

The Lion Tamarins of Brazil Fund: with Reference to the International Management Committees for *Leontopithecus*

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Introduction

The conservation significance of the lion tamarin programmes (for the golden lion tamarin *Leontopithecus rosalia*, golden-headed lion tamarin *L. chrysomelas*, black lion tamarin *L. chrysopygus*, and, more recently, the black-faced lion tamarin *L. caissara*), highlights so well how the adoption of 'flagship' species and the publishing of the plight of remnant populations in depleted environments can promote considerable public attention and support, resulting in the preservation and conservation of both animal species and associated habitat (Mallinson, 1986, 1987, 1989, 1994; Dietz *et al.*, 1994).

Thanks to the participation of numerous specialists, who have provided the impetus, technical advice, and finance for the successful running and coordination of the Lion Tamarin Committees, so much has been achieved to secure the viability of both captive and wild populations of the lion tamarin genus. During the past few years, through the unique collaboration of the Brazilian Institute of the Environment and Renewable Natural Resources (Ibama), zoo personnel and their supporters have promoted fund raising activities to help secure sufficient habitat to sustain viable wild populations and helped to develop environmental education programmes, as well as studies of the demography, behavioural biology and evolution of the species in the states of Bahia, Rio de Janeiro, São Paulo and Paraná.

Management Committees

In June 1990, the International Research and Management Committees (IRMC) provided the main driving force, in collaboration with the Fundação Biodiversitas, Belo Horizonte, and Ibama, Brasília, for the organization of the "Leontopithecus Population Viability Analysis Workshop", held in Belo Horizonte, Minas Gerais, Brazil (Seal *et al.*, 1990). The IRMC's include field scientists, zoo specialists, environmental educators, and personnel of governmental and non-

governmental organizations. They are recognised by Brazilian Law as technical advisors to Ibama on all issues concerning both wild and captive populations. The Committees meet with Ibama on an annual basis, adopting an interdisciplinary approach on all matters relating to the conservation of the lion tamarin genus, and promoting the interactive management of *in situ* and *ex-situ* populations (Mallinson, 1989).

The majority of the golden and golden-headed lion tamarins and all of the black lion tamarins in captivity outside of Brazil are subject to Management Agreements. These populations remain in the Trusteeship of Ibama, and none of the animals can be sold, traded or otherwise used in commercial transactions (Mallinson, 1994).

The Lion Tamarins of Brazil Fund (LTBF)

The Lion Tamarins of Brazil Fund (LTBF) was established by the International Committees in 1991. An appeal, signed by Gerald Durrell (Founder and Honorary Director, Jersey Wildlife Preservation Trust), was mailed to all holders of lion tamarins outside of Brazil in January 1992. The letter requested donations in support of *in situ* conservation work, in particular the funding of Brazilian field assistants studying lion tamarins in the wild. The appeal raised just over US\$10,000 in 1992, a sum that the Committees decided should be evenly distributed between the programmes for the four species, in support of surveys and censuses, behavioural and ecological studies, translocation, and environmental education. The Appendix provides details of the programmes that were supported by the LTBF in 1993.

Recognising the increasing importance of interactive management between captive and wild populations of endangered species, the Management Committees decided to continue to appeal on an annual basis for donations to the LTBF from all holders of lion tamarins. In this way, zoos that are already participating in the development of the scientifically managed captive

populations of lion tamarins outside of Brazil, are also able to contribute funds to aid the conservation of the remnant wild populations of this critically endangered primate genus.

In October 1993, the second appeal was sent out to all overseas holders of lion tamarins. The letter highlighted the International Committees' hope that this annual appeal will continue to generate sufficient funds to enable the Committees to build on past successes, as well to promote further these model programmes for the conservation of endangered species and associated habitats. At the time of the meeting of the Committees in May 1994, a sum in excess of US\$17,000 had been donated by 12 collections, including a significant contribution of US\$10,000 received from the Japan Marmoset Institute, Tokyo. This sum was divided equally amongst the four species' Committees to be allocated to research and conservation projects.

Although the donations to the fund have been largely one-off contributions, it is important to mention one particularly laudable long-term fund-raising programme set up by the Adelaide Zoological Gardens, Australia. The appeal letter sent out in 1992 resulted in the zoo launching a most innovative fund-raising effort on behalf of the LTBF, with an undertaking to raise US\$3,000 per year for a three-year period. As McAlister and Langdon (1993) record:

