

# Annual Report

---



---

**Philippine Eagle Foundation**

**1998**



# Field Research



The Philippine Eagle, photo by FREE, Ltd.

The Philippine archipelago is home to 26 species of diurnal raptors, most notable of which is the majestic Philippine Eagle. Found only in the four major islands of the Philippine archipelago, it is one of three raptor species worldwide considered as critically endangered.

The intensive fieldwork and documentation by Filipino and American naturalists led by Dr. Robert S. Kennedy during late 1970s and early 1980s laid the foundation for the conservation research of the Philippine Eagle. Much have been learned about the life history of the eagles since then,

but more needs to be learned. Since 1977 no scientific paper about the Philippine Eagle has been published. Realizing this, the Philippine Eagle Foundation is embarking on a research agenda focused on addressing the many biological questions that will provide the basis for hands-on management of the eagles in the wild. We are working to gather more data on reproductive success, nesting density, home ranges, population estimates, habitat use, and other aspects of the eagles' biology, for Mindanao and other islands.

*"It is disappointing to become a leading authority in the field, when you know that you still have so much you want to learn" -G. Keillor*

## New Findings

### Breeding Success



The majestic Philippine Eagle taken from a nest in the wild, photo by FREE, Ltd.

Analysis of 20 years of data including 69 nesting attempts by 43 pairs of eagles suggests that the Philippine Eagles in the wild may have actually been breeding quite well, producing an average of 0.4 young/pair/year. Breeding success refers to eaglet survival until it leaves the nest. A 100% breeding success, for the Philippine Eagle, should have a value of 0.5 young/pair/year, or one young every two years for every breeding pair.

This finding points to another factor that may play a more important role in the persistence of the remaining population in the

wild-the survival of juveniles and "floaters" (unpaired adults without breeding territories yet), and their eventual establishment of breeding territories. Deforestation in the Philippines have created "island" forest fragments. Whether forest fragmentation cause isolation of eagle populations, or if juveniles and subadults looking for mates and territories ever succeed in crossing over the barren and human-altered landscapes, have yet to be determined. Details of the analysis on this new insight have been recently submitted to a peer-reviewed journal.



## Notes on Juvenile Behavior

As a preliminary exercise prior to the planned radio-telemetry, we have been documenting the diurnal activities and mapping the movements of a juvenile Philippine Eagle at one isolated forested mountain in Cotabato province since October of 1998. Several interesting observations were made, including mock killing, tree-hole poking, ground exploration, and various forms of exercise.

Biologists have often suggested that Philippine Eagles require large territories, but the particular pair at Mt. Sinaka has been breeding successfully during the last three breeding seasons in a forest area less than 24 square kilometers. We do not know yet if this is a reflection of a time-lag to extirpation, or an example of the eagles' resilience to a diminishing habitat. We will continue to monitor the breeding success of the pair, and track the eaglet until the parents breed again to determine where juveniles go or if they survive at all. These preliminary observations were presented by PEF biologist Donald Afan during the recent 8<sup>th</sup> Wildlife Conservation Society of the Philippines, held in Puerto Princesa, Palawan.

Another paper dealing with nesting density and population estimate for eagles in Mindanao is currently being

prepared and is hoped to provide rough but valuable information on population numbers.

In order to test the many hypotheses we have formulated, the PEF submitted a proposal to the Department of Environment and Natural Resources (DENR) on a long term program to radio track both juveniles and adults in Mindanao. Information gathered from those activities are hoped to provide the basis for rational decisions on managing captive-bred and wild eagles. Radio tagging, or radio-telemetry, is a high technology tool involving attachment of a radio transmitter on the bird and tracked by several transceivers from known geographical points.

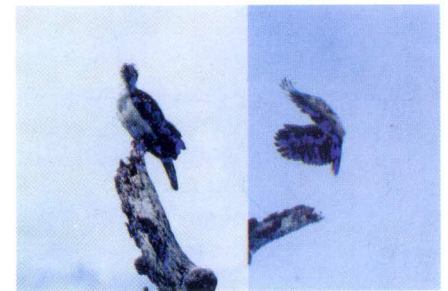
Verification of eagle reports have resulted in the confirmation of two new nests, for a total of 13 known nests for 23 breeding pairs for the year 1998 until early 1999. Early last year, a nest was found in Samar island by personnel of the DENR. The PEF hopes to strengthen its relationship with the DENR's Regional Eagle Watch Teams and provide assistance in field research techniques.



