Panay Eco-Social Conservation Project (PanayCon)

Eighteenth Annual Report

January 2015

E. Curio (ed.)

PanayCon, Pandan Public Library, Pandan, Antique, Philippines P.B. Box 42, Kalibo, Aklan 5600, Philippines Eberhard.Curio@rub.de

Under the umbrella of the NGO PhilinCon

In close cooperation with
Department of Environment and Natural Resources (Philippines)
University of the Philippines, Diliman, Quezon City (Philippines)
Frankfurt Zoological Society (Germany)
Erwin-Warth-Stiftung (Germany)
Ruhr-University Bochum (Germany)

Sagipin natin ang mga likas na pamana!



Frontispiece (overleaf): Front of our new T-shirt printed in 2015

Texts in English, Tagalog (Filipino) and Kinaray-a (local language spoken in Antique Province, Panay)

From top to bottom:

From left to right: Philippine Eagle (*Pithecophaga jefferyi*). - Dulangan [Writhed-billed Hornbill] (*Rhabdotorrhinus waldeni*, syn. *Aceros waldeni*) male. - The Philippine Archipelago.

Boy with Salakot.

Spotted Deer (*Rusa alfredi*) male. – Banaue rice terraces. – Bayanihan.

Rafflesia lobata, one of nine Philippine endemics. – Green Sea Turtle (Chelonia mydas)

Opposite: Back of T-shirt

From the living to the dead - extinction is for ever

Artwork by Helga S c h u l z e (Bochum); production of the t-shirt as a kind donation by Claus S u d h o f f (Manila).

Impressum:

The eighteenth Report of PanayCon builds on contributions from

Curio, Eberhard Dioso, Leocadio F. Ebon Jr., Armelito Faustino, Guillermo Kühn-van Geldern, Rabea Sanchez Jr., Enrique Santillan, Rhea Schwarz, Christian J.

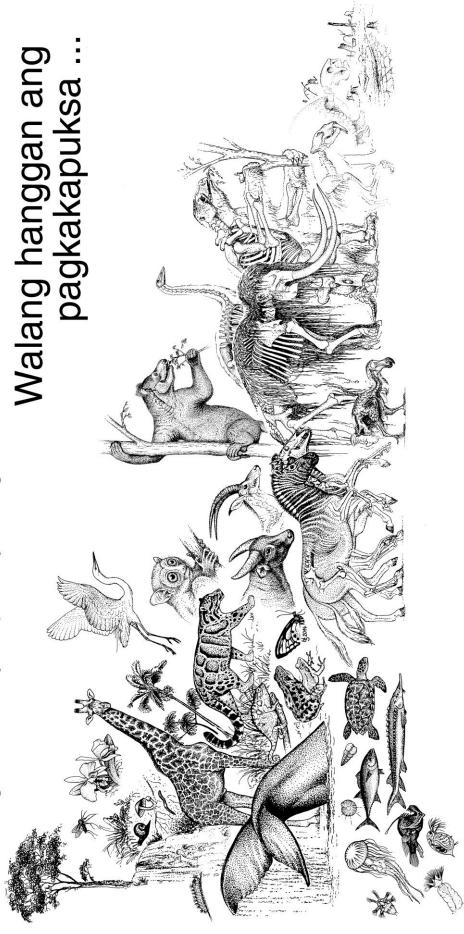
and was edited by E. Curio

© PanayCon: no part of this report must be used without the written permission of the PanayCon Mangement or the BOD of PhilinCon.

Pandan and Bochum, January 2016

Extinction is forever ... Evolution took 3.5 billion years to create the biodiversity we still see.

Gugugol ng 3.5 bilyong taong ebolusyon upang makalikha ng biodiversity na patuloy nating namamalas



Asta sa katubtuban ang andang pagkadura ... Makaabot kang 3.5 bilyon ka tuig para lamang makahimo kang biodiversity nga aton ron malantaw

Thanks to the sponsors under the umbrella of the NGO PhilinCon

Eighteenth Report 2015

An Update and Thorough Revision of the 'Seventeenth Report 2014'

Title of Project and Time Period:

Panay Eco-Social Conservation Project (PanayCon). The time period covers the year 2015.

The project's work is formalised under the aegis of a Memorandum of Agreement between the DENR and Ruhr-University Bochum, renewed in 2012. A collecting permit, covering collecting (plants, ectoparasites), and potential prey of the Marine Toad or Cane Toad (Rhinella [Bufo] marinus), locally known also as 'Hawaiian Frog', is in the making. An a dement with opportunistically obtained specimens (e.g. road kills) that represent new species or a new distributional record in the pipeline. - Links with many environmentally concerned agencies/ institutions are continuing to thrive and many others are developing: Erwin-Warth-Stiftung, President Hilde Stühlinger, and the CAPE Foundation, President Macrina P. Lovina, absolutely vital for the project; the CAPE Foundation is aiming at costal development including the instruction of fisher men and the conservation of marine wildlife. Furthermore, the Foundation is no perspicacious of sponsoring six Forest Rangers that had educated as WEOs (Wildlife Environmental Officers). Their delicate Jobs recall for arming them and necogenations are underway mitigate their oftentimes risky situations. -And further befriended supporter of the project is Leocadio F. Dioso. He hosts us by providing office space in the Leocadio Alonsagay Dioso Memorial Public Library, Pandan, Antique, Philippines. Furthermore, talks has been finalized with the University of the Philippines, Diliman, Quezon City, alongside Los Baños by hiring Prof. Dr. E. Curio as Visiting Professor to lecture, give seminars and supervising of Philippine Bachelor and Masters Students.

In the 15th report the plans of the filinalisation of the project were detailed, i. e. the stepping down on foreign personal to give way to key personal being Filipinos. The plans receive a heavy blow when the management, including a German, found to for responsible for embezzlement of funds. The ensuing chaos made three quarters of the staff jobless while the segment of the reha and research facilities (8 people) by funds regenerated by Prof. Curio could be remained until now. The case against is worn-doers to come to ends preliminarily. The FZS recover almost completely its budget, had fired to the management staff under the suspicion of embezzlement of their fund. – The project was victimized by two members of the staff, incidence occurring at the station and the other serviced receiving during ascent to the station. The theft concerned money. The victims were Ms. Santillan, our bookkeeper, and the other incidence was theft sustained by Prof. Curio. In the latter case, the suspect admitted in the theft during in a meeting in the brgy. hall of Bulanao, but failed to return the money and disappeared in the day which he was supposed to bring back the stolen money. The management is determined to follow up and retrieve the money by all legal means.

In the wake of this upheaval consultations led to an organization of staff as a result of which emerged PhilinCon with the project PanayCon. In 2014, a new manager was hired leading a new organizational structure (**App. 1**).

The Station 'Sibaliw' saw many visitors as usual (**App. 2**). For the first time members of the University of the Philippines, led by Prof. Dr. M. Amante, were welcome by station staff. A venue hammered out details for Prof. Curio joining the staff at Campus Diliman as Visiting Professor.

Sad to say, BioCon, an NGO and an earlier outgrowth of PESCP (now PanayCon), failed all along with its mandate of strengthening PESCP financially since its establishment 14 years ago. Accordingly the founding of a new NGO PhilConserve by concerned citizens in 2005 laid the ground for fostering the hope for effective biodiversity conservation in Panay; preparations toward fund-raising have been promoted by members of the BOD. To advance on within-country support by non-governmental bodies born out through an on-going correspondence with the BOD of BioCon, now in always entering in 14th year, so a far without success. In the course of the ensuing correspondence latter of Prof. Curio never got an answer the president of BioCon.

PanayCon 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. Jonathan D. Tan*, 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 PanayCon tremendously in its zeal of pushing its and the municipality's environment agenda. Accordingly I am pleased to mention the assistance of *Mr. Arnold Demegillo*, Pandan's MENRO and Agricultural Technologist, who took pains in advising PanayCon in community liaison matters facilitating various technical problems. Mr. *Demegillo* was promoted Head of the Municipal Disaster Risk Reduction Office.

As before, Prof. Dr. E. Schneider, President of the German 'Bird Protection Commitee' (Göttingen, Linum), was circumspectly funding our *ex situ* work focused on the rehabilitation and release of wildlife, specially endangered birds. Likewise, Mr. Antonio de Dios, President and General Manager of Birds International, Inc., and of Transport Equipment Corporation, and Mr. Georg Gewers, a Berlin architect, long term supporters of the project, donated funds usual. However, among the European supporters diversion of funds going to the vast numbers of refugees come from Near East and the Balkans were noticeable in the past year. This competition, based one-sided in charity thinking, give the project a hard time.

To all these people and institutions we are deeply grateful and hope that they will support the cause of both PanayCon and its umbrella NGO PhilinCon also in the future.

Editorial

The Philippines is hit hard by typhoons that increase in frequency and strength. There are on average 20 typhoons every year, of which almost half make landfalls. These typhoons reach wind speeds of 315 kph, spawning mega-storms like the 2013 typhoon 'Yolanda' (international name: Haiyan).

The damages are piling up, and yet, no governmental, comprehensive force has been put in place to stem these natural calamities. Did I say 'natural'? The incidence and strength are natural, leaving aside climate change as a crucial determinant of those properties; however, the severity of each single typhoon is *man-made* and is the primary cause of typhoons making landfall. The severity can be measured as well: typhoon 'Lando' (international name: Koppu), the latest, and according to a 68-year-old witness, the strongest one, is telling. It ravaged Central and Northern Luzon, causing, according to governmental estimates, damages amounting to PHP 9 billion (Euros 176 million), mostly affecting agricultural lands and products. Also affected were 1.2 million persons, and the widespread flooding destroyed

homes and roads. Even as far away as Manila, classes had to be suspended and flights cancelled.

Among the most affected were the rice farms of Nueva Ecija, a situation which, according to forecasts by the NEDA (National Economic and Development Authority), will triple the usual amount of rice that the country needs to import to cover nationwide needs.

The rural population has been hit hardest. The extent of the damage to the vegetable and rice fields, among other effects, have made the poorest segment of the population even poorer. Already unable in the past to build decent homes, this group is now faced with a worse situation: The demand for construction timber will increase and so will illegal logging. This then is a two-pronged vicious circle: a need to generate timber for scale and construction reduces the remaining forest cover need to stem flash-floods, causing the strength of the typhoons to be man-made. This is one of the factors driving the calamity. Illegal logging is the other driver. It plays in the hands of corruption in the lower ranks of bureaucracy and it causes the loggers to become criminals, since the nature of logging is illegal.

The 'natural' disasters are *man-made*, due to the increasing denudation of the forests. If the government wishes to address the country's poverty problem, disasters will continue to cause casualties and damages to property and preparing for typhoons will shrink to a minimum. With an increase in the severity of typhoons, prospects are adverse for a program preparing the country to more 'natural' disasters to come. The severity of typhoons is certainly a consequence of climate change, but, also certainly, part of the problem is *man-made* and – almost – avoidable through proper law-enforcement. (Source, in part, 'Philippine Daily Inquirer'.)

_	teenth Annual Report 2015. An Update and thorough Revision e 'Seventeenth Report 2014'	5
Edit	orial	6
Exec	cutive Summary	9
1.	Conservation, Education, Rehabilitation	11
1.1	Manager's Report	11
1.2	Law enforcement report	13
1.3	Animals under the care of PhilinCon in January 2014	26
2.	Conservation Research: Taxonomy and Biodiversity	32
2.1	Gambaquezonia curioi - a new species of Gambaquezonia for the	
	Phlippine island Panay (Araneae: Salticidae)	32
2.2	The praying mantids of Panay – an annotated checklist	32
3.	Behavioural Ecology	40
3.1	Ecology of a Bark Mantis (<i>Haania</i> sp., Mantodea)	40
3.2	Eucharitid ant-parasitiod affects facultative ant-plant Leea manillensis:	
	top-down effects through three trophic levels	45
3.3	Flight styles in some passerines.	45
Appe	endices 1- 5: Overview	.46

Executive Summary

Conservation and Rehabilitation

1.1 Manager's Report – Law Enforcement

The law enforcement portion of PhilinCon's activities mainly involves the work and accomplishments of our team of Forest Rangers (FRs). In recognition of their effectiveness, they have been officially deputized as WEOs (Wildlife Enforcement Officers) by the Department of Environment and Natural Resources (DENR).

