A REVISION OF THE SPIDER GENUS CESONIA (ARANEAE, GNAPHOSIDAE)

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A REVISION OF THE SPIDER GENUS
CESONIA (ARANEAE, GNAPHOSIDAE)

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ABSTRACT

The 30 known species of Cesonia are diagnosed, described, and assigned to species groups. Eilicina Bryant is newly synonymized with Cesonia. Eilicina elegans Bryant is transferred to Drassyllus; Sergiolus elegans Simon is transferred to Cesonia. Seventeen new species are described: Cesonia bixleri from California; C. rothi from California and western Arizona; C. ubicki and C. gertschi from the southwestern United States and northwestern Mexico; C. ceralvo and C. leeche from Baja California Sur, Mexico; C. iviei, C. cuernavaca, and C. coala from central Mexico; C. boca from Panama; C. chickeringi, C. cana, and C. bryantae from Jamaica; C. nadeli from Hispaniola; C. desecheo from Puerto Rico and the Virgin Islands; C. maculata from St. Kitts and Nevis; and C. ditta from Dominica. The males of C. classica Chamberlin, C. trivittata Banks, C. josephus (Chamberlin and Gertsch), and C. irvingi (Mello-Leitão) are described for the first time.

INTRODUCTION

This paper, the twelfth in a series on the spider family Gnaphosidae, contains a revision of the species previously placed in Cesonia Simon and Eilicina Bryant. These spiders, which occur in North and Central America and the West Indies, are unusual among gnaphosids in having distinct color patterns on the abdomen (and often the cephalothorax as well). In many cases, the color pattern is species-specific; hence we have provided below illustrations of a dorsal view of the body and a lateral view of the abdomen for those species with distinctive patterns.

The species of Cesonia are fast-moving, agile hunters usually found on sandy soils under loose leaf litter; males are frequently collected in pitfall traps. Some species have been kept in captivity by Mr. Vincent D. Roth, who reports that they will feed on dipters and other small flies but seem to prefer other spiders as prey, approaching them from the rear and sinking their fangs dorsally at the base of the abdomen (over the heart) while pinning the prey spider's legs down with their own front two pairs of legs.

As previously indicated (Platnick and Shadab, 1977), Cesonia belongs to a complex of several closely related North American genera which resemble Herpyllus in both somatic and genitalic characters. Because of their similarity, some workers (including ourselves) have considered lumping these species into a single genus. However, there are a number of probably synapomorphic characters which justify retaining the hypothesis that the species of Cesonia considered below form a monophyletic group. The most obvious of these characters is the color pattern, consisting usually of two, three, or four dark longitudinal bands covering the entire length of the body dorsally (and the length of the abdomen laterally) and separated by intervening longitudinal light bands (as in figs. 1, 2). The black bands are marked with both structural pigments and black scales (similar to those described in the Salticidae by Hill, 1979, and in other gnaphosids by Forster and Blest, 1979); the light bands generally bear white scales. In some species, the black bands may be interrupted (fig. 30), whereas in others they may fuse posteriorly (fig. 36). These kinds of modifications occasionally result in patterns reminiscent of other members of the Herpyllus complex. For example, the patterns of Cesonia josephus (Chamberlin and Gertsch) and its close relatives (figs. 68, 74, 78) resemble those of the only two species of Herpyllus, H. ecclesiasticus Hentz and H. propinquus (Keyserling), possessing a distinct color pattern (see Platnick and Shadab, 1977, figs. 1, 2); it is probably for this reason that C. josephus was assigned to Herpyllus by Ubick and Roth (1973). However, C. josephus and its relatives have distinct lateral abdominal light bands not found in the Herpyllus species, as well as the other characters.
of Cesonia noted below. Similar cases of the resemblance of the patterns of some Cesonia with anteriorly broken and posteriorly fused bands (as in figs. 96, 100) to those of species currently placed in Poecilochroa are believed to be nonhomologous for the same reasons.

In addition to their coloration, Cesonia species differ from other members of the Herpyllus complex in the spacing of their posterior eyes, the posterior medians being situated closer to the posterior laterals than to each other (as in fig. 1); in the other genera the posterior eyes are subequally spaced. There are also peculiarities of both the male and female genitalia of Cesonia. The median apophysis of the male palp protrudes beyond the tip of the palpal bulb, in close association with the embolus and, frequently, a membranous conductor (figs. 3–5); in related genera the median apophysis does not extend beyond the palpal bulb. The female genitalia are also unusual in containing thumb-shaped projections that protrude into the storage cavities of the spermathecae (as in fig. 7); these are sometimes conspicuous (particularly in the lugubris group) and sometimes difficult to see (if the spermathecae are heavily sclerotized), but at least traces of the protrusion seem to be found in all the known species.

On the basis of these four characters, then, we prefer to retain the genus Cesonia. Each of the characters, however, is also found in the type species of the genus Elicicina Bryant, E. cincta (Banks). When Bryant (1940) described this genus, she included in it both the type species and a new species, E. elegans. The two species are not closely related to each other; E. elegans has the closely spaced posterior median eyes, metatarsal preening comb, and genitalia characteristic of Drassyllus, and the species is therefore here transferred to that genus. Elicicina cincta, on the other hand, has genital characters (an epigynal hood leading to triangular epigynal margins and circular posterolateral epigynal openings, and a pair of posterolateral spermathecal ducts; figs. 114, 115) unique to a group of species found in southern Florida and the West Indies. Other species belonging to this group have been described as members of Sergiolum (by Simon, 1891), Callilepis (by Banks, 1909), and Herpyllus (by Fox, 1938). This group of species (referred to as the elegans group below) could thus be considered to constitute Elicicina. However, although it can be argued that all the species considered below constitute a monophyletic group, we know of no characters that would support the hypothesis that the elegans group constitutes the sister group of all the remaining species. We therefore prefer to consider Elicicina a synonym of Cesonia until a more fully resolved phylogenetic hypothesis is available for these animals.

Among the other genera of the Herpyllus complex, it is likely that Herpyllus itself is the sister group of Cesonia, for in both genera the male embolus is typically enlarged basally and shifted prolaterally, frequently so much so as to be oriented sideways in ventral view (figs. 3, 5; compare Platnick and Shadab, 1977, figs. 27, 91). If this hypothesis is correct, it confirms the rejection of the synonymy of the predominantly Palearctic genus Scotophaeus with Herpyllus, as the members of Scotophaeus lack these peculiarities of embolar shape and position, and can hence be only more distant relatives of Herpyllus than are the species of Cesonia.

The 30 known species of Cesonia are assigned below to four species groups. Three of these groups have characters unique to themselves and are therefore presumed to be monophyletic (the apomorphies of the elegans group have been cited above; in the bilineata group the abdomen bears four longitudinal black stripes and the spermathecal storage cavity has a lateral lobe; in the lugubris group the female epigynum bears a pair of lateral guides). The monophyly of the fourth group, the josephus group, remains uncertain, primarily because half the species assigned to it are known from only one sex; the known males, however, do seem to have shorter emboli, with less pronounced basal enlargements, than other Cesonia.

We have detected no characters which allow resolution of the interrelationships among the four species groups. The relative-
ly unsatisfactory state of our knowledge of *Cesonia* interrelationships is not unexpected, however, for with the exception of two species, *Cesonia bilineata* (Hentz) of the eastern United States and *Cesonia lugubris* (O. P.-Cambridge) of Mexico, the group has been poorly collected and additional species undoubtedly remain to be discovered, particularly in northern Central America and in the West Indies. In view of the rarity of most species in collections, we have provided below complete locality data for all but the two common species. The format of the descriptions and the standard abbreviations of morphological terms follow those used by Platnick and Shadab (1975). Unless another depository is indicated, all specimens mentioned below are in the American Museum of Natural History. All measurements given are in millimeters.

We are deeply indebted to Vincent D. Roth and Darrell Ubick for making available to us the notes on *Cesonia* they accumulated some years ago in an unfinished study of the group, some of the results of which were presented in Ubick and Roth (1973), and to B. J. Kaston for reviewing a draft of the manuscript. We also thank each of the curators and collectors listed below for their efforts in helping us secure specimens of *Cesonia*.

**COLLECTIONS EXAMINED**

AMNH, American Museum of Natural History  
BJK, Dr. B. J. Kaston  
BMNH, British Museum (Natural History), Mr. F. R. Wanless  
BRV, Dr. B. R. Vogel  
CAS, California Academy of Sciences, Dr. D. H. Kavanaugh  
CNC, Canadian National Collections, Dr. C. D. Dondale  
DEB, Mr. D. E. Bixler  
EPC, Exline-Peck Collection, Dr. W. B. Peck  
FMNH, Field Museum of Natural History, Dr. J. B. Kethley  
FSCA, Florida State Collection of Arthropods, Dr. G. B. Edwards  
HKW, Dr. H. K. Wallace  
JAB, Dr. J. A. Beatty  
JSH, Mr. J. S. Heiss  
MCZ, Museum of Comparative Zoology, Dr. H. W. Levi  
MET, Mr. M. E. Thompson  
MSU, Michigan State University, Dr. R. L. Fischer  
NVH, Dr. N. V. Horner  
OFF, Texas Tech University, Dr. O. F. Francke  
REL, Dr. R. E. Leech  
TDG, Mr. T. D. Gowan  
UCB, University of California at Berkeley, Dr. E. I. Schlinger  
UCR, University of California at Riverside, Mr. S. I. Frommer  
USNM, National Museum of Natural History, Dr. R. E. Crabill, Jr.  
VDR, Mr. V. D. Roth  
WAS, Dr. W. A. Shear  
WRI, Mr. W. R. Icenogle

**CESONIA SIMON**

_Eilicina_ Bryant, 1940, p. 390 (type species by original designation *Eilica cincta* Banks). Roewer, 1954, p. 421. NEW SYNONYM.

**DIAGNOSIS:** Specimens of *Cesonia* may be recognized by their longitudinal dark bands (fig. 1), widely spaced posterior median eyes (fig. 1), elongated median apophysis reaching beyond the palpal bulb (figs. 3–5), and spermathecal protrusion (fig. 7).

