

The Palawan Turtle Rescue

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On 17 June 2015, Katala Foundation Inc. (KFI) received a phone call from the Palawan wildlife authorities (PCSDS) with the shocking news that its Enforcement Group confiscated from an identified illegal trader in Southern Palawan 4,312 live, and 90 dead, freshwater turtles. Worse still, the majority of the turtles were Palawan Forest Turtles (*Siebenrockiella leytensis*) – a species carefully conserved in a joint effort by KFI and PCSDS over the last nine years.

Prior confiscations of *S. leytensis* had never numbered more than 80 individuals. Now, with a warehouse full of turtles at numbers almost exceeding the total estimated wild population, it was clear that an extraordinary effort would be needed to save them.

REDISCOVERY INCREASED CONSERVATION EFFORTS

The Palawan Forest Turtle had originally been described as *Heosemys leytensis*. For 69 years, two types, allegedly collected in Leyte, were the only known specimens. Then Buskirk (1989) described a neotype based on a third specimen allegedly from Leyte, found in the collection of the California Academy of Science. At about the same time, Timmerman and Auth (1988) bought a specimen in the Municipality of Taytay in northern Palawan. The search for the species in the wild began again, but it took another 12 years until Palawan was confirmed as its place of origin.

With a new description published in 2004, the countdown to tragedy began. Hunted down to supply collectors, hobbyists, and the East Asian food and Traditional Chinese Medicine markets, populations were reduced faster than they could be assessed. Recognizing the unfolding peril, KFI urgently adopted the Palawan Forest Turtle as a key species in its Philippine Freshwater Turtle Conservation Program (PFTCP) jointly implemented with the Department of Environment and Natural Resources – Biodiversity Management Bureau (DENR-BMB), focusing on both *in-situ* and *ex-situ* conservation



Images such as this struck an emotional chord and galvanized the global turtle conservation community to action.

PHOTO CREDIT: SABINE SCHOPPE



Turtles were stacked 3-feet-deep in the truck that carried the confiscated animals from the office of PCSDS to PWRCC. The night before they had arrived from the warehouse in Southern Palawan on a smaller truck on which they had been stacked 6-feet-deep. PHOTO CREDIT: KATALA FOUNDATION INC.

measures since 2006.

In 2007, KFI's *ex-situ* facilities were built in collaboration with the Zoological Society for the Conservation of Species and Populations (ZGAP), with research activities supported by the Turtle Conservation Fund (TCF). Further, TCF partnered with TSA and the Turtle Conservancy (TC) to assist KFI in enhancing husbandry facilities for an assurance colony.

Both ZGAP-DGHT and Wildlife Reserves Singapore (WRS) supported this critical assurance colony. Education campaigns were begun with the support of the US Fish and Wildlife Service (USFWS) and were later enhanced by the Ocean Park Conservation Foundation Hong Kong. Additional *ex-situ* conservation measures are supported by the Chester Zoo.

Based on both long and short term population surveys, KFI estimated the wild population of the Palawan Forest Turtle at some 6,000 individuals; all restricted to five municipalities in northern Palawan.

CONSERVATION CHALLENGES AND OPPORTUNITIES

On 18 June 2015, a truck from Rio Tuba arrived at the Palawan Wildlife Rescue and Conservation Center (PWRCC). PWRCC reacted fast and made it possible to accommodate the thousands of confiscated turtles for the first critical days. A first inspection revealed a conservation nightmare become reality. Most of the turtles were indeed Palawan Forest Turtles, and they were in terrible shape – dehydrated, smashed, injured, dying, with many already dead. Based on their dreadful condition, it was clear these animals had been collected and kept for over six months.

KFI accounted a total of 4,090 individuals excluding the fatalities that had incurred between confiscation and arrival at PWRCC. Turtles were composed of 3,831 Palawan Forest Turtles, 168 Asian Leaf Turtles (*Cyclemys dentata*), 25 Southeast Asian Box Turtles (*Cuora amboinensis*), and 69 dead individuals (63 *S. leytensis* and 6 *C. dentata*). The count confirmed that we were facing a crisis of unprecedented proportions; almost the entire estimated wild population of Palawan Forest Turtles had been confiscated.

