SPC-NMFS/Turtles/WP.16
11 December 1979

ORIGINAL : ENGLISH

SOUTH PACIFIC COMMISSION

JOINT SPC-NMFS WORKSHOP ON MARINE TURTLES
IN THE TROPICAL PACIFIC ISLANDS

(Noumea, New Caledonia, 11 - 14 December 1979)

SUBSISTENCE HUNTING OF MARINE TURTLES IN PAPUA NEW GUINEA

by C. Sylvia Spring
Wildlife Division
Department of Lands, Surveys and Environment
Papua New Guinea

1677/79

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

./.

are invited they bring exchange presents such as sac-sac, and other items of wealth (for example, tambu (shell money), 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.

SLIDES 2,3,4, 5.

SLIDE 6.7

SLIDE 8 9 10 11.

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.

SLIDE 12 13 14

* US equivalent 1.35 80 – 110

13 – 20

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 decended 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.

SLIDE 15 16 17.

./.

Also used in Central Province – Kalau – Woodlarks – MBP

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.

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

1. Fixed-spear tip

SLIDE 18

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

SLIDE 19, 20

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

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 us 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.

SLIDE 21.

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. 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 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 Leathery 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.".

ACKNOWLEDGEMENTS

for a cc'y of the Conf. ITINERARY
URGENT
See Andy ROSS & slides as Land 3 for 20 talk
If ok arrange photographs

C Sylvia Spring

Port Moresby
13 November 1979

TIGERPAPER OCT 79
VOL VI No.4

WILDLIFE CONSERVATION THROUGH UTILIZATION IN PAPUA NEW GUINEA

by A. de Vos

The title of this article may appear rather contradictory because in the past at least most utilization practices have resulted in the destruction rather than the conservation of wildlife. There are however many examples from other parts of the world which indicate that wildlife conservation based on utilization can be a sound practice.

All rural people of Papua New Guinea rely on wild resources on customarily owned land for their livlihood. Besides food, wildlife and its products have various other uses such as ornaments, medicine, weapons and so on in traditional Papuan New Guinean communities.

Papua New Guinea as a nation wants development. This inevitably means that coupled with a rapid increase in population, more land will be used for food and other purposes and that increasing pressure will be exerted on those parts of the country now little modified by man.

Until recently, most people in Papua New Guinea resorted to traditional conservation practices, including taboos on the use of certain species, limited exploitation of clan areas, etc., but with the introduction of modern firearms, nylon nets, etc., wildlife has become increasingly under stress.

For this reason the government has established an Environmental Policy with the objective that the ability of the environment to produce wildlife resources be maintained and where possible restored and improved.

One of the government's development strategies is maintaining and improving the quality of life in the village situation. Subsistence production is also emphasized. A high priority is given to food production – including the use of wildlife – and the government views development as a means of increasing prosperity economically, ecologically, socially and culturally in ways suitable to Papua New Guinea and her people.

The Utilization of Wildlife Species of Economic Importance

Crocodile conservation and management

Before the Crocodile Trade (protection) Act was passed in 1966, there were no controls whatsoever over trading in crocodiles and the industry simply relied on the hunting and killing of wild crocodiles for the supply of skins. As a result, by 1966 the crocodile population was becoming rapidly reduced to only a small proportion of its original size.

In order to prevent a further depletion of the crocodile population the government established a policy to allow as much use as possible to be made of the crocodile resource by the village people, consistent with the crocodile population being able to sustain a harvest on a continued basis. It is hoped that this will be accomplished through a replacement of an industry based on skins obtained by hunting crocodiles in the wild, with a network of farms in which small, wild caught crocodiles are raised to commercial size. The rationale behind this programme is that the high natural death rate among young crocodiles can be greatly reduced by rearing them in captivity and that in fact a limited harvest for this purpose does not have to affect the wild population in a detrimental fashion.

It is hoped that village crocodile farms will bring much needed financial assistance to those villagers who have few other opportunities for obtaining money. Villagers are given instructions in farming techniques at crocodile management courses so that they will acquire a better understanding of crocodile husbandry.

Birds of paradise

Birds of paradise have played an important role in ceremonial customs of the people and this role continues as strongly as ever in the rural areas. The long–term future of many species in Papua New Guinea is now in doubt as a result of the effects of material and socio–economic changes. The use of shot–guns, commercial exploitation of plumes and habitat destruction are among the major factors involved.

In order to prevent the further depletion of these beautiful birds, the government has set up a programme in which efforts are being made to avoid further serious losses in numbers, to preserve large populations of birds of paradise in selected reserves and to establish the wise use of these birds in close cooperation with the villagers concerned. It is essential to take into account the traditional land rights and usage as well as the ecological requirements of the birds.

To enlist the help of the people wildlife films will be shown in the villages, explaining the purpose and advantages of the programme. Unless the village people are fully involved and support bird of paradise conservation it is unlikely that significant numbers can be maintained.

The existing government policy is that birds of paradise may not be commercially exploited but should be preserved for use by the people in traditional and cultural ways. The export of plumes and live birds has been reduced to a minimum by strict enforcement of the law.

Cassowaries

Although cassowaries are important to the people of Papua New Guinea in most areas, their use varies from place to place. In most areas, they are hunted for their value as meat and for feathers, bones and toe nails. The feathers are used to decorate headdresses for traditional dances and the bones and nails to make tools and weapons.

It is only since the coming of Europeans that cassowaries have become a valuable item in the cash economy, because since armed fighting has become illegal, cassowaries have become important in settling disputes: they are difficult to obtain, and hence have a rarity value and play an important role in bartering to settle disputes. The cassowary has also become an essential component in bride price and compensation payments.

While traditionally this bird was hunted with bow and arrow or by trapping in pits or with a noose trap, these methods are being increasingly replaced by the use of the shot–gun and the steel–jaw trap. As a result the birds' existence is threatened in areas of heavy hunting.

The high value of cassowaries in the highlands has led to the development of an industry around the species. There are suppliers, raisers and traders of the birds, and finally consumers. As this is an industry without control it is unstable. For this reason the government has decided to initiate a management scheme with the cooperation of the landowners. This includes restrictions to traders and improved financial gains to raisers and suppliers.

Deer management and farming

Javan rusa deer *(Cervus timorensis)* spread into Papua New Guinea and now occur mainly in the Western Province with scattered herds in the Gulf and Central Provinces. The main herds occur on the Bala Plains in the Tonda Wildlife Management Area which was set up to prevent uncontrolled killing of deer. Until now deer have provided the main source of income for the people that live in and around this Wildlife Management Area from royalties from tourists on deer killed as game.

A government programme has been initiated to harvest deer on a large–scale basis and also to establish a deer farm. A crocodile farm could be set up in conjunction with a deer slaughtering plant to utilize the offal.

Megapodes

The eggs and the meat of megapodes have been traditionally used throughout Papua New Guinea but the species *Megapodius freyeinet* is particularly abundant in West New Britain where it is an important source of protein.

Insect farming and trading

Papua New Guinea has become a mecca for butterfly and insect collectors because of the variety, size and beauty its species. These insects constitute a resource which has considerable potential for development into village projects particularly in less developed areas, but which has not been fully explored.

Until 1968 there were no restrictions on the export of insects and a large scale export business existed, involving butterflies and beetles. In order to prevent a serious depletion in numbers seven of the more spectacular species of birdwing butterflies were declared protected in that year.

A programme has now been inaugurated by the government to assist interested villagers in the methods of collecting, farming and exporting unprotected butterflies and other insects to overseas dealers and collectors, to improve knowledge of insect farming and to establish a rational grading and marketing system for export. A villager who wants to diversify into profitable butterfly farming is encouraged to grow more of the food plants of both the larva and adult butterfly and then to harvest the pupae from the plants.

Beetle farming has not been attempted so far but many are collected, including the long-horned beetle *(Batocera wallacei)* which is attracted by the sap of the breadfruit tree.

Over 500 farmers and collectors are now engaged in insect farming and trading and they receive technical advice from Wildlife Officers. A marketing centre has been set up by government to assist these people.

Dugongs

Dugongs are of subsistence and cultural importance to the coastal people of Papua New Guinea. In recent years the number of dugong has declined greatly as a result of the introduction of modern equipment and methods of hunting, with the consequence of an increase in kills.

