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The Eurasian otter *Lutra lutra* in Afghanistan

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Abstract. 22 distributional records of the Eurasian otter *Lutra lutra* from Afghanistan are presented. Body and cranial dimensions are discussed and compared with material from adjacent regions. Otters in Afghanistan occur from 400 to 3000 m a. s. l., with most records coming from the east of the country. Notes on the otter fur trade and hunting methods from the 1970s are given.

Key words. Mammalia, Carnivora, Mustelidae, *Lutra lutra*, otter, Afghanistan, fauna, biogeography, fur trade.

Introduction

Otters have acquired a cynical kind of reputation over the last decades. They experienced drastic population declines in southern and western Europe and in many parts of tropical Asia, mostly due to destruction of natural habitats and wetland pollution. The publication of the IUCN 'Otter Action Plan' (Foster-Turley et al. 1991) was a big step towards international otter conservation, which emphasized priorities for worldwide conservation action for otters and their habitats. However, no information on otters from Afghanistan was included in this action plan and other publications on Asian otters (Foster-Turley & Santiapillai 1990, Foster-Turley 1991). One of the possible causes was the absence of Afghani delegates at the First Asian Otter Symposium in Bangalore, India, in 1988 (Foster-Turley, pers. comm. 1993) and the difficult political situation in the country over the last 20 years. Consequently, Afghanistan has been listed as a priority country in the Otter Action Plan, needing further attention. This paper intends to fill an information gap which is thought to be important for the understanding of otter biology and conservation in Afghanistan.

Taxonomic notes on otters in Afghanistan and adjacent regions

To date only one otter species, the Eurasian otter *Lutra lutra*, is known to inhabit Afghanistan (Hassinger 1973). A number of subspecies, listed by Pocock (1941) and Harris (1968), have been named from surrounding regions. They are briefly given here with their names, authors, type localities, and notes on the possible ranges (ZMAS = Zoological Museum of the Russian Academy of Sciences).

L. lutra seistanica Birula, 1912, Seistan at Iranian border; inhabiting the rivers of: Hilmend, Hamun and Naizar (approx. 31° N, 61° E, see Fig. 2), from material collected by Zarudnyi (1900) (ZMAS 8363 type specimen, ZMAS 8364, ZMAS 8365).

L. lutra oxiana Birula, 1914, found near Lyangar (approx. 38° 50' N, 71° E, see Fig. 2) in the Pyandzh River Basin, Tajikistan (ZMAS 10029 type specimen).

L. lutra kutab Schinz, 1844, Kashmir; inhabits the upper reaches of the Indus River and Punjab as far as Tibet.

L. lutra aurobrunnea Hodgson, 1839, Nepal; living in Chitral, Kashmir, Garhwal, Kumaon and on the southern Himalayan slopes.

L. lutra monticola Hodgson, 1839, Nepal; inhabits the upper reaches of the Indus River and Himalayan regions to Assam and the Sundarbans estuarine.

L. lutra meridionalis Ognev, 1931; vicinity of Teheran (Iran); dwells in N and W Iran and the Caucasian republics.

Ognev (1931) did not find significant differences between *L. l. oxiana* and *L. l. seistanica* while comparing skins of both proposed subspecies and thus treated *oxiana* as a synonym of *seistanica*. However, with only one defective skull of *L. l. oxiana* available and none of *L. l. seistanica*, Ognev understood his findings as being preliminary, awaiting better and more comparative material. He also rejected Pohle's view (1919), who included furs from Palestine in *seistanica*. Harris (1968) in his review on recent Lutrinae accepted Ognev's opinion as being valid. In any case, the taxonomic status of Afghanian otters still awaits thorough revision.

Apparently no otter skull has ever been documented from Afghanistan. We therefore present here measurements and photographs of a juvenile otter skull. The animal was caught in the wild by local hunters, probably in the Panjshir Valley, and then held in the Kabul Zoo where it died of an infection in 1974 (W. Rietschel, pers. comm. 1995). The skull is now deposited in the 'Museum für Naturkunde im Reiss-Museum' at Mannheim, Germany (RM 36) and depicted in Fig. 1. We did not find any other Afghanian otter material in German museums. In an unpublished thesis, Nauroz (1974) presented cranial dimensions of Afghanian otters from the collection of the Zoological Museum Kabul (ZMK). His data have been included in this report. However, we do not have any information on the status of the collections of the Kabul museum.

