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BULLETIN of the BRITISH MYRIAPOD GROUP

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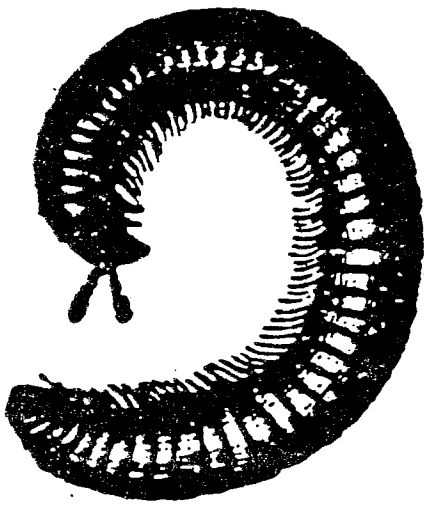

Julus Londinensis

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EDITORIAL

For this edition of the Bulletin we look to the edges of the British Isles, to Ireland and Orkney. We are very glad to receive copy from Ireland and look forward to many more contributions, perhaps one day also an organised meeting?

Thinking of stretching horizons, it has been suggested that the Bulletin should consider including articles on woodlice, since there is currently no equivalent outlet for papers on terrestrial Isopods. The editors would be very grateful for any comments either for or against this proposal, as well as any other thoughts on the contents of the Bulletin.

For 1998 the tradition is continued for faunistic studies, descriptions of species found the British Isles and structual abnormalities. As in 1997 the Latin names of our beasts receive some attention.

In a climate where biodiversity has become a well known word (even if there is some uncertainty as to what it actually means!) it is good to see an article about millipedes and the U.K. Biodiversity Action Plan. Paul Harding reminds us that even some of those species we consider quite common in Britain may not be so in Europe. Members of the public and also conservation professionals have a tendency to overlook myriapods in this country. Whilst we are never likely to achieve the publicity which surrounds groups such as butterflies, we should remember to promote them in local and national plans where relevant.

Bulletin of the British Myriapod Group 14 (1998)

RATIONALE FOR THE INCLUSION OF SEVEN SPECIES OF MILLIPEDES ON THE UK BIODIVERSITY ACTION PLAN

Paul T. Harding

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When the UK government became a signatory of the Rio Convention on Biodiversity, a process was set in train which has led to the selection of habitats and species that are considered to be 'Globally Threatened or Declining' in the UK. Seven species of millipedes have been included in these lists as the result of analyses undertaken at the Biological Records Centre (Harding, Palmer *et al.* 1995). This paper explores the reasoning behind the selection of these seven species of millipedes.

THE UK BIODIVERSITY ACTION PLAN PROCESS

Following the Rio Earth Summit in 1992, the UK government ratified its signature of the Rio Convention on Biodiversity and published *Biodiversity: the UK Action Plan* (UK BAP) in January 1994. However, the government was somewhat pre-empted by a consortium of non-governmental organisations (NGOs) such as the Royal Society for the Protection of Birds, the Wildlife Trusts and the World Wide Fund for Nature, which published *Biodiversity Challenge* a month or two earlier. *Biodiversity Challenge* and its follow-up, *Biodiversity Challenge 2nd edition* published in 1995, introduced the concept of targets for the UK BAP, to encourage the UK government to take positive action on species and habitats. The government produced its UK BAP Steering Group report (Anon. 1995) which listed more than 1200 'Globally Threatened or Declining Species'.

CRITERIA FOR SELECTION OF SPECIES UNDER THE UK BAP

Species were selected according to the following five primary criteria as established by the NGOs of the *Biodiversity Challenge* consortium and subsequently adopted by the UK BAP Steering Group (Anon. 1995). Some of the criteria can be applied on an all UK basis, but those on decline and localisation were, for reasons that are not always obvious, applied on a Great Britain only basis.

1. Recognised global or European threatened status (applies mainly to birds and some plants).
2. UK population estimated to be 25% or more of the world population (applies mainly to birds and some plants).
3. Decline in numbers or range in GB estimated to be more than 25% or more in the l ast 25 years (applies almost exclusively to birds and butterflies).
4. Occurrence in 15 or fewer 10km squares in GB.
5. Protected species listed on relevant schedules of international and national conventions and legislation.

With the exception of a few groups (most notably birds), the inclusion of a species in a published GB Red Data Book was not considered by the NGO consortium to be a valid criterion!

APPLYING THE CRITERIA TO MILLIPEDES

Harding, Suheimat *et al.* (1995) carried out preliminary analyses of data for selected invertebrate groups (butterflies, Carabidae, Orthoptera, Odonata and Diplopoda) based on these criteria. In the case of millipedes, only the following two criteria were considered to be applicable. Very small and probably under-recorded species were excluded from the analyses.

1. Number of 10km squares in GB in which species have been recorded since 1970.
2. Comparison of the GB distribution with the known European distribution (e.g. as summarised by Kime (1990a)) to estimate the global importance of the British fauna.

The analyses of the other four groups included an estimate of decline similar to that described by Thomas and Abery (1995), but insufficient historical data were available for millipedes for this analysis to be valid.

Nine species of millipede apparently qualified under these criteria for consideration as 'Globally Threatened or Declining Species' (Table 1).

TABLE 1

PRELIMINARY ANALYSIS OF MILLIPEDES UNDER THE U.K. BAP CRITERIA

Species	**10km sq (1970+)**	**European range***
Chordeuma proximum	58	France only - 12
C. sylvestre	2	Benelux, France, Germany to Italy - 84
Cylindroiulus britannicus	98	Widespread - 27
Melogona scutellare	41	France, Switzerland, Italy - 6 **
Metaiulus pratensis	5	France only - 3 **
Nanogona polydesmoides	384	France & Belgium only - 29
Ophyiulus pilosus	362	Central Europe - 85 **
Polydesmus coriaceus	116	France, Belgium, Spain, Portugal - 39
Thalassisobates littoralis	4	France & Italy only - 6

* Countries and number of 50km squares (Kime 1990a)
** European populations probably different subspecies to that in the UK

This initial list was scrutinised by advisors to the UK Biodiversity Steering Group. As a result, the list was reduced to seven species in the 'Long List' (q.v.) of the UK BAP Steering Group report (Table 2): three species from the original analysis were omitted and one was added. The interpretation of the original analysis by the UK BAP advisors was

made without further consultation with any of the authors of that analysis. The additional species, *Trachysphaera lobata*, is somewhat anomalous in the British fauna and, despite the comments by Bratton (1991), its status as a native species must be questionable.

TABLE 2

QUALIFYING FACTORS LISTED IN THE U.K. BAP LONG LIST

Species	Status	International Threat	International Importance	Decline	Localisation
Chordeuma proximum	Local	?	2	?	0
C. sylvestre		0	0	0	2
Melogona scutellare		?	2	?	+
Metaiulus pratensis		?	2	?	2
Nanogona polydesmoides		?	2	?	0
Polydesmus coriaceus		?	2	?	0
Trachysphaera lobata		0	0	0	2

Key to factors

All factors

?: Not defined

Status

Local: Not defined

International threat

2: Species of global conservation concern

0: Favourable conservation status in Europe

International importance

2: 50-74% of the world population in the UK

0: 0-24% of the world population in the UK

Decline

0: 0-24% increase in numbers/range in GB in the last 25 years (in fact, this factor was not analysed by Harding, Suheimat *et al.*(1995))

Localisation

2: Currently occurs in 1-5 10km squares in GB

+: Currently occurs in 16-100 10km squares in GB

0: Currently occurs in 101+ 10km squares in GB

MAKING SENSE OF THE LIST

The seven species of millipedes selected for inclusion in the UK BAP 'Long List' of 'Globally Threatened or Declining Species' are representative of a mainly western or north-western group of species in Europe which are often associated with moist woodlands on neutral or acidic soils. Their distribution in continental Europe varies from being very rare (*Metaiulus pratensis*) to being clearly restricted (*Chordeuma sylvestre*); *Cylindroiulus britannicus* is mainly synanthropic in continental Europe.

With its wide range of soil types and generally oceanic climate, Britain (and Ireland) could

be expected to contain species of soil and litter fauna associated with moist woodlands and wet soils. These habitats, where they occur in the rest of Europe, have almost certainly been colonised by a greater range of species (Kime 1990b). Four of the species also occur in Ireland (Doogue *et al.* 1993), suggesting a strong affinity with the Atlantic biome.

IMPLICATIONS OF THE INCLUSION OF MILLIPEDES IN THE UK BAP

An interesting precedent has been established in the UK BAP list in that species which are comparatively common or widespread in the UK can, nevertheless, be regarded as being threatened at a global scale and therefore of concern in the UK. Hitherto, almost all UK lists of threatened species have been based on perceived threatenedness (often only rarity) within the UK or Great Britain.

The UK has few endemic species, but it does have good populations of species that are characteristic of the Atlantic biome. Many of these species are marine (e.g. grey seal), montain (e.g. red grouse) or associated with high rainfall, temperate climatic conditions (e.g. many bryophytes and lichens). The recognition and definition of a similarly distinctive element in the European soil fauna, which is particularly well represented in the UK, is very preliminary. However, six of the seven species on millipedes on the UK BAP list are almost certainly components of this element, with large, widespread and sustainable populations in the UK.

All seven species (Table 2) appeared on the 'Long List' in the 1995 UK BAP Steering Group report. None were selected for inclusion in the 'Short List' or 'Middle List'; species on these two lists were to be the subject of individual Species Action Plans under the U.K. BAP process. These three confusingly named and defined lists have been reviewed in a recent report of the U.K. Biodiversity Group (Anon. 1998). Species listed in the 1995 report are now definied as either *Species of conservation concern* or *Priority species*, but it is not stated in the 1998 report how the species in the *Species of conservation concern* category will be treated!

