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A New Species of Pseudosinella (Insecta, Collembola) from an Austrian Cave

by

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Abstract: A new species of the genus *Pseudosinella* with 2 + 2 eyes found in an Austrian cave is described. Two *Pseudosinella* species *(Pseudosinella seyleri* n.sp. and *Pseudosinella leclerci* Stomp, Massoud & Thibaud, 1982) are integrated into the determination key of European *Pseudosinella* species with 2 + 2 eyes published by Rusek, 1979.

Introduction

Some years ago, Dr E. Christian sent to the National History Museum of Luxembourg a collection of *Pseudosinella* species found in Austrian caves. After examination of this collection, beside others already known, two new species of the genus *Pseudosinella* have been discovered: *Pseudosinella seyleri* with 2 + 2 eyes found in caves near Mödling (Austria) and *Pseudosinella christiani* with 0 + 0 eyes from caves near Salzburg (Austria). This species, which belongs to the *Pseudosinella vandeli* group, has already been published in 1986 by one of the authors. The first one is described in this publication. All chaetal abbreviations used in the description are based on Gisin's terminology (Gisin, 1967).

Another aim of this paper was to integrate *Pseudosinella seyleri* and *Pseudosinella leclerci* Stomp, Massoud & Thibaud, 1982 found in the department of Ardèche (France) into the key of determination to the European species of the *Pseudosinella* with 2 + 2 eyes published by Rusek (1979).

The authors wish to thank Dr E. Christian for kindly giving the permission to study his collection of *Pseudosinella* species from Austrian caves.

Description of a new apecies: Pseudosinella seyleri n. sp.

This species is dedicated to Mr and Mrs Albert Seyler from Capellen (Gr. D. of Luxembourg). It is mentioned by Christian (1987) in his Catalogus Faunae Austriae. XIIa: p. 49.

Body 1000 - 1500 µm long, white.
2 + 2 frontal eyes A and B present.
Antennae longer than head. Antennae / head: 1,3. All antennal segments with scales. Antennal organ III consists of two cylindric sensory rods.
Labium with chaetal arrangement M_1 m_2 r e l_1 L_2. Chaeta r small, only M_1 and L_2 are not smooth.
Formula of dorsal macrochaeta: R 111/10/0201 + 2.
Chaetotaxy of abdominal tergite II: p A B q_1 q_2.
Microchaeta s present on abdominal tergite IV. Claw of third pair of legs with one distal tooth in 65% length of the ventral lamella and two proximal teeth. Proximal teeth of unequal size, inner proximal tooth wing like and at the same height of the other in 45% length of the ventral lamella.
Empodium small with three apical teeth.
Tibiotarsal tenent hair with spatulated apex.
Manubrium: mucro small, with apical tooth bigger than the anteapical tooth.

Type-locality: Austria, Hinterbrühlerhöhle, (1943, 13), südlicher Wienerwald (Mödling). Altitude: 300 m. Several specimens.

Holotype: one specimen mounted on slide is deposited in the collections of the Musée National d'Histoire Naturelle in Luxembourg.

Key to the European Pseudosinella species with 2 + 2 eyes

Integration of two species *(Pseudosinella seyleri* n. sp. and *Pseudosinella leclerci* Stomp, Massoud & Thibaud, 1982) into the key published by Rusek, 1979.

(Chaetal designation and formula after Gisin, 1967)

1 Two frontal eyes A and B (A above B) 2
– Two frontomedial eyes A and D (D behind A) present 8

2 On abdominal tergite II two dorsal macrochaetae present: p A B q_1 q_2 3
– On abdominal tergite II only one dorsal macrochaeta present: p a B q_1 q_2 4

3 Dorsal chaetotaxy of head R 111, tibiotarsal tenent hair spatulate *P. seyleri* n. sp.

Diagnosis: 1000 - 1500 µm long, white.
Chaetotaxy of labium: M_1 m_2 r e l_1 L_2, only M_1 and L_2 are not smooth.
Dorsal macrochaetae R 111/10/0201 + 2.
Chaetotaxy of abdominal tergite II: p A B q_1 q_2.

Microchaeta s present on abdominal tergite IV.
Claw small, with one distal tooth in 65% length of the ventral lamella and two proximal teeth. Empodium small, with three apical teeth. Tibiotarsal tenent hair spatulate, mucro small, with apical tooth bigger than anteapical tooth.
Distribution: Mödling (Austria).

- Dorsal chaetotaxy of head R 011 7
- Dorsal chaetotaxy of head R 001, tibiotarsal hair acuminate *P. absoloni* (Rusek, 1979)

Diagnosis: 930 µm long, white.
Chaetotaxy of labium: M_1 M_2 r E L_1 L_2, r reduced to small papilla. Dorsal macrochaetae: R 001/10/0201 + 2.
Chaetotaxy of abdominal tergite II: p A B q_1 q_2 and with microchaeta s. Empodial appendage smooth on outer lamella. Tibiotarsal tenent hair acuminate. Trochanteral organ with 10 chaetae.
Distribution: Czechoslovakia (Moravia, in soil).

