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The Distribution of Scolopendromorpha in the USSR (Chilopoda)

by

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Abstract: In the USSR, Scolopendromorpha are especially abundant and species-rich in the Caucasus and Middle Asia, but they also occur in the southern parts of both the European territory and the Soviet Far East. At the moment, the order is represented in the country by 13 nominate species or subspecies belonging to four genera: *Cormocephalus*, *Cryptops*, *Otostigmus*, and *Scolopendra*. The latter also includes 2 species of *Trachycormocephalus*, which is thus revalidated, though downgraded to the status of a subgenus. Zoogeographically, the USSR fauna can be attributed to the following groupings: Palearctic (1 form), European (1 form), Mediterranean (4 taxa), Middle Asian (2 forms), and SE-Asian (1 form).

1. Introduction:

In the USSR, scolopendromorph centipedes are especially abundant and species-rich in the Caucasus and Middle Asia, but they also are met with in the southern parts of both European territory and Maritime Province (= Primorie) of the Soviet Far East. At present, the order is known to be represented in the country by 13 nominate species or subspecies belonging to 4 genera: *Cormocephalus* (1 species), *Cryptops* (6 species or subspecies), *Otostigmus* (1 form), and *Scolopendra* with two subgenera, *Scolopendra* s. str. (5 species) and *Trachycormocephalus* (2 forms). Recently, *Trachycormocephalus* has been synonymized under *Scolopendra* (see LEWIS 1986), but the presence in the former of such distinguishing characters as the hind border of the head capsule sunk into a transverse groove in the first tergite combined with paramedian and basal sutures on the head capsule (Fig. 1) as opposed to a head capsule with its hind border overlying the anterior edge of the first tergite or overlaid by it has led us, however, to the conclusion that *Trachycormocephalus* deserves the rank of a subgenus of *Scolopendra*.

2. The Scolopendromorpha of the USSR:

The taxa registered in the USSR are as follows:

1. *Scolopendra* (s. str.) *canidens* NEWPORT, 1844
2. *S.* (s. str.) *cingulata* LATREILLE, 1829
3. *S.* (s. str.) *subspinipes* LEACH, 1815
4. *S.* (*Trachycormocephalus*) *media* (MURALEWICZ, 1926)
5. *S.* (*T.*) *mirabilis* (PORAT, 1876)
6. *Cormocephalus* (s. str.) *gervaisianus* (C.L. KOCH, 1841)
7. *Otostigmus* (s. str.) *scaber* PORAT, 1876
8. *Cryptops* (s. str.) *anomalans anomalans* NEWPORT, 1844
9. *C.* (s. str.) *a. hirsutus* FOLKMANOVA, 1958

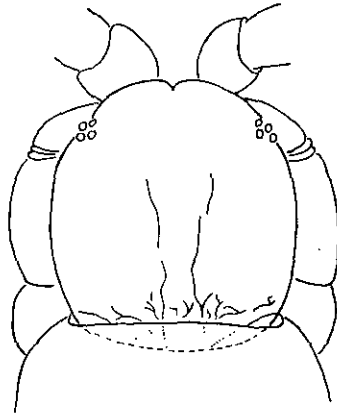


Fig. 1: *Scolopendra (Trachycormocephalus) mirabilis*: Head, ventral view.

10. *C. (s. str.) caucasius* VERHOEFF, 1934
11. *C. (s. str.) hortensis hortensis* LEACH, 1815
12. *C. (s. str.) hortensis paucidens* LATZEL, 1884
13. *C. (s. str.) parisi* BRÖLEMANN, 1920

The above list is based on both literature data and identifications of over 8000 specimens collected in 84 localities scattered all over the Soviet Union.

Scolopendra morsitans L., 1758 has been removed following ATTEMS (1930), who had once (1907) enlisted this species in the Caucasian fauna, obviously referring to DADAY's (1894) description of a *S. morsitans multispinosa* n. subsp., from the environs of Yerevan, Armenia, a form subsequently synonymized under *S. canidens* (see MURALEWICZ 1926). In reality, the range of *S. morsitans* lies so far away from the Caucasus that its presence there is highly improbable. As regards *S. canidens* in Armenia, there are grounds to treat that population as a separate (life-) form. The 2 ♂♂ and 1 ♀ at hand, deriving from a sparse arid woodland near Gegart, are disjunct from the typical *S. canidens* in having a twice higher number of spines on the coxopleurites of the last leg-pair (Fig. 2). So a separate subspecies of *S. canidens* may actually be warranted for the population from the Caucasus Minor.

Scolopendra viridis SAY, 1821 has not been put on the Soviet faunal list, despite the presence in the collection of the Zoological Institute of the USSR Academy of Sciences, Leningrad, of a specimen labelled "Petersburg, Campeachy tree". The specimen must have been imported with plant material, because *S. viridis* is known to be restricted to central and northern South Americas.

