



A MARVEL OF NATURE AT PUE ALEIPATA

Hire a four wheel drive in Apia and take the coast road east. Pass the beautiful village of Solosolo and the big, old church of Piulo, famous for its fresh water pool, then turn inland.

The road is still good as it climbs high into the mountains then quickly drops down to the village of Lotofaga on Upolu's exposed coast. Thirty minutes along the coast, the islands of Nuutele and Nuulua appear beyond the pounding surf of connecting reefs. Then, finally, two more islands appear — Fanaatapu and Namua.

The area is Pue Aleipata, less than 50 miles from Apia, at the most eastern tip of Western Samoa. Aleipata is a jewel, a sparsely populated string of villages, white sand beaches and brilliant lagoons that most visitors only get to see on picture postcards.

But Pue Aleipata is something else. It is a Samoan heritage, a place where a marvel of nature happens. The islands of Namua, Nuutele and Nuulua are the breeding grounds of the two turtles — the hawksbill (*Eretmochelys imbricata*) and the green (*Chelonia mydas*) — common to the Samoas.

The turtles have been coming ashore at night to lay their scores of eggs above the highwater marks of the sea for centuries.

the months of January and February, the height of the egg laying season, the turtles return in their hundreds each year to labour up the island beaches. But all year round turtles that have "come home" to lay their eggs may be found.

The hawksbill turtle may be found in many parts of the world. For centuries the hawksbill turtle's shell — sometimes referred to as the "tortoiseshell" of commerce — has been used in the making of jewelry. The hawksbill species grows to as large as one metre in diameter, with a head and beak very much like that of a bird of prey.

The hawksbill migrate and have been observed in various

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One of the world's most beautiful and oldest creatures, the turtle, comes ashore. At left, the release of baby turtles at Pue Aleipata, after being hatched at the Western Samoan Government turtle hatchery.

offshore the Aleipata islands — sometimes just a male and a female — before the female comes ashore.

Mating occurs in the water and can be awkward for both partners as turtles must keep their heads above the water in order to breathe. The female often comes off worse for wear when the male grasps her by means of a claw on each front flipper and also with his tail. The flipper sometimes cuts deep notches in the bone of the front edge of the female's shell.

The green turtle derives its name from the greenish colour of

the thin, horny plates covering its bony back (carapace). Another characteristic is its relatively small head. When fully grown the species may have a carapace measuring 48in in length and may weigh as much as 300lb.

The green female comes ashore on her own at laying time — every 12 days or so, until three to five clutches of eggs are laid.

The green turtle is vegetarian as an adult and grazes on turtle grass.

Scientifically, it is not explained why the two species of turtles return year after year to Pue Aleipata. However, the Western Samoan Government is keen to protect them. In 1968 a turtle hatchery was established on the foreshore at Pue Aleipata.

The hatchery incubates thousands of eggs, hatches them and raises the tiny turtles until they are bigger, stronger and have a better chance of survival when they are released into the ocean.

The turtles lay their eggs at night. They struggle up the sand beaches, their tracks leaving tell-tale, tractor-tyre-like marks. At highwater mark, at the beginning of the undergrowth, the females heave and groan in an "act" of building a nest.

Says Western Samoa's chief fisheries officer, Mr Alfonso L. Philipp: "They're really quite clever ... they thrash around and make a big show but it's all a decoy. They take off and lay somewhere else nearby."

The fisheries department is convinced the Pue Aleipata programme is a success and is having very positive results in keeping Samoa's waters well-stocked with turtles. In the 12 years the hatchery has been operating, many thousands of turtles have been released. But, while there are moves afoot to have the beautiful string of Aleipata islands made a marine reserve, it remains lawful in Western Samoa to catch, kill and sell turtles. But this lack of protection is not regarded as a problem as turtles are not a popular or common food source with Samoans and they are not commercially fished.

At the hatchery, the officer in charge is Viliamu Matagi. Early every morning Viliamu and his two assistants Pese Laeota and Tele Tausaga motor out to the turtle islands and walk the sandy beaches in search of turtle 'tracks.' On finding a nest, the eggs are carefully transported by bucket to the safety of the hatchery's wire compound where they are buried



Viliamu Matagi, top at the turtle hatchery at Pue Aleipata. The officer in charge of the project holds baby turtles being reared in the concrete baths. Above left, Matagi and assistant locate a clutch of turtle eggs above the beach on Namua Island. Above right, green sea turtle depositing her eggs, completing a nest.

in the sand. About 80 per cent will hatch successfully.

Ninety-four days after the eggs are buried, the baby turtles — now two or three centimetres in size — hatch and are placed in holding baths. There is no food for them, initially, for two weeks. Then fresh fole — mussels — are fed to them each day.

The baby turtles, having grown to about six centimetres in length, are released after seven months. They are placed carefully in the warm waters of the neighbouring lagoon, after having a coded mark clipped neatly on the side of their shells. The turtles soon disappear to start their lives free in the ocean.

