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A Revision of the Ground Spider Family Cithaeronidae (Araneae, Gnaphosoidea)

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ABSTRACT

The family Cithaeronidae includes relatively plesiomorphic gnaphosoid spiders from the Old World. Two genera are recognized, *Cithaeron* O. P.-Cambridge and the new genus *Inthaeron*, established for a new species, *I. rossi*, from India. Four species of *Cithaeron* are recognized: *C. praedonius* O. P.-Cambridge (found from Libya to Ma-

laysia), *C. delimbatus* Strand (East Africa), and two new species, *C. reimoseri* (Ethiopia) and *C. jocqueorum* (Ivory Coast). Three specific names are newly synonymized with *C. praedonius*: *C. limbatus* (Simon), *C. semilimbatus* (Simon), and *C. pallidus* Denis. Adult males and females of *C. delimbatus* are described for the first time.

INTRODUCTION

The family Cithaeronidae is one of the most obscure groups of spiders. Until very recently, only a handful of specimens were known, and most arachnologists are unfamiliar with these animals. Nor, at first glance, are they particularly striking. With their flattened and irregularly shaped posterior median eyes, their obliquely depressed endites, and their heavily sclerotized anterior lateral spinnerets, they are easily placed as members of the superfamily Gnaphosoidea. In general appearance,

with their relatively large eyes, procurved posterior eye row, long legs, and pseudosegmented tarsi, they closely resemble members of the Old World gnaphosid genus *Megamyрмаekion* (but differ in lacking the enlarged piriform gland spigots on the anterior lateral spinnerets that are synapomorphic for gnaphosids).

The first known specimens were described (as *Cithaeron*) by O. P.-Cambridge (1872), who considered them "to connect" zodariids

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and agelenids. Simon (1878) subsequently re-described the same species in the new genus *Tephlea*, placing it in the "Drassidae" (= Gnaphosidae) near *Cybaeodes* Simon, an obscure taxon currently assigned to the "Clubionidae." Subsequently, Simon (1893) synonymized *Tephlea* with *Cithaeron*, mentioning similarities of the spiders to zodariids and palpimanids but erecting a subfamily Cithaeroninae, placed in the Gnaphosidae (adjacent to his subfamily Cybaeodinae). The Cithaeroninae were elevated to familial status by Caporiacco (1938), who united the group with the (non-gnaphosoid) Homalonychidae in a superfamily Homalonychiformia, an arrangement followed by Roewer (1955a).

The only recent consideration of the family was a byproduct of a survey of gnaphosoid spinneret morphology and its phylogenetic implications (Platnick, 1990). In that paper, a second genus (*Bobineus* Roewer) that had subsequently been added to the family by Roewer (1955b) was transferred to the Gnaphosidae and placed as a junior synonym of *Pterotricha* Kulczyński. The results of that survey indicated that the familial status of the cithaeronids seems to be warranted. Although clearly a gnaphosoid, *Cithaeron* differs from true gnaphosids and prodidomids in having anterior lateral spinnerets that (1) are conical (rather than tubular) in shape, (2) are not widely separated at their base, (3) retain a sclerotized subdistal ring, and (4) have unmodified, rather than widened or elongated, piriform gland spigots. Comments on separating cithaeronids from the other currently recognized gnaphosoid families can be found in the familial diagnosis below.

Platnick (1990) also pointed out that the posterior median spinnerets of *Cithaeron* females are highly modified; instead of the large cylindrical gland spigots found in other gnaphosoids and many outgroup genera, the posterior portion of the PMS is covered with numerous small cylindrical gland spigots. The only other gnaphosoid examined to date that approaches this condition is *Drassodella* Hewitt (now placed in the family Gallieniellidae), which has multiple rows of cylindrical gland spigots. However, Platnick indicated that the cylindrical gland spigot arrangement of *Cithaeron* might be only a generic feature,

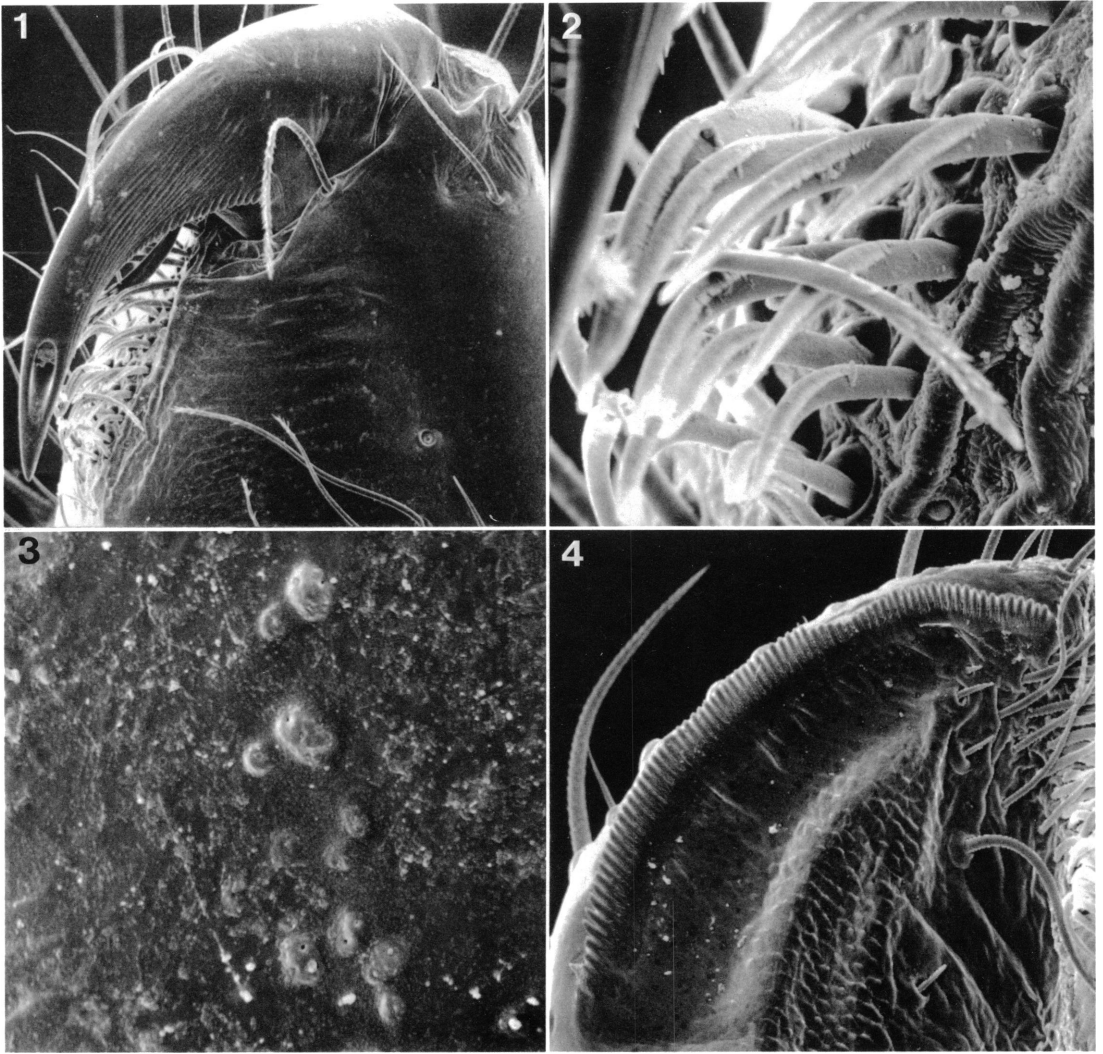
as an unidentified female from India—thought possibly to belong to a second cithaeronid genus—has numerous large cylindrical gland spigots, arranged in two parallel rows, on the posterior median spinnerets.

