

## MYRIAPODA FROM WESTER ROSS AND SKYE, SCOTLAND

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In the Preliminary Atlas of Millipedes (British Myriapod Group, 1988) some seven species are shown from the Isle of Skye and six from those coastal areas of Wester Ross encompassed in the 100km National Grid square NG (18). For centipedes (Barber & Keay, 1988) the corresponding numbers are six and one. A proportion of the Skye records were made by Bruce Philp in the early 1980s in the course of other surveys. The species of which I am aware of him having found are marked P. Subsequently, a number of records were made by Gordon Corbet (details held by National Recording Schemes and included here). Dick Jones (Jones, 1992) made several records from Wester Ross in his report on Myriapods from North Scotland and these are also noted (indicated RJ).

We have a few Wester Ross records from the 10km grid square NH (28) which are included and identified with an asterisk (\*) and from NC (29) (indicated \*\*) although any such records in the preliminary atlas are omitted. Skye and the adjacent island of Raasay are part of Watsonian vice-county 104 (along with Rum, Canna, Eigg, etc.) whilst Wester Ross is VC 105. 10km NG squares are shown for the unpublished records.

In August 2003, I had the opportunity to visit these areas and make a few collections. The weather had been extremely dry for some weeks and was then followed by heavy rain, conditions hardly suitable for finding large numbers of animals. The region is diverse in topography and contains substantial upland areas such as the Cuillin Hills and the Torridonian mountains with parts that are not accessible to cars. Almost all collecting was made in the valleys & coastal areas where there was convenient access. It would obviously be helpful to have further collections made at a different time of year and from a wider variety of sites.

Because of the scarcity of records from the area, it seems useful to record the results of the collecting in 2003 together with other records. A number of the millipedes were determined by Paul Lee. All records are now with the National Recording Schemes.

### DIPLOPODA

#### *Nanogona polydesmoides*

Recorded from one 10km square in the Trotternish Peninsula, Skye in the preliminary atlas (British Myriapod Group, 1988).

An additional Trotternish record is from Dunans at a picnic area in moorland (24.08.03). Also recorded from Wester Ross at Applecross amongst stones and shingle close to the sea (21.08.03). Likely to be widespread although, according to Gordon Corbet, confined to natural and artificial calcareous habitats. He has very few records from the Highlands compared with other "equally findable" species.

NG 47, 74

#### *Chordeuma* sp. (probably *C. proximum*)

Immatures are here recorded from Dunvegan, Skye. Gordon Corbet has recorded *C. proximum* from Rum so this is the most likely species but without mature males it is impossible to be certain (P.Lee pers. comm.).

NG 24

***Melogona scutellare***

Attadale Garden, Loch Carron, Wester Ross (Gordon Corbet, 03.10.01). This and a record from Eigg are the only sites he knows of in the whole of the Highlands and West Coast.

NG 93

***Proteroiulus fuscus***

There are several Wester Ross locations shown in the preliminary atlas although none on Skye. Rassal Ashwood NNR, Wester Ross (RJ, 15.7.91, G. Corbet, 29.8.91), Ardaneaskan area (cleared conifers, 19.08.03) and from forestry on the Island of Raasay (26.08.03). To be expected under bark, etc. in woodland habitats throughout the area and likely to be found when conditions are more favourable for collecting.

NG 54, 83, 84

***Blaniulus guttulatus***

Attadale Garden, Loch Carron, Wester Ross (Gordon Corbet, 03.10.01)

NG 93

***Archiboreoiulus pallidus***

Lochcarron, garden, under stones, 17.08.03. No other Highlands records; found in Glasgow (G. Corbet, pers.comm.)

NG 83

***Ommatoiulus sabulosus***

Two Skye P locations are shown for this distinctive species in the preliminary atlas. Also from Kirkibost, Skye (2000, S.Moran, pitfalls via G. Corbet), Loch Carron, Wester Ross (G. Corbet, 23.08.96), Inverewe Gardens (R.J), Strathellen, Wester Ross (conifer woodland, 18.08.03) Kinloch, Skye (picnic area within forestry, 28.08.03).

