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Wildlife Trade in Southern Palawan, Philippines

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Abstract

Southern Palawan is one of the hottest hotspots for illegal trade of wildlife in the Philippines. Large numbers of wildlife are transported either by fishing vessels or private chartered planes from the south of Palawan to Zamboanga, Cebu, Manila, Batangas and even to Malaysia. Parrots and mynas are among the species of birds most traded due to their huge demand in the market. Other birds that are also under considerable pressure of poaching are Palawan hornbill and White-bellied sea eagle. Apart from birds, other Palawan wildlife included in the illegal shipments are Palawan pangolin, Balabac mouse deer, Palawan bearcat, Palawan bearded pig, Southern Palawan tree squirrel, freshwater turtles and beetles. The present study identified species of conservation priority involved in trade. The study also presents data on traded wildlife species in Palawan including their market value, modes of transport, operation of wildlife traders in Palawan, and trade routes.

Keywords: Palawan, Philippines, wildlife trade

Introduction

In recognition of its importance to global biodiversity, the entire island of Palawan was declared a Biosphere Reserve with two world heritage sites, an Endemic Bird Area, and a Philippine Priority Area for Biodiversity Conservation (Diesmos and Palomar, 2004). Yet, illegal trade in flora and fauna is a major concern. Despite lack of properly documented information, apprehension data alone provide enough evidence of rampant illegal trade. Data from 1999-2002 indicate that a large number of hunted wildlife are birds, particularly talking mynas, wild quail and blue-naped parrots (Lasmarias, 2004). Several endangered and endemic species are also commonly traded, e.g. Palawan hornbill, leopard cat, Palawan peacock pheasant, and red jungle fowl. Excessive hunting is putting many of the rare and Palawan endemic species at the brink of extinction (Werner and Allen, 2000; Widmann, 1998).

The southern part of Palawan is the center of illegal trade in the province and one of the hottest hotspots for illegal wildlife trade in the Philippines (van den Beukel et al., 2006; Widmann, 2006). Levels of poaching and hunting are rampant in Bataraza, and Rio Tuba was identified as a local center for illegal wildlife trade (Widmann and Diaz, 2004). *Barangay* Culasian in Rizal was identified as a poaching "hotspot," thus it was made as the project site for Southern Palawan Anti-Poaching Initiative (SPAPI) (Widmann, 2006).

It is difficult to ascertain the impact of hunting on wildlife populations in Palawan. First, confiscation data do not indicate where these species were collected and second, there is little information on the population of the hunted wildlife species (Lasmarias, 2004). However, assuming that the volume confiscated only represents a small proportion of the total number of illegal wildlife, we can assume that populations in the wild are at risk if hunting cannot be controlled. But to be more conclusive, there is a need to explore the dynamics, extent, and impacts of illegal wildlife trade in the Palawan Corridor and this should be among the priority research needs in Palawan (Diesmos and Palomar, 2004).

The present study aims to contribute to the understanding of the illegal wildlife trade in Southern Palawan. It also aims to assess the origin and destination of wildlife, uncover operation modes of wildlife traders, transportation mode and trade routes.

Materials and Methods

Interviews were conducted in the Municipality of Rizal located 203 km south of the provincial capital, Puerto Princesa City (Figure 1). Rizal is the largest municipality in Palawan with a total land area of 125,915.45 ha. Rizal has a net in-migration rate of 80% (Anda and Tabangay-Baldera, 2004). Informal taped interviews were conducted with former wildlife traders, hired motorcycle drivers, middlemen, Municipal Environment and Natural Resources Officers (MENRO), Philippine National Police (PNP) officers, Palawan Council for Sustainable Development Staff (PCSDS), and Department of Environment and Natural Resources (DENR) personnel who are aware of the wildlife trade and were involved in wildlife conservation. Information was gathered on the species traded, confiscations, means and ways of transporting wildlife, origins and destinations, price paid to collectors and selling prices.

