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## A Revision of the Mygalomorph Spider Genus *Neocteniza* (Araneae, Actinopodidae)

NORMAN I. PLATNICK<sup>1</sup> AND MOHAMMAD U. SHADAB<sup>2</sup>

### ABSTRACT

The seven known species of *Neocteniza* are diagnosed and described; a male of the genus is reported for the first time. On the basis of shared derived characters it is concluded that the Actinopodidae and Migidae are sister groups and that of the three known genera of Actinopodidae, *Actinopus* and *Missulena* together constitute the sister group of *Neocteniza*. The genitalia of *Neocteniza*, particularly of the male, are of extra-

ordinary complexity for mygalomorph spiders, and suggest that males can mate only once and females only once during each adult instar. Five new species are described: *N. pococki* from Venezuela, *N. fantastica* from Colombia, *N. osa* from Costa Rica, *N. subirana* from Honduras, and *N. paucispina* from Guatemala. Genitalic and somatic characters of the group are illustrated in detail for the first time.

### INTRODUCTION

The spider genus *Neocteniza* was established by Pocock (1895) on the basis of a female from Guyana; a second species, based on a female from Guatemala, was added by F. O. P.-Cambridge (1897), who assigned the genus to the Actinopodidae. Simon (1903) confirmed this placement, but having seen no specimens was misled into suggesting that *Neocteniza* might be synonymous with *Calathotarsus* (Migidae), from which it may in fact be easily distinguished by the presence of a pronounced rastellum (figs. 6-8). Since Simon's time, the genus has been ignored by arachnologists. Although *Neocteniza* has been repeatedly listed in the Actinopodidae by various cataloguers (Mello-Leitão, 1923; Petrunkevitch, 1928; Exline and Petrunkevitch,

1939; Roewer, 1942; Bonnet, 1958), some recent authors (Gerschman and Schiapelli, 1963, 1970) have even stated that only one actinopodid genus (*Actinopus*) occurs in America.

Our interest in *Neocteniza* was first aroused when we received the male described below as *Neocteniza fantastica* in a collection of spiders taken in pitfall traps in Amazonas, Colombia, by Drs. S. and J. Peck and sent to us by Dr. Willis J. Gertsch. Although clearly (from its rastellum and leg cusps) a trapdoor spider, two characters, the widely spread rather than compactly grouped eyes (fig. 3) and the fused labium and sternum (fig. 8), indicated that the specimen belongs not to the Ctenizidae (the typical trapdoor spiders) but to the Actinopodidae. The male palp (figs.

<sup>1</sup>Assistant Curator, Department of Entomology, the American Museum of Natural History.

<sup>2</sup>Scientific Assistant, Department of Entomology, the American Museum of Natural History.

TABLE 1  
Characters Used in Figure 1

Character	Plesiomorphic State	Apomorphic State
1. Eyes	In compact group	Spread across carapace
2. Chelicerae	Obliquely inclined	Vertically inclined
3. Posterior sigilla of ♀	Flattened plates	Excavate depressions
4. Legs of ♂	Uniform in coloration	With color pattern
5. Femur IV	Unarmed	Armed with cusps
6. Anterior metatarsi of ♂	Without long apical ventral spine	With long apical ventral spine
7. Palpal tibia of ♂	Elongate	Incrassate
8. Embolus	Short	Long
9. Labium of ♀	Armed with spinules	Bare
10. Sclerotized bursae copulatrix	Absent	Present
11. Spermathecae	Short, straight	Long, sinuous
12. Pars cephalica of ♂	Flattened	Greatly elevated
13. Thoracic groove	Recurved	Procurved
14. Labium	With suture lines	Without suture lines
15. Posterior sigilla of ♂	Flattened plates	Excavate depressions
16. Posterior tarsi of ♂	Not scopulate	Scopulate
17. Tibia III	Without apical comb	With apical comb
18. Posterior tarsi	Unarmed	Armed with cusps
19. Maxillae of ♂	Armed with spinules	Bare
20. Paired tarsal claws of ♂	Multidentate	Unidentate
21. Tibia IV	Armed with spines only	Armed with cusps
22. Carapace margin of ♂	Flat	Reflexed dorsally

21-23) is, however, radically different from those of the other actinopodid genera, *Actinopus* and *Missulena*. Comparisons with the type specimens of the two described female *Neocteniza* revealed a number of similarities that allow assignment of the Colombian male to the genus: the thoracic groove is a deep, recurved, sinuous T-shaped fissure and there are three longitudinal rows of setae between the groove and the ocular area (figs. 2, 3); suture lines between the labium and sternum are visible at the sides but not in the middle, and occur just anterior of a wide, deep T- or Y-shaped depression (figs. 7, 8); the fourth femur bears a distal clump of cusps on its dorsal surface (figs. 14, 15); the fourth metatarsus has an apical comb of elongated spines (figs. 13, 16); and the segments of the outer spinnerets each bear one or more enlarged ventral tubercles (fig. 10). Subsequent searches of the mygalomorph collections of the American Museum of Natural History and the Museum of Comparative Zoology turned up females of three additional species, and Dr. Gertsch was able to add a fourth

from Central American material at his disposal, with the result that *Neocteniza* is now known to be widespread in Central and northern South America (fig. 32).

Of the ecology of *Neocteniza* little is known, although the genus is seemingly restricted to tropical wet forests. Only one of the eight known specimens, the holotype of *Neocteniza osa*, was collected by an arachnologist, Dr. Carlos E. Valerio, who reports (*in litt.*) that the specimen was taken in litter on the floor of a dense primary forest near a stream, and that no burrow was observed. Nevertheless, the well-developed rastellum and large numbers of strong digging cusps on the legs suggest that the spiders probably are burrow dwellers.

Fortunately more can be said about the relationships of *Neocteniza*. Of the two other actinopodid genera, one (*Actinopus*) is exclusively Neotropical and the other (*Missulena*) exclusively Australian. Gerschman and Schiapelli (1963) included Africa within the range of the family, apparently including the African genus

*Stasimopus*. Simon (1892) described *Stasimopus* in the Actinopodidae but subsequently (1903) transferred the genus to the Ctenizidae; the latter placement seems correct, particularly as *Stasimopus* lack the apical comb of cusps on the third patella (figs. 9, 11) characteristic of actinopodids. Only one other family of mygalomorphs, the Migidae, has the eyes spread widely across the carapace as do the actinopodids; the fact that both the Liphistiidae and Atypoidea, unquestionably the most primitive of living spiders and the closest relatives of the other mygalomorphs, have closely grouped eyes indicates that to be the plesiomorphic state of the character, the widely spread eyes of actinopodids and migids to be a synapomorphy, and those two families to be sister groups. Within the Actinopodidae, there is abundant evidence, summarized in table 1 and figure 1, that the dichotomy between *Neocteniza* and the other two genera occurred before the splitting of *Actinopus* and *Missulena*. Of the characters listed in table 1, the first three have states that are not found in other mygalomorphs and are therefore presumed apomorphic; directionality of transformation series for the other listed characters was determined by immediate out-group comparison (i.e., with Migidae for characters 4-18, with *Neocteniza* for characters 19-22). The fact that both the Migidae and Actinopodidae are found on more than one southern continent (the former family being known from Australia, Tasmania, New Zealand, New Caledonia, southern South America, South Africa, and Madagascar) suggests that the divergence between them antedates the breakup of Gondwanaland, hardly surprising for such relatively primitive spiders.

Of interest is the occurrence in *Neocteniza* of the high degree of sexual dimorphism found in both *Actinopus* and *Missulena*. Males are much smaller than females; the male of *N. fantastica* is 6 mm. long, whereas the smallest female reaches almost 14 mm. Womersley (1943) noted an equally great discrepancy between the sexes of a single species, *Missulena occatoria* Walckenaer. The male of *N. fantastica* has a distinct color pattern on the legs lacking in females and most other mygalomorphs. The cuticle of the female carapace is smooth, that of males divided into tiny cells, some of which bear distinct tubercles. In females the anterior lateral eyes are much

larger than the anterior medians; in the male of *N. fantastica* the situation is reversed. The male shows no traces of the third or fourth sigilla, but females have elongate, depressed posterior sigilla (fig. 7). As in many ctenizids, females have denticles scattered between the rows of cheliceral teeth that are lacking in males, and have much shorter and stouter legs. As in *Missulena* (but not

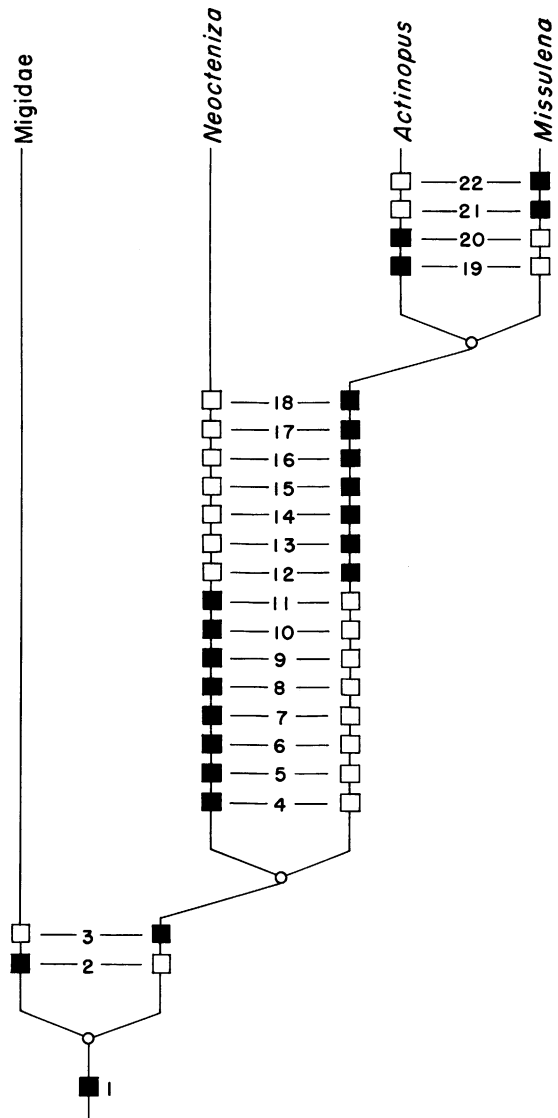


FIG. 1. Cladogram of actinopodid relationships. Dark squares indicate apomorphic states of characters listed in table 1.

