 individuals each. The subgroups were at least 20m apart and spread over a large area of the sea surface. This type of schooling behavior is consistent with other observations of this species (Acevedo-Gutiérrez *et al.* 1997, Leatherwood and Reeves 1983), known for its gregarious behavior (Stacey and Baird 1991).

The animals were approximately 5 m in length, a great deal larger than the pygmy killer whale, Feresa attenuata, or the melonhead whale, Peponocephala electra (Jefferson *et al.* 1993). While the heads of the animals were rounded, they lacked the pronounced melon of short-finned pilot whales, Globicephala macrorhynchus (Jefferson *et al.* 1993), and had no obvious beak. Their dorsal fins were pointed but curved and around 20-30 cm in height. For some individuals the ventral coloring was slightly paler than the rest of the animal, which was a dark gray. Field notes describing physical characteristics and photographs (fig. 1) leave no doubt about the identification of the animals as false killer whales, Pseudorca crassidens.

Whistles emitted by the false killer whales were audible from the boat with the motors running, with the aid of a hydrophone both whistles and sonar clicks could be heard. A 22 minute recording of the false killer whale was made. For the entire period of the recording animals continued to pass the boat. At one stage four individuals approached and swam under the boat turning sideways as they passed, sonar clicks became very strong at that moment.

On departing in the same direction as the false killer whales a subgroup of 5 individuals approached the boat and began surfing the bow wave. Using a crossbow and adapted bolt a biopsy was taken from a large individual. While with this subgroup of animals other subgroups were continuously visible, some contained smaller individuals assumed to be juveniles, these groups never approached the boat.

The continuous passage south-east of the subgroup accompanying the boat was interrupted at 11:16 when they paused on the surface. One individual made a sudden, and extremely rapid, movement out of the subgroup. Five minutes later an individual was observed carrying a large piece of yellowfin tuna, Thunnus albacares, in its mouth. While the dietary habits of false killer whales are not well known, they appear to feed opportunistically on a wide range of prey types and sizes, including large pelagic species such as Mahi-mahi, Coryphaena hippurus (Leatherwood and Reeves 1983, Stacey and Baird 1991).

After catching the tuna the subgroup started to distance itself from the boat. Avoidance behavior was initiated by diving for a period of about two minutes, after which the subgroup surfaced 50m in front of the boat and several breaches were observed. We accelerated to a speed of 6 knots to follow the subgroup. The remaining contact with the group consisted of them surfacing at two minute intervals while moving steadily towards the south-east. Boat speed varied between 3.3 and 10.8 knots. At

midday it was decided to stop following the group, the final position was 22°36.3' S, 167°04.8' E. We had remained with the group for 1 hour 53 minutes, covered a distance of approximately 6.4 nautical miles and traveled at an average speed of almost 5 knots.

Reports of false killer whales from the south-west Pacific are not uncommon, mass strandings of the species have been recorded from both New Zealand and Australia (Baker 1983). In addition, this species has been caught incidentally in Taiwanese gillnets from northern Australia (Harwood *et al.* 1984), and reported from dolphin drive fisheries in the Solomon Islands (Dawbin 1974). In spite of a few records from inshore waters (Stacey and Baird 1991, Acevedo-Gutiérrez *et al.* 1997), the false killer whale is known as a pelagic species (Wade and Gerrodette 1993), so it is not surprising that sightings have not been more frequent in New Caledonia, where most scientific studies are confined to the inner lagoon. It is likely that this species is not uncommon in the oceanic waters surrounding the New Caledonian lagoon.

LITERATURE CITED

- ACEVEDO-GUTIÉRREZ, A., B. BRENNAN, P. RODRIGUEZ AND M. THOMAS. 1997. Resightings and behavior of false killer whales (Pseudorca crassidens) in Costa Rica. *Marine Mammal Science* 13: 307-312.
- BAKER, A. 1983. Whales and Dolphins of New Zealand and Australia: An Identification Guide. (Victoria University Press: Wellington).
- DAWBIN, W.H. 1974. Cetacea of the south western Pacific Ocean. Unpublished meeting document of FAO/ACMRR meeting, La Jolla, California. 21 pp.
- HARWOOD, M.B., K.J. McNAMARA, AND G.R.V. ANDERSON. 1984. Incidental catch of small cetaceans in a gillnet fishery in Northern Australian waters. Report of the International Whaling Commission 34: 555-559.
- JEFFERSON, T.A., S. LEATHERWOOD AND M.A. WEBBER. 1993. FAO Species Identification Guide: Marine Mammals of the World. (FAO: Rome).
- LEATHERWOOD, S.; AND R.R. REEVES. 1983. The Sierra Handbook of Whales and Dolphins. (Sierra Club Books: San Francisco).
- STACEY, P.J. AND R.W. BAIRD. 1991. Status of the false killer whale, Pseudorca crassidens, in Canada. *Canadian Field-Naturalist* 105: 189-197.
- WADE, P.R., AND T. GERRODETTE. 1993. Estimates of cetacean abundance and distribution in the eastern tropical Pacific. Report of the International Whaling Commission 43: 477-493.

Jacqui Greaves, Opération Cétacés, B.P. 12 827, Nouméa, New Caledonia. Claire Garrigue, ORSTOM B.P. A5 Nouméa, New Caledonia.

FIG. 1. False killer whale Pseudorca crassidens, demonstrating the characteristic rounded head lacking a beak and the tall, falcate dorsal fin.