

## Guest Editorial

The meeting of the Asian Elephant Specialist Group (AsESG) at Phnom Penh, Cambodia, in May 2002 took stock of the status of elephant population and the conservation issues in the course of revising the Action Plan of 1990. The issues have largely remained as before – loss and fragmentation of habitat and escalating elephant-human conflict, in addition to poaching and a crisis with captive animals. We now have a much better appreciation of the magnitude of poaching for ivory and other products. The programme of Monitoring the Illegal Killing of Elephants (MIKE) under the auspices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), already operating in Africa, is now beginning in Southeast Asia and South Asia. A task force of the AsESG has also been working on a framework for the welfare and management of elephants in captivity.

The meeting brought in newer information of the status of elephant populations. With a few exceptions the news is grim – the Asian elephant is in dire straits in the Indo-China region, continues to be captured in significant numbers in Sumatra, and seems destined to lose habitat rapidly in Borneo. Even in India where the elephant is still holding its ground in terms of population numbers or even increasing in size, a combination of factors including escalating elephant-human conflict (in the east-central region), the selective poaching of tusked males (mainly in the south but also elsewhere), and deforestation (in the northeast) poses a threat.

The most exciting new information on the Asian elephant is undoubtedly the molecular genetic structure of the species emerging from the work of one of our members, Dr. Prithiviraj Fernando, working on populations across the range of the species outside India, and of Ms T.N.C. Vidya working primarily on the Indian populations. This work has been carried out using a non-invasive technique of extracting tiny amounts of genetic material (DNA) from the dung of wild elephants. Work on mitochondrial DNA (inherited maternally) and the nuclear DNA is underway. The results, some of which were recently presented at a symposium of the Society for Conservation Biology (held at Canterbury, U.K. in July 2002), promises to take our understanding of the phylogeography of *Elephas maximus* to a new level. This has important implications for conservation strategies of the species.

Sri Lanka has high genetic diversity among its elephant populations going by the amazing number (more than 15) of “mitochondrial haplotypes” seen across the island country. In contrast, the large elephant populations of southern India are low in mitochondrial genetic variation. The Indo-China region, whose elephants are in a precarious state, also seems to have high genetic variation in some of its small populations. There is however no case for treating the Sri Lankan elephants as a distinct sub-species because many of the haplotypes here are shared with populations on the Asian mainland. On the other hand, the Sumatran elephant, along with those of

peninsular Malaysia, does show a certain distinctness. Another interesting result has been from the island of Borneo (the origin of the elephants here has been a matter of speculation). Preliminary work on the elephants of Borneo indicates a unique mitochondrial haplotype not found anywhere else in Asia.

The genetic information on Asian elephants will give us an additional criterion, as important as population or habitat size, for recasting the framework under which conservation strategies and priorities are worked out. The implementation of conservation strategies and plans is however a more complex affair that is linked to the rapidly changing social, economic and political landscape of the elephant range states across Asia.

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A young tusker from Sri Lanka  
(Photo: courtesy: Dr. H. I. E. Katugaha)