

A NEW SPECIES OF THE GENUS *PROSOCHEYLA* VOLGIN
(ACARI: CHEYLETIDAE)
WITH A KEY TO THE KNOWN WORLD SPECIES

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ACARI
CHEYLETIDAE
PROSOCHEYLA
NEW SPECIES

SUMMARY: A new species of the genus *Prosocheyla* Volgin from China is described and illustrated. A key to the eight known species is provided.

INTRODUCTION

Volgin (1969) erected the genus *Prosocheyla* based on *Cheletogenes oaklandia* Baker, 1949 with the subgenera: *P. (Prosocheyla)* and *P. (Reckiana)*. SMILEY & MOSER (1970) described the species *P. acanthus*. The genus was reviewed by SUMMER & PRICE (1970), including five species. BOCHKOV & HAUSTOV (1999) described a new species, *P. villosa*. FAIN & BOCHKOV (2001) described the seventh species in this genus, increasing the number of *Prosocheyla* species in the world to seven.

In the present paper, one new species of the subgenus *Prosocheyla* s.str. is described from China, and a key to the eight known species is provided. Type specimens are deposited in the Department of Biological Science, Nanchang University, Nanchang, China. All measurements are given in micrometers (μm).

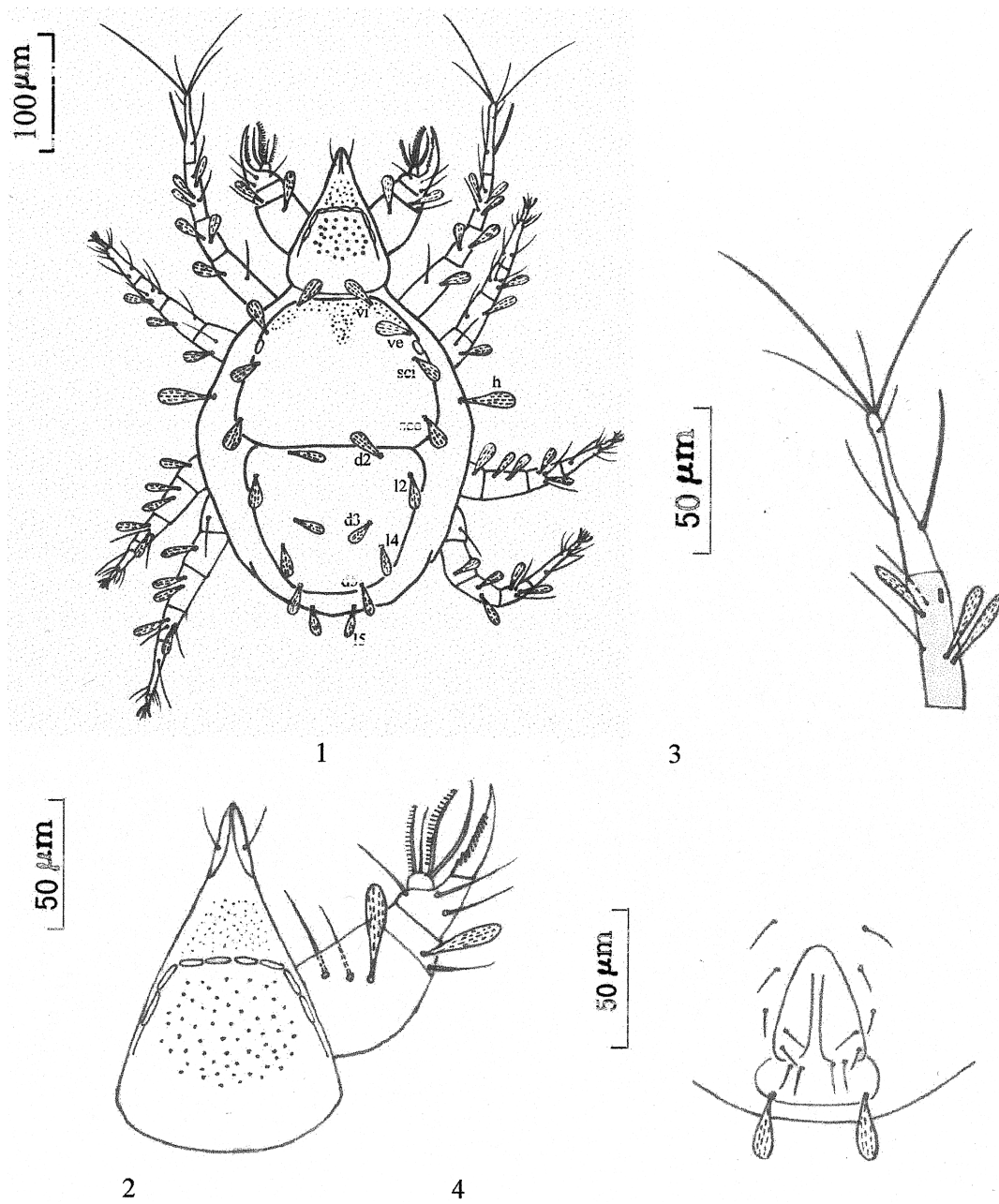
Genus *Prosocheyla* Volgin

Prosocheyla Volgin, 1969,
Akad. Nauk. S. S. S. R., Zool. Inst.,
Opredel. P. Faune. U. S. S. R., 101:358-368
Type species : *Cheleogenes oaklandia* Baker, 1949

Diagnosis: Palpal tarsus with two comb-like setae and two sickle-like setae; palpal claw bears 3 to 13 teeth. Eyes present. Dorsal side of idiosoma with two — four shields: one propodosomal and one — three hysterosomal. Lateral setae on idiosoma short, squamiform, of medium width. Dorsomedian setae present, orthodox or aberrant, the latter lobulate or fragmented; humerals similar to lateral setae. Legs shorter than idiosoma, leg I without claws and empodia, bearing four to six conspicuous terminal setae; tarsi II IV with smooth claws and empodia. Solenidion ω_1 at least half as long as body of tarsus, guard seta minute or absent.

