BULLETIN OF THE UNIVERSITY OF UTAH

VOLUME 30 JULY 8, 1939 No. 2

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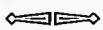
BY

RALPH V. CHAMBERLIN



BIOLOGICAL SERIES, Vol. V, No. 3

PUBLISHED BY
UNIVERSITY OF UTAH
SALT LAKE CITY

On Some Diplopods of the Family Fontariidae

By RALPH V. CHAMBERLIN

The purpose of the present paper is to designate certain new genera in the family Fontariidae occurring in the eastern and southeastern states and to give brief preliminary diagnoses of various new species within these and related genera.

Genus EPELORIA Chamberlin, new

The gonopods with blade of telopodite apically split or furcate, the prongs parallel and appressed to each other, both slender and acute, and the telopodite setose on mesal side to base of these prongs. Larger, more robust forms.

Genotype. *Epeloria talapoosa,* n. sp.

Epeloria talapoosa Chamberlin, new species

Pl. 1, fig. 1.

The types have faded in the alcohol but the dorsum appears to have been dark brown or chocolate colored with the keels alone yellow.

Coxae and sternites not spined.

Gonopods as figured. (Fig. 1)

Width of male holotype, 8.2 mm.

LOCALITY—Georgia: Talapoosa. Male holotype and female allotype taken by R. V. Chamberlin, August 29, 1910.

Genus BRACHORIA Chamberlin, new

Relatively broad forms with wide carinae continuing slant of dorsum. The blade of telopodite simple, distally acuminate, of form shown in figure for genotype; large proximal portion sparsely setose, the distal portion smooth.

Genotype. *Brachoria initialis,* n. sp.

This genus includes the three species indicated below.

Brachoria initialis Chamberlin, new species

Pl. 1, fig. 3.

Dorsum of preserved type uniform brown, with the wide keels lighter, the dorsum thus having three color bands of which the dark medium band is about twice the width of each lateral one. The venter is a lighter brown. Legs with proximal joints darker brown, the ones distad of femur abruptly lighter. Color in life not known.

Gonopods as drawn. (Fig. 3)

Length of male holotype, 37 mm.; width, 10.2 mm.

LOCALITY—Alabama: Mapleville, July 26, 1910. One male. R. V. Chamberlin, collector.

Brachoria sequens Chamberlin, new species

Pl. 1, fig. 2.

A species very similar in general form and coloration to the preceding, but somewhat larger and distinct in the gonopods as shown by the figures. (Figs. 2 and 3)

Length, about 42 mm.; width, 11 mm.

LOCALITY—Mississippi: Agricultural College. One male taken in March.

Brachoria eutypa Chamberlin, new species

Pl. 1, fig. 4.

Dorsum and head black or nearly so, with antennae dark brown; tergites trimaculate in yellow, the lateral spots large and covering nearly entire keel, the median spots elongate transversely. Collum with a large anterior spot and a much smaller posterior one on median line, the lateral spots large. Venter and legs yellow.

Gonopods as drawn. (Fig. 4)

Length, 38 mm.; width, 9.8 mm.

LOCALITY—Tennessee, Russelville. Male holotype taken August 8, 1910, by R. V. Chamberlin.

Genus ZINARIA Chamberlin, new

A genus like *Nannaria* and *Mimuloria* in having the principal blade of the telopodite of the male gonopods relatively short and nearly straight, not at all coiled. It differs from these genera in having the blade divided or furcate at the distal end.

Genotype. *Zinaria cala,* sp. nov.

Includes *virginiensis* (Drury), etc., and the two new species described below. The known species are transversely banded.

Zinaria cala Chamberlin, new species

Pl. 1, fig. 6.

Head above, antennae, and dorsal plates dark brown; the head over labial and lateral portions yellow; the tergites with a sharply defined yellow border laterally and caudally, the collum with anterior as well as posterior border yellow; venter and legs yellow.

Dorsum strongly convex, with the keels relatively narrow. Pores lateral in position.

