

INTERNATIONAL SYMPOSIUM ON SEA TURTLES IN '88

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THE MARINE TURTLES IN MICRONESIA

1988 REVIEW

by

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JULY 30 - AUGUST 3, 1988

# TURTLES IN THE CENTRAL CAROLINE ISLANDS OF MICRONESIA

## Abstract

The islands of the Central Carolines are politically a part of the newly-independent Federated States of Micronesia. The major species present is Chelonia mydas, however hawksbill (Eretmochelys imbricata) also occur, but in far fewer numbers. Traditionally sea turtles have always formed a part of the diet of the people of Micronesia, particularly those in the "outer islands". Recent increased pressure from local traditional hunting as well as greater access to nesting beaches by motorized craft have increased pressures on turtles throughout Micronesia. There have been some conservation efforts, but these are sporadic and not coordinated. The current legal situation with respect to turtles is not clarified, as United States laws which formerly protected certain species no longer apply. Recommendations are given to rectify some of these problems and to make the citizens of this new nation more aware of the current problems confronting turtle populations in Micronesia.

## Introduction

The islands of the central Carolines stretch roughly along 7 degrees North latitude from about 140 degrees East to 168 degrees East longitude. Most of the islands are inhabited, however there are some which are not. It is these latter islands and atolls which are the most important nesting sites for sea turtles in Micronesia. The major species prevalent throughout the islands is the green turtle, Chelonia mydas. Hawksbill, Eretmochelys imbricata, also occur but are generally not as numerous, except in the Palau islands in the westernmost part of Micronesia. There are rare sightings and records of the olive ridley (Lepidochelys olivacea) and the leatherback, whose closest recording nesting is on the islands off the northern coast of Papua New Guinea.

## Nesting Locations

The nesting sites are mainly in the atolls of Ngulu, Ulithi, Olimarao, Namoniur, and Oroluk. The individual islands of Pikelot,

Gaferut, and East Fayu are also important nesting sites. With the exception of Ngulu, Ulithi, and Oroluk all of these islands or atolls are uninhabited. On Ngulu and Ulithi nesting takes place on islands far removed (more than 15 miles) from the inhabited islands in the atolls. On Oroluk however there is only one small island which has supported a resident human population for the past 15 or 20 years. Turtles which now nest on Oroluk are now prone to capture; and complete loss of the nesting population at this particular atoll must be recognized as a distinct possibility.

## Migration Patterns

For the most part, migration patterns among all turtle species in Micronesia are unknown. There have been only two recent records of tag recoveries, and only one of those can be substantiated. In this case a turtle tagged at Oroluk atoll was recovered a year later near Taiwan. In the other case there was a report of a turtle from northern Papua New Guinea being recovered at Kosrae island in the eastern Carolines, however the records of this incident are now lost.

## Use of Turtles by the Inhabitants of Micronesia

Generally, it is the people of the "outer" islands, those islands far from the centers of commerce and transportation, who most utilize turtles. In the central Carolines these people sail their traditional canoes many miles to the nesting areas to obtain turtles as a food source to be returned to their home islands. This practice has been carried out for generations, hardly without interruption. (However, during the Japanese administration of Micronesia and up until the end of World War II, long distance canoe voyaging was prohibited and strongly discouraged by the foreign rulers.)

Turtles were and still are obtained on the nesting beaches as well in the waters around the islands. In the latter case, both males and females are captured while mating in the lagoons or open sea near the nesting beaches. In some instances a captured female will be tethered to a tree near the beach at night and allowed to swim in the shallow water to attract other turtles which are then captured. Turtles are

transported live back to the inhabited islands aboard the canoes. They are then killed and the meat distributed to the people by the Chiefs on those islands.

To a lesser extent, turtles are caught in the more heavily populated centers of Micronesia and also used for food. In these islands, motorboats are used to chase turtles across the shallows and they are often speared. In Micronesia these islands are higher in elevation and generally volcanic in origin. They do not have nesting beaches but contain turtle grass within the lagoons which is a food source for green turtles. On some islands, notably Yap and Pohnpei, people have learned to dive near the reefs and hook sleeping or resting turtles in the skin with long hooks attached to bamboo poles. The people claim that this method of fishing for turtles was learned from the Okinawa people who were in Micronesia during the Japanese administration prior to World War II. It is interesting that these techniques have not been adopted by the people of the outer islands who live closer to the nesting beaches. They prefer to rely solely on their traditional methods of capture.

