

LITHOBIUS LAPIDICOLA MEINERT, 1872 IN BRITAIN

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The first report of a species called at the time *Lithobius lapidicola* Meinert from the British Isles was by Brade & Birks (1916) based on material from Sugarloaf, Co. Wicklow, Ireland and identified as such by Brolemann. Interestingly, they initially thought that some of the specimens were *Lithobius borealis* Meinert and sent them to Meinert himself but he referred them to his *L.lapidicola*. The specimens did show the supplementary spine on the last leg characteristic of the former species and the authors noted well developed projections on the 11th tergite. Bagnall (1918) reported *Lithobius borealis* from Lancashire and Brade-Birks & Brade-Birks (1933) described the latter as a rare English centipede. Their description of Bagnall's specimen in the latter paper showed no accessory spine and with tergite 9 slightly excavated posteriorly tending to give the appearance of angular projections. This description could probably cover *L.melanops* Newport.

Dr Eason in his standard work (Eason, 1964) described *L.lapidicola* Meinert as well as referring to *L.borealis* and pointed out that a degree of confusion existed regarding these species. In his paper on West European species of Lithobiomorpha (Eason, 1982) he resolved the matter establishing that the species that British workers had referred to as *L.lapidicola* Meinert, 1872 should be named *L.borealis* Meinert, 1868 and that the name *L.lapidicola* Meinert, 1872 should be applied to the species known as *L.pusillus* Latzel, 1880 and which is described by Brolemann (1930) under that name. (The *L.borealis* of Verhoeff, 1937 was apparently *L.lapidicola*). *L.lapidicola* as now defined had not been recorded from the British Isles at the time but had been reported from several NW European countries.

In the mid 1980s Charles Rawcliffe made several collections from heated houses at the Royal Botanic Gardens, Edinburgh and amongst these were specimens identified by Dr Eason as the genuine *L.lapidicola* (= *L.pusillus*) and referred to in the Provisional Atlas (Barber & Keay, 1988). These were considered to be introduced animals and it was not until 1988 that I collected material from Sandwich Bay, Kent in July and October that included examples of *L.lapidicola* Meinert (det.E.H.Eason). Subsequently a few more, mostly damaged, specimens were found in the same area, above HTL and mostly within a local nature reserve or on the edge of the golf course. The area is not an

