

HERETOFORE UNDESCRIBED FEMALES OF TWO NEARCTIC SPECIES OF *PARYDRA* (DIPTERA: EPHYDRIDAE)^{1 2}

Philip J. Clausen³

ABSTRACT: The females of *Parydra* (*Chaetoapnaea*) *pedalis* Clausen and *Parydra* (*Chaetoapnaea*) *spinosa* Clausen are described, illustrated, allotypes designated, and modifications to an existing key are provided. Both species were previously known only from the males. A slight modification to the description of the males of *P. spinosa* is included.

DESCRIPTORS: Diptera, Ephydridae, *Parydra*, *pedalis* and *spinosa*, females described, allotypes designated.

At the completion of our revision of the nearctic species of the tribe Parydrini (Clausen and Cook, 1971), four new species of *Parydra* were described only from males as the females were then unknown. Of these four species, I now have seen females of two (*Parydra pedalis* and *spinosa*), and I offer this paper as a supplement to the above revision.

Parydra (*Chaetoapnaea*) *pedalis* Clausen

Diagnosis: As in Clausen and Cook, 1971, except female abdomen with sternite 5 subtriangular; sternites 5 through 8 subequal in width to other sternites; sternite 8 consisting only of a large median sclerite without a deep posterior notch, blunt to convex anteriorly, much smaller than sternite 7; ventral receptacle slender with rounded cap, internal fold not constricted near top, cap about 2/3 length of receptacle.

Description: MALE. — As in Clausen and Cook, 1971.

FEMALE. — Total body length 3.06 to 3.30 mm; shining black with coppery, golden, and greyish pruinosity. **Head** shining black with coppery pruinosity except where mentioned; length 0.75 to 0.85 mm; ocellar triangle raised; 3 round ocelli; ocellar setae large, divergent; interocellar and postocellar setae small, divergent; 2 large pairs of orbital setae; eyes red, oval; vertex with coppery pruinosity above, becoming golden below; 1 large pair of convergent, inner vertical setae; 1 large pair of divergent, exterior vertical

¹ Accepted for publication: February 1, 1977

² Paper No. 9755, Scientific Journal Series, Minnesota Agricultural Experiment Station, St. Paul, Minnesota 55108.

³ Department of Entomology, Fisheries, and Wildlife, University of Minnesota, St. Paul, Minnesota 55108

setae; postorbitals and occipitals small; gena black with golden pruinosity. Face shining black with golden pruinosity, straight to concave when viewed in profile; facial depressions long, from antennal base to first parafacial seta; 1 large pair and 5 smaller pairs of parafacial setae. Clypeus with coppery pruinosity; mouthparts with greyish pruinosity. Antennae dark, brown to black with coppery pruinosity; arista brown, slightly plumose.

Thorax shining black with golden to coppery pruinosity; greyish spot at intrascutal suture; faint greyish stripes laterally along dorsocentral setal rows, between acrostichal and dorsocentral setal rows, and medially between acrostichal setal rows; stripes all more apparent anteriorly and posteriorly; scutum length 0.92 to 1.05 mm; many long acrostichal setae; many long dorsocentral setae with 2 pairs being larger than others, 1 pair at intracentral suture and 1 pair farther posterior; 1 long pair of prescutellar setae; humeral and posthumeral setae long and fine; presuturals long and fine, 1 larger pair; 2 large pairs of notopleurals, posterior pair larger; 1 large pair of posterior intraalar setae; pleura shining black with golden pruinosity above, becoming greyish below; 1 large pair of mesopleural setae; sternum with greyish pruinosity; katepisternal spine absent. Scutellum shining black with golden pruinosity, length 0.34 to 0.41 mm, apical process small and pointed, apical tubercles small, lateral tubercles absent, apical and lateral scutellar setae large. **Legs** all black or dark brown except reddish tarsi, covered with greyish pruinosity; prothoracic tibiae with long yellow setae at apex, mesothoracic tibiae each with a spur and 3 black anterior setae at apex; apex of metathoracic tibiae with 3 or 4 black anterior setae and a yellow posterior comb. **Wing** clear, slightly darkened around crossveins; no white spots; R_{2+3} sometimes with appendage near apex; veins dark brown to black; length from humeral crossvein 2.58 to 2.99 mm; width 1.16 to 1.26 mm; distance from h to R_1 0.75 to 0.88 mm; R_1 to R_{2+3} 1.16 to 1.33 mm; R_{2+3} to R_{4+5} 0.71 to 0.82 mm; R_{4+5} to M_{1+2} 0.37 to 0.44 mm; length R_{4+5} 1.53 to 1.84 mm; length M_{1+2} 0.82 to 0.92 mm; costal section from R_1 to R_{2+3} 1.5 to 1.7 times distance from R_{2+3} to R_{4+5} ; halteres light brown to yellowish.