Some more remarks ought to be made as regards the species included in the list. Thus, *S. (T.) media*, originally described as *Trachycormocephalus medius* (see MURALEWICZ 1926) by a single specimen from near Shemakha, Azerbaijan, is a nomen dubium. The holotype which is housed in the Zoological Museum of the State University of Moscow is in very poor condition. The remains that still exist appear to be of *S. canidens* which occurs in Azerbaijan and in neighbouring regions and shows considerable geographic variation. However, we do not dare formalize the issue by synonymizing *S. media* until more comparative material, including topotypes, has been studied.

C. anomalans hirsutus is also known only from the holotype taken in the Caucasus (FOLKMANOVA 1958). As in the case with *T. medius*, no further material has been collected.

The reliable data for the Scolopendromorpha of the USSR are as follows:

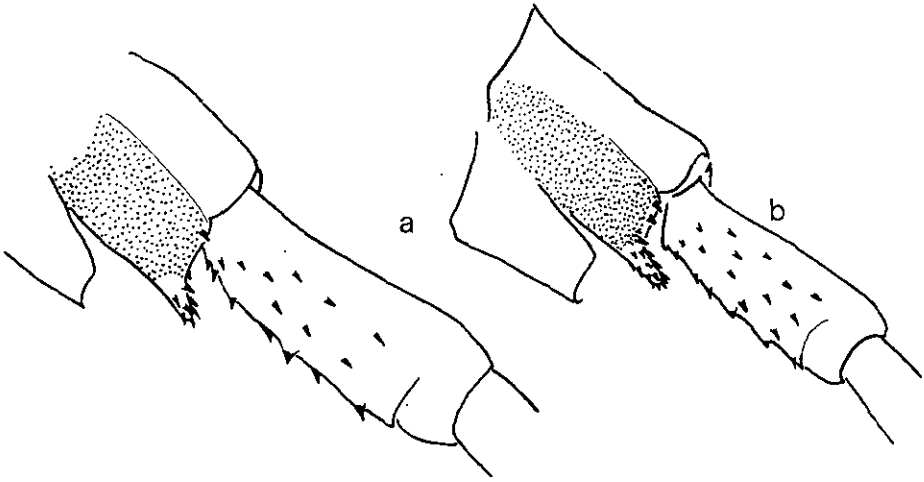


Fig. 2: *Scolopendra* (s. str.) *canidens*: Coxopleural process of last leg-pair, (a) typical form; (b) specimen from Gegart.

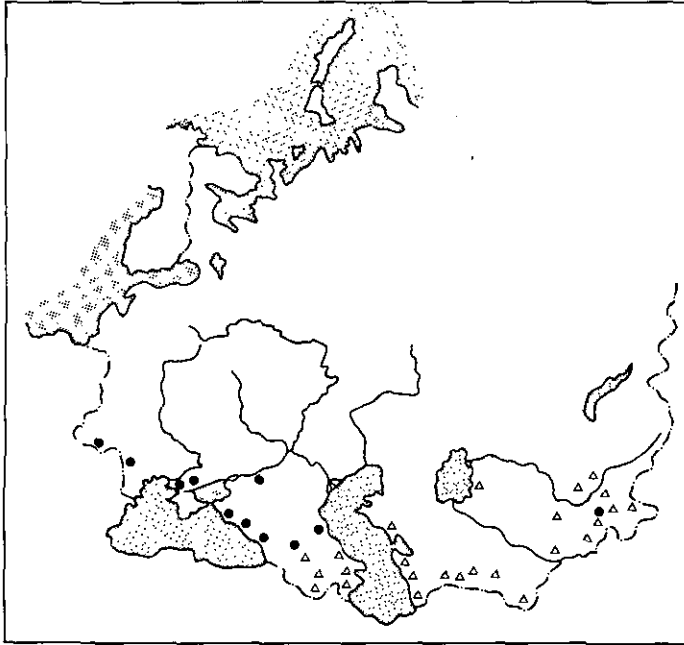


Fig. 3: Distribution of *Scolopendra* (s. str.) *canidens* (open triangles), *Scolopendra* (s. str.) *cingulata* (black circles) in the USSR.

1. *Scolopendra* (s. str.) *canidens*: This species is common in Middle Asia, it more seldom occurs in the Caucasus (Fig. 3). A population from Matcha, Tadjikistan, is sharply disjunct in having a disproportionately small head combined with a broad and strong body; well shortened coxopleural processes which are atypically conical, not cylindrical, and crowned with spines only apically and with considerably shortened and enlarged femuroids of the forcipules.

2. *S.* (s. str.) *cingulata*: This occurs in the southern European part of the USSR and is especially common in the Crimea and the Caucasus (Fig. 3). Two specimens have been discovered in Tadjikistan, one of which, from Obi-Garm, Ghissar Mt. Ridge is typical, while the other, from Kara-Tau Mt. Ridge, N slope, meadows ca. 1200 m a. s. l. is not, having the forcipular tooth plate like that of *S. canidens* (Fig. 4) and the median suture on the 21st tergite very short.



Fig. 4: *Scolopendra* (s. str.) *cingulata*: Tooth plate of the forcipules, specimen from Kara-Tau Mt. Ridge.

