

The marine reptiles and mammals of Guam

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Abstract—Three marine turtle and 13 cetacean species are reported from Guam and the Mariana Islands. An anecdotal report of a sea snake on Saipan and the single record of a dugong on Guam are noted.

Marine Reptiles

Three of the seven species of the world's marine turtles have been reported from Guam waters. Because most sea turtles have wide distributions, it may be possible that additional species will be sighted. The olive ridley turtle (*Lepidochelys olivacea*) was reported for the first time from Micronesia in deep water near the reef at M'il Channel, NW Yap, in November 1973 (Falanruw et al. 1975). Five specimens (identified only as *Lepidochelys*) were also accidentally caught in fishing lines near and to the southeast of Helen's Reef during September 1974 (Cushing 1974). The hawksbill (*Eretmochelys imbricata*) and the green turtle (*Chelonia mydas*) are found throughout Micronesia and are relatively common at Guam; these two species has recently been studied at Tinian (Pultz et al. 1999). The prime literature on marine turtles in the region is Pritchard (1977, 1982), Hirth (1993), and Gyuris (1999).

Order Testudines

Family Cheloniidae

Chelonia mydas (Linnaeus, 1758) [Green Turtle]

The green turtle is herbivorous and circumtropical in distribution. Individuals of this low-level nesting population are sighted throughout the year, particularly during December to February and May to June (NMFS-USFWS 1998a). Numerous individuals have been reported from northern Guam (Wiles et al. 1995).

Eretmochelys imbricata (Linnaeus, 1766) [Hawksbill Turtle]

Hawksbill turtles feed on sponges and are listed as endangered throughout their circumtropical range. Nesting individuals are virtually unknown on

Guam; the first reported hawksbill turtle nest on Guam was in November 1991 (NMFS-USFWS 1998b).

Family Dermochelyidae

Dermochelys coriacea (Vandelli, 1761) [Leatherback Turtle]

The leatherback turtle is the largest species of marine turtles and is listed as endangered throughout its range. Individuals thrive on a diet of jellyfish and other soft-bodied animals. Although quite rare in the area, a 250-pound individual was rescued from southeast of Cocos Island, Guam, on April 1978 (Anon. 1987). During aerial surveys (October 1989-April 1991), 2.6 % of the turtles recorded were leatherbacks (NMFS-USFWS 1998c).

Order Squamata

Family Elapidae

Subfamily Hydrobiinae

There are no verified records of sea snakes on Guam. Anecdotal reports of sea snakes are probably the result of confusion between the sea krait *Laticauda colubrina* commonly found on Palau and the snake eel *Myrichthys colubrinus*, indigenous to Guam. In the early 1970s there was a newspaper report of a yellow-bellied sea snake (*Pelamis platurus*) found on a Saipan beach; this species is widely distributed and is periodically reported from the Hawaiian Islands (5 individuals in 1999, alone).

Marine Mammals

Whales, dolphins, and dugongs are the marine mammals reported from the waters surrounding Guam.

Order Cetacea

Historically, whaling efforts in Micronesia were greatest in the first half to the 19th Century and declined after the 1850s with the discovery of petroleum and the advent of the Civil War. Guam was a major port for water and supplies for the early trips (Doty 1972, Martin 1979). General accounts of whaling in the Marianas were based on earlier ships' logbooks (Bordallo 1965a, 1965b, Camba 1965). Stories of sightings and killings of *Megaptera novaeangliae* (humpback whales) in the southern Mariana Islands in 1869 were reported by Beane (1905), who added that a catch of nine whales was "not a particularly brilliant season's work".

Most of the marine mammals of Micronesia and the western Pacific are widely distributed. Any one of several additional species reported for the broader Pacific island might be observed (Eldredge 1991, Reeves et al. 1999). Only

species which have been reported from Guam and the Mariana Islands are listed below. Species broadly observed in Micronesia but not at Guam include *Delphinus delphis* [Common dolphin], *Feresa attenuata* [Pigmy killer whale], *Lagenodelphis hosei* [Fraser's dolphin], *Pseudorca crassidens* [False killer whale], and *Stenella attenuata* [Pantropical spotted dolphin]. Full identification information and distribution maps are provided by Jefferson et al. (1993) with updates in Rice (1998).

Mysticeti

Family Balaenopteridae

Balaenoptera edeni Anderson, 1879 [Bryde's Whale]

This widely distributed species was speculatively reported from Guam as a decomposed carcass, washed ashore some 500 m north of Sella Bay, Guam, on August 31, 1978 (Davis 1978).

Balaenoptera borealis Lesson, 1828 [Sei Whale]

Sei whales have a worldwide distribution. A single specimen was sighted west of Saipan (Masaki 1972). Two tagged sei whales from the Northern Mariana Islands were later killed several hundred kilometers south of the western Aleutian Islands (Horwood 1987).

