

Scientists Document Remarkable Flora and Fauna in the Enga highlands

Survey yields new species of plants, frogs and mammals

By Bruce Beehler

A team of Papua New Guinean and international field scientists have uncovered a trove of new and little-known species of plants and animals inhabiting the Mount Kaijende highlands in Enga Province, Papua New Guinea.

The discoveries during a three-week field survey in August and September 2005 included new species of plants, frogs, and mammals. In addition, the scientific team recorded other species of plants, mammals, birds, and frogs from Enga Province for the first time.

“Papua New Guinea is remarkable for its

richness of plants and animals, and many sites are under-surveyed, but Mount Kaijende highlands region is amazing in its abundance of previously undocumented flora and fauna.



Mammalogist Kris Helgen and field team, with mountain cuscus.. Photo: Bruce Beehler and team

It is something of a “Lost World,” said Stephen Richards, a herpetologist from the South Australian Museum and leader of the eight-person survey team.

The Mount Kaijende highlands is a rugged 800km² upland plateau studded with high peaks exceeding 3,500 meters. Although crisscrossed by traditional walking tracks and visited occasionally by hunters in search of game, the area is uninhabited and rich in wildlife.

Continue page 5

“Prosperity through sustainable biodiversity use and protection...*its now or never...*”
Voyagers without boundaries.”

By Wenceslaus Magun, Luanne Losi and Liz Wilson

Over the last four months in the lead up to the Pacific Island Forum leaders meeting in Port Moresby,

Continue page 4

Inside this issue:

Prosperity through sustainable biodiversity use and protection...	1,4, 6-8
Melanesia CBC Major Events for the next quarter	2
Milne Bay, PNG celebrates World Food Day	2
Save the rats!	3
Key Convention offers the Pacific opportunities	8-9
Milne Bay, PNG Vocational Teachers undergo in-service	10

Milne Bay, PNG celebrates World Food Day

By Jimmy Saoia

struggle to fight against hunger.

More than 850 million people around the world remain hungry. At the World Food Summit held in Rome in 1996 and again at the World Food Summit five years later in 2002, leaders vowed to reduce that number by half by 2015. Moreover, the United Nations Millennium Development Goals commit world leaders to reducing by half the proportion of people who suffer from hunger, while ensuring environmental sustainability.

Milne Bay celebrated WFD in style

In Milne Bay Province, Papua New Guinea, a crowd of well over 700 people participated in the World Food Day (WFD) celebrations. This included a total of 14 village groups from Divinai, Watunou, Bubuleta, Bou and various groups from the neighboring villages.

The Provincial Department of Agriculture and Livestock (PDAL), Oil Palm Incorporation Corporation (OPIC), Cocoa Coconut Institute of Papua New Guinea (CCIPNG), Provincial Aids Committee (PAC), Fresh Produce Development Agency (FPDA) and Conservation International – Milne Bay Community Based Coastal and Marine Conservation Project (CBC&MC– CI), and schools including – Watunou community, Divinai Primary, Bubuleta and Watunou elementary schools. Students from Rabaraba Vocational Center who were on field experience joined in to make this event one of the biggest ever celebrated in the province on such occasion.

These communities participated in activities ranging from preparing and displaying local dishes, showed off assorted fruit and nuts, through to conducting open-air educational awareness programs using posters and pamphlets. Music and traditional dancing with traditional dressing and choirs depicting the essence of the event, accompanied these activities as highlights of the day to drive home the message of this years WFD theme: *“Agriculture and Intercultural Dialogue”*.

The theme called for people of all races, creeds and walks of life to come together to share their experiences through dialogue, towards promoting sustainable agriculture development now and into the future and about their status of the



A family group from Divinai Village bagged the first prize for displaying some of the best products including a local dish. Photo: Jimmy Saoia

Awards and appreciation

Various organizations donated awards to appreciate the participating community groups, which included gardening tools, introduced vegetable and rice seeds, planting materials of recommended varieties and boxes of pencils. The Agriculture and Land Use program of the CBC and MC Project (CI) contributed more than K500 of basic gardening tools. Other contributors came from the Provincial DAL, with recommended food, while the local women donated a local delicious sago dish to the officials in appreciation for the event. The participants were also awarded certificates in recognition for taking part in this event.

Background Information.

World Food Day is an international event an initiative of the Food and Agriculture Organization (FAO) and sister organization, Telefood. It is aimed at alleviating and fighting hunger throughout the world. It is an International event that started in

1945 and is observed annually with different theme decided by the FAO.

