

**KATALA INSTITUTE FOR ECOLOGY
AND BIODIVERSITY CONSERVATION (KIEBC)**

Annual Report 2009



**Puerto Princesa City, Palawan, Philippines
January 2010**

KATALA INSTITUTE FOR ECOLOGY AND BIODIVERSITY CONSERVATION (KIEBC)

GENERAL INFORMATION

Name: KATALA Institute for Ecology and Biodiversity Conservation (KIEBC)

Location: Narra, Palawan, Philippines

Proponent: KATALA Foundation, Inc., (KFI)

3rd Floor RGP Building, Peneyra Road, San Pedro, Puerto Princesa City 5300
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Environmental Compliance Certificate: ECC-4B-042-PA-5012-2007

Goal: Conservation of Palawan's biodiversity through establishment of an education, conservation and research institution in close vicinity to threatened target species and ecosystems.

Objectives: To serve as a venue for conservation education with local population, youth, national and international visitors as main target groups.

To develop procedures for rescue, conservation breeding, habitat restoration and eventually re-introduction of selected highly threatened wild species of Palawan, like Philippine cockatoo and Philippine forest turtle.

To establish an institution for research on applied ecology and biodiversity conservation, with focus on threatened species management, priority area conservation and restoration.

Time Frame: Preparatory Phase: August to November 2006
Operational Phase One: December 2006 to December 2008
Operational Phase Two: January 2009 to December 2010
Operational Phase Three: January 2011 to December 2012

Philippine Project Cooperators:

Department of Environment and Natural Resources (DENR)

Protected Areas and Wildlife Bureau (PAWB)

Palawan Wildlife Rescue and Conservation Center (PWRCC)

Palawan Council for Sustainable Development (PCSD)

Municipal Government of Narra, Palawan, Philippines

Concerned agencies and authorities

PROJECT DESCRIPTION

Rationale

The Palawan faunal region is of high species diversity, reminiscent of the close-by island of Borneo, but at the same time holds a high percentage of endemics, therefore resembling the Oceanic Philippines. Although still extensive areas of pristine forests, mangroves and coral reefs exist on Palawan, the rate of destruction, deterioration and fragmentation of these ecosystems is one of the highest in Southeast Asia.

Since 1998, KFI is implementing the Philippine Cockatoo Conservation Program (PCCP) in Narra, Palawan. It is one of the first community-based species conservation programs in the Philippines, and was deemed as one of the most successful of its kind. Within ten years, the population of the critically endangered Philippine cockatoo increased tenfold in a protected area specifically established for this species. Rasa Island is now the single-most important habitat for the Philippine cockatoo and is one of the most accessible wild places in the Philippines for a broader public to experience first-hand a rare and endemic species in its natural habitat.

In order to institutionalize this project and to broaden conservation efforts within southern Palawan, the establishment of the KATALA Institute for Ecology and Biodiversity Conservation (KIEBC) was envisioned by KFI and its local and international partners.

Project Location

The project site is located in Barangay Antipuluan, Narra, Palawan. It is situated about 1.5km northeast of the Narra town proper in the coastal plain, only about 200m away from the National Highway. Here the Katala Institute for Ecology and Biodiversity Conservation will be established. The site encompasses a total land area of 2.18ha donated by the municipal government of Narra. The area is surrounded by pastures and paddy fields, with the Victoria Range as spectacular backdrop.

Project Goal and Objectives

The goal of the KATALA Institute for Ecology and Biodiversity Conservation can be summarized as follows:

Conservation of Palawan's biodiversity through establishment of an education, conservation and research institution in close vicinity to threatened target species and ecosystems.

