The Golden Lion Tamarin Conservation Program:

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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. Mlickelberg – 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
Golden lion tamarin captive breeding program

Data: Jon Ballou et al, 2006
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
Development of biodiversity corridors between forest fragments
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??

![Image of a primate]
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

Elizabeth Nagagata & Laurenz Pinder

Andreia Martins
Science and communication

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
Post office stamp
20 reais bank note
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 socio-economic activities in the region.
Planning and Adaptive Management:

AMLD established 1992


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 problem-solving, 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:**

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<thead>
<tr>
<th>In wild:</th>
<th>In 1972</th>
<th>Protected in 2007</th>
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<tbody>
<tr>
<td>200?</td>
<td>(1000- 2000)</td>
<td>~ 1700 (800 R,T)</td>
</tr>
<tr>
<td>In zoos:</td>
<td>75 animals</td>
<td>480</td>
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<tr>
<td># of zoos:</td>
<td>16</td>
<td>140</td>
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REFERENCE


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