Over the course of history, the intercultural development and movement of crops and livestock breeds revolutionized diets and reduced poverty.

Few examples:

- Asia domesticated rice – today the staple food for over half the world’s population and sugar cane, a major cash crop in many regions;
- Africa gave the world’s coffee – now a popular beverage worldwide and a mainstay of Latin American agriculture;
- The introduction of the camel to Africa from Arabia allowed people to live and travel in more extreme environments and contributed meat and milk to diets.

In PNG we try to focus on the:

- Development of tolerant/resistant varieties to certain conditions and high yielding varieties to encourage production quantity and quality.
- Introduce improved field practices through agriculture or other related organizations;
- Encourage informal exchange within individuals or communities in the their own local communities and areas. Local knowledge plays a significant role in this regard, however it is overlooked a lot of times.

All these could not have happened without a collective effort by everyone involved in sharing their experiences, knowledge and skills.

Melanesia CBC MAJOR EVENTS for the next quarter

March 6-12: Center for Biodiversity Conservation Meeting, Launching of the Nature of Conservation International, CBC Management Team Meeting, Technical Team Meeting (a week before and after) – to be held in Alotau , Milne Bay Province, Papua New Guinea

Save the rats!

By Roger James

Most of us don't really like rats. We think of them as dirty, disease carrying vermin that steal our sweet potatoes and nibble our hair and feet through mosquito nets until we wake up and shout, "Ae!" We even have solid proof that the flora and fauna of many Pacific Islands have been destroyed by the depredations of introduced rats, especially the Ship Rat (*Rattus rattus*).

But not all rats are bad. There are some really special rats in Melanesia, and many are critically endangered.

A critically endangered species is one that faces an extremely high chance of extinction. These are the species we know are at the crest of the extinction wave.

Scientists who know the value of euphemisms refer to rats as 'murids' because they belong to the family Muridae in the order Rodentia. There are over 1300 murid species worldwide. In the 2004 IUCN Red List, 50 of these were listed as critically endangered, and of these 7 were Melanesian species.

However, as is typical of New Guinea Red Listed species, the decision to list species as critically endangered was based on very limited data, and in the 2005 Global Mammal Assessment for the region, things changed significantly. Of the original 7 critically endangered species which were mostly New Guinea mountain species, 2 were relegated to data deficient, 2 to least concern, 1 to near threatened, and 1 to endangered. Only one, the King Rat (*Uromys rex*) of Guadalcanal in Solomon Islands, retained its critically endangered status. Three new species were listed as critically endangered, all island species: *Uromys boeadii* of Biak island and *Uromys emmae* of Owi island in Cenderawasih Bay, Papua; and *Solomys*



Solomys sapientis, the Isabel Giant Rat. The genus *Solomys* is restricted to the Solomons archipelago. This species is listed as endemic to Isabel island, in the Solomon Islands, but may have also occurred on Malaita island in the past. Either this species, or *Solomys salamonis*, may be the mysterious murid of Makira island. Photo: Mike McCoy



Uromys rex, the King Rat or Siru of Guadalcanal. Previously there were 3 murids endemic to the island of Guadalcanal. This is the only species remaining, and is Critically Endangered. Photo: Mike McCoy

Solomys ponceleti of Choiseul island in Solomon Islands, and Bougainville island in PNG.

Two murids from the Solomon Islands, *Uromys imperator* and *Uromys porculus*, are already listed as extinct. The cause of extinction is believed to be wild cats introduced during the British colonial era. Unfortunately, as with many poorly conceived biological control experiments, the nuisance species that were supposed to be controlled are still as common as ... rats! Instead, the unique native species, which had not evolved defensive behaviours to survive mammalian predators like cats, were decimated.

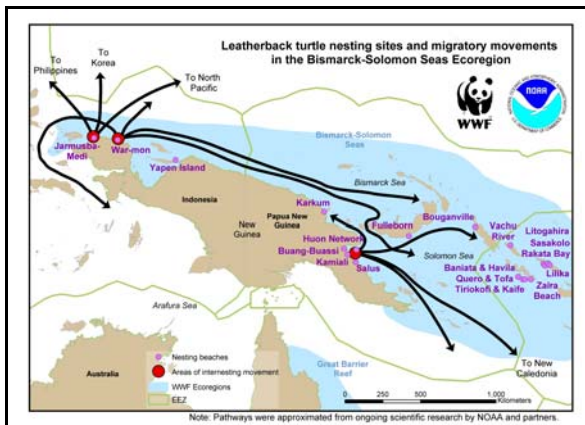
Patrick Pikacha, under a BP conservation grant, has been working on *Solomys ponceleti* in Choiseul. His analysis of local knowledge indicates that most people know of the species by its name and the knowledge that it occurred in lowland forest, but very few people have seen it. This pattern of knowledge without recent observations supports the hypothesis of recent decline.