The 1998 report lists only the redefined *Priority species* (mainly those included in the original 'Short' and 'Middle' lists). The revised criteria for *Species of conservation concern* suggest that most or all of the seven millipede species listed in Table 2 would qualify for inclusion in this category. As none of the seven species has been considered by the U.K. Biodiversity Group to be globally threatened, or to be rapidly declining in the U.K., none have been upgraded to *Priority species* status. Given the extremely restricted range and peculiar habitat of *Metaiulus pratensis*, its status in the U.K. is clearly less favourable than that of the other six species and it may deserve consideration as a *Priority species.*

CONCLUSIONS

The inclusion of seven millipedes on the UK BAP list may seem an irrelevance to both mainstream conservationists and millipede recorders. Few people are able reliably to find or identify the species, little is known about their ecological requirements or what measures could be taken to safeguard them in the UK. However, two important principles have been established with the inclusion of these species on the UK BAP list:

1. Even comparatively obscure invertebrates should qualify under national obligations stemming from the Rio Convention on biodiversity;
2. The UK has an obligation, in its priority setting for nature conservation, to take into consideration the importance of the UK flora and fauna in a wider European and global context.

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NEW IRISH VICE-COUNTY RECORDS FOR CENTIPEDES (CHILOPODA)

M. Cawley

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Barber (1983) produced the first list detailing the vice -county distribution of centipedes in Ireland, comprising 226 records from 37 of the 40 Irish vice- counties. Updated versions have been produced by Keay (1989,1993), the latter comprising 301 records, and with all 40 vice- counties being represented. A few additional vice- county records are contained in Richards (1961), Bilton (1990), and Cowen *et al.* (1990). The primary purpose of this paper is to give details of a further 108 centipede vice-county records which I made between June 1993 and January 1998. During that period I visited all of the Irish vice-counties, with the exception of South Kerry (H01), primarily with the intention of recording harvest-spiders (Opiliones), however I also collected millipedes, and to a lesser extent centipedes. Initially a small collection of centipedes were determined by Dick Jones and Andy Keay, however the great bulk of specimens were determined by myself using Eason (1964). Specimens were usually collected from under stones, pieces of wood, etc, and to a lesser extent from beneath bark, in moss, and from leaf-litter. In all, I managed to gather over 850 centipede records from a total of 176 Irish 10km squares. The fieldwork generated 677 centipede 10km square records, of which almost 600 are additional to the data contained in Barber & Keay (1988) and Jones (1992). Three species, one geophilomorph and two lithobiomorphs, were collected which appear to be additions to the Irish fauna. The identity of these specimens is currently being checked by an expert and they have not been included in this report. I failed to collect three species for which there are modern Irish records, namely *Henia brevis* (Silvestri), *Geophilus osquidatum* Brölemann and *Geophilus fucorum seurati* Brölemann. All of the information gathered will be submitted to the British Myriapod Group recording scheme using the centipede record card (RA58). The overall results of the fieldwork are summarised in Table 1.

I have retained a collection of voucher specimens, and it is my intention to eventually deposit these at the National Museum of Ireland, Dublin. The summary notes at the end of each species account are loosely based on my own field observations.

***Haplophilus subterraneus* (Shaw)**
North Kerry (H02): Killarney, V9590, 2 November 1995, mixed deciduous woodland.
South Tipperary (H07): Bansha Wood, R9233, 3 November 1996, under rubbish in hedgerow bordering conifer plantation.
Clare (H09): Cratloe, R4861, 2 August 1996, mixed deciduous woodland.
Wexford (H12): Enniscorthy, S9840, 11 October 1994, waste ground.
South-east Galway (H15): Lough Cutra, R4699, 25 July 1995, deciduous woodland.
North-east Galway (H17): Toghermore, M4549, 14 April 1995, *Fagus* hedge at edge of field.
Roscommon (H25): Boyle, G8002, 8 April 1995, field border.
East Mayo (H26): Devlis, M5179, 1 June 1995, road verge.

West Mayo (H27): Ballina, G2418, 26 May 1994, waste ground.
West Donegal (H35): Greenan, G9685, 9 April 1996, base of an old stone wall.
H. subterraneus is clearly widespread in Ireland, and, as in Great Britain it is often common in deciduous woodlands. Appears to be more frequent than *N. flavus* in the milder western half of the country.

TABLE 1
SUMMARY OF IRISH CENTIPEDE DISTRIBUTION RECORDS

Species	Cawley 1993-1998			Total Irish*		Rank in Ireland
	10km Squares	Records		10km Squares		
		No.	%	No.	%	
H. subterraneus	64	78	9.1	91	7.1	6
H. submarina	1	1	0.1	2	0.2	19
S. nemorensis	18	22	2.6	47	3.6	10
H. brevis	0	0	0.0	1	0.1	21
S. crassipes	2	2	0.2	9	0.7	17
S. maritima	15	19	2.2	49	3.8	9
G. carpophagus	10	13	1.5	30	2.3	14
G.*electricus*	5	5	0.6	20	1.6	15
G. osquidatum	0	0	0.0	1	0.1	22
G. fucorum seurati	0	0	0.0	1	0.1	20
G. oligopus	43	52	6.1	67	5.2	8
N. flavus	49	57	6.7	104	8.1	4
B. truncorum	55	76	8.9	86	6.7	7
C. hortensis	19	21	2.5	35	2.7	13
C. parisi	3	5	0.6	6	0.5	18
L. variegatus	100	131	15.3	193	15.0	2
L. forficatus	120	162	19.0	232	18.0	1
L. melanops	39	43	5.0	91	7.1	5
L. borealis	24	33	3.9	39	3.0	11
L. crassipes	8	11	1.3	13	1.0	16
L. microps	84	103	12.1	137	10.6	3
L. fulvicornis	18	20	2.3	36	2.8	12
Total	677	854	100	1290	100	

* Based on the data contained in Barber & Keay (1988), and Jones (1992), together with new 10km square records generated by my own fieldwork. Includes also a small number of records contained in Bilton (1990), Cowen *et al.* (1990) and Richards (1961).

Hydroschendyla submarina (Grube)
West Cork (H03) : Ringalurisky Point, W6141, 10 July 1997, 3 specimens under a stone on a substrate of sand and gravel, at the base of an inter-tidal rock exposure, and just above LWM.
Usually associated with inter-tidal rock crevices, and likely to be under-recorded because of the difficulty of collecting from that microsite. The only other Irish records appear to be from West Mayo (Johnson 1912) and North-east Galway (Keay 1993).

Schendyla nemorensis (Koch)
West Galway (H16): Seaweed Point, M2522, 28 March 1993, under moss on stone, coastal headland.
Longford (H24): Newtown Forbes, N1080, 29 March 1995, planted deciduous woodland.
Sligo (H28): Enniscrone, G2728, 19 October 1993, grassy bank in coastal field.
Fermanagh (H33): Belcoo, H0939, 5 November 1996, *Corylus* scrub.
East Donegal (H34): Pollarock, G8565, 4 June 1996, coastal heath.
This centipede has been recorded from all parts of the country, although in my experience it is rather easier to locate in coastal areas. It is likely to be under-recorded because of its small size.

Strigamia crassipes (Koch)
Sligo (H28): Aughris Head, G5036, 21 August 1993, coastal headland.
West Donegal (H35): Dooey, B9034, 3 September 1996, one specimen under a stone in sand dunes.
S. crassipes appears to be genuinely rare in Ireland. The total number of records now stands at 9, from 8 vice-counties, and about half of these are pre-1920. The records do however come from all parts of the island.

Strigamia maritima (Leach)
North-east Galway (H17): Lough Atalia, M3024, 3 August 1996, shingle beach.
Sligo (H28): Carrickadda Point, G3538, 21 April 1985, under rocks between the tide marks. This specimen was collected by Dr D.C.F. Cotton, and determined by A.N. Keay.
Appears to occur all around the Irish coast. In Co Sligo, I have found it to be present, but not common in the more exposed shingle beaches.

Geophilus carpophagus Leach
Wexford (H12): Lough Doo, T1029, 10 October 1994, well drained, acid hillock.
Carlow (H13): Slievebawn, S8054, 22 November 1997, upland heath.
Available records suggest that this large geophilomorph is much less common in Ireland than in Great Britain. The grand total of Irish records is just 39, of which about half are pre-1970. All of my records are from wild habitats, usually near the sea, and generally from acid soils.

Geophilus electricus (L)
South Tipperary (H07): Carrick-on -Suir, S4021, 13 January 1995, waste ground.
Laois (H14): Dunmore, S4078, 3 May 1996, mixed deciduous woodland.
Widespread, but not common in the southern third of the country, and almost unknown in the northern two-thirds.

Geophilus oligopus (Attems)
Mid Cork (H04): Blarney, W6075, 12 February 1995, mixed woodland.
Kilkenny (H11): Kilkenny Castle, S5155, 21 January 1995, planted woodland.
Wexford (H12): Ladys Island, T1007, 25 October 1994, overgrown garden.
Laois (H14): Carrick Wood, N5410, 25 March 1995, *Fagus* woodland.
South-east Galway (H15): Lough Cutra, R4699, 25 July 1995, deciduous woodland.
West Galway (H16): Barna Wood, M2423, 29 February 1996, *Quercus-Fagus* woodland on slightly acid soil.
North-east Galway (H17): Tuam, M4351, 11 December 1993, ancient graveyard.
Longford (H24): Newtown Forbes, N1080, 29 March 1995, planted deciduous woodland.
Roscommon (H25): Boyle, G8002, 20 March 1995, under rubbish in town park.
East Mayo (H26): Claremorris, M3474, 27 October 1993, town garden.
East Donegal (H34): Bundoran, G8159, 7 December 1993, waste ground.
West Donegal (H35): Donegal, G9278, 31 December 1994, mixed riverine woodland.
Numerous recent records suggest that this geophilomorph is widespread and reasonably common in Ireland, however it is noticeably less in evidence in counties along the south coast.