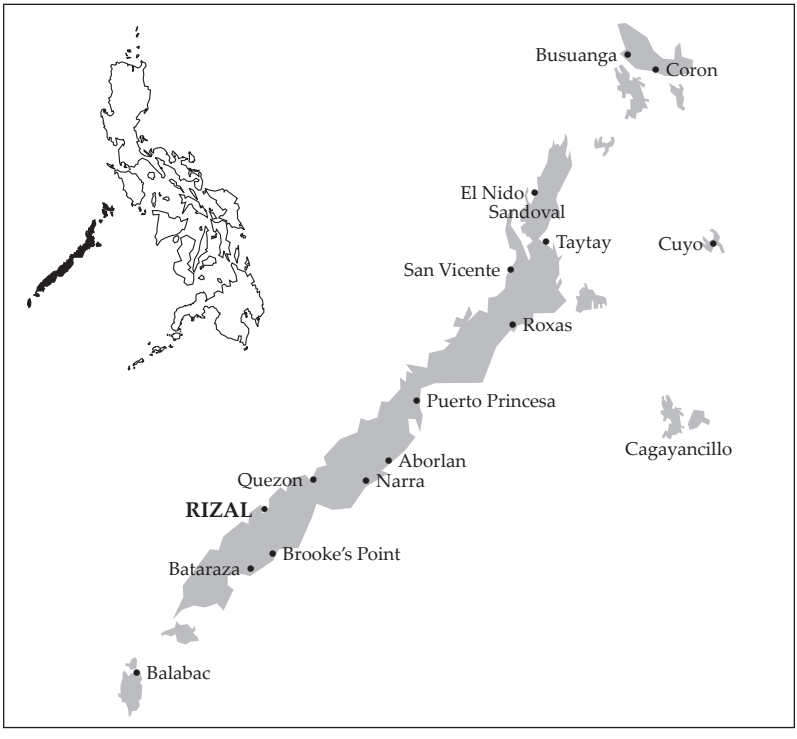

Figure 1. Map of Palawan, Philippines where the Municipality of Rizal is highlighted

For the purpose of this study and in accordance with Republic Act 9147, wildlife trade is defined here as an act of engaging in the exchange, export or import, purchase or selling wildlife, their derivatives or by-products, locally or internationally. Wildlife traders or shippers are defined as persons or group of persons doing wildlife trafficking. A trader is identified as the person financially sustaining the middlemen and poachers to collect, transport and deliver the wildlife from its origin to the trader. The function of the trader is to gather wildlife and supply the demand in and outside Palawan and the Philippines. Middlemen are persons whose primary duties are to buy wildlife from various poachers, heap and deliver them to traders.

Results and Discussion

Confiscation records from DENR and PCSDS from 2000-2006 that were compiled by Katala Foundation (KFI, 2007) show that 25 wildlife species or species groups were illegally traded in Southern Palawan (Table 1). Of these, 22 species are specifically recorded as traded wildlife, two are bush meat, and one is for the hobby or traditional medicine industry. Of all traded wildlife species, 19 are listed as "globally threatened" or "near-threatened" by IUCN (2007). Thirteen (52%) of the confiscated species are endemic to the Palawan faunal region.

Beetle trade

Beetles are the most traded wildlife in terms of number of individuals. The major source areas are Narra, Aborlan, Brooke's Point, Rizal, Quezon and Bataraza based on the interviews conducted with traders. Unlike other species, beetles are small, easy to collect, and transport, and one of the most expensive and demanded wildlife. The demand for beetles, particularly of the genera *Dorcus* and *Odontolabis* is documented through recent confiscations in Palawan. The beetles are offered over the internet and sold in vending machines in Japan. Most beetles are collected and traded for their supposedly aphrodisiac qualities. Female beetles for instance, are soaked in wine beverages and other liquors in some bars and restaurants in Metro Manila. A serving of beetle in a glass of tequila would cost as much as a few thousand pesos. The taxa *Odontolabis* and *Dorcus titanus palawanicus* are sold in pairs to insect collectors in the Philippines

Table 1. Traded wildlife from Southern Palawan confiscated between 2000-2006 (Source: KFI, 2007)

