



Technical Progress Report

August - December 2014



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Puerto Princesa City, Palawan, Philippines
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TECHNICAL PROGRESS REPORT

COUNTRY: PHILIPPINES

PROJECT TITLE: PHILIPPINE COCKATOO CONSERVATION PROGRAMME

In-situ Conservation Project

PROJECT DURATION: August to December 2014

PROJECT SITES: Palawan, Philippines

PROJECT COOPERATORS:

Department of Environment and Natural Resources (DENR)
Municipal Government of Narra, Palawan, Philippines
Municipal Government of Dumarán, Palawan, Philippines
Municipal Government of Balabac, Philippines
Bgy. Pandanan Government, Balabac, Palawan, Philippines
Local Protected Area Management Committees (LPAMC)
Protected Area Management Board-RIWS (PAMB-RIWS)
Palawan Council for Sustainable Development Staff (PCSDS)
Jewelmer Corporation Inc.
Concerned agencies and authorities

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EXECUTIVE SUMMARY

Objective 1: Conservation of cockatoo population on Pandanan and Bugsuk Islands, Balabac

- Due to increasing number of transients in the island of Pandanan, wardens increased visibility and coordination with barangay officials. Most of these transients are engaged in seaweed farming and had commenced cutting of mangrove for their seaweed farms and for own shelter as well. We informed the barangay officials and as well coordinated with Jewelmer Corporation on these cases.
- Since we monitored several kaingin (slash and burn farms) areas planted with rice in August, we obtained no first hand sightings and reports of cockatoo raiding in these areas.
- Continued monitoring in communities and surrounding waters of Pandanan and Malinsuno gathered no new settlers in the area that could potentially pose danger to habitat and wildlife. Wardens are busy with nest checking of which seven nest trees were already noted with early indications of occupation in September.
- Two monitoring sites with 11 observation plots were established in Dalahican and in Magsakayan forest respectively.
- We expanded our nursery to cater to more tree seedlings. In this month, we added seven more wild fruit species for propagation. Inventory of the nursery at the end of November was 245 seedlings in thirteen species.
- As the rainy season continued, we started to assess and record all fruiting plants in our preparation for the announced El Niño event this year.
- Area monitoring in September revealed a number of food providing trees were fruiting and flowering. In Buliluyan, a minimum of 20 individuals were sighted foraging on *Sonneratia alba*.
- After the Breeding Assessment Meeting conducted, we commenced nest checking and observed four of the seven cockatoo nest trees had indications already of nest preparation.
- Highest roost count in Malinsuno Island for August was 185. Counts were affected by the onset of the NW monsoon and numbers of roosting birds dropped continuously towards the end of the reporting period to a maximum of 63 birds in December.
- On November 3, Rene updated the Municipal Council of Balabac on the project progress. He reported that despite increasing cockatoo numbers, no complaints from farmers were received yet, since cockatoo mostly feed on wild fruits and cultivated Horseradish Trees.
- Vice Mayor of Balabac Rudy Mohammed-Ain commended the conservation efforts of KFI and assured support from the municipality.
- Observations of wardens, particularly regarding encroachment of the island by outsiders are routinely shared with Jewelmer security and management, who in turn inform KFI on steps taken.

Objective 2: Conservation of cockatoo population on Rasa Island, Narra

- Highest priority for this reporting season was the preparation for the recently forecasted El Niño which will affect the Philippines by early 2015.
- In September we installed five terracotta bowls to serve as water basins and put up two data loggers to record temperatures in nest trees. Four more were installed in November.

- We stocked up on baby food for hand-raising of rescued nestlings. Additional rearing boxes were constructed, and with funding from Jurong Bird Park.
- Improvements of the facilities for rescue of birds in the campsite on Rasa were initiated, particularly the construction of a rescue station for cockatoo nestlings.
- Flashing with iron sheets on new nest trees were completed in August. Defective flashing was also replaced.
- Continuous monitoring of claimed areas was conducted and no expansion was noted in the reporting period.
- On August 26 the regular PAMB meeting was conducted in Narra. Indira presented PCCP project update for Rasa Island during meeting which was presided by the Municipal Mayor.
- Another PAMB meeting for Rasa Island Wildlife Sanctuary was conducted on November 20. Dr. Roger Dolorosa from Western Philippines University presented a proposal for marine research in the protected area, particularly involving coral reef assessment, inventory of gastropods and bivalves, population studies on commercially important gastropods and sea cucumbers.
- Since this reporting period KFI represents the NGO/CSO in Narra in its reactivation of the Environmentally Critical Areas Network (ECAN) Board. This ECAN Board assumes an important responsibility for SEP clearance issuances which are delegated by the PCSD council to municipal levels.
- Our proposal for Rasa received approval of funding from PAME-GIZ. This project covers mainly the ecosystem services valuation, in particular for the marine portions of Rasa Island Wildlife Sanctuary.
- Siegfried Diaz, our Field Operations Coordinator, conducted a day lecture on cockatoo conservation and demonstration on nursery establishment and planting of Malunggay during the Senior Scouts Outfit of Panacan National High School. Almost 100 scouts were reached.
- A video production featuring the PCCP project sites of Rasa and Pandanan was initiated.
- We participated in this year's Palay Festival in October. We joined the parade and conducted a cockatoo fun day in our office with school kids present.
- In December we participated in the Christmas party of the municipality and conducted lectures and games, including appearance of the Katala mascot. The affair was attended by slightly more than 400 children and their parents.
- December was the wettest month on record since start of the project, with 1,393.3mm measured in the Aborlan PAGASA station. We therefore were hopeful that the freshwater lens of Rasa Island was fully recharged, and the drought-related effects of the predicted El Niño for the breeding season of 2015 would be less severe than that for the years of 2005 and 2010.
- In November the wardens recorded a high activity around the nest trees. A total of 74 nests showed signs of occupation. We assume that a lot of nest cleaning was done by birds which are not yet in breeding condition, and that this high activity will not translate into a high number of breeding attempts in 2015.
- Highest mainland count for the reporting period was on the 2nd of September with 112 individuals at Borbon station as well.
- Wardens monitored a new roosting area in very close proximity to the traditional roost site in Rasa Island since September. This area is contiguous mangrove forest.

- On October 30, the roost tree was adorned with 297 white cockatoos, while two other sites yielded 43 additional birds! This is the highest count since start of the project!
- Initial results of the University Giessen, Germany, indicated that all 16 submitted cockatoo blood samples from Rasa Island were free of West Nile virus, avian malaria, Newcastle disease and *Leucozytozoon*.
- During the reporting period massively increased cutting of Horseradish Trees (Malunggay) in Panacan was observed. Inquiries yielded that a founder of a religious sect was promoting a tonic out of the leaves of Malunggay as cure for a wide array of illnesses including cancer.
- A meeting with the religious leader was sought under attendance of representatives of the Municipal Council of Narra to discuss the matter. It was agreed that the proponent will refrain from obtaining more cuttings and that harvest of leaves has to be done in a way which will not affect growth performance and fruit production of existing trees.
- Since most planted Horseradish Trees are either on private lots or in public areas with general access, additional trees need to be planted in more secure locations. KFI considers purchasing a lot which lies in the centre of the cockatoo feeding area for this purpose.

Objective 3: Conservation of cockatoo population on Dumaran Island, Dumaran

- During this reporting period main activity of the wardens was mass-planting of trees while the rainy season lasted.
- Three hornbill nest trees were flashed with iron sheets in September. One former hornbill nest was verified to be occupied with Hill Myna with two hatchlings confirmed.
- We monitored fruiting and flowering vegetation in preparation for El Niño. We completed repair of one nest tree which was flooded in the previous breeding season. Three artificial nest boxes were prepared in September and two were installed in November.
- Mike confiscated one Blue-naped parrot which was turned over by school kids who found out the parrot was unable to fly.
- In November wardens recorded a case of illegal fencing of an area which included an active cockatoo nest. The area comprised around 20 ha. Complaints have been filed on this issue, and the alleged perpetrator was requested to attend the LPAMC meeting to settle the matter.
- Local Protected Area Management Committee (LPAMC) convened on Aug. 8, 2014 for its quarterly regular meeting which was presided by the Municipal Mayor. Our bid for financial assistance for 2015 for the warden scheme was approved.
- The breeding season of cockatoos in Dumaran is traditionally the last one to end, since it seems that breeding seasons are progressing from South to North in Palawan, and Dumaran is the northernmost project area. Although only four nests were occupied, eleven eggs were produced. With 2.7 eggs per pair, this is considerably higher productivity than in Rasa or Pandanan. One egg was however infertile. Three hatchlings died, possibly due to predation. Seven fledglings were banded and successfully left the nests.
- Highest roost count in October, and for the reporting period, was 23 at the traditional roosting site in Lagan which included the two released birds.

- The remaining cockatoo of the two birds released in Dumaran was still observed throughout the reporting period, and it continues roosting and foraging with the wild cockatoos. It now avoids people and completely relies on wild foods for sustenance.
- Declaration of the newly established “Critical Habitat” on Dumaran Island was approved on October 28, 2014 by the PCSD Council through Resolution No. 14-513. This is the first critical habitat established in the Province of Palawan.
- Planting at the forest corridor and the newly established critical habitat on Dumaran Island continued throughout the reporting period.
- Over 4,500 indigenous tree seedlings were planted in September at the buffer area of the Omoi Cockatoo Reserve while nearly 19,000 trees were planted in the farms of our farmer co-operators. Wardens planted nearly 3,000 trees at the buffer zones of the Omoi Cockatoo Reserve in October. These areas are situated within our newly declared Critical Habitat under PCSD SEP.
- We provided 100 indigenous tree seedlings and participated in the tree planting activity of Bgy. Sto Tomas where their identified reforestation site was planted by residents and wardens alike in August.
- The provincial government promotes the use of Teak *Tectona grandis* for watershed protection and a plantation timber. While KFI supports the latter, and actually KFI was recommending establishment of timber plantation since years for Dumaran, the use of this species for watershed rehabilitation is deemed undesirable, since the species is exotic, and native species are more suitable for the multiple functions of watersheds, including erosion and control, nutrient retention, permanent carbon sequestration, biodiversity conservation, water-holding capacity, and so on. The matter is in discussion within decision makers in Dumaran and within the province.
- The “Critical Habitat” declared in Dumaran through efforts of KFI is apparently the first of its kind in Palawan and there seem to be no clear-cut procedures for including this land use form into existing LGU land use maps and ECAN maps of the province. We keep networking with the responsible agencies.
- Cockatoo numbers remain stable on low levels. Reasons are not known, but supplementation will be undertaken with rescued and confiscated birds in the future.

Objective 4: Education and research at the Katala Institute

- A cockatoo which sustained injuries caused by entanglement in thin nylon rope was turned over to KI for treatment on December 2. Since it recovered well from the minor injuries it could be released on December 19 on Rasa Island.
- Another cockatoo from Panacan was turned over on December 12, where it was found on the ground. Injuries were treated and antibiotics were administered in the food, however the bird succumbed on January 4.
- The newly acquired Palawan Porcupines were closely monitored. Enclosure was readily accepted and animals got used to their keepers.
- A total of 18 previously confiscated Palawan Pond Turtles which were housed in Katala Institute (KI) were released in Dumarao, Roxas in September.
- Under-brushing and planting of seedlings around perimeters of KIEBC was on-going throughout the reporting period. In August, we planted 554, and in September ca. 250 seedlings and 28 in October towards the end of the rainy season.
- By end of the planting period, our total seedling inventory in the nursery was 3,839, mostly Parina, which is food-providing for the cockatoo.

- A visitor's hut using native materials was installed in front of the cockatoo aviary. This facility will enable guests to stay for extended times in front of the enclosure while being protected from sun or rain in order to observe the birds.
- Signboards will be installed informing about the Philippine cockatoo in general and the feeding ecology in particular.
- Six culverts were constructed to improve the accessibility of the loop trail.
- The vegetable garden supplementing the animal food was replanted with winged beans, sweet potatoes and pineapple.
- On August 14, 14 Philippine cockatoo individuals visited the KIEBC and interacted with the caged birds.
- Visitor hut, establishment of the "Cockatoo Garden" and the signboards were funded by Jurong Bird Park in Singapore. A proposal to the same organization for the establishment of a field station in the area of Katala Institute is in preparation.
- Severe flooding due to heavy rains occurred in December in the area. Since enclosures are elevated, captive animals were not affected.

