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## **A new species of *Scleropauropus* (Myriapoda: Pauropoda: Pauropodidae) from Austria**

U. Scheller\*

### **Abstract**

A new species of the genus *Scleropauropus* (Pauropoda), collected in Austria, is described: *Scleropauropus christiani* sp.n.

**Key words:** Myriapoda, taxonomy, soil fauna, biogeography, Austria.

### **Zusammenfassung**

Eine neue Art der Gattung *Scleropauropus* (Pauropoda) aus Österreich, *Scleropauropus christiani* sp.n., wird beschrieben.

### **Introduction**

The members of the genus *Scleropauropus* show a scattered occurrence and are not often met with. One single specimen of the West Palearctic *Scleropauropus lyrifer* REMY, 1936 has been reported previously from Austria (Vorarlberg, MEYER & SCHELLER 1992). Erhard Christian recently collected three specimens of the genus in a riverine forest in Vienna. These specimens are distinctly separate from all other species of the genus by having four posteriorly directed macrochaetae on the tergal side of the head.

Specimens were mounted singly in Hoyer's medium. The holotype has been deposited in the Myriapoda collection of the Naturhistorisches Museum Wien (NHMW), paratypes in the collection of the author.

### **Family Pauropodidae. Subfamily Scleropauropodinae**

### **Genus *Scleropauropus* SILVESTRI, 1902, Subgenus *Scleropauropus* s. str.**

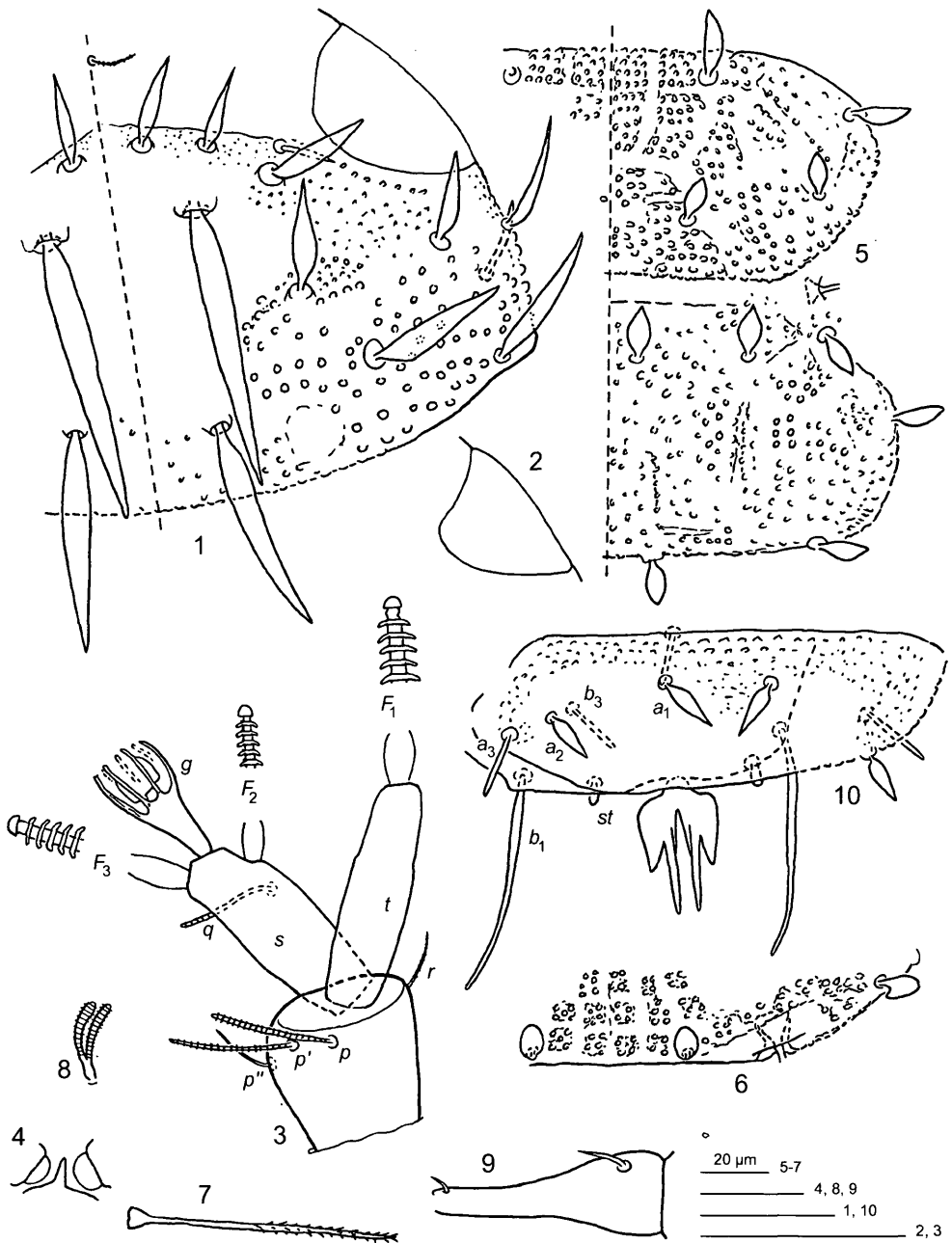
### ***Scleropauropus christiani* sp.n.**