From behind a blind, PEF biologists, J. Ibañez and K. Gatil observe Philippine Eagles in the wild.



Glen Bueser testing telemetry equipment.



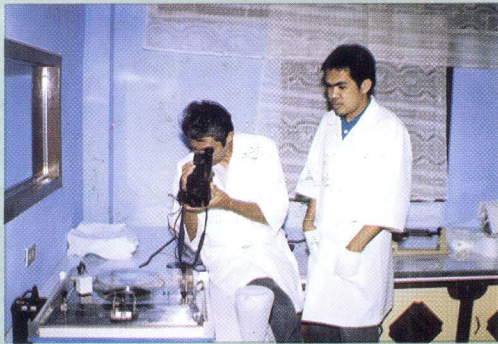
Juvenile Philippine Eagle at Mt. Sinaka, Arakan, Cotabato.



**Staff:** From left to right: Gliceria Balaquit-Ibanez, Jayson C. Ibanez, Marije bij de Vaate (volunteer from the Netherlands), Hector Miranda Jr., Glenn Lovell L. Bueser, Kharina Gatil, Adriano M. Oxales, Donald S. Afan. Volunteers not in photo: Ralph Mancke (US), and Christian Falckelman (Germany).



# Captive Breeding



Doming Tadena and Adorico Aya-ay checking on the newly hatched eaglet.

**C**aptive breeding of endangered species such as the Philippine Eagle, has been controversial, both in the Philippines, and elsewhere. **We consider captive breeding as an important management tool and a sound investment in "genetic insurance"**. Studies have shown that recovery programs to save endangered

species tend to be more difficult and even more expensive as the target species' population drops to very low numbers. The Philippine Eagle's population itself is unknown. At present, we can only infer its status from the fact that the primary habitat, the lowland dipterocarp forest, is less than 10 % of the original expanse.

*"One good thing about our species.....is that we like a challenge." -E. O. Wilson*



Pangarap at 32 days



at 60 days



at 3 ½ months old

One long standing argument concerning the conservation of the Philippine Eagle is that protection of the forest is far more important than captive breeding. We agree fully and support such statement. In fact, a review of our expenditures over the past five years will show increasing levels of investments on *in situ* conservation initiatives. While we have made significant progress on these fronts, these efforts pale in comparison at which habitat loss escalates. This is further compounded by human poverty and land tenure issues, corruption, ambivalent government policies, enforcement problems, etc. . In the face of all these, we do what we can in the field but we can only support and do our part within the limits of our resources.

addressed, captive breeding of the Philippine Eagle probably represents one of the species' most viable options for recovery. We now know more about the biology and behavior of the Philippine Eagle because of long term observations on captive birds. This information will be vital for both *in situ* and *ex situ* management as we prepare for the next stage - releasing eagles back to the wild. As part of our obligation to the supporting public and donors, we will publish data and make these available to all interested parties in the near future.

Considering that the primary threats to endangerment in the wild have not been sufficiently



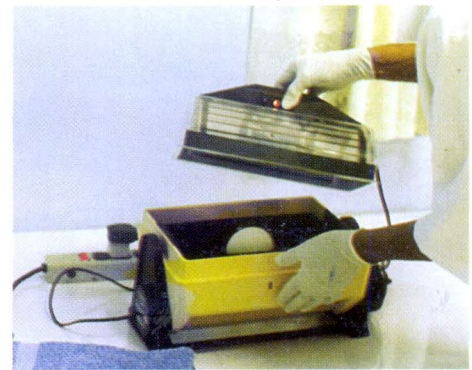
At present, captive propagation at the Philippine Eagle Center continues to be limited and sporadic. However, substantial progress was achieved in furthering our understanding of the species' breeding behavior in captivity. This has resulted in improvements on captive management techniques and infrastructure design at the Center. Those innovations resulted in the successful pairing and subsequent breeding of the eagles. On February 23, 1999 the third eaglet bred in captivity was hatched. Another pair began breeding as early as August 1998 but failed to produce any egg during the season. The history of both birds are unknown.

*Pag-asa* and *Pagkakaisa*, both males, showed well adapted breeding behavior but have not been producing seminal fluid yet. The eagles, aged 7 and 6 respectively, will probably start producing viable semen later, as was the case with Junior. Junior, now 17 years old, produced semen regularly throughout the breeding season. This was used for inseminating the females with surplus production kept for cryogenic studies. Jing-jing, an older male at about 26 years,

continued to produce sporadically and in very small amounts.