In order to halt a further diminution of this species it was declared protected in 1976 with the exception of traditional use by automatic citizens (native Papua New Guineans). This measure was necessary to restrict the catching of dugong with large nylon nets, and the sale of their meat in markets. Thus, utilization of the dugong has become restricted to the subsistence economy and taken out of the cash economy which has proved so disastrous for the dugong populations in other countries.

The Wildlife Division of the government is now collecting basic information on the basis of which conservation and management strategies can be developed.

Marine turtles

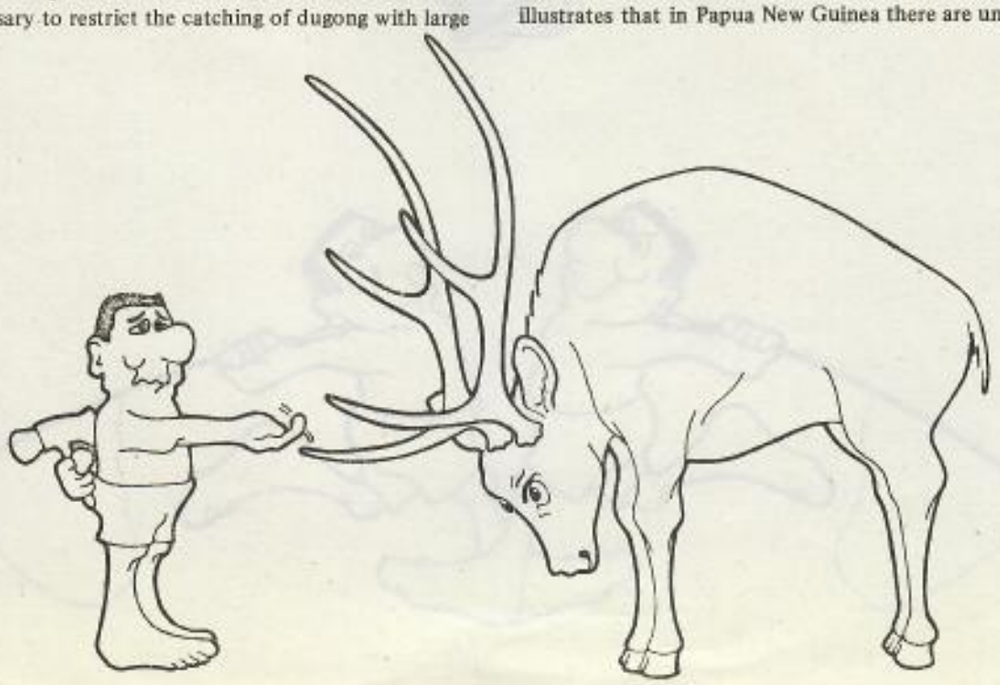
Six species of marine turtles are believed to occur in Papua New Guinea waters. Among these the Green *(Chelonia mydas)*, Leathery *(Dermochelys coriacea)*, Hawksbill *(Eretmochelys imbricata)*, and Ridley *(Lepidochelys olivacea)* are being exploited and have significant cultural and nutritional value for coastal people. In recent years many reports have been received expressing concern for a decline in their numbers as a result of a replacement of traditional ways and practices by modern killing methods.

Marine turtles are an important source of subsistence food because turtle meat has a high protein content. Also the sale of excess meat, eggs and shells at the local markets provide villagers with a small source of cash income.

It is believed that there are still fairly large populations of these turtles in Papua New Guinea waters but information is inadequate. A programme has been set up by government aimed at producing conservation and management strategies for marine turtles which will be appropriate to the indigenous people and consistent with their traditional practices and beliefs.

Successes and failures

The foregoing details about various species illustrates that in Papua New Guinea there are unique



possibilities for wildlife conservation through utilization and that the government is assisting the rural population through policy and management to make the best use of the wildlife resource on a sustained yield basis. The crocodile, megapode and insect rearing programmes have already been successful, but the dugong and marine turtle programmes are hardly beyond the stocktaking stage and no effective management procedures have been established. Unfortunately the cassowary rearing programme which was initiated with New Zealand technical assistance has largely failed. The main reason for this is that the indigenous people of Papua New Guinea are not accustomed to animal husbandry practices and are inclined to take care of captured animals on a casual basis only, which creates problems of undernourishment, increased disease and parasite incidence, etc. This has also proven to be a major stumbling block in the development of crocodile rearing at the village level.

Another problem is that the technical and extension staff now employed by the government are inadequately trained and that there is insufficient staff to do an effective job. For this reason there is a need for technical assistance such as that now offered by the UNDP/FAO project on assistance to the crocodile industry.

In view of the fact that villagers in many areas have expressed their desire to control hunting of wildlife and destruction of habitat on their clan or village land so that they, and future generations, could continue to enjoy, use, eat and earn money from this resource, there are definite signs of hope that improved management of wildlife under the control of government will lead to better conservation practices while utilization is continued as warranted.

The author is Project Manager for the UNDP/FAO Project on Assistance to the Crocodile Skin Industry.

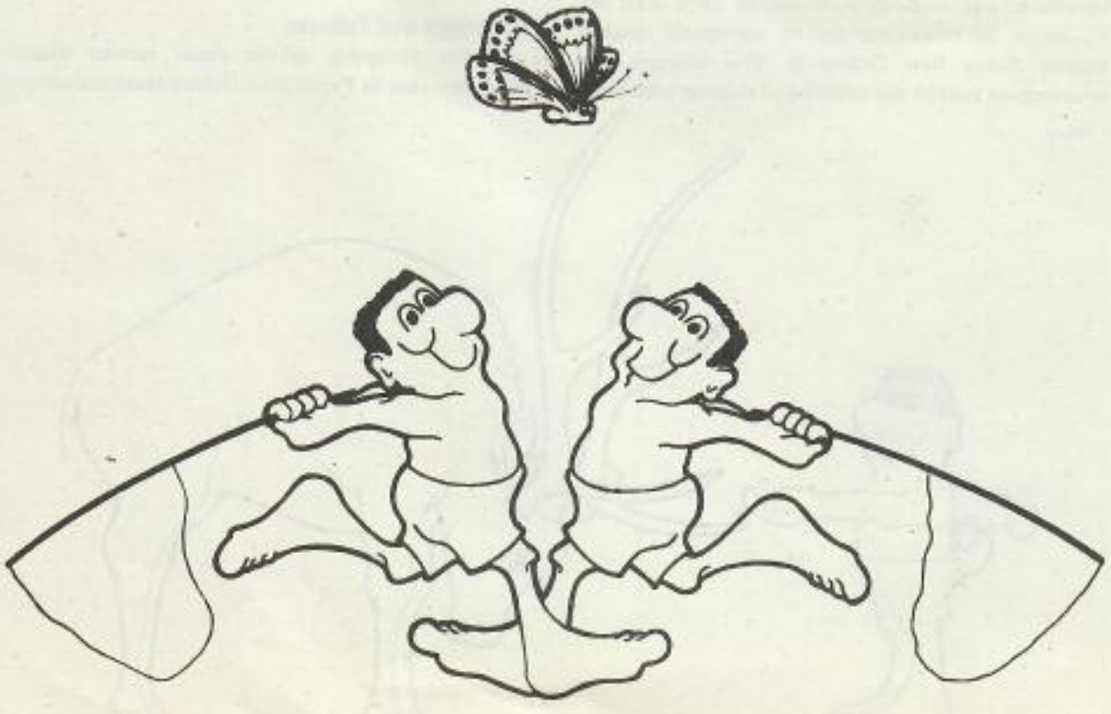
References

Hudson, B.E.T. 1978. **Wildlife conservation and management in Papua New Guinea.** Bulletin no. 78/1. Wildlife Division, Department of Lands and Environment, P.O. Box 2585, Konedobu.

Liem, D.S. 1974. **Wildlife utilization in the proposed Garu Wildlife Management Area, West New Britain, Papua New Guinea.** Ecofile 10–1–3 (2.2)

Publication no. 3. **Australian UNESCO Committee for MAB.** Australian Public Service.

Rongap, B. *et al. Keeping the options open: the case for reserves in:* **Report of Symposium on ecological effects of increasing human activities on tropical and sub–tropical forest ecosystems.** University of Papua New Guinea, 23, April – 1 May 1975.