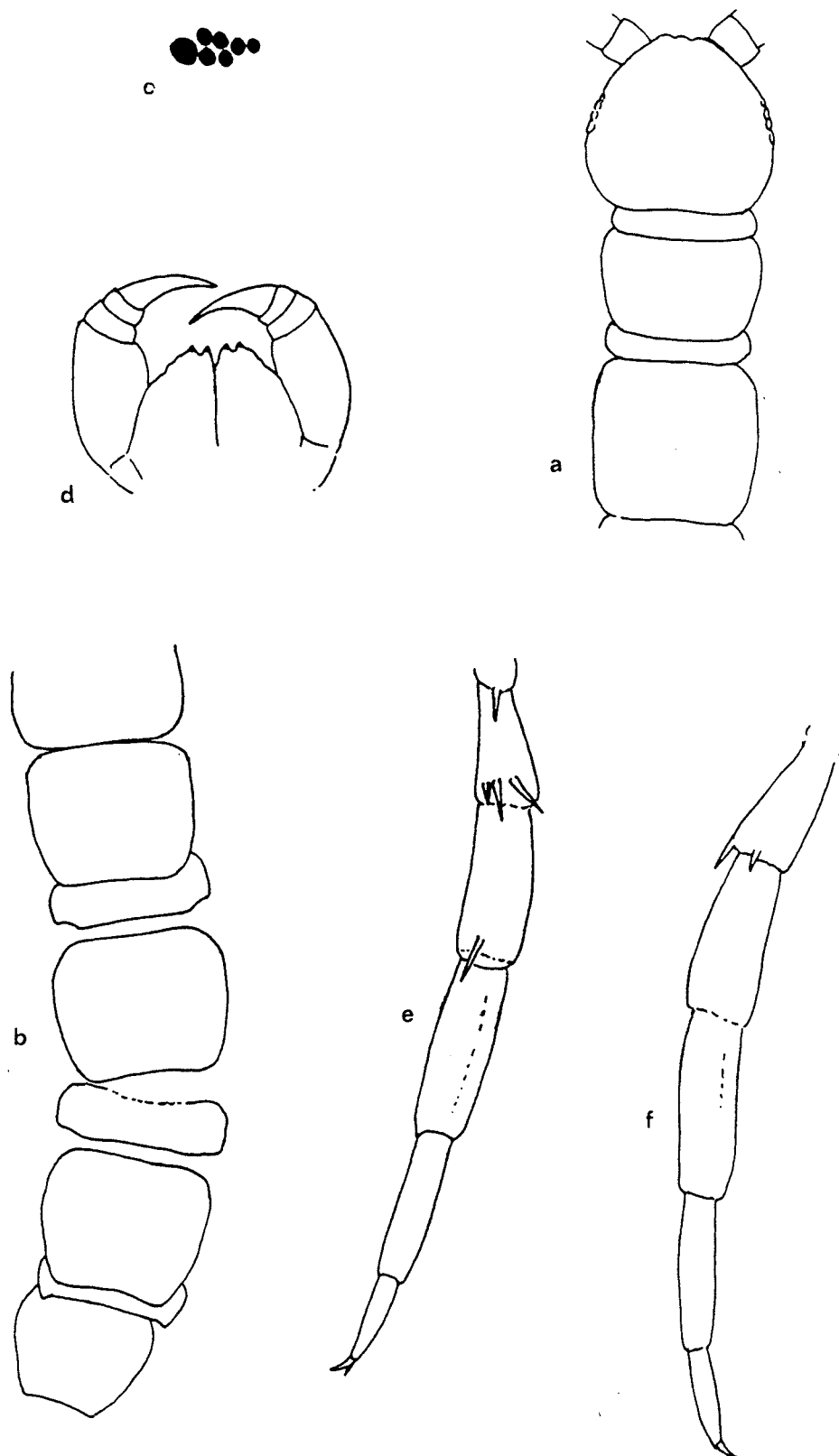


Fig.1. *Lithobius lapidicola* Meinert, female from Havergate Island, Suffolk :

a. Head & first four tergites
 c. Ocelli (right side)
 e. 15th leg, dorsal

b. Tergites 8 - 14
 d. Forcipules, ventral
 f. 15th leg, ventral

(Drawings by R.E.Jones)

easy one for casual collecting, mostly low dune/ shingle and comparatively dry. The most abundant lithobiid there was the common coastal *L.melanops*.

In 1991 Paul Lee sent me a female of an undetermined *Lithobius* from soil in a saltmarsh at Havergate Island on the Suffolk coast which also proved to be *L.lapidicola* (confirmed E.H.Eason). He had also collected a male from the same area from dead wood.

Although there are various descriptions in the literature (e.g. Brolemann, 1930, Eason, 1980) it is thought that it would be helpful for British workers to have a readily available account of the species and the help of Dr Eason in drawing this up in relation to British specimens is much appreciated. Much of the description is based on his notes and comments as well as his description of Sardinian specimens in his 1980 paper.

DESCRIPTION

Lithobius lapidicola Meinert

Length : up to 8mm or more (Sardinian specimens up to 9.6mm), head 0.96mm wide.

Colour : chestnut brown.

Antennae : one third of body length, 26-34 articles.

Ocelli : up to 11, usually 1 + 4,3,2. Posterior ocellus a little larger than next largest. Immature specimens have fewer ocelli (Fig.1c).