(Figs. 1-14)

**Type material:** Holotype (NHMW 5898): adult male, Austria, Vienna, Prater, 48°11.5' N 16°26.6' E, 157 m a.s.l., 350 m east of the pavilion "Lusthaus", 19.VI. 2006, leg. E. Christian. Paratypes: 2 adult females, same data as holotype.

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\* Dr. Ulf Scheller, Häggeboholm, Häggesled, S-53194 Järpås, Sweden. — [ulf.scheller@telia.com](mailto:ulf.scheller@telia.com)



Figs. 1 - 10: *Scleropauropus christiani* sp.n.: (1, 3 - 10) holotype, (2) paratype. (1) head, median and right part, tergal view; (2) right temporal organ, tergal view; (3) right antenna, sternal view; (4) collum segment, median part with process and appendages, tergal view; (5) tergites I and II, median and right part, tergal view; (6) tergite VI, right posteromedian part; (7) T<sub>3</sub>; (8) seta of trochanter of leg 9; (9) tarsus of leg 9; (10) pygidium, tergal view.

**Description:** (Range of variation in adult paratypes given in brackets).

Body length. (0.96-)1.05 mm.

Head (Fig. 1). Anterior seta between antennal bases thin cylindrical. Other tergal and lateral setae lanceolate or cylindrical/subcylindrical tapering of very different length. Relative lengths of setae, 1<sup>st</sup> row:  $a_1 = 10$ ,  $a_2 = 8$  (- 9); 2<sup>nd</sup> row:  $a_1 = (28 -) 31$ ,  $a_2 = 11$ ,  $a_3 = 6$ ; 3<sup>rd</sup> row:  $a_1 = (10 -) 11$ ,  $a_2 = 10$ ; 4<sup>th</sup> row:  $a_1 = (23 -) 25$ ,  $a_2 = 16$ ,  $a_3 = 15$ ,  $a_4 =$  not found; lateral group setae:  $l_1 = (12 -) 13$ ,  $l_2 = 10$ ,  $l_3$  not found. Ratio  $a_1/a_1-a_1$  in 1<sup>st</sup> row 1.3, 2<sup>nd</sup> row (1.6 -) 1.9, 3<sup>rd</sup> row 0.3 and in 4<sup>th</sup> row (1.5 -) 1.6. Setae  $a_1$  of 2<sup>nd</sup> and 4<sup>th</sup> rows proportionally very large, lanceolate, directed posteriorly. Temporal organs short, broadest in anterior part, length  $\approx 0.4$  of shortest distance apart, anterior margin somewhat concave (Fig. 2, the convex shape shown in fig. 1 depends on flattening down between glass slide and coverglass); no pistil; posterior pore not found. Head cuticle between antennae glabrous, median part glabrous except between  $a_1$  of 4<sup>th</sup> row which is sparsely grainy; posterolateral part with coarsely granular cuticle; temporal organs glabrous.

