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A REVISION OF THE SPIDER GENUS *BARRISCA* (ARANEAE, RHOICININAE)

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ABSTRACT

The male of *Barrisca nannella* is redescribed, the female is described for the first time, and a new species, *B. kochalkai*, is described from northern Colombia and Venezuela.

INTRODUCTION

Among an assortment of Neotropical spiders sent to me for identification recently by H. W. Levi were a male and two females from Colombia belonging to the genus *Barrisca*, established by Chamberlin and Ivie (1936) for a Panamanian species, *B. nannella*. Since females of *Barrisca* were previously unknown, a review of all the available material seemed appropriate, and has turned up a second species from northern Colombia and Venezuela.

The genus was originally placed by Chamberlin and Ivie in the Agelenidae, and considered by them to be closely related to *Tegenaria*. Roth (1964) noted that the irregularly placed tarsal trichobothria and deeply notched trochanters exclude *Barrisca* from the Agelenidae and subsequently (1965) transferred the genus to the Rhoicininae, which, following Exline (1950, 1960), he placed in the family Pisauridae. There seems little doubt that *Barrisca* is closely related to *Rhoicinus*; in both genera the male cymbium is distally elongated and bears a long prolateral spine at its base. Both the composition and the relationships of the Rhoicininae are very uncertain, however. Of the two other genera placed in the subfamily by Exline (1960), *Calacadia* is, as indicated by Lehtinen (1967), a close relative of *Metaltella* (Amaurobiidae), and the two genera provide an excellent example of closely related cribellate and ecribellate forms. The relationships of *Rhoicinaria* are less clear; Homann's (1952, 1961, 1971) arguments against its close relationship to *Rhoicinus* are convincing, but Lehtinen's (1967) placement of the genus in his Altellopsinae (Amaurobiidae) seems unsupported by any shared derived characters. Of *Xingusiella* Mello-Leitão (1940), added to the Rhoicininae by Lehtinen (1967) without examination of any specimens, virtually nothing is known.

The familial placement of *Rhoicinus* and *Barrisca* is even more problematical. Originally placed in the Lycosidae by Simon (1898), the group was transferred to the Agelenidae by Petrunkevitch (1928), to the Pisauridae by Exline (1950), back to the Lycosidae by Homann (1961, 1971), and to the Amaurobiidae by Lehtinen (1967). Since Homann (1971) treated the Pisauridae (and Ctenidae) as subfamilies of Lycosidae, and ranked the Rhoicininae equivalently with them, his proposal is equivalent to raising the Rhoicininae to family level in more conventional classifications. Homann rejected Lehtinen's placement because of the grate-shaped tapetum of the secondary eyes, believed by him to be a synapomorphy uniting the Stiphidiidae, Psechridae, Lycosidae (in his sense), Senoculidae, Oxyopidae, and possibly Zoropsidae and Acanthoctenidae (but not Amaurobiidae). Few, however, of the extremely large number of genera placed in the Amaurobioidea by Lehtinen (1967) and Forster and Wilton (1973) have had their eye morphology examined, and it seems likely that a grate-shaped tapetum may be found to occur in many of the families established by the latter authors. Six characters of rhoicinines not shared with the Lycosidae were listed by Exline (1950), and all seem to support Lehtinen's suggested amaurobioid relationship instead. However, Forster and Wilton (1973) indicated that the Lycosidae and Pisauridae may themselves be extremely derived members of the Amaurobioidea, which they characterized by the presence of four unbranched tracheal tubes (possibly a plesiomorphic character). I have examined the tracheal system of a juvenile of *Barrisca kochalkai*, new species, and it does conform to that condition. Thus at present the Rhoicininae seem to be best considered Amaurobioidea *incertae sedis*. If the heuristic trend, initiated by Forster and Wilton (1973), of isolating small groups of related amaurobioid genera as families until their interrelationships can be assessed is continued, the rhoicinines will probably have to be considered a family (they do not fit the diagnoses of any of the families recognized by Forster and Wilton).

I am indebted to H. W. Levi of the Museum of Comparative Zoology (MCZ) and John A. Kochalka (JAK) for the loan, exchange, and gift of specimens, to M. Hubert of the Muséum National d'Histoire Naturelle for loaning the type of *Rhoicinus wapleri*, to J. E. Carico for making available rhoicinine specimens previously loaned to him from the American Museum of Natural History (AMNH), and to M. U. Shadab for providing the illustrations.