Scientific Name	Species	No. of individuals	IUCN status (2007)	Endemic in Palawan (√ = yes)
Dorcus spp., *Odontolabis* spp.	Beetles	3,926		√
Gracula religiosa	Hill myna	1,522	LR/LC	subspecies *palawanensis*
Tanygnathus lucionensis	Blue-naped parrot	652	LR/NT	
	Freshwater turtles	233		depending on species
Anthracoceros marchei	Palawan hornbill	38	VU	√
Gallus gallus	Red jungle-fowl	35		
Macaca fascicularis	Long-tailed macaque	27	LR/NT	
Haliaetus leucogaster	White-bellied sea-eagle	23		
Polyplectron emphanum (napoleonis)	Palawan peacock-pheasant	22	VU	√
Prionailurus bengalensis	Leopard cat	21	LR/ LC	
Manis culionensis	Palawan pangolin	18	LR/NT	√
Aonyx (Amblonyx) cinerea	Small-clawed otter	15	NT	
Tragulus nigricans	Balabac mouse deer	15		√
Arctictis binturong whitei	Palawan bearcat	14	LR/NT	√
Python reticulatus	Reticulated python	14		
Cacatua haematuropygia	Philippine cockatoo	13	CR	
Sundasciurus steerii tree squirrel	Southern Palawan	13	LR/NT	√
Spizaetus cirrhatus	Changeable hawk-eagle	10	LR/NT	
Hylopetes nigripes	Palawan flying squirrel	10	LR/NT	√
Hystrix pumila	Palawan porcupine	8	LR/ LC	√
Spilornis cheela	Crested serpent-eagle	5	LR/ LC	
Tupaia palawanensis	Palawan tree-shrew	5	VU	√
Chalcophaps indica	Common emerald dove	3	LC	
Accipiter trivirgatus	Crested goshawk	2	LC	
Sus barbatus ahoenobarbus	Palawan bearded pig	1	VU	√

Legend: LR: low risk, LC: least concern, NT: near threatened, VU: vulnerable, CR: critically endangered.

for breeding purposes. The prices of beetles vary depending on the size; the larger the beetle, the higher the price. The price of beetles in source areas showed a big difference from the market price in Manila (Figure 2).

The insect trade in East and Southeast Asia began in the mid-1990s when economic returns from other wildlife were declining, and it peaked in the late 1990s (World Bank, 2005). In Palawan, beetles are usually transported weekly via commercial shipping lines, or daily through passenger planes. The risk of detection is high but very few confiscations are made. According to informants, connivance of port officials, x-ray machine operators, and ship crew and even porters

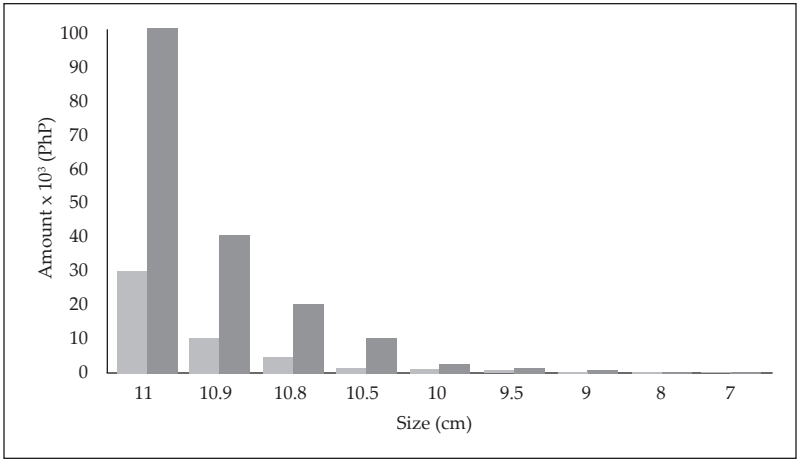

Figure 2. Beetles price per individual (Source: Palawan beetle traders)

