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DESCRIPTIONS OF TWO NEW SPECIES OF  
ARGYRA OCCURRING IN JAPAN  
(DIPTERA: DOLICHOPODIDAE)

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In spite of their occurrence in abundance the Dolichopodidae, in common with other small Diptera, have been practically entirely neglected in Japan. My first, though short, step is here taken towards systematics in this large family, with descriptions of two *Argyra*-species. The specimens herein used were collected by me and are deposited in the collection of the Entomological Institute of Hokkaido University.

I take this opportunity to thank Prof. T. Uchida and Prof. C. Watanabe for their continuous kind guidance. My thanks are also due to Prof. K. Yasumatsu, of Kyusyu University, Prof. G. F. Knowlton, of Utah State University, Dr. J. F. Gates Clark, of the U. S. National Museum, Prof. R. Frey, of the University of Helsinki, and the Director of the Photoduplication Service, the Library of the Congress of U.S.A., for their kindness in the literature.

*Argyra superba* sp. nov.

Frons and face silvery-white; first antennal segment hairy, the second overlapping the third dorsally; thoracic dorsum thickly pollinose, except a large spot of shining green before scutellum, in male; supplementary hairs occurring over thoracic dorsum; scutellum with hairs on the disk and four large marginal bristles; fore coxae, all femora and tibiae yellow; male with yellow on second and third abdominal segments.

Male. Length, 6.4 mm. Frons and face silvery-white, the latter comparatively wide for a male, slightly more than twice as wide as ocellar tubercle and 2.3 times as long as wide just below antennae, narrowing a little towards mouth-parts; palpi black, with yellowish-gray pollen in some lights, their hairs black, and their apices with a somewhat longer and bristly hair; proboscis black, its hairs dark brown. Antennae black, somewhat longer than head, the first segment with many hairs on the dorsolateral surface, the second overlapping the third dorsally with a lobe, which is half as long as the third, and is robust on the inner side but very narrow, lying just on the dorsal edge, on the outer side; third segment twice as long as wide, bluntly pointed apically; arista subapical, as long as antenna. Four pairs of postocellars; eyes white-pubescent; short, black, upper orbital cilia scarcely descending to upper third of eye-height; beard white, abundant. Dorsum of thorax, except a large spot of shining green before scutellum, thickly covered

with white pollen, which leaves a grayish strip on each side of the acrostichals; many short, fine supplementary hairs occurring over the dorsum; acrostichals short and fine, not distinguishable from the supplementary hairs; six dorsocentrals; humeral calli with a bristle and eight or nine fine hairs. Scutellum shining green, with about twenty hairs on the disk and four large marginal bristles. Pleura slightly tinged with green; a tuft of black prothoracics; anterior spiracles with brown hairs. Fore coxae yellow, with an indistinct, small, grayish spot on their basal outer surface, their anterior surface with many pale yellow hairs on the basal two-thirds, and black hairs and, along the outer edge, a row of black bristles on the apical third; middle coxae dark, being similar in

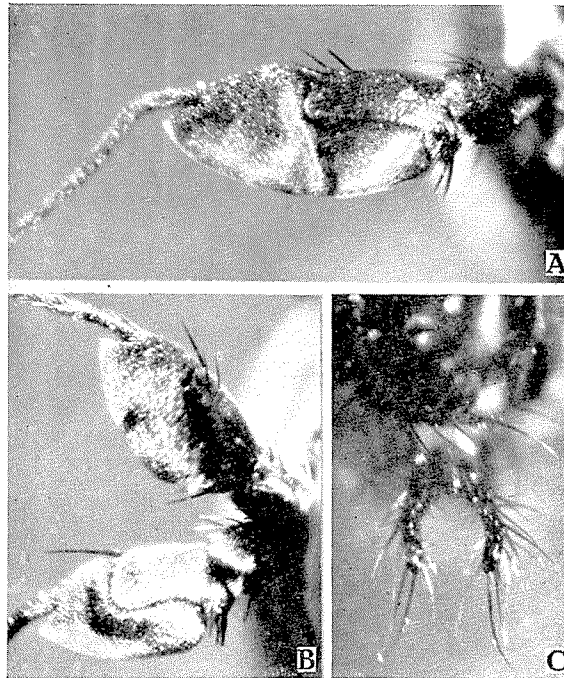


Fig. 1. *Argyra superba* sp. nov.