Among their standard functions, our FRs carry out regular patrols of the forest areas of Libertad, Pandan and Sebaste in Antique and the municipality of Buruanga in Aklan province. During 2014(?), their work resulted, in 13 separate occasions, in the confiscation of more than 135 pieces of logs that had been cut illegally. These were subsequently turned over to the PNP/DENR.

The FRs' monitoring activities also resulted in the discovery of a poachers' camp in the Sibaliw area (near PhilinCon's field station), from which CAMP our FRs were able to confiscate various paraphernalia used by the poachers.. These people belonged to a well-organized and heavily armed group from Nabas and Cubai. They were known to hunt for Warty Pigs, monkeys, hornbills and pigeons for food and for sale to the souvenir tradesmen in Boracay.

Sadly, the arrests and material confiscations that have been effected by PhilinCon and its FRs have not led to the illegal loggers, hunters and poachers being brought to justice in a court of law. Despite this fact, however, PhilinCon will continue its activities for the essential protection and conservation of our forests and its wildlife inhabitants

1.2 Animals under the Care of PhilinCon in 2014

Both species of hornbills (*Aceros* [further on called this way instead of the modern name *Rhabdotorrhinus*], *Penolopides*), various raptors, a Grass Owl and a Hawksbill Turtle (*Dermochelys imbricata*) were rehabilitated and released upon proper health checks by our veterinarian Dr. Enrique Sanchez. The rescue facilities from the animals came from in those in Mag-aba, Bulanao and Station 'Sibalew'. The Table 1 gives the details of the species, sex, ring no. of applicable and the circumstances of the recovery and the release. Animals classified as 'unsuitable for release' are sent to the PAWD DENR Region 6 in Iloilo City.

2. Conservation Research: Taxonomy and Biodiversity

2.1 Gambaquezonia curioi – a new Species of Gambaquezonia from the Philippine Island Panay (Araneae: Salticidae)

A jumping spider of the genus *Gambaquezonia* has been considered monotypic and endemic to the Philippine Island of Luzon. A new species has been described from Panay, based on genital characters of a male and female specimen. The species, *Gambaquezonia curioi*, is

distinguished by the male copulatory organ (embolus) and the female sperm receiving opening (epigynal sperm duct). The find highlights the need to further study of the Philippine spider fauna.

2.2 The praying mantids of Panay – an annotated checklist

Praying mantids (Mantodea) are an insect order which is largely understudied in the Philippines. The ~2,500 described species are thermophilous and strictly solitary predators distributed mainly in the tropics. They exhibit a variety of lifestyles and morphological ecotypes. No records from Panay are known so far. Therefore, from 2010 to 2015 the mantodean fauna of Panay has been repeatedly sampled via manual search, light and pitfall trapping. Seventeen species representing seven phylogenetic units (families) have been found, at least five of which are new to science. The majority (11 species) is confined to forests, and contains mostly endemic and subendemic taxa, while six species widespread in the Philippines and SE Asia prefer open habitats. The impoverished mantodean fauna of Panay is discussed with reference to the paleogeography of the island.

3. Behavioural Ecology

3.1 Ecology of the Bark Mantis (*Haania* sp., Mantodea)

The SE Asian genus *Haania* contains morphologically highly specialized praying mantids living on mossy tree bark. Two undescribed species occur on Panay, the more abundant of which was studied from February to March at Sibaliw station. Habitat requirements comprise trees of at least 32 cm circumference, hit by the sun and with a moss cover of ~81%. Adults preferred lower parts of a tree than did nymphs. 91% of nymphs and 84% of adults assumed the geotropic position. Specimens usually rested on the lee side of the tree and outside of direct sunlight, and at minimum distances of 14 cm (adults) and 5 cm (nymphs) of keeping inside an inhabited patch of moss. *Haania* is a typical ambush species, spending 67% (adults) vs. 96.7% (nymphs) of the time motionless. Territoriality is weakly expressed in nymphs, but becomes more pronounced when specimens approach maturity. Ten translocation trials have been performed, all of which revealed the resident mantid to be dominant over the intruder, even involving cases of cannibalism. The obtained results are discussed with reference to other mantodean taxa.

3.2 Eucharitid Ant-parasitoid Effects facultative Ant-plant *Leea manilllensis*: top-down Effects through three trophic Levels

Facultative ant-plant mutualisms could often hard to detect, especially in tropical ecosystems. *Leea manillensis* in Panay is indirectly protected against damage by the production of extrafloral nectaries that attract ants. Unexpectedly an ant-parasitoid wasp (*Chalcura* sp., Eucharitidae) exerts a strong effect on the system, both on the plants and on the ants well. The parasitoid altered the behaviour of the interacting ant-species, but also directly and indirectly affected the plants' fitness. The study gives an example of how top-down effects alter species interactions and can have a massive effect on mutualisms and their beneficial outcome.

3.3 Flight Styles in some Passerines

Semi-quantitative observations on bounding flight and steady (flapping) flight are performed in two forest-dwelling passerines (Philippine Bulbul *Hypsipetes philippinus*, Great Tit *Parus major*) in free flight. A long-standing hypothesis predicts bounding flight to preserve energy. A crucial role in the respect is played for the bounding flight – speed relationship. In is controversial whether a U-shaped bounding flight – energy expenditure curve best describes the relationship. The monotony of a new relationship reflecting bounding flight to speed argues for a flattened speed to J-shape energy expenditure as compared to a U-shape curve. Whether bounding flight is saving energy as proposed would depend of the kinematics of flight in free-flying such species such as the Bulbul and the Tit. - Further observations tentatively assign a training role for 'mock' prey capture and 'group acrobatics' of the Bulbul serving prey capture and predator evasion, respectively.

1. Conservation, Education, Rehabilitation

1.1 Manager's Report

by Christian J. Schwarz, MSc., Project Manager

The most pressing problem I had to deal with when I took over this position in July 2014 was the lack of proper funding. When compared to our activities in the financially stable years 2000 to 2009, this shortage of funds had a negative impact on conservation efforts on Panay in particular, and the Philippines in general.

In fact, our activities are now restricted to wildlife rehabilitation, forest monitoring, and scientific research, all of them basically restricted to the Northwest Panay Peninsula and some portions of southern Pandan. PanayCon had to pull out completely from the Central Panay Mountain Range, including the Dulungan or Writhed-Billed Hornbill (*Aceros waldeni*, recently reassigned to the genus *Rhabdotorrhinus*) nest-guarding scheme. Since 2009, poaching of nestlings of this species, as well as of other birds, snaring of Warty Pigs, and illegal logging have increased substantially in both areas, as discovered by our forest rangers, and experienced by myself during three years of research on the NWPP.

Conservation in the NWPP Natural Park is now basically a matter of the Protected Area Management Board (PAMB), headed by the Regional Executive Director of the DENR, but mainly under the supervision of Protected Area Superintendent Rhodel Lababit. The PAMB decides over long-term activities in the Protected Area; this concerns PanayCon's scientific and conservation research as well as large-scale, more or less sustainable "development" projects, like mining activities or wind turbines. The declaration of the NWPP as a PA under the NIPAS act in 2005 has still not passed the Congress. However, this delay allowed for adjustment of the initial, very coarse boundary of the PA to include additional areas of good forest. The area of the PA now encompasses 13.000 ha. The true extent of forest is unknown, but probably exceeds 6.000 ha. Despite this success, the PAMB is mainly a decision-making organ. It is not properly equipped or funded to actually implement conservation activities. Therefore, forest monitoring still largely relies on a core team of six Philincon FRs. These FRs are funded by our partner, CAPE Foundation, headed by Macrina P. Lovina (Makati, Manila). Without CAPE's support, no forest monitoring activities whatsoever would be conducted on the NWPP.

Illegal logging is well-organized now: the operators are usually armed, use silencers on their chainsaws, and informants at strategic points warn them when FR or PNP activities are detected. This makes it extremely difficult (and dangerous) for our small team to effectively intercept logging or hauling activities. Nevertheless, we can account for several successful apprehensions of illegally cut lumber (see below). Animal poaching is much more difficult to stop. Finding unreported snares is basically a matter of chance, and poachers using guns are mobile and difficult to corner. Besides, local people are much more willing to report timber than animal poaching. Poachers also roam in the environs of Sibaliw station, as evidenced by discoveries of snares, animal remains, sheds, and other indications of the poachers being active in the area. We have always duly reported such discoveries to the DENR. Towards the end of 2014, our rangers have also found evidence of an organized team of around 6-8 poachers, mainly from Cubai and Nabas, carrying firearms and snare equipment, and hunting for Tarictic Hornbills, monkeys, and Warty Pigs. While warty pigs are usually hunted for meat, their tusks as well as the monkey skulls and the Tarictic beaks and legs are sold to unknown buyers in Boracay. There, they are converted into souvenirs and sold to unknowing tourists.



Confiscated male Dulungan in the Mag-aba facility

On the positive side, we are receiving an increasing amount of information on stranded sea turtles and their nests, and in 2014 were able to release two adults in the process. Several nests, some of them already successfully hatched, have also been found. This shows that past awareness campaigns conducted by the DENR, the CAPE foundation, and us, have proved useful. There is no reason to tap our shoulders though, since we still get to know of turtles which have been illegally slaughtered by Pandan fishermen.The Libertad number donated or confiscated Dulungans rose from zero between 2004 and 2011 (during the nest-guarding scheme) to four since indicating increased 2012, poaching pressure on this critically endangered hornbill species. Our nest-guarding

scheme proved very successful, both in terms of providing data that allowed an estimate of the population size on Panay, as well as protecting this population. However, it was also criticized as "unsustainable" by a development program evaluator. Such comments bypass biological reality: development programs have to be sustainable; conservation programs do not! Their success is only measured in terms of survival of the targeted species. This example shows how much damage to conservation can be done by recommendations of biologically untrained professionals in highly influential positions.

When I returned to the Philippines in July 2014, most damages caused by supertyphoon Yolanda in November 2013 had already been fixed. However, Sibaliw station, including its solar power system, still required some attention. The humid climate takes its toll on technical equipment. Major repairs have been scheduled to take place in 2015, and the logistics and paper work imposed by this task have been discussed and planned towards the end of 2014.

It also became evident, even during my previous stays, that the food catering arrangements for the station and the organization of porterages had suffered from increasing inefficiency over the years, both in terms of money wasted and of quality of the food supplies purchased. My first duty over the course of the next weeks was to increase efficiency and lessen unnecessary wastage by re-organizing the Sibaliw food supply system. Weekly supplies are now controlled by PhilinCon office staff, basically consisting of Ms. Rhea Santillan and myself. The new measures have already proved successful, but leaves still room for further improvements.

Before closing, I would like to acknowledge the continued generosity of our supporters. Mr. Antonio de Dios, Manila, donated a significant amount to Philincon, as in the years before. This is also true for Macrina P. Lovina, CAPE foundation, who sponsored our FR team. David Wynne and family, Alexandria VA, USA, visited our project and repeatedly donated valuable materials. A major donation by Hilde Stühlinger, Erwin Warth-Stiftung, Stuttgart, financed the project manager position. Without such support, our work would not be possible. The following months have been devoted to project proposals and further fund-raising. Several ideas were discussed in the Philincon Board Meeting on October 15. Obtaining release permits for three of our Dulungans and some raptors, and the renovation of the station are also on the agenda. There is no rest in conservation.

1.2 Law enforcement Report

by E. Sanchez Jr., C. J. Schwarz, R. Santillan, A. Ebon, and F. Guillermo

Introduction

The implementation of "law enforcement activity" is one of the main sub-projects of PhilinCon, administered by its operational arm PanayCon. The sub-project workers are otherwise known as "Bantay Gubat" or Forest Rangers/Guards. To legalize the operations undertaken by our forest rangers against the illegal activities destroying our forests, the rangers are duly deputized as WEO (Wildlife Enforcement Officer) by the office of the DENR Region 6. The WEO is renewed every year, and valid in the municipalities of Libertad, Pandan, and Sebaste. In contrast to adequately funded WEOs in previous years, our FR team currently comprises only six full-time rangers. Additional rangers may join the team on a daily basis, if necessary. Despite being a small team and allotted with limited allowances, our FRs account for several successful apprehensions outlined below.