PNG FILE

G. B.

Bert said sent "2 months ago"

BERT - Please send them to Jim BY AIRMAIL IF YOU HAVEN'T ALREADY. 8/5/85 George

PS. Please This return letter to me

Dear George,

I returned two weeks ago from several days in Townsville where I'd hoped to spend some time with Col. He flew out for a court case in Brisbane 4 hours after I flew in but I spent quite a productive couple of days with Phil Reed. Phil followed me back to Daru and spent 10 days here with my turtle technician. The project is going well and we're getting alot out of it for what we have put in. I will send you a copy of the first very preliminary paper when it's back from Canberra in final form.

George, I left that big stack of papers you had put together for me with Bert Kikkawa to be posted to me. They have not arrived (Dec-May) and I have written to Bert regarding this but have had no reply after about 2 month. Would you please help a hatchling turtle biologist and chase Bert up (I take a great deal of liberty in refering to myself as a turtle biologist).

Life continues to be frustrating, busy, and interesting here. Stay in touch. Regards Jim

P.S. Kiwai Turtle hunters should be a prohibited import to the US. They could easily exterminate the Hawaiian turtle pop. if they were released there.

DEPARTMENT OF PRIMARY INDUSTRY

George Balazs
Natl. Marine Fisheries Service
Honolulu Lab.
PO BOX 3830
HONOLULU, Hi

5/21/83

Date:
Our Reference:
Action Officer:
Designation:

Your Reference:
Date:

Dear George,

I thought you might be interested in these turtles. I see from the papers by Sylvia Spring that Daru was the site of a market survey in the past. At present we are rather short staffed, and under budgeted. However, personally I would like to see the data collected. I have never been anywhere else where so many turtles are being taken. It is rare not to see one being butchered in the morning, along the wharf. We have seen up to twelve during a single day but others have seen at least 26. All so far have been large, probably mature, male and female Greens. Currently their value is about $50-60 and $40-50, respectively.

To answer a few of your questions:

1. Tagged turtles are not uncommon. Two have been reported since I arrived. They were Australian tags.

2. We do have ear tags at the office, but so far I have not seen an opportunity to use them.

3. Turtles are usually speared and then pounced on. To my knowledge, catching nesting turtles is less common - but that must be seasonal.

4. I will send you some slides of butchering, marketing etc.

5. I havn't seen any flatbacks yet, but I see from one of the papers that they are locally recognized.

If you have any ideas on where we might find US$2000, I might be able to hire one extra technician to collect turtle and dugong data full time. Let me know how and where to write. In the mean time I will discuss the matter with the main office in Port Moresby. By the way, you would be welcome to come and stay if you could get someone to cover your airfare. Perhaps if we got funds you could organize the data collection and train a person.

Regards

Jim Prescott

Jim Prescott
DPI Fisheries Research Station
PO BOX 5
DARU
Western Province
Papua New Guinea

PS. We saw about 25 turtles in a space of 2 hours yesterday out on the reef. For sure, I have never seen so many before.

Send -
- S. Spring papers
- stamps

PNG FILE

Dear Dave:

April 17, 1983

Thanks for your letter of April 6th. The offer sounds interesting but at this point I still think it is better to go for the cash. As for the questions regarding the warranty, I am afraid that I can't answer those questions. Hopefully by the time this letter reaches you the question will only be academic. The Whaler dealer is Amfac Marine at Kewalo Basin.

I forgot all about the projectors power requirements - sorry about that. My folks address is as follows:

Robert Prescott
Markwood Lane
Rumson, NJ 07760

I am sorry that you are still saddled with all these tasks.

The lobster research is going very slowly. At this time I am trying to make some sense out of the old data which were not well recorded until last year. Some of the old data sheets are on the backs of old inventories. I will be getting standardized data forms made and setting up my DBASE files very soon. There is a sizable amount of data each month and the computer will be very useful in the future. You might mention to George Balaz that there are alot of green turtles being taken here (on the order of 2-3 per day during the last week). Most of them are big old buggers. If he is interested I might be able to arrange some sort of data collection. It could be that the Australians would be more interested (one of their tags turned up last week).

I have been hearing stories about all sorts of interesting places to explore and hope to get organised to do that soon. Looking forward to getting stuck into some of the big groupers around the place. They are apparently big enough to take bags of lobsters away from people and be a threat to the divers themselves (max size is 9').

Write soon. Thanks for your continuing help. Will send some photos of boats etc. May get a 10 meter glass boat for next year's work - I hope so.

Best Wishes,

Jim

Jim

Dave- A few things I forgot. Could you send the the subsciption rate (overseas) for ① Fishery Bulletin along with the address, and ② Canadian Journal of Mar. + Aquatic sci. Did you send the papers to Dave yet? There is still no sign of them here.

PAPUA NEW GUINEA

AEROGRAMME

BY AIR MAIL PAR AVION

PAPUA NEW GUINEA

OVERSEAS SERVICE

Dave Hamm
Natl. Marine Fisheries Service
P.O. Box 3830
Honolulu, Hi 96812
USA

COUNTRY OF DESTINATION

HERE

SENDER'S NAME AND ADDRESS

Prescott
D.P.I. Fisheries Research Station
P.O. Box 5
Daru, Western Province
Papua New Guinea

Everyone can't visit Papua New Guinea but you can get to know the life and history of our country through our postage stamp issues.
For particulars write today to:—
PHILATELIC BUREAU, P.O. BOX 160,
PORT MORESBY, PAPUA NEW GUINEA.

FIRS

TO OPEN SLIT HERE FIRST

Saturday evening ~6 PM Honolulu = 10 PM Sunday night here.

Hello to everyone.

S. SPRING
20 Numbrus Dr
Flaxton
Qld
AUSTRALIA

~ May-~~June~~ 83

20 Numbrus Drive
Flaxton.

Dear George,

How are you? I have had rather an embarrassing day today. Dr. Anton Fernhout Project Manager IOCN today wrote me asking where the final report for Long Island was. He had not received it yet! Imagine my surprise, as I thought it had been mailed 5 months ago, ? the same time as I mailed your copy. Anyhow today I rang PNG & found out that the final report & its official covering letter has

& the official covering letter has been sitting in a filing cabinet these last 15 months!!! The Public Service is an amazing animal!

Anyhow, it's all sorted out now (I hope)! I'm just wanting to let you know that the Marine Turtle Stamp issue is on schedule - due for release early November this year. There are 6 species depicted. I was up in P.N.G. recently, to check on any further tag recoveries from Long Island & dropped into the Philatelic Bureau & saw the final drafts of the stamp issue. They look great!

Should I write to the M.T. Newsletter to let everyone interested know that the stamps are coming out & where they can order them?

Also I've recently had a paper published in the Société des Océanistes Journal. I will send you a copy when I get the reprints.

Also I sent a letter off to the U.S. Fisheries & Wildlife Service re the importation of sea turtle products into the U.S. My letter was dated 23rd February. I hope it arrived in time. While I was in PNG I briefed Ravu Kwapena head of the Wildlife Division on this issue & left him a copy of my letter. So if PNG is asked to comment on this issue (as a member of C.I.T.E.S.) he will support our views.

Have you heard what is happening about this issue now?

I would love to come to Costa Rica for the Conference. I am really missing my work with turtles but I have also enjoyed the break. Heard of any jobs going anywhere on turtles? Anyhow, must go. Please give my regards to Archie & Peter when you see them.

Sylvia

P.S. How is your work going?

DEPARTMENT OF LANDS, SURVEYS AND ENVIRONMENT

WILDLIFE DIVISION

TELEPHONE: 27-1627

P.O. BOX 585
KONEDOBU.

Date: 30 April 1982
Our Reference:
Action Officer: K. Simba.
Designation:
Your Reference:
Date:

George H. Balazs
National Marine Fisheries Services,
Honalulu Laboratory
P.O. Box 3830,
HONALULU,
Hawaii 96812.

Dear Mr. Balazs,

Thankyou very much for sending me a recently printed Sea Turtle Poster.

The turtle project was axed in this years' national budget, so haven't been able to carry out turtle work lately.

We had finished the Long Island - Research where we tagged total of 353 turtles. Six of the tagged turtles had been recaptured in Indonesia mostly speared while swimming.

Sylvia Spring has left the country and is now in Australia.

Thank you once again for the poster.

Best Regards.

KAYAMA SINBA.
Ecologist.

17th December, 1981.

