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A Revision of the Spider Family Stenochilidae  
(Arachnida, Araneae)



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## ABSTRACT

Stenochilidae Thorell, previously considered a subfamily of Palpimanidae, is again established as a valid family. The presence of a shared derived character (prolateral leg scopulae), as well as numerous differences in carapace shape, number of thoracic grooves, eye pattern, cheliceral dentition, labial structure, extent of the abdominal scutum, number of spinnerets, relative leg segment lengths, and genitalia establish Palpimanidae and Stenochilidae as sister groups of equivalent rank and familial status. Major differences in genitalia and carapace shape are used to con-

struct a probable phylogeny and reclassification of Stenochilidae. The genus *Metronax* Simon is placed as a junior synonym of *Stenochilus* O.P.-Cambridge. Two specific names are newly synonymized: *Stenochilus raudus* Simon with *S. hobsoni* O. P.-Cambridge, and *Metronax laetus* Thorell with *Colopea pusilla* (Simon). Two new species are described: *Stenochilus scutulatus* from northern India and *Colopea tuberculata* from Fiji. Genitalic and somatic characters of the group are illustrated in detail for the first time.

## INTRODUCTION

The family Stenochilidae was erected by Thorell (1873) for the peculiar Indian spider *Stenochilus hobsoni* O. P.-Cambridge (1870). Simon (1884, 1893a) first described three additional species of *Stenochilus* from India, Burma, and the Philippines and later (1893b) established the genera *Metronax* and *Colopea* for those species. Thorell (1895, 1897) added another species from Burma and some new records to *Metronax*. Since 1897, the group has remained virtually without notice from arachnologists.

Although Simon at first accepted Stenochilidae (1893a), in his "Histoire naturelle des Araignées" (1893b) he relegated it to subfamilial status in Palpimanidae, on the grounds that the New Zealand genus *Huttonia*, which he also gave subfamilial status, was intermediate between the palpimanids and stenochilids.

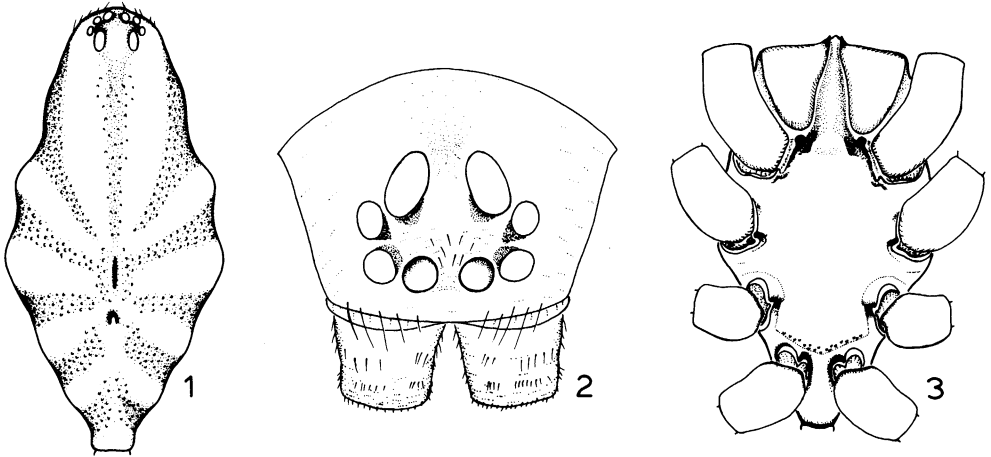
In the course of a revision of the Palpimanidae it has become apparent that each of these three groups deserves familial status, as *Huttonia* is not closely related to either the palpimanids or the stenochilids, and the differences in both somatic and genitalic characters between the three groups are as great or greater than those that separate other families of spiders. The purposes of the present paper are to demonstrate the numerous differences that preclude association of the stenochilids with the palpimanids, to comment on the probable phylogeny of this small and unusual group, and to present a revision of the genera and species involved.

This work would not have been possible without the help of other arachnologists in securing the extremely rare specimens on which it is based. In addition to specimens in the American

Museum of Natural History (AMNH), we have used material supplied by the following curators and institutions: Dr. M. Hubert, Muséum National d'Histoire Naturelle, Paris (MNHN); Dr. H. W. Levi, Museum of Comparative Zoology, Harvard University (MCZ); Dr. G. Rack, Zoologisches Institut und Zoologisches Museum, Universität Hamburg (ZMH); Dr. R. X. Schick, California Academy of Sciences, San Francisco (CAS); Dr. E. Tortonese, Museo Civico di Storia Naturale, Genoa (MCSN); Dr. G. C. Varley and Mr. E. Taylor, Hope Department of Entomology, Oxford University (HDO); and Mr. F. R. Wanless and Miss D. Norman, British Museum (Natural History), London (BMNH). We are especially grateful to Dr. R. R. Forster of the Otago Museum, Dunedin, for supplying specimens and information on *Huttonia*, and to Dr. J. A. L. Cooke for providing data on the habitat of *Stenochilus hobsoni*.

## COMPARATIVE MORPHOLOGY

Stenochilids differ from palpimanids in many characters. They are instantly recognizable by their peculiar diamond-shaped carapace, which is simple in outline in *Colopea* (figs. 24, 25) and modified with numerous undulations in *Stenochilus* (figs. 1, 16). In palpimanids, as in most spiders, the carapace has a simple oval outline. In addition the stenochilid carapace is unique in that there are always two thoracic grooves (generally an anterior groove and a posterior pit) rather than one. The significance, if any, of the highly modified carapace, particularly in species like *Stenochilus crocatus* (fig. 16), is unknown.



