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FIVE NEW WOLF-SPIDERS FROM FLORIDA

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The author is indebted to Dr. H. K. Wallace of the University of Florida for the privilege of studying the fine lot of material in the genus *Pirata* in his collection along with that contained in the collections of The American Museum of Natural History. The types of the new species diagnosed below and numerous paratypes are deposited in the American Museum. Many paratypes are retained in the collection of Dr. Wallace.

Pirata apalacheus, new species

Figs. 3 and 4

FEMALE.—Total length, 3.50 mm. Carapace, 1.70 mm. long, 1.25 mm. wide. Carapace dull yellowish brown, marked with a longitudinal black stripe on each side from the sides of the head to the caudal margin, the interval between these stripes pale and enclosing the usual Y-shaped black maculation. Sides of the carapace with a broad marginal pale stripe and a narrow marginal black seam. Dorsal eyes broadly ringed with black. Clothing of the carapace sparse, made up of short procumbent black hairs. Sternum pale yellow, with or without a narrow to broad marginal dusky band, sometimes uniformly dusky. Mouth parts and coxae pale yellowish, evenly clothed with erect black hairs. Legs dull yellowish brown, sometimes dusky, indistinctly annulate in black. Abdomen mostly black above, with a pale hastate maculation at the base and broken chevrons in the caudal half. Venter of the abdomen mostly pale, with a more or less distinct dusky median band which goes back from the epigynum nearly to the spinnerets.

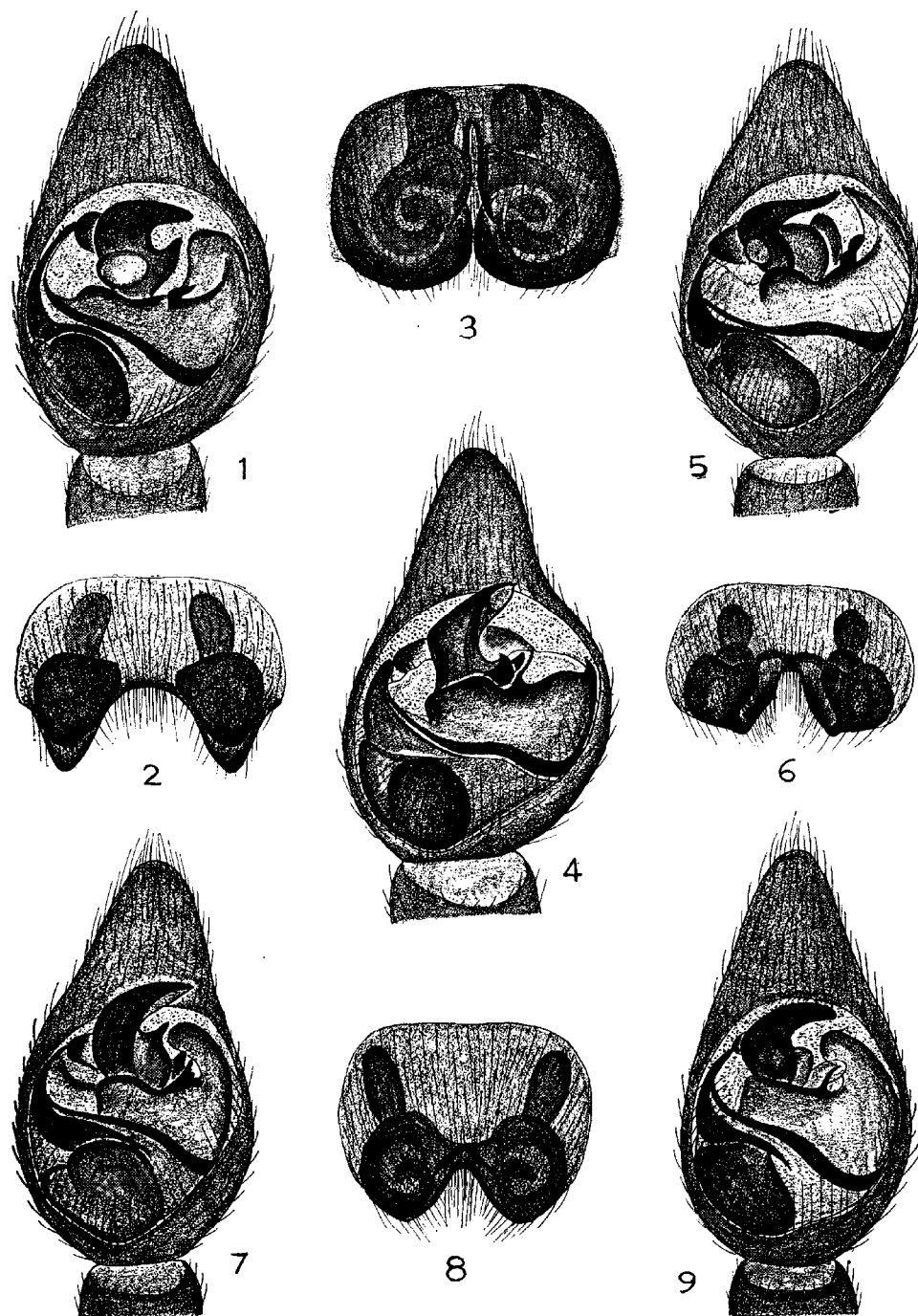
Structure essentially typical. First row of eyes gently procurved, subequidistantly spaced and subequal in size. Eyes of second row narrower than the third in the ratio 50:64, separated by two-thirds their diameter. Dorsal ocular quadrangle broader than long (64/48). Lower margin of the furrow of the chelicera with three teeth.