NG 51, 71, 83

***Tachypodoiulus niger***

Two Wester Ross locations are shown in the preliminary atlas. Glen Carron\* (14.05.99) and Attadale Garden (03.10.01), Wester Ross (both G. Corbet). Also Lochcarron (garden, 17.08.03, old burial ground, 20.08.03) and Achnashellach\* (railway station, 22.08.03) in Wester Ross and Armadale Pier (waste ground, 30.08.03) in Skye. Predominantly, perhaps entirely, synanthropic in the Highlands (G. Corbet).

NG 60, 83, 93, 94                      NH 04

***Allajulus nitidus***

A single record of this species (det. P.Lee) from the Old Burial Ground at Lochcarron (20.08.03). Second record from W.Scotland (G.Corbet).

NG 94

***Cylindroiulus londinensis***

A single specimen was amongst several species of millipede, including the *Chordeuma* sp. found in mixed woodland/forestry at Dunvegan, close to Dunvegan Castle (27.08.03). This particular animal is recorded as from under a rock. There are two other Scottish records, from gardens in Argyle (G. Corbet).

NG 24

***Cylindroiulus punctatus***

There are records of this common species from both Skye p and Wester Ross in the preliminary atlas. Gordon Corbet records it from both Skye (Kirkibost, S.Moran, pitfalls, 2000, Elishader, 30.08.91) and Wester Ross (Corrieshalloch Gorge\*, 27.09.99, Rassal Ash Wood NNR, 28.08.91, Talladale, Loch Maree, 26.08.91). Dick Jones reported it from Rassal Ash Wood, Shieldaig and Inverewe Gardens all in Wester Ross. In addition, it is recorded here in Wester Ross from Ardaneaskan / Strathellen (17 & 18.08.03), Lochcarron (18.08.03, 20.08.03; 2 sites), Applecross (21.08.03), Inverewe Gardens NTS (22.08.03) & Achnashellach\* (22.08.03) and from Skye at Portree Forest (25.08.03), Dunvegan (27.08.03) and Armadale (28.08.03). It is likely to be found in most, if not all, woodland under appropriate conditions although I was not able to find it on Raasay, possibly because of the previous dry weather.

NG 24, 44, 51, 56, 60, 74, 83, 84, 88, 94, 97                      NH 27

***Cylindroiulus latestriatus***

One Wester Ross location and one older record from Skye are shown in the preliminary atlas. Dick Jones found it on the foreshore at Inverewe. I have a record of several specimens from the coast at Lower Diabeg (19.08.03) and Gordon Corbet has drawn my attention to 1976 survey records from sand dunes at Redpoint and Achnahaird, both in Wester Ross (ITE, 1979). It might be expected to be found all round the coast in suitable locations / conditions.

NC 01                      NG 76

***Julus scandinavius***

There is one record from Skye in the preliminary atlas. Gordon Corbet reports it from Kirkibost, Skye (S.Moran, pitfalls, 2000). Additional records are Lower Diabeg (above shore, 19.08.04), Loch Maree (lochside picnic area, 22.08.03) and Achnashellach\* (station) in Wester Ross and Dunvegan, Skye (woodland, 27.08.03).

NG 24, 51, 76, 96                      NH 04

### *Ophiulus pilosus*

Three locations in Skye (Trotternish) P are shown in the preliminary atlas.

Gordon Corbet records this species from Bernisdale, N.Skye (30.08.91), Applecross (28.08.91), Talladale, Loch Maree (26.08.91), Corrieshalloch Gorge\* (27.09.99) and on the boundary of Easter and Wester Ross, east of Loch Droma\* (27.09.99). Dick Jones had it from Inverewe Gardens. Other records are from Strathellen (woodland, 18.08.03) and Lochcarron (garden, 20.08.03) in Wester Ross.

NG 45, 74, 83, 97            NH 27

### *Polydesmus angustus*

Two locations in Skye (Trotternish) P and three from Wester Ross are shown in the preliminary atlas.

S.Moran found this species in pitfalls at Kirkibost, Skye (2000, via G.Corbet). Gordon also has an old record from Raasay (21.03.56), Dick Jones found it at Inverewe and there is now a record from Loch Maree, Wester Ross (picnic area by lochside, 22.08.03).

