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The Piku Project

SAVING PAPUA NEW GUINEA'S ENDANGERED PIG-NOSED TURTLE

By Yolarnie Amepou

Seven tribes, seven languages, seven cultures. The fate of the Pig-Nosed Turtle (*Carettochelys insculpta*) living in the Kikori River lies in the hands of all the local people who own its habitat in southern Papua New Guinea.

Flowing southeast from the central ranges and lowland forests, the Kikori River drains into a mangrove-rich delta, which empties into the Gulf of Papua. The Rumu, Foroba, and Kasere tribes own the land upriver leading into the delta while the Kibiri, Porome, Kerewo, and Urama tribes own the land reaching from the delta to the coast. The Pig-Nosed Turtle, one of four freshwater species inhabiting the Kikori River, lives in the delta and travels to the sandbanks upriver to nest, laying two or three clutches every second year.

The harvesting of female turtles and their eggs has led to a drastic decline in the species population. The turtles cannot reproduce quickly enough to meet the demands of growing human consumption. In Kikori alone, the Pig-Nosed Turtle population has declined by nearly 60 percent since 1981. The loss of the Pig-Nosed Turtle in this region will not only mean the disappearance of this once global family of turtles, or even simply a loss of food and income for the people of Kikori. It will mean a loss of cultural identity.

Piku. Kaso-uwo. Watemui. Watemu. Uwo. Waema. The turtle is known by different names by different tribes along the river, and it pervades many legends, customs, and taboos. In the Goare village of the Kerewo tribe, for instance, women whose babies or toddlers have not yet walked are not allowed to eat the meat of Pig-Nosed Turtles; if they do, it is believed that their children will never stand, walk, or grow up.

One Rumu legend passed down for generations reflects the locals' intimate knowledge of the turtle's life cycle and nesting behavior. The story goes like this: A long, long time ago, there lived a young female *piku* named Matua. She lived all alone in a small creek and had

everything she wanted except for friends. One day, she decided to explore, following the fast flowing Kikori River all the way down to the delta. There, Matua met a handsome male *piku* named Mr. Kerewo, who warned her about swimming any farther into the open ocean. Night was falling, and Mr. Kerewo invited Matua to stay with him before turning back. A month went by, and Matua realized she was pregnant. She left the delta and swam home, laying her eggs on every sandbank on her way upriver.

It is when Pig-nosed Turtles leave the relative safety of the water to nest that they are most vulnerable. The turtle and its eggs are considered delicacies, and both are harvested during nesting season, which occurs in the drier months between September and February.

The first challenge in reversing a human-induced species decline is to admit there is a problem and accepting that extinction is likely without action. But how does one tell a people that an animal so integral to their past and present may not be part of their future?

I first encountered the Pig-Nosed Turtle in 2009, not on the lush banks of the Kikori River, but in a lecture hall at the University of Papua New Guinea. I was a third-year student majoring in marine biology, and I attended a lecture on the Piku Project almost by chance.

Carla Eisemberg, a biologist specializing in freshwater turtles, talked about responsibility, about taking ownership of our biodiversity. Sometimes you forgets the exact words a person uses, but the weight of what he or she says embeds itself so deeply in your consciousness,

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it stays with you forever. That presentation took less than an hour, but it would shape the rest of my life. I met my first Pig-Nosed Turtle in January 2012, working as a volunteer on Carla's project. At that moment, my life became intertwined with the turtle's struggle for existence, the story of an underdog fighting for survival amidst rapid development in Papua New Guinea. To understand the precarious position of the Pig-Nosed Turtle, one needs to look at the bigger picture of Papua New Guinea. Although it is a mere speck on the globe, comprising less than one percent of the planet's surface, the country contains up to seven percent of the earth's total biodiversity. The wide-ranging wildlife is mirrored in the nation's cultural diversity, which encompasses more than 800 indigenous languages and cultures. Of the seven million people inhabiting Papua New



Pig-Nosed Turtle
(*Carrettochelys insculpta*)

Guinea, more than 80 percent reside in rural areas. Most of the land is privately owned by families and clans, with less than ten percent belonging to the state.

Recently, population growth and the concentration of people in rural regions have put deadly pressure on our biological resources. Modern technology is making hunting and fishing grounds more accessible, as people now have outboard motors where they once used canoes and paddles. A 2005 study estimated that tens of thousands of tons of wildlife are consumed every year in Papua New Guinea, where plants and animals are harvested as food, hunted for sale, used to craft ornaments, and employed in village exchange ceremonies. This demand has devastated many of the country's iconic species, including the Blue Bird of Paradise, the Long-Beaked Echidna, all species

RANGE OF THE PIG-NOSED TURTLE



of tree kangaroo, all six species of marine turtles, and the Pig-Nosed Turtle.

Because we, the people of Papua New Guinea, are the greatest threat to our country's wildlife, conservation is impossible without our active participation.

Arthur Georges, an ecologist and professor at the University of Canberra, founded the Piku Project in 2006 to research turtles in the area and promote conservation in Kikori and Papua New Guinea at large. By using the Pig-Nosed Turtle as a flagship species, the project aims to achieve broader benefits for the plants and animals that share its habitat. Protecting the wildlife of Papua New Guinea involves everyone, and the Piku Project unites scientists, businesses, government agencies, non-government organizations, and local people to raise consciousness about our diminishing natural resources.

The Piku Project still faces many of the challenges it experienced a decade ago. It takes a long time to build trust within communities who initially suspect that the project must bring some hidden benefit to us—or a hidden cost to them. When outsiders enter an area, they are automatically eyed with suspicion. The Piku Project's members have had to prove, and must continue to prove, that we are not in Kikori to exploit it for personal gain.

Monitor Lizards present another threat to the survival of Pig-Nosed Turtles.



