

## NOTES

### Notes on Growth and Behavioural Development of Young Palm Civets (Viverridae : *Paradoxurus hermaphroditus*) in Captivity

The common palm civet (*Paradoxurus hermaphroditus*) inhabits South and South-East Asia from India and Sri Lanka to Indonesia, the Philippines and southern China (LEKAGUL & MCNEELY, 1977; MEDWAY, 1969). It is omnivorous, taking small vertebrates, insects and a variety of fruits. Palm civets are not difficult to maintain in captivity, and will eat meat, eggs, fish, cooked rice, milk cereals and fruits. Here I report some notes on the growth and development of two baby palm civets born in captivity, while I was living in Jakarta in 1974. I know of no other such observations that have been published. In the wild, young are born in a den in a hollow tree or among boulders (MEDWAY, 1969).

*Parents.* The parents were obtained separately from the Pasar Burong, a local bird/animal market, when approximately 4 months of age. On becoming parent animals, the female was about  $1\frac{1}{2}$  years old, and the male 1 year. One copulation was observed on 24 Feb. 1974, but the date of conception of the young was not known for certain. The female (Fig. 1) was noticeably pregnant by 21 April. The male was removed from her cage on 29 April, as local zoo personnel had reported infanticide by male palm civets. The birth of three young began on 10 May, and labour lasted all afternoon. The female had difficulty expelling the young, so a veterinarian was called to perform a Caesarian section the following day. One kitten died because of strangulation of the umbilical cord, but two, one male and one female, survived.

*Description of kittens and development.* Eyes and ears were closed at birth. The claws were soft. The muzzles were blunt and surrounded by bare pink skin; whiskers were pressed flat against the face. Fur was short and sleek, dark grey in colour, with a white band across the forehead to the ears, and clear stripes and spots down the back (Fig. 2). The bellies were pale and the tails dark.

The fur became fluffy on the 4th day and the claws hardened. Eyes became unsealed between days 9 and 12 after birth. The pinkness around the muzzle was lost by day 12. Both kittens had their upper incisors by day 25, and a full set of teeth by day 40.



*Growth.* Weights and some measurements of the kittens from birth to day 41 are shown in Table 1. Weight was taken to the nearest  $\frac{1}{2}$  ounce (14.2 g), but has been converted to grams. Growth was slow until about day 14, but rapid thereafter. The female grew somewhat more slowly than the male. (The reduction in weight of the female on day 11 was due to less milk being ingested before weighing.)

*Food and feeding.* The two young were bottle-fed milk every 2–3 hours with a nipple made from a small dropper bulb. They took several days to learn to suck from this properly. On the 3rd day the young were returned to their recuperating mother. After this, only the male was left with the mother overnight to feed; the female was kept separately and bottle-fed. Both kittens were placed with the mother during the day, and bottle-fed as well. The mother licked and cleaned both regularly.

Egg yolk was added to the diet on day 20. Both kittens accepted solid food by the 35th day (a mixture of bananas and Farex, a baby cereal). The kittens weaned themselves from the bottle between 35 and 40 days of age, but they continued to suckle from the mother, who continued to carry them back into her nest box to lick and clean them.

*Movement and behaviour.* The first noteworthy behaviour observed was by the infant female, still blind: she instinctively spat at the house dog. She was observed doing this again on day 19. On day 11, the kittens moved about by crawling on their bellies. On day 12, they could raise their heads. Although their eyes were open, they did not appear to focus until day 14, when they began to totter about on their legs. They mostly slept while not feeding at this age.

Day 17: Their ears began to twitch and they began to move toward food. On this day I first noted the beginnings of play. This consisted of rolling about and clumsily bumping into each other with mouth open, seeming to solicit play, but not yet really engaging in it.

The male also licked (i.e. groomed) his sibling and then himself.

Day 19: The kittens were noted scratching themselves; also grabbing each others' ears in their mouths. They slept less and played more after meals.

Day 20: It was apparent that they could smell.