Background

In the year 2001 the first and at the time only forest guard was hired to act as a so-called "forest monitor". When his efforts were recognized as a success, forest monitoring was added as one of the top priorities among the project's objectives, in order to help our conservation partner, the DENR, to protect the last lowland forest of the North West Panay Peninsula. The number of FRs was later increased to 18. Due to their profound knowledge, we hired former hunters, timber poachers and other people previously engaged in other illegal activities harming our precious forests in the NWPP and the CPMR. By acting as Forest Rangers, they could receive an income and bring in their experience without negatively affecting the forest.

Unfortunately, in the last quarter of 2009, almost all rangers lost their jobs due to mismanagement by previous project members, eventually leading to the pull-out of a major sponsor. Despite receiving no payment, our FRs continued to undertake operations on a voluntary basis.

Achievements 2014

Last year, our rangers had 48 operations, undertaken in the municipalities of Pandan, Sebaste and Libertad (Antique), and Buruanga (Aklan), respectively. Illegal logging and poaching were documented 13 times. On nine instances, a total of over 135 (!) pieces or logs of illegally cut trees could be apprehended and turned over to the PNP/DENR. Notable is the canter stopped with the help of the PNP on June 8 at Centro Norte, Pandan, loaded with 66 pieces of illegally cut Laua-an and Libtog timber. A matter of great concern are also the paraphernalia confiscated at a poacher camp close to Sibaliw station. They belonged to a well organized and heavily armed group of six to eight poachers from Nabas, Aklan and Cubai, Libertad, who are regularly hunting warty pigs, monkeys and hornbills for supplying the souvenir trade in Boracay.



Table 1. Forest and wildlife monitoring successes: Upper row: turtle nest monitoring at San Andres in December 2014. Middle left: illegally cut timber apprehended in February 2013. Middle right to lower right: Poacher camp in the NWPPNP. Middle right: cooking place. Lower left: snaring equipment. Lower right: shotgun ammo and feathers of poached tarictic hornbill.

Forest ranger activities in the year 2014.

DATE AND	LOCATION	ACTIVITY	FOREST	REMARKS
TIME			RANGERS	
			/WEOs	
			INVOLVED	
January 04,	Brgy. San Andres, Pandan,	Foot patrolling	Ebon, Armelito Jr.	The team did not find
2014	Antique	/monitoring	Matinong, Jose	any signs of illegal
7:00 P.M.			Domingo, Rudy	activities during an
			Ibanez, Cerwin	overnight operation
January 06,	Brgy Talisay, Pandan,	Monitoring	Matinong, Jose	After a close
2014	Antique	Confiscation/	Dujali, Joven	monitoring, 5 pieces of
1:00 P.M.	_	Apprehension		Dao timber with the
				dimensions of 2x4x16
				were successfully
				confiscated by the PNP
				Pandan, headed by
				Chief PI Jose Partisala.
January 08,	Brgy. San Andres, Pandan,	Monitoring	Matinong, Jose	After a follow-up
2014	Antique	Confiscation	Guillermo, Faustino	monitoring together
8:00 A.M.		Apprehension		with PNP Pandan,
				headed by SPO1
				Ranchez Barsubia and
				company, the team
				found Narra trees that
				had been logged
				illegally:
				1 pc. timber 16x20x7
				1 pc. log 26x30x7
				1 pc. log 24x28x7
10:00 A.M.	PhilinCon Office	Orientation on	Ebon, Armelito Jr.	WEOs IDs were given
	L.A. Dioso Public Library	Wildlife	Guillermo, Faustino	to PhilinCon WEO staff
	Bldg.	Enforcement	Matinong, Jose	by DENR personnel in
	Brgy. Baybay, Pandan,	Officers	Fernandez, Freddie	the persons of For.
	Antique		Dujali, Joven	Amadona Rana and
			Santillan, Rhea	Ms. Selma Joy Barcival.
			Domingo, Rudy	
			Manga, Joeman	
			Ibanez, Cerwin	
January 16,	Brgy. San Andres, Pandan	Follow-up	Guillermo, Faustino	The team confirmed that
2014	Antique,	monitoring	Ebon, Armelito Jr.	the logged Narra were
9:00 A.M.			Matinong, Jose	still there.
			Dujali, Joven	
January 21-22,	Sibaliw Research Station	Foot patrol	Ebon, Armelito Jr.	The team did not find
2014	NWPP	Monitoring	Guillermo, Faustino	any signs of illegal
7:00 A.M.			Matinong, Jose	activities, despite
			Dujali, Joven	previously received

			Domingo, Rudy	reports about illegal
				hunters.
February 13-14,	Brgy. Duyong, Pandan,	Monitoring	Ebon, Armelito Jr.	During an overnight
2014	Antique		Matinong, Jose	monitoring, the team
6:00 P.M.			Domingo, Rudy	found an Ughayan tree
			Dujali,Joven	that had been cut down
				and sliced into timber.
				The timber had already
				been delivered.
February 26,	Brgy. Nauring, Pandan,	Monitoring	Guillermo, Faustino	Despite received reports
2014	Antique		Ebon, Armelito Jr,	on an illegal boat hull
6:00 P.M.			Matinong, Jose	made of a Mugni tree,
			Dujali, Joven,	during an overnight
			Domingo, Rudy	monitoring the team
				could not confirm the
				delivery of the boat hull.
March 7-9, 2014	Brgy. Maramig to Sibaliw	Conduct survey	Ebon, Armelito Jr.	The team found and
8:00 A.M.	Research Statiion	on the uprooted/	Guillermo, Faustino	listed different species
	(NWPP-PA)	damaged trees	Matinong, Jose	of uprooted trees caused
		caused by	Dujali, Joven	by Yolanda: 3 Red
		typhoon Yolanda	Domino, Rudy	Laua-an, 2 Malaboyo, 1
			Mangga, Joeman	Baid, 1 Natu, and 2
		Foot patrolling/		Malakbakan
		monitoring		
March 11, 2014	Brgy. Nauring, Pandan,	Follow-up	Ebon, Armelito Jr.	After a whole night of
7:00 P.M.	Antique	Monitoring	Faustino, Guillermo	monitoring, the team did
			Matinong, Jose	not find any Mugni boat
			Dujali, Joven	hull, despite a
				previously received
				report from a concerned
				citizen.
				Instead, together with
				PNP Pandan, the team
				saw a tricycle with a
				temporary plate No.
				064409, owned by Mr.
				Roque Carino of Brgy.
				Fragante, loaded with
				timber to be delivered to
				a certain Mr. Hernani
				Baraca of Brgy.
				Nauring.
March 14, 2014	Mt. Muntili, Brgy. Duyong,	Patrolling,	Ebon, Armelito Jr.	2 pieces of Narra
6:30 P.M.	Pandan,	Monitoring	Guillermo, Faustino	timbers with the
	Antique	Confiscation	Domingo, Rudy	dimensions of 2x8x7
			Fernandez, Freddie	were found by the team
				together with the PNP
				Pandan along the road

March 15, 2014 7:00 P.M.	Brgy. Nauring, Pandan, Antique	Patrolling Monitoring	Guillermo, Faustino Ebon, Armelito Jr.	to Mt. Muntili. The retrieved timbers were brought to the PNP station for proper custody. Despite received reports from an informant about
			Matinong, Jose	a boat hull made of Mugni being about to be delivered from Brgy. Fragante, passing Pukatod River, down to Nauring River, the team did not find this reported hull during a whole night of monitoring. So, a follow-up monitoring will be conducted.
April 5-6, 2014 7:00 P.M.	Sitio Tabay, Brgy. Patria, Pandan, Antique	Foot patrolling monitoring	Ebon, Armelito Jr. Matinong, Jose	Despite previously received reports about Laua-an timber to be delivered from Mt. Bantulinao, Sitio San Juan, Brgy. San Roque, after two nights of operation the team did not find any traces of illegally cut timber.
April 7-8, 2014 7:00 P.M.	Brgy. Duyong, Pandan, Antique	Foot Patrolling Monitoring	Guillermo, Faustino Ebon, Armelito Jr. Matinong, Jose Dujali, Joven Domingo, Rudy Fernandez, Freddie	Because of a report from a concerned citizen about Narra timber to be delivered from Mt. Montili (between the Boundary of Brgy. Duyong and Brgy. Tingib), the team conducted an overnight monitoring but did not find any signs of illegal activities.
April 14-15, 2014 8:00 P.M.	Northwest Panay Peninsula (Sibaliw Research Station)	Foot patrolling Monitoring	Guillermo, Faustino Ebon, Armelito Jr. Matinong, Jose Domingo, Rudy Fernandez, Freddie Dujali, Joven	On the first day of monitoring the team camped overnight at Mt. Jubo and Mt. Tabyaka. During an overnight foot patrolling no signs of illegal activities could

	<u> </u>			1
				be detected.
				On the second day the
				team passed by the
				Station and went down
				to Bulanao together with
				Prof. Eberhard Curio.
April 30, 2014	Brgy. Duyong, Pandan,	Monitoring	Ebon, Armelito Jr.	Monitoring was
10:00 A.M.	Antique		Guillermo, Faustino	conducted after
			Matinong, Jose	information was
			Dujali, Joven	received from an
				informant through PNP
				Chief of Police, Jose
				Partisala. However, the
				team found out that
				mahogany had been cut
				instead of the reported
				Narra tree.
June 08-09,	Sitio Calabanog, Brgy.	Monitoring	Ebon, Armelito Jr.	A white elf canter with
2014	Idiacacan to Brgy. Nauhon,	Apprehension	Guillermo, Faustino	plate No. POD 845
6:00 P.M.	Sebaste, Antique		Matinong, Jose	loaded with 66 fletches
			Dujali, Joven	of both Laua-an and
			Domingo, Rudy	Libtog timber was
			Frenandez, Freddie	apprehended at Centro
				Norte, Pandan, Antique,
				through the help of the
				PNP Pandan, headed by
				their Officer-in-Charge,
				PI Bryan Alamo.
				It turned out that the
				drivers had been Mr.
				Bernie Elegino y
				Agravante and Mr. Bien
				Berte y Lomugdang,
				both residents of Idio,
				Sebaste. The owner of
				the timber was Mr.
				Oliver Berte y
				Lomugdang.
June 12-14,	Northwest Panay Peninsula	Monitoring	Guillermo, Faustino	The team heard a gun
2014	Protected Area	Foot patrol	Ebon, Armelito Jr.	fired at Mt. Liktinon,
8:00 P.M.		_	Matinong, Jose	and heard it again on the
			Dujali, Joven	following day. While
			Fernandez, Freddie	searching the area where
			Domingo, Rudy	the gun had been fired,
				the team saw 2 hunters
				with a home-made
				shotgun and a 22 caliber
				handgun. These two
	<u> </u>		1	

				hunters were seen going back to their area at Sitio San Juan, Brgy. San Roque, Libertad, Antique.
June 15, 2014 7:30 P.M.	Brgy. Tingib to Brgy. Patria, Pandan, Antique	Foot Patrolling/ Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Fernandez, Freddie	Because of previously received reports from a concerned citizen that Narra timber was to be delivered in Brgy. Patria, the team coordinated with Brgy. Capt. Hon. Carlito Garzon of Brgy. Tingib,
Luly 12 12 2014	Ducay Doguelas to Ducay	East Patral	Ehan Annalita In	in order to stay at his area, since it was a possible pathway of the Narra delivery. However, the team found nothing after follow-up monitoring.
July 12-13, 2014 8:00 A.M.	Brgy. Barusbus to Brgy. Inyawan, Libertad, Pandan, Atique	Foot Patrol Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Dujali, Joven Domingo, Rudy Fernandez, Freddie	Despite of received reports about timber to be delivered, during an overnight monitoring the team did not find any signs of illegal activities.
July 19, 2014 7:00 A.M.	Brgy. Duyong, Pandan, Antique	Monitoring	Guillermo, Faustino Ebon, Armelito Jr. Fernandez, Freddie Matinong, Jose Domingo, Rudy	Despite received reports through a phone call about ongoing cutting of Gmelina trees within a timberland area (DUPA Site), the following monitoring did not produce any Gmelina timber, nor had a chainsaw been heard operating.
July 19, 2014 7:30 P.M.	Brgy. Duyong, Pandan, Antique	Foot patrolling Follow-up Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Fernandez, Freddie Dujali, Joven	Follow-up monitoring/Foot patrolling was conducted. The team found only 2 pieces of 2x8x8 Gmelina timber left of the 500 board feet of Gmelina timber that had already been