Necrophloeophagus flavus (De Geer)
Mid Cork (H04): Kinsale, W6549, 24 March 1995, coastal erosion bank.
North Tipperary (H10): Templemore, S1071, 14 April 1996, grassy bank.
Laois (H14): Portarlington, N5310, 4 November 1997, roadverge.
South-east Galway (H15): Gorbally, M8231, 16 February 1996, edge of field.
North-east Galway (H17): Doonmacreena , M4367, 20 June 1995, grassy bank.
Roscommon (H25): Boyle, G8002, 8 April 1996, edge of field.
West Mayo (H27): Garrycloonagh, G1816, 13 April 1995, edge of field.
East Donegal (H34): Pollarock, G8565, 4 June 1996, coastal erosion bank.
West Donegal (H35): Letterkenny, C1610, 18 January 1996, waste ground.
Again a widespread and common centipede, however there are areas of relative scarcity, most noticably Co Sligo where it only comprises 5 of my 120 centipede records. The eastern tendency which has been noted in Britain (Barber & Keay 1988) seems to hold true for Ireland also.

Brachygeophilus truncorum (Bergsöe & Meinert)
Mid Cork (H04): Blarney, W6075, 12 February 1995, mixed woodland.
East Cork (H05): Knockaroura, W5796, 2 November 1997, conifer plantation.
South Tipperary (H07): Brittas, S1261, 5 February 1996, under dead bark in beech *Fagus sylvatica* L woodland.
Kilkenny (H11): Kilkenny Castle, S5155, 21 January 1995, planted woodland.
Wexford (H12): Bunclody, S9157, 23 November 1997, *Quercus- Fagus* woodland.
Carlow (H13): Corrabut Gap, S8356, 22 November 1997, conifer plantation.
South-east Galway (H15): Ballinasloe, M8531, 16 February 1996, waste ground.
West Galway (H16): Seaweed Point, M2522, 28 March 1993, under moss on stone, coastal headland.
North-east Galway (H17): Merlin Park, M3325, 23 June 1996, *Fagus* woodland.
Meath (H22): Mosney, O1669, 12 January 1998, under dead bark in copse.
Roscommon (H25): Killukin, M9297, 12 December 1996, edge of field.

East Mayo (H26): Claremorris, M3474, 27 October 1993, edge of field.
East Donegal (H34): Troopers Hill, H1298, 17 January 1996, acid woodland.
West Donegal (H35): Donegal, G9278, 31 December 1994, mixed riverine woodland.
Another frequently recorded centipede. Common in woodlands and often the only geophilomorph present on blanket bogs.

***Cryptops hortensis* Leach**
East Cork (H05): Cork Docks, W7072, 4 May 1995, waste ground.
South Tipperary (H07): Bansha Wood, R9233, 3 November 1996, under rubbish in hedgerow.
North-east Galway (H17): Tuam, M4351, 14 April 1995, waste ground at disused railway station.
Wicklow (H20): Bray, O2618, 13 January 1998, waste ground.
East Mayo (H26): Claremorris, M3474, 27 October 1993, waste ground.
West Mayo (H27): Ballina, G2418, 26 May 1994, waste ground.
Sligo (H28): Curraghmore Lake, G6340, 14 March 1993, coastal grassland.
The status of *C. hortensis* in Ireland approximately mirrors its status in Britain: widespread, if somewhat local, in the south, but becoming increasingly scarce, coastal, and synanthropic in the north. The Sligo record comes from a species rich coastal site, and may possibly represent a natural population.

***Lithobius variegatus* Leach**
Laois (H14): Carrick Wood, N5410, 27 March 1995, beech, *Fagus sylvatica* L woodland.
North-east Galway (H17): Tuam, M4351, 14 April 1995, waste ground at disused railway station.
Roscommon (H25): Killukin, M9297, 12 December 1996 edge of field.
East Mayo (H26): Barnalyra, M4495, 2 February 1994, acid woodland.
Widespread and common in a variety of natural habitats throughout Ireland, and shows no sign of the east coast scarcity which is such a feature of its distribution in Britain. Regularly turns up with *L. forficatus*, but unlike that species rarely found in synanthropic habitats.

***Lithobius forficatus* (L)**
South-east Galway (H15): Lough Cutra, R4699, 25 July 1995, deciduous woodland.
Roscommon (H25): Doyles Bridge, N0141, 6 October 1996, waste ground.
East Mayo (H26): Charlestown, G4701, 16 November 1993, field border.
L. forficatus is the most frequently encountered and widespread centipede in Ireland, as it is in Great Britain. Turns up in a remarkably wide variety of habitats, from city centres to remote offshore islands.

***Lithobius melanops* Newport**
North Tipperary (H10): Templemore, S1072, 14 April 1996, poorly drained woodland.
Wexford (H12): Enniscorthy, S9840, 11 October 1994, waste ground.
Laois (H14): Carrick Wood, N5410, 27 March 1995, *Fagus* woodland.
North-east Galway (H17): Toghermore, M4549, 14 April 1995, *Fagus* hedge at edge of field.
Longford (H24): Newtown Forbes, N1080, 29 March 1995, planted deciduous woodland.

East Mayo (H26): Claremorris, M3474, 27 October 1993, town garden.
Leitrim (H29): Drumshanbo, G9610, 8 June 1996, mixed woodland.
Tyrone (H36): Dungannon, H7962, 9 October 1995, edge of field.
Again a widely recorded centipede. Noticeably commoner in coastal areas, especially in sand dunes.

***Lithobius borealis* Meinert**
East Cork (H05): Knockaroura, W5796, 2 November 1997, conifer plantation.
South Tipperary (H07): Bansha Wood, R9233, 3 November 1996, conifer plantation.
Limerick (H08): Knightsgrove, R5918, 17 August 1997,conifer plantation.
Carlow (H13): Slievebawn, S8054, 22 November 1997, upland heath.
Offaly (H18): Clonard Wood, N3219, 25 May 1997, conifer plantation.
Roscommon (H25): Cornaglia, G7604, 8 January 1998, under moss on tree stumps in conifer plantation.
East Mayo (H26): Barnalyra, M4495, 2 February 1994, acid woodland.
West Donegal (H35): Rathmelton, C2120, 21 February 1996, riverine woodland.
Now recorded from all parts of the island. Appears to be rather common in upland areas. In the lowlands, usually associated with acid soils.

***Lithobius crassipes* Koch**
Sligo (H28): Ben Wiskin, G7249, 2 May 1985. This specimen was collected by Dr D.C.F. Cotton, and determined by A.N. Keay.
Fermanagh (H33): Ballindarragh, H3137, 14 October 1996, field border.
West Donegal (H35): Camusmore Bay, Tory Island, B8646, 31 August 1996, exposed coastal grassland.
The above constitute the first modern Irish records for *L. crassipes*. Appears to be genuinely rare in Ireland, in contrast to Great Britain where it is a frequently recorded species. Older Irish records have tended to come from the north-east, a part of the country which has been largely neglected by modern workers.

***Lithobius microps* Meinert**
Clare (H09): Inishmore, L8809, 19 July 1996, limestone pavement.
Laois (H14): Carrick Wood, N5410, 27 March 1995, *Fagus* woodland.
South-east Galway (H15): Lough Cutra, R4699, 25 July 1995, deciduous woodland.
West Galway (H16): Barna Wood, M2423, 29 February 1996, *Quercus-Fagus* woodland.
North-east Galway (H17): Tuam, M4351, 11 December 1993, ancient graveyard.
East Mayo (H26): Ballindine, M3668, 20 June 1995, conifer plantation.
West Mayo (H27): Castle Gore, G1918, 13 April 1995, acid woodland.
Monaghan (H32): Monaghan, H6733, 2 October 1995, rank grassland.
Fermanagh (H33): Enniskillen, H2344, 15 January 1996, grassy bank.
East Donegal (H34): Bundoran, G8258, 2 December 1996, grassy bank.
Londonderry (H40): Coleraine, C8531, 23 October 1996, hedgerow.
L. microps is widespread in Ireland, where it is the only commonly encountered small lithobiomorph. Turns up in a great variety of habitats.

Lamcytes fulvicornis **Meinert**
North Kerry (H02): Tralee, Q8213, 8 September 1996, waste ground.
Wexford (H12): Wexford, T0422, 9 October 1994, waste ground.
North-east Galway (H17): Galway Docks, M3024, 3 August 1996, waste ground.
Sligo (H28): Colgagh Lake, G7436, 11 October 1992, marshy grassland.
Tyrone (H36): Dungannon, H7962, 9 October 1995, edge of field.
Thinly scattered throughout Ireland, but likely to be under-recorded because of its restricted season. My records fall in the period end of July to mid-October, with single outliers in May and June.

SUMMARY

The addition of the above records bring the grand total of Irish centipede vice-county records to 415, giving an average of 10 species recorded per vice-county. The counties with the richest faunas are Mid Cork (H04) and Sligo (H28), each with 16 species recorded. The least recorded county is Cavan (H30) with 5 species. I have been able to collect centipedes from most parts of the country, and this has helped reduce the geographical bias in my data, however there has been a definite concentration of effort in the north-west, and the high species total for Sligo is clearly a reflection of this. On the other hand this may help to balance the south and east recording bias which is evident in Barber & Keay (1988). I have few records from Northern Ireland, which remains the most under-recorded part of the island for mapping purposes.

It should be born in mind that much of my centipede recording was carried out as an adjunct to other natural history activities. This is likely to lead to large, obvious species such as *L. forficatus* being well recorded, whereas small, soil dwelling species such as *S. nemorensis* will tend to have been missed. Also I have few collections from garden sites, which may explain the small number of *G. electricus* records.

ACKNOWLEDGEMENTS

Thanks go to Dick Jones for checking the identity of a small collection of specimens, and for all his help on myriapodological matters. Andy Keay checked a small number of specimens in 1995.