YOLARNE AMEFOU

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And of course there are a whole range of taboos that one inadvertently blunders through, relying on the goodwill of the locals to forgive and explain.

Then there is the alien concept of extinction itself. The disappearance of such a familiar, available animal

is almost incomprehensible at first, but community elders often have the long-term perspective to notice that harvests have been growing smaller and smaller. Following village meetings devoted to the numbers of turtles, locals will usually agree that a decline is occurring and something needs to be done. Village meetings have proven essential to the project, as has maintaining a long-term presence in the communities. Sustaining a consistent presence is logistically challenging, however. Traversing the 200-mile Kikori River and visiting more than 23 villages and settlements regularly is costly and difficult, but working with different tribes and clans means working fairly and having open communication with all.

Being a woman working in this region carries its own set of obstacles. Kikori society is patrilineal, meaning men own the land and make most of the decisions affecting it. Few women are respected as leaders; most are expected to marry young, have children, and take care of the house and extended family. A young woman like myself, working without a husband, away from home, is considered unconventional in the extreme. When I became a project leader in Kikori, I knew that I would be tested daily and would have to prove I was worth listening to and could be trusted. It's an ongoing challenge—one that is made easier by having a supportive team and help from other community leaders.

Regardless of gender, conservation workers are often seen as potential sources of income when they enter new regions. Landowners in some of our villages receive royalties from oil, gas, and logging companies they allow to work on their territory. When we approach them, hoping to carry out scientific research and conservation work, we are seen as another revenue stream and project leaders are often asked how much they will pay in order to move freely through the land. The Piku

Project hires landowners and community members as field assistants, and constantly supports the communities in taking ownership of their environment, and in working with others. Many different tribes are uniting for one cause: to save a turtle and protect the environment on which they all depend. Their environment is their life.

Education has been a core component of the Piku Project. Carla, Arthur, and other project members have taken an innovative approach to promoting community engagement and awareness by writing and publishing children's books with environmental themes, such as *The Adventures of Piggy on the Kikori River* (2008), a story about a Pig-Nosed Turtle. The Piku Project has also teamed up with Kikori children to produce a book and accompanying CDs based on Kikori and national radio programs about sustainability and conservation. The Piku Project has conducted workshops with local teachers, and their feedback has been instrumental in creating a teacher's resource book for educating Kikori students about their environment. Getting kids interested in Pig-Nosed Turtles is easy: they are impossibly cute.

Wau Creek, a lowland forest teeming with Death Adders (*Acanthophis*) and Brown Tree Snakes (*Boiga irregularis*), dazzling birds of paradise, amphibians and fish, is one of the Piku Project's greatest success stories. Located three hours from Kikori with an outboard motor, Wau Creek is outfitted with sandbanks ideally suited for the Pig-Nosed Turtles that travel upriver from the delta every year to nest.

Wau Creek belongs to the Rupahi clan and has traditionally served as their hunting and fishing grounds. The clan is settled in Waira Village, two hours away, and at Kikori, where there is better access to government services like health and education. The owners occasionally visit the creek on holidays, to collect sago palm starch for the family or to hunt and fish. Despite the area's history as a hunting ground, local landowners teamed up with the Piku Project to create the Wau Creek Pig-Nosed Turtle Protected Area.

Frank John, one of the brothers who owns Wau Creek, initiated the conservation and local management of Pig-Nosed Turtles there. Together, the Rupahi clan and the Piku Project built a research station on site, which is protected, operated, and maintained by Frank and boys from his clan. The local team records turtles and nests, human



BOTTOM: CARLA EISEMBERG / TOP: GARY AIDES

Top: Just a tiny portion of more than 2,400 Pig-Nosed Turtles confiscated in Hong Kong in 2014.

Above: Woman from Lalau selling eggs and Pig-Nosed Turtle meat in the Sirebi market, Kikori.



To compensate the clansmen, the Piku Project pays them for their work, and has also assisted with setting up a research station for visitors.

harvesting, as well as animal predation inside and outside Wau Creek. The protected area has successfully protected Pig-Nosed Turtles from human harvesting, but is facing a new challenge: predation from the ever efficient Monitor Lizard (*Varanus* sp.). The Monitor Lizard is responsible for more than 50 percent of nest predation every season.

The current challenge is making the Wau Creek Protected Area sustainable. Because those lands were hunting grounds, the Rupahi clan suffered an immediate loss of benefits in terms of Pig-Nosed Turtle meat and eggs as well as commercial logging. To compensate the clansmen, the Piku Project pays them for their work, and has also assisted with setting up a research station for visitors, who bring additional revenue into the area. The Piku Project aspires to make the Wau Creek Protected Area sustainable in the long-term by securing funding from local and national government.

The importance of Papua New Guinea's rich biodiversity is written into the young country's constitution: "We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations." The new strategy is to empower the people on the ground—the land-owners and the locals—and then support their initiatives.

The story of saving *piku* is still in its first few chapters. It involves a world changing force: a new ideology. Just as people can sweep through an environment and ravage its resources, we can reverse species decline and help humans in the process. Saving the Pig-Nosed Turtle in Kikori is not just about protecting the last remaining member of a globe-trotting turtle family, it is about saving a local fishery, traditional livelihoods, and an iconic species shared across native cultures. Saving *piku* is saving the world as we know it. 🌱

LEFT: YOLARNE AMEFOU

Above: Involving local communities in field research is a core component of the Piku Project, which relies on tribespeople of all ages to help monitor and protect Pig-Nosed Turtles.

Opposite: Children of Bhupal village in West Papua release Pig-Nosed Turtles in Maro River; 609 turtles were repatriated after being seized and then temporarily cared for at Kadoorie Farm and Botanic Gardens in Hong Kong.