				delivered. It was owned by DUPA Chairman Mr. Rhodel Lamigas. Based on our investigation, Mr. Demetrio Francisco of Brgy. Tingib had
				been the chainsaw operator. It could be confirmed that it had not been the first time of illegal cutting of trees at
July 19, 2014 7:00 P.M.	Brgy. Dumrog, Pandan, Antique	Foot patrol monitoring	Ebon, Armelito Jr. Guillermo, Faustino Fernandez, Freddie Matinong, Jose	the DUPA site. Despite received reports from a concerned citizen on Laua-an timber, the team did not find any signs of illegal activities during an overnight patrol.
August 02-03, 2014 6:00 A.M.	Brgy. Fragante to Brgy. San Andres, Pandan, Atique	Foot Patrol Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Dujali, Joven Domingo, Rudy Fernandez, Freddie	Despite information received from a concerned citizen regarding some illegally sliced Narra timber to be delivered, the team did not find any sightings of illegal activities after two nights of monitoring/ patrolling.
August 06, 2014 7:00 P.M.	Brgy. Sto. Rosario, Pandan, Antique	Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Dujali, Joven Domingo, Rudy Fernandez, Freddie	Despite of reports from a concerned citizen about sliced Mugis timber in various dimensions about to be delivered, the team did not find any sightings of illegal activities after a whole night of monitoring/patrolling.
August 6, 2014 9:00 A.M.	Brgy. Zaldivar, Pandan, Antique	Rescue and release of a hawksbill turtle	Dr. Sanchez, Enrique D. Jr.	On August 6, 2014, a hawksbill turtle was captured by fishermen from Brgy. Zaldivar, but soon after turned over to PhilinCon in the person of Dr. Sanchez Jr After 2 injections of treatment

				with antibacterial and fat soluble vitamins, the said turtle was released on August 8.
August 13-15, 2014 7:00 P.M.	Brgy. Barusbus, Libertad, Pandan, Antique and w/in the NWPP-PA	Foot patrol monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Tenorio, Joeserey Domingo, Rudy	After a whole night of monitoring operations from Mt. Bulalis via Mt. Palhe to Mt. Tabyaka, the team did not find any signs of illegal activities in the area.
August 17, 2014 8:30 A.M.	Brgy. Dumrog, Pandan, Antique	Foot patrol monitoring that led to a successful apprehension.	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Dujali, Joven Domingo, Rudy Fernandez, Freddie	After valuable information from a concerned citizen, the following operation led to a very successful apprehension of 17 pieces of Natu timber with a total of 196 bd. ft Full police assistance was provided by the Office of PNP Pandan, headed by PNP Insp. Bryan Alamo Chief of Police/Station Commander.
August 18, 2014 6:00 P.M.	Brgy. Centro Norte, Pandan, Antique	Monitoring Apprehension	Santillan, Rhea Guillermo, Faustino	33 pcs. = 342.6 bd. ft. of illegally cut and transported Mugis tree lumber were apprehended at the police checkpoint conducted by the PNP Pandan, headed by PNP Insp. Bryan Alamo. The information was gathered by the two WEOs listed in this report.
August 19, 2014 5:00 A.M.	Mt. Tawidwid, Brgy. Luhod Bayang, Pandan, Antique	Monitoring	Matinong, Jose Ebon, Armelito Jr.	No sign of illegal activities at the area could be detected during a whole night of monitoring/patrolling.
August 25, 2014 3:20 A.M.	Sitio San Juan, Brgy. San Roque, Libertad to Brgy. Patria, Pandan, Antique	Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose	Despite information received from a concerned citizen regarding illegal

				timber to be delivered from Sitio San Juan to Sebaste, the team did
				not find any traces of illegal activities.
September 5-6, 2014	Mt. Igpangi, Brgy. Mag- aba, Pandan, Antique	Monitoring	Guillermo, Faustino Ebon, Armelito Jr.	No sign of illegal activities in the area
8:00 P.M.			Matinong, Jose Domingo, Rudy Fernandez, Freddie	could be detected after a whole night of monitoring/patrolling.
September 10, 2014 7:00 P.M.	NWPP-PA	Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose	
9:00 P.M.	Sitio San Juan, Brgy. San Roque, Libertad to Brgy.	Monitoring	Domingo, Rudy	
September 12, 2014 7:00 P.M.	Brgy. Sto. Rosario to Brgy. Mag-aba, Pandan, Antique	Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Domingo, Rudy	
September 15- 16, 2014 8:00 P.M.	Sitio Kaligdon, Brgy. Mag- aba, Pandan, Antique	Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Domingo, Rudy	
September 20- 21, 2014 5:00 P.M.	Mt. Talangban, Brgy. Mag- aba to Brgy. Tingib, Pandan, Antique	Foot Patrol Monitoring	Ebon, Armelito Jr. Matinong, Jose Guillermo, Faustino Domingo, Rudy	Despite received reports about illegal cutting of timber at night-time, the team did not find any sighting of illegal activities during an overnight monitoring.
September 23- 2014 10:00 A.M.	Brgy. Sto. Rosario, Pandan, Antique	Monitoring	Ebon, Armelito Jr. Matinong, Jose	Despite information received from a concerned citizen regarding the illegal slicing of a Mugni tree, the team found out during monitoring that only coconut trees were at the reported area.
September 27- 28, 2014 7:00 P.M.	Brgy. Tingib, Pandan, Antique	Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Domingo, Rudy	Despite information received from a concerned citizen regarding illegal timber to be delivered from Brgy. Tingib to Pandan, the team did not detect any illegal

				activities during their monitoring.
October 1, 2014 8:00 P.M.	Brgy. San Roque, Libertad, Antique	Monitoring	Ebon, Armelito Jr. Matinong, Jose Guillermo, Faustino	Monitoring conducted after request by PASU Rhodel Lababit
October 15, 2014 3:00 P.M.	Sitio San Juan, Brgy. San Roque, Libertad, Antique	Monitoring	Ebon, Armelito Jr. Matinong, Jose Domingo, Rudy Guillermo, Faustino	
October 20-21, 2014 9:00 A.M.	Sitio Atabay, Brgy. Patria, Pandan to Sitio San Juan, Libertad, Antique	Foot patrol Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Domingo, Rudy	During an overnight monitoring the team did not find a reported illegally cut Kamagong tree.
October 23, 2014 10:00 P.M.	Sitio San Juan, Libertad, Antique	Monitoring	Ebon, Armelito Jr. Matinong, Jose Domingo, Rudy Santillan, Rhea	Despite received information regarding a white elf delivering illegal timber from Sitio San Juan to North Sebaste, no vehicle could be spotted during overnight monitoring.
October 25-26, 2014 4:00 P.M.	Sitio Calabanog, Brgy. Idiacacan, Pandan, Ant.	Foot patrol Monitoring	Ebon, Armelito Jr. Matinong, Jose Domingo, Rudy Guillermo, Faustino Fernandez, Freddie	The team conducted a foot patrol to Mt. Kabuluan, where a boat hull was reported to be located, but found nothing after an overnight operation.
November 03- 05, 2014 1:00 P.M.	Brgy. Nauhon, Sebaste, Antique	Monitoring Foot patrol	Ebon, Armelito Jr. Matinong, Jose Guillermo, Faustino Domingo, Rudy	Despite information received from a concerned citizen regarding the illegal poaching of timber, intended to be used as boat hull, the team found nothing after 2 days of monitoring/foot patrol.
November 12- 13, 2014 9:00 A.M.	Brgy. Candari, Brgy. Sto. Rosario to Brgy. Guia	Monitoring	Ebon, Armelito Jr. Guillermo, Faustino Matinong, Jose Domingo, Rudy Fernandez, Freddie	During an overnight monitoring conducted by the team, there were no sightings of previously reported electro-fishing in the area.
November 21, 2014	Brgy. Mag-aba, Pandan, Antique	General Clean up	Ebon, Armelito Jr. Guillermo, Faustino	General cleaning of Mag-aba Rescue and

9:00 A.M.			Matinong, Jose	Rehabilitation Facility
).00 T			Domingo, Rudy	in preparation of an
			Fernandez, Freddie	upcoming visit of
			r cmanacz, r readie	tourists.
November 25-	Northwest Panay Peninsula	Foot patrol	Ebon, Armelito Jr.	When the team reached
27, 2014	Protected Area	Monitoring	Guillermo, Faustino	Palhe Cave, they found
8:00 A.M.			Matinong, Jose	21 pieces of ropes, 1
			Domingo, Rudy	cooking pot and 4
			Fernandez, Freddie	plates. These
			Mangga, Joeman	paraphernalia were
				presumably owned by
				illegal hunters active in
				the area. Targeted
				species had obviously
				been wild pigs and
				endangered birds, esp.
				Tarictics.
December 09-	Sitio Calabanog, Brgy.	Monitoring	Ebon, Armelito Jr.	The team started to
10, 2014	Idiacacan to Brgy. Patria,	Foot patrol	Matinong, Jose	conduct a turtle nest
7:00 P.M	Pandan, Antique	•	Guillermo, Faustino	monitoring from Sitio
	, ,		Domingo, Rudy	Calabanog down to
			Fernandez, Freddie	Brgy. Patria. A
			Santillan, Rhea	concerned citizen
			,	provided information on
				a potential nest at
				around 6:30 in the
				morning. At around 10
				P.M. the team arrived at
				said nesting site at Brgy.
				San Andres, but the
				turtles had already
				hatched successfully a
				month ago. In order to
				confirm the information,
				the team started to dig
				out the nest and found
				shells of newly hatched
				turtles. Mr. Ricky
				Tamboong showed us 2
				rescued newly hatched
				turtles which were about
				2 weeks old. We asked
				him why he did not
				inform us in time, and
				he explained that he had
				informed their fish
				warden, Mr. Bobby
				Tindog, who informed

				neither the project nor
				the office of the
				MENRO.
December 25,	Brgy. Cabugao, Pandan,	Monitoring	Ebon, Armelito Jr.	In response to
2014	Antique	Apprehension	Guillermo, Faustino	information received
9:30 A.M			Matinong, Jose	from a concerned citizen
			Santillan, Rhea	about illegal cutting of a
				Narra tree, the team
				apprehended, together
				with the PNP Pandan
				headed by Chief PI
				Brian Alamo, some
				Narra timber owned by
				Mr. Aokly Alvaro. The
				timber is now under
				custody of Brgy. Capt.
				Benito Rubite.
December 26-	Brgy. San Andres, Pandan,	Monitoring	Ebon, Armelito Jr.	The team found 2
27, 2014	Antique		Matinong, Jose	Tipolo trees that had
9:00 A.M			Guillermo, Faustino	been already cut down,
			Domingo, Rudy	and 1 Mugni tree which
			Fernandez, Freddie	had been already sliced
				into timber and hauled
				away. The 2 Tipolo
				have not yet been
				finished because the
				chainsaw operator had
				an accident while
				cutting it.

1.3 Animals under the care of PhilinCon Year 2014

by E. Sanchez Jr., DVM

Sibaliw

Admission	Animal	Sex	Ring#	Remarks
Date/Origin	Species			
Brgy. Alegre, Sebaste,	Dulungan	male	0031	Slated for release -
Antique	(Aceros			target date January
2004	waldeni)			of 2015
June 2000	2 Dulungans	Female	0035	Slated for release -
Brgy. Idiacacan, Pandan,	(Aceros waldeni)	Female	0036	target date is January
Antique				of 2015.
May 2002	Tarictic	Female	0033	
sent up to Sibaliw 2008	(Penelopides			

	panini)			
June 6, 2007	Tarictic	Female	0151	Sent up to Sibaliw
Brgy. Bagumbayan,	(Penelopides			February 11, 2009
Pandan, Antique	panini)			
May 24, 2007	Taricite	Male	104	
Sebaste, Antique	(Penelopides			
	panini)			
sent up to Sibaliw	Tarictic	Female	0164	Mortality due to
September 21, 2010	(Penelopides			super-typhoon
	panini)			Yolanda in November
				2013
September 18, 2012	Dulungan			Surrendered to
Sitio Bulabog, Brgy.	(Aceros waldeni)			DENR, CENRO
Balabag, Boracay Island,	(immature)			PAWCZMS Boracay
Malay, Aklan				through PhilinCon
				by Mr. Toby Mockel,
				and facilitated by Mr.
				Jason Probyn and Del
				Nano, owners of
				Nigui-Nigui Resort, Boracay Island, and
				Mr. Jun Aguirre from
				the Philippine News
				Agency (PNA). The
				hornbill has been sent
				to Sibaliw Station
				after 60 days of
				quarantine in Bulanao
				Reha Facility.
June 20, 2014	2 Dulungans	Male		Surrendered by Mr. J.
	(Aceros waldeni)	Female		Amar of Brgy.
	(immature)	Temate		Importante, Mun. of
				Tibiao, Antique,
				through the efforts of
				Tibiao Fish Spa
				owner Nick Calawag
				of Brgy. Malabor.
				Mortality of 1 bird
				due to stress caused
				by environmental
				factors. Turn-over to
				PhilinCon in a DENR
				ceremony (DENR
				Caravan) in Libertad,
				Antique.

