



The history of stoats *Mustela erminea* and weasels *M. nivalis* in the Post-glacial of the British Isles.

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Introduction

In reviewing the origins of the post-glacial mammal fauna of the British Isles, it was assumed that stoats and weasels were native, and little detail of their recent history was offered (Yalden 1982, 1999). In their review of the history of Mustelidae in western Europe in the Late and Post-glacial, Sommer & Benecke (2004) assembled an impressive set of records of these species for the continent, but included few records from the British Isles. While they included two Late Glacial records of stoat from Ireland, there were no Late Glacial records of either species from Great Britain. This has allowed informal speculation that the weasel, perhaps both species, were introduced by humans to Great Britain, however unlikely this might seem. A more detailed summation of the records for these species is thus worth attempting. Many come from local accounts, not readily available in the international literature on these species.

Records

Neither species is common in archaeological faunas. In part this reflects their natural abundance and ecology; neither inhabits dens in caves, they are scarce as the prey of predators such as owls, and their use by humans for fur is limited. The stoat is recorded at least 10 times in Devensian and Late Glacial sites, including records from 7 layers of Pin Hole Cave (Table 1). While none of these is precisely dated, their co-occurrence at all sites with remains of lemmings *Dicrostonyx* and/or *Lemmus* suggest that these are early records, attesting to the early arrival and native status of stoats. The thin record (10 sites) from later dates emphasises that these are scarce animals in archaeological faunas.

There is a comparable total of 11 records of weasels from Devensian and Late Glacial sites, and a similar thin tail (14) of Post-glacial records (Table 2). More sites are involved than with stoats, since there are fewer replicated records from different layers of Pin Hole Cave.

Discussion

Most of the records involve just one individual mustelid: these are indeed rare species in archaeological sites. In the 603 small mammals from Repton, there is one weasel; in the 426 listed by O'Connor (1987), there are one stoat and two weasels; Ossom's Eyrie Cave has 3 weasels in 4249 mammals; combined, these suggest a representation of only 0.2%. Extrapolating to older deposits, the small mustelids would obviously be scarce. It is hard to be sure that the different layers of Pin Hole Cave document 7 different stoats, or only one, with its remains scattered through the layers, so it is hard to take the comparable numbers of stoat and weasel records at face value. Never-the-less, they are thought to be roughly of equal abundance in the recent fauna (Harris *et al.* 1995), so a reasonably similar abundance of archaeological records might be expected. It is unfortunate that there are no Mesolithic records from Great Britain to confirm their native status, to match the sequence of dates from Ireland. Genetic evidence confirms that the Irish stoat is native there: it is genetically very variable, but also very different from the population in Great Britain (Martinkova *et al.* 2007).

Table 1. Archaeological record of stoat *Mustela erminea* in the British Isles. The co-occurrence of vole and lemming prey is indicated by initials (A *Arvicola*, D *Dicrostonyx*, L *Lemmus*, Ma *Microtus agrestis*, Mg *Myodes glareolus*).

Site	National Grid Ref.	Age	Source	Spp.
Kirkdale Cave	SE 67 85	Ipswichian	Boylan 1981	A, Ma, Mg
Dowel Cave	SK 07 67	Devensian	Bramwell 1960	L, D
Etches Cave	SK 07 67	Devensian?	Pernetta 1964	L, D
Pin Hole Cave, Level 1	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, Ma, Mg
Pin Hole Cave, Level 2	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, A
Pin Hole Cave, Level 3	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, Mg
Pin Hole Cave, Level 5	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, Mg
Pin Hole Cave, Level 7	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, A
Pin Hole Cave, Level 11	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, A
Pin Hole Cave, Level 12	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, A
Inchnadamff	NC 27 17	Late Glacial	Newton 1917	D, Ma
Killavullen Cave	W 65 99	10,680 b.p.	Woodman et al. 1997	
Kilgreany Cave	X 17 94	9980 b.p.	Woodman et al. 1997	D
Coffey Cave	G 71 13	7650 b.p.	Woodman et al. 1997	
Dowel Cave	SK 07 67	Bronze Age	Bramwell 1960	A, Ma, Mg
Wroxeter	SJ 56 08	Roman, 4-5th C.	O'Connor 1987	A
Exeter	SX 92 92	1100-1200 AD	Maltby 1979	A
Trowbridge	ST 85 57	Norman	Bourdillon 1993	A
York, GAE site	SE 60 52	12-13th C.	O'Connor 1987	A, Ma
Beverly, Lurk Lane	TA 03 39	14- 15th C.	Armitage 1985	A, Ma, Mg
Dudley Castle	SO 94 90	Med	Thomas 2005	A
Kilton Castle	NZ 70 17	15-16th C.	O'Connor 1987	Ma, Mg
Foley Cave	R 68 09	305 b.p.	Woodman et al. 1997	D, L

Table 2 Archaeological record of the weasel *Mustela nivalis* in Great Britain. The co-occurrence of vole and lemming prey is indicated by initials (A *Arvicola*, D *Dicrostonyx*, L. *Lemmus*, Ma *Microtus agrestis*, Mg *Myodes glareolus*).

Site	National Grid Ref.	Age	Source	Spp.
Elder Bush Cave	SK 09 54	Devensian	Bramwell 1964	L, D, A
Dowel Cave	SK 07 67	Devensian	Bramwell 1960	L, D
Owlet Hole Cave	SK 19 63	Late Glacial	Bramwell & Wood 1947	L, D, A, Ma, Mg
Sun Hole	ST 46 54	Late Glacial	Collcutt et al. 1981	L, D, A, Mg
Tom Tivey's Hole	ST 70 44	Late Glacial	Barrett 1966	L, D
Inchnadamff	NC 27 17	Late Glacial	Newton 1917	D, Ma
Elder Bush Cave	SK 09 54	Late Glacial	Bramwell 1964	L, D, Ma, A
Dowel Cave	SK 07 67	Late Glacial	Bramwell 1960	L, D, A
Pin Hole Cave, Level 0	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, A, Mg
Pin Hole Cave, Level 5	SK 53 74	Late Glacial?	Jenkinson 1984	L, D, Mg
Ightham Fissure	TQ 60 56	Late Glacial?	Newton 1894	L, D, Ma, A, Mg,
Tom Tivey's Hole	ST 70 44	Holocene	Barrett 1966	A, Ma, Mg
Owlet Hole Cave	SK 19 63	Holocene	Bramwell & Wood 1947	A, Ma, Mg
Dowel Cave	SK 07 67	Neolithic	Bramwell 1960	A, Ma, Mg
Overton Down	SU 1370	Late Bronze/early Iron Age	Fowler 2000	A, Ma
York, Church Street	SE 60 52	Roman, 2-4th C.	Rackham 1982	A, Ma, Mg
Wroxeter	SJ 56 08	Roman, 2nd C.	O'Connor 1987	A, Ma
Wroxeter	SJ 56 08	Roman, 4-5th C.	O'Connor 1987	A
Droitwich	SO 89 62	Roman	Rackham 1982	A, Ma
Ossom's Eyrie Cave	SK 09 55	Post-Roman	Bramwell <i>et al.</i> 1990	A, Ma, Mg
Repton	SK 30 97	9th C.	Yalden 1995	A, Ma, Mg
Beverley, Lurk Lane	TA 03 39	14- 15th C.	Armitage 1985	A, Ma, Mg
Barnard Castle	NZ 05 16	15th C.	Armitage 1985	Ma
London, Post Office Middle	TQ 32 81	Late 15th C.	Armitage 1985	Ma, Mg
West Cotton	SP 97 72	Med.	Albarella & Davis 1994	A

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