carrying the insect-filled baggage is the primary reason. Beetles are restrained using thick plastic and tied with a cotton string. They are packed in bags that could accommodate as many as 100-300 individuals. Feeding is stopped once the animals are packed, hence a delay in shipment would eventually kill the insects. Beetles are hand carried and delivered to restaurants and to insect collectors in Manila. According to World Bank (2005) some beetles are available through international dealers on the internet at USD200.00 or more per pair, presenting a considerable profit to urban traders. The trade of beetles in Palawan had been ongoing for almost a decade until it was discovered recently in Palawan. The high demand for beetles was noted in the large volumes confiscated in seaport and airport terminals in Puerto Princesa City in 2006 (KFI, 2007). In these confiscations it was known that Europeans were involved in the trade.

Bird trade

Among birds, the Hill Myna is most sought after for the pet trade. It is bought from collectors at Php400.00-900.00/individual depending on the age (Table 2). This species is mainly found in Rizal where nesting trees (Manggis; *Koompassia excelsa*) are abundant. The high demand is due to its unique characteristic, particularly its ability to mimic human voices and sounds (van den Beukel et al., 2006). Hill myna and other bird species are mostly poached by members of the Palaw'an and Tagbanua ethnic groups.

Table 2. Prices of some wildlife species in source areas in 2006

Species	Local price (PhP)/individual
Hill myna *Gracula religiosa*	400- 900
Blue-naped parrot *Tanygnathus lucionensis*	30-35
Philippine cockatoo *Cacatua haematuropygia*	1,000-3,000
Balabac mouse-deer *Tragulus nigricans*	600-1200
Palawan pangolin *Manis culionensis*	300
Freshwater turtles	20-50

The blue-naped parrot ranks second among the commonly traded bird species. This species is however sold at a very low price (Php30.00-35.00/individual) due to its abundance in Palawan (Table 2). Its attractive plumage and ability to mimic sounds contributes to its high demand as a pet.

The Palawan hornbill is poached for the pet trade or as food. Interviews with poachers revealed that every breeding season (January-June), a minimum of two hornbills – hatchlings and rearing parent bird - are poached per nest. Evidence was found in 2005 when KFI led an apprehension in *Sitio* Pinatitig in *Barangay* Culasian and three hornbills – two hatchlings and one parent – were confiscated and turned over to PWRCC.

The red jungle fowl is usually caught in snares and is one of the most important sources of bush meat for ethnic groups in Palawan. However, it is also sold alive for interbreeding with fighting cocks (Lacerna and Widmann, 1999).

Among all recorded traded wildlife in this study, the Philippine cockatoo is the only "critically endangered" species (IUCN, 2007). It was not among the top ten traded wildlife in Southern Palawan from 2000 – 2006 (KFI, 2007), however, the total number of 13 confiscated individuals from 2000 to 2006 is high in relation to its remaining wild world population estimated at 1000 individuals (Widmann, 2002). The drastic decline of the cockatoo population in the 1990's was due to hunting, poaching and habitat destruction (Widmann et al., 2005). The poached cockatoos originated mainly from the far south of Palawan particularly from the Balabac Group of Islands and Bataraza where small remnant populations still occur. The hunting is triggered by high market prices starting in Palawan at Php1,000.00-3,000.00 per individual, in Manila it is sold at PhP2,500.00-8,500.00 per individual (van den Beukel et al., 2006) (Table 2).

Due to high market value of the Philippine cockatoo, poachers have developed territoriality over nesting trees. Every poacher respects the "ownership" of nesting trees of other poachers. Robbing each others nesting trees is not traditionally practiced. A poacher will poach all hatchlings of "his" trees every breeding season and will only leave the breeding pair to sustain his income for the next year. For rare species like the Philippine cockatoo that have only a very limited number of breeding pairs in the study area, this easily leads to local extinction once the existing breeding pairs are no longer fertile.