Tanya Leary is undertaking a review of Melanesian murids, and in doing so should clarify the known locations of most species, and provide up to date information on which species were in fact collected.

On Makira, where CI had a conservation project for some years in the 1990s, the name of a native murid was obtained by Roger James. The name, *Kiki koruvaganagai* means "rat that lives in burrows at the bottom of trees". Local residents described it as being as big as a possum, but that it had mostly disappeared since wild cats were introduced. One dead specimen was brought in by a local dog at Hagaehu village in 1998, but unfortunately was destroyed. This species remains to be identified, and may in turn prove to be yet another critically endangered island species.

“Prosperity through sustainable biodiversity use and protection...its now or never... Voyagers without boundaries.”

From page 1 Papua New Guinea (PNG) October 24-26, an initiative was conducted collaboratively to create a greater awareness of the plight of the Western Pacific Leatherback Turtle and other marine turtle species, to acknowledge the commitment of the communities whose beaches are home to the migrating species and to celebrate the tri-national partnership by the three governments to protect this great marine voyager. This effort was launched by WWF, CI, SeaWeb, Tetepare Descendants' Association, Village Development Trust, Kamiali Integrated Conservation Development Programme, Saubeba and Warmandi communities, Media Council of PNG, and the Governments of Indonesia, PNG and Solomon Islands.



Map of the Bismark Solomon Seas Ecoregion covering the hotspots for the western Pacific leatherback turtle: Map supplied by WWF

Justin Kili the former General Manager for Word Publishing and the trainer for the spots production dedicated his time to do the voice over. The radio spots were amongst other awareness activities including a banner, production and distribution of 80 t-shirts with the message: “36th Pacific Islands Forum Leaders Meeting”. The theme of the spots was “Prosperity through sustainable biodiversity use and protection...it's now or never. Voyagers without boundaries.”

Pacific Islands Forum Leaders

“Solwara Nius” Promotes Leatherback Turtle Awareness On Radio

The “Solwara Nius” a special radio program initiated by the participants at the two-day Radio Writing workshop on Motupore Island on the 1st and 2nd of August 2005 was finally produced and aired to protect the critically endangered Western Pacific Leatherback Turtle from extinction within the Bismark-Solomon Seas Ecoregion.

The Radio Spots were aired three weeks after the Pacific Island Forum meeting from 27th October to 5th of November. The Pacific Island Forum Side Event was held on the 26th of October at the Crowne Plaza hotel, Port Moresby, PNG.

Seaweb, in conjunction with WWF and the Media Council of Papua New Guinea, sponsored 10 (60-second) spots, which were aired on Nau FM, Yumi FM, NBC and FM central in Papua New Guinea.

FM Central aired 10 paid spots and 15 bonus spots, Kalang Advertising Ltd. aired 11 paid spots, NBC 15 paid spots and 15 bonus spots, Nau FM 10 paid spots and 22 bonus spots, Yumi FM 10 paid spots and 22 bonus spots whilst PNGFM Limited did the production including voicing, editing and mixing.

meeting

A special presentation held on the 26th of October during the Council for the Regional Organisations of the Pacific (CROP) Segment of the Pacific Islands Forum (PIF) Leaders Summit in Port Moresby, PNG, saw the Governments of Indonesia, Papua New Guinea and Solomon Islands making a commitment to develop a tri-national partnership focused on conserving the Western Pacific Leatherback Turtle within the Bismark Solomon Seas Ecoregion.

During this presentation leadership certificates were presented to the respective community representatives from the principal nesting beaches of Jamursba Medi, Papua Province of Indonesia, Huon Gulf, of Morobe Province in PNG, and Tetepare, of Western Province in the Solomon Islands in acknowledgement of their commitment.



Department of Environment and Conservation staff Miriam Philip, now WWF's Marine Program Manager scanning a leatherback in Kamiali, Lae, PNG using a Passive Integrated Transmitter (PIT) Scanner Photo: Vagi Rei

The presentation ceremony was opened by the Hon. William Duma, Papua New Guinea's Minister for Environment and Conservation who said: “On behalf of my Government I express our warm congratulations to these communities to have met the criteria for the award and hence being accorded a high profile international recognition on this occasion.”

