Sea Secrets

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A HARMONIOUS RELATIONSHIP. Rarely do the Hawaiian monk seal and Hawaiian green turtle come into actual physical contact with one another, as shown above at Whale-Skate Islet, French Frigate Shoals.

continued presence and activities of man. In 1976, the Hawaiian monk seal was placed on the endangered species list, reflecting the rarity of this species (only an estimated 750 to 1,500 individuals). Only one other species is believed to remain in the world—*M. monachus*, which inhabits remote areas of the Mediterranean Sea, Black Sea, and adjacent areas.

A third species—the Caribbean monk seal (M. tropicalis)—may already be extinct; nevertheless, the

Photo by George H. Balazs, Hawaii Institute of Marine Biology/Sea Grant

National Marine Fisheries Service has proposed it for listing as an endangered species in case remnant individuals do exist. According to "The Case of the Missing Monk Seal" in the October 1977 Natural History, the last authenticated citing of a Caribbean monk seal occurred in 1952. IOF members who observe what they believe to be a Caribbean monk seal are requested to photograph it and send details to The Marine Mammal and Endangered Species Division, National Marine Fisheries Service, Washington, D.C. 20235.

Interesting facts about the life history of the Hawaiian monk seal and

the Hawaiian green turtle are included in the full-color 32-page booklet *Ha-waii's Seabirds*, *Turtles*, and *Seals*, available from World Wide Distributors, Ltd., 1132 Auahi Street, Honolulu. Hawaii 96814 at a cost of \$2.50 postage included.

BAY OF FUNDY TIDAL PROJECT

In response to "Update on Tidal-Energy Project" in the January-February Sea Secrets, member Alan Ruffman writes: "No formal public hearings are or have been held in the Canadian Maritime Provinces regarding the proposed Bay of Fundy tidal-power project . . . Indeed, only

RARE BEHAVIORAL TRAITS

Green turtle (Chelonia mydas) aggregations in the remote Hawaiian Islands National Wildlife Refuge are unique among marine turtles, according to George H. Balazs of the Hawaii Institute of Marine Biology, in that both adult males and females, as well as sexually immature individuals, crawl ashore at select undisturbed beaches to bask in the sunlight for hours at a time. Although green turtles in the Galapagos (and possibly at other locations) were formerly known to exhibit a true land-basking habit, such behavior now appears to be absent, except in the Hawaiian Archipelago. Other than the female during nesting, most marine turtles do not return to land after leaving the natal beach.

Another unique behavior has been observed in the wildlife refuge at the islet of Whalè-Skate, French Frigate Shoals. The above photograph shows a Hawaiian monk seal (Monachus schauinslandi) and a Hawaiian green turtle basking together on the beach. Although both species share undisturbed beaches in the refuge, it is rare for them to be in physical contact with one another as shown. Generally, they will maintain a distance of at least 5 feet from one another. The turtles' and seals' social relationship on these beaches appears to be completely harmonious. As near as Balazs can presently determine, nowhere else has such a close, nonpredatory relationship developed between a reptile and a mammal.

The nature of monk seals is such that they are unable to adapt to the 5 feet = 1.5 meters

NICKNAMED "MEGAMOUTH," this 15-foot male shark represents a species new to science. In this photograph, the shape of the animal is distorted due to its being hung by its tail. In life, its head would not be as large in proportion to the rest of the body.

Official Photograph U.S. Navy

NEW SHARK SPECIES UNDER EXAMINATION

Taxonomists are currently scrutinizing the preserved specimen of giant, previously unknown shark species tentatively nicknamed "megamouth." The research team led by Dr. Leighton R. Taylor, director of the Waikiki Aquarium at the University of Hawaii, is drawing up a systematic description of the new shark which will result in the specification of a proper scientific name for the species. Preliminary observations indicated that the specimen represents not simply a new species of shark, but in fact a new family.

The "megamouth" was accidentally collected in November 1976, when it was hauled up dead by a Naval research vessel operating in deep waters northeast of Oahu. The animal had become entangled in one of the ship's sea anchors, which had been deployed to a depth of 500 feet. The fish was a 15-foot male weighing about 1,600 pounds, making it one of the largest species of sharks.

The nickname refers to the unusually large mouth, the inside of which is lined with a silvery layer containing

500 feet = 152 meters; 15 feet = 4.6 meters 1,600 pounds = 726 kilograms