IUCN/MTSG

Wildlife Division,
Department of Lands, Surveys
and Environment,
P.O. Box 2585,
KONEDOBU. PAPUA NEW GUINEA.

Mr. George Balazs,
National Marine Fisheries Service,
Honolulu Laboratory,
P.O. Box 3830,
HONOLULU. HAWAII. 96812.

Dear George,

Thanks for all your correspondence and the postcards (they are great!). I'm glad you liked my booklet - I enclose two more copies for you.

George, you wouldn't believe what's happening to the Wildlife Division in PNG. It's a real disaster! Life has been very chaotic recently. In the Budget (which came down last month and will come into effect in January 1982), the Wildlife Division has been practically wiped out!

Three projects have been retained and amalgamated into one project entitled "Conservation": they are Research and Surveys, Admin. and Bird of Paradise Projects - total 13 staff.

Seven projects have been discontinued - provincial development, wildlife publicity and library, education, dugong, turtle, legal and enforcement, wildlife resource centre: total 52 staff. Six projects have been transferred (some without budgets) to the Department of Primary Industry.

I am in the unfortunate position - along with the heads of other discontinued projects - of being transferred to the Department of Primary Industry in funded positions (i.e., salaries), but without budgets (in other words, I can't do any work!).

No-one in the Government apart from us sees this as having disastrous consequences for PNG in the long-term. No law enforcement or licencing ... how can we live up to our CITES responsibilities?

The Prime Minister has "gagged" us from going public - he will "not tolerate any criticism of the Budget". Needless to say, we are not going to lie down and die ... we are fighting for survival. I only hope they see reason.

...../2

Anyway, things may yet work out. How are things in Hawaii going? Better than here I hope!

Must go - have got to work extra fast now to tie up ends before January, just in case.

Regards,

Sylvia.

SYLVIA SPRING.

28.12.81

Well time flies when you're having fun!

Encl.

Nothing has happened, looks as tho I am transferred to D.P.I. as from 1st Jan 1982. Really its so damn disappointing its probably just as well I'm leaving at the end of January.

Hope you had an enjoyable Xmas & best wishes for the New Year

S.

DEPARTMENT OF LANDS AND ENVIRONMENT

WILDLIFE DIVISION

TELEPHONE: 214049

P.O. BOX 2585,
Konedobu,
Papua New Guinea.

Date:
Our Reference:
Action Officer:
Designation:
Your Reference:
Date: 12.11.80

Dr. George Balazs,
Fishery Biologist,
National Marine Fisheries Service,
P.O. Box 3830,
HAWAII. 98612

Dear George,

Well I hope you will forgive me for my long silence, I have in fact been terribly busy, this year has raced through. I've just come back from the Long Island Research Station and so far not too many turtles have come up to nest, there have been about 70 greens tagged and a couple of hawksbills. One leatherback came up but wasn't tagged. The volunteers are doing a heroic job, they were walking an incredible 12 miles per night on steep volcanic sand beaches. Valonna was so run down I had to bring her back to POM for a rest. It seems that a few adjustments have to be made to the programme, it is not as simple as it seems mainly because of the great physical distance that has to be covered. And it seems that nesting is not non-seasonal as Pritchard reported. The village people still insist that nesting is seasonal and that the big season is May June July next year and so far it appears that they may be right, unless there are no turtles left at all and that is why they are not nesting. Time will tell I guess. Anyway, so what have you been up to? I think that the idea of yours for a South Pacific Newsletter is terrific.As you recall from the Noumea Workshop, a lot of the people dealing with turtles are only peripherally interested in turtles and are more fisheries management people. These very people might be encouraged to contribute to a newsletter which is restricted to the South Pacific area and as such could improve communication in the South Pacific considerably.

Well I've just finished writing a popular book, 32pp glossy colour entitled Turtles Men and Magic. It should be ready for distribution early next year so I'll send you a copy. I also got my first Dermochelys skull a few months ago. Its like a

hugh jigsaw puzzle. I am also starting to get loggerhead skulls andridley skulls through the market survey here in Port Moresby.

We recently had a Traditional Conservation Practices Conference here in Port Moresby. I prepared a short background paper for it. It wasn't too bad (the Conference I mean) Bob Johannes came and presented an excellent paper, I wish I had said all the things he did.

Well I was recently suprised, I was asked to join the Freshwater Chelonian Specialist Group. I know nothing about freshwater turtles. But have been getting interested, I recently aquired a beautiful large (77cm carapace l) Pelochelys bibroni, she's really lovely. Next thing I have to do is raise funds so that a tank can be built for her at the new Sea Park on Ela Beach. But that will have to wait until I come back from leave. Today is my last day at work for 10 weeks, ah sweet bliss.

So Ge orge, have a happy Christmas and a wonderful New Year, have a drink for me, looking forward to receiving the first copy of the new newsletter. Oh yes, the Philatelic Bureau tell me they will be releasing a Marine Turtle Stamp issue in October, 1983! That's planning ahead. Oh yes and what's happening about the Huon Island thing, Rene sent me a report on the French trip. Did you get one?

Regards,

Sylvia

Sylvia Spring.

PS My regards to Richard Rhonnie

WHEN angler Francis Lokes was fishing off Ela Beach, Port Moresby one night this week, he was doubly lucky.

For he and a friend disturbed a sleeping turtle, which was destined to become Sunday lunch. But apart from a free lunch the turtle also brought Mr Lokes a K4 reward.

The fishermen discovered later, much to their surprise, that the turtle carried a tag with the inscription, "Reward — contact Applied Ecology P.O. Box 29, Australia".

PNG

PNG

JAN 29, 1981

Voco homeowner s flipped when night visitor called

It is not often that turtles come ashore to wake up Lae residents.

This one did early one morning last week.

Its flipping outside houses at Voco Point at about 3am woke up at least three families.

The residents said it was the first time this type of turtle, with three verticle ridges on its shell, had beached on Voco.

Sylvia Spring,
P.O. Box 2461,
KONEDOBU.

28.4.80

IUCN/SSC MARINE TURTLE SPECIALISTS GROUP

Mr. Alex Nonwo,
Assistant Secretary,
Philatelic Bureau,
Post Office,
PORT MORESBY.

Dear Mr. Nonwo,

I am writing to ask your Committee to consider the six species of marine turtles found in Papua New Guinea as themes for a stamp issue. All of these unique reptiles are experiencing serious survival problems on a world wide scale. Papua New Guinea has protected these animals from foreign exploitation by becoming a signatory to the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Papua New Guinea was recently represented at the World Conference on Sea Turtle Conservation held in Washington D.C. in late November 1979. One of the goals defined by the Scientific Committee of that Conference was to increase public awareness of the survival status of, and main threats to existing populations of marine turtles. A stamp issue would contribute significantly to this end.

The names of the species nominated along with a brief description is attached to this letter.

Several other countries have already issued stamps portraying marine turtles. I enclose several examples of these and I'm sure you'll agree that turtles can be a very attractive subject matter.

I would be pleased to provide you with any additional matter, should you decide to issue a series of stamps on marine turtles.

Yours sincerely,

Sylvia Spring

SYLVIA SPRING
Member, IUCN/SSC Marine Turtle Specialists Group
Biologist-in-charge, Marine Turtle Project, Wildlife Division.

TURTLE SPECIES FOUND IN PAPUA NEW GUINEA

1. Green Turtle (Chelonia mydas)- The most abundant and widespread turtle found in Papua New Guinea. It is also the most heavily utilised by village people for food. The main breeding concentrations are now found in isolated areas and areas where the people are Seventh Day Adventists. There have been many reports of declining numbers of green turtles from all around the coast of Papua New Guinea.

2. Hawksbill (Eretmochelys imbricata)
This is the most tropical of the sea turtles. It nests singly or in small groups over an extensive tropical range. It is nearly as widespread but not so abundant as the green turtle. They are found wherever there are coral reefs. Hawksbill shell is traditionally used to make a variety of items, including combs, limesticks, armbands, earrings, and in some places bride price items.

3. Leathery Turtle (Dermochelys coriacea)
This giant black turtles with ridges running down its back is easily recognised by village people. Regular nesting is reported to occur widely along the north coast of New Guinea and on some of the larger islands but always in low densities. This turtle and its eggs are usually eaten by village people. It is not favoured as a food item because of its very oily flesh and fishy smell. The oil is sometimes used to make wick lamps.