4 Dorsal chaetotaxy of head R 000 *P. thibaudi* (Stomp, 1977)

Diagnosis: 1100 - 1300 µm long, white.
Chaetotaxy of labium M_1 m_2 R e l_1 L_2. Dorsal macrochaetae: R 000/00/0101 + 2.
Chaetotaxy of abdominal tergite II: - a B q_1 q_2. Without microchaeta s on abdominal tergite IV. Claw with 2 proximal teeth of unequal size,

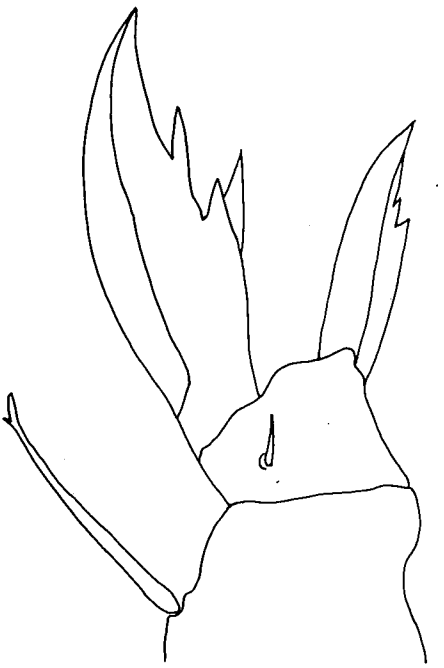


Fig.: Pseudosinella seyleri n. sp.: claw III

distal tooth in 70% of inner lamella. Empodial appendage without teeth. Tibiotarsal tenent hair acuminate.
Distribution: FR6. (Fränkische Alp, cavernicolous).

– Dorsal chaetotaxy of head R 001 5

5 Abdominal tergite IV without anterior macrochaeta
P. hercynica (Rusek, 1979)

Diagnosis: 1150 µm long, white.
Cheatotaxy of labium: M_1 M_2 r E L_1 L_2, r strongly reduced.
Dorsal macrochaetae: R 001/00/0100 + 2.
Chaetotaxy of abdominal tergite II: p a B q_1 q_2.
Abdominal tergite IV without anterior macrochaeta and without microchaeta s. Empodial appendage smooth on outer lamella. Tibiotarsal tenent hair slightly spatulated. Trochanteral organ with 8 – 9 chaetae.
Distribution: Czechoslovakia (Moravia, in soil).

– Abdominal tergite IV with anterior macrochaeta 6

6 Empodial appendage with four small teeth on outer lamella. Abdominal tergite II with some supplementary microchaetae. L_1 on labium as long as L_2. Colour white. *P. pallida* (Gruia, 1977)

Diagnosis: 1000 - 1300 µm long, white.
Chaetotaxy of labium: M_1 M_2 r E L_1 L_2, r strongly reduced.
Dorsal macrochaetae: R 001/10/0101 + 2. Chaetotaxy of abdominal tergite II: p a B q_1 q_2.
Without microchaetae s on abdominal tergite IV. Tibiotarsal tenent hair clavate.
Distribution: Rumania (Carpathians, in soil).

– Outer lamella of empodial appendage smooth. Abdominal tergite II without supplementary microchaetae. Colour pale orange. L_1 on labium shorter than L_2
P. bohemica (Rusek, 1979)

Diagnosis: 1150 µm long, white pale orange.
Chaetotaxy of labium: M_1 M_2 r E L_1 L_2, r strongly reduced.
Dorsal macrochaetae: R 001/10/0101 + 2.
Chaetotaxy of abdominal tergite II: p a B q_1 q_2.
Abdominal tergite IV without microchaetae s. Empodial appendage smooth on outer lamella. Tibiotarsal tenent hair spatulated. Trochanteral organ with 13 chaetae.
Distribution: Czechoslovakia (southern Bohemia, in soil).

7 Dorsal chaetotaxy of head: R 011,
tibiotarsal tenent hair spatulate *P. alba* (Packard, 1873)

Diagnosis: 1000 - 1200 µm long, white.
Chaetotaxy of labium M_1 M_2 r E L_1 L_2, r strongly reduced.

Dorsal macrochaetae R 011/10/0201 + 2. Chaetotaxy of abdominal tergite II: p a b q_1 q_2. Microchaeta s present on abdominal tergite IV. Claw with two proximal teeth of different size and one distal tooth. Empodium lanceolate, without teeth. Tibiotarsal hair spatulate. Trochanteral organ with 9 chaetae.
Distribution: Europe, North America (in soil).

- Dorsal chaetotaxy of head R 011,
  tibiotarsal hair pointed *P. leclerci* (Stomp, Massoud & Thibaud, 1982)

  Diagnosis: 1200 μm long, white.
  Chaetotaxy of labium: m_1 m_2 r e l_1 l_2, r reduced.
  Dorsal macrochaetae: R 011/10/0101 + 2.
  Chaetotaxy of abdominal tergite II: p A B q_1 q_2. Microchaetae s present on abdominal tergite IV: Claw with proximal anterior tooth more developed than proximal posterior tooth. Unpair tooth of the claw in 65% length of the ventral lamella. Empodium lanceolate. Apical tooth of the mucro bigger than the anteapical.
  Distribution: France, Ardèche.

For continuation of the key: see Rusek, 1979.

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