Subsequent study has confirmed this possibility. The only adequate series of cithaeronids that seems ever to have been collected was obtained from Ethiopia, over recent years, by Dr. A. Russell-Smith. When they were first encountered, he reported (in litt., 16 June 1986) that:

If these are cithaeronids I suspect the reason they are relatively uncommon in collections is that they are *extremely* fast-moving when disturbed and thus difficult to catch! I have lost at least as many as are here because I just was not quick enough. All the specimens I have found have been in silk retreats on the underside of stones except for the female from Awash National Park which was under a pile of grass. In the specimens from the hill near Nazret the male was in the same silken retreat as the subadult female.

Examination of this fine series, as well as the relatively few specimens scattered among other collections, supports the recognition of the Indian female as a member of a second genus, described below as *Inthaeron*. Fortunately, the single known specimen has its spinnerets well extruded and preserved; the anterior lateral spinnerets closely resemble those of *Cithaeron* in the four details listed above, despite the differences in the arrangement of the cylindrical gland spigots on their posterior median spinnerets.

Those four anterior lateral spinneret characters are all presumably plesiomorphic for the Gnaphosoidea, however, which raises the question of whether *Cithaeron* and *Inthaeron* together form a monophyletic group. The best indication that they do is provided by cheliceral morphology. The chelicerae of *Cithaeron* are unusual in lacking teeth on either margin of the fang furrow; most other gnaphosoids have teeth on one or both of those margins. The promargin, however, bears a cluster of stiff setae, first noted by Simon (1893: 385, fig. 312). Examination by scanning electron microscopy (figs. 1, 2) indicates that (at least in *Cithaeron*) these setae are situated behind an elevated ridge, and each originates from an elevated and notched base and bears several feathery branches. Al-



Figs. 1–4. *Cithaeron delimbatus* Strand, female. 1. Chelicera, posterior view, 260 \times . 2. Modified setae on cheliceral promargin, posterior view, 1300 \times . 3. Cheliceral gland pores, posterior view, 2000 \times . 4. Serrula, anterior view, 375 \times .

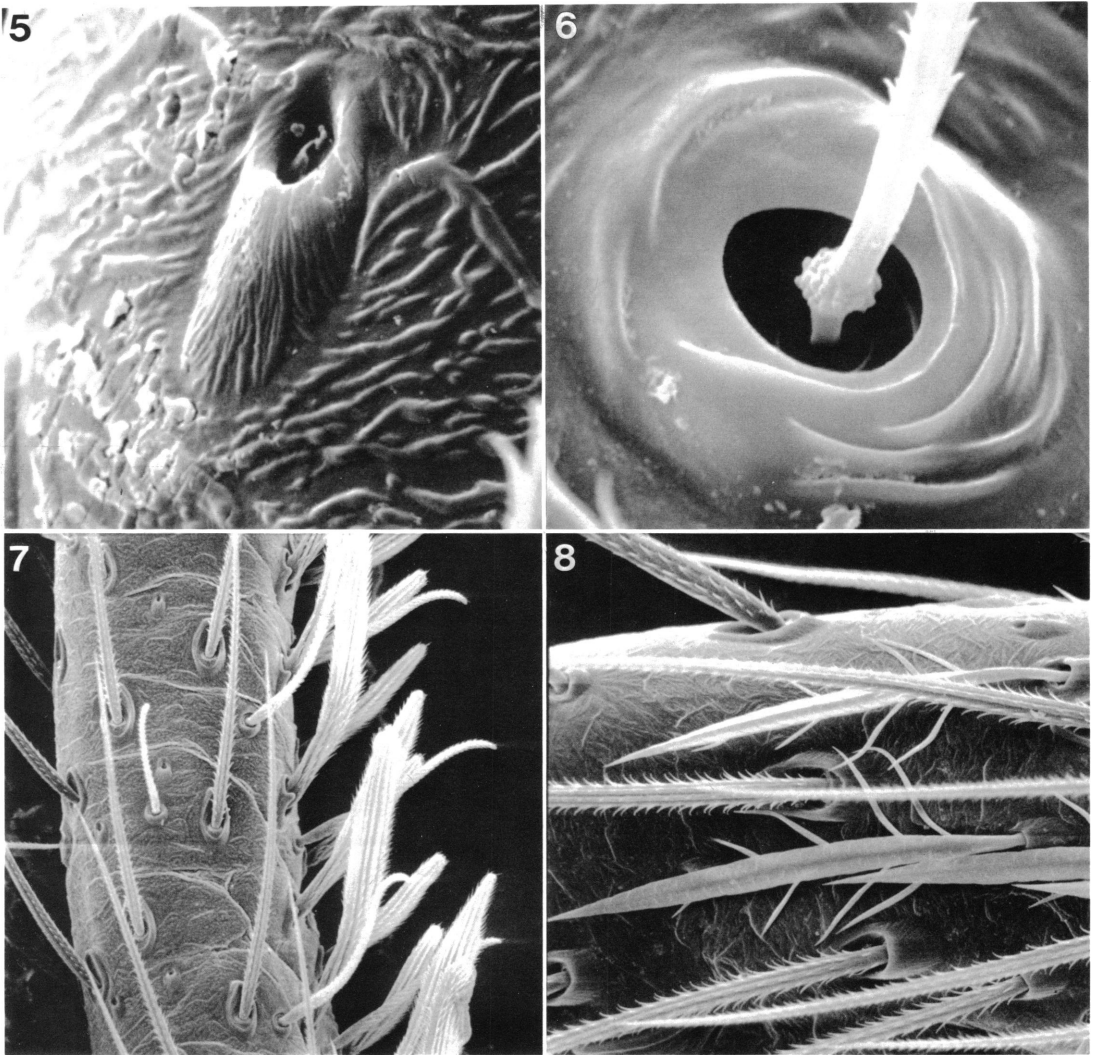
though the single known female of *Inthaeron* has not been scanned, detailed examination by light microscopy indicates that it conforms to *Cithaeron* in cheliceral morphology as well as such other unusual features as the pseudosegmented tarsi (fig. 7) and greatly reduced leg spination.

I am indebted to the curators and collectors listed below for access to specimens, to Mohammad U. Shadab of the American Museum of Natural History for help with illustrations, and to Gershon Levy, John Murphy,

Rudy Jocqué, and Darrell Ubick for helpful comments on a draft of the manuscript.