Bulanao Rehabilitation Facility

Admission Date/Origin	Animal Species	Sex	Ring #	Remarks
July 2011	3 Tarictics	Male		Sent to Bulanao in
Brgy. Calabanog, Pandan,	(Penelopides	Female		August 2011.
Antique	panini)	Female		Mortality of 1 female
	(nestlings)			during super-typhoon
	-			Yolanda on

		November 8, 2013.
November 30, 2011	Crested Serpent	Admitted to Mag-aba
San Andres, Pandan,	Eagle	Reha. Information on
Antique	(Spilornis cheela	the whereabouts of
_	holospilus)	this bird was provided
	(adult)	to PhilinCon office
		staff by our partner
		NGO, CAPE
		Foundation. The
		turnover to our FR's
		has been witnessed by
		the President of
		CAPE, Macky
		Lovina.
		Mortality due to
		super-typhoon
		Yolanda in November
		2013.
December 20, 2011	2 Brahminy	Birds were donated
Religious Group Rally	Kites	for rehabilitation and
against mining in Antique	(Haliastur indus)	future release. 1 bird
Province, San José Public		is a mortality of
Plaza		super-typhoon
		Yolanda.
June 20, 2014	2 Tarictics	Turned over to
	(Penelopides	PhilinCon by the
	panini)	DENR during a
	(immature)	ceremony in Libertad,
		Antique. Surrendered
		to the DENR Office
		by Nick Calawag.

Mag-aba Rehabilitation Facility

Admission date/Origin	Animal Species	Sex	Ring #	Remarks
July 2007	Crested Serpent		0799	Slated for release,
Brgy. Pajo, Libertad,	Eagle			targeted schedule is
Antique	(Spilornis cheela			January 2015.
	holospilus)			
	(adult)			
May 2011,	Grass Owl			Surrendered to DENR
Brgy. Fragante, Pandan,	(Tyto capensis)			through PhilinCOn by
Antique				Mr. Nonilon Dioso,
				And facilitated by SB
				Reynaldo Dioso and
				PhilinCon WEOs'
				together with
				Christian Schwarz.
				Slated for release,
				targeted schedule is
				January 2015.
August 11, 2012	3 Crows			Surrendered to DENR
Sitio Burabod, Brgy.	(Corvus			CENRO PAWCZMS

Callan, Sebaste, Antique	brachyrhynchos)			through PhilinCon by
				Arnaldo Nepomuceno
				& Hermie Yac-yac.
				Released after a
				month (30 days) of
				quarantine.
Santambar 24, 2012	Dulungan			Surrendered to
September 24, 2012	Dulungan			
Poblacion, Kalibo, Aklan	(Aceros waldeni)			PhilinCon on behalf
	(adult)			of CENRO Kalibo by
				Grace Mapeso-
				Quimpo. The bird has
				probably been in
				captivity for 14 years,
				as estimated by the
				owner. She had
				inherited the bird
				from her father.
				Mortality due to
				pectoral muscle
				atrophy and bacterial
				infection.
January 16, 2013	Honey Buzzard			Turn-over was
,	(Pernis steerei)			facilitated by Brgy.
	(immature)			Captain of Baybay,
	(miniature)			Pandan, Hon. Michael
				O. Condez, Liga
				President of the
				Association of
				Barangay Chairmans,
A	V: C 1			Pandan, Antique.
August 8, 2013	Visayan Spotted			Turned over by
	Deer			CENRO San José,
	(Rusa alfredi)			Antique, upon the
	(juvenile)			recommendation of
				PAWCZMS Region 6
				RTD Office (Carlo
				Custodio). Initially
				confiscated by the
				members of the PNP
				Mobile Group
				Bugasong, Antique,
				during their patrol
				operations in the
				hinterland barangays.
December 7, 2013	Changeable	Female	32442 w/	Rescued by a
, -	Hawk Eagle		Wilhelmshaven	fisherman from Brgy.
	(Spizaetus		Vogelwarte	San Andres, Pandan,
	chirratus)			Antique on December
	(subadult)		Helgoland	2007. Said raptor
			inscription	perched on his banca
				and appeared weak
				and tired. Its last
				resort had been to
				hunt in the fish caught
				by the fisherman out
				of his banca. The bird

	<u> </u>		1 11 11
			was probably unable
			to find prey, which
			had probably become
			very scarce due to
			super-typhoon
			Yolanda. Upon
			capture, the fisherman
			informed the MENRO
			(Municipal
			Environment and
			Natural Resources
			Officer) of Pandan,
			who immediately
			called the PhilinCon
			Reha in Mag-aba,
			Pandan.
			Rehabilitation and
			Release: The raptor
			was brought up to
			good health, and after
			a necessary
			quarantine period of
			30-45 days it was
			finally released on
			January 30, through
			an effort of the GIZ
			ForClim Project 2014.
			The release has been
			documented by a TV
			journalist from
			Germany.
July 2014	Crested Serpent		Turned over to
	Eagle		PhilinCon after being
	(Spilornis cheela		received by our
	holospilus)		FR/WEO Rudy
	(immature)		Domingo.
August 6-7, 2014	Hawksbill Turtle	not determined	Turned over to
120000 0 7, 201 1	(Eretmochelys	not determined	PhilinCon. The donor,
	imbricata)		Mr. Jesus Patiño,
	(immature)		captured the said
	(minature)		animal because it had
			been weak and floated
			on the sea surface,
			appearing emaciated.
			Treatment regime included antibacterial
			medications and
			vitamins A, D and E.
			Both medications
			have been
			administered
			intramuscularly. The
			turtle was released on
			August 8, 2014

Note: Admitted animals which are classified as "Unsuitable for release" are sent to the PAWD DENR Region 6 in Iloilo City.



Release of Changeable Hawk-Eagle in Magaba on January 30, 2014. Left: Dr. Enrique Sanchez, Jr. explaining Mag-aba reha facility to local and international witnesses, including a German film team. Right: Eagle female being released.



Release of Hawksbill Turtle in Barangay Zaldivar, Pandan, on August 8, 2014.

2. Conservation Research: Taxonomy and Biodiversity

2.1 Gambaquezonia curioi - a new species of Gambaquezonia from the Philippine island Panay (Araneae: Salticidae)

Summary. - The jumping spider genus *Gambaquezonia* has been considered monotypic and endemic to the Philippine Island Luzon. Here, we describe a new species from the Philippine Island Panay, based on genital characters of a male and female specimen. The new species, *Gambaquezonia curioi*, is distinguished by the shape and structure of the male embolus and tibial apophysis and the epigynal sperm duct. Finally, we highlight the necessity of further arachnological exporations on the Philippine Archipelago (**App. 3**).

2.2 The praying mantids of Panay – an annotated checklist

By Christian J. Schwarz, MSc., Project Manager

Introduction

The praying mantids (Mantodea) are a dictyopteran order of exclusively carnivorous insects, with about 2,500 described species (SVENSON *et al.* 2015). All species are thermophilous and strictly solitary predators distributed mainly in the tropics where they exhibit a variety of lifestyles and morphological ecotypes (PRETE *et al.* 1999, EHRMANN 2002, SCHWARZ 2003).

Like most invertebrates, this group of insects is largely understudied in the Philippines, all data available to date being in fact decades-old expedition collections from Luzon or Mindanao, or without any specific locality. The most important contributions are those of STÅL (1877), HEBARD (1920), WERNER (1922, 1926) and BEIER (1966). Preliminary catalogues of the Philippine mantodean fauna were compiled by BRUNER (1915) and WERNER (1926). The Western Visayas are notoriously undersampled, with only a few specimens from Negros known in the literature (HEBARD 1920, ROY 2011). From 2010 to 2015 the author was the first to study the Panay mantodean fauna on a regular basis. All habitat types have been repeatedly sampled in the course of the cane toad study via manual search, light and pitfall trapping. The mantodean results of these investigations are compiled in the following list. It is expected to be a fairly complete account of the species occurring on the island given the fact that no new species have been added to the list since 2012. All species are new records for the island, several are new to science and will be described subsequently.

The systematic arrangement of the order is currently in a state of successive revision, since recent phylogenetic studies (YAGER & SVENSON 2008, SVENSON & WHITING 2009, WIELAND 2013, LEGENDRE *et al.* 2015) are largely incongruent with the classic system established by BEIER (1964) and widely used since (e. g. EHRMANN 2002, OTTE & SPEARMAN 2005). Therefore, a revised system based on recent phylogenetic hypotheses is used here.

Information on distribution, life history, primary defense strategy, and habitat type is given for each species. Life history strategies include arbusticolous and arboricolous ambush hunters, hanging on the underside of leaves in rainforests or inhabiting weeds in open habitats, and semi-cursorial bark and ground mantids (see EDMUNDS & BRUNNER 1999 and SCHWARZ 2003 for a review). Bark mantids can be divided into several subtypes, depending on the type of tree they inhabit and on the adaptations to this habitat. The ground mantid niche

is poorly represented in SE Asia (SCHWARZ & KONOPIK 2014), even more so on Panay, which only harbors one species with mostly terricolous nymphs (see below).

With regards to the preferred habitat, the species on Panay can be roughly be grouped into two categories. Forest-dependent species are confined to closed canopy conditions and today restricted to primary and secondary dipterocarp forests, savaged plantations and neophyte stands. The second group is made up of species preferring open habitats. Initially, these taxa were confined to the upper canopy, tree fall gaps, landslide areas, and forest edges, but today they inhabit degraded man-made habitats like agricultural field margins, scrubland, and ruderal places. This group of mantids is naturally very rare in primary forests but was able to profit from human activity at the expense of forest taxa.

Mantids are masters of camouflage and employ several different strategies to disguise themselves from prey and predators. Generalist morphotypes rely on homochromy or crypsis (background-matching color pattern). These species are often polyphonic and able to adopt the colors and pattern of the background. Other taxa employ disruptive coloration and morphology (e. g. lobes) to break up the body outline. However, when removed from their habitat, members of these groups still look like edible insects. Morphologically more specialized taxa evolved to closely resemble certain structures of the habitat, like twigs or leaves, or mimic inedible or harmful arthropod models like ants. Their camouflage does not rely on a matching background to be effective.

Species list

Fam. Leptomantellidae

- 01. Leptomantella lactea (Saussure, 1870)
- Widely distributed in SE Asia.
- Confined to forests.
- Arboricolous, generalist ambush hunter inhabiting the canopy.
- Female exhibits a primitive form of brood care: it stays close to its ootheca and lacks aggression towards newly hatched nymphs.
- 02. Aetaella bakeri Hebard, 1920
- Endemic in the Philippines, with a close relative in Borneo.
- Confined to forests.
- Arboricolous, generalist ambush hunter inhabiting the understorey and lower canopy.
- Female exhibits a primitive form of brood care: it stays close to its ootheca and lacks aggression towards newly hatched nymphs.





Fam. Nanomantidae

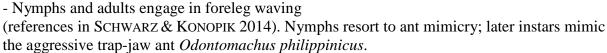
03. *Pliacanthopus* sp.

- New genus record for the Philippines, with close relatives in Malaysia.
- Species description in progress
- Confined to forests.
- Arboricolous, generalist ambush hunter inhabiting the canopy.



