



Opening Key Note

HISTORICAL REVIEW OF RELATIONSHIPS BETWEEN SEA TURTLES AND HUMAN
IN JAPAN:
RECOGNITION OF THE IMPORTANCE OF LOCAL RESEARCH AND MANAGEMENT
COORDINATOR (LRMC)
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After emerging from Africa 300 thousand years ago, *Homo sapiens* expanded its distribution worldwide through three main migration routes. One of three reached Japan. The oldest *H. sapiens* in Japan (~20,000 years ago) is from Ryukyu (Okinawa). At that time, of course, the sea turtles were already evolved. Since then, *H. sapiens* have used sea turtles as food. *H. sapiens* may not have settled in Ryukyu had sea turtles not been there. Sea turtle bones have been found in the excavated ruins throughout Japan, from Ryukyu to Hokkaido. Especially on the isolated islands where mammals were scarce, the sea turtle must have been an important food source. These relationships between people and sea turtles are rarely recorded in the literature, but some folklores and rituals still exist in various places.

There is a settlement called Takezaki in the south of Tanegashima, Kagoshima. In this island, there was a ceremony to capture loggerhead turtles that came to mate, and the residents shared the meat. The important fact here is that they caught turtles only once a year. This rule restricted excessive capture and therefore, protected the loggerhead turtles. In Fukuoka there is a dish called Gameni, which is prepared only around the New Year. During winter, green turtles in the Sea of Japan move south to avoid cold water, and people used to capture and consume these turtles. Nowadays, people use chicken instead of turtles. On the Ie Island in Ryukyu, people used to capture and eat green turtles. The adults would gather the children when they cooked turtles, and would hold the kitchen knife in front of the turtle's eyes and showed tears flowing from the eyes. The children ate turtles, but they could never forget the turtle's tears. Like these stories, until around 1950, humans harvested turtles in Japan and had naturally acquired a way to conserve the resources as a result. In a sense, this was a symbiotic relationship between humans and turtles.

The modern technology and economic growth destroyed this symbiosis between humans and turtles. The freezer affected this change the most by allowing people to keep turtle meat fresh for a long time. People caught more turtles than they could consume because they could keep and sell it. As a consequence, the turtle populations declined. In addition, the modernization of the fishing gear caused the increase of bycatch. Modernization also influenced sea turtle eggs. At Fukiagehama beach in Kyushu, residents were allowed to collect only half of the clutch and leave the rest in the nest under an unwritten local rule. However, as the network of transportation developed, eggs were sent to and sold at Tokyo for a high price. Then the mafia and gang members collected all of the eggs, and the harvesting was completely banned by law. The "ideal" symbiotic relationship between humans and sea turtles was over.

As the era of over exploitation continued, dedicated volunteers who tried to protect turtles, eggs, and the nesting beaches, appeared starting in the 1950s through the 1980s. These individuals include: Mr. Yasuo Kondo (Hiwasa), Mr. Ichiro Yoshida (Kamoda), Mr.





Yoshiro Kawarazaki (Omaezaki), Mr. Hiroshi Takeshita, Mr. Yoshito Nakajima (Miyazaki), Mr. Kazuyoshi Omuta (Yakushima), Mr. Osamu Uemura, Mr. Kiyoshi Goto (Minabe), and Mr. Masamichi Samejima (Satsuma). They worked on all aspects of nesting turtles and beaches, including counting nests, tagging turtles, protecting eggs and hatchlings, educating local children, assisting visitors, making laws with local governments, and responding to mass media. Their volunteer work tremendously contributed toward the conservation of sea turtles, not only in local areas, but also throughout Japan. I believe their contributions were internationally unique and would like to term this special role as the Local Research and Management Coordinator (LRMC).

Scientists also became interested in sea turtles when it became known that sea turtles nest throughout Japan. After Dr. Saburo Nishimura's work identified the sea turtles nesting in Japan as *Caretta caretta*, a team of graduate students from Kyoto University (led by master's program students Katsufumi Sato and Yoshimasa Matsuzawa) began conducting research at Minabe Senri Beach. With Mr. Kiyoshi Goto serving the role as the LRMC, the Kyoto University team made remarkable achievements in ecological research of sea turtles. The cooperation between LRMC and the young scientists was a very desirable relationship in managing a sea turtle nesting site. However, the accomplishments of the Kyoto University team, emphasizing the importance of LRMC and achieving significant research results, were an exception. Most young scientists needed to conduct research that are practical, not committing to long-term and labor-intensive projects on the nesting beaches. Most often, the students try to get research results without respecting the role of LRMC. For instance, I believe investigators for genetics and tracking projects require long-term field observations through LRMC.

The relationship between LRMC and scientists is getting better in Japan in recent years. The importance of LRMC seems to be weakening because of the increasing number of scientists. However, when considering the future of the sea turtles, what is most needed, I believe, is LRMCs rather than the scientists. People who are interested in sea turtle research and conservation must support LRMCs who understand the various elements of the local area, management of the turtles, and the surrounding environment. In order to conserve sea turtles, we must recognize and nurture the role of LRMCs globally.