- A. Antenna of male in inner view.
- B. Antennae of female: upper, in outer view;  
lower, in inner view.
- C. Outer lamellae in dorsal view.

colour to the pleura, yellow apically, their hairs and bristles black; hind coxae somewhat lighter in colour, the outer surface with a few short, white hairs and three black hairs arranged vertically, the uppermost black hair long and rather bristly. Femora yellow, with a row of rather long hairs on the anterior edge of the lower surface, which are black except some yellow basal ones, and are as long as the thickness of the femora on the middle pair but more or less shorter on the fore and hind pairs; fore femora with rather long, erect hairs on the posterior surface, which are black except yellow ones occurring on the lower part, middle and hind femora with rather long, yellow hairs on the posterior

edge of the lower surface. Tibiae yellow; fore tibiae with three pairs of dorsal bristles; middle tibiae with three or four anterodorsals, three posterodorsals, and two or three ventrals; hind tibiae with four or five pairs of dorsals and a few little ventrals. Fore and middle tarsi yellow, darkened towards the apex; hind tarsi dark brown to black, the first segment as long as the succeeding one. Wings grayish-hyaline, 5.1 mm. in length, veins brown; first vein ending at middle of wing; apical section of fourth vein distinctly bent just mesad of its middle; apical section of fifth vein 1.7 times as long as the cross-vein; calypters white, the apical edge black, the cilia yellow; knobs of halteres yellow. Dorsum of abdomen black with green reflections, and, except the first segment, thickly covered with white pollen, the second and third segments with a large yellow spot on each side; hairs black except yellow hairs occurring in the anterior angles of the first segment and along the lateral margins of the second, hindmarginals distinctly longer and bristly; venter dark brown, blackened towards the apex, yellow hairs on the first and second segments. Hypopygium black, with black hairs, of which two are longer and bristly; appendages very dark brown to black, the outer lamellae half as long as height of hypopygium, separated from each other by a distinct space for their most length.

Female. Length, 6.5 mm. Frons strongly tinged with green just below ocelli, vertex and upper occipital surface somewhat yellowish-gray and slightly tinged with green; face practically parallel along its lateral margins, 1.7 times as long as wide, 2.7 times as wide as ocellar tubercle; palpi covered with yellowish-gray pollen. Antennae shorter than head; third segment 1.5 times as long as wide; arista 1.7 times as long as antenna. Black, upper orbital cilia descending to upper third of eye-height. Dorsum of thorax shining green with coppery reflections, its white pollen confined to the anterior angles and lateral sides. Femora without long hairs on the lower surface. Wings faintly tinged with brown, 6.5 mm. in length. Dorsum of abdomen very dark green with coppery reflections.

Types. Five males and six females collected in Hokkaido: Aizan-Kei (16. VII, 1960), Nukabira (12. VII, 1959), and Sapporo (6. & 21. VI, 1959); one male at Kamidaki, Toyama-ken, Honsyu (20. IX, 1958). Holo- and allotype: male and female from Aizan-Kei.

Variations. The above description is based on the holo- and allotype. No serious difference of taxonomic importance is seen among the specimens collected in Hokkaido except that one male taken at Aizan-Kei has ten dorsocentral bristles, instead of six, on either side and one female from the same locality eleven on the left side and twelve on the right; these two specimens may represent a malformation rather than a normal variation. The hairs occurring on the palpi may become partly whitish in the male; wings, 5.2–5.7 mm. in length. Female: length, 6.5–7.0 mm., of wings, 5.5–6.7 mm.

The male at hand from Kamidaki differs from the other males by the body smaller (length, 5.8 mm., of wings, 4.9 mm.), the hairs occurring on the palpi wholly white, the humeral hairs brownish, the hind coxae wholly yellow, the femora with shorter hairs on the lower surface, and the hind tarsi with the first segment shorter than the succeeding one (25:30). As in the other characters, however, it agrees very well with the others I am inclined to believe that it may possibly represent a variant of the present species.

Remarks. This species is characterized by the second antennal segment deeply cutting

into the third as in *Argyra elongata* Zett., from which it may be distinguishable by the basal antennal segment not elongate, by having supplementary hairs over the disk of the thorax, by the scutellum hairy, by the first longitudinal vein longer, ending at the middle of the wing, etc.

*Argyra arrogans* sp. nov.

Frons and face silvery-white; first antennal segment hairy; thoracic dorsum thickly pollinose, except a large spot of shining green before scutellum, in male; supplementary hairs between posthumeral and first dorsocentral; scutellum bare, with four large marginal bristles; all coxae dark in colour, their hairs and bristles black; femora yellow, hind ones blackened on the apical fourth; tibiae yellow, hind pair blackened apically; abdomen with hairs wholly black; male with yellow on second and third abdominal segments.