First tibia with three pairs of ventral spines, lacking distal spines. First metatarsus with three pairs of ventral spines, the last pair apical. Tibia and patella I, 1.60 mm.; IV, 1.94 mm. long.

Epigynum as illustrated in Fig. 3.

MALE.—Total length, 3.25 mm. Carapace, 1.70 mm. long, 1.25 mm. wide. Coloration and structure in close agreement with the female. Spination of legs as in the female. Tibia and patella I, 1.50 mm.; IV, 2.00 mm.

Palpus as illustrated in Fig. 4.

PALPI AND EPIGYNA OF SPECIES OF *PIRATA*

- Figs. 1 and 2. *Pirata suwaneus*, new species
Figs. 3 and 4. *Pirata apalacheus*, new species
Figs. 5 and 6. *Pirata mayaca*, new species
Figs. 7 and 8. *Pirata nanatus*, new species
Fig. 9. *Pirata allapahae*, new species

Type Locality.—Male holotype, female allotype, and male and female paratypes from a rotten log in a hammock (Station 9C) in Alachua County, Florida, June 19, 1937 (H. K. Wallace). Three male and four female paratypes from same station, taken June 5, 1937 (H. K. Wallace). Several male and female paratypes from Torreya Ravine, Liberty County, Florida, April 16, 1938 (W. J. Gertsch). Two female paratypes from Albany, Daugherty County, Georgia, July 19, 1938 (H. K. Wallace, 1036).

This fine species is easily separated from all others from the United States by reference to the genitalia. The relatively large epigynum of the female is strongly sclerotized, dark brown in color, and presents two subcontiguous lobes which are broadly rounded at the caudal end and which are separated by a narrow groove. The male palpus is armed with a median apophysis which is angled on the prolateral surface and grooved on the retrolateral side. The details of this apophysis and the smaller supporting spurs at the base are distinctive.