4. Loggerhead (Caretta caretta)
This turtle has been reported from various locations around Papua New Guinea. The only nesting has been reported from the Trobriands and from the Woodlarks.

5. Olive Ridley Turtle (Lepidochelys olivacea)
This is also an uncommon species of turtle in Papua New Guinea. It is reported to nest in such widely separated areas as the East Sepik Province and the West New Britain Province. It is also reported as common in the Manus Province.

6. Flatback Turtle (Chelonia depressa)
This species of turtle is only found in the north Queensland waters and the Gulf of Papua. There have only been a few isolated reports of this turtle incidently caught on prawn trawlers around

Sylvia Spring,
P.O. Box 2461,
KONEDOBU.

IUCN MARINE TURTLE SPECIALIST GROUP 2.5.80

Mr. George Balazs,
Deputy Chairman,
IUCN/SSC Marine Turtle Specialist Group,
University of Hawaii,
P.O. Box 1346,
Coconut Island,
Kaneohe, HAWAII. 96744

Dear George,

Thank you for your letter of the 16th April 1980. I have taken steps along the lines you mentioned in your letter to persuade our Philatelic Bureau to issue a Marine Turtle stamp series.

I have been thinking of doing this for some time and actually had made enquiries about the chances of such a series ever being approved. I must say that the chances look good. The Dugong project has a stamp scheduled for release in September.

I enclose for you copies of all correspondence undertaken for your records. I have followed the format of the letters you enclosed rather closely, Hope thats OK.

I have been doing some objective thinking about the aims of my project and have been wondering if I should embark on a carcass salvage project. I really have no idea who could analyse such specimens as reproductive organs etc. Can you give me a contact for this. I was thinking of collecting stomach contents, skeletal material and reproductive material from the animals slaughtered in the markets here and in Daru. Any comments or advice you can give me would be much appreciated.

Looking forward to your reply,

Sylvia

Sylvia Spring,
Biologist-in-charge, Marine Turtle Project.
PS. Did you ever get the bank draft and was it the correct amount or did I shortchange you???

To: _____

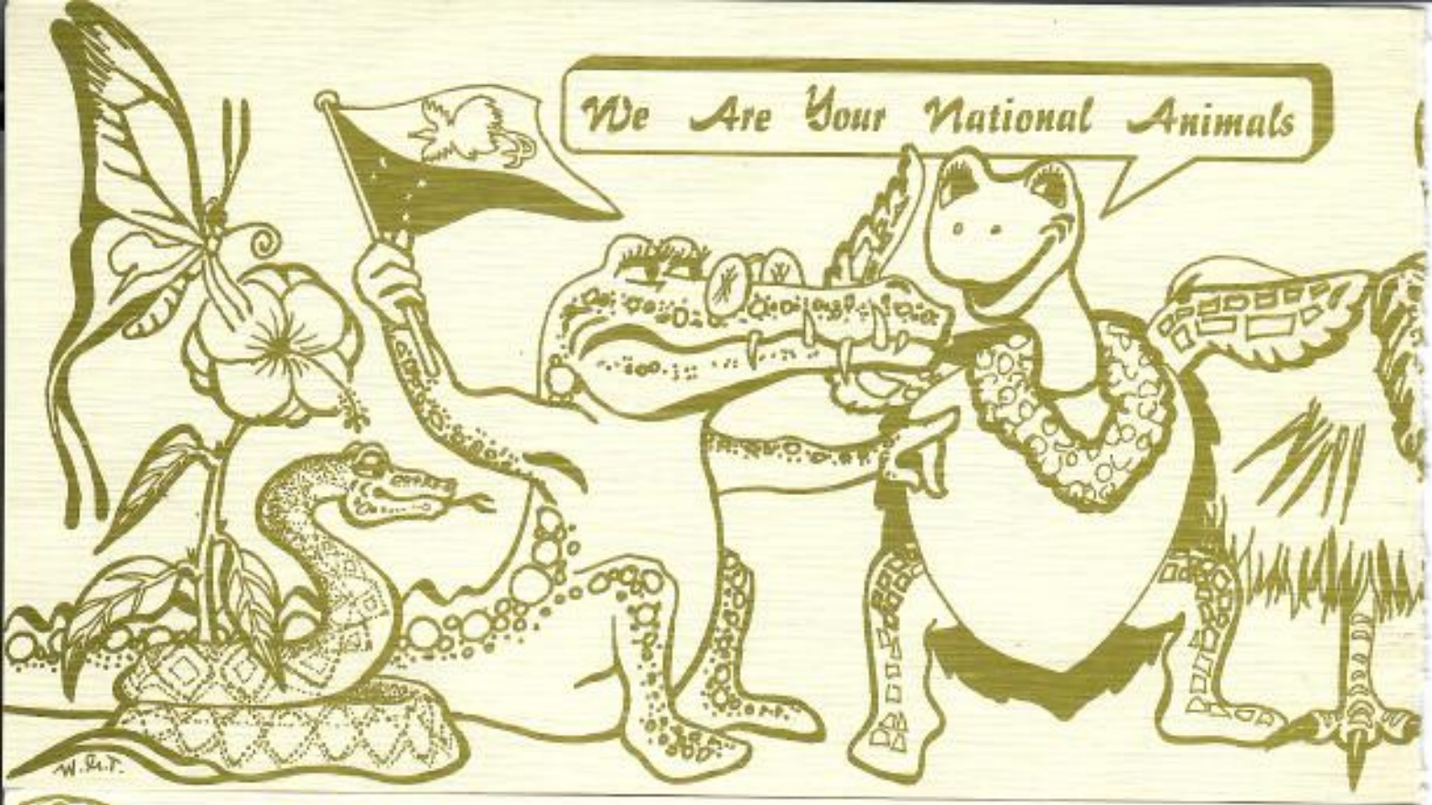
from: _____

Office of Environment and Conservation

* Merry Christmas

* Krismas Moalena

* Hamamas Long Krismas


We Are Your National Animals


CONSERVE FAUNA & FLORA !

Project in Papua New Guinea

Harry Whitten

CHANGE IS COMING to Papua New Guinea, as to many other places, as towns spring up and populations increase.

Wayne Gagne, a Bishop Museum entomologist, has returned from three years in the new Melanesian nation where he and his wife Betsy developed a project to help natives change traditional farming methods to meet changing conditions.

They were there to serve with the International Voluntary Services, which Gagne describes as a "non-governmental Peace Corps." It is privately funded and recruits technical people for projects in the Third World.

The Gagnes served at the Wau Ecology Institute, in Moribe Province of Papua New Guinea's eastern highlands. The institute has been in existence for 10 years and for 10 previous years was a field station of the Bishop Museum.

Gagne explains that shifting agriculture, also known as slash-and-burn agriculture or swidden agricul-

A Bishop Museum entomologist describes his work in Papua New Guinea.

ture, is practised in many tropical regions of the world as a solution to soil problems and as a way of managing pests.

The system consists of small plots which are partially cleared from the jungle. The cut vegetation is burned and crops are planted in the ashes. The plots can be used for one to three years and are then abandoned to the jungle for a fallow period of up to 20 years.

THE SYSTEM has many ecological advantages in tropical areas where soils are not highly productive, but it takes about 37 acres to feed one person.

The system's success was due in large measure to populations being dispersed and low, but today it is in trouble because populations are exploding and people are clustering around towns.

This is what is happening around the town of Wau, which has roads, markets, stores, hospital and airport. The traditional agricultural system is changing. Long fallow periods can't be afforded any more, with the result gardens aren't given time to return to forest before the land is cleared and burned for the next garden.

Gagne, after arrival in 1976 at Wau, started a project to find methods for keeping gardens on the same site without loss in soil fertility and increase in pests and weeds.

The pilot project that the Gagnes developed, with help of native laborers, used many traditional land-use practices but modified them and put an emphasis on fertilizers.

They chose a system that combined tree and field crops, known as agroforestry or agrosilviculture. The crops are grown on long mounds or ridges that follow the contours of the land.

THREE TYPES of crops were grown on each mound, a staple crop such as sweet potatoes or taro, a high protein crop such as beans, which as a legume helps keep up nitrogen levels, and a green vegetable crop.

The trees furnish firewood for food cooking and also shade to keep the soil from being excessively oxidized (causing loss of nutrients) by being baked in the sun.

