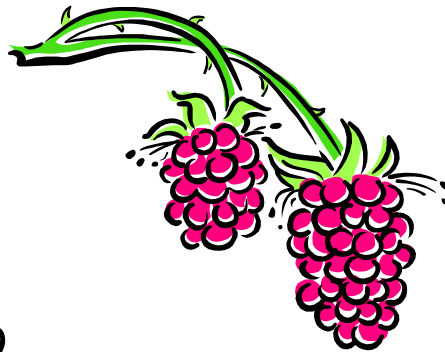


# The New Guinea Tropical Ecology and Biodiversity Digest



October 1999

Issue 8

Please send all contributions and corrections to either the mail, fax, or email address listed below.

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This issue we want to thank the Wildlife Conservation Society for providing financial support -- this is much appreciated!

If you have internet access, the digest is available on the web at: <http://www.wcs.org/png.html>

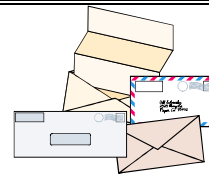
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If you need back issues of the Digest, please let us know and we will mail them to you (or you can download them from the web site).

We try to get a new issue out every six months so the information stays up-to-date. Please don't forget to send in any information you can contribute!

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## Editorials and Letters



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Anybody want to expound on his or her thoughts or solicit opinions about something? Please send in anything that you would like to see appear here! Opinions are from the author and don't necessarily reflect those of the editor or WCS.

### Plane Wrecks in NG

from Will Betz

The following excerpt is from an article entitled "Finding My Father" in the Melbourne Age (19 November 1998) and was written by Claire Miller:

"Denise Ryan grew up under the watchful eye and impish grin of her father, Denis John 'Jack' Unkles. She has no memory of him but he was always there, looking out with twinkling eyes and that grin from a photograph that remained on display throughout her childhood...all that Denise Ryan and the rest of her family knew for sure was that on 15 April

1944 her father, a dairy farmer-turned-pilot from Sale, and Lieutenant John Fetherstonehaugh, the son of a prominent Western District family, took off for a routine reconnaissance flight from a base in Lae in north-eastern PNG, and were never seen again...When she was older and trying to make sense of the world Denise told herself her dad was probably shot down by the Japanese in Papua New Guinea and that his plane fell into the sea. It was as likely a scenario as any other...Then one Sunday evening last month, Denise's phone

rang. It was her brother's wife Kerin. Denise expected she wanted to talk about family Christmas arrangements. Her sister-in-law came straight to the point: 'They have found John Unkles' aircraft.' ... It was a mystery solved by chance. An American anthropologist, Will Betz, was studying tree climbing kangaroos and other fauna in the PNG highlands about 80 kilometers from Lae when villagers from a remote hamlet guided him to the wreckage of a plane resting deep in a ravine. They told him their elders remembered burying two men...Betz reported the plane's registration number to authorities [Richard Leahy of Kiunga Aviation] in Lae, who sent it to Canberra for identification. It was indeed Jack Unkles' Wirraway aircraft...A helipad has been established and an expedition is planned soon...Denise says if her father's remains are found, they will be exhumed and reburied in the Lae war cemetery. 'I was asked, will you bring him back to Australia, and my immediate response was no. No, he was with other young men, that is where he has always been and that is where he should stay.' "

This story obviously has nothing to do with New Guinea conservation. I have submitted it to the Digest because I feel that we (field biologists) are one of the few groups that are in a position to find and report the location of these aircraft. It's been 53 years since the end of the war. As the village elders die, often their knowledge of these aircraft goes with them. In the case of the Wirraway, only 2 elders (both over 65) were left who remembered the location of the

aircraft. There was a real chance that the knowledge of the wreck would have died with these elders, because while many of the younger men knew that the wreck existed, they had never bothered to ask where it was! And that would have been a shame because as the above article points out each wreck is some family's tragedy. In my case one day's hike (with a great sighting of a Harpy Eagle on the way!) and 2 hours worth of wreck investigation was enough to solve the mystery of Lt. Unkles' last whereabouts and to give some comfort to his descendants. Before I left PNG, I met Fred Unkles, Lt. Unkles' son. He was getting ready to accompany Australian Air Force representatives to the crash site to see his father's grave. The look in his eyes told me that the decision to look for the wreck had been worth it.

In any case the point of all this is to make other fieldworkers aware of the number (500 plus) of missing aircraft, that local knowledge of these aircraft is disappearing, and that we are in a position to help. So if you ever hear about a wreck in your field area, please follow it up! At the very least contact Richard Leahy at Kiunga Aviation (tel. 472-6488, fax 472-4086) in Lae and give him the general location of the wreck. Richard has a listing of all known New Guinea wrecks and he can take it from there. Better yet, take a day off work and go look at the wreck. Take some photographs and try to get the plane's registration number. You could change a family's life.

## On the role and contributions of foreign research biologists in New Guinea

From Andrew Mack

As a visiting research biologist to New Guinea (I study in PNG and Irian Jaya), I am sometimes asked what biologists give back to Irian or PNG. This is a fair question. Often people in New Guinea and elsewhere mistakenly think biologists come to New Guinea, extract an irreplaceable resource and leave without making any contribution. These people are often surprised to learn the many real benefits coming from foreign biologists. Although there are unscrupulous researchers (as there can be unscrupulous miners, missionaries, etc.) most researchers make serious efforts to invest in the nation where they work. Certainly all researchers should not be distrusted based on a few bad examples. Excluding all researchers would only result in a closed society, with inadequate scientific exchange, that fails to meet its fullest potential.

### What do research biologists "take away" from New Guinea?

Some people suspect that biologists are collecting some sort of useful asset from New Guinea, taking it home and exploiting it for gain. Some have even called this "biopiracy." Although there might be examples of this, they are VERY few. Mostly fears of biopiracy are borne from a misunderstanding of what biologists do.

First, biological specimens are not unique. Unlike cultural artefacts that are irreplaceable, biological specimens are replaceable. The animals and plants of New Guinea reproduce themselves. Cultural artefacts are unique products of the artisan's creation; they do not replace themselves. Removal of specimens is not comparable to removal of artefacts.

Second, most biologists collect data predominately in the form of measurements and descriptions of observations.

Until a biologist makes these measurements, they do not really exist. You cannot just go in the forest and pick up a bunch of measurements. Someone has to make them and once they are made anyone else can make them again. So researchers mostly create something new: data. To be successful researchers must share that data. They analyze it and publish the results. Scientific publications do not pay the author. In fact most biologists usually *pay* the publisher a page charge to get something published.

Third, very few actual specimens are ever collected. Most that are collected are used for taxonomic studies: to determine how species are related and as vouchers to document identifications. Virtually no specimens are used in "bio-prospecting," despite the large amount of press coverage "bio-prospecting" has received. The economics of pharmacology are such that it is usually cheaper to design a drug than to search through millions of species and molecules in hope of finding one that is economically useful. Non-biologists sometimes suspect researchers collect specimens for financial profit. In fact, it is usually illegal to sell specimens overseas. Specimens are simply a form of data, like a series of measurements. They enable scientists to confirm and replicate results. Collecting specimens was a part of good science long before anyone heard of "bio-prospecting." Most biologists deposit duplicates of specimens at appropriate facilities in PNG and Indonesia.

To summarize: Most biologists only remove notes and measurements that anyone can replicate. Some biologists do collect a few specimens as a standard practice of good science that has always existed. However, the number is very small and the motivation is NOT financial profit. Indeed, if

one is concerned by the loss of information or potential revenue posed by scientific collecting, then one must certainly be aghast at the loss of biodiversity posed by poorly-managed mines, timber projects, transmigration sites and plantation agriculture that cause massive, irreparable losses and cause extinctions. So we can see that biologists indeed remove very little from New Guinea, and that which is removed naturally replaces itself. We should now ask, what do researchers give back to New Guinea?

#### What do research biologists "put" back into New Guinea?

Returns to the host nation come in immediate and delayed benefits which are outlined in the table below. Immediate benefits include foreign revenue infused into the economy. Foreign researchers obtain funding overseas and spend that money in New Guinea. Although there are fewer biologists than tourists, biologists usually stay much longer. A biologist who stays one year is roughly equivalent to 25 tourists that stay two weeks. Much of the revenue from biologists goes directly to the least developed rural communities in the form of wages, land use fees, etc., whereas most tourist revenue goes to large urban hotels.

Another immediate benefit comes from the scientific and cultural exchange between visiting biologists and their hosts. Although biologists learn a great deal from their hosts, they also enable their hosts to learn about foreign science and culture too. Both parties benefit from such exchanges. This is why most governments have programs to promote cultural and scientific exchange. Visiting biologists provide this service for free. Note that on early visits the scientific exchange possible is limited. It takes some time to become familiar with the biota and ecosystems of New Guinea. Prudent researchers wait until they are adequately experienced before offering scientific information. How often have we witnessed first-time visitors to New Guinea expounding like experts on things they know little about? Allow a scientist to develop expertise here and they can later offer much in return; expect too much on their first visit and you will be disappointed.

Researchers usually learn Tok Pisin or Bahasa Indonesia and develop ties with rural people, whereas most tourists do not. Field researchers often play an important role in rural education-- sometimes speaking at rural schools, giving demonstrations, coaching their new friends in English, sharing books, etc.

The last immediate benefit from foreign biologists comes in the short reports and papers they write while in-country on their early visits. These are very useful for government and NGO planning and as educational tools, but they are often poorly circulated and sometimes inaccurate. However, note that in the delayed benefits, researchers eventually produce publications that are more accurate, better-written and widely circulated. The scientific process is slow-- often published results are not completed until years after the field work is done. People looking only for immediate benefits do not see such delayed benefits. Collecting data is like planting a seed that takes a long time to grow and bear fruit in the form of publications.

The delayed benefits are not so apparent, but note they are more numerous, significant and substantial than immediate benefits (see table). Let that seed grow! A returning biologist will develop relationships with the scientific community in New Guinea (this is hard to do by novice post-graduate students). Eventually biologists bring

scientific supplies and equipment to the country that might be difficult or expensive to obtain and they often donate it to appropriate national institutions. Researchers deposit specimens in local museums and herbaria, helping to improve the quality and utility of these collections.

With time biologists develop expertise and can begin to analyze data and provide reports and publications that New Guinea's resource managers and scientists can use. Many organizations cannot afford to undertake all researches they need themselves, but often they can obtain the information they need freely from past visitors. Science is all about sharing information freely. The scientist who does not share soon finds himself alone with no one interested in him/her. Our ultimate purpose of doing research is to share our results. If we fail, we get fired!

As a biologist gains experience in New Guinea, the quality of their "give back" to New Guinea improves. It takes extensive experience in the region to be a good teacher or mentor. Additionally, the longer a biologist studies in the area, the more students and tourists they attract to the area. The benefits build like a landslide. One long-term visiting biologist will cause or facilitate the visits of additional dozens of visitors and scientists. These visitors in turn make their own contributions as outlined in the table. Lastly, some visiting biologists develop relationships with students in New Guinea and help open opportunities for them to study overseas. Gaining admittance to foreign universities is difficult to do without contacts overseas. Students here can get these contacts when they meet visiting researchers.