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A PRELIMINARY LIST OF THE MYRIAPODS OF ORKNEY

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INTRODUCTION

The Orkney Islands are a group of about 70, mostly fairly low lying, islands between 58° 41' and 59° 24' N and 2° 22' and 3° 26' W separated from the Scottish mainland by the Pentland Firth, about 10 km at its narrowest. The highest point, Ward of Hoy on Hoy is 477m and no island other than Hoy has land over 270m. The highest point on Mainland is Ward Hill 268m. Less than 20 of the islands are inhabited.

The largest island is Mainland, linked to the southern isles of Burray and South Ronaldsay by the wartime Churchill Barriers and their roads. Lamb Holm (Laman) and Glimps Holm (Glimsholm), lying between Mainland and Burray are linked with them and to each other by these barriers. Other southern isles are Hoy, Flotta, and Graemsay. Shapinsay and Stronsay lie to the west of Mainland. Northern isles include, Rousay, Egilsay, Eday, Westray, Papa Westray, Sanday and North Ronaldsay. The climate is mild (mean daily temperatures vary by only 9.6 ° C between January and July) but windy. Average rainfall is about 890 - 1020mm p.a. (Berry, 1985)

Land Cover of Scotland Data (quoted in Orkney Local Biodiversity Action Plan Forum, 1997) shows land cover to be 55% improved grassland, 15% heather moorland, 11% peatland, 3.3% freshwater, 1.1% marsh, 1.5% dune. Woodland cover is insignificant but significantly adds to the biodiversity where it occurs. Berriedale Wood on Hoy is the most northerly natural woodland in Britain; other small areas of woodland are minor areas e.g. of aspen or represent plantations of broadleaves including sycamore, wych elm, alder, beech, ash, etc. These latter are likely to be significant in the occurrence of myriapods. Coniferous plantations represent a total of only 0.1km^2 mostly experimental (unsuccessful) plantations from the 1950s on Hoy.

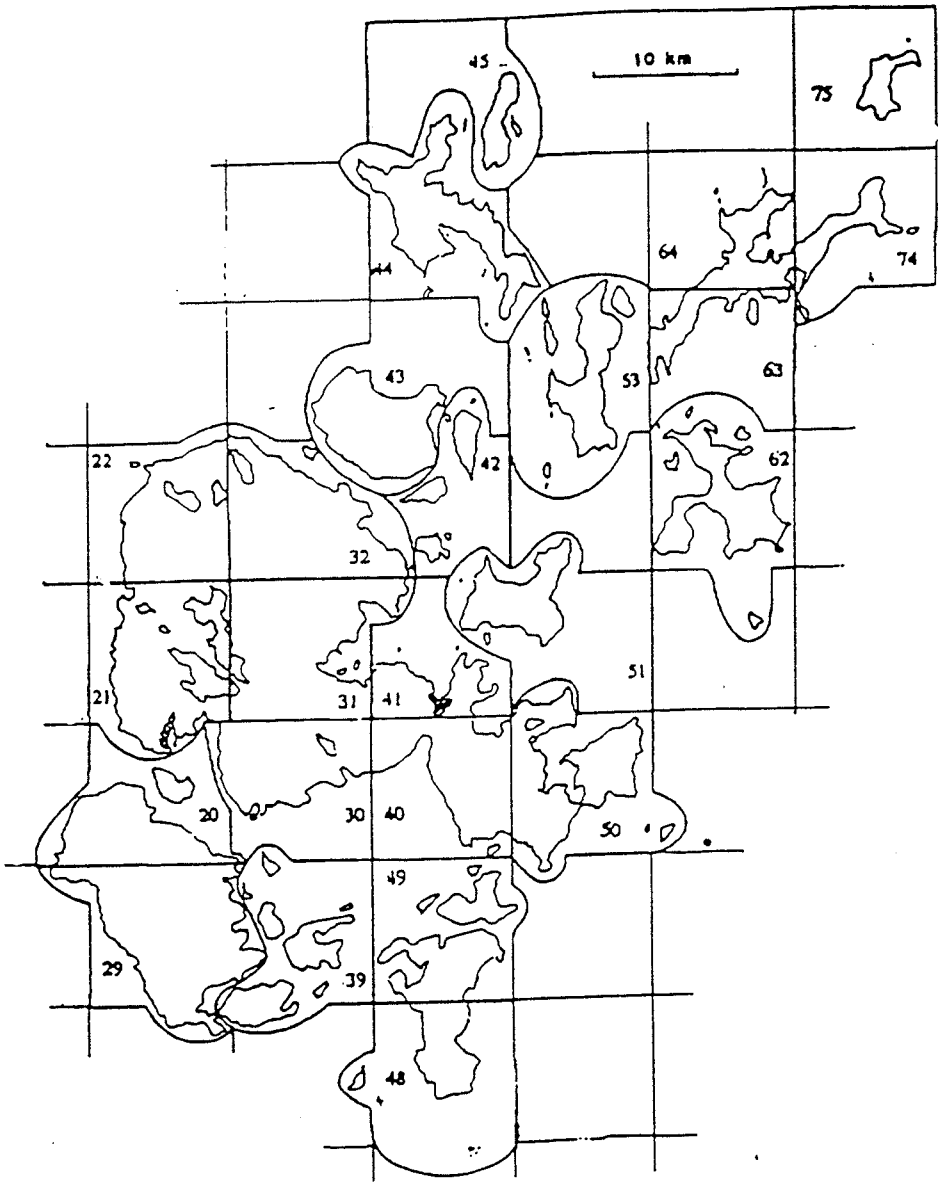
Orkney has been subject to human settlement over a long period of time and is well known for its archaeological remains. Very much under Scandinavian influence and for a period under the Norwegian crown, Kirkwall is closer to Oslo than it is to London. The relative isolation, topography land-use climate factors and the influence of the various settlements gives Orkney its current fauna and flora. An account of its natural history is given by Berry (1985).

Biological recording of the islands has been co-ordinated by the Orkney Biological Records Centre. The unit of recording used is the so called "islandised square" (Orkney Local Biodiversity Action Plan Forum, op.cit.) as being more appropriate than the conventional 10km National Grid square used on mainland Britain which, for instance, causes the small island of Papa Westray, only 7km by 2.5km, to lie in four different recording squares (44, 45, 54, 55). In the islandised system this island along

Map 1

ORKNEY SHOWING ISLANDISED SQUARES

29, 20 Hoy & Graemsay
21, 22, 30, 31 West Mainland
39 South Isles West including Longhope
49 South Ronaldsay & Burray
48 South Ronaldsay
40 Holm & St.Ola (Mainland)
41 St.Ola (N) (Mainland)
42 Egilsay, Wyre, Gairsay
43 Rousay
44 Westray
45 Papa Westray
50 East Mainland
51 Shapsinsay
53 Eday, etc.
62 Stronsay, etc.
63, 64, 74 Sanday
75 North Ronaldsay



with its Holm is assigned to square 45 where the largest part lies. (See Map 1). The islandised records for myriapods are shown in Table 1.

Myriapod records from Orkney seem to date only from 1978 when D.B.Britt recorded three millipede species (*Nanogona polydesmoides*, *Archiboeoiuls pallidus* and *Polydesmus angustus*) from Mainland and Hoy. Subsequently P.T.Harding collected one millipede (*Cylindroiulus latestriatus*) and two centipedes (*Strigamia maritima* and *Lithobius forficatus*) from Mainland in 1981. C.P.Rawcliffe (1986) and G.B.Corbet (1994) added species from Mainland, South Ronaldsay and Rousay. The present author visited the islands in 1995 and additionally collected on Papa Westray. The total numbers of species so far is only 9 diplopods and 9 chilopods. All collections have been made during August or September. No doubt work by others or earlier in the year would yield a greater number of species.

A comparison with Shetland and Northern Scotland is shown in Table 2.

RECORDS OF SPECIES

DIPLOPODA

Nanogona polydesmoides

This was collected at Ogil Burn on Hoy, Tratland on Rousay and at two sites on Mainland (Loch of Stenness, Quoyberstane), one a garden. Likely to be fairly widespread.

Archiboreoiulus pallidus

The familiar spotted snake millipede, *Blaniulus guttulatus* does not occur this far north. There are two mainland records of *A.pallidus*, Binscarth Wood and a coastal site at Tingwall where it was numerous in rock crevices beside a stream.

Boreoiulus tenuis

Collected by G.B.Corbet at Hurtiso on Mainland.

Proteroiulus fuscus

The only record of this is from sycamore woodland at Orphir. The lack of woodland on the islands will clearly restrict the occurrence of this and other typically woodland species.

Cylindroiulus latestriatus

This species, which often favours maritime sites, is a common animal in Orkney and is recorded from Mainland (Aikerness, Yesnaby, Orphir, Skipi Geo, Bay of Skail, Skara Brae, Brough of Birsay), Lamb Holm, Glimps Holm, South Ronaldsay (Widewall), Hoy (Hurliness) and Papa Westray. It is likely to be found on all of the islands.

Cylindroiulus punctatus

Like *Proteroiulus fuscus*, a woodland species which is probably one of the commonest millipedes in much of Britain, this is restricted in Orkney by lack of appropriate habitats. Recorded from three sites on Mainland (Binscarth Wood, woodland at Orphir and a garden at Quoyberstane).

Brachydesmus superus

This smallish polydesmid is actually recorded only from Binscarth Wood on Mainland (twice). It might be expected to be much more common so is possibly overlooked.

Polydesmus angustus

This polydesmid, common over much of Britain, is recorded here from Mainland (Stromness Harbour, Loch of Stenness and Binscarth Wood) and from Hoy (Ogil Burn and roadside near Dwarfie Stane).

Polydesmus inconstans

Recorded twice from Mainland (Wideford Hill and Dounby Click Mill).