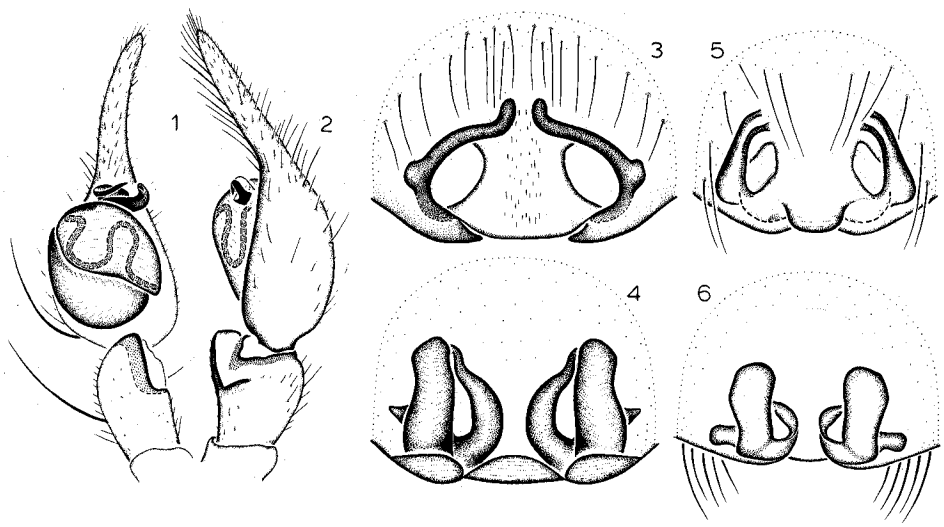
Barrisca Chamberlin and Ivie

Barrisca Chamberlin and Ivie, 1936:15 (type species by original designation *Barrisca nannella* Chamberlin and Ivie.

Diagnosis.—The only genus with which *Barrisca* is likely to be confused is *Rhoicinus*, from which it differs in having the labium no longer than wide rather than considerably longer than wide, the posterior tip of the sternum blunt rather than sharply pointed, the ledge of the male palpal tibial pit situated ventrally rather than retrolaterally, the epigynal openings situated ventrally rather than on a posterior plate, the legs spotted rather than ringed and without the extreme hairiness of *Rhoicinus*, and the first femur much longer than the carapace rather than at most only slightly longer.

Description.—Carapace widest near rear of coxae II, with elongate cephalic region about half of maximum width, moderately elevated, with steep posterior depression; margins dark brown, surrounding pair of submarginal light bands surrounding two broad

dark bands separated by single broad light median band expanded anteriorly to cover most of pars cephalica; surface covered with plumose setae, white and scale-like above light bands; thoracic groove longitudinal. From above, both eye rows recurved; all eyes dark, ringed with black pigment; ratio of eye diameters, anterior lateral: anterior median:posterior lateral:posterior median, 14:11:15:14; anterior medians separated by two-thirds their diameter, by slightly less than their radius from anterior laterals; posterior medians separated by two-thirds their diameter, by their diameter from posterior laterals; median ocular quadrangle much wider in back than in front, about as long as wide in back; clypeal height almost twice the anterior median eye diameter. Chelicerae with three promarginal and three retromarginal teeth; endites rectangular, with anteromedian scopula; labium no longer than wide, laterally notched at base, with rebordered tip; sternum about as long as wide, with blunt extension between coxae IV and invaginated anterior margin, dark brown except for small light yellow spot on midline at about one-fourth its length. Leg formula 4123. Femora heavily spotted, distal leg segments lightly spotted; tibiae, metatarsi, and tarsi with scattered trichobothria; tarsi with three claws, superior claws with several teeth; all trochanters deeply notched. Typcial leg spination (only surfaces bearing spines listed): femora: I d1-1-1, p0-2-1, r1-1-1; II d1-1-1, p1-2-1, r1-1-1; III d1-1-1, p1-1-1, r1-1-1; IV d1-1-1, p1-1-1, r0-0-1; patellae: I-IV d1-0-1; tibiae: I, II d1-1-0, p0-1-1, v1r-4-0, r0-0-1; III, IV d1-1-0, p0-1-1, v2-2-2, r0-1-1; metatarsi: I p0-1-2, v2-2-0, r0-1-2; II p1-1-2, v2-2-0, r0-1-2;III, IV p1-1-2, v2-2-0, r1-1-2. Abdomen dark brown with wide orange median longitudinal stripe with two pairs of short lateral oblique extensions at one-third and two-thirds its length, and pair of dark spots at about one-fourth its length; venter light with median dark band and scattered dark spots; anal tubercle divided; anterior spinnerets thick, conical, with short



Figs. 1-6.–1-4: *Barrisca nannella*: 1, left palp, ventral view; 2, left palp, retrolateral view; 3, epigynum, ventral view; 4, epigynum, dorsal view. 5, 6: *Barrisca kochalkai*: 5, epigynum, ventral view; 6, epigynum, dorsal view.

second segment; posterior spinnerets no longer than anteriors, with short second segment; colulus large, oval, preceded by spiracular furrow leading to four unbranched slender tracheae. Male palpal tibia with retrolateral apical excavation bordered by ventral ledge; cymbium elongate, bearing basal prolateral spine. Epigynum with lateral margins, midpiece, and pair of atrial sclerites.