He further assured the Chair of this PIF-CROP Segment that: “My Ministry of Environment and Conservation will be following the developments of these items with keen interest and to action appropriately the undertakings that may emerge from the PIF in the near future.”

Continue page 6

Scientists Document Remarkable Flora and Fauna in the Enga highlands

From page 1 It features montane forests, highland lakes, alpine grasslands and elfin woodlands, with striking scenic beauty. It also serves as an important rainfall catchment for a series of populous valleys in Enga and Southern Highlands Province.

The field survey sought to generate comprehensive species lists for plants, birds, mammals, and frogs. The effort was collaboration between Conservation International's Rapid Assessment Program, PNG's Department of Environment. The survey was sponsored by the Environment Department of Porgera Joint Venture mining operation, which is majority owned and managed by Placer Dome.

The conservation significance of the Mount Kaijende highlands is considerable. Gaikovina Kula, Executive Director for Conservation International's Melanesia Center for Biodiversity Conservation remarked: "I visited the Mount Kaijende highlands in the 1980s with the Department of Environment and Conservation, and at that time noted what a remarkable natural resource it was. Today, this represents an important natural ecosystem that should be protected by the local communities that own it. It possesses natural wealth that will benefit these communities for decades to come."

Meanwhile, the Minister for Environment and Conservation, Mr. William Duma said PNG's rich wealth of biodiversity attracts a lot of international interest from donors including NGOs, multilateral agencies, bilateral agreements and occasionally the private sector.

He expressed gratitude towards the Environment Department of Porgera Joint Venture mining operation and Placer Dome in playing a leading role in these latest remarkable discoveries.

Mr. Duma further congratulated all those who have been involved in one way or another and especially Conservation International for their continued work in protecting and promoting PNG's rich biodiversity.

Findings of particular interest include:

- More than 600 species collected, and at least two new woody species identified;
- The occurrence of 25 mammal species in the Porgera area - more than doubling the number previously known

from Enga Province. Many of New Guinea's most unusual mammals were found to occur in the region, including the Long-fingered Triok (*Dactylonax palpator*) - a black-and-white striped possum that uses its unusually long and spindly fingers to extract insects from the bark of dead trees, and the One-toothed Moss Mouse (*Mayermys ellermani*), the only rodent in the world that has just a single molar on each side of the jaw;

- The discovery of many rare mammals occur in the area including three types of kangaroo - Doria's Tree Kangaroo (*Dendrolagus dorianus*), the Small Dorcopsis (*Dorcopsulus vanheurni*), a kind of mountain wallaby), and the Subalpine Wallaby (*Thylogale calabyi*, also called (*Calaby's Pademelon*).

The presence of so many kangaroos in one area is a sign of a largely intact mammal fauna not yet degraded by over-hunting. Other rare mammals found included the

Giluwe Rat (*Rattus giluwensis*), a small, round, golden-brown rodent that resembles a hamster and was previously thought to occur only on Mt. Giluwe;

- Studies of bones recovered in these same grasslands suggest that a new species of striped bandicoot (genus *Microperoryctes*) also occurs in the area, but this animal has not yet been captured alive or photographed;

- Another jawbone discovered during the survey revealed that the Subalpine Giant-Rat (*Mallomys istapantap*), one of New Guinea's most elusive rodents and perhaps

the world's largest rat (weighing up to two kilograms) also lives in the area;

- Sixteen frog species found included an attractive tree frog (*Litoria becki*) that was previously known only from high elevations on Mt. Wilhelm and Mt. Giluwe, and another frog (genus *Callulops*) that appears to be a species previously known only from a single museum specimen; and
- Among birds, the Long-bearded Melidectes (*Melidectes princeps*) was recorded for the first time from Enga Province, and the Ribbon-tailed Astrapia (*Astrapia mayeri*) was found to be common and widespread at elevations considerably lower than previously known.



Small frog, *Aphantophryne* species – a new species from Mt. Kaijende highlands. Photo: Bruce Beehler and team

This biodiversity survey was conducted with support from Porgera Joint Venture, with the ultimate goal of establishing a conservation area in Enga Province as an environmental offset to the impact of the Porgera mine.

“Prosperity through sustainable biodiversity use and protection...its now or never... Voyagers without boundaries.”

From page 4 In his speech to those present at this special occasion the Ambassador of the Republic of Indonesia to Papua New Guinea, H.E. Mr. J.R.G. Djopaari said: “Today as we all witness together, Indonesia is working hard together with PNG and Solomon Islands in an effort to build a special partnership to conserve and manage the Western Pacific Leatherback Turtle Nesting Sites, Feeding Areas and Migratory Routes.