*Actinopus*), males differ from females in having multidentate tarsal claws.

Like most higher spiders but unlike virtually all mygalomorphs, which typically have simple and taxonomically frustrating genitalia, both the male palp and female epigynum of *Neocteniza* are highly modified. The palpal tibia, long and thin in the other actinopodids, is enormously incassate and bears on its retrolateral side a sclerotized plate occupied by several rows of long, strong cusps (figs. 21-23). The tarsal bulb, simple and rounded in most mygalomorphs, is flattened, squared, and divided into wide proximal and narrow distal flanges. The tip of the distal flange is tuberculate on its prolateral side and only weakly sclerotized on its retrolateral side at the origin of the embolus, which is tremendously elongated, sharply narrowed proximally, and provided with a pair of tubercles at about one-third of its length. The most unusual structure of all is an apophysis that arises from the ventral side of the proximal flange of the tarsal bulb and which fits firmly between the cusps of the second row on the tibial plate (fig. 23). For the sake of clarity, the illustration shows a small space between the apophysis and the next outside cusp, but in both palpi there is virtually no space between them and the apophysis is inserted between two cusps so firmly that it would be impossible to raise the tarsus without breaking it. It should be noticed that this locking system allows (or rather forces) the long, fragile embolus to be held underneath the palpal femur and anterior portion of the carapace, where it is less likely to be damaged. Presumably only a tremendous increase in internal pressure could successfully disengage this locking system, and it seems reasonable to suggest that this happens only during mating. As in many other spiders, the male probably does not seek prey or feed after maturation, but abandons the burrow and searches until he finds a female. Without the locking system it is difficult to imagine how the male could carry on any other activities without either breaking the embolus or having it torn off at its weakly sclerotized origin.

The female genitalia are also atypical. The epigynum, usually smooth and unmodified in mygalomorphs, is raised, heavily sclerotized, and

frequently bears elevated horns; the horns are most highly developed in *Neocteniza pococki* (fig. 19). These horns may catch against the tibial cusps of the male palp during mating. The spermathecae communicate to the outside through very heavily sclerotized bursae copulatrix (fig. 18), the shape and degree of separation of which are taxonomically useful. The spermathecae themselves are sclerotized only at their basal ends, and are anteriorly surrounded by a thick mass of tissue possibly glandular in nature; as these tissue masses also have distinctive shapes we illustrate one spermatheca with the mass intact and one with it removed. As the distal ends of the spermathecae are so weakly sclerotized, their shape is probably variable (it is certainly modified by the surrounding tissue masses in intact specimens) and we have used only characters of the sclerotized basal portions and bursae to distinguish species.

The holotypes of *N. pococki* and *N. osa* have sclerotized rods protruding from both bursae (figs. 19, 24) and what appear to be the tips of the male embolus are visible inside the spermathecae (figs. 23, 25). Thus it appears likely that the tip of the embolus breaks off and fractures during mating at least part of the time, and that males may be unable to mate more than once with each palp. If *Neocteniza* resemble other mygalomorphs, both palpi are inserted into the epigynum simultaneously, so a given male would mate with only one female. Similar situations involving breaking structures on the male palp that prevent additional matings are known in higher spiders such as *Argiope* and *Araneus* (Levi, 1975). The fractured tip of the embolus protruding from the bursa probably also makes additional matings difficult or impossible for the female, which may thus be unable to mate more than once during each adult instar. This would force males to seek unmated females and would presumably be selectively advantageous by increasing the number of sedentary females in the population that actually get approached by males.

Given the magnitude of difference in genitalic and somatic characters separating *Neocteniza* from the other actinopodids and the phylogeny presented in figure 1, a reasonable case could be made for recognizing two subfamilies within the

Actinopodidae. The new monotypic subfamily that would be established for *Neocteniza*, however, would not differ from the genus in content, and until such a taxon could perform a grouping function (i.e., until another genus closer to *Neocteniza* than to *Actinopus* or *Missulena* is found), it seems undesirable to add to the increasingly heavy burden of family group names in spiders, which in recent years have proliferated at a rate much higher than our rather limited advances in the recognition of phylogenetic relationships would justify.

We are grateful to Mr. Fred R. Wanless of the British Museum (Natural History) for the loan of the types of *Neocteniza sclateri* and *Neocteniza mexicana*, to Dr. Herbert W. Levi of the Museum of Comparative Zoology, Harvard University, for his hospitality during a search of that collection, and to Dr. Willis J. Gertsch for his assistance with and advice on numerous aspects of this project.

#### *NEOCTENIZA* POCKOCK

*Neocteniza* Pocock, 1895, p. 193 (type species by monotypy *Neocteniza sclateri* Pocock). Roewer, 1942, p. 189. Bonnet, 1958, p. 3048.

**Diagnosis.** *Neocteniza* may be easily distinguished from *Actinopus* and *Missulena* by the thoracic groove, which is recurved and T-shaped rather than procurved and U-shaped.

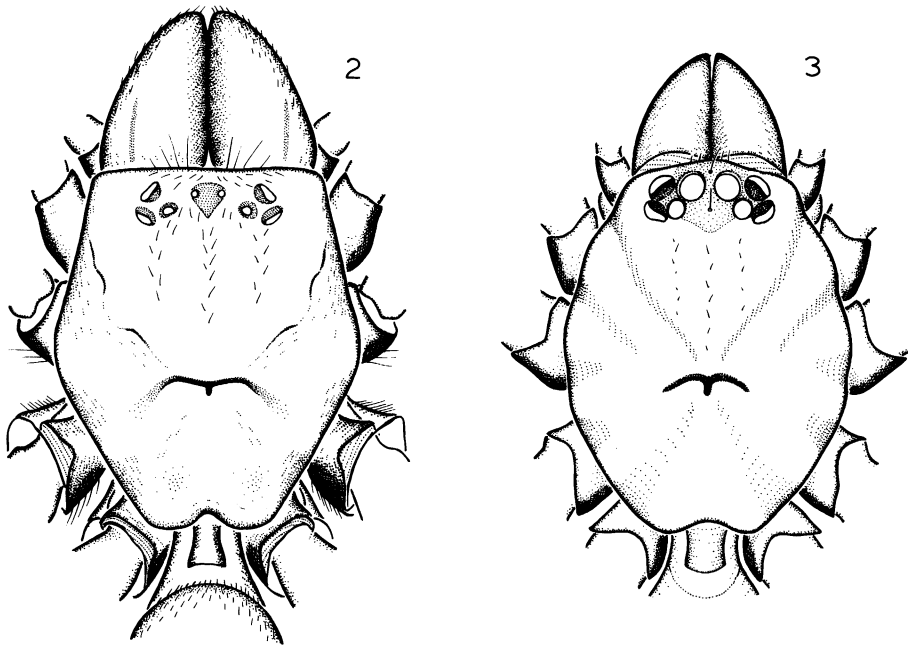
**Description.** Total length, including chelicerae, 6-24 mm. Carapace of male dark olive brown, not shining, of female light reddish brown, shining; dusky bands radiate from thoracic groove; posterior halves of lateral margins and ocular tubercle darkened; conjunctival membrane translucent, pale beige or purple, visible only narrowly at sides, more broadly at front and back. Chelicerae light brown, darkened medially and distally; fangs and rastellum dark reddish black. Underside of cephalothorax light brown with labium and maxillae darkest; sclerotized elements set in dirty white conjunctival membrane. Coxae and trochanters of male pearly white, of female light brown, with distal half of trochanters darkened; other leg segments of female light brown, with dusky longitudinal dorsal bands on femora, patellae, and tibiae; of male olive brown, with distal half of patellae, all of tibia I, distal two-

thirds of tibiae II and III, and distal half of tibia IV pearly white. Abdomen grayish purple dorsally, lighter ventrally; spinnerets pale beige.

Carapace (figs. 2-5) widest at middle of coxae II; cuticle of male divided into tiny cells, with cells of pars cephalica smooth, those of pars thoracica bearing distinct tubercles; cuticle of female smooth, undivided; pars thoracica with scattered long, fine setae; pars cephalica with three longitudinal rows of strong setae extending from thoracic groove to ocular tubercle, where coalesced into transverse row. Anterior margin of carapace produced anteriorly at middle, sides produced laterally at anterior or all coxae, posterior margin with deep invagination at middle. Pars cephalica of male flattened, of female greatly elevated, dome-shaped, highest at ocular tubercle, steeply rounded at sides; cephalic groove represented by three deep semicircular depressions on each side; thoracic groove deep, recurved, T-shaped, sinuous fissure.