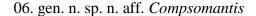
Fam. Gonypetidae 04. *Amantis aeta* Hebard, 1920

- Endemic in the Philippines, with close relatives in SE Asia.
- Confined to forests.
- Adults are generalist ambush hunters inhabiting the understorey and lower canopy, while nymphs are semi-cursorial and mainly terricolous (the only Panay mantid species sampled by pitfall traps). A terricolous or nearly terricolous lifestyle in both nymphs and adults is ancestral for the genus, *A. aeta* being an exception in this regard.





- Described from neighboring Mindoro, but also common on Panay.
- Found in open habitats.
- Arbusticolous; this bark mantis subtype prefers slender branches to sit on.
- Nymphs and adults engage in foreleg waving. Upon approaching threats, the mantids switch position to the opposite side of the twig.



- Genus and species new to science, description in progress.
- Endemic on Panay.
- Confined to forests, but preferring sunny places in secondary forests and at forest edges.
- Living on tree bark, prefers young trees.
- Nymphs and adults engage in foreleg waving. Upon approaching threats, the mantids switch







position to the opposite side of the trunk and run up several centimeters before flattening against the bark.

07. Theopompa sp.

- Possibly new to science; the status of this species is currently being investigated.
- Confined to forests.
- Living on tree bark, preferring the canopy of larger trees.
- Upon an approaching threat, the mantids flatten themselves; if threat persists, they quickly run up the trunk.

Fam. Haaniidae

08. Haania sp. "short wing"

- New to science, description in progress.
- Endemic on Panav.
- Confined to forests.
- Lives on mossy tree bark at low heights, representing a morphologically and behaviorally distinct subtype of bark mantids.
- The ecology of this species has been described elsewhere (SCHWARZ 2014, KÜHN-VAN GELDERN *et al.* this volume).

09. Haania sp. "long wing"

- New to science, description in progress.
- Endemic on Panav.
- Confined to forests.
- Lives on mossy tree bark, representing a morphologically and behaviorally distinct subtype of bark mantids.
- In contrast to the preceding species, this congener prefers dipterocarp bark heterogeneously covered in mosses, lichens, and small vines, climbs higher up the trace, and has a clightly divergent phonology.

up the trees, and has a slightly divergent phenology (SCHWARZ 2014).

Fam. Hymenopodidae

10. Creobroter meleagris Stål, 1877

- Endemic in the Philippines, with close relatives in SE Asia.
- Found in open habitats.
- Arbusticolous, generalist ambush hunter inhabiting the inflorescences of weeds and scrubs.









- This species represents the "flower mantis" ecotype in the Philippines, characterized by disruptive coloration and morphology (lobes). Most commonly found on *Ageratum conyzoides* and *Mikania cordata* (both Asteraceae), sometimes also on *Stachytarpheta jamaicensis* (Verbenaceae) and small individuals of *Melastoma polyantha* (Melastomataceae).

11. Odontomantis euphrosyne Stål, 1877

- Endemic in the Philippines, with close relatives in SE Asia.
- Found in open habitats.
- Arbusticolous, generalist ambush hunter inhabiting weeds and scrubs.
- Nymphs resort to ant mimicry, mimicking *Camponotus*, *Plagiolepis* and similarly-looking ants (MATHEW 1935).

12. Acromantis sp.

- The status of this species is currently being investigated; the genus is widely distributed in SE Asia.
- Confined to forests.
- Arboricolous; on Panay this species is a generalist ambush hunter inhabiting the canopy. Other species may prefer weeds and scrubs in open habitats.
- Nymphs resort to ant mimicry.

Fam. Deroplatyidae

13. Tagalomantis manillensis (Saussure, 1870)

- Endemic in the Philippines, known so far only from Luzon and Panay; a close relative occurs on Sulawesi.
- Redescription in progress.
- Confined to forests.
- Arboricolous ambush hunter inhabiting the understorey and lower canopy.
- This species represents the "stick mantis" ecotype on Panay, characterized by an elongate body and associated behavior enhancing stick resemblance. Female exhibits brood care: it guards its ootheca and lacks aggression towards newly hatched nymphs.

Fam. Mantidae

14. Statilia pallida Werner, 1922





- Endemic in the Philippines, with close relatives in SE Asia.
- Found in open habitats.
- Graminicolous and arbusticolous, generalist ambush hunter inhabiting grasses and weeds.
- The species exhibits green/brown polyphenism.

15. Tenodera aridifolia (Stoll, 1813)

- Widely distributed in SE Asia.
- Found in open habitats.
- Graminicolous and arbusticolous, generalist ambush hunter inhabiting grasses and weeds.
- The species exhibits a green/brown polyphenism.

16. Hierodula patellifera (Audinet-Serville, 1839)

- Widely distributed in SE Asia.
- Found in open habitats.
- Arbusticolous and arboricolous, generalist ambush hunter inhabiting weeds and bushes.
- The species exhibits a green/brown polyphenism. Freshly hatched nymphs resort to ant mimicry, mimicking the weaver ant *Oecophylla smaragdina*.

17. Hierodula cf. vitreoides Giglio-Tos, 1912

- Possibly endemic to the Philippines, the status of this species is currently being investigated.
- Confined to forests.
- Arboricolous, generalist ambush hunter inhabiting the canopy.
- The species exhibits a green/brown polyphenism. Freshly hatched nymphs resort to ant mimicry, mimicking the weaver ant *Oecophylla smaragdina*.







Discussion

When compared with other island groups (PAICs) of the archipelago (HEBARD 1920, WERNER 1922, 1926, BEIER 1966), the mantid fauna of Panay is rather impoverished, lacking several SE Asian genera known to occur on Luzon or Mindanao, like *Metallyticus*, *Amorphoscelis*, *Tropidomantis*, *Phyllothelys*, *Deroplatys*, *Euchomenella* and *Mesopteryx*. This picture will probably turn out to be also roughly true for the Western Visayas as a whole, even though Negros harbors at least two species which have not yet been recorded from Panay (ROY 2011, pers. obs.).

Most genera are represented on Panay by only one, often endemic species, with two exceptions. First, the speciose genus *Hierodula*, exemplifying the "typical" green generalist mantid in Asia and Australasia, has two species on Panay which occupy two different niches.

H. patellifera occurs in disturbed habitats, while *H.* cf. *vitreoides* requires more shade and replaces the former in primary forests. Heterogeneous secondary forests and savaged plantations may harbor both species.

More interesting is the occurrence of two species of *Haania* on Panay. This mantodean group is phylogenetically much older than the Philippine islands (SVENSON & WHITING 2009) and turns out to have undergone a radiation event after colonizing the archipelago, comparable to the frog genus *Platymantis*. Aside from the two species on Panay, at least five other Philippine and several Sundaian species await description (Schwarz & Stiewe in prep.).

Endemism level is moderate: 5 out of the 17 species recorded from the island are endemic, corresponding to a rate of 29%. The most unusual find is the single specimen of the new *Pliacanthopus* species, the first member of this genus recorded for the Philippines. It is possible that this or a related species occurs on other islands but has escaped detection so far.

The reasons for the low number of taxa contrasting with fair levels of endemism is found in the relative isolation of the Greater Negros-Panay PAIC with respect to the remaining archipelago in particular, and of the Philippines to SE Asia in general. While the Greater Luzon and the Greater Mindanao PAIC are today separated from adjacent SE Asian mainland (and from each other) by only one oceanic barrier, a second oceanic barrier separates the Western Visayas, acting as an additional dispersal filter. This confirms the rather low transoceanic dispersal abilities of mantodeans when compared to other groups (in fact it is rather similar to that of mammals), underscored by a very low diversity on oceanic islands (SCHWARZ & KONOPIK 2014 and references therein).

Another, maybe more important reason is the comparatively young age of the Greater Negros-Panay PAIC, which is estimated to be not older than 3.5 Ma (STEPPAN et al. 2003). Most other Philippine islands have provided dry land for longer periods of time (HALL 2009, STEPPAN et al. 2003, LOHMANN et al. 2011), providing colonization and persistence opportunities. In fact, speciation in most investigated taxa seems to be older than the PAICs created by glacial cycles and to reflect more the Miocene to Pliocene geologic history of the archipelago than Pleistocene sea level changes (STEPPAN et al. 2003, SILER et al. 2010, 2011, 2012). For example, emergent parts of the terranes making up present-day Sulawesi were connected with each other and with the northern Philippines via volcanic island chains until the Middle Miocene (15 Ma). Genera like Tagalomantis must have colonized Sulawesi and the Philippine archipelago from Sundaland by that time, since latest after 10 Ma, only the southern Philippines (where this genus does not occur) retained an island stepping stone connection to Sulawesi. In contrast, genera like Amorphoscelis and Deroplatys are missing from the central and northern Philippines, including Panay. They must have colonized the archipelago after 5 Ma, when stepping stones connected northern Borneo and Mindanao, and Borneo and Palawan, respectively (HALL 2009, LOHMANN et al. 2011).

References

BEIER M. (1964) Blattopteroidea, Mantodea, p. 849-970 in: BRONN H. G. (ed.), Klassen und Ordnungen des Tierreichs. Fünfter Band: Arthropoda. III Abteilung: Insecta. Geest & Portig, Leipzig.

BEIER M. (1966) Noona Dan Papers No. 29. Die Mantiden der Noona Dan Expedition nach den Philippinen und Bismarck Inseln. *Entomologiske Meddelelser* **34**: 361-370, 3 pl.

- Bruner L. (1915) Preliminary catalogue of the orthopteroid insects of the Philippine Islands. *University Studies* **15**: 195-281.
- EDMUNDS M. & BRUNNER D. (1999) Ethology of Defenses against Predators, p. 276-299 *in*: PRETE F. R., WELLS H., WELLS P. H. & HURD L. E. (eds), *The Praying Mantids*. The Johns Hopkins University Press, Baltimore & London.
- EHRMANN R. (2002) *Mantodea Gottesanbeterinnen der Welt*. Natur und Tier Verlag GmbH, Münster.
- HALL R. (2009) Southeast Asia's changing palaeogeography. Blumea 54: 148-161.
- HEBARD M. (1920) Studies in Malayan, Papuan, and Australian Mantidae. *Proceedings of the Academy of Natural Sciences of Philadelphia* **71**: 14-82, 2 pl.
- KÜHN-VAN GELDERN R. & SCHWARZ C. J. (this volume) Ecology of a Bark Mantis (*Haania* sp., Mantodea), p. 40, *in*: CURIO E. (ed.), *Panay Eco-Social Conservation Project* (*PanayCon*) *Eighteenth Annual Report*. Available as download at www.panaycon.org/index.html.
- LEGENDRE F., NEL A., SVENSON G. J., ROBILLARD T., PELLENS R. & GRANDCOLAS P. (2015) Phylogeny of Dictyoptera: Dating the origin of cockroaches, praying mantises and termites with molecular data and controlled fossil evidence. *PLoS ONE* **10** (7): e0130127, doi:10.1371/journal.pone.0130127.
- LOHMANN D. J., BRUYN M. DE, PAGE T., RINTELEN K. VON, HALL R., NG P. K. L., SHIH H.-T., CARVALHO G. R. & RINTELEN T. VON (2011) Biogeography of the Indo-Australian Archipelago. *Annual Review of Ecology, Evolution, and Systematics* **42**: 205-226.
- MATHEW A. P. (1935) Transformational deceptive resemblance as seen in the life history of a plant bug (*Riptortus pedestris*), and of a mantis (*Euantissa pulchra*). *Journal of the Bombay Natural History Society* 37: 803-813, 1 pl.
- OTTE D. & SPEARMAN L. (2005) *Mantida species file Catalog of the mantids of the world*. Insect Diversity Association, Publication Number 1, Philadelphia.
- PRETE F. R., WELLS H., WELLS P. H. & HURD L. E. (1999) *The Praying Mantids*. The Johns Hopkins University Press, Baltimore and London.
- ROY R. (2011) Les Amorphoscelinae Indo-Malais (Mantodea, Amorphoscelidae). *Revue française d'Entomologie (N. S.)* **32** (1-2): 65-92.
- SCHWARZ C. J. (2003) Diets and habitat preferences of neotropical praying mantids (Dictyoptera: Mantodea, Burm. 1838). Diploma thesis at the University of Würzburg.
- SCHWARZ C. J. (2014) Anspruchsvolle Zwerge Die Tarnkünstler der Gattung *Haania*. *Bugs* **6**: 24-29.
- SCHWARZ C. J. & KONOPIK O. (2014) An annotated checklist of the praying mantises (Mantodea) of Borneo, including the results of the 2008 scientific expedition to Lanjak Entimau Wildlife Sanctuary, Sarawak. *Zootaxa* **3797** (1): 130-168.
- SILER C. D., DIESMOS A. C., ALCALA A. C. & BROWN R. M. (2010) Phylogeny and biogeography of Philippine bent-toed geckos (Gekkonidae: *Cyrtodactylus*) contradict a prevailing model of Pleistocene diversification. *Molecular Phylogenetics and Evolution* **55**: 699-710.
- SILER C. D., DIESMOS A. C., ALCALA A. C. & BROWN R. M. (2011) Phylogeny of Philippine slender skinks (Scincidae: *Brachymeles*) reveals underestimated species diversity, complex biogeographical relationships, and cryptic patterns of lineage diversification. *Molecular Phylogenetics and Evolution* **59**: 53-65.
- SILER C. D., OAKS J. R., WELTON L. J., LINKEM C. W., SWAB J. C., DIESMOS A. C. & BROWN R. M. (2012) Did geckos ride the Palawan raft to the Philippines? *Journal of Biogeography* **39**: 1217-1234.
- STÅL C. (1877) Orthoptera nova ex insulis Philippinis descripsit. Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar **34** (10): 33-58.

