

# Three aberrant polecats *Mustela putorius* (Mammalia: Carnivora, Mustelidae)

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## Case 1

On 4 April 1993 the second author and Mrs. D. van Duijn found a very large dead male polecat *Mustela putorius* LINNAEUS, 1758 along the road A50 near Heelsum, The Netherlands. The animal was a traffic victim. Its skull was shattered and many postcranial bones were broken. Only the skin could be saved. This skin is now in the collection of the Zoological Museum of the University of Amsterdam, the Netherlands (reg.nr. ZMA 24.699). As stated, the animal was very large, but not deformed due to the accident. The following measurements were taken: head-body length 561 mm, tail length 181 mm, total length 724 mm, length hindfoot 74 mm and ear length 31 mm. The stomach contained the remains of a young brown hare *Lepus europaeus* PALLAS, 1778.

The study of published body measurements of polecats (e.g. Glas 1974, Blandford & Watson 1991, Roger *et al.* 1988, Wolsan 1993) confirmed our first impression concerning the large size of the specimen. To demonstrate its exceptional size we computed the means and standard deviations of the head-body length, the tail length etc. of 135 male polecats from the Netherlands, present in the collection of the Zoological Museum Amsterdam. The data of clearly juvenile specimens were not used in this study. The results are shown in Table 1. While looking at the body dimensions of the 135 male polecats, we were struck by the more or less independent variation of the separate dimensions. One can have a rather long-bodied, short-tailed, big-footed and small-eared animal. It is beyond the scope of this short communication to discuss this pheno-

menon, but it is clear that our specimen (ZMA 24.699) is rather short-eared for its size.

## Case 2

Some time ago Mr. F. Chanudet kindly showed us the skull of a male polecat caught at Saint Maigrin, France (45°26'N, 00°16'W) in March 1985 (Fig. 1a). During the study of this skull we were surprised by the extensive lesions caused by parasites in the frontal sinuses. In the Netherlands the extensive damage caused by the nematod *Skrjabingylus nasicola* (LEUCKART, 1842) in skulls of weasels *Mustela nivalis* LINNAEUS, 1766 and stoats *Mustela erminea* LINNAEUS, 1758 is well known (see e.g. Van Soest *et al.* 1972). But in polecats and other larger mustelids the visible damage of the frontal sinuses by these parasitic worms is very rare indeed, and if present, restricted to a small hole in the area of the frontal sinuses.

Table 1 Body dimensions (in mm) of male polecats *Mustela putorius* from the Netherlands (collection ZMA) compared with case 1, the specimen from Heelsum (ZMA 24.699). HB = head-body length; T = tail length; TL = total length; HF = hindfoot length; E = ear length

	HB	T	TL	HF	E
n	135	135	135	134	132
mean	387.7	144.3	532.0	58.0	24.9
s.d.	29.4	15.5	37.6	4.8	3.0
max.	462	197	619	68	32
ZMA 24.699	561	181	724	74	31