Insect-resistant crops were planted and natural or biological control of pests sought, since insecticides weren't used.

Coffee pulp and hulls were used as fertilizer, since they were available from nearby coffee plantations and other fertilizers were not.

For that matter, composting is a traditional practice in the Papua New Guinea highlands, Gagne says.

He concentrated on entomology and his wife on ethnobotany or use of local crops. They grew 150 varieties of 80 different crops, including fruit and nut trees.

Gagne said their project was the only one of its type in Papua New Guinea and that it attracted considerable interest. Financial assistance from the United Nations University in Tokyo and the New Zealand government helped them keep the project going.

WHEN THEY left the project at the end of 1979, three other IVS volunteers arrived to move into an extension phase of the system the Gagnes had demonstrated.

Wayne Gagne

Betsy Gagne is staying a few more months in Papua New Guinea to prepare environmental education material for use in its national high schools, which are somewhat like our junior colleges, Wayne says.

This work is being done for the new nation's Office of Environment and Conservation and its Education Department.

The people in the Wau Valley, Wayne says, are about half-way between the tribal and the more modern society. They do some subsistence gardening, some gold-mining, and some raising of cash crops such as coffee and vegetables.

J. Linsley Gressitt, director of the Wau Ecology Institute since its founding, is now spending the bulk of his time in Honolulu while the assistant director, Allen Allison, Bishop Museum herpetologist, is at Wau.

He said the institute is largely self-supporting, getting grants and donations and also getting some revenue from its small coffee plantation and other agricultural work.

The Bishop Museum helps by contributing a salary and a half, which now means that of Allison at Wau and of Gressitt, half of the time there.

Monday, May 19, 1980 Honolulu Star-Bulletin A-17

Sylvia Spennig
Wildlife Division
P.O. Box 2585
Konedobu

Dear George,

Hi there, thanks for the photos, & reprint & newspaper article. & also many thanks for the 'ransom' for the travellers cheques. I'll get a bank draft (US $) — no more Kina cheques, to repay you. — Oh yes & also for getting my paper in on time. Gad George, I really appreciate all your help —

I got a letter from Archie also, enclosing a copy of my recommendation which he forgot to enclose!

Anyway I am still trying to convince the Govt here to give me some more funds, but its like squeezing blood from a stone. IUCN still haven't advised me whether they are funding me either! Oh well, we all have these trials.

Well I have been busy organising

my schedule for this year — I hope to be concentrating on the Central + Western Provinces, trying to assess the degree of exploitation that is occurring, (through market + village surveys) + trying to assess the effect this is having on the population — tagging + recoveries — it all sounds a little dubious but I guess some information is better than none — and if I can get the IUCN money, I can get comparative figures from a) an area of no exploitation — Mussau I. + b) an area of controlled exploitation — Long Island Wildlife Management Area. I'll also tie in stomach contents + gonad maturity with market + village surveys to collect some peripheral information, on feeding biology + to try + relate size to sexual maturity. Should be fun! Kayama in the meantime will be spending most of his time in the field finishing off the village surveys.

At the moment I am busy with financial reports + trying to scam some extra money through revotes —

in Papua New Guinea)' & sending articles to the Post Courier to try & drum up a little publicity. Every little bit helps.

Well George, enough rambling — oh yes do you know when Archie is coming out here? Maybe I can show him a PNG turtle! — if he has the time!

What's happening about the New Caledonia aerial survey? Are those results going to be published?

So, I've run out of news — thanks once again for everything, you don't know how much it's like an oasis in the desert — hope you had a good X-mas & New Year (I did!)

Regards,

Sylvia

P.S. I still haven't forgotten about Peasat!

17·12·79.

Dear George,

Here are the amendments to my two papers. Can you push them thru to whoever, before the deadline.

Paper 1: Subsistence Hunting is basically unaltered. I submitted the originals in Washington

Paper 2: has a few changes so I've attached the amended copy.

Many thanks & have a Merry Xmas & New Year. — as the Hawaiians say — Mahalo o Aloha!

Sylvia Spennemann

Thursday, January 31, 1980 Honolulu Star-Bulletin C-13

18-Foot Lizard in New Guinea

LONDON (AP) — British explorers say they have found the world's biggest lizard, an 18-foot-long reptile living in a swamp in Papua New Guinea.

"It has large teeth and claws, and local people call it a dragon and say it eats people," explorer John Blashford-Snell told a news conference. He said members of the expedition that found the lizard are "still out there, observing it, so I expect some more details later."

A reptile expert at the British Natural History Museum said it could be a member of a newly discovered species. The Guinness Book of Records says there have been reports of New Guinea lizards measuring 15 feet 7 inches but the longest lizard measured by scientists was 10 feet 2 inches.

DEPARTMENT OF LANDS AND ENVIRONMENT

WILDLIFE DIVISION

TELEPHONE:

P.O. BOX 2585, KONEDOBU

Anton K.C. Fernhout
WWF/IUCN Project Manager
1110 Morges
SWITZERLAND.

Date: 15 August, 1979
Our Reference: 19.11.2
Action Officer:
Designation:
Your Reference:
Date:

Dear Mr Fernhout,

PROJECT 1683 - PAPUA NEW GUINEA MARINE TURTLES.

I hereby enclose a Progress Report for Stage I The Consultancy, and a Workplan for Stage II requesting assistance of K25,500 or US$31,875.

A funding request for Stage II (5 years) has been submitted to the government of Papua New Guinea. Your contribution to the first year of Stage II will be of considerable help to the government and to the Wildlife Division in particular.

Thank you for your interest and co-operation.

Yours faithfully,

M.N. RAGA,
a/First Assistant Director (Wildlife)

MARINE TURTLES IN PAPUA NEW GUINEA

STAGE 1 - A PROGRESS REPORT
THE CONSULTANCY

Project Description
Project Aims
A. Budget Analysis
   A.1 Expenditure
   A.2 Implementation
B. Achievements
   B.1 The Consultancy
   B.2 Furthur Achievements

MARINE TURTLE CONSERVATION PROJECT

Project Description

The Marine Turtle Project was initiated by the Wildlife Division in 1977. A postal survey was conducted around the coastline of Papua New Guinea and the ecologist made preliminary surveys to several provinces. The data collected in this way provided the base for a project proposal which was submitted to the National Planning Office for funding as an N.P.E.P. Project for 1978. A submission was also made to the International Union for the Conservation of Nature through the Aid Co-ordination Committee of the Government of Papua New Guinea for 1978. (See Appendix 1)

The Project is divided into two major stages as follows:

Stage I: The Consultancy
This consultancy was carried out as an N.P.E.P. Project (19-5-3-15) in 1978. Stage I involved the visit by an expert on marine turtles to assess the marine turtle resource of Papua New Guinea.

Stage II: Implementation of a Management and Conservation Programme
Stage II is a five year programme to implement the recommendations of the consultant to commence in 1980. A proposal has already been submitted to the Government of Papua New Guinea for funding as an N.P.E.P. Project. A proposal in also being submitted to the IUCN/WWF for partial funding for one year of the programme.

Project Aims

The scientific aim of the project is to ensure the survival of the marine turtle resource.

The socio-economic aim of the project is to protect the subsistence and cultural value of turtles in the traditional society.

STAGE I : THE CONSULTANCY - A PROGRESS REPORT

A. Budget Analysis

In 1978 Stage I of the Marine Turtle Conservation Project was funded by the Government of Papua New Guinea at a level of K30,000.

Originally submissions had been made to the Government of Papua New Guinea (K30,000) and to the International Union for the Conservation of Nature (IUCN/WWF) (K25,000).

As Stage I was conducted on a reduced budget some major modifications had to be made, most significantly to reduce the proposed two visits by the Consultant to Papua New Guinea to one visit.

A.1 Expenditure

(a) Consultant

Consultancy fee	K 6,200
Airfares consultant USA-POM return	K 2,000
Airfares within P.N.G. and accomodation for the consultant and accompanying ecologist	K 5,600
Aerial surveying (23 hours)	K 4,200
TOTAL CONSULTANCY COST	K18,000

(b) Ecologist

Airfares within P.N.G. and accomodation	K 1,400
Aerial surveying (20 hours)	K 3,600
Materials and Supplies	K 7,000
TOTAL ECOLOGIST COST	K12,000
TOTAL PROJECT COST	K30,000

A.2 Implementation

January: Ecologist was in Port Moresby carrying out necessary

administrative backup for the project, including financial reviews, budget estimates, paper-work for consultancy approval.