“As reported by our colleagues from the PNG DEC, we are devising a Tri-National Partnership that is hoped to boost conservation and management efforts in the three countries for the Western Pacific Leatherback Turtles. The partnership which is in its final stage to be formally proclaimed by Indonesia, PNG and Solomon Islands will mark a novel approach of how governments could respond positively to the challenges of conservation efforts.”

Mr. Mathias Taro, Solomon Islands Minister of Fisheries and Marine Resources said: “It is with great pleasure that, I, on behalf of the peoples and government of Solomon Islands, commit to a partnership with the governments of Indonesia and Papua New Guinea, towards the conservation and management of Western Pacific Leatherback Turtles, with stakeholders of the Bismarck Solomon Seas Ecoregion programme.”

He further made an undertaking saying: “As an initial sign of our commitment, the Solomon Islands government has accepted the chairmanship of the BSSE Tri national Prepcom, which will be held in Honiara in February 2006.”

Lastly, Dr. Navu Kwapena representing the Papua New Guinea Government said: “The PNG Department of Environment and Conservation is committed to the 4th National Goal and Directive Principle therefore is willing to work closely with Indonesia, Solomon Islands and partners to further strengthen the development of the Tri Nation Expression of commitment to conservation and management of the Western Pacific Leatherback Turtles. The PNG Department of Environment and Conservation in principal endorses the Tri-National statement that was a major outcome of the Preparatory Committee meeting that was held on the 21st – 22nd of October 2005 here in Port Moresby.”

Coinciding with the commitment made by the three governments, WWF and partners also acknowledged the leadership of those communities that have “willingly set aside areas within their customary coastal areas and waters for the nesting and nurturing of the critically endangered Western Pacific

Leatherback Turtle populations.” At least 40% of known beaches in the BSSE fall under this commitment and includes the beaches in Indonesia, Papua (Jamursba Medi and Warmon), Papua New Guinea (Kamiali and the greater Huon coast) and Solomon Islands (Tetepare, Rendova and Isabelle Islands) that support the largest populations of nesting female Western Pacific leatherbacks.

WWF Director General Designate Jim Leape presenting WWF leadership award to Levi Ambio from Kamiali ICDP Photo: WWF staff

WWF leadership awards were presented by Mr. Jim Leape, WWF Director General Designate and Ms. Liz Mclellan, WWF Asia Pacific Turtle Coordinator to Mr. Demianus

Yesawan and Mr. Benyamitus Yessa from Saubeba and Warmandi, Sorong district representing Papua, Indonesia, Mr. Philemon Tomala and Mr. Gassa Zibo (Huon Leatherback Turtle Network) and Mr. Levi Ambio and Mr. Colin Maru, (Kamiali Integrated Coastal Development Group) from Papua New Guinea and Solomon Islands (Tetepare Descendants Association) represented by community delegates Mr. Kennedy Soapi (Tetepare Island community) and Mr. George Hite (Baniata community).

“This partnership agreement covers approximately 2.5 million sq. km of coastal areas and waters of this region with specific attention to inter-nesting areas comprising of an estimated 5,95331.41 sq. km of which currently only 2486 sq. km has some form of management,” said Liz Wilson, WWF Bismarck Solomon Seas ecoregion coordinator.

“Given the scope and complexities of this region, the implementation plan for this partnership will need the ongoing support from a wide range of partners such as Conservation International, The Nature Conservancy, National Fisheries Authority, Secretariat for the Pacific Regional Environment Programme, Western Pacific Regional Fisheries Management Council, National Oceanic and Atmospheric Administration, the communities and neighbouring Governments and this is an invitation for interested donors and new partners to come onboard and be part of this exciting initiative,” she said.

Concluding remarks were made by Jim Leape, WWF International’s Director General designate who said: “Protecting the Bismarck and Solomon Seas Seascape is globally significant for a number of ecosystems and species, ranging from coral reefs to migratory species such as tuna and whales. The governments and communities of Papua New Guinea, Solomon Islands and Papua Indonesia are to be congratulated for this tri-national partnership that will protect this global treasure, the Western Pacific Leatherback Turtle.

Continue page 7



“Prosperity through sustainable biodiversity use and protection...its now or never... Voyagers without boundaries.”

From page 6 Mr. Gai Kula, Executive Director for the Melanesia CBC, Conservation International said: “There is a need for long term funding for those communities that will protect the sites for the protection of the sea turtle species and to increase the capacity of the marine/landowners at these sites. He added: “Policy and laws at regional and national levels need to ensure that the right fishing gears are used in waters where this species passes through.”