In RM 36 second dentition is present, except for canines and third premolars, which are getting replaced. The RM 36 skull shows a strongly broadened anterior part of the zygomatic arch, measuring 9.5 mm at its narrowest constriction (Fig. 1). Comparing the measurements of Nauroz (1974) with the RM 36 skull, we presume that only specimen ZMK 2098 presents an adult otter. All other skulls are distinctively smaller in BS, ZW, MW, and WC. Unfortunately, Nauroz did not comment on the age of the examined material. The length of the horizontal axis of the last molar and the length of lower and upper carnassials in the RM skull (11.3; 13.9; 11.4) almost

Table 1: Cranial measurements of *Lutra lutra* from Afghanistan. CB condylobasal length, BS basal length, IO interorbital constriction, PO postorbital constriction, ZW zygomatic width, MW mastoid width, WC width over upper canines (measurements after Novikov 1956); RM Museum für Naturkunde im Reiss-Museum, Mannheim, ZMK Zoological Museum Kabul. Measurements of ZMK specimens from Nauroz (1974). The figures for IO and PO in skull ZMK 2098 may have been mismatched but were not exchanged here.

No.	Sex	CB	BS	IO	PO	ZW	MW	WC
RM 36	?	103.3	94.4	22.3	19.3	60.5	56.4	25.7
ZMK 2062	?	126	93.5	25.5	19	59.6	55.2	24.6
ZMK 2305	f	97.5	83	23.4	20.6	59.2	55	20
ZMK 2304	f	97.9	83	25	17	55	52	14.6
ZMK 2303	m	101.5	85	24.6	17.4	55.1	55.5	23.8
ZMK 2098	?	115.2	102	[16.9]	[21]	68	60	27

Fig. 1: Dorsal, ventral and lateral aspects including a detail of the maxillar toothrow of a subadult *Lutra lutra* skull from the Panjshir-Valley near Kabul, Afghanistan. Greatest length 107 mm. Skull deposited at Museum für Naturkunde im Reiss-Museum, Mannheim, RM 36.

equal the dimensions given by Ognev (1931) for *L. l. seistanica* (11.3; 13.1; 12.2 ZMAS 10029). We tentatively assign the RM 36 to the same subspecies on the basis of the comparatively large dimensions already shown at that age.

Data on body mass (W) in g, head and body length (HB) and tail length (TL) in mm of otter skins from Afghanistan are summarized below; they are taken from Birula (1912), Nauroz (1974), and ZFMK material (ZFMK Zoologisches Forschungsinstitut und Museum Alexander Koenig Bonn; ZMAS Zoological Museum of the Russian Academy of Sciences; ZMK Zoological Museum Kabul).

No.	W	HB	TL	Origin
ZMK 2062	2950	510	200	Khanabad
ZMK 2305	1750	500	280	Panjshir
ZMK 2304	1376	430	250	Khanabad
ZMK 2303	1400	450	260	Khanabad
ZMK 2098	3200	520	335	?
ZFMK 93.383	?	660	400	Faizabad, fur market
ZFMK 93.384	?	940	600	Kabul, fur market
ZMAS 8363	?	1040	660	Seistan
ZMAS 8364	?	900	670	Seistan