Hawksbill turtles were also utilized in the past for traditional ornaments such as combs and for making hooks for skipjack tuna fishing. On some islands there were elaborate customs and taboos associated with the taking of hawksbill turtles for these purposes, and the turtle itself was never eaten or considered a food item. Today, ornaments are still produced on a small scale for sale to tourists. This persists even though there are prohibitions against their importation into the US. There is increasing demand by mainly Japanese tourists for these items.

#### Changes Which Have Occurred in the Last thirty Years to Affect Turtle Populations

There have been many changes to the lives of the people in the central Carolines during the past 30 years. Many of these changes have affected turtles and the peoples' relationship to them. One of the most important has been the impact of the introduction of Christianity which removed many of the older taboos and customs associated with turtles. These customs and taboos made hunting and canoe voyaging

very difficult and probably resulted in fewer turtles being taken in the past.

Education has also had an impact, although it is hard to determine exactly how much it has affected peoples' perceptions about turtles. One of the things that has not happened is that western education has tended to bypass conservation and environmental education, particularly in elementary schools. Thus, very little is known about turtle biology by students who rely on their ancestors' knowledge which has been passed down through many generations. This traditional knowledge is most accurate when it relates to turtle hunting, seasons and so forth. It is least accurate when describing aspects of turtle biology (such as reproductive capacity).

Improved transportation has come about, particularly in the last 10 to 15 years. New ships have been used by the government to service the outer islands. On occasion these ships also call at the uninhabited islands and capture turtles. The turtles thus obtained are usually given to the islanders for food on their home island. This in itself is not bad, but the relative ease by which ships can now reach the islands and return turtles to inhabited islands has created a demand by people to utilize them more often for this purpose.

The advancing money economy in Micronesia has also had an impact on turtles. While it was prohibited under the US administration to capture or sell turtles because of US laws, turtles were still often sold in the population centers (US law exempted traditional taking of sea turtles for subsistence purposes). As local businessmen are becoming more affluent, some of them have invested in fishing boats or transportation vessels which enable them to reach the islands where turtles are nesting. Although their taking of turtles by these vessels is in a sense illegal, there is not much public outcry or concern for these activities. Some of these vessels are provided through bilateral foreign aid. While they are ostensibly to be used for fishing, they sometimes are employed in voyages to turtle nesting areas. When compared with the carrying-capacity of the traditional canoes, the ships can of course carry many more turtles. They can also

operate in less than favorable weather which might hinder canoe voyaging.

Even the inhabitants of the outer islands who do not directly participate in these activities are affected by the changes of the 20th century. Their canoes are now equipped with dacron sails, allowing them to sail faster and safer to turtle islands. In the past they often used canvas or even pandanus-mat sails, the latter having to be lowered and covered in rainstorms. The new sails thus make canoe travel easier today than in the past.

There is a large amount of commercial shipping traffic passing through Micronesia, as well as fishing by foreign vessels licensed by the government. To date there has been only one major shipwreck on a turtle nesting island, and in that incident although the ship was wrecked, most of the fuel oil was removed by the US Coast Guard to minimize damage to the nesting beach.

Almost all uninhabited islands have wrecks of smaller vessels, usually foreign fishing boats; however these do not seem to have had much impact on turtle nesting at those sites.

#### Impact of Activities of Foreign Fishing Vessel

Before the declaration of Micronesia's 200-mile Exclusive Economic Zone, fishing vessels occasionally stopped at some of the smaller islands to trade. In anticipation of such visits (which were strictly illegal, even under laws in force at the time) inhabitants of the outer islands would capture and raise small hatchlings in the hope of trading to the crew of a fishing boat for cigarettes or food. However these visits have stopped almost completely since 1979 and the introduction of the 200-mile fishing regulations. This in turn has lessened the incentive for raising smaller turtles, although some are still occasionally kept as pets.

A major problem is posed by the existence of certain fishing vessels from Taiwan who visit the uninhabited islands to steal clams, fish and turtles when available. These vessels are illegal throughout the region, but their activities have not stopped, even with the introduction of the 200 miles laws.

Other forms of legal commercial fishing by foreign vessels have an unknown impact on turtles. Longliners from Taiwan, Japan and Korea all fish in Micronesia under license from the government. Their fishing effort has been fairly steady for the past eight or ten years, and while they occasionally take a turtle by longline, it is never reported unless there is a government observer on board. Government observers currently are able to cover only a very small portion of the trips undertaken by these fleets, so no accurate or complete data is available.

#### Past Conservation Efforts

There have been only sporadic efforts at conservation or research with sea turtles in Micronesia. Early in the 1970's a small hatchery operated in one of the outer islands of Yap. A tagging project was carried out on Oroluk atoll in Pohnpei during 1985-86 resulting in some valuable data on the sea turtles at that location.