Pirata nanatus, new species

Figs. 7 and 8

FEMALE.—Total length, 2.55 mm. Carapace, 1.42 mm. long, 0.95 mm. wide. Carapace dull yellowish brown, strongly marked in black. Dorsum with a black longitudinal band on each side from the side of the head to the caudal margin, the interval between relatively narrow, especially behind, obliterated for the most part in the ocular region and enclosing the characteristic Y-shaped black maculation. Sides of the carapace with a broad submarginal pale stripe and with a narrow marginal black seam. Mouth parts, coxae, and sternum pale yellowish brown, unmarked, clothed evenly with erect black hairs. Legs light yellowish brown, more or less dusky but showing no signs of darker annulae. Abdomen nearly all black, with a pale hastate maculation at the base and a small series of pale spots behind, the remnants of pale chevrons. Sides of abdomen black or nearly so, the venter pale yellow, without markings.

Structure typical. First row of eyes gently procurved, subequidistantly spaced, the median eyes somewhat larger. Eyes of second row narrower than the third in the ratio 40:53, separated by two-thirds their diameter. Dorsal ocular quadrangle broader than long (53/37), narrower in front. Lower margin of the furrow of the chelicera with three teeth.

Spines as in *apalacheus*. Tibia and patella I, 1.35 mm.; IV, 1.65 mm.

Epigynum as illustrated in Fig. 8.

MALE.—Total length, 2.35 mm. Carapace, 1.35 mm. long, 0.97 mm. wide. Coloration in complete agreement with the female. Structure essentially as in the female. Legs spined as in the female but the spines, especially the most distal pair, less robust. Tibia and patella I, 1.17 mm.; IV, 1.40 mm.

Palpus as illustrated in Fig. 7.

Type Locality.—Male holotype, female allotype, and nine female paratypes from Turner County, Georgia, May 6, 1937 (H. K. Wallace, 606). Two female paratypes from Columbia County, Florida, April 27, 1935 (H. K. Wallace, 402). Three female paratypes from Alachua County, Florida, April 19, 1937 (H. K. Wallace, Station 1, vic.); one female paratype from same station taken January 30, 1937 (H. K. Wallace). One female paratype from Alachua County, Florida, March 18, 1938 (W. J. Gertsch).

This species has been confused with *Pirata seminola* Gertsch and Wallace. It is very much smaller, averaging about 3.00 mm. as compared with 4.50 mm., has the marginal black seam on the carapace very much narrower, and lacks any trace of black annulae on the legs. The median apophysis of the male palpus is a heavy curved spur which has a conspicuous prong on the retrolateral side at the base, whereas in *seminola* the basal region is rounded.

Pirata suwaneus, new species

Figs. 1 and 2

FEMALE.—Total length, 3.50 mm. Carapace, 1.80 mm. long, 1.50 mm. wide. Clothing of the carapace rather sparse, made up of procumbent black hairs and a few erect black setae. Carapace light yellowish brown, marked with a longitudinal dark stripe on each side from the sides of the head to the caudal margin, the interval between pale and as wide as the black stripes behind, somewhat wider in front where the pale stripe encloses the characteristic Y-shaped black maculation. Sides of the carapace with a submarginal pale band scarcely as wide as the dark band and with a rather narrow, often irregular, marginal dark stripe. Dorsal eyes on black patches. Mouth parts and coxae light yellow, unmarked. Sternum concolorous but usually marked along the margins with a row of black spots opposite the coxae or a distinct narrow black band. Clothing of the underside short black hairs. Legs light yellowish brown, strongly annulate in black. Abdomen black above, marked with a series of pale spots over most of the dorsum, the sides mostly black. Venter pale, sometimes unmarked but usually with a median irregular black band from the epigynum to near the spinnerets.

Structure typical. First row of eyes gently procurved, the larger median eyes separated by their radius, somewhat nearer the lateral eyes. Clypeus equal in height to a diameter of an anterior lateral eye. Eyes of second row narrower than the third in the ratio 36:54, separated by two-thirds their diameter. Dorsal ocular quadrangle broader than long (54/37), narrower in front. Lower margin of the furrow of the chelicera with three teeth.