3. *S.* (s. str.) *s. subspinipes*: The only specimen examined is from the environs of St. Olga Bay near Takhobso River, Maritime Province.

4. *S.* (*Trachycormocephalus*) *m. mirabilis*: This species is common in Turkmenistan and Tadjikistan, much more seldom in Uzbekistan (Bukhara Area). The range coincides with the southern parts of that of *S. canidens*, with both species often mixed in one and the same sample.

5. *Cormocephalus gervaisianus*: The only specimen, from the collection of the Zoological Museum of the State University of Moscow, is from Anzov, Transcaucasia.

6. *Otostigmus scaber*: This is also known from only one specimen in the USSR. It is from Imperatorskaya Gavan (now known as Sovgavan), Maritime Province.

7. *Cryptops a. anomalans*: This is found in the southern Ukraine (Askania Nova), and is especially common in the Crimea (Fig. 5).

8. *C. caucasius*: This is found in the Crimea but is most common in the Caucasus where it is usually more abundant and widespread than *C. hortensis* (Fig. 5). A typical specimen has been recorded from Turkestan (SW-Kopetdagh). Among the few individuals of *C. caucasius* at hand from near Lenkoran, Azerbaijan, one, derived from Gaftoni, differs in having full paramedian sutures on the head convergent toward the hind half of tergite 1 similarly to *C. anomalans* (Fig. 6). Apparently, sutures on tergite 1 (except for the ring suture) is a variable character. In this connection, *Cryptops osellai* MATIC, 1977 described from the adjacent regions of Turkey (vil. Artvin, vil. Kars, MATIC 1977) may prove to be the same as *C. caucasius*, because the only difference between both is a pair of incomplete paramedian sutures on tergite 1 in the former.

9. *C. hortensis*: A species widespread over the USSR European part south of Moscow, in the Caucasus and Middle Asia (Fig. 5). Two of its subspecies are clearly allopatric, with *C. h. hortensis* populating the European part of the USSR and Middle Asia, and *C. h. paucidens* inhabiting the Caucasus. The number of saw-like teeth on the last tibia varies from 5 - 9 and 5 - 6, respectively, and on the 1st tarsal segment from 2 - 4 and 2 - 3, respectively.

10. *C. parisi*: In the USSR, this species occurs only in Transcarpathia, being quite typical there. A tridentate labrum of both *C. parisi* and *C. caucasius*, whose ranges seem to form a succession, is perhaps a good character for the erection of a separate subgenus for them.

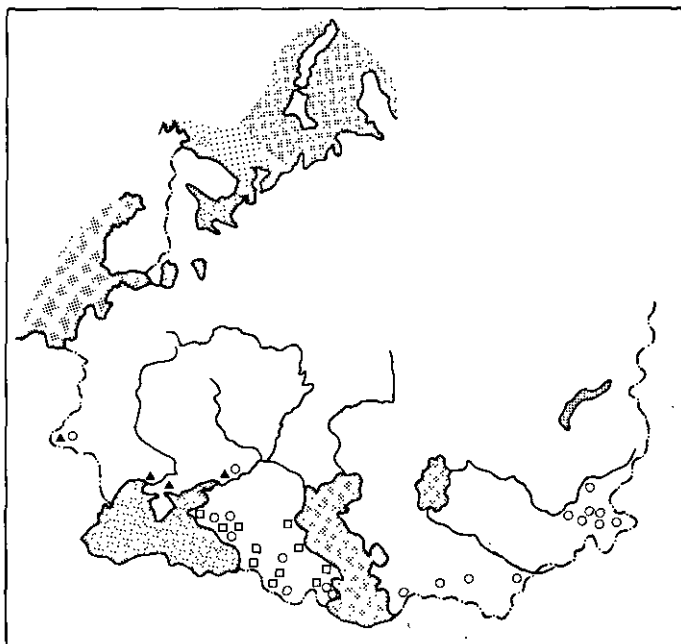


Fig. 5: Distribution of *Cryptops anomalans* (black triangles), *C. caucasicus* (open square) and *C. hortensis* (open circles).

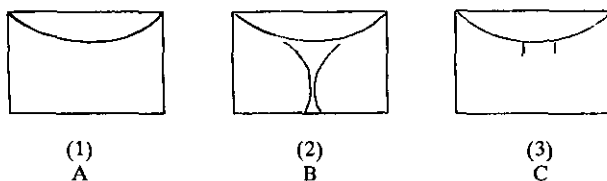


Fig. 6: Diagrams of the first tergite of the typical *Cryptops caucasicus* (A), *C. caucasicus* from Gaftoni (B) and *C. osellai* (C), showing the different degrees of the development of paramedian sutures.

3. Summary:

The scolopendromorph fauna of the USSR is represented by five zoogeographical complexes: Palearctic (*hortensis*), European (*parisi*), Mediterranean (*anomalans*, *caucasicus*, *cingulata*, *gervaisianus*), Middle Asian (*canidens*, *mirabilis*), (South) East Asian (*scaber*, *subspinipes*).

4. Literature:

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