Eyes set on low tubercle roughly three times as wide as long, occupying more than half of carapace width at that point. Clypeus narrow, gently sloping, equal in length to less than anterior lateral eye diameter. Slightly procurved anterior eye row slightly narrower than recurved posterior row; anterior median eyes rounded, others oval. In male anterior median, in female anterior lateral eyes largest. Anterior eyes of male nearly contiguous, of female with medians closer to each other than to laterals; posterior median eyes much closer to laterals than to each other. Median ocular quadrangle wider than long, wider in back than in front.

Sternum and labium (fig. 7, 8) fused, suture lines visible at sides but not at middle. Sternum shining, with scattered stiff setae; pairs of small, round sigilla near margin opposite first and second coxae; posterior sigilla of male unrecognizable, of female represented by elongate, oval, glabrous depressions connected by slight, narrow linear depressions to large, glabrous, extremely deep, anterior T-shaped or Y-shaped depression present in both sexes. Labium without spinules, often invaginated at middle of anterior margin, sometimes with elevated ridge behind apex. Maxillae longer than wide, with distinct distal anterolateral projection and proximal median ridge, bearing one to three



FIGS. 2, 3. Carapace, dorsal view. 2. *Neocteniza pococki*, new species. 3. *N. fantastica*, new species.

(usually two) spinules at anteromedian corners, set on ventral and anterior surfaces with numerous long, thick setae forming anterior serrula. Chelicerae robust, flattened medially, projecting forward distance equal to one-third to one-half of carapace length, roughened medially, smoother laterally, set with broad median and narrow lateral rows of stiff setae increasing in length and thickness toward rastellum; rastellum (fig. 6) consisting of rows of strong spines and thick cusps borne on protruding median lobe and transverse row of strong spines above origin of fang. Chelicerae with promarginal and retro-marginal rows of teeth (fig. 12), female with scattered denticles between marginal rows.

Leg formula of male 4123, of female 4312 or 4132. Legs of male (fig. 11) relatively long, thin, of female (fig. 9) relatively short, stout, of both sexes clothed with long setae, armed with stout digging cusps and elongate spines. All legs without scopulae. Femora, patellae, and tibiae with one to three longitudinal rows of setae on dorsal surface separating glabrous areas. Femur of female palp greatly narrowed laterally, bent

toward midline at distal end. Femur IV with dorsal series of cusps at distal end (figs. 14, 15). Patella III with anterodorsal, retrolateral, and series of apical cusps, the latter forming distinct comb. Patella IV with anterodorsal clump of thickened setae, some of which occasionally attain cusp thickness. Anterior tibiae of male with spines, of female with cusps; tibia IV with two to eight ventral spines, without cusps. Anterior metatarsi of male with spines, of female with cusps; metatarsus III with elongate apical ventral spine on retrolateral side; metatarsus IV with apical comb (figs. 13, 16). Palpal tarsus of female with cusps and pair of apical ventral spines. Anterior tarsi of male with spines, of female with cusps; posterior tarsi unarmed. Palpal tarsus of female with single claw bearing large tooth and additional denticles. Tarsi with three claws, without claw tufts; unpaired claw smooth; paired claws of male multidentate, of female with single large tooth and additional denticles. Distal leg and female palp segments with long dorsal trichobothria. Abdomen widest at about two-thirds of length, regularly coated with long setae. Four



spinnerets, inner pair short, one-segmented, outer pair longer, three-segmented, first segment longest, third shortest, segments bearing patches of enlarged ventral tubercles.

Male palp with incrassate tibia bearing retro-lateral plate with several rows of cusps, flattened tarsal bulb with ventral apophysis, and elongate embolus (figs. 21-23). Female epigynum raised, heavily sclerotized, often with elevated horns (fig. 17); paired, heavily sclerotized, posteriorly situated bursae copulatrix lead to long spermathecae sclerotized only near base, surrounded by dense masses of tissue (fig. 18).

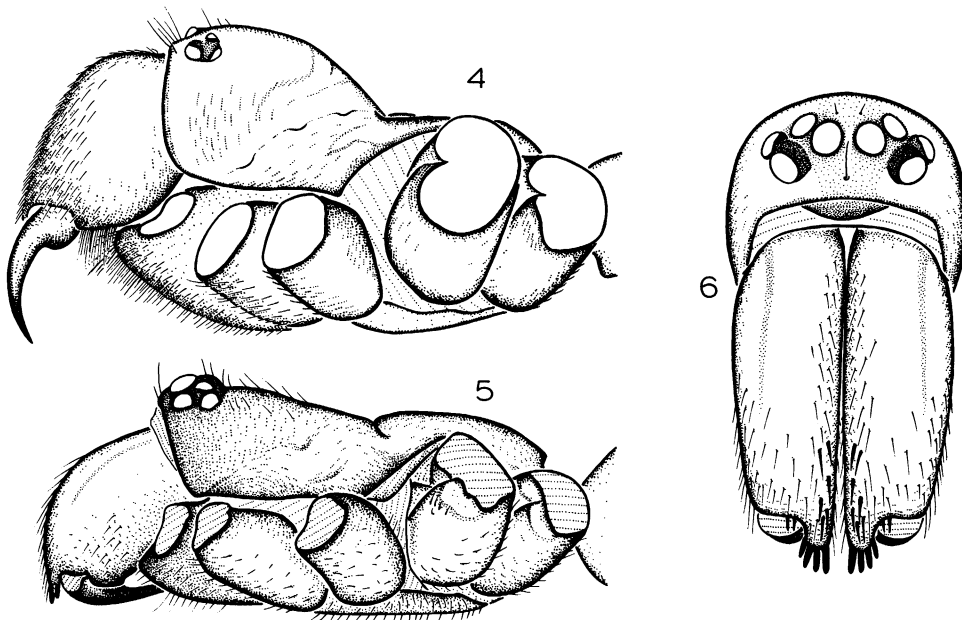
- curved, elevated horns (figs. 17, 19); South America . . . . . 4
- Epigynum without longitudinal, outwardly curved, elevated horns (figs. 28, 30); Central America . . . . . 5
- 4. Bursae copulatrix separated by more than their width (fig. 18) . . . . . *sclateri*
- Bursae copulatrix separated by less than their width (fig. 20) . . . . . *pococki*
- 5. Sclerotized basal portion of spermathecae originating at lateral edge of bursae copulatrix (fig. 31) . . . . . *paucispina*
- Sclerotized basal portion of spermathecae originating median of lateral edge of bursae copulatrix (fig. 29) . . . . . *subirana*

KEY TO FEMALES OF *NEOCTENIZA*

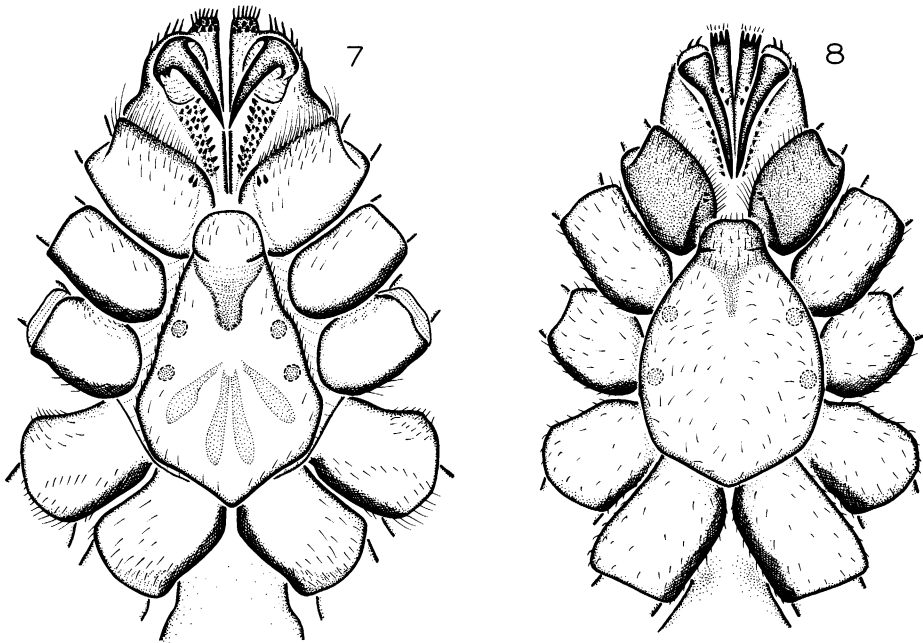
- 1. Sclerotized basal portion of spermathecae recurved (figs. 18, 20, 29, 31) . . . . . 3
- Sclerotized basal portion of spermathecae not recurved (figs. 25, 27) . . . . . 2
- 2. Spermathecae directed medially (fig. 25) . . . . . *osa*
- Spermathecae directed laterally (fig. 27) . . . . . *mexicana*
- 3. Epigynum with longitudinal, outwardly

*Neocteniza sclateri* Pocock  
 Figures 17, 18, 32

*Neocteniza sclateri* Pocock, 1895, p. 194, pl. 5, figs. 3, 3a, 3b (female holotype from Demerara [=Georgetown], East Demerara, Guyana, in the British Museum [Natural History], examined). Roewer, 1942, p. 189. Bonnet, 1958, p. 3048.