Reptile trade

Freshwater turtles are also commonly traded as indicated in the confiscation records of the DENR (KFI, 2007). Earlier studies on the freshwater turtle trade in Southern Palawan had found three species (*Cuora amboinensis*, *Dogania subplana* and *Cyclemys dentata*) that are traded (Gavino and Schoppe, 2004; Regodos and Schoppe, 2005). These studies confirm the report of Widmann (1998) who wrote that populations of *C. amboinensis* were decreasing in densely settled areas because of local consumption. *Cuora amboinensis* and *C. dentata* are sold within Bataraza for local consumption for Php50.00-60.00/ individual and *D. subplana* for Php20.00-50.00/individual (Gavino and Schoppe, 2004). Prices are similar to those reported by informants of this study (Table 2).

Tracking the wildlife trade

Information obtained through interviews in Rizal indicate that wildlife trade in Southern Palawan extends to localities in the municipalities of Rizal, Quezon, Brooke's Point, Bataraza, and Balabac. Poachers are usually members of Palaw'an and Tagbanua ethnic groups who depend mainly on hunting and poaching as source of income. Middlemen buy and deliver the stocks directly to wildlife traders who transport these to Manila or other parts of the Philippines. A former practice was to peddle wildlife along the roads of major cities, or to sell to pet shop or restaurant owners who serve "exotic" food. Nowadays, wildlife goes directly to collectors and pet shop owners, on a cash-on-delivery basis. The income generated from wildlife trade is high and therefore attracts many people in Palawan to participate in the trade.

Wildlife is obtained from *barangays* in the west coast of Palawan like Sowangan, Tagusao, Quinlogan and Sawmill of the Municipality of Quezon and Iraan, Punta Baja, Campong-ulay, Ransang, Upper Culasian, Panalingaan, Taburi, Latud and Canipaan of the Municipality of Rizal (Figure 3).

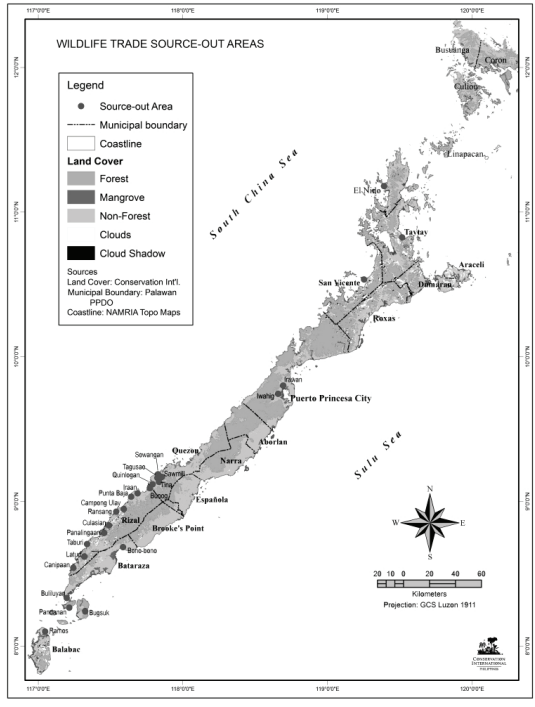

Figure 3. Wildlife source areas in Palawan

From the source areas, wildlife is collected and transported via motorcycles, boat and or jeepneys to stock houses where other wildlife is accumulated until the required volume is reached. A total of 18 stock houses were identified with the help of the informants, nine in Rizal, four in Quezon, two in Brooke's Point, two in Puerto Princesa City and one in Bataraza (Figure 4). The stock houses are not permanent, and from time to time, wildlife stocks are transferred to other houses within the same areas to prevent detection. A similar pattern was also observed in a World Bank (2005) financed study on illegal wildlife trade in East and Southeast Asia. The present study revealed that most traders operate in Rizal and Bataraza, some having more than one stock house. A total of 17 wildlife traders were identified. A few reportedly have connections with the armed forces, which might explain why they remain relatively untouched by law enforcers.