CHILOPODA

Strigamia maritima

This littoral species of centipede is probably common all round the coastlines of the islands. Actually recorded from Mainland (Stromness, Finstown, Orphir, Sandi Sand, Yesnaby and Brough of Birsay) and from Rousay (Knowe of Burrian).
Geophilus carpophagus

This species favours a variety of habitats in various parts of Britain including woodland and moorland. It has actually been recorded only from Widewall where two females were found. Possibly searching at a different time of year would yield more specimens. It has, however, not been recorded from Shetland or Caithness.

***Geophilus oligopus* (*Geophilus insculptus*)**

Recorded from three sites on Mainland, one a garden (Binscarth Wood, Tingwall and Quoyberstane). Possibly more easily found earlier in the year.

Brachygeophilus truncorum

Although commonly a woodland species, this is also an animal of moorland and grassland. Recorded from three sites on Mainland (Grit Ness, Orphir, Skipi Geo) and two on Papa Westray (North Hill and Machair) it is probably widespread in the islands.

Lithobius forficatus

The large common lithobiid, recorded from 11 sites on Mainland, four on Hoy, three on Papa Westray, two on Rousay, two on South Ronaldsay, Lamb Holm and Glimps Holm. The locations included both urban and rural sites.

Lithobius melanops.

A species associated with both human activity and coastal sites. Recorded from Mainland (Binscarth Wood, Skipi Geo, Orphir, Sandi Sand and Quoyberstane), South Ronaldsay (Burwick), Burray Northfield), Hoy (Rackwick) and Papa Westray.

Lithobius borealis

The only records so far of this species are from Hoy (Betty Corrigal's Grave and Rackwick). It is commonly associated with moorland.

Lithobius crassipes

Seven records from Mainland (Wideford Hill, Dounby, Evie, Orphir, Skipi Geo, Sandi Sand and Tingwall) together with specimens from South Ronaldsay (Windwick), Rousay (Knowe of Burrian) and Papa Westray (Machair area).

In eastern areas of Britain *L.crassipes* is the typical small *Lithobius* of many areas including moorland whereas *L.borealis* seems to be more western. The fact that *L.crassipes* was not found on Hoy but *L.borealis* was and the latter species was not found on mainland nor on the moorland of Papa Westray (North Hill) which is a "typical" habitat for it is interesting. In Shetland (Barber, 1986) *L.borealis* was found on Mainland, Unst, Bressay, Fetlar and ? Yell whereas *L.crassipes* was not recorded. There appear to be no records of *L.borealis* from Caithness.

Lamyctes fulvicornis

This species, which is typically found in late summer and autumn is recorded from Mainland (Wideford Hill, Skipi Geo), Rousay (Hunclett), Hoy (Dwarfie Stane) and Papa Westray (North Hill NR).

DISCUSSION

Reference has already been made to the interesting occurrence of the two smaller species of *Lithobius.* There is little unpredictable in our list of species; it is a very limited one compared with southern Britain and indeed with Southern Scotland. Undoubtedly this is, in part, due to the small amount of collecting and the season when this was done and we might, for instance on the basis of comparison with other areas (Table 2) expect, in due course to find others such as *Polydesmus denticulatus* and *Schendyla nemorensis.*

Two relatively large iulid millipedes, *Ophyiulus pilosus* and *Ommatoiulus sabulosus*

are recorded from Caithness and Sutherland but from neither Orkney nor Shetland so far and could possibly be found. The conspicuous variegated centipede, *Lithobius variegatus* was not seen and, given its characteristics and the presence of suitable habitats, together with its apparent absence in Shetland, Caithness and Sutherland, it is probably not present although found in the Outer Hebrides (VC110). It often has a marked westerly distribution.

The geophilomorph *Geophilus proximus* is known only from a single female from Unst, Shetland. This is the sole British record. It could possibly be found in Orkney.

ACKNOWLEDGEMENTS

My thanks are due to Chris Booth and Keith Fairclough of the Orkney Field Club and RSPB respectively and to the other members of the OFC who made me welcome at a field meeting. Also to Ann Prior, RSPB warden on Papa Westray who gave us shelter and a hot drink on a day that was, even by Orkney summer standards apparently, highly unseasonable.

Charles Rawcliffe and Gordon Corbet both kindly made their records available, Dick Jones gave me an updated millipede list and Paul Harding of Biological Records Centre a print-out from their records.

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TABLE 1

ISLANDISED SQUARE RECORDS FOR MYRIAPODS

	Mainland	**South Ronaldsay & Burray**	**Rousay**	**Hoy**	**Papa Westray**
DIPLOPODA					
Nanogona polydesmoides	21,41		42		
Archiboreoiulus pallidus	31				
Boreoiulus tenuis	50				
Proteroiulus fuscus	30				
Cylindroiulus latestriatus	21,22,30,32,40	49		29	45
Cylindroiulus punctatus	30,31,32				
Brachydesmus superus	31				
Polydesmus angustus	21,31			20	
Polydesmus inconstans	32,41				
CHILOPODA					
Strigamia maritima	21, 22, 30, 31,50	49			
Geophilus carpophagus		49			
Geophilus oligopus	31,41	48			
Brachygeophilus truncorum	22,30,32			29	45
Lithobius forficatus	21,22,30,32,40,41,50	48,49	43	20,29	45
Lithobius melanops	22,30,31,41,50	48,49		29	
Lithobius borealis				29	
Lamyctes fulvicornis	22,41		43	20,29	45

TABLE 2

OCCURRENCE OF SPECIES IN NORTHERN SCOTLAND & ISLANDS

Species	Caithness	Sutherland	Orkney	Shetland	Outer Hebredies
DIPLOPODA					
VC	**109**	**107/108**	**111**	**112**	**110**
N. polydesmoides	x	x	x	x	x
A. .pallidus			x		
B. tenuis			x	x	
P .fuscus	x	x	x	x	
C. latestriatus	x	x	x	x	x
C. punctatus	x	x	x	x	x
O. pilosus	x	x			x
O. sabulosus	x	x			
B. superus	x	x	x		x
P. angustus	x	x	x		x
P. denticulatus				x	
P. inconstans	x	x	x	x	x
Total recorded species of diplopod					
	8	**8**	**9**	**7**	**6**

Total diplopod species recorded for VCs 107, 108, 109, 111, 112 = 12

CHILOPODA

VC	**109**	**107/108**	**111**	**112**	**110**
S. nemorensis		x		x	x
S. maritima		x	x	x	x
G. carpophagus		x	x		x
G. oligopus		x	x	x	
G. proximus				x	
B. truncorum	x	x	x	x	x
L. variegatus		x			x
L. forficatus	x	x	x	x	x
L. melanops	x	x	x	x	x
L. borealis		x	x	x	x
L. crassipes	x	x	x		
L. fulvicornis		x	x	x	x
Total recorded species of chilopod					
	4	**11**	**9**	**9**	**9**

Total chilopod species recorded for VCs 107, 108, 109, 111, 112 = 12

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A DESCRIPTION OF *SCHENDYLA PEYERIMHOFFI* BRÖLEMANN AND RIBAUT (1911)

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INTRODUCTION

Schendyla peyerimhoffi has been found around the western coast of Britain from Anglesey to Beachy Head. It may cover a greater range, and may also occur in Ireland. The purpose of this paper is to update Lewis (1961) and Eason (1964) and bring out the differences between it and *Schendyla nemorensis* which looks very similar. Although it appears to be uncommon this is probably due to a failure to collect in the appropriate microsites.

Originally described from Morocco and subsequently from Portugal it was first found in Britain by Lewis (1961) who was looking at the centipedes of the tidal zone. It was later identified from a collection made in the Isles of Scilly by Turk (1946) and it was found to be widespread in Devon and Cornwall. Barber (1987) found it in the estuaries of the Erme, Avon, Dart, Teign and Exe but not in the Yealm or Plym. Jones and Pratley (1987) found it common in the Isles of Scilly and Hopkin found it on Anglesey. Blower found it common around the Gower (Barber & Keay, 1988) and also in Brittany (1987). The known distribution means that it is probably common along much of the Atlantic seaboard provided the correct habitats are searched. *Geophilus pusillifrater* has for instance been found in the Channel Isles on Guernsey (Newsletter No. 20. 1994). *S. peyerimhoffi* has been found around the high tide level, at the same level as *Geophilus fucorum* and *Strigamia maritima*. It also occurs in rock crevices and from under lichen covered stones in the *Pelvetia* zone and has been found particularly in estuaries.

DESCRIPTION

Schendyla peyerimhoffi is a small schendylid centipede superficially like *S. nemorensis* which can be found under the same stones. A look at the last pair of legs with a lens should show that you have a probable *peyerimhoffi* if the last segment of each leg is very short. It needs confirmation under a microscope where the following features will be seen:

Length: up to 21.5mm.
No. of leg bearing segments: 39 - 45. The British specimens are at the higher end of the scale.
Coloration: Colourless to very pale yellow with head darker.
Antennae: almost 3 times the head segment when fully extended. Sparsely covered with setae, those at the distal end very short (Fig 1).
Head capsule: Very slightly longer than broad, convex borders. Lamina basalis present (Fig 1).