Abdomen as in Figure 1. Ventral receptacle as in Figure 2.

Distribution. Northwestern U.S. and southwestern Canada.

Specimens examined. 12 specimens (7 ♂♂ and 5 ♀♀). This species was originally described from the holotype ♂ and 3♂ paratypes from British Columbia and the state of Washington (see original description for exact localities). I have now examined 3 ♂♂ and 5 ♀♀ from California, Siskiyou County, Mount Shasta, McBride Spring, 7 km NE Mount Shasta City, 28-VII-1974, Paul H. Arnaud, Jr., and one female of this series I am herein designating as the allotype. The allotype ♀, 2 ♂♂ and 3 ♀♀ are to be deposited in the collection of the California Academy of Sciences, and the remaining ♂ and ♀ are to be retained in the author's collection.

Parydra (Chaetoapnaea) spinosa Clausen

Diagnosis. As in Clausen and Cook, 1971 except female abdomen with sternites 5 through 8 much wider than other sternites; sternite 8 consisting only of a large median sclerite without a deep posterior notch, blunt to convex anteriorly, subequal to smaller than 7, smaller than 6.

Description. MALE. — As in Clausen and Cook, 1971 except wings with cells dimpled, wings appear wrinkled.

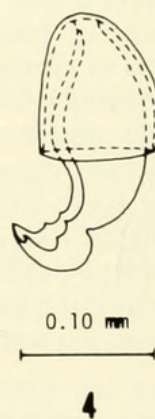
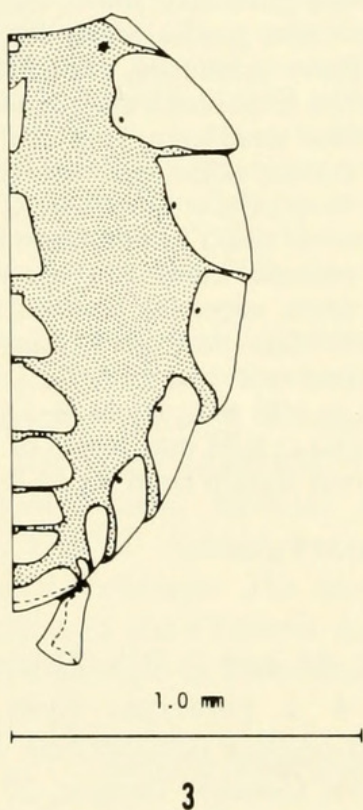
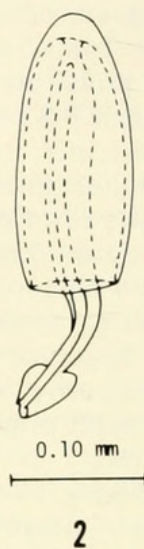
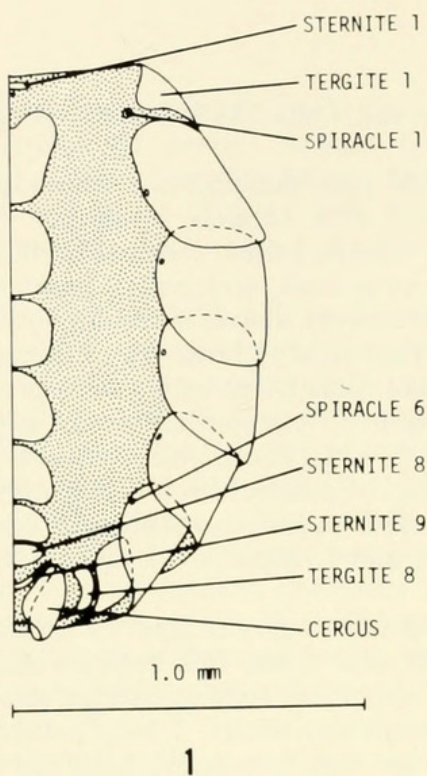
FEMALE. Total body length 3.33 to 3.37 mm; shining black with coppery, golden and greyish pruinosity. **Head** shining black with coppery pruinosity except where specified; length 0.82 to 0.85 mm; ocellar triangle raised; 3 round ocelli; ocellar setae large, divergent; interocellar and postocellar setae small, divergent; 2 large pairs of orbital setae; eyes red, oval; vertex with coppery pruinosity above, becoming golden or greyish below; 1 large pair of convergent, inner vertical setae; 1 large pair of divergent, exterior vertical setae; postorbitals and occipitals small; gena black with golden pruinosity. Face shining black with coppery pruinosity, straight to concave when viewed in profile; facial depressions long, from antennal base to first parafacial seta, covered with greyish pruinosity; 1 large pair and 4 or 5 smaller pairs of parafacial setae. Clypeus with coppery or golden pruinosity; mouthparts with greyish pruinosity. Antennae dark, brown to black with greyish pruinosity on segments 1 and 2, coppery on segment 3; arista black, slightly plumose.

