THE HISTORY OF ORANGUTANS IN CAPTIVITY

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Orangutans have been recorded in captivity as early as 400 years ago (Harrison 1963). Fossil evidence suggests that orangutans were eaten and possibly kept as pets in the Niah region of Borneo, Malaysia.

The first record of an orangutan in captivity outside its native region was on June 29, 1776, when an individual was obtained for the Prince of Orange's private zoo in Holland. This animal died on January 22, 1777. In 1808, an orangutan survived for 5 months in the collection of Empress Josephine of Malmaison, France (Jones 1982).

Between the years of 1816 and 1830, 7 orangutans were taken to the western world, none surviving very long. The first confirmed arrival of an orangutan in North America was in Boston in 1825 (Jones 1982).

From the mid-to-late 1800's, only a few animals reached major animal collections each year. Probably all were infants and most died of malnutrition or dysentery. Of the survivors, fewer than 20% lived for more than 3 years in captivity (Jones 1982).

In the late 1800's, the famous naturalist Alfred Russell Wallace made several discoveries about the habits of wild orangutans. Because his goal was to describe natural diversity, he documented behaviors as well as collected the animals in order to study their physiology (Harrison 1963).

Prior to the 1920's, a zoo that could keep an orangutan alive for a few years would consider itself very fortunate. No orangutans lived more than six years; the average was about three and a half years (Ulmer 1966). Breeding orangutans was not a priority for zoos, as the animals were there merely for public enjoyment and entertainment. Most early captives were infants that never reached reproductive age. Adult orangutans which were held in European countries during World War I perished due to bombings and food shortages (Jones 1980).

Following the arrival of reproductively viable specimens in 1926, the first orangutan was born in a zoo. Subsequently in 1928, two more births occurred: one in Berlin at the Nuremburg Zoo in April, and another in September at the Philadelphia Zoological Garden.

Unfortunately, these infants died, apparently from malnutrition. At that time, nutritional needs of pregnant and nursing females were not adequately understood. Other early births in North America included Lincoln Park Zoological Garden, St. Louis Zoological Park, and San Diego Zoo (Jones 1980).

The first observations of the development of a mother-reared, captive-born orangutan were documented by Dr. Gustav Brandes, a director of the Dresden Zoo. The subject, Bushi, was born to Sumatran parents on a ship in route to Holland in 1927. Data on Bushi's development care were published in 1939 (Jones 1982).

Subsequent to this, standards of nutritional and medical care for captive orangutans gradually improved. Zoos began to recognize the importance of testing both animals and caregivers for tuberculosis. Causes of death of captive orangutans included pneumonia, parasitic infestations and human-borne viruses, partially resulting from inadequate housing conditions (Ulmer 1966).

In 1931, the Philadelphia Zoological Garden was among the first to use protective glass barriers (Ulmer 1966), which served to isolate the orangutans from visitors carrying potentially fatal pathogenic microorganisms. With these advances, the average life span of the captive orangutan increased.

Each captive birth was of paramount importance, especially since the number of wild orangutans was declining. It is ironic that throughout much of the twentieth century a major cause of decline of the wild orangutan was considered to be the collection of animals for captive situations (Walker 1983). It became apparent that unless drastic measures were taken, the orangutan would be threatened with extinction within a few decades (de Boer 1982).

In the 1960's, there was increasing interest in gathering data on wild orangutans. Valuable information from researchers such as John MacKinnon, Hermann Rijksen, and Biruté Galdikas regarding the natural history, social structure and ecology of the species paved the way for advances in the husbandry of captive orangutans.

To protect wild orangutans, the Convention on International Trade in Endangered Species of Wild Fauna and Flora included *Pongo pygmaues* in Appendix I which offers the highest level of protection (1972). In 1977, the United States Department of the Interiors Endangered Species Act listed the orangutan as endangered, as did the International Union of Conservation of Nature and Natural Resources

(IUCN). Despite the Indonesian Fauna Protection Ordinance of 1925 (prohibiting orangutan killing) and additional regulations in 1931 and 1932, the law was not strictly enforced until 1961 (Rijksen and Rijksen-Graatsma 1975).

In 1969, most zoos world wide agreed not to accept any animal not accompanied by an official document from the IUCN (Rijksen and Rijksen-Graatsma 1975).

The first studbook for the orangutan was compiled by Dr. Geoffroy Bourne and his staff at Yerkes Regional Research Primate Center in Atlanta, Georgia. The list consisted of all orangutans held in captivity as of December 31, 1969. In 1976, the studbook was transferred to Marvin L. Jones of the Zoological Society of San Diego. Jones listed the animals in captivity since January 1, 1946 (Jones 1982). As of 1991, the studbook has been managed by Lori Perkins of Zoo Atlanta.

In 1982, A Species Survival Plan (SSP) for *Pongo pygmaeus* was formed by the American Association of Zoological Parks and Aquariums. In 1985, the SSP mandated that the subspecies of all wild-caught animals be chromosomally determined by karyotyping. This allowed for accurate determination of the Bornean (*Pongo pygmaeus pygmaeus*), Sumatran (*Pongo pygmaeus abelii*) and subspecific hybrid. Since that time there has been a moratorium on the breeding of subspecific hybrids.

Overall, two important milestones for captive orangutans are the increased rate of survival of neonates and decreased frequency of handreared infants. In 1992, only one of seven infants born was handreared due to its premature birth (Melanie Bond, personal communication).

A review of film footage, books, and photos demonstrates how far zoos have come in providing a safe haven for endangered species such as the orangutan. Once fancied as oddities with peculiar behaviors, orangutans are now seen as intelligent and fascinating creatures that capture our empathy and respect. Zoos have been able to reach more people through education and exhibitry, and while alerting visitors to the plight of orangutans.

Captive orangutans are ambassadors for their wild cousins and with successful management they will continue to propagate and survive.

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