

## BEHAVIORAL BIOLOGY RECOMMENDATIONS

Orangutans can be housed in a variety of ways: mixed age/sex groups, or restricted-access groups. Although orangutans can be housed alone, it is not recommended. Adult males and adult females can be housed through the use of a creep door arrangement, allowing the female to choose her accessibility to the male. Individual institutions should evaluate available holding and exhibit spaces as well as the temperament and social experience of their animals when forming groups. Visual barriers and access to several holding enclosures or exhibits are an important consideration for larger social groups. Group structure should be evaluated periodically, especially when housing juvenile animals with adults, as animals' temperaments may change with the onset of sexual maturity.

Orangutans that are housed in groups should be deprived of social contact only under extreme circumstances such as medical reasons or for the safety of the individuals or group. When individuals must be isolated from the group, every attempt should be made to retain as much visual, olfactory, and auditory contact as possible, while restricting physical contact. This can be accomplished through the use of mesh or lexan shift doors. Mirrors on the outside of the enclosure can be used to maintain visual contact.

Orangutan environments should be designed to promote species-typical behavior, development, and health management. Environments should be spacious and provide opportunities for arboreal locomotion, including large arboreal areas for resting and building nests. Holding enclosures and/or exhibits should have natural light or ultraviolet transmitting skylights and a constant source of fresh water.

Orangutan environments should be sufficiently complex and flexible to provide environmental stimulation conducive to the expression of species-typical curiosity, intelligence, foraging patterns and tool use. The use of behavioral enrichment devices is essential to providing psychological stimulation while promoting tool use and foraging skills. Adequate substrate and nesting materials will promote extended foraging periods and nest building.

By housing females and males with females and infants, caregivers can promote the development of parental skills and behavior in both male and female animals of all age classes. If direct contact is not an option, visual, olfactory, and tactile contact is still beneficial. Positive reinforcement training has a wide variety of applications including: husbandry behaviors, extinguishing bad behavior patterns, strengthening the animal/caregiver bond and promoting infant care-giving skills. A sound, thoughtfully considered birth plan can promote care-giving skills if infant-care problems arise.