Thorax shining black with coppery pruinosity; greyish spot at intrascutal suture; greyish stripes laterally along dorsocentral setal rows, and between acrostichal and dorsocentral setal rows; scutum length 0.92 mm; many long acrostichal setae; many long dorsocentral setae with 1 longer pair at intrascutal suture; 1 long pair of prescutellar setae; humeral and posthumeral setae long and fine; presuturals long and fine, 1 larger pair; 2 large pairs of notopleurals, posterior pair larger; 1 large pair of posterior intraalar setae; pleura shining black with coppery or golden pruinosity above, becoming greyish below; 1 large pair of mesopleural setae; sternum with greyish pruinosity; katepisternal spine absent. Scutellum shining black with coppery pruinosity, except with white to greyish central spot; length 0.51 mm; apical process rather large and rounded; apical and lateral tubercles absent; apical and lateral scutellar setae large. **Legs** with coxae and all but apex of femurs black; trochanters, apex of femurs, tibiae, and tarsi reddish; covered with greyish pruinosity; prothoracic tibiae with long yellow setae at apex; mesothoracic tibiae each with a spur and 3 black anterior setae at apex; matathoracic tibiae with an anterior cluster of black setae and a yellow posterior comb at apex. **Wing** clouded, darkened areas at crossveins bounded by white spots, appearing purplish; one such spot posterior to medial crossvein; R_{2+3} with appendage near apex; veins brown; cells dimpled, wings appear wrinkled; length from humeral crossvein 2.45 to 2.52 mm; width 1.12 to 1.16 mm; distance from h to R_1 0.71 to 0.75 mm; R_1 to R_{2+3} 1.12 to 1.16 mm; R_{2+3} to R_{4+5} 0.65 to 0.68 mm; R_{4+5} to M_{1+2} 0.34 mm; length of R_{4+5} 1.43 to 1.60 mm; length of M_{1+2} 0.65 to 0.68 mm; costal section from R_1 to R_{2+3} 1.7 times distance from R_{2+3} to R_{4+5} ; halteres yellow.

