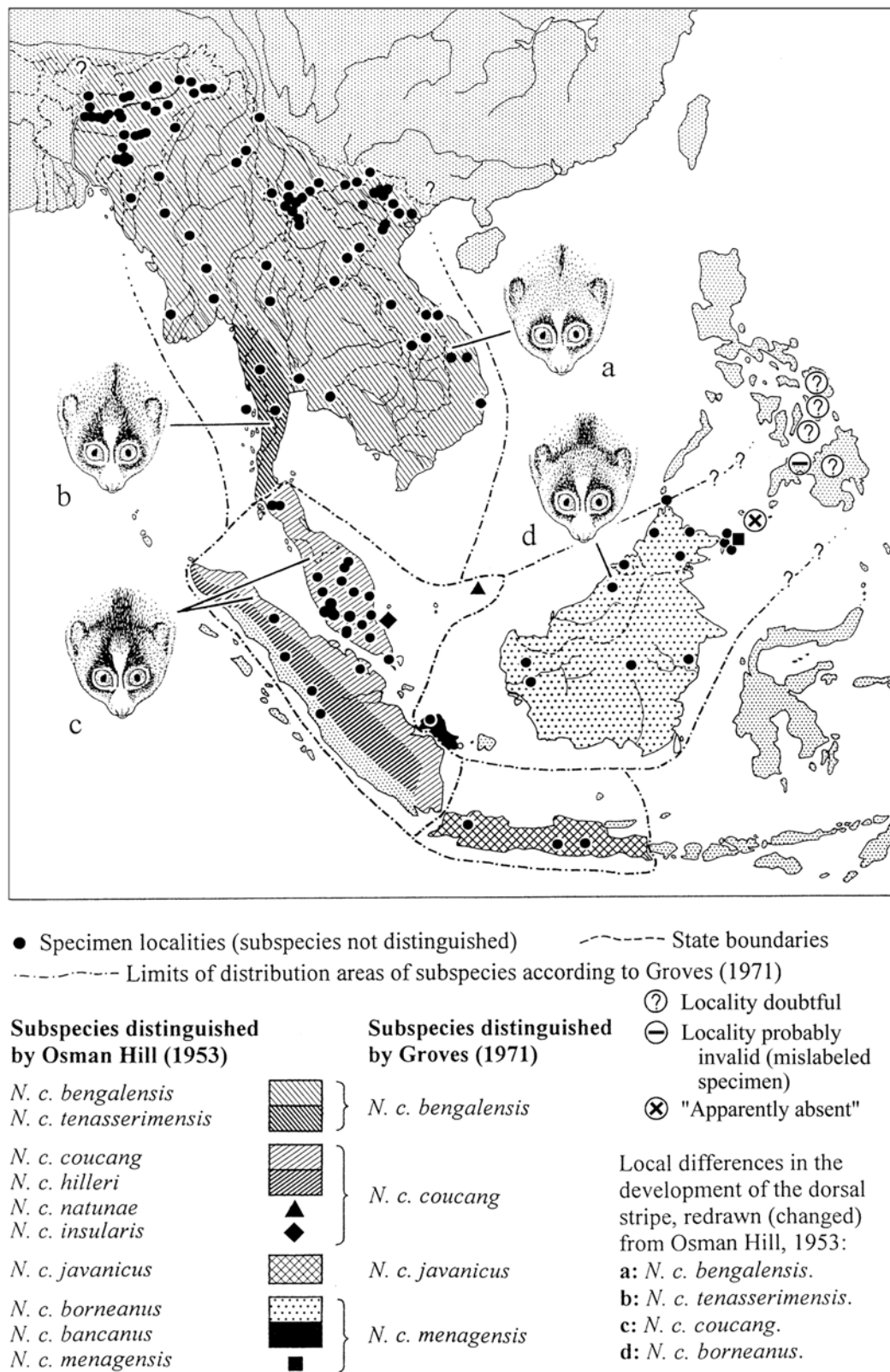


## DISTRIBUTION AND STATUS



**Figure 9:** *Nycticebus coucang*, distribution area and some specimen localities. (All areas mentioned as distribution areas by at least one author were included.) See Map References.



The slow loris has a fairly wide distribution in Southeast Asia. It is found in India, Burma, Thailand, Vietnam, Laos, Cambodia, Malaya, Sumatra, Java, Borneo and some adjacent islands (Napier and Napier, 1967). Its distribution extends north into China where it occurs in southern Yunnan and western Guangxi (Zhang et al., 1992). There is limited information about population numbers of any of the Asian prosimians. MacKinnon estimated the population in Indonesia at 1,139,415 in 1987. This number was based on estimates of suitable remaining habitat and population density at that time, and only 14% of the suitable habitat was protected as reserves. Undoubtedly, the present population is much smaller.

