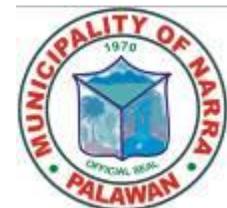
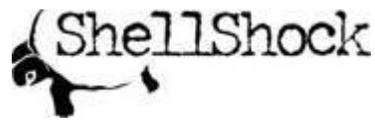


PHILIPPINE FRESHWATER TURTLE CONSERVATION PROGRAM (PFTCP)

2008 Annual Report



By



Puerto Princesa City, Palawan, Philippines

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2008 ANNUAL REPORT

COUNTRY: PHILIPPINES

PROJECT TITLE: PHILIPPINE FRESHWATER TURTLE CONSERVATION PROGRAM (PFTCP)

PROJECT DURATION: December 2006 - December 2011

PROJECT SITE: Philippines

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
Western Philippines University (WPU)
Concerned agencies and authorities**

BY: KATALA FOUNDATION INC. (KFI)

ADDRESS: Philippine Cockatoo Conservation Program

**3rd Floor-a R.G.P. Building
Peneyra Road
Barangay San Pedro or P.O. Box 390
Puerto Princesa City
PH 5300 Palawan, Philippines
sabine_schoppe@web.de; idlacerna@yahoo.com
www.philippinecockatoo.org
Tel/Fax: +63-48-434-7693**

PHILIPPINE FRESHWATER TURTLE CONSERVATION PROGRAM

EXECUTIVE SUMMARY

On 26 December 2006, DENR-PAWB and Katala Foundation Inc. (KFI) entered into a Memorandum of Agreement for the implementation of the “Philippine Freshwater Turtle Conservation Program” (PFTCP). Progress of the said program since its early stages in 2007 were integrated in the technical progress reports of the Philippine Cockatoo Conservation Program (PCCP) of Katala Foundation Inc (www.philippinecockatoo.org). Major accomplishments in line with the objectives of PFTCP in 2008 were the start of three long-term population surveys on the critically endangered Philippine Forest Turtle (*Siebenrockiella leytensis*) which are the extension of previous short-term populations at the same site. Research on the morphology and population size of the other Palawan freshwater turtles has been conducted as well. Kindly refer also to the monthly accomplishment reports of one of the project components that was funded by the European Association of Zoos and Aquaria (EAZA) through the Shellshock Turtle and Tortoise Conservation Campaign. A proposal for Philippine-wide research on the Southeast Asian Box Turtle had been submitted for funding. A proposal to fund the extension of a long-term population study of the Philippine Forest Turtle has been submitted as well, and one for a comprehensive IEC campaign has been drafted. Turtle captive care facilities at the Katala Institute for Ecology and Biodiversity Conservation (KIEBC) are continuously being improved.

OBJECTIVES

The Philippine Freshwater Turtle Conservation Program has the following objectives:

- 1. Conservation of Philippine freshwater turtle populations and their habitats, particularly but not restricted to Puerto Princesa City, Narra, Dumarán Island, and Rizal**
 - 1.1. Establishment and development of facilities for conservation breeding / captive management / rescue of threatened freshwater turtle species.
 - 1.2. Provision of assistance in identifying areas / habitats of freshwater turtle for priority protection as well as in implementing conservation and protection measures and sustainable development of identified priority areas.
 - 1.3. Provision of assistance in wildlife law enforcement and information dissemination.
 - 1.4. Conduct of experimental soft release of turned-over / donated / confiscated and captive bred freshwater turtles.
- 2. Conduct of scientific research on the biology and management of Philippine freshwater turtles and their habitats, and socio economic frame conditions leading to threats and strategies for conservation, such as, among others studies / researches:**
 - 2.1. Research on biology such as but not limited to breeding, population dynamics, feeding ecology, synecology, diseases, threats, taxonomy, captive management, veterinary medical procedures, and behavior, among others.
 - 2.2. Habitat conservation and restoration techniques.