FIGS. 4-6. 4, 5. Carapace, lateral view. 4. *Neocteniza pococki*. 5. *N. fantastica*. 6. Carapace and chelicerae, anterior view, *N. fantastica*.



FIGS. 7, 8. Underside of cephalothorax, ventral view. 7. *Neocteniza pococki*. 8. *N. fantastica*.

*Diagnosis.* *Neocteniza sclateri* is closest to *N. pococki* but may be distinguished by the smaller epigynal horns (fig. 17) and shorter spermathecae (fig. 18).

*Male.* Unknown.

*Female.* Total length, including chelicerae, 16.56 mm. Carapace 6.15 mm. long, 5.17 mm. wide; ocular area with three long, stiff setae behind anterior median eyes, about 18 very long clypeal setae, and transverse row of about 16 shorter subclypeal setae; thoracic groove equaling at greatest width about three-tenths of carapace width at that point, situated back almost three-fifths of carapace length.

Ratio of eyes, anterior lateral:anterior median:posterior lateral:posterior median, 36:22:33:31. Anterior median eyes separated by roughly their diameter, by more than twice their diameter from anterior laterals. Lateral eyes of each side separated by roughly one-third of anterior lateral eye diameter. Posterior median eyes separated by almost three and one-half times their diameter, by less than half their diameter from posterior laterals. Median ocular quadrangle wider than long (171/43), narrowed in front (171/70).

Sternum and labium 4.82 mm. long, 3.31 mm. wide. Anterior sternal depression equaling at branching point roughly one-ninth of sternal width at that point. Cheliceral rastellum consisting of three transverse rows of about six stiff spines, subterminal median strong cusp, and terminal row of five strong cusps on projecting lobe; transverse row of about 10 long spines above origin of fang. Cheliceral promargin with six or 11 teeth, retromargin with nine or 11 small teeth; seven or nine small denticles scattered between rows.

Leg formula 4132. Femur IV with dorsal series of 19 or 20 cusps arranged in three irregular rows at distal end. Patella III with anterodorsal series of 21 or 22, apical comb of 10, and two or three retrolateral cusps. Leg cusps: palpal tibia, 14 or 18 prolateral, five or six retrolateral; tibia I, five or six prolateral, eight or nine retrolateral, zero or one ventral; tibia II, two prolateral, four or five retrolateral, zero ventral; tibia III, 21 or 24 prolateral, nine or 10 retrolateral, six or nine dorsal; metatarsus I, 18 prolateral, 17 or 19 retrolateral; metatarsus II, 18 or 22 prolateral, nine or 16 retrolateral; metatarsus III, 12 or 13 prolateral, nine or 10 retrolateral; meta-

tarsus IV, six prolateral, two retrolateral, apical comb of four; palpal tarsus, 18 or 19 prolateral, 13 or 15 retrolateral; tarsus I, six or 10 prolateral, seven or nine retrolateral; tarsus II, nine or 10 prolateral, five or six retrolateral. Tibia I 1.8 times as long as greatest width, tibia III 1.1 times as long as greatest width. Palpal claw with two tiny denticles distal to long tooth bearing two dorsal and two ventral denticles; proclaw of leg I with two denticles distal to large tooth bearing ventral denticle, retroclaw with only one distal denticle; leg II claws as in leg I proclaw; posterior leg claws bearing long tooth distal to one denticle. Measurements in mm.:

	I	II	III	IV	Palp
Femur	3.17	2.90	2.88	4.00	2.34
Patella	2.23	2.12	1.94	2.55	1.47
Tibia	2.05	1.82	1.47	2.44	1.48
Metatarsus	1.55	1.62	1.96	2.95	—
Tarsus	0.94	0.72	1.12	1.04	1.69
Total	9.94	9.18	9.37	12.98	6.98

Abdomen 6.52 mm. long, 4.39 mm. wide. Spinneret segments bearing patches of around five, 12, and seven ventral tubercles. Epigynum darkened posterolaterally, with two widely separated, slightly elevated, outwardly curved horns (fig. 17). Widely separated bursae copulatrix with anterolateral openings leading to long, basally recurved, distally expanded sinuous spermathecae (fig. 18).

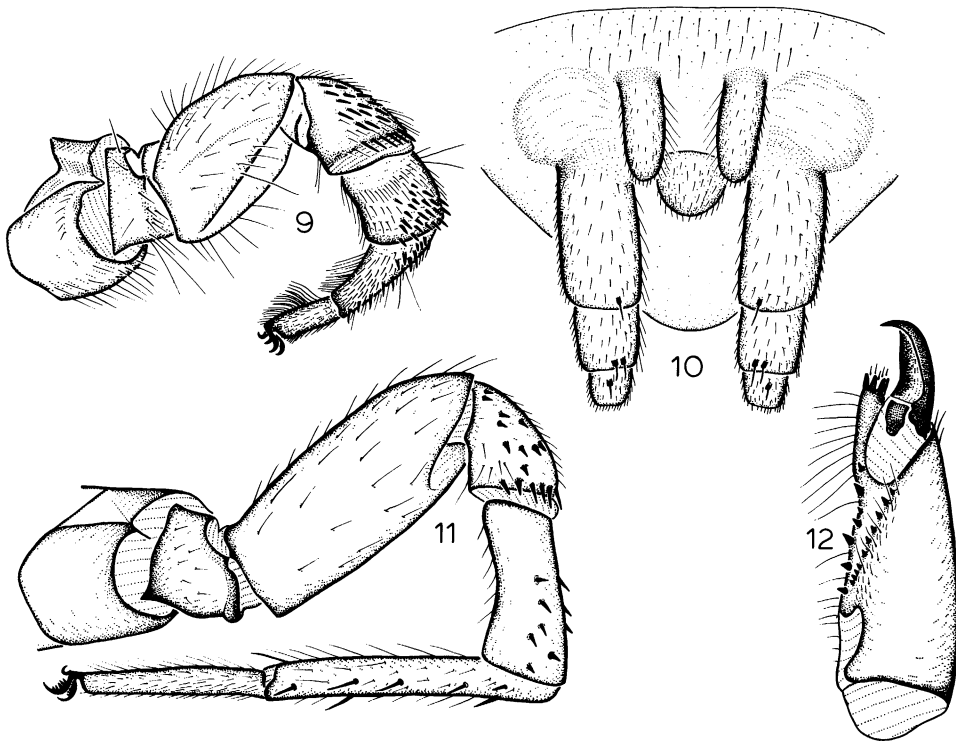
*Material Examined.* Only the holotype from Guyana (fig. 32).

***Neocteniza pococki*, new species**

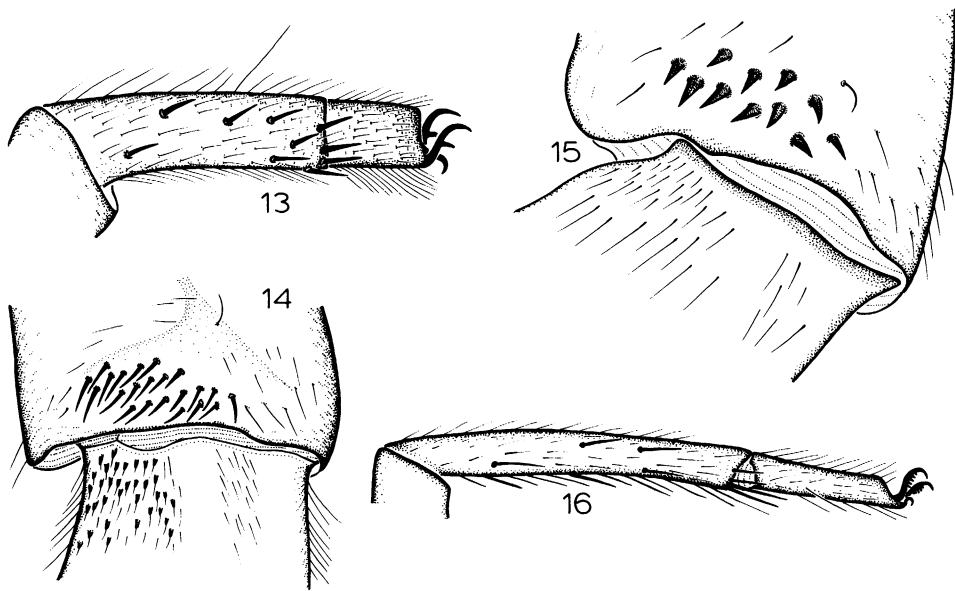
Figures 2, 4, 7, 9, 13, 14, 19, 20, 32

*Type.* Female holotype from Caripito, Monagas, Venezuela (March 15-31, 1942; W. Beebe), deposited in the American Museum of Natural History.

*Etymology.* The specific name is a patronym in honor of R. I. Pocock, in recognition of his pioneering work on *Neocteniza* and other mygalomorphs.



FIGS. 9-12. 9. *Neocteniza pococki*, left leg III, prolateral view. 10-12. *N. fantastica*. 10. Spinnerets, ventral view. 11. Left leg III, prolateral view. 12. Left chelicera, ventral view.