**DESCRIPTION:** See descriptions of species groups below.

**SYNONYMY:** Reasons for the synonymy of _Eilicina_ are discussed in the Introduction.  
*MISPLACED SPECIES:* _Eilicina elegans_ Bryant is transferred to _Drassyllus_ in the Introduction. *Cesonia cincta* Banks (1929) and *Cesonia nigra* Chickering (1949), both described from Panama, are probably the female and male, respectively, of a single species which does not meet the diagnosis of _Cesonia_ given above. Epigynal structure indicates that the species is most closely related to the Mexican species _Cesonia cingulata_ Roewer (1933), which was transferred to _Poecilocroa_ by Ubick and Roth (1973). These taxa probably do not belong to _Poe-
cilochroa either, but their proper placement must await further revisionary studies of the Neotropical representatives of the *Herpyllus* complex.

KEY TO SPECIES GROUPS OF CESONIA

1. Abdomen with four longitudinal black stripes (as in figs. 1, 2) ............ bilineata group
   Abdomen with at most three longitudinal black stripes ............. 2

2. Tip of male embolus relatively long, directed distally (as in figs. 118, 136); female spermatheca with posterolateral ducts (as in figs. 133, 139); Florida and West Indies ......... elegans group
   Tip of male embolus relatively short, directed retrolaterally or ventrally; female spermatheca without posterolateral ducts .... 3

3. Abdomen with pair of paramedian longitudinal white stripes reaching beyond middle of abdomen length (as in figs. 14, 20); female epigynum with lateral guides (as in figs. 18, 52) ................. lugubris group
   Abdomen without pair of paramedian longitudinal white stripes (as in fig. 68) or with short stripes only (fig. 100); female epigynum without lateral guides (as in figs. 72, 88) ............ josephus group

THE BILINEATA GROUP

DESCRIPTION: Total length 2.9-7.2. Carapace oval in dorsal view except for greatly narrowed front, widest between coxae II and III, pale orange with thin dark lateral margins and wide paramedian dark bands, with long erect dark setae at clypeus and posterior declivity, short recumbent light scales concentrated at ocular area, and short recumbent dark scales along paramedian bands. Cephalic area not elevated; posterior declivity steep; thoracic groove longitudinal. From above, anterior eye row recurved, posterior row straight; from front, both rows slightly procurred. AME circular, dark, other eyes oval, light. Eyes subequal in size; AME separated by their diameter or more, by less than their radius from ALE; PME separated by one and one-half to two times their diameter, by less than their diameter from PLE; ALE and PLE separated by roughly their diameter. MQW wider in back than in front, as wide in back as (or wider than) long. Clypeal height almost twice the AME diameter. Chelicerae usually with three promarginal teeth, of which most proximal is reduced to denticle, and one retromarginal denticle. Endites rectangular, obliquely depressed; labium expanded posteriorly, rebordered anteriorly; sternum long, narrow, with dark border recessed toward carapace and sclerotized extensions to coxae. Leg formula 4123. Typical leg spinulation pattern (only surfaces bearing spines listed): femora: I, II d1-1-1, p0-0-1; III d1-1-1, p0-1-1, r0-1-1; IV d1-1-1, p0-0-1, r0-0-1; patellae III, IV r0-1-0; tibiae; I, II v0-1p-1p; III d1-0-0, p1-1-1, v1p-1p-2, r0-1-1; IV d1-0-0, p1-1-1, v1p-2-2, r0-1-1; metatarsi: II v1p-0-0; III p0-1-2, v2-0-1p, r0-1-2; IV p1-2-2, v2-2-1p, r0-2-2. Legs pale orange, unmarked. Anterior metatarsi and all tarsi scopulate; tarsi with two dentate claws and thick claw tufts. Trochanters I, II unnotched, III, IV slightly notched. Metatarsal preening comb lacking but weak brush present on metatarsi III, IV. Trichobothria in two dorsal rows on distal leg segments. Abdomen pale yellow with long orange anterior scutum in males, two broad lateral longitudinal dark stripes on dorsum and narrower dark longitudinal stripe ventrolaterally on each side. Six spinnerets, anterior separated at their base by nearly twice their diameter, with up to six spigots. Palp with laterally displaced, basally expanded embolus, long median apophysis protruding beyond palpal bulb, and membranous conductor. Epigynum with or without hood, without lateral guides; spermathecae with internal protrusions and lateral lobes, without postero-lateral ducts.

KEY TO SPECIES OF THE BILINEATA GROUP

1. Males (those of chickeringi unknown) ....... 2
   Females .................................. 3

2. Retrolateral tibial apophysis smoothly tapered toward tip (figs. 3, 4) ............ bilineata
   Retrolateral tibial apophysis greatly narrowed below tip (figs. 8, 9) ............ sincera

3. Epigynum with small anterior hood (fig. 6) ............ bilineata
   Epigynum without hood (figs. 10, 12) ....... 4
MAP 1. North America, showing distributions of *Cesonia bilineata* (circles), *C. chickeringi* (squares), *C. classica* (triangles), *C. cuernavaca* (diamond), and *C. cincta* (inverted triangle).

4. Spermathecae relatively elongate (figs. 10, 11); south central United States and Mexico …

............................  *sincera*
Spermathecae relatively rounded (figs. 12, 13; Jamaica ............................  *chickeringi*

*Cesonia bilineata* (Hentz)
Figures 1-7; Map 1

*Herpyllus bilineatus* Hentz, 1847, p. 456, pl. 24,
fig. 5 (male and female syntypes from North Carolina and Alabama, no specific localities, destroyed).

*Poecilochroa bilineata*: Emerton, 1890, p. 175.

**DIAGNOSIS:** The epigynal hood (fig. 6) and smoothly tapered retrolateral tibial apophysis (fig. 4) are diagnostic.

**MALE:** Total length 3.99 ± 0.42. Carapace 1.82 ± 0.21 long, 1.41 ± 0.14 wide. Femur II 1.35 ± 0.10 long (93 specimens examined). Eye sizes and interdistances: AME 0.06, ALE 0.06, PME 0.07, PLE 0.05; AME–AME 0.09, AME–ALE 0.02, PME–PME 0.13, PME–PLE 0.04, ALE–PLE 0.07. MOQ length 0.24, front width 0.22, back width 0.27. Carapace with two, abdomen with four black stripes (figs. 1, 2). Palp with large median apophysis (figs. 3, 5) and smoothly tapered retrolateral tibial apophysis (fig. 4). Leg spination: femora I, II pO-1-1; patella III p0-1-0; tibiae: I v2-2-2; II p0-0-1, v1r-2-1p; III, IV v2-2-2; metatarsi: I, II v2-0-0; III p0-2-2.

**FEMALE:** Total length 5.67 ± 1.34. Carapace 2.17 ± 0.37 long, 1.66 ± 0.24 wide. Femur II 1.55 ± 0.21 long (118 specimens examined). Eye sizes and interdistances: AME 0.06, ALE 0.06, PME 0.06, PLE 0.05; AME–AME 0.08, AME–ALE 0.02, PME–PME 0.12, PME–PLE 0.05, ALE–PLE 0.08. MOQ length 0.24, front width 0.20, back
width 0.24. Coloration as in male. Epigynum with anterior hood (fig. 6), spermathecae relatively short, rounded (fig. 7). Leg spinulation: femora I, II p0-1-1; patella III p0-1-0; metatarsus III p0-2-2.


Distribution: Eastern North America from Manitoba and Massachusetts south to New Mexico and Florida (map 1).

Variation: Specimens from the southern parts of the range are generally smaller than their northern counterparts, which rarely have the lateral abdominal stripes united by a transverse ventral dark band crossing in front of the spinnerets. The female epigynum are variable in width and spermathecal spacing, and the epigynal hood is close to the spermathecae and inconspicuous in some southern females.

Natural History: Mature males have been collected in every month except February and March, mature females year round. Specimens have been taken in pitcher plants and Bermuda grass, from a silk-lined tube in a clay bank, in upland woods, at forest edges, by sweeping in open mesquite woods, in pitfall traps in hillside woods, dunes, sand pine and pin oak stands, and open and tall grass prairies, on a dead pig, in malaise traps, and in houses and greenhouses.

**Cesonia sincera** Gertsch and Mulaik

Figures 8–11; Map 2


Diagnosis: The distally narrowed retrolateral tibial apophysis (fig. 9) and elongate spermathecae (figs. 10, 11) are diagnostic.

Male: Total length 2.99–3.96. Carapace 1.37–1.87 long, 1.01–1.51 wide. Femur II 0.97–1.22 long. Eye sizes and interdistances: AME 0.05, ALE 0.05, PME 0.05, PLE 0.05; AME–AME 0.05, AME–ALE 0.01, PME–PME 0.07, PME–PLE 0.02, ALE–PLE 0.05. MOQ length 0.16, front width 0.15, back width 0.16. Coloration as in *C. bilineata*. Palp with long median apophysis (fig. 8) and distally narrowed retrolateral tibial apophysis (fig. 9). Leg spinulation: patella IV r0-0-0; tibiae: I, II v1r-1r-1p; III v1p-2-2; IV d0-0-0; metatarsi: I, II v1r-0-0; IV p0-2-2, v2-1r-1p.

Female: Total length 4.91 ± 0.58. Carapace 1.83 ± 0.18 long, 1.41 ± 0.12 wide. Femur II 1.29 ± 0.10 long. Eye sizes and interdistances: AME 0.05, ALE 0.06, PME 0.05, PLE 0.06; AME–AME 0.06, AME–ALE 0.01, PME–PME 0.09, PME–PLE 0.02, ALE–PLE 0.05. MOQ length 0.17, front width 0.16, back width 0.20. Coloration as in *C. bilineata*. Epigynum with basal openings, without hood (fig. 10), spermathecae elongate (fig. 11). Leg spinulation: patella IV r0-0-0; tibiae: I, II v0-0-1p; IV d0-0-0; metatarsi: II v0-0-0; IV v2-1r-1p.
Material Examined: United States:

Distribution: Southwestern United States and northern Mexico (map 2).

Variation: Some males from Texas have a shorter tip of the retrolateral tibial apophysis than figured. The length of the epigynum varies even among specimens collected together.

