PHILIPPINE ENDEMIC SPECIES CONSERVATION PROJECT (PESCP)

Twelfth Annual Report

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In tight cooperation with

Aklan State University (Philippines)
Department of Environment and Natural Resources (Philippines)
Frankfurt Zoological Society (Germany)
Ruhr-University Bochum (Germany)
GTZ / CIM (Germany)

Front cover:

Logo of Philippine Association for Conservation and Development, Inc. (PhilConserve),
erected as an NGO by PESCP in March 2005 to step up and reinforce PESCP's long standing agenda in the field of conservation and development to the benefit of the people and their environment

Design by Helga Schulze (Ruhr-Universität Bochum)

The Project has been funded in 2005 by the

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Twelfth Report 2006

An Update and Thorough Revision of the ‚Eleventh Report' 2005

Title of Project and Time Period:

Philippine Endemic Species Conservation Project (PESCP); the time period covered is the year 2005.

The project's work is formalised under the aegis of a Memorandum of Agreement between the DENR and Ruhr-University Bochum and a collecting permit, covering collecting (blood, plants, ectoparasites) and accidentally (e.g. road kills) obtained specimens that represent new species or new distributional records. Links with many environmentally concerned agencies/ institutions are continuing to exist and many others are developing: BII (Birds International Inc., Quezon City), 'GEO protects the Rain Forest' (Hamburg, Germany), Green Forum - Western Visayas (Iloilo, Panay), the GTZ and CIM (German Agency for Technical Assistance, Eschborn; Centre for Internatl. Migration and Development, Frankfurt/M.), the Negros Forest and Ecological Foundation, Inc. (Bacolod, Negros), New England Zoological Society (Chester, UK), both CENTROP and SUAKCREM at Silliman University (Dumaguete, Negros), ASEAN Regional Centre for Biodiversity Conservation (ARCBC) in Los Baños, the Philippine National Museum (Manila), Radio Station DWWW, President Roberto N. Bacsal, the Philippine Working Group (Manila), and UP Diliman (Dr. P. Ong).

The most significant link forged with Aklan State University (ASU) since 2003 continued to prosper. Accordingly, joint endeavours in the field of community-based development and conservation of both ASU and PESCP saw their outreach work in Aklan province expanding and solidifying, thanks to a grant from EC-UNDP; this joint endeavour in reforestation and various agro-forestry measures will go some way toward protection of tropical forests as those of Panay (see Manager's Report). A cornerstone of this cooperation was the continuing funding of the position of an Environment Program Coordinator by ASU with the assistance of the German Government (GTZ/CIM). The man in charge is PESCP's acting Manager who thereby has been assigned a double role (see Tenth Report, 2004).

Sad to say, BioCon, an NGO and earlier outgrowth of PESCP, failed all along with its mandate of strengthening PESCP financially since its erection five years ago. Accordingly the founding of a new NGO 'Philippine Association for Conservation and Development, Inc.' (PhilConserve) by concerned citizens was a major event fostering the hope for effective biodiversity conservation in Panay (details see Editorial below).

Editorial

A year ago I discussed in some depth the laudable intentions of the Philippine Government to get to grips with the large-scale illegal and legal logging going on in the country. These intentions, climaxing in the President's prophetic announcement of rating the illegal loggers' activities as 'heinous crimes' that need capital punishment (Philippine Daily Inquirer, 5 Dec 2004), met my uncompromised acclaim (Eleventh Report, 2005). They had been triggered by the horrendous death toll paid in the Aurora disaster. And they fell on ears ready to listen, at a time when the much more disastrous tsunami event had taken 220,000 lives. The readiness to listen was underlined by paraphrasing the feeling of many by Greenpeace Southeast Asia (von Hernandez, Philippine Daily Inquirer, 20 Sep 2005): "Greenpeace believes that the first crucial step to reverse the vicious cycle of destruction and calamity must be to protect what is left of our country's forests. Unless the government acts now to implement a nationwide total log ban, 'tsunamis from the mountains' will remain a constant threat to the 20 million Filipinos living in and around the mountain areas." Sadly, the last year saw a number of acts and messages by which these laudable intentions were softened or even reversed. For example, selective logging was allowed to be reinstated again, Caraga Province was exempted from any log ban, (actually called 'implementation of anti-illegal logging measures'), and the Secretary of the DENR aired in regard of his order, that the furniture industry would not be adversely affected 'because it was not the season for harvesting (timber) anyway'. However, if logging was seasonal then any total log ban, if imposed at all, is doomed to failure. I don't want to be misunderstood. The country needs construction timber for fulfilling the most basic needs of people working on their houses. However, this timber must come from plantations especially established for the purpose; it must *not* come from the remnants of forests that cover less than 18 % of the total area once forested. These remnants are the vital barrier against the disastrous floods and landslides mentioned, notwithstanding the many other ecological services these last forests provide to man.

The 'indecisioness' of the authorities deplored above receives nourishment from time to time from irresponsible reports of even international origin. Deceptively correct, they prove to be flawed when carefully screened. A prime example of this sort of pseudo-science was contained in a report by FAO (UN's Food and Agriculture Organization) and CIFOR (Indonesia-based Center for International Forestry Research) portrayed by the Philippine Daily Inquirer (14 Oct 2005). It concluded that deforestation was not a cause of flooding *because* the *frequency* of major floods in the past 120 years has been stable worldwide. This argument borders to demagogy since it confounds flooding effects due to *frequency* with those due to *severity*. Why had Ormoc, Leyte, not been hit by mudslides centuries before the floods took the lives from 8,000 people toward the end of the 20th century? Because the slopes above the town had still their forest cover and were not planted with crops the shallow roots of which cannot keep the soil. Another argument in the report mentioned is that flooding takes a larger toll now because more people are living in the flood plains now. This leaves out the fact that people, because of population pressure in the lowlands, expand into ever higher elevations, and mudslides wash away whole villages clinging to elevated slopes; it is not solely the flood plains that pay the death toll, specially in a mountainous country like the Philippines. Again, mudslides are undeniably the causal agent of the disasters we are observing now, and this is irresponsibly denied by the report mentioned. It is high time that the Philippine Government takes a determined stand in questions of both a total log ban and of timber plantations that would turn away the eyes of timber-hungry loggers from the last natural stands of forest. The zigzag course steered now sends the wrong message to the illegalists whom PESCP in tight cooperation with the PNP and the military is confronting

with all legal means (see the Manager's Report below). Likewise, NGOs pretending to defend the forest as well but shun the illegalists (see Eleventh Report, 2005) and criticise others who, like PESCP, take a firm stand against them should be publicly branded.

The apocalyptic dimensions of the Luzon disaster have invigorated the public discussion of the reasons underlying the massive logging that triggered the deadly landslides. *Poverty* is typically denounced to be the major reason. If the nation's cake, i.e. mainly food, is to be divided up among 84 million, and the cake cannot be enlarged presently, as it seems, then birth control or 'responsible parenthood' appears the only way out of the impasse. This conclusion is echoed by both the Department of Health and such prominent spokesmen as Senate President Pro Tempore Juan Flavier, a former health secretary. I am fully subscribing to this notion as *the* signpost through the maze. Accordingly efforts must be launched for an effective family planning program that goes beyond a short term educational family-planning special of the country's media as occurred last January; such faint-hearted attempts at redressing the current fatal plight of overpopulation are a drop in the ocean.

The past year was a triumph for me when I learned that my uncrowned environmental hero, Raul Zapatos, had been released from life imprisonment already in 2003; due to some slippage of information I came to know about it only recently (PDI and GMA Network Company, 12 May 05). The event restored my confidence into Philippine jurisprudence, at least to a great extent. What had happened? Raul Zapatos, a DENR forest guard, had kept up in Agusan del Sur a truck that transported illegally cut timber. The mayor, to whom the truck belonged and who corruptly was involved in illegal timber trade, then shot at Zapatos and his team. In shooting back Zapatos killed the mayor and wounded his bodyguard. At the end of a series of transfers among various courts the Supreme Court sentenced Zapatos to life imprisonment in 1990. Because the public regarded this sentence as highly biased a committee formed fighting for repealing the case which finally ended with the high court finding Zapatos not guilty after 13 (!) years; an innocent man had been vindicated. His family had meanwhile left their home because of threats and reprisals. Even a dead corrupt politician can retaliate. – Seen in a wider context the unjust imprisonment of a non guilty colleague, like some other cases of this brand, had sent a fatal message to forest guards all over the country. It is to be hoped that they leastways learned about the final outcome of Zapatos' fight for liberation from a life behind bars.

The past year marked yet another event of expectation for conservation in Panay. PESCP, in conjunction with concerned citizens, namely Leocadio Dioso, a liaison officer of PESCP (see organigram, **App. 1**), Edelvina Dioso, Arnold Demegillo, a long term friend and helper of PESCP, Thomas Künzel and myself erected an environmental NGO 'Philippine Association for Conservation and Development, Inc.' (PhilConserve, see its logo on the frontispiece of this report) in March, duly registered with the SSC after Philippine law. PESCP, and likely other projects, will work under its umbrella and assistance. The founding was prompted by the dissatisfaction PESCP felt with the work of other NGOs that are working toward conservation as well, but who largely fail to fulfil their mandate. We hope PhilConserve to make a difference.

As in the past year, PESCP's Research Station in Sibaliw, Municipality of Buruanga, received again a number of visitors, volunteers and practical students from a variety of institutions (**App. 2**). The strands of research thus begun need to be developed more fully and possibly be taken up by successors with stamina. The many incipient results are encouraging and will be reported below, based on the original reports. - PESCP's conservation research was severely handicapped by not being able to import the long sought-after equipment. Appropriate

telemetry equipment badly needed to monitor the survival upon release of endangered hornbills (Tarictics) and purchased by way of an enormous fund-raising effort of mine was kept on hold by the Customs Office at Manila Intl. Airport since 18 March 2004. PESCP could not afford to pay the mind-boggling amount of customs import fees required (for more details see the Editorial of the Eleventh Report, 2005).

A project such as PESCP that is fighting for the maintenance and restoration of the country's resources *should be given help by the Government* instead of being dragged into a bureaucratic conundrum and inordinate financial sacrifices. Accordingly PESCP is up to apply for a customs fee waiver for all imported goods that are indispensably needed to fulfil its government-endorsed agenda of community-based conservation. In the end of year the DENR forged a renewed MOA with Ruhr-Universität Bochum for another five years. Our thanks go to Dr. M. Lim, then acting PAWB Director of the DENR in Quezon City, for facilitation.

In this period vibrant with various conservation activities PESCP's linkages with other institutions of the regions continued to grow, notably with Aklan State University and its circumspect President Dr. B. Palma. The link via PESCP's Manager Mr. Thomas Künzel who is at the same time ASU's Environment Program Coordinator was strengthened to the benefit of both institutions. It climaxed in the past year's appropriation of a substantial fund from EC-UNDP enabling PESCP to set up a community-based reforestation and agro-forestry project in the area of operation of ASU in Aklan (Castillo). The launching took place in ASU in the presence of numerous honourables, governors and mayors in March. The event was graced by the presence of the Philippine representative of the UNDP section in Manila, Mr. Glen de Castro.

PESCP gratefully acknowledges again the factual and moral support received from the LGU of Pandan. I take this opportunity to extend my deep-felt gratitude to *Hon. Plaridel Sanchez*, Municipal Mayor of Pandan, and the Head of the Pandan Department of Agriculture, *Mr. Ronald S. Sanchez,* for their great understanding and perspicacity of giving leeway to their staff in assisting PESCP tremendously in its zeal of pushing its and the municipality's environment agenda. Accordingly I am pleased to mention the assistance, oftentimes of penitential dimension, of *Mr. Arnold Demegillo*, Pandan's Agricultural Technologist. Without his dedication to law enforcement and Forest Ranger coordination, little would have been accomplished. In a similar vein, I have to highlight a constant dilemma that is now being resolved thanks to the circumspection and speedy action of PENR Officer V. Sardina (San Jose) and the RED, DENR Reg. VI (Iloilo City). It had turned out that the interpretation of the Chainsaw Act of 2002 when being applied by PESCP and subsequently by the DENR or the PNP was not uniform. As agreed upon recently, the DENR officials mentioned are issuing by mid Jan 06 an order according to which the Chainsaw Act will leave no room for interpretation, thus leading to security in handling confiscations by PESCP FRs. PESCP warmly welcomes the removal of those ambiguities.

As before, Prof. Dr. E. Schneider, President of the German 'Bird Protection Committee' (Göttingen), as well as M. Sc. T. Pagel (Zoo Cologne), President of the Breeders' Association AZ were circumspectly funding our *ex situ* work focused on the rehabilitation and release of wildlife, specially endangered birds.

Executive Summary

Conservation and Education

1. All activities of PESCP in the past year should be seen in the light of paving the road toward proclaiming the Central Panay Mountain Range holding the most substantial and last forests of Panay as a Protected Area, following the model of the NW Panay Peninsula PA. Based on the indispensable counter parting and funding from the Frankfurt Zoological Society (FZS) PESCP could, as the only conservation organisation in the W Visayas, secure funding from EC-UNDP for community-based measures toward forest restoration and agroforestry (see below); from the National Geographic Society's Conservation Trust, the North of England Zoological Society and Niehoff Vaihinger for continuing the nest hole protection program benefiting endangered hornbills, and from both the Bird Protection Committee and the Breeders Association AZ for continuing its rehabilitation and release into the wild of endangered bird species, notably the hornbills.

2. The main pillars supporting the project's work have been, as in 2004,

    - Habitat protection, environmental law enforcement and 'rainforestation'
    - Protection of critically endangered/ endangered wildlife
    - Livelihood-based sustainable community development
    - Conservation and development education
    - Nationalisation/ sustainabilisation of PESCP's activities and programs
    - Rehabilitation and release of captive wildlife
    - Conservation and basic research

    The resulting accomplishments can be detailed as follows.

3. In partnership with the 25-Peso Multipurpose Cooperative of Aklan State University (ASU) the year's most prominent undertaking revolved around the erection of the 'Community-based Maintenance and Restoration of Forests in Central Panay Mountain Range and Protected Area of NW Panay Peninsula (CoFoPa)' project with the assistance of the EC-UNDP 'Small Grants Programme for Operations to Promote Tropical Forests' in the provinces of Antique and Aklan. Foci of this project are (till Sep 2006) and have been Forestry resource management and protection including nursery establishments in five counterpart communities of 18 native timber trees and 6 different fruit trees, rainforestation with native trees, habitat protection against timber and wildlife poaching, amongst other measures by way of erecting community-sites for sustained production of charcoal production outside timber land; forestry-connected livelihood alternatives (agroforestry, native timber and fruit tree farming), four other livelihoods including, e.g., pig and chicken production.

4. As before, PESCP pursued forcefully its Forest Ranger-assisted habitat protection and law enforcement activities. In the process large amounts of primary forest timber and nine chainsaws were confiscated in cooperation with the Philippine National Police (PNP) and the DENR. Smooth running of the latter confiscation was hampered by loopholes in the interpretation of the Chainsaw Act of 2002, as identified by PESCP that thanks to the circumspect assistance of the DENR Reg. VI (Iloilo City) will be rectified by an order removing any ambiguities by mid Jan 2006. – Further progress was made by the deputisation of 9 out of 13 PESCP-Forest Rangers as Deputy Natural Resource Officers

(DENROs) by the DENR with the prospect of assigning this status, or a new similar one, to all of them.

5. The protection of endangered wildlife went ahead with long strides in regard of the highly successful guarding of now up to 349 nest holes of the Writhed-billed Hornbill or Dulungan (*Aceros waldeni*) and of galvanizing awareness of the public and the developers on Boracay re the plight of the large flying foxes that have their roosts there while feeding daily on the 'mainland' of the peninsula. Whereas the considerably expanded nest guarding scheme was an unprecedented success for the Dulungan nesting population, the protection of the flying foxes including a critically endangered one (*Acerodon jubatus*) was less successful due to the frictions with the developers of various provenances, the non-consistent law enforcement, the still on-going 'investigation' of clearly destructive slaughter on the mainland and other circumstances. Helpful side-effects of PESCP's nest hole protection scheme were measures curtailing the still widespread use of snares put up for critically endangered/ endangered mammals (*Cervus alfredi, Sus cebifrons*) and the confiscation/voluntary surrender of now over 40 air guns (see chap. 1.5). The wildlife protection was more firmly integrated into PESCP's livelihood program (see 2. above). – The rehabilitation and release of endangered wildlife species, foremost Tarictic Hornbills went ahead but was seriously hampered by the improved telemetry equipment still being retained in the Customs in Manila (see already the plight described in the Eleventh Report, 2005). Another drawback was the suspension of financial support of the Philippine researcher by the national financing foundation due to the lengthy deliberation of an extension proposal. This caused an unforeseen drain of the project's meagre financial contingency at the expense of urgent conservation measures. On the positive side, the equipment of the project's consultant vet and the holding pens for large raptors could be expanded and improved. The diet protocols for raptors, parrots and other birds could be improved as well as their medication. Pre-release training made substantial progress thanks to the erection of a more permanent large holding cage for large raptors in which sustained power flight can be exercised and tameness against humans be minimized. The project consultant vet could attend a number of relevant seminars and conferences.

6. Conservation and development education was carried out in schools, both on Boracay and in NW Panay by lectures of staff in schools, visits by school classes and students of ASU of PESCP and its rescue facilities, e.g. in Mag-aba, and visits to Station Sibaliw, as was compatible with the on-going research up there.

7. Nationalisation and sustainabilisaton of PESCP's programs was promoted by tightening the linkage with ASU whose Environment Program Coordinator is at the same time Mr. Thomas Künzel, PESCP's Manager, due to the perspicacious assistance of both the German Government (GTZ/CIM) and FZS. – Another important step in embedding PESCP's activities into the national legal framework of environmental conservation was the erection of a new NGO 'Philippine Association for Conservation and Development, Inc.' (PhilConserve, see frontispiece for logo) in March, under whose umbrella PESCP will be executing its manifold tasks in the future.

8. The proclamation of the NW Panay Peninsula as PA triggered a number of administrative measures like the setting up of a PAMB (PA Management Board) under the aegis of the NW Panay Biodiversity Management Council (NPBMC). In a number of important meetings of both bodies the five municipalities of the peninsula involved pledged their announced support, yet only in partial fulfilment of their promises. This led to the TASK FORCE ANAK-Talon (see Eleventh Report, 2005) still not becoming operational. This in

turn renders the work of PESCP's FRs even more important than before since they still shoulder virtually alone the monitoring of the forests of NW and N Central Panay. – The erection of a Diesel power plant in Nabas, Aklan, raised controversies and confusion among the DENR, the local LGU and the PAMB that have not been resolved at present. (Due to earlier massive interventions from many parties the erection of a similar power plant could be averted to take place in Pandan, Antique.) A number of environmentally positive resolutions were endorsed by the NPBMC, e.g., the permission for PESCP to collect seedlings in the PA for its reforestation activities. Preparatory steps for a PA Bill to be enacted were taken. – Through the erection of PhilConserve PESCP is now endorsed to be represented in the PAMB as an ordinary member. – There were many training and conference attendances by PESCP staff for having a more erudite view on environmental management and its legal bases.

Conservation Research

1. With an extremely rich fern flora comprising 10 % of the world's known species on 0.06% of the globe's terrestrial surface, the Philippines rank among the top countries in the world. The fern community around Station Sibaliw was competently surveyed in a first approach that will be resumed in early 2006 by Prof. Dr. W. Bennert of Ruhr-Universität Bochum, the first survey of this kind in NW Panay. A first estimate shows the fern flora within a radius of 2 km around the station to stand at ca. 100 species, from among the 1,100 species listed for the country by large. Among the species found habitat specialists abound, e.g. thriving only on rotten tree trunks and in other specialized niches.

2. The ongoing herpetological survey by Gaulke and her field assistants yielded finds of a gecko (*Gekko* nov. sp.) new to science the technical description by Rösler et al. is in the pipeline; it is a Panay endemite and the third species of the genus *Gekko* on Panay. Having been found in two places of the NW Panay Peninsula only its actual distribution warrants closer attention. There have been finds of two small snakes (*Oxyrhabdion leporinum, Calamaria bitorques*) on the peninsula that have been previously found only on both Negros and Cebu, and on Luzon, respectively, and are thus two new distributional records for Panay. - Biometric data, accounts on the diet, the genital morphology and other details of the vegetarian Panay Monitor (*Varanus mabitang*) including the first recapture from among 12 marked individuals are provided. - C. Dolino could add two new distributional records to the list of Panay amphibians: the frog *Platymantis hazelae* (known previously from Negros and Masbate) and new for Sibaliw the frog *Limnonectes leytensis* (known previously from Mt. Baloy).

3. The ornithological survey now going on since the inception of the project in 1995 yielded new distributional records for both Boracay (5, conservatively) and Panay (1). Furthermore, the first though data-deficient description is given for the breeding of the Colasisi (*Loriculus philippensis*) as well as for the Negros Bleeding-heart (*Gallicolumba keayi*) and breeding records for other bird species the two Pittas of Panay included are given, too. The new find of the Negros Bleeding-heart, a globally threatened endemite of the Negros Panay faunal region, on Boracay, renders the protection of the north Boracay forest as one of global significance. Unfortunately, in spite of a red alert report by E. C. in March no measures have been taken since to effectively protect the forest remnant near Yapak on the island. Other inroads into the remaining biota of this small area make it one of highest conservation concern.

4. In the light of the 'Escape Hypothesis' (Janzen-Connell Model) determination of the 'seed shadow' of individual rainforest trees has taken center stage in the study of seed dispersal mechanism. J. Reiter pioneered in his study of seed dispersal of two fig species (*Ficus septica, F. variegata*) by the Musky Fruit Bat (*Ptenochirus jagori*) the portrayal of the spatial distribution around the parent tree of its seeds by way of marking entire fig fruits in situ with a fluorescent spray. Subsequently the spat out pulp remains with seeds could be mapped by using an ultraviolet lamp in the night that worked with an accuracy of discovering single tiny seeds. Accordingly the seed shadow generated by *Ptenochirus* starts just beyond the area under the parent tree and covers an area of about 2 hectares around it. (This leaves out some small amount of long-distance dispersal through a longer gut retention time into the next night following foraging.)

5. Further to this, the search for the mortality agents explaining the distance-survival effect predicted by the 'Escape Hypothesis' as established previously (see Eleventh Report, 2005), was started by a pilot study of Y. Grabowski. When laying out in standardized plots a standard number of ripe fruits of a fig (*Ficus* sp., 'Green Dural-og') and of *Gnetum indicum* and comparing the faunal composition and species abundance of the animals attacking the pulp and/ or the seeds (saprozoites) among the area under the focal parent tree and a control tree of another species, she found a significantly larger fauna attacking the fruits under the focal tree, as predicted by the 'Escape Hypothesis'. The objection that the rich fruit bonanza on the ground prior to the experiment might have attracted many saprozoites that would have led to the larger species assemblage under the focal tree was controlled for by putting out fruits from a control tree under the focal tree as well. In a larger data set employing different trees of three species F. Hager showed for the first time tree species-specificity of the mortality agents as predicted.

6. In a historical précis referring to unpublished reports of researchers that have not worked with PESCP allegations by a third party as to claiming priority for various discoveries by PESCP are scrutinized critically. Accordingly the allegations do not stand up to careful scrutiny and the merits of certain discoveries on Panay go fully to PESCP.

3. Basic Research

1. Island biogeographic theory predicts the size of the fauna, for example, of an island to depend on the size of the island, its distance from the faunal source, e. g. a continent, and other determinants. In a pilot approach M. Schaub surveyed the faunas of terricoline arthropods in the pods of two epiphytic fern species (*Aglaomorpha* sp., *Asplenium* sp.) sitting with their tufts of leaves on forest trees around Sibaliw in order to see whether the ferns are island equivalents or simply temporary refuges. Sampling of the faunas at monthly intervals of 10 ferns each and of the top soil in the same area revealed the ferns to harbour subsets of the soil fauna. The only exceptions in their rich arthropod assemblages are five species of beetle that exclusively inhabit the ferns. As the dry season advances the moisture of the ferns declines and so do their inhabitants. There are reasons to believe that the ferns are functioning both as islands and as temporary refuges, depending on the organism under scrutiny.

2. Primary forest is thought to harbour more biodiversity than secondary forest. The invertebrate fauna living on the soil (= terricolines) was surveyed by A. Siegert with the help of Barber pitfall live traps in both types of forest near station Sibaliw. In doing so, direct observations revealed a number of species and individuals to turn away from the

trap when touching it or walk along its inner rim and out again. Accordingly the primary forest contained significantly more species and individuals of all terrestrial arthropod groups, and the proportion of animals actually caught amounted to a mere 19.4 % of all those touching the pitfall rim (counts of 4 ant species and 1 spider species). This is a conservative result since the traps containing no preservative were virtually odourless. It demonstrates that Barber traps are inadequate to sample the terricoline fauna in a quantitatively representative way yet may be useful for a gross comparison among habitats.

3. To study the fluctuation in numbers of the Philippine Bent-toed Gecko (*Cyrtodactylus philippinicus*) A. Siegert captured, marked and recaptured those living in Station Sibaliw. When animals were translocated 100 m and 150 m away from the station along one straight line trail to reduce intraspecific competition 36 % of 22 individuals of both sexes returned to the station within 19.5 (range 4-36) days. The body mass of returnees did not differ from those not returning within that time span. Whilst the reasons for the population fluctuation of the Geckos inhabiting the station are remaining unclear the removal experiment demonstrates that the animals are capable of homing under circumstances that render pilotage after landmarks unlikely. The result is a challenge to further in-depth experimentation aiming at the underlying orientation mechanism.

1. Conservation and Education

1.1 Manager's Report

By T. Künzel

1. Introduction

PESCP, which started its work in the Western Visayas in 1996 as a small project focusing on the conservation of endangered wildlife species, during the years, with the continuous support of the Frankfurt Zoological Society (FZS), has become a medium sized organisation well known in the region and is now one of the main players in northern Panay in the fields of community-based habitat protection / biodiversity conservation and sustainable development.

