CHAPTER TEN

CAMELUS DROMEDARIUS, THE DROMEDARY

10.1 The Living Animal

10.1.1 *Zoology*

The dromedary, or the Arabian camel, is closely related to the Bactrian camel. Dromedaries share all typical camel features with the latter species but differ in a number of aspects, the most obvious of which is its one-humpedness.[1] Dromedaries are tall animals; males stand 1.8–2 m at the shoulder. Unlike the Bactrian camel, they have a short pelage. Their feet are adapted to walking in a sandy desert (fig. 158) but they are unsuitable for slippery or muddy conditions and are easily injured by sharp stones. Dromedaries are browsers mainly on shrubs and forbs but also on higher trees (fig. 351). Their teeth are like those of the Bactrian camel and thus also the dromedary gives the false impression of bearing no less than six canines in the upper jaw, three at each side. The mouth of a dromedary presents a chaotic mass of teeth in front of the neat row of grinding molars. Dromedaries are not very aggressive in their behaviour, compared to the Bactrian camel. The exception is formed by males in the breeding season, when they do not tolerate other males near their herd and will fight them to the death. For this reason, there can be only one adult male in the herd, the others have to be castrated or kept together in a bachelor herd.

In South Asia, the dromedary is restricted to the arid and semi-arid regions of western India and Pakistan. Its south- and eastward distribution is determined by the degree of humidity, its northern distribution by the average winter temperature; the dromedary is sensitive to cold and humidity and can survive only in regions with a long dry season and a short rainy season. Muslim armies introduced the dromedary in South India in the twelfth century, but the local climate made it difficult, if not impossible, to keep them healthy for a longer time. Like

[1] For additional description of the dromedary, see section 9.1.1.

horses, they had to be imported regularly. The dromedary overlaps in distribution with the Bactrian camel in the areas of Afghanistan, Pakistan, and Southwest Asia. The dromedary got extinct in the wild about 2,000 years ago.

Dromedaries and Bactrian camels can interbreed, but usually only the female offspring is fertile.

10.1.2 *Role of Dromedaries in Society*

Dromedaries are used as pack and draught animal (fig. 163), for riding, for their meat, milk and dung. They are also used as protective shields in sand storms. In the past, they played a role in warfare as well. Today, there are two general types of dromedaries among the many breeds. The first type has been selectively bred as a strong pack and draught animal; the second type as a long-legged riding and racing camel such as the Mahri of Pakistan.

Dromedaries are indispensable animals in the desert. Actually, thanks to dromedaries life is possible for humans in the extreme desert (fig. 164). They need only small quantities of food and can survive on two kilos of dry matter per day for an extended period. The same is valid for water: they can sustain ten to fifteen days without water at temperatures between 30°C and 50°C. Their milk—and to a lesser extent their meat—provides food and their dry dung serves as fuel for cooking. The long lactation period of 9–18 months ensures a year-long production of milk. Stealing a dromedary in the desert regions is therefore a major sin and valuable objects were priced in dromedaries, not in gold. Dromedaries were also crucial in desert warfare, which had a decisive impact on the course of history, see for example the Arab conquest of Sind.[2] With dromedaries it is possible to cover great distances in a short time without the need for supplies, whereas a horse cannot go one day without water and food. Another strong point of dromedaries in warfare is that the horses of the enemy will bolt away if they are not used to the sight and smell of dromedaries. Dromedaries are also fit for ploughing. They are often harnessed together with oxen, although one dromedary is supposed to be more efficient than a pair of oxen. The milk of a dromedary is valued positively, and is ascribed certain

[2] A. Wink, *Al-Hind; The Making of the Indo-Islamic World, vol. 1: Early Medieval India and the Expansion of Islam, 7th–11th centuries* (Leiden, Brill, 1990).

therapeutic effects. It is used to cure jaundice, spleen troubles, dropsy, tuberculosis and asthma.[3]