Cesonia chickeringi, new species

Figures 12, 13; Map 1

Type: Female holotype from Mona Heights, St. Andrew Parish, Jamaica (December 28, 1963; A. M. Chickering), deposited in MCZ.

Etymology: The specific name is a patronym in honor of the collector of the holotype.

Diagnosis: The absence of an epigynal hood together with relatively rounded spermathecae (figs. 12, 13) are diagnostic.

Male: Unknown.

Female: Total length 3.61 ± 0.43. Carapace 1.52 ± 0.11 long, 1.17 ± 0.10 wide. Femur II 1.17 ± 0.09 long. Eye sizes and interdistances: AME 0.05, ALE 0.06, PME 0.05, PLE 0.05; AME—AME 0.06, AME—ALE 0.02, PME—PME 0.12, PME—PLE 0.04, ALE—PLE 0.08. MOQ length 0.20, front width 0.16, back width 0.22. Coloration as in C. bilineata. Epigynum with basal openings, without hood (fig. 12), spermathecae short, rounded (fig. 13). Leg spination: metatarsus IV p0-2-2, v2-1p-1p, r1-2-2.

Other Material Examined: Unless otherwise indicated, the following specimens were collected by A. M. Chickering and are deposited in the MCZ. Jamaica: St. Andrew Par.: Mona Road, Nov. 11, 1963, 1 ♀; Reservoir Aqueduct, Nov. 30, 1963, 1 ♀; Richards Reservoir, Nov. 19, 1963, 2 ♀, Dec. 18, 1963, 2 ♀; Trefalgar Road, Nov. 19, 1963, 1 ♀. St. Ann Par.: Runaway Bay, June 23, 1954, 1 ♀. St. Catherine Par.: Gunboat Beach, Nov. 19, 1963, 1 ♀; Hope Gardens, Kingston, June 26, 1954, 1 ♀; Kingston Park, Palisades Area, Nov. 1, 1957, 2 ♀; Port Henderson, June 20, 1954, 2 ♀; School of Agriculture, Nov. 13, 1957, 1 ♀; Spanish Town, July 10, 1974, wasp (Trypoxylon texense) nest, dry shrubs (D. B. Jayasingh), 1 ♀; near Spanish Town, Oct. 10, 1957, 1 ♀.

Distribution: Known only from Jamaica (map 1).

The Lugubris Group

Description: As in the bilineata group except for the following: Total length 2.8–9.2. Leg spination: femora I, II p0-1-1; pa-
tella III p0-1-0; tibiae: I p1-0-0, v2-2-2 (males), p0-0-0, v1p-1p-1p (females); II p0-0-1, v1r-2-2 (males), p0-0-0, v0-1p-1p (females); III p2-1-1, v1p-2-2; metatarsi: I, II v2-0-0 (males), v1p-0-0 (females); III p1-2-2 (males), p1-2-2, r1-1-2 (females); IV r1-2-2. Abdomen with at most three dark longitudinal stripes, with pair of paramedian longitudinal light stripes reaching beyond middle of abdomen length. Palp with median apophysis fused to conductor. Epigynum with lateral guides; spermathecae without lateral lobes.

KEY TO SPECIES OF THE LUGUBRIS GROUP

1. Males (those of cerralvo, cana, and cuernavaca unknown) ........................................... 2
   Females .................................................. 8
2. Tip of retrolateral tibial apophysis broadly curved dorsally (figs. 27, 33, 39) ........ 3
   Tip of retrolateral tibial apophysis not broadly curved dorsally (figs. 17, 45, 51, 61) .. 5
3. Median dark abdominal stripe broken (fig. 30); southeastern California and southwestern Arizona (map 3) ........ rothi
   Median dark abdominal stripe not broken (figs. 24, 36) ........................................... 4
4. Median dark abdominal stripe reaching anterior edge of abdomen, not fused to lateral dark stripes posteriorly (fig. 24); California and Baja California (map 3) .... trivittata
   Median dark abdominal stripe not reaching anterior edge of abdomen, fused to lateral dark stripes posteriorly (fig. 36); Utah south to Morelos (map 3) ...... gertschi
5. Retrolateral tibial apophysis relatively short, thick (fig. 45); Arizona and Chihuahua (map 4) .................. ubicki
   Retrolateral tibial apophysis relatively long, thin (figs. 17, 51, 61) .......................... 6
6. Lateral dark abdominal stripes relatively narrow (figs. 48, 49); southwestern United States and Gulf of California (map 1) ........................................... 7
   Lateral dark abdominal stripes relatively wide (figs. 14, 58) ....................................... 7
7. Paramedian light abdominal stripes unbroken (figs. 14, 15); Mexico and Guatemala (map 2) .................. lugubris
   Paramedian light abdominal stripes broken (figs. 58, 59); western Mexico (map 6) ........ iviei
8. Lateral epigynal guides connected by anterior epigynal margin (figs. 18, 22, 28, 34, 40, 46) ..................... 9
9. Lateral epigynal guides not connected by anterior epigynal margin (figs. 52, 56, 62, 66) ..................... 14
10. Epigynal midpiece reaching at least half of epigynal length (figs. 28, 34, 40, 46) ... 10
11. Epigynal midpiece restricted to basal one-third of epigynal length (figs. 18, 22) . 13
12. Spermathecae relatively short (figs. 29, 35, 41); paramedian light abdominal stripes straight (figs. 24, 30, 36) .... 11
   Spermathecae relatively long (fig. 47); paramedian light abdominal stripes angled posteriorly (figs. 42, 43); Arizona and Chihuahua (map 4) .................. lugubris
13. Median dark abdominal stripe broken (fig. 30); southeastern California and southwestern Arizona (map 3) ........ rothi
   Median dark abdominal stripe not broken (figs. 24, 36) ........................................... 12
14. Lateral epigynal guides situated posteriorly (figs. 62, 66) ............................................. 15
15. Lateral epigynal guides situated near middle of epigynum (figs. 52, 56) ................. 16
16. Epigynal midpiece long, narrow (fig. 66); Morelos (map 1) ...................................... cuernavaca
   Epigynal midpiece short, wide (fig. 62); western Mexico (map 6) .................. iviei
17. Epigynal midpiece occupying posterior one-third of epigynum (fig. 56); Jamaica (map 2) .................. cana
18. Epigynal midpiece occupying posterior one-fifth of epigynum (fig. 52); southwestern United States and Gulf of Mexico (map 1) .......................... 11

Cesonia lugubris (O. P.-Cambridge)
Figures 14–19; Map 2

Helvidius lugubris O. P.-Cambridge, 1896, p. 221, pl. 27, figs. 1, la–1e (female holotype from Amula, Guerrero, Mexico, in BMNH, examined).


**Diagnosis:** The long, straight, narrow, unbroken paramedian light longitudinal abdominal stripes (fig. 14) are diagnostic.

**Male:** Total length 4.83 ± 0.43. Carapace 2.29 ± 0.19 long, 1.78 ± 0.13 wide. Femur II 1.60 ± 0.15 long (22 specimens examined). Eye sizes and interdistances: AME 0.05, ALE 0.06, PME 0.06, PLE 0.05; AME–AME 0.07, AME–ALE 0.03, PME–PME 0.12, PME–PLE 0.05, ALE–PLE 0.13. MOQ length 0.27, front width 0.18, back width 0.24. Abdomen with pair of narrow longitudinal paramedian white bands (figs. 14, 15). Palpal bulb narrowed distally (fig. 16), retrolateral tibial apophysis sharply pointed, narrowed distally (fig. 17). Leg spine: tibiae: I p0-0-0; II v1r-2-1p.

**Female:** Total length 6.65 ± 0.93. Carapace 2.91 ± 0.25 long, 2.20 ± 0.20 wide. Femur II 1.86 ± 0.13 long (96 specimens examined). Eye sizes and interdistances: AME 0.09, ALE 0.10, PME 0.08, PLE 0.08; AME–AME 0.18, AME–ALE 0.03, PME–PME 0.13, PME–PLE 0.06, ALE–PLE 0.16. MOQ length 0.34, front width 0.36, back width 0.29. Coloration as in male. Epigynum with basal depression (fig. 18), spermathecae relatively elongate (fig. 19). Leg spine: tibia III v1r-1p-2.

**Records:** **Mexico:** Chiapas: 3.1 mi. NE Los Amates; San Cristóbal de las Casas; 16.8 mi. SE Teopisca. Colima: 8 mi. SW Colima; 10 mi. S Colima; 20 mi. N Colima; 12 mi. E Manzanillo; Santiago, NW of Manzanillo; 2 mi. S Tonila. Guerrero: Amula; Ayotzinapa; 11 mi. W Chilpancingo; 5.3 mi. N Iguala; 38 mi. S Iguala; Pie de la Cuesta, 8 mi. W Acapulco; Taxco. Jalisco: 10 mi. N Ciudad Guzmán; 8–12 mi. W Guadalajara; 24.4 mi. E Ixtlán del Río; Lago de Chapala; W side, Laguna de Sayula; 20 mi. N La Quemada; 5–8 mi. E Magdalena; Plan de Barrancas; 12.4 mi. S Técalitlán; nr. Tequila. México:
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DISTRIBUTION: Northern Mexico south to Honduras (map 2).

VARIATION: Occasional females have the spermathecae conspicuously constricted at about half their length and/or convergent anteriorly; these specimens have usually been collected together with normal females.

NATURAL HISTORY: Mature males have been collected from March through September, mature females every month except March and October. Specimens have been taken under rocks and at elevations between 260 and 7500 feet.

Cesonia cerralvo, new species
Figures 20–23; Map 2

TYPE: Female holotype from Isla Cerralvo, Baja California Sur, Mexico (March 22, 1953; J. P. Figg-Hoblyn), deposited in AMNH.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: The doubled anterior epigynal margin (fig. 22) is diagnostic.

MALE: Unknown.