Coxae of second legs of the male with the usual processes which are relatively large and cylindrical. The other coxae and the sternites without special processes.

The gonopods are of the *virginiensis* type as shown in the figure. (Fig. 6)

Length of male holotype, 21 mm.; width, 4 mm. Width of female allotype, 5 mm.

LOCALITY—Florida: east of Deer Park, April 14, 1919. Ten specimens.

Zinaria urbana Chamberlin, new species

Pl. 1, fig. 5.

An obviously larger and more robust species than *cala*, with the yellow border of tergites broader, widened in mid-dorsal region and on keels.

The sternite of the fourth segment with a pair of acute conical processes.

Gonopods of typical general structure, differing only in details as shown by the figures.

Length of male holotype, about 29 mm.; width, 6.9 mm.

TYPE LOCALITY—Illinois: Urbana. Three males collected by V. G. Smith in the Brownfield Woods.

OTHER LOCALITY—Pennsylvania: Greene County. Two males and three females taken July 29, 1926, by T. L. Guyter.

Genus PACHYDESMUS Cook

Pachydesmus incursus Chamberlin, new species

Pl. 1, fig. 7.

Dorsum brown, with entire keels in life dull yellow; collum yellow at ends. Venter, antennae and legs yellow.

Tergites less heavy than in *crassicutis*, smooth and shining, without rugae. Pores on dorsal part of marginal thickenings, directed upwards. Sternites and coxae not spined.

Characterized by details of gonopods of male as illustrated. (Fig. 7)

Length of male holotype, 53 mm.; width 10 mm.

LOCALITY—South Carolina: Taylors. Male holotype taken by R. V. Chamberlin August 3, 1910.

Pachydesmus duplex Chamberlin, new species

Pl. 1, fig. 8.

A form comparable in large size and general appearance to *P. retrorsus* Chamberlin but nearer to *P. crassicutis* (Wood) in the form of gonopods which, however, are distinct in lacking any subapical spur on the branch of telopodite. See figure for details.

Body brown with outer ends of keels paler. Venter and legs lighter than dorsum as usual, without any markings.

Length, about 72 mm.; width, 15 mm.

LOCALITY—Mississippi, Grenada. One male taken in July, 1910, by R. V. Chamberlin.

Genus SPATHORIA Chamberlin, new

Moderately large forms characterized by the structure of the male gonopods. In these the telopodite is a simple, relatively short, and straight lamina or blade with the spine from base long and slender.

Genotype. *Fontaria lamellidens* Chamberlin.

The genus includes also *S. bimaculata* (McNeill)

Spathoria lamellidens (Chamberlin)

Pl. 1, fig. 9.

Fontaria lamellidens Chamberlin, Entomological News, March, 1931, p. 78.

LOCALITY—Mississippi: Biloxi. One male taken by K. L. Cockerham.

A gonopod is figured.

Genus APORIARIA Chamberlin

Aporiaria carolina Chamberlin, new species

Pl. 2, fig. 10.

Head and antennae black or nearly so; dorsum solid black excepting for a yellow spot at each end of the collum and the posterior portion of the ordinary keels which are also yellow; under surface of keels and sides of body black, as are also the anal valves; venter yellow, as are also the legs excepting the third articles which are black, and the fourth which are dusky.

Processes of coxae of second legs cylindrical; coxae of other legs and the sternites without processes.

Gonopods of male similar to those of *geniculata* but the telopodite much less strongly bent, etc., as shown by the figures; the end of blade of telopodite less acutely pointed.

Length of male holotype, 32 mm.: width, 5.2 mm. Length of female allotype, 36 mm.; width 7 mm.

LOCALITY—North Carolina: Soco Falls, near Waynesville. Male holotype, female allotype, with two male and two female paratypes. April 29, 1939.

Aporiaria geniculata Chamberlin, new species

Pl. 2, fig. 11.

Head dark above, elsewhere yellow. Antennae yellow, proximally, being darker distally. Dorsum black or nearly so, with the keels yellow, the tergites in part also narrowly margined with yellow across caudal border. Venter and legs yellow.

