

While increasing the number of species, the danger of spoiling the effectiveness of breeding programmes by trying to run them simultaneously for too many different animals must always be kept in mind. Concentration on particular zoological families or groups within families seems likely to produce better results. In recent years, the collection at Howletts and Port Lympne has placed particular emphasis on felids, primates and the rich fauna of Sundaland, the zoogeographical region comprising the Malaysian peninsula and the Indonesian islands. This area holds many important and interesting mammals which are at risk in the wild. Among the felids, the Howletts colony has been increased by the acquisition of the following very rare species: marbled cat, fishing cat, African golden cat, black footed cat, Pallas cat, Temminck's cat and Indian desert cat. The clouded and snow leopards are increasing in numbers, with several cubs successfully reared by their mothers. Good progress is also being made in negotiations with other zoos to add sand cats and rusty spotted cats to the colonies. Recent arrivals have included several new species of rare and interesting primates, perhaps the most remarkable being a group of Javan brown langurs (Presbytis cristata phyrra). These rare animals



Javan brown langurs with infant at Howletts

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occur in the eastern part of Java, where they are under pressure because, like other kinds of langurs, they are considered to be destroyers of crops. Thanks to a successful exchange with Jakarta Zoo, mates for two female siamangs have arrived, as well as two pairs of silvered gibbons (Hylobates moloch), native to Java. Other new primates include Goeldi's monkeys, golden lion tamarins and black and white colobus. Two pairs of babyrousas, a kind of wild pig from Celebes, are on loan to Antwerp Zoo.

Another collaboration between Howletts and the Indonesian Government is a project for the study and the conservation of the Sumatran rhino (Dicerorhinus sumatrensis), one of the rarest mammals in the world. Agricultural development in its native land has increased the pressure on the animals living there, reducing and dividing the amount of land available for their preservation. These new inhibitions affect the animals' behaviour, particularly in the case of a solitary creature like this rhinoceros, which is accustomed to meeting others of its kind on established trails and at wallowing sites. The disruption of the animals' traditional patterns of movement has produced a reduction in breeding opportunities.

The rain forest habitat of the Sumatran rhinos and its elusiveness means that little is known of its life or its frequency in the wild. Estimates of the total world population range from 150 to 300, perhaps about half in Sumatra itself. The first part of the project will survey some unprotected areas containing the rhinoceros in Sumatra, studying the animals' ecology and making a census of the population outside the reserves. An expedition should then be able to capture the rhinos to establish a captive breeding programme, planned to colloboration with local advisers.

The urgency of starting captive breeding of the Sumatran rhinoceros is indicated by the need to develop a viable population in captivity as a holding operation while studies of the animals' status in the wild are still being conducted. There are records of several specimens in European zoos about the turn of the century, and many of them were quite long-lived, although only three live births are known.

It is proposed that the new breeding programme should start with four pairs of immature and adult animals, two at Howletts and two in Indonesia. From this nucleus, with the help of recent developments in the knowledge of nutrition and breeding techniques, it is hoped that a larger colony will grow, enough for some of its numbers to be returned to appropriate areas in Sumatra, if there is a chance of successful reintroduction there.