FIGS. 1-3. *Stenochilus hobsoni* O. P.-Cambridge. 1. Carapace, dorsal view. 2. Eyes, anterodorsal view. 3. Sternum, ventral view.

The eye pattern of stenochilids is unlike that of palpimanids and resembles that of prodomids and some zodariids. The eyes of the right and left sides form single, continuous, gently curved rows (figs. 2, 18). In four of the five known stenochilid species, the posterior median eyes are unusually long, twice the size of the others (figs. 1, 16, 24).

In contrast to the palpimanids, the cheliceral fang furrow has no teeth, but, as in several haplogyne families, does have a basal lamella (fig. 27). Further, stenochilid species may be distinguished from palpimanids in that the labium is not free but completely fused to the sternum (figs. 3, 26).

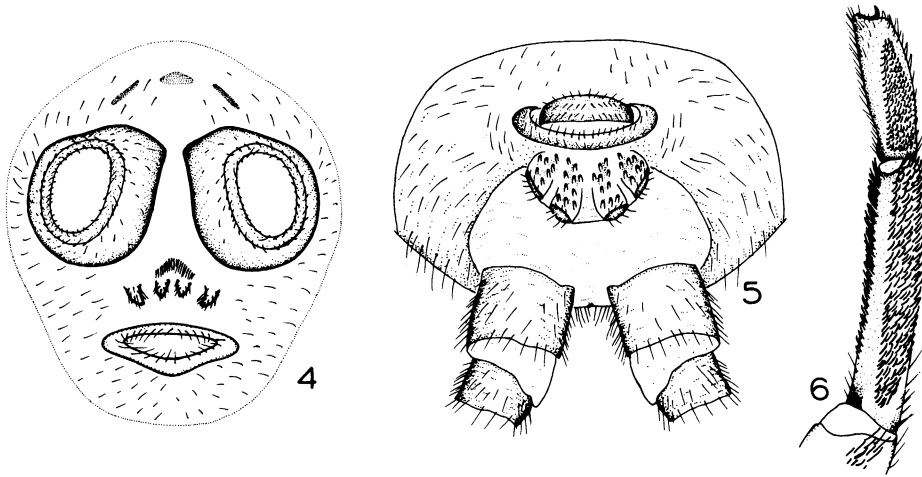
Both groups have an anterior abdominal scutum, but in palpimanids the scutum is a ringlike structure surrounding the entire anterior end of the abdomen, whereas in stenochilids it is reduced to a simple genital plate on the abdominal venter only.

Some of the most significant differences between the two groups are in the spinnerets, but because of the difficulties of examining them in juveniles and males many important details were not noticed by workers of the last century. One of the diagnostic characters of Palpimanidae is the presence of only two spinnerets, rather than the normal six. The stenochilids agree in having two large spinnerets, but differ by possessing remnants of the four posterior spinnerets as well.

In preserved males the two large spinnerets generally lie against the anal tubercle, and it is necessary to apply pressure anterior of the large spinnerets, forcing them apart, to observe the smaller structures. The remnants of males are not provided with spigots and appear nonfunctional. In females, however, they are considerably larger, easily visible, equipped with spigots, and fused into a platelike structure resembling a cribellum, except, of course, that it is behind, not in front of, the large spinnerets (figs. 4, 5).

Palpimanids are generally recognized by the numerous modifications of the first pair of legs, which are much larger than any of the others. The relative leg segment lengths of palpimanids are unique: the patella is greatly elongated, longer than the tibia, whereas the metatarsus is greatly shortened, shorter than the tarsus. In addition the first leg of palpimanids bears a characteristic dense, undivided prolateral scopula. The stenochilids, however, have both legs I and II enlarged and bearing scopulae. The relative leg segment lengths are those of typical spiders, not palpimanids, and the leg scopulae are divided into large prolateral and small ventral portions (fig. 6).

It is in the genitalia that the most convincing differences occur. The palpimanids are typical haplogyne spiders: the male palpi lack hematochae and consist of only a bulb and embolus in the American species, with a few additional ter-



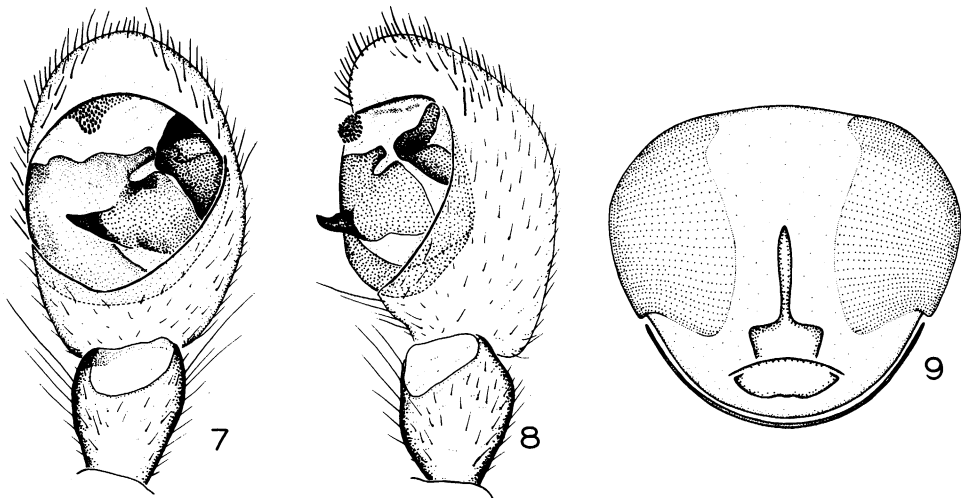
FIGS. 4-6. *Stenochilus hobsoni* O. P.-Cambridge. 4. Spinnerets of male, ventral view. 5. Spinnerets of female, dorsal view. 6. Tarsus and metatarsus I, prolateral view.

minal sclerites in African and Eurasian species; the bulb is attached to the proximal portion of the tarsus and is not protected by a cymbium; the females have no external epigynum and lack separate fertilization pores. Although stenochilid females resemble those of palpimanids, the male palpi are entelegyne, as they have hematodochae, lie, in their contracted state, in a deep alveolus of the cymbium, and are expansible (figs. 7, 8, 10,

11, 12). The significance of this difference, and the doubt it casts on the traditional division of ecribellate spiders into haplogynes and entelegynes, is being fully discussed in a separate paper.