FEMALE: Total length 6.15–9.13. Carapace 2.44–3.30 long, 1.88–2.41 wide. Femur II 1.58–2.09 long. Eye sizes and interdistances: AME 0.08, ALE 0.09, PME 0.06, PLE 0.09; AME–AME 0.08, AME–ALE 0.03, PME–PME 0.15, PME–PLE 0.07, ALE–PLE 0.14. MOQ length 0.34, front
width 0.24, back width 0.27. Abdomen with posteriorly expanded paramedian light stripes (figs. 20, 21). Epigynum with doubled anterior margin (fig. 22), spermathecae narrowed anteriorly (fig. 23). Leg spination: tibiae: II v1p-1p-1p; III p1-1-1.

**OTHER MATERIAL EXAMINED:** Mexico: Baja California Sur: La Paz, Feb. 1–3, 1965 (V. Roth), 1 penultimate ♀ (with fully developed subcuticular epigynum); San José de Comondú Canyon, Feb. 15, 1966 (V. Roth), 2♀; San José del Cabo, 1896 (N. Banks, MCZ), 1♀.

**DISTRIBUTION:** Known only from Baja California Sur and adjacent islands of the Gulf of California (map 2).

*Cesonia trivittata* Banks

Figures 24–29; Map 3

*Cesonia trivittata* Banks, 1898, p. 220, pl. 13, fig. 23 (female syntypes from Sierra de San Lázaro, Baja California Sur, Mexico, in CAS, destroyed, and MCZ, examined). Roewer, 1954, p. 412. Bonnet, 1956, p. 1026.

**DIAGNOSIS:** *Cesonia trivittata* resembles *C. rothi* and *C. gertschi* in having a dorsally curved retrolateral tibial apophysis, but may be distinguished from them by the characters listed in the key (couplets 4 and 5 for males, 11 and 12 for females).

**MALE:** Total length 3.24–4.25. Carapace 1.49–1.84 long, 1.10–1.38 wide. Femur II 1.01–1.30 long. Eye sizes and interdistances: AME 0.05, ALE 0.06, PME 0.06, PLE 0.05; AME–AME 0.06, AME–ALE 0.02, PME–PME 0.09, PME–PLE 0.06, ALE–PLE 0.07. MOQ length 0.23, front width 0.16, back width 0.21. Abdomen with wide stripes, light stripes fused posteriorly (figs. 24, 25). Embolus originating near midventral line (fig. 26), tip of retrolateral tibial apophysis curved dorsally (fig. 27). Leg spination: femur II r0-1-0.

**FEMALE:** Total length 5.19 ± 0.68. Carapace 2.14 ± 0.20 long, 1.61 ± 0.17 wide. Femur II 1.46 ± 0.11 long. Eye sizes and interdistances: AME 0.07, ALE 0.08, PME 0.06, PLE 0.06; AME–AME 0.07, AME–ALE 0.02, PME–PME 0.12, PME–PLE 0.05, ALE–PLE 0.09. MOQ length 0.24, front width 0.20, back width 0.24. Coloration as in male. Epigynum with hood (fig. 28), spermathecae rounded (fig. 29). Leg spination: tibia IV d0-0-0; metatarsi: I v0-0-0; III p0-2-2, r0-1-2.


**DISTRIBUTION:** Southwestern California south to Baja California Sur (map 3).

*Cesonia rothi,* new species

Figures 30–35; Map 3

**TYPES:** Male holotype and female paratype from Gila Valley, Yuma County, Arizona (July 23, 1958; V. Roth), deposited in AMNH.

**ETYMOLOGY:** The specific name is a patronym in honor of the collector of the type specimens.

**DIAGNOSIS:** The broken dark abdominal stripes (fig. 30) are diagnostic.

**MALE:** Total length 3.81 ± 0.46. Carapace 1.81 ± 0.13 long, 1.42 ± 0.11 wide. Femur II 1.33 ± 0.10 long. Eye sizes and interdistances: AME 0.06, ALE 0.07, PME 0.06, PLE 0.07; AME–AME 0.06, AME–ALE 0.01, PME–PME 0.09, PME–PLE 0.05, ALE–PLE 0.07. MOQ length 0.24, front width 0.18, back width 0.22. Abdomen with median and lateral dark stripes inter-
ruptured at about half their length (figs. 30, 31). Embolus obscured by conductor in ventral view (fig. 32); tip of retrolateral tibial apophysis strongly curved dorsally (fig. 33). Leg spination: femur II r0-1-0; metatarsus III r1-1-2.

**FEMALE:** Total length 4.84 ± 0.63. Carapace 2.13 ± 0.22 long, 1.64 ± 0.19 wide. Femur II 1.51 ± 0.15 long. Eye sizes and interdistances: AME 0.07, ALE 0.07, PME 0.07, PLE 0.09; AME-AME 0.07, AME-ALE 0.02, PME-PME 0.13, PME-PLE 0.05, ALE-PLE 0.11. MOQ length 0.30, front width 0.21, back width 0.27. Coloration as in male. Epigynum with circular midpiece (fig. 34), spermathecae widest anteriorly (fig. 35). Leg spination: femur II r0-1-0.


**DISTRIBUTION:** Known only from southeastern California and southwestern Arizona (map 3).

**Cesonia gertschi,** new species
Figures 36-41; Map 3

**TYPES:** Male holotype and female paratype from pitfall trap among oaks at Elgin, Santa Cruz County, Arizona (July 9–14, 1973, F. Enders), deposited in AMNH.

**ETYMOLOGY:** The specific name is a patronym in honor of W. J. Gertsch, who first recognized the species as new.

**DIAGNOSIS:** Cesonia gertschi resembles C. trivittata and C. rothi in having a dorsally curved retrolateral tibial apophysis, but may be distinguished from them by the characters listed in the key (couplets 4 and 5 for males, 11 and 12 for females).

**MALE:** Total length 3.61 ± 0.50. Carapace 1.72 ± 0.21 long, 1.28 ± 0.14 wide. Femur II 1.19 ± 0.09 long. Eye sizes and interdistances: AME 0.05, ALE 0.05, PME...
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0.05, PLE 0.06; AME–AME 0.05, AME–ALE 0.01, PME–PME 0.09, PME–PLE 0.06, ALE–PLE 0.08. MOQ length 0.23, front width 0.15, back width 0.19. Median dark abdominal stripe fused to lateral dark stripes posteriorly (figs. 36, 37). Base of embolus directed prolaterally (fig. 38), tip of retrolateral tibial apophysis curved dorsally (fig. 39). Leg spination: femur II r0-1-0; tibiae: I p0-1-1; III v1p-1p-2.

FEMALE: Total length 5.33 ± 0.85, Carapace 2.21 ± 0.30 long, 1.67 ± 0.23 wide. Femur II 1.49 ± 0.21 long. Eye sizes and interdistances: AME 0.07, ALE 0.06, PME 0.07, PLE 0.07; AME–AME 0.06, AME–ALE 0.02, PME–PME 0.11, PME–PLE 0.07, ALE–PLE 0.09. MOQ length 0.28, front width 0.20, back width 0.25. Coloration as in male. Epigynum with wide midpiece (fig. 40), spermathecae rectangular (fig. 41). Leg spination: metatarsi: II v2-0-0; III r0-1-2.


DISTRIBUTION: Utah south to Morelos (map 3).

Cesonia ubicki, new species
Figures 42–47; Map 4

Types: Male holotype from swimming pool at an elevation of 5400 feet at the Southwestern Research Station, Chiricahua Mountains, Cochise County, Arizona (May 29, 1966; V. Roth), and female paratype from a pitfall trap at the same locality (July 26, 1971; A. Jung), deposited in AMNH.

ETYMOLOGY: The specific name is a patronym in honor of D. Ubick, who first recognized the species as new.

DIAGNOSIS: The short, wide retrolateral tibial apophysis (fig. 45) and extremely wide epigynal midpiece (fig. 46) are diagnostic.

Male: Total length 4.07. Carapace 2.05 long, 1.55 wide. Femur II 1.48 long. Eye sizes and interdistances: AME 0.05, ALE 0.08, PME 0.06, PLE 0.06; AME–AME 0.06, AME–ALE 0.02, PME–PME 0.10, PME–PLE 0.05, ALE–PLE 0.09. MOQ length 0.23, front width 0.16, back width 0.22. Abdomen with paramedian light stripes angled outward posteriorly (figs. 42, 43). Palpal bulb gradually narrowed distally (fig. 44), retrolateral tibial apophysis short, wide (fig. 45). Leg spination: metatarsus III r1-1-2.

Female: Total length 4.92–7.74. Carapace 2.14–2.88 long, 1.66–2.10 wide. Femur II 1.30–1.81 long. Eye sizes and interdistances: AME 0.06, ALE 0.08, PME 0.06, PLE 0.06; AME–AME 0.06, AME–ALE 0.03, PME–PME 0.13, PME–PLE 0.05, ALE–PLE 0.11. MOQ length 0.26, front width 0.18, back width 0.25. Coloration as in male. Epigynum with extremely wide midpiece (fig. 46), spermathecae elongate, sin-
uous (fig. 47). Leg spination: tibiae: III v1p-1p-2; IV v2-2-2; metatarsus III r0-1-2.


Distribution: Known only from southeastern Arizona and northwestern Chihuahua (map 4).

Cesonia classica Chamberlin
Figures 48–53; Map 1


Diagnosis: Cesonia classica resembles C. cana in having small, rounded, anteriorly situated lateral epigynal guides, but may be distinguished by the narrower lateral dark abdominal stripes (figs. 48, 49).

Male: Total length 4.00 ± 0.40. Carapace 1.83 ± 0.16 long, 1.44 ± 0.14 wide. Femur II 1.24 ± 0.12 long. Eye sizes and interdistances: AME 0.05, ALE 0.06, PME 0.05, PLE 0.05; AME–AME 0.08, AME–ALE 0.02, PME–PME 0.11, PME–PLE 0.03, ALE–PLE 0.10. MOQ length 0.22, front width 0.18, back width 0.22. Wide median and narrow lateral abdominal dark stripes fused posteriorly (figs. 48, 49). Median apophysis wide basally (fig. 50), retro-lateral tibial apophysis greatly narrowed at tip (fig. 51). Leg spination: metatarsus: III p0-2-2; IV r0-2-2.