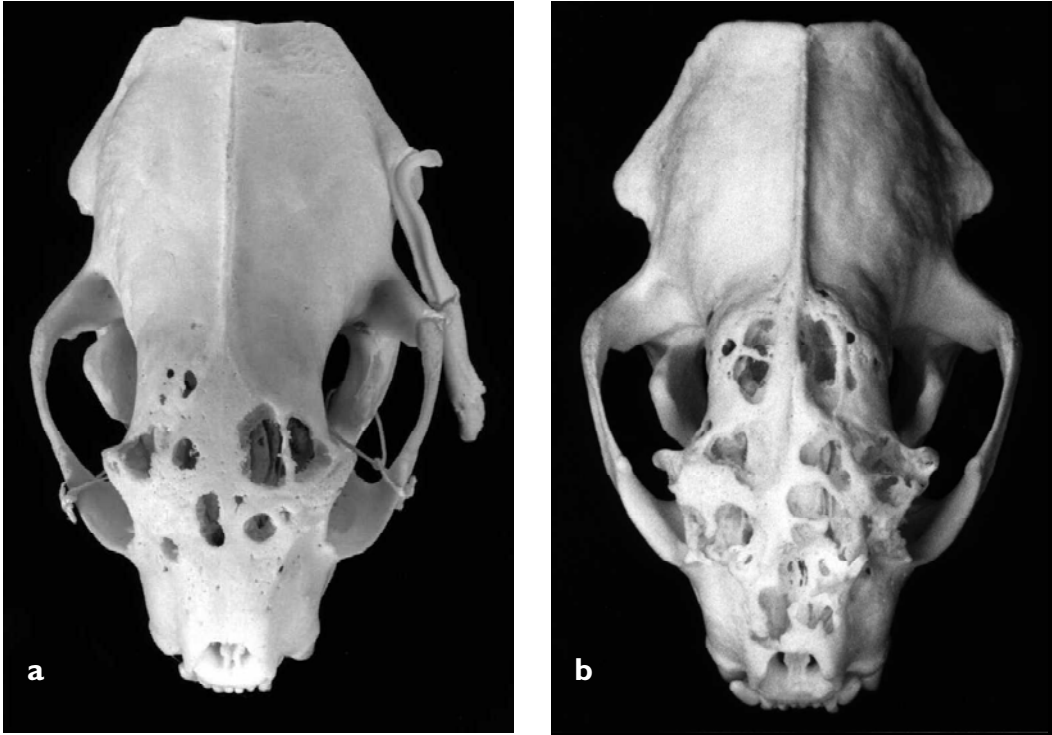


Figure 1 Dorsal views of the skull of *Mustela putorius*; **a** from Saint Maigrin, France, showing frontal sinus damage due to parasitic worms. Condylar length of this skull 66,2 mm [Photo: L.A. van der Laan, ZMA]; **b** from Germany, showing extensive lesions caused by frontal sinus parasites. Condylar length of this skull 71,8 mm [Photo: R. 't Hart]

### Case 3

Our surprise increased when we obtained the skull of a polecat from Germany, which was mounted for a customer by a taxidermist (Fig. 1b). Although we are grateful that this skull came to our attention, it is a pity that the taxidermist did not remember the exact provenance of the specimen. The date it was killed was also not known. This skull is even more damaged by frontal sinus parasites than case 2 from France.

Although it is rather unscientific to identify the parasitic worms that caused the lesions when one has only the cleaned skulls in hand, we nevertheless believe that in both polecat skulls the lesions were caused not by *Skrjabinulus nasicola*, but by the trematod *Trogloremata acutum* (LEUCKART, 1842). This species has not (yet) been found in the Netherlands, but is known from central Europe (in Germany *Trogloremata*-infected polecats occur already in the mountainous area east of Cologne - Dr.

Horst Kierdorf *in verbis*, 1996) and from the eastern and southern regions of France. For the biology of the species and its intermediate hosts, see Vogel & Voelker (1978) and Colyn & Rompaey (1989). The origins of our two skulls agree with the mentioned distribution area.

*Trogloremata acutum* has snails (e.g. genus *Bythinella*) and frogs as intermediate hosts; polecats eat frogs and become subsequently infected. Although the species has so far not been recorded from the Netherlands, in view of the growing trade of frogs for keeping them in terraria, the possibility can not be excluded that frogs infected with metacercaria of *Trogloremata acutum* will be set free and will infect polecats. The more so as the other intermediate host of the parasite, the snail genus *Bythinella* has been found not long ago in the southernmost part of the Netherlands. It is therefore necessary to continue to study polecats and polecat skulls found in the Netherlands.

## REFERENCES

- Blandford, P.R.S. & Walton, K.C., 1991 - Polecat *Mustela putorius* - pp. 396-406 in: Corbet, G.B. & Harris, S. (eds.) - The Handbook of British Mammals - Blackwell Scientific Publications, Oxford
- Colyn, M. & Rompaey, H. Van, 1989 - Review of the frontal sinus parasites of Mustelidae and Viverridae, with new data from tropical Africa - Revue de Zoologie africaine 103: 3-20
- Glas, G.H., 1974 - Over lichaamsmaten en gewichten van de bunzing, *Mustela putorius* Linnaeus, 1758, in Nederland - Lutra 16(2/3): 13-19
- Roger, M., Delattre, P. & Herrenschmidt, V., 1988 - Le Putois (*Mustela putorius* Linnaeus, 1758). Encyclopédie des Carnivores de France - Espèces sauvages ou errantes, indigènes ou introduites, en métropole et dans les Dom-Tom, 15: 1-38 - S.F.E.P.M., Puceul
- Soest, R.W.M. van, Land, J. van der, Bree, P.J.H. van, 1972 - *Skrjabingylus nasicola* (Nematoda) in skulls of *Mustela erminea* and *Mustela nivalis* (Mammalia) from the Netherlands - Beaufortia 20: 85-97
- Vogel, H. & Voelker, J., 1978 - Ueber den Lebenszyklus von *Trogloremia acutum* - Tropenmedizin und Parasitologie 29: 385-405
- Wolsan, M., 1993 - *Mustela putorius* Linnaeus, 1758 - Waldiltis, Europäischer Iltis, Iltis - pp. 699-769 in: Niethammer, J. & F. Krapp (Herausg.) - Handbuch der Säugetiere Europas, Band 5, teil II - Aula Verlag, Wiesbaden

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