I hope that through this long editorial, it is apparent that many benefits can and do come from visiting research biologists. The tricky point is that these are not always apparent when someone makes their first application for a research visa. Will they come and go without doing much? Or will they develop a program that continues to escalate through a long career, eventually reaching many people in New Guinea? Will they bring many new scientific, educational and financial rewards to the host country? There are no promises, but the risks of welcoming researchers are relatively small. Most are completely harmless!

MOST researchers take very little out of New Guinea and MOST return a good deal to the people and the futures of Irian Jaya and PNG. Given this, it might be wise to ask, how can we promote research in New Guinea?

#### How to attract foreign biologists to New Guinea?

Just as nations have councils to promote foreign businesses and tourism in their countries, they might similarly benefit from promotion of biological research. New Guinea is one of the most magnificent living laboratories in the world. Its animals and plants are unique with an evolutionary history unlike anywhere in the world. It has tremendous diversity and most of its ecosystems are still comparatively free from pollutants and other human follies that mar the rest of the world. Most biologists long to work in New Guinea. But it is difficult to work here, partly due to bureaucratic difficulties. Other problems like high expense of getting here, the crime reputation in PNG, or the fears of instability in Irian Jaya are not easily resolved. However, the bureaucratic difficulties in both Irian Jaya and PNG could be reduced. If local and national governments sought to promote researchers as they do tourists and foreign investors, then undoubtedly many of the benefits mentioned above would result.

A last comment

Please note, biologists are human with all the shortcomings (and maybe more) expected of any person. Thus some researchers might not be very articulate or they may be shy and not make good instructors/trainers whereas they might be able to complete difficult analyses most cannot. Others might make great teachers, but not be able to turn on a computer. Therefore, it is important to be flexible with what you expect in return from a visiting biologist. If you expect all to train students, you will find some just do not do this well. If you expect all to help with computer problems, you will find many

cannot. It is important to find what each visitor as an individual with unique talents can best offer. Most biologists are delighted to share their expertise and strengths. But make one teach who is a lousy teacher and you will not help the students very much. Some researchers might not be very helpful at all, especially on their first visit to a new country. Some are social misfits, some are not very intelligent, some are misinformed, or have other character flaws. We all are human, so please try to accept our flaws. If you can do that *and* exploit our strengths, you will find a wonderful asset for education and development.

IMMEDIATE BENEFITS	DELAYED BENEFITS
<ul style="list-style-type: none"> <li>• inflow of foreign capital, especially to rural communities</li> <li>• cultural exchange</li> <li>• scientific exchange on first visit (less experienced)</li> <li>• training on first visit (less-experienced)</li> <li>• outreach and rural education</li> <li>• reports and preliminary results reported in gray literature before leaving on first visits,. Narrowly distributed.</li> </ul>	<ul style="list-style-type: none"> <li>• improvement of in-country research infrastructure (equipment, specimens, etc.)</li> <li>• data and insight used in land management and planning</li> <li>• attract financial support for in-country education, research, conservation, etc.</li> <li>• scientific exchange on later visits(more experienced)</li> <li>• training on later visits (more experienced)</li> <li>• publicity that promotes tourism, attracts other researchers and students</li> <li>• published, careful analyses in main literature after time to analyze and write. Widely distributed</li> <li>• host NG nationals for education or other missions overseas.</li> </ul>



# New Guinea Conservation Projects



Updates anyone??

## Alliance Update for the PNG Forestry Assessment – July, 1999

From Max Kuduk

The WB/WWF Alliance supported PNG Community and Certified Forestry Assessment (Sustainable Forestry Assessment) has made significant progress. Several consultant studies on various aspects of community and certified forestry including policy, economics, marketing, field logistics, and others have been undertaken and reports are currently under preparation.

A workshop with the majority of players in community and certified forestry in PNG was held in late May yielding the priority actions detailed below. Please note these activities have been funded by a combination of project preparation funds under the Forest and Conservation Project and WB/WWF Alliance Funds.

**PNG Strategies for Sustainable Forestry Workshop, Madang 26-28 May 1999**

**SUMMARY OF RESULTS**

**Priority Actions**

As a strategy for focusing the range of actions to be undertaken, the workshop participants were asked to allocate

votes to the activities they believed to be of highest priority. The selected activities, in order of support received, were as follows:

1. Establish the Ecoforesters Association and obtain funding to ensure its success (received 9 votes). This activity will be organized by the PNG Ecoforestry Forum. A proposal for funding was approved at the meeting of the Forum held during the workshop. It is anticipated that the Ecoforestry Forum will meet again in July and that the Ecoforestry Association will be launched in October 1999.
2. Commence a process to ensure that there is an appropriate legal instrument to regulate small scale forestry projects, recognizing that landowners own their forest resources (received 9 votes).

This activity will be organized by the Ecoforestry Association in cooperation with relevant PNG Government agencies and NGOs.

3. Undertake a comprehensive forest valuation of economic costs and benefits of logging, following up on an incomplete World Bank project (received 9 votes).

To be undertaken by the PNG National Forest Authority under the auspices of the World Bank Forest Conservation Program.

4. Develop a training and accreditation program for landowner monitoring of logging operations (received 8 votes).

This activity will be organized by WWF South Pacific in cooperation with relevant PNG Government agencies and NGOs.

5. Organize a meeting between National Planning Office, NGOs and other stakeholders to define steps to better integrate land use planning of forest resource departments and introduce constraints-based planning (received 7 votes).

This activity will be organized by WWF South Pacific.

6. Disseminate conclusions of the fragile Forests analysis (received 5 votes).

This activity will be organized by WWF South Pacific in cooperation with DEC.

7. Determine the susceptibility of Fragile Forest types to damage by small-scale forestry activities (received 5 votes).

It was agreed that this work should initially be undertaken on a project-by-project basis, commencing with the NGOs present at the workshop whose forestry operations may be taking place in Fragile Forests. The two projects identified were the EU forestry operations in Kamarere (*Eucalyptus deglupta*) forests and the WWF-US Kikori logging operations in mangrove (*Xylocarpus*) forests.

8. Test run FSC standards on existing projects throughout PNG and analyze the cost implications (received 4 votes).

This activity will be undertaken by the EU project in cooperation with the Ecoforesters Association and the PNG FSC Working Group. FPCD would continue a leading role in this activity.

9. Undertake a holistic cost-benefit economic analysis of small and large scale development options in a selected location in PNG, similar to the exercise recently undertaken in Morovo Lagoon, Solomon Islands (received 3 votes).

No organization made a firm commitment to undertake this work. It was agreed that it would be suited to an international NGO such as Greenpeace or WWF.

#### Next Steps

It was agreed that there is a need for ongoing communication to enable the workshop participants to remain informed on the progress of the activities agreed to by the workshop. WWF South Pacific agreed to take responsibility for the ongoing communication. Timelines for communication are as follows:

**June 1999** - WWF will send a copy of the workshop report to all participants

**July 1999** - Further meeting of Ecoforestry Forum.

**August 1999** - WWF to complete report of Sustainable Forestry Assessment

**September 1999** - WWF South Pacific will send a bulletin to all workshop participants. The bulletin will describe progress to date on the activities agreed to by the workshop.

**October 1999** - Ecoforestry Association to be launched.

**January 2000** - WWF South Pacific will send a second bulletin to all workshop participants, describing progress on the agreed activities.

**June 2000** - Tentative date for participants to meet again to review strategy.

WWF-US and possibly other WWF-Offices plan to help fund some portion of the follow up activities. WWF and participants and the Ecoforesters Association may contact the World Bank Forest and Conservation Project and other donors to request continued support and matching for follow up activities.

A final report for this Community and Certified Forestry Assessment is expected by August, 1999.

## World Environment Day Celebration

From Timothy King of the Pacific Heritage Foundation

Over three hundred school children attended the World Environment Day celebration at the headquarters of Pacific Heritage Foundation on 4 June 1999. The grade five pupils came from six different community schools on the Gazelle Peninsula to join in the celebration and to learn more about the importance of their natural environment. The event included a marching band, singing, school drama performances about the environment, an essay competition, and sporting events. Pacific Heritage Foundation used its conference hall to display the organization's work and to show a series of conservation and health videos. An interactive display put on by the PHF Eco-Forestry Desk was especially popular and included information and a quiz on the importance of the certification of sustainable timber harvesting, and a practical demonstration of small-scale sawmilling and chainsaw handling.

Following is the winning essay by Trevor Kamaga, Grade 8, from Tubuwana Top Up School, Namatanai:  
Dear National Government,

On behalf of my fellow citizens of Papua New Guinea, I'd like to have this opportunity to give our

complaints to you and your members about the unwise usage of resources in our environment. We can see that our land was once filled with lots of wildlife in the forests, but today nearly all of these resources in the environment are disappearing. We do not know why that is. I'd like to propose to you my concern about the country, so please let's think carefully about this. It's good that we invite the foreign countries to come and harvest from our environment, so that we can have some money to supply the country's needs. But it seems that they are not using it wisely, that is why most of the resources are all gone or in other words they become non-renewable. Hopefully I believe that my letter of complaint to you will make you think twice about the usage of resources in our Mother Land. The good thinking and wise decisions from you will tell whether our country succeeds or fails. It's about time that we should preserve some of our resources for the next generations to come.

Yours sincerely,

Trevor Kamaga, Grade 8 Student

## Forest Authority Withdraws New Regulation

From Timothy King of Pacific Heritage Foundation

The Forest Authority has withdrawn the controversial Regulation 250, responding quickly to the challenge issued to it by Pacific Heritage Foundation. PHF, a Rabaul-based NGO, last week demanded that the PNG FA withdraw Regulation 250 or face court action. In response the managing director of the Forest Authority, Thomas Nen, has publicly admitted that the Regulation was badly drafted and has undertaken not to enforce it.

The dispute was over Regulation 250, which was introduced last year. This Regulation purported to control the activities of small sawmill operators by making them subject to the same rules and regulations as large logging companies. At present the Forestry Act clearly states that it does not apply to those people who cut less than 500 cubic meters of timber a year. The Regulation was an attempt to change this by withdrawing the 500 cubic meter rule.

As Gillian Maki, a lawyer with PHF, explained "the Forest Authority has publicly admitted that it was wrong and has withdrawn Regulation 250. The Forestry Act specifically states that it does not apply to small sawmill operators. If the Forestry Authority wants to change this then they must ask Parliament to make new legislation. The Forest Authority cannot use Regulations to change the decisions of Parliament".

The decision will come as a relief to many community groups who operate small-scale sawmills in their own forests to provide an income for community development projects. These groups had been advised by the Forest Authority to stop operations as a result of Regulation 250. Now they are free to start their operations again.

The prompt response by the Forestry Authority to the demand of PHF will be seen as growing evidence that NGOs are increasingly being seen as credible and professional organizations who have an important role in PNG.