Coxae and sternites without processes, excepting the conical ones of second sternite.

Distinguished by the form of the gonopods of the male as represented in fig. 11.

Length, 27 mm.; width, 5 mm.

LOCALITY—North Carolina: Soco Falls, near Waynesville. Male holotype taken April 29, 1939, by Mrs. Nelle Causey.

Genus MIMULORIA Chamberlin

Mimuloria ducilla Chamberlin, new species

Pl. 2, fig. 12.

Dorsum, with head and antennae, black; labral border of head yellow; collum with caudo-lateral corners, a transversely elongate median spot on caudal border and a median spot at anterior border, yellow; ordinary tergites trimaculate, the caudolateral corner of keels and a transverse median spot bordering caudal margin yellow. Venter brownish yellow, the legs light yellow.

Sternal processes of second segment in male acutely conical, no processes on other sternites or on the coxae.

Characterized especially by the gonopods of the male which are of the *missouriensis* and *castanea* type. See the figures for details.

Length, 35 mm.; width, 6.25 mm.

LOCALITY—North Carolina: Soco Falls, near Waynesville. Male holotype and allotype collected by Mrs. Nelle Causey, April 29, 1939.

Genus DYNORIA Chamberlin, new

Large forms with wide keels distinguished by a distinctive structure of the male gonopods the blade of the telopodite of which is heavy and bears a smaller branch from its anterior or outer edge, this arising from about the middle of the length.

Genotype. *Dynoria icana,* n. sp.

Dynoria icana Chamberlin, new species

Pl. 2, figs. 13, 14.

A large, robust form with wide keels in which the dorsum of the long-preserved specimens is brown, but may have been darker in life, with the keels yellow and caudal borders also lighter. The collum is lighter over all borders. Venter and legs pale.

Sternites and coxae not spined. Pores on upper edge of marginal thickenings as usual.

Gonopods of made as illustrated. (Figs. 13, 14)

Length of male holotype, about 42 mm.; width, 11.8 mm.

LOCALITY—Georgia: Tallulah Falls. Male holotype and female allotype taken by R. V. Chamberlin, July 31, 1910.

Genus SIGMORIA Chamberlin, new

Includes large, robust species which are characterized by the sigmoidally curved blade of the telopodite.

Genotype. *Sigmoria munda,* n. sp.

In addition to the genotype, this genus as now known includes *Fontaria evides* Bollman and the new species *Sigmoria divergens, marionа, conclusa* and *aberrans.*

Sigmoria munda Chamberlin, new species

Pl. 2, figs. 15, 16.

Dorsum in preserved specimens dark brown to black with the keels yellow and usually a narrow caudal border on tergites also lighter in color. Venter and legs light in color as usual.

Characterized especially by the gonopods of male. See figures 15 and 16.

Length of male 44 mm.; width, 10.5 mm.

TYPE LOCALITY—North Carolina: Hot Springs. Two males and two females taken August 6, 1910.

OTHER LOCALITY. North Carolina: Asheville. One male taken August 6, 1910.

Sigmoria aberrans Chamberlin, new species

Pl. 3, figs. 24, 25.

Black above with the keels orange yellow. Antennae brown. Venter and legs in preserved specimens yellow.

Distinct in the form of the gonopods as shown in figs. 24 and 25.

Length of male holotype, 39 mm.; width, 10.1 mm.

Length of female allotype, 44 mm.; width, 11 mm.

LOCALITY—North Carolina: Linville Falls. August 12, 1910. Several males and females.

Sigmoria conclusa Chamberlin, new species

Pl. 3, figs. 22, 23.

In life the dorsum is black with the carinae yellow of orange caste. Legs yellow. Antennae dark brown.

Gonopods as drawn. (Figs. 22 and 23)

Length of male holotype, 40 mm.; width, 10.2 mm.

LOCALITY—Tennessee: Altapass. August 11, 1910. Several males and females.

Sigmoria divergens Chamberlin, new species

Pl. 3, figs. 19, 20, 21.

