



ROOTS cont'd

Dr. Walter Starck

Dr. Starck wore a black and white striped suit for over 10 years of marine research expeditions, during thousands of hours underwater over a wide geographic range - from the Great Barrier Reef, Vanuatu, New Caledonia, the Solomons and Papua New Guinea to New Zealand and beyond - and is convinced of its effectiveness. Testing the bio mimicry himself, his observations of shark responses include details such as:

"At Lord Howe on several occasions dozens of Galapagos Sharks (*Carcharhinus galapagensis*) surrounding divers in plain suits at close range immediately moved away when the banded suit appeared. On various occasions elsewhere, particularly aggressive Grey Reef Sharks (*Carcharhinus amblyrhynchos*) quickly dispersed when approached with the banded suit."

Gerry Allen, Dr. Starck's diving buddy at the time, journeyed with him to the Solomon Islands to conduct further tests, including what they affectionately call "the flasher experiment". As Allen described it, "Walt (Dr. Starck) got in the water with a coat over the striped suit and went down among the sharks. When they got too inquisitive Walt opened the coat and 'flashed' them. They got excited and immediately left him alone. It depends on the species of shark, but on that expedition we had compelling evidence that the striped suit worked."

As for the disruptive optical effect, Dr. Starck concurs that "Sharks have sophisticated sensory systems... A contrast enhancing mechanism in their visual system which enables them to see farther underwater than we can... Add to this a high contrast pattern which presents the appearance of a disjointed jumble of bits moving in strange ways and you greatly add to the confusion." Reference: Shark: Killer Tales from the Dangerous Depths by Robert Reid.

Dr. Starck realized decades ago that "the island peoples of the Pacific have lived in intimate relationship with the sea for thousands of years and know much about that realm we have yet to learn."

Anthropological insights

The Mimic Suits™ team met with the three chiefs of Ra Island to learn about the tribal sea snake dance, its origins and significance. A ritual they perform weekly to ward off sharks. Superstition plays a strong role in these indigenous cultures, where they believe they have been spared from shark attacks due to their reverence for the sea snake.

The sea snake legend, as they recounted to us in more detail, apparently began with parents who left their children a picnic while they went off for a banquet. They returned to find the children hungry. When asked why, the children explained that they had given their food to the sea snake. Angry, the parents killed the sea snake. But with no sea snake to ward off sharks, a shark appeared and started to eat all the fish in the lagoon. The parents regretted their violent act and realized it was wrong. They asked the sea snake spirit for forgiveness through this dance. A second sea snake appeared, which not only absolved them of their guilt, it drove away the shark.

On Ra Island, the natives consider the Nevet Neme rocks as the original birthplace of the sea snake and its ancestral home. Ironically, the island's distinctive shape is reminiscent of a shark, which the natives call Nabago, and is seen as a talisman bringing good luck.



We were honoured to earn the trust of the island chiefs, who granted us permission to visit the Reef Islands, known in their local language as Rowa and uninhabited since 1939. Here the dancers performed a kastom snake dance for the first time, as this is the birthplace of the ancestral male snake Neme Teyo, whereas Nevet Neme is the birthplace of the ancestral female sea snake Nema Taya. Incidentally, their offspring was the inspiration for strings of black and white shell money they call they call Nesem or Nowosem.

The sea snake dance is a native kastom they strongly believe in and take very seriously. To quote the chiefs, "The sea snake legend gave man the dance."

Black and white stripes

The dancers paint themselves in black and white stripes to mimic the poisonous sea snake, using a black clay they call Namalvae and a toxic white limestone they call Nevette. On their heads they place a green plant called Naphii, alluding to where the amphibious sea snake lays its eggs. They carry long sticks decorated with white feathers called Nilto from a male rooster. One feather signifies a chief, two feathers indicates someone of lesser standing and three feathers mean no special standing in their social hierarchy. The sticks are adorned with a toxic orange fig called Nowosisybe, symbolic of the sea snake's own toxicity. Like many indigenous males from Vanuatu, the dancers wear traditional clothing called Nambas, in this case made from palm bark.

While performing the dance, some of the men actually go into a trance-like state. In their mouths is a grass leaf called Nasas, which they clench in their teeth to keep the good spirits in, using it to growl while they dance to keep the bad spirits out. The dancers sing in an ancient language they call Nagatgat Tomotlap, named after their indigenous god Qat - a spirit they credit with creating the Banks Islands, night, death, women and marriage. There is no known written version of Qat. It is an oral Oceanic language. The etymological root of Qat is linked to secret initiations and ritual dances associated with ancestral spirits. Qat is officially learned only by men, who have to pass through 12 stages of meetings at various rendezvous points called Nahalgoi. The 12 stages are akin to a rite of passage, part of their selection process to become dancers.

Both the sea snake dance and dancers are called Neme. The dance is only performed by men and by boys as young as seven. Women are not even allowed to see the men prepare for the dance. There are several songs that comprise the ceremonial sea snake dance. The first song calls for the sea snake spirit and is called Meole. The second is the actual sea snake dance song which they play twice, called Revusreme. The third is called Sowme. It connects man with the sea snake and is also played twice. The fourth song is the farewell to the spirit and is called Gentemole.

Similar homages to the sea snake are performed through ritual dances on the surrounding islands of Mota Lava, Vanua Lava and Ureparapara, but Ra Island is considered the birthplace of the original sea snake and therefore the most authentic.

Other indigenous cultures in the Pacific

Snake pattern designs feature in the native folklore of numerous other Pacific island cultures, either painted or in a more permanent fashion as tattoos. An example is the Ngol tattoo from the Yap islands. Similar practices also appear in Samoa, Tonga and Fiji. In fact, the god of tattooing in Fiji is the snake god Degei. These tattoos were often seen on women, as well, since women were frequently the gatherers in what were once shark infested lagoons.