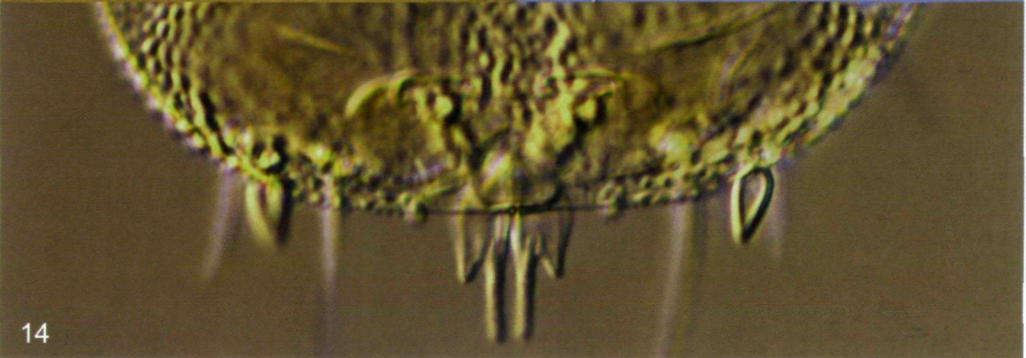
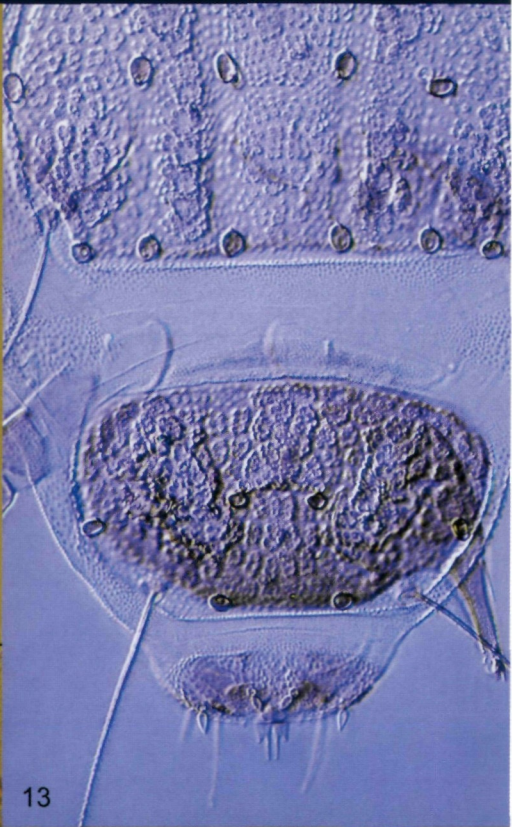
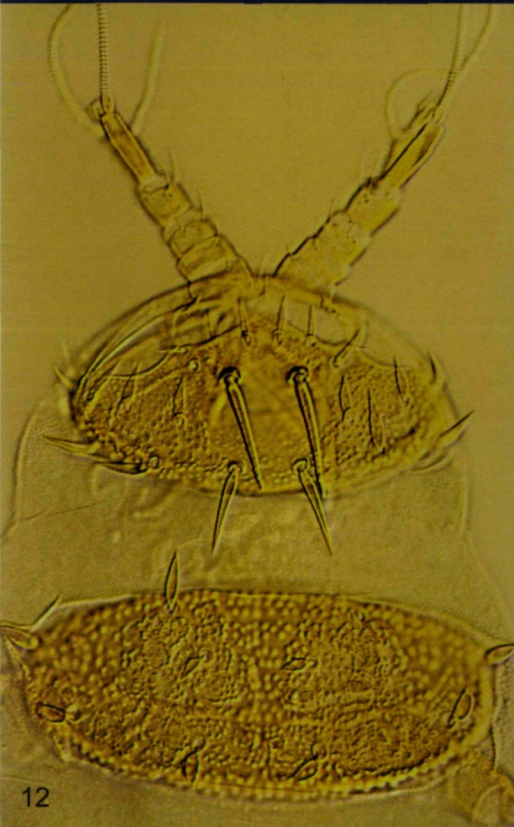
Antennae (Fig. 3). Segment 4 with 4 subcylindrical striate setae,  $p$  and  $p'$  thickest,  $r$  very thin. Relative lengths of setae:  $p = 10$ ,  $p' = (9 -) 10$ ,  $p'' = (5 -) 6$ ,  $r = (4 -) 5$ .  $p'''$  not found. Tergal seta  $p$  0.5 (- 0.6) of length of tergal branch  $t$ . The latter somewhat fusiform, 3.7 (- 4.0) times as long as greatest diameter and 1.1 (- 1.2) times as long as sternal branch  $s$  which is (2.4-)2.5 times as long as its greatest diameter and with its antero-distal corner distinctly truncate. Seta  $q$  as seta  $p$  on 4<sup>th</sup> segment, 0.5 of length of  $s$ . Relative lengths of flagella (base segments included) and base segments:  $F_1 = 100$ ,  $bs_1 = 6$ ;  $F_2 = (42 -) 45$  (- 47),  $bs_2 = (4 -) 5$ ;  $F_3 = (76 -) 80$  (- 81),  $bs_3 = 7$ .  $F_1$  (3.5 -) 3.7 times as long as  $t$ ,  $F_2$  and  $F_3$  1.8 (- 1.9) and (3.2 -) 3.3 times as long as  $s$  respectively.  $F_2$  thinner than  $F_1$  and  $F_3$ . Distal calyces small subhemispherical, distal part of flagella axes not widened. Globulus  $g$  1.7 times as long as greatest diameter, 8 (- 9) bracts, capsule bottom flattened; length of  $g$  0.6 of length of  $s$ , diameter (1.1 -) 1.2 times as long as greatest diameter of  $t$ . Antennae glabrous.