NG 51, 53, 96

### *Polydesmus denticulatus*

Glen Shiel, Wester Ross\* (RJ)

### *Brachydesmus superus*

One record (Trotternish) from Skye in the preliminary atlas. A record from woodland at Dunvegan (27.08.03) is added. Probably widespread but under-recorded.

NG 24

## **CHILOPODA**

### *Stigmatogaster subterraneus* (*Haplophilus subterraneus*)

Inverewe Gardens (RJ)

### *Schendyla nemorensis*

Recorded from Portree, Skye (G.Corbet, 30.08.91)

NG 44

### *Strigamia maritima*

Recorded by Gordon Corbet from Portree, Skye (30.08.91) and Loch Carron, Wester Ross (14.05.99). It occurred in numbers on the shore at several sites along Loch Carron in the Lochcarron area (18/20.08.03) and on the Applecross Peninsula at Applecross and Toscaig (21.08.03), on Skye at Staffin Quay (24.08.03) and on Raasay at Churchtown Bay (26.08.03). It is likely to occur in all suitable sites on shores around the area although no specimens were found at Lower Diabeg despite a search there.

NG 44, 46, 53, 73, 74, 83, 93, 94, 96

***Geophilus easoni***

“*Geophilus carpophagus*” is recorded from both Skye P and Wester Ross in the provisional atlas (Barber & Keay, 1988). Almost certainly all these records refer to *G. easoni*. Bruce Philp had it from 7 sites on Skye (Fairy Bridge, Loch an Fhridhein, Flag Woods, Rudh’an Dunain, Armadale, Sligachan and Loch Suardal) and Dick Jones reported “*Geophilus carpophagus*” from Rassal Ash Wood (presumably *G. easoni*). Gordon Corbet records *G. easoni* from Neist, Skye (31.08.91) and Loch Torridon, Wester Ross (14.05.99). A single additional record is of a male from under a rock in grassland at Duntulm Castle, Skye (24.08.03).

NG 14, 47, 85

***Geophilus insculptus***

Inverallgin, Torridon, Wester Ross (G. Corbet, pasture near shore, 26.08.91), Inverewe Gardens (RJ). Further records are from Lochcarron (garden, immature, 17.08.03), Annat (roadside, rocks under pines, one male, 19.08.03) and Applecross (sycamore woodland, one female, 21.08.03). No Skye records.

NG 74, 85

***Geophilus flavus (Necrophloeophagus flavus)***

Dick Jones reported this from the foreshore at Inverewe, possibly the most northern British record; A female and an immature of this species are now recorded from a cottage garden at Lochcarron (20.08.03).

NG 83

***Geophilus truncorum (Brachygeophilus truncorum)***

There is a single record from Skye (Trotternish) in the provisional atlas. Records are from Loch Maree (G. Corbet, 27.08.91) and Rassal Ash Wood NNR (RJ, 15.07.91, G. Corbet, 28.08.91) and I have it from Ardaneaskan (forestry, subcortical, 20.08.03). Undoubtedly in more favourable conditions it would be expected to be found to be widespread in this region.

NG 83, 84, 96

***Lithobius variegatus***

Some comments on the distribution of this species have already been noted (Barber, 2003). Lewis (1997) suggests that it may be limited by climatic factors and by competing species or predators of which *L. forficatus* may be one. The latter species, he suggests, may be a more recent arrival in Britain and probably still spreading. If this were the case, it might be a reason for the apparent absence of *L. variegatus* on Raasay (despite searching in likely situations) and its patchy distribution on Skye.

Recorded from three locations in Skye P in the provisional atlas (B. Philp: Sligachan, Rudh’an Dunain, Geary). Gordon Corbet recorded it from Neist in Skye (31.08.91) and from Shieldaig (14.05.99) and Torridon (23.08.96) in Wester Ross.

