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SUBSISTENCE HUNTING OF MARINE TURTLES
IN PAPUA NEW GUINEA

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ABSTRACT

In Papua New Guinea marine turtles are heavily utilised by coastal and island villagers as a source of subsistence food, for traditional feasts, and exchanges, and for sale in local markets.

In general there are many traditional rules and regulations concerning the hunting and use of turtles, but these are dependent on respect for traditional authority. In most areas traditional authority is eroding as a result of the younger generation being exposed to the western way of life and economy. The young people are taking advantage of modern equipment to catch turtles for everyday use and for sale in the markets. Village elders are beginning to notice the subsequent decline in turtles' numbers and attribute it to the disregard of old traditions.

This paper summarises the findings of surveys carried out to investigate the subsistence and cultural significance of marine turtles in Papua New Guinea.

These surveys include a postal questionnaire, village and market surveys.

METHODS

In 1977 the postal questionnaire was prepared in the three main languages of Papua New Guinea: English, Motu and Pidgin and was distributed to various schools, colleges, missions and government organizations around the coast of Papua New Guinea. The information received in these questionnaires was carefully assessed and used as background information for village surveys. Village surveys are a valuable source of traditional data. Interviews are conducted on an informal basis, with village elders, councillors and turtle hunters participating. Traditional information such as hunting methods and their associated rituals, the use of turtles in the village, and legends is collected. Village leaders are advised of a visit by a TOK SAVE or message sent over the local radio. This is necessary to ensure that villagers will be present when we arrive.

Daily market surveys are currently being conducted in Daru and Port Moresby.

RESULTS

Around the coast and islands of Papua New Guinea people rely heavily on the sea as a major source of their protein. Fish, turtles and shellfish provide the main wealth of the village. Often gardens are very poor and so the people traditionally exchange their fish and turtles for garden produce such as sac-sac (sago), taro and greens from the mainland or island villages. The major source of protein

is fish which is eaten daily. Second in importance are turtles. The most heavily utilized turtle is the green turtle Chelonia mydas. However hawksbills Eretmochelys imbricata are also widely eaten with little ill effect. (I have heard of three cases of death by poisoning from eating hawkbill flesh, all young children).

KAUENGA
KIMBE (Talaka Pennig)
traditionally

exception In most areas in Papua New Guinea turtles are highly valued animals for traditional use and for their cash value. However, in the Trobriand Islands they have no special significance for the people. The Trobriand Islanders are an agricultural people to whom yams have a significance far greater than their nutritional worth. Turtles are eaten when found but are not especially sought after as a food item and are certainly not used in important occasions such as feasts.

Sumis → In all other coastal areas however turtles are or were traditionally eaten in feasts, for example bride price repayments, funerals, the building of a new canoe, the opening of a new haus boi, the birth of a first child. Today feasts are also held for non-traditional special occasions relating to business, political and religious activities such as Christmas, Independence Day celebrations, the opening of a new church or business group. When turtles are required for a feast, the chief or leader organizes the hunters and canoes to go out and get turtles. Up to 60 turtles are usually required for a big feast. Turtles are either kept on their backs in the shade in the village or in banis in the sea. While they are in banis they are fed sea grasses, chopped clams and fish to ensure that they do not get too skinny in the meantime. When all preparations have been made for the feast the turtles are killed. If guests from other villages

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are invited they bring exchange presents such as sac-sac, and other items of wealth (for example, ^(shell money) tambu, dogs teeth), according to the number of turtles which are provided by the host village. Turtles are usually given a quick roast and then cut up and boiled in a pot with a few greens. All of the turtle is eaten including parts of the shell, bones, blood and internal organs. When a hawksbill with a particularly beautiful shell is caught and eaten, the shell is saved for making into combs or preserved as a decoration for the house or sold to tourists. In the past, the hawksbill shell was used to make a number of everyday items such as spoons, knives, etc., but these are now supplied by trade stores. Hawksbill shell was also used to make some items of traditional bilas such as belts, bracelets, earrings, limesticks and brideprice items but these are rarely seen today.

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In areas close to town centres, turtles are being hunted with little restraint, for daily consumption and for sale in the town markets. For example a large green turtle will fetch between K60 and K80 in the Port Moresby market. Shells are also sold to tourists - between K10 and K15 for a good size shell.

*
equivalent
1.35
80-110

13 - 14

However, there are other areas where turtles are no longer hunted at all, these are the Seventh Day Adventist villages, where the people do not eat meat. Of all the areas I have surveyed there are only a few locations where turtles are still abundant, two of these are Seventh Day Adventist areas, they are Massau Island in the New Ireland Province and the Hermit Islands in the Manus Province.