- STEPPAN S. J., ZAWADZKI C. & HEANEY L. R. (2003) Molecular phylogeny of the endemic Philippine rodent *Apomys* (Muridae) and the dynamics of diversification in an oceanic archipelago. *Biological Journal of the Linnean Society* **80**: 699-715.
- SVENSON G. J. & WHITING M. F. (2009) Reconstructing the origins of praying mantises (Dictyoptera, Mantodea): the role of Gondwanan vicariance and morphological convergence. *Cladistics* **25**: 468-514.
- Svenson G. J., Hardy N. B., Cahill Wightman H. M. & Wieland F. (2015) Of flowers and twigs: phylogenetic revision of the plant-mimicking praying mantises (Mantodea: Empusidae and Hymenopodidae) with a new suprageneric classification. *Systematic Entomology* doi: 10.1111/syen.12134.
- WERNER F. (1922) Philippine mantids, or praying insects. *Philippine Journal of Science* **21**: 147-157, 1 pl.
- WERNER F. (1926) Zur Kenntnis der Mantodeen der Philippinen. Konowia 5: 227-232.
- WIELAND F. (2013) The phylogenetic system of Mantodea (Insecta: Dictyoptera). *Species, Phylogeny, and Evolution* **3**: 1-306.
- YAGER D. D. & SVENSON G. J. (2008) Patterns of praying mantis auditory system evolution based on morphological, molecular, neurophysiological, and behavioural data. *Biological Journal of the Linnean Society* **94**: 541-568.

3. Behavioural Ecology

3.1 Ecology of a Bark Mantis (*Haania* sp., Mantodea)

By Rabea Kühn-van Geldern and Christian J. Schwarz

Introduction and Methods



Haania sp. male (left) and female (right).

The SE Asian genus *Haania* Saussure, 1871, contains morphologically highly specialized praying mantids living on mossy tree bark. Ten species are currently known but the genus is more diverse than previously known; several species await description. Panay harbors two undescribed species, one of which is more abundant. Previous observations had revealed that the behavior of *Haania* differs considerably from typical generalist mantids (SCHWARZ 2014), so a more detailed study was conducted from February to March at Sibaliw station. Only one location in the primary forest is known to sustain a population of this mantid. However, it also occurs in the secondary forest, albeit at lower densities. The season was already advanced for this species, nevertheless 19 specimens (5 females, 1-2 males, 2-3 subadults and ten younger

nymphs) could be observed. Observation periods lasted from 11 to 17 h. Bark mantids exhibit site fidelity (SCHWARZ 2003), so usually a specimen could be encountered on the same tree on consecutive days. However, several individuals vanished during the course of the study. The following parameters were recorded: circumference of the inhabited tree, relative moss cover up to 1 m height, occurrence of vines, distance of mantid to the ground, cardinal direction, orientation of mantid, distance of mantid from margin of moss cover, and the direction of sun and wind with respect to the mantid. Intraspecific interactions and territorial behavior was also assessed by displacing selected individuals to trees occupied by a conspecific. Numerical values are given as mean \pm SD.

Results and Discussion

1. Morphology and primary defenses

These mantids exhibit crypsis, and disruptive coloration and morphology as adaptations to their habitat. Their green ground color is mottled with dark and light. Disruptive effects breaking up the body outline are achieved through the lobes on head, pronotum, and abdomen, annulated walking legs, and two pairs of bright lateral V-like patterns above the walking legs coxae. The walking legs are long, slender and stalk-like, holding the body of the mantid above the moss cover. Young nymphs are pale green and become successively brighter green in the course of the

Oothecae



post-embryonic development.

Oothecae are laid on structures protruding from the moss and are on average 5 mm long and 2-3 mm wide and high. In contrast to other bark mantids (HILL *et al.* 2004, SCHWARZ, this volume) *Haania* does not spiral up or down the trunk upon an approaching threat, but

bends the body and crouches against the moss. Only



Haania sp. female camouflaged on mossy bark



Habitat

when poked repeatedly they start to run away using all six pairs of legs. Adult males are good fliers and sometimes attracted to lights.

2. Habitat requirements

Haania sp. only inhabits dry trees covered by short mosses and hit by the sun. Therefore, it avoids most parts of the primary forest, which are too shady and too humid, and prefers steep slopes or adjacent secondary forests. Moss cover (at 100 cm height) of the trees inhabited by the study specimens averaged $81 \pm 9\%$. Average circumference of inhabited trees was 94 ± 62 cm. A possible explanation for the avoidance of thin trees is that those are shaken too much by the wind. Horizontal branches are likewise avoided.

3. Behavior

Orientation

Geotropy is strongly supported in this species, as has been in other bark mantids (e. g. LIEFTINCK 1953, LADAU 2003, SCHWARZ 2003): 91% of nymphs and 84% of adults assumed the geotropic position. Of the remaining, 8% of nymphs and 13% of adults chose the upright

position, while just 1-3% of specimens rested sideways.

The adaptive significance of geotropic behavior may be related to successful prey capture. Hunting against the direction of the light presumably impedes proper object recognition. Most bark mantids observed by the second author assume the geotropic orientation by day. In contrast, the upright position is often assumed by night (KROMBEIN 1963). These orientation switches between day and night have not been observed in *Haania* and *Astape* (LIEFTINC K 1953, Schwarz pers. obs.).

Perch height

Adults prefer the lower parts of the tree, resting at an average height of 34 ± 10 cm. In contrast, nymphs have been found to rest at heights of 83 ± 15 cm. The maximum height an individual has been found at was 120 cm.

Wind and sun avoidance

Almost all specimens (90% of adults and 100% of nymphs) rested on the lee side of the tree. This was also true with regard to the position of the mantid



First instar nymph

with respect to the sun: 97% of adults and 100% of nymphs rested outside direct sunlight.

The low heights preferred by the mantids in combination with their avoidance of excessive sun and wind may be a consequence of their habitat requirements, defined by low substrate humidity but high atmospheric humidity. Moss cover is more extensive at low heights in those parts of the forest inhabited by populations of this mantid. Also, wind stress is lower near the ground than at several meters off the ground, causing less disturbance (which equals to energetic loss) and desiccation stress to the individual. This may also be the reason for the localized occurrence of these mantids: long-fronded mosses in other parts of the primary

forest are too moist (because they dry out too slowly after rains), and impede proper locomotion.

Distance to moss cover margin

In most cases the mantids rested directly on the moss, keeping a distance of 24 ± 10 cm (adults) and 10 ± 5 cm (nymphs) to the margin of the moss cover. This is in concordance with their cryptic defense strategy. Mantids are able to perceive suitable backgrounds and prefer those in favor of non-matching resting places (reviewed in EDMUNDS & BRUNNER 1999 and BERG *et al.* 2011).

Cardinal direction

There was a difference in the preferred cardinal direction between adults and nymphs: while 56% of adults rested on the southern side of the tree, with North being the second-most preferred side (26%), nymphs preferred the northern and western sides (44% and 26%, respectively). This difference may be a consequence of the location, since the studied nymphs inhabited a different part of the forest with a different wind direction. Thus, the chosen resting side seems to be not influenced by cardinal direction per se, but by other abiotic factors like position of the sun and prevailing direction.

Activity

Haania sp. is less cursorial than other bark mantids and can be regarded as a typical ambush species which spends most of the day motionless. For adults, this amounts to 67% of the time. This roughly equals the amount of time spent motionless by the arboricolous ambush species *Sphodromantis lineola* (ZACK 1978), and is somewhat less than the 75.3% recorded for the bark mantis genus *Liturgusa* (SCHWARZ 2003). Prey capture and ingestion is a rare event, accounting for 1% of observation time. This is much less than the values recorded by SCHWARZ (2003) for *Liturgusa* (11.6%). This may be explained by the fact that the latter genus feeds mainly on ants, which are a common prey item, in contrast to the rather rare prey encounters most mantids are faced with.

Other activities observed in *Haania* are grooming (11%) and locomotion (21%). The time required for grooming roughly corresponds to the values for other species (16.7% in *S. lineola*, 11% in *Liturgusa*), while locomotion (not related to prey capture) is more common in *Haania*. It is mostly caused by wind driving the mantid to the lee side (15%), and as such may be a characteristic of the peculiar habitat of this species. Nymphs are more sedentary than adults, spending 96.7% of the time motionless.

4. Intraspecific interactions

Territorial behavior was tested by removing a subadult or adult specimen from its home tree and placing near a conspecific at about 15-20 cm. This experiment was not performed with young nymphs, since they show a much more greater tolerance to conspecifics than is the case in subadults and adults. In the field, several young and medium-sized nymphs may share a tree, while this is very rarely the case with adults. Only six specimens were available for this experiment due to the advanced season. Some specimens were used for more than one trial, allowing 10 trials to be performed.

In all cases (100%) the resident mantid showed dominant behavior, expressed either as active (attack, 50%) or passive (standing its ground, 50%) territory defense. The intruder fled in all cases. The attacks of the resident mantid resulted in one intruder being killed; four trials have been prematurely ended by the experimenter to avoid the killing of the attacked specimen. A

high degree of territoriality in adults had already been noted by SCHWARZ (2014) and partly coincides with observations on another *Haania* species from Palawan (Schwarz unpubl.) and on the closely related genus *Astape* on Java (LIEFTINCK 1953). In the latter cases, the territory of a female was also defended against intruders, but in contrast to the Panay species, more than one specimen may be found on a single tree.

The mantids of the genus *Haania* differ in several respects from typical ambush mantids which had served as models in scientific studies so far (see PRETE *et al.* 1999 and BERG *et al.* 2011 for an overview). This study was conducted towards the end of the adult's phenological timeframe, so obtaining a good sample size (particularly of adult males) proved problematical. Additional translocation experiments involving adults of both sexes and nymphs will help to deepen our understanding of the intraspecific behavioral repertoire of this mantid species, including sexual interaction, prey capture, and (the lack of?) territorial aggression towards nymphs. Observation time should be extended into the night to account for circadian shifts in activity patterns.

