The aim of the present paper is to review the Coleophoridae of India and neighbouring regions, i.e. the former ‘British India’. These were described by Edward Meyrick between 1917 and 1933. Since then there has been no further work on Indian Coleophoridae, and since the independence of India in 1948 no more species have been recorded from that vast region, which undoubtedly has a very interesting fauna. Recently a number of species have been recorded from Pakistan (Baldizzone 1994). These are not treated in this paper (except for the check-list), in which only Meyrick’s species are reviewed. In total Meyrick described 20 species, 19 in Coleophora Hübner and one in Macrocorystis Meyrick, here synonymised with Coleophora. Three species are transferred to other families in Gelechioidea and one is synonymised, so that still 16 Coleophora species named by Meyrick are recognised.


The present taxonomic knowledge of the Coleophoridae of the Indian subcontinent and Sri Lanka is reviewed. Nineteen species are treated here, all described by E. Meyrick; three of them are transferred from Coleophoridae because of external morphology and genitalia structure: Coleophora aphypnota Meyrick, 1917 is transferred to Batrachedridae, C. crossophanes Meyrick, 1917 to Momphidae (provisional), and C. tarsocoma Meyrick, 1917 to Cosmopterigidae. The following new synonymies are established: the monotypic Macrocorystis Meyrick, 1931 is a junior synonym of Coleophora Hübner, 1822, C. enchorda Meyrick, 1931 a junior synonym of C. versurella Zeller, 1849, and C. sarohiensis‘Toll & Amsel, 1967 a junior synonym of C. niphosta Meyrick, 1917. Coleophora byrostola (Meyrick, 1931) is a new combination (from Macrocorystis). Lectotypes are selected for 8 species. A checklist of the 34 Coleophoridae of the Indian subcontinent and Sri Lanka is provided.

Dr. G. Baldizzone, Via Manzoni, 24, I-14100 Asti, Italy. E-mail: bldz@libero.it [corresponding author]

H. W. van der Wolf, Andriesplein 2, NL 5671 VS Nuenen, The Netherlands. E-mail: van-der.wolf@hccnet.nl

Key words. – Coleophoridae; Batrachedridae; Momphidae; Cosmopterigidae; Indian subcontinent; India; Sri Lanka; new synonymies.

Material

All the Meyrick types studied are in the Natural History Museum in London. Not all specimens were studied, but representative syntype specimens (with suggestions for lectotype selection) were selected by Dr. K. Sattler or Mr. K. Tuck for study by the senior author. From these eight lectotypes were selected. The identity of Coleophora species can only be established with certainty on the basis of genitalia characters; therefore lectotype selection of specimens with genitalia preparation is essential to prevent future confusion (ICZN article 74.7.3).

The label information of types is cited in full, ‘1/3’ indicates the first specimen of a series of three of that species in the Meyrick collection (not necessarily all of which are types).
Abbreviations for Museums
DEI Deutsches Entomologisches Institut, Eberswalde, Germany.
BMNH Natural History Museum, London, U.K.
USNM United States National Museum, Smithsonian Institution, Washington, USA.

Checklist of the Coleophoridae of the Indian subcontinent and Sri Lanka

**Coleophora** Hübner, 1822

*Macrocorystis* Meyrick, 1931 *syn. n.*

* crypsiphanes* Meyrick, 1917; Sri Lanka

*aegra* Meyrick, 1917; Pakistan, Afghanistan

*thiophaea* Meyrick, 1917; India

*aleyonipennella* (Kollar, 1832); Palaeartic, Pakistan, Australia (intr.), New Zealand (intr.)

*statherota* Meyrick, 1917; Sri Lanka

*parapartarmica* Toll & Amsel, 1967; Central Asia, Pakistan

*kabulensis* Baldizzone, 1994; Afghanistan, Pakistan

*sogdianae* Baldizzone, 1994; Iran, Afghanistan, Pakistan

*swatensis* Baldizzone, 1994; Iran, Afghanistan, Pakistan

*salviella* Chrétien, 1917; North Africa, Central Asia, Pakistan

*parthenica* Meyrick, 1891; Palaeartic, Pakistan, U.S.A. (intr.)

*galligena* Falkovitsh, 1970; Central Asia, Jordan, Pakistan

*ktimeschiella*, Toll, 1952; Palaeartic, Pakistan, U.S.A (intr.)