3. Education and capacitating stakeholders of PFTCP on natural resource management and conservation; rehabilitation/restoration of species habitats, and environmental awareness by:

- 3.1. Conducting environmental education on the status and threats of Philippine freshwater turtle species for key stakeholders like poachers, buyers, traders, decision makers, law enforcers, in and out of school youth, local communities, academe and local government units, among others;
- 3.2. Capacitating local communities concerned on turtle conservation, including pre and post release activities for the species in their respective areas;
- 3.3. Disseminating information on Philippine freshwater turtles and related conservation / protection issues through multi media, including publications and distribution of research outputs/results generated from this undertaking;
- 3.4. Establishing a Center in Narra, Palawan as venue for biodiversity education and research.

PROGRAM HIGHLIGHTS

In line with the objectives of PFTCP the following highlights were accomplished in 2008:

1. Conservation of Philippine freshwater turtle populations and their habitats, particularly but not restricted to PPC, Narra, Dumaran Island, and Rizal

- 1.1. Construction work leading to the establishment of the Katala Institute of Ecology and Biodiversity Conservation (KIEBC) as an Education and Biodiversity Centre in Narra - of which the turtle facilities are one part - continued. Within the reporting period the following had been accomplished:
 - 1.1.1. Three ponds (4x5m each) as part of natural sewage plant for discharges from quarantine enclosures. Central ponds were placed with rice hull and the remaining with gravel and water plants. The excavated soil was used to backfill around perimeter fence ready for planting.
 - 1.1.2. Establishment of canal systems (estimated 120 linear meters with 50cm width and 60cm deep) outside quarantine area to drain waste waters from turtle enclosures to the sewage ponds.
 - 1.1.3. Planting sorghum seeds on backfilled areas beside quarantine fence and dikes.
 - 1.1.4. Reconstructing the nursery shed with a portion roofed with *Nypa* shingles and the rest with mesh nets. Shed house dimension is about 16.5m length and 4m width. Seedlings were sorted and prepared for planting.
 - 1.1.5. Brushing/under brushing of grasses which are competing with planted pioneering species along perimeter fence.
 - 1.1.6. Malunggay cuttings were planted beside the information hut.
 - 1.1.7. To prepare for future infrastructures, water connection from the main source is being discussed in cooperation with the municipal government.
 - 1.1.8. Quarterly self-monitoring reports were prepared and submitted by KFI's Pollution Control Officer.
- 1.2. Facilities to keep and breed turtles at the said KIEBC that had been established in 2007, underwent continuous maintenance activities and were exposed to

major improvement such as diversification of vegetation, shading of enclosures, furniture of enclosures etc.