Leatherback turtle laying eggs © WWF Cannon_Martin Harvey

ried out by Dr. Norman Quinn but he did not continue due to lack of funds.

WWF Indonesia Leatherback Turtle Program Leader Ms. Creusa Hitipeuw said that she would like to see governments agree to look after endangered species, migratory routes and share knowledge between countries. The same turtles travel between different countries along the same routes.

“Voices from the field”

Meanwhile, Department of Environment and Conservation (PNG Government) Marine Officer Vagi Rei said: “Local people need to be educated to look after Leatherback Turtles, which are an endangered species.” The Leatherback Turtle project lead scientist said about 110 turtles had been tagged over the last five years.

He explained that two conservation areas (Kamiali Wildlife Management Area and Labu) had been established in the Huon Gulf in Morobe Province.

He added that the department staff has trained 10 village leaders to carry out awareness programs within their communities. These leaders in turn train others in their villages. This has reduced the number of turtles being harvested.

“We have reduced (turtle) egg selling at the Lae (PNG) market at the moment. It’s local people who work in the beach,” he said.

He also said tourists would come once conservation areas are set aside for turtles to come ashore and lay eggs.

Mr. Vagi urged anyone catching tagged turtles to release them back to the sea, pointing out that it is against the law to catch tagged turtle. He further called on the government to give funding towards recruitment and training programs for university graduates to conduct research, create awareness and work hard to preserve endangered species like the Leatherback Turtle.

“At the moment graduating students want to become lawyers, accountants, doctors and engineers and want to make money quickly.

“Nobody wants to be patient and conduct research,” said Mr. Rei, the only officer with DEC working hard to conserve turtles.

Mr. Rei said the PNG government only started studying the Leatherback Turtles in 1999. The original research was car-

She explained that they had worked for a decade to stop poaching. They established Jermusba Medi, which is a large nesting site and two years ago set up Warmon, another nesting site. Ms. Hitipeuw said governments must set aside incentive based projects for people to protect their environment.

“The government must also support us with funding. We need to expand and manage several sites,” she said.

She said WWF has signed an agreement with Forestry Conservation and they were doing good work together. The government also gives them park rangers to help them work. She wants leaders at the Pacific Islands leaders Forum in Port Moresby, PNG to look at ways to help increase the number of Leatherback Turtles in the region. “These could be done through laws and conservation sites funded by the government,” she stressed.

Next Steps

As support to the communities who have set aside their beaches for turtle conservation, WWF PNG has given Kamiali Integrated Conservation Development Programme and the Huon Coast Leatherback Turtle Network in PNG a grant of PGK11,000 each for the turtle research and monitoring work, which they are undertaking. The grant has been made possible from the WWF Australia International Fund – through the Bismarck Solomon Seas Ecoregion Programme. This grant will help the communities to conduct training workshop, carry out actual monitoring and research and data collection and carry out awareness campaign during the upcoming nesting season. A similar grant has been given to the Tetepare Descendants Association in the Solomon Islands engaged with turtle conservation.

Another activity, which WWF has undertaken, is to work closely with NFA and DEC on translating a brochure from English to Pidgin. The brochure is titled ‘Catch Fish Not Turtles using Longlines.’ This brochure is hoped to be educational for the local fishermen and others who involved in longline fishing.

During the February meeting hosted by the Solomon Islands Government in 2006, an

Continue page 8



Key Convention offers the Pacific opportunities

From page 9 The biodiversity of the Pacific region is recognized as being globally significant from both a terrestrial and a marine perspective. However, the biodiversity of the Pacific is also very highly threatened. Extinction rates in the region, especially for birds and land-snails, are amongst the highest in the world. Less than 30% of the forest cover remains in a natural state and what is left is being removed at up to 4% per annum on some islands. Furthermore, the Pacific has more globally threatened species per capita than any other region, including at least 858 species with a high probability of extinction in the medium term future.

Pacific islanders remain highly dependent on biological resources and healthy ecosystems for survival. Fishing and agriculture are still the mainstays of the economies of most PICTs. The fisheries industry alone contributes approximately 11% of the GDP of all PICTs. Most Pacific islanders still rely on biological resources for housing, traditional medicines, handicraft production and food.

The major threats to Pacific biodiversity are human-induced

and include invasive species, habitat alteration and loss, destructive harvest techniques and the over-exploitation of natural resources. Invasive species and habitat degradation are the two major threats affecting three quarters of all threatened species. The impact of extreme natural events such as cyclones, floods, drought and fire may also be significant at times and may also be influenced by man. The future impact of climate change and sea level rise is uncertain at this stage but could be significant, especially on the low-lying islands and atolls, which could disappear completely.



