Parturition in the Wild Camel (*Camelus ferus*): The First in Situ Recorded Observation

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INTRODUCTION

No scientific reports exist for parturition or early maternal behaviour in the critically endangered wild camel (*Camelus ferus*), despite comprehensive descriptions in domesticated camels[1,2,3] and documented interspecific differences in maternal behaviour[4]. The wild camel persists in the Gobi of southwestern Mongolia and northwestern China; genetics confirm it is not a feral Bactrian but a distinct lineage adapted to extreme deserts, now restricted to four fragmented habitats[5,6,7]. Current estimates indicate ~664 individuals in Mongolia (95% CI: 400-1100)[7] and 640-740 in China[6]. Despite its status as an umbrella species for the Gobi ecosystem, reproductive biology in the wild remains largely undocumented amid rising climatic and human pressures[8]. Here we provide the first in situ description of parturition and immediate maternal care in *C. ferus*.

RESULTS

Delivery occurred in recumbency; the dam stood 3 s postpartum. The mother initiated immediate olfactory bonding, follow by forelimb nudging to stimulate the calf and showed pronounced defence behaviour. Neonatal competence was rapid. Stable standing and coordinated locomotion emerged within the first 2 h.
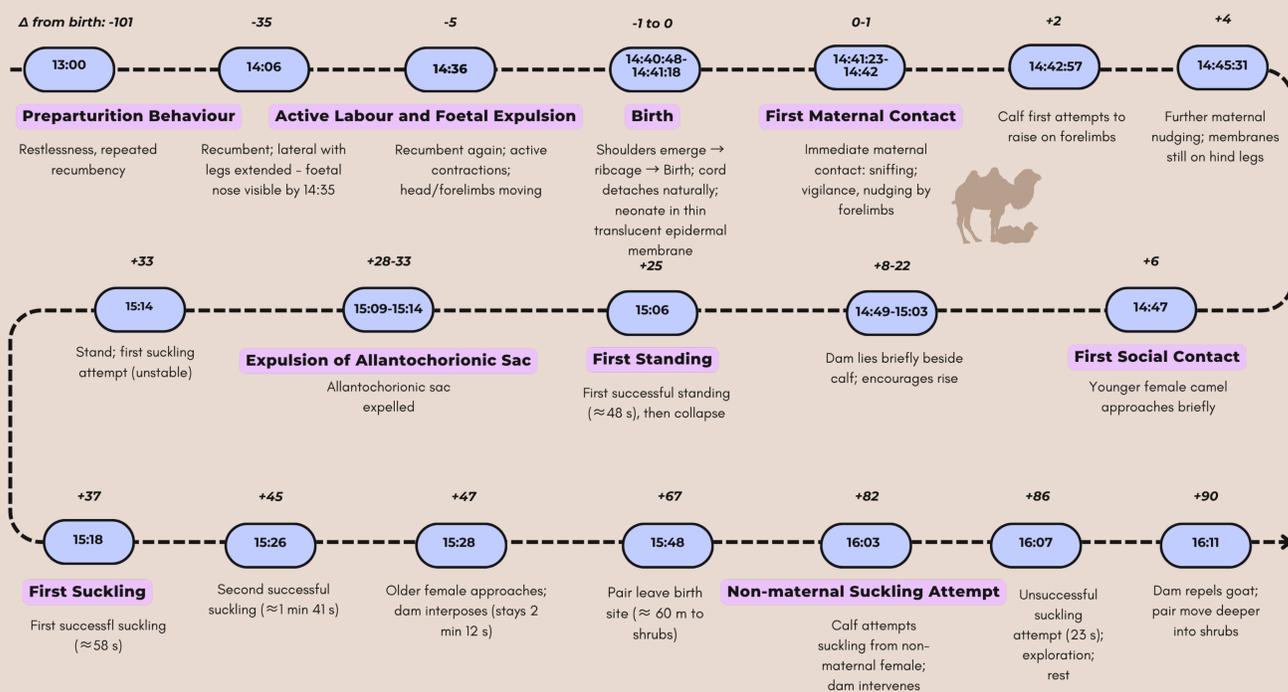

Fig. 2. Timeline and key milestones of parturition and early postpartum behaviour in the wild camel
Δ from birth (min; 0 = 14:41:18); negative = pre-birth, positive = post-birth

Fig. 3. Stages of parturition in the wild camel - observed case

Stage I:
Onset of Labour
Cervical dilation and restlessness
Early morning - 14:06

Stage II:
Active Labour and Foetal Expulsion
14:06 - 14:41:18

Stage III:
Expulsion of Placenta and Maternal Care
14:41:18 - 15:09+

Fig. 4. Key behavioural stages during parturition and early postpartum period in a wild camel
a: Foetal head and forelimbs visible at the vulva; **b:** Expulsion of the foetus in lateral recumbency;
c: Complete expulsion of the calf - transition from lateral recumbency to standing position;
d: First maternal sniffing of the neonate; **e:** Gentle nudging of the neonate by the dam to encourage standing;
f: Expulsion of the allantochorionic sac; **g:** First successful standing attempt of the calf;
h: First successful nursing; **i:** Maternal protective behaviour - dam chasing away a goat approaching the calf

METHODS AND STUDY SITE

The observation took place on 19 April 2025 at the Zakhyn Us Wild Camel Breeding Centre in the buffer zone of Great Gobi A SPA, Mongolia. A 13-year-old multiparous female was continuously observed using focal animal sampling from pre-parturition to the early postpartum period. The focal female was separated from the herd; two females were nearby. The neonate was male. Observations were made from ~25 m with 4K video and field notes.

Fig. 1. Study site: Zakhyn Us, Great Gobi A SPA

DISSCUSION

Parturition stage durations matched domestic reports[1,9]. Active labour (35 min) lay at the lower end of published ranges[1]. Early calf mobility and strong maternal defence indicate selection for rapid neonatal competence in predator-exposed environment[8]. Bonding was olfactory-led: immediate sniffing and forelimb nudging, with no licking or placentophagy. A brief allo-suckling attempt suggests progressive offspring recognition and supports post-parturition isolation[10]. Birth at 14:41 aligns with reported diurnal peaks[3]. Two females remained nearby throughout labour, indicating social tolerance and possible facilitation; this warrants further study. Conservation relevance: informs timing for in situ protection, ex situ calving protocols, and potential camera-based replication.

CONCLUSION

This first in situ documentation of parturition helps close a key gap in the reproductive ethology of the wild camel and provide a conservation-relevant behavioural baseline for in situ management.

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