Objective 1: To serve as a venue for conservation education with local population, youth, national and international visitors as target groups

Objective 2: To develop procedures for rescue, conservation breeding, habitat restoration and eventually re-introduction of selected highly threatened wild species of Palawan

Objective 3: To establish an institution for research on applied ecology and biodiversity conservation

HIGHLIGHTS OF ACCOMPLISHMENTS

In line with the different project phases and objectives of KIEBC the following activities were conducted between January and December 2009. For earlier activities and reports please refer to Progress Report 2007, Annual Report 2008 and www.philippinecockatoo.org

Landscaping / Planting / Construction

- Access road construction finally started in April. The national highway passing by the site was under construction in the 3rd quarter of the year and hindered trucks to enter the site. Finally in the last quarter of the year, 342m³ of backfilling materials were delivered and used for the construction. The road is now already passable until the main entrance gate of KIEBC; the material needs however still to be compacted.
- The area around the deep well was cemented. Co-manager and SHDiaz met with a deep well expert and discussed how to improve water source in KIEBC area.
- The temporary perimeter fence that had been destroyed by strong winds and grazing cattle had been repaired. Then we started replacing the temporary bamboo fence with a permanent structure. So far 22m permanent perimeter fence have been constructed.
- Manual backfilling along the perimeter fence continues.
- Renovation of the caretaker house started in December 2009 and inner walls of rooms were painted.
- A KIEBC status report was published in November in the ZGAP newsletter No 25(2).

Nursery and Planting

- Pioneering and food trees for cockatoos were planted along the perimeter fence, in quarantine and turtle areas and near the new cockatoo aviary. In mid February 150 cuttings of *Moringa oleifera* were planted around KIEBC premises. In March, 274 tree seedlings were planted in quarantine and turtle areas while 230 seedlings along the perimeter fence. In September, some 900 seedlings of 10 tree species and more than 100 large trees were planted.
- Some 2000 seedlings of 63 tree species are maintained in the KIEBC nursery. Plants raised are mainly food providing trees for the Katala. A new area was cleared in preparation for a new nursery area. In the current nursery area some seedlings have already established hence will be left to grow.

Visitors

- Parrot expert Thomas Arndt visited KIEBC in the first week of January. His visit provided us advice and comments on our KIEBC facilities particularly on the on-going construction of the cockatoo aviary and the cockatoo feeding plan.

- On February 23, Czech zookeeper Pavel Hospodarsky visited along with four others from the Czech Republic to discuss about captive care and maintenance of *S. leytensis* and provided some inputs for aviary construction.
- Dr. Nimal Fernando, Senior Veterinarian of Ocean Park in Hong Kong and consultant veterinarian of the Turtle Survival Alliance (TSA) assessed the health status of our Philippine Forest Turtles on June 12-13, 2009. He also trained our keepers in assessing health status and application of fluids.
- Rainier Manalo and Salvador Guion visited KIEBC on June 12, 2009 to assess and discuss a filter system for the turtle pens.
- From 7-9 September, the Turtle Survival Alliance (TSA) had sent a team to assess husbandry conditions of *S. leytensis*. The team was headed by Rick Hudson, president of TSA.
- 10 September, a team of the local TV channel ABS-CBN visited KIEBC.

Training / Staff Development

- From 16-31 January 2009 Ariel Dangis, new assistant turtle caretaker was trained at the facility.
- In May, Charlito Basio – still another turtle assistant was trained and contracted for the rest of the year.
- KFI staff Diverlie Acosta attended a four-day training as Pollution Control Officer in May 2009. She was officially inducted on June 27, 2009. Ms. Acosta also sits as board member to the Palawan Association of Pollution Control Officers (PAPCO).
- Quarterly self-monitoring reports were submitted to DENR-EMB on the 15th of the following month.
- In November, KFI staff Diverlie Acosta attended one month training in veterinary medicine and animal husbandry in Hong Kong. First she spent three weeks at the Kadoorie Farm and Botanic Garden (KFBG) in Tai Po and then one week at Ocean Park (OP) in Aberdeen. During the warden's refresher training in December, Diverlie was able to provide feedback on her training to wardens and staff.
- From Dec. 7 to 23, 2009 a veterinary student of the University of the Philippines in Los Baños conducted an internship at KIEBC. She checked birds and turtle for external and internal parasites which so far were all found to be negative.
- After a series of interviews a full-time zookeeper, Emanuel Coñate, was contracted for 2010. He had a first training in December and volunteered at the center when wardens and staff were out for refresher training.