*byrsostola* (Meyrick, 1931) (*Macrocorystis*) comb. n.; India

*centrota* Meyrick, 1917; India

*longiductella* Baldizzone, 1989; Iran, Pakistan

*tollamseliella* Oudejans, 1971; Central Asia, Pakistan

*caelebipennella* Zeller, 1839; Palaeartic, Pakistan

*argopleura* Meyrick, 1917; Afghanistan, Kashmir, Pakistan

*castalia* Meyrick, 1930; Afghanistan, Kashmir, Pakistan

*versurella* Zeller, 1849; Holartic, India, Argentina (intr.), Chile (intr.)

*enchorda* Meyrick, 1931 *syn. n.*

*aphrocrissa* Meyrick, 1933; Kashmir

*policromiensis* Toll & Amsel, 1967; Afghanistan, Pakistan

*abbusella* Baldizzone, 1994; Iran, Pakistan

*pakistana* Baldizzone, 1994; Pakistan

*echrypis* Meyrick, 1930; Kashmir

*ognotona* Meyrick, 1917; India, Sri Lanka

*pernoceros* Meyrick, 1933; Kashmir

*niphomesta* Meyrick, 1917; Turkmenistan, Iran, Afghanistan, Pakistan

*sarobiensis* Toll & Amsel, 1967 *syn. n.*

*hydrella* Baldizzone, 1994; Pakistan

*gabralensis* Baldizzone, 1994; Pakistan

*gedrosiae* Baldizzone, 1994; Iran, Pakistan

*chordoscelis* Meyrick, 1917; India

*leucochares* Meyrick, 1922; India

Species transferred from Coleophoridae:

*Coleophora*’ aphypnota Meyrick, 1917 to Batrachedriidae

*Coleophora*’ crosophanes Meyrick, 1917 to Momphidae (provisional)

*Coleophora*’ tarsocoma Meyrick, 1917 to Cosmopterigidae

Genus **Coleophora** Hübner

**Coleophora** Hübner, 1822: 67. Type species (by monotypy): *Tinea anatipennella* Hübner, 1796: pl. 27, fig. 186.


Remark. – The structure of the genitalia of *Macrocorystis byrsostola* are those of a *Coleophora*. Thus *Macrocorystis* is a junior subjective synonym, see further under *C. byrsostola*.

**Coleophora crypsiphanes** Meyrick

(figs. 3, 21-24, 25-27.)


*Coleophora crypsophanes* Vives Moreno, 1988: 69. [Mis-spelling]


*Coleophora crypsophanes* Vives Moreno, 1988: 69. [Mis-spelling]

Description. – The original description is correct: ‘δ 10 mm., δ 14-16 mm. Head and thorax glossy whitish-grey or grey-whitish. Palpi and antennae simple, grey-whitish. Abdomen whitish-grey. Forewings narrowly elongate-lanceolate; greyish-ochreous, with strong silvery reflection, in δ irrorated with dark grey, especially towards costa and posteriorly; second discal stigma rather large, blackish: cilia ochreous-grey-whitish, gery towards tornus. Hindwings light grey; cilia whitish-grey.’ (Meyrick 1917: 70)

Male genitalia (fig. 21-22). – Spinose part of gnathos globular. Tegumen compact. Transtilla narrow and long, medially joined. Valvula indistinct. Cu-
cullus long. Saccus very simple, small, lateral margin ending ventrally in a rounded, sclerotized point. Phallotheca conical. Vesica without cornuti, well sclerotized on ventral margin.

Structure of abdominal supports (fig. 23). – Male with posterior lateral struts, about half length of anterior ones. Transverse strut characterised by straight proximal margin and convex distal margin, merging medially with proximal one. Tergal disks with rather small conical spines, about 6 or 7 times longer than wide. Female without posterior lateral struts, and with transverse strut almost straight, both margins slender and parallel. Tergal disks (3rd tergite) about 3 times longer than wide.

Female genitalia (fig. 25-26). – Papillae anaes large, long. Apophyses posteriores about half length of anterior ones. Sterigma subtrapezoid, membranous, sclerotized only at distal margin and at two lateral strips at ostium bursae originating at base of apophyses anterior and reaching proximal margin. Membranous ostium bursae small, funnel-shaped. Short colliculum, beaker-shaped, with very small internal spines. Ductus bursae completely transparent, about twice length of sterigma. Bursa copulatrix bag-shaped, very big and long, with striking heavily sclerotized sword-shaped signum.

Remark. – This species does not belong to any group of palaearctic Coleophoridae, but resembles certain species of the afrotropical region, which will be treated in a monograph by the authors.

Biology. – Unknown.