Female: Total length 5.23 ± 0.84. Carapace 2.30 ± 0.17 long, 1.78 ± 0.15 wide. Femur II 1.54 ± 0.14 long. Eye sizes and interdistances: AME 0.06, ALE 0.07, PME 0.07, PLE 0.07; AME–AME 0.11, AME–ALE 0.03, PME–PME 0.16, PME–PLE 0.05, ALE–PLE 0.11. MOQ length 0.26, front width 0.23, back width 0.30. Coloration as in male. Epigynum with basal depression (fig. 52), spermathecae elongate, concave medially (fig. 53). Leg spination typical for the species group.


Van Duzee, MCZ), 1 ♀, May 21, 1942 (F. Bonet), 1 ♀ .

Distribution: Southwestern United States and northwestern Mexico (map 1).

Cesonia cana, new species
Figures 54–57; Map 2

Type: Female holotype from Cane River at Morant Bay Road, St. Andrew Parish, Jamaica (October 4, 1957; A. M. Chickering), deposited in MCZ.

Etymology: The specific name is an arbitrary combination of letters.

Diagnosis: Cesonia cana resembles C. classica in having small, rounded, anteriorly situated lateral epigynal guides, but may be distinguished by the longer epigynal midpiece (fig. 56).

Male: Unknown.

Female: Total length 4.48–5.74. Carapace 1.91–2.47 long, 1.57–1.78 wide. Femur II 1.26–1.60 long. Eye sizes and interdistances: AME 0.07, ALE 0.07, PME 0.07, PLE 0.07; AME–AME 0.08, AME–ALE 0.03, PME–PME 0.14, PME–PLE 0.06, ALE–PLE 0.13. MOQ length 0.31, front width 0.22, back width 0.28. Wide median and lateral abdominal dark stripes fused posteriorly (figs. 54, 55). Epigynal midpiece relatively long (fig. 56), spermathecae twisted posteriorly (fig. 57). Leg spination: tibiae: III v1p-1p-2; IV d0-0-0; metatarsus III p0-2-2.


Distribution: Known only from Jamaica (map 2).

Cesonia iviei, new species
Figures 58–63; Map 6

Types: Male holotype from an elevation of 1200 meters on the east side of Sierra Alamas, Sonora, Mexico (collected November 9–13, 1972, matured February 1, 1973; V. Roth), and female paratype from 5 miles northeast of San Blas, Nayarit, Mexico (May 14, 1963; W. J. Gertsch and W. Ivie), deposited in AMNH.
ETYMOLOGY: The specific name is a patronym in honor of one of the collectors of the paratype.

DIAGNOSIS: Cesonia iviei resembles C. cuernavaca in having small, triangular, posteriorly situated lateral epigynal guides, but may be distinguished by the sinuous retrolateral tibial apophysis (fig. 61) and rounded epigynal midpiece (fig. 62).

MALE: Total length 4.90. Carapace 2.27 long, 1.91 wide. Femur II 1.58 long. Eye sizes and interdistances: AME 0.06, ALE 0.07, PME 0.06, PLE 0.07; AME–AME 0.09, AME–ALE 0.03, PME–PME 0.11, PME–PLE 0.06, ALE–PLE 0.11. MOQ length 0.27, front width 0.21, back width 0.23. Paramedian light abdominal stripes broken (figs. 58, 59). Embolus situated beside and below median apophysis and conductor (fig. 60), retrolateral tibial apophysis sinuous (fig. 61). Leg spination: femur II r0-1-0; tibia III v2-2-2; metatarsus III r1-1-2.

FEMALE: Total length 6.35. Carapace 2.76 long, 2.01 wide. Femur II 1.68 long. Eye sizes and interdistances: AME 0.08, ALE 0.09, PME 0.07, PLE 0.07; AME–AME 0.08, AME–ALE 0.03, PME–PME 0.14, PME–PLE 0.08, ALE–PLE 0.16. MOQ length 0.32, front width 0.24, back width 0.28. Coloration as in male. Epigynum with rounded midpiece (fig. 62), spermathecae concave medially (fig. 63). Leg spination: tibia I v0-1p-1p; metatarsus III p1-1-2, r0-1-2.

MATERIAL EXAMINED: Only the type specimens.

DISTRIBUTION: Northwestern Mexico (map 6).

Cesonia cuernavaca, new species
Figures 64–67; Map 1

TYPE: Female holotype from north of Cuernavaca, Morelos, Mexico (May 6, 1963; W. J. Gertsch and W. Ivie), deposited in AMNH.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: The extremely long and narrow epigynal midpiece (fig. 66) is diagnostic.
MALE: Unknown.

FEMALE: Total length 5.72–7.52. Carapace 2.43–2.91 long, 1.91–2.24 wide. Femur II 1.58–1.89 long. Eye sizes and interdistances: AME 0.08, ALE 0.09, PME 0.08, PLE 0.08; AME–AME 0.11, AME–ALE 0.03, PME–PME 0.14, PME–PLE 0.05, ALE–PLE 0.15. MOQ length 0.33, front width 0.27, back width 0.30. Paramedian light abdominal stripes relatively short (figs. 64, 65). Epigynal midpiece long, narrow (fig. 66), spermathecae with anteromedian lobes (fig. 67). Leg spination typical for the species group.

MATERIAL EXAMINED: Five females taken with the holotype.

DISTRIBUTION: Known only from the type locality in Morelos, Mexico (map 1).

THE JOSEPHUS GROUP

DESCRIPTION: As in the bilineata group except for the following: Total length 2.4–7.5. Carapace usually without distinct paramedian dark bands. Leg spination: femora I, II p0-1-1; tibiae: III p2-1-1; IV d0-0-0; metatarsi: I, II v2-0-0 (males), vlp-0-0 (females); III p0-2-2. Some leg segments often darkened. Abdomen without paramedian longitudinal light stripes or with short ones only. Palp with median apophysis fused to conductor. Spermathecae without lateral lobes.

KEY TO SPECIES OF THE JOSEPHUS GROUP

1. Males (those of bixleri unknown) ........... 2
   Females (those of lacertosa, pudica, and boca unknown) .................. 8
2. Prolateral loop of palpal duct not visible in ventral view (figs. 70, 80) .................. 3
   Prolateral loop of palpal duct visible in ventral view (as in fig. 86) .................. 4
3. Retrolateral tibial apophysis relatively short (fig. 71) .................. josephus
   Retrolateral tibial apophysis relatively long (fig. 81) .................. leechi
4. Retrolateral tibial apophysis relatively short (fig. 99) .................. lacertosa
   Retrolateral tibial apophysis relatively long (figs. 87, 93, 103, 105) .................. 5
5. Membranous conductor relatively short (figs. 86, 92) .................. 6
   Membranous conductor relatively long (figs. 102, 104) .................. 7
6. Embolus basally curved (fig. 86) .......... coala
   Embolus basally straight (fig. 92) .......... notata
7. Retrolateral tibial apophysis straight in ventral view (fig. 102) .......... pudica
   Retrolateral tibial apophysis curved in ventral view (fig. 104) .......... boca
8. Epigynum without hood (figs. 72, 76) ...... 9
   Epigynum with hood (figs. 82, 88, 94) .................. 10
9. Spermathecae round (fig. 73) .......... bixleri
   Spermathecae elongate (fig. 77) ............ notata
10. Epigynal hood relatively narrow (fig. 82) ........ notata
11. Spermathecae with median projections (fig. 89) .......... bixleri

Cesonia josephus
(Chamberlin and Gertsch)
Figures 68–73; Map 2

Poecilochroa josephus Chamberlin and Gertsch, 1940, p. 4, fig. 32 (female holotype from Atherton, San Mateo County, California, in AMNH, examined). Roewer, 1954, p. 432.


DIAGNOSIS: The short, sinuous retrolateral tibial apophysis (fig. 71) and anterior spermathecal lobes (fig. 73) are diagnostic.

MALE: Total length 3.96–4.75. Carapace 1.78–2.05 long, 1.31–1.55 wide. Femur II 1.19–1.33 long. Eye sizes and interdistances: AME 0.05, ALE 0.07, PME 0.07, PLE 0.07; AME–AME 0.06, AME–ALE 0.02, PME–PME 0.06, PME–PLE 0.05, ALE–PLE 0.08. MOQ length 0.20, front width 0.16, back width 0.20. Abdomen with short median and long paired lateral light stripes (figs. 68, 69). Palp with recessed embolus (fig. 70), retrolateral tibial apophysis short, sinuous (fig. 71). Leg spination: femur II r0-1-0; patella III p0-1-0; tibiae: I v2-2-2; II v1r-2-1p; III vlp-2-2; IV d1-0-0; metatarsi: III p1-2-2, r1-1-2; IV r1-2-2.
FEMALE: Total length 5.18–7.45. Carapace 2.19–2.52 long, 1.59–1.85 wide. Femur II 1.42–1.55 long. Eye sizes and interdistances: AME 0.07, ALE 0.08, PME 0.08, PLE 0.08; AME–AME 0.06, AME–ALE 0.02, PME–PME 0.09, PME–PLE 0.08, ALE–PLE 0.12. MOQ length 0.26, front width 0.20, back width 0.24. Coloration as in male. Epigynal midpiece extending length of spermathecae (fig. 72), spermathecae with anterior lobes (fig. 73). Leg spination: patella III p0-1-0; tibiae: III v1p-2-2; IV d1-0-0, p2-1-1; metatarsi: III p1-2-2, r1-1-2; IV r1-2-2.

MATERIAL EXAMINED: United States:

DISTRIBUTION: Known only from California (map 2).

Cesonia bixleri, new species
Figure 74–77; Map 4

TYPE: Female holotype taken by sweeping a boggy and wet meadow at an elevation of 3900 feet in Yosemite Valley, Mariposa County, California (May 10, 1968; D. E. Bixler), deposited in AMNH courtesy of Mr. Bixler.

ETYMOLOGY: The specific name is a patronym in honor of the collector of the holotype.

DIAGNOSIS: Cesonia bixleri resembles C. josephus and C. leechi but may be distinguished from the former by the shorter lateral white abdominal stripes (figs. 74, 75) and from the latter by lacking an epigynal hood (fig. 76).

MALE: Unknown.