*N. coucang* occurs in primary and secondary rain forests. Besides habitat destruction, the slow loris is at risk due to illegal trade and hunting (MacKinnon, 1987). Their fur is used as dressing for wounds by natives from Burma to Borneo (Harrison, 1962). Thadou tribesmen believe that the slow loris flesh can cure epilepsy and its meat can cure stomach ailments.

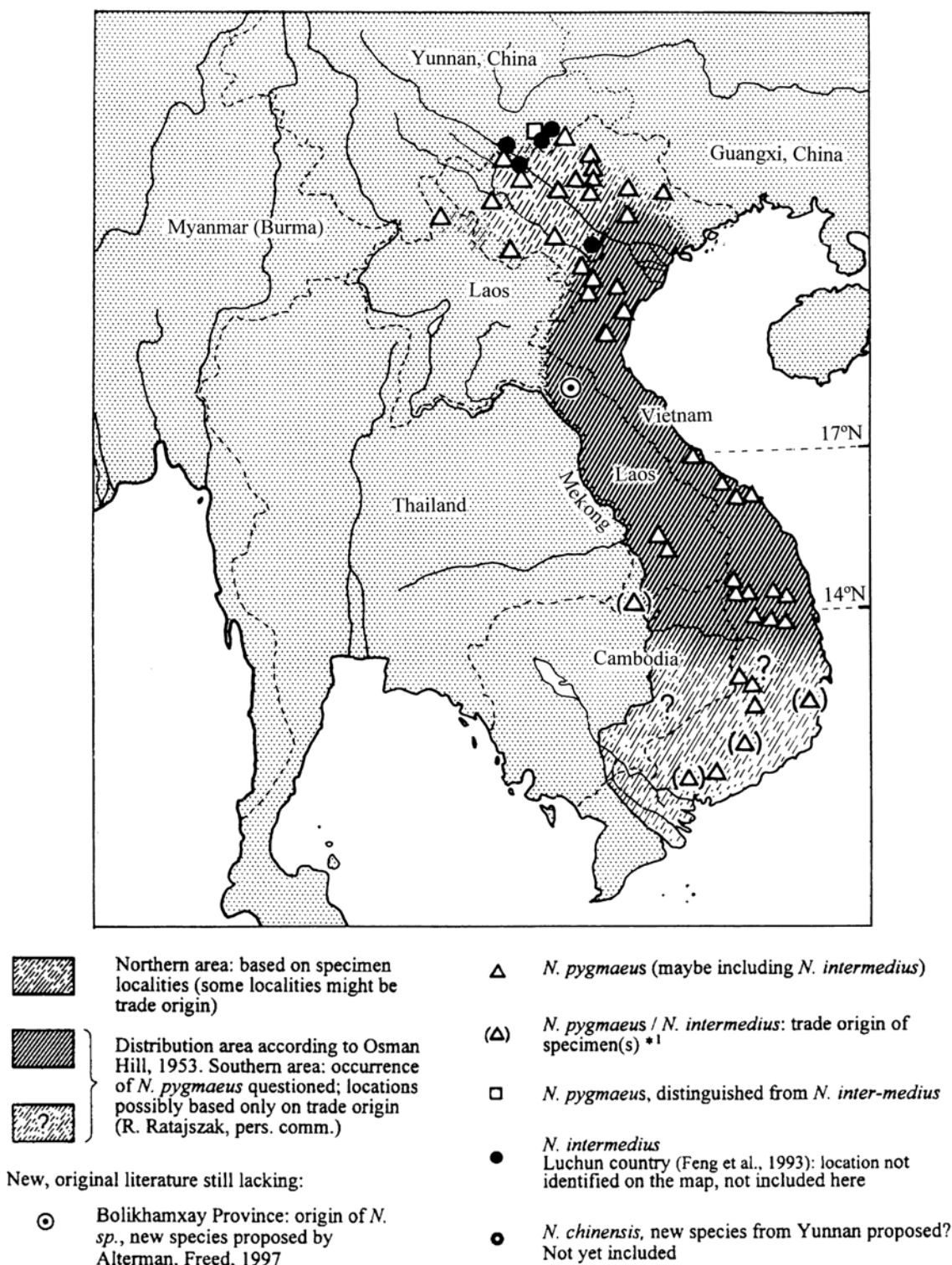
As is true for all the Asian prosimians, field research is difficult due to lorises' nocturnal, arboreal, cryptic nature (some Internet information about field methods is available under <http://www.species.net/Primates/Loris/LorCind.html>). The Global Captive Action Plan for Primates (Stevenson et al., 1992) recommends that well-managed captive nuclei of two subspecies (*coucang* and *bengalensis*) are kept. They do not consider the species to be in danger of extinction in the near future, so conservation efforts have therefore been limited. The Prosimian Taxon Advisory Group has recommended a moratorium on captive breeding efforts in North America to ensure sufficient space for more critical species such as the pygmy loris.