We requested some 40 students from Western Philippines University (WPU) be excused from class to help PWRCC personnel and KFI staff with unloading. WPU is an active partner of PCSDS and KFI in wildlife conservation. The turtles were moved into the only available enclosures: two huge crocodile pens which were



With a mandate to release turtles as quickly as possible to reduce captive stress, the rate at which the medical teams were able to triage turtles and get them back into native streams was impressive. Cris Hagen (TSA) and Paul Gibbons (right, TC) are shown with the team returning turtles to the wild. PHOTO CREDIT: KATALA FOUNDATION

under repair that time and had not been used by PWRCC for months, thus with no running water and full exposure to the sun. Freshwater had to be trucked in to fill the pens so that they could be used temporarily for the turtles. We had to resort to this because there were no pens available large enough to hold the huge number of turtles.

HELP ARRIVES FROM EVERYWHERE

That same night, KFI informed the IUCN/SSC TFTSG and appealed for assistance. Nothing prepared us for the overwhelming response from turtle conservation groups from all over the world. In less than 12 hours, Asian, American, and European organizations had all committed financial support, technical assistance, and supplies.

In the meantime, KFI and PWRCC discussed moving the turtles to smaller crocodile pens with less exposure to sunlight and not so deep for better management of the turtles. We were so lucky that these pens were vacant. This new pens had to be renovated and transformed from crocodile pens to turtle ponds to better meet the needs of the turtles. KFI staff – assisted by students, PWRCC personnel, volunteers, and hired laborers – repaired the pens, installed adequate shade over the ponds and work areas, and started transferring the turtles to the new areas on 19 June.

On 21 June 2015, the IUCN/SSC TFTSG made the recommendation on next steps, stating: “We believe it is important to release back into the wild as many apparently healthy animals as possible at the first available moment. We recommend that animals that do not clearly need extensive rehabili-

tative care should be released into the wild swiftly, ideally into areas that were previously inhabited by these turtles.”

We held the same view, considering *S. leytensis* shows intraspecific aggression and fares poorly when maintained in large groups. The confiscated number was so large that the species was in danger of becoming functionally extinct in the wild unless many of them were quickly returned. Thus, KFI staff began surveying possible release sites that would meet tough criteria: that turtle release occur within the species' natural range, not within a pristine wild population, not be readily accessible, be away from people, and that the release team be unseen by locals.

Four days after the arrival of the confiscated turtles at the rescue center, the first veterinarians, Dr. Sonja Luz from WRS, Dr. Paolo Martelli from OPHK, Dr. Paul Gibbons from TC, and Dr. Charles Innis from the New England Aquarium, started triage of thousands of turtles and treated those immediately in need of veterinary aid. They were soon joined by Dr. Karthi Martelli of Kadoorie Farm and Botanic Garden, TSA's Director of Animal Management Cris Hagen, and a Wildlife Conservation Society team composed of Dr. John Sykes, Dr. Kenneth Conley, vet techs Nga Nguyen Thi Thanh and Ihsaan Sebro, and Assistant Director of Zoological Health, Lisa Eidlin.

The team primarily dealt with necrotic shell lesions secondary to trauma and septicemia, dehydration, distal limb edema, severe eye lesions, and claw loss from extended contact with concrete. The number of turtle deaths decreased rapidly as the animals responded to aggressive

antibiotic and fluid therapy and began to eat voluntarily.

FREE AND BACK HOME AT LAST!

As early as 22 June, we started releasing turtles that were judged sufficiently healthy. By the end of the month, 2,773 individuals had been released back to the wild, giving the turtles a better chance for survival, and greatly reducing crowding at the rescue center for a species highly prone to stress in groups. All released turtles received a cohort notch as recommended by TFTSG-TSA-TC-CRF.

