

SOME UNPUBLISHED RECORDS OF CENTIPEDES IDENTIFIED BY DR. E. H. EASON.

R. D. Kime

Belgian Royal Institute of Natural Science, 29 Rue Vautier, Brussels 1000.

INTRODUCTION

I dedicate this paper to the memory of “Ted” Eason, an outstanding and unforgettable figure, a pre-eminent myriapodologist with a singular and engaging personality. I first met him in 1970 at the inaugural field meeting of the British Myriapod Group held at Brendon in North Devon: from then until 1997 we met many times, both at meetings and privately, and communicated regularly by letter. I was privileged to count him as a friend.

After I had come to work on the Continent in 1974 he identified or confirmed the identification of many centipedes that I had collected and helped me to set up a reference collection. To a large degree the data thus accumulated have not previously been published; they are mainly occasional occurrences of common species in a number of different countries which did not seem to merit special publication at the time. However, there were some interesting discoveries and some observations made to me by Ted Eason which certainly should be published. I am therefore presenting a mixture of data and his observations which were essentially about taxonomy, occasionally about ecology and distribution.

RECORDS

For the benefit of mapping projects I am listing the localities and UTM grid references of the centipede records which were confirmed. These are presented in the form of tables on a country by country basis: each table is followed by relevant observations. Those data that have been published already are not included, except in a few instances when they gave rise to significant comments by Dr. Eason.

Records from Belgium

Almost all of these have been incorporated into the recently published atlas by Koen Lock (2000). There are, however, a few more that have come to light as I have re-examined all my files and letters for this article. In addition there is one site, Mont Rigi, that I have intended to write about for some time.

Locality	Province	Date	UTM 10km sq.	Species
Transinne	Luxembourg	13.5.1986	FR54	<i>Lithobius crassipes</i> , <i>L. macilentus</i> .
Ligneuville	Liège	20.3.1988	KA98	<i>Lithobius crassipes</i> , <i>L. curtipes</i> <i>L. macilentus</i> <i>L. pelidnus</i>
		27.11.1988		<i>L. curtipes</i> , <i>L. pelidnus</i> <i>L. tricuspis</i> .
Mt. Rigi Robertville	Liège	1977/1978	KA99	<i>Lithobius calcaratus</i> , <i>L. crassipes</i> , <i>L. curtipes</i> , <i>L. dentatus</i> , <i>L. forficatus</i> , <i>L. macilentus</i> , <i>L. microps exarmatus</i> , <i>L. tenebrosus</i> , <i>L. tricuspis</i> , <i>Lamyctes emarginatus</i> , (as <i>fulvicornis</i>).

Observations

The locality in Transinne is a forest in the northern Ardennes on leached siliceous soil at about 450m above sea level. The two species found are common in such sites.

The forest at Ligneuville is in the eastern Ardennes at an altitude of approximately 400m. The precise locality is designated "A la Haye" and is noteworthy because in June, 1979, some immature specimens of a craspedosomid (stadium VII) resembling the genus *Haasea* (Mauriès, pers. comm.) were taken from an oakwood. Whatever this species was, it would have been new for Belgium. I subsequently made a number of attempts to find adults of the millipede, but without success. Then, much of the area was clear felled during the 1980s. I did at least locate the lithobiids listed above. The record of *Lithobius pelidnus* was the first for Belgium. I did not find it again until examining samples taken from a stand of spruce in 1999. This was at Epioux in the southern Ardennes (420m, UTM FR61).

The Mont Rigi site is in the Hautes Fagnes region of Belgium. It consists of a mosaic of montane woodland, upland heath and peat bogs at an altitude of 650-690m. The woodland is on the whole coniferous while there are some bushy areas of heathland containing birch, willow and aspen. I was able to examine the myriapods that were caught in pitfall traps, in place from the summer of 1977 until the spring of 1978: this gave rise to the list of ten lithobiids above. It is worth pointing out that only two millipedes were found in the traps. One was *Craspedosoma rawlinsi* and the other was *Mycogona germanicum*, a Central European chordeumid confined to the montane zone. They are both cold-resistant. Millipedes common at lower altitudes such as *Tachypodoiulus niger*, *Julus scandinavus* and *Glomeris marginata* were not found at all, but this may have been due to the extreme acidity of the soil habitat. *Julus scandinavus* is common on acidic Belgian heaths however. Dr. Eason looked at the whole collection and made the following comments:

"The most surprising find is *Lithobius microps exarmatus*, known only from the Mediterranean region of Europe although I have found it in mid-Wales. Originally named as a variety of *duboscqui* (= *microps*) by Brolemann, some authors regard it as a distinct species. Apart from the total absence of spines (except small DaT 1-11) I can find nothing to separate it from *microps* and on Mt. Rigi, where it is the only form of *microps* found, it is behaving like a subspecies and not as the occasional abnormal specimen (i.e. variety). A subspecies with a markedly discontinuous distribution is known as 'polytopic' and this may be such a case. It would certainly be interesting to map the distribution of *microps* in the region surrounding Mt. Rigi to see if *microps* and *exarmatus* behave as species or subspecies."

I have to confess that I have not done this, but recently a second colony of *Lithobius microps exarmatus* has been located not far away in an oak wood close to the German border, again without finding any *L. m. microps* in the population. Brolemann (1930) cites both the Pyrenees and the Maritime Alps for *L. duboscqui* var. *exarmatus*.

There are some further comments on the Mt. Rigi specimens:

"Another curious specimen is a female *tricuspis* with simple 15th claws. I have labelled this *L. tricuspis* var. *mononyx* Latzel, so far only found in the Pyrenees. This is a variety only as it occurs in the same population as the normal form. In Brolemann's (1930) key it runs to *L. troglodytes* but is definitely *tricuspis*".

67 specimens of *L. tricuspis* were caught altogether in the fifteen trapping sites. It was by far the commonest lithobiid. This fits well with the observation by Spelda (1999) that in Baden-Wurttemberg the species does not show an altitudinal preference and occurs above the tree line.

"Yet another odd specimen is the female *L. forficatus* which has a large simple female claw. This must also be a variety as there are normal female *forficatus* from Mt. Rigi".

Eight specimens of *L. forficatus* were caught, fewer than *L. crassipes* (20) and *L. curtipes* (12) as well as

far fewer than *L. tricuspis* (67). In fact *L. forficatus* is relatively rare and indeed has not been caught at all in many of these higher forests in the Ardennes.

L. tenebrosus has been recorded only four times in Belgium (Lock, 2000); It is apparently a rare species usually confined to montane woodland (Spelda, 1999). *Lithobius dentatus* and *L. macilentus* were represented by one specimen each. These are the commonest species in most of the Ardennes forests up to altitudes of at least 560m.

Dr. Eason ends his report to me with two questions: "Is Mt. Rigi very high or is there anything special about it?" The answer to both of these in the Belgian context is yes, the area is an important nature reserve. It is situated where the Atlantic and Central European zones meet, its altitude giving it an often humid yet rather continental climate of a montane nature. It can to some degree be regarded as part of the Central European Montane zone and there are also some connections with southern alpine mountains. A millipede, *Ceratosphys amoena*, once thought to be endemic in the Pyrenees, has been found elsewhere in the Belgian Ardennes.

Records from Luxemburg

There is only one record of note from the Grand Duchy of Luxemburg. Nevertheless it may well be the most important in this article. It concerns some specimens that I sent to Dr. Eason from a national nature reserve at Oberanven, collected during a research project carried out by the National Natural History Museum in Luxemburg. The locality, by name "Aarnesch", a dry calcareous pasture on a hill with a plot of pines (UTM LA 00) was partly cut for hay, partly grazed by sheep and partly left alone during the experimental period. The centipedes found were as follows:

- Geophilus carpophagus* – one specimen in the grassland.
- Strigamia acuminata* – one specimen from the north of the grassland.
- Lamyctes emarginatus* – in the sheep pasture.
- Lithobius muticus* – one male and one female at the edge of the sheep pasture.
- Lithobius calcaratus* – in all the pastures except with sheep.
- Lithobius forficatus* – in the pines.
- Lithobius pusillus* – in the pines and the neighbouring pasture.