PHYLOGENY

Only one derived character, the prolateral leg scopula, is found in all three subfamilies of Palpi-



FIGS. 7-9. *Stenochilus hobsoni* O. P.-Cambridge. 7. Palp, ventral view. 8. Palp, retrolateral view. 9. Internal female genitalia, dorsal view.

manidae as conceived by Simon. If, however, this is acknowledged as evidence that the three groups are monophyletic, we must accept the fact that as much divergence has occurred within this "family" of less than a hundred species as between much larger families of other labidognath spiders. *Huttonia* differs from palpimanids and stenochilids in almost every other major morphological character, including those given great weight in spider macrotaxonomy, such as the number of claws and the structure of the genitalia. As the leg scopula in *Huttonia* is only a narrow line of fine setae, quite unlike the dense brush of palpimanids and stenochilids, it is more reasonable to assume that this unusual genus had an independent origin, and that Simon erred in associating the three groups. For his series "Spiders of New Zealand," R. R. Forster is preparing a detailed study of *Huttonia*, in which he will assign it to its own family.

If we assume that the prolateral leg scopulae of palpimanids and stenochilids do indicate their common origin, we have abundant evidence that they are sister groups of equivalent rank. As the group as a whole must have evolved from a labidognath ancestor with the normal six spinnerets, the presence of remnants of the four posterior spinnerets indicates that the stenochilids diverged from the common stock early in its history. We can deduce from the present leg modifications of stenochilids that although at the time of divergence there was already a clear tendency toward enlargement and modification of the anterior legs, the greatly enlarged leg I and the peculiar relative leg segment lengths of present-day palpimanids had not yet evolved. Additional evidence of the relative age of the palpimanid-stenochilid divergence is provided by the numerous somatic and genitalic oddities of the stenochilids, their almost relictual distributional pattern (specimens are known from India, southeast Asia, New Guinea, and the Philippine and Fiji islands), and by the genitalic diversity of the extant stenochilids. In future papers we plan to demonstrate that Simon's Palpimaninae actually contains three divergent subfamilies; it is clear that the sister group of the stenochilids is not any of these younger, restricted subfamilies but Palpimanidae as a whole. Although it would be

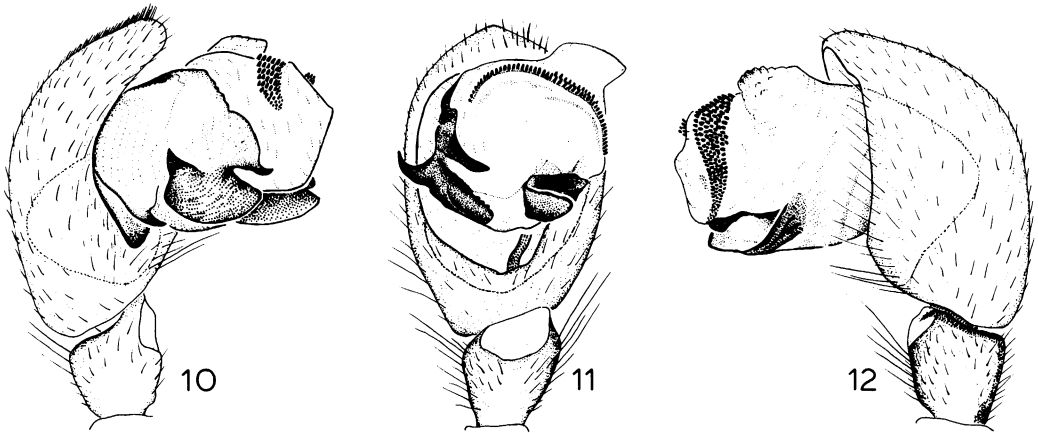
possible to consider the palpimanids and stenochilids as subfamilies if our restricted subfamilies were placed as tribes (a category seldom used in spider macrotaxonomy), the resulting family would be, as is hopefully clear from the morphological discussions above, out of line with the amount of divergence within and between other currently accepted spider families.

Two quite different types of male palpi are found in the two genera of Stenochilidae. *Stenochilus* males have entelegyne palpi with accessory sclerites (figs. 7, 13). The palpi of *Colopea*, however, are unlike those of any other spider known to us. At first glance they appear to be those of a typical haplogyne, what with their large bulbous tegulum (figs. 19-21, 28-30). Further investigation reveals the presence of an expansible hematodocha and the surprising lack of an embolus (figs. 22, 23). This condition can only be interpreted as a secondary reduction in complexity; we must postulate from the presence of hematodochae that earlier in their history *Colopea* males had typical entelegyne palpi and that for some reason both the embolus and all accessory sclerites have subsequently been lost. How this palpus functions in transmitting sperm without an embolus remains a mystery. The tip of the bulb seems to be porous in nature, and sperm may be transferred through those pores.