Clypeus: 1+1(0) post antennary, 2+2(3) intermediate and 1+1 prelabial setae (Fig 9). At least some *S. nemorensis* have 3+3 intermediate setae.
Labrum: Side-pieces weak, merging into the mid-piece consisting of 14 or fewer teeth, the outer ones having sharp points and presumably arising from the side-pieces (Fig 9).
Mandible: of typical schendylid form with pectinate and dentate lamellae, the dentate forming three blocks of 3, 3, 2 (Figs 4, 5).
Maxillae: First maxilla with 1(0)+1 seta on each telopodite and 1+1 seta on the coxal projections. 2 palps on each telopodites, the ones on the coxae are rather indistinct. Second maxilla has spoon shaped apical claws to the telopodites bearing no spines (Fig 3).
Forcipular segment: Forcipular tergite trapesoidal, about as wide as head at the posterior. Poison claws without chitin lines, coxopleural suture prominent (Fig 2). Poison claws short, claw with a basal node, concavity with crenulations which are large and uneven (Fig 8). *S. nemorensis* has a smooth concavity which occasionally has a few well spaced incisures. The poison claws reach short of the head capsule when closed.
Trunk: Pores on segments 2-11, (Fig 6) being narrower, more elongate and placed further forward on the sternites than in *S. nemorensis.*
Last trunk segment: Metatergite trapesoidal, the edges very slightly convex (Fig 12). Metasternite trapeziform covering 2 coxal pores on each side (Figs 7, 10, 11). Legs much more swollen than the normal walking legs but male and female legs about the same size. Metatarsus of the last leg short (about 3 to 4x smaller than tarsus) (Fig 10, 11). *S. nemorensis* has the metatarsus much longer (about 2 to 2.5x smaller than the tarsus) (Fig 13). There is no apical claw. The coxae of the last legs are more swollen than in *S. nemorensis* and covered with more setae. In *S. nemorensis* there is a distinctly swollen part to the coxa which is differentiated from the rest of the coxa as a bulge (Fig 13).

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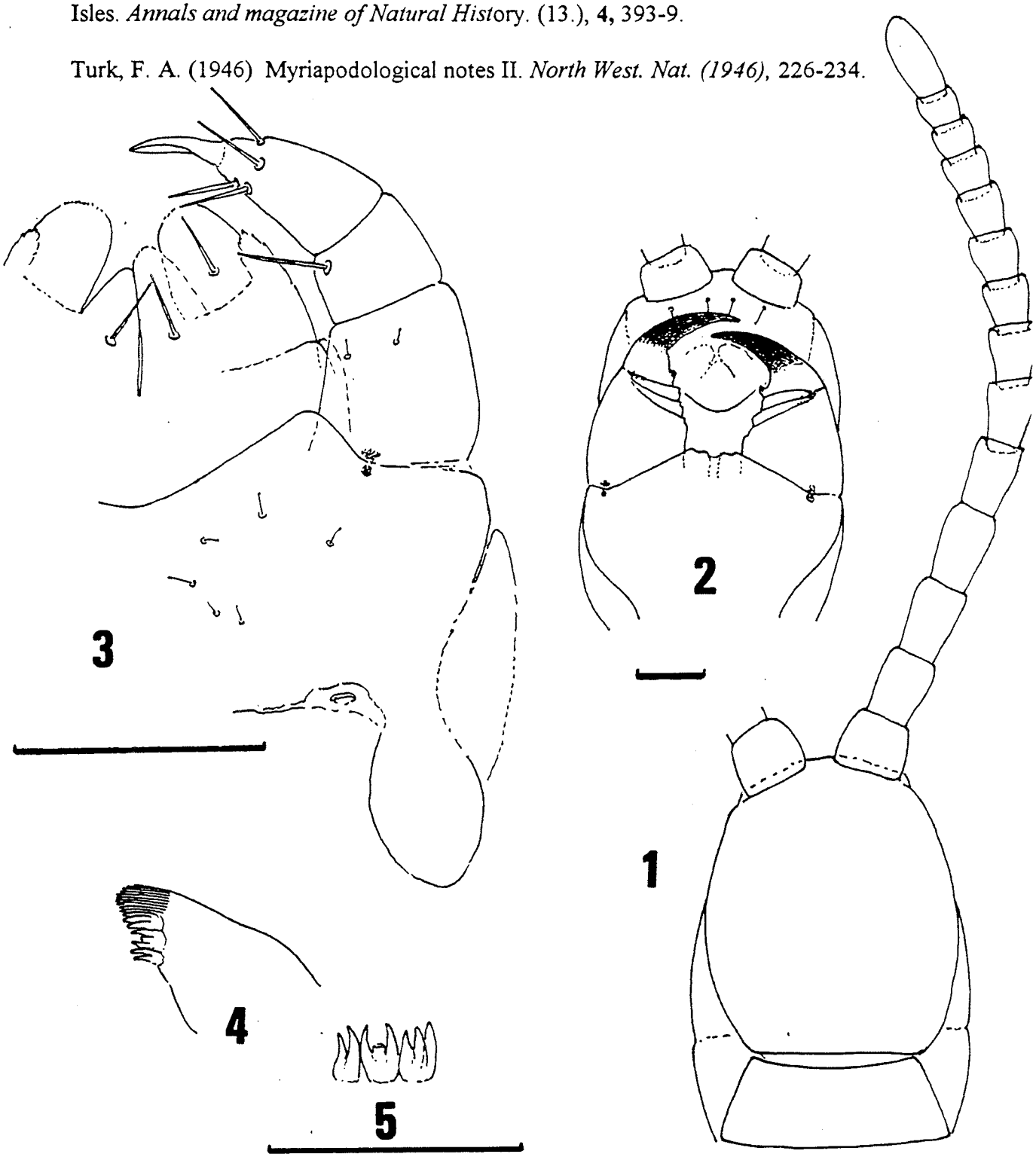
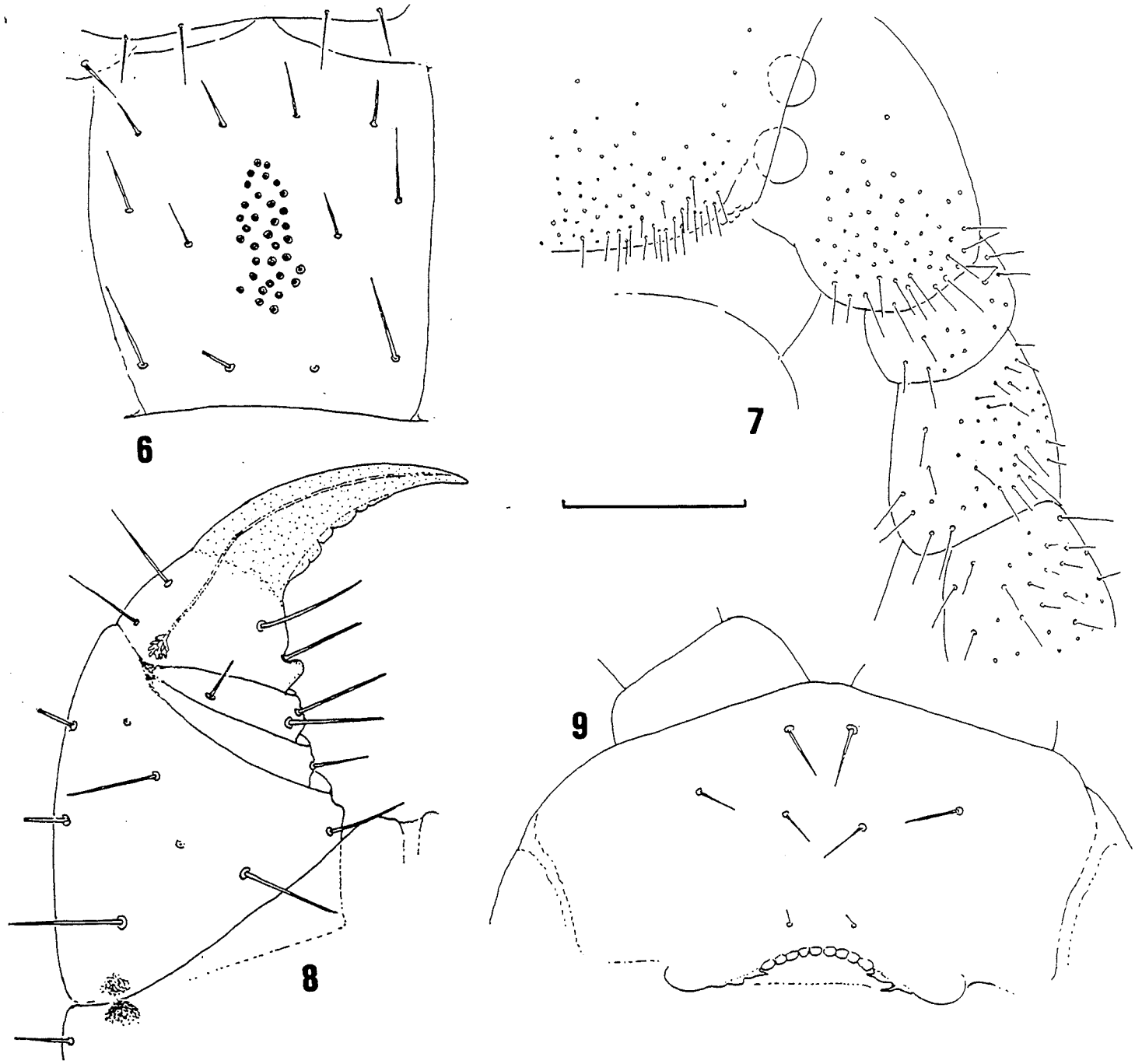
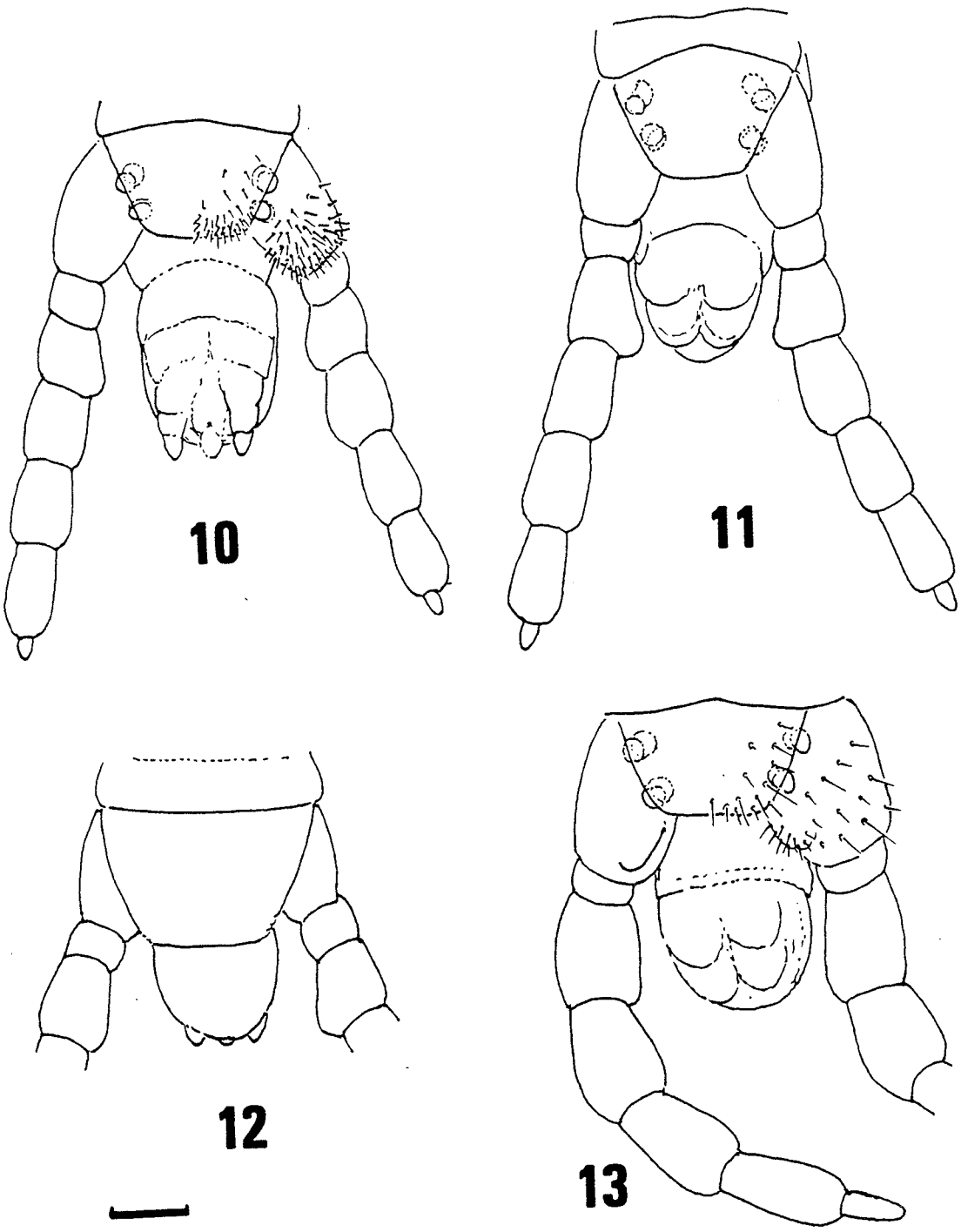


