The Golden Lion Tamarin Conservation Program:

Devra G. Kleiman Smithsonian National Zoological Park & Zoo-Logic, LLC



Golden Lion Tamarins: A flagship species program to protect, restore and expand the Atlantic rainforest of Brazil & its biodiversity – an international zoo success story



Adelmar Coimbra-Filho
James Dietz/ Andy Baker ecology

Lou Ann Dietz/ Elizabeth Nagagata/ Patricia Mie Matsuo - education

Ben Beck - reintroduction

J. Mickelberg – population management

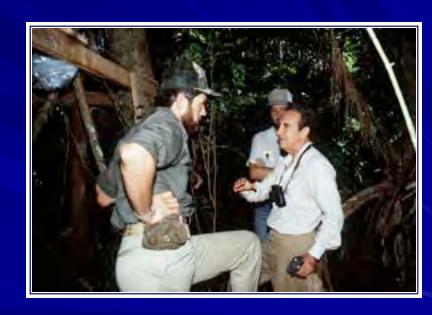
Denise Rambaldi– AMLD Executive Director

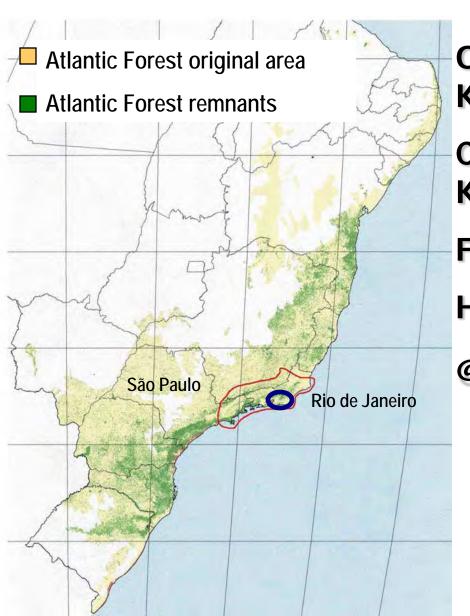
Rosan Fernandes - corridors

Cecilia Kierulff/ Paula Procopio- ecology, translocation

Carlos Ruiz-Miranda- behavior Alcides Pissinatti- vet. med.

Collaborators: Sharing the journey





Original covering – 1,200,000 Km²

Current covering – 90,000 Km²

Forest remnants - 7.3% Human Demography:

@ 80% Brazilian population >50% Brazil's GNP

Golden Lion Tamarin Status in 1972

NUMBERS:

In wild:

Several 100 ?

In zoos:

@ 75 GLTs

of zoos:

16



The threats have evolved over time

- Deforestation
- Hunting
- Agriculture, misuse of fire & pesticides
- Oil/gas pipelines next to Reserves
- Major highways next to Reserves
- New settlements by "Landless"
- •Trains carrying toxic chemicals within Reserves

Setting long-term objectives: Golden lion tamarins & the Atlantic forest REQUIRED FOR 2025

For a naturally evolving population of Golden

Lion Tamarins by 2025, we need.....

1) Protected habitat = >23,000 ha

2) Protected GLTs = >2,000

Golden Lion Tamarin Conservation Program Activities

I. THE CAPTIVE POPULATION:

Cooperative research and management

II. THE WILD POPULATION:

Field research on population status and behavioral ecology

III. REINTRODUCTION AND TRANSLOCATION:

Preparation, release, protection of critical resources, and long-term monitoring

IV. THE HABITAT:

Protection, management, preservation, restoration, and creating linkages/corridors

V. CAPACITY BUILDING AND OUTREACH:

Public and professional education and outreach, organization development, training