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## Current Research Updates



If you have recently finished work or are currently doing a project, please send a summary for inclusion in the next newsletter--**thanks!** Remember that research articles should still be submitted to journals for publication. We just want to print a summary of your work to let people know what is going on without having to wait for the lag-time involved in regular journal publications and so that summaries of all current work in NG can be found in one location. We want to make it easy for everyone to keep informed about all of the current research in New Guinea, so please send your information!

### Owlet-Nightjars

From Thane Pratt

Owlet-nightjars are a family of secretive night birds best recognized by their small size and amazing cat-like whiskers. During the day they usually sleep hidden in tree hollows, but at night they emerge to dine on insects caught by hawking and pouncing. Owlet-nightjars are a New Guinea specialty – seven species call the island home, whereas only one extends its distribution to Australia and two more inhabit other Pacific islands. In New Guinea the species are often hard to tell apart, not only because they look alike but also because individuals can differ greatly in coloration.

It turns out that there may be more species of owlet-nightjars lurking in the rain forests than have been previously realized. I recently completed a paper calling attention to an unrecognized species of owlet-nightjar from the southern lowlands of New Guinea (Pratt, Auk, in press). First described years ago from two specimens collected near Palmer Junction on the upper Fly River, the bird was originally classified as a subspecies of the Feline Owlet-nightjar. However, the "new" species differs by its smaller size, tiny feet, and various plumage characters. Overall it does resemble a rufous Feline Owlet-nightjar, but the latter species inhabits montane forests above 1000 m elevation, whereas the

new bird has so far been found in lowland forest. *Aegotheles tatei* was named for G. Tate, mammologist on the expedition that collected the first specimens. I'm proposing the English name Starry Owlet-nightjar, in reference to the star-like spots on its head and back.

I'd be very keen to learn of locations where this bird can be found. Besides the two specimens from Fly R., another specimen was collected 1000 km to the east, at Nunumai just inland of Amazon Bay. This rare bird is sure to turn up at other localities.

Lastly, I should mention that Jack Dumbacher, Rob Fleischer, and I have begun a project exploring the systematics of owlet-nightjars through a combination of the traditional morphological approach and analyses of DNA taken mostly from museum skins. Of particular interest are two subspecies of the Barred Owlet-nightjar, *A. bennettii affinis* from the Vogelkop and *A. b. plumiferus* from Goodenough and Fergusson islands, which could also turn out to be species of their own.

I'd enjoy corresponding with anyone about owlet-nightjars at the email address: [tpratt@aloha.net](mailto:tpratt@aloha.net)

### New Guinea Harpy Eagle Research in Crater Mountain – Update

From Mark Watson

I have completed 9 months of fieldwork now, but have failed to find any active nests and so have decided that the project is not viable as a PhD. However, enough data has

been collected to yield at least one paper on diet, hunting behaviour and calling.

Some 7 home ranges were monitored in the course of the study, giving an estimated density of one pair per 100 sq.

km in the Crater Mountain Wildlife Management Area. This is a higher density than in the forests I visited in the Kubor Range, The Jimi Valley and on Mount Giluwe. In each of these latter places the eagles are vigorously hunted. Villagers displayed the feathers of 4 eagles shot within the last 18 months, which must have a significant effect on the populations in those areas.

Recording of calls has shown a great variety of vocalisations, some of which have not been described. These include high frequency calls as well as the low frequency “gulp!”, by which the eagle is best known. The behavioural function of these different calls is a mystery, although on one occasion they were given by both male and female during pair

bonding display. A hunting male followed for up to six hours on two days also made high frequency calls continuously.

I will leave PNG for good in early November.

Monitoring will continue, carried out by two men from Herowana village, who received extensive training throughout the year. Should they identify breeding in the coming months, The Peregrine Fund plans to send an experienced tropical raptor ecologist to document this for the first time.

It is very satisfying to report that the villagers themselves can continue to pursue this very elusive species, fostering active participation in research and conservation by members of the community.

Sponsorship from The Peregrine Fund and San Diego Zoo is gratefully acknowledged.

## Community interactions between ants and arboreal-nesting termites in New Guinea coconut plantations

sent in by Scott Miller

Abstract of an article in *Insectes Sociaux*, Volume 46 Issue 2 (1999), pp 126-130

by M. Leponce<sup>1,2</sup>, Y. Roisin<sup>1,3</sup>, J. M. Pasteels<sup>1</sup>

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Summary: We investigated the incidence of inquiline ants and of arboreal-nesting ants on a community of three arboreal-nesting termites living in New Guinea coconut plantations. Inquiline ants were present in 10 % of *Microcerotermes biroi* nests and in 4 % of *Nasutitermes princeps* nests. Live termite nests inhabited by the most common inquiline ant, *Camponotus* sp. A, were generally left by the ant after several months. In some nests, *Camponotus* sp. A was observed coexisting with its host during the whole observation period (3 years). Therefore, *Camponotus* sp. A was apparently an

opportunistic inquiline which did not affect significantly the mortality of termite colonies. The arboreal-nesting ant, *Crematogaster irritabilis*, was locally found occupying up to 99 % of the trees present in 1 ha plots. In such hot spots, the overall abundance of termites was approximately half that of plots devoid of *Crematogaster irritabilis*. The high density of *Crematogaster irritabilis* may be an important limiting factor for the termite assemblage, by hastening the death or hindering the establishment of arboreal termite colonies.

## The Lake Wanam Rainbow Fish

from Peter Clark of The Rainforest Habitat in Lae

With the Royal Melbourne Zoological Gardens and the Australian and New Guinean Fish Breeders Association, the Rainforest Habitat embarked on a mission to ascertain the current status of the Lake Wanam Rainbow Fish (*Glossolepis wanamensis*). This was initiated because the last time investigators visited Lake Wanam in 1997, it was noted that the species was extremely rare and only two specimens were caught. It was thought that the introduction of Carp, Tilapia, and Gambusia (Mosquito fish) may have caused this drastic and worrying reduction in numbers, and that a new team of researchers should visit the lake, talk with the landowners, arrange a new survey, and possibly establish an insurance population elsewhere, where introduced species would not affect breeding.

If the fish had become extinct, it was planned that specimens kept overseas in breeding facilities might be brought back to PNG for reintroduction after the full reason for their demise was understood.

Three representatives from Australia spent 10 days at the Rainforest Habitat and at Lake Wanam where, assisted by

local villagers, they found the species in reasonable numbers. This could be for many reasons including the increase in fishing pressure on Tilapia that has occurred in the last two years (this area now being the main supply for the Lae market), or that 1997 was an El Nino drought year and water levels were extremely low, which caused a massive die off of fish in the lake.

However this fluctuation in population numbers did highlight the vulnerability of this species that only occurs in about three to four square kilometres of the world’s surface, and it was decided with the landowners consent to establish a separate breeding population at the Rainforest Habitat. This has been carried out and two separate populations were in fact established. One of these populations is now breeding well.

In light of the fact that the villagers are keen to set up local tourism at the lake, this project should provide good publicity for the area. Signs explaining this cooperative venture between the local landowners and the scientific community will be prominently displayed both at Lake Wanam and at the Rainforest Habitat.

## Scott's Tree kangaroo ('Tenkile') (*Dendrolagus scottae*)

from Peter Clark of The Rainforest Habitat in Lae

In July this year a field expedition to the Torricelli Mountains was undertaken to ascertain the current status of Scott's Tree kangaroo, and to try and convince the local landowners to agree to a temporary moratorium on hunting this now endangered species.

Mr Matt Vincent of the Melbourne Zoo, Mr Chris Talie of Lumi, and myself from the Rainforest Habitat in Lae undertook the expedition on the recommendation of the CBSG PNG Tree kangaroo CAMP and Matchies Tree kangaroo PHVA conference, held in Lae in September of 1998. The trip was funded by the Melbourne and Taronga Zoos, and the Friends of the Zoo Inc. of Melbourne.

Only discovered in 1989 (Flannery) this Tree kangaroo is now in imminent danger of extinction, with less than 200 specimens left in the wild (estimation based on the CBSG CAMP Taxon data sheet), and occurs in an area of less than 20–30 sq kms around the southern face of Mount Somoro.

The team was restricted in size because of financial restraints, but managed to achieve all nine objectives. These were:

1. Establish the possibility of a Tenkile hunting moratorium.
2. Confirm and expand the current information about the wild population.
3. Determine priority needs for local villagers.
4. Identify appropriate community support programs.
5. Outline strategies for implementation of support programs.
6. Determine nature and extent of Tenkile ownership disputes.
7. Assess captive animals and take hair samples.

8. Identify a site for a captive program, in situ.
9. Identify an interim committee with responsibilities, actions and timing.

Based on new information received, a further task was added to this list, that being to investigate the possibility of both Tenkile, and the Golden Mantled Tree kangaroo existing in the Prince Alexander Range, east of where they are currently known to occur. The Golden Mantled (*Dendrolagus goodfellowi pulcherrimus*) discovered only in 1993 (Flannery), is the other currently critically endangered Tree kangaroo species in PNG, known only to occur in a 20sq km area near Sibilanga in the Sandaun Province.

We investigated several localities in these mountains, and using the knowledge of local landowners, now believe that Tenkile does not live there, but that there is a great likelihood that the Golden Mantled or a new subspecies of Goodfellow's Tree kangaroo, occurs along a 100 kilometre stretch of this mountain range.

The expedition proved very successful and a two year moratorium on hunting Tenkile was signed by thirteen villages. In exchange, we have agreed to try and assist in setting up a research and captive breeding facility at Lumi station, where a site was identified. The people of Lumi are very proud of their unique Tree kangaroo species, and are keen to assist in its long term conservation.

A full report on the expedition, its findings and recommendations, has been completed.

## Biodiversity Surveys in the PT Freeport Indonesia COW Mining and Project Area, Irian Jaya, Indonesia

X-URL: <http://www.hatfieldgroup.com/spotlight/bio.htm>

forwarded by Burke Burnett

PT Freeport Indonesia (PTFI) operates a copper-gold mining facility and related infrastructure in Irian Jaya, Indonesia. The PTFI Contract of Work (COW) Mining and Project Area is located in Timika Regency, and covers approximately 3,000 km<sup>2</sup> from the mines at about 3,700 m above sea level to the Arafura Sea to the south. Given its location in Irian Jaya (one of the three major biodiversity centres in Indonesia), the PTFI COW Area contains considerable biological diversity. Much of this biodiversity is unique to New Guinea, and occurs within a number of sensitive environments.

The PTFI COW Area includes rich ecosystem diversity, as it covers all the altitudinal zones in Irian Jaya, including the lowland zone, montane zone, subalpine zone, alpine and nival zone ranging from the sea to the summit of the Jayawijaya Mountains. Two physiographic regions are involved: the Southern Coastal Plain and the Central Mountain Ranges.