We are aware of the insufficiencies of dried skin measurements, but due to lack of other data we rather tend to list the material than to omit it. Furs from a private collection of G. Kühnert showed the following dimensions: max. HB 930, min. HB 740; max. TL 600, min. TL 330 (n = 20). Comparing the ZMK material with otter skins purchased by G. Kühnert from the Panjshir River Valley in the vicinity of Kabul and two skins at ZFMK, the material deposited at ZMK appears to represent very young otters. Harris (1968), when comparing HB and TL of Iranian and Russian otters skins, found Seistan otters to have considerably long tails. Adult otters in Kühnert's skin collection and adult ZFMK 93.384 specimen showed an average TL of 506 (n = 15). Our results show a larger range of Afghanian otter skin dimensions compared to the few data recorded before. It is thus not astonishing that Harris (1968) still reported significantly long tails (n = 2) for *L. l. seistanica*. Afghanian otter skins at ZFMK and the Kühnert collection show a distinct contrast between face and throat. The throat fur colouration is very brigth, sometimes almost white and sharply separated from the face and neck. In five specimens (incl. ZFMK 93.384) a yellowish underfur is clearly visible on the throat. Additionally, the underpart tail colouration of all examined Afghanian specimens is comparatively pale. Unfortunately, we cannot give details on seasonal variation as the exact date of virtually all collected skins is unknown. We conclude that the fur measurements and colouration of the Afghanian material examined correspond to *L. l. seistanica* as indicated by Heptner et al. (1974).

Distribution of *L. lutra* in Afghanistan

To date, the most comprehensive work on mammals of Afghanistan has been published by Hassinger (1973) who compiled almost all available data prior to 1968.

Niethammer (1967) reported that one could easily find up to 40 otter furs on a day visit to Kabul's fur market, with the biggest proportion reportedly coming from the Maidan Valley. He also quoted the local name given to the otter by the fur traders as "saghe obi". Niethammer (1983), in his checklist of Afghanian mammals, commented on *L. lutra*: "only known from bazar furs, unsubstantiated records and unconfirmed observations". However, in 1974 Nauroz presented a comprehensive checklist of Afghanian carnivores based on bazar surveys and fur trade records. According to him, the demand for otter furs was comparatively high. He emphasized the relatively high price the otter furs fetched at 500—1000 Afghani per piece (DM 25—50 in 1973) compared to the low numbers of furs found in bazars (n = 21). Otter furs were primarily used for collars. W. Rietschel (pers. comm. 1995) adds, that some Afghanian tribesmen wore caps trimmed with otter fur (e.g. during the famous Buskashy games). According to G. Kühnert, former keeper of the Zoological Museum Kabul and research assistant at Kabul Zoo, otter skins for sale were mostly untanned and in bad condition (pers. comm. 1995).

Otters were reportedly trapped along rivers with a barrier device made of stone walls and thorny bushes, leaving only one outlet for the animal to pass. Animals were then killed by a heavy stone placed on top of a baited wooden pole at the outlet of the barrier (Nauroz 1974). Naumann & Nogge (1973) also reported the shooting of otters.

All locations for *Lutra lutra* in Afghanistan are summarized in Fig. 2. Names of locations are as follows: 1 Faizabad (Hassinger 1973) and Faizabad fur market (Nauroz 1974); 2 Talig-an Valley near Khanabad (Naumann & Nogge 1973); 3 Khanabad, ZMK, as in Nauroz (1974); 4 Kunduz fur market (Nauroz 1974); 5 Pul-i-Khumri fur market (Nauroz 1974); 6 Mazar-i-Sharif fur market (Nauroz 1974) and Mazar-i-Sharif, ZMK, as in Nauroz (1974); 7 Murghab (Nauroz 1974); 8 Herat fur market (Nauroz 1974); 9 Juwain in Seistan (in Hassinger 1973); 10 Hamun-i-Puzak (in Hassinger 1973); 11 Helmand River (in Hassinger 1973); 12 Arghandab River (in Hassinger 1973); 13 Panjao, southern Koh-i-Baba Mountains (Nauroz 1974); 14 Maidan Valley (Niethammer 1967); 15 Kabul fur market (Nauroz 1974); 16 Panjshir Valley (Kühnert collection; Naumann & Nogge 1973; ZMK as in Nauroz 1974); 17 Anjuman Pass (in Hassinger 1973); 18 on Daria-i-Bajagul River in the upper Alingar Valley (Naumann & Nogge 1973); 19 Gusalik, Nuristan (in Hassinger 1973); 20 Kumar River drainage area east of Jalalabad (in Gaisler et al. 1968); 21 Bashgul River, Nuristan (Naumann & Nogge 1973); 22 observation at Sust-i-Bala in 1971, Wakhan Corridor (Naumann & Niethammer 1973) and according to Grote (1951) "...abundant in the Western Pamir..."; 23 type locality of *oxiana* Birula, 1914; 24 type locality *seistanica* Birula, 1914.