In life the dorsum is black with caudal margins of tergites and lateral margins of keels red. On the sides a red line runs from carinae to bases of legs. Legs with first two joints yellow, the others pinkish red. Caudal and anterior borders of collum red. Antennae brown. In the preserved specimens the red color has faded out as usual.

Gonopods as illustrated.

Length of male holotype, 40 mm.; width, 10 mm.

LOCALITY—South Carolina: Landrum. Many specimens taken August 4, 1910.

Sigmoria mariona Chamberlin, new species

Pl. 2, figs. 17, 18.

Black above, with keels and caudal borders of tergites yellow. Collum with keels and anterior and posterior borders yellow. Venter and legs yellow as usual, antennae brown.

Male gonopods as drawn. (Figs. 17 and 18)

Length of male holotype, 40 mm.; width, 10 mm. Female allotype of about same length but 10.8 mm. wide.

LOCALITY—North Carolina: Marion. Two males and two females taken by R. V. Chamberlin August 12, 1910.

Genus SIGIRIA Chamberlin, new

Suggesting Brachoria, but the blade of telopodite not segmented and the subapical portion broadly expanded.

Genotype. *Sigiria scorpio*, new species.

Sigiria scorpio Chamberlin, new species

Pl. 3, figs. 26, 27.

Dorsum of preserved type deep brown, with keels yellow and posterior border of tergites light brown. Collum with light anterior and posterior border connecting the lateral light areas. Antennae brown. Venter, sides and legs yellow.

Gonopods of male as drawn.

Length of male holotype, 36 mm.; width, 8.5 mm. Length of female allotype, 38 mm.; width, 9 mm.

LOCALITY—North Carolina: between Hot Springs and Paint Rock. Male holotype and female allotype taken August 7, 1910.

Genus CLEPTORIA Chamberlin, new

Large forms characterized by stout gonopods in which the telopodite presents a broad curved blade without definite divisions and of the form shown in the figures for the genotype (Figs. 36, 37).

Genotype. *Cleptoria macra*, new species.

Includes also the closely allied *Fontaria rileyi* Bollman.

Cleptoria macra Chamberlin, new species

Pl. 4, figs. 36, 37.

In life the dorsum is solid black or in part above deep brownish black, with the lateral portion of keels bright red; legs with two basal joints yellow, the others pink, this color becoming more concentrated distad. In alcohol the red pigment fades out, leaving keels and legs yellow throughout, and the dorsum becomes dark brown.

The gonopods are shown in figs. 36 and 37.

Length of male holotype, 50 mm.; width, 12.2 mm.

LOCALITY—South Carolina: Taylor's. Male holotype taken August 3, 1910.

There is some hesitation in separating this form from *C. rileyi* of which the type has not been examined; but it seems to be distinct in its obviously larger size, the width of the male being 12.2 mm., as against 10.2 mm., in lacking the black swelling behind each pore as noted for *rileyi*, etc.

Genus APHELORIA Chamberlin

Apheloria adela Chamberlin, new species

The dorsum is dark brown or blackish with keels and caudal borders of tergites yellow. Antennae and lower part of head brown, the head otherwise like dorsum. Sides, venter and legs light brown or yellowish as judged from the preserved type.

In character of the male gonopods apparently nearest to *A. aspila* (See figure 31), but at once distinguishable from that species in the color pattern, especially the light cross bands on the tergites. It is also a smaller form.

Length of male holotype, about 34 mm.; width, 9 mm.

LOCALITY—New York: Ithaca.

Apheloria aspila Chamberlin, new species

Pl. 4, fig. 31.

Head mostly black, but in part brown like the antennae. Dorsum black with keels over ectocaudal half yellow. Sides, venter and legs yellow.

In general appearance very similar to *A. iowa* but apparently quite distinct in size and in the form of the male gonopods as shown by the figures.

Length, about 41 mm.; width, 10 mm.

LOCALITY—North Carolina: Soco Falls, near Waynesville. Male holotype taken April 29, 1939, by Mrs. Nelle Causey.