Birds are fed with a diet of dog food, banana and papaya while beetles are kept in tiny labeled, transparent plastic jars and fed with chopped sugarcane or old newspapers. Before transport, birds

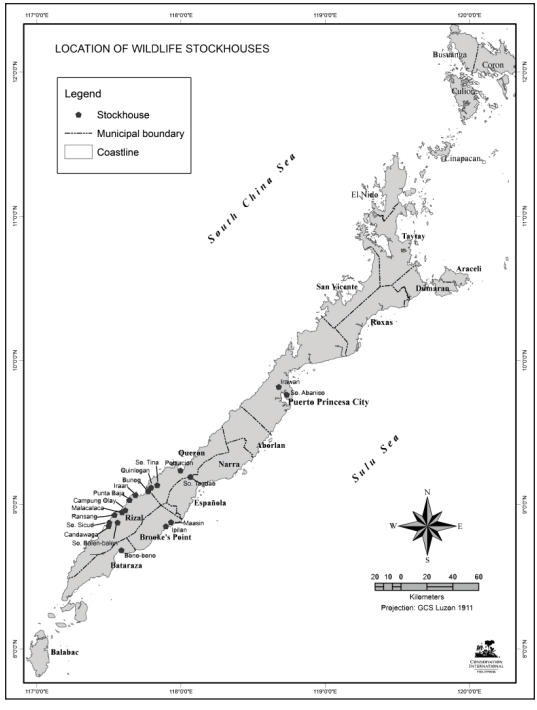

Figure 4. Location of wildlife stock houses in Palawan

are fully fed and dosed with intoxicants in order to prevent them from creating noise. They are restrained by wrapping a damp cloth around their bodies and by putting them inside a bag with cell-like compartments. In an earlier study, de Leon (2005) described that wildlife is transported via motorcycles or shuttle vans to loading areas where hired fishing boats are waiting to transport the cargo to Manila via Batangas or Bulacan. The rent for these boats can be as high as PhP60,000 in addition to the docking fee required by certain resorts. Some years ago birds were still frequently transported onboard passenger boats to Manila or Cebu where the bird cage/boxes were kept in the cabins (de Leon, 2005). Whether on private boats or on passenger boats, loading time is preferably in the evening to minimize detection and stress. Similar observations were made by a trade study of Haribon (2004). The present study showed that several surveillances are usually conducted by traders to ensure that there is no apprehension and docking is usually done in the evening to minimize detection risks. The identified loading areas include eight

in Southern Palawan (Balabac, Bataraza, Pulot Shore at the boundary of Brooke's Point and Espanola, and Candawaga coast, Ransang coast, Malakibay coast, Salungsong coast, Bansi coast and Bunog Shore in Rizal), one in Puerto Princesa City (*Sitio* Tacduan) and four in Northern Palawan, particularly in El Nido, Taytay, Roxas and San Vicente. Some wildlife traders join shipments of mangrove tanbark from Rizal to Zamboanga City for pet shops or street peddling. Sometimes, these reach Sabah, Malaysia in connection with the tanbark and timber trade. The final destinations in the Philippines include Manila, Cebu, Zamboanga City and General Santos City (Figure 5). Manila is the major destination of most birds from the provinces. In Manila, the cargo is picked up directly by pet shop owners in locations preferred by the trader. No direct deliveries are done by traders except for beetles.

