

**Redescription of *Roncus lubricus* L. Koch, 1873, type-species of the genus *Roncus* L. Koch, 1873 (Pseudoscorpionida, Neobisiidae)**

**Giulio Gardini**

Istituto di Zoologia dell'Università,  
Genova, Italy

**Summary**

The pseudoscorpion *Roncus lubricus* L. Koch, 1873 (Neobisiidae), type-species of the genus *Roncus* L. Koch, 1873, is redescribed on the male lectotype from Bloxworth, Dorset.

**Introduction**

The genus *Roncus* was established in 1873 by L. Koch for three new species: *lubricus*, *cambridgii* (now *Roncocreagris cambridgei*: Mahnert, 1976) and *alpinus*. *Roncus lubricus*, originally the first included species, is regarded by subsequent designation as the type-species of the genus (Beier, 1932).

The genus *Roncus* is taxonomically well defined among the Neobisiidae (Vachon & Gabbutt, 1964). It has a wide distribution throughout western Europe and the Mediterranean area to western Iran, with 70 epi- and hypogean species.

The taxonomy of the genus at specific level is very poor. Gabbutt & Vachon (1967) emphasised the difficulties in using Beier's (1963) key to the European members of the genus. Chaetotaxy and morphometric characters are usually employed, but they may be useful only to distinguish between cavernicolous species, or between strongly modified or endemic species. The homogeneous features of most epigeal species, however, do not permit the use of the above-mentioned characters for taxonomic purposes (Gardini, 1981). Therefore I consider that *Roncus lubricus sensu auct.* includes a heterogeneous complex of species widely distributed throughout a large part of the generic range, eastwards to Greece and Bulgaria (Beier, 1963). A revision of *R. lubricus* becomes necessary.

Koch's description of *R. lubricus* is based on specimens from different localities (1873, p. 45): "Rvd. O. P.-Cambridge fand diese Art in England;

von Herrn E. Simon wurde sie auf Corsica und der Insel Lavesi bei Corsica und in Marocco in zahlreichen Exemplaren gesammelt". The type locality is "England", but in 1892 O. P.-Cambridge gives further details (p. 218): "I have only met with four specimens of this rare species, one of which is the type from which Dr. Ludwig Koch described the species in 1873. This specimen and one other were found among moss in a wood at Bloxworth, one under a stone at Pokeswell, and the fourth was found by my nephew (F. O. P.-Cambridge) some years ago under a stone near Sherborne". Modern chernetologists have overlooked these words and the type remains undescribed.