Distribution. – Sri Lanka: Maskeliya.

Coleophora aegra Meyrick
(figs. 4, 28-31)


Description. – The original description is correct: ‘11 mm. Head and thorax whitish-ochreous. Palpi ferruginous-yellowish or yellow-whitish. Antennae stout, ochreous-whitish, basal joint shortly rough-scaled anteriorly. Abdomen whitish-ochreous. Forewings elongate-lanceolate; light ochreous-yellow, deeper and ferruginous-tinged posteriorly; an undefined elongate rather dark fuscous patch extending along termen, suffused anteriorly with yellow-ferruginous: cilia greyish, on costa ochreous-yellow. Hindwings grey, tinged with pale ochreous towards apex; cilia pale grey, on costa tinged with ochreous.’


Structure of abdominal supports (fig. 31). – No posterior lateral struts. Transverse strut almost straight at proximal margin, slightly convex at distal margin, which is thicker near disks of second tergite. Tergal disks (3rd tergite), with short conical spines, about twice as long as wide.

Remark. – This species, of which the female is unknown, belongs to the second group of Toll’s system (1953, 1962), section C. serratella (Linnaeus, 1761), and is near C. neviusiella Busck, 1904, a species known from China and the oriental coast of Russia.

Biology. – Unknown.

Distribution. – Northern Pakistan: Abbottabad and Murree; Afghanistan: Nuristan.

Coleophora thiophaea Meyrick
(figs. 5, 32-35)


Description. – The original description is correct: ‘11 mm. Head and thorax whitish-ochreous. Palpi ferruginous-yellowish or yellow-whitish. Antennae stout, ochreous-whitish, basal joint shortly rough-scaled anteriorly. Abdomen whitish-ochreous. Forewings elongate-lanceolate; light ochreous-yellow, deeper and ferruginous-tinged posteriorly; an undefined elongate rather dark fuscous patch extending along termen, suffused anteriorly with yellow-ferruginous: cilia greyish, on costa ochreous-yellow. Hindwings grey, tinged with pale ochreous towards apex; cilia pale grey, on costa tinged with ochreous.’

Male genitalia (figs. 32-35). – Spinose part of gnathos oval, ventral margin enveloped by spinose structure joined to gnathos arms. Tegumen medially constricted, with two slightly widened arms. Transtilla small, subtriangular, extended. Valvula large, heavily sclerotized, ventral margin in the form of a teardrop, covered with bristles.; dorsal margin very thick, coverd with bristles.; dorsal margin very thick, covering cucullus margin towards ½ of its length. Cucullus short, narrower at base. Saccus narrow, long, ventral margin curved, ending at dorsal angle in a slightly curved subtriangular point. Phallotheca conical, long,
Coleophora statherota Meyrick (fils. 37-40, 42-44)

Coleophora statherota Meyrick, 1917: 72. Lectotype $\delta$ (here designated). SRI LANKA. – LECTOTYPE' (round blue-edged BMNH label), 'Maskeliya, Ceylon, Pole, 1. 06 ', 'statherota Meyr.' (Meyrick’s handwritten label), 'Coleophora statherota Meyr., 3/4, E. Meyrick det., in Meyrick coll.', 'Meyrick Coll., B.M. 1938-290', 'B.M. Genitalia Slide $\delta$ No 24474', 'Lectotype $\delta$, Coleophora statherota Meyr., teste K. Sattler, 1988' (BMNH) [examined].

Additional material examined. – SRI LANKA: 1 $\delta$ paralectotype, 'Maskeliya, Ceylon, de Mowbray, 8.05', 'Coleophora statherota Meyr., 2/4, E. Meyrick det., in Meyrick coll.', slide 24476 (BMNH); 1 $\delta$, N.E. Distr. Hakgala Botanical Gardens, 6000 feet, black light, 6-8.x.1976, G. F.Hevel, R. E.Dietz, S. Karunaratne, D. W. Balasooriya, slide Bdz 9209 (USNM).

Description. – The original description is correct: '18-20 mm. Head whitish-ochreous, sides of crown whitish. Palpi grey, white towards base beneath, scales of second joint hardly projecting at apex beneath. Antennae whitish, faintly and suffusedly ringed with fuscous, basal joint shortly rough-scal ed anteriorly. Thorax white, patagia more or less infuscated. Abdomen whitish-grey. Forewings narrowly elongate-lanceolate; fuscous, suffusedly streaked with dark fuscous between veins; a narrow white costal streak from base to near apex; veins more or less marked with ill-defined irregular white lines; cilia pale greyish, at apex with a suffused white bar. Hindwings grey; cilia light grey.'

