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Sea Turtles in the Waters Adjacent to Japan

Five species of sea turtles are found around the southern districts of the Japan Islands: the green turtle (*Chelonia mydas*), the hawksbill (*Eretmochelys imbricata*), the loggerhead (*Caretta caretta*), the ridley (*Lepidochelys olivacea*), and the leatherback (*Dermochelys coriacea*). There are few sighting records of, and no report of laying eggs by leatherback and ridley turtles. However, the loggerhead, green turtle, and hawksbill have nested in Japan.

The Loggerhead Turtle (*Caretta caretta*)

Aka-umigame is the Japanese standard name for the loggerhead turtle, one of the very commonly distributed sea turtles along the coast of Japan (Figure 1). It breeds along the coasts farther north than any other species in the western Pacific. Along the Pacific coast of Japan's mainland, it nests occasionally as far north as Fukushima Prefecture, 37°N. While on the coast of the Sea of Japan, it nests as far north as Ishikawa Prefecture also about 37°N. These nesting areas can be considered margins of the loggerhead population in the western Pacific. In the Japan Islands, the number of nesting places is not large. The places where loggerheads nest in abundance are in Shizuoka Prefecture, Kii Peninsula, Shikoku, and the east coast of Kyushu. Nesting places in the Ryukyus and the Ogasawara (Bonin) Islands are rarer than those in the above places. Generally, it is considered that loggerheads or sea turtles are more abundant in the south. This report does not support that general consideration, although the loggerheads coming to these nesting places are considered to be recruits from subtropical waters. Between late May and August, their breeding season, loggerheads congregate in the offshore waters of the breeding places. This gregarious phenomenon is seen at the beginning of the season every year. In these areas, courting behavior is seen among rocks offshore

Caretta caretta

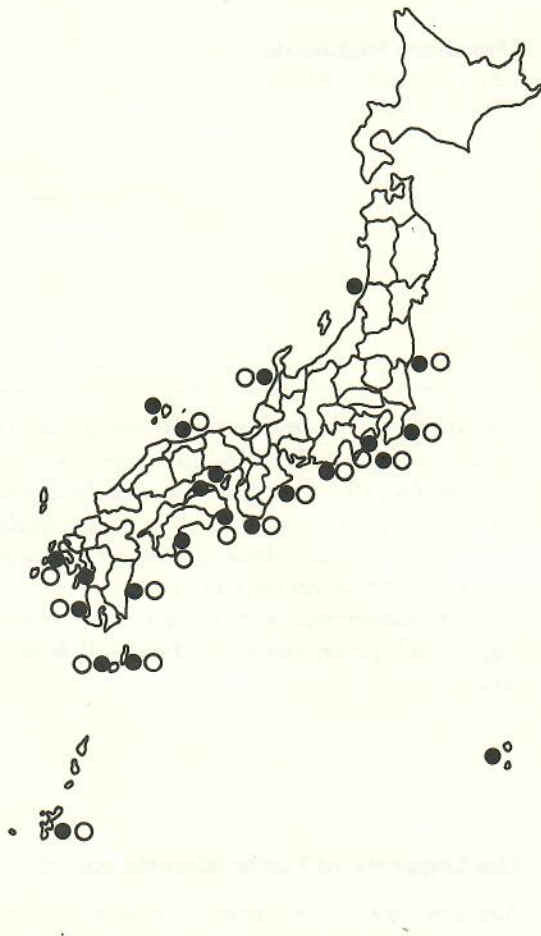


Figure 1. The distribution and nesting areas of the loggerhead turtle (*Caretta caretta*) in Japan. ● Sighted positions; ○ Laying eggs and hatched.

in 20 to 30 m of water. The nesting season starts when 20°C isothermal waters approach the coast of Japan in the spring. Adults, subadults and juvenile loggerheads, over 1,000 in number, were tagged with "Roto-tag" (plastic cattle ear tag) in our study at Gamouda Beach, Tokushima Prefecture, during 1969–1979. Most of the females that came to the beach and were examined were between 72.0 cm and 107.5 cm in straight carapace length, (89.0 cm in average; $n = 118$) and between 53.0 kg and 125.0 kg (96.8 kg in average; $n = 15$).