FEMALE: Total length 5.72. Carapace 2.59 long, 1.81 wide. Femur II 1.52 long. Eye sizes and interdistances: AME 0.07, ALE 0.09, PME 0.07, PLE 0.09; AME–AME 0.09, AME–ALE 0.03, PME–PME 0.11, PME–PLE 0.09, ALE–PLE 0.10. MOQ length 0.31, front width 0.22, back width 0.24. Abdomen with median and paired lateral light stripes all short (figs. 74, 75). Epigynal midpiece extending length of spermathecae (fig. 76), spermathecae narrowed anteriorly (fig. 77). Leg spination: tibiae: III v1p-2-2; IV d1-0-0; metatarsus IV r1-2-2.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from the type locality in California (map 4).

Cesonia leechi, new species
Figures 78–83; Map 5

TYPES: Male holotype and female para-type taken by beating leaves of living Yucca valida 2.8 miles south-southeast of Todos Santos, Baja California Sur, Mexico (December 25, 1958; H. B. Leech), deposited in CAS.

ETYMOLOGY: The specific name is a patronym in honor of the collector of the type specimens.

DIAGNOSIS: Cesonia leechi resembles C. josephus and C. bixleri but may be distinguished by the longer retralateral tibial apophysis (fig. 81) and the presence of an epigynal hood (fig. 82).

MALE: Total length 3.46. Carapace 1.75 long, 1.30 wide. Femur II 1.08 long. Eye sizes and interdistances: AME 0.05, ALE 0.07, PME 0.05, PLE 0.05; AME–AME 0.05, AME–ALE 0.02, PME–PME 0.11, PME–PLE 0.06, ALE–PLE 0.08. MOQ length 0.22, front width 0.15, back width 0.21. Abdomen with lateral light stripes broken (figs. 78, 79). Palp with recessed embolus (fig. 80), retralateral tibial apophysis relatively long (fig. 81). Leg spination: patella III p0-1-0; tibiae: I v0-0-0; III p1-1-1, v2-2-2; IV p1-0-1,
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v2-2-2; metatarsi: I v0-0-0; II v1p-0-0; III p0-1-2; IV p1-1-2.

**Female:** Total length 5.15. Carapace 2.29 long, 1.73 wide. Femur II 1.45 long. Eye sizes and interdistances: AME 0.06, ALE 0.08, PME 0.07, PLE 0.06; AME–AME 0.08, AME–ALE 0.02, PME–PME 0.11, PME–PLE 0.06, ALE–PLE 0.11. MOQ length 0.29, front width 0.20, back width 0.25. Coloration as in male. Epigynum with curved hood (fig. 82), spermathecae narrowed anteriorly (fig. 83). Leg spine: tibiae: I v0-0-0; III d0-0-0, p2-1-0, v2-2-2; IV p1-0-1, v2-2-2; metatarsi: I v0-0-0; III p0-1-2; IV p1-1-2.

**Material Examined:** Only the type specimens.

**Distribution:** Known only from the type locality in Baja California Sur (map 5).

*Cesonia coala*, new species

Figures 84–89; Map 3

**Types:** Male holotype from Ruinas de Palenque, Chiapas, Mexico (June 26–30, 1959; C. and P. Vaurie), and female paratype from the west side of Coatzacoalcos, Veracruz, Mexico (August 11, 1966; J. and W. Ivie), deposited in AMNH.

**Etymology:** The specific name is an arbitrary combination of letters.

**Diagnosis:** Cesonia coala resembles *C. notata* but may be distinguished by the continuous lateral dark abdominal stripes (figs. 84, 85).

**Male:** Total length 2.92. Carapace 1.36 long, 0.99 wide. Femur II 0.94 long. Eye sizes and interdistances: AME 0.04, ALE 0.05, PME 0.06, PLE 0.05; AME–AME 0.06, AME–ALE 0.01, PME–PME 0.07, PME–PLE 0.04, ALE–PLE 0.05. MOQ length 0.16, front width 0.14, back width 0.19. Abdomen with irregularly shaped median light stripe (figs. 84, 85). Palp with curved embolus (fig. 86), retrolateral tibial apophysis long, sinuous (fig. 87). Leg spine (leg IV absent): tibiae: I p1-0-0, v2-2-2; II p0-0-1, v1r-2-2.

**Female:** Total length 4.05. Carapace 1.58 long, 1.17 wide. Femur II 1.04 long. Eye sizes and interdistances: AME 0.05, ALE
MAP 4. North America, showing distributions of Cesonia ubicki (diamonds), C. bixleri (triangle), C. lacertosa (square), C. elegans (circles), and C. bryantae (inverted triangles).

0.05, PME 0.07, PLE 0.05; AME–AME 0.05, AME–ALE 0.01, PME–PME 0.07, PME–PLE 0.05, ALE–PLE 0.06. MOQ length 0.20, front width 0.15, back width 0.21. Coloration as in male. Epigynum with straight anterior hood (fig. 88), spermathecae with median lobes (fig. 89). Leg spination: femur IV p0-0-1; patella IV r0-0-0; tibiae: III p1-1-1; IV p1-0-1; metatarsi: III p0-1-2; IV p0-2-2, v2-1p-1p.

Material Examined: Only the type specimens.

Distribution: Southern Mexico (map 3).

Cesonia notata Chickering
Figures 90–95; Map 3


Diagnosis: Cesonia notata resembles C. coala in having a straight anterior epigynal hood, but may be distinguished by the inclusion of dark markings within the light median abdominal stripe (figs. 90, 91).

Male: Total length 2.40–3.01. Carapace 1.18–1.33 long, 0.84–0.95 wide. Femur II 0.83–0.90 long. Eye sizes and interdistances: AME 0.05, ALE 0.05, PME 0.05, PLE 0.05; AME–AME 0.03, AME–ALE 0.01, PME–PME 0.06, PME–PLE 0.04, ALE–PLE 0.05. MOQ length 0.16, front width 0.13, back width 0.16. Median light abdominal stripe containing dark markings (figs. 90, 91). Embolus almost straight (fig. 92), retralateral tibial apophysis long, gradually tapered toward tip (fig. 93). Leg spination: femur IV p0-0-1; tibiae: I p1-0-0, v2-2-2; II p0-0-1, v1r-2-1p; metatarsus IV p0-2-2, v2-1p-1p.

Female: Total length 3.61 ± 0.35. Carapace 1.55 ± 0.12 long, 1.09 ± 0.09 wide. Femur II 1.00 ± 0.07 long. Eye sizes and interdistances: AME 0.06, ALE 0.06, PME 0.06, PLE 0.06; AME–AME 0.04, AME–ALE 0.01, PME–PME 0.09, PME–PLE 0.05, ALE–PLE 0.06. MOQ length 0.20, front width 0.16, back width 0.21. Coloration as in male. Epigynum with straight anterior hood (fig. 94), spermathecae without median lobes (fig. 95). Leg spination: femur IV p0-0-1; tibiae: I v1p-1p-1p; IV p1-0-1; metatarsus IV p0-2-2, v2-1p-1p.
Cesonia pudica Chickering


Distribution: Oaxaca south to Panama (map 3).

Cesonia lacertosa Chickering

Figures 96-99; Map 4


Diagnosis: The wide embolus (fig. 98) and short, stubby retrolateral tibial apophysis (fig. 99) are diagnostic.

Male: Total length 4.93, 4.95. Carapace 2.24, 2.27 long, 1.61, 1.62 wide. Femur II 1.55, 1.57 long. Eye sizes and interdistances: AME 0.06, ALE 0.07, PME 0.07, PLE 0.08; AME-AME 0.07, AME-ALE 0.02, PME-PME 0.11, PME-PLE 0.07, ALE-PLE 0.09. MOQ length 0.24, front width 0.19, back width 0.24. Lateral dark abdominal stripes broken anteriorly, fused posteriorly (figs. 96, 97). Embolar base wide, situated below conductor (fig. 98), retrolateral tibial apophysis short (fig. 99). Leg spination: tibiae: I vlp-2-2; II p0-0-1, v0-2-2; III vlp-2-2; metatarsus IV v2-lp-1p, rl-2-2.

Female: Unknown.

Material Examined: One male taken with the holotype in August 1939 (A. M. Chickering, MCZ).

Distribution: Known only from the Panama Canal Zone (map 4).
Cesonia pudica Chickering
Figures 100–103; Map 5

Cesonia pudica Chickering, 1949, p. 323, figs. 9, 10 (male holotype from El Valle, Coclé, Panama, in MCZ, examined). Roewer, 1954, p. 412.

DIAGNOSIS: The extremely long, narrow retrolateral tibial apophysis (fig. 102) is diagnostic.

MALE: Total length 2.99, 3.30. Carapace 1.37, 1.55 long, 0.94, 1.02 wide. Femur II 0.85, 0.94 long. Eye sizes and interdistances: AME 0.04, ALE 0.05, PME 0.04, PLE 0.05; AME–AME 0.04, AME–ALE 0.01, PME–PME 0.06, PME–PLE 0.03, ALE–PLE 0.06. MOQ length 0.19, front width 0.12, back width 0.14. Abdomen with transverse lateral white bands connected to vaguely discernable paramedian longitudinal light stripes under scutum (figs. 100, 101). Palpal bulb with parallel edges (fig. 102) closely paralleled by narrow retrolateral tibial apophysis extending almost to tip of bulb (fig. 103). Leg spination: femur IV p0-0-1; tibiae: I v1p-1p-1p; IV p1-0-1; metatarsus IV p0-2-2.

FEMALE: Unknown.

MATERIAL EXAMINED: One male taken with the holotype in July 1936 (A. M. Chickering, MCZ).

DISTRIBUTION: Known only from the type locality in Panama (map 5).

Cesonia boca, new species
Figures 104, 105; Map 6

Cesonia pudica (misidentification): Chickering, 1949, p. 325 (male from Boquete only).

TYPE: Male holotype from Boquete, Chiriquí, Panama (July, 1939; A. M. Chickering), deposited in MCZ.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: Cesonia boca may be distinguished from C. pudica by the wider embolar base (fig. 104) and shorter, more sinuous retrolateral tibial apophysis (fig. 105); Chickering (1949) only "doubtfully assigned" the holotype of C. boca to C. pudica.

