

The EEP formed a Primate Taxonomy Advisory Group during the 9th EEP Annual Conference held at Edinburgh Zoo in July 1992. The Co-chairs are Miranda Stevenson (Edinburgh Zoo) and Christian Schmidt (Zoologischer Garten Zürich). The Primate TAGs within Europe, such as that of the Federation of Zoological Gardens of Great Britain and Ireland (see *Neotropical Primates* 1(1):9-10), are separate but comprise part of the EEP. At a meeting during the Congress of the International Primatological Society (IPS) in Strasbourg in August 1992, a number of people were designated the task of providing reviews of the populations of captive primates in European countries in order to evaluate space available, a survey coordinated by Michael Schwibbe and Joachim Wilde of the German Primate Centre. This review should be ready for an EEP Primate TAG meeting on December 4-5th 1993 at the Jersey Wildlife Preservation Trust, Jersey, and will allow for the establishment of a Regional Collection Plan (RCP).

A further meeting of the EEP Primate TAG, held in Salzburg in June 1993, recommended that it be split into sub-groups concerned with prosimians (Achim Johann, Tierpark Rheine), Old World monkeys (Neil Bemment, Paignton Zoo), the gibbons (Jean-Marc Lernoould, Mulhouse Zoo), the great apes (Marianne Holtkotter, Stuttgart Zoo), and the New World Monkeys, with Bryan Carroll, Jersey Wildlife Preservation Trust, responsible for the callitrichids (including *Callimico goeldii*), and Leobert de Boer, Apenheul Zoo, Apeldoorn (Netherlands), responsible for the cebids.

Koen Brouwer, EEP Executive Office, c/o Amsterdam Zoo, Postbus 20164, 1000 HD Amsterdam, The Netherlands, **Miranda Stevenson**, Royal Zoological Society of Edinburgh, Scottish National Zoological Park, Corstorphine Road, Murrayfield, Edinburgh EH12 6TS, Scotland, and **Christian R. Schmidt**, Zoo Zürich, Zürichburgstrasse 221, CH-8044 Zürich, Switzerland.

Reference

Boer, L.E.M.de 1991. *EEP European zoos care about the conservation of endangered animal species*. National Foundation for Research in Zoological Gardens/EEP Executive Office, Amsterdam. 16pp.

RESEARCH ON GOLDEN-HEADED LION TAMARINS AT ANTWERP ZOO



In 1986, one captive and seven wildborn golden-headed lion tamarins arrived at the Royal Zoological Society of Antwerp (RZSA). Since then, more than 100 animals have been

born, about 30 of which have died, and 24 were transferred to other locations (data: May 1993). The sex ratio at birth has been biased in favour of males: five males for every four females. Breeding pairs have produced on average more than two litters (or 3-4 offspring) a year. 13% of the offspring were stillborn, but only 5% of the young born alive died in their first year.

In recent years, research projects have been carried out on these animals, in collaboration with the University of Antwerp. Parental care was the first topic (Van Elsacker *et al.*, 1992). Studies on other callitrichids have suggested that the relative contribution of the mother in infant care is largely influenced by the social environment; the number and sex of helpers and infants, and such factors as the experience of the helpers. Two families at the RZSA with a nearly identical social situation were observed, and it was found that there was still a big difference in relative maternal investment. In one family the father was the primary carrier, in the other it was the female. It was also clear that infant transfers between the male and the female were controlled by the female. The results suggested that maternal behaviour in the golden-headed lion tamarin may depend primarily on the female's physical and hormonal condition.

In this context, a preliminary study was carried out to examine the possibility of associations between prepartum and postpartum hormonal levels in the females and their maternal behaviour (Van De Veegaete, 1991), as has been demonstrated for other callitrichids. The level of oestradiol (an oestrogen metabolite) in the urine was measured during the three weeks before birth in two females with differing maternal behaviour. No difference was found for prepartum levels, although the laboratory kit used was for measuring oestradiol in humans, and this might not have been entirely adequate. However, a relation has been detected

between the sharp decrease in oestradiol concentrations around eight days following birth and maternal performance at that time, although this may be confounded by the occurrence of a postpartum oestrus, where sexual motivation may be interfering with that for maternal behaviour.