A phylogenetic tree reflecting the probable evolutionary history of the family is shown in figure 31. It must be remembered that the known distribution of these species indicates that additional species, and possibly genera, may eventually be found on other Pacific islands. The initial divergence of Palpimanidae and Stenochilidae has been argued above. Both the outlined differences in the male genitalia and the obvious differences in carapace shape (figs. 1, 16, 24, 25) support the *Stenochilus-Colopea* dichotomy. *Stenochilus hobsoni* and *scutulatus* resemble each other closely except for genitalic details and differ in carapace shape from *crocatius*.

Stenochilidae, then, may be defined by the following derived characters: the diamond-shaped carapace, the two thoracic grooves, and the presence of hematodochae in the male genitalia. Palpimanidae, as we restrict it, is defined by the presence of only two spin-





FIGS. 10-12. *Stenochilus hobsoni* O. P.-Cambridge, expanded palp. 10. Prolateral view. 11. Ventral view. 12. Retrolateral view.

nerets, elongated patellae, and shortened metatarsi, all derived characters. The two groups share one derived character, the prolateral leg scopulae.

STENOCHILIDAE

*Stenochiloidae* Thorell, 1873, p. 603.  
*Stenochilidae*: Simon, 1890, p. 81.  
*Stenochilinae*: Simon, 1893b, p. 393. Roewer, 1942, p. 380. Bonnet, 1956-1958, pt. 4, p. 4155.

**Diagnosis.** Stenochilids are immediately recognizable by their uniquely diamond-shaped carapace (figs. 1, 16, 24, 25). In addition, the presence of two thoracic grooves, four posterior spinneret remnants, and divided prolateral scopulae on metatarsi I and II are all diagnostic.

**Description.** Total length 3.5-10 mm. Carapace diamond-shaped, widest behind coxae II, heavily tuberculate, deep red. Two thoracic grooves, anterior usually slitlike, posterior a pit; cephalic area only slightly elevated. Anterior eye row slightly recurved, posterior row strongly procurved; eyes appearing as two curving longitudinal rows; anterior median eyes dark, others light; posterior medians usually elongate, others circular. Anterior medians separated by less than their diameter, closer to anterior laterals; posterior medians separated by their diameter, much closer to posterior laterals. Median ocular quadrangle longer than wide, wider in back than in

front. Clypeal height greater than anterior median eye diameter. Chelicerae light red, without marginal teeth, with basal lamella and lateral stridulating files. Endites light red, convergent, sharply pointed anteromedially, with greatly reduced serrulae. Labium light red, elongate, fused to sternum. Sternum with pronounced anterolateral elevations, sclerotized extensions surrounding coxae and prolonged extension between coxae IV. Leg formula 1243. Tarsi and metatarsi I and II with prolateral scopulae, divided on metatarsi into thick prolateral and thin ventral portions. Tarsi with two dentate claws and protruding onychium; claws reduced in size on legs I and II. Abdomen pale yellow with two brown oblique dorsal muscle impressions, coated with dark spinelike setae. Tracheal spiracle slightly anterior of spinnerets, sclerotized. Abdominal scutum restricted to venter. Two large spinnerets and four small posterior spinneret remnants, fused and platelike in females. Palpal femur with two small stridulating teeth. Female palp without claw.

KEY TO GENERA AND SPECIES OF STENOCHILIDAE

1. Carapace outline smooth, without undulations (figs. 24, 25) . . . . . *Colopea*, 2
- Carapace outline with undulations (figs. 1, 16) . . . . . *Stenochilus*, 3

2. Posterior median eyes elongate (fig. 24); tip of palpal bulb occupying one-fourth length of bulb (figs. 19-21); internal female genitalia as in figure 14; southeast Asia and the Philippines . . . . . *C. pusilla*  
Posterior median eyes rounded (fig. 25); tip of palpal bulb occupying less than one-fourth length of bulb (figs. 28-30); females unknown; Fiji . . . . . *C. tuberculata*
3. Carapace with pronounced undulations and extended posterior tip (fig. 16); males unknown; internal female genitalia as in figure 17; Burma and Cambodia . . . *S. crocatus*  
Carapace with gentle undulations and without extended posterior tip (fig. 1); India . . . . 4
4. Palpus with distal prong (figs. 13, 15); females unknown; northern India . . . *S. scutulatus*  
Palpus without distal prong (figs. 7, 8); internal female genitalia as in figure 9; southern India . . . . . *S. hobsoni*

#### STENOCHILUS

- Stenochilus* O. P.-Cambridge, 1870, p. 729, pl. 44, fig. 1 (type species by monotypy *Stenochilus hobsoni* O. P.-Cambridge).  
*Metronax* Simon, 1893b, p. 396, figs. 349-353 (type species by original designation *Stenochilus crocatus* Simon). NEW SYNONYMY.

**Diagnosis.** Species belonging to *Stenochilus* may be easily recognized by the laterally undulating margins of the carapace (figs. 1, 16). The presence of an embolus and accessory sclerites on the male palpus and an unpaired median spermatheca in the internal female genitalia are also diagnostic.

**Description.** Total length 4.6-9.8 mm. Carapace with laterally undulating margins, sometimes extended posteriorly. Dorsal surface of coxae rough but without distinct tubercles. Tarsal onychium clawlike on tarsi I and II. Male palpus with spinelike embolus and conspicuous terminal apophysis. Internal female genitalia consisting of single median spermatheca prolonged anteriorly into sharp point.

**Synonymy.** Simon distinguished *Metronax* from *Stenochilus* on the basis of minor differences in eye relationships. The similarities in carapace shape and particularly in the structure of the internal female genitalia indicate that the maintenance of a separate genus for *crocatus* is unwarranted.