Male. Length, 5.2 mm. Frons and face silvery-white, the latter slightly less than twice as wide as ocellar tubercle and 1.7 times as long as wide just below antennae, narrowing very slightly towards mouth-parts; palpi black, whitish-pollinose, with black hairs; proboscis and its hairs dark brown. Antennae black, the first segment with hairs on the dorsolateral surface, the third twice as long as wide, bluntly pointed apically; arista inserted at apical fourth of dorsal length of third segment, somewhat longer than antenna. Two pairs of postocellars; eyes covered with light brown hairs; short, black, upper orbital cilia descending to upper  $1/2.5$  of eye-height; beard white, abundant. Dorsum of thorax, except a large spot of shining green before scutellum, thickly covered with white pollen, which leaves a grayish strip on each side of the acrostichals; humeral calli with a bristle and six hairs; supplementary hairs between posthumeral and first dorsocentral; six dorsocentrals; acrostichals rather fine, and yet bristly, becoming longer caudad. Scutellum shining green, its four marginal bristles large, the disk bare. Pleura, especially the mesothoracic sclerites, tinged with green; prothoracics mostly replaced by dark brown hairs, a few remaining black and bristly; anterior spiracles with brown hairs. All coxae dark, being concolorous with the pleura, their hairs and bristles black. Femora yellow, only the apical fourth of the hind pair blackened; hairs wholly black, fore femora with long, erect hairs on their posterior surface, middle femora with a row of long hairs on the anterior edge of the lower surface, of which some median ones are distinctly longer than the width of the femora. Tibiae yellow, hind pair blackened apically; fore tibiae with four or five anterodorsal and four posterodorsal bristles; middle tibiae with three or four anterodorsals, three posterodorsals, three or four anteroventrals, and four posteroventrals; hind tibiae with two rows of dorsals, and several little ventrals. Fore and middle tarsi yellow, darkened apically; hind tarsi black, the first segment a little longer than the succeeding one (25:21). Wings grayish-hyaline, 4.2 mm. in length, veins brown; first vein ending at middle of wing; apical section of fourth vein distinctly bent at its basal third; apical section of fifth vein twice as long as the cross-vein; calypters white, their apical edge black, the cilia yellow; knobs of halteres yellow. Dorsum of abdomen black, and, except the first segment, thickly covered with white pollen, the first segment with green reflections, the second and third with a large yellow spot on each side; venter dark

brown, blackened apically; hairs occurring on abdomen wholly black, hindmarginals distinctly longer and bristly. Hypopygium black, with black hairs, of which two are longer and bristly; outer lamellae brown, slightly shorter than one-third of height of hypopygium, appressed together; inner appendages dark brown.

Female. Length, 5.5 mm. Face practically parallel on the lateral margins, 1.7 times as long as wide, slightly more than thrice as wide as ocellar tubercle. Antennae much shorter than head; third segment very slightly shorter than wide, bluntly pointed apically, brown with the upper and basal margins black; arista subapical, twice as long as antenna. Eyes white-pubescent; black, upper orbital cilia scarcely descending to upper third of eye-height. Dorsum of thorax shining green, with coppery reflections, its white pollen confined to the sides. Wings 5.0 mm. in length. Dorsum of abdomen green with coppery reflections, with white pollen on the sides; venter black.

Types. Four males and two females collected in Hokkaido: Aizan-Kei (15. VII, 1960), Nukabira (12. VII, 1959), Yamabe (30, VI, 1960), and Sapporo (6. VI, 1959). Holo- and allotype: male and female from Aizan-Kei.

Variations. The specimens at hand are invariable in most details except for slight differences of less important characters. The following variations are noted here:—Male: the third antennal segment may be slightly more robust, being 1.5 times as long as wide, and rather brownish (in two paratypes); the pubescence of the eyes may be paler or even white; the first segment of the hind tarsi may be as long as the succeeding one (in three paratypes); length, 5.0–5.7 mm. Female: the only paratype of this sex well agrees with the allotype except that the abdomen is very darkened and practically black.

Remarks. This species is very similar in general appearance to the preceding one, from which it differs by the second antennal segment not overlapping the third, by the supplementary hairs of the thorax confined to the area between the posthumeral and first dorsocentral bristles, by lacking hairs on the disk of the scutellum, by the hairs occurring on the coxae, femora, and abdomen wholly black, etc. It may be related to *Argyra nigricoxa* V. D., but may differ from the latter, in the male, by the scutellum bare, the first segment of the fore tarsus without a row of little bristles on the lower surface, which are about as long as the thickness of the segment, and the calypters with the apical margin black. It may be distinguishable from *Argyra discedens* Beck. by the hairs occurring on the abdomen wholly black, the fore coxae blackish, the cilia of the calypters yellow, etc.

## ERRATA

Vol. 23, No. 2, 1960, p. 124, line 13 from top, for "1.7 times" read "2.5 times."

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