Two smaller research projects are studying scent-marking and anti-predator behaviour (Walraven, 1990; Walraven and Van Elsacker, 1991). Observations demonstrated the following: a) males marked more frequently than females; b) marking occurred mainly at the borders of the enclosures, adjacent to neighbouring groups, and at feeding sites; c) marking occurred mainly during bouts of intergroup vocalizing and while feeding; d) marking was predominantly circumgenital at the enclosure borders, and predominantly sternal in the interior of the enclosure.

Regarding anti-predator behaviour, different smells were tested which represented: 1) a sympatric predator; 2) an allopatric predator; and 3) an allopatric non-predator. Pieces of cotton wool impregnated with the smell of an ocelot, a polecat, and a common marmoset were placed in the lion tamarin's resting sites (Declerck, 1991). The test-animals had also been confronted with smell samples of familiar, as well as unfamiliar conspecifics in the course of the previous study. They were able to distinguish between predator and non-predator smells. They generally avoided the cotton wool impregnated with the smells of ocelots and polecats, which was not true for the smell of the marmoset. When they did approach the "predator smell" they sniffed it more intensively.

A study on contraception as a means of controlling the growth of the population, and as a management tool, was also begun recently. We are studying the effect of melengestrol-acetate (MGA) implants on the implanted breeding female and the possible effects on the non-implanted sexually mature daughters still resident in the family. The main objective is to examine if the breeding female's inability to breed affects the process of social contraception on the younger female group members. Behavioural observations are combined with urine analyses (in collaboration with the University of Gent) to obtain information on underlying hormonal mechanisms.

Helga De Bois and Linda Van Elsacker, Royal Zoological Society of Antwerp, Koningin Astridplein 26, 2018 Antwerpen, Belgium.

References

- Declerck, L. 1991. De respons van het goudkoppleeuwaapje, *Leontopithecus chrysomelas*, op geurstoffen van predatoren. Licentiaatsthesis, Universitaire Instelling Antwerpen, Antwerp. (English abstract available).
- Haazen, W. 1988. Studie van het vocale repertoire van het goudkoppleeuwaapje, *Leontopithecus chrysomelas*. Licentiaatsthesis, Universitaire Instelling Antwerpen, Antwerp.
- Van De Veegacte, P. 1991. De proximale invloeden op moederzorggedrag bij goudkoppleeuwaapjes (*Leontopithecus chrysomelas*) in gevangenschap. Licentiaatsthesis, Universitaire Instelling Antwerpen, Antwerp. (English abstract available).
- Van Elsacker, L. 1990. De goudkoppleeuwaapjes stellen zich aan u voor. *Zoo Antwerpen*, 55(4):34-35. (Also available in French).
- Van Elsacker, L. 1991. On the issue of reintroduction projects of lion tamarins in Brazil. *Lutra*, 34:92-93.
- Van Elsacker, L., De Meurichy, W., Verheyen, R.F. and Walraven, V. 1992. Parental behaviour in golden-headed lion tamarins (*Leontopithecus chrysomelas*): maternal differences in infant carriage. *Folia Primatol.*, 59:121-126.
- Walraven, V. 1990. Het markeergedrag van het goudkoppleeuwaapje, *Leontopithecus chrysomelas*. Licentiaatsthesis, Universitaire Instelling Antwerpen, Antwerp. (English abstract available).
- Walraven, V. and Van Elsacker, L. 1992. Scent marking in New World Primates: a functional review. *Acta Zoologica et Pathologica Antverpiensia*, 82:51-59.

MIXED-SPECIES *SAGUINUS* GROUPS AT BELFAST ZOOLOGICAL GARDENS

Associations between sympatric species are a common occurrence in a number of forest primates. These associations range from very temporary encounters to permanent closed membership groups. Tamarin species of the genus *Saguinus* form some of the most stable mixed-species groups observed in mammals.

In the wild, groups of red-bellied tamarins, *Saguinus labiatus*, and saddle-backed tamarins,