



INTERNATIONAL ELEPHANT FOUNDATION

Promoting *in situ* and *ex situ* conservation, education and research of the world's elephant populations



Two modes of anti-poaching patrols, IEF sponsored patrol vehicle and elephant patrol (see page 9).

The mission of the International Elephant Foundation is to support and operate elephant conservation and education programs, both *ex situ* and *in situ*, with an emphasis on intense management and protection, as well as scientific research that assists these actions.



INTERNATIONAL ELEPHANT
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Deborah Olson
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From the desk of the Program Officer...

Dear International Elephant Foundation Supporter:

I am excited to introduce you to our inaugural newsletter. Through this newsletter, we'll continue to bring you important updates on our work to conserve elephants throughout the world in the field and in captivity. Whether it's providing expertise to train elephant veterinarians in Sri Lanka, funding a variety of professional and educational scholarships, or elucidating land use and migrations patterns in Cameroon, the International Elephant Foundation has dedicated more than \$400,000 USD to elephant conservation over the past four years.

One of our most significant accomplishments over the past year was the Human-Elephant Relationships and Conflicts Symposium held this fall in Sri Lanka (see article on p. 1). Co-sponsored by the IEF, the conference was highly anticipated and extremely well attended. Delegates attended from all of the Asian elephant range states, numerous range states of Africa, the United States, Europe and Australia. The significant partnerships made through this conference will benefit elephant conservation for years to come.

Please enjoy these updates and contact me if you need additional information on any of our projects. If you have any suggestions for this publication, please let us know. Thank you again for partnering with us to conserve elephants throughout the world.

*Deborah Olson, IEF Program Officer
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The International Elephant Foundation (IEF) is a non-profit organization established in 1998 for the purpose of contributing expertise and providing funds to support elephant conservation programs worldwide, including protection of elephants in the wild and of their habitats, scientific research, education efforts and improvement in intensively managed captive animal care facilities.

The IEF's board of directors are highly regarded elephant experts experienced in working with African and Asian elephants through hands-on care and/or conservation and research. All board members are affiliated with elephant programs at a variety of organizations internationally, including non-profit and for-profit zoological institutions, circuses, universities, or independent entities. Scientific advisors, from the fields of medicine, research, academia and elephant management guide and support the IEF board.

Board members contribute their time and expertise, as well as funds, and receive no compensation for time spent on IEF business. Board members' expertise, time and travel to IEF board meetings are a complete donation to IEF from them personally, their institutions and their sponsor. In fact, more than 91% of funds raised by IEF go directly into elephant conservation efforts. All financial donations to IEF, a 501(C)(3) non-profit organization, are tax deductible.



2004 Calendar of Significant IEF Events



January

2004 Elephant Conservation and Research grant award announcement
Principles of Elephant Management Scholarship winner announcement
1st - Accepting applications to the Eighth Elephant Ultrasound and Veterinary Procedures Workshop



April

Eighth Elephant Ultrasound and Veterinary Procedures Workshop scholarship winner announced



August

31st - Deadline for Elephant Conservation and Research grant submissions for funding in 2005



September

31st - Deadline for 2005 AZA Principles of Elephant Management Scholarship applications



Fall

IEF Annual Elephant Conservation and Research Symposium

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Report on the Symposium on Human-Elephant Relationships and Conflicts

Sri Lanka was the site of the Symposium on Human-Elephant Relationships and Conflicts hosted by the International Elephant Foundation and The Biodiversity and Elephant Conservation Trust. The Symposium was highly anticipated and extremely well attended. Sixty papers had been accepted for presentation (out of almost 100 abstracts received). Delegates attended from each of the Asian elephant range states, numerous range states of Africa, the United States, Europe and Australia. The United States was not only represented by IEF, but also the zoo and research community. Many projects supported by the United States Fish and Wildlife Service (USFWS) were reported on during this meeting.

Over the three days of paper sessions and subsequent discussion, a number of themes consistently emerged: elephant-human conflicts are increasing, habitat loss is the major cause, loss of elephant and human life is probably higher than reported, future government land use plans must be developed with elephants in mind, and strategies to prevent elephant damage to human prop-



erty are not one-size-fits-all. At the end of the last day of the symposium it was time to discuss the next step for the delegates to take in resolving human-elephant conflicts.