FIGS. 13-16. 13, 14. *Neocteniza pococki*. 15, 16. *N. fantastica*. 13, 16. Left metatarsus and tarsus IV, prolateral view. 14, 15. Left femur and patella IV, prolaterodorsal view.

**Diagnosis.** *Neocteniza pococki* is closest to *N. sclateri* but may be distinguished by the larger epigynal horns (fig. 19) and longer spermathecae (fig. 20).

**Male.** Unknown.

**Female.** Total length, including chelicerae, 23.29 mm. Carapace 8.68 mm. long, 7.56 mm. wide; ocular area with about 10 long, stiff setae behind anterior median eyes, about 28 very long clypeal setae, and transverse row of about 15 shorter subclypeal setae; thoracic groove equaling at greatest width slightly more than one-third of carapace width at that point, situated back about seven-twelfths of carapace length.

Ratio of eyes, anterior lateral:anterior median:posterior lateral:posterior median, 23:12:17:14. Anterior median eyes separated by almost twice their diameter, by almost four times their diameter from anterior laterals. Lateral eyes of each side separated by slightly more than anterior median eye diameter. Posterior median eyes separated by more than five times their diameter, by their diameter from posterior laterals. Median ocular quadrangle wider than long (123/45), narrowed in front (123/50).

Sternum and labium 7.27 mm. long, 4.68 mm. wide. Anterior sternal depression equaling at

branching point one-fourth of sternal width at that point. Cheliceral rastellum consisting of six transverse rows of stiff spines, two strong cusps in longitudinal row along lateral margin, subterminal row of five strong cusps, and terminal row of three long cusps on projecting lobe; two transverse rows of about 13 stiff spines above origin of fang. Cheliceral promargin with six or eight teeth, retromargin with 11 or 12 small teeth; 17 or 20 small denticles scattered between rows.

Leg formula 4312. Femur IV with dorsal series of 21 or 22 cusps arranged in three irregular rows at distal end. Patella III with antero-dorsal series of 15 or 17, apical comb of nine, and three or four retrolateral cusps. Leg cusps: palpal tibia, 18 or 21 prolateral, 10 retrolateral; tibia I, 11 or 12 prolateral, 19 retrolateral, five ventral; tibia II, five or eight prolateral, 11 or 13 retrolateral, two or three ventral; tibia III, 19 or 23 prolateral, six retrolateral, six or seven dorsal; metatarsus I, 23 or 24 prolateral, 29 retrolateral; metatarsus II, 22 or 23 prolateral, 18 or 20 retrolateral; metatarsus III, 12 or 14 prolateral, seven retrolateral; metatarsus IV, three or six prolateral, two or three retrolateral, apical comb of four or seven; palpal tarsus, 19 or 22 prolateral,

16 retrolateral; tarsus I, eight prolateral, nine or 10 retrolateral; tarsus II, nine prolateral, six or eight retrolateral. Tibia I 1.5 times as long as greatest width, tibia III 1.1 times as long as greatest width. Palpal claw with tiny denticle distal to long tooth bearing ventral denticle; paired claws of leg I bearing long tooth between two short denticles; leg II proclaw similarly armed, retroclaw lacking proximal denticle; posterior leg claws as in *N. sclateri*. Measurements in mm.:

	I	II	III	IV	Palp
Femur	4.68	4.54	4.35	5.79	3.74
Patella	3.28	3.10	3.38	3.82	2.23
Tibia	2.88	2.68	2.09	3.60	2.20
Metatarsus	2.45	2.33	3.02	4.18	—
Tarsus	<u>1.01</u>	<u>1.37</u>	<u>1.66</u>	<u>1.44</u>	<u>1.15</u>
Total	14.30	14.02	14.50	18.83	9.32

Abdomen 10.32 mm. long, 6.77 mm. wide.

Spinneret segments bearing patches of around seven, 20, and nine ventral tubercles. Epigynum black, with two elevated parentheses-shaped horns (fig. 19). Bursae copulatrix with raised median and lateral prominences surrounding opening leading to long, basally recurved spermathecae (fig. 20).

*Material Examined.* Only the holotype from Venezuela (fig. 32).

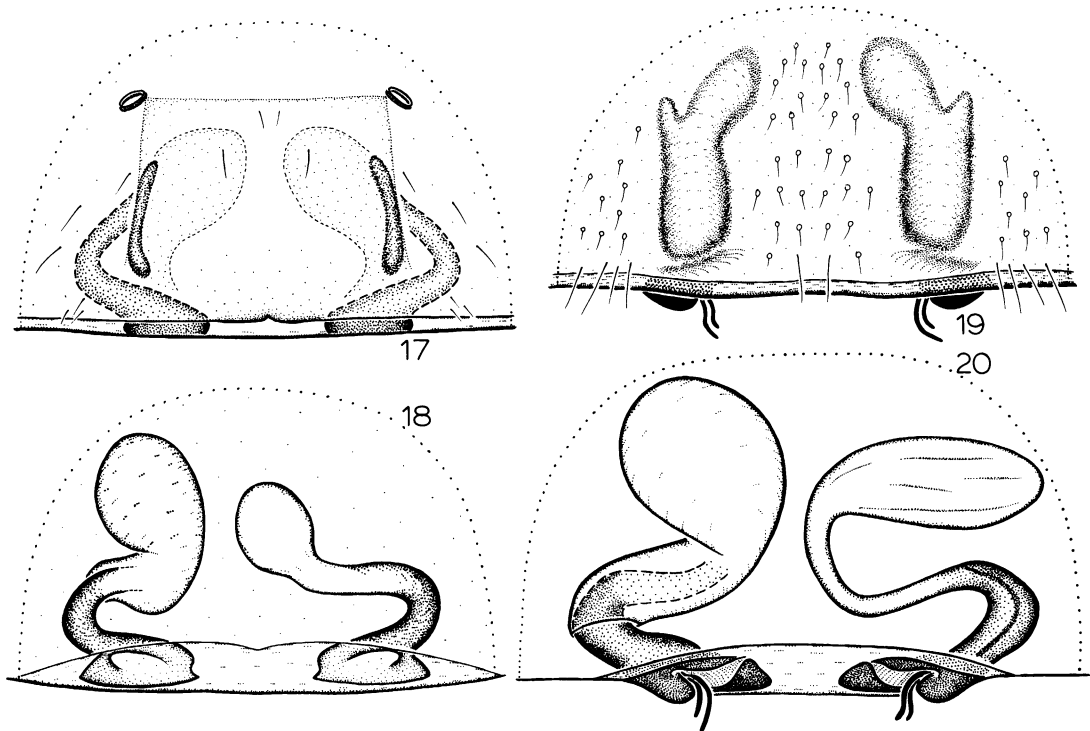
***Neocteniza fantastica*, new species**

Figures 3, 5, 6, 8, 10-12, 15, 16, 21-23, 32

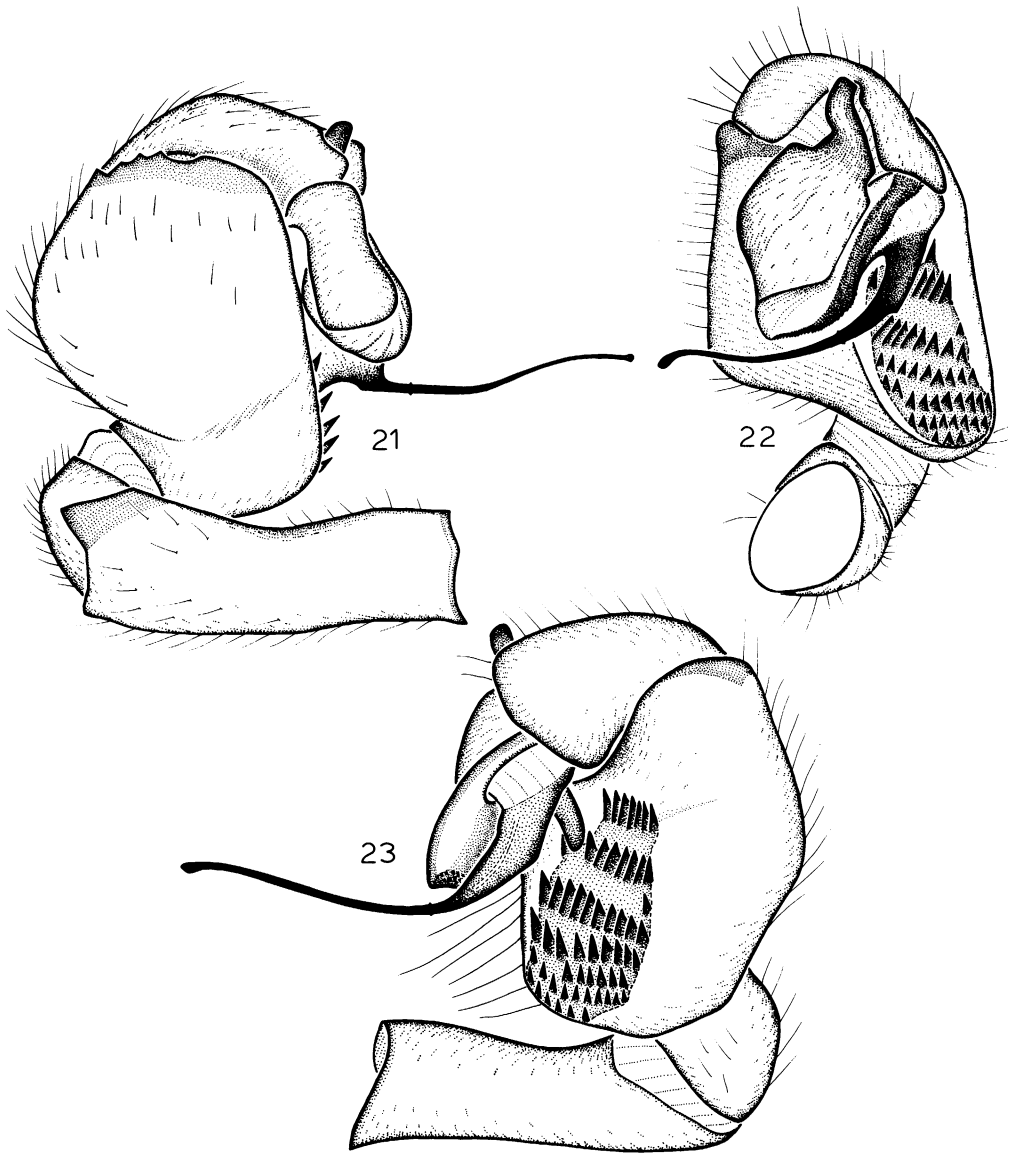
*Type.* Male holotype from pitfall trap in forest 18 km. north of Leticia, Amazonas, Colombia (February 24-28, 1974; S. and J. Peck), deposited in the American Museum of Natural History.