Apheloria iowa Chamberlin, new species

Pl. 3, fig. 28.

The dorsum is black without median spots or caudal bands on tergites but with the keels yellow back of the diagonal line connecting mesocaudal and ectocephalic corners. Collum with lateral ends and a band across anterior border yellow. Head blackish with antennae dark brown. Sides below keels, venter and legs yellow.

Gonopods of male as drawn.

Length of male holotype, 33 mm.; width, 9 mm.

LOCALITY—Iowa: Mt. Pleasant. Two males.

Apheloria keuka Chamberlin, new species

Pl. 4, fig. 32.

Dorsum brown or horn-color, sometimes in part dusky, the keels yellow. Antennae, legs, sides and venter yellow.

Very distinct in the form of the male gonopods. See figure 32.

There is a marked difference in the size of the sexes.

Length of male, 37 mm.; width, 7.3 mm. Length of female 39 mm.; width, 9 mm.

TYPE LOCALITY—New York: Ithaca. Male holotype, female allotype.

OTHER LOCALITY—New York: Lake Keuka. Male and female paratypes.

Apheloria reducta Chamberlin, new species

Pl. 4, fig. 35.

Dorsum brown with the keels yellow, the yellow color extending mesad farther than usual along caudal border of tergite. Collum yellow at ends. Head brown with antennae yellow. Sides, venter and legs yellow.

Male gonopods close in structure to those of *A. iowa.*

Length of male holotype, 34 mm.; width, 9.2 mm.

LOCALITY—Arkansas: Imboden. Two males and several immature, July 19, 1929.

Apheloria tigana Chamberlin, new species

Pl. 4, fig. 29.

Dorsum black with the caudal lateral portion of keels in the preserved specimens brown, the light color extending in a narrow stripe forward along lateral border. Head black above and brown below. Sides, venter and legs light brown or yellow.

The gonopods appear quite distinct, especially in the form of the basal spur. See figure 29.

Length of male holotype, about 40 mm.; width, 10 mm.

LOCALITY—North Carolina: Raleigh. Two males and two females.

Apheloria unaka Chamberlin, new species

Pl. 4, fig. 33.

Much resembling *trimaculata* in coloration but an obviously smaller species. Dorsum and head, with antennae, black; tergites trimaculate, the lateral yellow spots large, occupying caudal part of keels, the median spot small. Collum with large lateral spots and on median line with a large anterior spot and either no spot posteriorly or this represented by a vague, small dot. Venter and legs yellow, not at all pinkish in life.

Especially distinct in the form of the telopodite or gonopods as illustrated.

Length of male holotype, about 39 mm.; width, 10 mm. Length of female allotype, 45 mm.; width, 11 mm.

TYPE LOCALITY—Tennessee: Unaka Springs. Adult males and females in addition to young taken August 10, 1910, by R. V. Chamberlin.

OTHER LOCALITY—North Carolina: Hot Springs. One male paratype taken August 6, 1910, by R. V. Chamberlin.

Apheloria virginia Chamberlin, new species

Pl. 4, fig. 30.

In life the dorsum is black. Antennae light brown. Legs uniform yellow. Tergites of trimaculate, the median spot small and in life bright yellow; the lateral spots covering entire keels and red in color; spot of last segment yellow, and lateral spots of the immediately preceding segments may be yellow in part. Collum with an anterior median spot which is transversely elongate or a band which connects the lateral light areas.

Length of male holotype, 36 mm.; width, 9.1 mm.

LOCALITY—Virginia: Chatham. Many specimens taken August 14, 1910, by R. V. Chamberlin.

After long preservation in alcohol, the dorsum is chocolate colored and the median spots more or less obscure, while the red color has disappeared.

PLATE 1

Epeloria talapoosa, n. sp.

1. Subventral view of right gonopod.

Brachoria sequens, n. sp.

2. Right gonopod, caudoventral view.

Brachoria initialis, n. sp.

3. Right gonopod, caudoventral view.

Brachoria eutypa, n. sp.