Since 1995, PTFI have conducted vegetation surveys and, more recently, have begun to establish biodiversity research sites and permanent monitoring plots in the PTFI COW Area. However, until this study was undertaken in 1997, no comprehensive assessments of biodiversity had been conducted in the Freeport area. This lack of data on biodiversity was highlighted in the recent Freeport Environmental Audit, where recommendations were made to

conduct further research in both the PTFI COW Area and Lorentz National Park areas.

Biodiversity in the PTFI COW Area has been impacted to varying degrees by mine development activities. This includes mining activities at high altitudes, the mill and Tembagapura town site in the montane zone, associated infrastructure from the port site to the mine site, and tailings management areas. Increased urbanisation and immigration around Timika, transmigration settlements, and production forestry to the west have also resulted in changes to the local flora and fauna. The impact of PTFI activities on biodiversity is not uniformly distributed throughout the PTFI COW Area, but is focused in particular altitudinal zones and subzones. For example, mine activities are located mainly in the subalpine zone, while tailings management is located mainly in the lowland zone. Biodiversity research sites and permanent monitoring plots for the PTFI COW Area have been located in the mine area and lowlands, and served as site locations for the biodiversity study. The knowledge gained from the present biodiversity study will provide valuable information on similar ecosystems that occur within the adjacent Lorentz National Park.

The present study was commissioned in early 1997 and directed by PT Hatfindo Prima (PHTP), an environmental consulting company based in Bogor. The biodiversity study team consisted of internationally-recognized scientists from

the Indonesian Institute of Sciences (LIPI), University Cendrawasih (UNCEN) in Manokwari, Bishop Museum (Hawaii), Western Australia Museum (Perth), Smithsonian Institute (Washington D.C.), and other research organizations in Indonesia.

Field surveys for this project were conducted between January and May, 1997, and included collections and identification of terrestrial and aquatic biota in the PTFI COW Area. Surveys included assessments of the birds, mammals, freshwater fisheries, terrestrial and aquatic biota, reptiles and amphibians. Preliminary results of the biodiversity study were first presented at a workshop held in Bogor in July 1997 that was attended by over 100 scientists and researchers from around the world.

Study results were also submitted to BAPPEDAL (the Environmental Assessment Agency) as one of the 42

environmental studies included in PTFI's recently approved Regional AMDAL study. A total of 12 reports have been produced from the biodiversity surveys conducted by Hatfindo, and are now being produced for distribution on CD ROM to universities, libraries, research institutes, government and non-government agencies in Indonesia and around the world.

The Hatfindo study was successful in identifying those species that have protected status or are particularly vulnerable to disturbance in the PTFI COW Area. Long-term biodiversity monitoring and management will continue, with particular emphasis on conserving sensitive habitats and mitigating impacts from the mine operation. Future biodiversity surveys may also include Lorentz National Park, given its proximity to Freeport and importance as a potential World Heritage Site.



This section is for anyone to use. You can send in announcements (for example, to advertise an upcoming meeting). You can also send in any requests for information that you think other newsletter recipients could help with (for example, if you are writing a paper about forest structure and want to find out who is currently working in this area or who you could collaborate with or exchange info with). Please send any announcements or information requests to Deb.

### Seeking Environmental Job in PNG

My name is Ariadna Benet, and I'm from Barcelona (Spain). I did one graduate degree in chemistry and I've just finished my PhD in biology. I am also completing a master's degree in environmental science and would like to work as an adviser for environmental problems. I arrive in PNG at the beginning of next year (2000) and will stay for about two years. I'm very concerned about environmental problems and as a scientist, I feel I need to face more realistic problems to be in touch with society, therefore I'm looking for a job related

to environmental pollution or destruction. I'm an active person, am enthusiastic and am a hard worker.

Ariadna Benet i Monico  
Centre d'Investigacio i Desenvolupament  
Dept. Biologia Molecular i Cel.lular  
Jordi Girona, 38  
08034 Barcelona  
Europe  
Email: [abmbmc@cid.csic.es](mailto:abmbmc@cid.csic.es)

### Seeking Information About Mistletoe Use

from Ed Colijn's news server

I am presently conducting a world-wide review of wildlife use of mistletoes (Loranthaceae and Viscaceae), focusing on vertebrates at the familial level. I have presently identified over 50 families of birds and 35+ mammalian families known to eat mistletoe fruit, leaves or nectar, and over 30 families of birds known to nest in mistletoe clumps. South East Asia and New Guinea are centers of diversity for

these plants, but I have found few references of vertebrate-mistletoe interactions in the literature. If you know of any obscure publications on the subject, or if you have unpublished observations I would really like to hear from you. All sources will, of course, be gratefully acknowledged. Please contact Dave Watson, Natural History Museum, The University of Kansas, [vergil@ukans.edu](mailto:vergil@ukans.edu)

### Seeking Help to Monitor Coral Spawning

from Ed Colijn's news server

I am writing to ask for help from universities, conservation groups and diving groups in the SE Asia region. I am collaborating with Gilly Llewellyn (conservation science advisor to the WWF Indonesia Wallacea Program) to recruit volunteers or potential partners for an informal, regional effort to help improve the monitoring of SE Asian coral spawning activity.

Ideally this program would become a network of dive centers, scientists, university dive groups and conservation groups, who would plan night dives around the full moon (or

whenever is most likely) to try and observe coral spawning. Such a program could serve as a powerful education and awareness raising tool as well as being of great practical conservation value (and is a perfect excuse for a night dive). Spawnwatch is the suggested name (with apologies to Baywatch) but alternative titles are welcome. We are keen to hear from anyone who wants to become involved, or who has past experience in coral spawning monitoring programs.

Interested parties should contact us by e-mail either to Gilly: [Gllewellyn@wwfnet.org](mailto:Gllewellyn@wwfnet.org) or directly to me: [scip9051@nus.edu.sg](mailto:scip9051@nus.edu.sg)

Thanks in advance,  
James. R. Guest  
Reef Ecology Laboratory  
Department of Biological Sciences  
National University of Singapore  
10 Kent Ridge Crescent  
Singapore 119260  
Tel: (65) 778-7112 (office)

(65) 774-8873 (home)  
Fax: (65) 779-6155 / 772-2486  
E-mail: [scip9051@nus.edu.sg](mailto:scip9051@nus.edu.sg) / [jrguest@hotmail.com](mailto:jrguest@hotmail.com)

Gilly Llewellyn  
Conservation Science Program Manager  
WWF Indonesia Wallacea Office  
Jl Hayam Wuruk 179  
Denpasar 80235  
Bali  
Email: [Gllewellyn@wwfnet.org](mailto:Gllewellyn@wwfnet.org)

## Seeking Information about Singing Dogs

From James McIntyre of Southwest Pacific Research Foundation

In order to learn more about the natural history of the New Guinea Highland Wild Dog (New Guinea Singing Dog), the New Guinea Singing Dog Conservation Society, based in the USA, would appreciate it greatly if all those who have had contact with, or have some knowledge of these free-living wild dogs, please complete this Questionnaire and return it as soon as possible to James McIntyre, 631 Tarpon Ave. #6391, Fernandina Beach, FL 32034 USA, phone/fax: (1) 904-261-5630, email: [jmcint6317@aol.com](mailto:jmcint6317@aol.com)

Name  
Age  
University address  
Home village  
Village address/Province  
Exact location of wild dog sightings (what village, which mountains, which province, etc.?) Please list each sighting individually.  
When were the dogs seen? (month, year)

Who saw the wild dogs?  
How many dogs were seen?  
When was the last time dogs were seen in this area? Are they still there?  
Description of the wild dogs:  
Approximate size: height, weight and length  
Color or colors, please describe  
What did the ears look like?  
What did the tail look like?  
Describe any seasonal habits or behaviors (i.e., birthing, mating, diets, etc.)  
What is the local name for the wild dog?  
What is the meaning or translation of this name?  
Does the wild dog have any cultural significance to the local people?  
Did you or the local people hunt the wild dog?  
Do you know of, or have you heard of, any stories or legends about these dogs? (from relatives or grandparents, etc.) Please give us a short summary of these stories.

## Did you know that you are legally required to deposit copies of everything you publish in or about PNG?

From the National Library Service, Office of Libraries and Archives

One of the major roles of the National Library of PNG is to collect, maintain and disseminate informational resources relating to PNG, and to preserve the documentary heritage of this country in the PNG Collection for future generations to access. One of the methods used is through the Legal Deposit of the National Library and Archives Act of 1993. Legal deposit is compulsory under this act.

Two copies of any publication (e.g., books, newspapers, videos, cassettes, CDs) produced in PNG, or about PNG even if produced elsewhere, or authored by a PNG citizen must be deposited with the National Library, prior to their public release and at the expense of the depositor. Legal deposit extends not only to commercial publishers and government departments, but also to private individuals, clubs, churches, societies and organizations. Failure to comply with this act may lead to prosecution and a fine of up to K5000. However, there are exemptions for confidential material from non-government sources.

Legal deposit ensures that the works of authors and publishers will survive for the use of future generations, because the National Library assumes an obligation to preserve all material lodged with them. The comprehensive collection of PNG publications formed in this way provides the means for research into all aspects of PNG history, life, economic, political, cultural and artistic, commercial, technical and scientific endeavour.

Legal deposit publications serve as a basis for the PNG National Bibliography compiled by the National Library. The National Bibliography is available by subscription in printed form and is circulated widely in PNG and overseas.

For more information please contact: Legal Deposit Section, National Library Service, P.O. Box 734, Waigani NCD, PNG, phone: (675) 325-6200, fax: (675) 325-1331, email: [ola@datec.com.pg](mailto:ola@datec.com.pg)

## ISSN and ISBN Numbers for Published Works

From Chris Kelly Meti of the PNG National Library Service

The PNG National Library is the designated PNG ISBN (International Standard Book Number) Agency for the

allocation of ISBN numbers for non-serial publications like monographs, books, pamphlets, videos, cassettes, CD-ROMs,

etc. that are published in PNG. By obtaining an ISBN for your publication from the PNG ISBN Agency, you will receive automatic inclusion into the PNG National Bibliography and the Publisher's International ISBN Directory, giving you world-wide coverage. For more information please contact: The Bibliographical Services Librarian, PNG ISBN Agency, National Library, P.O. Box 734, Waigani NCD, PNG, phone: (675) 325-6200 or 4754, fax: (675) 325-1331, email: [ola@datec.com.pg](mailto:ola@datec.com.pg)

If you are publishing a serial (having successive parts published indefinitely like periodicals, newspapers, annuals, journals, proceedings, transactions, or monographic series) you obtain an ISSN (International Standard Serial Number), not an ISBN. To do this you need to contact ISDS (International Serials Data System); ISDS does not have a National Centre in PNG so to obtain a number you should contact the international office in Paris: ISDS, International Centre, 20 rue Bachaumont, 75002 Paris, France, email: [issnic@issn.org](mailto:issnic@issn.org)

## World Wildlife Fund Conservation Grants Program

from David Olson

World Wildlife Fund is seeking proposals for a limited number of small conservation grants (US\$5000) that focus on critical questions for conservation planning and support conservation action for priority habitats, phenomena, and species. We encourage projects that address biodiversity conservation issues related to large-scale patterns of biodiversity, minimum requirements for the persistence of species and processes, the design of conservation landscapes across whole eco-regions, and problems of alien species on islands. We also urge submission of proposals that will catalyze conservation action in priority freshwater, marine, and non-forest habitats. We will emphasize projects that have

a good potential to catalyze further conservation action for issues and areas. Proposals from regional conservationists are particularly encouraged. Each proposal must clearly state targeted biodiversity features and how it will make a significant difference towards their conservation. Project reports are expected after 6 months and one year. Submit a 1500 word or two page (maximum) proposal to David Olson, Conservation Science Program, World Wildlife Fund, 1250 24<sup>th</sup> St., NW, Washington, DC 20037-1175 USA, or send via E-mail: [david.olson@wwfus.org](mailto:david.olson@wwfus.org) by the strict deadline of November 1, 1999.