The main goal during the first years of PESCP's work on Panay has been to make the lowland-rainforest of the NW-Panay Peninsula (NWPP) – one of the last of this forest type in the Philippines – a Protected Area (PA) under the NIPAS Act. A first major step towards this goal had been reached when the President of the Philippines in April 2001, signed the document declaring that lowland-forest a Natural Park (Protected Area category after NIPAS). This PA (12,000 ha with ca. 6,000 ha good forest) will step-by-step and over the coming years enjoy the

appreciation, care taking and conservation effort of the Department for Environment and Natural Resources (DENR), of the new Protected Area Management Board (PAMB), which had its first meeting in Aug 2004, of the five municipalities making up the PA and of the task force "Anak-Talon" created already for the special protection of the forest in the PA (see Curio 2005, Eleventh Report, p. 24 seq.) though not yet being operational. Alongside these overdue activities the PESCP started to shift its activities appropriately and within a suitable time frame to the Central Panay Mountain Range (CPMR), working in the spirit of our new

overall vision: **The protection of the forested areas of the CPMR.** The to-be-PA at stake covers ca. **40,000 ha** good forest, the home of a number of **critically endangered, endemic wildlife as the Dulungan Hornbill (*Aceros waldeni*), the Visayan Spotted Deer (*Cervus alfredi*), the Mabitang (Varanus *mabitang*), the Negros Bleeding-heart (*Gallicolumba keayi),*** and others. PESCP has been active in all four provinces of the CPMR already over the last 4 years focusing very successfully on the protection of forests and the virtually last viable population of the critically endangered Dulungan Hornbill living here.

PESCP's work is executed by 41 permanent local staff plus another part-time group of around 40 – 60 local co-workers employed part time, all of whom are staunchly supported by a German Manager being stationed permanently in the Philippines and a German Project Director who spends at least 4 months per year in the project area. Since Jan 2004 PESCP's Manager is also holding the position of the Environment Program Coordinator of Aklan State University (ASU) while being financed by GTZ/CIM, the German Technical Development Agency. In tight cooperation with the 25-Peso Multipurpose Cooperative of ASU and on behalf of UNDP/EC, the PESCP executes a reforestation project on Panay to the tune of 46,000 EUR since March 2005, which is possible only because of the counterpart funding from FZS.

PESCP's activities in the Philippines are based on MOAs and MOUs forged with the DENR, a number of LGUs, NGOs, Police Stations, Military Units and ASU. The MOA with the DENR is the most important one because it stipulates that the PESCP is conducting its activities as partner of, and on behalf of the DENR, the most powerful governmental organisation being mandated with the conservation and sustainable use of the natural resources of the country.

All programs and activities of PESCP are depending on funds being raised from national and international donor organisations among which the FZS, is by far the biggest sponsor since the start of the project 11 years ago. In the following the main pillars of PESCP's activities in 2005 are presented in decreasing order of priority:

A. Habitat Protection, Environmental Law Enforcement and Rainforestation
B. Protection of Critically Endangered/Endangered Wildlife
C. Livelihood-based sustainable Community Development
D. Conservation and Development Education
E. Nationalization / Sustainabilization of PESCP's Activities and Programs
F. Rehabilitation and Release of Captive Wildlife
G. Conservation Research

2. Overall Goal of the Project

The good forests of the NW-Panay Peninsula (ca. 6,000 ha) and the Central Panay Mountain Range (ca. 40,000 ha) and its wildlife are sustainably protected/conserved by, and to the advantage of the people living in and around the areas in question, and this protection/conservation does not rely on foreign support.

3. Selected Important Achievements in 2005

3.1 Community-based Maintenance and Restoration of Forests in the Central Panay Mountain Range and the Protected Area of the NW Panay Peninsula (CoFoPa)

PESCP's efforts to raise funds for the implementation of community-based forest protection and restoration programs have been extremely successful. As the only organization in the whole Western Visayas, PESCP, in partnership with the 25-Peso Multipurpose Cooperative (TFPMC) of Aklan State University (ASU), has been successfully submitting a project proposal titled "Community-based Maintenance and Restoration of Forests in Central Panay Mountain Range and Protected Area of NW Panay Peninsula (CoFoPa)" to the EC-UNDP "Small Grants Programme for Operations to Promote Tropical Forests". In March 2005 EC-UNDP gave ca. 55,000 US$ to enable PESCP/TFPMC to execute/implement the activities proposed for CoFoPa, which will operate for 19 months in 5 up-land communities in the Provinces of Antique and Aklan with the prospect to be extended after a successful termination of the project's first phase in Sep 2006. A basic condition to receive that funding from EC-UNDP has been a certain capacity for counterpart funding, which PESCP was able to realize through the annual funding coming from FZS.

The activities/achievements within the scope of the funding from EC-UNDP and FZS are as follows:

- Forestry resource management and protection after a detailed report of PESCP's forester **J. Espiritu (App. 3)** including:
  - Nursery establishment: 1 nursery has been established in each of the 5 counterpart communities; 12,899 seedlings from 18 different native timber tree species, and 602 seedlings from 6 different fruit tree seedlings have been produced.
  - Restoration of native forest by rainforestation of badly degraded secondary forest still usable as fore-runner vegetation: 1 site in the timber land area covered by badly degraded secondary forest has been selected for rainforestation in each of the 5 counterpart communities.
  - Preparation for restoration of native forest by rainforestation of former forestland covered now by cogon grass through out planting of fore-runners such as kagawate to improve soil quality, and *Gmelina* to provide shade for native forest tree seedlings not being sun-resistant (the exotic fore-runners will be eradicated/used after the planted native forest trees have reached a certain size).
  - Forest habitat protection: Community conservation plans stipulating measures against illegal logging and slash-and-burn activities exist in all 5 counterpart communities.

- Wildlife protection: Community conservation plans stipulating measures against hunting and wildlife trade exist in all 5 counterpart communities.

- Forest protection by establishing community-sites for sustained production of wood for charcoal production through out planting of kagawate sticks on suitable public land outside timber land.

- Forestry connected livelihood alternatives:
  - Agroforestry (sites belonging to 23 adaptors established already).
  - Native timber and fruit tree farming.

- Other livelihoods:
  - Native pig fattening and native chicken production (fattening facilities belonging to 80 adaptors established already)
  - Native pig breeding (6 breeding facilities established already)
  - Biogas production
  - Organic fertilizer production

3.2 Forest Ranger-based Habitat Protection and Law Enforcement

PESCP's habitat protection and law enforcement programs have been very successful and are acknowledged/ appreciated by the people, which quite often let us and others know that PESCP is the first and only organization here on Panay, which consistently implements its planned and announced law enforcement / forest protection activities resulting in a substantial reduction of illegal logging activities in the forests where before the illegal loggers did not have to fear any law enforcing effort. Some of these successes will be outlined as follows:

FRs measuring a tree in a 5.1 hectare clear-felled area in Nabas Municipality in March 2005. Left: Edilberto 'Edel' Malabja. Foto Courtesy Lars Rosenbaum.

- Due to the daily patrolling / monitoring effort of PESCP's 13 FRs a „climate" has been established in the forests which is feared by the illegalist; illegally used/possessed chainsaws and illegally cut lumber have been confiscated, whenever encountered.

- The new Chainsaw Act of 2002 through its Implementing Rules and Regulations (IRR) being in force since July 2003 was thought to put a stop to the rampant use of illegally possessed/used chainsaws, as e.g. chainsaws used in the open without a serial number. Contrary to that hope PESCP's monitoring activities in the area of Nabas (Aklan), Libertad and Pandan (Antique) during Sep, Oct and Nov 2005 resulted in the apprehension of 9 illegally possessed chainsaws (those without serial number) and/or without proper accompanying documents. With regard to these apprehensions the Office of the DENR Director of Region VI (RED) felt the need to issue an Amendment to the IRR to improve the usefulness of the Law and to close loopholes used by illegalists. This has to be regarded as a considerable success of PESCP's habitat protection effort in tight cooperation with the DENR, the country's lead agency for the protection of the environment. This success must be credited in the first place to PESCP's FRs and its team of leaders.

- In 2005 PESCP risked an experiment and allowed for the first time a female FR (Maria Ibabao from Brgy San Roque, Libertad) to join our group of FRs. We did so against some negative remarks about women not being physically strong enough to do the hard job of monitoring the hilly forests of Panay and/ or not being capable to deal with the tough male FRs. This experiment turned out in a very positive way because our female FR until now has not only been accepted by allof our 13 male FRs, she has also been physically and psychologically so strong that she quite often leads a FR team in the forests. Furthermore, it is this female FR who often takes the lead when it comes to apprehensions of a chainsaw in critical situations where she shows a great and very much needed capacity to de-escalate otherwise violent situations.

PESCP's Forest Rangers Expedito Paulino (left) and colleagues resting during a routine patrol. Photo courtesy Lars Rosenbaum

- Nine out of the 13 FRs of the PESCP have been already deputized by the DENR as Deputy Natural Resource Officers (DENRO) giving them the same authority as the DENR-FRs have with regard to patrolling and apprehensions. In July 2005 deputisation of FRs not being staff of the DENR was cancelled nationwide by DENR Secretary M. Defensor because of illegal activities in which some DENROs on Mindanao had been involved. According to some latest information from the DENR the deputisation might be re-enacted in Feb 2006. Then PESCP will make a new move to get all FRs deputized. In the meantime the DENR offered PESCP to deputize some of our staff as Wildlife Law Enforcement Officers (WLEO) – we are trying now to get as many of our FRs as possible deputized as WLEO. But,

even during a time when none of our FRs is a deputized DENRO our law enforcement activities are going on unabated; this is because at any time our FRs' law enforcement activities are backed by the special Law authorizing any civilian to interfere when seeing or being confronted with illegal activities.

Comments

Unfortunately, the task force Anak-Talon planned by NPBMC to be erected by Police, Army, DENR, LGUs, and NGOs which will be responsible for the protection of the PA in the NW Panay Peninsula is still not operational.

3.3 Protection of Critically Endangered / Endangered Wildlife

PESCP's protection of critically endangered / endangered wildlife has been especially successful with regard to programs focusing on two "flag ship" species – the critically endangered Dulungan Hornbill (*Aceros waldeni)* living in the CPMR, and the endangered Golden-crowned Flying Fox (*Acerodon jubatus*), which has its last roosts in the Panay region on Boracay Island.

Protection of the Dulungan and other wildlife inhabiting the same habitat

PESCP's community-based protection scheme for the Dulungan reduced nest hole poaching per breeding season from formerly ca. 50 % or more to ca. 5 % during each of the last 5 breeding seasons, which has to be seen as an enormous success. To maintain this protection level is the basis for the future existence of the Dulungan.

Community Conservationist removing pig snare tied to a bent treelet

Before PESCP got active in the CPMR, the information about the Dulungan - which arguably is one of the most threatened hornbill species worldwide - in the scientific literature said, that not more than 50 to100 breeding couples might have survived. After nearly 5 years of intervention through PESCP (with funding mainly from FZS, GEO, NGS and NEZS along with Niehoff Vaihinger) we had the pleasure to protect until successful fledging a total of 349 Dulungan nest holes in 2005.

PESCP's protection scheme focusing on the Dulungan living in the CPMR at the same time serves also the protection of other wildlife in the area as, e.g., the critically endangered Visayan Spotted Deer (*Cervus alfredi*), and the endangered Visayan Tarictic Hornbill

(*Penelopides panini panini*). AS usual many snares set for catching Wild Pigs and Deer have been removed by our FRs and Community Conservationists (picture above).

Protection of Flying Foxes
In 2003 PESCP was able to receive a grant from Haribon Foundation (largest Philippine conservation-focused NGO) to realize a program for the protection and conservation research focusing on the endangered Golden-crowned Flying Fox on Boracay. The most important results of the project are (1) a substantial reduction of the hunting pressure on the Golden-crowned Flying Fox, and on two other flying fox species using the same roosts as the Golden-crowned; (2) the numbers per species of flying foxes roosting on Boracay are known; (3) the behaviour of the flying foxes is better understood especially their reaction to stress induced by human activities near the roost, and (4) further threats and especially hunting imposed on the flying foxes during their nocturnal forays to the Panay mainland are better understood, authorities have been leastways alerted, and appropriate interventions are planned.

Unfortunately, the roosts of the flying foxes on Boracay, being the last ones on the whole of Panay, is still very much endangered by irresponsible construction activities near certain roost sites. We are asking all authorities concerned – especially the DENR and the Hon. Mayor of Malay, Ceciron Cawaling, not to sacrifice those roosts on Boracay, that are indeed a great attraction for tourists, for having one more hotel on the island. We are fully understanding and accepting that Boracay's beauty must be allowed to enjoy tourists, but the necessary construction and development effort should not turn into the destruction of that beauty.

Anti-Air-gun program
PESCP's Rice-for-Air-gun program as an intervention against hunting has been very successful resulting in the collection of 53 air-guns until now.

3.4 Livelihood-based sustainable Community Development

Over the years PESCP's livelihood-based, sustainable community development programs have been executed very successfully covering communities in all four provinces of Panay.

FZS/NGS/NEZS-Niehoff Vaihinger-cofinanced Dulungan protection related livelihoods
Within the scope of our Dulungan protection scheme during the last 4 years the implementation of livelihood alternatives in the communities living in and around the Dulungan forests has been an indispensable and very successful tool as a flanking measure enabling the people in the up-land communities to refrain from illegal and unsustainable use of the forest and its wildlife – and so to refrain from poaching the Dulungan nest holes, and/or to support and control actively the proper execution of our Dulungan protection scheme.

FZS/UNDP-cofinanced livelihoods
In 2005, due to the co-funding from FZS and EC-UNDP, a full-fledged livelihood program is in full swing in 5 counterpart communities in the provinces of Aklan and Antique. The 5 counterpart communities have been chosen with regard to their location in or nearby forested land and to the potentially positive effect the livelihood interventions will have with regard to the protection of the forest and its wildlife as already explained above for our Dulungan

protection scheme – empowerment of the people in our counterpart communities to refrain from illegal and unsustainable use of the forest and its wildlife.

These FZS and EC-UNDP funded livelihood programs include native pig breeding and fattening and chicken breeding, agroforestry, sloping agriculture, native timber tree and fruit tree farming, and vegetable production.

FZS/UNDP/Rapunzel-cofinanced livelihoods
In 2005, PESCP started a program helping farmers to produce a certain vegetative crude fibre and to use it in the process of mat weaving.

All these livelihood interventions are very successfully helping PESCP to make our habitat and wildlife protection activities sustainable by empowering the up-landers to become less and less dependent on the use of the forest.

In all the many up-land communities where PESCP has been active in helping the people to set up livelihood alternatives we convinced our counterparts that for any long-term improvement of their and the coming generations' living conditions consequently community-based conservation or restoration of a healthy environment is paramount; further we helped them to conceive appropriate conservation plans. In continuous follow-up activities PESCP's is monitoring the consequent implementation of these community conservation plans. The positive results show us that the combination of livelihood alternatives and community-based environmental conservation plans are a very powerful tool in making conservation sustainable.

3.5 Conservation and Development Education

Conservation and development education activities/campaigns are a successful integral part of all our community-based livelihood programs in the up-lands of all four provinces of Panay. PESCP has been regularly invited by schools to give students lectures about biodiversity conservation and precautionary economic development. Student groups from Aklan State University and other schools are regularly visiting PESCP's office and our reha facilities to learn about wildlife and its conservation, curricula the schools do not offer them. If compatible with ongoing research, small groups of Philippine students together with their teachers are regularly invited to stay a couple of days in our research station to get a first impression of and an introduction to the 'working' of the rain forest
.

3.6 Nationalization / Sustainabilisation of PESCP's Activities and Programs

PESCP's linkage with Aklan State University (ASU)
In 2003 PESCP has been able to win over the ASU located at the western slopes of the CPMR as a strong local partner for PESCP's activities / programs, and the Manager of PESCP, Mr. Thomas Künzel, became also the Environment Program Coordinator of ASU. Within the scope of that partnership Mr. Künzel has been accepted by GTZ/CIM for being supported by GTZ/CIM's program of Integrated Experts making available a salary for these positions for 2003; since 2004 that salary is co-financed by GTZ/CIM and FZS. By pursuing very successfully the partnership between PESCP and ASU we have been able to make a big and important step towards the nationalization / sustainabilization of PESCP's activities and programs.

PESCP and the Philippine Association for Conservation and Development (PhilConserve)
In March 2005 yet another step towards nationalization of PESCP's activities and programs has been successfully made by erecting a Philippine NGO named PhilConserve under whose umbrella PESCP is now operating.

Communities as PESCP's vehicles on the road to sustainability
As another very important move – possibly the most important one - towards nationalization and sustainabilization of PESCP's activities / programs, all our conservation and livelihood activities we execute together with our local counterpart communities in the forested up-lands of Panay have to be looked at. It is here that we directly link up with the people who are the rightful owners of the environment we are concerned about, and who within the scope of our interventions are empowered step by step to accept and execute the idea of conserving nature to the advantage of their coming generations.

3.7 Rehabilitation and Release of Captive Wildlife

PESCP maintains three reha facilities, two in the lowland areas of Pandan and Libertad and another at PESCP's research station at 450 m a.s.l. in the prime forest of the PA of the NWPP which is used as the only release site for rehabilitated Tarictic Hornbills. Since 2002 all of the released Tarictics are part of our telemetry program sponsored by the Brehm Fonds (Fund for International Bird Conservation), which in 2006 will also include the Dulungans ready to be released from the station's reha facility. A Philippine researcher focusing on the telemetry project has been funded mainly by the Bird Research and Conservation Foundation, when Haribon Foundation discontinued funding for evaluation purposes.

Our former goal to install a Breeding Center for Endangered Wildlife in ASU for which we planned to build appropriate breeding facilities for the Dulungans had to be cancelled for technical reasons.

Rehabilitation and release of wildlife surrendered to PESCP by private owners or confiscated through Police or the DENR is successfully going on and is overseen by PESCP's veterinary consultant Dr. E. Sanchez who supervises four care takers.

All release activities are executed according to DENR regulations and are often witnessed by DENR staff.

3.8 Conservation Research

Conservation research activities have been mainly executed in the prime forest around PESCP's research station, but also on Boracay (see chap. 2 below):

PESCP's records for Panay of species new for science or new distributional records
The two most important new records in the last three years will be mentioned here in passing:

- The King Cobra (*Ophiophagus hannah*), one of the most dangerous snakes in the world – a new record for Panay.
- The Mabitang (*Varanus mabitang*), a vegetarian reaching two meters in length – described new for science.

Conservation Research at PESCP's Research Station
The most important project in 2004 and 2005 executed around the research station is titled " Foraging, diet and reproduction upon release of Tarictic Hornbills" for which a major budget line in 2004 came from Haribon, and the Brehm Fonds, and for which we shall receive yet another funding from Haribon for 2006.

The project is making use of Tarictic Hornbills, which went successfully through our rehabilitation process after being secured from illegal maintenance on Panay. These Tarictics when being ready for release are equipped with a transmitter to allow us to follow and record their post-release whereabouts, foraging, diet and reproductive behaviour as well as their survival through time, with the first three components mentioned serving as short-term indicators of survival in the wild.

The bulk of the telemetry equipment ordered from Canada, which has been withheld in the customs office in Manila, we were able to receive in Oct 2005, so that in 2006 we will be able to execute the full-fledged telemetry program hopefully again with a budget from Haribon, which we requested for already.

The undertaking is thought to gain insight into the suitability of release as a conservation technique for strengthening the wild population of hornbills. Proper results will not be available before the telemetry equipment being kept in Manila for so long can be put to proper use.

The project is executed by one of our Philippine researchers who is supported continuously by volunteers, and/ or station staff.

Many other research activities have been executed using the research station as a base camp with especially outstanding records in the field of ornithology, herpetology and community ecology resulting in a number of newly discovered species (see previous Annual Reports).

Conservation research on Flying Foxes:
The conservation research executed on Boracay concentrated on the roosts of flying foxes (for details see section 3.3 this chapter).

Editor's note: Without the dedication of its personnel, especially its long-term staff, PESCP would not have accomplished a plethora of tasks since its inception. Among those long-term loyal staff **Mr. Benjamin 'Jun' Tacud**, Senior Station Officer, deserves special mention for his serving the project for already ten years by early 2005. In recognition of his services as a most gifted and knowledgeable naturalist and indefatigable field guide and assistant too many researchers he received from the hand of the Project Director a Certificate of Appreciation and a cheque over 10,000 P in March 2005.

1.2 Deputy Manager's Report

By Reynaldo S. Elio

1.2.1 Updates on the NPBMC and the PAMB

The **NPBMC (NW Panay Biodiversity Management Council)** was convened in just two meetings this year. The first took place March 2, 2005, the second and the last for this year on

July 28, 2005. It is sad to note that out of the two meetings it was only during the second meeting that the council had a quorum.

March 02, 2005 – The 1st NPBMC Meeting for the year 2005 was held in Libertad, Antique. Out of the five mayors expected to attend only Mayor Mary Jean N. Te of the Municipality of Libertad and at the same time the chair of the council was present. Mayor Te recalled that as far as complete attendance of the 5 mayors is concerned in NPBMC meetings, it happened only once, that was last December 10, 2003, when the meeting was held in Boracay Island, Aklan.

Highlights of the meeting: (based on the Minutes of the meeting)

- Commitment of 5 municipalities for NPBMC activities amounting to 50,000 PhP from each municipality and another 50,000 PhP for TASK FORCE ANAK-Talon (see Eleventh Report, 2005) for the year 2005.

  During this meeting, status of the pledges was reported as follows:

Municipalities:	NPBMC Activities	TASK FORCE ANAK- Talon
Pandan	25,000 PhP	None
Libertad	50,000 PhP	50,000 PhP
Nabas	50,000 PhP	50,000 PhP
Malay	No data	No data
Buruanga	No data	No data

Note: During this meeting, there were no representatives from the LGUs of Malay and Buruanga but last council meeting held November 16, 2004, in Buruanga Aklan, the first 3 municipalities that confirmed their 50,000 pledge for the TASK FORCE were Libertad, Malay and Buruanga.

Obviously, the pledges for the NPBMC activities partly materialized yet as of this date, not a single Centavo had been collected from the municipalities for TASK FORCE ANAK-Talon activities. It's unfortunate because this TASK FORCE was formally organized since December 2003 and for the past 2 years, pledges were not collected from the concerned municipalities and consequently no activities has been implemented.

Based on the NPBMC Minutes of Meeting of November 16, 2004, a resolution had been passed by the council to strengthen the agreement made on December 10, 2003, that each municipality will appropriate 50,000 PhP for a year intended as a support fund for TASK FORCE ANAK-Talon operation. A similar resolution was also passed as concurred and agreed by the respective Local Chief Executives, that the 5 municipalities are obliged to appropriate 50,000 PhP as a support fund for the operation of NPBMC.

- Salient features of BioCon's 'Northwest Panay Biodiversity Conservation Project' funded by the Foundation for Philippine Environment (FPE) include the following:

  - Jointly with PESCP, the creation of NPBMC
  - Joining the long-standing initiatives made by PESCP toward the proclamation of Northwest Panay Peninsula Natural Park as Protected Area, formulation of the Protected Area bill, creation of TASK FORCE ANAK-Talon, initiate activities in annual celebration of "Pista ng Gubat", etc.

- Status of the Protected Area (PA) bill (as reported by PASu Rhodel Lababit)

  - The draft PA bill as of now needs refinement and requires 2 day workshop;
  - NPBMC and PAMB needs to work together for the refinement of the PA bill. It was suggested and agreed that members of the regional technical working group of DENR Region VI should be involved in refining the bill as well as the technical staff of Congressmen of Antique and Aklan;
  - Once the PA Bill will be finalized, this should be turned over to the two Congressmen of Antique and Aklan to sponsor it in Congress. It was further recommended that the NPBMC should draft and pass a resolution requesting the respective congressmen to sponsor the PA bill.

- Review of Environmental Issues and concerns affecting the Northwest Panay Peninsula:

Diesel Fired Power Plant in Nabas: (Construction going on by Mirant Co.)

  - LGU Nabas wants to ensure that the power plant will operate in accordance to conditions stipulated by DENR specifically control pollution. A tripartite monitoring team will be organized once the plant starts its operation. It was further suggested that Beacon will be one of the members of the tripartite monitoring committee;
  - There was a complaint raised by the Information Officer of the Office of the Governor, Aklan, that the endorsement given by the Sanguine Banyan of Nabas and Sanguine Panlalawigan of Aklan is for Mirant to apply for an Environmental Compliance Certificate (ECC) but he was confused upon knowing that the construction is going on now even without an ECC? Furthermore, some residents of Barangay Tagururoc are already complaining about the disturbing vibration of the machine during the test run.

July 28, 2005 – 2nd council meeting was held in Pandan, Antique.

Highlights:

  - Pista ng Gubat activities were presented and approved by the body.

Note: ***Pista ng Gubat was celebrated last time fromSeptember 30 to October 1, 2005, held in Barangay Inyawan, Libertad***

  - Strategic planning workshop cum Team Building of NPBMC members was agreed to be conducted this year. This workshop aims to help NPBMC set focus and directions for the next 3 to 5 years. Mining operations and applications in Northwest Panay Peninsula (NPP) will be tackled during the workshop.

Note: The conduct of the Planning Workshop did not materialize this year and was rescheduled for next year.

  - Drafted NPBMC Resolution for 5 municipalities to appropriate 50,000 PhP each for a year intended as a support fund for TASK FORCE ANAK-Talon operations and another resolution for 5 municipalities to appropriate 50,000 PhP each as a support fund for the operation of NPBMC were confirmed and deemed approved.

PAMB (Protected Area Management Board) was able to convene 4 Executive Committee Meetings and 2 En Banc Meetings.

Executive Committee meetings were held March 2, May 31, July 6 and November 30, 2005, while PAMB En Banc Meetings were held July 6 and November 30, 2005.