#### *Stenochilus hobsoni* O. P.-Cambridge Figures 1-12

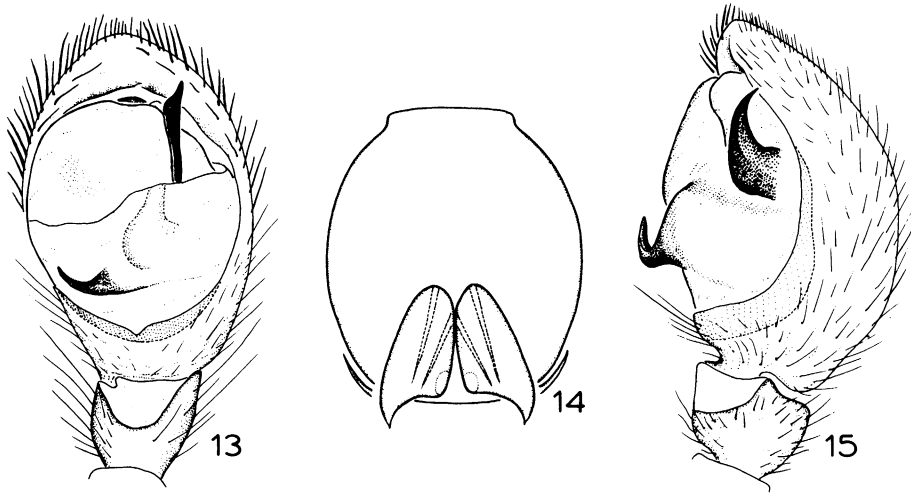
- Stenochilus hobsonii* O. P.-Cambridge, 1870, p. 729, pl. 44, fig. 1 (male holotype from Bombay, Maharashtra, India, in HDO, examined).  
*Stenochilus raudus* Simon, 1884, p. 368 (male holotype from "Genji," probably Gingee, near Pondicherry, Madras, India, in MNHN, examined). NEW SYNONYMY.  
*Metronax raudus*: Simon, 1893b, p. 396, fig. 354. Roewer, 1942, p. 380. Bonnet, 1956-1958, pt. 3, p. 2827.  
*Stenochilus hobsoni*: Simon, 1893b, p. 396. Roewer, 1942, p. 380. Bonnet, 1956-1958, pt. 4, p. 4155.

**Diagnosis.** *Stenochilus hobsoni* is closely related to *scutulatus*, with which it forms a distinct species group restricted, so far as is known, to India. Although females of *scutulatus* are unknown, the males can be easily distinguished by the peculiar series of tiny black denticles found on the prolateral side of the tip of the palpal bulb in *hobsoni*. In addition, the two species seem to be allopatric, *hobsoni* occurring in southern and *scutulatus* in northern India.

**Male.** Total length 4.82-7.42 mm. Carapace 2.20-3.71 mm. long, 1.21-1.94 mm. wide. Femur I 1.40-2.41 mm. long (five specimens). Palp with spinelike embolus, ridgelike terminal apophysis, and anterolateral series of tiny black denticles (figs. 7, 8; expanded palp, figs. 10-12).

**Female.** Total length 5.67-6.62 mm. Carapace 2.38-3.35 mm. long, 1.39-1.73 mm. wide. Femur I 1.58-2.16 mm. long (four specimens). Internal female genitalia with broad, convex base and long thin tip, anterior portions unsclerotized (fig. 9).

**Material Examined.** India: Andhra Pradesh: Tirupati, near campus, Dec. 13, 1965 (J. A. L. Cooke, AMNH), 1 ♂; Narayana Vanam Kona, near Tirupati, Jan. 21, 1966 (J. A. L. Cooke, AMNH), 1 ♂. Maharashtra: 20 miles north of Bombay, Jan. 21, 1962, 50 meters (E. S. Ross and D. Q. Cavagnaro, CAS), 1 ♀; 3 miles northwest of Sinnar, Jan. 16, 1962, 700 meters (E. S. Ross and D. Q. Cavagnaro, CAS), 1 ♀; Mahabaleshwar, Feb. 13, 1962, 1250 meters (E. S. Ross and D. Q. Cavagnaro, CAS), 1 ♂, 1 ♀. Mysore: 5 miles



FIGS. 13-15. 13, 15. *Stenochilus scutulatus*, new species, palp. 13. Ventral view. 15. Retrolateral view. 14. *Colopea pusilla* (Simon), internal female genitalia, dorsal view.

west of Hunsur, Feb. 24, 1962, 850 meters (E. S. Ross and D. Q. Cavagnaro, CAS), 1 ♀.

**Distribution.** Southern India (Madras, Mysore, Andhra Pradesh, and Maharashtra).

**Natural History.** Cooke supplied the following information regarding the habits and habitat of this species in Andhra Pradesh: "they were not rare in the area. They were in silk tubes about 2 inches long or more beneath impacted large stones on red dusty soil in an area of open arid (seasonally) scrub land rather like the deserts of the southwestern United States, with low, prickly bushes at intervals. At this season the rains had just stopped, leaving the soil damp for about a week."

**Synonymy.** Simon established *raudus* on the basis of discrepancies in eye relationships between his specimens and Cambridge's faulty illustration and description. Apparently Simon never examined the type of *hobsoni*, which corresponds to *raudus* in genitalic details, even though it is somewhat smaller than the other available males of this species.

***Stenochilus scutulatus*, new species**  
Figures 13, 15

**Type.** Male holotype from south of Pali, Rajasthan, India, 275 meters (January 8, 1962;

E. S. Ross and D. Q. Cavagnaro), deposited in CAS.

**Etymology.** The specific name is from the Latin *scutula* (diamond-shaped) and refers to the shape of the carapace.

**Diagnosis.** *Stenochilus scutulatus* is very closely related to *hobsoni*, but may be distinguished by its pronglike terminal apophysis (figs. 13, 15).

