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Daytime Births in Captive Patas Monkeys

JANICE CHISM, T. E. ROWELL
University of California, Berkeley
and SANDY M. RICHARDS
Institute of African Primatology

ABSTRACT. Daytime births in two patas colonies were the rule rather than the exception.

INTRODUCTION

People who work with captive groups of monkeys usually find new infants in their colonies when they arrive at work in the morning. BRANDT and MITCHELL (1971) reviewed published accounts and concluded that Old World monkey births usually occurred at night. JOLLY (1972, 1973) found that the majority of monkey births in zoos, including those of patas monkeys, occurred outside working hours, that is between 17:00 hrs and 08:00 hrs the following morning. Although she concluded from this that births typically occurred at night, there are an average four daylight hours outside working hours, and many more during the late spring in high latitudes, the time and zone of most monkey births in zoos. Fieldworkers, themselves diurnal, have rarely seen births, which adds to the general impression of usually nocturnal parturition.

No births have been seen among wild patas monkeys; the only previously described births of captive patas occurred during the daytime (GOSWELL & GARTLAN, 1965). We present further data on births in two patas colonies which suggest that for this species daytime births may be the rule rather than the exception.

ANIMALS AND METHODS

One group of patas was housed at the Animal Behavior Field Station at the University of California in Berkeley, in an outdoor grassy enclosure 30 m square. It included eight adult females and their immature offspring, with a single adult male. Births occurred from 1972, when the colony was established, to 1977.

The other colony was housed at the Institute of African Primatology Tigoni, Kenya, in two groups, each including an adult male, up to four females and their offspring. Cages here were outdoor, concrete floored, about 6 m square. The colony was established in 1967, and births were recorded by S. M. R. from 1974 to 1976.

RESULTS

Twenty-two births occurred in the Berkeley colony, and the time of birth was

known in 14 cases. Nine births occurred at Tigoni, and the time was known for four of them. One birth was observed after nightfall at Berkeley, the other 17 timed births occurred during the day, the majority in the afternoon (Fig. 1). The remaining 13 newborns were found when work began in the morning. At Berkeley they could have been born late the previous afternoon, during the night, or early the same morning. At Tigoni a colony inspection at dawn finds infants which could have been born the previous afternoon or during the night. We estimate that, had these unobserved births occurred randomly throughout the non-working hours, about 25% would have occurred during the night. It is possible that all, or none, of the unobserved births were daylight births. At the most conservative estimate, which would assume that all unobserved births were nocturnal, more than half the births in the two colonies occurred during daylight hours.

Five births have been observed in their entirety in the Berkeley colony, four to multipara and one to a primipara. Imminent births were signalled first by discharge of mucous and/or blood from the vagina, then by behavioral signs such as lying down, feeling the vulva, crouching, and lifting the tail as if to defecate. Time to birth from first observations of these signs varied from one to eight hours, multiparous females providing both extremes. All of the births observed at Berkeley produced live infants; one of the Tigoni observations was of a stillbirth. Infants clutched the mother's fur as soon as they were free of the birth canal, their eyes were open, and they were able to crouch on all fours or cling unaided to the mother's belly within an hour of birth. Four of the mothers were seen to eat the placenta, which they did before cleaning their infants, although some sniffing and perfunctory licking of infants occurred before the placenta was delivered. They also cleaned their own hands and the birth area before attending to the infant; two multiparous mothers put their infants on the ground beside them, out of contact, while they ate the placenta and only retrieved them after it was finished.

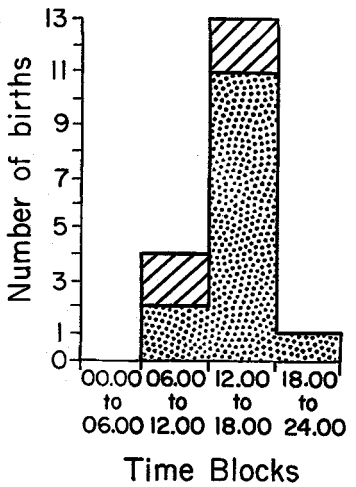

Fig. 1. Timing of observed births. Births at Berkeley ($n = 14$) stippled. Births at Tigoni ($n = 4$) cross-hatched.

While these births were taking place, mothers were accessible to other group members. They made no effort to avoid other monkeys which remained nearby watching during the births. On the contrary, they sought out and sat with other group members both during labor and immediately after birth.

DISCUSSION

We feel that the similarity of birth timing in two colonies housed in very different climates, one at the equator and one at 37°N strongly supports the idea that daytime births are characteristic of the species and not just an artefact of local conditions.

Patas monkeys may be unique among Old World monkeys in showing a strong bias towards daytime births. This may perhaps be related to another unique feature of patas behavior, the tendency to spread out at dusk and sleep alone, rather than to gather into a single group sleeping tree as do most monkeys (HALL, 1965; KUMMER, 1971). Patas monkeys, in their open grassland natural habitat, may be more susceptible to predation at night than during the day when their alertness and speed offer some protection. Selection for births to occur during the least dangerous time of day is then not surprising.

Without making any particular effort to do so, we have been able fortuitously to observe several patas births during normal working hours. The species is very fertile and easy to breed in captivity, and so we suggest that it may well be the most appropriate species to choose for any study of parturition and related events in a primate.

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Authors' Addresses: JANICE CHISM, *Department of Anthropology, University of California, Berkeley, Berkeley, California 94720, U.S.A.*; T. E. ROWELL, *Department of Zoology, University of California, Berkeley, Berkeley, California 94720, U.S.A.*; SANDY M. RICHARDS, *Institute of African Primatology, P. O. Box 114, Limuru, Kenya.*