Among imprinted females, only the eagles Pitha, Luyag and Kahayag produced eggs during the last breeding season. Luyag's and Kahayag's were infertile while Pitha's was fertile but failed to hatch. A total of 5 eggs were produced in the 1998 breeding season. All the other females at the Philippine Eagle Center are either too young or too old for breeding.

New incubators from Brinsea Ltd. helped captive breeding operations tremendously and were, in fact, instrumental in the successful hatching of the eagle *Pangarap*. The software Avian Incubation Management developed and donated by David LeMesurier also helped facilitate documentation and monitoring of breeding operations.



Incubator from Brinsea Ltd.



**Staff:** From left to right: Mario Entrolizo, Dr. Roberto Puentespina (Volunteer Veterinarian), Adorico M. Aya-ay, Noel Lupaz, Dominador P. Tundag, Eddie V. Juntilla, Domingo O. Tadena, Edison L. Dayos. Not in photo: Cipriano L. Aleman, Bernardino C. Salarza, James W. Grier, Ph. D. (Volunteer Consultant)



# Community-Based Initiatives



CBI Team works closely with the indigenous cultural communities.



Tree nursery being maintained by the PEF's project partners.



Development Officer Mar Magdadaro facilitating a training/workshop.



Participant at the Peoples Organization Congress held last November.

The Philippine Eagle Foundation firmly believes that the most sensible way of protecting the remaining forest is by building capacity of local communities in managing the natural resources on which they depend and share with the Philippine Eagle. By working with local people in saving the eagle's habitat we save the millions of other life forms found within it. Moreover, we provide stakeholders a sense of propriety and dignity in managing their own local resources.

Our Community-Based Initiatives (CBI) program has the difficult task of forging partnerships with local communities through capability building and enterprise development. This proved to be even tougher in 1998. The El Niño and La Niña weather phenomena wrecked havoc on agricultural productivity, especially in Mindanao. The Asian regional currency crisis reached its peak and further intensified environmental problems. These events have helped aggravate poverty problems particularly in the uplands. It also made outcomes of our community-based efforts difficult to predict. Nonetheless, they provided a rigorous test for the sustainability

of our various programs.

In 1998 the SAFER Project, funded by the Royal Netherlands Government, was evaluated by two UPLB professors, Dr. Rodel Lasco, an agroforestry expert who served as the team leader, and Susan Lucero, a social development practitioner. The team visited all eight project sites in Bukidnon and North Cotabato. They interviewed PO leaders, held focus group discussions and community assemblies, surveyed agroforestry farms and seedlings nurseries, and looked into project documents. Although the final evaluation was both encouraging and favorable, several issues that needed further attention were raised. These include variations in strategies, livelihood loans, development perspective, economic approach, conflict between efficiency and sustainability and credit. Future efforts will focus on addressing these limitations and building on guaranteed strengths.



Capping the whole evaluation process was the People's Organization (POs) Congress. This was called mainly to assess the achievements of the community-based resource management since 1990. Dubbed as "Panagtagbo", it aims to forge linkages and partnerships among communities served by the PEF. This initiative also encouraged the beneficiaries to organize and initiate actions in pursuit of common goals and interests. Twenty-eight representatives from 19 organizations from all parts of Mindanao converged in Davao City last November 26-30, 1998.

To consolidate the gains of the program for the year 1998, a number of training workshops for the communities were conducted. A total of 672 beneficiaries from 82 organizations participated in the 10 training courses. These courses include: *Sloping Agricultural Land Technology, Basic Enterprise Development, Basic Leadership Skills Training, Biodiversity Conservation Seminar, Gender and Development Workshop, Land Tenure Options in the Uplands, Ancestral Domain*

*Management Planning, Population, Health and Environment, Protected Area Management Training, and Herbal Medicines Training.*

During the later part of the year, the CBI program purchased 4 hectares to be used as sustainable agriculture demonstration farm and resource center. The land will be dedicated to serve as hands-on training facility for partner-communities. Hopefully, it will serve as a model for showing alternative forms of agroecosystems which highlight production practices that are ecologically-friendly, life sustaining, cost-effective and profitable.



Development Officer Mendoza manages the demonstration farm and resource center.