**Male.** Total length 4.68-5.36 mm. Carapace 2.02-2.36 mm. long, 1.22-1.30 mm. wide. Femur I 1.39-1.58 mm. long (three specimens). Palp with spinelike embolus and pronglike terminal apophysis (figs. 13, 15).

**Female.** Unknown.

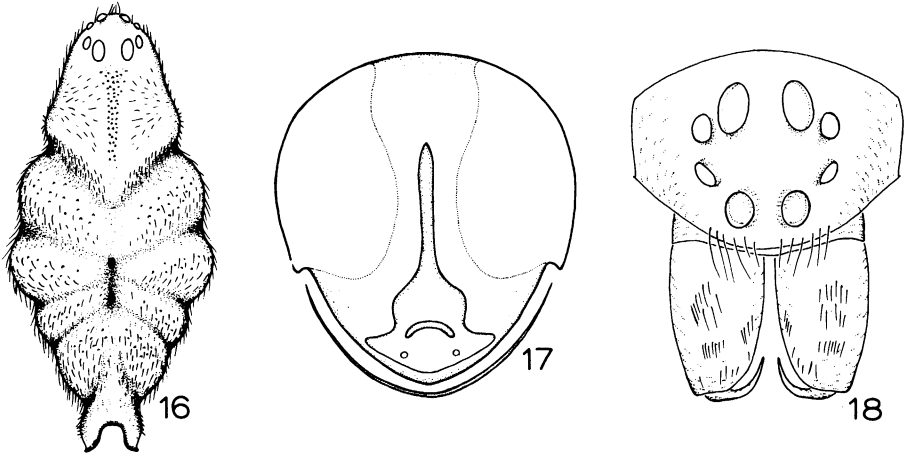
**Material Examined.** India: Rajasthan: Kishangarh, Jan. 7, 1962, 450 meters (E. S. Ross and D. Q. Cavagnaro, CAS), 1 ♂; 2 miles southeast of Sirohi, Jan. 9, 1962, 450 meters (E. S. Ross and D. Q. Cavagnaro, CAS), 1 ♂.

**Distribution.** Northern India (Rajasthan).

***Stenochilus crocatus* Simon**  
Figures 16-18

*Stenochilus crocatus* Simon, 1884, p. 341, figs. 4, 5 (female holotype from Minhla, Burma, in MCSN, examined).

*Metronax crocatus*: Simon, 1893b, p. 396, figs.



FIGS. 16-18. *Stenochilus crocatus* Simon. 16. Carapace, dorsal view. 17. Internal female genitalia, dorsal view. 18. Eyes, anterodorsal view.

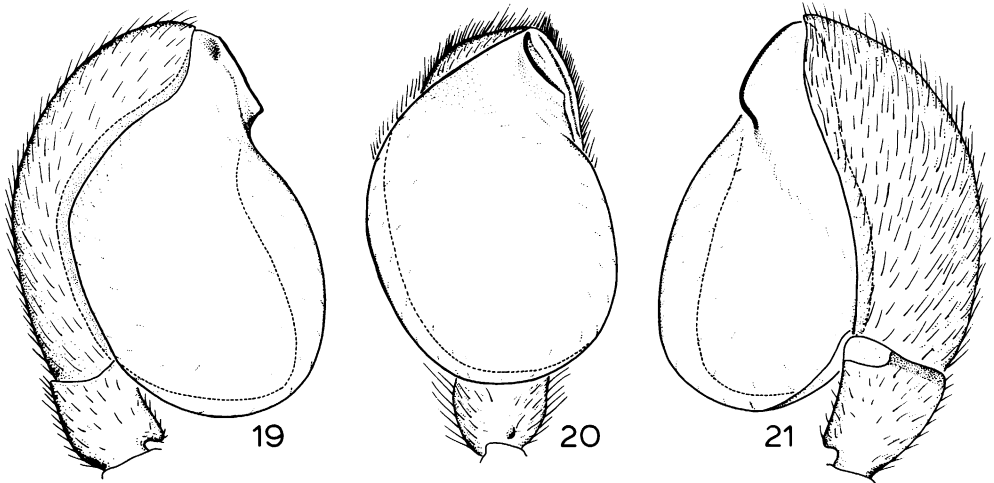
349-353. Thorell, 1897, p. 192. Roewer, 1942, p. 380. Bonnet, 1956-1958, pt. 3, p. 2827.

*Diagnosis.* *Stenochilus crocatus* is a distinctive species easily recognizable by the pronounced undulations and greatly extended posterior tip of the carapace (fig. 16).

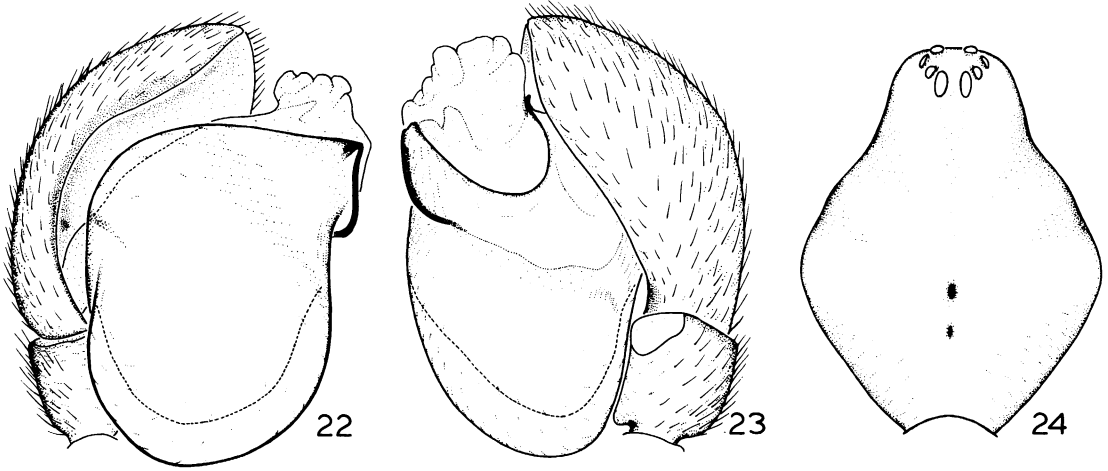
*Male.* Unknown.