Turtles also contribute to the oral history of the village. There are many legends and stories to explain the origin of turtles, why they entered the sea, how they got their shells and so on. There are some clans who believe they are descended from turtles and there are stories describing this

relationship. As well there are some magic men who claim to possess powers over turtles. There are four magic men to my knowledge in such widely separated provinces as East Sepik, Western, Manus and Milne Bay. In each location, these men are highly respected within the village and only use their magic for very important occasions, for example, at Ponam Island, in the Manus Province, the traditional net is only used in association with magic. It was last used in 1975 when there were several important occasions occurring together - Independence, the ordination of a local priest and the opening of a church.

METHODS OF HUNTING

In Papua New Guinea turtle hunting methods have been traditionally passed down from generation to generation, with a few modifications along the way. Hunting techniques and their associated rituals differ from area to area but they can be roughly grouped as follows:

- a. Netting The traditional net is rarely used today however it was rather widely used in the "taim bilong tambuna" or olden days. The net is made from bush fibres and the art of making the traditional net or kapet belongs to certain families and is passed down from generation to generation. Most nets have disintegrated today, however in the Manus Province there are several left which are used for very special occasions. The one on Ponam is considered a sacred object and is stored in its own house and looked after by an elder who possesses magic powers and who is highly respected in the community.

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Method of using net When turtles are needed the people concerned see the two leaders of the turtle net and discuss their requirements. The two leaders then confer and set a date for the hunt. 24 men are required to cast the net - 12 on each side (each leader is responsible for his own side). The leaders pass the message among the 12 men that a hunt is on and to prepare according to the rules. On the day of the hunt the canoes gather together and leave at dawn. The net, which has been weighted with stones, is carried across two large canoes. There are ten canoes altogether, 4 small ones on each side. The canoes halt at a passage and wait until a turtle is seen. Then the net is cast and some hunters jump into the sea with it. When the turtle is caught in the net the men call to the large canoers who then converge and the small canoes duck in and pick up the turtles. Up to 7 or 8 large turtles can be caught in one channel. The whole process is carried out according to strict ritual and so the turtle hunt becomes quite an occasion in the village.

Also used in
Central Province - leaders
Woodlark - MBP

- b. Harpooning This is the most widely practised technique. It is traditional in some areas and introduced in others.

1. Fixed-spear tip

This consists of a wood or bamboo harpoon with a fixed iron tip. This is used in the East Sepik Province, Madang Province and the Trobriand Islands. Two or three men in a small canoe hunt turtles, usually at night, using a lantern. When the turtle is speared, one or two men jump in the water and pull the turtle on to the canoe. Only a few turtles are caught on these hunting expeditions as there is limited space on the canoes.

2. Detachable spear tip

In the Manus Province this widely practised method was taught to the villagers by Japanese fishermen prior to World War II. It consists of a wooden harpoon with a

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detachable spear tip made from a three-cornered file which is connected to a perei or wooden float by a nylon cord. When the turtle is speared either from the canoe or by a swimmer in the water, the harpoon detaches and the turtle is allowed to swim until it is exhausted. Then it is picked up by the canoe. This technique is also used in the Western Province, where villagers have magnificent sailing outriggers. A spotter on the mast directs the harpoonist at the prow of the boat.

3. Platform

This was the traditional way of spearing turtles and dugongs in the Western Province. It is no longer practised, but was 40 or 50 years ago. Turtle hunters would build a platform made of bush materials over the reef and wait for turtles and dugongs to swim past. When one did it was promptly speared and the turtle was allowed to run and was pulled in when tired.

4. By hand

In the St. Matthias Group in the New Ireland Province, turtles were traditionally caught by hand. Today the people are Seventh Day Adventists and do not eat turtle meat. The village elders believed that drinking turtle blood would increase their swimming and diving powers so turtles had to be caught without a drop of blood being spilled. Canoes would chase a turtle until it tired and then a hunter would leap into the water and wedge a wooden pole in the soft skin of the neck under the shell and then flip the turtle over onto its back. The turtle was then lifted onto the canoe alive and unhurt. In Bipi Island, turtles were also traditionally caught by hand for feasts. The village chief would call all the hunters and tell them to prepare their canoes to

go and catch turtles. Each hunter would prepare his canoe and take along his supplies (some food, tobacco and betel nut). When the hunters reached the turtle islands they would prepare all the food in one pot and offer it to the spirits of the reefs and beaches.

Next morning all the canoes would go to sea in a line and look for turtles. When a turtle was spotted there would be a competition to see who could catch the first turtle. Each canoe would average 4 or 5 turtles, depending on the skill of the hunters.

Turtles are also traditionally caught by hand in the Western Islands, the Trobriands and Woodlark Islands.

In the Manus here turtles are hunted on a dark night with calm water which is full of phosphorescence. Canoes follow the phosphorescent trail left by the turtle and then ^{hurtles} leap on the animal.

