

HAND-REARING OF EXOTIC FELID SPECIES: Part 1

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Introduction

The hand rearing of exotic felids should be avoided if at all possible. Even the most dedicated caregiver cannot replace the nurturing abilities of the mother while milk replacer or formula can never replicate the nutritional composition of the mother's milk. In addition, a naturally reared cub is behaviourally better adjusted as an adult. Despite these facts there are some instances where hand rearing an exotic felid may be unavoidable. In the first of two articles the author will give readers an overview of what basic equipment and management protocols are required for hand-rearing exotic felids.

A•• Equipment

Containers for measuring, mixing and storing the prepared formula should be set aside and only be used for the purpose of hand rearing.

Feeding bottles

We have successfully used the "Catac major feeder" with the "ST3 teat" (Catac Ltd, UK. www.catac.co.uk) for Cheetah (*Acinonyx jubatus*) and Arabian leopards (*Panthera pardus nimr*). The Catac bottle is banana shaped, made of reinforced glass and available in two sizes; standard feeder (30ml) and major feeder (60ml). Three teat sizes (ST1, ST2, ST3) are available; the smallest being most suitable for smaller felids. Once the ST3 teat becomes too small a plastic baby bottle with a teat that fits comfortably into its mouth, usually a premie teat (a latex nipple for premature children) is used. Small plastic bottles with teats are also available from PetAg Ltd, USA (www.petag.com). Always have a spare bottle to hand in case one gets broken.

Weighing Scale

An accurate scale is essential for hand rearing. Steady weight gain is an indicator of health and the amount fed is usually based on a percentage of the cubs' body weight. An electronic kitchen scale with a weighing bowl is used for young cubs while a hanging spring scale with fabric bag should be used for older, more active neonates. The neonate should be weighed at the same time daily, after it has been stimulated to urinate and defecate but before it is fed.

Housing

Neonatal felids have a poor ability to thermo regulate and require an ambient temperature of 30°C to 32°C in the first week of life, gradually dropping to 24°C thereafter. A commercial incubator built for human or animal use is recommended. Alternatively a wooden box 1.5 m² with 50cm high sides with a heating blanket occupying half the floor area could be used. The heating blanket should be set at the lowest setting and be covered by at least 2 layers of bedding. A bowl of water, out of the neonates reach, should be placed in the room to create a humid environment. The size of the housing will have to be adapted to keep pace with the neonate's degree of mobility.

Bedding

Use fleece tops or towelling. Bedding can be rolled into a "sausage", and bent into a C-shape to imitate the shape of the mother. The neonate can be placed within the C or draped over the "sausage", making it feel more secure. Do not use fake furs as fibres are often ingested resulting in vomiting or constipation. Soiled blankets/towels should be replaced immediately.

B•• Hygiene

The importance of correct handling and storage of ingredients and the sterilization of all equipment used cannot be over emphasised and will contribute to the overall health of the animal. Wash your hands with a disinfectant soap before handling the neonate and the feeding equipment. Sterilization of all equipment is very important. Commercial products containing Sodium Dichloroisocyanurate for the sterilization of baby bottles are recommended ("Steri tabs" or "Milton") These fluids should be prepared according to the manufacturers instructions.

- Prepare formula and clean bottles in a clean hygienic environment.
- Equipment should be washed in warm soapy water after every use.
- Use a bottlebrush to clean the inside of the feeding bottles.

- Ensure equipment is rinsed thoroughly under running water before placing in sterilization fluid. Wash your hands with disinfectant soap before removing the bottle and nipple from the sterilization fluid then rinse the bottle and nipple under running tap water to remove the sterilization fluid.

C•• Record keeping

A neonate data sheet is essential for daily recordings of all hand-rearing information. It allows you to keep track of any changes and is a useful reference for future hand-rearing experiences. Daily weight gain, intake at each feed, elimination (urine and faeces, colour and consistency), medication given and various stages of physical and behavioural development are all valuable details to record.



Fig 1. Arabian leopard cub (*Panthera pardus nimr*) at 38 days of age. (© Jackie Strike)

D•• Quarantine

Neonates should be housed in isolation from other animals to reduce the risk of infections. Access to the neonate should be limited to the caregiver and veterinary staff. Overalls and a pair of shoes should be set aside for the sole use of the caregiver and stored at the entrance to the enclosure. Depending on the species a balance has to be found between social stimulation and the isolation of quarantine. In general hygiene should be strict without compromising the opportunities for contact and play.

E•• Routine

Routine is very important when hand-rearing. The neonate should be fed and weighed at the same time(s) each day. This makes the cub feel more secure. Keeping feeding frequency and amounts fed consistent reduces the chances of gastro intestinal upset.

•• Be prepared ••

A basic "hand rearing" set kept on hand should include teats/nipples of the correct size for large and small felid species, bottles onto which they fit and formula. A Formula to feed one neonate, of the largest species in the collection for a minimum of one week should be stored in the freezer (for up to six months) in a clearly labelled container, this should allow for enough time for more formula to be bought.

References

- AKF, (2005), Dedicated Cheetah Combined July/August 2005, Journal of the American Association of Zoo Keepers, 32(7/8)
- Felid Taxonomic Advisory Group (TAG) of the American Zoo and Aquarium Association (AZA) • www.felidtag.org
- Gage, L.J. (2002) Hand-rearing Wild and Domestic Mammals. Iowa State Press.
- The Infant Diet Book. AZA Animal Health Committee. American Zoo and Aquarium Association • www.aza.org