"During 1992 considerable work was undertaken at the Adelaide Zoological Gardens, South Australia, to improve conditions and display facilities for both golden lion tamarins (*Leontopithecus rosalia*) and cotton-top tamarins (*Saguinus oedipus*). Because of their threatened status, an education and conservation campaign was set up featuring the lion tamarins and using the idea of "A Golden Coin for a Golden Animal". In brief, thanks to generous support from the Electricity Trust of South Australia (ETSA) which paid for the exhibit improvements, a video was made featuring the well-known conservationist, the Honorary Director of the Jersey Wildlife Preservation Trust (JWPT), Dr Gerald Durrell. The video is activated by dropping a \$1.00 coin (a golden coin in Australia) through the slot. Excellent footage of golden lion tamarins is then displayed, with a message from Dr Durrell detailing the plight of this beautiful creature, and encouraging people to assist in its preservation and conservation. Contributors are assured that all money raised will be used to contribute to the revegetation project in the Poço das Antas Biological Reserve, Rio de Janeiro, and

the reintroduction of captive-born groups of this "flagship" species in its native habitat, projects which form part of the Golden Lion Tamarin Conservation Programme of the National Zoological Park, Smithsonian Institution, Washington, D.C. The funds are being channeled through the "The Lion Tamarins of Brazil Fund", an international appeal started by Dr Durrell in December 1991, and managed by Jeremy Mallinson, Zoological Director of JWPT, and Devra Kleiman of the National Zoological Park, Washington, D.C. Adelaide Zoo's particular campaign for golden lion tamarins has been able to guarantee the funding for a field assistant for three years, and the first allocation of money was forwarded in early 1993.

The publicity surrounding the golden lion tamarin did not stop with this particular project, but continued, using some very provocative posters, to try to boost membership of the Royal Zoological Society of South Australia Inc., and to encourage people to become involved with conservation. The posters and full page advertisements in the local newspapers, once again sponsored by ETSA, were certainly very eye-catching and effective and raised the profile of the Adelaide Zoo considerably."

Summary

The coordinated work of the International Committees for the conservation of the lion tamarin genus represents model programmes that provide excellent examples of what can be achieved through an interdisciplinary approach involving science, interactive management, politics, environmental education, and habitat preservation and restoration.

With our growing understanding of the science of conservation today, the significance of the lion tamarin programmes highlight so well how the importance of 'flagship' species for publishing the plight of remnant populations in degraded environments can promote considerable public attention and support, providing for action on behalf of the animals and their habitats.

As the Management Committees for the lion tamarins provide excellent models for the interactive management of wild and captive populations of endangered species, it is also hoped that the Lion Tamarins of Brazil Fund will, in a similar way, instigate and promote fund-raising efforts by the international zoo community to contribute funds in support of the remaining wild populations of endangered species they have represented in their zoological collections.

References

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- tamarins are to be used to trap animals and conduct medical/physical examinations, and to accompany groups and compare behaviour before and after translocation. Project to accomplish rescue of targeted groups; secure protection for the translocation site; provide experience and information necessary for future transfers of wild and reintroduced individuals between subpopulations which will probably be required in the future management of the species, and; increase knowledge of the biological effects of isolation and small population size (see Kierulff, M.C.M., Status and distribution of the golden lion tamarin in Rio de Janeiro, *Neotropical Primates*, 1(4): 23-24, 1993, and Kierulff, M.C.M. and Oliveira, P. P. de. Habitat preservation and the translocation of threatened groups of golden lion tamarins, *Leontopithecus rosalia*, *Neotropical Primates*, 2(suppl.): 15-18, 1994).
- 1993 *Lion Tamarins of Brazil Fund Grant*: US\$2,500, paid to Dr Devra Kleiman, National Zoological Park, Smithsonian Institution, Washington, D.C. 20018, USA. (Chair of the IRMC for *Leontopithecus rosalia*).
- 2. Golden-Headed Lion Tamarin *Leontopithecus chrysomelas***
- Project*: Conservation, Ecology, and Behaviour of Golden-Headed Lion Tamarins in the Una Biological Reserve, Bahia, Brazil
- Principal Investigator/Field Worker*: James M.Dietz, University of Maryland/Jose Renato Oliveira da Silva, Una, Bahia
- Project Objectives*: 1) To obtain the biological information necessary to complete a population viability assessment and make management recommendations to Brazilian authorities and funding agencies for the conservation of the species in the Una Biological Reserve; 2) To compare aspects of the behavioural ecology of the species in the Una Reserve with those of the golden lion tamarin in the Poço das Antas Biological Reserve, Rio de Janeiro, and; 3) to create a centre in the Una Reserve for the training of Brazilian scientists and students in the techniques of conservation biology and the study of behavioral ecology. The project was begun in July 1991, following the receipt of authorization from the Brazilian Institute for the Environment (Ibama No.060/91 of 27 February 1991, Edict No.383 of 8 July 1991). Interim progress reports and proposal updates provided in June 1992 and February 1993.
- 1993 *Lion Tamarins of Brazil Fund Grant*: US\$1,250,

Appendix

Leontopithecus Conservation Programmes Supported by the Lion Tamarins of Brazil Fund

