



9-30-1969

# A new species of *Oppia* from Colorado (Cryptostigmata: Oppiidae)

Tyler A. Woolley

Colorado State University, Fort Collins

Follow this and additional works at: <https://scholarsarchive.byu.edu/gbn>

## Recommended Citation

Woolley, Tyler A. (1969) "A new species of *Oppia* from Colorado (Cryptostigmata: Oppiidae)," *Great Basin Naturalist*: Vol. 29 : No. 3 , Article 3.

Available at: <https://scholarsarchive.byu.edu/gbn/vol29/iss3/3>

This Article is brought to you for free and open access by the Western North American Naturalist Publications at BYU ScholarsArchive. It has been accepted for inclusion in Great Basin Naturalist by an authorized editor of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

A NEW SPECIES OF *OPPIA* FROM COLORADO  
(CRYPTOSTIGMATA: OPPIIDAE)

Tyler A. Woolley<sup>1</sup>

A student brought in a soil and humus sample from a (commercial?) earthworm bed that was teeming with enchytraeids and uropodine mites. Associated with these organisms but not in such large numbers, was a species of one of the larger *Oppia*. Specimens of this species were compared with various species of this genus in the author's collections and with species described in the literature, particularly the species of the *Oppia* complex delineated by Hammer (1968). As a result of these comparisons, the species was determined to be a new representative of Oppiidae and is described below.

*Oppia coloradensis*, sp. n.

(Figs. 1-4)

DIAGNOSIS. The new species resembles *Oppia trichosa* Hammer, 1958, and *O. notata* Hammer, 1958, as well as *O. yodai* Aoki, 1965, but the sensillus in each of these last three species is pointed and lanceolate rather than the blunt and slightly clavate type found in *O. coloradensis*, sp. n. Aoki's species also has five genital setae compared to four in *O. coloradensis*. The sensillus of the new species resembles the type found in *Amerioppia*, but the latter genus lacks interlamellar hairs, which are present in the new species. The rostrum of *O. notata* is pointed and has a transverse band with a small tooth; *O. trichosa* shows a rounded rostrum, as does *O. coloradensis*. In both *O. notata* and *O. trichosa* the interlamellar hairs are lacking, while in *O. coloradensis* these hairs are prominent. The new species also has similarity to *O. simplex*, Balogh, 1962, but the notogastral hairs of the latter species are much longer and more robust than in *O. coloradensis*; the notogastral hairs of *O. yodai* Aoki, 1965, are about the same relative length as in the new species.

Compared to *O. covarrubiasi* Hammer, 1968, from New Zealand, the new species has only four pairs of genital hairs (rather than six), the interlamellar hairs, exobothridial hairs and notogastral hairs of the new species are much longer.

The new species apparently lacks notogastral setae *ta* in all of the specimens examined.

DESCRIPTION. Golden-brown in color, with darker, reddish-brown margins; integument finely granulated on both prodorsum and notogaster; prodorsum triangular in outline, rostrum rounded, rostral hairs four-fifths as long as lamellar hairs, finely barbed; lamellae or lamellar ridges absent, lamellar hairs a fifth again as long as rostral hairs, finely barbed, decurved; dorsum between pedo-

<sup>1</sup>Department of Zoology, Colorado State University, Fort Collins.

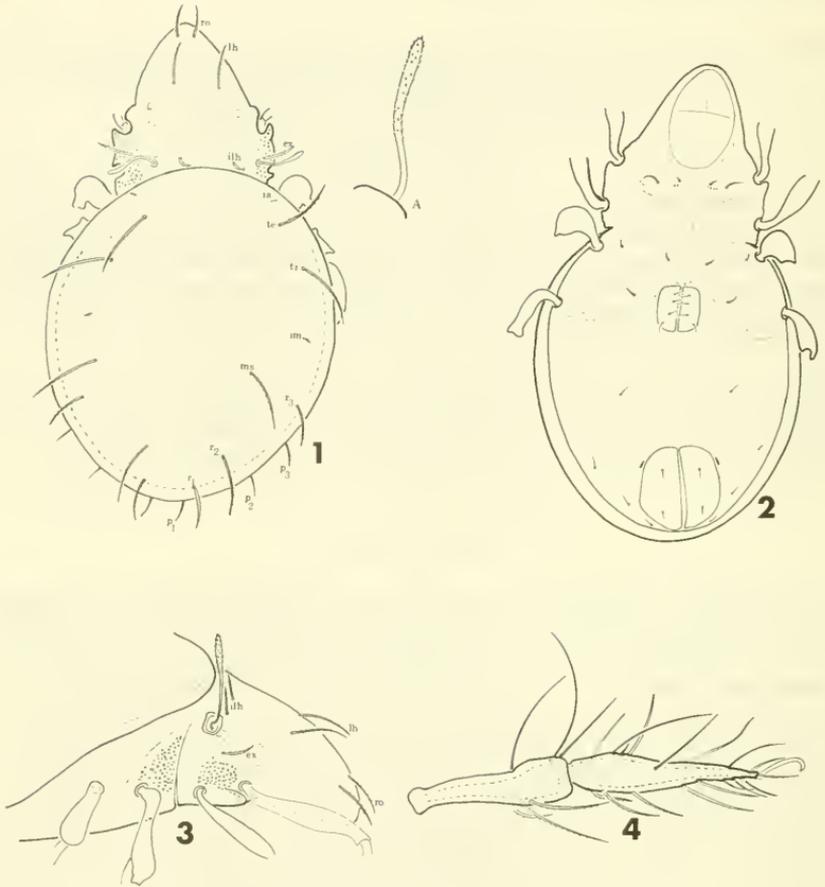


Fig. 1. *Oppia coloradensis* from the dorsal aspect, legs omitted; A, enlarged view of sensillus.