Other highlights:

- Together with the late William Oliver, Indira and Peter were selected as the first ever species Champions of the European Association of Zoos and Aquaria (EAZA). Thanks a lot Roland!
- The first "Critical Habitat" in Palawan was established through initiative of KFI comprising two existing cockatoo reserves, their buffer zones and a connecting corridor. This tool may be of use for securing smaller and isolated forest patches in the vulnerable lowland areas of Palawan.
- A record-breaking 14 **Palawan Hornbills** *Anthracoceros marcheii* fledged in Dumarán in this breeding season.
- In the same period, four **Blue-headed Racquet-tails** *Prioniturus platenae*, out of two nests fledged successfully in Dumarán.
- On August 1 we participated in an update of the red list of threatened animals for the setting of Palawan Province.
- On August 16, we participated in the climate change workshop organized by WWF and BPI. This was a scenario building workshop.
- On August 29 and September 19, Rene observed three and five mating **Green Turtles** *Chelonia mydas* respectively in the channel between Malinsuno and Pandanan.
- We participated in Raptor Watch to document the winter migration of raptors from October 13 to 25, 2014. We counted nearly a thousand raptors most of which were **Grey-faced Buzzards** *Butastur indicus* in Malinsuno Watch Point, which demonstrates that this is a regionally important migration passage area between the Philippines and Malaysia.
- On September 5 Peter presented a paper on the Philippine Cockatoo Conservation Programme during the Anniversary Conference of the Fonds fuer Bedrohte Papageien in Berlin.
- On September 9 Peter gave a presentation on the reforestation and wildlife corridor creation efforts in the Dumarán project sites in the Zoo of Landau in der Pfalz, Germany. The Stadtholding Landau and the local energy provider Energie Suedwest in cooperation with the Zoo are supporting these activities since many years.
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- The Parrot Society Magazine September issue published the article of Dorothy Schwarz about the Katala Foundation and its conservation program.
- On September 11 the orientation meeting for the ECAN Board of Narra was conducted. Indira was selected as representative of the civil society of this body. The board will assess environmentally sensitive projects within the Municipality of Narra according to the Strategic Environmental Plan law of Palawan.
- On October 7 staff meeting involving PCCP personnel from all project sites were conducted. Cockatoo population figures from the sites were compiled and numbers from other sites were estimated. Given the lack of information from some sites, particularly in the Sulus, we estimate that between 640 and 1,120 Philippine cockatoos survive in the wild. Possibly between 75 and 90% of birds can be found in Palawan. At least 48% of birds are found within sites managed by PCCP.
- On Oct. 9, Peter and Indira presented before the Rizal Local Protected Area Management Committee (LPAMC) the official closure of the Rizal PCCP Project. The LGU committed to continue its financial assistance to the wardens scheme but will have to revise the jurisdiction of the wardens to include other potential areas for protection.
- On October 28 a proposal for the development of a comprehensive wildlife management plan for the Province of Palawan was discussed with members of the PCSDS and the Philippine Tropical Forest Conservation Foundation (PTFCF). KFI will submit a proposal to PTFCF for a workshop involving all agencies and organizations working in this field in Palawan.
A MoA was signed with PCSDS and other organizations working on biodiversity issues in Palawan to share information on the topic in a website called "Palawan Biodiversity Knowledge Platform" on December 11.
- On November 30, Rene rescued and released a captive **Hawksbill Turtle** *Eretmochelys imbricata* in Pandanan.

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We also are grateful to Dr. Jens-Ove Heckel, Director of Zoo Landau in der Pfalz, the Stadtholding Landau in der Pfalz and Freizeitbad La Ola for helping us realize the Reforestation Projects.

The PCCP is indebted to the real players of the project: the wardens and volunteers from Narra, Dumarán, and Pandanan for their dedication, hard work and commitment. Without them, the project would not have reaped the good harvests.

To the honorable Mayor of Narra, Madame Lucy Demaala and members of the municipal council and officials in particular MPDO Fellizar. Special gratitude goes to PAMB members, Narra for their vigilance and ready attention on Rasa. We are grateful for the support of Mayor Medwin Pablico in Dumarán. We would like to thank Dumarán MPDO Agnes Padul, Municipal Administrator Arnel Caabay and all Dumareños. Special gratitude goes to Mayor Shuaib J. Astami of Balabac and his council, Bgy. Captain Violeta Gabinete and her able council of Bgy. Pandanan, Balabac for their assistance and cooperation. We thank as well the families of wildlife wardens from Pandanan.

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We thank the support of Governor Jose Pepito C. Alvarez and Vice Governor Dennis Socrates.

We also thank the local government of Bgy. Antipuluan for their support. Thanks also to the SKM officers and members. Likewise to the indigenous peoples of Pandanan and Bugsuk Brgy. Captain Pastor Alfaro and all those who helped us in our visits in Bugsok. We appreciate the assistance of Melinda de Luna from Jewelmer Corporation.

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To all visiting tourists, foreign and local, for their generosity and support, thank you very much.

We are thankful to the PFTCP team headed by its Director, Dr. Sabine Schoppe and partners assisting in the maintenance of our assurance colony and of activities related to the repatriated *S. leytensis*: ZGAP, ZGAP-DGHT, Ocean Park Conservation Foundation, Turtle Survival Alliance, Office of Puerto Princesa City Mayor, Betterplace, Kadoorie Farm and Botanic Garden, LGU of Dumarao and Roxas, TRAFFIC SEA, DENR and line agencies.

Our heartfelt gratitude goes to Siegfried Diaz (SD), Rene Antonio (RA), Mike Plazos (MP), Angeles Guion-Satioquia (AGS), Sheen Hanjin Arib and assistant keeper Angelo Satioquia for their services and assistance provided to the project. We also thank PFTCP volunteers for their time and kind assistance. We are equally grateful to KFI board and supporters.

ACRONYMS

BMB	Biodiversity Management Bureau (formerly PAWB)
CE	Conservation Education
CENRO	Community Environment and Natural Resources Office(r)
CMRPA	Culasian Managed Resource Protected Area
DENR	Department of Environment and Natural Resources
ELAC	Environmental Legal Assistance Council
IUCN	International Union for the Conservation of Nature and Natural Resources
KEEC	Katala Environmental Education Center
KFI	Katala Foundation, Inc.
KI	Katala Institute
LGU	Local Government Unit
LPAMC	Local Protected Area and Management Committee
LPF	Loro Parque Fundación
MENRO	Municipal Environment and Natural Resources Officer/Office
MMPL	Mt. Mantalingahan Protected Landscape
MOA	Memorandum of Agreement
PA	Protected Area
PAMB	Protected Area Management Board
PASu	Protected Area Superintendent
PCCP	Philippine Cockatoo Conservation Program
PCSD(S)	Palawan Council for Sustainable Development (Staff)
PENRO	Provincial Environment and Natural Resources Office
PFTCP	Philippine Freshwater Turtle Conservation Program
PNP	Philippine National Police
PTFCF	Philippine Tropical Forest Conservation Foundation
PWRCC	Palawan Wildlife Rescue and Conservation Center
RA 9147	Republic Act 9147 otherwise known as the Wildlife Protection Act
RIWS	Rasa Island Wildlife Sanctuary
SDENRO	Special Deputy Environment and Natural Resources Officer
WPU	Western Philippines University
ZGAP	Zoologische Gesellschaft für Arten- und Populationsschutz

INTRODUCTION

The Philippine Cockatoo *Cacatua haematuropygia*

The Philippine Cockatoo or Red-vented Cockatoo *Cacatua haematuropygia* is restricted to lowland forest areas and mangroves in the Philippines. Formerly, it could be found all over the archipelago (Dickinson *et al.* 1991). Only in the last decades a rapid decline set in, which brought the species to the brink of extinction (e.g. Boussekey 2000a; Lambert 1994). The reasons for the decline of the populations are (e.g.; Collar *et al.* 1999; Lambert 1994; Widmann *et al.* 2001):

- Habitat destruction, particularly in respect of nesting and food providing trees.
- Persecution as crop pest.
- Poaching for pet trade.
- Potential diseases caused by the introduction of captive birds in the range of wild populations.
- Tropical storms and typhoons

Habitat destruction and poaching are the most important factors threatening the Philippine Cockatoo.

Since 1888 Katala Foundation Inc. (KFI) implements the PCCP in the Philippines. Comprehensive conservation projects in this phase are currently undertaken in three sites in Palawan (Fig. 1): Rasa Island (Narra), Dumaran Island (Dumaran), Pandanan and Bugsuk Islands (Balabac). The two former sites contain by now protected areas declared on municipal or higher levels, specifically established to include the cockatoo populations. The Pandanan site is predominantly owned by Jewelmer Corporation, with which KFI has a Memorandum of Agreement for the conservation of the species.

We estimate that between 640–1,120 Philippine Cockatoos exist in the wild (assuming few populations have been overlooked in recent surveys of historical locations, and 100-150 individuals survive in the Sulus, for which only incomplete information is available).

The single-most important Philippine Cockatoo population on Rasa is secured under presidential proclamation as “Rasa Island Wildlife Sanctuary” since February 2006, in addition to local legislations. Highest population count was 317 individuals in 2014. Pandanan, holds possibly the second-most important population with at least 220 birds (up from 80) individuals.

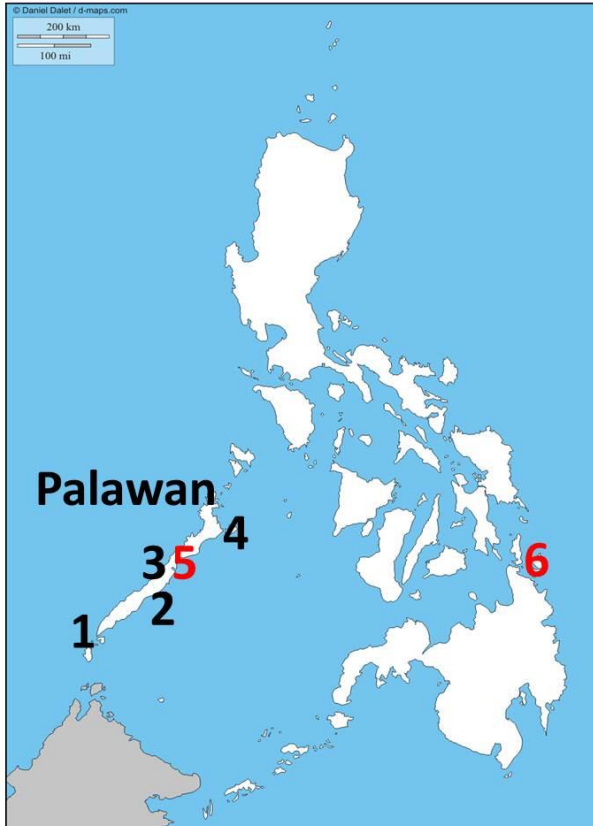
With these three project sites in Palawan, it is estimated that between a third to half of the remaining wild population is currently covered in PCCP projects. Cockatoo populations are stable or increasing in all sites, and improved legal conservation could be achieved (e.g. through creation of cockatoo reserves). However, law enforcement by state agencies remains weak and pressure on these areas is rather increasing (migrant influx to Palawan, mining, planned large-scale projects, like biofuel plantation or coal plant).

Warden schemes remain the single-most important tool to assure the short-term survival and recovery of the species, whereas lobbying, conservation education, habitat restoration and reintroduction, as well as provision of alternative livelihood options are important for the long-term improvement of the frame conditions for cockatoo conservation in the Philippines.

Objective of the Philippine Cockatoo Conservation Program

Conservation and restoration of the most viable subpopulations of the Philippine Cockatoo and their habitats, including associated flora and fauna under involvement of all key stakeholders, resulting in a down-listing of the species from 'Critical' to 'Endangered' through reversing its population decline and under consideration of the precautionary principle.

Program Strategy



The main strategy of the programme is to conserve *in-situ* the most important subpopulations of the Philippine cockatoo through adopting participative methods.

The general program strategies are:

- Management of local resources in the framework of Philippine law;
- Capacity-building for local decision-makers and key stakeholders to ensure sustainability of the conservation efforts; and,
- Ecosystemic conservation approach with the Philippine cockatoo as flagship species.

Figure 1. Map of the Philippines indicating sites of the Philippine Cockatoo Conservation Program: 1. Pandanan, Balabac; 2. Rasa Island, Narra; 3. Katala Institute, Narra; 4. Omoi and Manambaling Cockatoo Reserves, Dumarang; 5. Iwahig Prison and Penal Farm, Puerto Princesa; 6. Kangbangyo and Poneas Islands, Del Carmen. Black: project sites covered in this report; red: other PCCP sites

Deliverables

Objective 1: Conservation of cockatoo population on Pandanan and Bugsuk Islands, Balabac

- Warden scheme on Pandanan and Bugsuk Island continued and extended to adjacent mainland.
- Monitoring of cockatoo population and habitat on Pandanan and Bugsuk Island continued.
- Conservation education in Pandanan Island and adjacent mainland continued.
- Research on conservation-related aspects of cockatoo biology on Pandanan and Bugsuk continued, with focus on factors influencing breeding success and foraging ecology.

- Advocacy in respect to impacts and perpetrations in cockatoo habitats, particularly networking with local stakeholders, particularly Jewelmer Corporation, the largest private landowner, continued.

Objective 2: Conservation of cockatoo population on Rasa Island, Narra

- Warden and mainland volunteer scheme continued.
- Members of Protected Areas Management Board in the management of the Philippine Cockatoo and Rasa Island Wildlife Sanctuary capacitated and meetings facilitated.
- Conservation education for stakeholders continued.
- Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology.
- Advocacy in respect to impacts and perpetrations in cockatoo habitats continued.

Objective 3: Conservation of cockatoo population on Dumaran Island, Dumaran

- Warden scheme continued.
- Members of Local Protected Areas Management Committee in the management of the Philippine cockatoo, as well as Omoi and Manambaling Cockatoo Reserve assisted and capacitated.
- Research on conservation-related aspects of cockatoo biology on Dumaran continued, with focus on factors influencing breeding success and foraging ecology.
- Buffer zone restoration around existing cockatoo reserves continued.
- Creation of forest corridor connecting the two existing cockatoo reserves continued.
- Advocacy in respect to impacts and perpetrations in cockatoo habitats continued.

