sea turtle conservation
IN THE LAND OF URASHIMA TARÔ
by YOSHIMASA MATSUZAWA
Japanese folklore tells of a fisherman, Urashima Tarō, who rescues a sea turtle from torment and sets him free. In gratitude, the turtle transports the fisherman to a mythical Dragon Palace beneath the sea, where he is welcomed by a beautiful princess. This eighth-century fable sets the cultural backdrop for modern sea turtle conservation in Japan, where community-led efforts have restored once-decimated sea turtle populations.

Japan boasts one of the world’s first government-led initiatives specifically for sea turtle conservation in the Chichijima Ogasawara Islands, located 1,000 kilometers (621 miles) south of Tokyo. These islands are a major breeding ground for green turtles, and when the region was first settled in 1876, turtles were heavily harvested. To combat this overexploitation, Japan’s Agriculture and Commerce Department established one of the world’s first sea turtle head-start projects in 1910. Green turtle eggs were collected and hatched, and the juvenile turtles were released after one to seven months in captivity. The project was interrupted by World War II, then revived in 1976 by Yoji Kurata and Hiroyuki Suganuma of the Tokyo Metropolitan Fisheries Center. The project ultimately was passed on to the Ogasawara Marine Center, which has managed it since 1982. The project has released over 300,000 turtles to date, and the nesting population in the Chichijima Islands has seen a dramatic recovery.

Post–World War II economics led Japan to become one of the world’s worst nations for sea turtle conservation. Until the early 1990s, the country was a major importer of tortoiseshell (bekko), a practice that threatened the hawksbill with extinction on a global scale (see SWOT Report, vol. III, pp. 24–25). Sea turtle bycatch was also a significant source of mortality, especially for north Pacific loggerheads. Decades of economic expansion, however, led Japan back to its long-held traditions of nature stewardship, characterized by voluntary, community-led initiatives that were often founded by a unique brand of local ocean heroes.
Nesting Biogeography of Sea Turtles in Japan

Regional Management Units

scale: 1,000,000
projection: JGD 2011 Japan Zone 19
data: Data were digitized with permission from Figures 1 and 2 in Matsuoka, Y. (ed), Proceedings of 27th Japanese Sea Turtle Symposium in Mureta (2016), Sea Turtle Association of Japan, Osaka, Japan. See end of report for a complete list of data contributors. Ocean Basemaps — Environmental Data and Mapping Center (EDMC), U.S. Department of Commerce, NOAA NODC, and other contributors; boundary data — Eri Maps and Data for ArcGIS 2016.

noted: When multiple species may nest at an unquantified site, the site is colored black; species that comprise less than 5% of the clutches at nesting sites are not displayed on the map.

One such hero was Yasuo Kondo, a teacher in the Tokushima prefecture in the 1950s. He was playing baseball with his students at Ohama beach in Minami-cho (formerly Hiwasa-cho) when he discovered the remains of harvested loggerhead turtles. Yasuo was deeply saddened by the incident and proclaimed: “Sea turtles are emissaries of the Sea God! This should not happen again!” With his students, he launched a pioneering study of loggerhead nesting behavior, built and managed hatcheries, and studied embryogenesis, hatching sea-finding behavior, allometry, and growth rates. Their work won multiple awards and resulted in the declaration of sea turtles and Hiwasa beach as national treasures in 1958. Their work also spurred the construction of an aquarium in 1960, which became the Caretta Sea Turtle Museum, now Japan's flagship marine education facility. A male loggerhead named Hamatsaro, that was hatched and raised at the museum, has become a local hero as the longest-living sea turtle for which a precise age is known (67 years). In 1968, Kondo went on to publish a book about his life with sea turtles that has become a great inspiration to many young researchers.

Another of the world’s longest continuous sea turtle nest-monitoring efforts is located on the Kamoda coast of Anan City in the Tokushima prefecture. In 1954, students at the Kamoda elementary school began to monitor turtles as a class activity, and when the school closed in 1992, local residents continued the program. It has now accumulated 64 years of data and has the distinction of being the longest uninterrupted sea turtle project in Japan. The postwar period was an era marked by economic growth, during which much of Japan placed little importance on the environment, thereby making the achievement of these school children all the more notable. Their work gained national attention and became a model; indeed, many of the sea turtle projects in Japan today were inspired by the efforts of Kamoda’s youth.