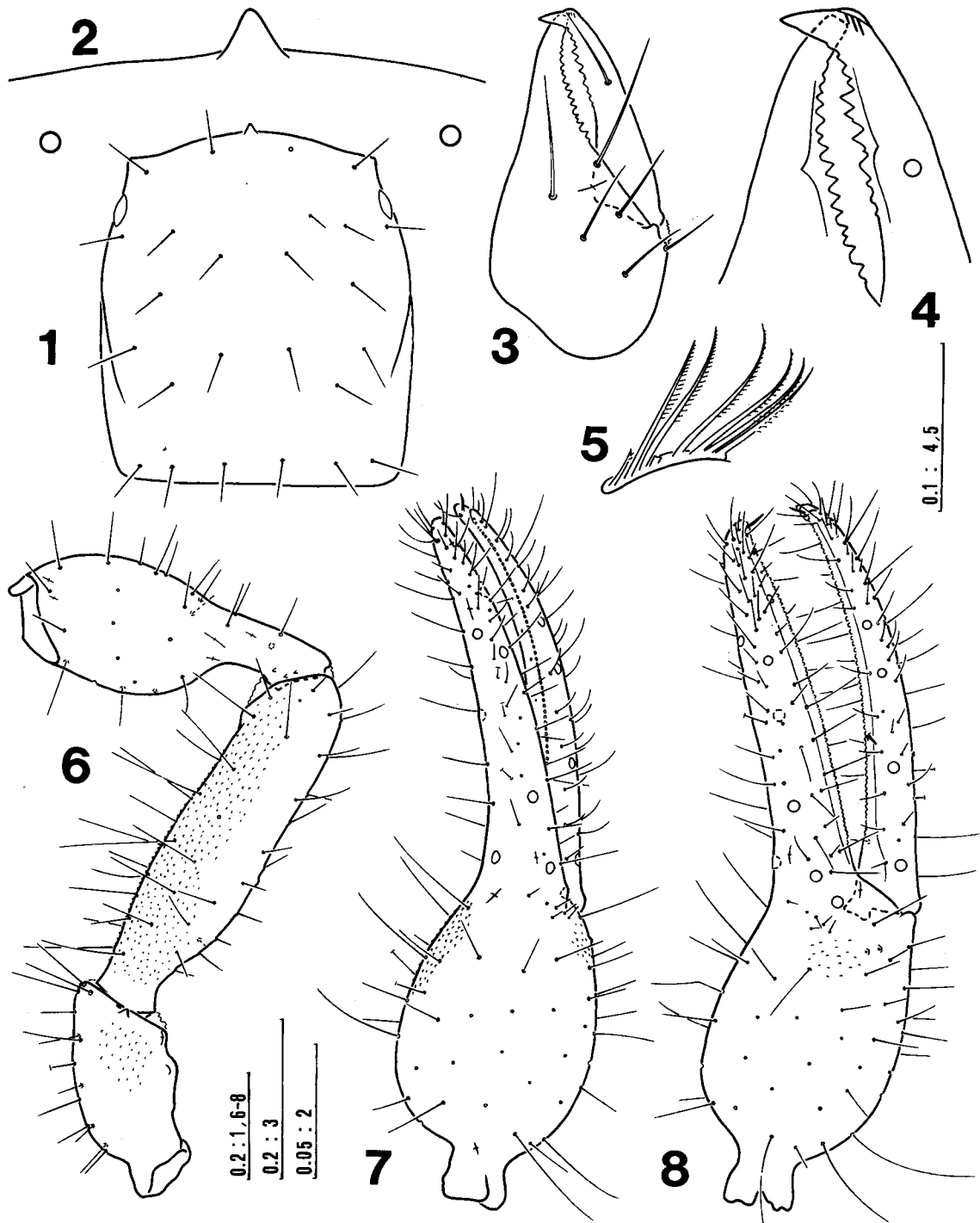
**Designation of the lectotype**

The two specimens from Bloxworth are still preserved in the O. P.-Cambridge collection, Hope Entomological Collections, University Museum, Oxford. They are a male and a female labelled respectively "3" and "13." "*R. lubricus*". All the specimens in the jar from which tubes 3 and 13 were taken have a general label covering all the contents of the jar: the label states "Bloxworth" (A. Z. Smith, pers. comm.).

One of these two specimens is the type described by L. Koch (O. P.-Cambridge, 1892), but there is no objective evidence to establish which one. I designate as lectotype the male specimen labelled "3".

**Redescription of *R. lubricus*, ♂ lectotype**

Yellowish red. Total length (excluding chelicerae) 2.1 mm. Cephalothorax (Fig. 1) 1.15 x longer than broad; epistome (Fig. 2) 0.02 mm long, anterior angle about 60°, apically blunt; anterior lateral process of cephalothorax obtuse (about 130°), therefore not prominent; setal formula 4-7-8-6 (ocular row with an extra seta); eyes well developed, 0.06 mm diameter, 0.07 mm from anterior border of cephalothorax. Tergal chaetotaxy 6-7-10-11-11-11-11-11-9. Sternite II (Fig. 11) with 21 setae (10 along anterior margin of genital opening); sternite III with 24 setae, 3 + 3 on stigmata and 5 along posterior margin of genital opening; genital area as in Fig. 11, median genital sac 0.1 mm long; chaetotaxy of sternites IV-X: 12(2 + 2)-13-13-13-13-13-13. Chelicerae (Fig. 3) 1.91 x as long as broad, palm with



Figs. 1-8: *Roncus lubricus* L. Koch, lectotypus ♂ (Bloxworth, Dorset, England). 1 Cephalothorax; 2 Epistome; 3 Right chelicera; 4 Ditto, detail of teeth of fixed and movable fingers; 5 Ditto, flagellum; 6 Trochanter, femur and tibia of right pedipalp; 7 Right chela, dorsal view; 8 Ditto, lateral view. Scale lines in mm.