COLLECTIONS EXAMINED

- | | |
|------|---|
| AMNH | American Museum of Natural History, including material kindly donated by A. Russell-Smith |
| BMNH | Natural History Museum, London, P. Hillyard |
| CAS | California Academy of Sciences, San Francisco, W. Pulawski |
| CJK | J. K. H. Koh, Singapore |



Figs. 5–8. *Cithaeron delimbatus* Strand, female. 5. Tarsal organ from leg I, dorsal view, 5860 \times . 6. Trichobothrial base from tarsus I, dorsal view. 7. Tarsus I, dorsolateral view, 500 \times . 8. Feathery setae on tarsus I, lateral view, 1000 \times .

CJM J. and F. Murphy, Hampton, England
 CRS A. Russell-Smith, Harleston, England
 HDO Hope Entomological Collections, Oxford University, I. Lansbury
 HUJ Hebrew University, Jerusalem, G. Levy
 MNHN Muséum National d'Histoire Naturelle, Paris, J. Heurtault and C. Rollard
 MRAC Musée Royal de l'Afrique Centrale, Tervuren, R. Jocqué
 NMB Naturhistorisches Museum Basel, W. Wittmer
 NMK National Museums of Kenya, J. M. Ritchie, R. K. Bagine

NMW Naturhistorisches Museum Wien, J. Gruber

SYSTEMATICS

CITHAERONIDAE SIMON

Cithaeroninae Simon, 1893: 341, 384 (type genus by monotypy *Cithaeron* O. P.-Cambridge). – Bonnet, 1956: 1095.
 Cithaeronidae: Caporiacco, 1938: 63. – Roewer, 1955a: 475. – Brignoli, 1983: 584. – Platnick, 1989: 456.

DIAGNOSIS: Cithaeronids can be distinguished from other gnaphosoids as follows: from the Gnaphosidae, Prodidomidae, and Ammoxenidae by the presence of conical (rather than tubular) and narrowly separated anterior lateral spinnerets bearing a subdistal sclerotized ring and unmodified piriform gland spigots, from the Trochanteriidae by the unflattened body, from the Gallieniellidae by the unelongated chelicerae, and from the Lamponidae by the deep oblique depression on the palpal endites and the presence of long, pseudosegmented tarsi (see Platnick, 1990, for additional data on those families). The absence of cheliceral teeth together with the presence of modified setae on the cheliceral promargin (figs. 1, 2) is also believed to be diagnostic.

DESCRIPTION: Ecribellate, entelegyne, gnaphosoid spiders. Total length 3.4–8.3. Carapace rounded in dorsal view, abruptly narrowed at ocular area, widest between coxae II and III, truncated anteriorly and posteriorly, highest at rear of pars cephalica, pale yellow, surface often with dark maculations except on broad bands along lateral and posterior margins and on postocular portion of pars cephalica, with few weak setae near lateral margins and stronger setae in ocular area; cephalic area moderately elevated, level, deeply depressed around longitudinal thoracic groove; lateral margins usually with tiny tubercles. From above, both eye rows slightly procurved; from front, both rows strongly procurved; AME circular, dark, ALE and PLE circular, light; PME flattened, irregularly oval, light, highly reflective; PME largest, ALE and PLE subequal, smaller than AME; AME separated by their radius or more, closer to ALE; PME separated by their radius or less, usually much farther from PLE; lateral eyes of each side separated by their radius or more; MOQ roughly square. Clypeus very high, height about three times AME diameter. Chelicerae short, vertical; fang furrow without marginal teeth, promargin with cluster of stiff setae situated behind elevated ridge (fig. 1), each seta originating from elevated, notched base, bearing several feathery branches (fig. 2); cheliceral gland opening from tiny pores on surface opposite fang tip (fig. 3). Endites rectangular, with distinct, deep oblique depression; without anteromedian scopula but with

strong anterolateral serrula (fig. 4); labium as wide as long or wider, truncated distally, not rebordered; sternum shield-shaped, with heavily sclerotized lateral (but not posterior) margins, sparsely coated with long, dark, stiff setae, with sclerotized extensions to and between coxae; coxae IV separated by almost their width. Legs I, II, IV subequal in length, leg III shorter. Legs bearing few, extremely short, weak spines, restricted to basal dorsal surface of femora, ventral surface of tibiae and metatarsi, and tips of metatarsi; sides of distal segments with feathery setae (fig. 8). Legs pale yellow; tarsi scopulate, pseudosegmented (fig. 7), with two strong, dentate claws and claw tufts consisting of few but strong setae; trochanters not notched; metatarsi without preening combs; trichobothria present in single dorsal row on tarsi and metatarsi, base transversely ridged (fig. 6); tarsal organ capsulate but with large opening (fig. 5). Abdomen pale yellow, with or without dark maculations, surface with weak, brown setae; males with long anterior scutum occupying half of abdominal length. Six spinnerets, anterior laterals conical, not widely separated, with subdistal sclerotized ring and small, unmodified piriform gland spigots (Platnick, 1990: fig. 170), posterior medians not advanced anteriorly, posterior surface bearing dense cluster (Platnick, 1990: fig. 171) or two longitudinal rows of small cylindrical gland spigots in females; minor ampullate gland spigots present on both posterior median and posterior lateral pairs (Platnick, 1990: fig. 172). Posterior respiratory system consisting of spiracle situated near base of spinnerets, leading to short atrium from which emerge two thin tubes that almost immediately bifurcate, producing four extremely narrow tracheae confined to abdomen. Male palpal femur and patella unmodified (males known only in *Cithaeron*); tibia with distinct retrolateral apophysis and distally excavated, unsclerotized prolateral margin, sometimes with dorsal apophysis as well; cymbium greatly elongated, bulb with large subtegulum, rounded tegulum bearing prolaterally originating embolus of variable length, and translucent, medially situated median apophysis. Epigynum with anterior hood and complexly coiled ducts.

DISTRIBUTION: West Africa (Ivory Coast),

East Africa, the Middle East, and India east to Malaysia and Singapore.

Cithaeron O. P.-Cambridge

Cithaeron O. P.-Cambridge, 1872: 272 (type species by monotypy *Cithaeron praedonius* O. P.-Cambridge).

Tephlea Simon, 1878: 207 (type species by monotypy *Tephlea agelenoides* Simon). First synonymized by Simon, 1893: 384.

DIAGNOSIS: Females can be distinguished from those of *Inthaeron* by having the cylindrical gland spigots on the posterior median spinnerets arranged in a dense cluster (Platnick, 1990: fig. 171) rather than in two longitudinal rows. Males of *Inthaeron* are unknown.

Cithaeron praedonius O. P.-Cambridge

Figures 9–13

Cithaeron praedonium O. P.-Cambridge, 1872: 273 (two female syntypes in HDO, examined; according to the original description, they are from "under a stone on the Lebanon" and "a similar situation at Hasbeiya," Lebanon, but both specimens are actually penultimate females rather than adults).