#### Current Legal Situation

The "Compact of free Association" between the Federated States of Micronesia and the United States went into effect in late 1986. Micronesians are free to make their own conservation laws and to carry out their own programs. However these areas have not been given priority and there has been a vacuum created in Micronesia with the expiration of US laws affecting these species.

The Federated States of Micronesia is not yet a signatory to the CITES convention, although they actively participate in the South Pacific Regional Environmental Program, based at the South Pacific Commission in Noumea, New Caledonia.

#### Recommendations

1. Turtles should be obtained for subsistence food purposes only. They should not be allowed to be sold or placed in commerce.
2. Only traditional methods of capture should be allowed, and that only when employing canoes to voyage to the uninhabited nesting beaches.

3. A total ban on the taking of turtle eggs should be put in place.

4. An organized conservation effort should begin, consisting initially of (1) data collection (2) tagging and (3) conservation education.

5. Foreign fishing vessels, in particular longliners, should be required by their home country to report any turtles taken incidental to fishing operations. This information should be shared with the countries in the region.

6. The current legal situation should be clarified by the introduction of laws which will provide the best possible protection for turtles, while at the same time keep in mind its traditional use as an important food item and protecting the rights of the outer island people to this food source under terms noted in items #1, 2 and 3 above.

Mike A. McCoy  
July, 1988

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Edited and Published by  
HIMEJI CITY AQUARIUM  
Nishinobu, Himeji 670, Japan  
HIWASA CHELONIAN MUSEUM  
INTERNATIONAL SYMPOSIUM  
ON SEA TURTLES '88  
in JAPAN  
Published on March, 1991  
English Transcription from Tapes by  
SMUL INTERNATIONAL, INC.  
Kansai Branch

1st Conference: July 30 - Aug. 1, 1988  
Venue: Hiwasa Community Center, Tokushima Prefecture  
2nd Conference: Aug. 2 - 3, 1988  
Venue: Himeji Dokkyo University, Himeji-City

Edited and Published by

HIMEJI CITY AQUARIUM

Nishinobusue, Himeji 670, Japan

HIWASA CHELONIAN MUSEUM

Oohama, Hiwasa, Kaifu - gun, Tokushima

779 - 23, Japan

Editorial Advisor : Dr. Itaru Uchida (PORT OF NAGOYA  
PUBLIC AQUARIUM)

Published on March, 1991

English Transcription from Tapes by

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## Regarding the Publication of the International Sea Turtle Conference Minutes

The minutes of the International Sea Turtle Conference held from July 30, 1988, to August 3, 1988, in Hiwasa-cho, Tokushima Prefecture, and in Himeji City were completed.

At the conference, the preservation of sea turtles was discussed in Hiwasa-cho with the Sea Turtle Museum playing a central role in the discussions. Activities of the Municipal Aquarium served as the core of discussions in Himeji, which focused on the uses and conservation of sea turtles, with talks mainly centered on the hawksbill turtle.

The conference was characterized by attendance and active discussions by researchers, government officials, representatives of the Bekko industry, natural preservation organizations, and the general public. This is the first time that such a conference focussing on sea turtles has been held anywhere in the world. Therefore, it was necessary that the minutes should be published.

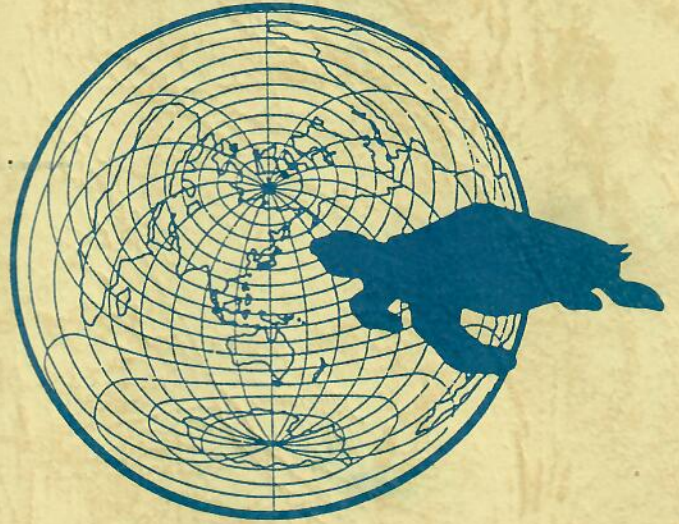
We feel great joy at the publication of these minutes, and would like to express our deepest appreciation to all those who have helped in preparing for the conference, its implementation.

Thank you

Conference Representative

Itaru Uchida





INTERNATIONAL SYMPOSIUM  
ON **SEA TURTLES** '88

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