**Staff:** From left to right: Marlino B. Magdadaro, Elfranco I. Linsahay, Stephen R. Paspe, Virgil P. Estrada, Misael C. Galvadores.



# The Conservation Education Program



MIWE Trainees during a tour at the Philippine Eagle Center.

The Conservation Education Program (CEP) of the Philippine Eagle Foundation is tasked with developing public awareness and understanding of the natural environment. Among its responsibilities are training and extension, volunteer/donor

recruitment, publications and educational services designed mainly for the visitors at the Philippine Eagle Center in Malagos, Davao City. Towards this end, the CEP has implemented various projects to sustain public interest on wildlife conservation.

*“In the end we will conserve what we love and respect.  
We will love and respect only what we understand.  
We will understand only what we are taught or allowed to experience.”*

-Anonymous

## Mindanao Initiative on Wildlife Education



Lito Cereño facilitating a session during a teachers' training workshop.

The Mindanao Initiative on Wildlife Education (MIWE) introduces science, natural history, and conservation to the formal educational system at the secondary level. The project provides hands-on exercises for both teachers and students on nature and biodiversity conservation. This initiative hopes to upgrade the school curriculum by introducing updated data on and new ways of learning natural history and conservation science.

A total of 264 teachers from five regions of Mindanao (IX, X, XI, XII & Caraga) were involved in the integration of wildlife modules into their schools' curriculum since its first implementation in 1996. About 17,640 secondary level students have used the workbook provided to them. A wide array of environment-related activities conducted by the participants in their respective schools was

believed to have been generated by the project.

Because of our initiatives the Department of Education, Culture and Sports (DECS) issued directives to local schools to participate and incorporate the wildlife modules into their classroom curricula. Additionally, efforts have been undertaken to have the training module accredited with the Professional Regulation Commission as part of participating teachers' continuing professional education program. This will hopefully help motivate teachers further and encourage other teachers to avail of this training. The PEF will maintain this form of partnership with educators to sustain public interest while furthering capability of educators in teaching natural history and wildlife conservation. This program was funded by the Canada Fund for Local Initiatives.



# Broadcasters' Education on Environment & Development

The radio is a powerful tool in disseminating information rapidly. It is a very effective way of reaching out to remote communities. This project, the Broadcasters' Education on Environment & Development, involves developing alliances with broadcast media practitioners in Mindanao. A total 17 radio stations, with 28 direct participants are currently involved with this project. With so many people living in the uplands, our partnership with the radio broadcast community will allow us to influence millions of marginal-income families and perhaps even engage their partnership in the future.

Project partners have already produced three versions (English, Filipino and vernacular) of a 60-second radio "plug-in" about the Philippine Eagle and the rainforest which are regularly aired by the participating stations. Announcements and information on key meetings such as the holding of a special training for the local government officials, teachers and

other sectoral representatives were also disseminated through this medium.

While the long term goal of the project is to influence public perception towards understanding of the role of wildlife in the natural environment, initial public response to the program appears promising. Already we have received reports on captured raptors, eagle sightings and nest locations. This allowed us to respond rapidly to reports on eagles in the field.

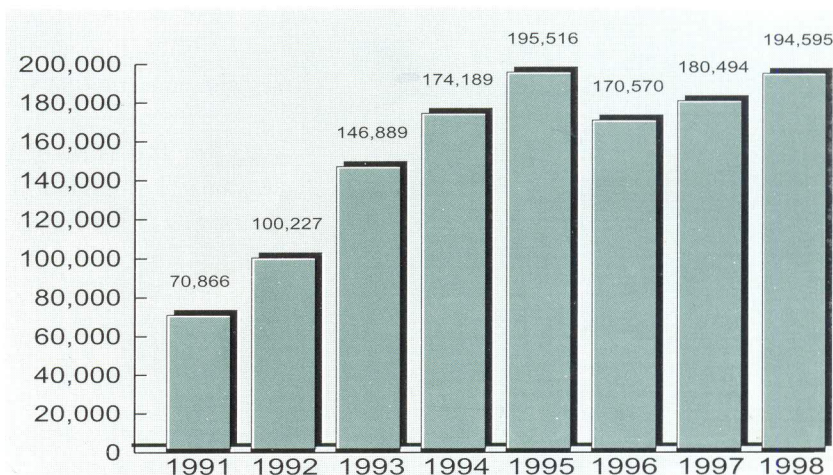
Another program output was the formation of a "core organization". Aptly called "*Mindanao Green Rangers*", they are currently developing information packets on eagle conservation to be aired regularly by member radio stations. Efforts are now underway to officially register this organization. This program is implemented with support from the Presidential Management Staff and the Gerald Durell Memorial Fund.