*Female.* Total length 6.59-9.80 mm. Carapace 3.85-4.88 mm. long, 1.80-2.09 mm. wide. Femur I 2.12-2.68 mm. long (four specimens). Internal female genitalia with abruptly narrowed base containing sclerotized duct, and elongate tip (fig. 17).

*Material Examined.* Burma: Bhamo, Oct. 20,



FIGS. 19-21. *Colopea pusilla* (Simon), palp. 19. Prolateral view. 20. Ventral view. 21. Retrolateral view.



FIGS. 22-24. *Colopea pusilla* (Simon). 22, 23. Expanded palp. 22. Prolateral view. 23. Retrolateral view. 24. Carapace, dorsal view.

1896 (L. Fea, ZMH), 1 penultimate ♂, 1 ♀; Bhamo (BMNH), 1 ♀; Tharrawaddy (BMNH), 1 juvenile. Cambodia: no specific locality (MNHN), 1 ♀.

*Distribution.* Burma and Cambodia.

*COLOPEA*

*Colopea* Simon, 1893b, p. 397 (type species by original designation *Stenochilus pusillus* Simon).

*Diagnosis.* Species belonging to *Colopea* may be easily recognized by the absence of lateral undulations of the carapace margin (figs. 24, 25). The absence of an embolus and accessory sclerites on the male palpus and the presence of paired spermathecae in the internal female genitalia are also diagnostic.

*Description.* Total length 3.5-4.8 mm. Carapace with smooth lateral margins, not extended posteriorly. Coxae I and II with dorsal tubercles. Tarsal claws and onychium reduced on anterior legs. Male palpus without embolus or accessory sclerites. Internal female genitalia with paired spermathecae.

*Colopea pusilla* (Simon)

Figures 14, 19-24

*Stenochilus pusillus* Simon, 1893a, p. 76 (two

juvenile syntypes from Antipolo, Luzon, the Philippines, in MNHN, examined).

*Colopea pusilla*: Simon, 1893b, p. 397. Roewer, 1942, p. 380. Bonnet, 1956-1958, pt. 2, p. 1194.

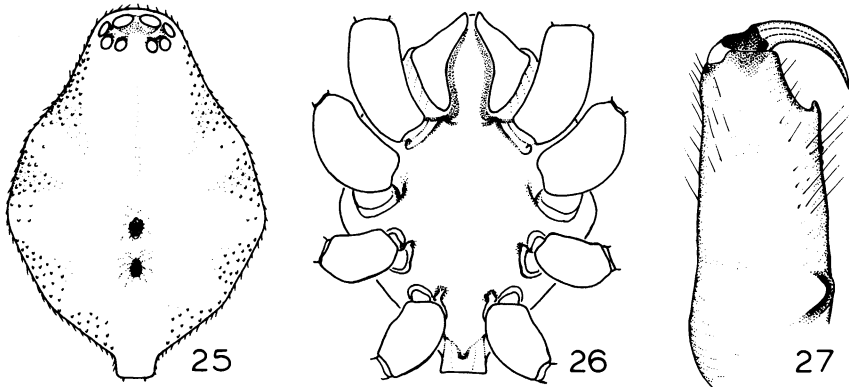
*Metronax laetus* Thorell, 1895, p. 18 (juvenile holotype from Tharrawaddy, Burma, in BMNH, examined). Roewer, 1942, p. 380. Bonnet, 1956-1958, pt. 3, p. 2827. NEW SYNONYMY.

*Diagnosis.* *Colopea pusilla* may be distinguished from *tuberculata* by the elongate posterior median eyes, the relatively larger tip of the palpal bulb (figs. 19-21), and its distribution.

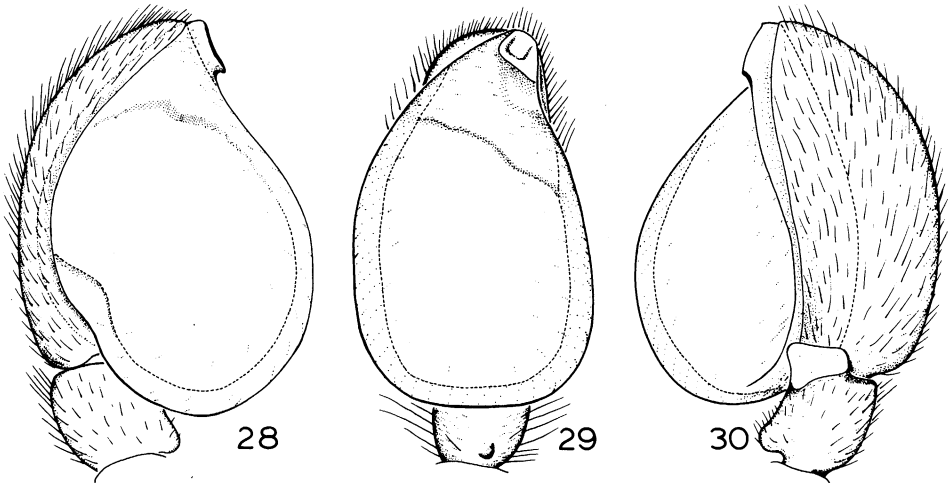
*Male:* Total length 3.94, 4.61 mm. Carapace 2.02, 2.30 mm. long, 1.40, 1.58 mm. wide. Femur I 1.48, 1.62 mm. long (two specimens). Posterior median eyes elongate. Tarsi I and II expanded ventrally. Tip of palpal bulb occupying one-fourth of bulb's length (figs. 19-21; expanded palp, figs. 22, 23).

