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BRITISH SCHENDYLIDAE (CHILOPODA, GEOPHILOMORPHA)

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Schendylid centipedes are generally described as small and pale species; Brolemann (1930) notes amongst the features of the tribe Schendylini to which all our forms belong "Formes petites où très petites, filiformes, de coloration pâle". If Hydroschendyla submarina is excluded (it is reddish brown and up to 40 mm long) this is probably a fair generalisation for at least the British species.

Six species have been recorded from Great Britain of which one, Schendyla zonalis is somewhat doubtful, another is known once from a greenhouse and two are maritime. There is, however, always a possibility of further forms occurring here especially in the south and west. One species, Brachyschendyla dentata has been found subsequent to the publication of Eason (1964) and more information is now available on both the ecology and distribution of our species.

Recognition of Schendylini

British schendylids are usually easily recognised by having a head rather longer than broad, forcipular tergite trapeziform, and, most distinctly, coxae of the last legs having only two, more or less conspicuous pores opening ventrally along the edge of the metasternite and the last legs not bearing claws, the latter often being represented by minute spines or tubercles.

The labrum consists of a conspicuous, toothed, arcuate mid piece connecting two side pieces and the second maxillae have well developed claws. The characteristics of these, together with the presence or absence of sternal pore groups and the appearance of the mandible are important diagnostic features.

Hydroschendyla submarina (Grube, 1869)
Quite unlike other British schendylids in appearance, being reddish brown in colour (similar to Strigamia maritima (Leach)) and up to 40 mm long, 45-53 pairs of legs. It is distinguished at once from S. maritima by the absence of the prominent tooth at the base of the poison claw of that species and by the appearance of the last legs, typically schendylid.

According to Lewis (1962) the species was recorded from Jersey, Cornwall, Yorkshire and Pembrokeshire; he reported it from the Plymouth area, on both sides of the Tamar. He is doubtful about the status of the Pembs specimens and has later (pers. comm.) expressed grave doubts about the record from Yorkshire. There is also a record from Ireland from the Clare Island Survey.

It is an elusive animal, being confined to rock crevices on the shore from which it has more recently been recorded from South Devon, the Scillies and Brittany, the latter two by R. Jones. In consequence it is difficult to be precise about its distribution; it may well have been confused with S. maritima in the past and is worth searching for. Elsewhere it occurs all along the Atlantic coast from Scandinavia to North Africa.

Schendyla nemorensis (C.L. Koch, 1837)
A colourless or pale yellow animal up to 30 mm long in some cases, distinguished from our other common small geophilomorph, Brachygeophilus truncorum (Bergsoë & Meinert) by its paler colour and distinctively different last legs, which, like other schendylids, lack claws. In addition B. truncorum is relatively rarely found in urban locations whilst S. nemorensis shows no marked preference for either rural or urban sites.

This is by far our commonest schendylid; the centipede recording scheme had 571 reports of it, mostly post-1970 which makes it our fifth commonest geophilomorph after Necrophloeophagus flavus, Brachygeophilus truncorum, Geophilus carpophagus and Haplophilus subterraneus. Records are from all parts of Britain and Ireland except the more northerly areas of Scotland but it is distinctly less common in Yorkshire and Cumbria northwards with few modern records from there. It has been found in a great variety of habitats, records from arable, scrubland, waste ground and seashore being amongst the highest numbers whilst it is also one of the commonest centipedes in bracket fungi.

Schendyla nemorensis var. fountaini Turk, 1944.
Turk reported this variety from Cornwall. The last segment (metatarsus) of the last legs was only one quarter the length of the penultimate (tarsus). There were also some differences in the shape of the claw of the second maxillae (3.5 times as long as broad instead of 2.25) and the labrum (17 teeth).

In the absence of the material it is difficult to be clear on the status of this variety. The last legs certainly tend to suggest S. peyerimhoffi but there is great variation in S. nemorensis in any case.

Schendyla peyerimhoffi Brolemann & Ribaut, 1911
Despite suggestions that this is not a "good" species by Misioch (1979) there is little doubt that we have a distinctive form characterised by 4-5 well spaced incisures giving the poison claws a distinctly crenulate appearance and a very short metatarsus compared to the tarsus on the last legs. These latter are usually quite distinctive and make the animal easily recognised once seen and easily separated from S. nemorensis which may occur in maritime sites to which S. peyerimhoffi seems to be confined in Britain.