*Etymology.* The specific name is from the Medieval Latin *fantasticus*, referring to the incredible structure of the male palp.

*Diagnosis.* *Neocteniza fantastica* is the only



FIGS. 17-20. 17, 18. *Neocteniza sclateri* Pocock. 19, 20. *N. pococki*. 17, 19. Epigynum, ventral view. 18, 20. Vulva, dorsal view.



FIGS. 21-23. *Neocteniza fantastica*, left palp. 21. Prolateral view. 22. Ventral view. 23. Retrolateral view.

male of the genus known; the features of the palp (figs. 21-23) are presumably distinctive.

*Male*. Total length, including chelicerae, 6.08 mm. Carapace 2.99 mm. long, 2.38 mm. wide; ocular area with two long median setae behind and in front of anterior median eyes and about six fine setae along anterior margin of ocular tubercle; thoracic groove equalling at greatest

width one-third of carapace width at that point, situated back about five-eighths of carapace length.

Ratio of eyes, anterior lateral:anterior median:posterior lateral:posterior median, 21:30:18:17. Anterior median eyes separated by about one-fifth their diameter, by about one-eighth their diameter from anterior laterals.

Lateral eyes of each side separated by about one-third of anterior median eye diameter. Posterior median eyes separated by about two and one-half times their diameter, almost touching posterior laterals. Median ocular quadrangle wider than long (77/43), narrowed in front (77/56).

Sternum and labium 2.03 mm. long, 1.40 mm. wide. Anterior sternal depression equaling at branching point roughly one-fifth of sternal width at that point. Cheliceral rastellum consisting of six or seven spines near inner margin and one lateral subapical and three apical cusps on projecting lobe; transverse row of two long spines above origin of fang. Cheliceral promargin with six or seven teeth, retromargin with eight or 10 small teeth; no denticles scattered between rows.

Leg formula 4123. Femur IV with dorsal series of 11 or 12 cusps arranged in two irregular rows at distal end. Patella III with anterodorsal series of 10 or 11, apical comb of eight, and zero retrolateral cusps. Tibia I with two ventral spines on retrolateral side, one apical, one subapical; tibia II with subapical spine only; tibia III with six prolateral, three dorsal, and two apical retrolateral cusps and pair of apical ventral spines; tibia IV with basal and median ventral spines on prolateral side and pair of apical ventral spines. Metatarsus I with three pairs of ventral spines, apical retrolateral spine extremely elongate, reaching to half the length of tarsus; metatarsus II with spines on retrolateral side of venter only; metatarsus III with seven prolateral and four retrolateral cusps; metatarsus IV with four prolateral and two retrolateral, proximal and median ventral, and anteroventral comb of five spines. Anterior tarsi with three prolateral and two retrolateral spines. Tibia I about four times as long as greatest width, tibia III about twice as long as greatest width. Paired claws with teeth in single series as follows: tarsus I proclaw seven, retroclaw seven or eight; tarsus II proclaw six or seven, retroclaw seven; tarsus III proclaw five, retroclaw five or six; tarsus IV proclaw six, retroclaw five or six. Measurements in mm.:

	I	II	III	IV	Palp
Femur	2.52	2.20	1.73	2.68	1.19
Patella	1.10	1.01	0.95	1.16	0.52
Tibia	1.86	1.47	1.08	2.38	1.12
Metatarsus	1.55	1.51	1.79	2.79	—
Tarsus	<u>0.77</u>	<u>0.83</u>	<u>1.02</u>	<u>1.20</u>	<u>0.79</u>
Total	7.80	7.02	6.57	10.21	3.62

Abdomen 3.33 mm. long, 2.20 mm. wide. Spinneret segments bearing patches of one, two, and one ventral tubercles. Genital region with about 20 epiandrous gland openings.

Palp clothed with short dark hairs. Femur three times as long as apical width, cylindrical, expanded distally. Patella only slightly longer than wide, globose, slightly twisted prolaterally. Tibia enormously incrassate, with protruding ventral and distal lobes, bearing on retrolateral side heavily sclerotized, broadly triangular plate bearing rows of heavy cusps; arrangement of cusps on left palp as in figure 23, on right palp as follows: distal row as in left palp, second row with six rather than seven cusps dorsal to insertion of palpal prong, single cusp of third row lacking, fourth row with 12 rather than 10 cusps, fifth row with 12 rather than nine cusps, sixth row with seven rather than six cusps, seventh (curved) row with nine rather than 10 cusps, and eighth row with five rather than six cusps. Tarsus short, deeply invaginated distally on prolateral side. Palpal bulb bladeliike, tuberculate on under surface distally, bearing lobelike ventral prong locking firmly into cusps of second row; embolus extremely long, narrow, with ventral tubercle at about one-eighth its length, paired dorsal and ventral tubercles at about one-fourth its length, and dilation at tip (figs. 21-23).

*Female.* Unknown.

*Material Examined.* Only the holotype from Colombia (fig. 32).

#### *Neocteniza osa*, new species

Figures 24, 25, 32

*Type.* Female holotype from forest 2.5 miles southwest of Rincón, latitude 8° 42' N, longitude 83° 29' W, Osa Peninsula, Puntarenas, Costa Rica (March 8-12, 1967; C. E. Valerio), deposited in the American Museum of Natural History.

*Etymology.* The specific name is a noun in apposition taken from the type locality.

*Diagnosis.* *Neocteniza osa* is closest to *N. mexicana* but may be distinguished by the medially rather than laterally directed spermathecae (fig. 25).

*Male.* Unknown.

*Female.* Total length, including chelicerae, 16.78 mm. Carapace 6.48 mm. long, 5.11 mm. wide; ocular area with five long, stiff setae

behind anterior median eyes, about 20 very long clypeal setae, and transverse row (interrupted at middle) of about 11 shorter subclypeal setae; thoracic groove equaling at greatest width one-third of carapace width at that point, situated back almost three-fifths of carapace length.

Ratio of eyes, anterior lateral:anterior median:posterior lateral:posterior median, 34:18:29:24. Anterior median eyes separated by slightly more than one and one-half times their diameter, by almost three times their diameter from anterior laterals. Lateral eyes of each side separated by about seven-tenths of anterior median eye diameter. Posterior median eyes separated by almost four and one-half times their diameter, by one-third of their diameter from posterior laterals. Median ocular quadrangle wider than long (160/57), narrowed in front (160/73).

Sternum and labium 4.82 mm. long, 3.35 mm. wide. Anterior sternal depression equaling at branching point one-fifth of sternal width at that point. Cheliceral rastellum consisting of four transverse rows of stiff spines, three strong cusps in longitudinal row along lateral margin, subterminal row of four strong cusps, and terminal row of two long cusps on projecting lobe; transverse row of two median cusps and about 11 stiff lateral spines above origin of fang. Cheliceral promargin with seven or eight teeth, retromargin with nine small teeth; 17 or 23 small denticles scattered between rows.