First tibia with two ventral pairs and a single subventral spine on the retrolateral side, without spines at the apex. First metatarsus with three pairs of ventral spines, the last pair apical. Tibia and patella I, 1.50 mm.; IV, 1.87 mm.

Epigynum as illustrated in Fig. 2.

MALE.—Total length, 2.80 mm. Carapace, 1.55 mm. long, 1.05 mm. wide. Coloration in complete agreement with the female. Structure closely approximating that of the female. First tibia with three pairs of ventral spines and occasional one spine or a distal pair of weak spines. Tibia and patella I, 1.46 mm.; IV, 1.70 mm.

Palpus as illustrated in Fig. 1.

Type Locality.—Male holotype, female allotype and paratypes from Port Mayaca, Lake Okeechobee, Florida, March 29, 1938 (W. J. Gertsch). The following examples are all designated as paratypes: Males and females from Dade County, July 12, 1937 (F. N. Young). Male and females from Levy County, August 9, 1937 (H. K. Wallace, 591); males and females, May 9, 1937 (H. K. Wallace, 494); two males, April 9, 1937 (H. K. Wallace, 593). Females from Columbia County, April 27, 1935 (H. K. Wallace, 402). Male and female from Cocoa, Florida, February 23, 1925 (W. M. Barrows). Males and females from Fort Myers, Florida, November 12, 1937 (W. M. Barrows). Males and females from Blountstown, Florida, April 18, 1938 (W. J. Gertsch). Male and female from St. Johns River, near Geneva, Florida, April 11, 1938 (W. J. Gertsch). Females from Englewood, Florida, April 1-5, 1938 (W. J. Gertsch). Males and females from Winter Park, Florida, March 21, 1938 (W. J. Gertsch). Females from Okeechobee, Florida, March 26, 1938 (W. J. Gertsch). Males and females from Peace River, west of Arcadia, Florida, March 30, 1938 (W. J. Gertsch). Males and females from DeLand, Florida, March 26, 1939 (F. E. Lutz). Numerous male and female paratypes from various stations in Alachua County, Florida.

This common species is most easily identified by reference to the genitalia. The epigynum of the female presents two widely separated, narrowly rounded lobes which are much longer than in *mayaca* and *nanatus*. The median apophysis of the male palpus is geniculate, is terminated in a stout, pointed spur, and armed on the retrolateral side near the base with a stout prong nearly as large as the principal spur. The legs are always marked with black annulae.

***Pirata mayaca*, new species**

Figs. 5 and 6

FEMALE.—Total length, 3.50 mm. Carapace, 1.80 mm. long, 1.30 mm. wide. Carapace yellowish brown, marked with a longitudinal dark stripe on each side from the sides of the head to the caudal margin, the interval between forming a pale longitudinal stripe which is narrowest at the

posterior declivity, is somewhat broadened in front and encloses a Y-shaped black maculation. Sides of the carapace with a submarginal pale band half as wide as the dorsal band and a marginal dark band which is fully as wide as the pale band. Eye tubercles black. Clothing of carapace sparse, inconspicuous, made up of procumbent black hairs and a few erect black bristles, these latter confined to the pars cephalica. Mouth parts and coxae clear yellow, clothed evenly with erect black hairs. Sternum concolorous with the coxae but with a black seam or series of black spots opposite the coxae. Legs dull yellowish brown, clear to dusky, without indication of darker spots or annulae. Abdomen light brown above and on the sides, the dorsum with a pale hastate maculation at the base and an irregular median pale area, comprised of spots, behind. Venter pale yellow, rarely with contrasting markings.

Structure typical. First row of eyes gently procurved, the much larger median eyes separated by one-third their diameter, about half as far from the lateral eyes. Clypeus equal in height to the diameter of an anterior lateral eye. Eyes of the second row narrower than the third in the ratio 24:30, separated by one-half their diameter. Dorsal ocular quadrangle broader than long (30/20), narrowed in front. Lower margin of the furrow of the chelicera with three teeth.