Tephlea agelenoides Simon, 1878: 207 (female holotype from Syria, should be in MNHN, lost). First synonymized by Simon, 1893: 386.

Tephlea limbata Simon, 1885: 36 (female lectotype, here designated, from "Ramlé," near Alexandria, Egypt, in MNHN, examined). NEW SYNONYMY.

Tephlea semilimbata Simon, 1890: 91 (female syntype from "Cham-Cham," near Aden, Yemen, in MNHN, examined). NEW SYNONYMY.

Cithaeron praedonius: Simon, 1893: 386, figs. 341–344. – Roewer, 1955a: 475. – Bonnet, 1956: 1094.

Cithaeron limbatus: Simon, 1893: 386, fig. 345. – Roewer, 1955a: 475. – Bonnet, 1956: 1094.

Cithaeron semilimbatus: Simon, 1893: 386. – Roewer, 1955a: 475. – Bonnet, 1956: 1094.

Cithaeron pallidus Denis, 1953: 340 (female holotype from Wadi Dharh, Yemen, should be in National Museum of Natural History, Smithsonian Institution, not currently in that collection, may be represented by a female bearing this name, determined by Denis but without locality data, in MNHN, examined). NEW SYNONYMY.

Cithaeron pallidus: Brignoli, 1983: 584.

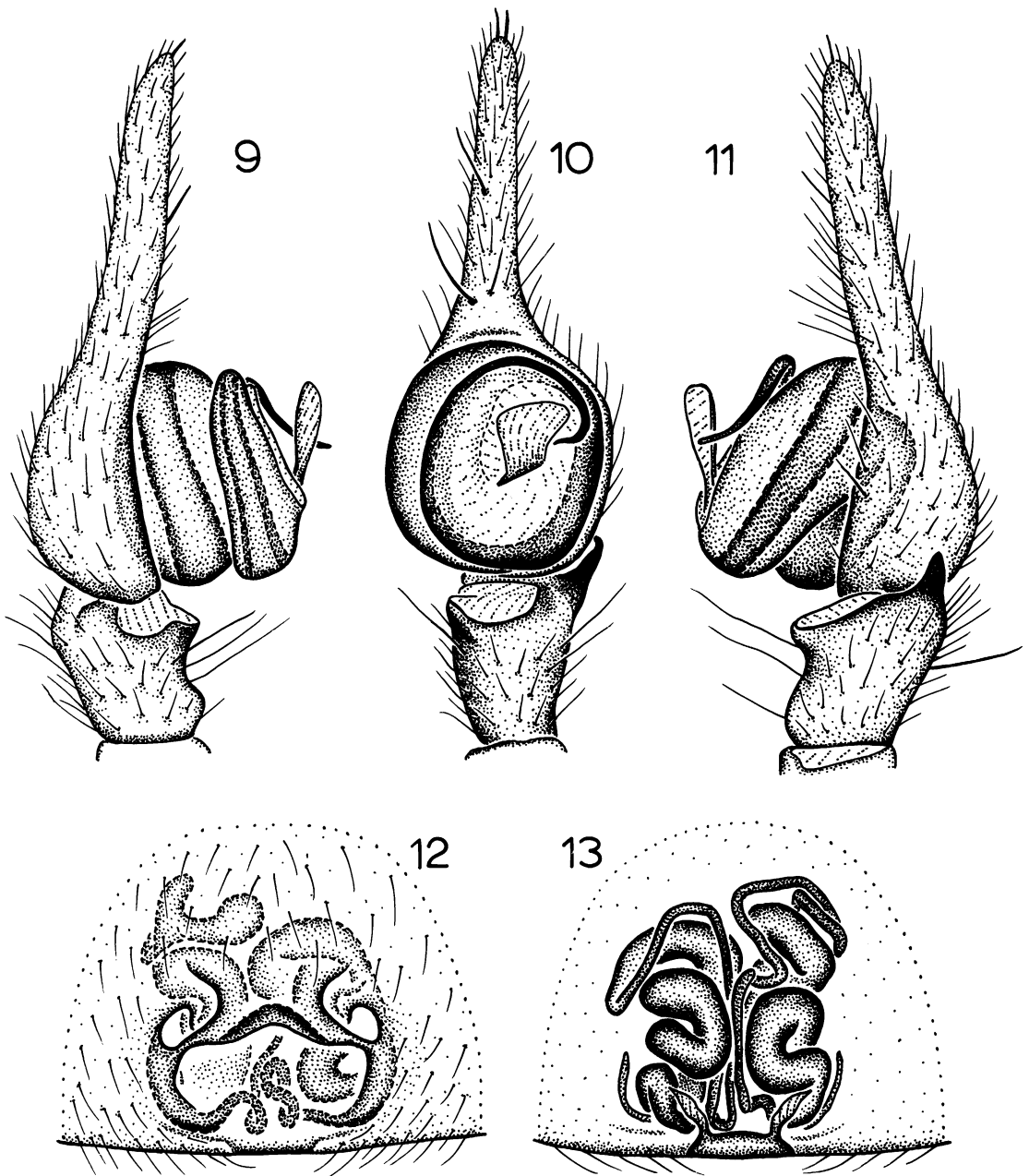
NOTE: Although the syntypes of *C. praedonius* are penultimate females and cannot be identified with certainty, that name is used for this taxon because it is the only cithaeroid species known from the Middle East.

DIAGNOSIS: This species is similar to *C. delimbatus* but can be distinguished by the larger median apophysis on the male palp (figs. 10, 11) and the more highly coiled epigynal ducts of females (figs. 12, 13).

MALE (JERUSALEM, ISRAEL): Total length 3.49. Carapace 1.73 long, 1.49 wide. Femur II 2.63 long. Eye sizes and interdistances: AME 0.11, ALE 0.09, PME 0.11, PLE 0.09; AME-AME 0.09, AME-ALE 0.02, PME-PME 0.02, PME-PLE 0.06, ALE-PLE 0.08; MOQ length 0.27, front width 0.31, back width 0.24. Retrolateral tibial apophysis small, triangular, with tip directed prolaterally; median apophysis relatively large, protuberant (figs. 9–11). Leg spination: femora I–IV d1-0-0; tibiae: III v0-0-1p; IV v0-1p-1p; metatarsi III, IV p0-0-1, v0-0-2, r1-0-1.

FEMALE (ISRAEL): Total length 5.38. Carapace 2.50 long, 1.99 wide. Femur II 3.04. Eye sizes and interdistances: AME 0.10, ALE 0.10, PME 0.13, PLE 0.12; AME-AME 0.10, AME-ALE 0.03, PME-PME 0.05, PME-PLE 0.08, ALE-PLE 0.09; MOQ length 0.30, front width 0.30, back width 0.31. Epigynum with anteromedian hood, slightly depressed posteromedian atrium, and anterolateral openings (fig. 12); epigynal ducts highly, variably coiled (fig. 13). Leg spination: femora I–IV d1-0-0; tibiae III, IV v0-0-1p; metatarsi III, IV p0-0-1, v1r-2-2, r0-0-1.