- 1.3. Electricity was installed in turtle quarantine, breeding and caretaker facilities, and so far two ponds were supplied with an electric water pump/filter system.
 - 1.4. Water quality of deep well and surrounding waters was tested several times during the reporting period to guarantee the well being of the semi-aquatic and aquatic turtle species.
 - 1.5. As of 31 December 2008, KIEBC holds and assurance colony of 34 *Siebenrockiella leytensis*, 19 *Cuora amboinensis*, 11 *Cyclemys dentata*, and 1 *Dogania subplana*.
 - 1.6. Long term (5-year) population surveys on three populations of *S. leytensis* were initiated in 2008. The funding for the first two years (2008-2009) of fieldwork was secured from the Turtle Conservation Fund (TCF) through EAZA-Shellshock Campaign. From February to March 2008 the first assessment of the three selected populations was conducted. In the first site, a total of 78 *S. leytensis* and 6 *C. dentata* were caught, measured and released. No *C. amboinensis* were encountered. In the second site, a total of 21 *S. leytensis*, 2 *C. dentata*, and 6 *C. amboinensis* were collected, measured and released, and at the third site 10 *S. leytensis*, 17 *C. dentata*, and 11 *C. amboinensis* were surveyed and released. The same sites will be monitored at the same time of the year in 2009.
 - 1.7. KFI team conducted a faunal survey in the Culasian Managed Resource Protected Area (CMRPA), one of the PCCP project sites from 31st March to 5th April 2008. The survey concentrated on birds, small mammals, amphibians and reptiles. The herpetofauna was collected during night visual encounter surveys and with pit fall traps. Among other herps (3 lizard species, 12 frog species) the team found the Malayan Softshell Turtle *Dogania subplana* to be relatively common. The locals, who are mainly members of the indigenous people (Palaw'an tribe), admitted that they sometimes eat this turtle species.
- 2. Conduct of scientific research on the biology and management of Philippine freshwater turtles and their habitats, and socio economic frame conditions leading to threats and strategies for conservation.**
- 2.1. To encourage mating while at the same time reducing aggression among male Philippine Forest Turtles, enclosures were subdivided and individuals regrouped. Most of the smaller compartments now hold only one male and one female.
 - 2.2. The KIEBC turtle caretaker conducted daily observations with special reference to feeding, time of major activity, behavior and reproduction and biology.
 - 2.3. Mating was observed in all species kept. *Cuora amboinensis* mates year-around. For the first time we have observed mating in *Cyclemys dentata*. *Siebenrockiella leytensis* was also frequently observed mating. A total of 12 *S. leytensis* eggs were encountered during the reporting period. Most of them were not properly laid but just deposited in the water or in the mud. All except two did not develop and were discharged; two are still in a self-made incubator under observation. *Cyclemys dentata* had laid a total of 10 eggs during the report period, but none hatched. A total of 6 *Cuora amboinensis* eggs and 9 hatchlings were encountered in the outdoor enclosures. Hatchlings were measured regularly to calculate the daily growth rate.

2.4. Four artificial nesting areas were constructed for *S. leytensis*. Work on new designs is still ongoing.

2.5. All *S. leytensis* were dewormed twice during the reporting period.

The below following feeding schedule was followed. Food is supplemented with vitamins, calcium and minerals.

	Hard-shelled species	Softshell turtle
Monday	Fish	Fish or shrimp or chicken
Tuesday	-	-
Wednesday	Water Spinach	Fish or shrimp or chicken
Thursday	-	-
Friday	Water Spinach	Fish or shrimp or chicken
Saturday	Soft fruits	Fish or shrimp or chicken
Sunday	-	-

2.6. The following scientific papers and reports were published or submitted for publication in 2008:

- Schoppe, S., 2008. Erste Informationen zum Wachstum der Philippinischen Waldschildkröte (*Siebenrockiella leytensis*). *Marginata*, 18, 5(2): 52-57.
- Schoppe, S., 2008. TCF-0096. *Siebenrockiella leytensis* over time – are populations stable? Unpublished progress report to the Turtle Conservation Fund. Katala Foundation Inc., Puerto Princesa City, Palawan, Philippines, 11 pp.
- Schoppe, S. and J. Matillano, 2008. Conservation status of the critically endangered Philippine Forest Turtle *Siebenrockiella leytensis* (Taylor, 1920) in Palawan. 17th WCSP Annual Philippine Biodiversity Symposium, Leyte State University, Baybay, Leyte, Philippines, 13-16 April 2008.
- Schoppe, S. and M. Cervancia, *in print*. Herpetological surveys along Pagdanan Range and Dumaran Island, Northern Palawan, Philippines. HAMADRYAD January 2009.
- Schoppe, S. and D. Acosta, *in print*. First notes on the herpetofauna of the Culasian Managed Resource Protected Area, Culasian, Rizal, Palawan, Philippines. *In* Widmann, I., P. Widmann, S. Schoppe, M. Espeso, and D. van den Beukel (eds.), *in print*. Conservation Studies on Palawan Biodiversity: a compilation of researches conducted in cooperation with or initiated by Katala Foundation Inc. Katala Foundation, Inc. Puerto Princesa City, Palawan, Philippines.
- Schoppe, S., J. Matillano, M. Cervancia and Diverlie Acosta, *in prep*. Conservation needs of the critically endangered Philippine Forest Turtle *Siebenrockiella leytensis* (Taylor, 1920) in Palawan. *Intended for submission to Chelonian Conservation Biology*.

