

**ANAMASTIGONA PULCHELLUM SILVESTRI (CHORDEUMATIDA:  
ANTHROLEUCOSOMATIDAE) AN ADDITION TO THE FAUNA OF  
NORTHERN EUROPE, RECORDED FROM IRELAND.**

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**INTRODUCTION**

On 24 September 1994 I collected a number of immature stadia of an unknown millipede from woodland at Delamont House (J512 507) Co. Down. These resembled immatures of *Craspedosoma rawlinsii* Leach, a locally common species of wet woodland in Northern Ireland, and were initially labelled as such.

Subsequently, mature specimens of the same taxon were collected at several sites in east and north Down and it became apparent that a non-British species was involved. Demange (1981) and Brölemann (1935) were consulted but gave no indication of the identity of the animal. Descriptions and drawings of the key features including the genitalia were then sent to Dr. J.-P. Mauriès of the Museum National d'Histoire Naturelle in Paris. In his reply Dr Mauriès indicated that the description was very close to that of *Anamastigona pulchellum* Silvestri, a southern Italian species reported from sites of introduction in southern France (Mauries 1960) and Madeira (Demange 1970). The occurrence of a southern European species so far to the north as Ireland seemed unlikely both to him and to the author but a detailed comparison of published material was undertaken to assess points of similarity. The conclusion drawn from this was that Mauriès' initial diagnosis was correct and the Co. Down species was *Anamastigona pulchellum*.

As the literature relating to this species is relatively inaccessible a synopsis of the morphology and habits of *Anamastigona pulchellum*, based largely on material collected in Co. Down, is provided below.

**SYNONYMY:**

*Anamastigona pulchellum* Silvestri 1894  
*Prodicus attemsi* Verhoeff 1900  
*Prodicus neapolitanus pulchellus* Verhoeff 1905

**TAXONOMY:**

Order Chordeumatida  
Family Anthroleucosomatidae Verhoeff 1899  
Subfamily Anthroleucosominae Verhoeff 1899

### GENERAL DESCRIPTION.

A medium sized chordeumatidan resembling *Craspedosoma rawlinsii* in general facies but smaller (10mm, *Anamastigona pulchellum*, vs 15mm, *Craspedosoma rawlinsii*, in length), with the metazonites bearing long setae and with the body a mottled, matt, red-brown colour.

### SIZE.

Male, 9-10mm; female 9.5-10.5mm. Width up to 1mm.

### HEAD.

Vertex of the head is convex and very pilose in the female but more flattened and smooth in the male. The antennae are long and reach the hind margin of segment 4. There are 17 pigmented ocelli arranged in an acute triangular field.

### BODY.

Metazonites are cylindrical with small mid-lateral keels (paranota) around the insertion of the middle macrosetae. The macrosetae are arranged as in figure 1.

### MALE SEXUAL CHARACTERS.

(a) Legs. Legs in both sexes are long but leg 6 and particularly leg 7 in the male are longer and stouter than the remainder of the walking legs.

(b) Coxae. The hind half of the coxa in leg 10 has a strong digital internal extension. In the front half the coxal sac projects into two internal swellings, one anterior, the other posterior (figure 2).