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Figs. 1-4 *Prosocheyla sinensis* sp. nov. female. 1. — Dorsal view. 2. — Gnathosoma. 3. — Tibia and tarsus of leg I. 4. — Ano-genital region.

KEY TO THE KNOWN SPECIES OF GENUS
PROSOCHEYLA (Females)

1. Both setae on palpal genua piliform. Tibia I with a short solenidion and four setae (subgenus *Reckiana* Volgin) 2
- Dorsal seta on palpal genua squamiform, ventral seta piliform. Tibia I with a short solenidion and five setae (subgenus *Prosocheyla* Volgin) 3
2. Dorsum of idiosoma with three shields: one propodosomal and two hysterosomal located one behind the other *P. hepburni* (Lawrence, 1954)
- Dorsum of idiosoma with two shields: one propodosomal and one hysterosomal ... *P. buckneri* (Baker, 1949)
3. Dorsomedian setae aberrant, fragmented. 4
- Dorsomedian setae resemble dorsolateral setae, squamiform 7
4. Tibial claw with 3 to 4 strong teeth on its basal portion. *P. acanthus* Smiley & Moser, 1970
- Tibial claw with 7 to 9 rounded teeth distributed over most of its length. 5
5. The dorsal seta of tibia I is squamiform *P. traubi* (Baker, 1949)
- All setae of tibia I are piliform 6
6. All the surface of the rostral shield covered by tubercles. Setae 15 situated on hysterosomal shield. Propodosomal and hysterosomal shields with 8 and 7 pair of median setae respectively. *P. villosa* Bochkov & Haustov, 1999
- Only the lateral parts of the rostral shield covered by tubercles. Setae 15 situated off hysterosomal shield. Propodosomal and hysterosomal shields with 7 and 6 pair of median setae. respectively *P. ripkai* Fain et Bochkov, 2001
7. Propodosomal shield with four pairs of marginal setae and two pairs of median setae; hysterosomal shield with eight pairs of setae *P. oaklandia* (Baker, 1949)
- Propodosomal shield with four pairs of marginal setae, no median setae; hysterosomal shield with five pairs of setae. *P. sinensis*.sp.nov.

Prosocheyla sinensis sp.nov. (FIGS.1-4)

Female (Holotype) — Gnathosoma 130 long and 85 wide, rostrum 60 long. Peritremes arch-like, consisting of 4 pairs of links. Rostral shield with tubercular surface. Palpal femur longer than wide, dorsal seta squamiform, ventral setae piliform, genual seta squamiform dorsally and with a simple

seta ventrally, tibial seta piliform, claw of palps bearing 11 teeth. Palpal tarsus broader than long, bearing 2 comb-like setae and 2 sickle-like setae, outer comb with about 18 teeth, inner comb with about 16 teeth.

Idiosoma 305 long and 238 wide. All dorsum setae squamiform, about 28 long and 13 wide. Dorsal side of idiosoma with two shields - propodosomal and hysterosomal. Propodosomal shield trapezoidal in form, 131 long, 174 wide, bearing 4 pairs of lateral squamiform setae, *vi*, *ve*, *sci*, *sce* and no median setae. Humeral seta squamiform, longer than dorsal setae. Hysterosomal shield about 135 long and 150 wide, bearing setae *l2*, *l4*, *d5*, 1 pair of anterior squamiform setae *d2*, and 1 pair of median squamiform setae *d3*. Setae *l1* and *l3* lacking, setae *l5* situated off hysterosomal shield. Ventral surface with 3 pairs of intercoxal setae and 5 pairs of genital setae, all piliform; with 3 pair of anal setae (posterior pair of anal setae squamiform, other setae piliform).

Legs are shorter than idiosoma. Lengths of legs: I-247, II 175, III 196, IV-217. Chaetotaxy formula of legs I-IV (number of solenidia is given in brackets): coxae 2-1-2-2, trochanters 1-1-2-1, femura 2-2-2-1, genua 2-2-2-2, tibiae 5(1)-4-4-4, tarsi 6(1)-7-6-6. All setae of coxae piliform; trochanters I, II, IV each with one piliform seta, trochanter III with one squamiform seta and one piliform; femura I and II with one squamiform seta and one piliform seta, femur III with two squamiform setae, femur IV with one squamiform seta; genua I, III, IV each with two squamiform setae, genu II with one squamiform seta and one piliform seta; tibia I with three squamiform setae and two piliform setae, tibia II with one squamiform seta and three piliform setae, tibiae III and IV with two squamiform setae and two piliform setae; all setae of tarsi piliform. Leg I bears four conspicuous terminal setae, their lengths: 80, 75, 45, 30. Solenidion ω_1 50 long, guard seta of tarsus I absent. Tarsus I 58 long, tibia I 48 long.

Male: Unknown.

Types. Holotype female and one paratype female were collected on 17 July 2002, from a withered bark, Henan province, China, by Tu Dan.

REMARKS

This new species is similar to *P. oaklandia* (Baker, 1949) but can be distinguished from the latter by the following points:

- 1) propodosomal shield with two pairs of median setae in *P. oaklandia* but devoid of median setae in the new species.
- 2) hysterosomal shield with eight pairs of setae in *P. oaklandia* but only five pairs of setae in the new species.

The new species is also similar to *P. traubi* (Baker, 1949), but the latter has only one squamiform seta on tibiae I, whereas the new species has three.

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