Participants of the Broadcasters' Education on Environment and Development training, conducted by the PEF-CEP.

## PEC Visitors' Traffic

The Philippine Eagle Center serves as an educational resource for furthering public awareness on and understanding of wildlife and the natural environment. People of all ages from all walks of life visit the center regularly. Since 1991, we have hosted some 1,233,346 visitors at the Center. About 194,595 people visited the PEC last year. While the primary target of education programs at the Center is the youth, adult visitor traffic have increased and now represents 52% of total visitors.



PEC Visitors' Traffic



## Nursery Establishment at the PEC

Students from the local schools helped establish a tree nursery at the Philippine Eagle Center. These students collected seeds, prepared the seeds for germination, bagged the seedlings and planted them at

designated areas. The students got free art lessons and training on ecology from PEF project officer Ric Obenza. This project is supported through a grant from the MacArthur Foundation.

## Production of Education Materials

Posters, brochures and fliers were developed, printed and distributed in various parts of Mindanao to complement our education extension

work in the field. Recipients included local communities, government units and schools throughout the island.

## Volunteer Program

A number of student volunteers were recruited and successfully completed our volunteer training course.

Volunteers from the Philippine Science High School include: Alvin Faustino, Paul Anthony Tan, Yves Nagal, Ariz Solito, Kristina Estero, Ethel Avisado, Donnah Lumanlan, and Katrina Oliva. While volunteers from the Holy Cross of Davao College include: Maria Cristina Parcasio, Melanie Cugay, Rafael Dino, Eldisa Masaling, Joan Ompay, Daisy Estenzo, Lony Corpuz, Jeona Pontillo, Annette Basco, Virlyn Barbarona, Marife Celerio, Ninnin Antipa, Analyn Cortez, Ricky Moralde, Emile Rellin, Anna Tomotod, Loida Baquero, Flordeliz Mellendrez, Leizel Asis, Maria Imelda Sy, Evangeline Avila, Charity Avila, Nancy Braga, Margie Quintarilla, Jojo Ruta, Aida Ebus, Retchel Dagatan, and Maria Diana dela Cruz. Their participation were mostly on special activities at the PEC e.g., animal's birthday, fiesta, tour

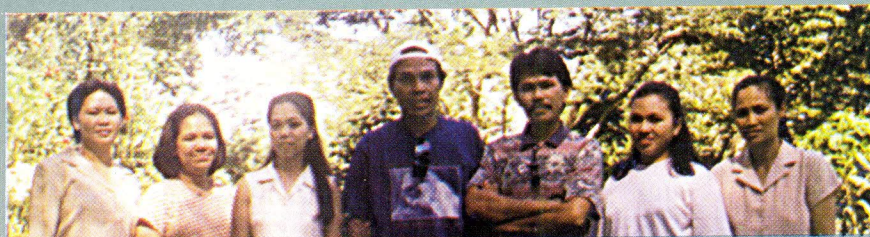
guiding, briefing visiting students and tree planting.

Three volunteers from Germany, USA and the Netherlands were also involved with our work. Christian Fackelmann from Germany shared his experience on falconry and helped with captive breeding operations. While Ralph Mancke, Ph.D. and Marije bij de Vaate were involved with field research work. Marije is with us to study tropical NGOs' operations while Ralph is here to pursue a special interest on the Philippine Eagle, biodiversity and tropical forests.

Over the years, the Foundation has welcomed volunteers from here and abroad. These volunteers have provided much needed personnel support and expertise. In return, we provide them opportunities to contribute to conservation-related programs and assist them in learning more about their particular field of interests. Interested parties may contact:



Volunteers at work.



**Staff:** From left to right: Ivy T. Rotor, Anna Mae T. Sumaya, Jocelyn Baron, Ricardo N. Obenza, Angelito A. Cereño, Lynie M. Balodo, Annabelle Tacderan.

**The Philippine Eagle Foundation**  
Garnet cor. Diamond Sts.  
Marfori Heights Subdivision  
8000 Davao City, Philippines  
Tel: (06382) 224-3021  
Fax: (06382) 224-3022  
E-mail: [pheagle@gatesway.com](mailto:pheagle@gatesway.com)