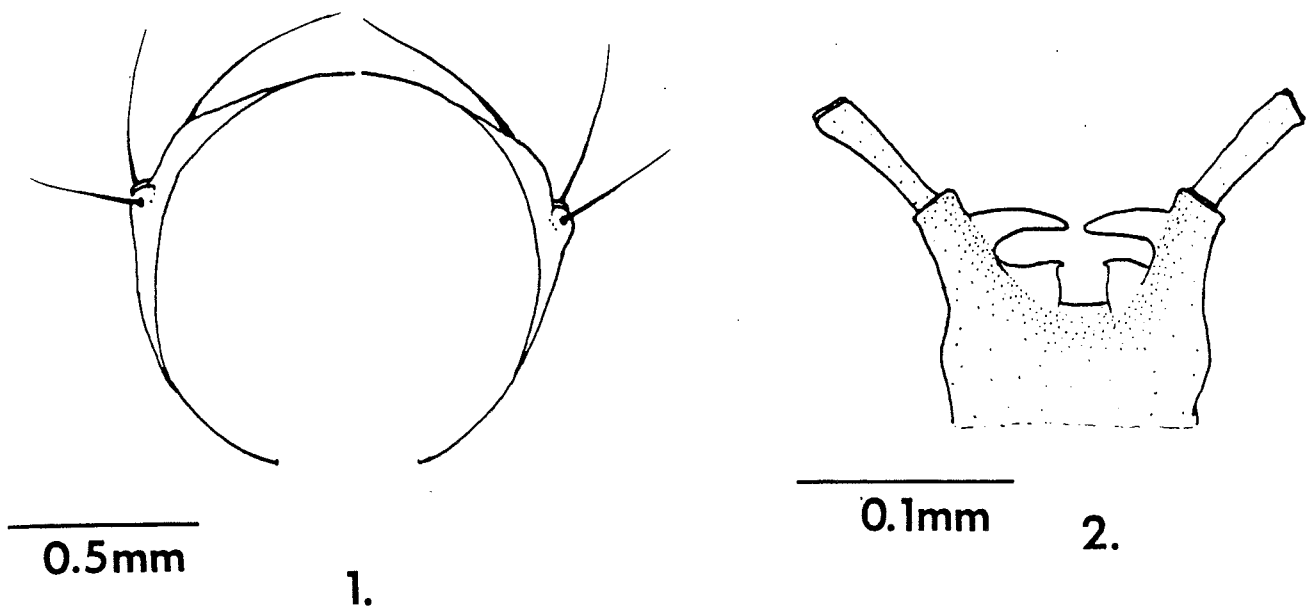


Figure 1. Caudal view of a middle segment of *Anamastigona pulchellum*, showing the arrangement of setae.

Figure 2. Structure of the coxae of segment 10 (male).

(c) Paragonopods (Figures 3 and 4). Segments 8 and 9 are noticeably expanded around the genitalia. The paragonopods are relatively large and project out of the body cavity in segment 8. The projecting telopodites are wing shaped from side view with laterally flattened tips attenuating to points which are directed backwards (Figure 3A). The median syncoxite (3B), lying between these, has a complex structure. Salient features are an elevated spiny field between the telopodites which is grooved on the upper surface and continued backwards into a projecting keel (3C). The keel is strongly spinulose, particularly when seen in side view.

(d) Posterior gonopods, segment 9. These have smaller but well separated telopodites, and a truncate median field (figures 3, 5).

#### **SEX RATIO:**

Male to female ratio 1:4 at the Co. Down sites.

Female characters were not examined.

#### **DISCUSSION**

The Anthroleucosomatidae are widely distributed in the Palearctic but have not heretofore been represented in the fauna of Europe north and west of the Alps (Mauriès 1960). It is evident from the Madeira and Toulouse records that *Anamastigona pulchellum* has good dispersal ability and can successfully colonise new terrain. Even so, the very wide difference in latitude between its former range and north east Ireland make the apparent ready adaption to conditions there seem extraordinary.

The four Irish sites so far are all in Co. Down:

Delamont House (J513 507), 24 September 1994. Large number of sub-adults on the undersides of dead beech branches; leaf litter under beech and laurel in old estate woodland.

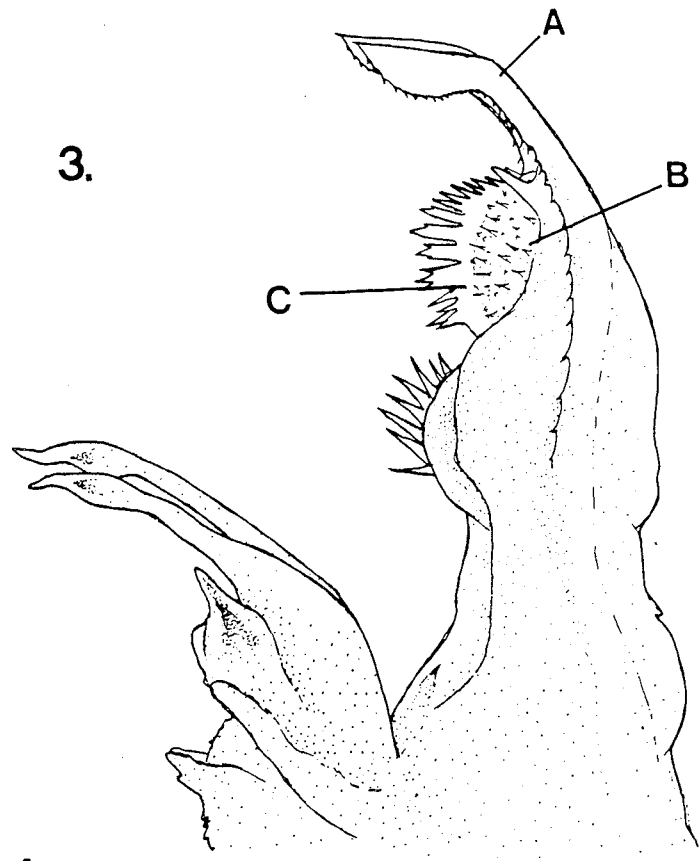
Clement Wilson Park, Belfast (J326 695), 24 October 1994. Occasional adults in litter under Norway maple and white poplar; disturbed, wet, riverine wood.