### **Pygmy Loris**

Distribution of the pygmy loris is predominantly the evergreen forests of Vietnam and Laos. Duckworth (1994) found that slow and pygmy lorises are sympatric in some areas of Laos. Pygmy lorises are also found in the secondary forests and shrub land of Vietnam (Ratajszczak, 1988). Qiang et al. (1987), have reported that the pygmy loris additionally occurs in the Yunnan province of China. Due partly to unstable political situations in the countries where these animals originate, little is known about their wild status. The total population has been estimated at 72,720, with less than 13% occupying protected areas (MacKinnon and MacKinnon, 1987). Because of a 76% habitat loss from logging, along with destruction from military activities and hunting, the pygmy loris is considered to be under-protected in the wild (MacKinnon and MacKinnon 1987).

Pygmy lorises are often kept as a domestic pet and are sold in local markets in Vietnam and Laos (Ratajszczak, 1988). The eyes, fur, and other parts of the body are also used for medicinal purposes. A survey of the Ho Chi Minh City animal market in January 1994, found 43 pygmy lorises for sale (Tan, 1994).

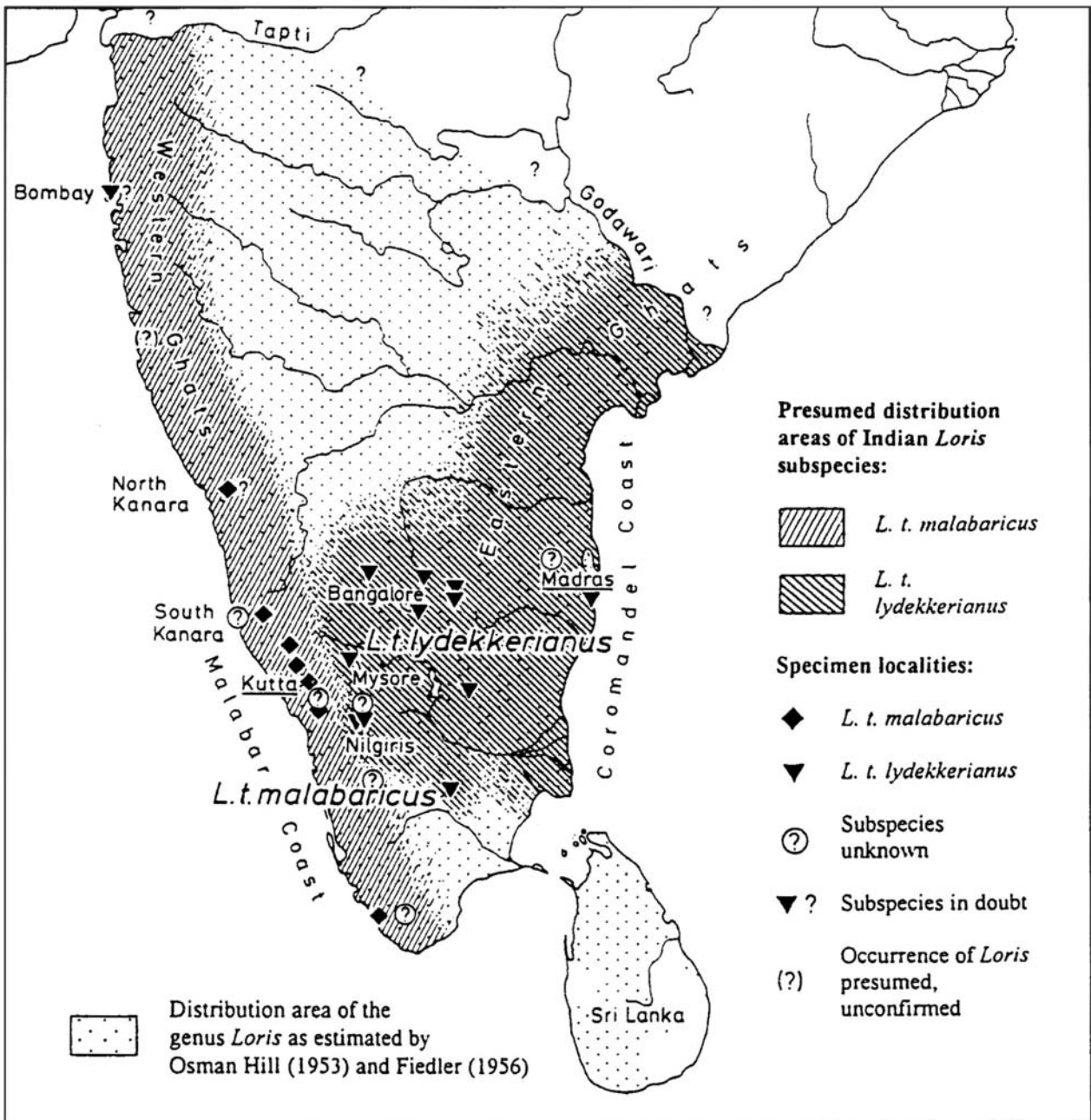
The IUCN Species Survival Commission in its 1994 Red List of Threatened Animals has classified *Nycticebus pygmaeus* as vulnerable. Vulnerable is defined as taxon that are facing a high probability of extinction in the wild in the medium-term future. The Global Captive Action Plan for Primates (Stevenson et al. 1992) proposes a breeding program that has a population sufficient to preserve 90% of the average heterozygosity of the wild gene pool for 100 years. A Species Survival Plan was established for the pygmy loris in 1994.