Megaptera novaeangliae (Borowski, 1781) [Humpback Whale]

Humpback whales are known from all oceans (except the Arctic Ocean). Individuals near Guam would presumably be members of the 'Asian' stock thought to winter from the Bonin (Ogasawara) Islands south to the Marianas (Rice 1998). Specimens, speculatively identified, have been reported from Guam. One such sighting reported two whales about 100 m off the reef margin at Uruno Point on February 25, 1978 (Eads pers. comm.). Three were sighted off the west coast of Guam on February 13, 1991 (Eads 1991). A group of three were photographed off Saipan in February 1991 (Darling & Mori 1993) and a mother and calf off the east coast of Rota in late February 1991 (Stinson pers. comm.) A group of six or more were photographed at the entrance to Apra Harbor in January 1996 (Anon. 1996).

Odontoceti

Family Ziphiidae

Ziphius cavirostris Cuvier, 1823 [Cuvier's Beaked Whale]

This cosmopolitan species has been reported in the Mariana and Bonin Islands area (Masaki 1972).

Family Physteridae

Physeter macrocephalus Linnaeus, 1758 [Sperm Whale]

Sperm whales are among the most common whales in the Micronesian area. Townsend's (1935) charts show sightings throughout the year between 1761 and 1920, especially around the Marianas, Pohnpei, and Kosrae. At Guam, a 15-m albino sperm whale was found beached at Acho Bay, Inarajan, on September 5, 1962 (Bordallo 1965b). Kami & Lujan (1976) also reported a stranding. Eight sperm whales were sighted June 15, 2001, including a young calf with a trailing umbilical cord (web site for Micronesian Divers Association).

Kogia sima Owen, 1866 [Dwarf Sperm Whale]

This species is considered rare in the area. Kami & Lujan (1976) reported two beached *K. sima* records. The first washed ashore at Asan, March 25, 1970; the second, at Rizal Beach, December 6, 1974. Two specimens from Guam are deposited in the U.S. National Museum (Reeves et al. 1999). A dead dwarf sperm whale was found floating in Cocos Lagoon on August 24, 2002. The small, one-meter long, baby was apparently stillborn and floated into the lagoon from offshore waters (Radway 2002).

Kogia breviceps (de Blainville, 1838) [Pygmy Sperm Whale]

A partially decayed specimen identified as *K. breviceps* was found at NSD Beach at Naval Station (Apra Harbor), Guam on February 9, 1989 (Sherwood 1989).

Family Delphinidae

Peponocephala electra (Gray, 1846) [Melonheaded Whale]

Individuals are observed with relative frequency throughout Micronesia. A stranded male melon-headed whale was reported from Inarajan, Guam, on April 1980 (Kami & Hosmer 1982). Donaldson (1983) further detailed the description and compared the measurements with Queensland, Australia, specimens.

Orcinus orca (Linnaeus, 1758) [Killer Whale]

Killer whales are cosmopolitan in distribution; however, there are few verified records from Micronesia. On August 1, 1981 a killer whale was found at Orote Point, Guam (Kami & Hosmer 1982); the body was partially decomposed when beached and the flukes and dorsal fin were missing. Other unverified reports of killer whales on Guam have been periodically made. During the summer of 1987, two large male and two female killer whales were observed just offshore between Orote Point and Facpi Point, Guam (Naughton, pers. comm., Eldredge 1991).

Globicephala macrorhynchus Gray, 1846 [Shortfinned Pilot Whale]

Widely distributed, this species ranges throughout warm and tropical waters of the world. A large school of about ten individuals were reported near Uruno Point, Guam (Birkeland 1977). Kami & Hosmer (1982) and Donaldson (1983) reported the first known beaching at Guam on July 6, 1980.

Grampus griseus (Cuvier, 1812) [Risso's Dolphin]

This species is considered to be cosmopolitan, preferring tropical or warm temperate waters. Miyazaki & Wada (1978) reported one group of Risso's dolphin northwest of Guam. Additional sightings were made during the winters 1993-1995 in the Mariana Islands and Guam (Miyashita et al. 1996).

Stenella longirostris (Gray, 1828) [Spinner Dolphin]

Spinner dolphins are found throughout the tropics, but there are few verified records from Guam. Rock (1984) published a photo of two in the waters of Guam. Spinner dolphins were consistently observed at Pugua Patch Reef (Double Reef), Guam where groups of 20 to 30 individuals were found in April and May 1986 and in June 1988 (Naughton pers. comm.). Stinson (1994) reported spinner dolphins common throughout the Mariana Islands. Groups of these dolphins were common around Double Reef and Merizo throughout the late 90's and were the subjects of a dolphin-watching tourist industry (Paulay pers. comm.).

Stenella coeruleoalba (Meyen, 1833) [Striped Dolphin]

The striped dolphin occurs in tropical and warm temperate waters. A single freshly dead female was found at Dadi Beach, Agat Bay, Guam on July 24, 1985 (Nitta, pers. comm.). Additional records include one from Guam (Wilson et al. 1987).

Order Sirenia

Family Dugongidae

Dugong dugon (Muller, 1776)

Dugongs are widely distributed in the Indo-Pacific region. A single dugong was sighted in Cocos Lagoon at the southern end of Guam in 1975 (Randall et al. 1975). Several sightings were reported in 1985; picnickers made a sketch of an animal which was decidedly a dugong from an observation along the southeastern coast of Guam (Grosenbough pers. comm.).

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