Day 35: The kittens were leaping about in a coordinated fashion, alternately pouncing on and chasing one another. Objects of play such as balls were not introduced; thus, they played only with each other. A kind of 'hide-and-seek' became popular,



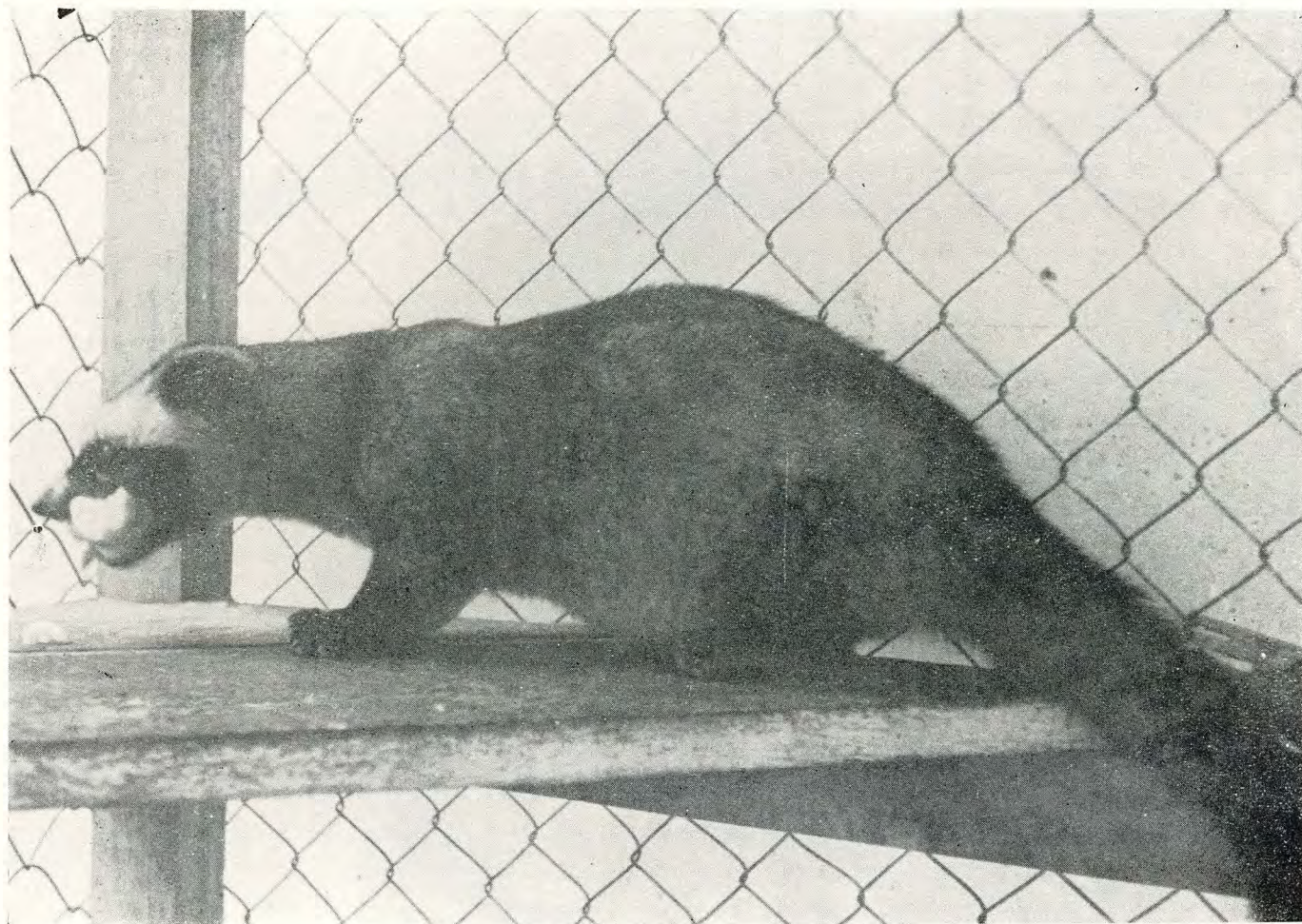


Figure 1. Adult female palm civet, pregnant.





Figure 2. Young palm civets, age 4 days.

Table 1. Weights (g) and some measurements (mm) of male and female sibling palm civets.

		Day after birth									
	Sex	1	8	11	12	14	17	19	23	29	41
Head*	M	76							114		
	F	76							95		
Back	M	102							165		178
	F	105							127		153
Tail	M	111							165		228
	F	127							171		216
Weight	M	100	120	140	140	140	180	210	230	330	450
	F	110	140	110	140	140	140	180	200	270	350

\*nose tip to base of neck, following contours of head

#### REFERENCES

- LEKAGUL, B. and J.A. MCNEELY, 1977. *Mammals of Thailand*. Association for the Conservation of Wildlife, Bangkok.
- MEDWAY, LORD. 1969. *The Wild Mammals of Malaya*. Oxford University Press, Kuala Lumpur.

*Velvet E. Douglas*  
P.O. Box 1383  
Bangkok