Figures 1-5. *Schendyla peyerimhoffi* Brölemann and Ribaut (1911) specimens from the Isles of Scilly. 1) Head, antenna and forcipular tergite, dorsal. 2) Head and forcipular segment, ventral. 3) First and second maxillae, ventral, left half. 4) Mandible. 5) Dentate lamellae of mandible. Scale bars = 0.1mm. except for No. 5 which = 0.05mm.



Figures 6-9. *Schendyla peyerimhoffi* Brölemann and Ribaut (1911) specimens from the Isles of Scilly. 6) 6th segment, ventral showing pores. {NB. tail end uppermost} 7) Part of the metatergite, coxa trochanter, prefemur etc. of the last leg m showing sites of setae. 8) Poison claw. 9) Clypeus and labrum. Scale bars = 0.1mm.



Figures 10-12. *Schendyla peyerimhoffi* Brölemann and Ribaut (1911) specimens from the Isles of Scilly. 10) Last leg bearing segment, male ventral. 11) Last leg bearing segment, female ventral. 12) Last segment, male dorsal. Figure 13. *Schendyla nemorensis* (C. L. Koch) Last segment, female ventral. Scale bars = 0.1mm.

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THE LATIN NAMES OF BRITISH CENTIPEDES

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INTRODUCTION

This paper is a follow on from my earlier listing of The Latin Names of British Millipedes (Slawson, 1996) and much of this introduction is a repeat of that article. This is by no means comprehensive, and much has been gleaned from Latin and Greek dictionaries, I do not have the time or availability to access the original descriptions of the species - where the derivation of the name is often also explained. Many scientific names are open to personal interpretation, and I am indebted to Helen Read and her colleagues in the B.M.G. for their critical corrections and additional derivations included in this list. However, there are still a few missing - any suggestions will be greatly appreciated.

KEY

Many of the names come from the Latin from which numerous common English words are derived. In some cases, the species name is the exact spelling of the Latin word, to avoid repetition, the Latin word is omitted. Some specific names are used for more than one species, often with different endings (dependent on the gender of the generic name e.g. *armatum* or *armatus*) - rather than including two entries, these different versions are denoted as follows - *armat|um -us*. Some names have more than one possible derivation, in these cases two entries are included.
For Greek derivations I have included the original Greek spelling, therefore there follows here a quick listing of the approximate transliterations of the Greek letters:

ABBREVIATIONS

GK	- Greek	L	- Latin	N.L.	- New Latin
M.E.	- Middle English	Met.	- Metonym	Myth.	- Mythological
Pat.	- Patronym	Obs.	- Obscure meaning		

It has not been possible to determine the derivation of some names. Any suggestions for the following scientific names would be appreciated by the author or Editor: *Chalandea, coleoptrata, duboscqui, osquidatum, peyerimhoffi, seurati, Strigamia & Tygarrup.*

acuminata (L: *acumen*) a point - acuminate; pointed or tapered; (L: *-atus*) bearing

agilis (L) easily moved, mobile

anomalans (GK: ανωμαλος) irregular, uneven

aulacopus (GK: αυλαχος) a furrow; (GK: πους) a foot

borealis (GK: βορειος) northern

Brachygeophilus (GK: βραχυς) short; (from *Geophilus*) q.v.

Brachyschendyla (GK: βραχυς) short; (from *Schendyla*) q.v.

brevior (L: *brevis*) short; (L: *ora*) border, edge

brevis (L) short

calcaratus (L: *calcar*) a spur; (L: *-atus*) bearing

carniolensis (L) Carniola, former Austrian crownland, N. Yugoslavia; (L: *-ensis*) indicates place of origin : from Carniola

carpophagus (GK: καρπος) fruit; (GK: φαγι) food

Chaetechelyne (GK: χαιτη) a mane; (GK: χελι) an eel : a hairy eel

CHILOPODA [Class] (GK: χιλιας) a thousand; (GK: ποδι) the foot : referring to the number of legs, but not as a hundred!

Clinopodes (GK: κλινω) lean; bend; (GK: ποδι) a foot or leg : with bent legs

crassipes (L: *crassus*) thick; (L: *pes*) the foot : with thick legs

Cryptops (GK: κρυπτω) hide, conceal

curtipes (L) shortened or mutilated; (PES: *the foot*) with short legs

dalmatica (L) Dalmatia, SW Yugoslavia; (L: *-aticus*) indicates place of origin : from Dalmatia

dentata -um (L: *dentatus*) toothed

Dicellophilus (GK: δικελλα) two-pronged fork; (GK: φιλη) friend

electricus (GK: ηλεκτρικος) electric

erythrocephalus (GK: ερυθρος) red; reddish; (GK: κεφαλη) the head : with a red head

ferrugineum (L) rusty; light red brown

flavus (L) pale yellow

forficatus (L: *forfex*) scissors; (L: *-atus*) bearing : referring to the jaws

fucorum (L: *fuco*) to redden : referring to the darker coloured head

fulvicornis (L: *fulvus*) yellow or tawny; (L: *cornus*) a horn : referring to the antennae

Geophilus (GK: γεως) the Earth; (GK: φιλος) a friend : referring to its subterranean habits

Haplophilus (GK: απλους) simple; (GK: φιλος) a friend

Henia (GK: ειαιος) single; uniform

hortensis (L: *hortus*) a garden; (L: *-ensis*) indicates place of origin : of the garden

Hydroschendyla (GK: ψδωρ) water; (GE: *Schendyla*) q.v.

insculptus (L: *insculpo*) to cut or carve in : referring to the carpophagus fossae

javanicus (L) from Java

Lamyctes (GK: λαμα) a thin sheet

lapidicola (L: *lapis*) a stone; (L: *colo*) inhabit : inhabiting stony places

linearis (L: *linea*) a line

Lithobius (GK: λιθος) a stone : found under stones

longicornis (L: *longus*) long; (L: *cornus*) a horn : referring to the antennae

macilentus (L) thin

maritima -um -us (L) of the sea; coastal

melanops (GK: μελας) black; (GK: οψις) appearance

microps (GK: μικρος) small; (GK: οψις) appearance

monoeci (GK: μονος) single; (GK: εικων) image or picture

montana -um (L: *montanus*) of mountains

muticus (L) without a point; blunt

MYRIAPODA (GK: μυριοι) numberless; (GK: ποδι) the foot : many-legged

Necrophloeophagus (GK: νεκρος) dead; lifeless; (GK: φλοιος) rind; bark; (GK: φαγι) food : feeding in dead bark

nemorensis (L) of a grove or wood, particularly the grove of Diana near Aricia

Nesoporogaster (:) ; (GK: πορως) a passage; pore; (GK: γαστηρ) belly

oblongocribellata (L: *oblongus*) oblong or elongate

Pachymerium (GK: παχυς) thick or stout; (GK: μερις) portion

parisi (L: *Parisii*) from Paris, France

peregrinus (L) foreign

piceus (L) pitch-black

piliconnis (L: *pilus*) a hair; (L: *cornus*) a horn : referring to the antennae

pinguis (L) fat; greasy

proxima -um -us (L: *proximus*) nearest : to another species?