6 setae; fixed and movable fingers (Fig. 4) with 16 and 12 teeth respectively; spinneret represented by a low convex hyaline tubercle, with three glandular ducts; ratio  $gl = 0.63$ ; flagellum (Fig. 5) with one short proximal blade and seven longer blades distally, all blades denticulate; serrulae interior and exterior of ?20 and 30 blades respectively. Pedipalpal coxa with 7-8 setae, manducatory process with 4; coxa I 6-7, anterior lateral corner (Fig. 12) about 0.02 mm long and with  $45^\circ$  angle; coxa II 7; coxa III 5; coxa IV 7. Pedipalps (Figs. 6-8): trochanter 2.21 x as long as broad, with sparse granulations dorsally and two lateral tubercles (one of which is very small); femur 3.87 x, with a single lateral tubercle at about the middle (medial tubercles absent), granulation as in Fig. 6; tibia 2.42 x, smooth, club moderately elongate, club/pedichel = 1.88; chela 3.58 x, hand 1.66 x, without pedichel 1.44 x, granulation as in Figs. 7 and 8; a group of 5-6 microsetae proximal to trichobothria *eb* and *esb*; two "tubercles" on latero-distal side of hand; fixed finger with 71 teeth, movable finger with 61-62 teeth, form of teeth as in Figs. 13 and 14; trichobothria of chela as in Figs. 7 and 8; movable finger with a sensillum distal to trichobothrium *sb*, between 21st and 22nd teeth (Fig. 14); movable finger/hand = 1.3; femur/movable finger = 0.96. Leg I (Fig. 9): femur I 3.29 x as long as broad; femur II 3.33 x; tibia 5.0 x; metatarsus 3.1 x; tarsus 5.4 x. Leg IV (Fig. 10): femur *s.l.* 2.69 x, femur I 1.22 x, femur II 1.45 x; tibia 5.54 x, TS-ratio = 0.61; metatarsus 2.8 x, TS-ratio = 0.16; tarsus 5.55 x, TS-ratio = 0.35, with two subapical bifid setae; setae of legs I and IV as in Figs. 9 and 10.

Measurements (mm): cephalothorax 0.68 x 0.59, anterior breadth 0.46. Chelicerae 0.42 x 0.22, movable finger 0.29. Pedipalps: trochanter 0.42 x 0.19; femur 0.755 x 0.195; tibia 0.605 x 0.25, pedichel 0.21, club 0.395; chela 1.29 x 0.36; hand 0.60, without pedichel 0.52; fixed finger from apex to *eb* 0.73, movable finger 0.78. Leg I: femur I 0.395 x 0.12; femur II 0.30 x 0.09; tibia 0.35 x 0.07; metatarsus 0.17 x 0.055; tarsus 0.27 x 0.05. Leg IV: femur I 0.30 x 0.245, femur II 0.36 x 0.245; tibia 0.61 x 0.11; metatarsus 0.21 x 0.075; tarsus 0.35 x 0.063.

### Remarks

Gabbutt & Vachon (1967) gave a full account of the external morphology (through all the nymphal

stages to the adults) of a population of *Roncus lubricus* L. Koch collected at Lambridge Wood, near Henley-on-Thames, Oxon. Legg (1975) used individuals from the same locality to describe the male and female genitalia and associated glands of this species.

The lectotype ♂ and the ♀ from Bloxworth and the specimens from Henley-on-Thames which I have studied (8 Oct. 1968, G. Legg leg., 3 ♂♂, 3 ♀♀) are conspecific, according to the shape of the pedipalps (especially the tibia), chaetotaxy and most of the morphometric characters; the measurements of the male from Bloxworth are a little larger, but those of the female are within the limits given by Gabbutt & Vachon (1967). The specimens from Henley-on-Thames also have a group of 3-4 microsetae proximal to the trichobothrium *eb*, and the sensillum on the palpal movable finger is placed distal to the trichobothrium *sb*, between the 16th and 25th teeth; the ratio distance of sensillum from tip of movable finger/total length of movable finger is 0.50-0.62. The ratio club/pedichel of the palpal tibia is 2.0-2.1.