Ribbon-tailed Astrapia, *Astrapia mayeri*, the most common bird of paradise in the Mount Kaijende highlands. Photo: Bruce Beehler and team



“Prosperity through sustainable biodiversity use and protection...its now or never... Voyagers without boundaries.”

From page 7 implementation programme will be developed focusing on management strategies for migratory routes and key corridors, sustainable fisheries practices, community capacity building, aligning of national, regional and internal policies and coordinating mechanisms for this partnership. This will link in very nicely with the launch of the Year of the Sea Turtle in 2006 facilitated by the regional turtle programmes of SPREP and IOSEA (Indian Ocean and South East Asia) Memorandum on sea turtles.



Villagers and technical officers deploying a transmitter on a leatherback turtle in Papua Province of Indonesia. Photo: WWF staff

fund conservation projects and recruit technical experts to help conserve Leatherback Turtle in the Western Pacific region.

They hope to have the PIF leaders support this proposal and get these governments to fund several conservation sites to be selected, laws to be enacted and Leatherback Turtles given chance to increase in numbers. They would also like leaders throughout the Pacific region to declare areas for turtles when they migrate for feeding and breeding.

There is a great opportunity to draw on the strengths of the stakeholders in PNG and SI with the revival of the National Biodiversity Strategy Action Plans being currently discussed through national workshops being held and are about to be held in the two countries.

Concluding words...

DEC, WWF, Conservation International (CI) and non-governmental organisations have worked hard to bring together a proposal for the government of the three countries to

This campaign was made possible with support from WWF, CI, SeaWeb, Tetepare Descendants' Association, Village Development Trust, Kamiali Integrated Conservation Development Programme, communities and the Provincial Government of Sorong, Papua, Indonesia, Media Council PNG, and the Governments of Indonesia, PNG and the Solomon Islands.

Luanne Losi, WWF PNG Program Marine Officer, and Liz Wilson WWF Bismark Solomon Seas Ecoregion Coordinator



Key Convention offers the Pacific opportunities

Pacific island leaders and those attending the Pacific Island Forum Leaders Meeting in Papua New Guinea were called to take action to reduce biodiversity loss in Pacific island countries if sustainable development objectives are to be achieved.

“All of us rely on biodiversity, directly or indirectly for our health and welfare. We have to ensure that biodiversity will be available for us and for all future generations,” says Ms. Kate Brown, Action Strategy Adviser with the Secretariat of the Pacific Regional Environment Programme (SPREP).

“The Convention on Biological Diversity’s new Island Biodiversity Programme of Work is an important opportunity for all Pacific islanders. In fact it has been developed with strong support from Pacific island countries.”

Fourteen Pacific countries are now signatories to the Convention on Biological Diversity that has been ratified by 187 nations. Other Pacific states are in varying stages of implementing related obligations and priorities.

The programme offers the ways to deal with biodiversity issues in an integrated way. It also encourages new political and ecological partnerships to be formed with other countries and islands outside the region such as Indonesia, Japan and India.

“It recognizes the uniqueness of island countries, and acknowledges the need to help reverse the loss of biodiversity currently facing the region,” Ms. Brown said.

“Island biodiversity underpins sustainable development, culture and livelihoods. At the Mauritius International Meeting in January this year the Pacific countries asked for the implementation of a Programme of Work on island biodiversity.”

The region’s increasingly limited land area, unique species, and significant coastal and marine biodiversity were widely acknowledged, but much needed to be done to check the many threats now being seen and felt on many island ecosystems.

“As a region we have to encourage the Global Environmental Facility to allocate specific funding to this Programme of Work so that Pacific countries can begin to implement it. It needs political support at the highest levels as well as increasing cooperation between regional organizations and the support of NGOs and communities across the region,” says Ms. Brown.



Wattled Ploughbill, rare mountain forest bird of the Mount Kaijende Highlands: Photo Bruce Beehler and team

She believes the programme will enable more avenues to check ongoing biodiversity loss, and support Pacific national biodiversity strategies.

Background information

Island Biodiversity Programme of Work

This programme provides:

- Recognition that island biodiversity underpins sustainable development, culture and livelihoods. The PoW is a special platform for global support for the conservation and sustainable use of island biodiversity.