Summary of PAMB Action Points / Accomplishments:

- Action Plan was drafted and approved by the Execom. The activities were:
  - Protection of the Protected Area
  - Review of PA Bill
  - Conduct Execom and En Banc Meetings as scheduled
  - Ecotourism development
- Approved request of PESCP to collect seeds and wildlings within the Northwest Panay Peninsula intended for nurseries that would be utilized later for rainforest establishment (CoFoPa Project)

- Formulated Action Points among the different stakeholders:
  - Enhance Information Education Campaign on: Environmental Laws, Resource Management of PA, Biodiversity Conservation, etc.;
  - Advocacy/Lobbying for: Financial support for Forest Protection Law Enforcement and Technical Assistance from concerned agencies;
  - Training / Capability building for stakeholders re: Environmental Law Enforcement, PA Management, etc.;
  - Livelihood development for forest occupants/forest products dependents

- Significant Resolutions passed by the PAMB this year:
  - RESOLUTION ADOPTING THE TASK FORCE ANAK–TALON FOR THE PROTECTION AND PRESERVATION OF THE NORTHWEST PANAY PENINSULA NATURAL PARK (PAMB Resolution No. 1 S. 2005);

  - RESOLUTION REQUESTING HON. FLORENCIO T. MIRAFLORES, CONGRESSMAN, LONE DISTRICT OF AKLAN, TO EXTEND FINANCIAL ASSISTANCE TO THE PROTECTED AREA MANAGEMENT BOARD FOR NORTHWEST PANAY PENINSULA NATURAL PARK (PAMB Resolution No. 2 S. 2005);

  - RESOLUTION REQUESTING HON. EXEQUIEL B. JAVIER, CONGRESSMAN, LONE DISTRICT OF ANTIQUE, TO EXTEND FINANCIAL ASSISTANCE TO THE PROTECTED AREA MANAGEMENT BOARD FOR NORTHWEST PANAY PENINSULA NATURAL PARK (PAMB Resolution No. 3 S. 2005);

  - RESOLUTION REQUESTING THE DENR REGIONAL EXECUTIVE DIRECTOR TO TRANSFER THE OFFICE OF THE PROTECTED AREA SUPERINTENDENT FROM

  - CENRO CULASI TO FARMERS INFORMATION TECHNOLOGY (FITS) CENTER, LIBERTAD , ANTIQUE (PAMB Resolution No. 4 S. 2005);

  - RESOLUTION REQUESTING THE HONORABLE MAYORS OF LIBERTAD AND PANDAN IN THE PROVINCE OF ANTIQUE, BURUANGA, MALAY AND NABAS IN THE PROVINCE OF AKLAN TO EXTEND FINANCIAL SUPPORT TO PROTECTED AREA MANAGEMENT BOARD FOR THE REVIEW AND FINALIZATION OF PROTECTED AREA BILL IN THE AMOUNT OF EIGHT THOUSAND PESOS (P 8,000.00) FOR EACH MUNICIPALITY (PAMB Resolution No. 5 S. 2005).

1.2.2 Training and Conferences Attended by PESCP Staff (for acronyms used see below)

Title of the Training	Date	Topics	Participat-ing Staff	Venue	Convenor
1. EC-UNDP SGP PTF Planning Workshop and General Assembly	Feb 28 – March 5, 2005	• Orientation on EC -UNDP SGP PTF Project Implementation Guidelines	Reynaldo S. Elio with Rep. from 25 Peso Cooperative (ASU)	Los Baños , Laguna	UNDP, ERPR
2. EC-UNDP SGP PTF Forum on Forest Protection and Sustainable Livelihood	April 21 – 24, 2005	• Forest Protection and Sustainable Livelihood • Sharing of Updates and problems encountered in implementation of EC-UNDP SGP PTF Project	Reynaldo S. Elio with Rep. from 25 Peso Cooperative (ASU)	Los Baños , Laguna	UNDP, ERPR
3. 24th National Conference and Scientific Meeting of the EENP	May 24 - 26,2005	Theme: " Innovative Environmental Education Approaches in Linking Population and Environment"	Reynaldo S. Elio and Prof. Roger Felizardo of ASU	Western Philippine University, Sta Monica, Puerto Princesa, Palawan	EENP
4. 2nd Batch of the Trainers, Training on CBFM Program Awareness	May 23 – 31, 2005	• CBFM Policies and Regulations, Approaches/ Strategies in Sustainable Forest Management	John R. Espiritu	Shamrock Beach Resort, Guimbal, Iloilo	DENR, JICA
5. Training Course on Biodiversity Conservation and Protected Area Management	Aug 24 – 26, 2005	• Biodiversity and Endemism • Levels and Importance of Biodiversity • Protected Areas and Wildlife Laws • Threats to Philippine Biodiversity	Reynaldo S. Elio	Sampaguita Gardens, New Washington, Aklan	Haribon Foundation

6. Managing Bioregions for Sustainable Development	Sep 16 – 17, 2005	• Presentation of Theoretical Framework and Empirical Evidence of Managing Bioregions for Sustainable Development	Reynaldo S. Elio & Henry Dungganon	Asian Social Institute, Malate, Manila	MTKISD & ASI
7. An Experts' Meeting on Community-Centered Ecosystem Management for Sustainable Development 1	Nov 22 – 23, 2005	• Joint Presentation of Background and the Organization and Management Protocol • Consolidation of Reflections on the Workshop • Consensus Building on the Training Program and the Curriculum	Reynaldo S. Elio & Henry Dungganon	Asian Social Institute, Malate, Manila	MTKISD & ASI
8. An Experts' Meeting on Community-Centered Ecosystem Management for Sustainable Development 2	Dec 5 – 6, 2005	• Johannesburg Plan of Implementation • Joint Presentation on November 22-23 Workshop Summary and Assessment • Consensus Building	Reynaldo S. Elio & Henry Dungganon	Asian Social Institute, Malate, Manila	MTKISD, ASI & FAO

ACRONYMS USED:

EC - European Commission
UNDP - United Nations Development Programme
SGP PTF- Small Grants Programme for Operations to Promote Tropical Forests
ERPR - Earth's Right People's Rights
ASU - Aklan State University
EENP - Environmental Education Network of the Philippines
CBFM - Community – Based Forest Management Program
JICA - Japan for International Cooperation Agency
ASI - Asian Social Institute
MTKISD - Maximo T. Kalaw Institute for Sustainable Development
FAO - Food and Agriculture Organization

1.3 PESCP Forest Ranger Accomplishment Report on Law Enforcement Activities

by Arnold D. Demegillo
PESCP- FR Coordinator

This year the office has received a total of 16 airguns (14 were surrendered voluntarily by hunters while two were confiscated by FRs from the hunters). And aside from the 159 snares/traps (used for Spotted Deer, Warty Pig, Long-tailed Macaque, flying foxes, birds, and other animals) that have been collected in the forests, the following successful law enforcing activities have been part of the monitoring activities of PESCP FRs with support by and in cooperation with PNP and DENR.

Date of Operation	Materials apprehended/recovered/discovered	Place	Remarks
Feb 05	Discovered a makeshift hut possibly made by hunters. Discovered feathers from Pink-bellied Pigeon, Changeable Hawk-Eagle and a macaque skull, a cigarette's case and an airgun bullet container	Sibaliw- Tabyaka area	• FRs have destroyed the hut.
Feb. 11	1000 bd ft. illegally cut lumber (from Toog tree)	Sitio Listoga, Pandan	• Discovered by PESCP FRs (inside private lot) allegedly used for building a bridge
March 04	75 bd ft illegally cut Kalantas tree aleady processed into small-size boat hull	Calabanog mountain area	• Recovered by PESCP FRs • No claimant
March 23	Discovered illegal kaingin activity on around 4 has (inside protected area) and illegal cutting of around 10 large mature trees.	Buena Fortuna, Nabas mountain area	• The PESCP FRs tracked down the perpetratrors by way of their chainsawing in clearing this large area
May 27	Two Tarictics	Idio, Sebaste	• Apprehended by PESCP FRs from poacher
July 31	Three Racquet-tail Parrot s	Abiera, Sebaste	• By way of diplomacy the PESCP FRs made the alleged poacher of the birds to voluntarily turn them over.
Sep 24	500 bd ft illegally cut kalantas tree already processed into large size boat hull	Idiacacan mountain area	• Recovered by PESCP FRs • No claimant
Sep 26	One chainsaw	Sta. Cruz area, Pandan	• Apprehended by PESCP FRs • Bears no serial number.
Sep 26	228 bd ft lumber from illegally from three natural grown tree species	Sta. Cruz area, Pandan	• Recovered by PESCP FRs led by PESCP Manager T. Künzel , with assistance of PNP Pandan. • No claimant
Oct 18	One Tarictic	Tagororok mountain area (near the river)	• Found by PESCP FRs during patrolling

Nov 03	The kaingin area was planted with coconut tree, banana, other fruit bearing trees and some root crops	Buena Fortuna, Nabas	• The FRs tasked with follow-up monitoring of a large kaingin area discovered 23 Mar 05
Nov 06	Two chainsaws	San Juan, Libertad	• Found by FRs used in cutting a coconut • Both chainsaws lacked a serial number
Nov 08	300 bd ft illegally from Red Laua-an tree already processed into a boat hull	Libertad mountain area	• Recovered by PESCP FRs • No claimant
Nov 10	Two chainsaws	Pinatuad, Nabas	• Found by PESCP FRs cutting coconut tree on private land. • No registration, no serial number
Nov 15	One chainsaw	Solido, Nabas	• Found cutting natural grown tree (Badlan) some 270 bd ft. inside private land • No cutting permit • No registration, • No serial number
Nov 17	Processed boat hull (undetermined volume)	Sitio Tagubtub-Unidos, Nabas	• The said boat hull was built inside private ground
Nov 24	One chainsaw	Union, Libertad	Found by PESCP FRs: cutting Mahogany tree on private lot No registration, No serial number
Nov 26	One chainsaw	Lindero, Libertad	• Found by PESCP FRs cutting natural grown tree in private lot • No registration, • No cutting permit
Nov 26	Two chainsaws	Mag- aba, Pandan	• Found by FRs cut Mahogany tree in private lot • Both without serial number
Nov 29	One chainsaw	Nauring, Pandan	• Found by FRs cut coconut tree • Missing parts of the serial number
Dec 01	50 bd ft illegally cut lumber (from naturally grown, indigenous tree Malagabii tree)	Duyong, Pandan	• The cutting site was found by PESCP FRs inside a private lot but near a river bank • No cutting permit
Dec 01	One chainsaw	Duyong, Pandan	• Found by PESCP FRs: cutting drift log on the beach • No registration

- Aside from their regular schedule of operation in the mountain the FRs were also conducting night patroling alternately with PNP of Pandan in the lowland of Barangay Sta. Cruz, from 17 to 26 Sep. This kind of activity was triggered by a tipp-off by a concerned citizen that there would be illegal hauling of lumber at night time.

- During the 2005 hornbill breeding season the PESCP FRs became more versed with the forest situation when former hunters and poachers were tapped as part of the hornbill nest hole validation in different sites (Sebaste, Libacao, Malinao, Calinog area). The success of the pre- and post-validation was partly to be attributed to the untiring support by and cooperation of the FRs.

- As a consequence of the determined stand adopted by PESCP FRs in apprehending 12 chainsaws and piles of illegally cut lumber plus boat hulls the FRs received three malicious threats or death threats either as individuals or as a group.

- Due to this standing of the PESCP FRs in the eyes of the public, many people are seeking advice/ information in the PESCP re the legal and proper procedure in using/possessing a chainsaw and planning the cutting of trees.

- As a reaction to the hot issue of the significant number of chainsaws apprehended by PESCP FRs (even registered with the DENR without having a serial number matching the documents/papers issued to the owner). This then made the DENR-CENRO Culasi set off a number of marathon meetings with various municipalities involving the chainsaw owners/operators and including PESCP staff (Manager T. Künzel and other staff when conferring in the municipality of Pandan). In the presence of Thomas the DENR official (Mr. Legaste) apologised and accepted that there were indeed shortcomings on their part. Nevertheless the meeting ended with a very clear conclusions on how to correct for the loopholes discovered. Had it not been for the decisive action of the PESCP manager instructing the FRs to scrutinize chainsaws caught in operation for registration and serial numbers then the issue of illegally used chainsaws would not have come up.

- The PNP of Pandan was assisting the PESCP FRs during part of the chainsaw apprehensions as in the cases of Mag-aba (26 Nov) and Brgy Nauring (29 Nov).

- Due to the actions undertaken by the PESCP FRs in apprehending illegally operated chainsaws, if only for just cutting a coconut tree, yet without a serial number, for example, and because of becoming aware of their violations of the Chainsaw Act of 2002, chainsaw owners have become more cautious.

1.4. Accomplishment Report: Culasi and Sebaste Clusters

By Alexander Alabado
Wildlife Educator

Barangays covered: Culasi: Barangays Alojipan, Flores and Osorio
Sebaste: Barangay Alegre

1.4.1. Community-based Work

For the past four years, the intervention of PESCP in Barangay Flores, Osorio and Alojipan of the town of Culasi and Barangay Alegre in the town of Sebaste established rapport with the people of the community. Similarly good working relations were established with the government agencies such as DENR, DA (Department of Agriculture), and Local Government Units of the municipalities concerned down to the barangay level.

The interventions of PESCP focus on educating the people about the importance of wildlife tracing its direct and indirect roles for our forest and how to conserve it. It also focused on the anti-hunting activities so as to protect animals from hunting, poaching for food, for pet and the pet trade. The intervention results in giving alternatives so as to avoid illegal activities leading to forest degradation.

Piglets and chicken were distributed to 40 families in Barangay Alojipan while 10 families were recipients of agro-forestry measures. These additional sources of income will lessen the recipients' forest dependency.

Community Conservationists assigned in this area were tasked in monitoring hunting activities, timber poaching and other illegal activities, and at the same time conducting patrolling in the forest to gather data on the wildlife present. During the patrolling in the forest of Madia-as_Mountain, CCs collected a total of 11 traps and snares and brought them to the office. (This trapping would be a clear violation of the MOA reflecting the conditions under which PESCP is providing help to the people of Alojipan so that any further assistance needs to be reconsidered. However, I was assured that the corpora delicti had been collected in the areas of operation of neighbouring barangays. Why then had they been collected by CCs from Alojipan? This matter needs serious attention in the current year. Ed.)

Community-based awareness campaigns have been executed in four old sites, namely Barangays Alegre, Alojipan, Osorio, Flores and eight barangays as new expansion sites, namely Barangays Salde, Paningayan, Simbula Culasi, Barangay P. Javier, Abiera, Sitio Igpatuyao,

Poblacion Sebaste, Antique; Barangays Osman, Malinao and Barangay Maria Cristena, Madalag, Aklan, focusing on the Writhed-billed Hornbill (Dulungan). The vulnerability of the hornbill and the indispensable role the birds play as seed dispersers in the forest ecosystem have been explained and discussed. While achieving protection of nest holes, practical measures were implemented to improve the living conditions of the people of the Barangays involved.

The following is a list of awareness campaign activities in four key Barangays and eight new expansion sites.

Courtesy call to the Office of the Mayor of the Municipality of Sebaste and Culasi for the selection of PESCP expansion sites for Dulungan protection activity. - January 06, 2005.

- Meeting with the Integrated Social Forestry (ISF) holder of Barangay Idio discussing the conservation measures specifically to stop illegal logging in the mountainous area in the Barangay and give an update of the UNDP project. – January 9, 2005.
- A member of the team conducted community integration into our conservation program in Barangays Paningayan, Simbula, Salde, Culasi, P. Javier and Abiera of Sebaste by interviewing poachers, barangay officials and other members of the community regarding the wildlife found in their respective area. The hornbill protection program was introduced. – January 11-21, 2005.
- Courtesy call to the office of the Mayor and PNP of the municipality of Madalag, Aklan, discussing the purpose of the program and giving posters on *Varanus mabitang* and reading materials on hornbills. – February 24-25, 2005.
- The same activity in the municipality of Malinao, Aklan. – March 1, 2005.
- A member of the team conducted community integration in Barangay Maria Cristina and interviewed poachers, barangay officials and other members of the community regarding the wildlife found in the area. The hornbill protection scheme was introduced. – March 2-5, 2005.
- Meeting with the nest wardens together with Barangay officials of Barangay Alegre to discuss the appropriate conservation measures, specifically for the year's breeding season. - March 8, 2005.
- A member of the team conducted community integration in Barangay Osman, Malinao, Aklan, and interviewed poachers, upland farmers, Barangay officials and other members of the community. The hornbill protection activity was introduced and Dulungan and Mabitang posters were handed out. – March 9-11, 2005.
- Attending the Social Forestry Holder meetings in Barangays Idio, San Juan and Alojipan. – March 28-31, 2005.
- Conduct of the Nest Hole Detection Program for 29 nest wardens and handing out their incentives for guarding 173 Dulungan nest holes. The program was attended by representatives from DENR, LGU-Sebaste, barangay officials and other members of the community. – August 18, 2005.
- Discussing the importance of biodiversity during the training for Agro- forestry participants from Culasi, Libertad, and from Castillo, Makato, and Aklan, held in ASU-Makato Campus. - August 25-27, 2005.
- Tree planting activities in Barangay Flores that was joined by
- Nine barangay officials and other members of the community. – November 23-24, 2005.

1.4.2 Nest Wardening and other Direct Conservation Measures

The Nest Wardening scheme was carried up to this year. Individual-based wardening was again adopted in the area when a nest of the Writhed-bill was far and little known by the community except the hunters, the wardens of today. The community-based wardening system plays with the dynamics of social pressure within the communities.

A total of 173 active Dulungan nest holes was identified and protected in this year's breeding season. 161 nests had been found in Brgy. Alegre, 10 Dulungan nest holes were visited and post-validated in areas of Brgy. Abiera. All active nests had successfully fledged. The parameters that we considered during validation to determine that occupied nest holes fledged successfully are as follows: Faeces and food remains found on the ground under the nest, no signs of ladders, bolo marks or climbing gears at the base of the nest tree.

Since a large number of active hornbill nests were identified this year, PESCP decided to deploy an extra cadre of our forest rangers (Federico, Antoy, Ralito Tenorio, Expedito Paulino Jr, and Robert Nepumoceno), research assistants Gersom Operiano, Narciso Paulino and two Community Conservationists Joman Mangga and Alberto Mangga. The validation

team was composed of four groups including the 28 nest wardens. The validation was done in two surveys, the pre-validation and post-validation. Following the protocol of previous years, the new nests were tagged, their positions the altitude included taken, the height of the nest, distance from the Barangay, description of the status of the forest at the place.

Two Writhed-bill nests in the Bayabas area, Mt. Madja-as, were visited by CCs Arnaldo Nabas, Vicente Filaro and Nelson Anos had successfully fledged.

1.4.3 Other related Activities

- Helped facilitate the release of 1 Leopard Cat in Libacao, Aklan. – January 05, 2005
- Helped facilitate the procurement of 20 pcs. farm tools and six sacks of organic fertilizer in Kalibo, Aklan, for delivery at Barangay Unidos, Nabas, Aklan. – January 07, 2005.
- Tasked as documenter during the Farmers Association meeting in Barangay Castillo, Ibajay, Aklan. – January 25, 2005.
- Visited DENR office for following-up the release papers for 1 Tarictic and 2 Serpent Eagles. – February 4, 2005.
- Member of the team investigating the status of clay mining and getting the GPS fix to determine whether it has reached the mountainous part of Libertad. The team was composed of a representative from DENR, LGU-Libertad, PNP and barangay officials from Barangays Tigum, Tinindugan and other neighbouring ones. – February 8, 2005.
- Helped facilitate the procurement of 2 units sewing machine and 20 pieces of assorted farm tools for the Women and Farmers Association of Brgy. Castillo, Ibajay, Aklan. – February 15, 2005
- Gathered Barangay Alegre information from nest wardens about the status of old Dulungan nest holes. Also tasked CC Bobet Mangga to conduct weekly monitoring of 10 Dulungan nest holes in Nimbong Area. – March 15, 2005.
- Conducted monitoring, in Barangay Flores, the status of the cattle given to hunters and a nursery project for the community. – March 16-17, 2005.
- Attended, together with PESCP staff, the Barangay Council Meeting in Barangay Idio regarding the update of our UNDP project. – March 18, 2005.
- Visited Barangay Alojipan and arranged with the barangay officials the General Assembly Meeting for an UNDP project update as well as the selection of participants. – March 23, 2005.
- Attended, together with J. Espiritu, the ISF holder meeting and identified participants for an agro-forestry and nursery project. – March 28, 2005.
- Attended the General Assembly meeting in Barangays Alojipan and Idio in regard of the planning and finalization of the livelihood and agro-forestry project (UNDP). – March 31, 2005.
- Meeting with the Municipal Mayor of Culasi to give an update of our UNDP project in Barangay Alojipan. – April 1, 2005.
- Attended the launching of our UNDP program in Aklan State University, Banga, Aklan. – April 4, 2005.
- Conducted interviews with participants in an agro-forestry and livelihood project In order to prioritize poor families in the area as beneficiaries. April 5-6, 2005.
- Gathered Barangay Alegre data re the status of 10 monitored Dulungan nest holes in the Nimbong area. – April 7-8, 2005.
- Member of the team conducting interviews with prospective UNDP participants in Sitio Calabanog. – April 13-14, 2005.
- Attended the Barangay Development Meeting in Barangay Alojipan to give the list of participants that needed to be placed as recipients in the UNDP project. – April 16, 2005.
- Helped facilitate the nursery training in Barangay Castillo, Ibajay, Aklan, conducted jointly by PESCP and ASU for nursery caretakers and selected agro-forestry participants. – April 21-23, 2005.
- Canvassed the costs of materials needed for a pig pen in four sites in YL trading in Culasi. – April 25, 2005.
- Gathered initial data in Barangay Alegre on how many Dulungan nest holes were occupied. – April 26, 2005.
- Helped facilitate the selection of livelihood participants in Sitio San Juan, San Roque, Libertad. – April 27, 2005.
- Helped facilitate training for livelihood participants in Barangay Idio, Sebaste, Antique. – May 3-4, 2005.

- Met with nest wardens in Brgy. Alegre, Sebaste, to gather data plan for the pre-assessment of occupied Dulungan nest holes. – May 7, 2005.
- Attended in Barangay Alojipan the livelihood participants' meeting in preparation for the two days training and seminar care-taking of chicken and piglets. – May 9, 2005.
- Helped facilitate training in Brgy. Alojipan, Culasi, ***for*** livelihood participants of CoFoPa project. – May 11-13, 2005.
- Conducted visitation of Dulungan nest holes in the area of Brgy. Alegre. – May 17-24, 2005.
- Facilitated the visitation of CCs F. Filaro, A. Nabas and N. Anos of two Dulungan nest holes in Bayabas Area, Mt. Madja-as in Culasi. – May 27, 2005.
- Facilitated the visitation of 10 Dulungan nest holes in Barangay Abiera, Sebaste, Antique. – June 8 – 15, 2005.
- Met with nest wardens of barangay Alegre, Sebaste, on how and when to conduct the post-assessment of Dulungan nest holes during/after the current breeding season. – June 23, 2005
- Met with Mrs. Amadona Rana in DENR office Culasi, Antique. – July 1, 2005.
- Helped facilitate the transportation of confiscated birds from Caticlan to PESCP's rescue facility at Mag-aba, Pandan (see report by project vet Dr. Sanchez above). July 7, 2005.
- Facilitated together with S. Galuego, CC Manga and four Forest Rangers the donation of one Tarictic from Barangay Bacalan, Sebaste. – July 18, 2005.
- Conducted together with 27 nest wardens, six Forest Rangers, two CCs the post- assessment of Dulungan nest holes in Barangay Alegre. – May 19 – 29, 2005.
- Helped facilitate the delivery of 50 rolls of barbed wire from Kalibo to Culasi. – August 1, 2005.
- Attended the Barangay Council Meeting together with CC Ontoy Filaro to facilitate the donation of a grass owl from Jesus Marcelino in Barangay Alojipan, Culasi. – August 2, 2005.
- Facilitated the delivery of 400 pcs of Calamansi to Barangay San Roque, Sitio Calabanog, Barangay Idio and Barangay Alojipan. – August 4, 2005.
- Canvassed the costs for the venue and catering needed in the Nest Wardens Recognition Program in Culasi. – August 8, 2005.
- Facilitated the preparation and distribution of communications to the offices of the Mayors of Culasi and Sebaste and other agencies involved in the Nest Wardens' Recognition Program. – August 15-17, 2005
- Facilitated together with PESCP staff the mentioned Recognition Program and gave the incentives intended for every nest warden involved. - August 18, 2005.
- Helped facilitate the Dulungan nest holes warden recognition program in Poblacion Madalag, Aklan. – Aug. 24, 2005.
- Helped facilitate the preparation and conducted training and seminars for the agro-forestry participants in ASU Castillo Campus, Makato, Aklan. - August 28-27, 2005.
- Helped facilitate the procurement of piglets for Barangay Flores, Culasi, for UNDP Project. – August 31, 2005.
- Conducted meeting in Pob. Culasi, Antique, attended by five CCs to gather update of the situation of wildlife hunting, poaching and other destructive practices in their area of area assignment. – September 2, 2005.
- Helped facilitate the procurement of piglets for Barangay Flores, Culasi. – September 7, 2005.
- Facilitated the registration of an office motorbike in Kalibo. – September 8, 2005.
- Facilitated the renewal of five CCs' insurances in San Jose, Antique. – September 12, 2005.
- Facilitated the submission of important documents to Twenty Five Peso Multi Purpose Cooperative in Banga, Aklan. September 15, 2005
- Accompanied R. Elio for computer repair in Kalibo. – September 21, 2005
- Assisted Dr. Sanchez in castrating male piglets Sitio Calabanog. – September 28, 2005.
- Met with CC's in Culasi to hand out their allowances. – September 30, 2005.
- Accompanied Thomas, the manager, on his way to Caticlan. – October 03, 2005.
- Helped evaluate of a biogas site in Alojipan with the evaluation team from the Provincial Veterinarian Office. – October 04, 2005.
- Visited Department of Agriculture (DA) office in Culasi. – October 07, 2005.
- Assisted Dagyaw / Bayanihan for three agro-forestry sites in Sitio San Juan, Libertad. – October 11, 2005.
- Assisted agro-forestry participants' meeting in Sitio Calabanog, Pandan, and San Juan, Libertad. – October 12, 2005.
- Helped facilitate the delivery of chickens and piglets in Barangay Alojipan. – October 13, 2005.
- Coordinated with the Office of the Mayor and D.A. in Culasi to ask for the support of Mr. R. Solis for proper check-up and medication of chicken and piglets given to Barangay Alojipan. – October 18, 2005.