Objective 4: Education and research at the Katala Institute for Ecology and Biodiversity Conservation

- Captive management of Philippine Cockatoo and other highly threatened species continued through employment and training of zookeepers and volunteers.
- Landscaping with native species propagated in the Katala nursery continued.
- Educational trail, enclosures and visitors facilities upgraded.
- Proposal submission to other potential donors continued.

Description of Project Sites

Rasa Island, Narra, Palawan

Rasa is a small coral island of 8.34 km² land area situated in the Sulu Sea, just offshore of the Municipality of Narra, Palawan, Philippines (Fig. 2). About 1.75 km² are covered with coastal forest, mangrove (5.60 km²), cultivated areas (predominantly coconut; 0.39 km²), 0.60 km² are barren or sparsely vegetated sand and coral outcrops. In February 2006, the island became a Wildlife Sanctuary through Presidential Proclamation 1000 and since a Protected Area Management Board is functioning as management body for Rasa Island Wildlife Sanctuary (RIWS). In 2008, RIWS was chosen as Top 13 Bird Watching Sites in the Philippines by the Department of Tourism.

The island is the pilot site of the program since 1998. Due to intensive poaching, only 23-25 Philippine cockatoos were left on the island then. Key component of this project site is the warden scheme which involves patrolling and protection of the birds during and outside the breeding season. This scheme has proven to be efficient and lead to dramatic recovery of the Philippine Cockatoo population as of to date. As of 2014, 317 cockatoos have been simultaneously counted on roost sites on Rasa and adjacent mainland.

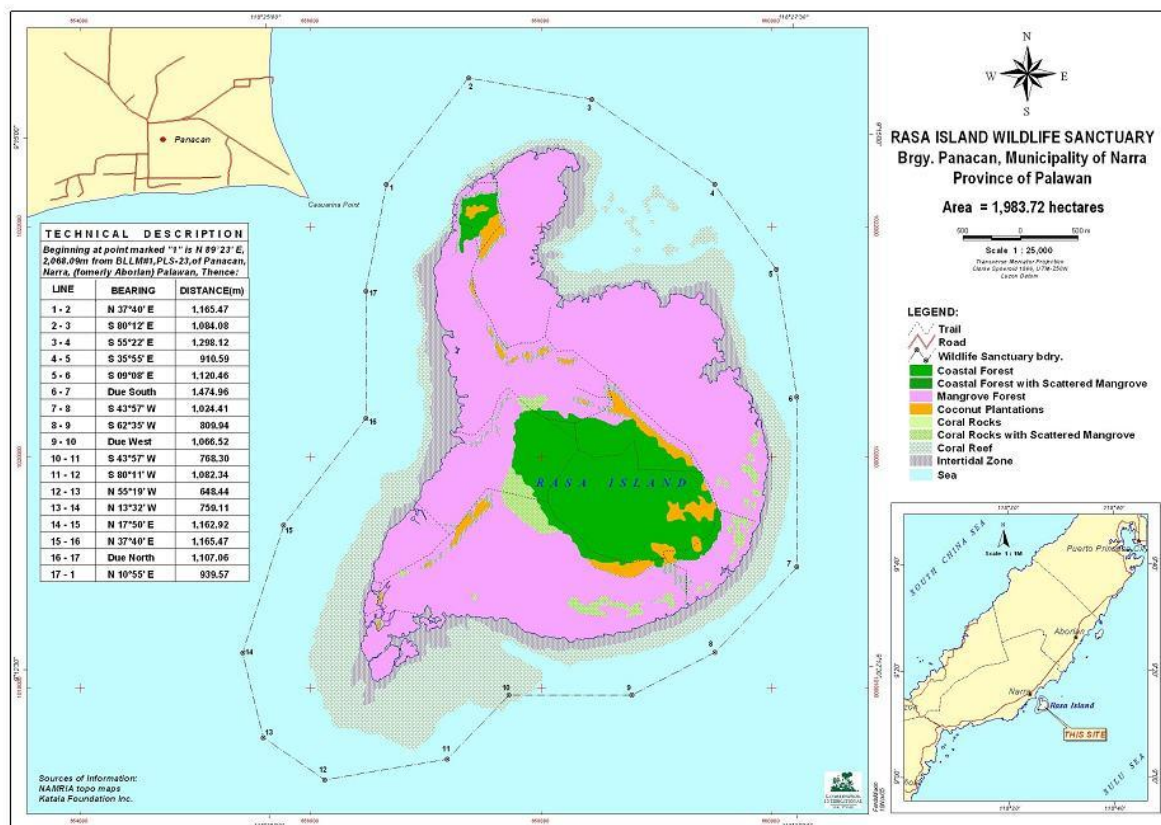


Figure 2. Vegetation cover of Rasa Island Wildlife Sanctuary, Palawan, Philippines

Rasa Island probably therefore holds the highest population density of Philippine Cockatoo that remains in the wild. The world population of Philippine cockatoo was estimated to range between 1,000 to 4,000 individuals (Lambert 1994). More recent estimates put the number of cockatoos remaining in the wild between 640 and 1,120. About 75% of this population is found in Palawan.

Not only Philippine Cockatoos live on the island, but a variety of other species, with an unusual high percentage of globally threatened and near-threatened taxa (IUCN 2015), considering the small size of Rasa. Noteworthy among the 112 recorded bird species are Red-headed Flameback *Chrysocolaptes erythrocephalus* (EN), Grey Imperial-pigeon *Ducula pickeringii* (VU) and Mantanani Scops-owl *Otus mantananensis* (NT).

Dumaran Island, Dumaran, Palawan

Dumaran is situated in north-eastern Palawan between 10°22' and 10°41'N and 119°28' and 119°55'E. Nine Barangays are situated on Palawan mainland, seven on western Dumaran

Island. The island is situated in the Sulu Sea and separated by a ca. seven km wide channel from the mainland.

PCCP currently manages three areas on the island: Omoi and Manambaling Cockatoo Reserves (Fig. 3) and the traditional roosting site in Lagan. A Local Protected Area Management Committee (LPAMC) functions as its management body. Both cockatoo reserves, a buffer zone and a corridor connecting both areas was declared as critical habitat, comprising 1,500 ha.

All natural terrestrial ecosystems in Dumarán are tree-dominated. On Dumarán Island only few small and isolated forest patches remain, none of them larger than 103 ha. The most abundant formation is evergreen and semi-evergreen lowland forest with Ipil *Intsia bijuga*, Amugis *Koordersiodendron pinnatum* being emergent tree species of commercial value.

Ornithological surveys conducted by Katala Foundation so far yielded 136 species from the island. A prominent species of conservation concern is the Philippine cockatoo, which can be found with viable population in the mangroves and forest remnants of Dumarán Island, but apparently not anymore on the mainland. The last remaining forest patches are therefore of global conservation concern. This notion is supported by the recent records of other globally threatened species, particularly the Palawan Forest Turtle *Siebenrockiella leytensis* (CR).

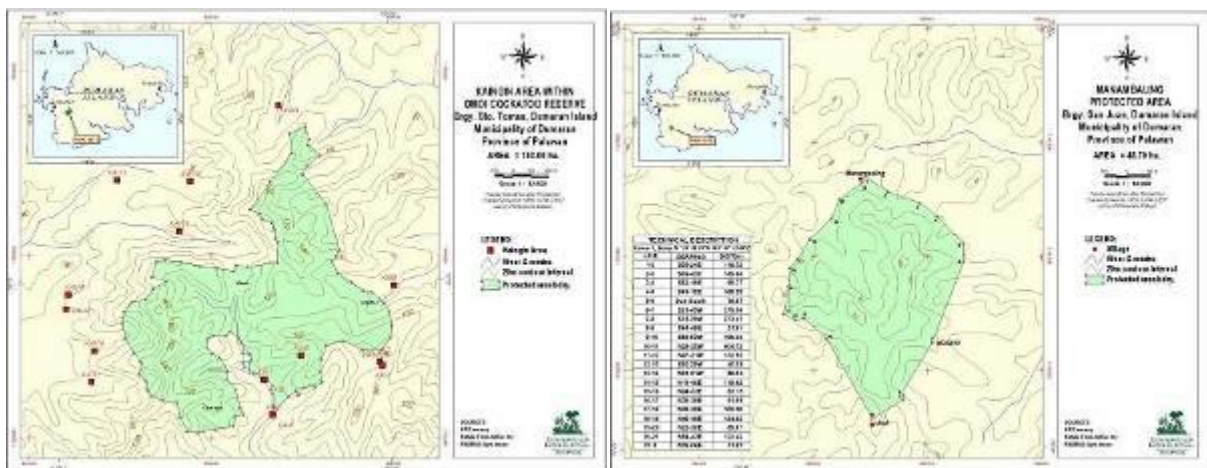


Figure 3. Omoi Cockatoo Reserve (left) and Manambaling Cockatoo Reserve (right) cover the last forest patches on Dumarán Island.

Other species of conservation concern are Palawan Hornbill *Anthracoceros marchei* (VU), Blue-headed Racquet-tail (VU) and Palawan Pencil-tailed Tree-mouse *Chiropodomys calamanianensis* (DD).

Habitat degradation and destruction, rather than poaching, remain the biggest challenges for cockatoo conservation in Dumarán. In the current phase ca. five hectares of secondary forest and grassland were purchased with support of the Stadtholding Landau in the course of a carbon-mitigation project. These areas have been rehabilitated and integrated in the buffer zone of the Omoi Cockatoo Reserve.

The Critical Habitat established through PCSD Resolution No. 14-513 connects the two existing cockatoo reserves through a corridor and extends to include remaining forest fragments in the area. This is the first critical habitat established in the Province of Palawan.

Pandanan Island, Balabac

Pandanan Island in Bgy. Pandanan belongs to the north easternmost municipality of Balabac in Palawan (Fig. 4). Coastal forests are dense and stock on flat limestone originating from elevated coral reefs. Large trees in the coastal forest are mostly deciduous and widely spaced due to water stress during the dry season. The understory is very dense with abundant vines. Emergent trees comprise the genera *Dipterocarpus*, and *Ficus*. A narrow rim of beach forest with *Erythrina*, *Calophyllum* and *Barringtonia* is present. The dense coastal forest cover is as well protected because the large portion of the island is privately-owned and entries are monitored by private guards. Coconuts are the major crop grown in the coastal areas and shifting cultivation including lowland rice, corn, and root crops inside forested areas are common land use forms. Extensive mangroves are thriving.

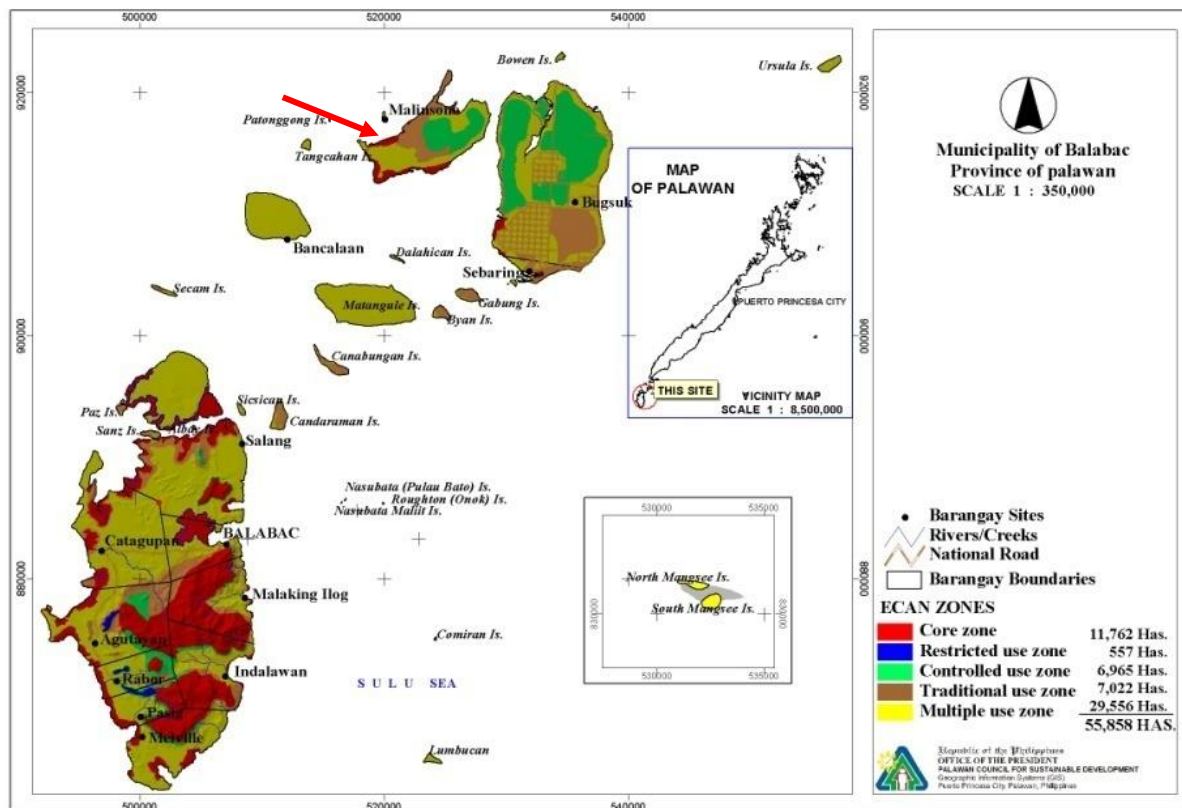


Figure 4. Location map of Pandanan Island indicated by red arrow (Map Source: PCSDS).