Edenderry, Belfast (J324 685), 26 October 1994. Abundant in litter under native alder in riverbank carr.

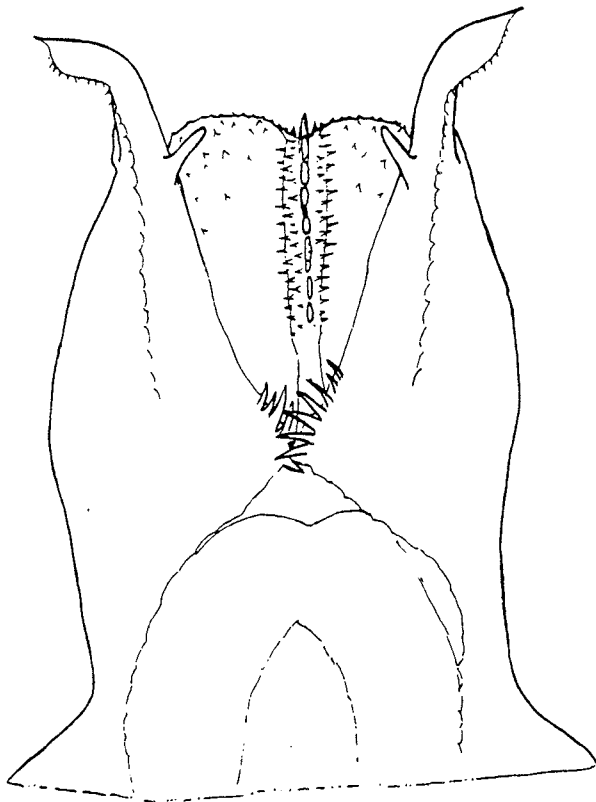
Rowallane (J405 575), 10 December 1994. Occasional in deep leaf litter under beech/oak on acid humus soils; old estate woodland.

On two years' observations (1994-1995) it appears well naturalised in these localities. A small range of immature stadia have been found in late summer/ early autumn with sexually mature stadia appearing from early October to at least February. There is also an outlying record or an early instar on 22 February 1996 at the Clement Wilson Park site. The overlap of generations which the latter record denotes is suggestive of a longer than annual cycle.

3.



4.



5.

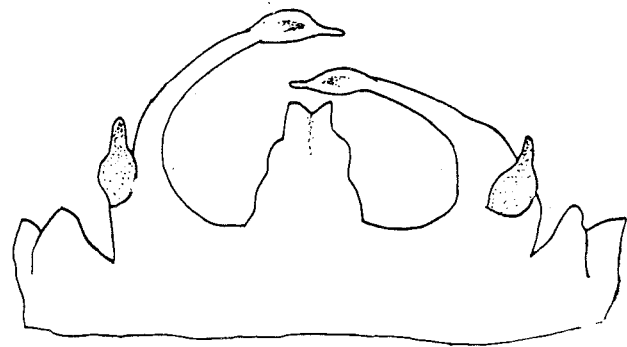


Figure 3. Side view of the gonopods and paragonopods. A - paragonopod telopodites; B - syncoxite; C - spinules on the syncoxite keel.  
Figure 4. Caudal view of the paragonopods.  
Figure 5. Caudal view of the gonopods.

This species may be expected to spread to other parts of Ireland and western Britain in time. Habitat preferences are for deep, stable litter in deciduous woods, although wetter woods such as riverine alder with shallow, friable litter are also favoured. Collections were made by roughly raking back leaf and other litter and examining the ground surface underneath on to which most animals will fall. *A. pulchellum* appears as a medium to small, reddish-brown millipede which curls up into a nearly circular outline. Upon uncurling, movement is rapid because of the long legs and it can outpace most native millipedes.

#### ACKNOWLEDGEMENTS

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