This was called for by heads of Government and Ministers in Mauritius and identified as a priority in the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (SIDS);

- Alignment to regional priorities as identified in the Action Strategy for Nature Conservation, SPREP’s Action Plan for Managing the Environment and national priorities as identified in countries’ National Biodiversity Strategies and Action Plans;
- A framework to guide GEF allocations in support of island biodiversity; and
- A mechanism to help islands deal with their obligations under the CBD in an integrated way and connects SIDS with ALL islands allowing new political and ecological connections and partnerships to be formed (e.g. with Japan, Indonesia, India etc.).

Although this programme of work addresses island ecosystems collectively, it places emphasis on oceanic islands and particularly on small island developing states (SIDS) because these systems are often perceived to be the most at risk. In particular, this programme of work responds to the call made by SIDS to address island biodiversity under the Convention on Biological Diversity in a manner that responds to the unique characteristics of SIDS and to threats related to climate change, land degradation and their particular vulnerabilities.

It has sought to avoid duplication with existing thematic work programmes and other existing initiatives of the Convention on Biological Diversity

Island Biodiversity in the Pacific

Biodiversity – the totality of living things - and the ecological processes that bind them, underpin Pacific lives and livelihoods to a greater extent than in most regions of the world. Better integration of efforts to maintain intact ecological systems into the widest range of decision-making leads to benefits across all sectors as well as protecting the treasure house of globally unique species held in the Pacific.

Milne Bay, PNG Vocational Teachers undergo in-service



CONSERVATION
INTERNATIONAL

CONSERVATION INTERNATIONAL
MELANESIA CENTER FOR BIODIVERSITY
CONSERVATION

1919 M Street, NW, Suite #600
Washington, DC 20036

Phone: (202) 912-1343
Fax: (202) 912-1046

Email: bbeehler@conservation.org

FOR MORE INFORMATION ABOUT THE
MELANESIA CBC, PLEASE VISIT OUR
WEBSITE:
WWW.CIMELANESIA.ORG.PG



fishing syllabus “Fishing For The Future,” Teachers’ Guide for Milne Bay Province as well as other educational matters.

The occasion also marked the launching of the recently published *Fishing For The Future* teachers guide book, developed for vocational and secondary schools of Milne Bay and PNG.

Fishing for the Future is a Teacher’s Guide produced by CI in collaboration with the National Department of Education and Milne Bay Provincial Government.

This guide book was produced to revise the current Vocational School Syllabus where a module has been developed for marine conservation and management issues. The objective of the module were to:

- Strengthen environmental education;
- Raise awareness for marine resource management and conservation to support sustainable use of these resources;
- Help integrate simple scientific monitoring concepts into local management initiatives; and
- Equip students with basic marine resource management principles for application to their local areas.

This reform was developed to prepare students through the formal education system to meet their needs at the village level, formal employment or for continuation of their education.

By John Gonapa

A total of fifty teachers and their technical staff representing eight Technical Vocational Education Training (TVET) institutions, seven vocational schools, and one technical high school attended a one week National In-service Training (NIST) at the Kuiuaro Technical High School, in Milne



Technical staff in Milne Bay Province, PNG attending the one week TVET in-service: Photo: John Gonapa

Bay PNG held on the 3rd to the 7th of October, with the theme: “Effective and productive implementation for prosperity through self-reliance through school curriculum.”

The NIST was coordinated and facilitated by the Community Based Coastal and Marine Conservation

Project (CBC and MCP) under its Education Program’s output for in-serving teachers as planned for the year 2005.

The NIST fell in line with the National Education Calendar for Vocational Teachers In-service plan, which paved the way for the joint partnership in-service between Conservation International and the Milne Bay Provincial Education Division.

There were also five resource officers from CI, TVET division in Port Moresby, PNG and the Regional Vocational Inspector for Milne Bay and Oro Provinces who attended the in-service as co-facilitators.

The NIST was funded by CI whose staff were also involved in making reforms (changes and approaches) in the curriculum for the vocational/technical schools which included the syllabus for the schools in Vocational/Technical institutions.

All the facilitators did extremely well in their presentations and were able to achieve their aims and objectives. The participants were also compounded with activities and exercises throughout the in-service week, many of whom have expressed satisfaction in attaining new skills and knowledge from the facilitators.

The focus of the in-service was based on the vocational/technical schools curriculum. It was geared towards the immediate shift on the new curriculum by the Department of Education to be introduced and be implemented in TVET institutions as part of the National Education plan between now and 2014.

The main components of the in-service were Competent Base Training and Assessment (CBT and A), Short Course, Pre Employment Technical Training (PETT) and the new