## The APN Call For Proposals 2000/2001

Source: SEA-SPAN, June 08 1999 (from Ed Colijn's news server)

(although the deadline of 30 Sept is past, perhaps you could contact this organization for funding for next year)

The Asia-Pacific Network for Global Change Research (APN) is an inter-governmental network whose mission is to foster global environmental change research in the Asia-Pacific region, increase developing country participation in that research, and strengthen interactions between the science community and policy makers.

The APN is inviting proposals for funding in the period April 2000 to March 2001 and is able to provide a limited amount of financial support (normally up to US\$100,000 per project per annum) for research and workshop activities that fall within its areas of interest.

### OUTLINE OF ELIGIBILITY AND GUIDELINES FOR APPLICATION

#### 1. General scope of the APN Call for Proposals for 2000/2001

The APN is prepared to support activities relating to -

- \* capacity building and networking;
- \* planning and scoping workshops;
- \* synthesis and analysis of existing knowledge and research which addresses knowledge gaps in key areas;
- \* the development of policy products such as integrated assessments, impact assessments, climate models, etc;

#### 2. Areas of Interest to the APN

The APN is primarily concerned with the integration of natural science with social and economic factors. The Human Dimensions of Global Change is therefore central to the APN Research Framework. Proposals must relate to one or more of the following areas of interest to the APN:

- (1) Climate Change & Variability
- (2) Changes In Coastal Zones & Inland Waters
- (3) Changes In Atmospheric Composition
- (4) Changes In Terrestrial Ecosystems & Biodiversity

Note: In 2000/2001 the APN is giving particular emphasis to 'Climate Change & Variability' and 'The Human Dimensions of Global Change'.

#### 3. Developing Regional Cooperation on Global Change Research

The primary goal of the APN is to develop regional cooperation on global change research in Asia and the Pacific. Accordingly the APN will not fund one country projects.

To be eligible for consideration, proposals must involve action or contributions by individuals or organisations from at least 3 countries (two of which must be "developing" countries). The APN Secretariat is willing to help proponents team up with researchers in other countries, but this must be done before the proposal is submitted. For assistance please contact the Secretariat.

#### 4. Making a Proposal

Anyone wishing to make a proposal to the APN should consult the APN Call for Proposals 2000/2001 - Guide For Proponents which gives a full explanation of the proposal process and includes a cover sheet which must accompany the proposal. The cover sheet is also available as an electronic form in Microsoft Word97 for PCs and Microsoft Word6 for Macintosh.

Copies are available by e-mail, fax or post from the Secretariat or can be downloaded from APN Homepage <http://www.rim.or.jp/apn>

#### 5. Application Procedures

Deadline for submissions: Midnight, 30 September 1999

Submit to: APN Secretariat

Funding decisions: March 2000 at the APN Inter-Governmental Meeting

Who may apply: institutions or individuals

Eligibility and Criteria: see APN Call for Proposals 2000/2001 - Guide For Proponents

#### 6. Address for Inquiries and Applications:

APN Secretariat, 3-1-13 Shibakoen, Minato-ku, Tokyo 105-0011, JAPAN

Tel: +81-3-3432-1844

Fax: +81-3-3432-1975

Email: [airies@airies.or.jp](mailto:airies@airies.or.jp)

Web site: <http://www.rim.or.jp/apn>

### The Ford Foundation Environment and Culture Residential Fellowship Program

The Institute of International Studies is pleased to announce the Ford Foundation Environment and Culture Residential Fellowship Program. This program, with the generous support of the Ford Foundation, provides funding to bring scholars/activists to the UC Berkeley campus for periods of one to four months as Residential Fellows.

#### General Program Description

The Residential Fellowship Program enables individuals who have been deeply involved in practical and applied aspects of environmental politics/policy or resource management to engage in writing projects, to further their training and education, and to take advantage of the faculty, student, and bibliographic resources at UC Berkeley and other Bay Area campuses. Residential Fellows play an integral role in the Berkeley Workshop on Environmental Politics.

Ideal Candidates are individuals with some academic training, but who also have substantial experience working with community or grassroots environmental organizations or in the policy arena. Scholars and activists from the developing world are especially encouraged to apply.

Please see our web site for a full description of this program and for information on the application process:

<http://globetrotter.berkeley.edu/EnvirPol/res-fellows.html>

We need your help in getting the word out about this new program, so please forward this announcement to eligible candidates that you've met in your research and travels. Also, feel free to forward this information to organizations that might know of eligible candidates for our program.

We have hard copy brochures for the program which we've just released. If you would like to receive the hard copy brochure and/or want us to send the brochure to an organization or an individual, please let us know. You can give us addresses for organizations and individuals and we'll send the brochures to them.

Upcoming application deadlines for the program are: Nov. 1, 1999 and April 1, 2000.

Sincerely,

Michael Watts,

Director Institute of International Studies and the Berkeley Workshop on Environmental Politics

215 Moses Hall, #2308

Berkeley, California 94720-2308

USA

### Course on the Tropical Plant Families of SE Asia

From Ed Colijn's news server

Botanists, Biologists, Anthropologists and other researchers who are working or planning to work in the field in SE Asia, and anybody interested in the botanical diversity in SE Asia, are invited to visit the webpage of the National Herbarium of the Netherlands - Leiden (<http://nhncml.leidenuniv.nl/rhb/tropfam.htm>) to get information on our course: Tropical Plant Families of SE Asia, February 21 - March 10, 2000.

This course is especially developed for undergraduates, graduates and researchers who want to get

familiar with the identification of taxa, their field characteristics, biology, etc.

For more information contact:

Dr. Marco Roos

National Herbarium of the Netherlands

P.O. Box 9514, 2300 RA Leiden

The Netherlands

Phone: + 31 71 527 3524 / 3500

Fax: + 31 71 527 3511

<http://rulrhb.leidenuniv.nl/>

### Southern Hemisphere Ornithological Congress

From a notice by Mike Clarke, on behalf of the Scientific Program Committee, Southern Hemisphere Ornithological Congress, 27 June - 2 July 2000, Griffith University, Brisbane, Australia

Those wishing to present an oral presentation or poster are invited to submit an abstract by 15th November 1999 for consideration by the Scientific Program Committee. Presenters of papers selected for inclusion in the Program will be notified by email, fax or mail by 31st December 1999.

If payment for registration has not been received from the presenting author by 15th March 2000, your presentation will be withdrawn from the program.

Registration details can be obtained from the Conference website, whose address is

<http://home.vicnet.net.au/~birdsaus/index.html> or by contacting the SHOC 2000 Congress Secretariat at Conventions Queensland, PO Box 4044, St Lucia South, Qld, 4067, Australia (Phone 61-7-3870-8831, Fax 61-7-3371-9514, email: [shoc2000@convqld.org.au](mailto:shoc2000@convqld.org.au)).

Oral presentations can be associated with any of the Symposia listed below, or be part of several open Contributed Papers sessions. Potential contributors to symposia who may have already been contacted by symposia organisers must still submit an abstract to the email address below.

Please note: the number of spoken papers will be limited, and that by requesting to present your research at SHOC 2000, you must agree to present a poster if all spoken paper places are taken.

#### Abstract Format

Abstracts should be submitted as an attachment to an email message directed to: [M.Clarke@zoo.latrobe.edu.au](mailto:M.Clarke@zoo.latrobe.edu.au). An additional hard copy should also be faxed to 61-3-9479 1551. Users of P.C. computers (IBM compatible) please ensure the attachment is a Microsoft Word 6.0 document in Windows 95

format. Users of Macintosh computers should save their abstract as an RTF file i.e. in Rich Text Format, and then send this RTF file attached to the email message. Anyone lacking access to email or fax facilities may submit their abstract on a floppy disk formatted for Windows 95 to Dr M. Clarke, Dept. of Zoology, La Trobe University, Bundoora, 3083, Australia.

Abstracts should be a maximum of 250 words in length (excluding title, authors and addresses), in English, presented in 10pt, Times New Roman font, single spacing between lines in the format given below. You should be able to simply type over the example below to achieve the correct format.

Title: Bold type, scientific names underlined.

Author(s): The presenting author's name should be underlined  
Postal and email address(es):

Text: no more than 250 words

#### Topics and Convenors of symposia are:

1. Megapodes: Past, present & future: Darryl Jones  
[D.Jones@mailbox.gu.edu.au](mailto:D.Jones@mailbox.gu.edu.au) Rene Dekker [dekker@nmm.nl](mailto:dekker@nmm.nl)
2. Ratite Biology: David Westcott  
[david.westcott@tfrc.csiro.au](mailto:david.westcott@tfrc.csiro.au) Peter Sharp  
[peter.sharp@bbsrc.ac.uk](mailto:peter.sharp@bbsrc.ac.uk)
3. Threatened Species Recovery Programs in the Southern Hemisphere- Are they working?: Jeremy Thompson  
[Jeremy.Thompson@env.qld.gov.au](mailto:Jeremy.Thompson@env.qld.gov.au) Richard Hill

[rhill@iconnect.net.au](mailto:rhill@iconnect.net.au)