Nauroz (1974) found *L. lutra* to occur in Afghanistan from 400 to 2900 m and, according to local information presented to Naumann & Niethammer (1973), further eastward in the Wakhan Corridor otters reach Babab Tangi at 3000 m a. s. l. Nauroz (1974) stated that otters do occur in virtually all river systems of Afghanistan, except for the only seasonally flooded Hari-Rud Valley.

Few records are available from otters in captivity: according to Nauroz (1974), eight otters were held at Kabul Zoo from July 1969 until March 1973, but apparently the animals did not breed. We presume that the Kabul Zoo does not exist anymore.

The situation of otters close to the Afghanian border

According to Roberts (1977) Eurasian otters were rare in the 1970s in the Pakistani regions bordering Afghanistan (river valleys of Swat, Chitral and Kaghan). He stated

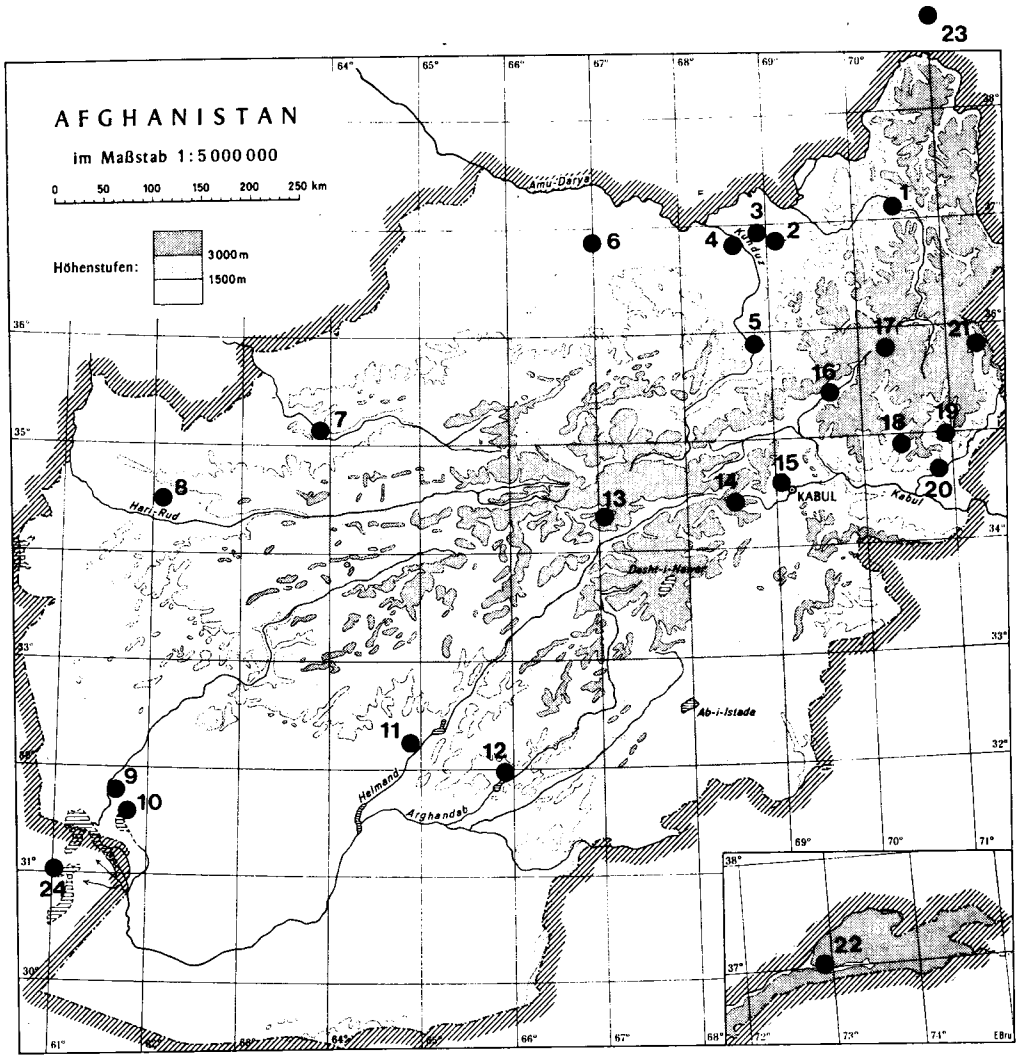

Fig. 2: Distribution of the Eurasian Otter *Lutra lutra* in Afghanistan. For locality references see text.