Male genitalia (figs. 37-38). – Spinose part of gnathos large, globular. Tegumen long, medially constricted. Transtilla small, subtriangular. Valvula large, with rounded ventral margin. Cucullus long, club-shaped, very oblique. Sacculus narrow, long, characterised in the ventral angle by a long subtriangular point, in the dorsal angle by a long process attached to base of cucullus. Phallotheca big, conical, almost transparent. 6 cornuti, in the form of spines of different lengths.

Structure of abdominal supports (figs. 39, 44). – No lateral posterior struts; transverse strut straight, with rather reduced proximal margin. Tergal disks (3rd tergite) about 6-7 times longer than wide, with small conical spines.

Female genitalia (figs. 42-43). – Papillae anales large, narrow. Apophyses posteriores about 2.5 times longer than anteriores. Sterigma subtrapezoid, membranous, sclerotized mainly anteriorly on two strips from base of apophyses anteriores to distal margin. Ostium bursae small, arched, membranous. Colliculum forming a long funnel. Ductus bursae narrow, with long medial line about $\frac{3}{4}$ of its length from colliculum; then widening with a convolution, ending in bursa copulatrix, which is small, oval, without signum.

Remark. – The species probably belongs to the group of C. conyzae Zeller, 1868 because of the structure of the genitalia, but it is rather characteristic because of the structure of the sacculus in the male, and of the ductus bursae and the absence of a signum in the female.

Biology. – Unknown.

Distribution. – Sri Lanka: central mountains.

Coleophora byrostola Meyrick comb. n. (fils. 7, 45-48, 50-53)

Macrocorystis byrostola Meyrick, 1931: 49. Lectotype $\delta$ (here designated), INDIA. – LECTOTYPE' (round purple-edged BMNH label), 'Mahableshwar Bombay RM. Bred .6. 30' (Meyrick’s handwritten label), 'Macrocorystis birsostola (sic) Meyr. 1/9, E. Meyrick det., in Meyrick Coll.’ 'Meyrick Coll., B.M. 1938-290', 'MACROCORYSTIS Meyr.’ (Meyrick’s handwritten label), 'birsostola' (Meyrick’s handwritten label), 'Lectotype $\delta$, Macrocorystis birsostola (sic) Meyr., teste K. Sattler, 1988' (BMNH) [not examined].

Material examined. – INDIA: 1 $\delta$, Mahableshwar, 8.v.30, R.Maxwell, slide 24468 (BMNH); 1 $\delta$, Mahableshwar, 8.vi.30, R. Maxwell, slide 24469 (BMNH); 1 $\delta$, Didibi, N. Coorg, LN. vii.[19]07, [as Coleophora tarsocoma Meyr. 1/4], slide 24454 (BMNH).

Description. – The original description is correct: '8-9 mm. Head antennae whitish-ochreous. Palpi, thorax greyish-ochreous. Forewings elongate-lanceolate; greyish-ochreous; second discal stigma dark fuscous: cilia whitish-grey-ochreous. Hindwings light grey; cilia whitish-grey-ochreous.'

Male genitalia (fig. 45-48). – Spinose part of gnathos globular. Tegumen medially constricted. Transtilla slender, long, medially joined. Valvula big, covered with bristles, rounded on the ventral margin. Cucullus short, stout, with broad base. Sacculus rather small, on the lateral margin ending in a more or less long and rounded process. Phallotheca short, conical, more sclerotized on the ventral margin, end-
ing in a beak-shaped point. Numerous cornuti, in the form of spines of different lengths.

Structure of abdominal supports (figs. 49, 53). – No posterior lateral struts; transverse strut slender, convex in the form of an obtuse angle. Tergal disks, with many conical spines, about 3 times longer than wide (3rd tergite).

Female genitalia (figs. 50-52). – Papillae anales large, oval. Apophyses posteriores about half length of anteriores. Sterigma subtrapezoidal, rather wide and short. Ostium bursae arched. Colliculum beaker-shaped. Ductus bursae with a spinose, coiled sleeve only in a short distal section; remainder of ductus transparent, slightly more sclerotized near the insertion of the ductus seminalis. Bursa copulatrix rounded, with a big anchor-shaped signum.

Remark. – It is difficult to place the species in a group of Toll’s system. It does not resemble any palaearctic species, but it has links with some afrotropical species, which are still being studied.