- Facilitated the procurement of 10 piglets from Barangay San Luis and delivered them to Alojipan. – October 20-21, 2005.
- Helped facilitate the renewal of registration of project jeep in Kalibo, Aklan. – October 25-26, 2005.
- Visited DENR office in Culasi for a meeting with Amadona Rana, PAWS in-charge. – November 3, 2005.
- Attended, together with Rey Elio and R. Lestino, the Sangguniang Bayan meeting in Barbaza, Antique. – November 7, 2005.
- Went to Aklan State University in Banga, Aklan, because of an UNDP project concern. – November 9, 2005.
- Joined a group confiscating two chainsaws in Barangay Pinatuad, Nabas, Aklan. – November 10, 2005.
- Accompanied R. Elio to DENR Kalibo for turning over the two confiscated chainsaws. – November 11, 2005
- Visited, together with Daniel (PESCP volunteer) and John (project forester), Barangay Flores to update us re the status of their nursery. – November 16, 2005.
- Met with three CCs to get an update on the situation of their area of assignment. – November 21, 2005.
- Visited together with Daniel and John Barangay Flores for tree planting. Demonstrated how to graft fruit trees and have counsel. – November 23-24, 2005.
- Confiscated, together with three forest rangers and M. Ibabao one unregistered chain saw in Barangay Duyong, Pandan, and turned it over to DENR Culasi. – December 1, 2005.
- Went to DENR office in Culasi for submitting endorsement letter from PESCP office for the release of apprehended chainsaw owned by Ms. Rita Francisco of Barangay Botbot, Pandan, Antique, after the owner was able to provide a copy of registration papers to PESCP office December 7, 2005.

1.5 Accomplishment Report: Five more Clusters of Barangays

By Richard M. Lestino
Wildlife Educator

Area of Operation:
Libacao Cluster: Barangays Dalagsaan, Manika and Oyang
Barbaza Cluster: Barangays Lumbuyan, Mayabay, Idao and Nalusdan
Culasi Cluster: Barangays Paningayan, Simbula and Salde
Sebaste Cluster: Barangays Abiera, Sitio Igpatuyao Poblacion and P. Javier
UNDP Counterpart Communities: Barangays Alojipan, Sitio Calabanog, Idiacacan, Idio and San Roque

1.5.1 Interventions

Over the past year, PESCP has seen many challenges to its integrated conservation agenda and program implementation both in the Northwest Panay Peninsula as well as its more recent focus, the Central Panay Mountain Range (CPRM).

In early 2005, campaigning towards the protection of the Dulungan the flagship species of PESCP, was intensified by expanding coverage to municipalities of the CPMR other than those monitored so far, yet with still remaining forest cover as well. PESCP reached out into the Municipalities of Madalag, Aklan, and Calinog, Iloilo, as well as some barangays of the Municipalities of Sebaste and Culasi, Antique.

As usual, the coordination with the Local Government Units (LGUs) involved was part of the protocol followed to seek their support for tight cooperation and partnership for the welfare of the people and their environment in general.

Based on the information gathered at both the Municipal level and the level of upland communities we identified upland Barangays as foci of further intervention campaigning. These were, Paningayan, Simbula and Salde in Culasi, further. Abiera, P. Javier and Sitio Igpatuyao of Poblacion in Sebaste. During the site validation meetings, interviews and consultation with the council and community members where conducted as part of the community integration in the intervention program. Based on this, regular site visitations along with Information Education Campaigns where conducted on the existing laws and ordinances pertaining to environmental conservation.

1.5.2 Conservation Efforts

In partnership and cooperation with the LGUs, Barangay Councils, Philippine National Police (PNP) and DENR offices concerned the campaign mentioned has been a productive one. As a result, in coping with poaching, four functional air guns where surrendered to the office in exchange for two sacks of rice per piece, thus forming part of a livelihood support program (see table). This brings up the total of air guns surrendered to PESCP to over 40.

Name of Air Gun Owner	Address	Date Surrendered
Samuel Lojera	Poblacion, Sebaste	November 15, 2005
Joseph Junelas	Sitio Igpatuyao, Poblacion, Sebaste	October 25, 2005
Paulo Jarquio	Sitio Beiho, Poblacion, Sebaste	October 11, 2005
Dioneto Fernando	Brgy. Abiera, Sebaste	August 22, 2005

Several traps and snares where also confiscated by the CCs assigned in their areas of jurisdiction during their regular forest and wildlife monitoring. The support by the PNP and Philippine Army assigned to the area of project operation strengthened the sympathy of the community people for this campaign and its outgrowths.

1.5.3 Nest Hole Wardening Scheme

The implementation of nest hole wardening for the Dulungan as one of the project components was always given priority. As of the latest nest hole validation conducted in the CPMR specifically in Libacao, Culasi and Sebaste clusters it was found out that there's an increase in the number of nest holes of birds nesting in the area. Prior to this, a pre-assessment/ validation activity was conducted in the area to look into the veracity of the reported sightings of Dulungans by upland people. After this, the post-validation takes place after the fledging season, to ensure that tagging of the tree involved had caused no disturbance to the breeding birds and that poaching had not intervened. In this way an inventory of the Dulungan population in the CPMR was going to be completed. The post-validation team comprised of a team leader, a guide, porters and the nest hole wardens. Upon verification of fledging of a brood each nest hole warden was given an incentive of five hundred Pesos (500 PhP) as part of a livelihood support program.

The annex below comprises a list of Dulungan nest holes in three clusters of barangays (Libacao, Culasi, Sebaste) including tag numbers, estimated height of each nest hole above ground, tree species, nearest location (mountain/river), altitude, forest type, GPS positions, and fledging success.

1.5.4 Further Project related Activities

- **January 9** – attended the meeting of Integrated Social Forestry holder in Idio, Sebaste, with the Barangay Council.
- **January 24-25 –** meeting with DEVELOPER staff, an NGO in Aklan, regarding the concern of a farmers and women association in Brgy. Castillo, Makato, Aklan.
- **January 30 –** attended a meeting with the National Commission for Indigenous People (NCIP) in Libacao, Aklan. The main objective is to form/ establish a Provincial Consultative Body that will represent the Indigenous People of Aklan in the Regional Consultative Body and National Assemblies. Within this framework problems arising from, e.g., PESCP covering part of the Indigenous People's Ancestral Domain Claim can then be discussed.
- **February 9 –** tutored Forest Rangers in regard of the handling of the Global Positioning System (GPS) during regular forest and wildlife monitoring activities.
- **February 15 –** assisted in the procurement of farm tools for agroforestry adaptors from among UNDP counterpart communities.
- **February 17 –** assisted the turning over of 2 sewing machines to Women's Association in Brgy. Castillo, Makato, Aklan, as part of livelihood support as part of the UNDP project.
- **March 24 & March 1** – courtesy call at the LGUs of Madalag and Malinao, Aklan, discussing the possibility of a Dulungan survey in these municipalities. Additionally, data, maps and information were gathered regarding the status of wildlife and forest cover in the area.
- **April 4 –** attended the launching of the UNDP funded COFOPA project in Aklan State University in Banga, Aklan.
- **April 6-7 –** selected potential livelihood participants of the CoFoPa project in Brgy. Idio, Sebaste.
- **April 12 –** attended an Administrative Hearing conducted by CENRO Culasi regarding illegally cut lumber in Brgy. Sto. Rosario, Pandan.

- **April 14, 15 & 16 –** met with livelihood participants of the CoFoPa project in Barangays San Roque, Idio and Alojipan.
- **April 21 – 23** (1st batch) & May 31 – June 2 (2nd batch) – assisted the training on nursery establishment in Castillo, Makato, Aklan, with agroforestry adaptors and nursery care takers of each of the CoFoPa counterpart communities concerned.
- **April 27 – 28** (1st batch) & May 3 – 4 (2nd batch) – assisted the training on pig and poultry raising (care and maintenance) of livelihood participants in San Roque, Libertad & Idio, Sebaste.
- **June 23 –** attended the joint tree planting activity of Municipal Government Unit of Pandan, DENR and PESCP Forest Rangers in Sitio Malumpati, Brgy. Sto. Rosario, Pandan, Antique.
- **August 24, 25 & 26 –** facilitated and assisted the Nest Wardens Acknowledgement venue in the Municipalities of Culasi (Antique), Madalag (Aklan), Libacao (Aklan) and Calinog (Iloilo). Nest wardens, representatives of LGUs, DENR and barangay officials of all project sites witnessed the activity.
- **September 6** – assisted the Park Superintendent (PASu) and Forest Ranger Coordinator in the training of the PESCP's Forest Rangers on environmental laws, GPS handling and First Aid.

- **November 7** – attended the Municipal Councillor Regular Session in Barbaza, Antique, dealing with a draft MOA between the LGU, PESCP and Philippine National Police of Barbaza that aims at a tight partnership and cooperation re the implementation of the existing environmental laws and future livelihood opportunities for upland communities.

1.5.5 Other Tasks

- Assisted and facilitated the purchase and delivery of livelihood project-related tools to CoFoPa counterpart communities
- Assisted in the procurement of farm tools for agroforestry participants and nurseries
- Helped the CoFoPa project veterinarian, Dr. Sanchez, with the maintenance of CoFoPa livelihood projects
- Assisted the Forest Ranger Coordinator with FR related activities

Annex

ACTIVE DULUNGAN NEST HOLES IN BARANGAY DALAGSAAN, LIBACAO, AKLAN

Nest Warden	No. of Nest holes	Tag number	Estimated height (ft) of nest holes	Tree species	Location river/ mountain	Alti-tude (m)	Desti-nation /Pos-ition	For-est type	Remarks
Nick Colas	2	1036	60 & 40 ft.	bita	Maba-diang	890	N 11 16.432' E 122 15.656	PRF	fledged
Joefer Donato	3	1037	0, 52 & 40 ft.	balakba kan	Maba-diang	950	N 11 16.432' E 122 15.656	PRF	fledged
Nick Colas	2	1038	72 & 69 ft.	balakba kan	Sinunga-yan	750	N 11 16.715' E 122 14.855	PRF	fledged
Phade Nervar	1	1042	70 ft.	gatasan	Mala-ganga	631	N 11 16.206 E 122 14.424	PRF	fledged
Godofredo Colas	3	1039	40, 55 & 45	bay-ang	Mala-ganga	640	N 11 16.206 E 122 14.424	PRF	fledged

Godofredo Colas	2	1040	30 & 35	libtog	Mala-ganga	700	N 11 16.206 E 122 14.424	PRF	fledged
Godofredo Colas	3	1041	40, 50 & 55	libtog	Mala-ganga	750	N 11 16.206 E 122 14.424	PRF	fledged
Nick Colas	1	1043	38 ft.	balakba kan	Lapad-bato	650	N 11 16.727 E 122 16.679	PRF	fledged
Noli Onao	3	1015	80, 82 & 78 ft.	balakba kan	Maybu-tong	522	N 11 18.970 E 122 16.900	PRF	fledged
Nelson Esto	2	1025	40 & 55 ft.	balakba kan	Kaluk-tugan	537	N 11 19.172 E 122 16.647	PRF	fledged
Nelson Esto	1	1024	45 ft.	balakba kan	Kaluk-tugan	550	N 11 19.172 E 122 16.647	PRF	fledged
Nelson Esto	2	1016	40 ft.	libtog	Kaluk-tugan	600	N 11 19.172 E 122 16.647	PRF	fledged
Joemar Bianido	1	1001	30 ft.	Bagi-lomboy	Mayharas	540	N 11 16.897 E 122 15.637	PRF	fledged
Joemar Bianido	1	1002	25 ft.	nato	Mayharas	420	N 11 16.369 E 122 15.857	PRF	fledged

Joemar Bianido	1	1003	80 ft.	Balak-bakan	Mayharas	480	N 11 16.369 E 122 15.857	PRF	fledged
Joemar Bianido	1	1004	30 ft.	laua-an	Maydi-gahop	450	N 11 15.736 E 122 15.636	PRF	fledged
Joemar Bianido	1	1005	50 ft.	balakbakan	Linapos	560	N 11 15.723 E 122 15.216	PRF	fledged
Joemar Bianido	1	1006	65 ft.	balakbakan	Gapa hanggod	450	N 11 15.259 E 122 15.321	PRF	fledged
Joemar Bianido	1	1007	70 ft.	balalakbakan	Sapa hanggod	480	N 11 15.259 E 122 15.267	PRF	fledged
Joemar Bianido	2	1008	35 & 30 ft.	libtog	May sorabot	540	N 11 16.379 E 122 15.142	PRF	fledged
Joemar Bianido	1	1009	40 ft.	libtog	May sorabot	605	N 11 16..379 E 122 15.142	PRF	fledged
Joemar Bianido	3	1010	20, 70 & 75 ft.	libtog	May sorabot	620	N 11 16.379 E 122 15.142	PRF	fledged
Godofredo Colas	2	1044	25 & 30 ft.	libtog	Magsalay	480	N 11 15.363 E 122 15.611	PRF	fledged
Godofredo Colas	1	1045	50 ft.	libtog	Datag Magsalay	450	N 11 15.363 E 122 15.611	PRF	fledged

Godofredo Colas	1	1046	20 ft.	libtog	Datag Magsalay	520	N 11 15.363 E 122 15.611	PRF	fledged
Godofredo Colas	3	1047	50, 62 & 70 ft.	libtog	Datag Magsalay	460	N 11 15.363 E 122 15.611	PRF	fledged
Godofredo Colas	2	1048	90 ft.	libtog	Datag Magsalay	420	N 11 15.363 E 122 15.611	PRF	fledged
Godofredo Colas	2	1049	70 & 80 ft.	bay-ang	Datag Magsalay	500	N 11 15.363 E 122 15.611	PRF	fledged
Jonny Esto	2	1017	40 & 45 ft.	balakbakan	Kaman-dag	560	N 11 19.073 E 122 16.647	PRF	fledged
Jonny Esto	1	1018	50 ft.	libtog	Kaman-dag	590	N 11 19.073 E 122 16.647	PRF	fledged
Jonny Esto	2	1023	35 & 50 ft.	balakbakan	Kaman-dag	650	N 11 19.073 E 122 16.647	PRF	fledged
Orte Bianido	1	1011	20 ft.	bay-ang	Magsalay	480	N 11 15.363 E 122 15.611	PRF	fledged
Orte Bianido	1	1012	30 ft.	libtog	Magsalay	540	N 11 15.363 E 122 15.611	PRF	fledged
Orte Bianido	2	1013	25 & 30 ft.	balakbakan	Magsalay	420	N 11 15.363 E 122 15.611	PRF	fledged

Orte Bianido	1	1014	35 ft.	balakbakan	Magsalay	570	N 11 15.363 E 122 15.611	PRF	fledged

ACTIVE DULUNGAN NEST HOLES IN BARANGAY PANINGAYAN, CULASI, ANTIQUE

Sonny Placido	1	1075	60 ft.	balakbakan	Egpako	440	N 11 29.540 E 122 09.215	PRF	fledged
Rolly Placido	1	1076	55 ft.	balakbakan	Egpako	460	N 11 29.250 E 122 09.464	PRF	fledged
Joey Placido	1	1077	60 ft.	balakbakan	Marobo	520	N 11 28.189 E 122 09.215	PRF	fledged
Jhon Magsipoc	1	1079	65 ft.	balakbakan	Kalagos	480	N 11 28.670 E 122 09.435	PRF	fledged
Jhon Magsipoc	1	1080	27 ft.	balakbakan	Calolot	580	N 11 29.879 E 122 09.260	PRF	fledged
Rolly Placido	1	1096	47 ft.	balakbakan	Egponot	460	N 11 29.654 E 122 09.654	PRF	fledged
Rolly Placido	1	1097	42 ft.	libtog	Egponot	420	N 11.28.654 E 122 09.654	PRF	fledged

Rolly Placido	1	1098	30 ft.	libtog	Egponot	410	N 11 29.842 E 122 09.432	PRF	fledged
Jhon Magsipoc	1	1099	63 ft.	balakbakan	Egponot	520	N 11 28.842 E 122 09.654	PRF	fledged
Rolly Placido	1	1058	65 ft.	lagasi	Timbaban	490	N 11 29.450 E 122 10.251	PRF	fledged
Rolly Placido	1	1100	60 ft.	balakbakan	Egponot	520	N 11 28.420 E 122 09.320	PRF	fledged
Sonny Placido	1	1066	50 ft.	balakbakan	Kalagos	500	N 11 28.540 E 122 09.190	PRF	fledged
Sonny Placido	1	1095	60 ft.	balakbakan	Tig-isiw	520	N 11 29.560 E 122 10.180	PRF	fledged
Sonny Placido	1	1094	30 ft.	balakbakan	Tig-isiw	430	N 11 29.560 E 122 10.180	PRF	fledged
Sonny Placido	1	1093	50 ft.	balakbakan	Tig-isiw	540	N 11 29.560 E 122 10.180	PRF	fledged
Sonny Placido	1	1092	50 ft.	lawaan	Timbaban	600	N 11 29.560 E 122 10.180	PRF	fledged
Joey Placido	1	1091	35 ft.	kalolot	Egponot	480	N 11 28.450 E 122 08.586	PRF	fledged

Ricky Magsipoc	1	1078	36 ft.	libtog	Kalagos	520	N 11 28.890 E 122 08.140	PRF	fledged
Ricky Magsipoc	1	1073	25 ft.	bogarom	Egpako	540	N 11 28.190 E 122 08.245	PRF	fledged
Ricky Magsipoc	1	1072	35 ft.	libtog	Egpako	590	N 11 28.870 E 122 08.590	PRF	fledged
Quino Placido	1	1074	30 ft.	tabaw	Egpako	600	N 11 28.186 E 122 08.904	PRF	fledged
Quino Placido	1	1071	35 ft.	balakbakan	Egpako	590	N 11 29.786 E 122 09.423	PRF	fledged
Quino Placido	1	1070	40 ft.	balakbakan	Egpako	540	N 11 29.786 E 122 09.423	PRF	fledged

ACTIVE DULUNGAN NEST HOLES IN SITIO IGPATUYAO, POBLACION, SEBASTE, ANTIQUE

Joseph Jonelas	2	1027	30 ft.	baid	Tumbo	550	N 11 36.520 E 122 08.270	PRF	fledged
Joseph Jonelas	1	1028	40 ft.	baid	Tumbo	570	N 11 36.520 E 122 08.289	PRF	fledged
Joseph Jonelas	1	1029	40 ft.	kabnol	Tumbo	520	N 11 36.860 E 122 09.680	PRF	fledged

Joseph Jonelas	1	1030	30 ft.	baid	Tumbo	600	N 11 36.210 E 122 09.327	PRF	fledged
Joseph Jonelas	1	1031	30 ft.	baid	Tumbo	580	N 11 36.532 E 122 09.527	PRF	fledged
Joseph Jonelas	1	1032	40 ft.	boganso l	Tumbo	550	N 11 36.674 E 122 09.426	PRF	fledged
Danilo Balindes	2	1033	40 ft.	baid	Mulag	450	N 11 36.670 E 122 09.530	PRF	fledged
Danilo Balindes	3	1034	50 ft.	baid	Mulag	430	N 11 36.670 E 122 09.530	PRF	fledged
Danilo Balindes	1	1035	30 ft.	tabaw	Mulag	450	N 11 36.670 E 122 09.530	PRF	fledged
Danilo Balindes	1	1050	20 ft.	baid	Mulag	400	N 11 36.670 E 122 09.530	PRF	fledged
Danilo Balindes	1	1051	30 ft.	libtog	Mulag	460	N 11 36.670 E 122 09.530	PRF	fledged
Danilo Balindes	1	1053	40 ft.	lawaan	Mulag	420	N 11 36.670 E 122 09.530	PRF	fledged
Ramie Agustin	2	1054	40 ft.	libtog	tidlanga	460	N 11 35.560 E 122 08.186’	PRF	fledged

Ramie Agustin	1	1055	30 ft.	libtog	Tidlanga	500	N 11 35.560 E 122 08.186	PRF	fledged
Ramie Agustin	1	1056	30 ft.	mogis	Tidlanga	560	N 11 35.560 E 122 35.186	PRF	fledged
Ramie Agustin	3	1059	50 ft.	baid	Tidlanga	460	N 11 35.560 E 122 08.186	PRF	fledged
Ramie Agustin	1	1060	30 ft.	balakbakan	Nabang	450	N 11 35.560 E 122 08.186	PRF	fledged
Ramie Agustin	1	1061	30 ft.	lawaan	Payo	446	N 11 35.455 E 122 08.316	PRF	Fledged
Ramie Agustin	1	1062	40 ft.	lawaan	Payo	500	N 11 35.455 E 122 08.316	PRF	fledged
Ramie Agustin	1	1064	45 ft.	lawaan	Payo	450	N 11 35.455 E 122 08.316	PRF	fledged
Ramie Agustin	1	1067	40 ft.	balakbakan	Payo	540	N 11 35.455 E 122 08.316	PRF	fledged
Ramie Agustin	1	1068	50 ft.	lawaaan	Payo	446	N 11 35.455 E 122 08.316	PRF	fledged
Danilo Balindes	1	1069	40 ft.	libtog	Mulag	470	N 11 36.670 E 122 09.530	PRF	fledged

Danilo Balindes	1	1090	45 ft.	libtog	Mulag	490	N 11 36.670 E 122 09.530	PRF	fledged
Danilo Balindes	1	1142	50 ft.	lawaan	Mulag	500	N 11 36.670 E 122 09.530	PRF	fledged
Danilo Balindes	1	1052	55 ft.	balakbakan	Mulag	520	N 11 36.670 E 122 09.530	PRF	fledged

ACTIVE DULUNGAN NEST HOLES IN BARANGAY ABIERA, SEBASTE, ANTIQUE

Leopoldo Fernando	1	1141	55 ft.	libtog	Nasapa	580	N 11 35.629 E 122 09.200’	PRF	fledged
Leopoldo Fernando	1	1143	45 ft.	libtog	Nasapa	670	N 11 35.629 E 122 09.200’	PRF	fledged
Leopoldo Fernando	1	1144	60 ft.	lawaan	Nasapa	450	N 11 35.629 E 122 09.200’	PRF	fledged
Leopoldo Fernando	1	1145	50 ft.	tabaw	Nabanglid	422	N 11 34.553 E 122 08.027’	PRF	fledged
Leopoldo Fernando	1	1146	45 ft.	libtog	Nabanglid	422	N 11 34.553 E 122 08.027’	PRF	fledged

Dioleto Fernando	1	1147	50 ft.	libtog	Maslog	670	N 11 35.615 E 122 08.117’	PRF	fledged
Dioleto Fernando	1	1148	65 ft.	lawaan	Maslog	600	N 11 35.615 E 122 08.117’	PRF	fledged
Dioleto Fernando	1	1149	65 ft.	libtog	Maslog	540	N 11 35.615 E 122 08.117’	PRF	fledged
Dioleto Fernando	1	1152	50 ft.	libtog	Maslog	488	N 11 35.615 E 122 08.117’	PRF	fledged
Dioleto Fernando	1	1154	55 ft.	libtog	Maslog	550	N 11 35.615 E 122 08.117’	PRF	fledged
Dioleto Fernando	1	1151	40 ft.	libtog	Maslog	620	N 11 35.615 E 122 08.117’	PRF	fledged
Rolly Fernando	1	1153	55 ft.	lawaan	Nasapa	580	N 11 34.629 E 122 08.200’	PRF	fledged
Rolly Fernando	1	1155	45 ft.	libtog	Nasapa	670	N 11 34.629 E 122 08.200’	PRF	fledged
Rolly Fernando	1	1158	60 ft.	libtog	Nabanglid	530	N 11 34.553 E 122 08.027’	PRF	fledged

Rolly Fernando	1	1157	45 ft.	lawaan	Nabanglid	422	N 11 34.553 E 122 08.027	PRF	fledged

1.6 Wildlife Rehabilitation Accomplishment Report

By Enrique Sanchez Jr.
Wildlife Veterinarian, PESCP

with contributions from: N. Bagac, M. Melchor, E. Geronimo,
J. Jamangal, B. Tacud and S. Hembra

1.6.1 General

The activities comprise not only rehabilitation of native birds, mammals and reptiles, but also rescue of confiscated animals not found on Panay Island. These confiscated animals were illegally caught elsewhere with the bulk coming from the Philippines and then smuggled from Negros Island. This collection of species was the biggest ever PESCP had to cope with, and it included hornbills, parrots, mynahs, monitor lizards and two exotic birds (see **App. 4**). The confiscation had intercepted the animals en route to Manila lacking tight security inspection in ports of entry. When comprising endangered species such shipments are potentially speeding up their disappearance in the wild.

The high-tech equipment of PESCP's pre-release health check and treatment to produce top quality releasees (see editor's note in Eleventh Report [2005] on wildlife rehabilitation) still contrasts with its still ill-developed post-release monitoring. The high-tech equipment to be deployed in this area of conservation research is in part still with the Manila customs since summer 2004. The project had to prioritize forest protection rather than paying the horrendous import taxes demanded from the customs authorities. PESCP is striving at having such unproductively spent fees officially waived. In this undertaking it is supported by Aklan State University.

While PESCP is aiming at releasing every single individual of wildlife admitted to its rescue facilities there are cases where release back into the wild is prohibitive. Animals not suited for are 1) permanently disabled as, e.g., in the case of a Serpent Eagle being blind on one eye; 2) pigeons/doves with permanently impaired growth of primary wing feathers because of infection or injuries; 3) Excessive apparently irreversible aggression in hand-raised adult Long-tailed Macaques.