4. Right gonopod, caudoventral view.

Zinaria urbana, n. sp.

5. Right gonopod, ventral view.

Zinaria cala, n. sp.

6. Right gonopod, ventral view.

Pachydesmus incursus, n. sp.

7. Right gonopod, ventral view.

Pachydesmus duplex, n. sp.

8. Right gonopod, ventral view.

Spathoria lamellidens (Chamberlin).

9. Right gonopod, subventral view.

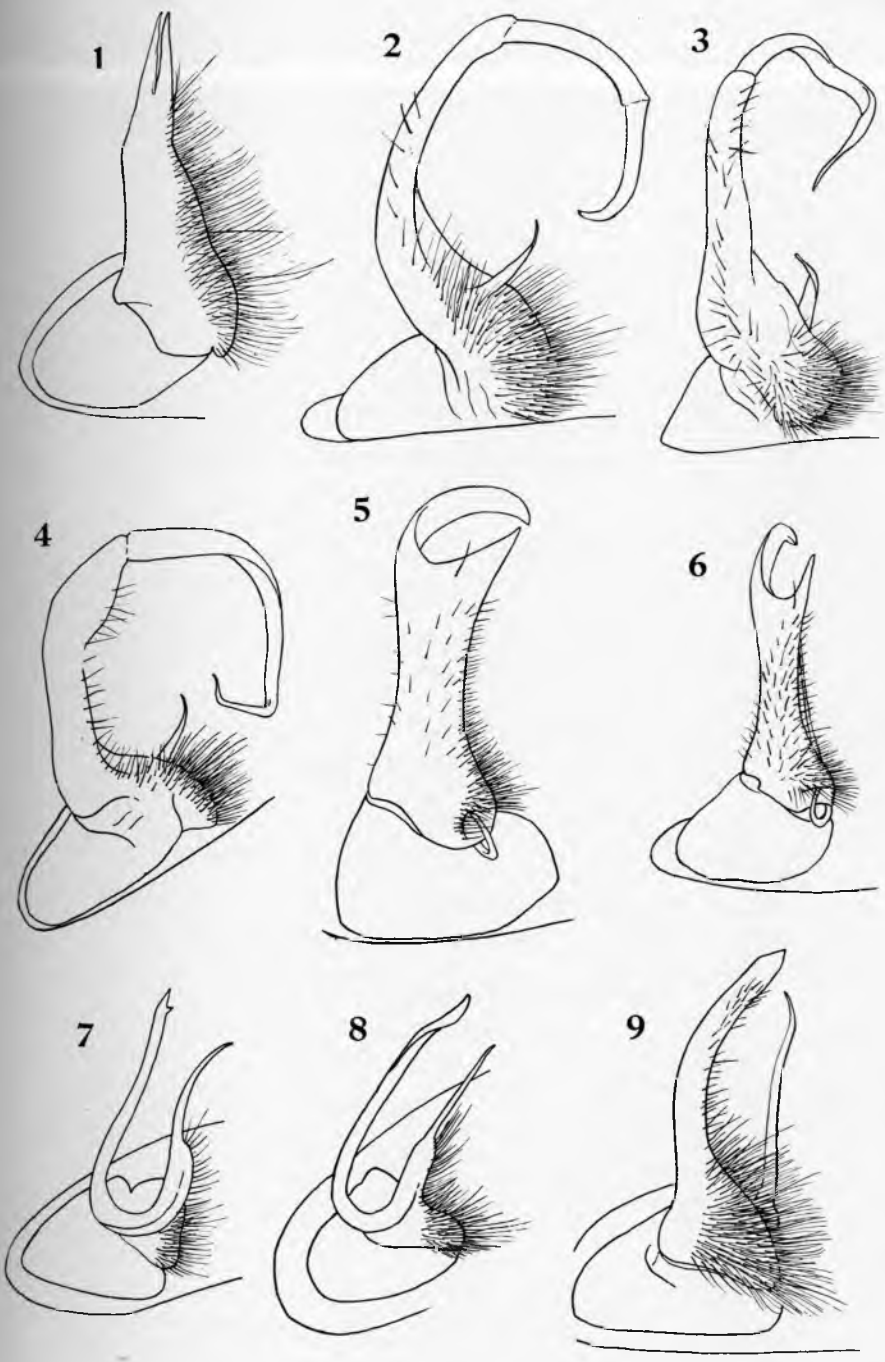

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PLATE 2

Aporiaria carolina, n. sp.
10. Right gonopod.