Further records are from Ardaneaskan (forestry, 17.08.03), Strathellen (woodland, 18.08.03), Annat (roadside trees in moorland area, 19.08.03), Lower Diabeg (coastal, 19.08.03), Toscaig, Applecross Peninsula

(grassland, 21.08.03), Shieldaig (moorland, 21.08.03) and Achnashellach (forestry, 22.08.03), all in Wester Ross. The only two Skye records for 2003 are from Aird of Sleat (moorland, 28.08.03) and Kinloch (picnic area in forestry, 28.08.02), both in the Sleat peninsula.

NG 14, 50, 71, 73, 76, 83, 85, 94, 95

### *Lithobius forficatus*

Eight 10km squares are recorded for Skye P for this species in the provisional atlas. These are based on B. Philp's records from Boreraig, Greshornish, Allt Mor, Fairy Bridge, Dun Caun, Struan, Ollisdal, Loch an Fhridhein and Kilt Rock.

It was recorded by Gordon Corbet from Duntuilim, Skye (30.08.91), from Fearnmore, Applecross Peninsula (28.08.91), NW of Applecross (28.08.91) and Head of Loch Broom\* (27.09.99) in Wester Ross. Dick Jones had it from Inverewe Gardens and Aird of Coigach \*\*, Wester Ross.

Additional records are from Lochcarron (garden, 17.08.03), Lower Diabaig (coastal, 19.08.03), Applecross (dead wood in grassland, 21.08.03), Achnashellach (forestry, 22.08.03), Loch Maree (picnic area, 22.08.03) and Inverewe Gardens NTS (22.08.03) in Wester Ross. Records from Skye are at Dunans (lochan side, 24.08.03), Staffin Quay (coastal waste-ground, 24.08.03), Leacan Nighean an t-Slosslaich (grassmoor, 25.08.03), Dunvegan (forestry, 27.08.03). It is also recorded from three sites on Raasay (roadside, moorland at Calum's Road, Eyre Point, all 26.08.03)

NG 24, 34, 46, 47, 53, 54, 64, 74, 76, 83, 88, 94, 96                      NH 18

### *Lithobius melanops*

There is one 10km square record for this from Skye P in the provisional atlas based on a record from Loch an Fhridhein (B.Philp, 22.06.80).

Dick Jones found this at Rassal Ash Wood whilst Gordon Corbet records it from NW of Applecross, Wester Ross (28.08.91).

Other records are from Loch Fada (roadside, moorland, under rocks, numerous, 25.08.03) and Armadale (forestry, 28.08.03) both on Skye. The specimen from the latter site was unusual in being quite a dark chestnut brown (the Loch Fada specimens were the typical lightish *L. melanops* colour) with very prominent projections on tergite 9 and no obvious secondary sexual characteristics on the last legs. It came out as *L. melanops* in all appropriate keys and was identified as such by M. Zapparolli.

NG 44, 60, 64

### *Lithobius borealis*

The provisional atlas records this from one 10km square on Skye P; this is based on a specimen from the Quirang which showed slight projections on tergite 9 and was confirmed by E.H. Eason (B.Philp, 04.04.80). Gordon Corbet records it from Talladale, Loch Maree, Wester Ross (26.08.91). Other records are from Ardaneaskan, Wester Ross (male, under bark of dead wood by roadside, wooded area, 17.08.03) and from Raasay (26.08.03) where two females were collected in forestry and an immature, probably of this species was found at Calum's Road.

NG 53, 83, 97

### *Lithobius crassipes*

Gordon Corbet collected this species from a roadside site NW of Applecross (28.08.91).

NG 64

### *Lamyctes emarginatus (L.fulvicornis)*

One record is shown for SkyeP in the provisional atlas; this was from a specimen collected at Ollisdal (22.06.80).

Records are from Kirkibost, Skye (pitfalls, S.Moran via G.Corbet, 2000), NW of Applecross (G.Corbet, 28.08.91), Glen Shiel\* (RJ), Aird of Coigach\*\* (R.J). This is a species that is seasonal in its occurrence and said to be sensitive to dampness.

NG 51, 64

## DISCUSSION

The present report is based on a relatively small number of records; as explained conditions were not favourable in August 2003 with few or no specimens being found at some sites. For instance, nearly half an hour's searching at Portree Forest (conifer plantation) yielded just a single specimen of *Cylindroiulus punctatus* and no records at all were made in the shore / grassland / moorland areas at the seaward end of Glenbrittle.