Trunk. Setae of collum segment not studied; sternite process (Fig. 4) with broad base, anterior part narrow, pointed distally; appendages with large semiglobular caps. Process and appendages glabrous. Setae on tergites (Fig. 5, 6) with short cylindrical stalk, broadly unsymmetrically lanceolate, glabrous. There are 4+4 setae on tergite I, 6+6 on II-V and 4+2 on VI (2 additional setae on tergites I and IV in one paratype). Length of submedian posterior setae on tergite VI 0.4 of interdistance and about as long as pygidial setae  $a_1$ . Cuticle of tergites very rough, densely covered with semiglobular structures in a check pattern, the latter most distinct on anterior tergites.

Bothriotricha (Fig. 7). All with simple straight axes,  $T_1$  and  $T_2$  very thin with minute pubescence on distal 1/3,  $T_3$  and  $T_4$  thickest with sparse pubescence of distinct simple oblique hairs. Relative lengths of bothriotricha:  $T_1 = 100$ ,  $T_2 = 86$ ,  $T_3 = 69$ , probably broken (- 86),  $T_4 = 79$  (- 101),  $T_5 = 98$  (- 105).

Genital papillae. Hidden, not studied.

Legs. Setae on coxa and trochanter of leg 9 (Fig. 8) furcate, branches subsimilar, somewhat clavate, striate, blunt. Corresponding setae on more anterior legs with rudimentary secondary branches. Coxal seta of leg 2 in male as on leg 9. Tarsus of leg 9 (Fig. 9) 2.6



(- 2.7) times as long as its greatest diameter, strongly tapering, distal third thin, almost cylindrical; setae tapering, pointed, somewhat curved, glabrous, proximal seta fourth of length of tarsus and 2.2 times as long as distal seta. Cuticle of tarsus glabrous.