PESCP is doing much to forestall accidental escape of its reha patients. Yet typhoons destroyed cages in the Mag-aba Reha Facility where cages are built with local materials, i.e. bamboo and coconut lumber. The used materials are prone to termite infestation. With such infestation the destruction goes commonly unnoticed thus leading to the accidental escape of

birds. Some Tarictic Hornbills from the wild were lost this way. Rotten cages will now be re-built in a way that minimises accidental escape

PESCP's Forest Rangers caring for confiscated nestling Racquet-tailed Parrots by feeding them parrot baby food via a syringe. Photo courtesy Reynaldo Elio, 30 June 2005

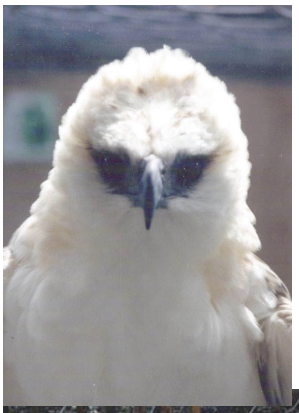
1.6.2 Media and Public Relations

After the acceptance of confiscated birds by PESCP's Mag-aba rehabilitation facility, the event got TV coverage by Mr. Gary Vargas of Kalibo Cable, affiliated with the National Network of GMA – 7. Furthermore, there was a visit from award winning travel photographer Mr. Lester Leadsman of Smart Telecommunications. He had featured PESCP's the facility in Mag-aba in the Philippine Airlines' official Magazine 'Mabuhay'.

1.6.3 Housing and Equipment

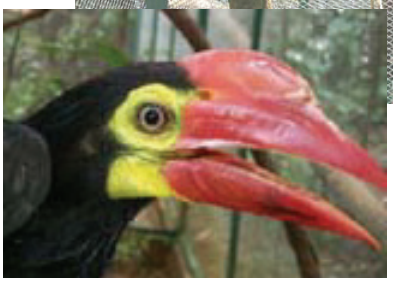
. PVC piping and aluminium wire mesh are a way out of the impasse due to flimsy construction materials, as practiced in Station Sibaliw.

PESCP Rescue/Rehabilitation



Left: Changeable Hawk-Eagle, PESCP Rescue Facility, Bulanao.

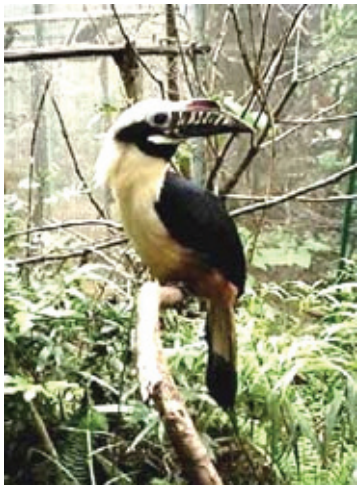
Below: Taking prey during rehabilitation as a precondition of release.



Above: Writhed-billed Hornbills, male and female at PESCP rehabilitation facility, Sibaliw.

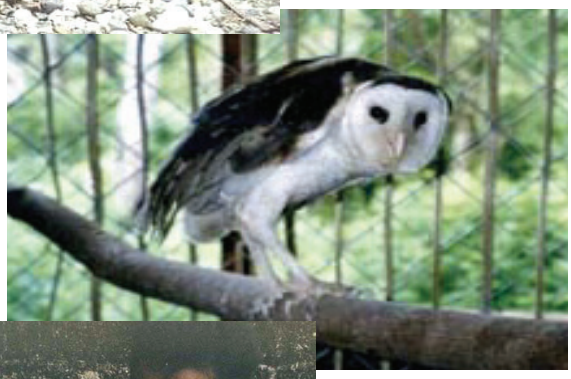
Left: Female Writhed-billed Hornbill, Sibaliw.

Left:: Project members Dionna Doroteo and Arnold Demegillo on an expedition to accept a donated Visayan Tarictic Hornbill fledgling from the hinterlands.



Left: Tarictic male

Below: Male and 3 females



Above: Grass owl, Bulanao.

Left: Caretaker Nestor Bagac tending an injured grass owl.

The replacement of lumber frame for each flight pen (cage) was started last year (see Eleventh Report). Three holding pens and a large flight cage were rebuilt. This August 3, old cages collapsed and could be rebuilt using almost entirely rust proof materials such as PVC pipes and a minimum of metal. The construction costs are thus halved as compared to conventional cage building with using corrosion-prone iron.

Furthermore, shelters for rat and mice cages in the Mag-aba Reha Facility were extended to accommodate a larger number of breeders.

A dissecting microscope found its way to my mini-laboratory, thanks to the generosity of a conservation minded German businessman in Manila, Claus Sudhoff, a friend of PESCP's Project Director.

1.6.4 Other assignment

Apart from being a Wildlife Veterinarian and Rehabilitation Coordinator, I was tasked with being a Veterinary Consultant for PESCP's EC-UNDP sponsored reforestation and livelihood program. The focus here is on swine and poultry raising and breeding under the aegis of the CoFoPa project (see Manager's Report, chap. 1.1, above).

1.6.5 Diet Development

For RAPTORS

Eagles (Changeable Hawk Eagle and Crested Serpent Eagle)

The diet comprises mainly lean beef, supplemented sometimes with rats and mice bred in the center. Snakes run over by vehicles and wild rats brought by rice farmers are welcome additions to the diet. Candidate birds for release are fed with extra food to compensate for the number of days they fail to catch prey upon being released. They are almost fed entirely with live prey during pre-release training, e.g. white rats and mice bred in the center and unwanted kittens brought by their owners.

Besra (*Accipiter virgatus*)

Fed with beef cut in strips. Rat and mice pink puppies for sick and immature birds.

Owl (*Ninox philippensis*)

Fed almost entirely with insects such as dragon flies, beetles, grasshoppers, praying mantises, and crickets collected near the center. During times of poor insect abundance fed with beef cut in strips.

For PARROTS

Blue-crowned Racquet-tail (*Prioniturus discurus*) and Colasisi (*Loriculus philippensis*)

Fed with Cerelac (Nestle) mixed with pounded soaked beans (mungo, soy beans, green peas) mixed with oatmeal soaked in warm water. The prepared mixture is sprinkled with multi-vitamin supplement (Vionate manufactured by Novartis) three times a week, Pecutrin (Bayer) given once a week. The mixture should be stored frozen only for three days. Fruits are given throughout the day, e.g. banana, guava, papaya as well as commercial fruit juice as the sole substitute of nectar (E. Curio pers. comm.)

Diets for hornbills (see Seventh and Eleventh Report, 2001 and 2005, respectively, on rehabilitation)

For MAMMALS

Long-tailed Macaque (*Macaca fascicularis*)

Fed entirely with seasonal fruits available on the market, e.g. bananas, papaya, sometimes, fruits such as rambutan, lansones, mangoes and vegetables.

Leopard Cat (*Prionailurus bengalensis)*

Fed with mice and rats bred in the center. Beef fed one half (½) of the entire food offered.

Medications and medical supplement for sick and new animal arrivals at the rehabilitation center:

Baxidel (Univet)
Used as anti- bacterial and anticoccidial medicament.

Bioserin (EuroVet)
Commonly used to increase the immune response and as a source of high protein food for sick animals.

Nutrical (Albrecht)
A high protein food supplement used for dogs and cat.

Dextrolyte (TrycoPharma)
An oral rehydrating agent containing amino acids, can be applied orally.

Gusanex (Schering-Plough)
An anti -septic that contains anti-inflamatory ingredients, inhibiting the growth of fly larvae. Applied to wounds and minor skin injuries.

Benebac powder (PetAg)
Contains beneficial bacteria to restore the intestinal micro flora of the intestine after a prolonged period of anti bacterial treatment.

1.6.5 Accomplished Tasks

At the start of 2005, I had to hike to Station Sibaliw and its rehabilitation facility to collect samples for pre-release checks, composed of blood sera and newly voided wastes from Tarictics. Candidates for releases were carefully screened, selected and conditioned by caretaking staff at Sibaliw Forest, Buruanga, Aklan. The releases were witnessed at the start of the Month of March by PASu Rodel Lababit of DENR. Months later a pre-release health check of eagles of two species with their subsequent release from the Mag-aba facility was witnessed by E. L. Legaste and R.C. Pagayunan from DENR – CENRO, Culasi, in October.

The number of animals housed and transferred this year has never been that high before. We had to accommodate a total of 118 different individuals of many species of uncertain origin (see **App. 4**). Comprised of birds and reptiles shipped from Negros island and Mindanao en route to Manila the consignment was intercepted at the Jelly Port of Caticlan in Malay, Aklan.

The apprehension was a result of a tip-off to PNP authorities from a concerned citizen of Boracay Island. This was credited to the massive effort of education and information campaigning by and the continual presence of PESCP.

My thanks go to Mr. Manuel Delos Reyes of the Forest Management Service (FMS) of Malay, Aklan, and to the PNP Mobile Group Caticlan for safe guarding the said wildlife upon confiscation. Despite the personal risk and bribing money offered to them by the previous illegal owners, deploying influences and emissaries, they had stood their ground admirably.

The birds and reptiles stayed temporarily for less than two weeks at PESCP's Mag-aba facility. Two of our FRs, Expedito Paulino Jr. and Edilberto Malabja, had to become nannies feeding the nestlings. Hired later on, an extra caretaker paid on a daily basis, joined them. Baby parrot management and care received valuable input from Prof. Lucia Lastimoza and 'Pavel' of WVSU.

By July 12, Deputy Director Damaso Fuentes of the PAWD of DENR Region VI, Iloilo, facilitated the transfer of the confiscated mix of species; the birds and reptiles were transported to Lombija Wildlife Rescue Center on Guimaras Island. On the same day, four animals had to be classified as "unsuitable for release".

1.6.7 Seminars and Conferences attended

Veterinary Practitioners Association of the Philippines (VPAP) 33rd Annual Scientific Conference held in Dusit Hotel in Makati City June 9-10, 2005, with topics presented by colleagues on wildlife medicine, such as the following:

" Human and wildlife health: The Sentinel Species Concept "
" Assessment of captive animal facilities (Zoos) in the Philippines"
" Rescue and rehabilitation protocols for Philippine birds "
" Caring for Dugongs "

1.6.8 Eminent Problems and possible Solutions

The planned post-release survival monitoring created for released and wild Tarictics did not materialize within this year. This is due to the lack of part of the data encoding machinery for telemetry which is still on hold with the Customs in Manila.

Pre-release training of raptors was improved through enforced flight exercise imposed on the eagles slated for release. Performed by the caretaker in Mag-aba (see Eleventh Report, 2005) the procedure yielded a very promising result. Birds were scared in the big, 25 m long flight cage and made to fly hence and forth between two distant perches at the narrow ends of the cage. There were two multiple releases on 26 October 2005, of two different eagle species (see App. 4). Whereas the Changeable Hawk Eagle disappeared into the forest, the serpent eagle released the same day was subsequently seen around and recaptured 7 days later because of complaints of neighbours.

There is a lack of other training facilities such as a flight cages in order to accommodate and exercise power flight of smaller birds such as pigeons, parrots, Colasisi and other birds of similar size. At present the holding that served as training cage for Emerald Pigeons serves now as an owl flight pen. But due to its too tame behaviour of the bird, release is deemed a risk, as it is remains unknown how long it will take the bird to over-come its tameness. We are not sure if the approach of scaring birds is applicable to an owl kept for rehabilitation.

The problem of wild cricket breeding as a source of animal protein for Tarictics has not yet been resolved. Cannibalism on larvae and mates is still the major problem. To circumvent it we tried different protein supplements as diverse as dog food and calf manna but we feel that live insect food would be superior. This prompted me to prepare an unused 20 gallon aquarium for use as a breeding box for wild crickets. Next, I have to find out if the wild crickets really cannibalize each other due to some factor in their maintenance by our staff in Sibaliw Station.

1.6.9 Visitor's at Mag-aba Facility

January 2005 – Mr. Erman Ballecer and Lester V. Ledesma (2001 Kalakbay Award – travel writer of the year and 2002 Aseanta Award – Excellence in Photography), courtesy of Smart Telecommunications Philippines

February 23, 2005 – William Oliver & Carmela Espanola of Flora and Fauna International

May 26, 2005 – Dr. Perry Ong of University of the Philippines, Diliman

July 08, 2005 – Nilo Subong - CENRO Kalibo, Damaso Fuentes, Regional Deputy Director of PAWD – DENR, Fernando of DENR – Region 6, Iloilo

July 11, 2005 – Prof. Lucia Lastimoza & 'Pavel' of West Visayas State University

September 09, 2005 – Prof. Rex Sadaba & students of UP Visayas

October 01, 2005 – Prof. Rex Sadaba & students of UP Visayas

October 04, 2005 – Lakbay Aral visit of Local Government Unit employees of Pandan led by Hon. Mayor John Sanchez & Municipal Councillors Fr. Paulino Blanza, Raymund Gumboc and Manuel Dionela.

October 08, 2005 – Prof. Rex Sadaba & students of UP Visayas

October 09, 2005 – Teachers & students of Aklan Catholic College from Kalibo, Aklan, headed by Grace Delos Reyes and Engr. Cecilia Calizo

1.6.10 Bulanao Visitors (Plaza Rehabilitation Cages)

August 15, 2005 – 5 students from UP Visayas sent by Mayor Te of Libertad, Antique, and SK Federation President Robert Nicopior.

September 28, 2005 – Day Care (pre-school) students of Libertad, Antique

October 02, 2005 – Bandiola family & their visitor from Japan

October 10, 2005 – Day Care Center (pre school) students of Cubay, Libertad, Antique

2. Conservation Research

2.1 Fern (Pteridophyte) Diversity of the Research Station Sibaliw Area

By H.W. Bennert, Ruhr-Universität Bochum

During a stay in September 2005, we had the opportunity of exploring the fern flora of the dipterocarp forest in the vicinity of the Sibaliw Research Station. As expected, it turned out to harbour an even for tropical areas unusually rich fern flora.

Our observations are quite fragmentary, due to the restricted area explored and the limited time available (1 week), which was further reduced by repeated heavy rainfalls rendering field work impossible. Before reporting on our records, we want will give a very brief account on the diversity of plant life of the Philippines by large with focus on the pteridophytes (ferns and fern allies).

The total number of plant species in the Philippines is estimated to be 14,400 with the flowering plants contributing the bulk with over 8,000 species. Pteridophytes comprise more than 1,100 species belonging to 142 genera and 39 families (Barcelona & Hollowel 2001). What an extraordinarily high pteridophytic species diversity this means, becomes evident when we consider that the Philippine ferns represent about 10 % of the globally described species, but with this portion being concentrated on an area of only 0.06 % of the earth's terrestrial surface.

Of these 1,100 pteridophytes, 290 species (26 %) are endemic and found only in the Philippines (Barcelona & Hollowel 2001). As in other groups of organisms, a significant percentage of the country's endemic pteridophytes (33 % or 95 species) are known only from

the type locality, i.e. from a single collection. Of these single records, 73 % (69 species) were collected exclusively on Luzon (44 species) or on Mindanao (25 species).

We estimate that within a distance of about 2 km, the Sibaliw Research Station area harbours more than 100 pteridophyte species. Both, terrestrial and epiphytic growing ones are well represented.

Some widely distributed and common ferns colonize open fields, brighter patches in secondary forest and also grow along trails. These comprise species like the Broad Sword-fern *Nephrolepis biserrata*, with fronds of up to 2 m in length, which can grow terrestrially as well as epiphytically, Bracken Fern, *Pteridium aquilinum*, in some places a weed taking possession of clearings, False Staghorn Fern *Dicranopteris linearis* forming a tangle mass or virtually impermeable thickets, and the pantropical fern ally *Lycopodiella cernua* (Lycopodiaceae). All these are indicators of disturbance.
The number of primary forest ferns is enormous. The frond size varies considerably among species in both terrestrial and in epiphytic ones. Among the smaller common forest ground species is the shade tolerant Asian Spikemoss, *Selaginella plana* which is a native of Malaysia and Indonesia, and in the Philippines possibly only introduced. *Tectaria dissecta* is a medium-sized fern, rather common with a wide occurrence in habitats along streams, on rocks, and in forest shade. The tree ferns are the largest ferns in the forest; they produce trunks attaining heights of 5 m and more. They are represented by several species belonging to the genus *Cyathea*. Fronds almost as large or sometimes even larger (up to 7 m) can be found in the Elephant Fern *Angiopteris palmiformis* (member of the more primitive family of Marattiaceae) which may also have a trunk, but much smaller than in the tree ferns. Other species occurring on the forest ground belong to the genera *Blechnum*, *Diplazium*, *Polystichum*, *Pteris*, a.o.

Fig.1. Bird's-Nest Fern (*Asplenium nidus*) (adopted from: Zamora & Co 1986).

Epiphytes are equally common, but their species number and density increase gradually with altitude and reach a maximum in the mossy forest (upper montane forest), where especially Filmy Ferns (Hymenophyllaceae) and epiphytic lycopods (Lycopodiaceae) find most suitable growing conditions.

Among the true ferns, it is the Spleenwort family (Aspleniaceae) and the polypodies (Polypodiaceae) whose species richness merits special mentioning. In both groups frond size and morphology may vary considerably. One of the most spectacular fern epiphytes is the Bird-nest Fern (*Asplenium nidus*) (Fig. 1) with fronds reaching up to 50-150 cm long by 20 cm wide; the undivided leaves have a prominent blackish midrib. It grows in a great variety of sites as an epiphyte on large trees or is independently growing on the forest floor and rocks if enough light is available. The nest shaped radiating fronds catch dead leaves and other rainforest litter. The litter rots and forms a

growing medium for the root system of the fern and other epiphytes. Other species of this genus have divided fronds, like the Wedge-shaped Spleenwort, *Asplenium neolaserpitifolium*. Similar in size to the Bird-nest Fern, but with divided leaves is the Bear's-paw Fern, *Aglaomorpha meyeniana* (Polypodiaceae) which is found in both Taiwan and in the Philippines. Smaller epiphytic ferns include the Shoestring Fern or Ribbon Fern, *Vittaria elongata* (Vittariaceae), whose fronds are small (only 1.5 cm wide) and pendulous bearing a so-called coenosorus, i.e. a continuous sorus protected by the leaf margin. Another fern of the same family is *Anthrophyum reticulatum*, with a very different sorus pattern: The single sori spread along the veins and are of varying length. The Needle Fern or Tailed Fern, *Belvisia mucronata*, a member of the polypody family, is a distinctive fern because of the long slender tailed section at the end of each fertile frond. This is actually the fertile segment of the frond.

Among the ferns, even some climbers are represented, the so-called climbing ferns, which are restricted to the genus *Lygodium* (Schizaeaceae). The climbing structure is the frond's rachis which has an indeterminate growth, with the leaves attaining a length of 10-15 m, possibly even 40 m.

This brief overview should not go without mentioning a very peculiar small fern, *Ophioglossum ramosii*, belonging to the Adder Tongue family (Ophioglossaceae). It is a remarkable substrate specialist growing exclusively on large fallen and rotten tree trunks (Fig. 2).

Another very unusual feature of this fern is that its small leaves, usually just a few cm in length, have only a fertile (spore producing) structure (sporophore), whereas the sterile leaf blade (trophophore) is reduced or absent.
.The same phenomenon occurs in the related species *Ophioglossum simplex* from Sumatra and *Ophioglossum lineare* from New Guinea. This is suspected to be related to the mycotrophic habit of these plants. Mycotrophy (nutrients obtained from an associated fungus) is generally known to occur in the subterranean gametophytes of *Ophioglossum*, but seems to be transferred to the sporophytic generation in these three highly specialised species.

Fig. 2: An Adder Tongue Fern (*Ophioglossum ramosii*), growing on fallen rotting tree trunks (photograph: H.W. Bennert).

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2.2 Notes on the Herpetofauna of NW Panay

By Maren Gaulke

This year's herpetofaunal research in NW Panay (July/August) was hampered by extremely bad weather conditions. Planned excursions into the difficult terrain of the higher regions of the West Panay Mountain Range were impossible. Nevertheless, some interesting findings and observations in the more accessible areas were made by different **team members** and will be reported here.

Cynthia Dolino, a biologist from Silliman University in Dumaguete, Negros Oriental, visited the Research Station Sibaliw from July 18 to 25. Mrs. Dolino is specialized on amphibians, and therefore concentrated her research efforts on the anuran fauna of the area. Based on sightings and the identification of calls she added two species to the herpetofaunal list of Sibaliw area. On stones in a riverbed she identified *Limnonectes leytensis*. This species is widely distributed and at least in some areas considered common on nearby Negros Island, however, so far was only known from two specimens and one locality in the center of Panay (Mun. Calinog, Mt. Baloy; Ferner et al. 2001). The other species, *Platymantis hazelae*, is a new distributional record for Panay. Previously the species was known only from Negros and Masbate. At present the record is based on the identification of calls, no actual sighting took place. Mrs. Dolino feels safe about her identification, because she knows the calls of *P. hazelae* from Negros. However, we will wait for the collection of a specimen, before we add this species officially to the herpetofauna of Panay. Another result of Mrs. Dolino's visit is the positive confirmation that the loud, knocking sounds, which can be heard in the area of our research station, are indeed the calls of *Kaloula* cf. *kalingensis*.

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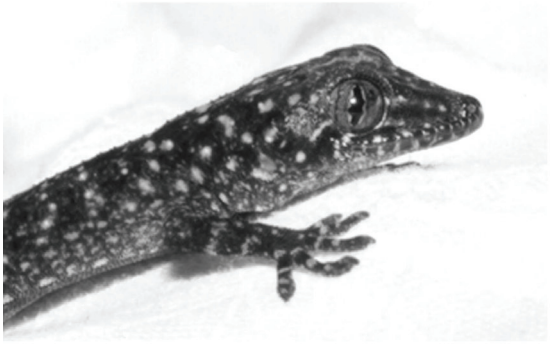
After three years of research (June 2002 to June 2005) the project on the biology of *Varanus mabitang*, sponsored by BIOPAT e.V., was officially closed down this year. **The results of our project are published in Silliman Journal (Gaulke et al. 2005, App. 5). Among others they comprise information on the vertical distribution, the relative population density, and the diet of the Mabitang, as well as further morphometric data.**

Mr. Narciso Paulino, one of the research assistants of the project, made an interesting discovery shortly before the project ended. Following a trail of fresh blood drops, he found parts of a Mabitang, which most probably was just killed by a bird of prey. The remains were the head, one forelimb, and part of the intestines. Besides of being the first proof of a Mabitang being victim of a predator other than man, the comparison between the head size of the carcass and the head size of the other Mabitangs measured, show that with a total size of about 90 cm it is the smallest Mabitang discovered so far. The teeth of this juvenile are still pointed, in contrast to the blunt teeth of adults.

Claw tips of all Mabitangs measured during our research (including the claw tips of the carcass) were exported to the GeoBio Center of the LMU, Munich, for stable isotope analyses. Measuring the stable isotopic composition of Mabitang claws and food is a noninvasive method to gain insight into the food web structures; a paper with the results **is accepted for publication (Gaulke et al. in print)**.

The hemiclitoris of the holotype of *V. mabitang* was examined, confirming that *V. mabitang* is the sister species of *V. olivaceus* (ZIEGLER et al. 2005, **App. 6**).

A telemetry project to continue our field research on *V. mabitang* is in preparation, the equipment (receiver, transmitter, Yagi-antenna) is funded by the GeoBio Center, LMU Munich.



Two finds of juvenile King Cobras (both by Gersom Operiano) indicate that this dangerous elapid is less rare than previously assumed. The two juveniles were found in secondary growth and in a village, showing that the species is not confined to primary forest. Both specimens have a very distinctive colour pattern. Whilst a whitish dorsal banding is known for juveniles of *Ophiophagus hannah*, the distinctive black and white ventral banding of the specimens from NW-Panay is, to our knowledge, not yet mentioned in literature. Furthermore, Mr. Operiano collected a small, colubrid snake during nighttime from a river in the Alegre Forest area. **Later on it was identified as *Oxyrhabdion leporinum visayanum*. This snake was previously only known from Negros and Cebu, therefore we can report another new distribution record for Panay.**

Similarly, on a trip to Mt. Banderahan, NW Panay Peninsula, we found a large **Dwarf Snake (*Calamaria bitorques*), a species known so far only from Luzon and thus new for Panay.**

Because of its size of 52 cm, it is the largest specimen known. Whether small differences in pholidosis and colouration warrant to regard it a taxon of its own right needs to be found out when more specimens will have come to light (Gaulke & Vogel 2005, **App**. **7**).

This year's most exciting find was the discovery of a **gecko population (by Arnold Demegillo and Maren Gaulke) of an undescribed geckonid, which so far was known to us from only one subadult male.** This species is a new member of the genus *Gekko*, and by implication the third *Gekko* species known for Panay (see four portraits on the right). At present we are looking for a name patron with the help of BIOPAT e. V., the description is ready for submission (Rösler et al. in prep.).

The herpetofaunal inventory of Bulabog Puti-and National Park was continued by Arnold Demegillo and M. G. but resulted in very few further new records. This was disappointing, because usually more species can be found during the rainy season. However, the only species, which could be added to our list as published in the Annual Report of last year, are the Marine Toad *Bufo marinus*, and the ranid frog *Platymantis dorsalis*. While *B. marinus*, an introduced species, is typically found in man made habitats, *P. dorsalis* is a forest-dweller which, however, is not restricted to primary forest.

We want to add a correction: last year we listed *Gekko monarchus* for Bulabog Puti-an National Park, which would have been a new distributional record for Panay. However, examination of some males of this gecko during our trip this year proved it to be *Gekko mindorensis*, a species which is already known for Panay. Phenotypically, both species are leastways very similar.

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2.3 Birds: New Island and Breeding Records for Panay and Boracay

By E. Curio, F. Geronimo, S. Hembra, J. Jamangal & B. Tacud

Crested Goshawk, *Accipiter trivirgatus*, one seen by E. C. near primary forest near Station Sibaliw, 26 March 2005. This new island record is not too surprising since the bird is known from neighbouring Negros and E Visayan Islands (Kennedy et al. 2000). The find brings up the number of Panay birds to **182** as compared to last year's report (Curio 2005).

A survey devoted to a focused blood sampling of one bird species in secondary forest near Brgy. Yapak, N Boracay (18-22 Mar 05), yielded the following new records for **Boracay** Island according to the listing by Kennedy et al. (2000):

Philippine Hawk-Owl, *Ninox philippensis*, calling 15 times at mid day in understory, very tame, approachable by 3 m (B. T.).

Reddish Cuckoo-Dove, *Macropygia phasianella*, called one evening (B. T.).

Negros Bleeding-heart, *Gallicolumba keayi*, 2 males sang and counter-sang in several bouts of singing, ca. 100 m apart (E. C., B. T.). The forest on Boracay is so small that the population must be at the brink of local extinction, the circumstances leading to a red alert signal to the PENRO/DENR in Kalibo in March. - The find is not surprising in view of the species occurring on nearby Panay, across the channel (Klop et al. 1998, J Ornithol, 139: 76-77; see also mentioning of a breeding episode of the species on the peninsula.)