MATERIAL EXAMINED: **Libya:** Wadi Kuf, Jan. 24, 1960, under damp stones outside cave mouth (J. A. L. Cooke, AMNH), 1♂. **Egypt:** "Ramlé," near Alexandria (Letourneux, MNHN), 1♀ (syntype). **Ethiopia:** Masawa, Eritrea (G. Accigliaro, MRAC), 1♂, 1♀. **Israel:** Arad, May 30, 1968 (G. Levy, HJ), 1♀; Jerusalem, Aug. 1974 (G. Levy, HJ), 1♂; no specific locality, July 1971 (J. Sharp, AMNH), 1♀. **Saudi Arabia:** Jeddah area, Hejaz region, Aug. 1985–Apr. 1986, pitfall trap (A. A. Faragalla, AMNH), 1♀; Wadi Hanifa, Apr. 25, 1976 (W. Wittmer, W. Büttiker, NMB), 1♀. **Yemen:** "Cham-Cham, au-dessus des citernes d'Aden" (E. Simon, MNHN), 1♀, 1 juvenile (syntypes); King's gardens, Wadi Dharh, 19 km NW San'a, Feb. 12, 1951, el-



Figs. 9–13. *Cithaeron praedonius* O. P.-Cambridge. 9. Left male palp, prolateral view. 10. Same, ventral view. 11. Same, retrolateral view. 12. Epigynum, ventral view. 13. Same, dorsal view.

evaluation 2165 m, rubbish heaps and vegetation (R. E. Kuntz, MNHN) 1♀ (data are those of the holotype of *C. pallidus*, on the assumption that the female currently in MNHN is in fact that specimen). **India:** “Hindustan: Ramnad (Fabre)” (spelled Ramund on cur-

rent, post-Simon label of vial in MNHN), 1♂, 1♀ (paralectotypes of *Tephlea limbata*). **Malaysia:** Penang, Feb. 29, 1962 (H. T. Pagden, BMNH), 1♀. **Singapore:** King Close, Jan. 6, 1991, between old newspaper piles (J. Koh, CJK), 1♀.

DISTRIBUTION: Northeastern Africa (Libya, Egypt, and northern Ethiopia) and the Middle East east to Malaysia and Singapore.

SYNONYMY: The relatively extensive list of synonyms reflects both the relative rarity of specimens (and the consequent lack of direct comparisons among them) and their extensive variation in color pattern and in the details of duct coiling in the female epigynum. The dorsal abdominal coloration ranges from uniformly pale, at least in alcohol (i.e., *C. pallidus*), to uniformly dark except for a small, median pale patch immediately above the spinnerets (i.e., *C. praedonius*). Some specimens show a pair of lateral dark bands for the entire length of the abdomen (i.e., *C. limbatus*), or on just the posterior portion of the abdomen (i.e., *C. semilimbatus*). No two females show identical patterns of epigynal duct coiling; for that matter, no individual specimen shows identical coiling of the ducts of the right and left sides.

Cithaeron delimbatus Strand

Figures 14–18

Cithaeron delimbatus Strand, 1906: 614 (juvenile female holotype from Mane River, Ethiopia, deposited in Stuttgart, destroyed); 1908: 86. – Roewer, 1955a: 475. – Bonnet, 1956: 1094.

Cithaeron delimbatum: Simon, 1909: 36. – Berland, 1922: 49.

NOTE: Because the holotype is both juvenile and destroyed, application of this name is uncertain (Strand could conceivably have had a juvenile of *C. praedonius* or *C. reimoseri* instead); I have elected to follow the decisions of Simon (1909) and Berland (1922) in referring East African specimens to this name.

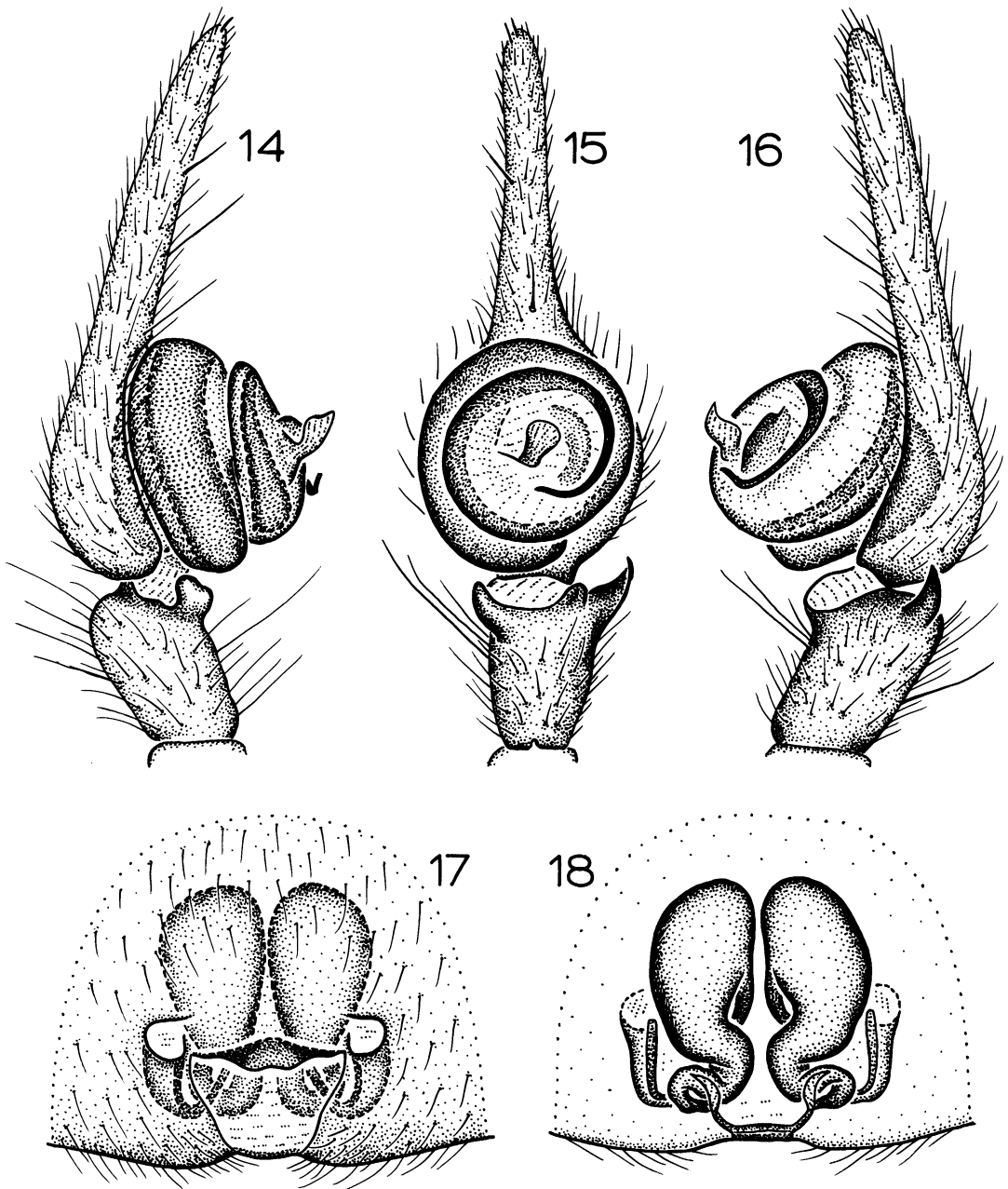
DIAGNOSIS: This species resembles *C. praedonius* but can be distinguished by the smaller median apophysis on the male palp (figs. 15, 16) and the less highly coiled epigynal ducts of females (figs. 17, 18).