Barrisca nannella Chamberlin and Ivie
Figs. 1-4

Barrisca nannella Chamberlin and Ivie, 1936:15, figs. 28-32 (male holotype from Barro Colorado Island, Canal Zone, Panama, in AMNH, examined). Roth, 1965:291.

Diagnosis.–Females of *B. nannella* may be distinguished from those of *B. kochalkai* by the anteriorly approximate epigynal margins (Fig. 3); males of the former species may be distinguished from those of *Rhoicinus* by the short embolus and simple median apophysis (Fig. 1).

Male.–Total length 4.79 mm. Carapace 2.40 mm long, 1.87 mm wide. Leg spination: femora: I r1-2-1; IV r0-1-1; tibiae: I, II v1r-4-2, r0-1-1; metatarsus II r1-1-2. Leg measurements in mm:

	I	II	III	IV
Femur	3.49	3.53	2.99	3.55
Patella	0.95	0.94	0.83	0.83
Tibia	3.35	3.31	2.63	3.38
Metatarsus	3.44	3.42	2.92	4.09
Tarsus	1.66	1.55	1.15	1.55
Total	12.89	12.75	10.52	13.40

Palpal bulb with large subtegulum, hook-like median apophysis, terminal embolus expanded just behind its tip (visible anteriorly), and membranous conductor (Figs. 1, 2).

Female.–Total length 5.75 mm. Carapace 2.68 mm long, 2.06 mm wide. Leg spination: patella I d0-0-1; tibiae: III v2-2-0; IV v1p-1p-1p; metatarsus II p0-1-2. Leg measurements in mm:

	I	II	III	IV
Femur	3.35	3.49	3.02	3.67
Patella	1.04	1.01	0.90	0.90
Tibia	2.84	2.77	2.38	3.15
Metatarsus	2.74	2.74	2.56	3.71
Tarsus	1.33	1.22	1.17	1.30
Total	11.30	11.23	10.03	12.73

Epigynum with sinuous lateral margins nearly meeting at middle anteriorly (Fig. 3). Spermathecae with long fertilization ducts and short lateral lobes (Fig. 4).

Material Examined.–PANAMA: *Canal Zone*: Barro Colorado Island, August 1928 (A. M. Chickering, AMNH), 2 males. COLOMBIA: *Valle del Cauca*: near Lago Calima, elevation 1400 m, June 1976 (W. G. Eberhard, MCZ, AMNH), 1 male, 2 females. PERU: *Amazonas*: Montenegro, Bagua, elevation 350 m, 29 September-1 October 1963 (A. Herrer and P. Wygodzinsky, AMNH), 1 male.

Barrisca kochalkai, new species
Figs. 5, 6

Type.–Female holotype from large epiphytic bromeliads at San Pedro, elevation 960 m, Sierra Nevada de Santa Marta, Magdalena, Colombia (18 May 1975, J. A. Kochalka), deposited in AMNH courtsey of Mr. Kochalka.

Etymology.–Named for J. A. Kochalka.

Diagnosis.–Female of *B. kochalkai* may be distinguished from those of *B. nannella* by the epigynal margins being restricted to the sides of the epigynum (Fig. 5), and from the sympatric species *Rhoicinus wapleri* Simon by the ventrally situated epigynal openings.

Male.–Unknown.

Female.–Total length 7.27 mm. Carapace 3.23 mm long, 2.50 mm wide. Leg spination: femora: I d1-2-1; r1-1-1; III d1-2-1; patellae: III, IV p0-1-0; tibiae: I v1r-4-1p; III v1p-2-1p. Leg measurements in mm:

	I	II	III	IV
Femur	3.67	3.67	3.20	3.85
Patella	1.30	1.22	1.04	1.12
Tibia	3.08	3.02	2.51	3.33
Metatarsus	2.95	2.95	2.59	3.82
Tarsus	1.51	1.46	1.30	1.51
Total	12.51	12.32	10.64	13.63

Epigynal margins restricted to sides of epigynum (Fig. 5). Spermathecae with short fertilization ducts and long lateral lobes (Fig. 6).

Material Examined.–COLOMBIA: *Magdalena*: San Pedro, Sierra Nevada de Santa Marta, large epiphytic bromeliads, elevation 960 m, 18 May 1975 (J. A. Kochalka, AMNH, JAK), 2 females. VENEZUELA: *Aragua*: Rancho Grande (Charles T. Collins, AMNH, MCZ), 2 females.

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