4. Life History and Ecology of Southern Hemisphere seabirds: Kees Hulsman [K.Hulsman@mailbox.gu.edu.au](mailto:K.Hulsman@mailbox.gu.edu.au) Diego Montalti [dmontalti@arnet.com.ar](mailto:dmontalti@arnet.com.ar)
5. Ethnosystematics and ethnobiology of birds: Glen Ingram [glen.ingram@hyder-con.com.au](mailto:glen.ingram@hyder-con.com.au)
6. Shorebird migrations between the hemispheres: Jim Wilson [j.wilson@dynamite.co.au](mailto:j.wilson@dynamite.co.au)
7. Biogeography and Systematics of Southern Hemisphere groups: Leo Joseph [joseph@acnatsci.org](mailto:joseph@acnatsci.org)
8. Birds on the edge: Fragmentation and Disturbance: Richard Loyn [RHL@DCE.VIC.GOV.AU](mailto:RHL@DCE.VIC.GOV.AU) Leon Bennun [eanhs@AfricaOnline.Co.Ke](mailto:eanhs@AfricaOnline.Co.Ke)
9. Mating systems and cooperative breeding: Robert D Magrath [Robert.Magrath@anu.edu.au](mailto:Robert.Magrath@anu.edu.au) Morne du Plessis [morne@botzoo.uct.ac.za](mailto:morne@botzoo.uct.ac.za)
10. Southern Hemisphere migration: mirror image or new paradigm?: Ursula Munro [Ursula.Munro@uts.edu.au](mailto:Ursula.Munro@uts.edu.au) Hugh Dingle [rdhdingle@ucdavis.edu](mailto:rdhdingle@ucdavis.edu)
11. Ecology of birds in human-dominated landscapes: Carla Catterall [C.Catterall@mailbox.gu.edu.au](mailto:C.Catterall@mailbox.gu.edu.au)
12. Seabird Conservation Issues in the Southern Hemisphere: Eric Woehler & Steve Emslie [eric\\_woe@antdiv.gov.au](mailto:eric_woe@antdiv.gov.au)
13. Southern perspective on avian life histories: Professor Hugh Ford [hford@metz.une.edu.au](mailto:hford@metz.une.edu.au)
14. Physiological correlates of avian life histories: Bill Buttemer [bill\\_buttemer@uow.edu.au](mailto:bill_buttemer@uow.edu.au)

## Where Worlds Collide: Faunal and floral migrations and evolution in SE Asia-Australasia

URL: <http://www.ozemail.com.au/~promote1/auspalaeo/announcements.htm>

The University of New England  
Armidale, Australia  
29 November-1 December, 1999

### INVITATION

The Organizing Committee cordially invites you to join your colleagues at the international conference Where Worlds Collide: Faunal and floral migrations and evolution in SE Asia-Australasia, to be held at The University of New England from 29 November - 1 December, 1999. The conference will form a contribution to IGCP Projects 411 and 421.

### OBJECTIVES

SE Asia is in many respects a unique natural laboratory for studying the effects of geological and tectonic processes, and in particular continental terrane movements, orogenesis and continental collisions, on migration and evolution of a wide variety of animal, plant and insect groups. Waxing and waning physical (geological) and biological (biogeographical) interactions between SE Asia and Australasia go back more than 500 million years and one of the main aims of this conference is to improve our understanding of these relationships both temporally and spatially. Some tantalising questions remaining to be answered include:

- \* Why is Wallace's Line so well defined and what dictated its position?
- \* Cretaceous placental mammals in Australasia: ancestors of some northern hemisphere groups?
- \* What role(s) did the continental "Arks" of India and Australia play in determining distribution and evolution of organisms in the SE Asian region?

- \* How have tectonics and terrane movements influenced migrations and evolution in SE Asia-Australasia and the present-day biogeographic patterns of the region?
- \* What do we know about human dispersals, culture contacts and cultural change in the region?

This conference is designed to provide a forum for answering such questions and to discuss the interaction between physical (geological and tectonic) processes, sea level fluctuations, climate changes, and patterns of migration and evolution in the SE Asian-Australasian region.

### THEMES

The conference will be structured into themes. Some preliminary suggested themes are:

- \* Palaeozoic/Mesozoic geology and biogeography.
- \* Cenozoic geology and biogeography.
- \* Primate evolution and biogeography.
- \* Hominoid migration and dispersal.
- \* Plant evolution and dispersal in the region.
- \* Wallace's Line.
- \* Human dispersals, cultural contacts and change.

### PUBLICATIONS

Selected refereed and accepted papers will be published as a book. All other papers, following peer review and acceptance, will be published in electronic form as a collection of UNEAC Papers on the Internet via the UNEAC Web Page and on a CD ROM.

### REGISTRATION & ACCOMMODATION

Registration fee for the Conference (including abstracts volume, and morning and afternoon teas) will be A\$200 (A\$150 if by 1 August, 1999) and A\$75 for students. Accommodation will be in student colleges (approximate cost for single room, shared bathroom will be A\$40) and in Motels

in Armidale (approximate cost for a single room with continental breakfast will be A\$80). Details will be provided in the Second Circular.

#### **ORGANIZING COMMITTEE:**

Covenor and Chairman: A/Prof. Ian Metcalfe, Asia Centre, UNE

Other Members: Prof. Kevin Hewison, Director, Asia Centre, UNE Prof. Iain Davidson, Head, School of Human and Environmental Studies, UNE Dr. Mike Morwood, Archaeology & Palaeoanthropology, UNE A/Prof. N. Prakash, Botany, UNE

#### **KEYNOTE SPEAKERS**

Prof. Robert Hall, Royal Holloway, London University will present a keynote paper on Cenozoic plate tectonics and distribution of land and sea in SE Asia.

Ms Penny van Oosterzee, author of the Eureka prize winning book "Where Worlds Collide: The Wallace Line" will present an evening public lecture.

#### **DATES TO REMEMBER**

December, 1998: Release of First Circular

15 February, 1999: Deadline for receipt of pre-registration

1st April, 1999: Release of 2nd Circular and Registration Form

1 July, 1999: Deadline for submission of abstracts

1 August, 1999: Deadline for registration

29 November, 1999: Deadline for receipt of full papers

## **AGU/ASLO Special Session on TROPICS, 24-28 JANUARY 2000**

From Ed Colijn's news server

Held in San Antonio, Texas

List of Invited Speakers and Titles

17 September 1999 (from G. J. Brunskill, Co-Convenor)

Benthic Invertebrates & Sediment Mixing in the Inner Shelf of the Gulf of Papua, Papua New Guinea. J. Y. Aller (USA)

Sediment-Porewater Interactions in the Inner Shelf of the Gulf of Papua, Papua New Guinea. R. C. Aller (USA)

Carbon Mass Balance for the Gulf of Papua, Papua New Guinea. G. J. Brunskill, D. M. Alongi, J. Pfitzner, I. Zagorskis (Australia)

Global fluvial discharge to the oceans: Importance of tropical rivers. K.L. Farnsworth and J.D. Milliman (USA)

Physical Oceanography of the seaward Mamberamo River Estuary (Northern Irian Jaya) in May 1999. Abdul Gani Ilahude (Indonesia)

DiMethyl Sulfide in the atmosphere & surface waters of the Gulf of Papua, Coral and Bismarck Seas during TROPICS '97. Jones, G.B., A. Trevena, T. Ayuki, and D. Miller (Australia)

Sediment dispersal from the Sepik River (Papua New Guinea), via surface and subsurface Plumes. Gail Kineke & Richard Sternberg (USA)

Slope sedimentation off the Sepik River, Papua New Guinea: A lowstand analog for slope processes? S.A. Kuehl, T. Kniskern, and D. Fugate (USA)

Osmium Supply to the Oceans From New Guinea. Candace E. Martin, Bernhard Peucker-Ehrenbrink, Greg Ravizza, Gregg J. Brunskill, and Ron Szymczak (Australia, USA, Germany)

Shelf ooids: late Quaternary sea level and tropical aridity. J.D. Milliman (USA)

Sepik Estuary submarine canyon: evidence for modern sedimentation. C. Nittrouer and J. P. Walsh (USA)

The estuarine chemistry of rare earth elements: comparison of the wet tropical rivers Amazon, Fly, Sepik, and the Gulf of Papua systems. Edward Sholkovitz & Ronald Szymczak (USA, Australia)

Sepik Canyon Sediment Transport in Fluid Mud Gravity Flows. Richard Sternberg & Gail Kineke (USA)

Zooplankton of the Mamberamo River Estuary, Irian Jaya. Agustinus B. Sutomo (Indonesia)

The effect of first-order physiographic features on continental-margin sedimentation patterns: insights from coastal New Guinea. J. P. Walsh & C. A. Nittrouer (USA)

For more information see: <http://www.agu.org> AND <http://www.aims.gov.au/tropics>

## **The Third International Hornbill Workshop**

from Ed Colijn's news server

SINGAPORE

10-13 May 2000

on The Ecology of Hornbills with Emphasis on Reproduction and Population

Organized by:

Hornbill Research Foundation and Nature Society Singapore Nature's Niche Pte. Ltd.

#### **INTRODUCTION**

The First International Asian Hornbill Workshop was organized in 1992 to create an Asian Hornbill Network. It has generated much interest and brought together researchers from 11 Asian countries. The Second International Asian Hornbill Workshop organized in 1996 was aimed at monitoring progress, as well as strengthening and extending collaboration among hornbill researchers and researchers on related topics in Asia. The 2nd Workshop was participated by researchers from field and laboratory, aviculturalists, and zoo-curators

from 16 countries. This 3rd International Hornbill Workshop aims to bring together field researchers in Asia and Africa on ecology of hornbills, as well as zoo and bird park curators and other researchers in the field of breeding and reproduction of hornbills.

#### **AIMS AND OBJECTIVES**

The seminar and workshop will bring together field researchers from Asia and Africa, along with zoo-curators and scientists to:

- . Share the latest information and study techniques on hornbills, as well as gather information on related topics
- . Provide an opportunity for researchers, both in the field, in laboratory and in captivity to have closer interaction with one another and strengthen hornbill network
- . Encourage continuous research on hornbill ecology and related fields

. Create an IUCN Hornbill Conservation Action Plan, identifying the top priority activities for preserving populations of wild hornbills.

### THEME OF THE WORKSHOP

Factors influencing reproduction of hornbills in the wild and in captivity

Recent findings in biology of hornbills

Food and feeding ecology of hornbills

Human exploitation of hornbills

Other related topics

(Note from Ed Colijn: For those interested the Oriental Bird Club has posted the entire document, including programme and registration form, to the Oriental Birding Vault on their website at

<http://www.egroups.com/docvault/orientalbirding/Hornbill%20Workshop.doc> from where you can download it)

### Internet Sites to Check Out:

<http://www.thejakartapost.com>

[http://www.unitech.ac.pg/Unitech\\_General/Departments/Forestry/Bulolo/index.htm](http://www.unitech.ac.pg/Unitech_General/Departments/Forestry/Bulolo/index.htm)

Key to the Forest Insect Pests of Papua New Guinea: <http://www.geocities.com/ResearchTriangle/System/4131/index.htm>

Ok Tedi Mining: <http://www.oktedi.com/>

Flannery, Tim (1994) The rediscovery of Bulmer's Fruit Bat: <http://www.batcon.org/batsmag/v12n1-1.html>

Village Development Trust NGO: [www.global.net.pg/vdt](http://www.global.net.pg/vdt)

The home page of the 3rd International Symposium-Workshop on Frugivores and Seed Dispersal that will be held from 6-11 August 2000 in Brazil can be accessed at the following address: [www.unicamp.br/ib/f2000](http://www.unicamp.br/ib/f2000)

The following web site presents details of all known orchid genera from Papua New Guinea. Shown are representative examples of species in all genera and some sections if possible. Additionally provided are line drawings and photos. Our photo library is extensive and constantly being added to. Genera names applied are those recognized at the time of publishing. Several new genera have been created by various authors, mostly by elevating existing sections within a genus to generic level. These changes are being updated and synonyms will be included over a period of time: <http://www.bandisch.com/PNGorchid/>

The New York Turtle and Tortoise Society announces a new Web site devoted to THE ASIAN TURTLE CRISIS:

<http://nytts.org/asianturtlecrisis.html>

Articles, links, and photographs included on this site bring together much of the currently available material. Together, they just begin to reveal the extent and gravity of this environmental crisis. The site includes links to current news articles and reports as well as many still photos take by William McCord during his trip to the Guangzhou and Shenzhen markets in China two years ago. The sheer numbers of turtles imported from Southeast Asia documented in these markets leaves little doubt that such an ongoing, continuous take is unsustainable.