So far, 91 bird species have been recorded in Pandanan and adjacent Malinsuno. Among these are six globally threatened and six near-threatened species (IUCN 2015). Of outstanding conservation concern are particularly the larger tree cavity nesters, like Palawan Hornbill, all three parrot species of Palawan, Philippine Cockatoo, Blue-naped Parrot and Blue-headed Racquet-tail, and other conservation relevant species like Grey Imperial-pigeons and Mantanani Scops-owl (Widmann *et al.* 2008). The first and only record for the Philippines of a Fairy Pitta *Pitta nympha* comes from Malinsuno as a result of the conservation project.

The implementation of the warden scheme recruiting cockatoo poachers resulted in significant increases of the cockatoo population in the first years of project implementation, comparable to those of the early stages on Rasa Island. In recent surveys, roosting site is at a coconut plantation in Malinsuno Island just across Pandanan Island.

Methods

The Philippine Cockatoo Conservation Programme (PCCP) employs an ecosystemic and community-based approach to biodiversity conservation using the Philippine cockatoo as its flagship species. The main components of the program are nest protection or warden schemes; scientific researches on feeding, biology and ecology of the Philippine Cockatoo and other threatened species; identification, protection and management of key conservation sites; conservation education; habitat restoration; and capacity building. Researches on the Philippine Cockatoo include distributional surveys, rescue of individual birds, reintroduction and translocation assessments, and captive management for conservation education and conservation breeding for later reintroduction.

Information on the biology and ecology of the cockatoo is gathered mainly through direct observation. On Rasa, movements of the cockatoos can be best observed from a boat, from beaches or coral outcrops. Very dense vegetation on the island considerably hampers visibility on transect walks or point counts. On Dumaran and Pandanan movements are observed through wardens monitoring and patrols at protected areas and roost sites.

Monitoring of the population trend on Rasa, Dumaran and Pandanan is done through counting individuals at a traditional roost site. A traditional roost site is situated in a mangrove area on Rasa and can be observed from a boat while in Dumaran a privately-owned coconut plantation serves as the roost site bordering close to a mangrove area. On Balabac, at least two roosting sites are presently monitored; one in Malinsuno Island and the other on Pandanan Island. Counts are conducted monthly either before sunset on Rasa and Balabac islands and daily on Dumaran. Counts are also conducted during dawn before birds leave the roost site. Whenever possible, counts on Rasa are conducted under similar weather and light conditions.

The core component in all project sites is the warden scheme, employing former poachers as wildlife wardens. Wardens inspect and verify existing and potential nest trees starting end of September. During the breeding season, the nest trees are under permanent surveillance. Trees are climbed and nest holes controlled every ten days during that time. For safety reasons, dead or damaged trees are not climbed. Nest trees are characterized through species identification, tree height, diameter at breast height (DBH), height of nest hole, exposition of nest hole, diameter of hole, and diameter at base and depth of cavity. The geographic location of each nest tree is taken with the help of a GPS and marked in a map.

Presence or absence and condition of adult birds, eggs, nestlings or nest predators are noted. Nestlings are weighed with Pesola spring balances/and or electronic balance and banded with aluminum rings bearing the inscription of the Department of Environment and Natural Resources (DENR), the number and year (e.g. DENR 0001-15).

Volunteers are detailed in monitoring stations at the mainland coasts of Narra within and outside the breeding season. These volunteers record all sightings of cockatoos and other significant wildlife in the area of assignment.

Surveys to find remnant cockatoo populations are based on historical sources or recent information. To initially narrow down the searches, non-formal interviews with key informants (poachers, other forest users, barangay officials, school teachers) are conducted. Surveys aim to identify remnant cockatoo populations or areas which are suitable for translocation.

Herbarium collections are made of key plants in cockatoo habitats, particularly food-providing plants, and nest and roost trees. The physical structures of cockatoo breeding habitats are characterized through forest profiles. Phenological information on fruiting and flowering of food-providing trees are systematically collected on Rasa and Dumaran.

Larger-scale restoration of lowland forest habitat is currently done in Dumaran. Particularly nest- and food-providing plants for cockatoos are systematically tested for their suitability for reforestation. MS Access and excel programs are used for analysis.

Composition of remaining bird communities in project and survey sites is assessed using MacKinnon-Lists and, occasionally, mist-netting. Composition of mammal, reptile and amphibian communities in project sites is assessed through direct observations, mist- and harp-netting, live-trapping (Sherman type and locally-made cage type) and pitfall trapping.

To identify potential cooperators for the projects, livelihood needs, and capacities, stakeholder and SWOT analyses are employed. Participatory planning is done through goal-oriented project planning methodology. Alternative livelihood is provided for key-stakeholders of the cockatoo and the PAs, based on the needs assessments.

Conservation education activities employ the PRIDE approach which uses marketing methodologies to galvanize community support for conservation. The approach conducts pre and post project surveys to assess changes in levels of knowledge, awareness and behavior among target audience by using control groups. Survey Pro is used for analysis on changes over time. Proven marketing vehicles like billboards, posters, fact sheets, puppet shows, school and community visits, festivals and media participation are used to deliver relevant and compelling conservation messages.

Relevant trainings and seminars are conducted to help capacitate local partners in conservation. Cross visits to Rasa and other project sites are encouraged to facilitate exchange of experiences, lessons learned and good practices to boost morale of local partners and reinforce knowledge.

Please refer to each output for particular methodologies used in achieving results.

Results and Progress

Objective 1: Conservation of cockatoo population on Pandanan and Bugsuk Islands, Balabac

Warden scheme on Pandanan and Bugsuk Island continued and extended to adjacent mainland

Due to increasing number of transients in the island of Pandanan, wardens increased visibility and coordination with barangay officials. Most of these transients are engaged in seaweed farming and had commenced cutting of mangrove for their seaweed farms and for own shelter as well. We informed the barangay officials and as well coordinated with Jewelmer Corporation on these cases. Community monitoring visits were done. These monitoring visits were not only confined to islands of Pandanan and Malinsuno but also neighbouring small islands for possible cockatoo sightings and verification of reported sightings. Some of these informal settlers were asked to leave by barangay police and were escorted out of the island.

Since we monitored several kaingin (slash and burn farms) areas planted with rice in August, we obtained no first hand sightings and reports of cockatoo raiding in these areas. Cockatoos according to locals were just passing their farms particularly in the morning. A slingshot was confiscated in September. Reports of shooting at cockatoos with a home-made airgun were followed up upon, but could not be verified.

Continued monitoring in communities and surrounding waters of Pandanan and Malinsuno gathered no new settlers in the area that could potentially pose danger to habitat and wildlife. Wardens are busy with nest checking of which seven nest trees were already noted with early indications of occupation in September.



Figure 5. Warden starts patrolling from northern beach in Pandanan (left) and monitoring new settlers on the island (right; Photos: Rene Antonio)

We took special notes on vegetation and rainfall on the islands in preparations for the El Nino breakout said to happen early next year. Two monitoring sites with 11 observation plots were established in Dalahican and in Magsakayan forest respectively. Sites were along the area of primary forest and far from community and local interference. Forest trees inside the 20x20m observation plots were recorded, global positioning system readings were made for each site and all plots.

Transport boxes, as well as baby food and feeding syringes were provided in case of nestling rescue. First Aid Kit and Banding Kits were checked and restocked.



Figure 6. Newly established huts of see-weed farmers (left) and shifting cultivation in SW Pandanan (right) require permanent monitoring to prevent expansion (Photos: Peter Widmann)

We expanded our nursery to cater to more tree seedlings. In this month, we added seven more wild fruit species for propagation. Total seedlings as of August are 159. Fifty-six trees of two species (*Intsia*, *Sterculia*) were planted to protect the seashore in Malinsuno, where the KFI fieldhouse and the cockatoo roost sites are situated. On November 28, 254 trees were planted in Pandanan, consisting of beach forest species and two food-providing species for cockatoos. Inventory of the nursery at the end of November was 245 seedlings in thirteen species.

Research on conservation-related aspects of cockatoo biology on Pandanan and Bugsuk continued, with focus on factors influencing breeding success and foraging ecology

As the rainy season continued, we started to assess and record all fruiting plants in our preparation for the announced El Niño event this year that was forecast to last until July 2015. We observed also early nest activities in some cockatoo nest trees we monitored.

Area monitoring in September revealed a number of food providing trees were fruiting and flowering. In Buliluyan, a minimum of 20 individuals were sighted foraging on *Sonneratia alba*. Some residents also noted the cockatoos feeding on Ipil-ipil pods, Narra and Ipil fruits. The cockatoos had also been spotted in interior barangays of the southern tip of the mainland Palawan.

An overnight visit to Sebaring Dos in Bugsok Island was conducted in October. Similarly, Pagatpat trees were fruiting and frequented by the cockatoos ranging from 20-30 individuals. After feeding in the area, birds proceed back to interior forests of Bugsok Island inside the Jewellmer Corporation area.

After the Breeding Assessment Meeting conducted, we commenced nest checking and observed four of the seven cockatoo nest trees had indications already of nest preparation. We also established the Biodiversity Monitoring Stations (BMS) and transects for phenological studies in Pandanan Island. By November most active nests showed signs of occupation through cut twigs, bite marks at cavity entrances, fresh faeces or feathers inside

the nest cavities. A wild bee nest was removed from the entrance of a nest tree and old nest substrate was cleaned out from other nests.

Highest roost count in Malinsuno Island for August was 185. Counts were affected by the onset of the NW monsoon and numbers of roosting birds dropped continuously towards the end of the reporting period to a maximum of 63 birds in December.

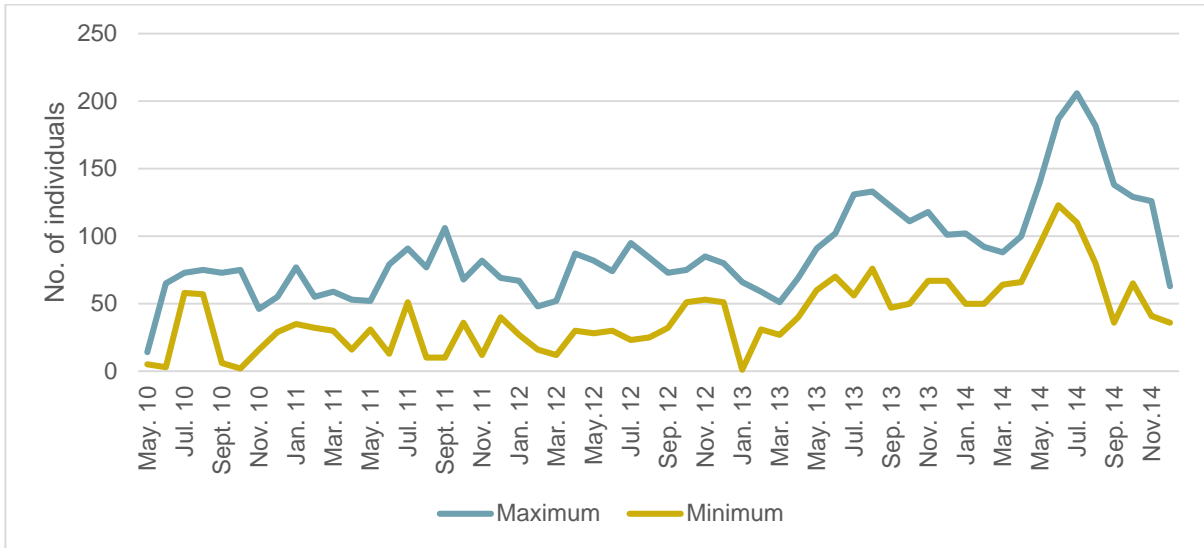


Figure 7. Maximum and minimum monthly counts of cockatoos roosting on Malinsuno, Balabac



Figure 8. Cockatoos feeding on *Leucaena leucocephala* in Malinsuno Balabac (Photo: Rene Antonio)

Advocacy in respect to impacts and perpetrations in cockatoo habitats, particularly networking with local stakeholders, particularly Jewelmer Corporation, the largest private landowner, continued

On November 3, Rene updated the Municipal Council of Balabac on the project progress. He reported that despite increasing cockatoo numbers, no complaints from farmers were received yet, since cockatoo mostly feed on wild fruits and cultivated Horseradish Trees.

Vice Mayor of Balabac Rudy Mohammed-Ain commended the conservation efforts of KFI and assured support from the municipality. During this occasion Rene received information on small remnant populations of cockatoos on the main island of Balabac.

Observations of wardens, particularly regarding encroachment of the island by outsiders are routinely shared with Jewelmer security and management, who in turn inform KFI on steps taken.

Constraints and measures taken

- In November arrival of five persons, allegedly coming from Basilan and suspected to be armed, was reported to village officials, who in turn informed security personnel of the pearl farm and the Philippine National Police. Incidents like this indicate that security situation in the area needs to be monitored carefully and project activities need to be adapted accordingly. Patrolling starting from January 2015 will occasionally be conducted together with the barangay (village) police.