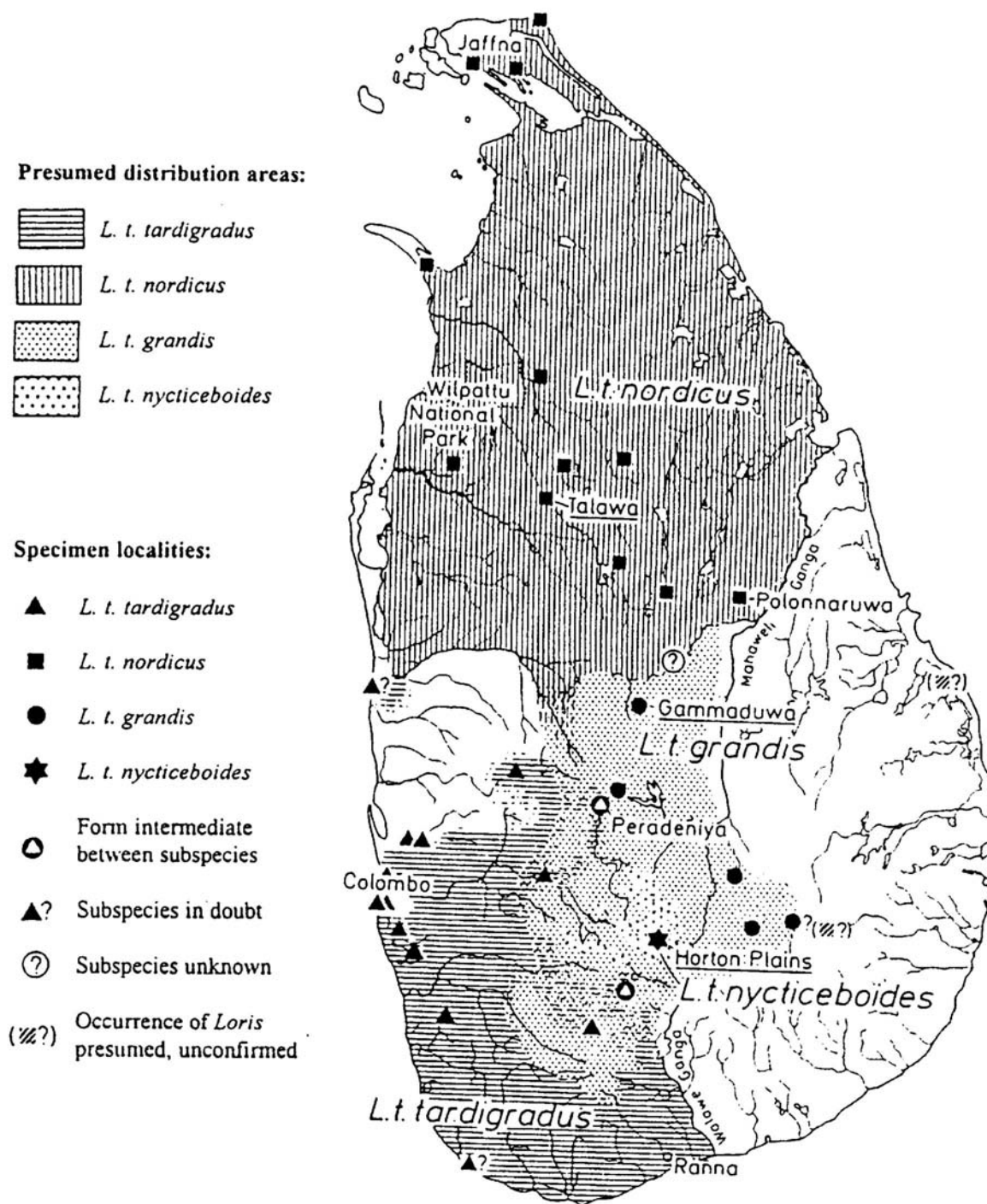
**Figure 10:** Distribution of *Nycticebus pygmaeus* and possibly existing other pygmy loris forms. Forms distinguished from *N. pygmaeus* by some authors are here included under the names / synonyms used in the literature. The question of correct taxonomy is not intended to be answered here. See Map References.