It has been suggested that the dromedary is actually derived from the Bactrian camel or a close relative and lost one of the humps in the process of domestication.[4] This is contradicted by rock-drawings from the Arabian peninsula of about 1,000 B.C.E. with a depiction of wild dromedaries being hunted by men on horses.[5] Archaeologists think that the domestication of the dromedary took place in the middle or southern part of the Arabian Peninsula during the third millennium B.C.E. as evidenced by remains found on the island off the coast at Abu Dhabi,[6] from where they were brought to other parts of the Middle East. It is assumed that in later times the dromedaries were hybridized with Bactrian camels for the purpose of caravan trade.[7] As far as South Asia is concerned, the first evidence of a dromedary is a depiction on a copper plate from Mohenjo-daro in the Indus Valley, Pakistan.[8] The depicted animal has one large hump. The figure seems a rare exception as this is the only one among the impressive amount of archaeological objects found in the area. It may equally well have originated from a disturbed layer and thus be younger than the bulk of the material. The camel is mentioned in Panini's grammar (c. fourth century B.C.E.) as a beast of burden,[9] possibly also already as a war animal;[10] others follow the opinion that this last use did not occur before medieval times with the Rajputs.[11] Sanskrit knows only one word for both the camel and

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[3] K. Knoess, "The milk dromedary," in *The camelid, an all purpose-animal*, ed. W. Cockrill (Uppsala: The Scandinavian Institute for African Studies, 1984), 176–198.

[4] The idea is that a single hump offered a smaller surface area for water loss by perspiration, which is favourable under desert conditions. See F. Al-Ani, *Camel; Management and Diseases* (Amman: Dar Ammar Book Publisher, 2004), 3. Thomas' camel (*C. thomasi*) is considered to be the two-humped ancestor of the dromedary.

[5] I. Köhler-Rollefson, "*Camelus dromedarius*," *Mammalian Species* 375 (1991), 1–8.

[6] E. Hoch, "Reflections on prehistoric life at Umm an-Nar (Trucial Oman) based on faunal remains from the third millennium BC," in *South Asian archaeology*, ed. M. Taddei (Naples: Istituto Universitario Orientale, 1979), 589–638. A date as early as the 4th millennium B.C.E. is suggested by Al-Ani, op. cit. (2004), 3. The first evidence of domestic dromedaries in Central Asia is not before 1,500 B.C.E. (ibidem, 4).

[7] R. Bulliet, *The Camel and the Wheel* (Cambridge: Harvard University Press, 1975).

[8] Mohenjo-daro Museum, cat no. 546–VS 983.

[9] V. Agrawala, *India as known to Panini* (Varanasi: Prithvi Prakashan, 1963, 2nd edition); S. Banerji, *Flora and Fauna in Sanskrit Literature* (Calcutta: Naya Prokash, 1980).

[10] Ibidem, 219.

[11] L. Renou, *La civilisation de l'Inde ancienne, d'apres les textes sanskrits* (Paris: Flammarion, 1950), 200.

the dromedary, and it is very likely that Panini referred to the Bactrian camel, considering the depiction of this animal in friezes from Greater Gandhara, the region where he lived.[12]

Despite their highly praised value, dromedaries are considered quite bad-tempered animals, who can bite nastily and spit to show their disagreement. They are thought to be stupid, untrustworthy, inflexible and obstinate.[13] More likely, however, their ability to survive under the most difficult circumstances urges them to follow their own impulses. On the other hand, the dromedary is a symbol of love in the Thar desert, for example in the Dola-Maru, a Rajasthani love epic. One of the Rajasthani folk-goddesses, the *sagati* Dasha Ma or Moma, rides a dromedary.

According to brahmanical texts on *dharma*, dromedaries fall under the class of inedible animals. The reason might be that they bear teeth in both jaws, unlike the ruminants, who are edible. They lack the frontal incisors, which would make them edible, but they still bear front teeth in the upper jaw: a true canine and a caniniform lateral incisor and premolar. Also their feet form a problem. They are even-toed, thus edible, but not hoofed: their feet are padded and webbed, more like those of an elephant, with small nails at the tip. The feet resemble those of the five-nailed animals, which are inedible, more than those of the even-toed hoofed animals. The dromedary is, however, eaten in the Thar desert, as is clear from, amongst others, the Pabuji myth of Rajasthan.[14]

The dromedary is ritually somehow related to the ram: at the sacrifice of the ram, the sacrificial quality (*medha*) passes out and the ram becomes the camel.[15] Therefore, as stated in the brahmanical texts, the dromedary cannot be sacrificed because it has no sacrificial quality anymore.

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[12] The dromedary though, was already used in warfare during the first millennium B.C.E. in western Asia, seen a relief from the palace of the Assyrian king Ashurbanipal (c. 645 B.C.E.) at Nineveh, Iraq, now in London (British Museum).