It was originally described from Morocco and subsequently from Portugal and was first reported in Britain from the Sussex coast and Plymouth by J.G.E. Lewis (Lewis, 1961). It was later identified from material collected in the Scillies by F.A. Turk in 1946 and has more recently been rediscovered there by R.E. Jones (this Bulletin). In 1983 I first found it under flat, smallish stones on mud around high water in the Avon, near Aveton Gifford, South Devon. Subsequently it has been recorded from estuarine sites on the Erme, Dart, Teign and Exe in Devon and the Hayle area of Cornwall. Apart from sites under stones it has also been collected in rock crevices.

J.G. Blower has it from several sites around the Gower, South Wales and S.P. Hopkin has collected it on Anglesey. All the indications are that it will prove to be widespread in suitable locations around southern and western coasts. Mr. Blower has also collected it from the Brittany coast (Blower, 1987), a report which fits in with its known distribution along the Atlantic coast of S.W. Europe (Map 1).

Schendyla zonalis Brolemann & Ribaut, 1911
Similar in appearance to S. nemorensis although the metatarsus of the last legs is said to be usually more than half the length of the tarsus, this species is distinguished by the presence of 1-3 ventral and sometimes one dorsal spine on the claw of the second maxillae. This is not necessarily an easy character to see. In addition the labrum has 16-26 teeth (15 in S. nemorensis) and the mandibular dentate lamina is divided into three separate masses (only one in S. nemorensis). It occurs in southern France, the Mediterranean region and elsewhere in Europe.

R.S. Bagnall (Bagnall, 1935) reported it from the coasts of Devon and Dorset. Numerous specimens of S. nemorensis from southern Britain have been examined but so far we have failed to rediscover it. It could well occur here but its status must remain somewhat doubtful for the present.

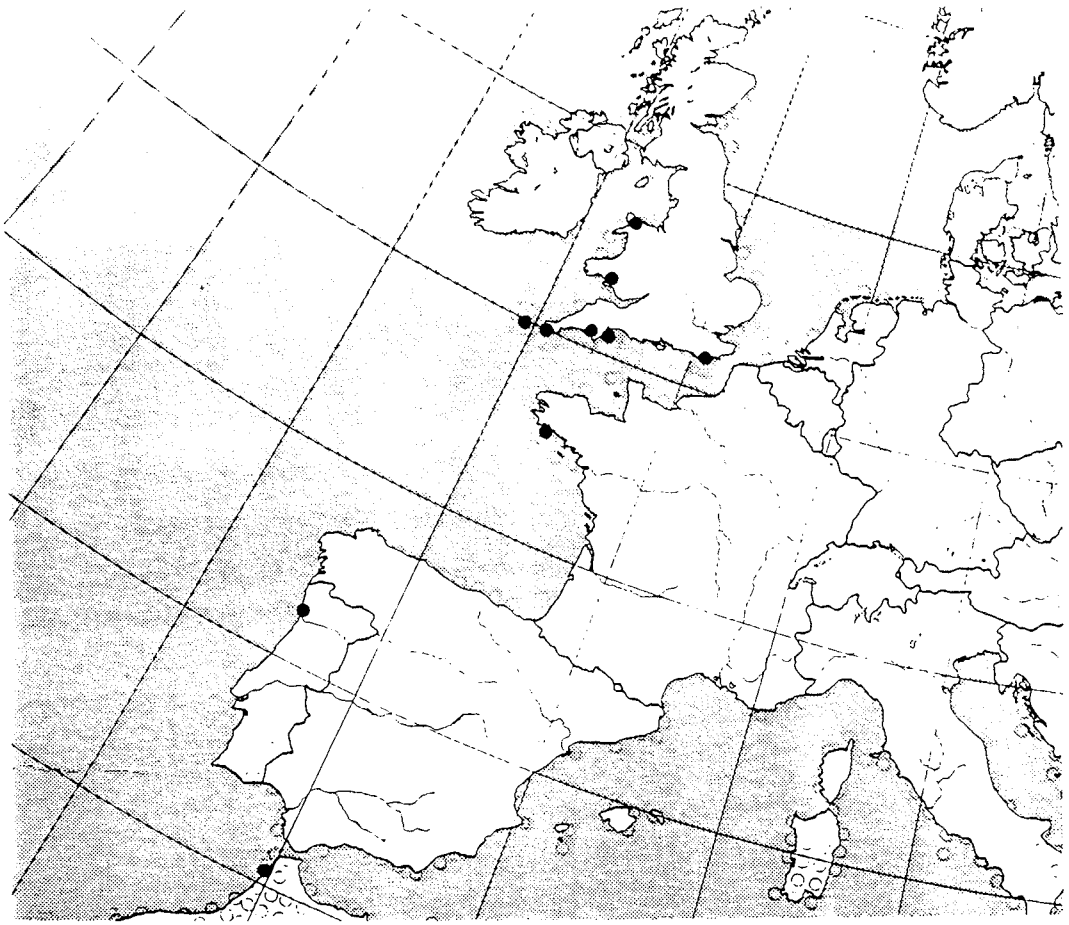
Brachyschendyla monoeci (Brolemann, 1904)
There has only been one record of this species, from a greenhouse at Tuckingmill, Cornwall in 1943 (Turk, 1944).