The Green Turtle (*Chelonia mydas*)

Ao-umigame is the Japanese standard name for *Chelonia mydas*. As shown in Figure 2, the green turtle migrates to the southern coasts of the Japan Islands. Its nesting area is exclusively in the southern islands of Japan at about 30°N. Yakushima, Kagoshima Prefecture, is the

northernmost nesting site recorded. Thus, the green turtle shares most of the beaches with the loggerhead; both of them prefer warmer sandy beaches. The Ogasawara (Bonin) Island at about 27°N is also an important nesting place.

The Hawksbill Turtle (*Eretmochelys imbricata*)

Figure 3 shows the distribution of the hawksbill turtle, whose Japanese standard name is *tamai*. There are only 2 records of nesting females of this species in Ishigakijima and Kuroshima in the Yaeyama Archipelago in the Ryukyus of Japan, at about 25°N. The area must be the margin of the hawksbill in Japan. Records of stranded turtles in other places are of subadults and juveniles. The hawksbill is the third least common species of sea turtle in Japan, and there is little knowledge about its nesting sites.

Chelonia mydas

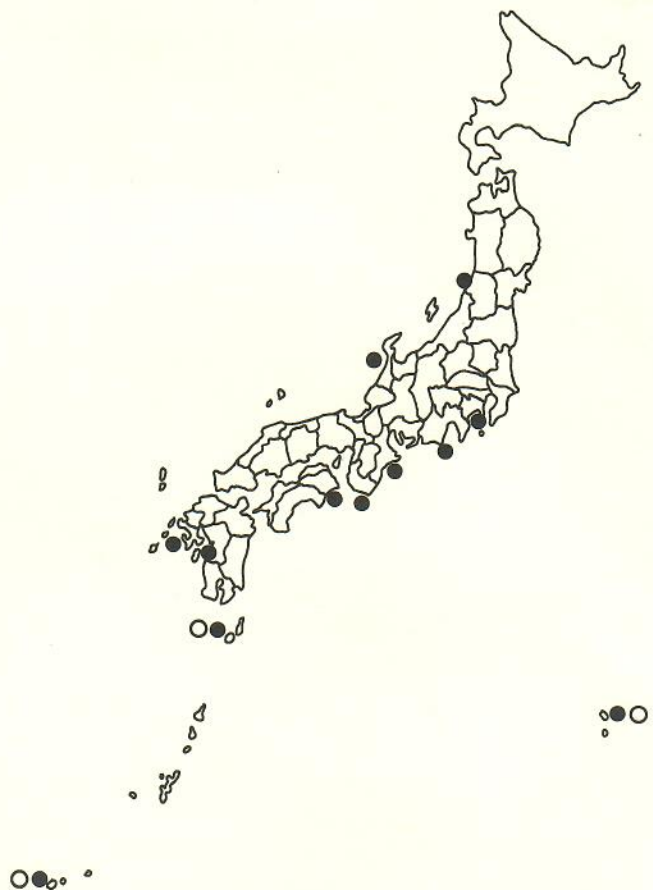


Figure 2. The distribution and nesting areas of the green turtle (*Chelonia mydas*) in Japan. ● Sighted positions; ○ Laying eggs and hatched.

Human Incursion on Sea Turtles

Recently, there has been worldwide concern about the nesting places of sea turtles. There are problems from human activities along the coast of Japan. Some measures should be taken to conserve the animals; otherwise we may soon see a decrease in the population. Only a few Japanese people, shore villagers, eat turtle meat and eggs, which do not appear at markets. At Yakushima, Kagoshima Prefecture, a popular nesting site, villagers take loggerhead and green turtle eggs to eat, and fishermen in Kagoshima, Wakayama and Kochi Prefectures sometimes catch loggerheads or green turtles by hand harpoon for their own food during the nesting season. According to our investigation, about 50 to 100 adults are killed annually. These turtle catches seem to have begun after the second world war.