With respect to the last species Dr. Eason wrote:

"I have labelled these *Lithobius pusillus* Latzel (male and female) because they differ from *lapidicola* in having only six ocelli each side, with the posterosuperior the largest, completely smooth tergites with no trace of projections on T11 or 13 and very indistinct anterior tarsal articulations. In *lapidicola* the ocelli are 9-11, with the posterior the largest, always some degree of wrinkling of the tergites and at least traces of projections on T13 and often T11, and the anterior tarsal articulations less indistinct. I would have identified these as *lapidicola* had I not recently seen some specimens from Crete sent me by John Lewis which are in better condition and convince me that *pusillus* is distinct from *lapidicola* (= *pusillus pusillifrater*). I was wrong to give *pusillus* as a synonym of *lapidicola* in my 1982 paper. *L. pusillus* is common in Austria according to Latzel and there are authentic records from the Mediterranean region, but none from Western Europe proper as far as I know."

Remy & Hoffmann (1959) mention neither *L. lapidicola* nor *L. pusillus* from Luxemburg; it is a new species for the Country.

Records from France

While extending collecting activities through France in order to prepare maps of the distribution of species in areas from which there were few records, Dr. Eason suggested that I send him some samples for verification. I therefore sent him a selection of tubes containing lithobiids obtained by hand searching and sometimes Berlese extractions of forest litter. I list below the certain identifications that he made. Generally, they supposedly involve the most common species at the site and may be of some biogeographical interest.

Site	Commune	Department	UTM	Date	Species
Bois de Trélon	Trélon	Nord	ER 74	17.5.92	<i>Lithobius crassipes</i> <i>L. dentatus</i> <i>L. forficatus</i>
Bois d'Harcy	Bourg-Fidèle	Ardennes	FR 12	4.10.86	<i>Lithobius dentatus</i> <i>L. macilentus</i> <i>L. tricuspis</i>
Bois des Potées	Sévigny-la-Forêt	Ardennes	FR 02	19.10.86	<i>Lithobius curtipes</i> <i>L. dentatus</i> <i>L. macilentus</i> <i>L. microps</i>
Woodland	Fontoy	Moselle	KV 87	4.11.84	<i>Lithobius aeruginosus</i> <i>L. macilentus</i> <i>L. tricuspis</i>
Bois des Champs Gringaut	Asquins	Yonne	EN 56	3.11.85	<i>Lithobius macilentus</i> <i>L. microps</i> <i>L. tricuspis</i>
Woodland	Brosses	Yonne	EN 56	3.11.85	<i>Lithobius agilis</i>
Bois de Beauregard	St-Amand-en-Puisaye	Nièvre	EN 06	15.5.88	<i>Lithobius macilentus</i> <i>L. microps</i>
Bois de Martinières	Champagnac-de-Belair	Dordogne	CL 13	1.11.85 31.10.86	<i>Lithobius agilis</i> <i>L. macilentus</i> <i>L. microps</i> <i>L. tricuspis</i>
Gorges de la Dordogne	Neuvic	Corrèze	DL 41	3.9.92	<i>Lithobius calcaratus</i> <i>L. macilentus</i> <i>L. melanops</i> <i>L. pilicornis</i>
Woodland	Grandsaigne	Corrèze	DL 13	3.9.92	<i>Lithobius forficatus</i> <i>L. tricuspis</i>
Woodland	Le Falgoux	Cantal	DK 69	3.9.92	<i>Lithobius forficatus</i> <i>L. muticus</i> <i>L. piceus</i> <i>L. tricuspis</i>
Woodland	Laissac	Aveyron	DK 80	2.9.92	<i>Lithobius melanops</i>
Rochers de Chironne	Chamaloc	Drôme	FK 86	17.8.82	<i>Eupolybothrys</i> <i>longicornis</i>
N of Col de St. Alexis	St-Agnan-en Vercors	Drôme	FK 87	17.8.82	<i>Lithobius dentatus</i>