According to Brolemann (193) only females are known, it is up to 22 mm long and has 51-57 pairs of legs; the labrum has 9-13 tuberculous teeth and the second maxillae have one or two spines along its ventral edge. The last legs are slender and quite unlike those of any other of our British schendylids and the last segment (metatarsus) is longer than the preceding tarsus.

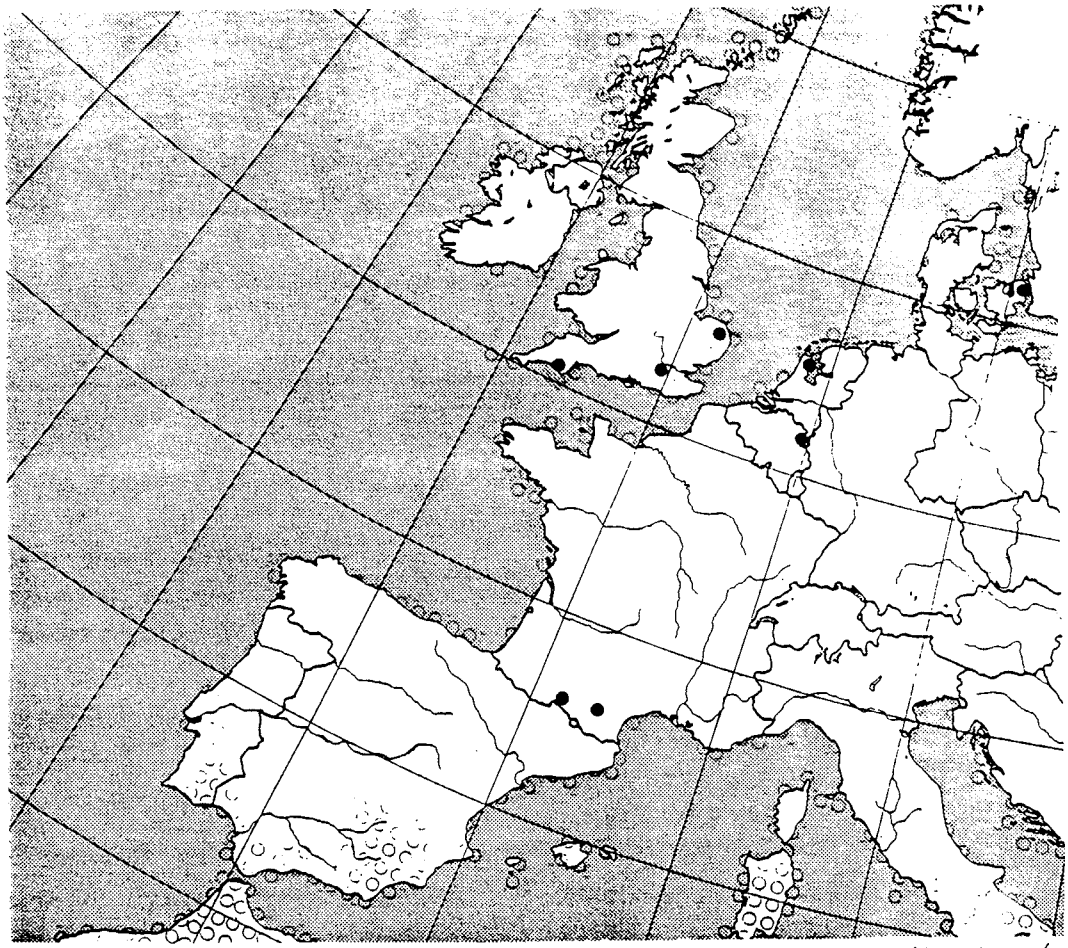
Turk noted certain differences from the French descriptions including the presence of a claw on one terminal leg but he had no doubt as to the identity of his animals.

