

The sharksucker (*Echeneis naucrates*) attached to a tucuxi dolphin (*Sotalia guianensis*) in estuarine waters in south-eastern Brazil

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During a photo-identification survey for a study of area use and social organization of marine tucuxi dolphins (*Sotalia guianensis*) in an estuarine area in south-eastern Brazil, a remora or diskfish was recorded attached to one dolphin in a group of 25. The record place (water salinity 28 psu at the record time) is about 23 km from the closest connection between the estuary and the open sea. The diskfish was identified as a sharksucker (*Echeneis naucrates*). This is the first record of a remora on a marine tucuxi dolphin. Besides adding a new host to the cetacean species which are known to carry remoras, our record strengthens the recent suggestion that sharksuckers use coastal dolphins as hosts.

The association between remoras or diskfish and cetaceans has been recently reviewed (Fertl & Landry, 1999, 2002). Two distinct remora species are recorded on cetaceans to date, the whalesucker (*Remora australis*) and the sharksucker (*Echeneis naucrates*). The whalesucker is found in oceanic waters and so far is recorded attached to cetaceans only (e.g. Fertl & Landry, 2002; Silva-Jr & Sazima, 2002). The sharksucker is found mostly in coastal areas and attaches itself to a wide variety to hosts, from fish to mammals (review in O'Toole, 2002, see also Noke, 2004; Wedekin et al. 2004). This note reports on a sharksucker (*E. naucrates*) attached to a tucuxi dolphin (*Sotalia guianensis*) in estuarine waters in south-eastern Brazil.

Marine tucuxi dolphins (*Sotalia guianensis*) dwell in coastal waters of the western South Atlantic, from Honduras (14°N) in central America to Santa Catarina in southern Brazil (27°S) (Da Silva & Best, 1996; Flores, 2002). Since 1996 a long-term study on area use and social organization (Santos et al., 2001; Santos 2004) has been conducted with a marine tucuxi population in the Cananéia estuary (25°S 47°W), São Paulo, south-eastern Brazil (see map in Santos et al., 2001). On 19 May 2003, a group of 25 dolphins composed of 14 adults and juveniles plus 11 calves was found roaming in depths of 4.1–9.3 m. One of the dolphins was recorded with a juvenile sharksucker (*Echeneis naucrates*) attached to its left side (Figure 1). The diskfish was identified by its blackish, slender body and the pale bordered ventral fin typical of juveniles of *E. naucrates* (see Humann, 2000; Froese & Pauly, 2005; for photographs), as well as its presence in coastal brackish waters. The other slender diskfish known in Brazil's coastal waters is *Phtheichthys lineatus*, which, however, has a much slenderer body (Carvalho-Filho, 1999) and is found only over coral reefs (O'Toole, 2002). The record place was at 25°01.18'S 47°58.44'W, about 23 km from the closest connection between the estuary and the open sea. Water salinity at this place and the record time was 28 psu and horizontal water transparency was about 3 m.

The juvenile dolphin with the attached sharksucker had no distinguishable marks along the dorsal fin border, and thus it was uncatalogued (Santos, 2004). Its sex was not ascertained and its size was estimated at 160–180 cm total length. Morphometric data collected in the last eight years from dead tucuxis indicate that dorsal fin height is about 10% of the total body length. Thus, the photographed tucuxi's dorsal fin height was about 16–18 cm. Based on these estimates, the sharksucker was about 20–25 cm total length. Sharksuckers this length are juveniles (I.S., personal observation), the adults reaching 90–110 cm (Humann & DeLoach, 2002; Froese & Pauly, 2005).

The sharksucker is perhaps the most versatile species among the remoras. It free-swims in the water column feeding on small fish and plankton (O'Toole, 2002; I.S., personal observation), and rides a wide array of hosts including sharks, rays, bony fish, sea turtles, manatees, dolphins, and whales (review in O'Toole, 2002; also Wedekin et al., 2004). Its versatility includes the role of a station-based cleaner (Sazima et al., 1999), a highly unexpected situation for a mostly hitchhiking fish group (O'Toole, 2002).



Figure 1. A sharksucker (*Echeneis naucrates*) attached to the back of a tucuxi dolphin (*Sotalia guianensis*) in estuarine waters of Cananéia, São Paulo, south-eastern Brazil.

Given the sharksucker's versatility, our record may come as no surprise; the more so as *E. naucrates* is already recorded on coastal dolphins (*Tursiops truncatus*, see Fertl & Landry, 1999; Noke, 2004). Even its presence in estuarine waters may be more common than generally thought, as the sharksucker attaches to vertebrates that enter brackish waters. These include fish such as the tarpon, *Megalops atlanticus* (O'Toole, 2002), West Indian manatees, *Trichechus manatus* (Fertl & Landry, 2002), bottlenose dolphins (Noke, 2004), and green turtles, *Chelonia mydas* (I.S., personal observation).

Our record of a diskfish on a marine tucuxi dolphin adds a new host to the cetacean species known to carry remoras, and strengthens the suggestion that sharksuckers occasionally use coastal dolphins as hosts (Fertl & Landry, 1999, 2002).

The authors thank the pilot Serginho, who took charge of the research boat during the 2003 photo-id study. Marcos Santos received a fellowship from the FAPESP (grant no. 01/05128-8), and have been supported by the Cetacean Society International (US), the Whale and Dolphin Conservation Society (UK), and the Earthwatch Institute (US). The Instituto Oceanográfico da Universidade de São Paulo provided logistical support. Ivan Sazima thanks the CNPq and FAPESP for financial support.

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Submitted 23 April 2005. Accepted 12 October 2005.