The largest loggerhead nesting beach in Honshu is found on Senri no Hama beach in Minabe-cho in the Wakayama prefecture, an area that was slated for residential development in the early 1960s. The leader of the town’s Board of Education, Hidematsu Toyama, and area that was slated for residential development in the early 1960s. The leader of the town’s Board of Education, Hidematsu Toyama, and local youth groups began parcelling the beaches to stem the tide of illegal egg harvesting. In 1968, a local junior high school teacher, Osamu Uemura, and his school’s principal, Kiyoshi Goto, organized the Minabe-cho Sea Turtle Research Group to continue the monitoring, a noble effort that continues to this day.

Yet another heroic turtle conservation effort began in the 1970s at the most important loggerhead habitat in Kyushu, where 98 percent of sea turtle eggs were being lost to poaching. The Miyazaki Wildlife Research Association, led by Hidoshi Takeshita and Yoshito Nakashima, responded to this crisis with an initiative that led to the virtual cessation of poaching by the end of the decade.

The largest loggerhead nesting site in the North Pacific is at Nagata, on Yakushima Island, where turtle egg harvesting rights were managed by an open bidding process that began shortly after World War II. In 1973 the town issued an ordinance to stop the practice, and by 1978 beach surveillance had effectively shut down the egg harvest. However, Yakushima’s turtles were also being affected by sand mining.

A local photographer and farmer, Kazuyoshi Omuta, was deeply concerned, motivating him to create the Yakushima Unigame Kan (Sea Turtle Center) in 1985. That nonprofit organization parceled Inakahama, Machahama, and Yotouse beaches to study adult nesters, relocate doomed nests, and measure hatching success. Very few research groups in the world have conducted saturation tagging for fully three decades, and the organization’s persistent efforts resulted in a massive database that shows that the region hosts more than 30 percent of loggerhead nesting in the North Pacific. Those findings resulted in the designation of the area as a UNESCO World Natural Heritage Site in 1994, and in 2005 as a Ramsar Site. Omuta remains the guardian of this important loggerhead rookery, and he continues to innovate new projects, including the planting of megalith-resistant trees to screen the beach from traffic light, and the fencing off of high-density nesting areas from tourist foot traffic.

As these examples highlight, Japan’s 20th-century sea turtle conservation was often born of spontaneous, grassroots efforts led by brave and concerned citizens. Their isolated projects typically were conducted without coordination by government or international conservation groups; communication among projects was poor; and the projects seldom published standardized data or reports. As a result, Japanese sea turtle conservation was largely invisible to the outside world, and Japanese conservationists were unaware of threats to sea turtles beyond their shores.

This all changed in 1988 when Itaru Uchida, one of Japan’s leading sea turtle researchers, organized a symposium at Hiwasa. Many renowned sea turtle researchers attended, including Colin Limpus, George Balazs, Karen Bjorndal, Mike McCoy, and Rene Marquez. During the symposium, Hironori Sugamuma, of the Ogasawara Marine Center, and Naoki Kamezaki, of Kyoto University, met for the first time. Their friendship led to the launching of a new publication, the Unigame Newsletter of Japan, in 1989, and the creation of the Sea Turtle Association of Japan (STAJ) in 1990. The newsletter still promotes an exchange of information among Japanese sea turtle conservationists, and the STAJ hosts a Japanese Sea Turtle Symposium every year. Thanks to these advances in information sharing, 15 Japanese students now have doctoral degrees relating to sea turtles, and 5 of them have been recognized with awards at international sea turtle symposiums. Most important, the STAJ has become the national authority on sea turtles, providing guidance and expertise to the Japanese government and the global sea turtle conservation effort.

Japanese culture possesses strong cultural symbolism and a deep respect and compassion for nature. That is particularly the case for sea turtles, as reflected in a number of local practices that can still be observed today. For instance, dead sea turtles are often buried in marked graves, a practice normally reserved only for humans. Likewise, following the example of Urashima Tarō, traditional Japanese fishermen still respect the long-standing custom of rescuing sea turtles caught in fishing nets, often freeing them to the sea with an offering of sake.