1. Golden Lion Tamarin *Leontopithecus rosalia*

Project: Survey and Translocation of Isolated Lion Tamarin Groups, Rio de Janeiro, Brazil

Principal Investigator/Field Worker: Maria Cecília Martins Kierulff, Federal University of Minas Gerais

Project Objectives: A survey of golden lion tamarins outside of the Poço das Antas Biological Reserve, Rio de Janeiro, and translocation of isolated groups to a larger protected area, considering that these genetically important animals will almost certainly disappear in the near future as a result of continuing deforestation and/or genetic or demographic problems. Techniques already developed for wild and reintroduced

paid to Dr James M. Dietz, Department of Zoology, College Park, University of Maryland, Maryland 20742, USA (Member of the IRMC for *Leontopithecus chrysomelas*).

3. Golden-Headed Lion Tamarin *Leontopithecus chrysomelas*

Project: "Projeto Mico-Leão-Baiano" - Environmental Education Programme

Project Director: Maria Cristina Alves, Ilhéus, Bahia.

Project Objectives: To promote an environmental education programme for the preservation of the golden-headed lion tamarin and its forests by developing an understanding of conservation within local communities. The programme began in 1990 through the combined efforts of national and international NGO's and funding organizations. A Centre for Nature Education has been developed for professionals, school children and the general public. Environmental education programmes for schools, consisting of slide shows for students and specific courses for teachers, help to achieve the Project's principal target by stimulating conservation awareness and the participation of the target community in southern Bahia.

1993 Lion Tamarins of Brazil Fund Grant: US\$1,250, paid to Maria Cristina Alves, Director "Projeto Mico-Leão-Baiano", Rodovia Ilhéus-Itabuna Km22, 45600 Itabuna, Bahia, Brazil (Member of the IRMC for *Leontopithecus chrysomelas*).

4. Black Lion Tamarin *Leontopithecus chrysopygus*

Project: Metapopulation Management for the Black Lion Tamarin in the State of São Paulo

Principal Investigator/Field Worker: Claudio Valladares-Padua/Laury Cullen Jr., IPÊ - Instituto de Projetos e Pesquisas Ecológicas, São Paulo

Project Objectives: To carry out studies that will enable metapopulation management for the species, integrating in this way all known subpopulations which have been confirmed to date in five isolated forests (only two of which are in protected areas; the Morro do Diabo State Park and the Caetetus State Ecological Station). Population viability analysis for the species suggests that without active management the chances of its survival over the next 100 years are extremely

poor. Translocation and managed dispersal between fragmented populations will be investigated, and the long-term behavioural/ecological studies will be continued. Although the forest fragmentation that exists among the several subpopulations means that they are capable of tolerating stochastic problems, it also impedes natural migration and the guarantee of genetic variability. (See Valladares-Padua, C., Padua, S.M. and Cullen Jr, L., The conservation biology of the black lion tamarins, *Leontopithecus chrysopygus*: first ten years' report, *Neotropical Primates*, 2(suppl.): 36-39, 1994.)

1993 Lion Tamarins of Brazil Fund Grant: US\$2,500, paid to Dr Claudio Valladares-Padua through Dr Faíçal Simon, Fundação Parque Zoológico de São Paulo, Avenida Miguel Stefano 4241, Caixa Postal 12.954, 04301 São Paulo, São Paulo, Brazil (Chair of the IRMC for *Leontopithecus chrysopygus*).

5. Black-Faced Lion Tamarin *Leontopithecus caissara*

Project: Distribution, Status, and Conservation of the Black-Headed Lion Tamarin, Superagüi

Principal Investigators/Field Workers: Vanessa G. Persson, Museum of Natural History "Capão da Imbuia", Curitiba, and Maria Lúcia Lorini, National Museum, Rio de Janeiro, Brazil

Project Objectives: To establish population size, threats and habitat viability, and investigate the ecology and behaviour of the species, as well as factors restricting population expansion, in order to formulate a coordinated conservation programme, following the proposals of the Action Plan drawn up by the IRMC for *L. caissara* (see Câmara, I. de G., Action Plan for the Black-Faced Lion Tamarin, *Neotropical Primates*, 1(3):10-11, 1993; Câmara, I. de G., Conservation status of the black-faced lion tamarin, *Leontopithecus caissara*, *Neotropical Primates*, 2(suppl.): 50-51, 1994). (See also Lorini, M.L. and Persson, V.G., Status of field research on *Leontopithecus caissara*: The Black-Faced Lion Tamarin Project, *Neotropical Primates*, 2(suppl.): 52-55, 1994).

1993 Lion Tamarins of Brazil Fund Grant: US\$2,500, paid to Admiral Ibsen de G. Câmara, Avenida das Américas 2300 - C-40, 22640-101 Rio de Janeiro, Rio de Janeiro, Brazil (Chair of the IRMC for *Leontopithecus caissara*).