Forcipular segment : 2 + 2 prosternal teeth, internal slightly further forward than lateral, porodont fine but thicker than a seta. Lateral to the porodont the shoulders slope backwards forming at most a feeble shoulder (Fig.1d).

Tergites : wrinkling of tergites from T5 backwards is described as characteristic of this species. Posterior angles of T9 obtuse or squared, T11 squared or with trace of projections, T13 is described as with small posterior projections but on the female from Suffolk there was barely a trace of projections and the posterior angles were more or less right angled.

Coxal Pores : number variable from 2,2,3,2 to 4,5,4,3 in Sardinian specimens; the Suffolk female had 3,4,4,3 which is typical (fewer in males). Circular.

Legs : 14 and 15 have faint but definite tarsal articulations. 14 and 15 are slightly swollen in both sexes but without any special modification in the male. 15th legs with an accessory claw.

Female genitalia : two stout conical spurs on the gonopod; claw with small distal medial denticle and smaller more proximal lateral denticle.

Spinulation : Eason (1980) describes this as showing striking regional variation.

15th legs usually :

V	-	-	mp	-	-
D		m	amp	m	-

Table 1 is the spinulation for the Havergate female and is unusual in lacking 2 VaF (E.H.Eason, pers.comm.):

1			m			a	a
2	(p)	(p)	m		mp	ap	a
3		am	m		mp	ap	a
4		am	m		mp	ap	a
5		am	m		mp	ap	a
6		am	m		mp	ap	a
7		am	m		mp	ap	ap
8		am	m		mp	ap	ap
9		am	m		mp	ap	ap
10		am	m		mp	ap	ap
11		p	am	m	amp	ap	ap
12		mp	amp	m	amp	p	p
13	m*(a)	mp	amp	m	amp	p	p
14	m	amp	amp	m	amp	p	
15	m	amp	m		mp		

() one side only * very small

DISTRIBUTION

Edinburgh, Royal Botanic Garden, Tropical House No.23.
shingle on shelf supporting plants (C.P.Rawcliffe, 20.v.86)

Kent, Sandwich Bay NR and adjacent area.
shingle/sand dune/grassland, under dead wood, etc.
(A.D.Barber, 20.vii.88, 24.x.88, 28.x.90)

Suffolk, Havergate Island NR.
male in dead wood, female in soil, saltmarsh (P.Lee, 14.vii.91)

Known from : Austria, Netherlands, Sardinia, Sweden, Switzerland.
Probably quite widespread in Western Europe.

IDENTIFICATION

This species lacks any distinctive feature that allows immediate identification. Its relatively small size (8mm compared with the 12.5 mm of *L.borealis*), its lack of the characteristic swollen last two pairs of legs of *L.microps*, the double claw on the last leg, the lack of clear shoulders on the forcipular coxosternite and the small number of ocelli are valuable pointers to its identification. Whilst tergite 9 has no projection the state of T11 and T13 seems variable and this can influence the way in which it keys out in the standard works.

In "Centipedes of the British Isles" (Eason, 1964) it will key out as *L.borealis* if T11 has projections or as *L.calcaratus* if these are not present or clearly visible. Obviously it lacks the distinctive protuberances of the 15th legs of males of the latter species and the arrangement of ocelli is quite different.

In Brolemann (1930) it will either key out as *L.lapidicola* (= *L.borealis*) if projections are seen or as *L.lapidicola* (= *L.borealis*)/*L.pusillus* (= *L.lapidicola* in the present sense) if there are no projections on T11.

Dr.Eason's north-west European key (Eason, 1982) only works with males when the absence of any distinctive structure on the last legs will identify it as *L.lapidicola*. In Britain it is most likely to be confused with *L.borealis* from which, amongst other characters, it is separated by the absence of the accessory spine on the last legs.