Fig. 2. *O. coloradensis* from the ventral aspect, legs partially shown.

Fig. 3. Prodorsum and part of notogaster of *O. coloradensis* from the lateral aspect, showing tubercles associated with bases of legs I-III and pedotecta I.

Fig. 4. Tibia and tarsus I of *O. coloradensis*.

tecta I with sculptured depressions or circles, interlamellar hairs shorter than rostrals, more robust, barbed; exobothridial hairs about as long as rostrals, but more definitely barbed; pseudostigmata small, circular; sensillus clavate, with fine spines or barbs (terminal barbs make the tip appear lanceolate, but the outline is clavate), curved outward, upward (position varies in mounted specimens), surface of head and two-thirds of pedicel barbed (Fig. 1A); prodorsal surface laterad of pseudostigmata finely tuberculated from pedotecta I to posterior margin, small, rounded tubercles extending into concavity of pedotecta I (Figs. 1, 3).

Outline of notogaster nearly round, slightly narrowed posteriorly, nine pairs of notogastral hairs present (setae *ta* appear to be missing

in all specimens observed), main dorsal setae robust, curved, barbed, slightly longer than lamellar hairs; setae and fissures *ia*, *im* as in Fig. 1, fissure *im* equidistant between the setae *ti* and *ms*.

Camerostome oval, ventral apodemata, and setae as seen in Fig. 2; apodemata IV arched from behind insertion of legs IV to join the coxisternal apodeme anterior to genital aperture; genital aperture about  $\frac{1}{3}$  as large as anal, genital covers nearly rectangular, each with four setae, g:1-3 in nearly straight line nearer medial margin than lateral, g:4 in posterolateral corner of cover; aggenital setae, fissure *iad* and adanal setae as in Fig. 2; anal opening rounded, anal covers each with two setae.

Legs monodactylous

MEASUREMENTS. Length 468  $\mu$ , prodorsum 162  $\mu$ , hysterosoma 324  $\mu$ ; width 282  $\mu$ .

The type (a male), 10 male paratypes and 10 female paratypes were collected from a dirt sample with enchytraeids and uropodines. Fort Collins, Larimer County, Colorado, 1 December 1954, by T. A. Woolley; two additional females were taken from Mount Meeker Camp Ground, Boulder County, Colorado, 17 July 1952, by T. A. Woolley. The type will be deposited in the U. S. National Museum.

DISCUSSION. Hammer (1968) admits the difficulty of differentiating species of the "*Oppia*" complex, but she (1961, 1962, and 1968) evaluated and arranged species of this complex into a number of genera in a way that should be helpful; at least it is a start toward clarification of the complex. Admittedly, as Hammer indicates, *Oppia* continues to be an extraordinarily complicated genus or cryptically a series of genera, and the use of the genus *Oppia* (*sensu stricto* Koch) for species that do not fit in allied genera is resorted to, not as finally correct, but because the placement of such species in this genus is as close as one can come within the present taxonomic status of this group.

Hammer (1968) also delineates and provides a key for the genera of the *Oppia* complex in both South America and New Zealand. The North American representatives of this complex are little known in comparison. Higgins and Woolley (1965) described *Spinoppia magniserrata* as a new genus and species of this complex. Woolley (1957) also redescribed *Oppia minuta* (Ewing) from this group. Other representatives are known from North America, but no attempt has yet been made to assess the numbers of species and evaluate their placement in the current scheme of genera. The minute size of the representatives and the immense variety of forms are deterrents to a revision of this complex, even though such a revision and evaluation is sorely needed.

#### LITERATURE CITED

- BALOGH, J. 1962. Recherche sur la Faune Endogee de Madagascar VII Naturaliste malgache 13:121-151.  
AOKI, JUN-ICHI. 1965. Oribatidens Thailandis I. Nature and Life in Southeast Asia IV:129-193.

- HAMMER, M. 1958. Investigations of the Oribatid Fauna of the Andes Mountains I. The Argentine and Bolivia. *Biologiske Skrifter Det Kongelige Danske Videnskabernes Selskab* 10(1):1-129.
- . 1961. Investigations on the Oribatid Fauna of the Andes Mountains II. Peru. *Biol. Skr. Dan. Vid. Selsk* 10(1):1-157.
- . 1962. Investigations on the Oribatid Fauna of the Andes Mountains III Chile. *Biol. Skr. Dan. Vid. Selsk.* 13(2):1-96.
- . 1968. Investigations on the Oribatid Fauna of New Zealand part III. *Biol. Skrifter det Kongelige Danske Videnskabernes Selskab.* 16(2):1-96.
- HIGGINS, H. G., AND T. A. WOOLLEY. 1965. An Unusual New Genus of Mites from Florida. *Florida Entomologist* 49(1):67-70.
- WOOLLEY, T. A. 1957. Redescriptions of Ewing's Oribatid Mites, V.—Families Belbidae and Oppiidae. *Entomological News* 58(8):211-221.