Many ideas were offered regarding the next symposium and the IEF board of directors will consider these in the development of our 2004 goals

and funding priorities, as well as in the planning of future Annual Elephant Conservation and Research Symposiums. One idea offered met with unanimous assent from all the delegates; to write a letter to the United Nations asking for international government recognition of the issues surrounding elephant conservation and requesting a UN commission for elephant issues. A letter has been drafted on behalf of the delegates of the Symposium on Human-Elephant Relationships and Conflicts on letterhead of the International Elephant Foundation and the Biodiversity and Elephant Conservation Trust and sent to Kofi-Annan (Secretary General, United Nations)

(Debbie Olson, IEF Program Officer)



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Managing Elephants in Sumatra

Human-elephant conflicts are increasing as elephant habitat is rapidly disappearing causing significant financial losses to land owners and resulting in fatalities to both elephants and villagers. Some of the elephant sub-populations are fragmented and isolated into non-viable habitats. When relocation is necessary, it is difficult to find a release site that can ensure the action taken does not just relocate the problem. Some current conservation/protected areas are not well managed and do not effectively protect Sumatran elephants. Most of the wild elephants are present in blocks of forest outside the conservation/protected area, which has a high potential for human-elephant conflict.

All these symptoms reflect the failure of the current land-use planning system to take elephants and long-term benefits of habi-

tat conservation into account. A stronger commitment is required to offer well-developed, human-elephant conflict mitigation through holistic approaches to stop further elephant capturing as one solution. When a policy to stop capturing elephants is implemented without offering reliable alternative solutions for human-elephant conflict mitigation, the already upset villagers and plantation owners resort to poisoning or destroying the elephants.

In the 1980s, the Indonesian Directorate General of Forest Protection and Nature Conservation (PHKA) ordered the capture of wild elephants to ease the conflict between human and elephants and the training of problem elephants to be utilised to drive other problem elephants back to the forest or to use them for other purposes (public education, tourism, festivals and logging activity). As a result, between 1986 and the end of 1995,



520 elephants were captured and a five-year plan was formulated to increase the captive population to 900. Elephant Conservation Centres (ECCs) were established in six provinces in Sumatra. In 2002, less than 400 elephants still remain in captivity and most of them are living in the government managed ECCs.

To continue capturing elephants for ECCs does not seem realistic since elephant training/conservation centres have not fulfilled their original purposes. The elephants in ECCs are already overcrowded and under-utilized, which is having a serious impact on their welfare, particularly during this time of economic crisis. All the centres are experiencing a lack of funds for medicines, elephant feed and wages for the mahout and are poorly managed and under-resourced. Captive elephants often experience health problems and veterinary care is expensive and limited.

There have been attempts by the camp managers at some centres to form cooperatives to generate extra income but these need better management. However, several ECCs are in good locations, suitable for elephants in terms of water availability and forest cover as natural fodder, and possibly for future development.

A practical manual for ECC husbandry and management has been developed and was augmented with a series of tailored training workshops in the field in collaboration of PHKA, IEF and FFI (Flora and Fauna International). Furthermore registration of the captive elephants in Indonesia has been initiated by FFI and PHKA. The registration provides individual photography and information about the elephants, however the quality of the registration needs to be improved and updated by including the use of implanted microchips.

Further efforts to improve the elephant management skills of ECC personnel through pilot projects in selected ECCs is necessary for the future. The goal is to improve the overall management of the ECCs and provide a better atmosphere for self-sustainability and financial independence. Currently, there are plans for IEF to intensely focus on the Seblat-Bengkulu ECC.

The first ECC was established with no other goal but to be part of the global complexity of Sumatran elephant conservation

efforts. Therefore the existence of elephants in the ECCs should be directly or indirectly used for the conservation of elephants and their habitat.

The elephants in the ECCs are still under-utilized: however, many potential uses exist:

Forest protection and human-elephant conflict mitigation

The activities of human-elephant conflict mitigation using trained elephants include: chasing, driving and capturing wild elephants for relocation or for keeping in ECCs. This activity is conducted in association with BKSDA (Provincial Nature Conservation Government Agency) and the related National Park. In Aceh and North Sumatra, FFI and BKSDA have been using the ECC elephants integrated into the CRU (Conservation Response Unit) for forest monitoring and for immediate response of human-elephant conflict cases surrounding the 3 established units.

Scientific investigation

Research has been conducted in several ECCs, since there are few studies on the Sumatran elephant. For example, Wildlife Conservation Society used the captive elephants in Way Kambas for researching dung decay rates; information that contributes to the methods of elephant counting. In collaboration with FFI, IEF conducted a small research project on elephant blood parasites and blood lead content in Riau, North Sumatra and Aceh Province. Some additional projects are: fungi succession and insect on elephant dung, elephant food intake study, elephant natural fodder study, the utilisation of the dung for bokashi, etc.