Elsewhere the species is recorded from Alpes Maritimes, Czechoslovakia and Rumania.

Brachyschendyla dentata Brolemann & Ribaut, 1911
A small species, up to 12 mm or so long with 39 pairs of legs. As with the preceding, only females are known. It is a distinctive animal due to the presence of prominent projections on both the base of the poison claw itself and on the femoroid and by the appearance of the last legs. These latter



Map 1 Schendyla peyerimhoffi 50 km grid square distribution (UTM)



Map 2 Brachyschendyla dentata 50 km grid square distribution (UTM)

are somewhat swollen and the prefemur is extremely small.

The original records for this species were from two localities in France from the early years of this century (Brolemann & Ribaut, 1911). It was rediscovered in Surrey, at Haslemere and at Guildford in 1968 from Tullgren extractions of soil (Barber and Eason, 1970). It was later found by R.D. Kime on the Hogs Back near Guildford. Since then it has been found in a soil extract from a site in Devonport, twice under paving slabs in a garden in Norwich (R.E. Jones), last autumn under a log on a flower bed in Kensington Gardens, London and at the beginning of this year under a stone on a roadside bank next to a house near Ivybridge, Devon.

It has also now been found in the Netherlands and Denmark. Quite clearly the records do not represent the limits of its occurrence and it will be worth searching for elsewhere in southern Britain where it may prove to be widespread. Most, if not all, records are from the winter months of the year October to April; it is noticeable that on some occasions it is found at the soil surface on notably cold days.

Other Species

Demange (1981) notes a number of species of both Schendyla and Brachyschendyla from France and lists have been produced for other locations such as Liguria (Minelli & Zapparoli, 1982). A number of species have also been described from the Balkans. Our experience with Brachyschendyla dentata (Haute-Garonne, Tarn are the given locations) suggests that other small species such as other Brachyschendyla spp. might possibly occur here but because of their size and habits remain undiscovered. They are most likely to be introduced synanthropic or extreme south western species.

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Key to British Schendylidae

1. Robust reddish brown species with 45-53 pairs of legs. Sea shore only: Hydroschendyla submarina
   Whitish or pale yellow species with 37-57 pairs of legs. Inland or seashore 2

2. Last legs relatively slender, meatarsus exceeds tarsus in length, 51-57 pairs of legs, females only; Brachyschendyla monoeci
   Last legs more or less swollen, metatarsus markedly shorter than tarsus, 49 or fewer pairs of legs, males or females 3

3. Forcipules having a prominent projection on the femoroid and on the base or the claw itself; 12 mm or less, females only; Brachyschendyla dentata
   Forcipules having a more or less prominent projection only on the base of the claw, males or females 4

4. Metatarsus of last legs 1/3 to 1/5 length of tarsus. Poison claw with 4 or 5 well marked incisures giving it a crenulate appearance, littoral: Schendyla peyerimhoffi
   Metatarsus $\frac{1}{2}$ to $\frac{1}{3}$ length of tarsus or longer, no regular incisures in poison claw; 5

5. Metatarsus of last legs $\frac{2}{3}$ to $\frac{1}{2}$ length of tarsus, labrum with 16-26 teeth, dentate lamina of mandible in 3 separate masses, apical claw of second maxillae with 1-3 spines on its ventral ridge, possibly 1 on dorsal. Schendyla zonalis

6. Metatarsus of last legs $\frac{1}{3}$ to $\frac{1}{2}$ length of tarsus, labrum with about 15 teeth, dentate lamina in single mass, apical claw of second maxillae entirely without spines.
   Schendyla nemorensis