Abdomen as in Figure 3. Ventral receptacle as in Figure 4.

Distribution. Far western U.S.

Specimens examined. 9 specimens (7 ♂♂ and 2 ♀♀). This species was described from the holotype ♂ and 4 ♂ paratypes from California, Washington, and Idaho (exact localities in original description). I have since examined 1 ♂ from Oregon caves, Josephine County, Oregon, 27 June 1972, Wayne N. Mathis; and 1 ♂ and 2 ♀♀ from Mill Valley, Marin County, California 17. VIII. 1967, P.H. Arnaud, Jr. I am herein designating 1 ♀ as the allotype which will be deposited in the collection of the California Academy of Sciences, and the remaining ♂ and ♀ from Marin County, California are to be retained in the author's collection.



Figures 1 and 3 – Female abdomens – Fig. 1 – *Parydra pedalis*; Fig. 3 – *Parydra spinosa*.

Figures 2 and 4 – Ventral receptacles – Fig. 2 – *Parydra pedalis*; Fig. 4 – *Parydra spinosa*.

Key

The females of both species will key to couplet 50 in Clausen and Cook, 1971. The remainder of the key, with previous figure references omitted, should then read as follows:

50. Sternites 5 through 8, or 6 through 8 much wider than other sternites 51
 Sternites 5 through 8 subequal in width to other sternites 52
51. Sternites 5 through 8 much wider than other sternites (Fig. 3), ventral receptacle as in Fig. 4 *spinosa* Clausen
 Sternites 6 through 8 much wider than other sternites. *succurva* Clausen
52. Costal section of wing from R_1 to R_{2+3} 1.7 or less times distance from R_{2+3} to R_{4+5} 53
 Costal section of wing from R_1 to R_{2+3} 1.9 or more times distance from R_{2+3} to R_{4+5} *hamata* Clausen
53. Sternite 5 round to oval, ventral receptacle usually with top of cap narrow and appearing somewhat pointed, R_{2+3} usually appendiculate near tip
 *appendiculata* Loew
 Sternite 5 not round or oval, subtriangular, with or without an anterior notch, or round with an anterior projection; ventral receptacle with top of cap rounded, not narrow and appearing somewhat pointed; R_{2+3} with or without appendiculate tip
 54
54. Ventral receptacle with internal fold of cap not constricted near top, cap about $2/3$ length of receptacle. 55
 Ventral receptacle with internal fold of cap constricted near top, cap about $3/4$ length of receptacle 56
55. Ventral receptacle broad, sternites 7 and 8 subequal in size *borealis* Clausen
 Ventral receptacle slender (Fig. 2), sternite 8 much smaller than 7 (Fig. 1)
 *pedalis* Clausen
56. Metatibiae each with one very large spine on anteroventral apex which extends far beyond apex of tibia *parasocia* Clausen
 Metatibiae each with several small spines on anteroventral apex which extend at most only slightly beyond apex of tibia *socia* (Cresson)

ACKNOWLEDGEMENTS

For providing the specimens which made this paper possible, I would like to thank Dr. Paul H. Arnaud, Jr. of the California Academy of Sciences.

LITERATURE CITED

- Clausen, P.J. and E.F. Cook. 1971. A revision of the nearctic species of the tribe Parydrini (Diptera: Ephydriidae). Mem. American Ent. Soc. 27: 1-150.



Clausen, P J. 1977. "Heretofore Undescribed Females Of 2 Nearctic Species Of Parydra Diptera Ephydriidae." *Entomological news* 88, 127–132.

View This Item Online: <https://www.biodiversitylibrary.org/item/55166>

Permalink: <https://www.biodiversitylibrary.org/partpdf/57314>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: American Entomological Society

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.