February: Ecologist visited the East Sepik Province and conducted boat surveys and village interviews.

March: Ecologist visited Madang Province to conduct aerial surveys of Madang coastline and outlying island groups. (6 hours)

April: Ecologist in Port Moresby carrying out quarterly financial reviews, and necessary consultancy approval submissions.

May: Ecologist visited New Ireland, East New Britain and Bougainville Provinces and conducted aerial surveys (14 hours).

June: Ecologist in Port Moresby carrying out necessary administrative work.

July: Ecologist in Port Moresby.

August: Arrival of the consultant Dr. Peter Pritchard in Port Moresby.

September: Discussions at HQ to clarify the aims of the consultancy. Travel to Madang, Manus, New Ireland, East New Britain, East Sepik and Milne Bay by consultant and accompanying ecologist.

October: Return to U.S.A. by the consultant.

November: Ecologist in Port Moresby preparing budget estimates for 1979.

December: As above.

B. Achievements

B.1 The Consultancy

The programme for Stage 1 of the Marine Turtle Conservation Project centred around the engagement of a marine turtle consultant to visit Papua New Guinea to make a preliminary assessment of the marine turtle resource.

The specific requirements of the consultancy were as follows:

(a) to investigate the marine turtle resource in various parts of Papua New Guinea in its context as a traditional food source and to make recommendations on its long term management.

(b) to study the social, legal and policy frameworks existing in Papua New Guinea to determine the most effective and efficient measures to conserve the marine turtle resource.

(c) prepare a practical plan to extend management and conservation techniques.

In March 1979, the consultant submitted his Consultancy Report to the Wildlife Division. This comprehensive report fulfills the above requirements and contains information on the methods of study employed by the consultant and his results (Appendix 2).

B.2 Further Achievements

A Five year management and conservation programme has been drawn up, based upon the consultants reports and the work of the ecologist and has been submitted to the Government of Papua New Guinea for funding as an N.P.E.P. Project.

A submission is also being made to IUCN/WWF to assist funding for one year of the 5 year programme to a level of K25,500. See attachment.

MARINE TURTLES IN PAPUA NEW GUINEA

STAGE 11 - A WORKPLAN
A PROGRAMME FOR THEIR MANAGEMENT & CONSERVATION

Project Description
A. Objectives
B Justification
   B.1 Reasons for undertaking the Project
   B.2 Reasons for IUCN/WWF Involvement
C. Workplan
   C.1 Methods
   C.2 Implementation
D. Budget Analysis
E. Responsibilities
   E.1 Technical Responsibility
   E.2 Administrative Responsibility
F. Other Support

PROJECT DESCRIPTION

A. Objectives

The long-term scientific aim of the project is to ensure the continued survival of the marine turtle resource through a management, conservation and education programme.

The socio-economic aim of the project is to protect the subsistence and cultural value of turtles in traditional society.

B. Justification

B.1 Reasons for undertaking the Project

All species of marine turtles in the world are vulnerable and most of the populations are in trouble. All except the Australian Flatback (Chelonia depressa) have been listed in Appendix 1 (Endangered) of the Convention on International Trade in Endangered Species of Wild Fauna and Flora to which Papua New Guinea is a party.

In Papua New Guinea we have an almost unique biological resource. Of the seven species of marine turtles alive in the world today, six are found in Papua New Guinea. According to the consultant who visited Papua New Guinea in 1978 to assess our marine turtle resource "the marine turtle populations of Papua New Guinea are probably significantly depleted in many areas". This decrease has been occurring so slowly over several generations it has not been immediately obvious to any one observer. This decrease can be attributed to many things mainly the breakdown of traditional hunting practices, introduction of modern fishing methods, population increase and the introduction of a cash incentive in modern villages.

The Government of Papua New Guinea is concerned for the future of its marine turtle resource as are the people of Papua New Guinea, for whom the turtle resource has significant subsistence and cultural values. In 1978 the Government of Papua New Guinea funded Stage I of the Marine Turtle Project which involved the visit by a consultant to Papua New Guinea to assess the marine turtle resource. A project proposal for Stage II has been submitted for funding, based upon recommendations made

by the Consultant.

The project is fully supported by the Government of Papua New Guinea as an attempt to conserve the marine turtle resource for the benefit and use of future generations of Papua New Guineans and for the survival of the marine turtle resource.

B.2 Reasons for IUCN/WWF Involvement

As Papua New Guinea is a newly independant country, the Government requires funding assistance to carry out Stage II of the Marine Turtle Conservation Project. Therefore, the Government of Papua New Guinea requests IUCN/WWF aid for the first year of the five year programme at a level of funding K25,500 as has been previously indicated by your Project Committee.

C. Workplan

C.1 Methods

(a) Education and Extension Work

The onus for conservation work in Papua New Guinea lies with the traditional landowners. In Papua New Guinea all land, reefs and wildlife within it is owned by individual clans or villages. Therefore it is the traditional landowners who must be educated on the biology of their resource, the reasons for conservation and the methods of conservation, as it is they who will introduce and enforce the conservation measures in the villages. Thus education will play an important role in the conservation of marine turtles. Extension work will be tied in with village surveys. Educational aids will be aimed at village, Government and the general public levels. The radio and news media will also be used to educate the general public.

(b) Surveys

Part of an ongoing programme of village and aerial surveys which commenced in 1977. This is a major operation as the marine turtle resource covers thousands of miles of coastline. The survey aims

to map the abundance and distribution of turtles as well as collect information of a traditional nature concerning turtles before this information disappears and is lost. Surveys which have been carried out to date are as follows:

1977: Wewak, East Sepik Province - Road survey to Cape Wom Village Boat survey to Musschu, Kairuru and Raboin Islands.

Manus Province - Boat surveys along the north coast of Manus to Ahus, Ponam, Harengan Islands and Tulu Village.

East New Britain - Boat survey to small islands outside Rabaul Harbour. Road survey to Pila Pila Village.

Madang Province - Trawler Survey to Long Island.

Western Province - Boat Surveys to Mabuduan, Ture Ture and Katatai Villages.

1978: Madang Province - Aerial Survey from Madang to Bogia, Karkar, Bababag, Manam Islands and Long and Crown Islands.

New Ireland Province - Aerial Survey from Kavieng, around New Hanover to the St. Matthias Group.

Bougainville Province - Aerial Survey from Kieta, around Buka Island to the Nissan Islands.

Manus Province - Boat survey to Ponam Island, Tulu Village, Harengan Island, Pak Island, Bipi Island and Lessau Mission.

Madang Province - Aerial survey from Madang to Bogia, Karkar Bababag, Manam Islands, Long and Crown Islands; from Madang to Wasu. Trawler Survey to Long and Crown Islands.

East Sepik Province - Aerial survey from Wewak to Aitape and Vanimo via Wuvulu Island.

New Ireland Province - Visit to Eloaue Island of the St. Mathias Group. Aerial survey from St. Mathias Group to Kavieng to Rabaul.

Milne Bay Province - Aerial surveys to the Woodlark Islands, the Trobriands, Normanby, Fergusson and Goodenough Islands, from Alotau to Port Moresby.

Central Province - Boat visit to Fishermens Island.

1979: Western Province - Visit to the Western Province to recruit a labourer to conduct daily market surveys.

Wewak, East Sepik Province - Road surveys out of Wewak to Kofi, Boiken and Turubu Villages.

Manus Province - Boat surveys to Ahus, Ponam, Andra, Bipi and Lou Islands and to Tulu Village.

Basic information is still lacking from some significant sections of coastline. These areas include the Morobe and Northern Provinces, most of the coastline of New Britain, and the island of Bougainville. Visits have been planned to Morobe and the Bougainville Provinces for 1979. These will be preliminary visits with aerial and village surveys to accessible villages.

It is hoped to cover the entire coastline and islands of Papua New Guinea for the sake of completeness, to gather baseline data on what species of turtles are present, in what concentrations, and what use is made of them by villagers. Then selected visits can be made to areas of special interest or areas with conservation problems. As yet aerial surveys have not been used as a means of population estimation. However aerial surveying has proved to be of great value for looking at nesting beaches and turtles, and could be used in conjunction with village surveys. It is valuable in defining sections of coastline along which potential nesting beaches exist, and during the nesting season fresh nests and tracks can be seen clearly.