Viliamu says he receives reports from time to time of large, fully grown turtles with a distinctive marking being caught in a fishnet. Or a report comes from Apia that a turtle with a marking

corresponding with that used by the hatchery in its early years has turned up in the market. Increasingly, grown turtles with the distinctive markings are appearing, giving the hatchery cheer that the carefully raised babies are growing to maturity.

Viliamu says he has often observed turtles produce a double laying in a night — in different nests. The female takes up to two hours to dig the hole to lay her eggs. Usually there are between 150 and 180 eggs — moist, slippery and warm and about the size of a ping-pong ball — to a hole.

The turtles' eyes run with tears to wash the sand away; and, as a rule, before dawn the female has struggled back to the water to disappear until she is ready to return to lay again.

One warm nights in January and February, Viliamu and his helpers come across 30, 40 or 50 turtles on a single island. They are delighted the turtles of Pue Aleipata are returning — that they are still coming home in good numbers.

While the sea turtles of the world are being slaughtered to extinction, Western Samoa's turtle population remains healthy.

GUIDE AND PHILOSOPHER EXHAM

AT HOME AT ARORANGI

Exham Winchman has an interesting philosophy; he believes that for the Cook Islands, the industries of tourism and primary production are closely tied. Without one, he reckons, it would be difficult for the other to survive. The jet aircraft that bring tourists to Rarotonga carry back with them fresh Cook Island produce. Without the tourists and the jets the produce would not make the market ... and without the produce for overseas markets, jet services could not be maintained.

Exham operates a unique tour on Rarotonga. He believes it is important to explain everything. He personally explains the uses of all his island's fruits, trees and bushes. He points out breadfruit trees, chestnut trees, mangoes, oranges, coconuts, pawpaw, taro, arrowroot, bananas and avacadoes — enough to feed families — all of which grow and fruit inside five years.

"Yes," sighs Exham, "a man has only to work five years of his life if he wants to. On these fruits you can raise pigs and chickens — and for the rest of your days you can have fresh eggs and pork with your fruit and vegetables. No, God didn't put the first man in a supermarket, he put him in a garden."

Exham points up at the high trees around his home to show visitors the source of Rarotongans' free kapok for their mattresses and pillows. Eyes widen as Exham reels off the native trees and plants in his Garden of Eden: Passion fruit, pawpaw, hibiscus, guavas, limes, mangoes, ginger, frangipani, mandarins, kava, bird of paradise, fruit salad anthurium, cocoa, sugar cane, custard apple and oranges.

Exham Winchman, a descendant



Exham Winchman and wife Maria in their Garden of Eden.

of the first missionary to the Cooks, Papehia, and of the first British consul, Richard Exham, was a grower before he entered the tourist business. He studied local history and flora and turned his Arorangi home into a miniature botanical gardens where he can now be found for a part of most days talking to visitors and fielding endless questions about the fruits and produces of the Cook Islands.

While his wife Maria feasts the guests on exotic fruits from the garden — avocado dip, pawpaw-flavoured scones, fried breadfruit, taro chips and chicken, Exham's education continues. Exham's theory is that the visitors who enjoy their island food will more likely buy those products when they see

them in the shops in their home countries.

"If people know what they are eating," explains Exham, they will tell other people about the new fruits they have found ... and that is good for agriculture here."

Exham Winchman says he started his tours after travelling to New Zealand. "As a tourist," he recalls, "nothing I saw meant anything unless I was told about it... you have got to know what things are and what they're used for."

So Exham's tour incorporates crop identification, visits to plantations and market gardens. People see what is grown, how local people earn their money.

Exham explains the Land Tenure System; he shows them how Cook Islanders live and how they cook. In all, he says, they're tasting a little slice of Cook Islands life. ☺



Cover: Little Fraser Palesoo, of Apia, Western Samoa, is the subject of the cover of this issue of TUSITALA. The picture, shot by Apia professional photographer Andy Forsgren, was taken at Mulino Beach near the Parliament Buildings.



Dear Passengers,
Taloa,
Welcome aboard. As general manager of Polynesian Airlines it is my pleasure to introduce you to the fifth issue of our inflight magazine, TUSITALA.

This issue, the spotlight is on the Cook Islands — one of our paradise destinations. TUSITALA editor Rob Lahood visited Rarotonga and among his stories we feature is a portrait of Cook Islands premier Tom Davis.

Also featured are stories on the Cooks' Constitution Week festivities, traditional dancing, shopping and a look at Cook Islands enterprises.

We hope you will enjoy your flight with Polynesian Airlines, and look forward to seeing you on board again soon.

Happy reading!

Taloa,
J.T. Betham
General Manager,
Polynesian Airlines

Publisher: **James S. Richards**
Editor: **Rob Lahood**
Art Director: **Frank Sinclair**
Manager: **Craig W. Strong**
Advertising: **Larry Hyde**
Production Manager: **Anne Taylor**
Distribution: **Kurtis James Sabahost**

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