**Pygidium** (Fig. 10). Tergum: Posterior margin evenly rounded. Relative lengths of setae:  $a_1 = 10$ ,  $a_2 = 11$  (- 16),  $a_3 = 17$  (- 21),  $st = 4$  (- 6).  $a_1$  and  $a_2$  lanceolate, as setae on anterior tergites, converging,  $a_3$  almost cylindrical, diverging.  $st$  short, broad, probably more rounded than  $a_1$  and  $a_2$ . Distance  $a_1 - a_1$  1.8 (- 2.0) times as long as  $a_1$ ; distance  $a_1 - a_2$  about 2.6 times as long as  $a_2 - a_3$ ; distance  $st - st$  4 times as long as  $st$  and (1.3 -) 1.4 times as long as distance  $a_1 - a_1$ . Cuticle of anterior part of tergum coarsely granular, posterior part glabrous. Sternum: Posterior margin between  $b_1$  somewhat indented below anal plate. Relative lengths of setae ( $a_1 = 10$ ):  $b_1 = 37$  (- 47),  $b_3 = 9$  (- 10). These setae thin,  $b_1$  tapering,  $b_3$  cylindrical.  $b_1$  0.8 (- 1.0) of interdistance;  $b_3$  almost 0.4 of interdistance. Anal plate glabrous, narrowest anteriorly, lyriform, with convex lateral margins and four posterior tapering appendages: two short posterolateral ones and two straight long submedian ones separated by a narrow incision, the latter about 0.5 of length of plate.

**Type locality:** Austria, Vienna, Prater, 48°11.5' N 16°26.6' E, 157 m a.s.l., 350 m east of the pavilion "Lusthaus".

**Habitat:** Decaying leaf litter accumulated at the edge of a moist depression in a riparian forest without current forestry operations, nearby an old branch of the River Danube, within a large recreation area.

**Etymology:** Dedicated to the collector Prof. Dr. Erhard Christian, BOKU Vienna.

**Remarks:** The character which most sharply separate the new species from other species of the genus is the occurrence of four very large setae on the tergal side of the head, two  $a_1$  in 2<sup>nd</sup> and two in 4<sup>th</sup> row. It has not earlier been observed in the genus but similar macrochaetae, however occurring in only one of the four rows of setae, have been reported from the subgenus *Donzelotauropus* in *Stylopauropus* (found in California: REMY, 1958; in Alaska: SCHELLER, 1986). Disregarding this peculiarity *S. christiani* n.sp. may be closest to some West Palearctic species as *S. peniculifer* REMY, 1941 from France, *S. lyrifer* REMY, 1936 from many European countries and *S. segrex* REMY, 1959 from North Africa.

## References

- MEYER E. & SCHELLER U., 1992: Abundance and species composition of Pauropoda in forest soils of western Austria (Voralberg, Tirol). – In MEYER, E., THALER, K. & SCHEDL W. (eds.), *Advances in Myriapodology. Proceedings of the 8<sup>th</sup> International Congress of Myriapodology*, Innsbruck, Austria, 15-20.VII.1990. *Berichte des naturwissenschaftlich-medizinischen Vereins in Innsbruck*, Supplementum 10: 431-439.
- REMY P.A., 1958: Pauropodes des États-Unis d'Amerique et de la Jamaïque. – *Mémoires de la Société nationale des Sciences naturelles et mathématiques de Cherbourg* (5) 8 (1957-58): 33-109.
- SCHELLER U., 1958: Beringian Pauropoda (Myriapoda). – *Entomologica Scandinavica* 17: 363-391.

Figs. 11 - 14: *Scleropauropus christiani* n. sp., holotype. 11, habitus, body length 1.05 mm; 12, head and tergite I; 13, tergite V, VI and pygidium; 14, anal plate. LM micrographs E. Christian.

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