[13] Another negative connotation is found in the medical text of Bhela: seeing a dromedary in one's dream would predict coming death, as stated in *Indriya Sthana* 9.12.

[14] See also James Tod "allodial chief Roop Singh of the Pattawut clan held out in phalodi and, when provisions failed, he and his noble associates ate their camels" in *Annals and Antiquities of Rajasthan, or The Central and Western Rajput States of India*, 2 Vols (London: Routledge and Kegan Paul, 1972, first publised 1892), vol. 2, 97.

[15] *AitB* 2.8.

10.2 Dromedaries in Stone

Dromedaries are ideal pack animals in the more arid regions. An example of a transport with dromedaries figures on a decorative plinth frieze from a Jain temple at Mandor near Jodhpur, Rajasthan (thirteenth to sixteenth century; fig. 165). Here, the dromedaries are used as pack animals but also as riding animals. They are realistically depicted, with their long neck, smooth coat and large hump. One of the animals is drinking from a well, in which a *noria* turns.[16]

Another dromedary sculpture once decorated one of the Chandella temples at Khajuraho, Madhya Pradesh (eleventh century, sandstone).[17] These dromedaries are used as riding animal. The characteristic lying position of a dromedary, with folded hind-leg and sitting on the knee, has been carefully sculptured. Actually, the position strongly resembles that of the pair of Bactrian camels at Sanchi, Madhya Pradesh (fig. 161). Here, at Khajuraho, however, there is clearly only one hump present, and there are no long hairs below the throat. The ribs are visible, which seems in contrast with the very round hump. A further difference with the Sanchi camels is that the hind legs are folded more strongly, and the neck and head held more upright as if these dromedaries are about to rise. On one of the plinths of one of the Chandella temples of Khajuraho, a caravan has been depicted consisting of dromedaries and horses, likely representing a war caravan (fig. 166).

Somewhat later is a panel on the plinth of the Sun temple at Konarak, Orissa (c. 1238–1258). The scene has been explained as a foreign delegation with a giraffe on the ground of a similar depiction at Persepolis, Iran.[18] The neck of the animal is extremely long and the back slopes. On the other hand, the animal is small, bears no horns and seems to lack any coat pattern, though this is difficult to establish since erosion obscures the details. The size and overall appearance fits a young dromedary very well since the latter has a relatively longer neck than the adult. Dromedaries do not naturally occur in eastern India, and must have been regarded as exotic animals.

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[16] A *noria* is a wheel carrying pots on its circumference to transport water from a well.

[17] Site Museum; figured in Snead, op. cit. (1989), pl. 95.

[18] For further discussion and references, see section 23.2.

A decorative relief at the Mallikarjuna temple at Srisailam, Andhra Pradesh (sixteenth century) figures a row of animals including dromedaries with a badly depicted hump: the humps are too flat, too elongated, and resemble a hunchback. The two animals to the left have a long neck, steep back, and a short tail. The frieze represents a caravan of adult and juvenile dromedaries.[19] Similar long-necked dromedaries with sloping backs decorates the Hosabasti at Mudbidri, Karnataka (first half of the fifteenth century) and the Vitthala temple at Hampi, Karnataka (first half of the sixteenth century).[20] These dromedary caravans are most likely walking from the port to their destination, because dromedaries do not thrive in these regions and had to be imported continuously, either as pack animal or for use in warfare, without however much success.

10.3 Concluding Remarks

Considering the extremely restricted occurrence of the dromedary, it is not surprising that few depictions of dromedaries are found on architecture other than in the western part of the continent. It does indeed seem that no realistic depiction in stone of a dromedary is known from the rest of the subcontinent. The very few stone carvings from these other areas are naive and often described as giraffes based upon their long necks (see Chapter 23). They date to the thirteenth (Orissa) and fifteenth to sixteenth century (Andhra Pradesh, Karnataka). They seem to represent either tributes or imported animals. Regarding its depiction in western India, it is remarkable that depictions of this valuable animal are so extremely rare, at the same time, the dromedary is praised highly in the vernacular literature of North India. An explanation for this omission may lie in the fact that the majority of surviving stone sculpture is concerned with temple art, whereas the dromedary essentially belongs to the pastoralists. The dromedary plays an important role in Rajasthani folklore, for example the Pabuji and Moma traditions, in religion, legend as well as myth, but this seems not to be reflected in stone sculptures.

[19] See further section 23.2.
[20] Ibidem.