Objective 2: Conservation of cockatoo population on Rasa Island, Narra

Warden and mainland volunteer scheme continued

Highest priority for this reporting season was the preparation for the recently forecasted El Niño which will affect the Philippines by early 2015. The phenomenon occurs every four to five years, and in 2005 and 2010 resulted in complete breeding failure, if not for the rescue of hatchlings undertaken by wardens. Losses are caused by food scarcity caused by extreme drought and possibly also by excessive heat in the nest cavities.

In September we installed five terracotta bowls to serve as water basins and put up two data loggers to record temperatures in nest trees. Four more were installed in November. We also stocked up on baby food for hand-raising of rescued nestlings. Additional rearing boxes were constructed, and with funding from Jurong Bird Park. Improvements of the facilities for rescue of birds in the campsite on Rasa were initiated, particularly the construction of a rescue station for cockatoo nestlings. This consists of five enclosed rearing boxes fitted with bars and one-way-mirrors to avoid unnecessary contact with the caretakers. The facility can accommodate a maximum of twenty hatchlings.

Flashing with iron sheets on new nest trees were completed in August. Defective flashing was also replaced. Four new nest trees discovered this year were characterised in the same month. One nest tree which had the nest chamber in a branch had fallen according to wardens reports in October.

Continuous monitoring of claimed areas was conducted and no expansion was noted in the reporting period. Apart from this, wardens also noted down vegetation status on Rasa in preparation for El Nino next year.



Figure 9. Installation of metal sheets on nest tree to protect against monitor lizards and rats (left), installed metal sheet on *Sonneratia* nest tree in mangrove (right; Photos: Siegfried Diaz)



Figure 10. Upgrading the campsite on Rasa with shelves for equipment (left); and rearing boxes for rescued nestlings (right; Photos: Peter Widmann)

Members of Protected Areas Management Board in the management of the Philippine Cockatoo and Rasa Island Wildlife Sanctuary capacitated and meetings facilitated

On August 26 the regular PAMB meeting was conducted in Narra and was presided by the Municipal Mayor. Indra presented PCCP project update for Rasa Island. In attendance was also the Regional Technical Director of DENR MIMAROPA Region Dr. Gwendolyn Bambalan. Highlights of the meeting were: (1) Presentation of the KFI proposal entitled “Realizing biodiversity services and values in Rasa Island Wildlife Sanctuary (RIWS)” for funding from GIZ-PAME (2) Finalization of the PAMB resolution endorsing the reintroduction project and (3) DENR work and financial plan for RIWS.

Another PAMB meeting for Rasa Island Wildlife Sanctuary was conducted on November 20. Dr. Roger Dolorosa from Western Philippines University presented a proposal for marine research in the protected area, particularly involving coral reef assessment, inventory of gastropods and bivalves, population studies on commercially important gastropods and sea cucumbers. These studies are in connection with the KFI-initiated project project on

ecosystem valuation of RIWS which is approved for funding by the German Government through GIZ. This project covers in particular the marine portions of Rasa Island Wildlife Sanctuary to address the lowest score derived from the METT (Management Effectiveness Tracking Tool) analysis done in 2012.

Since this reporting period KFI represents the NGO/civil society organization in Narra in its reactivation of the Environmentally Critical Areas Network (ECAN) Board. This ECAN Board assumes an important responsibility for SEP clearance issuances which are delegated by the PCSD council to municipal levels.

Conservation education for stakeholders continued

Siegfred Diaz, our Field Operations Coordinator, conducted a day lecture on cockatoo conservation and demonstration on nursery establishment and planting of Malunggay during the Senior Scouts Outfit of Panacan National High School. Almost 100 scouts were reached.

A video production featuring the PCCP project sites of Rasa and Pandanan was initiated. The clip is intended to be less than 15 minutes long and will include interviews with wildlife wardens, PCCP staff and other program stakeholders, as well as sequences of cockatoos and project sites. It will be uploaded to YouTube and other media once it is reviewed and approved by all program partners. Shooting of the video was initiated on October 21 on Rasa.

We participated in this year's Palay Festival in October. We joined the parade and conducted a cockatoo fun day in our office with school kids present. In relation to Narra's tourism promotion, a local print media visited Rasa Island for its feature story.

In December we participated in the Christmas event of the municipality and conducted lectures and games, including appearance of the Katala mascot. The affair was attended by slightly more than 400 children and their parents.



Figure 11. Elementary and high school students attending conservation education of KFI during the annual Palay Festival in Narra (Photos: Siegfred Diaz)

Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology

Previous attempts to correlate precipitation, fruiting phenology and performance of the breeding season indicated that there is a positive correlation between precipitation in the last

three month of the previous year and the success of the following breeding season (measured in average number of fledglings per breeding pair; Fig. 13). Whereas the months of October and November were slightly below average in terms of precipitation, December was the wettest on record since start of the project, with 1,393.3mm measured in the Aborlan PAGASA station (Fig. 12). We therefore were hopeful that the freshwater lens of Rasa Island was fully recharged, and the drought-related effects of the predicted El Niño for the breeding season of 2015 would be less severe than that for the years of 2005 and 2010.

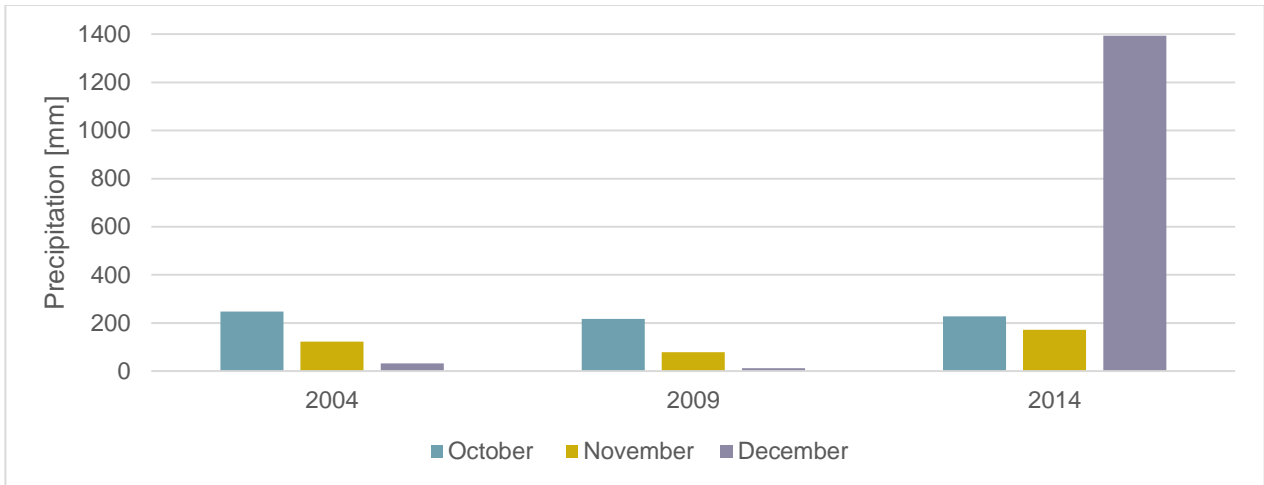


Figure 12. Precipitation in southern Palawan in the months of October, November and December in years preceding El Niño events. Note the peak of rainfall in December 2014 which refilled the freshwater lens on Rasa and made a drought on the island for the 2015 breeding season less likely.

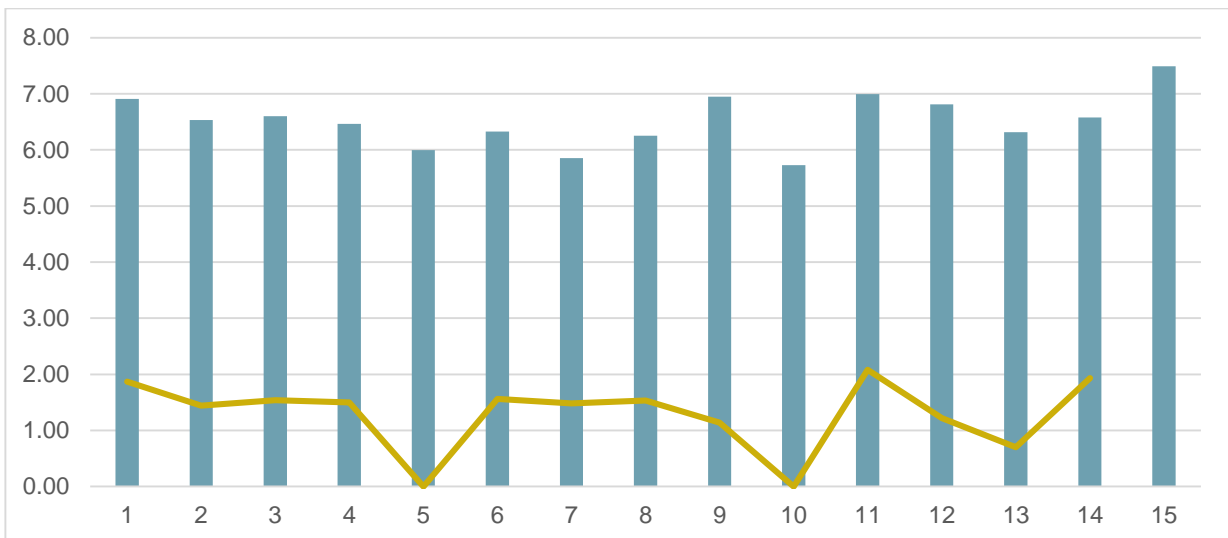


Figure 13. Average number of fledglings per breeding pair (line) and natural logarithm (ln) of precipitation [mm] from October to December preceding the breeding season (bars) per year

In November the wardens recorded high activity around the nest trees. A total of 74 nests showed signs of occupation, with at least two and up to eight cockatoos around at a time. We assume that a lot of nest cleaning was done by birds which are not yet in breeding condition, and that this high activity will not translate into a high number of breeding attempts in 2015.

Highest mainland count for August was on the 24th with 102 individuals at Borbon station. They were counted in the afternoon. Highest mainland count for the reporting period was on the 2nd of September with 112 individuals at Borbon station as well. They were counted in the morning. Highest mainland count for October was 79 individuals. From October 20, not less than 30 individuals were observed on average in the morning at Borbon station and foraging around neighbouring mainland stations. Numbers increased again in December with a maximum of 111 birds counted.

Wardens monitored a new roosting area in very close proximity to the traditional roost site in Rasa Island since September. This area is contiguous mangrove forest. At the traditional roost site, we counted 236 individuals in September. Meanwhile at the roost site in October 30, the roost tree was adorned with 297 white cockatoos, while two other sites yielded 43 additional birds! This is the highest count since start of the project. As reported earlier, counting becomes increasingly difficult since three locations have to be sampled simultaneously.

Initial results of the University Giessen, Germany, indicated that all 16 submitted cockatoo blood samples from Rasa Island were free of West Nile virus, avian malaria, Newcastle disease and *Leucozytozoon*. Additional tests will be conducted with newly acquired markers to verify these initial findings.



Figure 14. Detail of traditional roost site on Rasa taken early morning on November 12 (above); birds leaving for the mainland (below; Photos: Peter Widmann)

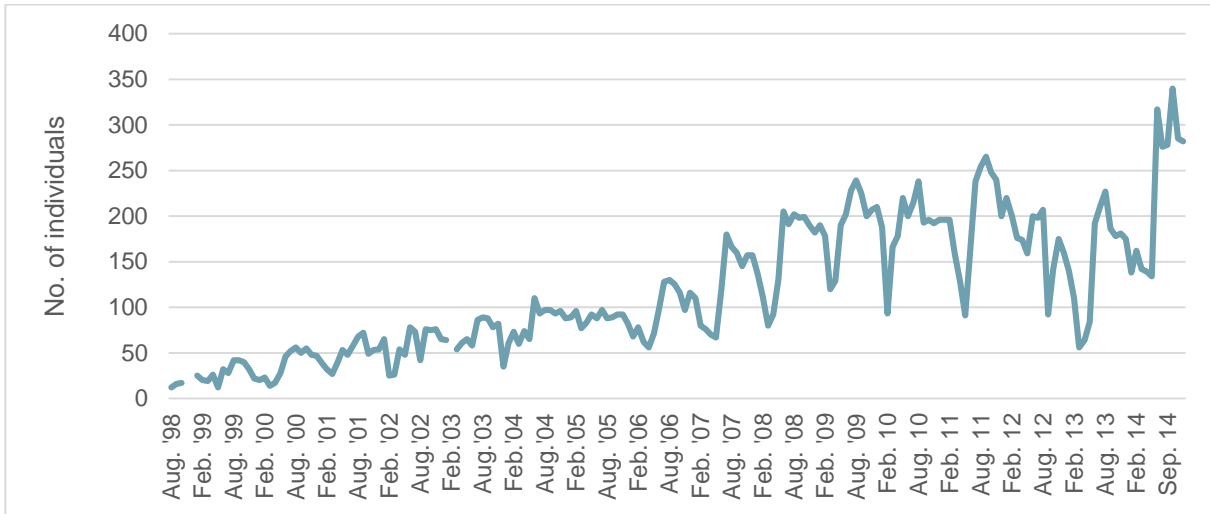


Figure 15. Maximum number of Philippine Cockatoos (simultaneous count) on traditional and temporal roost sites on Rasa Island and Panacan mainland