2.7. KFI is a formal collaborator and research partner of “The Comparative Biogeography and Conservation of Philippine Vertebrates” (CBCPV) project through the Herpwatch Philippines research consortium. Herpwatch Philippines represents a partnership between the Curator of Herpetology at the University of Kansas Biodiversity Institute (Dr. Rafe Brown) and the Curator of Herpetology at the National Museum of the Philippines (Mr. Arvin Diesmos). The research activities of CBCPV and its agents are supported by a valid Memorandum of

Agreement (signed by Eliza Gozun, Secretary of the DENR, 2004) between DENR Manila and the University of Kansas Biodiversity Institute. Additionally, CBCPV is certified by DENR to collect scientific specimens and genetic samples under the provisions of a valid Gratuitous Permit (GP 171, 2008).

3. Education and capacitating stakeholders of PFTCP on natural resource management and conservation; rehabilitation/restoration of species habitats, and environmental awareness.

- 3.1. Turtle calendars were distributed in Liminangcong, Northern Palawan in February through the help of Ms. Ma. Victoria Matillano from WWF-Palawan.
- 3.2. A national TV network, GMA interviewed PCCP Co-manager Dr. Sabine Schoppe and KFI staff about the Philippine Forest Turtle. The documentary was aired on 2nd February 2008 nationwide under the program hosted by Jessica Soho.
- 3.3. From 21st – 25th April 2008, a reconnaissance survey was conducted at an indigenous people's community in Puerto Princesa City to identify the need for in-depth information education campaigns.
- 3.4. KFI's turtle caretaker, Ms. Diverlie Acosta and two PCCP wildlife wardens attended a zookeeper training workshop organized by the Zookeepers Association of the Philippines (ZAP) from September 8-12, 2008. Their attendance was sponsored by Chester Zoo.
- 3.5. During the one-week celebration of the Biodiversity Week at the Palawan State University, KFI's had booth and displayed information and status and threats of Palawan's threatened wildlife including freshwater turtles in September.
- 3.6. Turtle caretaker Diverlie Acosta conducted a one-week information campaign on freshwater turtles with special reference to the Philippine Forest Turtle in Roxas last October.
- 3.7. KFI occupied an information booth during the annual Palay Festival in Narra last October and displayed material on threatened Philippine wildlife with special reference to the Philippine Cockatoo and freshwater turtles.
- 3.8. In order to assist the turtle caretaker in the daily work while at the same time capacitating young out-of-school youth, KFI trained young Narreños in basic turtle care in December.

MAJOR CONSTRAINTS, ISSUES AND ACTIONS TAKEN

1. Diseases

- 1.1. Shell rot was identified as one of the major health problems of *C. amboinensis* and *C. dentata* in the 1st quarter of 2008. It was related to heavy rains and waterlogged soils in most part of the enclosures. Shell rot was treated with Betadine and external application of antifungal and antibacterial cream. To avoid future problems, the substrate in about 1/3 of each enclosure was elevated to create dry zones. This was effective so far.
- 1.2. Respiratory and other health problems
Siebenrockiella leytensis had experienced health problems starting end of June 2008. On 28 June 2008 one individual with a respiratory problem was transferred from the enclosure to a small quarantine cell. When other individuals also showed signs of weakness they were all transferred to quarantine cells for easy

monitoring and better treatment. KFI management immediately consulted members of the Philippine Association of Wildlife Veterinarians Inc. (PAWVI) veterinaries (Dr. Esteven Toledo, Dr. Nielson Donato, Dr. Emilia A. Lastica), PWRCC Head of Clinical Section Dr. Joanne Justo, and Dr. Sonja Luz, Senior Veterinarian at Singapore Zoo and KFI veterinary consultant. Common agreement was to treat turtles with daily warm bath and a *Vetracin* and Multivitamin oral application. While most individuals reacted positive to this treatment, two (#13 and 21) remained very weak and were therefore brought to PWRCC for injection of antibiotics (*Enrofloxacin*) on July 4, 2008. For the duration of the treatment and until animals were considered fully recovered they remained in PWRCC. They were returned to KIEBC on July 29, 2008 and still kept under quarantine for another couple of weeks. The other individuals had in the meantime reacted positive to the *Vetracin* and warm bath treatment, became active again and ate daily with appetite, giving the impression of recovery. Then suddenly without prior new signs of weakness one individual died in the evening of July 31 and another in the morning of August 1, 2008 (see below).