Biology. – According to the original description the species was bred from leaves of Strobilanthes (Acanthaceae), ‘from larvae mining blotches in December in leaf of Strobilanthes (Acanthaceae), several in one leaf; pupa within blotch, forming a compact oval opaque capsule, which usually drops out as the mined portion of leaf withers.’

Distribution. – Western India: Maharasthra, Mahabelshwar; south-western India: Karnataka, Coorg plateau.

Coleophora centrota Meyrick (fig. 8)


Description. – The original description is correct: ‘18 mm. Head and thorax white. Palpi white, second joint with scales hardly projecting at apex beneath. Antennae white, basal joint roughly tufted anteriorly with long scales, stalk clothed with long rough scales above towards base. Abdomen ochreous-whitish. Forewings lanceolate; ochreous-yellow, towards costa suffused with fuscous; a strong white costal streak from base to ¾, extreme costal edge dark grey towards base; dorsum suffused with white anteriorly, dorsal edge white to beyond middle; a fine white line along fold from base to middle of wing: cilia pale ochreous. Hindwings dark grey; cilia light greyish-ochreous.’

Male genitalia (fig. 54-56). – Spinose part of gnathos globular. Tegumen constricted at base of gnathos arms. Transtilla rather small, subtriangular. Valvula with rounded ventral margin; dorsal margin with short sclerotized bristle. Cucullus rather long, club-shaped, considerably constricted at base. Sacculus small, simple, with curved ventral margin, ending in triangular point on lateral margin. Phallotheca conical, dorsally partially sclerotized. Cornuti 5-6, stout spines, reunited into a chain.

Structure of abdominal supports (figs. 57, 60). – Posterior lateral struts about 2.5-3.0 times shorter than anteriores. Transverse strut slightly convex, slender. Tergal disks, with many short conical spines, about twice longer than wide (3rd tergite).

Female genitalia (figs. 58-59). – Papillae anales large, oval. Apophyses posteriores about 2.5 times longer than anteriores. Sterigma subtriangular, its proximal margin rather wide, distal margin long and medially, near the arched ostium bursae, very spinose. Colliculum beaker-shaped. Ductus bursae rather long, a medial line occupying about ¼ of its length, the distal spinose sleeve occupying ½. Bursa copulatrix ample, transparent, with leaf-shaped signum.

Remark. – The species belongs to the 18th group of Toll’s system; the genitalia do not allow a more de-
tailed positioning.

Biology. – Unknown.

Distribution. – Northern Pakistan, Kashmir, north-eastern Afghanistan.

Coleophora castalia Meyrick (figs. 10, 61-64, 65-67)

Coleophora castalia Meyrick, 1930:561. Holotype ♂, INDIA. – 'HOLOTYPE' (round purple-edged BMNH label), 'Yusimarg, Kashmir, 7500', TBF. 8, 23°, 'castalia Meyr.' (Meyrick's handwritten label), 'Coleophora castalia Meyr., 1/1, E. Meyrick det., in Meyrick coll.', 'Meyrick Coll., BM 1938-290', 'B.M. Genitalia Slide ♂ 24440', 'Holotype ♂, Coleophora argopleura Meyr., teste K. Sattler, 1986' (BMNH) [examined].


Description. – The original description, based on a single specimen, is correct: '18 mm. Head ochreous-white. Palpi whitish. Antennae whitish ringed greyish-ochreous, scale with rough projecting hairscales anteriorly, basal sixth of stalk thickened with loose scales above. Forewings brownish, dorsal half very pale ochreous; a moderate attenuated white costal streak from base to ¾; streaks of white suffusion confluent towards base along dorsum to middle of wing, and along fold; a slender streak of white suffusion beneath brown area from middle of disc to beneath apex, broader posteriorly: cilia white, towards tornus tinged pale ochreous. Hindwings grey; cilia ochreous-grey-whitish.' It should be noted that there is a certain variation in colour, more or less fuscous, according to the locality. The same holds good for the white costal line, which is more or less wide, and purely white, or slightly suffused with brown.

Male genitalia (figs. 61-63). – Spinose part of gnathos big, pear-shaped. Tegumen long, constricted at gnathos base. Transtilla small, subtriangular. Valvula wide, rounded, covered with bristles. Saccus short, rounded and sclerotized on lateral margin, a small triangular tooth on dorsal angle. Phallotheca conical, long, partially sclerotized on dorsal and lateral sides. Numerous cornuti, as small spines, most of them reunited into long strip.