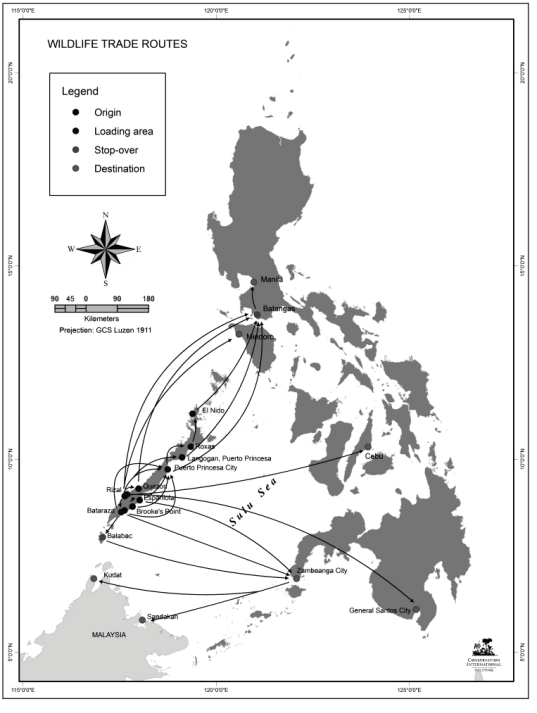

Figure 5. Wildlife source areas in Palawan

Volume of trade

Parrots are usually shipped 1-3 times a month during the breeding season (January-July) and once a month outside of the breeding season. This results in an average of 19 shipments per year. A minimum of 250-300 heads of birds and numerous other wildlife comprise one shipment, in order to make the trip economically feasible. Hence, a conservative estimate of 4,750 parrots are illegally traded every year. Based on the confiscation records, shipments are usually composed of 70% mynas and 30% parrots. For this number of birds, the collectors earn PhP1,705,250.00 (=USD28,420.00) (i.e., 3,325 mynas at PhP500.00 each and 1,425 parrots at PhP30.00 each). The total number of poachers involved in the business is unknown, but it is apparent that the wildlife trade is a lucrative business, especially at the higher levels of the trade hierarchy (middlemen and traders). Confiscation records from 2000-2006 showed a total of 2,174 confiscated mynas and parrots in seven years (KFI, 2007). This represents a mere 6.5% of the estimated traded number of 33,250 in seven years (4,750 individuals/year) as most shipments go undetected as law enforcement is weak. Moreover, most apprehended traders remain unpenalized. Only a few court cases against traders are pending at present. A World Bank (2005) study of illegal wildlife trade in East and Southeast Asia indicated that even when caught, fines and other penalties are generally much less than the gain from trade. De Leon (2005) stated that prosecution of cases involving wildlife law violation has been likewise difficult, as there is no special court in the Philippines specifically handling cases of environmental law violations. Enforcing laws protecting wildlife is often difficult because there are few and inadequately trained enforcement personnel, and enforcement policies and strategies are ineffective. A major problem is that wildlife smuggling is highly organized, with powerful and influential circles involved.

Conclusion

We conclude that the volume of illegally traded wildlife revealed by this study represents only a very small percentage of the actual volume traded. Understanding the dynamics and complexity of trade as well as enhancing the expertise of grass-roots law enforcers is necessary to curb the illegal trade. In addition to lack of manpower, indifference and corruption, law enforcers have insufficient knowledge on species

and legal status identification. Therefore, there is a need for training on species and legal status identification for law enforcers. To ensure a more efficient curb on wildlife trade, it is essential that laws are strictly implemented and penalties imposed on violators. Patrols of smaller sea ports and offshore areas need to be increased to detect illegal shipments. Personnel of Anti-Wildlife Poaching Units need to monitor checkpoints, especially during the breeding season.

To determine the impact of trade on wild populations, studies on the population/abundance of the main species involved in illegal trade should be conducted.

Beissinger and Bucher (1992) recognized the need for novel concepts for co-management of species and ecosystems to achieve sustained natural resource utilization in the face of population growth and poverty. These may include the application of managed resource protected areas in the most vulnerable lowland ecosystems, as well as the application of sustainable use concepts for parrots and mynas in the future, as has been proposed for neotropical parrots for quite some time. This could provide a small, but sustainable and legal flow of live birds for the pet market.

In the study area, the establishment of the Culasian Managed Resource Protected Area in Rizal under the SPAPI resulted in a decline in poaching activity inside the 1,954 ha of forests in the past two years. The value of an alternative livelihood program for poachers was recognized. Conservation education has also proved to be a powerful tool for changing the perception of poachers towards conservation. Advocacy is also needed to change the attitude of pet lovers and collectors towards wildlife, its products and derivatives.

The improvements achieved by the implementation of SPAPI in Culasian should inspire efforts to extend this strategy to other *barangays* and municipalities in Southern Palawan. Sustainable use schemes for wildlife in the Philippines require an effective control of the illegal and unsustainable trade in wildlife.

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