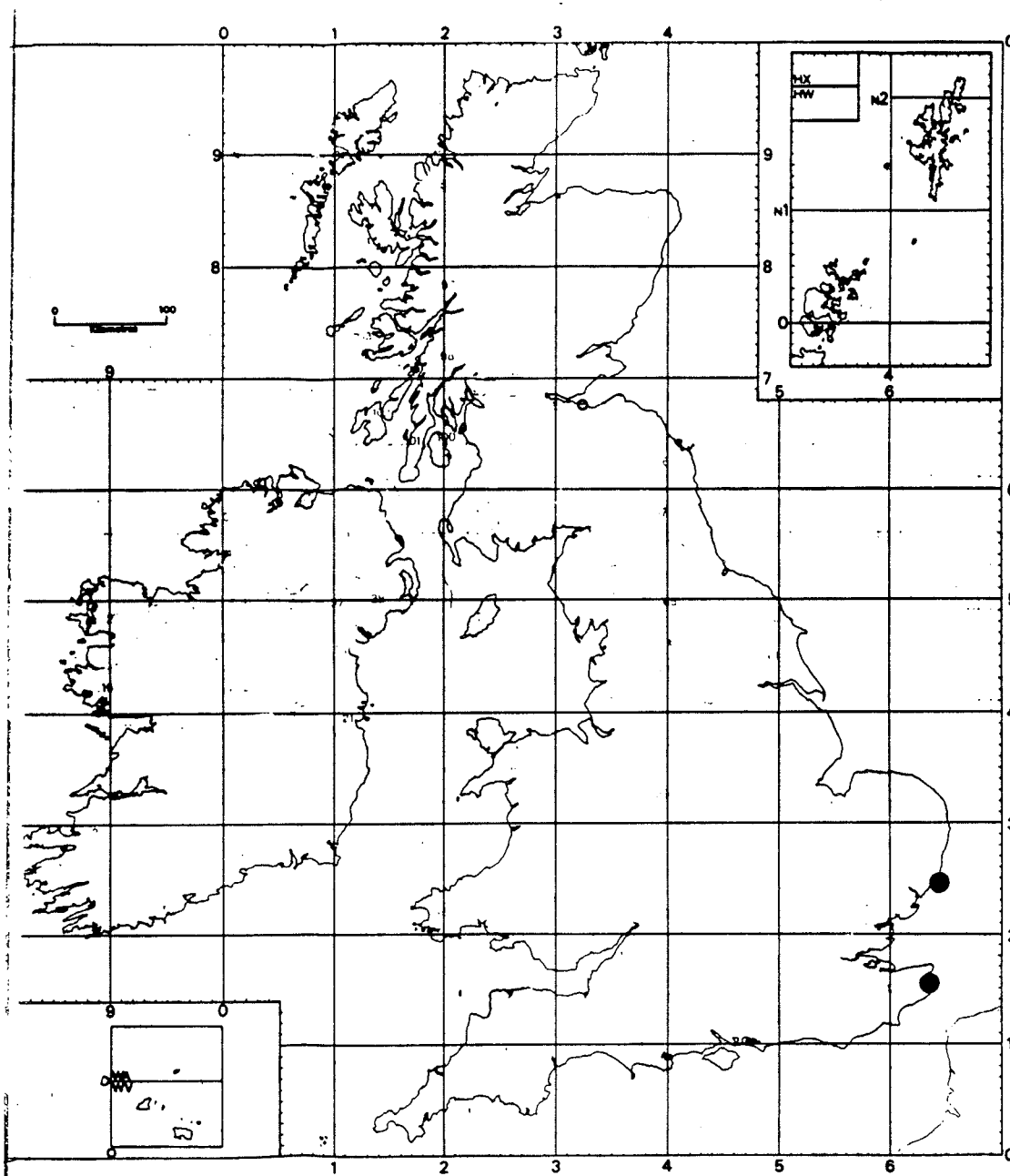
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Map.1. *Lithobius lapidicola* Meinert
Known outdoor distribution in Britain