Leg formula 4132. Femur IV with dorsal series of 21 cusps arranged in three irregular rows at distal end. Patella III with anterodorsal series of 15 or 16, apical comb of seven or eight, and single retrolateral cusp. Leg cusps: palpal tibia, nine or 12 prolateral, two or four retrolateral; tibia I, three or four prolateral, two or four retrolateral, zero ventral; tibia II, zero or one prolateral, five retrolateral, zero ventral; tibia III, seven or nine prolateral, two or three retrolateral, four or five dorsal; metatarsus I, 13 or 17 prolateral, 15 or 18 retrolateral; metatarsus II, 15 or 16 prolateral, eight or nine retrolateral; metatarsus III, seven prolateral, six or seven retrolateral; metatarsus IV, five or six prolateral, two or three retrolateral, apical comb of three; palpal tarsus, 12 or 15 prolateral, 11 or 13 retrolateral; tarsus I, four or five prolateral, six or eight retro-

lateral; tarsus II, five or six prolateral, five retrolateral. Tibia I 2.0 times as long as greatest width, tibia III 1.2 times as long as greatest width. Palpal claw with two tiny denticles distal to large tooth bearing ventral denticle; proclaw of leg I bearing tiny denticle distal to long tooth bearing ventral denticle, retroclaw with two distal denticles; leg II claws as in leg I retroclaw; posterior leg claws as in *N. sclateri*. Measurements in mm.:

	I	II	III	IV	Palp
Femur	3.38	3.22	2.95	4.08	2.50
Patella	2.27	2.05	2.23	2.55	1.48
Tibia	2.02	1.79	1.37	2.52	1.44
Metatarsus	1.68	1.81	2.05	3.02	—
Tarsus	0.82	0.85	1.44	1.04	1.62
Total	10.17	9.72	10.04	13.21	7.04

Abdomen 6.28 mm. long, 4.21 mm. wide. Spinneret segments bearing patches of around three, 10, and five ventral tubercles. Epigynum with two darkened, horny posterior paramedian elevations (fig. 24). Bursae copulatrix with oval anteromedian openings leading to long, angular, medially directed spermathecae (fig. 25).

*Material Examined.* Only the holotype from Costa Rica (fig. 32).

*Neocteniza mexicana* F. O. P.-Cambridge  
Figures 26, 27, 32

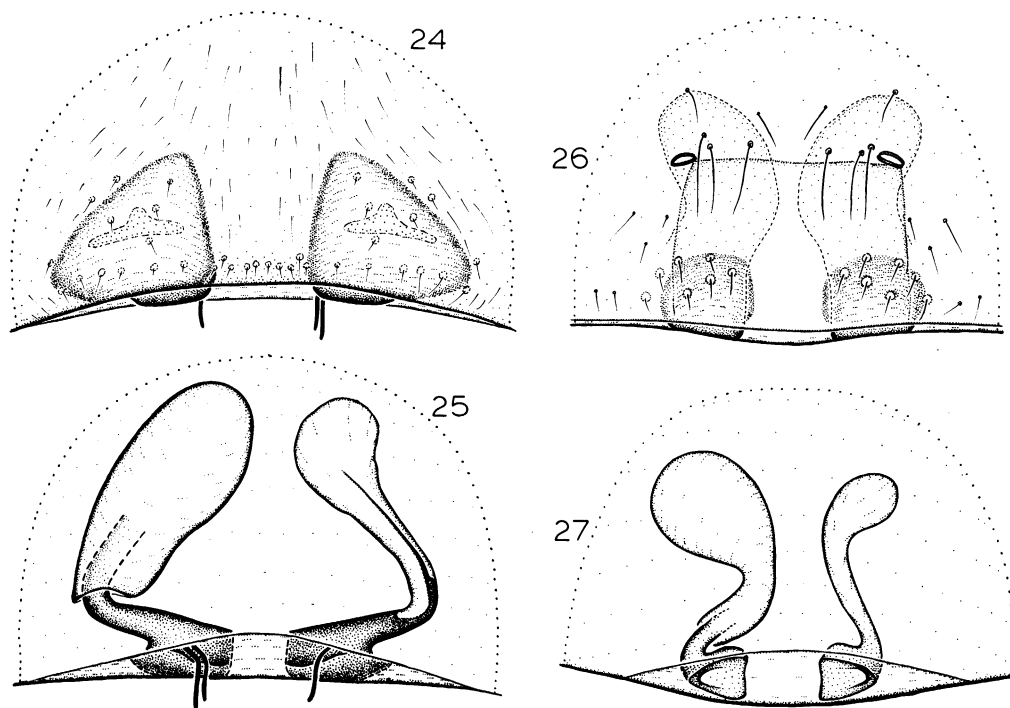
*Neocteniza mexicana* F. O. P.-Cambridge, 1897, p. 7, pl. 1, figs. 6, 6a, 6b (female holotype from Guatemala, no specific locality, in the British Museum [Natural History], examined). Roewer, 1942, p. 189. Bonnet, 1958, p. 3048.

*Diagnosis.* *Neocteniza mexicana* is closest to *N. osa* but may be distinguished by the laterally rather than medially directed spermathecae (fig. 27). The female genitalia are superficially similar to those of *N. paucispina*, but the bursae copulatrix are much narrower and the basal portion of the spermathecae straight rather than recurved.

*Male.* Unknown.

*Female.* Total length, including chelicerae, 13.72 mm. Carapace 4.07 mm. long, 3.71 mm. wide; ocular area with six strong setae behind anterior median eyes, about eight long clypeal





FIGS. 24-27. 24, 25. *Neocteniza osa*, new species. 26, 27. *N. mexicana* F. O. P.-Cambridge. 24, 26. Epigynum, ventral view. 25, 27. Vulva, dorsal view.

setae, and lateral clumps of four shorter sub-clypeal setae on each side; thoracic groove equaling at greatest width one-third of carapace width at that point, situated back about seven-twelfths of carapace length.

Ratio of eyes, anterior lateral:anterior median:posterior lateral:posterior median, 35:16:26:24. Anterior median eyes separated by almost their diameter, by one and one-half times their diameter from anterior laterals. Lateral eyes of each side separated by one-half of anterior median eye diameter. Posterior median eyes separated by two and one-half times their diameter, by less than one-third their diameter from posterior laterals. Median ocular quadrangle wider than long (109/40), narrowed in front (109/50).

Sternum and labium 3.34 mm. long, 2.41 mm. wide. Anterior sternal depression equaling at branching point roughly one-fifth of sternal width at that point. Cheliceral rastellum consisting of three transverse rows of stiff spines and

three or four strong cusps at apex of projecting lobe; transverse row of about eight stiff spines above origin of fang. Cheliceral promargin with six teeth, retromargin with nine or 11 small teeth; 10 or 11 small denticles scattered between rows.

Leg formula 4132. Femur IV with dorsal series of 12 or 14 cusps arranged in two irregular rows at distal end. Patella III with anterodorsal series of nine or 10, apical comb of seven, and zero retrolateral cusps. Leg cusps: palpal tibia (left missing), five prolateral, zero retrolateral; tibia I, zero prolateral, zero or two retrolateral, zero ventral; tibia II (right missing), unarmed; tibia III, seven prolateral, two retrolateral, three or four dorsal; metatarsus I, five or six prolateral, seven retrolateral; metatarsus II (right missing), five prolateral, seven retrolateral; metatarsus III, seven prolateral, four or five retrolateral; metatarsus IV, four or six prolateral, one or two retrolateral, apical comb of four; palpal tarsus (left

missing), six prolateral, five retrolateral; tarsus I, three prolateral, two or three retrolateral; tarsus II (right missing), three prolateral, two retrolateral. Tibia I 1.5 times as long as greatest width, tibia III length and greatest width subequal. Palpal claw as in *N. osa*; paired tarsal claws with dentition as in *N. sclateri*. Measurements in mm.:

	I	II	III	IV	Palp
Femur	2.38	2.27	2.16	2.88	1.78
Patella	1.55	1.51	1.42	1.69	1.08
Tibia	1.33	1.22	0.92	1.83	1.01
Metatarsus	1.11	1.15	1.41	2.16	—
Tarsus	0.65	0.58	0.85	0.72	1.19
Total	7.02	6.73	6.76	9.28	5.06

Abdomen 6.30 mm. long, 4.46 mm. wide. Spinneret segments bearing patches of around four, five, and four ventral tubercles. Epigynum squared, darkened only posteriorly, without elevated horns (fig. 26). Bursae copulatrix extremely narrow, separated by more than twice their width; basal portion of spermathecae straight, distal portion directed laterally (fig. 27).

*Material Examined.* Only the holotype from Guatemala (fig. 32).

#### *Neocteniza subirana*, new species

Figures 28, 29, 32

*Type.* Female holotype from Subirana, Yoro, Honduras (no date; Stadelmann), deposited in the Museum of Comparative Zoology.

*Etymology.* The specific name is a noun in apposition taken from the type locality.

*Diagnosis.* *Neocteniza subirana* is closest to *N. paucispina* but may be distinguished by the spermathecae arising medially to the lateral edge of the bursae copulatrix rather than at the lateral edge itself (fig. 29).

*Male.* Unknown.

*Female.* Total length, including chelicerae, 14.90 mm. Carapace 7.20 mm. long, 5.87 mm. wide; ocular area with seven strong setae behind anterior median eyes, about 16 long clypeal setae, and lateral patches of four or five weak subclypeal setae; thoracic groove equaling at greatest width slightly more than one-third of carapace width at that point, situated

back about three-fifths of carapace length.

Ratio of eyes, anterior lateral:anterior median:posterior lateral:posterior median, 32:22:28:27. Anterior median eyes separated by their diameter, by more than two and one-half times their diameter from anterior laterals. Lateral eyes of each side separated by slightly more than anterior lateral eye diameter. Posterior median eyes separated by slightly more than four times their diameter, by their diameter from posterior laterals. Median ocular quadrangle wider than long (165/66), narrowed in front (165/71).

Sternum and labium 5.35 mm. long, 3.87 mm. wide. Anterior sternal depression equaling at branching point almost one-fourth of sternal width at that point. Cheliceral rastellum consisting of six transverse rows of stiff spines and subterminal and terminal rows each with four strong cusps; transverse row of about 12 long spines above origin of fang. Cheliceral promargin with five distal teeth and two proximal denticles, retromargin with 11 or 12 small teeth decreasing in size proximally; 14 or 15 small denticles scattered between rows.