Timeline

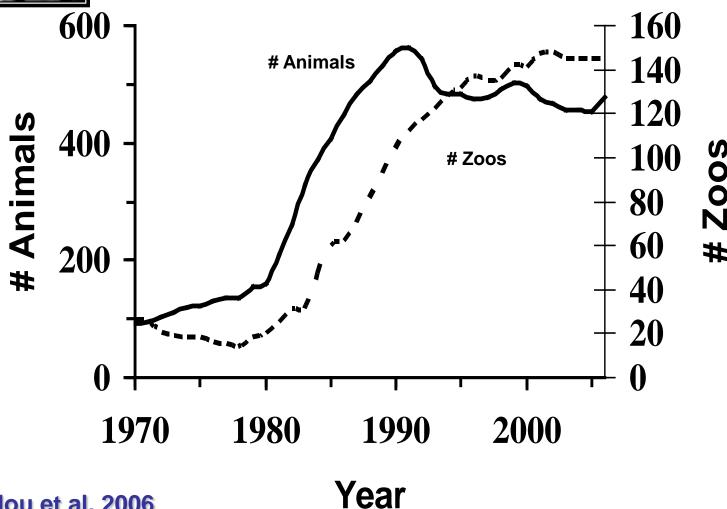
- > 1972-82: Captive breeding & research
- ➤ 1974: Poço das Antas Reserve established
- > 1983: Ecological studies begin
- > 1984: First reintroduction
- > 1991: First complete census
- ➤ 1993: Golden Lion Tamarin Association created (AMLD)
- > 1993: Tamarin translocations begin
- > 1997: 2nd Reserve (União) created
- > 2002: Corridor building started





Data: Jon Ballou et al, 2006

Golden lion tamarin captive breeding program



Scientific studies of the wild population:

- Critical resources, habitat preferences, and sources of mortality
- Home range size and overlap
- Group size, population density, and population change
- Group turnover: Immigration and emigration







Application to reintroduction and translocation:



Free-ranging educational exhibits







Reintroduction: results

- From 150 reintroduced zoo-born tamarins, the population now has more than 600 GLTs; 97% of the reintroduced population was born in the wild
- ➤ No longer possible to monitor all groups and many are completely wild

Human activities continue to be the major cause of loss among reintroduced monkeys





1st complete census conducted in 1991; Translocation initiated in 1993; President declares União (3,200 ha) a Biological Reserve in 1997

From 42 translocated tamarins, the total population currently is over 200 golden lion tamarins

▶25 groups have been monitored long-term





RESULTS: MORE HABITAT PROTECTED about 17,000 ha total

Poço das Antas reserve – 6,500 ha

União reserve - 3,200 ha

Rio Vermelho ranch - 1,700 ha

➤ Other reintroduction ranches 4,000 ha

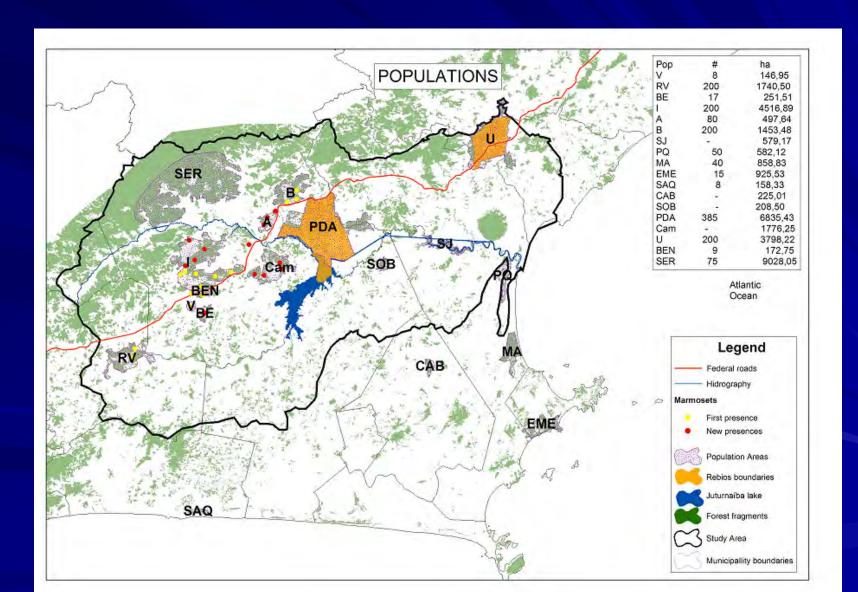
Private reserves (RPPNs) ~2,000 ha

Current and Future Challenges

- ➤ Introduce landscape consolidation and integration strategy (e.g. implement biodiversity corridors)
- **▶** Develop & implement GLT Metapopulation Management Plan
- Increase capacity within region, including strengthening the GLT NGO (e.g. stabilize funding)
- > Strengthen relationship with zoos



Develop integrated landscape strategy within golden lion tamarin distribution:



Capacity building, conservation education, outreach, social marketing:

How do you use your flagship species to increase awareness, knowledge and skills...... and to change attitudes & behavior??? How do you increase human capacity in the region??