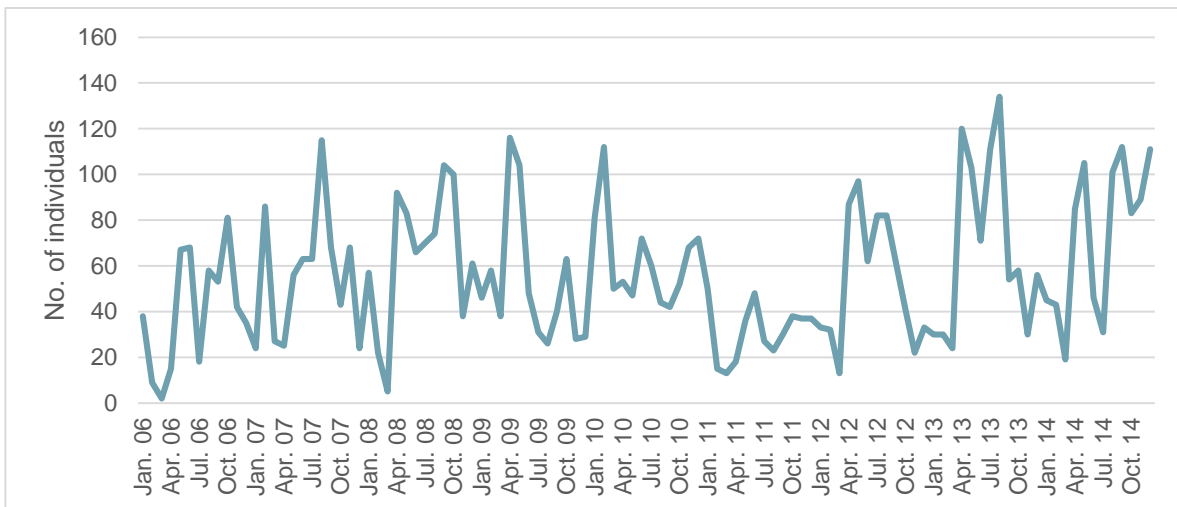


Figure 16. Maximum daily counts of Philippine Cockatoos transferring to mainland opposite of Rasa

Advocacy in respect to impacts and perpetrations in cockatoo habitats continued

During the reporting period massively increased cutting of Horseradish Trees (Malunggay) in Panacan was observed. Inquiries yielded that a founder of a religious sect was promoting the preparation of the leaves as tonic for a wide array of illnesses including cancer. Leaves were bought in Panacan on a commercial scale, and cuttings of trees were made to win propagules for a commercial plantation in the area. Some of the cuttings were apparently just left on the roadside, where they dried and perished, and therefore could not be used for planting. Horseradish is one of the prime food sources of the Philippine cockatoo on the mainland opposite of Rasa and more than 3,000 trees were planted under initiative of KFI.

A meeting with the religious leader was sought under attendance of representatives of the Municipal Council of Narra to discuss the matter. It was agreed that the proponent will refrain

from obtaining more cuttings and that harvest of leaves has to be done in a way which will not affect growth performance and fruit production of existing trees.



Figure 17. Radically pruned Horseradish Tree to produce cuttings for a commercial plantation (Photos: Angel Satioquia)

Constraints and measures taken

- Since most planted Horseradish Trees are either on private lots or in public areas with general access, additional trees need to be planted in more secure locations. KFI considers purchasing a lot which lies in the centre of the cockatoo feeding area for this purpose. Talks with Mayor Demaala of Narra also resulted in the drafting of a municipal resolution requiring all house lot owners of Narra to plant Horseradish Trees for own consumption, for commercial purposes and as food for the cockatoo. We started a monitoring scheme for Horseradish Trees in Panacan, including incidences of cutting, harvesting and phenology.

Objective 3: Conservation of cockatoo population on Dumarán Island, Dumarán

Warden scheme continued

During this reporting period main activity of the wardens was mass-planting of trees while the rainy season lasted (see paragraph on buffer zone restoration).

Breeding season assessment was conducted in August 8 with all wardens in Dumarán, as well as Peter and Indira. Three hornbill nest trees were flashed with iron sheets in September. One former hornbill nest was verified to be occupied with Hill Myna with two hatchlings confirmed.

We monitored fruiting and flowering vegetation in preparation for El Niño. We completed repair of one nest tree which was flooded in the previous breeding season. Three artificial nest boxes were prepared in September and two were installed in November. The activity had to be partly postponed until December due to termination of tree climbing activities caused by strong winds during passage of typhoon Queenie.

Mike confiscated one Blue-naped parrot which was turned over by school kids who found out the parrot was unable to fly. Apparently the wings were clipped; hence, we turned it over to the rescue centre in Puerto Princesa.

In November wardens recorded a case of illegal fencing of an area which included an active cockatoo nest. The area comprised around 20 ha. Complaints have been filed on this issue, and the alleged perpetrator was requested to attend the LPAMC meeting to settle the matter.

In December six larger trees were recorded to be flattened by typhoon Queenie; none of these was a nest tree.

Members of Local Protected Areas Management Committee in the management of the Philippine cockatoo, as well as Omoi and Manambaling Cockatoo Reserve assisted and capacitated

Local Protected Area Management Committee (LPAMC) convened on Aug. 8, 2014 for its quarterly regular meeting which was presided by the Municipal Mayor. Our bid for financial assistance for 2015 for the warden scheme was approved. We suggested to the municipal Council of Dumarán to draft a resolution requesting citizens to report cockatoo sightings. A similar ordinance is already passed in the Municipality of Narra. Two cases of illegal logging were discussed. Both took place outside of the two cockatoo reserves.

A LPAMC meeting end of November had to be postponed to December 16, due to effects of typhoon Queenie, which passed over northern Philippines. A case of illegal logging was dismissed by court, apparently due to lack of evidence. A shifting cultivation area which was brought to court by the Municipal Mayor failed as it was claimed to be an ancestral domain. However, no such claims are plotted in the map of PCSDS procured by KFI.

Research on conservation-related aspects of cockatoo biology on Dumarán continued, with focus on factors influencing breeding success and foraging ecology

The breeding season of cockatoos in Dumarán is traditionally the last one to end, since it seems that breeding seasons are progressing from South to North in Palawan, and Dumarán is the northernmost project area. Although only four nests were occupied, eleven eggs were produced. With 2.7 eggs per pair, this is considerably higher productivity than in Rasa or Pandanan. One egg was however infertile. Three hatchlings died, possibly due to predation. Seven fledglings were banded and successfully left the nests.

Highest roost count in August was 21 and lowest was 12 individuals at the traditional roosting site in Lagan. Highest roost count in October, and for the reporting period, was 23 at the traditional roosting site in Lagan which included the two released birds. These integrate well with wild cockatoos. Both were permanently together with the wild birds foraging and returning to the roost site.

The partially successful release of two hand-raised cockatoos was already reported in the last period (one bird died of unknown reasons, the other one is still alive as of end of this reporting period and well integrated into the wild flock). This bird was still observed throughout, and it continues roosting and foraging with the wild cockatoos. It now avoids people and completely relies on wild foods for sustenance.

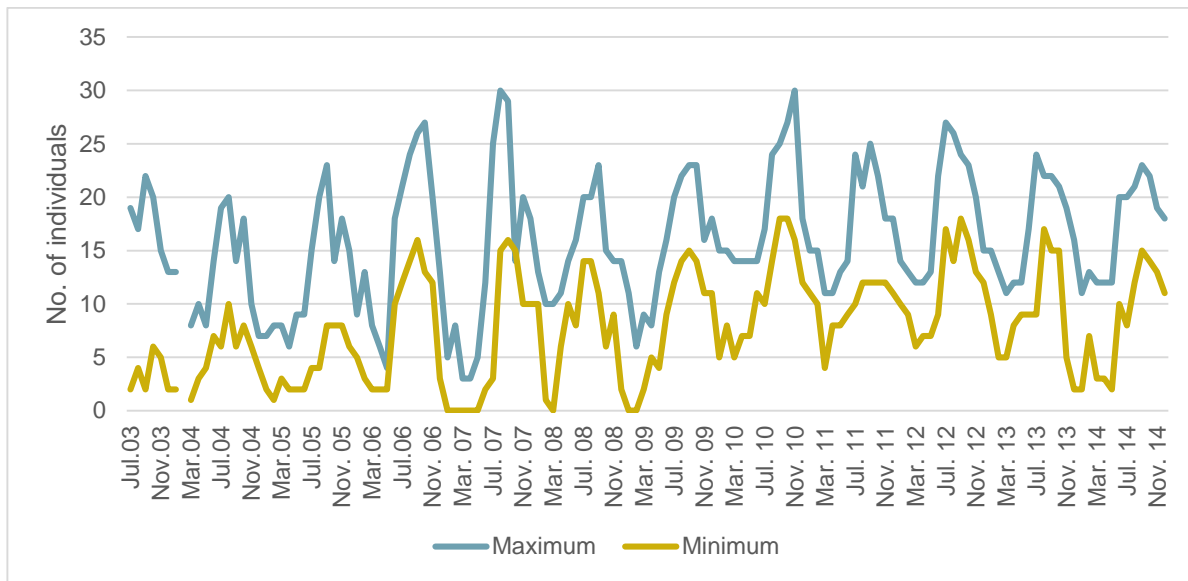


Figure 18. Maximum and minimum monthly counts of cockatoos roosting in Lagan, Dumarán

Buffer zone restoration around existing cockatoo reserves and creation of forest corridor connecting the two existing cockatoo reserves continued

Declaration of the newly established “Critical Habitat” on Dumarán Island was approved by the PCSD Council on October 28, 2014 through Resolution No. 14-513. This is the first critical habitat established in the Province of Palawan.

Planting at the forest corridor and the newly established critical habitat on Dumarán Island continued throughout the reporting period. Farmer co-operators also continued planting in their respective farms. We monitored tree seedlings planted from April to July and most of those planted in dry months of April-June did not survive and need replacement.

Over 4,500 indigenous tree seedlings were planted in September at the buffer area of the Omoi Cockatoo Reserve while nearly 19,000 trees were planted in the farms of our farmer co-operators. Wardens planted nearly 3,000 trees at the buffer zones of the Omoi Cockatoo Reserve in October. These areas are situated within our newly declared Critical Habitat under PCSD. We started to demarcate the boundary of the critical habitat by planting with native *Areca* palms. Permanent markers still have to be established in cooperation with the LGU and PCSD.

We provided 100 indigenous tree seedlings and participated in the tree planting activity of Bgy. Sto Tomas where their identified reforestation site was planted by residents and wardens alike in August.

In August the area purchased years earlier with funds from Stadtholding Landau was monitored. This was the first area which was restored starting from weedy grassland with some scattered trees in 2007. The area has turned into a promising secondary forest. Grasses were completely replaced by woody plants and shade tolerant understorey herbs. Natural recruitment takes place. Apparent were the good performance of some species of native (understorey) palms. Tree seedlings and saplings were abundant.



Figure 19. Restored secondary forest overview (left); natural palm recruitment (right; Photos: Peter Widmann)



Figure 20. Tree seedlings after mass fruiting (left); understory ginger *Hedychium* sp. (right; Photos: Peter Widmann)

Advocacy in respect to impacts and perpetrations in cockatoo habitats continued

The provincial government promotes the use of Teak *Tectona grandis* for watershed protection and a plantation timber. While KFI supports the latter, and actually KFI was recommending establishment of timber plantation since years for Dumarán, the use of this species for watershed rehabilitation is deemed undesirable, since the species is exotic, and native species are more suitable for the multiple functions of watersheds, including erosion and control, nutrient retention, permanent carbon sequestration, biodiversity conservation, water-holding capacity, and so on. The matter is in discussion within decision makers in Dumarán and within the province.

Constraints and measures taken

- The “Critical Habitat” declared in Dumarán through efforts of KFI is apparently the first of its kind in Palawan and there seem to be no clear-cut procedures for including this land use form into existing LGU land use maps and ECAN maps of the province. We keep networking with the responsible agencies.
- Cockatoo numbers remain stable on low levels. Reasons are not known, but supplementation will be undertaken with rescued and confiscated birds in the future.

Objective 4: Education and research at the Katala Institute

Captive management of Philippine Cockatoo and other highly threatened species continued through employment and training of zookeepers and volunteers

A cockatoo which sustained injuries caused by entanglement in thin nylon rope was turned over to KI for treatment on December 2. The bird was discovered by inhabitants of Panacan, the fishing village situated opposite of Rasa Island. Two primaries were cut by the nylon and some blood on the beak was observed. The ring/leg band indicated that the bird hatched in 2011. Since it recovered well from the minor injuries it could be released on December 19 on Rasa Island. The transport box containing the bird was opened once wild cockatoos were recorded in the area at 6.50 in the morning. The bird immediately left the box and joined a flock of more than 50 birds which transferred to the mainland.

Another cockatoo from Panacan was turned over on December 12, where it was found on the ground. The bird had swollen wing muscle, probably indicating internal bleeding. The animal was overall not very responsive with closed eyes and puffed up plumage. The ring indicated that the bird fledged in 2012. Injuries were treated and antibiotics were administered in the food, however the bird succumbed on January 4.