Leg formula 4132. Femur IV with dorsal series of 29 or 31 cusps arranged in three irregular rows at distal end. Patella III with anterodorsal series of 16 or 20, apical comb of eight or nine, and one retrolateral cusp. Leg cusps: palpal tibia, nine or 10 prolateral, four or five retrolateral; tibia I, seven or eight prolateral, nine retrolateral, zero ventral; tibia II, zero or two prolateral, four retrolateral, two ventral; tibia III, 13 or 16 prolateral, eight retrolateral, four or five dorsal; metatarsus I, 15 or 16 prolateral, 14 or 15 retrolateral; metatarsus II, 13 or 14 prolateral, 12 retrolateral; metatarsus III, 14 prolateral, eight or 11 retrolateral; metatarsus IV, seven or nine prolateral, two or three retrolateral, apical comb of four or five; palpal tarsus, 15 prolateral, eight or nine retrolateral; tarsus I, six or seven prolateral, six retrolateral; tarsus II, five or eight prolateral, four retrolateral. Tibia I 1.7 times as long as greatest width, tibia III length and greatest width subequal. Palpal claw with two tiny denticles distal to long tooth bearing one dorsal and two ventral denticles; paired claws of leg I as in *N. osa*, of leg II as in leg I proclaw of *N. osa*, of leg

III with long tooth bearing two ventral denticles, of leg IV with long tooth bearing one ventral denticle. Measurements in mm.:

	I	II	III	IV	Palp
Femur	3.53	3.29	3.24	4.61	2.56
Patella	2.45	2.21	2.52	2.65	1.55
Tibia	2.12	1.87	1.58	2.74	1.51
Metatarsus	1.81	1.44	2.09	3.17	—
Tarsus	0.95	0.86	1.22	0.94	1.84
Total	10.86	9.67	10.65	14.11	7.46

Abdomen 5.83 mm. long, 4.10 mm. wide. Spinneret segments bearing patches of around four, 10, and five ventral tubercles. Epigynum darkened posterolaterally, furrowed, with two triangular elevated horns (fig. 28). Bursae copulatrix extremely wide, narrowly separated, with long median depressed slit leading to opening; spermathecae originating median of lateral

edge of bursae, basally recurved (fig. 29).

*Material Examined.* Only the holotype from Honduras (fig. 32).

#### *Neocteniza paucispina*, new species

Figures 30-32

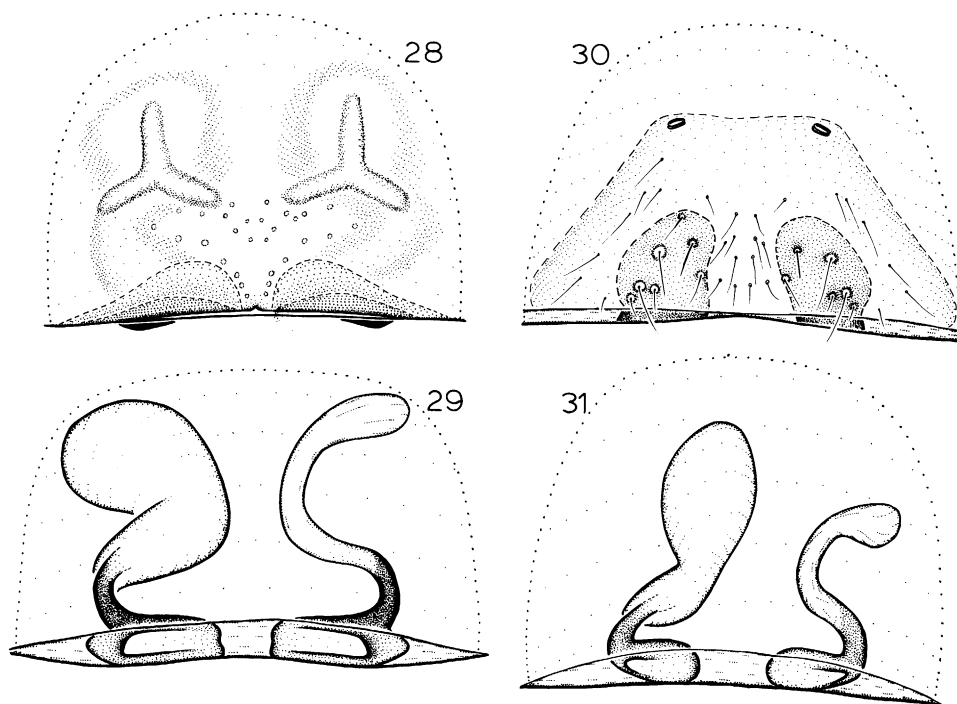
*Type.* Female holotype from Uaxactún, Petén, Guatemala (March-April, 1931; H. H. Bartlett), deposited in the Museum of Comparative Zoology.

*Etymology.* The specific name is derived from the Latin *paucus* (few) and *spina* (spine).

*Diagnosis.* *Neocteniza paucispina* is closest to *N. subirana* but may be distinguished by the spermathecae arising at the lateral edge of the bursae copulatrix (fig. 31); a comparison with *N. mexicana* is provided above.

*Male.* Unknown.

*Female.* Total length, including chelicerae, 14.44 mm. Carapace 5.18 mm. long, 4.36 mm.



FIGS. 28-31. 28, 29. *Neocteniza subirana*, new species. 30, 31. *N. paucispina*, new species. 28, 30. Epigynum, ventral view. 29, 31. Vulva, dorsal view.

wide; ocular area with nine long, stiff setae behind anterior median eyes, about 10 long clypeal setae, and transverse row of about 12 shorter subclypeal setae; thoracic groove equaling at greatest width almost one-third of carapace width at that point, situated back almost two-thirds of carapace length.

Ratio of eyes, anterior lateral:anterior median:posterior lateral:posterior median, 37:18:32:22. Anterior median eyes separated by their diameter, by almost twice their diameter from anterior laterals. Lateral eyes of each side separated by one-half of anterior median eye diameter. Posterior median eyes separated by three and one-half times their diameter, by less than one-fourth their diameter from posterior laterals. Median ocular quadrangle wider than long (128/51), narrowed in front (128/60).

Sternum and labium 3.85 mm. long, 2.88 mm. wide. Anterior sternal depression equaling at branching point more than one-third of sternal width at that point. Cheliceral rastellum consisting of four transverse rows of stiff spines, sub-terminal row of three strong cusps, and terminal

row of four long cusps on projecting lobe; transverse row of about eight stiff spines above origin of fang. Cheliceral promargin with seven teeth, retromargin with 10 or 11 small teeth; eight or 13 small denticles scattered between rows.

Leg formula 4312. Femur IV with dorsal series of 16 or 17 cusps arranged in two irregular rows at distal end. Patella III with anterodorsal series of 11 or 12, apical comb of six or seven, and zero or one retrolateral cusp. Leg cusps: palpal tibia, nine or 10 prolateral, three or four retrolateral; tibia I, zero or one prolateral, four or five retrolateral, zero ventral; tibia II, zero prolateral, zero or one retrolateral, zero ventral; tibia III, six prolateral, two or four retrolateral, four or five dorsal; metatarsus I, nine or 10 prolateral, seven or 11 retrolateral; metatarsus II, two or eight prolateral, five or nine retrolateral; metatarsus III, nine or 10 prolateral, six or seven retrolateral; metatarsus IV, four or six prolateral, two retrolateral, apical comb of three; palpal tarsus, 13 or 14 prolateral, seven or nine retrolateral; tarsus I, five prolateral, four or five retrolateral; tarsus II, four or five prolateral, three or



FIG. 32. Map of northern Neotropical region, showing type localities of *Neocteniza sclateri* (1), *N. pococki* (2), *N. fantastica* (3), *N. osa* (4), *N. subirana* (5), *N. paucispina* (6), and *N. mexicana* (7; parentheses indicate an unknown locality in Guatemala).

four retrolateral. Tibia I 2.0 times as long as greatest width, tibia III 1.3 times as long as greatest width. Palpal claw as in *N. pococki*; paired claws of leg I with two denticles distal to large tooth bearing ventral denticle, of leg II similar but with two ventral denticles, of posterior legs as in *N. sclateri*. Measurements in mm.:

	I	II	III	IV	Palp
Femur	2.63	2.34	2.59	3.51	2.05
Patella	1.82	1.55	1.84	2.12	1.22
Tibia	1.57	1.37	1.16	2.14	1.20
Metatarsus	1.33	1.37	1.91	2.52	—
Tarsus	<u>0.70</u>	<u>0.68</u>	<u>0.94</u>	<u>0.94</u>	<u>1.30</u>
Total	8.05	7.31	8.44	11.23	5.77

Abdomen 6.98 mm. long, 5.29 mm. wide. Spinneret segments bearing patches of around three, six, and four ventral tubercles. Epigynum darkened posteriorly, without elevated horns (fig. 30). Bursae copulatrix relatively narrow, separated by their width; basal portion of spermathecae originating at lateral edge of bursae, curved (fig. 31).

*Material Examined.* One female taken with the holotype in Guatemala (fig. 32), much smaller (carapace length 3.71 mm.) and probably not of reproductive age, but agreeing in all essential details.

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