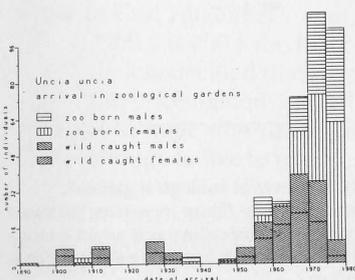


# Breeding Ounces, *Uncia uncia* (Schreber, 1775) in Zoological Gardens

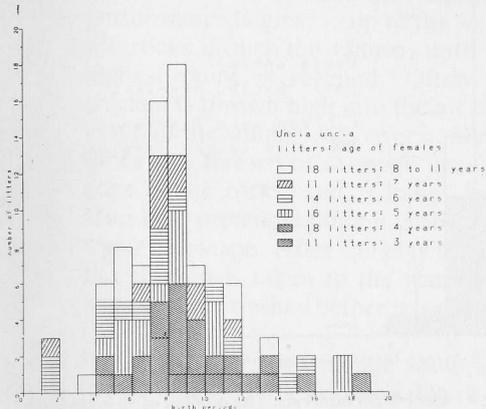
Ingo Rieger

Zoo Zurich, Zurichbergstr. 221, CH-8044 Zurich, Switzerland

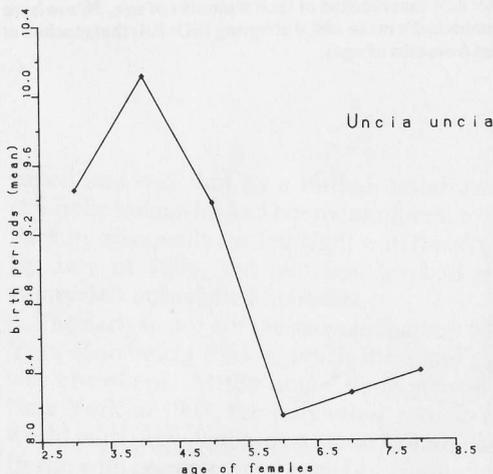
The figures presented below are based on the ounce register published in the second pedigree book of snow leopards by Leif Blomqvist (1). The purpose of the present paper is to present facts of the reproductive biology of ounces in zoological gardens.



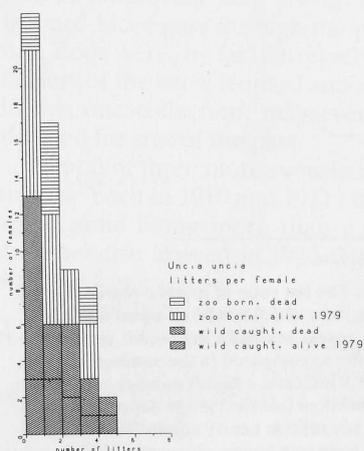
**Figure 1** Ounces in zoos: Ounces are kept in zoos since the end of the last century. Between 1894 and 1980, 388 individuals of known sex are recorded: 89 wild caught females, 79 wild caught males, 117 zoo born females and 103 zoo born males (with a longevity of more than 6 months). The first ounces born in a zoo were born in Hamburg 1906. Import maximum of wild caught ounces was between 1966 and 1970. Since 1966, the proportion of zoo born ounces (older than 6 months) is equal or greater than of wild caught individuals.



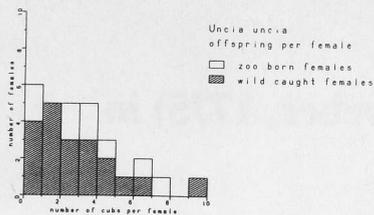
**Figure 2** Seasonality of ounce-litters: The horizontal time axis is divided into 20 periods each lasting some 10 days. Period 1: March 1–March 10, Period 2: March 11–March 20, ...Period 20: September 11–September 20. Ounce births were recorded between middle of March and beginning of September with a maximum in the second half of May.



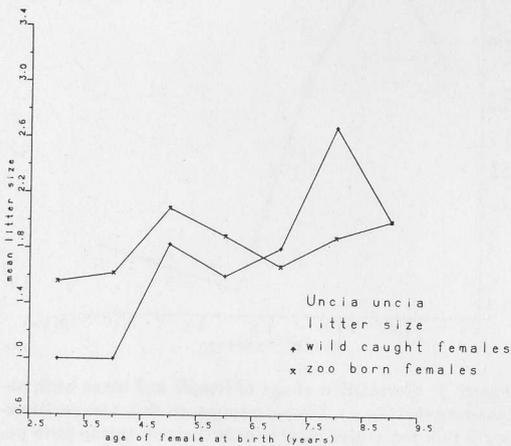
**Figure 3** Correlation of age of female and mean birth period (see also Fig. 2). The graph suggests that younger females (3 to 5 years) give birth later in the year (mean birth period: 9.7; SD: 3.4; n: 45) than older females (mean birth period: 8.3; SD: 3.1; n: 43). The results indicate a tendency, the difference is statistically not significant.