Glen Barry's "Gaia's Forest Conservation Archives and Portal" web site <http://forests.org/> features a search interface for over 20,000 articles and the indices of many major conservation organization web sites. The advantage of using this search engine instead of an engine that searches the entire internet is that you know you will only access relevant information and so reduce your time investment.

## Research Stations



This section is for contributions describing research facilities in New Guinea. If you have information about a place where researchers are welcome to come and work, please send a summary. Include the location, altitude, available facilities, logistics of getting there, and a contact name, address and fax number. Thanks!

### Kamiali Training Centre and Guest House

In the Kamiali Wildlife Management Area, Lababia, Salamaua District

The Kamiali Training Centre and Guest House is located 60 km south of Lae (a two hour speedboat ride) on an ocean shore with sea grass beds and coral reefs; fresh water streams are nearby and directly behind the centre are trails going through undisturbed rain-forest. Plans are in the works to construct an additional research facility at 1000 m elevation in the mountains behind the centre. Additionally, the site has nesting leatherback sea turtles from November through February. Nestled in the heart of the Kamiali Wildlife Management Area (29,000 hectares of terrestrial habitat and

18,000 hectares of marine habitat) and a short distance from the small but culturally rich community of Lababia, this facility features complete catering services, meeting facilities, tour packages, and comfortable sleeping accommodation for up to 24 guests.

#### Accommodation:

There are three bungalows with bunkbeds and an airy loft area above the dining room with more bunkbeds. We provide all linens, soap, and mosquito nets. Price is K25 per person per night.

**Meal Service:**

Daily cuisine generally consists of locally grown produce, fresh fish and seasonally available fruits. Food is prepared using both traditional and western methods. Breakfast is K5 per person, lunch is K10 per person and dinner is K10 per person.

**Amenities:**

The Centre uses both solar and generator power and has two way radio communication. Cool mountain streams supply the Training Centre with ample fresh water for drinking, showers, and flush toilets. In addition to sleeping areas, there is a dining room and a large conference room with tables, chairs and a large white board.

**Transport:**

Transportation between Lae and Lababia is by speed banana boats. Passenger rates for Lae-Lababia return is about K40 per person and arrangements for travel can be coordinated for you through the Training Centre. Local boats with drivers can

be rented for day trips near the centre at a cost of roughly K25 per hour. If you wish to bring your own boat, there is adequate anchorage in front of the Training Centre with a mooring fee of K10 per boat per night.

**Reservations and Bookings:**

To arrange for your stay, it is best to fax (675) 472-4824 or email [vdt@global.net.pg](mailto:vdt@global.net.pg) with a subject header of "Attention KTC Manager". You can expect a response within the same week, however please allow at least two weeks notice for confirmation. Communication with the Training Centre is limited to two way radio, and short notice requests can be handled in this way. Payment can be made by travellers cheque or cash. Sorry, we are not equipped to handle credit card transactions. Please contact the VDT office to arrange details: Village Development Trust, P.O. Box 2397, Lae, Morobe Province 411, PNG, Phone: (675) 472-1666, fax: (675) 472-4824, email: [vdt@global.net.pg](mailto:vdt@global.net.pg)

## Diseases you should know about



This section is to make sure that we are all aware of the various diseases we need to look out for in New Guinea. Many diseases you would not get in town, but only by working in the forest or in a village, and doctors might not be able to diagnose these diseases easily. If you know about a disease that we should be aware of, PLEASE send in a description, or at least the name of the disease, so we can look up information on it to include in a future issue of this newsletter—thank you! Folks at the Institute of Medical Research—can you help us?

Diseases we have covered in past issues include: Ross River Virus, Barmah Forest Virus, Filariasis, Dengue Virus, Murray Valley Encephalitis Virus, Bat Lyssavirus, Japanese Encephalitis, Malaria and Typhoid Fever.

### Typhus

Typhus is a general term used for any of several related diseases caused by various species of *Rickettsia*, micro-organisms that resemble both bacteria and viruses. The typhus group includes epidemic typhus, endemic typhus and scrub typhus.

Epidemic typhus is prevalent worldwide. It is an acute disease caused by contamination of a human lice bite or by inhalation of human lice feces. Incubation period is 10 to 14 days, followed by a sudden onset of severe headache and fever. Temperature reaches 104°F and stays there for up to two weeks. The rash (pink spots) develops on the 4<sup>th</sup> to 6<sup>th</sup> day and spreads to all parts of the body except the face, hands and feet. The patient may vomit and be in a state of delirium or shock. Accompanying low blood pressure may lead to vascular collapse. Fatalities are rare in children, but increase with age so that the overall mortality rate is high. Once over the disease, symptoms do not recur without a reinfection.

Endemic typhus, or Murine typhus, is common throughout the world and is transmitted by the fleas of infected rats or mice. The symptoms are similar to those of epidemic typhus, but are much milder. Mortality rate with this typhus is low.

Scrub typhus is spread by mites that feed on infected rodents and occurs mainly on Pacific islands and in SE Asia (including New Guinea). Symptoms are similar to those of epidemic typhus. Onset is sudden with fever, chills, headache and general swelling of the lymph nodes. When the fever begins, a red lesion develops at the site of the bite and this usually ulcerates and forms a black scab. High fever (104°F) develops during the first week as does a severe headache. A cough is present during the first week of fever and pneumonia may develop. A rash also develops on the torso often extending to the arms and legs, but the rash is not as distinct as the rash in epidemic typhus.

All forms of typhus are treated with antibiotics (e.g. chloramphenicol, doxycycline or other tetracyclines) which work rapidly to remove the symptoms. There are effective vaccines for epidemic and endemic typhus, but not for scrub typhus. Use flea- and mite-repellents.

Sources:

<http://doctorkoop.net/conditions/encyclopedia/articles/020000a/020000211.html>

<http://www.thirdworldtraveler.com/www.thirdworldtraveler.com/people/stevet.../typhus.html>

### Malaria Update

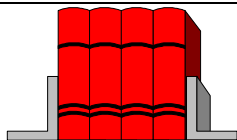
From the Post Courier, Monday, Sept 27, 1999

An article in the [American Journal of Tropical Medicine and Hygiene](#) by Dr. Theresa Shapiro and colleagues at John Hopkins University states that atovaquone (Glaxo-

Wellcome's brand name Malarone) was 100 percent effective in keeping volunteers from developing malaria when they were bitten by mosquitoes carrying *Plasmodium falciparum*.

Dr. Shapiro said that when atovaquone is taken in conjunction with proguanil, an older malaria-fighting drug, it should work even better by preventing drug resistance from developing by attacking the parasites at two places in the life cycle. Glaxo, the drug company that produces the drug, is preparing to

donate the combined form of atovaquone and proguanil to a non-profit organization to distribute it to countries worst hit by malaria. The combination has already been approved across Latin America, Europe, Asia and in Australia.



## Available Publications and Items

If you know about any books or items we should know about, please send the details! To order the following publications, use the addresses in bold.

**From the Distribution Officer, Publication Section, DAL, P.O. Box 417, Konedobu NCD, Papua New Guinea. Price US\$15 or Aus\$20 (incl. Airmail postage):**

A special issue of the Papua New Guinea Journal of Agriculture, Forestry and Fisheries: Soil Research and Management in Papua New Guinea. Special issue of: Papua New Guinea Journal of Agriculture, Forestry & Fisheries, 1998. Vol 41 no. 1., 101 pp (Edited by A.E. Hartemink).

This special issue of the Papua New Guinea Journal of Agriculture, Forestry & Fisheries is dedicated to soil research in Papua New Guinea. It is authored by 13 soil scientists and the issue includes four review and four research papers. Papua New Guinea has a long and interesting history of soil research of which Geoff Humphreys gives an overview in the first paper of this issue. David Freyne describes in the second paper PNGRIS (Papua New Guinea Resource Information System) which contains digitized information on the natural resources, land use and population of the country. There is a large soil component in PNGRIS that, as the author shows, can be used for several purposes. David Radcliffe and Matthew Kanua used PNGRIS to estimate the cover of Andisols and they review the specific chemical and physical properties and management of these soils. Although Andisols cover a relative small area, they are extensively used for cultivation. Coffee is an important source of income for one-third of the population in Papua New Guinea and Paul Harding and Potaisa Hombunaka review the nutritional aspects of the crop. They summarize many years of research conducted at the Coffee Research Institute and throughout other parts of the Papua New Guinea highlands. Research papers include a report on changes in soil properties resulting from continuous sugarcane cultivation. At last there are three papers on nutrient management under sweet potato which is the main staple crop in Papua New Guinea.

**Copies available (postage by airmail around Rp. 210.000 (US\$35)) from: Dewi M. Prawiradilaga, Fauna Flora International-Indonesia Programme, Jalan Bangbarung Raya Blok III Kavling 11, Bantarjati, Bogor 16151, P.O. Box 230, Bogor 16002, Phone: + 62 251 326 408, Fax: + 62 251 372 101, E-mail: [ffi@indo.net.id](mailto:ffi@indo.net.id)**

Proceedings of the 2nd conference on Eastern Indo-Australian vertebrate fauna. Editors: Dewi M. Prawiradilaga, Mohammad Amir & Jito Sugardjito

**Free from United Nations Development Program, P.O. Box 1041, Port Moresby NCD, PNG, phone: (675) 321-2877, fax: (675) 321-1224**

Ellis, Julie-Ann (1997) Race for the rainforest II. Applying Lessons Learned from Lak to the Bismarck-Ramu Integrated Conservation and Development Initiative in Papua New Guinea. PNG Biodiversity Conservation and Resource Management Programme. Dept. of Environment & Conservation. UNDP - Global Environment Facility UNOPS-PNG/93/G31. 90 pp.

**From the office of the SIL General Secretary: Prof. R.G. Wetzel, Dept of Biological Sciences, University of Alabama, Tuscaloosa AL 35487-0206, USA; Email: [rwetzel@biology.as.ua.edu](mailto:rwetzel@biology.as.ua.edu)**

The International Association for Limnology (SIL) is publishing a series on Limnology in developing countries. The volumes include reviews of the state of research and training in aquatic resources in various developing countries. Each review includes an account of the physical environment, water resources and aquatic ecological researches, status of conservation and management of aquatic resources (rivers, lakes, reservoirs, wetlands) training and research facilities, and scientific organisations in each of the countries.