The newly acquired Palawan Porcupines, were closely monitored. Enclosure was readily accepted and animals got used to their keepers. On September 9 one of our porcupines got entangled in a nylon rope, which was buried in the enclosure and probably was left behind after construction. It took more than a day to catch the animal and remove the rope. No injuries were sustained during this incident.

A total of 18 previously confiscated Palawan Pond Turtles which were housed in KI were released in Dumarao, Roxas in September.



Figure 21. Recovering cockatoo in pre-release aviary (left; Photo: Angel Satioquia), Palawan Forest Turtles screening before release (right; Photo: Peter Widmann)

Landscaping with native species propagated in the Katala nursery continued

Under-brushing and planting of seedlings around perimeters of KIEBC was on-going throughout the reporting period. In August, we planted 554, and in September ca. 250 seedlings and 28 in October towards the end of the rainy season. By end of the planting

period, our total seedling inventory in the nursery was 3,839, mostly Parina, which is food-providing for the cockatoo.



Figure 22. Newly constructed visitor hut; cockatoo aviary in the background (left); foundation of visitor hut (right; Photos: Peter Widmann)



Figure 23. View on wetlands and mountain from visitor hut (left); newly constructed culverts help to manage water in KI (right; Photos: Peter Widmann)



Figure 24. Newly established feeds garden (left) and some of its beneficiaries (right: Photos: Angel Satioquia)

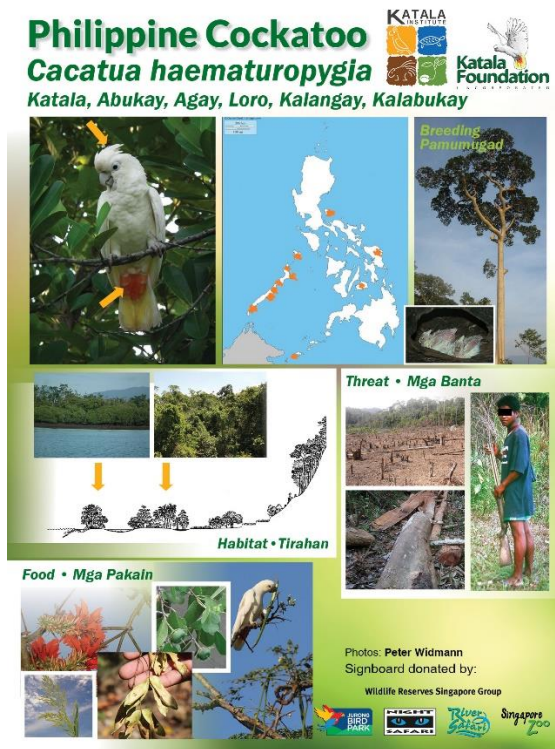


Figure 25. Examples of signboards installed along the loop trail in KI

Educational trail, enclosures and visitors facilities upgraded

A visitor's hut using native materials was installed in front of the cockatoo aviary. This facility will enable guests to stay for extended times in front of the enclosure while being protected from sun or rain in order to observe the birds.

At the same time the newly planted "cockatoo garden" featuring food plants of the species can be explored. Signboards will be installed informing about the Philippine cockatoo in general and the feeding ecology in particular.

In December necessary repairs of the perimeter fence were undertaken.

Six culverts were constructed to improve the accessibility of the loop trail. The vegetable garden supplementing the animal food was replanted with winged beans, sweet potatoes and pineapple.

On August 14, 14 Philippine cockatoo individuals visited the KIEBC and interacted with the caged birds.

Proposal submission to other potential donors continued

Visitor hut, establishment of the "Cockatoo Garden" and the signboards were funded by Jurong Bird Park in Singapore. A proposal to the same organization for the establishment of a field station in the area of Katala Institute is in preparation.

Constraints and measures taken

- We settled in cooperation with the DENR CENRO the boundary difference with the Department of Public Works and Highways (DPWH) which owns the adjacent lot to KI. We were planting the new boundary lines in August and are negotiating with DPWH regarding the use of said conflict area.
- Severe flooding due to heavy rains occurred in December in the area. Since enclosures are elevated, captive animals were not affected. Trails were temporarily flooded, but emerged soon after the deluge, since they were elevated above the terrain level as well.



Figure 26. Flooded trail to cockatoo aviary (left) and near quarantine area (right; Photos: Angel Satioquia)

Other highlights

Other reported wildlife within the reporting period

- On August 19, a flock of 21 **Philippine Ducks** *Anas luzonica* were recorded in Lagan (SW Dumarán) by Mike.
- On October 21 a flock of ca. 320 terns comprising five species was recorded in the coastal waters of Rasa by Peter. **Common, Roseate and Little Tern** (*Sterna hirundo*, *S. dougallii*, *S. albifrons*) are new records for the protected area.
- We participated in the Raptor Watch to document the winter migration of raptors from October 13 to 25, 2014. We counted nearly a thousand raptors most of which were **Grey-faced Buzzards** *Butastur indicus* in Malinsuno Watch Point, which demonstrates that this is a regionally important migration passage area between the Philippines and Malaysia. Migratory and wintering waders, egrets (including the globally threatened Chinese), flycatchers and warblers indicate that this is also the case for birds other than raptors.
- A chick of **Great-billed Heron** *Ardea sumatrana* successfully hatched on Rasa in November.
- A record-breaking 14 **Palawan Hornbills** *Anthracoceros marchei* fledged in Dumarán in this breeding season.
- In the same period, four **Blue-headed Racquet-tails** *Prioniturus platenae*, out of two nests fledged successfully in Dumarán.
- On August 29 and September 19, Rene observed three and five mating **Green Turtles** *Chelonia mydas* respectively in the channel between Malinsuno and Pandanan.
- On November 30, Rene rescued and released a captive **Hawksbill Turtle** *Eretmochelys imbricata* in Pandanan.
- On November 29, Rene confiscated 19 illegally collected individuals of **giant clams** *Tridacna* spp. and resettled them back to the reef in Pandanan.



Figure 27. Mixed flock of terns near Rasa Island (left); giant clam in reef of Pandanan Island (right; Photos: Peter Widmann)

Cooperation

- On Aug. 20, Indira presented the KFI projects during the PCSDS organized round table discussions with Palawan Project implementers and funding donors. The PCSDS has signaled further partnerships with KFI to engage wider coverage of

project implementation to include habitat restoration and rehabilitation and biodiversity conservation in general.

- On September 11 the orientation meeting for the ECAN Board of Narra was conducted. Indira was selected as representative of the civil society of this body. The board will assess environmentally sensitive projects within the Municipality of Narra according to the Strategic Environmental Plan law of Palawan.
- On Sept, 18 Peter met with Dr. Koelpin, Director of Zoo Wilhelma in Stuttgart, Germany, and introduced the PCCP.
- On October 28 a proposal for the development of a comprehensive wildlife management plan for the Province of Palawan was discussed with members of the PCSDS and the Philippine Tropical Forest Conservation Foundation (PTFCF). KFI will submit a proposal to PTFCF for a workshop involving all agencies and organizations working in this field in Palawan.
- A MoA was signed with PCSDS and other organizations working on biodiversity issues in Palawan to share information on the topic in a website called "Palawan Biodiversity Knowledge Platform" on December 11.

Papers published, submitted for publication to relevant journals, relevant reports and media mileage

- On September 5 Peter presented a paper on the Philippine Cockatoo Conservation Programme during the Anniversary Conference of the Fonds fuer Bedrohte Papageien in Berlin.
- On September 9 Peter gave a presentation on the reforestation and wildlife corridor creation efforts in the Dumaran project sites in the Zoo of Landau in der Pfalz, Germany. The Stadtholding Landau and the local energy provider Energie Suedwest in cooperation with the Zoo are supporting these activities since many years.
- On September, The Parrot Society Magazine September issue published the article of Dorothy Schwarz about the Katala Foundation and its conservation program (Annex 1). Dorothy visited the PCCP early in 2014.
- On October 7 staff meeting involving PCCP personnel from all project sites were conducted. Cockatoo population figures from the sites were compiled and numbers from other sites were estimated. Given the lack of information from some sites, particularly in the Sulus, we estimate that between 640 and 1,120 Philippine cockatoos survive in the wild. Possibly between 75 and 90% of birds can be found in Palawan. At least 48% of birds are found within sites managed by PCCP. This figure highlights the importance particularly of Rasa and Pandanan for the survival of the species, but at the same time indicates the extreme concentration of the remaining individuals in very few sites.
- An article on the Dumaran project was submitted for publication in the German parrot magazine "Papageien".
- A presentation on "Effects of climate change on terrestrial and freshwater biodiversity in Palawan" was given by Peter on November 19 for 230 students of the Western Philippines University, Puerto Princesa City.

Conferences and workshops attended

- On August 1 we participated in an update of the red list of threatened animals for the setting of Palawan Province.

- On August 16, we participated in the climate change workshop organized by WWF and BPI. This was a scenario building workshop.
- On September 17 and 25 Indira attended meetings with PCSDS and PTFCF regarding potential cooperation and proposal development.
- On September 17 a meeting on live fish trade was attended in Puerto Princesa.
- On Oct. 9, Peter and Indira presented before the Rizal Local Protected Area Management Committee (LPAMC) the official closure of the Rizal PCCP Project. The LGU committed to continue its financial assistance to the wardens scheme but will have to revise the jurisdiction of the wardens to include other potential areas for protection.
- On Oct. 18, Indira was interviewed by anchor of an eco-travel show of the ANC, a subsidiary of the national ABS-CBN TV network. The interview was about the PCCP and was aired in November 2014.
- On Oct. 21, Indira attended the Kalahi-CIDS orientation seminar in Narra.
- On Oct. 23, PCCP lectured before 44 inmates at the Iwahig Penal and Prison Farm in celebration of their Correctional Consciousness Week.
- On Oct. 28, Indira, Peter and Sabine attended a meeting with PCSDS on development of a proposal for wildlife management program for Palawan.
- On November 14 Peter attended a workshop on a 20-year plan for climate adaptation for Palawan. On November 15 Indira and Peter attended a conference of the “Business of Climate Change” in Puerto Princesa. Both affairs were organized by the local Chamber of Commerce.
- On December 4 a meeting was attended with representatives from UNESCO and IUCN to aid the assessment of Puerto Princesa Subterranean River NP as World Heritage site and Palawan as Man and Biosphere Reserve.

Awards and recognitions

- Together with the late William Oliver, Indira and Peter were selected as the first ever species Champions of the European Association of Zoos and Aquaria (EAZA). Thanks a lot Roland!

Personnel and equipment status

- Ms. Sheen Arib, our new administrative assistant assumes position this October after probation period.
- We have engaged a videographer to document the Project activities and programs.
- Service boat for Rasa is now dry docked and ready for repair and maintenance in preparation for the next breeding season.
- Service boat in Pandanan was also dry docked and cleaned and engine was checked in August. Painting commenced in December.
- Repair of the Katala Environmental Education Centre continued throughout December.

Implications for further work

- The first “Critical Habitat” in Palawan was established through initiative of KFI comprising two existing cockatoo reserves, their buffer zones and a connecting corridor. This tool may be of use for securing smaller and isolated forest patches in

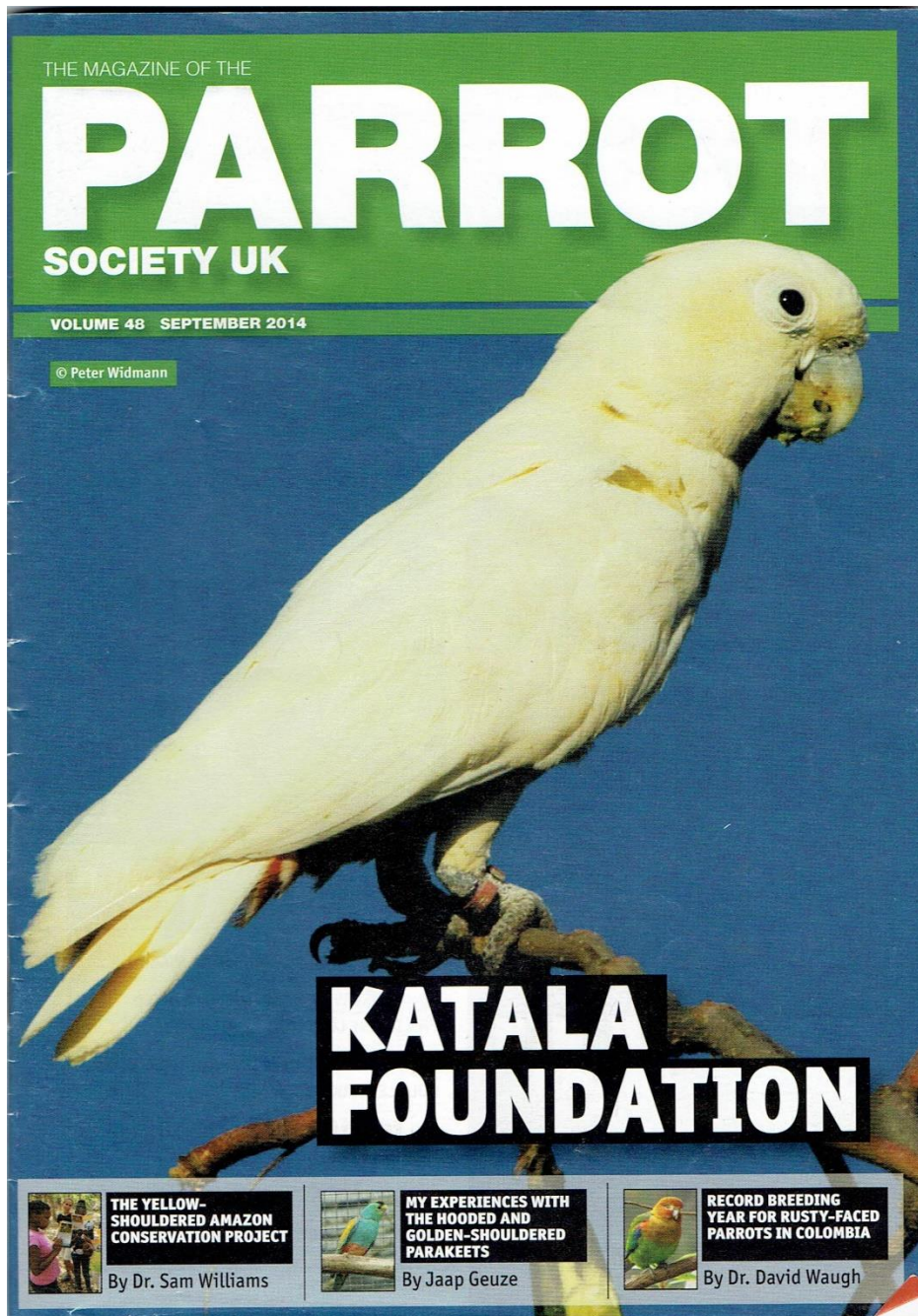
the vulnerable lowland areas of Palawan. This project was mainly funded by the Philippine Tropical Forest Conservation Foundation Inc.