pusillifrater (L: *pusillus*) very little; (GK: φρατωρ) a brother : referring to its small size

Schendyla (GK: σχοινον) a rope

Scolopendra (GK: σκολοπενδρα) a millipede

Scutigera (L: *scutulum*) a small shield; (L: *gero*) to bear (carry)

submarina (L: *sub*) below; (L: *marinus*) the sea? : referring to its maritime habits

subspinipes (L: *sub*) below; (L: *spina*) a thorn; (L: *pes*) the foot

subterraneus (L) underground

tenebrosus (L) dark or gloomy

tricuspis (L: *tres*) three; (L: *cuspis*) a point

truncorum (L: *truncus*) a tree trunk : referring to its habitat

variegata -us (L: *varius*) mottled; (L: *-atus*) bearing

vesuviana (L) Vesuvius, Italy : from Vesuvius

zonalis (L: *zona*) a belt; (L: *-alis*) pertaining to

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SOME COMMENTS ON THE LATIN NAMES OF BRITISH MILLIPDEDS

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Although the words used for composing the Latin names of animals are not necessarily having a particular descriptive significance and may even consist of purely arbitrary combinations of letters, fact is that most authors did choose descriptive names for the taxa they proposed. Knowledge of the meaning of these words may not be of scientific importance, it can help the reader to memorise the names and their spelling. Mr. Slawson's list (Slawson, 1996) serves this purpose very well. It is only to improve the quality of the list that I take the liberty to make some suggestions with regard to the correct meaning of a few names.

Entothalassinum – The name was coined by Attems (1914: 228) probably to emphasize the distribution of the genus: around the (western part of the) Mediterranean sea (*ento* = within, *thalasso* = sea: inland sea).

Lagur/a –us – This name is composed of two Greek words: *lagos* = hare, *oura* = tail: hare-tail, obviously referring to the caudal tufts of setae of the animal.

Melanops – Consisting of the Greek words *melas* = black, *ops* = eye: with black eyes.

Oxidus – when proposing this generic name for the greenhouse millipede *Fontaria gracilis* C.L. Koch, Cook (1911:628) alluded "....to the repugnatorial secretion of prussic acid".

Polyxenus – Etymologically this is a rather peculiar matter. Latreille (1804:82), who was the author of this name, spelled it with a double l: *Pollyxenus*, and gave as the meaning of the word "pollyxène": "rusé", in English: cunning, sly. He referred to the habit of the animals to hide under bark. Subsequent classical authors, e.g. Gervais, Koch, Leach, Lucas, in their writings mostly followed Latreille's orthography. It was Latzel (1884: 70) who pointed out that he knew of no Greek dictionary giving a translation of *Pollyxenus* as stated by Latreille. He preferred to drop one l and formally proposed the spelling *Polyxenus* for which word he gave as a, to him at least more satisfactory meaning "viele Gäste habend" (having many guests), in allusion to the species' habit of living in groups.

Vulnerarius – Berlese (1888: Fasc. 48, Nr. 1) describing *Mesoiulus vulnerarius* (now *Cylindroiulus* v.) wrote in the diagnosis "*pallidus, rubro lateribus guttulatus*" (pale, laterally spotted red). The pale animal has reddish ozadenes shining through the integument. Therefore possessing wounds.

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LITHOBIUS FORFICATUS (L.) (CHILOPODA, LITHOBIOMORPHA) WITH HIGHLY ABNORMAL FEATURES.

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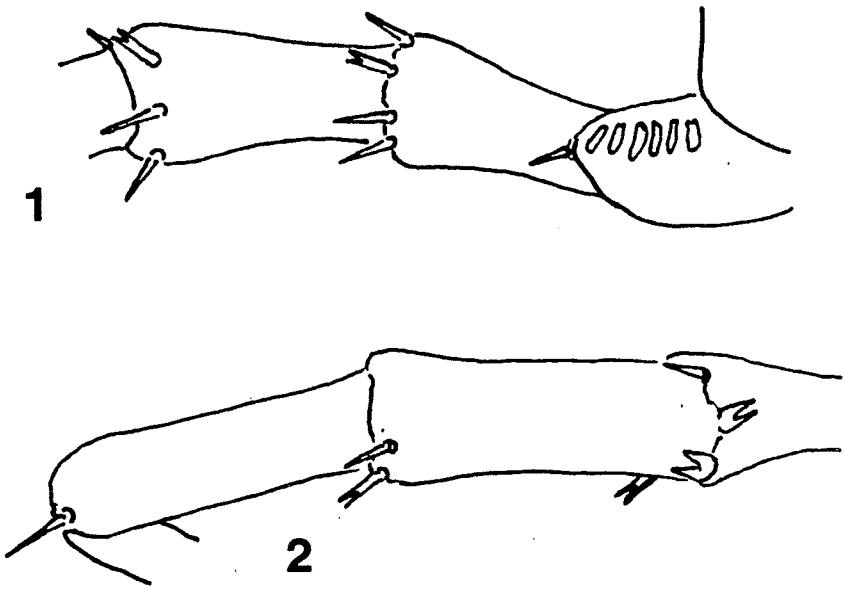
Amongst a collection of specimens sent to me by Charles Rawcliffe of Edinburgh was an adult female *Lithobius forficatus* from Crosscryne, near Biggar, Lanarkshire (VC 77) with such abnormal features, especially of its left fifteenth leg, that it seems worthwhile to put it on record. The specimen was collected from dead wood in mixed deciduous/coniferous woodland (strip plantation) on 25.5.96.

The cephalic shield is abnormally developed, presumably as a result of injury with consequential abnormal development of the ocelli on the left side.

The left fifteenth leg shows a series of highly unusual double spines, in particular DmP, DpP, and what appears to be DpF on the dorsal surface, what seems to be VmP and VpF ventrally (see Figs 1 and 2). I have seen the occasional double spine of this type but never a whole series such as this. The terminal claw of this leg is double but not in the usual lithobiid form with a smaller accessory claw. In this case the two claws are of similar size giving a somewhat chelate appearance to the structure. Since the nature of the terminal claw is a commonly used identification feature an animal such as this could no doubt cause considerable confusion to an inexperienced worker.

My thanks are due to Charles Rawcliffe for his collection of this and many other specimens and once again to Dick Jones for preparing the drawings for me.



Figures 1 and 2. Abnormal *Lithobius forficatus* from Crosscryne, Lanarkshire: Upper part of left 15th leg. Figure 1 ventral view. Figure 2 dorsal view.

ERRATA

Several errata have been brought to our attention in recent editions of the Bulletin:

Bulletin 8 (1992)

MYRIAPODS FROM NORTH SCOTLAND by R.E. Jones.

Page 7 paragraph 3. For *Lithobius forficatus* read *Lithobius borealis.*

Bulletin 12 (1996)

A KEY TO THE LITHOBIID CENTIPEDES OF BRITAIN by A.D. Barber.

Page 47. Couplet 1. Second alternative (Forcipular coxosternite with 2 teeth on each side) should lead to couplet 6 (not 8)

Page 48. Couplet 8. Second alternative, last sentence should read 'Curls up when disturbed more readily **than** that species.'

Page 49. Couplet 13. Second alternative (No projections on tergite 9, sometimes only on 13 or poorly developed) should lead to couplet 17 (not 15).

In both articles:

***ANTHOGONA BRITANNICA* MAURIÈS AND *POLYDESMUS BARBERII* LATZEL IN DEVON: MILLIPEDES NEW TO THE BRITISH ISLES** by D.E. Bolton and R.E. Jones.

and

***POLYDESMUS BARBERII* LATZEL AND *ANTHOGONA BRITANNICA* MAURIÈS IN DEVON** by D.E. Bolton.

The name *Anthogona britannica* should be followed by the authors Gregory, Jones & Mauriès.

Bulletin 13 (1997)

A DESCRIPTION OF *CHALANDEA PINGUIS* (BRÖLEMANN, 1898) By R.E. Jones and A.D. Barber.

Page 23
Clypeus: *add* plus band of setae which varies considerably 8+11, and 5+6.

Maxillae: *insert after microsetae* plus 3+2 setae and numerous microsetae.

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ANIMALS UNDER LOGS AND STONES

C. PHILIP WHEATER & HELEN J. READ

Naturalists' Handbook 22, Richmond Publishing Company

Animals Under Logs and Stones maintains the tradition of the Naturalists' Handbook series, by presenting a concise and accessible introduction to the fauna of this ubiquitous habitat.

It is divided into five sections, the first of which is an introduction giving a brief overview of this niche and a definition of the scope of the book. Section 2 deals with the nature of the environment under logs and stones and offers many suggestions for further work while section three provides an introduction to the biology of the main groups of invertebrates to be found in this micro habitat, along with recommended texts for each of them.

The fourth section comprises a series of keys to the invertebrates likely to be encountered. It begins with a key to the major groups of invertebrates, then deals with each one in turn taking most down to family level while the smaller taxonomic groups are keyed out to species. They are clearly illustrated and written in plain English making them ideal for those with little or no previous experience of invertebrates and veteran zoologists alike.

Section five deals with appropriate field and laboratory techniques, with a brief note on the writing up of results. The plates in the centre of the book provides a series of attractive colour and black and white illustrations of the common elements of this fauna plus and excellent single page pictorial key to the major groups described, which is perfect for introducing younger naturalists to this group of easily collected invertebrates.

The final section comprises a list of useful suppliers and societies plus a comprehensive list of references and recommended further reading.

"Animals Under Logs and Stones" is an ideal introduction for both naturalists and students into the fascinating world of invertebrates. It will be invaluable to both sixth-formers and undergraduates and should be catalytic in producing future generations of invertebrate zoologists.

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