Volume 1 published in 1995 included reviews for Ghana, Tunisia, Bangladesh, Pakistan, Sri Lanka, Malaysia and Papua-New Guinea. Volume 2, just published (1999) includes reviews for Indonesia, Morocco, Ethiopia, Uruguay and Costa Rica. Reviews for India, Mexico, China and Brazil are expected to be published by end of 1999 and early next year.

Vol 1 and 2 are priced at US\$ 5 and \$ 8 per copy respectively for individuals, and US\$ 12 and \$ 20 respectively for libraries/Institutions.

**From the Tropical Marine Centre, Solesbridge Lane, Chorleywood, Hertfordshire, WD3 5SX, United Kingdom, Tel: +44 1923 284151, Fax: +44 1923 285840**

The World Conservation Monitoring Centre is pleased to announce the publication of:

The Global Trade in Coral (Green and Shirley 1999, World Conservation Press, Cambridge, UK, 70pp, ISBN: 1-899628-13-4).

While stocks last these are available free of charge to addresses in developing nations and at the cost of postage and packing to all other addresses.

This study assesses the global trade in coral in an ecological and economic context. Throughout the report emphasis is placed on the trade in live coral for aquaria because the last decade has seen an enormous increase in this business. The taxonomic

composition of the trade is identified and the quantities of coral passing between nations illustrate the links between major exporters and importers. Subsequent chapters present data on the practicalities of monitoring international trade in coral at the global scale. In the last two chapters size and growth rate data are used to assess the sustainability of the trade in live coral: export and retail prices are used to estimate the revenue to exporting nations.

If you have comments or questions on the content of the report please contact Dr. Edmund Green, Head, Marine and Coastal Programme, World Conservation Monitoring Centre, 219 Huntingdon Road, Cambridge CB3 0DL, United Kingdom, Tel: (44) 1223 277314, Fax: (44) 1223 277136, [ed.green@wcmc.org.uk](mailto:ed.green@wcmc.org.uk)

Available for free from Cut Fathiah Gathom at email: [c.gathom@cgiar.org](mailto:c.gathom@cgiar.org)

Harnessing Carbon Markets for Tropical Forest Conservation: Towards a More Realistic Assessment. Manuscript by Joyotee Smith, Kalemani Mulongoy, Reidar Persson and Jeffrey Sayer. Center for International Forestry Research, Jakarta, Indonesia.

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## Scientific Literature



If you haven't sent your publication list in yet (your papers about New Guinea), please send these citations to Deb so we can include them in a future issue. It doesn't matter if you have one paper, or 30 papers-- the rest of us want to know about it! We would really like to know what you have found out about New Guinea; that is the purpose for this newsletter—to share information. If you have more than one page of citations, please send your list on disk or by email (preferably in Word) if possible-- thanks! In addition, don't forget that we offer a reference-finding service for those of us without inter-library loan. If you need a particular reference and cannot find it or do not have access to it, please write and we will see if we can find it for you and send it to you. (Not just the citations in the newsletter, you can request any citation).

### From Howard Rogers:

Rogers, H. M. 1999. Forest dynamics in a monospecific *Nothofagus pullei* forest, Mt. Giluwe, Papua New Guinea. *Science in New Guinea* 24 (3): 166-175.

### From J. Albert C. Uy:

Uy, J. Albert C. and Gerald Borgia. *in press*. Sexual Selection Drives Rapid Divergence in Bowerbird Display Traits. *Evolution*.

**Abstract.** -- Sexual selection driving display trait divergence has been suggested as a cause of rapid speciation, but there is limited supporting evidence for this from natural populations. Where speciation by sexual selection has occurred in newly diverged populations, we expect that there will be significant differences in female preferences and corresponding male display traits in the absence of substantial genetic and other morphological differentiation. Two allopatric populations of the Vogelkop bowerbird *Amblyornis inornatus* show large, qualitative differences in a suite of display traits including bower structure and decorations. We experimentally demonstrate distinct male decoration color preferences within each population, provide direct evidence of female preferences for divergent decoration and bower traits in the population with more elaborate display, and show that there is minimal genetic differentiation between these populations. These results support the speciation by sexual selection hypothesis, and are most consistent with the hypothesis that changes in male display have been driven by divergent female choice.

### From Alfred Hartemink:

Hartemink, A.E. & L. Kuniata 1996 Some factors influencing yield trends of sugar cane in Papua New Guinea. *Outlook on Agriculture* 25: 227-234.

Kunu, T. & A.E. Hartemink 1997 Soil chemical properties under primary forest and coffee in the Kutubu area of Papua New Guinea. *Papua New Guinea Journal of Agriculture, Forestry & Fisheries* 40: 1-5.

Hartemink, A.E., M. Johnston, P. John, W. Julius & A. Kerru 1997 Biomass production and nutrient uptake of taro roots. *Papua New Guinea Journal of Agriculture, Forestry & Fisheries* 40: 6-12.

Hartemink, A.E. 1998 Soil chemical and physical properties as indicators of sustainable land management under sugar cane cultivation in Papua New Guinea. *Geoderma* 85: 283-306.

Louman, B & A.E. Hartemink 1998 Sweet potato production in hedgerow intercropping systems in the lowlands of Papua New Guinea *Papua New Guinea Journal of Agriculture, Forestry & Fisheries* 41: 91-98.

Hartemink, A.E. & M. Johnston 1998 Root biomass and nutrient uptake of taro in the lowlands of Papua New Guinea. *Tropical Agriculture* 75: 1-5.

Sayok, A. & A.E. Hartemink 1998 Erosion and soil fertility changes under leucaena intercropped with sweet potato in the lowlands of Papua New Guinea. *Papua New Guinea Journal of Agriculture, Forestry & Fisheries* 41: 85-90.

Hartemink, A.E. 1998 Acidification and pH buffering capacity of alluvial soils under sugarcane. *Experimental Agriculture* 34: 231-243.

Hartemink, A.E. 1998 Changes in soil fertility and leaf nutrient concentration at a sugar cane plantation in Papua New Guinea. *Communications in Soil Science and Plant Analysis* 29: 1045-1060.

Hartemink, A.E., J. Nero, O. Ngere & L.S. Kuniata 1998 Changes in soil properties at Ramu Sugar Plantation 1979-1996. *Papua New Guinea Journal of Agriculture, Forestry & Fisheries* 41: 65-78.

### From Andrew L. Mack:

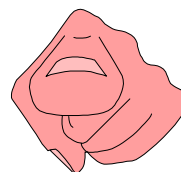
Mack, A. L. 1990. Notes on the Dwarf Cassowary *Casuarius bennetti* in Papua New Guinea. *Muruk* 4: 49-52.

Mack, A. L. 1992. The nest, egg, and incubation behaviour of the Blue Bird of Paradise, *Paradisaea rudolphi*. *Emu* 92: 244-246.

Mack, A. L. and D. D. Wright. 1993. Birds of Lake Tebera. *Muruk* 6: 25-26.

Mack, A. L. 1994. The nests and eggs of birds at the Crater Mountain Biological Research Station, Papua New Guinea. *Bulletin*

- of the British Ornithologist's Club 114: 176-181.
- Wright, D. D., A. L. Mack and E. H. Paxton. 1995. Recent *Aproteles bulmerae* (Megachiroptera: Pteropodidae) skulls found in Eastern Highlands Province, Papua New Guinea. *Mammalia* 59: 163-164.
- Mack, A. L. 1995. Distance and non-randomness of seed dispersal by the Dwarf Cassowary, *Casuaris bennetti*, in Papua New Guinea. *Ecography* 18: 286-295.
- Mack, A. L. 1995. Feathered Foresters: Dwarf Cassowaries sow the seeds of rainforest giants. *Living Bird* 14 (4): 22-25.
- Mack, A. L. and Wright, D. D. 1996. Birds of the Crater Mountain Biological Research Station, Papua New Guinea. *Emu* 96: 89-101.
- Mack, A. L. 1997. Spatial distribution, fruit production and seed removal of a rare, dioecious, rainforest tree in a Papuan rainforest. *Journal of Tropical Ecology* 13: 305-316.
- Mack, A. L. and D. D. Wright. 1998. Status and conservation of the threatened Vulturine Parrot, *Psittrichas fulgidus*. *Bird Conservation International* 8: 185-194.
- Mack, A. L. (editor and author) 1998. Rapid Assessment Survey of the Lakekamu Basin, Papua New Guinea. RAP Working Paper No. 9. Conservation International, Washington, D.C. 187 pp.
- Mack, A. L., R. Yamuna, T. Domambe, and J. Pano. 1998. Effects of drought on birds at Maimafu, Eastern Highlands Province. *Science in New Guinea* 23: 125-131.
- Mack, A. L. 1998. The potential impact of small-scale physical disturbance on seedlings in a Papuan rainforest. *Biotropica* 30: 547-552.
- Mack, A. L. 1998. An advantage of large seed size: tolerating rather than succumbing to seed predators. *Biotropica* 30: 604-608.
- Mack, A. L. 1999. Seedling ecology of *Aglaia mackiana* (Meliaceae), a cassowary-dispersed rainforest tree, in Papua New Guinea. *Biotropica* 31: 111-120.
- B. M. Beehler and A. L. Mack. 1998. Birds of the Lakekamu Basin. *Proceedings of the XXII International Ornithological Congress*. (in press)
- Mack, A. L. 1999. The Vulturine Parrot (*Psittrichas fulgidus*) of New Guinea, a species in need of study. *Psittascene* (in press)
- Supriatna, J., A. L. Mack, C. Yeager, S. Olivieri, T. Tarar, and B. Burnett (eds.). 1999. The Irian Jaya conservation priority-setting workshop: final report. Conservation International (in press).



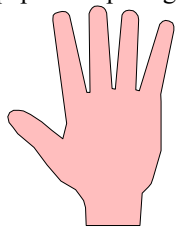
## We Want You!

To make this newsletter more useful, we want YOUR contribution! Please send changes or additions to the mailing list. Please send a paragraph to introduce yourself and tell us what your interests are. Please send a list of any publications you have about New Guinea. Please send a paragraph about any recent research or work you have done in New Guinea. Please send editorials, letters, announcements, etc. In other words, send anything of interest to your fellow researchers and conservationists-- share with us! We want this to be YOUR newsletter!-- Think of us as just the compilers! (Send all this good stuff to Deb Wright at the addresses/numbers listed on the first page of this newsletter)



## Our Current Mailing List

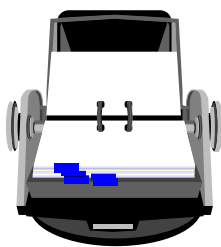
Included with this issue of the Digest, you will find changes and additions to the 1999 mailing directory which was mailed out with Issue 7. We hope this will facilitate communication between all of us. Please help us by sending the names and addresses of anyone else who would like to get a copy of the Digest. Also, please check your address, phone, fax, and e-mail. If anything is wrong, please drop us a line so we can correct it. If you would rather not receive the newsletter, please let us know so we can save the paper and postage. Thanks!



Goodbye until next time!

Lukim yu bihain!

Sampai jumpa lagi!



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