MALE (KORA RESERVE, KENYA): Total length 4.50. Carapace 1.78 long, 1.43 wide. Femur II 2.78 long. Eye sizes and interdistances: AME 0.12, ALE 0.10, PME 0.13, PLE 0.09; AME-AME 0.08, AME-ALE 0.02, PME-PME 0.03, PME-PLE 0.05, ALE-PLE 0.13; MOQ length 0.36, front width 0.32, back width 0.29. Retrolateral tibial apophysis

small, triangular, with tip directed pro-laterally; median apophysis relatively small, protuberant (figs. 14–16). Leg spination: femora I–IV d1-0-0; tibiae: III v0-1r-2; IV v0-0-2; metatarsi III, IV p0-0-1, v1r-2-2, r0-1-1.

FEMALE (BARINGO, KENYA): Total length 5.68. Carapace 2.58 long, 1.99 wide. Femur II 3.19. long. Eye sizes and interdistances: AME 0.12, ALE 0.11, PME 0.16, PLE 0.12; AME-AME 0.12, AME-ALE 0.03, PME-PME 0.04, PME-PLE 0.09, ALE-PLE 0.15; MOQ length 0.39, front width 0.37, back width 0.36. Epigynum with anteromedian hood, slightly depressed posteromedian atrium, and anterolateral openings (fig. 17); ventral visible duct leading into spermathecae may enter spermathecae laterally (as in fig. 17) or medially (varying even between right and left sides of one specimen); epigynal ducts slightly, variably coiled (fig. 18). Leg spination: femora I–IV d1-0-0; tibiae: III v0-0-2; IV v0-2-2; metatarsi: III p0-0-1, v0-2-2, r0-0-1; IV p0-0-1, v1p-2-2, r0-0-1.

MATERIAL EXAMINED: Ethiopia: Adagalla (MNHN), 1♀; Harbona, E Nazret, Apr. 9–July 22, 1986, elev. 1300 m, under stones in *Acacia-Commiphora* bushland (A. Russell-Smith, CRS, AMNH), 2♂, 2♀; Karamara Hotel grounds, Awash National Park, Mar. 31–Oct. 6, 1986–1988, elev. 1000 m, under piles of cut grass (A. Russell-Smith, CRS, AMNH), 2♂, 5♀, 1 penultimate ♀, Apr. 1–Oct. 29, 1986–1988, elev. 1000 m, hunting among stones at night under lights (A. Russell-Smith, CRS), 3♂; 20 km W Matahara, on road to Addis Ababa, Sept. 16, 1986, elev. 1200 m, under lava blocks in *Acacia* bushland (A. Russell-Smith, CRS), 1♀; 40 km W Matahara, on road to Addis Ababa, May 28, 1986, elev. 1400 m, in dense *Cenchrus* tussocks (A. Russell-Smith, CRS), 1♀, Apr. 1–July 23, 1987–1988, elev. 1300–1400 m, under stones (A. Russell-Smith, CRS), 3♀; Menare (P. Goderis, MRAC), 1♀; N Nazret, May 8, 1986, elev. 1650 m, under stone on eroded hillside (A. Russell-Smith, CRS), 1♂. **Afars and Issas:** Obock (MNHN), 1♀. **Somalia:** Sar Uanle, 20 km S Chisimaio, 0°29'48"S, 42°25'30"E, pit-fall, dune facing sea (G. Messana et al., MRAC), 1♀. **Kenya:** Baringo, Rift Valley, Aug. 28, 1972, hot, stony area near lake (J. and F. Murphy, CJM), 1♀; Kora National Reserve,



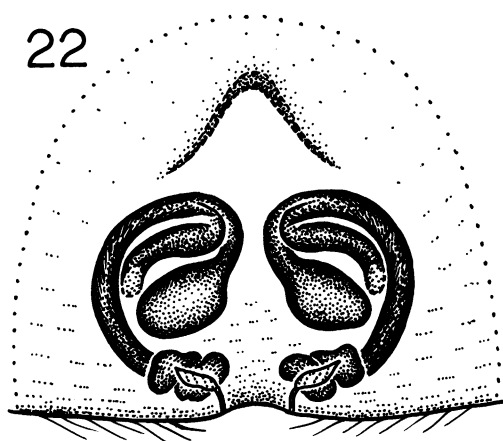
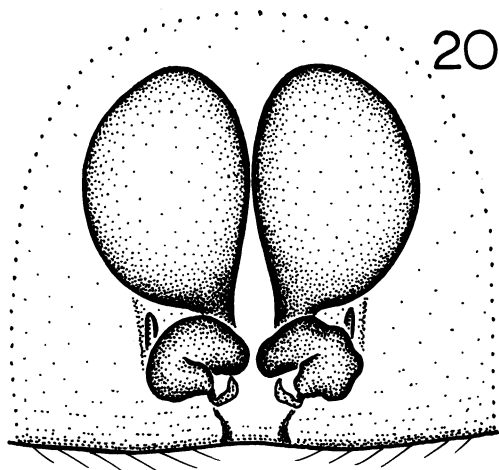
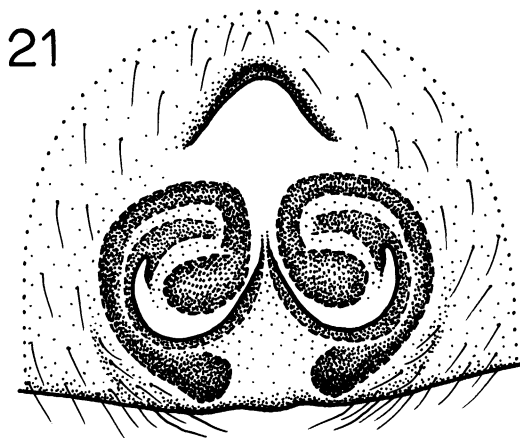
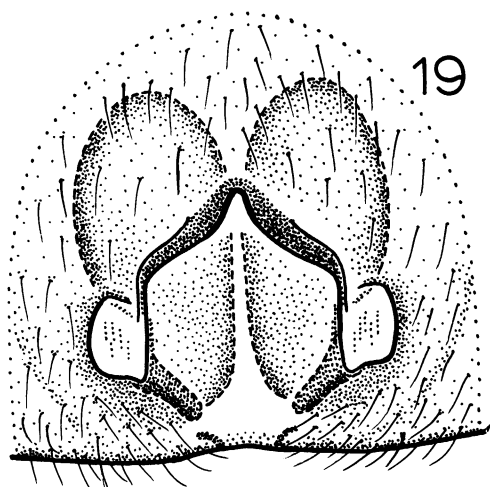
Figs. 14–18. *Cithaeron delimbatus* Strand. 14. Left male palp, prolateral view. 15. Same, ventral view. 16. Same, retrolateral view. 17. Epigynum, ventral view. 18. Same, dorsal view.