(c) Research

There are two sites which have been selected for intensive tagging programmes in 1980.

1. Long Island, Madang Province.
   On Long Island, nesting turtles are numerous and their exploitation is already under some restraints under the rules of the Wildlife Management Area. It is planned to undertake a twelve month tagging programme. This programme would be the first such programme for Papua New Guinea and will yield valuable information on the nesting seasons and nesting

frequency of green turtles. It would also allow an accurate estimate of the number of turtles slaughtered annually on Long Island. It is hoped that the tagging programme, once initiated by the project ecologist, will be manned by two experienced volunteers from Australia. They will live in a bush materials house on the Island and conduct nightly surveys along the beaches to tag, measure and photograph nesting turtles.

2. Etalima Beach, Eloaue Island, St. Mathias Group, New Ireland Province. There is a resident population of green turtles around Mussau Island. The residents of the islands are Seven Day Adventists and so do not eat turtles. This situation presents an unusual opportunity to study population structure and growth rate of green turtles. It is hoped that this programme will be manned by two experienced volunteers from Australia working with a local team to assist capturing turtles from the beach. The volunteers will live in a bush materials house.

It is hoped that IUCN/WWF fund the above programmes for 1980.

C.2 Implementation

As this request concerns the funding of the two research programmes, the following details will only apply to those research programmes.

January: Arrival of the four volunteers from Australia. Orientation with the Marine Turtle Project and the requirements of their research positions. Familiarisation with the Wildlife Division and its role. Ordering of necessary equipment and materials for the research sites.

February: Location in the field. Setting up of research programmes with the project Ecologist. Construction of bush materials houses. Commencement of Research Programmes.

March-June: Field studies.

July: Return to HQ for discussions and progress reports.

August-October: Field studies.

September: Visit to field locations by project ecologist.

October-November: Field studies.

December: HQ for discussions and progress reports.

D. Budget Analysis

Salaries

for 4 x Volunteers at Scientific Officer Class 1 for 12 months	K 5,200

Travel and Accomodation

2 x Volunteers at Long Island to return to POM every 6 months	
POM - MAD - POM	K 488
MAD - LONG IS - MAD	K 100
2 x Volunteers at Mussau Island to return to POM every 6 months	
POM - KVG - POM	K 842
KVG - MUSS - KVG	K 250
Accomodation in POM 4 x Volunteers, 4 weeks each @ K25 per day ..	K 2,800
Allowances (Camping, travelling)	K 1,200

Materials and Supplies

Bush Materials Houses and base camps at Long Island and Mussau Is ..	K 1,000
Living Equipment	K 1,800
(Camp stretchers, stoves, friges, chairs, tables, etc.)	
Inflatable dinghy and 25 h.p. outboard x 2	K 3,500
Photographic Equipment - 2 x Pentax cameras and flash units	K 900
Office and Lab. Equipment	K 900
Expendable Supplies - films, batteries, tapes, fuel, kerosene, etc	K 600
Generators x 2	K 1,000
Educational equipment - 16mm Projector, screen, slide projector	
films	K 1,000
Freight charges	K 2,420
TOTAL	K25,500

Bank Account

Forward to: Department of Finance,
for attention Wildlife Division,
Department of Lands and Environment,
Central Government Offices,
WAIGANI. Papua New Guinea.

E. Responsibilities

E.1 Technical Responsibility

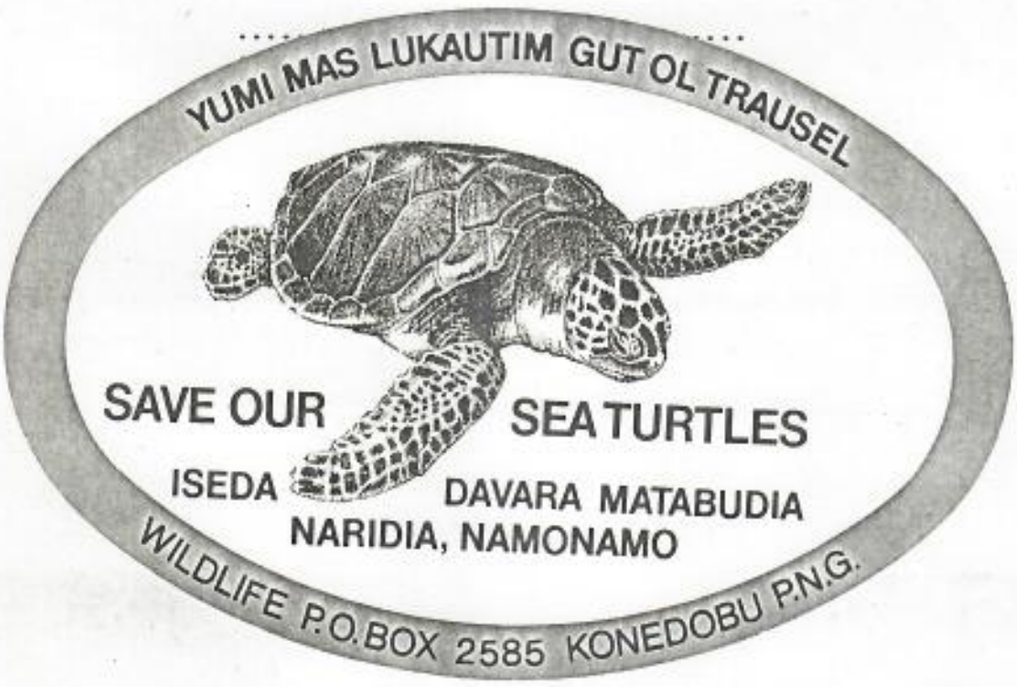
C. Sylvia SPRING,
Wildlife Division,
Department of Lands and Environment,
P.O. Box 2585,
KONEDOBU. P.N.G.

E.2 Administrative Responsibility

Wildlife Division,
Department of Lands and Environment,
P.O. Box 2585,
KONEODBU. P.N.G.

F. Other Support

Applications have not been made to any other funding agency. Financial assistance is essential to this Project.



POBox 2585
Kuredoku

14/3/80.

Dear George,

Thanks for both your letters & the article. Yes I had seen Anton's article, plagiarism & all! & yes Archie has written to me asking me to become a member of the NCN Specialist Sp. Hell, what's a lil ole country girl like me doing in such a group! Seriously tho', I was really pleased (looked like the chestnut car I did - couldn't stop grinning) — been busy with red-tape paperwork, explaining to every Tom Dick & Harry, as nearly every

Department (Finance, National Planning Office, Aid Co-ordinating Committee, Budgets Division, Accounts Division, the Director E+Cons. Pte. etc.) what the money was for, how I got it, how & when & where I want to spend it & establishing positions for the volunteers & etc etc — I am seriously thinking of making a tape ...

Well guess what, I've finally got your $10 (it was $10 wasn't it) ransom money! Many thanks George, considering my garbled call for help at 6.30 am. Luckily you found those travellers cheques cos when I reported them missing in Brisbane, the conversation

went something like this —
"Will you tell I purchased
these cheques in Hawaii, using
an Aust. dollar Bank Draft,
I spent most of them in
America & some in Noumea
where I lost the rest & I
am now reporting the loss to
you in Australia but
unfortunately my books with
the numbers on them are in
Papua New Guinea ....."
Then unsurprisingly they
asked me to come back
after X-mas & report the
loss again but luckily
they arrived in the mail!
(So what does being a
member of this group entail?)
I was recently contacted
by Mark Gentle from Fiji
(do you remember him?) he's
asked me if I am interested

(in a short-term conservancy in Fiji setting up a sanctuary & an education program!!
Of course I said I was!

Aloes & hugs in Hawaii
I hope you & your family are all well. Guess you heard that Somare has been thrown out & we have a new PM Sir Julius Chan (mixed race Chinese) - no changes yet - only new ministers & lots of press releases. Should be interesting to hear Chan's foreign policy & investment (foreign) policy! But all is peaceful - no troubles here not like Zimbabwe!! Well space is limiting & time has all but run ~~out~~ out (its 4:06 on FRIDAY afternoon - hurrah!) So must go

Sylvia