MALE: Total length 2.95. Carapace 1.46 long, 1.06 wide. Femur II 0.95 long. Eye sizes and interdistances: AME 0.05, ALE 0.06, PME 0.06, PLE 0.06; AME–AME 0.05, AME–ALE 0.01, PME–PME 0.07, PME–PLE 0.04, ALE–PLE 0.04. MOQ length 0.20, front width 0.14, back width 0.19. Abdomen with pattern indistinct but probably similar to that of C. pudica. Embolus situated beside conductor, with wide base (fig. 105).
104), retrolateral tibial apophysis relatively wide, curved in ventral view (figs. 104, 105). Leg spination: femora: I, II p0-0-1; III r0-0-1; patella III p0-1-0; tibia IV d1-0-0; metatarsus IV r1-2-2.

**FEMALE:** Unknown.

**MATERIAL EXAMINED:** Only the holotype.

**DISTRIBUTION:** Known only from the type locality in Panama (map 6).

### The Elegans Group

**DESCRIPTION:** As in the bilineata group except for the following: Total length 2.5–6.3. Carapace with paramedian light or dark stripes. Leg spination: femora: I p0-1-1, r0-0-1; II p0-1-1, r0-1-0; tibiae: II p0-0-1, v1r-2-2 (males), p0-0-1, v0-1-1p-1p (females); III p2-1-1, v1p-2-2; IV d0-0-0, p1-0-1; metatarsi: I, II v2-0-0; III p1-2-2, r1-1-2; IV v2-1p-1p, r1-2-2. Legs sometimes with dark rings. Abdomen with median light or dark stripe. Palp with folded embolar tip, often with twisted embolar tip. Epigynum with hood connected to anterior margins; spermathecae without lateral lobes, with posterolateral ducts.

### KEY TO SPECIES OF THE ELEGANS GROUP

1. Males (those of elegans, ditta, cincta, nadleri, and grisea unknown) .................. 2
2. Females ............................................. 5
3. Abdomen with median dark stripe (fig. 134); Florida and Bahama Islands ....... irvingi
   Retrolateral tibial apophysis not reaching almost to tip of palpal bulb (figs. 125, 131) . .................. 4
4. Embolus with a single twist (fig. 130); Jamaica ........................................... bryantae
   Embolus with multiple twists (fig. 124); Puerto Rico and Virgin Islands .... desecheo
5. Abdomen with median dark stripe (figs. 134, 140) .................................. 6
   Abdomen without median dark stripe (figs. 106, 110, 116, 122, 128) .................. 8
6. Spermathecae not extending far beyond epigynal hood (figs. 142, 144) .................. 7
7. Spermathecae rounded anteriorly (fig. 145); Cuba .................................. grisea
   Spermathecae angular anteriorly (fig. 143); Hispaniola ............ nadleri
8. Spermathecae with angular posteriorly (figs. 109, 113, 121) .................. 9
   Spermathecae with rounded posteriorly (figs. 115, 127, 133) .................. 11
9. Spermathecae extending nearly to epigynal hood (fig. 108); Dominica and St. Vincent ............ elegans
   Spermathecae extending only halfway to epigynal hood (figs. 112, 120) .... 10
10. Epigynal midpiece relatively narrow posteriorly (fig. 112); Dominica ............ ditta
   Epigynal midpiece relatively wide posteriorly (fig. 120); St. Kitts and Nevis . maculata
11. Spermathecae extending nearly to epigynal hood (figs. 114, 133) .................. 12
   Spermathecae extending only halfway to epigynal hood (fig. 126); Puerto Rico and Virgin Islands .......... desecheo
12. Spermathecae widely separated posteriorly (fig. 114); Cuba ............ cincta
   Spermathecae approximate posteriorly (fig. 132); Jamaica .......... bryantae

*Cesonia elegans* (Simon),

new combination

Figures 106–109; Map 4


**DIAGNOSIS:** The angular and posteriorly broadened posterolateral spermathecal ducts (fig. 109) are diagnostic.

**MALE:** Unknown.

**FEMALE:** Total length 4.07, 5.69. Carapace 1.55, 2.39 long, 1.12, 1.65 wide. Femur II 0.92, 1.48 long. Eye sizes and interdistances: AME 0.09, ALE 0.10, PME 0.09, PLE 0.11; AME–AME 0.08, AME–ALE 0.02, PME–PME 0.12, PME–PLE 0.07, ALE–PLE 0.10. MOQ length 0.37, front width 0.26, back width 0.30. Abdomen with sinuous paramedian dark stripes (figs. 106, 107). Spermathecae reaching to near epigynal hood (fig. 108), with large, angular posterolateral ducts (fig. 109). Leg spination: fe-

**Cesonia ditta**, new species

Figures 110–113; Map 6

**Type:** Female holotype from Long Ditton, Dominica (June 1911).

**Material Examined:** The holotype and one female from Long Ditton, Dominica (June 1911).

**Distribution:** Known only from St. Vincent and Dominica (map 4).

**Diagnosis:** Cesonia ditta resembles C. maculata in having an elongate epigynal hood and angular posterolateral spermathecal ducts, but differs in having a narrower epigynal midpiece (fig. 112).

**Male:** Unknown.

**Female:** Total length 4.54. Carapace 2.27 long, 1.69 wide. Femur II 1.48 long. Eye sizes and interdistances: AME 0.09, ALE 0.10, PME 0.09, PLE 0.11; AME–AME 0.08, AME–ALE 0.03, PME–PME 0.10, PME–PLE 0.09, ALE–PLE 0.09. MOQ length 0.33, front width 0.26, back width 0.30. Abdomen with broken paramedian dark stripes (figs. 110, 111). Spermathecae reaching only halfway to epigynal hood (fig. 112), with angular posterolateral ducts widest near middle (fig. 113). Leg spination: tibiae: I v0-2-1p; II v1r-2-1p; III v1p-1p-2.

**Material Examined:** Only the holotype.

**Distribution:** Known only from Dominica (map 6).

**Cesonia maculata**, new species

Figures 116–121; Map 6

**Types:** Male holotype and female para-type from St. Kitts, British West Indies (September 14–22, 1966; A. M. Chickering), deposited in MCZ.

**Etymology:** The specific name is from the Latin *macula* (spot), referring to the spotted abdominal color pattern.
**MAP 6.** North America, showing distributions of *Cesonia iviei* (inverted triangles), *C. boca* (circle), *C. ditta* (diamond), *C. maculata* (squares), and *C. desecheo* (triangles).

**DIAGNOSIS:** The embolus with a single twist (fig. 118) and posterolateral spermathecal ducts with a bifid tip (fig. 121) are diagnostic.

**MALE:** Total length 3.98, 4.00. Carapace 1.80, 1.87 long, 1.33, 1.37 wide. Femur II 1.26, 1.30 long. Eye sizes and interdistances: AME 0.08, ALE 0.08, PME 0.08, PLE 0.09; AME–AME 0.05, AME–ALE 0.01, PME–PME 0.07, PME–PLE 0.06, ALE–PLE 0.06, MOQ length 0.24, front width 0.21, back width 0.23. Abdomen with broken paramedian dark stripes (figs. 116, 117). Embolus with a single twist (fig. 118), retrolateral tibial apophysis long, narrow (fig. 119). Leg spination: tibiae: I p1-0-0, v2-2-2; IV p1-1-1.

**FEMALE:** Total length 4.09–4.36. Carapace 1.84–2.05 long, 1.34–1.48 wide. Femur II 1.22–1.33 long. Eye sizes and interdistances: AME 0.07, ALE 0.09, PME 0.08, PLE 0.09; AME–AME 0.07, AME–ALE 0.02, PME–PME 0.09, PME–PLE 0.06, ALE–PLE 0.06. MOQ length 0.26, front width 0.22, back width 0.25. Coloration as in male. Spermathecae reaching only halfway to epigynal hood (figs. 126, 127), with bifid tips on posterolateral ducts (fig. 121). Leg spination typical for the species group.

**MATERIAL EXAMINED:** One female taken with the types (MCZ) and a pair taken on Nevis, British West Indies, September 24–29, 1966, by A. M. Chickering (MCZ).

**DISTRIBUTION:** Known only from St. Kitts and Nevis (map 6).

**Cesonia desecheo,** new species

Figures 122–127; Map 6

**TYPES:** Male holotype from Desecheo Island, Puerto Rico (May 27–29, 1965; H. Heatwole, R. Levens, F. McKenzie), and female paratype from Port Grilo, San Germán, Puerto Rico (February 23–April 4, 1955; A. M. Nadler), deposited in AMNH.

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

**DIAGNOSIS:** The multiply twisted embolus (fig. 124) and the combined presence of rounded posterolateral spermathecal ducts and spermathecae extending only halfway to the epigynal hood (figs. 126, 127) are diagnostic.

**MALE:** Total length 3.48–4.75. Carapace 1.57–2.21 long, 1.22–1.55 wide. Femur II 1.12–1.51 long. Eye sizes and interdistances: AME 0.08, ALE 0.09, PME 0.09, PLE 0.09; AME–AME 0.05, AME–ALE 0.02, PME–PME 0.06, PME–PLE 0.05, ALE–PLE 0.06. MOQ length 0.28, front width 0.21, back...
width 0.23. Abdomen with broken paramedian dark stripes (figs. 122, 123). Embolus with several twists (fig. 124), retrolateral tibial apophysis long, relatively wide at base (fig. 125). Leg spination: tibia I p1-0-0, v2-2-2; metatarsus IV p0-2-2.

**FEMALE:** Total length 4.18. Carapace 1.91 long, 1.37 wide. Femur II 1.17 long. Eye sizes and interdistances: AME 0.09, ALE 0.09, PME 0.09, PLE 0.09; AME–AME 0.07, AME–ALE 0.02, PME–PME 0.08, PME–PLE 0.06, ALE–PLE 0.09. MOQ length 0.30, front width 0.25, back width 0.26. Coloration as in male. Spermathecae reaching only halfway to epigynal hood (fig. 126), with rounded posterolateral ducts (fig. 127). Leg spination: tibia II v0-2-1p.