The first three weeks of taking care and working hard to save the turtles were the most challenging in the professional lives of those directly involved in the rescue. Managing the different situations, the needs of both turtles and foreigners, giving interviews, and still smiling into cameras would have depleted all energy if not for the assistance of TSA Executive Director Andrew Walde, who handled communication with the international turtle community.

A local team of about 30 KFI volunteers helped in every possible way, notching the turtles for release; pumping dirty water out, and clean water into, ponds; moving countless bins of turtles around as needed; acting as veterinary assistants; and helping to keep everything organized.

Cris Hagen, the first member of the TSA staff to arrive in Palawan, reported after a week on site that “things are finally calming down and I think the general madness is over.” At this point, we started putting together teams of veterinarians, vet techs, and experienced turtle keepers who could provide treatment and rehabilitation until the rest of the animals were healthy enough for release. At the same time we trained KFI staff to take over once treatment was manageable.

Turtles were treated in two groups, every 48 hours, leaving every third day without treatment. Days without treatment were dedicated to morphology, blood work, necropsy, and laboratory work. Necropsy was spearheaded by WCS Head Pathologist Ken Conley.

By the end of June, the TSA team had been reinforced by Veterinary Care Manager Sheena Koeth and vet tech Allyson Lee, a volunteer supported by TSA, and PWRCC resident veterinarian Dr. Glenn Rebong. Vet tech Olivia Vandersanden volunteered, and Dr. Csaba Geczy worked with the group during the first week of July. After Dr. Geczy's departure, the technician team, KFI staff and vet student Mariah Lan-



Turtles ready for release were marked with a white spot and received a shell notch. They were then carried in crates to the vehicle for transport to the release site.

PHOTO CREDIT: KATALA FOUNDATION INC.

caster of Tufts University managed the turtles for more than a week without a veterinarian. The group was then joined by San Diego keeper Tommy Owens.

The remaining 254 turtles were moved to KFI's facilities at the Katala Institute for Ecology and Biodiversity Conservation (KIEBC) in Narra, Palawan which has facilities that are specifically designed for turtles and where it was possible to provide individual care to the remaining turtles. Prior to the move, we released another 439 turtles at four sites.

This amazing turnaround, from chaos to a manageable situation, is a tribute to the perseverance and dedication of an amazing team of veterinary staff and volunteers. In addition to KFI's resident keeper Angel Satioquia, we hired three new keepers, Kyle, Jovie and Archiel. The new keepers were trained by the experts in the first month of the crisis, and were temporarily assisted by Wrocław Zoo Keeper Karolina Mol and her husband Maciej.

FINALLY DONE WITH THE MISSION

9 July was the first day without mortality. On 13 July, all the turtles were reassessed when Drs. Alex Grioni and Sandra Schneider from Kadoorie, and Columbus Zoo Resident Dr. Matt O'Connor, arrived. Special emphasis was given to animals in critical condition and with severe eye lesions. With the need for veterinary attention

decreased, the San Diego Zoo team of Dr. Ben Nevitt and Jill Kuntz were the last to assist. They left after witnessing one of the last releases on 28 July, leaving only 57 turtles still requiring care.

Having received training from 20 different veterinarians and various technicians and keepers, we felt prepared to manage the remaining turtles. As of late September, after one more release, we are left with just six turtles. Our activities are now concentrated on monitoring the turtles at the release sites. We also collected some 130 eggs, with seven proving to be viable.

Overall mortality was 11.5%, surprisingly low compared to other large confiscations. This success rate would have in no way been possible, had it not been for the prompt and swift action by a truly global team wholeheartedly united in the goal of saving the Palawan Forest Turtle from extinction. We hope to never have such a large confiscation again, but we are confident that if it ever does happen, we will join hands again and with the full support of the wonderful, worldwide turtle community we will be able to rescue them

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