Amethyst Brown-Dove, *Phapitreron amethystina*, presence inferred from 1 tail feather with amethyst gloss on the upper side, found – incidentally – near snares for ground birds. Not heard calling but the species has a far smaller propensity for singing than its much more common congener *P. leucotis*. *P. amethystina* has only recently been found on Panay (Eleventh Report, Curio 2005).

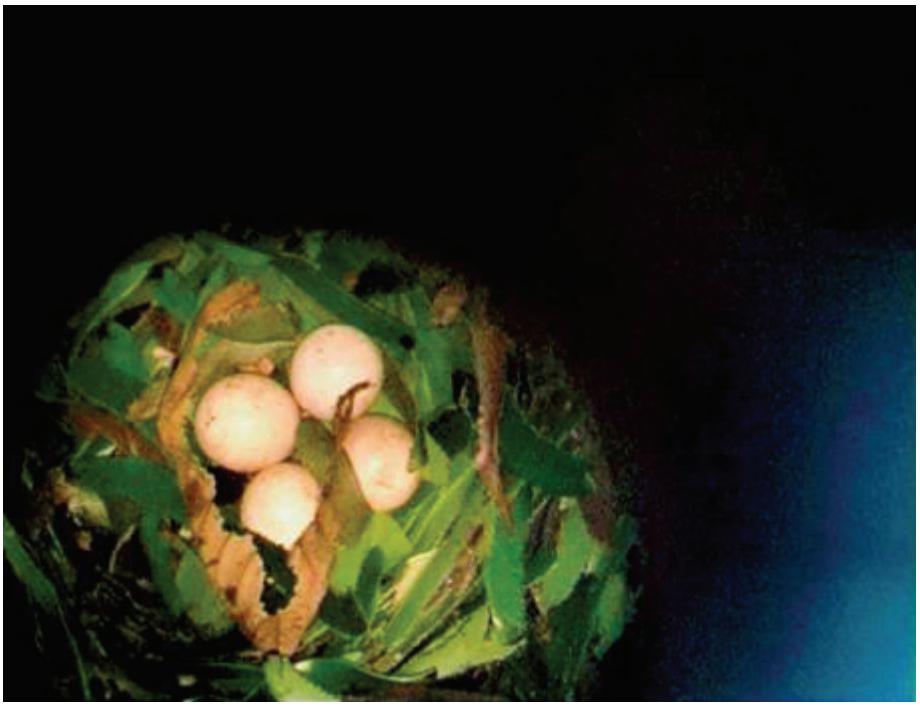
Ruddy Kingfisher, *Halcyon coromanda bangsi*, migrant, sampled for blood.

Brown Shrike, *Lanius cristatus*, migrant, once seen in the 'buffer zone', along trail blazed for development of tourist facilities (E. C.).

A noteworthy **absence**? In three days and two hours we did not see any sign of the otherwise common Coleto (*Sarcops calvus*).

One observation of note concerning a possibly **new dialect (?)** is added here as follows:

Hooded Pitta, *Pitta sordida*: One afternoon a bird gave loud strings of 'rau' calls in the very area where we could observe well a Hooded Pitta roaming over the floor. This vocalisation is what comes closest to the description of the species' song by Kennedy et al. (2000): A two-syllable 'waup waup', the difference lying perhaps in the number of syllables uttered.



Colasisi: Nest view with clutch (close-up)

Photo by Sherwin S. Hembra (12 July 2005)

Colasisi: Egg size and leaf from nest

Photo by Sherwin S. Hembra (12 July 2005)

The **breeding records** to follow stem partly from earlier years when they went unreported.

Colasisi, *Loriculus philippensis*, nest found for the first time in the Philippines in a hollow dead tree stump, 3 m high, with four eggs (see pictures next page) by F. G., S. H. and J. J. in July. Primary forest near Sibaliw, 485 m asl. Tree diameter 27 cm, height of hole above ground 2.6 m, entrance 7-9 cm, depth of hole 1.47 m; bedding materials for eggs green leaves, some dry leaves. Egg diameter 16.5 mm, colour dirty white with some tiny brown specks. Eight days after discovery of clutch 2 young had hatched, further events unknown (photo documentation). The clutch size of four fits into what is known for this genus of hanging parrots where 3 – 5 eggs in a clutch have been recorded (Forshaw & Cooper 1978) – Philippine birds with enlarged gonads found in Feb and Apr (Kennedy et al. 2000).

Red Junglefowl, *Gallus gallus*, a hen was incubating a clutch on top of a Bear's-Paw Fern (*Aglaomorpha* sp.) when Yvonne Grabowski flushed it by collecting figs beneath it, beside the Bulanao trail, ca. 200 m from Station Sibaliw, 31 March 2005. – This adds yet another observation in March to an earlier one of 17 March 2000 when 5 eggs hatched and the hen walked off with the brood the same day, also near Station Sibaliw. Both observations fit in with Feb to Jun as reported earlier, as does the clutch size of 4-5 eggs (Kennedy et al. 2000).

Negros Bleeding-heart, mentioned above, was found breeding near station Sibaliw ca 1 m above ground on a Bird's Nest Fern and the development of the two chicks was photographically documented. Fledging of the chicks occurred after a nestling period of only 12 days on 12 and 13 June 2003 (Slade et al. 2005, **App**. **8**). 'The short nestling period is probably an adaptation to the vulnerability of the open and low nest' (p. 162).

Hooded Pitta, *Pitta sordida*, two nests, one with three young, found beside Bulanao Trail's Legedan Area at ca. 200 m asl by Nino Geronimo on. Few days later, 11 Aug 05, one nest was empty, its state suggested fledging. The other no longer monitored. The former nest was woven with dead leaves and fibres, opening toward the trail, one step beside it; cup-shaped with side entrance, amongst dense leaf litter on limestone. Another Pitta nest with one nestling of about 10 days old found near Sibaliw on 26 July, possibly of Red-bellied Pitta (see below). Nest bulky structure on ground of dry leaves and shoots, snugly built among fern shoots, with side entrance to which young was looking (photo documentation). - Breeding thought to occur from Feb through June by Kennedy et al. (2000).

Red-bellied Pitta, *Pitta erythrogaster*, one nest found by Nino Geronimo at Bulanao Trail, 50-100 m asl, opening toward the trail right beside it, in bushy vegetation close to secondary forest starting higher up, on 19 Oct 05. Nest with 3 eggs that were found predated two days later. Incubating bird was flushed during walking past the nest. (Possibly this species owner of nest ascribed to Hooded Pitta, above.) Breeding was known to occur from Oct to Apr, once on Luzon in Aug, in Palawan also with 3 eggs (Kennedy et al. 2000).

Philippine Hawk-Owl, *Ninox philippensis*, one nest in Coconut Palm 15 m asl, with entrance 8 cm in diameter, deep, seen by Filemon Geronimo, Bulanao, near banana plantation in June 2004. Fledging unknown. Breeding was known to take place from Feb to May, as judged from downy young (Kennedy et al. 2000).

Black-naped Oriole, *Oriolus chinensis*, a nest with one young near fledging in a deep 15 cm diameter cup 5 m high, suspended on outer branch, in a narrow stretch of secondary forest on Maralison Isld., seen by B. Tacud and E. C. on 29 Oct 2004. An adult snarled nearby when a

boy climbed above the nest to have a look. Breeding was known to occur from Feb to Jun, on with a clutch of 2-3 eggs (Kennedy et al. 2000).

The two Pitta breeding records and that of the Oriole are noteworthy since they extend the known breeding season well into the rainy season.

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2.4 Tracking bat-dispersed Seeds using fluorescent Pigment

Plants, especially rainforest trees, get their offspring increasingly better established the farther away they become dispersed. In this way seedlings escape an adverse environment from under the parent tree so that rare species or those with few propagules get a chance to survive. This Janzen-Connell Model ('Escape Hypothesis') was verified for four rainforest trees around Research Station Sibaliw, NW Panay, thus providing the first experimental support of the model in the Old World (Curio et al. 2003, Ecotropica 9: 59-70; see also Eleventh Report, 2005). Since in this study we had created a dispersal pattern artificially the question became pertinent of how far away from the parent tree fruit bats, important seed dispersers, would move its seeds.

This problem has now been tackled most directly by **Reiter et al.** (2006, Biotropica 38: 64-68) by following the fate of fig seeds (*Ficus septica, F. variegata*) eaten by the Musky Fruit Bat (*Ptenochirus jagori,* see colour plate next page) and the Common Short-nosed Fruit Bat (*Cynopteris brachiotis*). To this end ripe figs were sprayed on their trees with a fluorescent pigment. The bats took dyed as well as untreated figs indiscriminately and carried them as usual to a 'feeding roost'. This is a nearby tree where the figs, like other fruits, are chewed, the chewed pulp largely spat out and the juice along with part of the pulp plus seeds ingested. The seed-containing spat outs and faeces where subsequently located with a hand-held ultraviolet lamp and their positions mapped; even single seeds that are tiny in figs could thus be detected. (Fluorescence of a chemical compound involves the transformation of short-wave light, in this case ultraviolet invisible to human eyes, into long-wave light, in this case visible light.) Most of the seeds were dispersed less than 50 m away from the parent plants, resulting in 'seed shadow' areas of <0.3 hectares in size. (A small proportion of seeds is retained in the gut of the Musky Fruit Bat for more than a night and thus becomes to lie outside this area [Luft, Reiter, pers. comm.].) The seed tracking experiment is the first direct demonstration of a bat-made 'seed shadow'.

Seeds dispersed beyond the area under the crown of the parent tree enjoy a survival advantage (Curio et al. 2003 and refs.). Given radii of crown projection of 4.2 m and 1.3 m for the two fig trees tested, and given dispersal distances of >4 and >5 m, respectively (Reiter et al. 2006), one has to conclude that virtually *all* seeds were deposited outside of the crown projection where mortality is near 100%. Hence, the smaller fruit bats such as the two species mentioned

are important seed dispersal agents in Panay's rainforest as well as other bat species are elsewhere (refs. in Reiter et al. 2006).

A Musky Fruit Bat plucking off a marked fig of Green Dural-og (*Ficus* sp.) from among others behind; red colouration of figs due to spraying with fluorescent pigment for detection of fig fruit remains after being discarded by the bats. The bat's tapeta lucida are shining brightly. Photo courtesy J. Reiter/ PESCP, now Opel Zoo, Taunus.

2.5 Saprozoites attacking fallen Fruits: the 'Escape Hypothesis' revisited

Janzen's 'Ecape Hypothesis' predicts seed and seedling mortality to be maximal under the parent tree (see chap. 2.4 above on fig dispersal by Reiter et al. 2006). The experimental verification of the hypothesis (Curio et al. 2003) for four rainforest tree species in Sibaliw raised the question 'Which are the mortality agents that bring about the spatial mortality pattern observed?' Since seed density had been kept constant in this experiment it was assumed that saprozoites, i.e. organisms feeding on decaying organic matter, are the culprits that preferentially attack the fruits/ seeds of the very tree under which they are lying 'in ambush'. Accordingly each tree species would be under attack from 'its' saprozoite community (animals, fungi, bacteria) that would be different from that of its heterospecific neighbours. **Yvonne Grabowski** had a close look at the animals attacking fallen fruits near Station Sibaliw.

To this end she laid out in 50 x 50 cm² plots on the ground the ripe fruits of two species. Fruits of a fig 'Green Dural-og' (*Ficus* sp.) that had been used already in the mortality-distance experiment (Curio et al. 2003) were deposited in three replicates of 10, 10 and 9 fruits, respectively. The other species was a climber (*Gnetum indicum*, Gnetaceae) with large, fleshy and conspicuously red fruits with two replicates of seven fruits each both under the parent and a control tree (n = 28). Each experiment consisted of an array of fruits laid out under the parent and a control array with the same number of fruits laid out under a tree 30 m (fig) and 300 m (*Gnetum*) away from the focal plant. The three fig replicates were monitored for 2, 5 and 11 days, respectively, the *Gnetum* fruits for 12 days. It was recorded what animals and/ or whether fungi attacked the decaying fruits. Both taxa were well represented. The *Gnetum* fruits had been attacked to some extent while still hanging on their progenitor. The destruction was monitored for each individual fruit and for equal periods of time at experimental vs. control plots.

Figs were eaten by ants (8 species), wasps and flies (4 species), beetles (2 species), further termites, crickets, bugs, earwigs, woodlice and fly larvae of one species each. *Gnetum* fruits were similarly attacked by ants (6 sp.), flies (4 sp.), termites (1 sp.), insect larvae of two kinds, beetles (3 sp.), other small insects and one mite species. While the species assemblages were qualitatively the same in experimental and control plots certain species appeared only at fruits of one species whereas others moved around/ attacked the other species. Hence, there was a certain host specificity of the saprozoites though not in the way predicted by the Escape Hypothesis. There were, however, considerable differences in the number of individuals per fruit species. Fig experimental plots yielded 243 saprozoite 'events' (five taxa of animals, repeated counts of the same individuals cannot be exluded) vs. 169 in fig control plots ($\chi^2 = 46.9$, df = 4, $p < 10^{-10}$). Similarly at *Gnetum* 252 'events' occurred in experimental plots vs. 209 in control plots (seven taxa of animal saprozoites) ($\chi^2 = 56.4$, df = 6, $p = 10^{-9}$).

In conclusion: There was a similar fauna and fungus flora in both experimental and control plots consuming each fruit type yet with a vast difference in individual animal and fungal saprotrophic events in both cases. Hence, it seems that the high mortality under the parent tree is, at least partly, due to the larger number of saprozoites attacking the fruits and possibly later on the seedlings. However, we did not yet control for the possibility of the number of attackers being larger under the parent due to a bonanza of fruits lying on the ground for days before we started the experiment; thus attackers may have had the opportunity to aggregate and build up numbers there. This objection does not apply to *Gnetum* equally the fruits of which still hang on the parent so that we had to pluck them when starting the experiment. However, quite a number had been attacked in situ by some consumers, thus leading to an

early potential aggregation of attackers above ground, i. e. close to where we erected the experimental plots. Therefore the jury on the tree species-specificity of the saprozoites hypothetically waiting for a bonanza to form under the parent plant during fruiting is still out.

2.6 Toward the Truth of the History of Discoveries

Scientists are working for being recognised for their accomplishments (Mayr 1982, The growth of biological thought. Harvard Univ. Press, Cambridge, Mass., London, UK). How accomplishments can be assigned to individuals or teams of researchers can be found out in various ways, of which hear-say is the least reliable. Fortunately, there is written evidence by which historians of science, or the researchers involved themselves, can resolve the question.

The scientific results of PESCP's research, a minor portion of the project's activities focusing largely on biodiversity conservation (see www.pescp.org), are receiving the ordinary attention from the scientific community. Yet single discoveries, that are not too 'technical' in jargon, are easily grasped and conveyed to people outside this community. They thus catch the eyes of outsiders and thereby receive more than the average attention. Such results meet with sometimes grave envy, apparently because they can be easily used for badly needed self-serving advertisement, or for damaging the reputation of others. One such discovery by PESCP, namely that of the low-elevation forest in the NW Panay Peninsula in 1995, met with envy of an interested party that tried to distort the unequivocal historical nature of that simple-to-be-conveyed finding. The party opinioned in talking that early on C. R. Cox and later observers, namely A. Diesmos and M. Pedregosa, had already earlier found that priceless expanse of forest, in which later on PESCP erected its research station and widely publicised the significance of the find. Would the party mentioned share my love for truth and historical detail it would have to admit that its opinion is a goof. In fact, neither C. R. Cox (1987, Report on a preliminary management survey of the proposed Panay Mountains National Park, Republic of the Philippines, Unpublished, 41 pp.) nor A. Diesmos & M. D. Pedregosa (1995, The conservation status of threatened species of bleeding-hearts [Columbidae] and hornbills [Bucerotidae] in the Philippines. Wildlife Biology Laboratory, Univ. of the Philippines, Los Baños, College, Laguna, Philippines, Unpublished, 68 pp.) alluded to the existence of that type of forest; the conservation significance is that it has virtually gone everywhere in the country. Specifically, Fig. 6 in Cox's report makes it clear that he envisaged forest to exist only in the Central Panay Mountain Range, omitting the NWPP from his map entirely.

A similar hoax is the verbally transmitted opinion of the same party that not PESCP (contra Klop et al. 1998, J Ornithol 139: 76-77) had discovered the Negros Bleeding-heart on Panay (and now Boracay Isld., see chap. 2.3 above), rather its existence on Panay had been *assumed* to exist on the island by other researchers before. Therefore the 'discovery' was to be attributed to those speculators. It goes without saying that the proof of a fact is very different from assuming that fact. By implication it is clear to whom the merit of this discovery, modest though it is, goes.

I want to leave it at that though more cases of greed and envy could be listed. Some may say that distortions of the truth such as those reported above, even if repeated with tenacity as happened, should be best thrown into the dustbin. However, damaging gossip and believing in it may oftentimes be hindering scientific progress and those working toward it with fairness.

3. Basic Research

3.1 The Fauna of epiphytic Ferns: Island Dwellers and/ or Refugees?

The forests around Station Sibaliw are teeming with epiphytes, especially ferns clinging to trunks and branches from 1.5 m above ground up to the canopy. Featuring as large as 100 to 175 cm in diameter, they belong to Bear's-paw Ferns (*Aglaomorpha meyeniana*, number of *A.* species in the Philippines unknown, Bennert pers. comm.) and Bird's Nest Ferns (*Asplenium* sp., 42 species in the Philippines [Univ. Philippines Science Education Center 1980, Plants of the Philippines, M & L Licudine Enterprises, Manila]; see Fig. 1, chap. 2.1 by Bennert above). Their leaves are stalked, lobed and pinnalike in Bear's-paws and erect and flaring in Bird's Nests, forming dense tufts that collect debris and water. The humus thus accumulating among the roots anchoring the fern to the tree is a microcosm with highly distinct living conditions for animals populating it, and of a size exceeding other such microcosms such as phytotelmata in bamboo (Kovak 1998, Mitt. Intl. Entomol. Ver., 22:127-137) and many others.

It is tempting to compare these isolated microcosms to islands of a huge archipelago whose fauna is self-sustaining, or to islands whose faunas derive from the 'continent' beneath, namely the forest floor. Island biogeographic theory (e. g. Begon et al. 2006, Ecology. Blackwell Publishing, Oxford/ UK, Carlton/ Australia) posits that island biota (fauna and flora) are the result of colonisation, within-island speciation, and extinction. Given enough time these processes lead to a biotic (= species) equilibrium that depends on island size, distance and degree of isolation from the source (continent, other islands) and other determinants.

Are the living conditions in those lofty fern tufts stable enough to warrant a look from the standpoint of island biogeography, or, are they merely temporary refuges? To test this idea **Markus Schaub** surveyed the faunas inhabiting the tuft microcosms by scooping 2 liter samples of humus along with their animal community from both types of ferns. The animals were sorted alive and returned along with their mass of humus to the very fern from which they had been taken. For comparison the fauna of equivalent volumes of top soil from randomly selected places on the forest floor in the area was sampled as well. For want of a repository of the many arthropod taxa (= systematic groups) found identification was possible only down to the level of order or family. However, though nameless, most taxa could be reasonably ranked as individual species upon ocular inspection with a dissecting microscope. There were thus 10 samples of each fern type in one episode of sampling that was done at monthly intervals (Mar, Apr, May, Jun), yielding 80 samples in total. These were compared among each other and to 100 samples of soil both from primary and secondary forest as well as from both sunny and shady places. Sorting of taxa revealed a total of 62 species of arthropods in the soil, 32 species in the Bird's Nest, and 26 species in the Bear's-paw. A small number of book lice (Copeognatha) and hard-to-discriminate small insect larvae from each habitat had to be left out from analysis. Breaking down the figures to single sample units yielded 2.7 (range 1-6) species per sample from soil, 3.1 (range 1-4) from Bear's-paw, and 3.8 (range1-11) from Bird's Nest. While the largest difference, between soil and Bird's Nest, is statistically significant ($p = 0.02$, one-way ANOVA, two-tailed), the difference among all three groups taken together is not ($p \geq 0.068$, Student-Newman-Keuls test, one-tailed). (Because of a Red Junglefowl (*Gallus gallus*) hen nesting on top of a Bear's-paw replicates could be taken only from 7 out of 10 plants.)

The total number of species in each microcosm is reflected by the number of higher taxonomic groups. In the soil, Markus found nine of these (Myriapoda, Chelicerata, Crustacea, Coleoptera (23!), Blattodea, Ensifera, Heteroptera, Formicidae, one each of Mantodea, Diptera and Lepidoptera, and probably Copeognatha). The fauna of the Bird's Nest comprised of a subset of these, with Heteroptera, Diptera and Lepidoptera being amiss. Similarly, the taxa in the Bear's-paw were but an even smaller subset of the soil fauna with Myriapoda, Chelicerata and Crustacea missing in addition. This picture of spatial distribution would be typical of a source area, in the present case the soil, that one may liken to a continent, from where colonisation of islands, here the ferns, takes place. However, there seems to be an anomaly. Five species of beetle were found in the ferns exclusively (2 Carabidae, 2 Pselaphidae, 1 Cerambycidae); specifically, three beetles occurred in the Bird's Nest whilst two inhabited both fern types.

Should further work substantiate the confinement of these five species to epiphytic ferns solely the intriguing question arises of how these species came to exist in the first place. From ancestors in the soil they could have arisen in an epiphyte or several of them by allopatric speciation (= formation of species in spatial separation from each other), from five hypothetical colonisations in parallel. The array of all epiphytic ferns together or any one of them may in effect have served as one 'island' separated from the source 'continent', the soil, by virtue of specialisation on epiphyte fern tufts. Allowing for specialisation on single epiphyte species on this niche by the invaders further splitting of taxa within the 'archipelago' of fern microcosms cannot be ruled out. Separation preceding the necessary reproductive isolation could have been facilitated by the capacity of flying around between the lofty homes, the tufts, as would be likely for all the five beetle invaders mentioned.

To attain equilibrium island faunas need to build on permanence of their habitat that is long term as compared to their diverse generation times. The ecology of the fern tufts fluctuates, however, with season. As the dry season advanced they lost their moisture continually as measured, and as also reflected by the concurrent decrease of their species diversity in all three habitats through four months. Specifically, the water content in June, a moisture low before the rains started, paralleled diversity per sample (soil 51 %, Bear's-paw 55 %, Bird's Nest 63 %). The intermediate position of the Bear's-paw is corroborated by its preference for sunny and more open habitat in secondary forest where evaporation is higher. The fluctuation of an apparently salient ecological factor, i.e. moisture, suggests that the ferns are a refuge, rather than stable island habitat(s) with an equilibrial fauna; the shift of climate between seasons would preclude stable numbers to build up and for competition to lead to extinctions. This predicts that in the rainy season when the top soil has become soaked again, there should be an exodus from the ferns top-down, and an ascent to the ferns with the advent of the dry season, a testable idea. These movements should not embrace the fern specialist beetles mentioned though their descent top-down after the dry season cannot be ruled out. Mechanisms conducive for an equilibrium to arise in the fern microcosm should act upon all those species that tend to stay in their ferns even during inclement conditions. *Therefore, the epiphytic ferns may be both, islands and temporary refuges.*

3.2 The Forest Floor Fauna: a critical Look at Barber Pitfall Traps

Primary forest is generally poorer in species than is secondary (= second growth) forest (e.g.Terborgh 1992, Diversity and the tropical rain forest. Freeman and Company, New York: Trees, birds, primates; Phillips et al. 1994, Proc Natl Acad Sci, 91: 2805-2809). In order to see whether this holds also for the invertebrate fauna dwelling on the forest floor (epigaeic or

terricoline species) **Anke Siegert** set up six Barber pitfall traps in a line in each of both habitats near Station Sibaliw. Different from what is customary they were live-trapping. They had an opening of 9 cm diameter that opened into a funnel obstructing escape from a plastic bottle 20 cm deep into which terricoline animals fell, more precisely were supposed to fall. Drainage holes forestalled drowning. The opening was level with the surrounding forest floor. Trapping yielded a total of 371 terricolines in primary forest as compared to 280 in secondary forest, a highly significant difference ($p = 0.0003$, two-tailed binomial test). A remarkable find was an amphipod crustacean (Talitridae = beach fleas) that is presently under taxonomic scrutiny by specialists. Members of this family, that typically inhabit the sea shore, have previously been found in the forest litter of Australia and South Africa (Dr. Coleman, Berlin, pers. comm.).

In order to check out the reliability of Barber trap captures traps were observed from seclusion for one hour in both mornings and evenings at standardized times in both forest types. From a vantage point (hammock, plastic chair) three traps in each forest type could be monitored at a time. Animals walking/ crawling up to a trap received one of three behaviour scores: Capture C, enter and leave trap L (by walking in, around and out of the funnel entrance), and turn away from rim of trap/ funnel T. These direct observations comprised three species of ants (two large Formicinae, 1 small species of unknown taxonomic position) and one small spider (Araneae). Following an earlier analysis (Seifert 1990, Entomol. Nachrichten u. Berichte 34: 21-27; Laeger & Schultz 2005, Myrmecol. Nachrichten 7: 17-24), the total capture rate is

$R = C/ (C + L + T)$ 100 %.