**OTHER MATERIAL EXAMINED:** Puerto Rico: Cayo Gusano, off Culebrita, Apr. 15, 1965 (H. Heatwole, F. McKenzie), 1♀; Río Piedras, Mar. 2, 1953 (A. M. Nadler), 1♀


**DISTRIBUTION:** Known only from Puerto Rico and the Virgin Islands (map 6).

*Cesonia bryantae*, new species

Figures 128–133; Map 4

**TYPES:** Male holotype from 2 miles south of Unity Valley, St. Ann Parish, Jamaica (December 9, 1954; A. M. Nadler), deposited in AMNH, and female paratype from 1 mile west of Spanishtown, St. Catherine Parish, Jamaica (October 21, 1957; A. M. Chickering), deposited in MCZ.

**ETYMOLOGY:** The specific name is a patronym in honor of E. B. Bryant, who first recognized the species as new.

**DIAGNOSIS:** The inverted T-shaped anteromedian light abdominal stripe (figs. 128, 129) is diagnostic.

**MALE:** Total length 2.56, 2.92. Carapace 1.33, 1.35 long, 0.88, 0.94 wide. Femur II 0.86, 0.88 long. Eye sizes and interdistances: AME 0.05, ALE 0.05, PME 0.06, PLE 0.06; AME–AME 0.05, AME–ALE 0.01, PME–PME 0.06, PME–PLE 0.04, ALE–PLE 0.05. MOQ length 0.22, front width 0.15, back width 0.18. Abdomen with medially expanded and posteriorly broken median light stripe (figs. 128, 129). Embolus with expanded base (fig. 130), retrolateral tibial apophysis gradually narrowed toward tip (fig. 131). Leg spination (leg I missing): femur IV p0-0-1; tibiae: II v1r-2-1p; III v1p-1p-2; IV p0-1-1, v2-2-2; metatarsus III p0-2-2.

**FEMALE:** Total length 4.05. Carapace 1.78 long, 1.20 wide. Femur II 1.12 long. Eye sizes and interdistances: AME 0.08, ALE 0.08, PME 0.08, PLE 0.08; AME–AME 0.05, AME–ALE 0.01, PME–PME 0.07, PME–PLE 0.06, ALE–PLE 0.06. MOQ length 0.25, front width 0.21, back width 0.23. Coloration as in male. Spermathecae approximate posteriorly (fig. 132), with rounded posterolateral ducts (fig. 133). Leg spination (leg I missing): femur II r0-0-0: tibiae: II v1r-2-1p; III p1-1-1, v1p-1p-2; IV p0-1-1.

**OTHER MATERIAL EXAMINED:** Jamaica: St. Ann: Moneague, Aug. 26, 1934 (P. J. Darlington, Jr., MCZ), 1♀.

**DISTRIBUTION:** Known only from Jamaica (map 4).

*Cesonia cincta* (Banks), new combination

Figures 114, 115; Map 1

*Eilica cincta* Banks, 1909, p. 157, pl. 45, fig. 8 (female holotype from Havana, La Habana, Cuba, in MCZ, examined). Bonnet, 1956, p. 1650.


**DIAGNOSIS:** *Cesonia cincta* resembles *C. bryantae* in having the spermathecae reaching almost to the epigynal hood and rounded posterolateral spermathecal ducts, but differs in having the spermathecae widely separated posteriorly (fig. 114).

**MALE:** Unknown.

**FEMALE:** Total length 4.03. Carapace 1.43 long, 1.07 wide. Femur II absent. Eye sizes and interdistances: AME 0.05, ALE 0.06, PME 0.07, PLE 0.08; AME–AME 0.05, AME–ALE 0.02, PME–PME 0.07, PME–PLE 0.05, ALE–PLE 0.06. MOQ length 0.23, front width 0.16, back width 0.21. Abdomen badly rubbed but probably with trans-
verse white band at one-third its length, similar to *C. bryantae*. Spermathecae reaching almost to epigynal hood (fig. 114), with rounded posterolateral ducts (fig. 115). Leg spination (legs I and II missing): femur IV p0-0-1; patella III r0-0-0; tibiae: III p1-1-1; IV p0-0-1; metatarsi: III p0-2-2, v1p-0-1p, r0-1-2; IV p0-2-2, v1p-0-1p, r0-2-2.

**Material Examined:** Only the holotype.

**Distribution:** Known only from Cuba (map 1).

*Cesonia irvingi* (Mello-Leitão)

*Figures 134–139; Map 5*

*Herpyllus australis* Fox, 1938, p. 233, pl. 2, fig. 1 (female holotype from Key West, Monroe County, Florida, in USNM, examined). Bonnet, 1957, p. 2171.


**Diagnosis:** The invaginated tip of the retrolateral tibial apophysis (fig. 137) and spermathecae extending far beyond the epigynal hood (fig. 138) are diagnostic.

**Male:** Total length 4.39. Carapace 2.09 long, 1.53 wide. Femur II 1.47 long. Eye sizes and interdistances: AME 0.07, ALE 0.08, PME 0.07, PLE 0.08; AME–AME 0.08, AME–ALE 0.02, PME–PME 0.10, PME–PLE 0.06, ALE–PLE 0.12. MOQ length 0.30, front width 0.22, back width 0.24. Carapace and abdomen with median dark stripe (figs. 134, 135). Palpal duct with three loops (fig. 136), retrolateral tibial apophysis invaginated at tip (fig. 137). Leg spination: femur I r0-0-0; patella III p0-1-0; tibiae: I p1-0-1, v2-2-2; IV p1-1-1, v2-2-2.

**Female:** Total length 5.51, 7.81. Carapace 2.29, 2.61 long, 1.73, 1.87 wide. Femur II 1.69 long. Eye sizes and interdistances: AME 0.08, ALE 0.09, PME 0.08, PLE 0.09; AME–AME 0.08, AME–ALE 0.03, PME–PME 0.13, PME–PLE 0.07, ALE–PLE 0.14. MOQ length 0.36, front width 0.24, back width 0.28. Coloration as in male. Spermathecae extending far beyond epigynal hood (fig. 138), with small, squared posterolateral ducts (fig. 139). Leg spination (legs I and II missing): patella III p0-1-0; metatarsus III p0-2-2, r0-1-2.

**Material Examined:** United States: Florida: Monroe Co.: Bob Allen Keys, second key from east, May 19, 1967 (J. A. Beaty), 1♂: Key West (USNM), 1♀ (holotype).

**Bahama Islands:** South Bimini, Feb. 17, 1970 (V. Roth), 1♀.

**Distribution:** Known only from southern Florida and the Bahamas (map 5).

*Cesonia nadleri,* new species

*Figures 140–143; Map 5*

**Type:** Female holotype from Boca Chica, National District, Dominican Republic (March 5–7, 1955; A. M. Nadler), deposited in AMNH.

**Etymology:** The specific name is a patronym in honor of the collector of the holotype.

**Diagnosis:** *Cesonia nadleri* resembles *C. grisea* in having the spermathecae extending to but not beyond the epigynal hood, but differs in the shape of the spermathecae and their posterolateral ducts (fig. 143).

**Male:** Unknown.

**Female:** Total length 5.51. Carapace 1.93 long, 1.37 wide. Femur II 1.33 long. Eye sizes and interdistances: AME 0.06, ALE 0.07, PME 0.07, PLE 0.07; AME–AME 0.07, AME–ALE 0.03, PME–PME 0.10, PME–PLE 0.05, ALE–PLE 0.10. MOQ length 0.24, front width 0.19, back width 0.24. Carapace and abdomen with median dark stripe (figs. 140, 141). Spermathecae extending to epigynal hood (fig. 142), posterolateral ducts square (fig. 143). Leg spination: femora: I, II r0-0-0; III r0-0-1; IV p0-0-1; tibiae: II p0-0-0; IV p1-1-1, v1p-1p-2; metatarsi: I, II v1p-0-0; III p0-2-2, r0-1-2; IV p0-2-2, v1p-1p-1p, r0-2-2.

**Material Examined:** Only the holotype.

**Distribution:** Known only from Hispaniola (map 5).
Cesonia grisea (Banks),
new combination
Figures 144, 145; Map 5

Callilepis grisea Banks, 1914, p. 639, fig. 2 (female holotype from Pinar del Río, Pinar del Río, Cuba, in AMNH, examined). Lapsus for Callilepis.


Callilepis grisea: Bonnet, 1956, p. 931.


Diagnosis: Cesonia grisea resembles C. nadleri but may be distinguished by the narrower posterolateral spermathecal ducts (fig. 145).

Male: Unknown.

Female: Total length 6.23. Carapace 2.20 long, 1.30 wide. Femur II 1.39 long. Eye sizes and interdistances: AME 0.07, ALE 0.08, PME 0.08, PLE 0.08; AME–AME 0.10, AME–ALE 0.02, PME–PME 0.11, PME–PLE 0.06, ALE–PLE 0.12. MOQ length 0.32, front width 0.24, back width 0.27. Specimen badly rubbed but coloration probably as in C. nadleri. Spermathecae extending to epigynal hood (fig. 144), with narrow posterolateral ducts (fig. 145). Leg spination: femora: I, II r0-0-0; IV p0-0-1; patella IV r0-0-0; tibiae: I v1p-1p-1p; II p0-0-0; metatarsi: I, II v1p-0-0; III p0-2-2, r0-1-2; IV p0-2-2, r0-2-2.

Material Examined: Only the holotype.

Distribution: Known only from Cuba (map 5).

LITERATURE CITED

Banks, Nathan


Braunet, Pierre


Bryant, Elizabeth B.

Cambridge, Frederick Octavius Pickard-

Cambridge, Octavius Pickard-


Chamberlin, Ralph V.


Chamberlin, Ralph V., and Willis J. Gertsch

Chickering, Arthur M.

Emerton, James Henry

Forster, Raymond R., and A. D. Blest
Fox, Irving

Gertsch, Willis J., and S. Mulaik

Hentz, Nicholas M.

Hill, David Edwin

Holmberg, Eduardo Ladislao

Mello-Leitão, Candido Firmino de

Platnick, Norman I.

Platnick, Norman I., and Mohammad U. Shadab


Roewer, Carl F.


Simon, Eugène


Ubick, Darrell, and Vincent D. Roth