Aug. 1983, pitfall trap in *Acacia-Commiphora* bushland (A. Russell-Smith, J. M. Ritchie, NMK), 1♂; no specific locality (Rothschild, MNHN), 1♀. **Tanzania:** 10 mi SE

Olduwai, Nov. 26, 1967, elev. 1500 m (E. S. Ross, A. R. Stephen, CAS), 1♀.

DISTRIBUTION: East Africa.

NATURAL HISTORY: A detailed description



Figs. 19–22. 19, 20. *Cithaeron reimoseri*, new species. 21, 22. *Inthaeron rossi*, new species. 19, 21. Epigynum, ventral view. 20, 22. Same, dorsal view.

of the Kora National reserve site can be found in Russell-Smith et al. (1987).

***Cithaeron reimoseri*, new species**

Figures 19, 20

Cithaeron limbatus (misidentification): Reimoser, 1937: 19.

TYPE: Female holotype from Adi Kaie, Eritrea, Ethiopia (Andreini), deposited in NMW.

ETYMOLOGY: The specific name is a patronym in honor of Eduard Reimoser, who first published on the holotype.

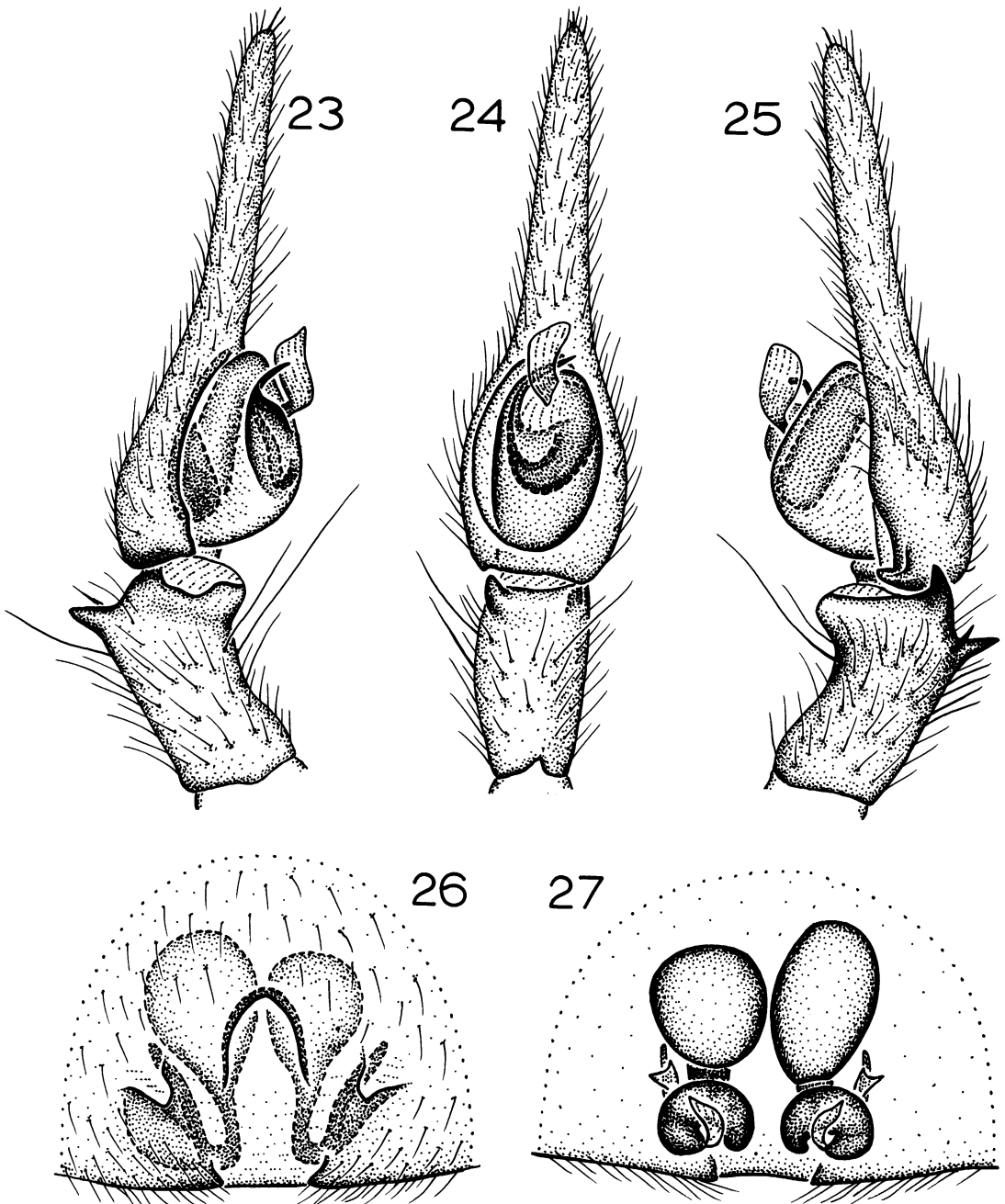
DIAGNOSIS: Females can be recognized easily by the heptagonal epigynal atrium (fig. 19).

MALE: Unknown.

FEMALE (HOLOTYPE): Total length 7.24. Carapace 3.11 long, 2.70 wide. Femur II 3.64 long. Eye sizes and interdistances: AME 0.13, ALE 0.13, PME 0.17, PLE 0.17; AME-AME 0.16, AME-ALE 0.06, PME-PME 0.06, PME-PLE 0.11, ALE-PLE 0.13; MOQ length 0.47, front width 0.42, back width 0.40. Epigynal hood narrowly constricted anteriorly, connected to lateral epigynal margins (fig. 19); spermathecae ovoid, posterior ducts thickened (fig. 20). Leg spination: femora I–IV d1-0-0; tibiae III, IV v0-0-2; metatarsi III, IV p0-0-1, v1r-2-2, r0-1-1.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from Ethiopia.



Figs. 23–27. *Cithaeron jocqueorum*, new species. 23. Left male palp, prolateral view. 24. Same, ventral view. 25. Same, retrolateral view. 26. Epigynum, ventral view. 27. Same, dorsal view.

***Cithaeron jocqueorum*, new species**
 Figures 23–27

TYPES: Male holotype and female allotype from a savanna at Kossou, Ivory Coast (Aug.

14, 1975; R. and E. Jocqué), deposited in MRAC.