- If low numbers of rescued or confiscated cockatoos become available which do not justify the initiation of the reintroduction attempt outside of Palawan, these birds will be used to supplement the population in Dumarán. Despite the loss of one bird, it could be demonstrated that integration into the wild flock is possible, and birds can be weaned completely from feeding stations if wild birds with local knowledge are still around.

Literature

- Boussekey, M. 2000a: European studbook for the Red-vented cockatoo (*Cacatua haematuropygia*). St. Martin La Plaine, France. 53pp.
- Collar, N.J., N.A.D. Mallari, B.R. Tabaranza, Jr., 1999: Threatened Birds of the Philippines. The Haribon Foundation/BirdLife International, Manila, Philippines. 559pp.
- Dickinson, E.C., R. S. Kennedy & K.C. Parkes, 1991: The Birds of the Philippines. B.O.U. check-list no. 12. British Ornithologists' Union, Tring, UK. 507pp.
- IUCN 2015. The IUCN 2015 red list of threatened species. www.redlist.org.
- Jones, C.G., Merton, D.V., 2012. A Tale of Two Islands: The Rescue and Recovery of Endemic Birds in New Zealand and Mauritius. In: Ewen, J.G., Armstrong, D.P., Parker, K.A., Seddon, P.J. (Eds.), Reintroduction Biology - Integrating Science and Management. Wiley-Blackwell, Chichester, UK, pp. 33-68.
- Katala Foundation Inc., 2010. Proceedings of the National Workshop for the Development of the Re-introduction protocol for the Philippine cockatoo *Cacatua haematuropygia*, Puerto Princesa City. pp. 62
- Lacerna I.D. & P. Widmann, 1999: Biodiversity utilization in a Tagbanua community in Southern Palawan, Philippines: International Conference on Applied Tropical Ecology: Aspects on ecosystems management in tropical Asia, ViSCA, Baybay, Leyte.
- Lambert, Frank. 1994: The Status of the Philippine cockatoo *Cacatua haematuropygia* in Palawan and the Sulu Islands, Philippines. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK.
- Mallari, N.A.D., B.R. Tabaranza Jr. & M.J. Crosby, 2001: Key Conservation sites in the Philippines. Haribon BirdLife International, Manila. 485pp.
- Schoppe, S., 2013 (May). *From nearing extinction to flagship species – the endemic Palawan Forest Turtle Siebenrockiella leytenensis*. Second Interim Report to Ocean Park Conservation Foundation Hong Kong. Katala Foundation Inc., Puerto Princesa City, Palawan, Philippines, 37 pp.
- Schoppe, S., 2013 (June). Critical habitat management on Dumaran Island, Palawan. Unpublished technical and financial quarterly report 3rd quarter, March to May 2013. Katala Foundation Incorporated (submitted June 2013)
- Sodhi, N., R. Butler, W. Laurance, & L. Gibson, 2011. Conservation successes at micro-, meso- and macroscales. Trends in Ecology and Evolution 1426. Elsevier Ltd.
- Widmann, P. 2001: Distribution and status of the Philippine cockatoo *Cacatua haematuropygia* in the wild. Unpubl. review and discussion paper. 32pp.
- Widmann, P., I.D. Lacerna & S.H. Diaz, 2001. Biology and conservation of the Philippine cockatoo (*Cacatua haematuropygia*) on Rasa Island, Palawan, Philippines. Proceedings of the 10th Annual symposium and scientific meeting of the Wildlife Conservation Society of the Philippines, April 2001, Silliman University, Dumaguete City, Philippines.
- Widmann, IDL, S.Diaz & A. Espinosa. Observations on Philippine cockatoo in Pandanan and Buliluyan, Southern Palawan, Philippines, 2008 in Widmann, I.D., P. Widmann, S. Schoppe, D. Van den Beukel & M. Espeso, 2008 (eds.): Conservation Studies on Palawan Biodiversity – a compilation of researches conducted in cooperation with or initiated by Katala Foundation, Inc., Puerto Princesa City, Palawan.

Appendix 1





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information campaigns.

From the start of 1999, the cockatoo population showed clear signs of recovery. In 2008 the cockatoo population hit the 200 individual mark. The area has become the core habitat not only of the Philippine Cockatoo but also of other globally threatened or near-threatened bird species. At present, similar strategies are applied in three other municipalities in Palawan: Dumanan in the north and Pandanan in the south, where remnant populations occur, and Rizal in the south, where many cavity-nest dwelling birds exist in an equally threatened lowland forest area.

Conservation support

Conservation of any living creature is costly. The Katala Foundation has several major partners. Since 1999 the Loro Parque Fundación has, together with Chester Zoo, UK, CEFA (Conservation des Espèces et des Populations Animales) and Asociación Beaulieu de Conservation et Recherche, France and ZCAP (Zoological Society for the Conservation of Species and Populations), Germany, supported the Palawan-based Katala Foundation.

The Philippine government also supports the project's aims but in general in the Philippines conservation has to depend on NGOs. And NGOs depend on outside help. They do not generally generate enough income. By Philippine law only 30% of its total costs can be used for salaries and wages. Peter Widmann would prefer to work fulltime on Katala but has to take consultancies abroad and at home to balance the Widmann's personal budget. Katala is not subsidised by individual members of the public in any major way. Municipalities are a reliable source but problems occur when government politicians (and policies) change. Loro Parc, involved from the start, has consistently funded the project, donating 1.3 million US dollars over 35 years. I spoke to Roger Wilkinson from Chester Zoo

who said of all the projects he has been involved with over many years Katala is one dearest to his heart. 'Small NGOs are doing everything right.' He says that Chester Zoo is not a huge organization so they like to feel that all money they donate is well spent. 'Katala,' Roger Wilkinson declares firmly, 'stands out as value for money.'

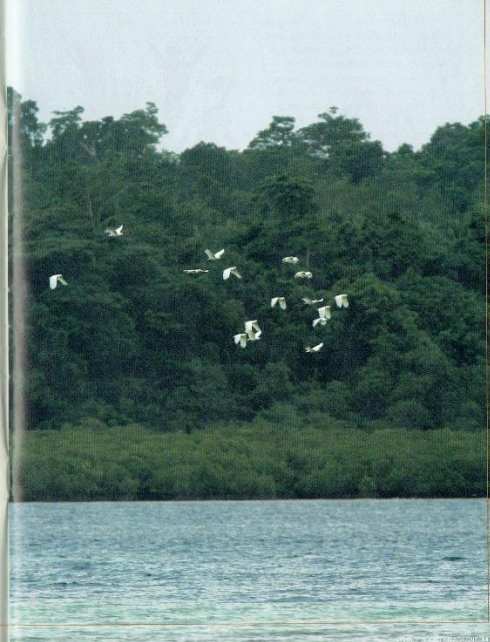
A successful protest against building a coal-powered plant

An example of the problem of development versus conservation in the third world. Palawan province's municipal council of Narra finally opposed the construction of a 15-megawatt coal-fired power plant by DMCI Power Corporation in Barangay Pansan in 2013, after local protests and a petition set up on the internet by The Katala Foundation was endorsed by thousands from around the world. Three online petitions were put up and had gathered nearly 82,000 signatures all over the world. Two of these were run by change.org. One was initiated by KFI. Mayores Lucy Demala has fervently supported conservation. She said: "we can't gamble the health of our community over the revenues to be generated from the operation of a DMCI coal-fired power-plant, that this may generate degradation in our coastal areas and greatly affect the wildlife we have been protecting for so many years, especially in the protected wildlife reserve of Rasa Island."

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several. The field station on Malinsuno has had its own house in the village for the last 3 years. This is built in traditional style on stilts with rattan walls and thatched roof. It won't be equipped for visitors until the dirt road is tarred. We found it comfortable enough. No running water but water from a well. A western style loo is plumbed in and flushed by pouring water from a bucket. Indra apologised for the simple meal; a needless apology since we ate fish so fresh that it seemed to be jumping off the plate. Village children were playing round the boats on the beach - not a mobile phone in sight.

First sight of Red vents

Chris and I spent the afternoon exploring the village. Domestic poultry resembles jungle fowl. Villagers subsist on fishing, coconut growing, small enterprises; jobs are in short supply. So Katala's employing wardens and boatmen is a source of useful revenue wherever their activities are carried out. We shared no common language with the villagers but playing with young children doesn't need one.

We were waiting for 5 pm to walk to the roosting site - a ten-minute track from the village. The cockatoos feed on nearby islands and sometimes on the mainland. Cockatoos fly across the water and then roost in two or three tall palm

trees, but they are not always in evidence. It grew almost dark. Expectation on my part was dashed, each time a white bird flashed past; egrets are ubiquitous everywhere on Palawan. No cockatoos. I grew restive after a 50-minutes wait. Be patient, Indra advised. Then they arrived; wingtip to wingtip - an aerial ballet. One moment empty sky, the next a cloud of white wings. I counted 31 then gave up. The wardens counted 73. The sky grew almost too dark to see them. They perched on the palm fronds, the fronds looking ratty since the cockatoos appear to nibble them.

In effect between 5 - 8% of the world population of every free living Red vent cockatoo was perched in those three tall coconut trees above our craning heads. (There are now over 108 cockatoos counted on Malinsuno roost site) Our group appeared to be having the same sort of cockatoo interactions of jostling and squawking that I've seen on film clips of Galahs going to roost. We stayed until dark then walked home by flashlight for supper.

Next day was even more exciting. We were taken to two nest sites on another island to bring down some chicks for ringing and examination. We set off in two pump boats. Chris and I, Indra, René the chief research officer on Pandanan, several wardens. The village capitana came along for the



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ride. As headman of the village (last year it was her husband) she takes an enormous interest in the cockatoos and their survival. Without her support and that of the village council she chairs, Katala's work would be impossible. The atmosphere was hilarious, everyone in the two pump boats joking and laughing.

Barangay Pandanan, the island on which the nest trees are situated, belongs to a wealthy, private individual who runs a pearl fishery there. In consequence, he agrees to preserve forest cover. We were met by 4 wardens; one is an ex-poacher, now the only tree climber in that group.

The walk was the toughest so far through lowland forest on a track that sometimes dwindled, but Indra and René knew exactly which fork to take. René kindly provided me with a stout stick.

We halted in a small clearing in front of a majestic Pomelia tree 30 - 50 m high - a favoured nest tree. When Katala began they wanted the ex-poachers to use modern safety harness to reach the nests but the climbers, who are all ex-poachers, rejected that outright after one attempt. Now all climbing is done the traditional way.

Sabino, an ex-poacher, who is 35 and has been with Katala since the inception, shimmies up a slender tree next to the nest tree; the girth

of the nest tree is too wide to be climbed. At the top of the slender tree opposite the nest hole, Sabino throws a platted vine as a boomerang and secures access to the nest tree. He collects chicks in a bag which is then lowered to the ground. He waits in the nest tree until all procedures with the chicks on the ground are over and they are hoisted up and replaced in the nest. While this is happening the parents are circling round and yelling at the tops of their voices.

This nest had contained 3 chicks, one had already fledged, (we spotted him flying with his parents high above us) so only two were brought down for feather sampling and weighing. The two were weighed and measured. René and Indra handled the chicks with speedy efficiency and a lot of tenderness. Both were smiling constantly. The almost fledged chicks wriggled like crazy and yelled like banshees. René got bitten through his surgical gloves. Eventually a feather was taken, a ring put on the unringed chick and the chicks were hoisted back to the nest.

We took a short rest at a camp site for the wardens where they cooked rice on an open fire, and then a long forest walk to a second nest tree. The forest on this island is practically untouched. I could have spent hours with the unfamiliar trees and flowers. One was a vine which the Victorian discoverer named Clitoria ternatea.