5. Nesting females

This is a rather widespread practice today. In the Manus Province it is a traditional practice with associated rules. In other areas it is non-traditional with little or no regulation. In Manus, there is a widespread practice of calculating when nesting females will return to lay a second clutch of eggs. When an individual needs a turtle for a household occasion he asks the village elder if he can catch a nesting female using this method. If fresh tracks are seen on the beach, the nest is dug up and the number of eggs inside counted. According to a formula which varies from one location to another, a number of small sticks or yakets are planted in the ground, each stick representing one day. When two or three sticks are left, the hunter returns to the site of the original nest and awaits the female turtle.

This technique is still practiced today however not as often, as nesting females are more scarce than in the past.

In Tulu village also in the Manus Province, there is a strong traditional tie between two clans and the Leatherback turtle. The people believe that the leatherback turtle belongs to these two clans and that the turtle will not return to nest if this ownership is not recognized. Only members of these two clans can use divining methods to predict the return of the nesting female. Every female which comes ashore to lay its eggs is eaten if found. When the turtle is killed it is cut up and divided according to tradition. The front end and the head goes to one clan and the back to the other with the pieces in between divided among the rest of the village. All the turtle is eaten and oil is collected from the shell and used for wick lanterns. In 1978 one leatherback was eaten of five nesting. Three of these nests were dug up (pers. comm. Pritchard, 1979). In 1979 two nesting females came ashore. Both were eaten and their eggs dug up. When I visited Tulu recently, the people were worried about the decreasing numbers of nesting females. There are usually between 12 and 14 nesting females in a good year.

6. Other

Turtles are also incidentally caught in fishing nets and by hook. A few are also shot by speargun but in general this practice is frowned upon by the village elders. At Kitava village in the Trobriand Islands, during the breeding season mating pairs are caught with ropes.

RITUAL ASSOCIATED WITH HUNTING TURTLES

In areas where turtles are caught for feasts, there is still a lot of ritual and rules associated with their capture and consumption. In areas where traditional authority and respect is breaking down, especially around city centres where there is a need for money, traditional restraints on taking turtles (and other wildlife for that matter) are becoming less effective.

Missionary activity has also resulted in a breakdown of traditional rituals, but not always to the detriment of turtle populations. For example, in the Western Province, turtles were once only hunted for feasts, but are now eaten as a daily food. On the other hand, where the Seventh Day Adventist Church is influential, the people no longer eat turtle meat and the populations are increasing. In the more remote provinces traditional ways are still respected and practiced.

1. Traditional ownership of reefs and beaches

In most places the right to fish certain reefs and beaches is controlled by individuals or by clans. This enables some measure of control over exploitation of turtles in these areas. However this system relies heavily on traditional authority and respect within the village. Also in the old days, traditional laws were defended effectively by force. Today this is no longer possible. The Wildlife Management Area system of the Wildlife Division enables traditional owners to legally take any offenders to court, thereby enforcing traditional rules, and placing the onus for enforcement on the villagers themselves.

2. Social restrictions

These restrictions while not primarily of a conservative nature often have a side benefit of conservation.

a. Hunters

These rituals are usually designed to discipline the hunting party and so make it a well organized and efficient hunt. To prepare for the hunt, hunters usually cannot sleep with their wives during the preparatory period. They must organize their personal effects and dress neatly and not indulge in any gossip or bad thoughts or pry into other peoples belongings. Silence is usually observed during the hunt, only the leader giving orders. If a man's wife is pregnant, he cannot participate in the hunt, or go near the hunting party.

b. Village restrictions

These are usually based on the superstition that unless these rules are observed the hunt will be poor or the hunters may have an accident. There are many restrictions on the hunters wives, for example, they cannot sweep or work until the men return, they must sit down in their houses and not walk about. Children cannot play or make a noise until the hunt is over.

c. Restrictions on eating turtle meat

People or clans who believe themselves related to turtles cannot eat turtle meat (East Sepik, Trobriand Islands). It is also prohibited for all villagers to eat turtle meat during the yam planting season in the East Sepik. In the Trobriands also if a person has eaten turtle meat he or she cannot go near the yam gardens for three days, or else the garden magic will be affected. Magic men who have powers over turtles do not eat turtle meat as they believe they will lose their magic powers if they do (Manus, East Sepik, Western and Milne Bay Provinces).

CONCLUSIONS

Marine turtles play a significant role in the lives of coastal village people as an important source of subsistence food. Also the rules and rituals associated with turtle hunting and the legends explaining their origin contribute to the cultural heritage of the people.

The greatest threat to turtle populations today is the breakdown of traditional restraints on catching turtles, plus the incentive to catch more turtles than was previously required, for sale in markets, not to mention the use of modern fishing gear. As one old man from Bipi Island said: "Before, in the old days, there were plenty of turtles; we used to hunt them only when our elders said so. Today the young people are following new ways, shooting turtles with spears from canoes with outboards and spearfishing with diving masks. In my opinion, if we still follow the old traditions, turtles will still be plentiful, but the new generation are killing them indiscriminately and turtles are getting scarce."

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C Sylvia Spring

Port Moresby

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