ETYMOLOGY: The specific name is a patronym in honor of the collectors of the types.

DIAGNOSIS: Males can be recognized by the

presence of a dorsal tibial apophysis (figs. 23, 25), females by the arched epigynal hood (fig. 26).

MALE (HOLOTYPE): Total length 4.59. Carapace 1.74 long, 1.43 wide. Femur II 2.83 long. Eye sizes and interdistances: AME 0.12, ALE 0.11, PME 0.15, PLE 0.11; AME-AME 0.11, AME-ALE 0.04, PME-PME 0.05, PME-PLE 0.05, ALE-PLE 0.08; MOQ length 0.38, front width 0.35, back width 0.35. Retrolateral tibial apophysis very small, accompanied by longer dorsal apophysis (figs. 23, 25); embolus short, not coiled (fig. 24). Leg spination: femora I-IV d1-0-0; metatarsi: III v0-0-2, r0-0-1; IV v0-0-2.

FEMALE (ALLOTYPE): Total length 5.93. Carapace 2.18 long, 1.86 wide. Femur II 3.11 long. Eye sizes and interdistances: AME 0.18, ALE 0.11, PME 0.16, PLE 0.13; AME-AME 0.09, AME-ALE 0.05, PME-PME 0.08, PME-PLE 0.07, ALE-PLE 0.11; MOQ length 0.45, front width 0.45, back width 0.40. Epigynum with arched anterior hood and posteriorly directed openings (fig. 26); spermathecae relatively short (fig. 27). Leg spination: femora I-IV d1-0-0; metatarsi III, IV v0-0-2, r0-0-1.

OTHER MATERIAL EXAMINED: Ivory Coast: N Korhogo, Bandama River, Feb. 24, 1979, edge of riverine forest (J. Everts, MRAC), 1♀, Apr. 17, 1980, edge of riverine forest (J. Everts, MRAC), 1♂; Kossou, Feb. 18-Mar. 2, 1975, savanna (R. Jocqué, MRAC), 1♂, July 22-30, 1974, humid savanna (R. Jocqué, MRAC), 1♀.

DISTRIBUTION: Known only from Ivory Coast.

Inthaeron, new genus

TYPE SPECIES: *Inthaeron rossi*, new species.

ETYMOLOGY: The generic name is a contraction of Indian *Cithaeron*, and is masculine in gender.

DIAGNOSIS: Females can be distinguished from those of *Cithaeron* by having the cylindrical gland spigots on the posterior median spinnerets arranged in two longitudinal rows rather than a dense cluster. Males are unknown.

Inthaeron rossi, new species

Figures 21, 22

TYPE: Female holotype taken at an elevation of 1250 m at Mahableshwar, Maharash-

tra, India (Feb. 13, 1962; E. S. Ross, D. Q. Cavagnaro), deposited in CAS.

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

DIAGNOSIS: With the characters of the genus and genitalia as in figures 21, 22.

MALE: Unknown.

FEMALE (HOLOTYPE): Total length 6.60. Carapace 2.32 long, 1.91 wide. Femur II 3.19 long. Eye sizes and interdistances: AME 0.13, ALE 0.12, PME 0.15, PLE 0.12; AME-AME 0.12, AME-ALE 0.03, PME-PME 0.07, PME-PLE 0.11, ALE-PLE 0.06; MOQ length 0.38, front width 0.38, back width 0.36. Epigynum with triangular anterior hood and anterolateral openings (fig. 21); epigynal ducts convoluted posteriorly, (possibly secondary) spermathecae situated anteriorly (fig. 22). Leg spination: tibiae IV v0-0-2; metatarsi: III p0-0-1, v1r-1r-2; r0-0-1; IV p0-0-1, v1r-2-2, r0-0-1.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from India.

REFERENCES

- Berland, L.
1922. Araignées. In Voyage de M. le Baron de Rothschild en Ethiopie et en Afrique orientale anglaise (1904-1905). Résultats scientifiques. Animaux articulés. Paris, 1: 43-90.
- Bonnet, P.
1956. Bibliographia araneorum. Toulouse, 2(2): 919-1925.
- Brignoli, P. M.
1983. A catalogue of the Araneae described between 1940 and 1981. Manchester, 755 pp.
- Cambridge, O.-P.
1872. General list of the spiders of Palestine and Syria, with descriptions of numerous new species, and characters of two new genera. Proc. Zool. Soc. London 1872: 212-354.
- Caporiacco, L. di
1938. Il sistema degli Araneidi. Arch. Zool. Italiano 25 (Suppl. 4): 35-155.
- Denis, J.
1953. Spiders of the Yemen, southwest Arabia, collected by the U.S. Naval Medical Mission to the Yemen, 1951. Trans. Am. Microsc. Soc. 72: 337-343.
- Platnick, N. I.
1989. Advances in spider taxonomy 1981-1987: A supplement to Brignoli's *A cat-*

- atalogue of the Araneae described between 1940 and 1980.* Manchester, 673 pp.
1990. Spinneret morphology and the phylogeny of ground spiders (Araneae, Gnaphosoidea). *Am. Mus. Novitates* 2978: 42 pp.
- Reimoser, E.
1937. Beitrag zur Spinnenfauna von Erythraea. *Mem. Soc. Entomol. Italiana* 16: 16–24.
- Roewer, C. F.
1955a. Katalog der Araneae von 1758 bis 1940, bzw. 1954. Brussels, 2a–b: 1–1751.
1955b. Die Araneen der Österreichischen Iran-Expedition 1949/50. *Sitzungsber. Österreichischen Akad. Wiss. Math.-Naturwiss. Kl.* 164: 751–782.
- Russell-Smith, A., J. M. Ritchie, and N. M. Collins
1987. The surface-active spider fauna of arid bushland in Kora Reserve, Kenya. *Bull. Br. Arachnol. Soc.* 7: 171–174.
- Simon, E.
1878. Les arachnides de France. Paris, 4: 1–334.
1885. Matériaux pour servir à la faune arachnologique de l'Asie méridionale. II. Arachnides recueillis à Ramnad, district de Madura par M. l'abbé Fabre. *Bull. Soc. Zool. France* 10: 26–39.
1890. Etudes arachnologiques. 22^e Mémoire. XXXIV. Etude sur les arachnides de l'Yemen. *Ann. Soc. Entomol. France* (6) 10: 77–124.
1893. Histoire naturelle des araignées. Paris, 1(2): 257–483.
1909. Arachnides. Première partie. *In Voyage de M. Maurice de Rothschild en Ethiopie et dans l'Afrique orientale anglaise (1904–1906).* *Ann. Soc. Entomol. Belgique* 53: 29–43.
- Strand, E.
1906. Diagnosen nordafrikanischer, hauptsächlich von Carlo Freiherr von Erlanger gesammelter Spinnen. *Zool. Anz.* 30: 604–637, 655–690.
1908. Nordafrikanische Spinnen, hauptsächlich von Carlo Freiherr von Erlanger gesammelt. *Arch. Naturg.* 74: 67–128.

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