Husbandry and Health

- Routine health check of cockatoos and turtles was conducted through the services of Dr. Glenn Rebong from the PWRCC.

- A new matrix was developed to record health status of every individual separately.
- In the absence of Diverlie Acosta during the time when she attended training, Mr. Salvador (Dong) Guion from PWRCC conducted weekly check-ups of the animals at KIEBC.



KIEBC access road.



Permanent perimeter fence.



Planting of trees.



Keeper Diverlie Acosta and visiting veterinary Dr. Nimal Fernando.



Visiting TSA team assessing turtle husbandry.



Assistant keeper Charlito Basio and Dong Guion of PWRCC checking turtles.



Diverlie Acosta attending training in Kadoorie (left) and Ocean Park (center) in Hong Kong.



UPLB student intern Raisa Lagrimas conducting faecal analysis.

Philippine Cockatoo

- Already in 2008, the Zoological Society for the Conservation of Species and Populations (ZGAP) incl. the “Fonds für Bedrohte Papageien” and the “Strunden-Papageien-Stiftung” had provided generous financial support for the construction of two large cockatoo aviaries. By April 2009, we had completed the construction of the cockatoo aviary except for painting the welded wire and the roofing of part of the aviary. The aviary is divided to accommodate the breeding section and the area for public viewing. The two might be connected through a large sliding door if the need should arise. Its design was discussed among partners from Europe along with our local partners. The flooring is placed with boulders and gravel allowing drainage but preventing potential predators to enter. In addition a deep concrete foundation prevents predators to enter. It was hard for us to find source of mercury and lead free paints for the aviary. Canvassing yielded only one option of paint that is available in Manila. Finally in October the paint was delivered to Narra. In November and December, roofing material was installed for the feeding and the breeding areas of the two aviaries. With the permission from CENRO large drift wood trunks had been gathered in coastal areas and were hauled to the aviary to serve as visual barriers, perches, and nest holes respectively. Tree trunks with and without nest holes are offered in the breeding area to give the future occupant the chance to choose a nesting area. The area around the aviary has been planted among other with Tarabangaw trees.

By end of December the construction work of the aviaries was finally finished. The two 4x8x3 m aviaries are now connected by a sliding door to provide birds the access to both aviaries if feasible. Transfer is scheduled for late January or early February.

- Early this year, we changed the feeding plan and schedule for the five cockatoos we have in KIEBC. We have stopped giving treats like sunflower, dog food and *Cerelac* (baby food) since February. Now, birds are fed twice everyday with chicken contrite

(at 5% of body weight of the bird) and a mix of local fruits and vegetables. Among the favorites are beans, peppers, banana, and local wild fruits and flowers of Malunggay, Aring, Bangkudo, Talisay, Ulagak, Banag. This is supplemented with vitamins and minerals. Their weights are stable.

- Foliage at each enclosure is regularly changed. There are about 23 species of local trees and shrubs we alternately use for aviary enhancement as foliage. Birds love to nibble on leaves, fruits, twigs and branches and certainly use it for perching and grooming.
- Artificial nest boxes are part of the furniture provided in the aviary and birds use them quite happily. We had several observations when bonding pair spent the nights inside their nest boxes. Birds especially Silver 75 were also observed trying to imitate the sounds of birds surrounding the aviary like that of white bellied sea eagle.
- All the birds enjoy the rain and in absence of rain, they are showered twice a week which they enjoy a lot.
- In late November, Violet 74 (male) suddenly started first plucking and then injuring himself at the crop area. After consulting the local veterinary at PWRCC the bird was transferred to the clinic at PWRCC and was stitched on Dec 1, 2009. The wound was treated and covered with a bandage and collar to protect the wound and prevent further nibbling.
- As of December 2009, Blue 80 (female) B80 is still bald and manifests behavioral problems. Brazil 78 (female) that had temporarily started plucking stopped after a while and feathers are now fully re-grown. She also shows disturbed behavior. Pandanan 08 continued plucking and is now bald, some feather are however re-growing. Violet's (74) wound has healed nicely but the bird is still under strict supervision at PWRCC. Silver 75 (male) shows regularly mating behavior and is the bird that best adapted to life in captivity.
- Despite behavioral problems, all birds are feeding well and stable in weight. We hope that the transfer to the new large aviary will bring positive changes and birds will hopefully stop plucking.



Pandanan enjoying shower.



Blue bald but active.



Silver observing keeper.



Construction process of the viewing and breeding aviaries for the cockatoos.

Freshwater turtles

- As of 31 December 2009, KIEBC holds an assurance colony of 34 Philippine Forest Turtles *Siebenrockiella leytensis*, 26 Southeast Asian Box Turtles *Cuora amboinensis*, 11 Asian Leaf Turtles *Cyclemys dentata*, and 1 Malayan Softshell Turtle *Dogania subplana*.
- Two major constructions improved husbandry conditions of turtles: a “clinic” and a new enclosure for the softshell turtle *Dogania subplana*. The “clinic” area with shelves, sink and working area serves for routine health check and treatment of turtles.
- Cement sealant was applied to some of the small quarantine cells to prevent Ca_2CO_3 leakage and related high pH. Turtle facilities were subjected to regular maintenance activities and enrichment plantings.
- The two large hard shell enclosures (H1 and H2) used for the Philippine Forest Turtle were subdivided into a total of 19 smaller compartments and each provided with a shed and a nesting area.
- Turtles were monthly monitored for health and quarterly for growth. Feeding schedule was revised. We started feeding freshwater gastropods to the turtles to supply with additional calcium. All turtles were dewormed trice during the reporting period. All hard shell turtle species showed reproductive behavior almost every month.
- During monthly turtle inventory in May it was noted that some *S. leytensis* had developed shell rot while all other species were healthy. Sick individuals were separated in quarantine enclosures and after veterinary consultation set on medication. The IUCN Tortoise and Freshwater Turtle Specialist Group and local experts from PWRCC and Conservation International were consulted and a veterinary from Ocean Park in Hong Kong, Dr. Nimal Fernando was sent through the generous support of the Turtle Survival Alliance (TSA) by mid of June. An article on Dr. Fernando’s visit was published in the August issue of the TSA’s regular magazine (<http://www.turtlesurvival.org/blog/1-blog/58-a-range-country-assurance-colony-for-the-philippine-forest-turtle>).
- Water samples were sent for analysis. Shell rot is expected to be related to stress in combination with water and soil chemistry at the site. The high pH of waters in Narra

might be one of the main causes of weakness of the animals. Pond water were consequently treated with leaves of *Terminalia catappa*, a coastal tree, locally called *Talisay* that is known to reduce pH of aquarium waters. Furthermore, cement sealant was applied to some of the small quarantine cell to prevent eventual Ca_2CO_3 leakage.

- Mid September, the Turtle Survival Alliance (TSA) - as a follow up of the earlier visit of Dr. Nimal Fernando – had sent a team to assess husbandry conditions of *S. leytensis*. The team was headed by Rick Hudson, president of TSA. High pH, eventual inflow of waste waters from surrounding pastures and stress among male individuals were identified as problems that need immediate attention. Hence, males were placed in individual compartments and a filtering pond system was designed by Bill Zeigler, who is specialized in pond filtering systems. Estimated cost for the filter and settling pond system are USD 11,000. TSA committed USD 5,000 and we have submitted proposal for counter funding to the Turtle Conservation Fund (TCF); decisions are due in late February. An article about the TSA visit was published by Rick Hudson online in September (<http://www.turtlesurvival.org/blog/1-blog/66-team-tsa-in-asia-september-2009>).



Diverlie Acosta deworming a turtle.



New clinic area.



New *Dogania* pond under construction.



Assistant keeper Ariel Dangis monitoring growth of turtle hatchling.



Visiting vet Dr. Nimal Fernando checking turtle conditions.



Team of the Turtle Survival Alliance headed by Rick Hudson (right) and KFI staff (in front).

Palawan porcupine

- The Zoological Society for the Conservation of Species and Populations has provided financial support for the captive care of the Palawan endemic porcupine *Thecurus pumilus*. The construction work of an outdoor enclosure for the Palawan porcupine was severely hampered by the weather that caused flooding and the absence of an access road. Excavation and backfilling was all done manually. A central mount was backfilled and a moat was dug out and cemented. Drift wood was used for landscaping the enclosure. The enclosure with moat, viewing area, den and furniture are now finished.

Early next year, the enclosure will get the final landscaping touch through planning of shade providing native trees. Once an agreement with PWRCC for the loan of specimens has been signed, we intend to loan two individuals for display and educational purposes.



Manual backfilling of mount.



Fenced porcupine enclosure.



Entrance to tunnel system.

Other Wildlife

- On March 21, 2009, a Pangolin was turned over to KIEBC, measured, documented and released back to the wild on March 26, 2009.

ACKNOWLEDGEMENTS

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- Mayor Clarito D. Demaala Jr. and his wife Lucy, MENRO Rolando R. Tagyab, MPDO Ronald Fellizar, Municipal Engineer Parco, and the Sangguiniang Bayan of the Municipality of Narra.
- Regional Director Mr. Sixto E. Tolentino, Jr. of DENR-EMB; Director Dr. Theresa Mundita S. Lim of DENR-PAWB; PENRO Juan C. dela Cruz, Priscilla L. Adriano and Vivian Soriano of DENR-PENRO; CENRO/PASu Fernando T. Tactay, EMS Mercy Almorfe, and Deputy PASu Emmanuel Alfaro of CENRO Narra.
- OIC Director Dr. Glenn Rebong of PWRCC.
- OIC Director Romeo Dorado PCSDS.
- The veterinaries Dr. Glenn G. Rebong of PWRCC; Dr. Sonja Luz of Singapore Zoo; Dr. Nimal Fernando of Ocean Park, and Dr. Esteven Toledo, Dr. Nielson Donato, Dr. Emilia A. Lastica of PAWVI.

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- Thanks to KFI, especially President Senator Juan Miguel Zubiri, Vice President Peter Widmann, Construction In-charge Siegfred Diaz, and staff.
- Special thanks also to the keepers Diverlie Acosta, Monico (Lolo) Beleg, Ariel Dangis, Charlito Basio, Loreto (Doy) Alisto, and Emanuel Coñate. And to Dong Guion of PWRCC who assisted us during his free time.
- Officials and residents of Bgy. Antipuluan, Narra.
- And to all staff, wardens, volunteers, and construction workers who help in the progress of KIEBC.

PERSONNEL INVOLVED

Indira Dayang Lacerna-Widmann and Dr. Sabine Schoppe – Program Managers, PCCP

Peter Widmann – KFI Vice-President

Maruji P. Manalo – Administrative Officer, Education Officer

Siegfred H. Diaz – Field Operations Coordinator

Diverlie Acosta - Pollution Control Officer, Research Assistant and Turtle Keeper

Ivy Regodos – Field Administrative Assistant

Ariel Dangis and Charlito Basio - Assistant Turtle Caretakers

SDENRO Monico Beleg - Bird Caretaker / Asst. Zookeeper

SDENRO Loreto Alisto - Assistant Bird Caretaker

Affiliated Scientists:

- Glenn G. Rebong, DVM, OIC, Project Director, PWRCC
- Dr. Nimal Fernando, Senior Veterinarian at Ocean Park, Aberdeen, Hong Kong
- Dr. Sonja Luz, Senior Veterinarian at Singapore Zoo
- Dr. Esteven Toledo, Dr. Nielson Donato, Dr. Emilia A. Lastica, PAWVI veterinaries