The softshell turtle experienced an infection of the upper jaw that resulted in a major swelling and hampered feeding. After consulting Dr. Glenn Rebong we first tried oral application of antibiotics. Since this showed no effect the turtle was brought to PWRCC for injection with antibiotics on Dec. 2, 2008. This proved to be effective and the turtle was returned on Dec. 19, 2008 to KIEBC. By the time of reporting the turtle had fully recovered and was feeding well.

2. Fatalities

During the reporting period we had six fatalities (four *S. leytensis*, one *C. dentata*, and one *D. subplana*). The carcasses of the two *S. leytensis* underwent necropsy and samples were sent through DENR-PAWB for histo-pathological analysis to Manila. Results are pending until today allegedly due to the unavailability of chemical needed in the analysis. Analysis of water samples taken from stagnant waters from the KIEBC surrounding wetlands revealed coliform bacteria. It is possible that there was temporary intrusion of these bacteria into some of the turtle enclosures during heavy rains and resulting floods.

RECOMMENDATIONS/PROSPECTS

- Source budget continuously and services of a regular veterinary consultant.

PROGRAM OF FUTURE ACTIVITIES

- Fund sourcing to support feeding and maintenance of turtles in KIEBC.
- Continuation of the long-term population studies intended at assessing trends in three *S. leytensis* populations.
- Continued information / conservation campaigns through the integrated CE approach of PCCP

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- OIC Regional Director Reynaldo R. Villafuerte of DENR-EMB.

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- PENRO Juan dela Cruz, Priscilla L. Adriano and Vivian Soriano of DENR-PENRO Palawan.
- CENRO Fernando Tactay and Emmanuel Alfaro of CENRO Narra.
- OIC Project Director Dr. Glenn G. Rebong of PWRCC.
- OIC Executive Director Romeo B. Dorado of PCSDS.
- The veterinaries Dr. Glenn G. Rebong and Dr. Joanne Mae G. Justo of PWRCC; Dr. Sonja Luz of Singapore Zoo; and Dr. Esteven Toledo, Dr. Nielson Donato, Dr. Emilia A. Lastica of PAWVI.
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- Officials and residents of Bgy. Antipuluan, Narra.
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- Geoffrey Aludia and Ronelito Esuma for assisting during field surveys.
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- KFI Vice President Peter Widmann and KFI staff, most especially Siegfred Diaz and Ivy Regodos for their support and assistance.
- And last but not least to Diverlie Acosta, turtle caretaker for taking real good care of the turtles.

PHOTO DOCUMENTATION



Figure 1 & 2: Overview of the quarantine and breeding facilities (left) and close up of one of the outdoor enclosures which is covered with a net and *Nypa* roofing to provide sufficient shade.



Figure 3 & 4: Typical *S. leytensis* habitat (left). Survey team which conducted the faunal inventory in Culasian, Rizal.



Figure 5 & 6: Subdivision of large *S. leytensis* enclosure into small compartments (left). Food preparation (right).



Figure 7 & 8: Eggs of *C. dentata* (left) and *S. leytensis* (right).



Figure 9 and 10: The turtle caretaker attended the 2008 zookeepers training workshop (left). PCCP Co-manager was interviewed about threats to the Philippine Forest Turtle (right).



Figure 11 & 12: KFI's booth during the Biodiversity week at the Palawan State University (left). Turtle caretaker Diverlie Acosta informing community members about threats to the survival of the Philippine Forest Turtle (right).



Figure 13 & 14: Treatment of shell rot in *C. amboinensis* (left). Warm water bath and heat lamp proved to be very effective for weak *S. leytensis* (right).