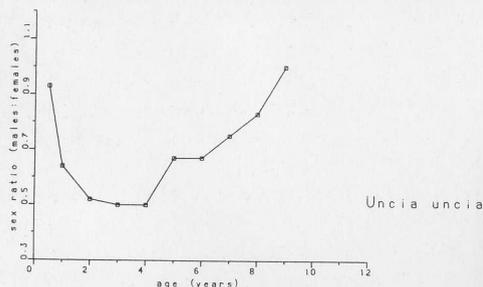
**Figure 4** Litters per female: The number of litters of which at least one cub reached 6 months of age, ranges from 1–5 in wild caught females (mean: 2.2, SD: 1.3, n: 30) and from 1–4 in zoo born females (mean: 2.1, SD: 1.1, n: 29).



**Figure 5** Offspring per female. 20 wild caught ounce females had, during their whole lifetime, a mean of 3.4 offspring (SD: 2.3) that reached at least 6 months of age, 36 zoo born females had a mean of 4.0 offspring (SD: 2.4) that reached at least 6 months of age.



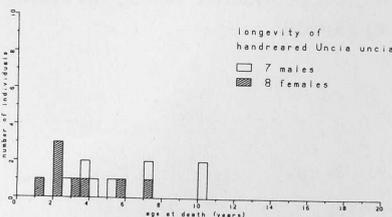
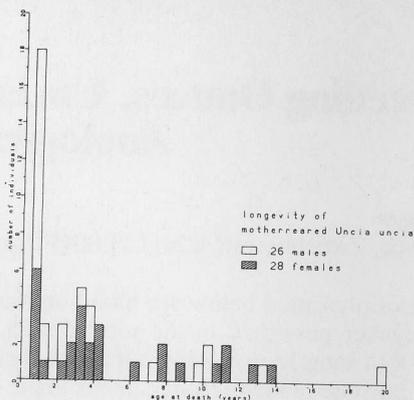
**Figure 6** Correlations between age of females and mean litter sizes. Mean litter size tends to be positively correlated with the age of the female. This tendency is more obvious in zoo born females than in wild caught females. It remains to be verified whether this correlation is based on the actual number of offspring which were born or whether it reflects a rearing influence, as the data presented refer to litter sizes 6 months after birth.



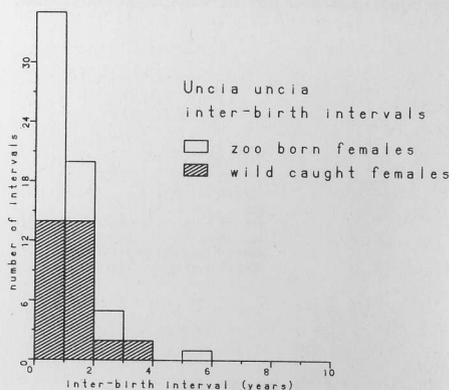
**Figure 8** Sex ratio. The sex ratio of mother-reared ounces (males: females, sex ratio of 1.0 means an equal number of individuals of both sexes, sex ratio below 1.0 indicates a lower number of males as compared to the number of females, sex ratio above 1.0 indicates a higher number of males as compared to the number of females) is age dependent. At 6 months of age, the sex ratio is nearly equal. Between 2–4 years of age, the sex ratio is in favour of females. With increasing age, it tends to be equal.

**References**

1) LEIF BLOMQVIST: *The snow leopard register. Int. Ped. Book of Snow leopards 2: 218–237, 1980*



**Figure 7** Longevity of ounces in zoological gardens. a) Mother-raised ounces: this figure reporting mother-raised ounces is in some way misleading as it might contain longevities of individuals that were hand-raised but which is not known by the author. b) Hand-reared ounces: reporting longevities of individuals that were not raised by a conspecific. (Data on hand-rearing from the literature and from personal information, longevities below 6 months were excluded).



**Figure 9** Inter-birth intervals. The median of 32 inter-birth intervals of wild caught females is 2 years (mean: 1.7, SD: 0.84). The median of 31 inter-birth intervals of zoo born females is 1 year (mean: 1.5, SD: 1.6). Statistical basis is poor, but with enough mathematical nonchalance, one might recognize the first domestication tendencies in zoo born ounces: the proportion of zoo born ounce females reproducing every year is higher than that of wild caught females.