Structure of abdominal supports (figs. 64, 67). – Posterior lateral struts, poorly indicated, are about half length of anteriores. The almost straight transverse strut slender. Tergal disks, covered with strong conical spines, about twice longer than wide (3d tergite).

Female genitalia (figs. 65-66). – Papillae analae oval. Apophyses posteriores about 3 times length of the anteriores. Sterigma subtrapezoidal, sclerotized mainly in central anterior part. Ostium bursae arched. Colliculum beaker-shaped. Ductus bursae with medi- al line over ¾ of its length, covered by a sleeve with small spines over half its length; ductus transparent, with central convolutions ending in bursa copulatrix, which is round, with large leaf-shaped signum.

Remark. – The structure of the genitalia of the holotype of C. enchorda, as described by Meyrick, shows that this is a junior synonym of Coleophora versurella Zeller, 1849.

Biology. – According to Meyrick’s description the specimen was bred from Amaranthus. In fact, the larva of C. versurella lives on several Amaranthaceae.

Distribution. – A species with a Holarctic distribution. Also known from South America.

Coleophora aphrocrossa Meyrick (figs. 11, 68-70)

Coleophora aphrocrossa Meyrick, 1933:364. Holotype ♂, INDIA. – 'HOLOTYPE' (round purple-edged BMNH label), 'Gulmarg, Kashmir, TBF. 8800' J. 31°, 'aphrocrossa Meyr.' (Meyrick's handwritten label), 'Coleophora aphrocrossa Meyr., 1/1, E. Meyrick det., in Meyrick coll.', 'Meyrick Coll., BM 1938-290', 'B.M. Genitalia Slide ♂ 24441', 'Holotype ♂, Coleophora aphrocrossa Meyr., teste K. Sattler, 1986' (BMNH) [examined].

Description. – The original description is correct: ‘12 mm. Head light greyish, crown fuscous except sides. Palpi white, oblique apical half of second joint grey becoming fuscous anteriorly, with slight apical projection. Antennae white ringed dark fuscous, scape loosely scaled. Thorax grey. Forewings grey;
costal edge ochreous-white from near base to apex: cilia whitish-grey; on costa ochreous-whitish. Hindwings light grey; cilia whitish-grey.’

Female genitalia (figs. 68-69). – Papillae anales long, very slender. Apophyses posteriores about 5 times longer than anteriores. Sterigma subtrapezoidal, excavated in distal margin near ostium bursae, which is arched. Colliculum narrow, long, rather sclerotized. Ductus bursae with medial line in distal half, which is covered by sleeve with small spines over ⅓ of its length; proximal half of ductus almost transparent, with speckled sclerotization. Bursa copulatrix ample, with small leaf-shaped signum.

Structure of abdominal supports (fig. 70). – No posterior lateral struts; transverse strut slightly convex. Tergal disks, with small conical spines, about 1.5 times longer than wide (3rd tergite).

Remark. – The species, of which the male is unknown, belongs to the 30th group of Toll’s system, and can be placed in the section of *C. vestiarella* Zeller, 1849.

Biology. – Unknown.

Distribution. – Western Kashmir: Gulmarg.

**Coleophora echyropis** Meyrick
(figs. 6)


Original description: ‘♂, 14 mm. (Head and thorax discoloured.) Antennae white ringed fuscous, scape rather rough-scaled anteriorly. Palpi white, second joint with a fuscous lateral streak, scales shortly projecting at apex, terminal joint ⅔ of second. Forewings light greyish-ochreous; a broad white streak with two or three black specks along costa from base to ⅔, suffused posteriorly; apical third of wing suffusedly mixed white, with a very few black specks between veins; a slender whitish-grey streak in posterior half of cell, with a few black scales; a greyish line with some black scales along fold: cilia whitish-grey mixed white at base, on costa white. Hindwings grey; cilia pale grey.’

Remark. – The holotype is in bad condition: the right wings and the abdomen are missing. Therefore it is impossible to identify the specimen. Judging from the remaining forewing, the species might belong to the group of *C. vestiarella* (Linnaeus, 1758).

**Coleophora ogmotona** Meyrick
(figs. 15, 71-74)


Description. – The original description is correct: ‘8 mm. Head and palpi fuscous-whitish. Antennae stout towards base, grey obscurely ringed with whitish. Thorax fuscous, with four whitish longitudinal lines. Abdomen grey. Forewings elongate-lanceolate; fuscous, obscurely darker-sprinkled; veins marked by slender whitish lines: cilia light grey. