



Plenary session. Photo by Charles R. Foerster.



Dr. Ardinis Arbain, Andalas University, Indonesia, presenting the final results of the Species Management Group. Photo by Charles R. Foerster.

tapir coordinator, for all his help and useful advice during the organisation of the meeting. Also, we thank the CBSG staff, especially Dr. Phil Miller and Amy Camacho, for helping us to design the most appropriate format for the meeting. The organisation of this workshop would never have been possible without the support from the Malaysian Department of Wildlife and National Parks. We would like to extend our gratitude to the Director for Research, Siti Hawa Yatim, Dr. Kae Kawanishi and Ms. Ramlah Abdul Majid for all their hard work organising the logistics of this meeting. Financial support for the meeting was kindly offered by the Copenhagen Zoo in Denmark, our largest donor, and from the Wildlife Conservation Society Thailand, the Department of Wildlife and National Parks of Malaysia, and several other funding agencies that supported partial or total expenses for some of our participants.

Patrícia Medici

Chair, IUCN/SSC Tapir Specialist Group (TSG)
Avenida Perdizes, 285, Vila São Paulo
Teodoro Sampaio, CEP: 19280-000, São Paulo, Brazil
Phone & Fax: +55-18-3282-4690
E-mail: epmedici@uol.com.br

Bengt Holst

Vice Director, Copenhagen Zoo
Chair, EAZA Tapir TAG
Sdr. Fasanvej 79, DK-2000 Frederiksberg, Denmark
E-mail: beh@zoo.dk

CURRENT PROJECT UPDATES

Colombia

Ecology and Conservation of the Mountain Tapir in the Central Andes of Colombia

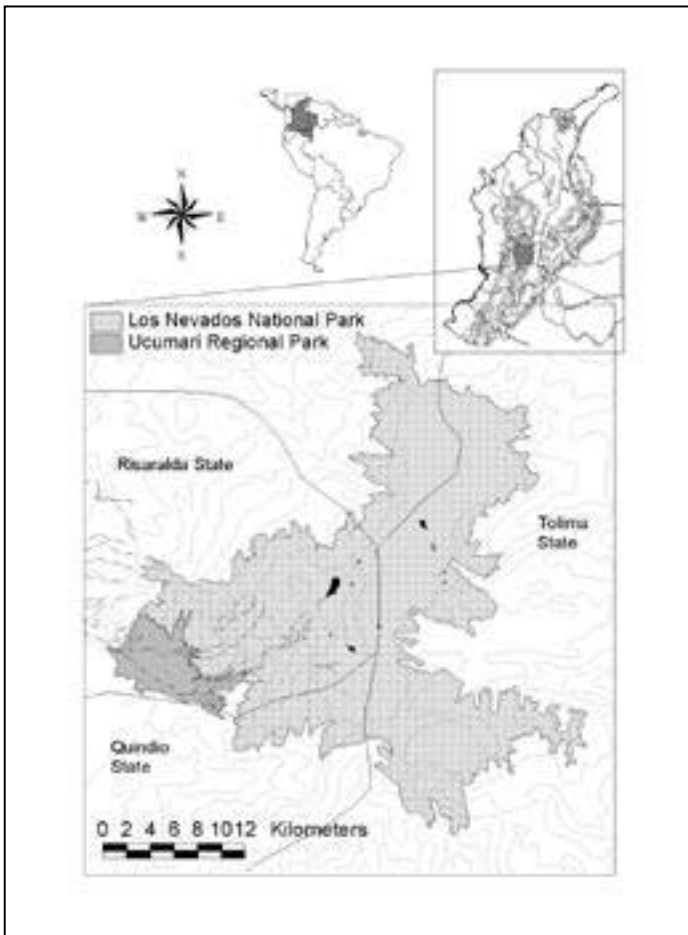
By **Diego J. Lizcano**

In the tropical Andes, the mountain tapir (*Tapirus pinchaque*) is the largest mammal, eating a variety of plants, fruit and

seedlings, along tapir trails and in tree fall gaps (Acosta *et al.* 1996; Downer 1996). Studies in Bolivia's lowlands suggest that herbivory by large mammals affects plant community dynamics by reducing the competitive ability of faster growing herbaceous species, which would out compete less competitive species (Painter 1998). But to date we do not have similar data for the tropical Andes region. This research will provide information regarding the importance of mountain tapirs as herbivores.

Hunting in the Neotropics is important to the livelihood of natives and colonist peoples of South America (Redford & Robinson 1987). The growing human population and more

efficient hunting technology increase the pressure on prey species often to the point of local extinction (Bodmer *et al.* 1994). Usually the preferred game species are large herbivores, like tapir, which have a greater predisposition for over-harvesting because of their low reproductive rate (Bodmer *et al.* 1997). Thus, the disappearance of large herbivores may alter the structure and species composition of a forest. For this reason it is important to understand why people hunt in the tropical Andes and what the consequences are of this hunting for the animal populations and for the forest.



Study area in the Central Andes of Colombia.

This project is studying the ecological importance of the mountain tapir in structuring the understory and canopy plant communities of tropical montane forest. It is also looking at how hunting of large mammal populations affects the ecological role of these herbivores. In the proposed research, I am studying the plant-animal interactions of mountain tapir in the tropical Andean forest ecosystem and the causes and effects of hunting on the large mammal populations in Los Nevados National Park, Ucumari Regional Park and surrounding areas in Risaralda state, in the Central Andes of Colombia.

A combination of observations and manipulative experiments are being carried out. Twenty-five exclosures (3 x 6 m)

using mesh wire and wooden poles and 25 control plots in a nested design were located between 2500 and 3600 m. This experiment will allow us to evaluate the impact of mountain tapirs as herbivores on Andean forest. Specifically I am evaluating the effect on biomass availability, structure and diversity. The diet of mountain tapirs is being studied using microhistological techniques (Alipayo *et al.* 1992; McInnis *et al.* 1983) and habitat use by sign counts. Hunting is being studied using simple data forms, which are completed by hunters, using methods of participatory research. The culmination of this study will help us understand what happens if hunting eliminates the mountain tapir population in the tropical Andes region. The results obtained will provide additional insights into the ecological functions of these herbivores, which will enhance existing and future management plans for tapirs and other large mammals in Colombia.

Data on mountain tapir habitat use will be useful to CARDER (Corporación Autónoma Regional de Risaralda), the regional environmental authority, who plan to increase their protected areas system with the creation of a new protected area adjacent to Ucumari Regional Park and Los Nevados National Park, the areas in which this study is being undertaken. In addition, the information on hunting will be useful to CARDER and the National Parks Office of the Ministry of the Environment, to enable the improvement of protection in their protected areas and to design strategies for the conservation of the most hunted mammals. New data on plant-animal interactions underline the importance of mountain tapirs not just as a species but also as a crucial component of the tropical Andean forest and Páramos.

This study received financial support from a Rufford Small Grants for Nature Conservation, UK, Instituto Alexander von Humboldt, Colombia, and an equipment grant from IdeaWild, USA.

Diego J. Lizcano

PhD. Candidate,

Durrell Institute of Conservation and Ecology

University of Kent at Canterbury, CT2-7NS, UK

E-mail: dl36@ukc.ac.uk

References

- Acosta, H., Cavelier, J. & Londoño, S. 1996. Aportes al conocimiento de la biología de la danta de montaña, *Tapirus pinchaque*, en los Andes Centrales de Colombia. *Biotropica* 28: 258-266.
- Alipayo, D., Valdez, L., Holechek J. & Cardenas, M. 1992. Evaluation of microhistological analysis for determining ruminant diet botanical composition. *J. of Range Management* 45: 148-152.
- Bodmer, R. E., Eisenberg, J. F. & Redford, K. H. 1997. Hunting and the likelihood of extinction of Amazonian mammals. *Cons. Biology* 11: 460-466.
- Bodmer, R. E., Fang, T. G., Moya, L. & Gill, R. 1994. Managing wildlife to conserve Amazonian forests: Population biology and economic consideration of game hunting. *Biol. Cons.* 67:29-35.

- Downer, C. C. 1996. The mountain tapir, endangered "flagship" species of the high Andes. *Oryx* 30: 45-58.
- McInnis, M. L., Vavra, M. & Krueger, W. C. 1983. A comparison of four methods used to determine the diets of large herbivores. *J. of Range Management* 36: 302-307.
- Painter, R. L. E. 1998. *Gardeners of the Forest: Plant-animal Interactions in a Neotropical Forest Ungulate Community*. University of Liverpool, Liverpool.
- Redford, K., & Robinson, J. 1987. The game of choice: Patterns of Indian and colonist hunting in the Neotropics. *American Anthropologist* 89: 650-667.

Tolima Jimba Kush

By Franz Kastón Flórez

Jimba Kush or mountain horse is what the Nasa Wesh community (indigenous Paez people of the Central Colombian Cordillera), call the mountain tapir (*Tapirus pinchaque*). This indigenous group migrated to the Tolima department from the Cauca Department in the south of Colombia about a century ago. The Nasa Wesh community has lived closely with this species, now endangered due to natural resource exploitation.

In 2000, an application to export a pair of wild caught mountain tapirs out of Colombia to Asia failed. Colombia conservationists proposed a plan that would lead to advancement in the knowledge and preservation of this endangered mammal in Colombia itself. In addition, the preservation of this species must also have a positive impact on the quality of life of the people that currently share their environment with the mountain tapir. Today there is the opportunity to invite the Nasa Wesh to share in the planning process.

The department of Tolima has three National Parks (the parks of Hermosas, Nevados and Nevado del Huila) within its boundaries. All these parks have tapirs and some degree of protection is afforded to the species. However, there are also mountain tapirs outside national parks that do not have any legal protection. For this reason, the location of the Nasa Wesh indigenous community in the Tolima Department between the Nevado del Huila Park and the Hermosas Park, directly links them with the future of this species and its habitat.

The current situation of the Tolima Department that has such influence over the future of the mountain tapir, is that it has many farmers with various socio-economic needs; the original landscape has been transformed into agriculture including cattle ranching, potato, poppy and pasture cultivation. Furtive hunting of tapirs occurs and the opening of a new highway to cross the Central Cordillera has also had an impact. There have been armed insurgents in the area in the past, but since a regional peace pact in 1995 with the Nasa Wesh communities these problems have improved.

Internationally, it has become more and more evident

that people, organisations and zoos have become increasingly interested and concerned about helping to conserve this endangered species. With this in mind, a long-term strategy has been in place since 2002 that will help overcome problems in the community and thus guarantee the preservation of *T. pinchaque* and its habitat in this region of the Tolima Department.

The first step of this strategy is to ascertain the population status of the species inside the indigenous territory. This is presently being undertaken in collaboration with the Tolima Government.

The biological and health research program will then be followed by the controlled breeding of this species within the indigenous territory and natural habitat of the tapir. This will be *in situ* management, stimulated by the success obtained with reproduction of this species in zoos.

Once the young tapirs are obtained, there will be two lines of action:

1. The establishment of a core of individuals born in the Central Cordillera that can be used as support to interact demographically and genetically with captive and wild populations;
2. Agreements developed with zoos exhibiting these captive born animals outside Colombia could channel important economic resources back into the country to benefit local tapir conservation initiatives.

These actions will help indigenous peoples and farmers understand that the value of the mountain tapir goes beyond food. It can become a positive resource to the community involved in a world-wide effort to conserve the Andean bio-system. It can represent jobs for members of the local communities.

In the educational context, workshops have been and will be conducted to inform the indigenous community about the biology and conservation of the species and its habitat and enable coordinated efforts.

It has been suggested that the mountain tapir be named the Colombian national animal. This will help inform the Colombian people about the species, establish it as an emblem and thus emphasise the value of the tapir and the importance of preserving biodiversity in the Colombian Andes.

We are all aware of how difficult this job will be but we are enthusiastic about the fact that the region still has something very important – mountain tapirs in their natural habitat. We hope that, as the designated objectives are achieved, the efforts of the local peoples will not permit this species to disappear from Colombia.

Additionally, DNA samples of different tapirs of the area have been obtained and these will be used to measure the genetic diversity of the population. This, together with health evaluations, will allow for detailed knowledge regarding the health and biological characteristics of these *T. pinchaque*