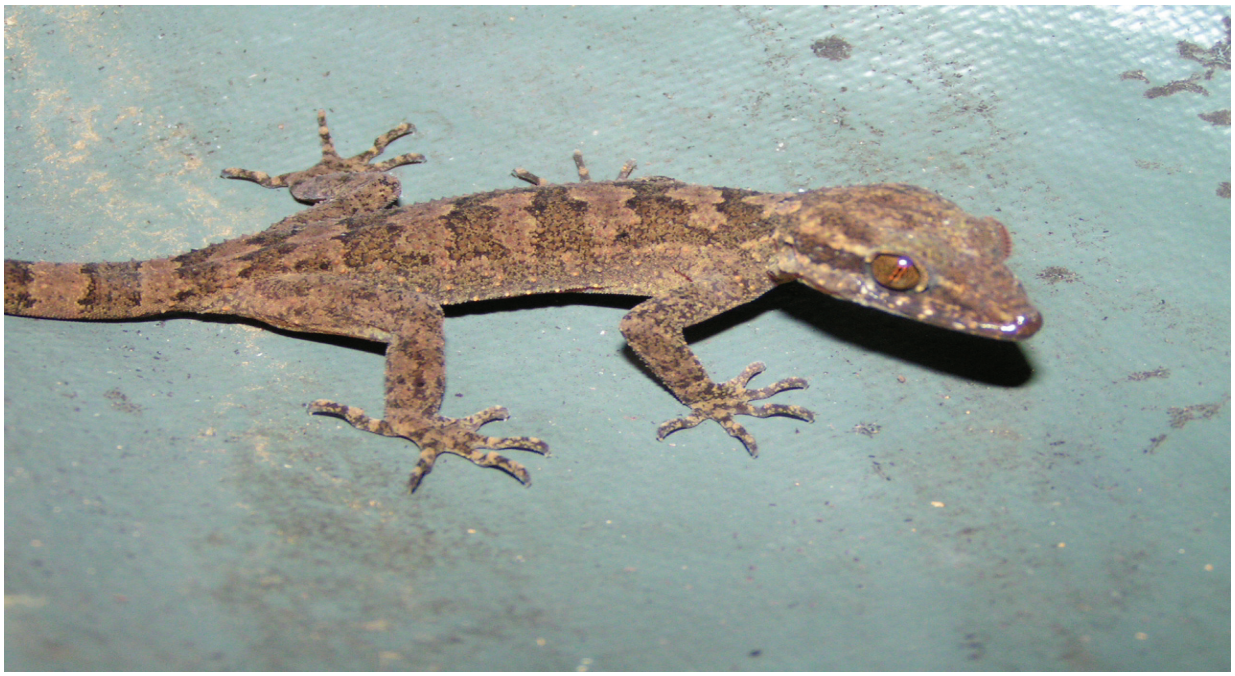
Accordingly only 19.4 % ($n = 31$) of all potential captures yielded definitive trap records, the rest was classified as L and T, i.e. was not captured. (The small ant and the small spider would not even have been represented as species.) Note that this proportion of real captures is the result of only 4 hrs.of observation in every 24 hrs. on 16 days (18 Mar – 2 Apr) spent at six, i.e. half of all traps, in both forests. Given the considerable variety of terricoline taxa (Oligochaeta, Crustacea, Arachnida, Myriapoda, Insecta and their larvae, eight ant species included), that made up the hundreds of real captures in all 12 traps (see above) it is reasonable to assume that this total is but a small fraction of potential captures in that period of time. The Barber trap method alone is thus inadequate in assessing the true abundance of species, let alone their true species composition, and more direct observations are needed to assess the true magnitudes of these figures. This caveat has been voiced already by earlier workers in Germany many years ago (Adis 1979, Zool. Anz. 202: 177-184; Seifert 1990, l.c., Laeger & Schultz 2005, l.c., and refs.), whose work was unknown to us at the time of our independent observations. Accordingly effective sampling, i. e. capture rates for three ants ranged from merely 2.9% to 14.5% which may be explained by the collecting fluid being used Our work, the first assessment in the tropics accounting for biasing effects of the traps used, and one employing no potentially repelling fluid, reveals that the inadequacy of Barber pitfall sampling of terricoline assemblages seems to be a general one.

We thank Dr. R. Schultz (Universität Greifswald) for helpful information.

3.3 A Gecko can home to its Domicile from far away

From among several gecko species living in and around Station Sibaliw **Anke Siegert** singled out the Philippine Bent-toed Gecko (*Cyrtodactylus philippinicus*) to start looking at its unknown biology. The species is wide spread across Luzon and the W Visayan islands (Gaulke 2002, Amphibians and Reptiles of Sibaliw, Illustrated Guide, PESCP, unpublished).

It inhabits the station above and below the floor that is penetrable from both sides. We attempted to catch all individuals and mark them with a number on the back using fluorescent pigment looking red under normal light (see chap. 2.4). A total of 37 geckos were thus marked



Adult Philippine Bent-toed Gecko, PESCP's Station Sibaliw. Photo courtesy S. Luft (PESCP)

and followed through time.

Numbers of this gecko fluctuated over a time span of nearly four months (5 Jan to 21 Apr) from three on one day to nine on two days, with an average of six individuals on any one day. To find out whether this number reflects an upper bound due to competition for some resource such as food a removal experiment was conducted. It was expected that the number of geckos present on any one day would go up as residents were removed. Removal was performed by carrying the geckos singly in the hand, after measuring and marking, to a tree 100 m (n = 16), later on 150 m (n = 6) north of the station, along a much used trail across hilly terrain of secondary forest. Out of 22 geckos thus displaced in the evening, from around 20 h to 22 h, eight (36%) returned to the station, their site of capture. One of those returning did so twice and another one even thrice; the first time the latter steadfastly returning animal was intercepted in a roofed hornbill cage 30 m away from the station, about that far away from the beeline connecting the release site with the station; apparently shelter from above is one of the habitat requirements of the species. On average, the displaced geckos returned 19.5 days (range 4 – 36 days) after their displacement. Five out of 16 males and 3 of 5 females thus came home (one non-returnee could not be sexed with certainty). Males took 17.8 days to do so, females ca. 22 days. Both and returnees the other displaced geckos had a mean body mass of 13.2 g. Both the lightest animal of 6.5 g and the heaviest of 19.5 g were returnees.

Contrary to our prediction the number of animals present at the station decreased continually from 6.2 in Jan to 5.0 in Feb, 3.6 in Mar and 0.8 in Apr. Translocations started, however, not before 13 March. The decreasing influx of geckos with time might be ascribed to a decrease of the rains and/or an increase of temperature, with the rainy season ending about Jan. To find out about a potential influence of decreasing competition the removal would have to be

replicated in the rainy season. However, decreased competition as a cause of taking up residence at the station cannot yet be discounted at present. Before removal, the animals may well have sensed the seasonal decrease in density at the station and for this reason may have returned at a high rate.

The homing performance as such is a surprising feat and a challenge for in-depth experimentation. Could landmarks have been used on the way home? This raises the question of the size of the home range landmarks of which might have been recognized during homing (pilotage). Even if one assumes conservatively that the home ranges of all eight returnees had been filling the space between the release site and the station, an area of roughly 2 hectares for an animal the size of *Cyrtodactylus* appears highly improbable. Furthermore, home ranges of this size would have had to overlap for the eight returnees for landmarks to be shared prior to taking up residence at the station, yet another unlikely precondition. Collectively, the odds are against assuming an orientation using landmarks. Alternatively, the station might have functioned as a sort of beacon with sound helping to localize it; visibility of the station at the release site is zero. And yet another possibility is true navigation (goal finding) based on a magnetic or a stellar (sun or the stars) orientation system so well established for a number of animal taxa. The fact that such a system has not been shown to exist in any squamate (scale bearing) reptile is a true challenge to further experimentation (W. Wiltschko pers. comm., Jan 2006).

Appendices

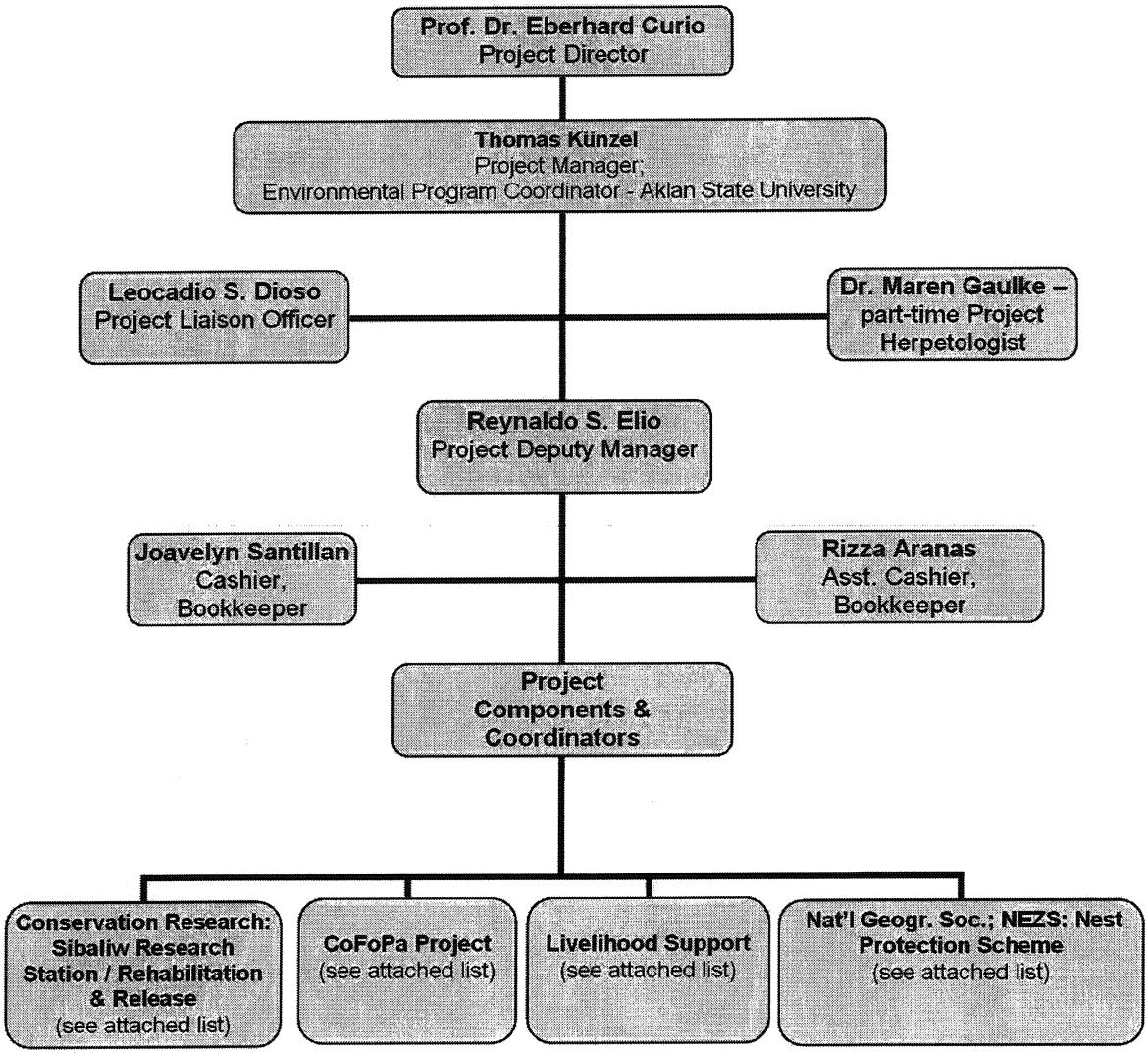
App. 1:	PESCP	Organizational Structure and Staff of Philippine Endemic Species Conservation Project
App. 2:	PESCP	Visitors of Research Station in Sibaliw
App. 3:	J. Espiritu	Status of CoFoPa Project on behalf of UNDP SGP PTF[1]
App. 4:	E. Sanchez	Animals under the Care of PESCP Wildlife Rehabilitation Facilities
App. 5:	Gaulke, Altenbach, Demegillo & Struck (2005)	On the Distribution and Biology of *Varanus mabitang*. Silliman Journal 46: 97-118.
App. 6:	Ziegler, Gaulke & Böhme (2005)	Genital Morphology and Systematics of *Varanus mabitang* Gaulke & Curio, 2001 (Squamata: Varanidae). Current Herpetology 24: 13-17.
App. 7:	Gaulke & Vogel (2005)	New Distributional Record and Body Length Record of *Calamaria bitorques* Peters, 1872. [Verbreitungsnachweis und Längenrekord für *Calamaria bitorques* Peters, 1872]. German with English Abstract. Sauria 27: 19-23.
App. 8:	Slade, Villanueva & Curio (2005)	First nesting observations of the Negros Bleeding-heart *Gallicolumba keayi* from Panay, Philippines. Forktail 21: 161-163.
App. 9:	Reiter, Curio, Tacud, Urbina & Geronimo (2006)	Tracking Bat-dispersed Seeds using fluorescent Pigment. Biotropica 38: 64-68.

[1] Small Grants Programme for Operations to Promote Tropical Forests

App. 1

PESCP **Organizational Structure and Staff of Philippine Endemic Species Conservation Project**

Updated Organizational Structure and Staff of Philippine Endemic Species Conservation Project (PESCP)



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- Benjamin Tacud Jr.- full time
- Junmar Jamangal – part time
- Edward Geronimo – part time
- Felimon Geronimo – part time

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- Björn Hochmann
- Yvonne Grabowski
- Markus Schaub
- Frederick Steinmetz
- Felix Hager
- Wilfried Bennert
- Stefan Schreiber
- Andrea Nüsse
- Inga Grote

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- Nestor Bagac – full time

National Geographic Society – Conservation Trust cum Sea World & Busch Gardens

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  Oyang, Libacao, Aklan
- John Inggo – part time
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- Romeo Agustin
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- Dante Nabalde
  Ma. Cristina, Madalag, Aklan
- Rey Dalumpines
  Aglunok, Calinog, Iloilo
- Jessie Bagac
  Usman, Malinao, Aklan

- Armelito " Bong" Ebon – part time
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German StudentVolunteers:

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- Daniel Sternemann

- **Arnold Demegillo – part time**
  Forest Rangers and BIOPAT Project Coordinator

  PESCP Forest Rangers
  (all full time, with 11 already deputized by the DENR)
- Federico Antoy Jr.
- Ralito Tenorio
- Faustino Guillermo
- Francisco Nabong
- Edilberto Malabja
- Carlito Mateo
- Joeserey Tenorio
- Expedito Paulino Sr.
- Expedito Paulino Jr.
- Raymundo Alejandro Jr.
- Roberto Nepomuceno
- Larry Tamboong (resigned end of August)
- Gualberto Tamboong (replaced Larry)
- Maria T. Ibabao – part time

BIOPAT Project

- Felizardo Geronimo – part time
- Narciso Paulino – part time
- Gersom Operiano – part time

CoFoPa Project – "Community–based Maintenance and Restoration of Forest in Central Panay Mountain Range and Protected Area of NW Panay Peninsula"

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Reynaldo S. Elio – Assistant Project Supervisor
Prof. Rogelio Felizardo – Project Manager – ASU
Ms. Ethel Lachica - Bookkeeper — 25 Peso Multi Purpose Cooperative
For. John R. Espiritu – Forester
Sonny Eupre E. Galuego – Asst. Forester
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Dr. Enrique Sanchez , DVM – Veterinarian Consultant
Richard Lestino – Wildlife Educator

Liaison Officers:
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Alonie de la Torre – Idio, Sebaste, Antique
Arnold Demegillo - Sitio Calabanog, Idiacacan, Pandan
Maria T. Ibabao – Sitio San Juan, San Roque, Libertad

Nursery Caretakers:
Edwin Filaro – Alojipan, Culasi, Antique
Roberto Ronquillo – Idio, Sebaste, Antique
Julito Dioso – Sitio Calabanog, Idiacacan, Pandan
Estelito Unlayao – Sitio San Juan, San Roque, Libertad
Alfonso Nabor – Castillo, Makato, Aklan

SUPPORT STAFF – Based in barangays Cubay and Bulanao, Libertad
Porters – all part time

- Planto Absalon
- Ventura Matanga
- Antonio Geronimo Jr.
- Rexil Geronimo
- Ben Pabay
- Jerry Roldan
-
- Moises Bagac
- Felicito Villamor
- Rico Bulan
- Benjie Geronimo
- Niño Geronimo
- Tiborsio Bernabe
- Alfonso Absalon
- Waren Geronimo
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- Ernesto Fernandez
- Aldren Magbanua
- Silvestre Ebon
- Rene Saluta

* Ramon Samulde
* Edmar Cabarlis
* Alan Absalon

- Dante Nabalde
  Ma. Cristina, Madalag, Aklan
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  Aglunok, Calinog, Iloilo
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- Felizardo Geronimo – part time
- Narciso Paulino – part time
- Gersom Operiano – part time

CoFoPa Project – "Community–based Maintenance and Restoration of Forest in Central Panay Mountain Range and Protected Area of NW Panay Peninsula"

Project Management Staff:

Thomas Künzel – Project Supervisor
Reynaldo S. Elio – Assistant Project Supervisor
Prof. Rogelio Felizardo – Project Manager – ASU
Ms. Ethel Lachica - Bookkeeper — 25 Peso Multi Purpose Cooperative
For. John R. Espiritu – Forester
Sonny Eupre E. Galuego – Asst. Forester
Henry Dungganon – Upland Agriculturist, Livelihood Coordinator
Dr. Enrique Sanchez , DVM – Veterinarian Consultant
Richard Lestino – Wildlife Educator

Liaison Officers:
Sugar Doroteo – Alojipan, Culasi, Antique
Alonie de la Torre – Idio, Sebaste, Antique
Arnold Demegillo - Sitio Calabanog, Idiacacan, Pandan
Maria T. Ibabao – Sitio San Juan, San Roque, Libertad

Nursery Caretakers:
Edwin Filaro – Alojipan, Culasi, Antique
Roberto Ronquillo – Idio, Sebaste, Antique
Julito Dioso – Sitio Calabanog, Idiacacan, Pandan
Estelito Unlayao – Sitio San Juan, San Roque, Libertad
Alfonso Nabor – Castillo, Makato, Aklan

SUPPORT STAFF – Based in barangays Cubay and Bulanao, Libertad

Porters – all part time

- Alan Absalon
- Alfonso Absalon
- Planto Absalon
- Moises Bagac
- Tiborsio Bernabe
- Victor Bernal
- Rico Bulan
- Edmar Cabarlis
- Pablito Diaz
- Silvestre Ebon
- Ernesto Fernandez
- Antonio Geronimo Jr.
- Benjie Geronimo
- Niño Geronimo
- Rexil Geronimo
- Waren Geronimo
- George de Guzman
- Marcelo Jamangal
- Aldren Magbanua
- Ventura Matanga
- Ben Pabay
- Jerry Roldan
- Rene Saluta
- Ramon Samulde
- Felicito Villamor

App. 2

PESCP **Visitors of Research Station in Sibaliw**

Visitors of Research Station in Sibaliw

NAME	DURATION OF STAY	REASON FOR VISIT
1. Dr. Enrique Sanchez	January 10, 2005	Health Check up of Hornbills to be released
2. Anke Siegert	October 12, 2004 - February 26 , 2005	Research /Volunteer
3. Lars Rosenbaum	frequently	Research /Volunteer
4. For. Rhodel Lababit	February 28 – March 1, 2005	Witnessed release of Hornbills
5. Dr. Enrique Sanchez	February 28 – March 1, 2005	Health Check up of Hornbills to be released
6. Lyn Amena	March 3 – 4, 2005	Educational Visit
7. Ninfa Bandillon	-dto-	-dto-
8. Lyn Quinlat	dto	dto
9. Roger Bugnayan	dto	dto
10. Vanessa Padios	dto	dto
11. Herdy Bandillon	dto	dto
12 Royce R. Placito	dto	dto
13. For. Damaso Fuentes	dto	Monitor compliance with the terms and conditions stipulated in the GP
14. Björn Hochmann	July 3–Sep 3, 2005, part time	Educational Visit
15. Tobias Schneider	March 12 – 14, 2005	Educational Visit
16. Harold P. MeDiodia 17. Iann Mae E. Yanga 18. Joanne Dorcos S. Payba 19. Ryan Darin C. Rosales	April 14 – 17, 2005	Conduct Research Study
20. Reynaldo S. Elio	April 14 - 15	Station Staff Visit
21. Yvonne Grabowski	March 17 – June 5, 2005	Research / Volunteer
22. Markus Schaub	March 17 – June 22, 2005	Research / Volunteer
23. Niño A. Espinas	May 6 – 28, 2005	Research
24. Dr. Perry Ong 25. Dario Cesarim 26. Marisol Pedregosa 27. Julius Venus 28. Jerry Sagubay	May 26 – 27, 2005	Field Visit (to meet Prof. Curio)
29. 2Lt. Badadre 4th IB Army	June 21 – 22, 2005	Field Operation
30. Dr. Maren Gaulke 31. Isidro Aguilar	July 10 – 19, 2005	Research Activity Assisted Dr. Maren Gaulke on field work
32. Cynthia N. Dolino	July 18 – 24, 2005	Fieldwork on Herpetofauna for Dr. Maren Gaulke
33. Daniel Sternemann	August 26 – 28, 2005	Take pictures / Volunteer
34. Felix Hager	August 31 – November 13, 2005	Research / Volunteer
35. Bebot Gellado 36. Robert Gellado	September 8-9. 2005	Repair of Generator
37. Frederik Steinmetz	May 2 – September 18, 2005	Research / Volunteer
38. Prof. Wilfred Bennert	August 5 – 12, 2005	Study of flora
39. Sonny E. Galuego 40. Joeserey Tenorio 41. Carlito Mateo 42. Rhodel Lababit	September 13 – 14, 2005	Conduct assessment of abundance of mother tree species and wildlings
43. Stefan Schreiber	October 7 – December 15, 2005	Research Volunteer
44. Andrea Nüsse	October 17, 2005 – January, 2006	Research Volunteer
45. Inga Grote	November 2, 2005 – February, 2006	Research Volunteer

Note: Forest Rangers who visited the station for patrolling purposes were not included in the list.

App. 3

J. Espiritu **Status of CoFoPa Project on behalf of UNDP SGP PTF**

Philippine Association for Conservation and Development (PhilConserve)

Philippine Endemic Species Conservation Project
(PESCP)
of the Frankfurt Zoological Society, Germany,
Ruhr University Bochum, Germany,
Aklan State University, Philippines,
in cooperation with
GTZ/CIM, Germany
PESCP Office, Tajanlangit Bldg., Centro Norte, Pandan, Antique
Ecurio@gmx.de thomaskuenzel2@yahoo.de

PESCP: Official Partner of the DENR through MOA
PESCP: Tight Partners with Twenty-Five Peso Multi-Purpose Cooperative in Implementing Community-Based Maintenance and Restoration of Forest in Central Panay Mountain Range and Protected Area of Northwest Panay Peninsula (CoFoPa Project) on behalf of United Nations Development Program (UNDP)

CoFoPa PROJECT STATUS 2005

PROJECT SITES	NAME OF THE PROJECT	PROJECT STARTED	SIZE OF THE PROJECT	REMARKS
1. Pawa, Nabas, Aklan	Community-based Nursery Development Project (Temporary Nursery)	October 2004	25 square meters	Functional
2. Flores, Culasi, Antique	Community-based Nursery Development Project (Temporary Nursery) Rainforestation on Rehabilitation of Watershed Area	November 2004 November 24, 2005	25 square meters **116 assorted native timber trees** planted in 4m x 4m spacing distance, covered an area of **1,856 square meters**.	Functional Functional
3. Castillo, Makato, Aklan	Nursery Development Project (Permanent Nursery) Agroforestry Development Project Rainforestation Development Project	April 2004 March 2005 March 2005	100 square meters (10m x 10m) 1 hectare **1,636 assorted native timber trees survived** and planted in triangular planting design in 4 m by 4 m planting distance which covers an area of **2.62 hectares**.	Functional/Pilot Project Functional/Pilot Project Functional/Pilot Project

4. San Juan & San Roque, Libertad, Antique	Community-based Nursery Development Project (Permanent Nursery) Agroforestry Development Project Rainforestation Development Project	July 2005 July 2005 Not yet established	72 square meters (6m x 12m) Approximately 0.5 hectare per Agroforestry Adoptors (10 Adoptors) Undetermined	Functional Functional Seedlings in the nursery not yet subject to be outplanted to Rainforestation site
5. Calabanog Idiacacan, Pandan, Antique	Community-based Nursery Development Project (Permanent Nursery) Agroforestry Development Project Rainforestation Development Project	June 2005 July 2005 Not yet established	72 square meters (6m x 12m) Approximately 0.5 hectare per Agroforestry Adoptors (10 Adoptors) Undetermined	Functional Functional Seedlings in the nursery not yet subject to be outplanted to Rainforestation site
6. Idio, Sebaste, Antique	Community-based Nursery Development Project (Permanent Nursery) Agroforestry Development Project Rainforestation Development Project	May 2005 July 2005 September 2005	72 square meters (6m x 12m) Approximately 0.5 hectare per Agroforestry Adoptors (10 Adoptors) **325 seedlings of narra** were planted in a 4 meters by 4 meters planting distance using triangular planting design and covers an area of **5,200 square meters or 0.52 hectares**.	Functional Functional Functional/On going
7. Alojipan, Culasi, Antique	Community-based Nursery Development Project (Permanent Nursery) Agroforestry Development Project Rainforestation Development Project	July 2005 July 2005 Not yet established	72 square meters (6m x 12m) Approximately 0.5 hectare per Agroforestry Adoptors (10 Adoptors) Undetermined	Functional Functional Seedlings in the nursery not yet subject to be outplanted to Rainforestation site

DETAILED PROJECT STATUS BASED ON THE ABOVE DATA

COMMUNITY-BASED NURSERY DEVELOPMENT PROJECT

1. Pawa, Nabas, Aklan

NAME OF SPECIES			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
NATIVE TIMBER TREES					
Common Name	**Scientific Name**	**Family Name**			
Red Laua-an	*Shorea negrosensis*	Dipterocarpaceae	150	0	For interested farmers for tree farming and for Rainforestation project.
Kamagong	*Diospyrus philippensis*	Ebenaceae	2	0	-do-
Narra	*Pterocarpus indicus*	Leguminosae	2	5	-do-
TOTAL			**154**	**135**	
FRUIT TREE SEEDLINGS					
Lanzones	*Lansium domesticum*	Meliaceae	29	9	9 planted by Ruhing Operiano
Rambutan	*Nephelium lappaceum*	Sapindaceae	6	0	To be distributed to farmers
Pomelo	*Citrus grandis*	Rutaceae	138	0	-do-
Mango	*Mangifera indica*	Anacardiaceae	1	0	-do-
TOTAL			**174**	**9**	
GRAND TOTAL (Native Timber Tree + Fruit Tree			**328**	**144**	

seedlings)					

2. Flores, Culasi, Antique

NAME OF SPECIES			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
NATIVE TIMBER TREES					
Common Name	**Scientific Name**	**Family Name**			
White Laua-an	*Shorea contorta*	Dipterocarpaceae	130	0	For interested farmers for tree farming
Bagilumboi	*Syzygium vidalianum*	Myrtaceae	11	2	2 seedlings planted by Kagawad Bantoy Patricio in her lot.
Nato	*Palaquium luzoniense*	Sapotaceae	4	10	4 nato planted by Punong Barangay Henry Lumogdang 3 planted by Kagawad Beverly Flores 3 planted by Kagawad Bantoy Patricio
Bangkalawag	*Terminalia foetidissima*	Combretaceae	15	0	To be distributed to interested farmers for tree farming
Frot-sal-eng	*(-)*	(-)	9	0	-do-
Kaningag	*Astronia purpuriflora*	Melastomataceae	1	4	2 planted by Kagawad Bantoy Patricio 2 planted by Kagawad Beverly Flores
Kamagong	*Diospyrus philippensis*	Ebenaceae	1	0	-
Daikit	*Ficus virgata*	Moraceae	0	2	2 planted by Punong Barangay Henry Lumogdang
Nonok	*Ficus prasinicarpa*	Moraceae	0	1	Planted by Kagawad Bantoy Patricio
Tabuyog	*Ficus congesta*	Moraceae	0	54	Planted for rehabilitation of watershed area
Toog	*Combretodendron quadrialatum*		0	57	-do-

Nonok	*Ficus prasinicarpa*	Moraceae	0	5	-do-
TOTAL			**171**	**135**	

. . . . . Flores . . . . Cont'd.