*Female.* Total length 3.56 mm. Carapace 1.76 mm. long, 1.19 mm. wide. Femur I 1.26 mm. long (one specimen). Eyes and tarsi as in male. Internal female genitalia with posterolateral extensions (fig. 14).

*Material Examined.* Thailand: Bang Phra, around shores of artificial lake, Jan. 4, 1958 (N. Meinkoth, MCZ), 1 ♂; Mae Chiang Hai, July 13,



FIGS. 25-27. *Colopea tuberculata*, new species. 25. Carapace, dorsal view. 26. Sternum, ventral view. 27. Chelicera, ventral view.



FIGS. 28-30. *Colopea tuberculata*, new species, palp. 28. Prolateral view. 29. Ventral view. 30. Retrolateral view.

1962, 200 meters (E. S. Ross and D. Q. Cavagnaro, CAS), 1 ♂, 2 juveniles. Malaysia: Singapore (MNHN), 1 ♀.

*Distribution.* Burma, Thailand, Malaysia, and the Philippines.

*Synonymy.* Thorell's redescription of *Colopea pusilla* under a different genus and species is readily understandable in view of Simon's failure to illustrate either the somatic or genitalic characters of the taxon and the rather widespread distribution of the species.

*Discussion.* Two juvenile specimens from Port

Moresby, Papua, New Guinea (lent by Dr. R. R. Forster of the Otago Museum) may belong to this species, but definite placement must await the collection of adults on this island.

***Colopea tuberculata*, new species**  
 Figures 25-30

*Type.* Male holotype from Nandarivatu, Viti Levu, Fiji (no date; W. M. Mann), deposited in MCZ.

*Etymology.* The specific name is from the

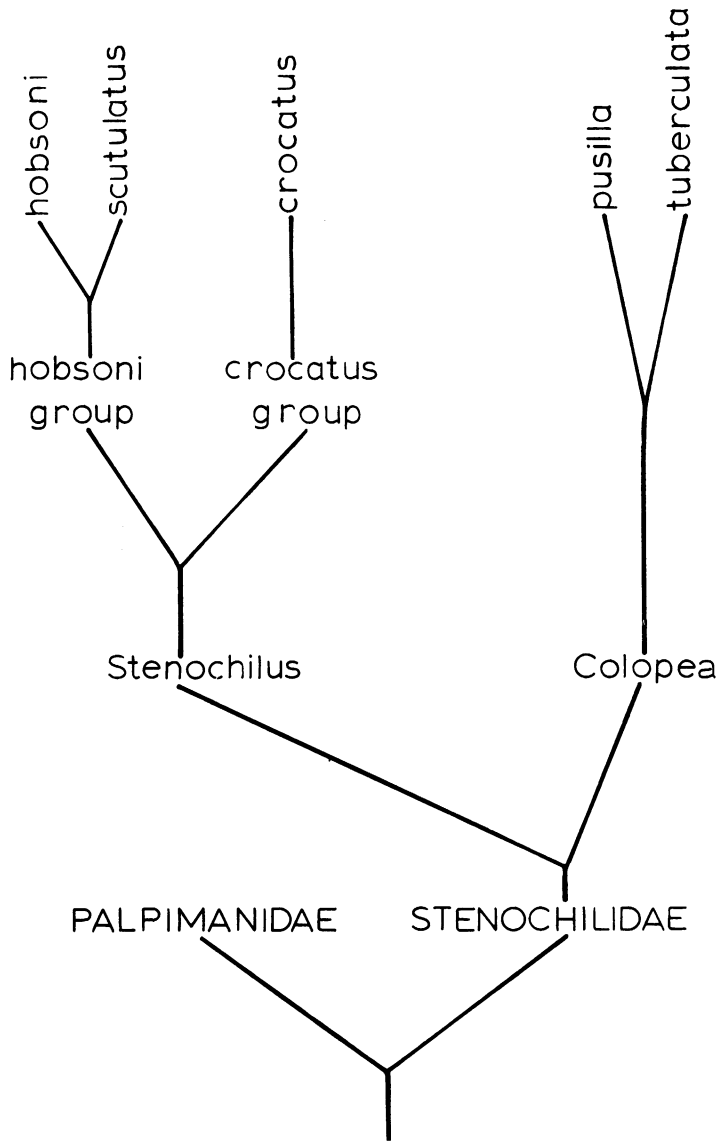


FIG. 31. Phylogenetic tree of Stenochilidae. See text for explanation.

Latin *tuberculum* (tubercle) and refers to the heavily tuberculate carapace.

*Diagnosis.* *Colopea tuberculata* may be distinguished from *pusilla* by the rounded posterior median eyes and the relatively shorter tip of the palpal bulb (figs. 28-30).

*Male.* Total length 4.43, 4.82 mm. Carapace 2.09, 2.41 mm. long, 1.58, 1.69 mm. wide. Fe-

mur I 1.66, 1.69 mm. long (two specimens). Posterior median eyes rounded. Tarsus I bent retro-laterally. Tip of palpal bulb occupying less than one-fourth of bulb's length (figs. 28-30).

*Female.* Unknown.

*Material Examined.* Fiji: Viti Levu (W. M. Mann, MCZ), 1 ♂.

*Distribution.* Fiji.

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