that even furriers admitted a decrease of otter fur supply. Chaudry (1991) emphasized the conflict between *L. lutra* and trout fisheries in the aforementioned areas since 1950, leading to government bounties offered for killed otters. Bounties were withdrawn in 1970. *L. lutra* reportedly shows seasonal migration behaviour in Kashmir, following spawning carps up to 3600 m or more in summer and descending again in winter (Prater 1980). For the Irani-Afghanian border, Misonne (1959) referred to the Seistan otters in the note of Birula (1912), not giving any new information. According to Novikov (1956) *L. lutra* was very rare in Uzbekistan east of Samarkand on the Zeravshan River, but Ognev (1931) listed the species as being quite abundant in Turkestan. The latter author also reported the high value of otter pelts fetched among the Kirgizians. Due to time constraints, other literature on otters from the former Soviet Central Asian republics (Romanovski 1991) was not consulted.

In the Indus River Basin to the south and east of Afghanistan lives a different species of otter, geographically separated by several montain ranges reaching to 3000 m and more. The smooth-coated otter *Lutrogale perspicillata* is known as a lowland species from Pakistan (where it occurs sympatrically with *L. lutra*) but has been recorded from a height of about 1000 m from Myanmar (U Tun Yin 1967). Hence a possible expansion of smooth-coated otters expanding via connecting valleys from Pakistan (e.g. Kabul River Valley at 500 m a. s. l.) was assumed earlier (Naumann & Nogge 1973), but we found no evidence for the presence of *L. perspicillata* in Afghanistan.

Conservation of otters and wetlands in Afghanistan

Afghanistan has been a Contracting Party to CITES since 1986 and has signed the Biodiversity Convention. However, it is not a Contracting Party to the Ramsar Convention (S. Frazier, pers. comm. 1995). According to Nauroz (1974), Afghanian legislation in 1973 allowed foreigners to legally export up to ten furs without restrictions. Between 1989 and 1993 no trade in otters was reported to CITES (A. Bräutigam & L. Collins, in litt. 1995).

The country has been ravaged by war and political turmoil over the last 20 years, but living resources have suffered from human influence such as grazing, woodcutting and hunting for a much longer period. Last information concerning conservation efforts date back to Sayer (1979), who reported the gazettal of five wildlife sanctuaries (i. e. Ab-i-Estada, Ajar Valley, Dashte Nawar, Kole Hashmat Kahn near Kabul and Pamir-i-Buzurg in the Wakhan Corridor). The only current information concerning area conservation and species protection from Afghanistan is the compilation of Evans (1994), who presumed that current on-the-ground protection in conservation areas is non-existent. He listed 17 important bird areas, including three wetlands of international importance, all of them already significantly threatened by deforestation and damming of major rivers (e. g. Hamun-i-Punzak in Seistan). A crucial constraint to Afghanian wildlife conservation is the tradition of hunting, mixed with today's weapon techniques and the availability of these during war. Wetland habitat protection as proposed by Evans (1994) has proven to be one of the best means to safeguard otter populations, but any conservation implementation in a war-struck country has to wait for political changes first.

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Zusammenfassung

22 Fundorte des Eurasischen Fischotters *Lutra lutra* aus Afghanistan wurden nachgewiesen. Körper- und Schädelmaße afghanischer Otterbelege wurden mit Material aus den umgebenden Regionen verglichen. Otter kommen in Afghanistan in Höhen von 400 bis 3000 m ü. M. vor, wobei die meisten Nachweise aus dem östlichen Landesteil vorliegen. Aus den 70er Jahren werden Daten über den Fellhandel und zu den Jagdmethoden referiert.

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