Apart from the scattered pattern of finds of *Lithobius variegatus* already alluded to, it is notable that few geophilomorphs or smaller lithobiomorphs were seen. It would, for instance, have been interesting to know whether the common small lithobiids in moorland areas are *Lithobius borealis* as it appears to be in Shetland (Barber, 1986) and SW England or *Lithobius crassipes* as on much of eastern Scotland (G. Corbet, *pers. comm.*), Orkney mainland (Barber, 1998) and eastern England. Gordon Corbet refers to his record of the latter species from the Applecross Peninsula as his only record of it from the Western Highlands or west coast whereas it is ubiquitous on the east coast and on the north coast of Sutherland (*pers. comm.*). There is a single record in the provisional atlas from the Western Isles.

A similar situation has occurred for millipede records; better conditions e.g. earlier in the year might yield a larger collection. Interestingly, the woodland at Dunvegan yielded five different species including both the *Chordeuma* sp. and the rather unexpected *Cylindroiulus londinensis*. The other unexpected millipede record was that of *Allajulus nitidus* from the old burial ground site outside Lochcarron, a sheltered area with trees, stones and freshwater which also yielded two other julids. Possibly these have been introduced from elsewhere e.g. with topsoil or garden plants.

Given the right degree of shelter, because of the Gulf Stream, parts of this area can enjoy a surprisingly mild climate as seen, for instance, in the "sub-tropical" gardens at Inverewe in which Dick Jones found *Stigmatogaster subterraneus*, normally associated with more southerly latitudes. For this reason as well as gaining a better understanding of the distribution of "commoner" species and a clearer picture of the *Lithobius variegatus* / *L. forficatus* and *Lithobius borealis* / *L. crassipes* patterns, one might anticipate finding further unexpected types.

A comparison of the present species list with that of the Isle of Mull (Scott-Langley, 2002) is of some interest (Table 1). Mull is some 100km on average further south (the most southerly part of Skye is about 40km north of the most northerly part of Mull).

A similar species list is reported, again with a single record of *Lithobius crassipes* (three for *L. borealis*) and 8 10km square records for *L. variegatus*.

**Table 1**

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**Species recorded from Wester Ross, Raasay, Skye and Mull**

	Wester Ross	Raasay	Skye	Mull
<i>Nanogona polydesmoides</i>	x		x	x
<i>Melogona scutellare</i>	x			
<i>Chordeuma</i> sp.			x	
<i>Proteroiulus fuscus</i>	x	x		x
<i>Blaniulus guttulatus</i>	x			
<i>Archiboreoiulus pallidus</i>	x			
<i>Ommatoiulus sabulosus</i>	x		x	x
<i>Tachypodoiulus niger</i>	x		x	x
<i>Allajulus nitidus</i>	x			
<i>Cylindroiulus londinensis</i>			x	
<i>Cylindroiulus punctatus</i>	x		x	x
<i>Cylindroiulus latestriatus</i>	x			x
<i>Julus scandinavus</i>	x		x	x
<i>Ophiulus pilosus</i>	x		x	x
<i>Polydesmus angustus</i>	x		x	x
<i>Polydesmus denticulatus</i>	x			
<i>Polydesmus inconstans</i>				x
<i>Brachydesmus superus</i>			x	x
<i>Stigmatogaster subterraneus</i>	x			
<i>Schendyla nemorensis</i>			x	x
<i>Strigamia maritima</i>	x	x	x	x
<i>Geophilus easoni</i>	x		x	x
<i>Geophilus insculptus</i>	x			x
<i>Geophilus flavus</i>	x			x
<i>Geophilus truncorum</i>	x		x	x
<i>Lithobius variegatus</i>	x		x	x
<i>Lithobius forficatus</i>	x	x	x	x
<i>Lithobius melanops</i>	x		x	x
<i>Lithobius borealis</i>	x	x	x	x
<i>Lithobius crassipes</i>	x			x
<i>Lamyctes emarginatus</i>	x		x	x

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