Records from Malta

I collected a few myriapods while on holiday in Malta in 1979. Dr. Eason identified the centipedes:

1. Woodland between Verdala Palace and Buskett Gardens. Limestone bluffs covered with pine, cypress, evergreen oak, etc. Under stones. 27.2.79.
Henia bicarinata, *Henia vesuviana*? (*Chaetechelyne* at the time)
2. Valley on north side of Gebel Cantar, between Dineli and Siggiewi. Under stones on green area beside road, on Upper Corallian limestone. 28.2.79.
Lithobius (Monotarsobius) osellai?
3. Marfa Ridge, north of Mellieha. Below stone in herbaceous roadside area. 1.3.79.
Scolopendra canidens oraniensis, *Eupolybothrus impressus*.
4. Luqa Airport. Under stones in shrubbery on globigerinous limestone. 3.3.79.
Schendyla nemorensis, *Himantarium gabrielis*.

The question marks arise from doubt about immature or damaged specimens.

Records from Portugal

These similarly arose from a collection made while on holiday.

1. South of Baragem da Bravura, near Lagos, Algarve. Nardos heath with heather, gorse, rosemary and grasses. 5.3.1981.
Lithobius hispanicus Meinert,
L. variegatus rubriceps,
Lamyctes fulvicornis Meinert,
now *emarginatus* Newport.
Scolopendra canidens oraniensis,
Cryptops trisulcatus Brolemann
Clinopodes poseidonis (Verhoeff),
Dignathodon microcephalum
Geophilus carpophagus (49 leg pairs = *G. easoni* Arthur *et al.*),
Haplophilus dimidiatus (Meinert)
2. Ferragudo, Algarve. Rosemary, heather and gorse heath with asphodels. 7.3.1981.
Scolopendra cingulata
3. Alvor, Algarve. 7.3.1981.
Haplophilus dimidiatus

Records from Tenerife

1. San Eugenio, Playa de las Americas. Under debris in temporary riverbed leading up through apartments into the desert. Near sea level. 28.12.1987
Lamyctes mauriesi Demange, 1981.
 2. Playa Paraiso. In litter of shrubbery and under planks just above the beach. 3.1.1988.
Lamyctes mauriesi
- This second record was published by Eason and Enghoff (1992). When Dr. Eason first wrote to me about my collection he thought that the animals that I had obtained from these two sites all resembled (*Henicops*) *Lamyctes africana* (Porat, 1871). Eason & Enghoff point out that this might prove to be the correct name for this species in the event that *L. africana*, *L. albipes* and *L. mauriesi* prove to be synonymous.
3. South of La Esperanza. Pine forest with heather and shrubs. Altitude about 900m. 30.12.1987.
Lamyctes fulvicornis, now *emarginatus*.
 4. Between La Esperanza and El Portillo. Pine forest at about 1900m. 30.12.1987.
Lithobius tenerife.

Records from Spain

I have some records of *Lithobius variegatus variegatus* which I collected in the northern mountains of Spain and which add to those published in Eason & Serra (1986). In this instance only, the animals were not actually sent to Dr Eason. The sites are the following:

1. Between Pedron and Noya, La Coruña. Oak/eucalyptus copse, with *Rubus*, gorse, honeysuckle and foxgloves, 8km from Noya.
30. 3. 1978. UTM NH13.
2. Desfiladero del Cares, by road AS114, km35, Asturias. Deciduous woodland in gorge.
13. 5. 1995. UTM UN59.

3. South of Posadas, Sierra de la Demanda, Rioja. Pinewood with heather and broom.
16. 5. 1995. UTM VM97.
4. Valgañon, Rioja. Beechwood by road C111, the first woodland when descending from the Sierra de Santa Cruz eastwards from the provincial boundary with the Province of Burgos.
17. 5. 1995. UTM VM98.

Eason & Serra's paper was very significant at the time as it fully established that *Lithobius variegatus* was not endemic to Britain, Ireland and their surrounding islands.

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[Editors note: *Lithobius macilentus* - Unlike the situation in Britain, where only females of this species occur, both males and females were present at all localities examined here.]