Education and awareness

Small projects have been initiated in some ECCs, but more efforts to implement this program need to be explored by involving well-designed awareness material for selected target groups. The future possibilities include integrating with formal education programmes.

Low impact sustainable eco-tourism

An initial attempt to establish ecotourism is present in most ECCs, especially in Way Kambas. Nevertheless, the value of a good ecotourism scheme and management requires greater commitment, additional infrastructure and further investment.

Development of a meta-population

Breeding the existing captive elephants in the ECCs is important since it is a significant gene pool. This gene pool is increasingly significant as wild elephant numbers diminish at a rapid rate. Stronger campaigns to raise awareness about the captive elephant issues in Sumatra are needed to gain wider public support, since few international conservation NGOs take into account captive Sumatran elephant problems.

(Wahdi Azmi, SKH, FFI-Sumatran Elephant Conservation Program, Indonesia and Heidi Riddle, IUCN Asian Elephant Specialist Group Member)

Male Mating Strategies in the African Elephant

In 2002, IEF began support of a project investigating reproductive strategies in the male African elephant. The goal of this project, led by Henrik Rasmussen (Save the Elephants), was to provide insights into the behavior, movements and habitat use of bulls in different reproductive states in Northern Kenya. In addition, the aim was to combine detailed behavioral studies of wild bull elephants, whose age and social context within the overall population is known, with remote collection of movement data using Global Positioning System (GPS) collars and non-invasive techniques for collection of hormone and genetic samples.

Preliminary Results

The fieldwork is now in the final phase with only minor data collection missing. A full year of GPS collar data will be available at the end of this year from most of the collared individuals. The few genetic samples pending as well as some additional behavioral data will be collected during the last field period from mid-October 2003 to beginning of January 2004. Data analysis and writing has until now been focused on finishing manuscripts covering background information needed to interpret the core data on movements and behavior.

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Three papers are in preparation, one covering estimation of elephant densities within the study area, one describing a new technique to estimate the age of immobilized elephants and one presenting a predictive model of the number of estrus females based on remote sensing of time specified vegetation growth. Development of a predictive model for the number of females coming into estrus during a given season is important since this is likely to be one of the main factors determining seasonal quality for the bulls. The NDVI (Normalized Differential Vegetation Index), recorded by the SPOT 4 and 5 satellites is a measure of the 'greenness' and a good indicator of vegetation

growth. The maximum NDVI values between rainy seasons were compared to data on estrus and calf birth from Save the Elephants long term monitoring program. NDVI turned out to be the main factor explaining the variation in number of females coming in estrus and can thus be used to predict estrus frequencies before real data on calves being born are available. Apart from this, NDVI values will be used in the analysis of individual movements recorded by GPS collars.

Elephant movements and ranging patterns

The GPS collar data, used in this project, is made available by Dr. Iain Douglas-Hamilton and Save the Elephants tracking project in Samburu. Since the beginning of 2002, 14 bulls have been tracked for varying durations of time with GPS collars and at present we have approximately 80,000 hourly positions recorded. The majority of the data has not yet been analyzed in detail. However, interesting information has already emerged. Two bulls, 30-year-old Mass and 42-year-old Lewis went to Meru National Park and Imenti forest. This is the first time that a link between the Samburu population and these areas has been established. These data not only provide the information that elephants migrate between these areas but also shows us which routes they take. This information is invaluable for the creation of open corridors between elephant ranges needed to minimize conflicts in areas of human-elephant cohabitation.

Work on the GPS data is scheduled to begin in early August. Initially the data set will be analyzed for quantitative differences in daily travel distance depending on individual age and sexual state. Preliminary analysis indicated that contrary to general belief, sexually active non-musth bulls and musth bulls do NOT differ significantly in their way of searching for females and demonstrates the same increase in distance traveled during sexually active periods. Apart from analysis linked to understanding the way bulls search for females, these data will be used to quantify bull-bull associations by calculating inter-distances between individuals. These data will be further combined with field observations of association and group composition.

Genetics

In order to investigate the genetic structure on a regional basis, samples have currently been collected from Meru, Tsavo, Shimba Hills, Marsabit and Mt. Kenya National Parks. These samples (in combination with samples to be collected from other regions of Kenya) will provide information on gene flow and degree of isolation between the East African elephant populations. These results are expected toward the end of 2004.