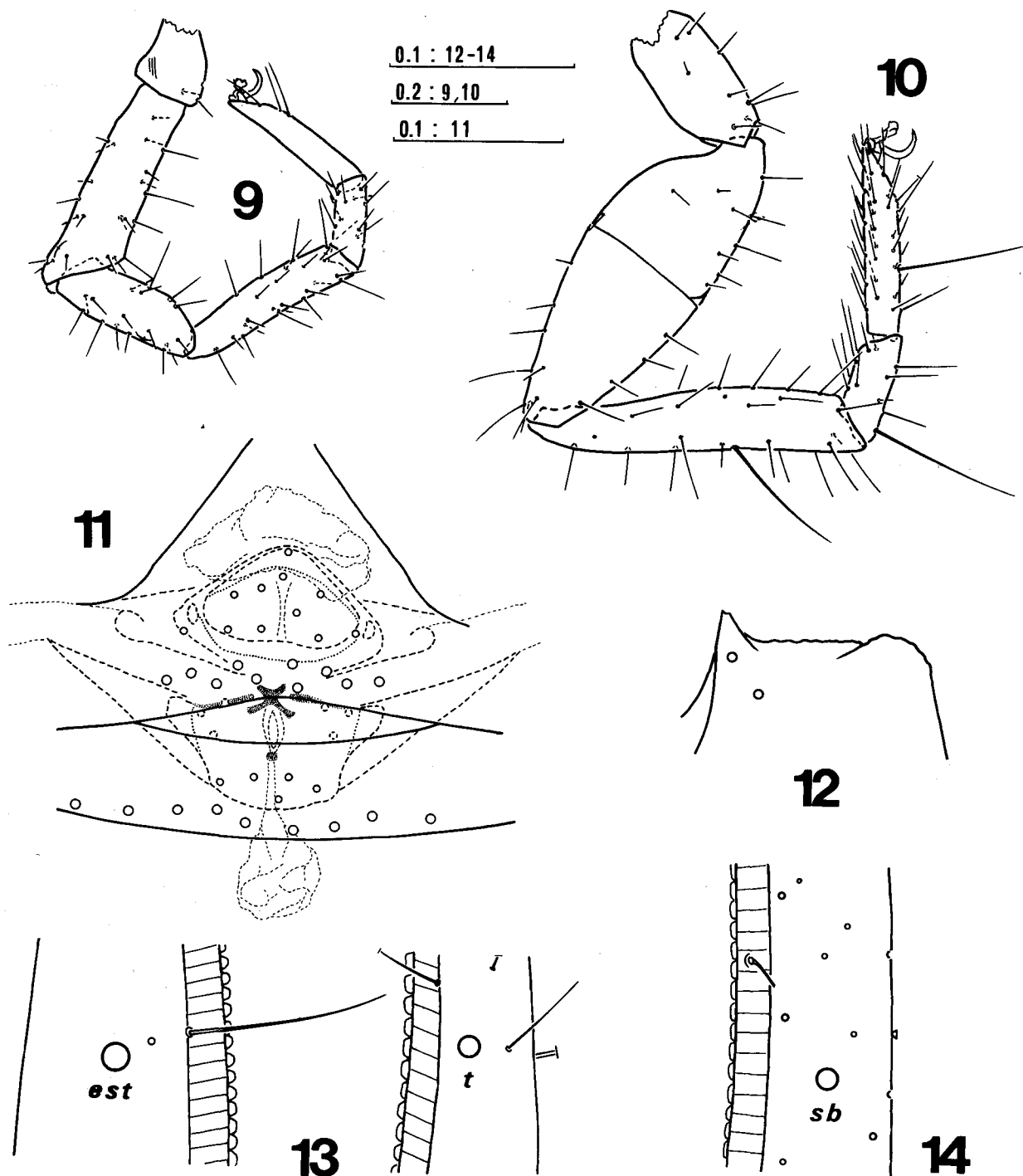
It is still impossible to outline the true distribution of *Roncus lubricus*. English populations (Jones, 1980) may all belong to this species as well as the Breton (Beier, 1963), the Parisian (Balazuc *et al.*, 1951) and the Belgian populations (Wettstein, 1955). Such a distribution might agree with Jeannel's (1942) "type armoricain".

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Figs. 9-14: *Roncus lubricus* L. Koch, lectotypus ♂ (Bloxworth, Dorset, England). **9** Right leg I; **10** Right leg IV; **11** Genital area; **12** Detail of right coxa I; **13** Right chela, detail of teeth; **14** Movable finger of right chela, detail of sensillum. Scale lines in mm.

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