References

- BERG M., SCHWARZ C. J. & MEHL J. E. (2011) *Die Gottesanbeterin*, Mantis religiosa. Die Neue Brehm-Bücherei Bd. 656, Westarp Wissenschaften, Hohenwardsleben.
- EDMUNDS M. & BRUNNER D. (1999) Ethology of Defenses against Predators, p. 276-299 *in*: PRETE F. R., WELLS H., WELLS P. H. & HURD L. E. (eds), *The Praying Mantids*. The Johns Hopkins University Press, Baltimore & London.
- HILL P., HOLWELL G., GÖTH A. & HERBERSTEIN M. (2004) Preference for habitats with low structural complexity in the praying mantid *Ciulfina* sp. (Mantidae). *Acta Oecologica* **26**: 1-7.
- KROMBEIN K. V. (1963) Behavioral notes on a Floridian mantid, *Gonatista grisea* (F.) (Orthoptera, Mantidae). *Entomological News* **74** (1): 1-2, 1 pl.
- LADAU J. (2003) Prey capture in a mantid (*Gonatista grisea*): Does geotropy promote success? *Canadian Journal of Zoology* **81**: 354-356.
- LIEFTINCK M. A. (1953) Biological and ecological of a bark haunting mantid in Java (Orthopt., Mantoidea). *Transactions of the Ninth International Congress of Entomology* **2**: 125-134.
- PRETE F. R., WELLS H., WELLS P. H. & HURD L. E. (1999) *The Praying Mantids*. The Johns Hopkins University Press, Baltimore and London.
- SCHWARZ C. J. (2003) Diets and habitat preferences of neotropical praying mantids (Dictyoptera: Mantodea, Burm. 1838). Diploma thesis at the University of Würzburg.
- SCHWARZ C. J. (2014) Anspruchsvolle Zwerge Die Tarnkünstler der Gattung *Haania*. *Bugs* **6**: 24-29.
- SCHWARZ C. J. (this volume) The Praying Mantids of Panay an Annotated Checklist, p. ... in: CURIO E. (ed.), Panay Eco-Social Conservation Project (PanayCon) Eighteenth Annual Report. Available as download at www.panaycon.org/index.html.
- ZACK S. (1978) Description of the behavior of praying mantis with particular reference to grooming. *Behavioural Processes* **3**: 97-105.

3.2 Eucharitid ant-parasitoid affects facultative ant-plant *Leea manillensis*: top-down effects through three trophic levels

By Christoph Schwitzke, Brigitte Fiala, K. Eduard Linsenmair, Eberhard Curio

Abstract. – Facultative ant–plant mutualisms are variable systems, shaped by a number of biotic and abiotic factors. Especially in tropical ecosystems, the generally assumed mutualistic benefits are often hard to prove. We studied the system Leea manillensis on the Philippine island Panay and its indirect defence mechanism against herbivory by producing extrafloral nectar therewith attracting ants. Unexpectedly, we found an ant-parasitoid wasp from the genus Chalcura (Eucharitidae) to have a strong influence on the system, on ants as well as on plants. The parasitoid not only altered the behaviour of interacting ant species, but also directly and indirectly affected the plants' fitness. This study demonstrates how top-down effects may alter species interactions and have a massive effect on mutualisms and their beneficial outcome (**App. 4**).

3.3 Flight Styles in some Passerines

By Eberhard Curio

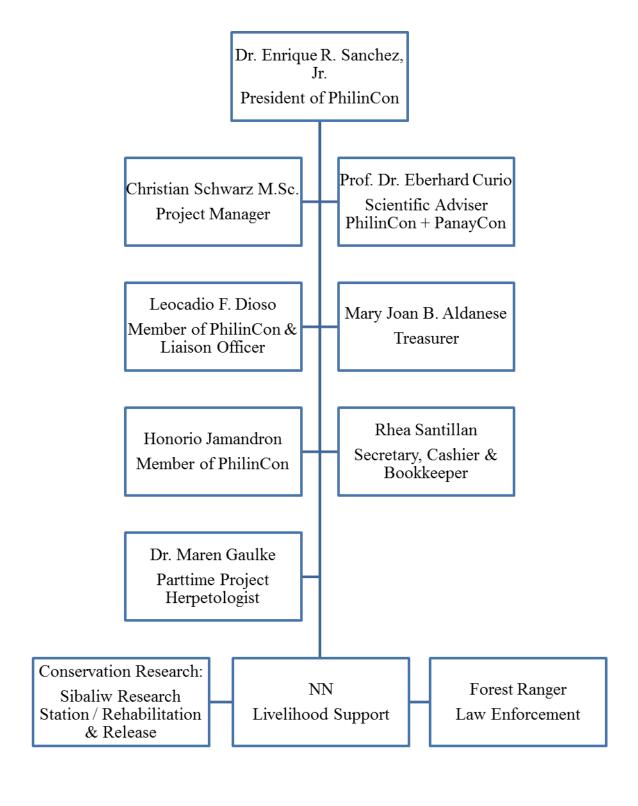
Abstract. - Semi-quantitative observations of the circumstances account under which bounding flight and steady (flapping) flight are performed by two forest-dwelling passerines of two different lineages (Pycnonotidae, Philippine Bulbul Hypsipetes philippinus; Paridae, Great Tit Parus major) in free flight. Bounding flight is one of two intermittent flight styles, to the exclusion of undulating flight, in passerines weighing ≤100g. A new bounding flightspeed relationship is apt to shed light on the power output of bounding flight. In line the function found in most flying animals for metabolic energy expenditure against speed the relationship support a flattened J-curve as compared to U-shaped curve found in some birds; this is based on the monotony of the parameters of bounding as a function of speed. Whether bounding flight is saving energy as proposed by the work of Rayner et al., and of Tobalske in tunnel wind experiments, would depend to the kinematics of flight in free-flying birds such as the Bulbul and the Tit. - Further observations demonstrate that both steady flight and bounding flight are used in foraging and in chases of two birds of the same species, whilst 'mock' prey capture and 'group acrobatics' in the Bulbul are tentatively assigned a training role serving prey capture and predator evasion, respectively. – Observations of Tree Sparrows (Passer montanus) support the idea of flapping flight changing abruptly into the still phase of bounding flight and is therefore consistent with 'body morphing' in the Bulbul (App. 5).

Appendices 1 – 5: Overview

App. 1	Staff of PhilinCon	Organizational Structure and Staff
App. 2	Rhea Matining	Visitors of Research Station 'Sibaliw'
App. 3	M. Freudenschuss, A. Grabolle & H. Krehenwinkel	Gambaquezonia curioi – a new Species of Gambaquezonia from the Philippine Island Panay (Araneae: Salticidae). Arachnology in press
App. 4	C. Schwitzke, B. Fiala, K. E. Linsenmair & E. Curio	Eucharitid Ant-parasitroid effects facultative Ant-plant <i>Leea manillensis</i> : Top-down Effects through three trophic Levels. Arthropod-Plant Interactions 9: 497-505. DOI 10.1007/s11829-015-9391-y.
App. 5	E. Curio	Flight Styles in some Passerines. Ecol. Birds (Ökol. Vögel) XX. 201X: 00-00, in press



Organizational Stucture of PhilinCon





VISITORS OF SIBALIW RESEARCH STATION Year 2014

Name	Date	Reason for Visit
Affiliation		
Kristin Hagel	January 10, 2014	visit
Former student of Ruhr-	J	1.555
Universitat Bochum		
Paul French	January 21-24,2014	birdwatching
United Kingdom	,	
Rhea Santillan	January 21-22,2014	Project visit, conduct monitoring
PhilinCon/PanayCon staff/		
WEO		
Faustino Guillermo	January 21-22,2014	Project visit, conduct monitoring
Forest Ranger/ Wildlife		
Enforcement Officer		
Joven Dujali	January 21-22,2014	Project visit, conduct monitoring
Forest Ranger/Wildlife	-	
Enforcement Office		
Jose Matinong	January 21-22,2014	Project visit, conduct monitoring
Forest Ranger/Wildlife		
Enforcement Officer		
Rudy Domingo	January 21-22,2014	Project visit, conduct monitoring
Forest Ranger/Wildlife	·	
Enforcement Officer		
Armelito Ebon Jr.	January 21-22,2014	Project visit, conduct monitoring
Forest Ranger/Wildlife		
Enforcement Officer		
Nestor Bagac	January 21-22,2014	Project visit, conduct monitoring
PhilinCon/PanayCon Staff		
Brendan Sloan	Feb. 15-17, 2014	Birding
Local Government Officer London		
Dr. Maren Gaulke	Feb. 24-26, 2014	Herpetological research
Project Herpetologist		
Dr. Hendrik Freitag	Feb.24-26, 2014	Field sampling w/ Phil.National
Ateneo De Manila		Museum
Marivine M. Santos	Feb.24-26, 2014	Field sampling w/ Phil.National
National Museum of the		Museum
Philippines		
Clister V. Pangantihon	Feb.24-26, 2014	Field sampling w/ Phil.National
National Museum of the		Museum
Philippines		
Gersom Operiano		Site establishment
Field Assistant		
Dr. Friedhelm Goeltenboth	April 2-4,2014	Project visit
Visayas Statte University Baybay,		
Leyte		
Prof. Dr. Eberhard Curio	April 3-15, 2014	Project visit
PhilnCon/PanayCon Founder		

April 14-15,2014	Discuss field course and MOA
,	With Prof. Curio
April 1-15, 2014	Discuss field course and MOA
,	with Prof. Curio
April 1-15, 2014	Discuss field course and MOA
r	with Prof. Curio
	1,1333
April 1-15, 2014	Discuss field course and MOA
	with Prof. Curio
April 1-15, 2014	Discuss field course and MOA
11,211 1 10, 201	with Prof. Curio
April 21-23, 2014	Bird watching
119111 21 23, 2011	Dira watering
April 21-23 2014	Bird watching
11pin 21 23, 2011	Bird watering
April 21-23 2014	Bird watching
11pin 21 23, 2011	Bird watering
April 21-23 2014	Bird watching
11pin 21 23, 2011	Bird watering
May 13-20, 2014	Site establishment
11111 10 20, 201	
May 13-20, 2014	Site establishment
1714) 13 20, 2011	
May 13-14, 2014	Research Voulnteer
111111 10 11, 2011	11050411011
May 13-14, 2014	Research Volunteer
May 15-17, 2014	Research Volunteer
May 15-19, 2014	Research volunteer
111111 10 19, 2011	110000000000000000000000000000000000000
May 15-19, 2014	Research volunteer
111111 10 19, 2011	110000000000000000000000000000000000000
July 3-4, 2014	Bird watching/ site seeing
1 3.3 5 3, 23 2 3	
August 7-8, 2014	Site seeing/exploring
<i>J</i> , <u></u>	0 · r · 0
August 7-8, 2014	Site seeing/exploring
<i>J</i> ,	0 · r · 0
August 7-8, 2014	Site seeing/exploring
August 7-8, 2014	Site seeing/exploring
	April 14-15,2014 April 1-15, 2014 April 1-15, 2014 April 1-15, 2014 April 21-23, 2014 April 21-23, 2014 April 21-23, 2014 April 21-23, 2014 May 13-20, 2014 May 13-20, 2014 May 13-14, 2014 May 13-14, 2014 May 15-17, 2014 May 15-19, 2014 July 3-4, 2014 August 7-8, 2014 August 7-8, 2014

Solar Technician		
Ryan James Posadas	August 27-19, 2014	Install and repair solar power
Solar Technician		
Lena Scheimann	Sept.9-Oct.17,2014	Study of Biology/Research
PhilinCon/Ruhr Universitat		volunteer
Bochum		
Prof. Dr. Eberhard Curio	Sept. 10-22, 2014	Project visit/ Research
PhilinCon/PanayCon Founder		
Scientific Adviser		
Christian Schwarz, MSc.,	October 22-27, 2014	Project visit/ research volunteer
Project Manager/ PhD student		
Lena Scheimann	October 30-Nov.30,	Study of Biology/ Research
PhilinCon/Ruhr Universitat	2014	volunteer
Bochum		
Delizia Polli	November 10-11,	Site seeing/ bird watching
Switzerland	2014	
Luca Hauri	Nov. 10-11, 2014	Site seeing/bird watching
Switzerland		
Fernando Sierra	Nov. 16-17, 2014	Site seeing/bird watching
Worldwide Cover-Switzerland		

Prepared by: Rhea A. Santillan Project Bookkeeper



Gambaquezonia curioi - a new species of Gambaquezonia from the Philippine island Panay (Araneae: Salticidae)

Running title: A new Philippine jumping spider species

By Mario Freudenschuss, Arno Grabolle and Henrik Krehenwinkel

Key words: Panay, taxonomy, new species, Salticidae, jumping spiders, Philippines, biodiversity

Summary. - The jumping spider genus *Gambaquezonia* has been considered monotypic and endemic to the Philippine Island Luzon. Here, we describe a new species from the Philippine Island Panay, based on genital characters of a male and female specimen. The new species, *Gambaquezonia curioi*, is distinguished by the shape and structure of the male embolus and tibial apophysis and the epigynal sperm duct. Finally, we highlight the necessity of further arachnological exporations on the Philippine Archipelago.

Arachnology in press.