

First report of remoras on two killer whales (*Orcinus orca*) in the Gulf of California, Mexico

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Abstract

In different parts of the world, there have been many sightings of cetaceans with remoras attached to their bodies. Recently, two killer whale (*Orcinus orca*) cow-calf pairs were sighted travelling together in the Gulf of California; one of these pairs had many remoras attached to both cow and calf. Despite the photographs taken, it was not possible to determine which species of remoras they carried. Usually killer whales are not seen with remoras and this is the first published report of a remora-killer whale association for the Gulf of California.

Key words: killer whale, remoras, whalesuckers, Gulf of California, epizootic.

Introduction

Remoras belong to the Echeneidae family of fish, which contains 4 genera and 8 species. Seven species are found in the Central Eastern Pacific, but all of these are cosmopolitan. Remoras can be found attached to sharks, rays, barracudas, moonfishes, turtles, whales, dolphins, manatees, marlins, swordfishes, and ships and other floating objects. They attach themselves by pressing their dorsal disc against the host, creating a powerful suction which can be difficult to loosen (Schneider, 1995).

Remoras are commensal organisms, they depend on the other species because they are poor swimmers. The advantages offered by their hosts include protection from potential predators, transportation, food availability, and courtship and reproduction potential (Strasburg, 1964; Cressey & Lachner, 1970; Moyle & Cech, 1982).

Results

On 27 June 1998, during a wildlife conservation cruise to the Islands of the Gulf of California, Mexico, two killer whale cow-calf pairs (*Orcinus*

orca) were found and photographed in the San Jose Channel (24°51'N, 110°35'W).

One pair had many remoras attached to their bodies. Both animals were swimming and behaving normally as the other cow-calf pair. The calf appeared to have more remoras, which were easily seen on both sides of its back and dorsal fin. In contrast, the adult female had most concentrated near the blowhole and eye patch. She also showed some greyish marks on the dorsum, from the tip of the rostrum to the dorsal fin, which might have been caused by previous remoras' discs. Both animals had several barnacles, probably *Xenobalanus* sp., attached mainly on the tip of the dorsal fin (Figs. 1a and b), which is a typical feature of most of the Mexican killer whales (Guerrero-Ruiz, 1997; Black *et al.*, 1997). Despite the photographs that were taken, the remoras were not assigned to any species because it is not recommended to try to identify them to species by remote observations (Schneider, 1995; Fertl & Landry, 1999).

Photographs of the four killer whales were compared to the known individuals that inhabit Mexican waters (Guerrero-Ruiz, 1997; Black *et al.*, 1997; Guerrero-Ruiz *et al.*, 1998), to see for how long they had been carrying the remoras, but no match was found.

Discussion

Some species of remoras show preference for certain host species, such as *Remora australis* (also known as *Remilegia australis*), which are found attached to cetaceans, hence its common name 'whalesucker' (Schneider, 1995). Due to this fact, it is commonly assumed that all echeneids found on cetaceans belong to this species.

There are several sightings of cetaceans with remoras, including blue whales (*Balaenoptera musculus*), fin whales (*Balaenoptera physalus*), Bryde's whales (*Balaenoptera edeni*), long-beaked common dolphins (*Delphinus capensis*), and bottle-nose dolphins (*Tursiops truncatus*), in the Gulf of

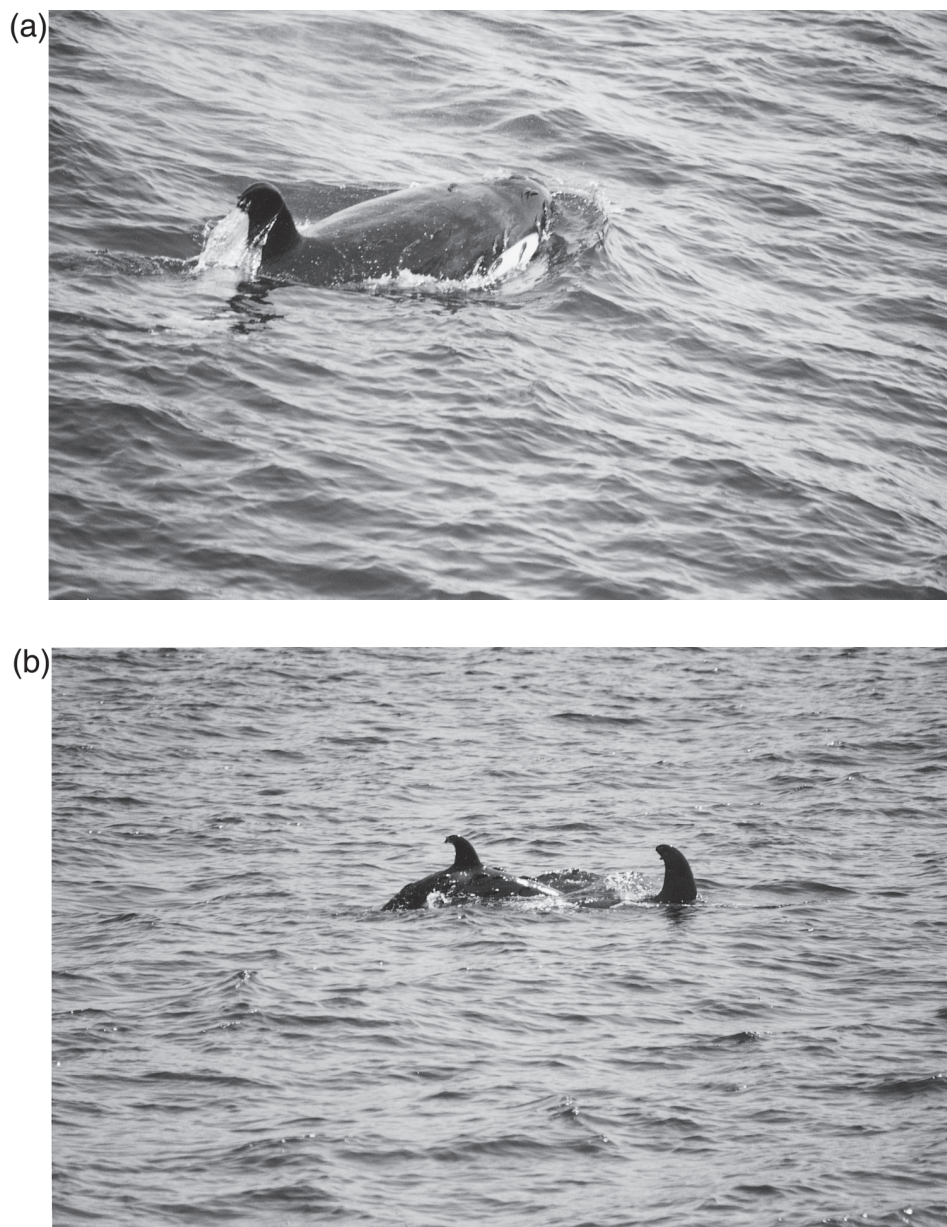


Figure 1. Killer whale adult female (a) and calf (b) showing remoras on their bodies in the Gulf of California, Mexico on 27 June 1998.

California and western side of the Baja California Peninsula. Most were documented observations and in few cases the remoras were identified as 'whalesuckers' (Fertl, pers. comm.). There have been four reports of killer whales with remoras: a sighting in South Africa, one in Indonesia, and one

in the central North Pacific (Lockyer, 1979; Fertl, 1998 pers. comm., respectively). These were all visual observations, so the remoras were not identified to species. This paper provides the first documented sighting of an echeneid-killer whale association in the Gulf of California.

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