First tibia with two ventral pairs and a single subventral spine on the prolateral side, lacking apical spines. First metatarsus with three pairs of ventral spines, the last pair apical. Tibia and patella I, 1.61 mm.; IV, 2.00 mm.

Epigynum as illustrated in Fig. 6.

MALE.—Total length, 3.00 mm. Carapace, 1.76 mm. long, 1.20 mm. wide. Coloration and structure in close agreement with the female. Spination of legs as in the female but the tibia with a single apical spine beneath. Tibia and patella I, 1.60 mm.; IV, 2.00 mm.

Palpus as illustrated in Fig. 5.

Type Locality.—Male holotype, female allotype and male and female paratypes from Port Mayaca, Lake Okeechobee, Florida, March 29, 1938 (W. J. Gertsch). Two male paratypes from Peace River, west of Arcadia, Florida, March 30, 1938 (W. J. Gertsch). Male paratype from Alachua County, June 14, 1937 (H. K. Wallace, Station 15); male paratype, February 2, 1937 (H. K. Wallace, Station 6-C); female paratype, April 19, 1937 (H. K. Wallace, Station 1). Male and female paratypes from Levy County, Florida, April 9, 1937 (H. K. Wallace, 593).

This species resembles *Pirata sedentarius* Montgomery in coloration and general structure. It is easily differentiated by the genitalia as shown in the figures. The median apophysis of the male is broadly rounded on the prolateral side and the main element is a spur which is much longer and more slender than in *sedentarius*. The base of the apophysis is armed on the prolateral side with a rounded lamella.

Pirata allapahae, new species

Fig. 9

MALE.—Total length, 3.40 mm. Carapace, 1.80 mm. long, 1.30 mm. wide. Carapace yellowish brown, with a dark brown longitudinal stripe on each side from the side of the head to the caudal margin, the interval between forming a pale median longitudinal band which is very narrow on the posterior declivity, is widened somewhat in front of the median groove, and which encloses a Y-shaped dark maculation. Sides of the carapace with a broad marginal pale band a black marginal seam or narrow band. Eye tubercles black. Carapace clothed with the usual covering of inconspicuous procumbent black hairs and with erect black setae on the pars cephalica. Mouth parts, coxae and sternum clear yellow, covered evenly with short black hairs, the sternum usually with a series of black spots opposite the coxae. Legs clear yellow to brown, dusky, without contrasting markings or annulae. Abdomen dark brown above and on the sides, the dorsum with a pale hastate maculation at base and a pale area or irregular spots behind. Venter pale yellow, unmarked or with a faint indication of an inconspicuous median stripe.

Structure typical. First row of eyes gently procurved, the larger medians separated by scarcely their radius, nearer the lateral eyes. Clypeus equal in height to a diameter of an anterior lateral eye. Eyes of the second row narrower than the third in the ratio 47:64, separated by one-half their diameter. Dorsal ocular quadrangle broader than long (64/44), narrowed in front. Lower margin of the furrow of the chelicera with three teeth.

First tibia with two ventral pairs and a single subventral spine on the prolateral side, without apical spines. First metatarsus with three pairs of ventral spines. Tibia and patella I, 1.70 mm.; IV, 2.05 mm.

Palpus as illustrated in Fig. 9.

Type Locality.—Male holotype from Alachua County, Florida, February 7, 1937 (H. K. Wallace, Station 7B). Male paratype from Alachua County, Florida, February 13, 1938 (H. K. Wallace, 1016). Male paratype from Spring Creek, Lake County, Florida, April 22, 1933 (H. K. Wallace, 201).

This species is nearest *Pirata sedentarius* Montgomery but is only half as large. The median apophysis is broadly rounded, more erect, and provided with a rounded lobe at the base on the retrolateral side.

A THIRD OF A CENTURY OF EXPERIENCE

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