Aporiaria geniculata, n. sp.
11. Right gonopod.

Mimuloria ducilla, n. sp.
12. Right gonopod.

Dynoria icana, n. sp.
13. Right gonopod, subventral view.

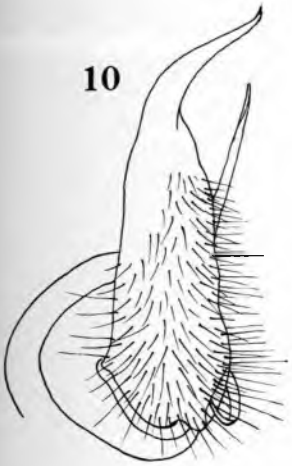
Dynoria icana, n. sp.
14. Distal view of telopodite.

Sigmoria munda.
15. Right gonopod, caudal view.

Sigmoria munda.
16. Ectal view of spur of telopodite.

Sigmoria mariona.
17. Right gonopod, subcaudal view.

Sigmoria mariona.
18. Ectal view, base of left telopodite.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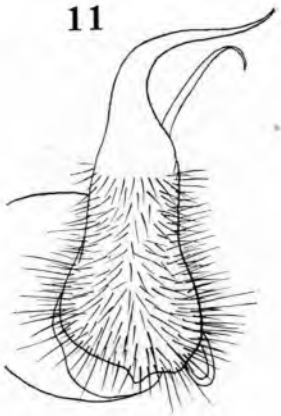
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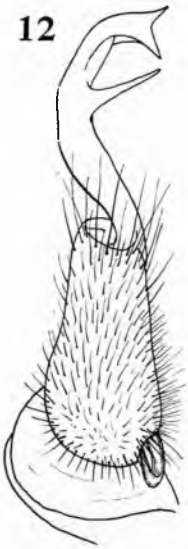
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PLATE 3

Sigmoria divergens, n. sp.

19. Right gonopod, subcaudal view.

Sigmoria divergens, n. sp.

20. Left gonopod, subanterior view.

Sigmoria divergens, n. sp.

21. Left gonopod, ectal view.

Sigmoria conclusa.

22. Right gonopod, caudal view.

Sigmoria conclusa.

23. Right gonopod, subcaudal view.

Sigmoria aberrans.

24. Left gonopod, anteromesal view.

Sigmoria aberrans.

25. Right gonopod, subcaudal view.

Sigiria scorpio.

26. Right gonopod, caudoventral view.

Sigiria scorpio.

27. Subanterior view of basal segment of gonopod.

Apheloria iowa.

28. Subventral view of left gonopod.


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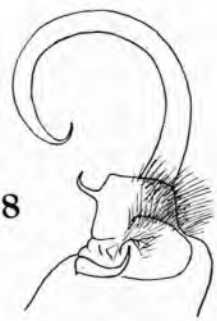
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PLATE 4

Apheloria tigana, n. sp.
29. Right gonopod, submesal view.

Apheloria virginia, n. sp.
30. Right gonopod, cephalic view.

Apheloria aspila, n. sp.
31. Right gonopod, submesal view.

Apheloria keuka, n. sp.
32. Right gonopod, cephalic view.

Apheloria unaka.
33. Right gonopod, subcephalic view.

Apheloria adela, n. sp.
34. Left gonopod, submesal view.

Apheloria reducta, n. sp.
35. Left gonopod, submesal view.

Cleptoria macra, n. sp.
36. Left gonopod, mesal view.

Cleptoria macra, n. sp.
37. Right gonopod, mesocaudal view.

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