FRUIT TREE SEEDLINGS					
Lanzones	*Lansium domesticum*	Meliaceae	65	9	9 planted by Ruhing Operiano
Rambutan	*Nephelium lappaceum*	Sapindaceae	60	0	To be distributed to farmers
Pomelo	*Citrus grandis*	Rutaceae	160	0	-do-
Mango	*Mangifera indica*	Anacardiaceae	157	0	-do-
TOTAL			**442**	**9**	
GRAND TOTAL (Native Timber Tree + Fruit Tree seedlings)			**613**	**144**	

WATERSHED REHABILITATION

In Flores, Culasi, Antique, watershed rehabilitation was done through out planting of indigenous native timber trees. A total of 116 seedlings, **57 toog, 54 tibig/tabuyog and 5 nonok** with a spacing distance of **4 meters by 4 meters** using **triangular methods of planting design** and covering an area of **1,856 square meters**.

3. Castillo, Makato, Aklan (Pilot Project)

NAME OF SPECIES			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
TIMBER TREES					
Common Name	**Scientific Name**	**Family Name**			
Kubi	*Artocarpus nitida*	Moraceae	296	144	144 survived in Rainforestation project
Akleng Parang	*Albizzia procera*	Leguminosae	590	0	To be planted in Rainforestation project
Mamahit	*Vitex bulusanensis*	Verbenaceae	436	0	-do-
Batikuling	*Litsea leytensis*	Lauraceae	190	0	-do-
Guisok	*Hopea philippinensis*	Dipterocarpaceae	152	0	-do-
Antipolo	*Artocarpus blancoi*	Moraceae	171	8	8 survived in Rainforestation project
Narra	*Pterocarpus indicus*	Leguminosae	120	1,O88	1,088 survived in Rainforestation project
Malanangka	*Parartocarpus venenosus*	Moraceae	64	141	141 survived in Rainforestation project
Dangkalan	*Calophyllum obliquinervium*	Guttiferae	36	10	10 survived in Rainforestation project
Mountain Agoho	*Casuarina equisetifolia*	Casuarinaceae	15	0	-do-
Dagabdab	*(-)*	(-)	80	10	10 survived in Rainforestation project
Dagabdab Red	*(-)*	(-)	45	10	10 survived in Rainforestation project
Uyaoy	*Planchonia spectabilis*	Lecythidaceae	10	10	10
Balinghasai	*Buchanania arborescens*	Anacardiaceae	320	225	225 survived in Rainforestation project
Taghangin/Taguhangin	*Syzygium caudatifolium*	Myrtaceae	120	0	-do-
Malakadios	*Dehaasia cairocan*	Lauraceae	80	0	-do-
Alupag	*Euphoria didyma*	Sapindaceae	80	0	-do-
Batino	*Alstonia macrophylla*	Apocynaceae	55	0	-do-

Tabaw	*Lumnitzera littorea*	Combretaceae	25	0	-do-
Putian	*Alangium meyeri*	Alangiaceae	120	0	-do-
Bakan	*Litsea philippinensis*	Lauraceae	24	0	-do-
Talisay	*Terminalia catappa*	Combretaceae	50	0	-do-
Balete	*Ficus balete*	Moraceae	64	0	-do-
Toog	*Combretodendron quadrialatum*	Lecythidaceae	15	0	-do-
Indang	*Macaranga ovatifolia*	Euphorbiaceae	2	0	-do-
Duhat	*Syzygium cumini*	Myrtaceae	258	0	-do-
Red Laua-an	*Shorea negrosensis*	Dipterocarpaceae	2	0	-do-
Sampalok	*Tamarindus indica*	Leguminosae	26	0	-do-
Acacia Mangium	*Acacia mangium*	Leguminosae	198	0	For forerunners
Antsoan-dilau	*Cassia spectabilis*	Leguminosae	48	0	-do-
GRAND TOTAL			**3,926**	**1,636**	

RAINFORESTATION PROJECT ESTABLISHMENT:

In Castillo, Makato, Aklan, **1,636 assorted native timber trees** were planted with a spacing distance of **4 meters by 4 meters** using **triangular methods of planting design** and covering an area of **2.62 hectares**.

4. San Juan San Roque, Libertad, Antique

NAME OF SPECIES			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
NATIVE TIMBER TREE SEEDLINGS					
Common Name	**Scientific Name**	**Family Name**			
Almon	*Shorea almon*	Dipterocarpaceae	1,992	0	To be planted in Rainforestation project
Tag-osip	*(-)*	(-)	792	0	-do-
Tul-ay	*(-)*	(-)	12	0	-do-
Balakbakan	*Symplocos polyandra*	Euphorbiaceae	172	0	-do-
Red Laua-an	*Shorea negrosensis*	Dipterocarpaceae	137	0	-do-
Magupanga	(-)	(-)	69	0	-do-
Palomaria/Bitaog	*Calophyllum inophyllum*	Guttiferae	323	0	-do-
Payong-payong	*Cyperus babakan*	Cyperaceae	266	0	-do-
Narra	*Pterocarpus indicus*	Leguminosae	226	0	-do-
Tabaw	*Lumnitzera littorea*	Combretaceae	65	0	-do-
Rain Tree[2]	*Samanea saman*	Leguminosae	7	0	-do-
Batikuling	*Litsea leytensis*	Lauraceae	71	0	-do-
Duka	*Kingiodendron alterniforium*	Fabaceae	54	0	-do-
Igmen	*Podocarpus imbricatus*	Podocarpaceae	234	0	-do-
Batwan	*Garcinia binucao*	Clusiaceae	6	0	-do-
Bignai	*Antidesma bunius*	Euphorbiaceae	3	0	-do-
Kamansi/Rimas	*Artocarpus cumunis*	Moraceae	5	0	-do-
Kamagong	*Diospyrus philippensis*	Ebenaceae	23	0	-do-
Makopa	*Syzygium samarangense*	Myrtaceae	122	0	-do-
Duhat (Lomboi)	*Syzygium cumini*	Myrtaceae	6	0	-do-
Tambis	*Syzygium aqueum*	Myrtaceae	156	0	-do-
TOTAL			**4,741**	**0**	**-do-**

[2] Origin South America, widely used as ornamental tree.

. . . . . San Juan . . . . cont'd.

FRUIT TREE SEEDLINGS			**NUMBER OF SEEDLINGS IN THE NURSERY**	**NUMBER OF SEEDLINGS OUTPLANTED**	**REMARKS**
Atis	*Annona squamosa*	Annonaceae	134	0	To be planted in Agroforestry Project
Avocado	*Persea americana*	Lauraceae	5	0	-do-
Cacao	*Theobroma cacao*	Sterculiaceae	7	0	-do-
Cashew	*Anacardium occidentale*	Anacardiceae	83	0	-do-
Lanzones	*Lansium domesticum*	Meliaceae	13	0	-do-
Coffee/Café	*Coffea Arabica*	Rubiaceae	163	0	-do-
Mango	*Mangifera indica*	Anacardiaceae	34	0	-do-
Pomelo/Lukban	*Citrus grandis*	Rutaceae	71	0	-do-
Rambutan	*Nephelium lappaeum*	Sapindaceae	54	0	-do-
TOTAL			**564**	**0**	**-do-**
GRAND TOTAL (Native timber tree seedlings + Fruit Tree seedlings)			**5,305**	**0**	

5. Calabanog & Idiacacan, Pandan, Antique

NAME OF SPECIES			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
NATIVE TIMBER TREE SEEDLINGS					
Common Name	**Scientific Name**	**Family Name**			
Almon	*Shorea almon*	Dipterocarpaceae	1,335	0	To be planted in Rainforestation project
Tag-osip	*(-)*	(-)	50	0	-do-
Uyaoy	*Planchonia spectabilis*	Lecythidaceae	630	0	-do-
Balakbakan	*Symplocos polyandra*	Euphorbiaceae	155	0	-do-
Red Laua-an	*Shorea negrosensis*	Dipterocarpaceae	237	0	-do-
Magupanga	*(-)*	(-)	75	0	-do-
Palomaria/Bitaog	*Calophyllum inophyllum*	Guttiferae	410	0	-do-
Payong-payong	*Cyperus babakan*	Cyperaceae	265	0	-do-
Narra	*Pterocarpus indicus*	Leguminosae	413	0	-do-
Tabaw	*Lumnitzera littorea*	Combretaceae	57	0	-do-
Amugis	*Koordersiodendron pinnatum*	Anacardiaceae	67	0	-do-
Batikuling	*Litsea leytensis*	Lauraceae	104	0	-do-
Nato	*Palaquium luzoniense*	Sapotaceae	104	0	-do-
Gogo	*Entada phaseoloides*	Fabaceae	551	0	-do-
Toog	*Combretodendron quadrialatum*	Lecythidaceae	9	0	-do-
Badlan	*Radermachera sibuyanensis*	Bignoniaceae	43	0	-do-
Kamagong	*Diospyrus philippensis*	Ebenaceae	30	0	-do-
Makopa	*Syzygium samarangense*	Myrtaceae	21	0	-do-
Duhat (Lomboi)	*Syzygium cumini*	Myrtaceae	157	0	-do-
TOTAL			**4,713**	**0**	**-do-**

. . . . Calabanog . . . . cont'd.

FRUIT TREE SEEDLINGS			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
Santol	*Sandoricum koetjape*	Meliaceae	43	0	To be planted in Agroforestry Project
Caimito/Star Apple	*Chrysophyllum cainito*	Sapotaceae	69	0	-do-
Mango	*Mangifera indica*	Anacardiaceae	3	0	-do-
Cashew	*Anacardium occidentale*	Anacardiaceae	17	0	-do-
Tisa	*Pouteria campechiana*	Sapotaceae	13	0	-do-
TOTAL			**177**	**0**	**-do-**
GRAND TOTAL (Native timber tree seedlings + Fruit Tree seedlings			**4,890**	**0**	**-do-**

6. Idio, Sebaste, Antique

NAME OF SPECIES			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
NATIVE TIMBER TREE SEEDLINGS					
Common Name	**Scientific Name**	**Family Name**			
Almon	*Shorea almon*	Dipterocarpaceae	909	0	To be planted in Rainforestation project
Tag-osip	*(-)*	(-)	60	0	-do-
Uyaoy	*Planchonia spectabilis*	Lecyhidaceae	751	0	-do-
Balakbakan	*Symplocos polyandra*	Euphorbiaceae	23	0	-do-

Red Laua-an	*Shorea negrosensis*	Dipterocarpaceae	25	0	-do-
Magupanga	*(-)*	(-)	102	0	-do-
Yaya-ay	*(-)*	(-)	71	0	-do-
Amugis	*Koordersiodendron pinnatum*	Anacardiaceae	37	0	-do-
Narra	*Pterocarpus indicus*	Leguminosae	182	325	325 narra were planted in Rainforestation site
Tabaw	*Lumnitzera littorea*	Combretaceae	39	0	-do-
Nato	*Palaquium luzoniense*	Sapotaceae	60	0	-do-
Batikuling	*Litsea leytensis*	Lauraceae	554	0	-do-
Kamagong	*Diospyrus philippensis*	Ebenaceae	92	0	-do-
Duhat (Lomboi)	*Syzygium cumini*	Myrtaceae	141	0	-do-
Cuttings Propagation					
Balete	*Ficus balete*	Moraceae	55	0	-do-
TOTAL			**3,101**	**0**	**-do-**
FRUIT TREE SEEDLINGS					
Marang	*Litsea perrottetii*	Lauraceae	27		To be planted in Agroforestry Project
Cacao	*Theobroma cacao*	Sterculiaceae	86	0	-do-
Mango	*Mangifera indica*	Anacardiaceae	12	0	-do-
Rambutan	*Nephelium lappaceum*	Sapindaceae	176	0	-do-
TOTAL			**301**	**0**	**-do-**
GRAND TOTAL (Native timber tree seedlings + Fruit Tree seedlings			**3,402**	**0**	

RAINFORESTATION PROJECT ESTABLISHMENT

In Idio, Sebaste, Antique, **325 narra** were planted with a spacing planting distance of **4 meters by 4 meters** using **triangular method** of planting design and covering **5,200 square meters or 0.52 hectares**.

7. Alojipan, Culasi, Antique

NAME OF SPECIES			NUMBER OF SEEDLINGS IN THE NURSERY	NUMBER OF SEEDLINGS OUTPLANTED	REMARKS
NATIVE TIMBER TREE SEEDLINGS					
Common Name	**Scientific Name**	**Family Name**			
Almon	*Shorea almon*	Dipterocarpaceae	1,497	0	To be planted in Rainforestation project
Tag-osip	*(-)*	(-)	332	0	-do-
Balakbakan	*Symplocos polyandra*	Euphorbiaceae	51	0	-do-
Red Laua-an	*Shorea negrosensis*	Dipterocarpaceae	80	0	-do-
Tabaw	*Lumnitzera littorea*	Combretaceae	97	0	-do-
Kamagong	*Diospyrus philippensis*	Ebenaceae	254	0	-do-
Bangkagan	*(-)*	(-)	34	0	-do-
TOTAL			**2,401**	**0**	**-do-**
FRUIT TREE SEEDLINGS					
Guyabano	*Annona muricata*	Annonaceae	41	0	To be planted in Agroforestry Project
TOTAL			**41**	**0**	**-do-**
GRAND TOTAL (Native timber tree seedlings + Fruit Tree seedlings			**2,442**	**0**	

SUMMARY:

COMMUNITY-BASED NURSERY DEVELOPMENT PROJECT

SPECIES	PROJECT SITES							TOTAL
	Pawa, Nabas, Aklan	Flores, Culasi, Antique	Castillo, Makato, Aklan	San Juan & San Roque, Libertad, Antique	Calabanog Idiacacan, Pandan, Antique	Idio, Sebaste, Antique	Alojipan, Culasi, Antique	
Native timber tree seedlings	154	171	3,926	4,741	4,713	3,101	2,401	19,207
Fruit tree seedlings	174	442	0	564	177	301	441	2,099
GRAND TOTAL	328	613	3,926	5,305	4,890	3,402	2,842	21,306

RAINFORESTATION DEVELOPMENT PROJECT

PROJECT SITES	NUMBER OF SEEDLINGS PLANTED OUT	PLANTING DISTANCE	PLANTING DESIGN	AREA COVERED (ha.)
1. Pawa, Nabas, Aklan	**-**	-	-	**-**
2. Flores, Culasi, Antique	**116**	4 meters x 4 meters	Triangular	**0.19**
3. Castillo, Makato, Aklan	**1,636**	-do-	-do-	**2.62**
4. San Juan & San Roque, Libertad, Antique	**-**	-	-	**-**
5. Calabanog, Idiacacan, Pandan, Antique	**-**	-	-	**-**
6. Idio, Sebaste, Antique	**325**	4 meters x 4 meters	Triangular	**0.52**
7. Alojipan, Culasi, Antique	**-**	-	-	**-**
GRAND TOTAL	**2,077**	**4 meters x 4 meters**	**Triangular**	**3.33**

Prepared by: **John R. Espiritu**, *PESCP Forester*

App. 4

E. Sanchez **Animals under the Care of PESCP Wildlife Rehabilitation Facilities**

ANIMALS UNDER THE CARE OF PESCP WILDLIFE REHABILITATION FACILITIES

MAG-ABA

Species	Ring Number	Date of arrival	Sex	Age	Origin	Remarks
Crested Serpent Eagle (*Spilornis cheela*)		April 19, 2005		nestling	Brgy. Nabaoy, Malay, Aklan	Mortality (5 – 06 -05) confiscated by BioCon Staff; died of bone fracture infection
Crested Serpent Eagle	109 with PESCP inscription	August 2004	female	nestling	Brgy. Cubay, Libertad, Antique	Accidentally released (4 – 22 – 05) donated by R. Francisco
Dog-Tooth Cat Snake(kawo – kawo) (*Boiga cynodon*)		April 28, 2005			Brgy. Centro Sur, Pandan, Antique	Mortality (4 – 28 – 05) electrocuted admitted by PNP Pandan
Philippine Rat snake(lagwason) (*Elaphe erythrura psephenoura*)		April 30, 2005			Brgy. San Roque, Libertad, Antique	Released (05 – 01 – 05) confiscated by M. T. Ibabao (UNDP liaison officer for CoFoPa project)
2 Blue-Crowned Racquet-tail Parrot (*Prioniturus discurus*)	- 103 - 105 with PESCP inscription	May 01, 2005		- Parent bird fledgling	Sitio Banawang, Brgy. Badiangan, Pandan, Antique	Released (05 – 07 - 05) Released (08 – 05 – 05)
Tarictic Hornbill (*Penelopides panini panini*)		May 27, 2005	female	nestling	Brgy. Idio, Sebaste, Antique	Mortality (05 – 30 – 05) died of mixed bacterial infection. Received by PESCP Forest Ranger (F. Nabong)

Tarictic Hornbill	104 with PESCP inscription	May 27, 2005	male	nestling	Brgy. Idio, Sebaste, Antique	Transfered to Bulanao facility (06 – 29 – 05). Received by PESCP Forest Ranger (F. Nabong)
2 Tarictic Hornbill	110 with PESCP inscription 109 with PESCP inscription	June 7, 2005 -- do --	male female	nestling nestling	Sitio Malumpati, Brgy. Guia, Pandan, Antique	Confiscated by PESCP's Forest Monitor A. Ebon. Transferred to Bulanao (06 – 29- 05)
3 Colasisi (*Loriculus philippensis*)		June 22, 2005		sub - adult	Brgy. San Roque, Libertad, Antique	2 released (07 – 21- 05) due to aggression & 1 still under rehabilitation (confiscated M. T. Ibabao, UNDP liaison officer for CoFoPa)
3 Leopard Cat (*Prionailurus bengalensis*)		June 08, 2005	female	queen and kitten	Mun. of Calinog, Iloilo	released (06 – 27 – 05) donated to Julius Venus, PESCP wildlife edu. Mortality: 2 kittens died of fly larvae infestation (06 – 08 – 05)
Grass Owl (*Tyto capensis*)	attached red plastic ring for ID	June 08, 2005		adult	Mun.of Calinog, Iloilo	Released (06 – 11 – 05); admitted by Julius Venus, PESCP wildlife edu
Philippine Hawk Owl (*Ninox philippensis*)	101 with PESCP inscription	July 19, 2005		immature	Brgy. Alojipan, Culasi, Antique	Confiscated by A. Alabado, PESCP wildlife edu.
3 Blue-crowned Raquet-tail Parrot	110 and 102 with PESCP inscription	July 31, 2005		nestling	Barangay Abiera, Sebaste, Antique	Confiscated by PESCP FR. F. Nabong & Rolly Fernando, PESCP Community Conservationist, Brgy. Abiera. Mortality: 1 died of malnutrition and stress (07 – 31 – 05)

1 Tarictic Hornbill		August 19, 2005	male	immature	Barangay Bacalan, Sebaste, Antique	Accidentally released (08 – 19 – 05) by breaking off the wire mesh cage. Donated to PESCP Forester Sonny Galluego
Besra (*Accipiter virgatus*)		August 26, 2005		immature	Barangay Bagacay, Culasi, Antique	Confiscated by Sugar Doroteo, UNDP liaison officer CoFoPa project – Brgy. Alojipan. Mortality (10 – 01 – 05): incurred wing fracture and secondary bacterial and fungal infection
Water Monitor Lizard (*Varanus salvator nucalis*)		Sept. 30, 2005		juvenile	Sebaste, Antique	Released (09 – 30 – 05). Confiscated by the PESCP Forest Rangers on forest patrol
2 Tarictic Hornbill	0796 0792	Dec. 02, 2005	female male	juvenile --- do ----	Sitio Tabay, Brgy. Patria, Pandan, Antique --- do -----	confiscated by Angel Tamboong, BioCon Forest Ranger --------- do -------
Long-tailed Maccaque (*Macaca fasicularis*)		June 16, 2004	male	adult	Municipality of Culasi, Antique	Unsuitable for release (sent to DENR PAWD Region 6, Iloilo – July 12, 2005). Admitted by DENR CENRO Culasi

1 Emerald Pigeon (*Chalcophaps indica*)		June 16, 2005		- adult -	Municipality of Culasi, Antique	Unsuitable for release (sent to DENR PAWD Region 6, Iloilo – July 12, 2005). Confiscated by PESCP staff
1 Crested Serpent Eagle	103 with PESCP inscription	Sept. 5, 2003	female	adult	Municipality of Barbaza, Antique	Confiscated by former PESCP volunteer F. Temur and PESCP staff. Unsuitable for release, sent to DENR PAWD Region 6, Iloilo.
1 Crested Serpent Eagle	107 with PESCP inscription	Sept. 1, 2003	female	adult	Brgy. Carmen, Pandan, Antique	Donated by Plaridel Sanchez IV
1 Changeable Hawk Eagle (*Spizaetus cirrhatus*)	24305	Sep. 1, 2003	female	juvenile	Brgy. Laserna, Nabas, Aklan	Donated by Plaridel Sanchez IV
1 Changeable Hawk Eagle	24302	Sep. 14, 1999	female	adult	Brgy. Pandan, Antique	Confiscated. Released (10 – 26 – 05)
1 Crested Serpent Eagle	108 with PESCP inscription	June 16, 2004	female	juvenile	Municipality of Culasi, Antique	Donated

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Tarictic Hornbill	0787	July 25, 2003	male	nestling	Sitio Burabod, Brgy. Callan, Sebaste, Antique	Donated
------ do -------	0772	July 31, 2003	female	fledgling	Barangay Paz, Libertad, Antique	Donated to PESCP caretaker Nestor Bagac
------ do -------	0790	Sept. 01, 2003	male	adult	Municipality of Tibiao, Antique	Donated by Plaridel Sanchez IV
------ do -------	0788	Sept. 01, 2003	female	juvenile	Brgy. Carmen, Pandan, Antique	Donated by Plaridel Sanchez IV
Writhed billed Hornbill (*Aceros waldeni*)	0031	June 04, 2002	male	fledgling	Barangay Alegre, Sebaste, Antique	Donated

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------ do ------	0033	June 19, 1999	female	fledgling	Barangay Idiacacan, Pandan, Antique	Donated
------ do ------	0034	June 19, 1999	male	fledgling	---- do ----	Donated
------ do ------	0035		female	fledgling	Sitio Banawang, Brgy. Napuid, Pandan, Antique	Donated
------ do ------	0036		female	fledgling	----- do ------	Donated

----- do -----	0059	June 4, 2002	female	fledgling	Brgy. Alegre, Sebaste, Antique	Donated
Tarictic Hornbill	0031	June 23, 2003	female	fledgling	Brgy. Botbot, Pandan, Antique	Donated
------ do ------	0033		male	fledgling	Sitio Calabanog, Pandan, Antique	Donated
------ do ------	0761	June 23, 2003	female	fledgling	Brgy. Botbot, Pandan, Antique	Donated
------ do -------	0766	June 2000	female	fledgling	Brgy. Napuid, Pandan, Antique	Released March 1, 2005
------- do -------	0770	June 23, 2003	male	fledgling	Brgy. Botbot, Pandan, Antique	Donated
------ do -----	0780	June 17, 2002	male	fledgling	Brgy. San Andres, Pandan, Antique	Released (March 1, 2005)
------ do ------	0781	July 26, 2002	male	fledgling	Mun. of Nabas, Aklan	Released (March 1, 2005)
------- do ------	0784	Jan. 22, 2003	female	fledgling	Brgy. Tingib, Pandan, Antique	Donated by Boy Sumaginsing (released March 1, 2005)

------ do --------	0785	March 16, 2003	male	fledgling	Sitio Malumpati, Brgy. Guia, Pandan, Antique	Donated
------ do -------	0786		female	fledgling		Donated

ANIMALS CONFISCATED AND TEMPORARILY UNDER THE CARE OF PESCP

SPECIES	DATE OF CONFISCATION	AGE	ORIGIN of SHIPMENT	REMARKS
44 Blue-crowned Raquet-tail Parrot	June 28, 2005	nestlings	Negros Island	Unsuitable for release
18 Rufous Hornbill (*Buceros hydrocorax*)	same	nestlings and fledglings	same	same
Coleto (*Sarcops calvus*)	same	adult	same	same
32 Crested Mynahs (*Acridotheres cristatellus*)	same	immature	same	same
1 Sulphur-crested Cockatoo (*Cacatua galerita*)	same	adult	same	same
1 Indian Peafowl (*Pavo cristatus*)	same	adult	same	same
2 Golden Pheasant (*Chrysolophus pictus*)	same	adult	same	same
3 water monitor lizard	same	subadult	same	same

Note: Confiscated animals sent to DENR PAWD Region 6, Iloilo City. Received by PAWD Deputy Director Damaso Fuentes