In Japan, the only turtle shell used for handicraft work is from the hawksbill, and all hawksbill shells are imported from Southeast Asia and tropical Atlantic and African countries. The major use of turtle shell in Japan is for making ornaments and accessories with long traditional workmanship. At present, about 1,200 people are engaged in this work. Their work is quite delicate and detailed, based on long training and tradition. If this work were to be interrupted once, a traditional and long-maintained skill should be lost forever. The hawksbill-shell workers organized an association to preserve their precious workmanship.

Japan and Sea Turtle Conservation

Japan's ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has been postponed for a variety of reasons, but it is to be ratified by the Congress, maybe in 1980. As a result of this ratification, trade in turtle shell will be seriously limited. Because of this, some ill-advised people have tried to hoard the shell with the help of dealers. However, following criticism by the public these activities have become difficult to continue. Recently, taxidermy dealers have entered the turtle shell-purchasing business, which had hitherto been done by shell dealers connected to handicraft workers. Stuffed hawksbills and green turtles are now sold in resort areas. Stuffed turtles are loved by people as a symbol of good luck and longevity in Japan as well as in some Asian countries. Large, stuffed turtles are so profitable to dealers that the weight of traded turtles has increased rapidly and prices have shot up. Now people tend to prefer smaller turtles because big ones cost so much. Catching smaller turtles may have a very bad effect on the population. As mentioned before, there is no hawksbill or green turtle catch for profit along the coast of Japan, so almost all of these stuffed turtles

Eretmochelys imbricata

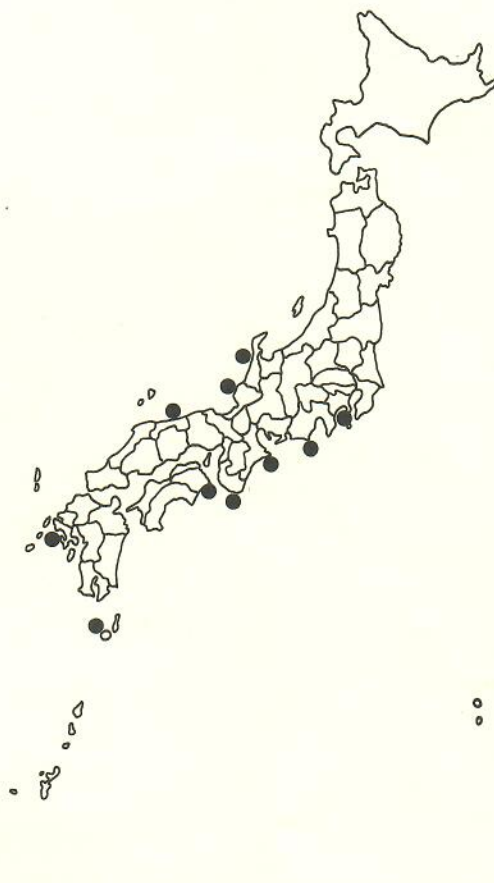


Figure 3. The distribution and nesting areas of the hawksbill turtle (*Eretmochelys imbricata*) in Japan. ● Sighted positions; ○ Laying eggs and hatched.

are imported. Importation of stuffed turtles has been done exclusively by dealers, and no handicraft workers on turtle shell are concerned with this business. The government of Japan announced an import ban on stuffed turtles on November 24, 1979.

At the same time, the Japanese government is trying to encourage the cultivation of hawksbills and other turtles to stabilize the supply of shells to protect the handicraft workers and their long-traditional skill, and to find a way to give aid to cultivation projects in the Southeast Asian countries for mutual understanding and interest. Cooperative conservation and cultivation projects have made progress, drawing attention to the Japanese and other shell-producing countries. To undertake this sort of cooperation, a fundamental biological knowledge, instead of purely a profit-slanted consideration, is indispensable to both sides. For conservation to succeed scientific reason must prevail over emotional or frantic action.

**Proceedings of the World Conference on Sea Turtle Conservation
Washington, D.C., 26-30 November 1979**

**with contributions on
Recent Advances in Sea Turtle Biology and Conservation, 1995**

Biology and Conservation of

Sea Turtles

Revised Edition



Edited by Karen A. Bjorndal