Where do you focus an education/ outreach program: Schools, the community, policy-makers? Who is your audience?







20% of Silva Jardim's teachers trained, 70 projects developed

Formal partnership with two municipalities

Education programs at Poço das Antas & União Biological Reserves

Outreach activities in the local communities











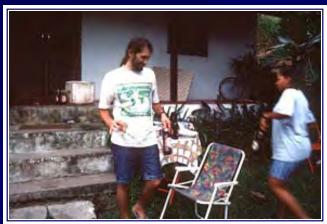


In 2006, Patricia Mie Matsuo completed a study for her Master's degree, examining the impact of training a group of local teachers, with an environmental curriculum on their knowledge; teaching substance; teaching style; and personal attitudes about the environment





Train interns and graduate students



Ezequiel Moraes



Andreia Martins



Elizabeth Nagagata & Laurenz Pinder



Science and communication

ライオンタマリンの森

Professional training (>230 interns)

Partnership with Brazilian and foreign universities

Support to students (>45 projects)

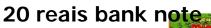
> 220 papers

Countless articles on newspapers, magazines

Documentaries for Brazilian and international

television









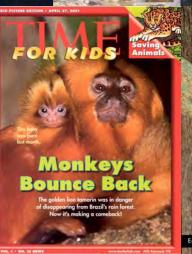


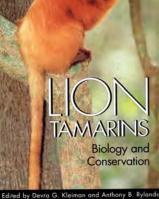


Mata Atlântica - Reserva da Biosfera Áreas de Preservação Permanente Mata Oliar - Recuperação de Florestas Direito de Propriedade Ato Ded aratório Ambiental Imposto Territorial Rural









Biodiversidade 6

Environmental extension

Working with recently settled "Landless" people to develop an economic livelihood that will not threaten tamarins or their forests.



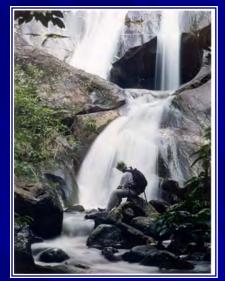






Recent regional development of ecotourism

Ecotourism project on local ranch involves partnership with landowner, AMLD, tour operator, and local mayor





What has driven this program's success? (and how do you define success?)



The Golden Lion Tamarin Association in Brazil integrates field research, reintroduction, translocation, capacity building, conservation education, habitat restoration, corridor development, and socioeconomic activities in the region.



Planning and Adaptive Management:

AMLD established 1992

Strategic planning: 1991, 1997, 2005

Program evaluation: 1997

MEASURE OF SUCCESS:
IUCN alters status of golden lion tamarin from "Critically Endangered" to "Endangered"

Organizational structure and function: characteristics of this successful program

- The program includes a wide range of people and organizations
- The involved individuals and agencies are diverse and have excellent problemsolving, inter-personal, & technical skills
- There has been strong leadership & continuity of members

Organizational structure and function: characteristics of this successful program

- The goals, objectives & strategy are well-defined.
- There has been long-term financial support from several donors.
- Partners collaborate more than compete.

Golden Lion Tamarin Status-2007

NUMBERS: in 1972 P

Protected in 2007

In wild:

200?

~ 1700 (800 R,T)

In zoos:

75 animals

(1000-2000)

480

of zoos:

16

140





































BRASIL

ZOO"



































AMERICA'S FIRST ZOO

Shimizu Family

Lion Tamarins of Brazil Fund







REFERENCE



Kleiman, D.G. and Rylands, A. B., Editors. 2002. Lion Tamarins: Biology and Conservation. Smithsonian Institution Press, Washington, DC (ISBN 1-58834-072-4).

This book is currently available from Rowman & Littlefield Publishing Group, 15200 NBN Way, Bldg. C, Blue Ridge Summit, PA 17214,

E-mail: <u>custserv@rowman.com</u>, Tel: (1-717) 794-3800, ext. 3564, Fax: (1-717) 794-3857)



THE END