## Slender Loris



**Figure 11:** Distribution of slender loris subspecies in India. Names of type localities are underlined. See Map References.



**Figure 12:** Distribution of slender loris subspecies in Sri Lanka. All areas mentioned as distribution areas by at least one author were included. See Map References.

The slender loris occurs in forest and woodland habitats (Mohnot 1980) and in thorny scrub jungle of the dry zones (B. Meier, pers. comm.). Mohnot reported in 1980 that the slender loris is uncommon; Hill commented in 1933 on its rarity in Sri Lanka. This species was frequently used in Indian laboratories for biological and biomedical research, but is now rarely used due to non-



availability and shrinking population numbers. The slender lorises' distribution is often patchy. It is still hunted in India because it is believed to cure eye diseases and is also believed to be a potent love charm (Devaraj Sarkar et al., 1981). Sri Lankans also kill the animals for superstitious reasons (Schulze and Meier, 1995a, S. Verner-Carlsson, personal communication). Ramakantha (1991), reports that Marring Nagas grind the slender loris skull, mix it with water, and take it orally to cure epidemics like cholera.

Five subspecies (*tardigradus*, *grandis*, *malabaricus*, *nycticeboides*, and *nordicus*) are recommended for breeding programs by the Global Captive Action Plan for Primates (Stevenson et al., 1992). Present captive population numbers in Europe and North America will require periodic importation from the wild to attain a satisfactory level of genetic diversity.



## HISTORY OF LORISES IN CAPTIVITY

### Slow Loris

The Asian prosimian studbook for North America has been maintained by Helena Fitch-Snyder at San Diego Zoo since 1991. The earliest known exhibit of slow lorises in the United States was in 1876 at the Central Park Zoo. No further information on these animals is available. Philadelphia Zoo has detailed records of slow lorises that begin in 1889.

Studbook data show that there are a few wild caught slow lorises that have been in captivity for more than 20 years. Of the captive-bred animals, the oldest age is 18 years.

Michael Clark published a regional studbook for the slow lorises of the British Isles in 1988, and John Bochan published an updated version in 1990. Both studbook keepers are located at the Regent's Park Zoo in London. Regent's Park Zoo received their first slow lorises in 1830 or 1831; however, most breeding occurred after 1963 (Bertram, 1984).

### Pygmy Loris

Pygmy lorises have only recently been introduced to North America, although the first known import was kept at the Honolulu Zoo in 1968. Approximately 37 pygmy lorises were exported from Vietnam and Laos to Sweden in 1986. The following year, several wild-caught pairs were transferred to San Diego, Cincinnati, and the Duke Primate Center. This species bred for the first time in North America in 1988. With the exception of a few confiscated animals, all pygmy lorises currently in the North American population originated from Swedish imports. Helena Fitch-Snyder maintains the international studbook records for pygmy lorises.

### Slender Loris

This species was first exhibited at the Bronx Zoo in 1900, and the first complete records were at the Philadelphia Zoo in 1908. A slender loris arrived at the London Zoo in 1832, but it only survived for six days (Bertram, 1984). The slender loris has reproduced in only a few North American zoos, and the reproductive rates are among the lowest in the small primates (Izard and Rasmussen, 1985). At Ruhr-University in Germany, an outbreeding program for *L. t. nordicus* was developed with nine founders since 1980. The animals at Ruhr-University bred successfully over several generations, and several European and American institutions also had breeding success. The animals in the third and fourth generation are now all related; *nordicus* in American zoos are related to the European captive population.

Challenges in captive breeding of slender lorises are: the small founder populations, inbreeding concerns, low reproductive rates in most zoos, and losses, apparently due to environmental stress and nutritional problems. Surveys would be necessary to assess the degree of threat to subspecies in the wild.

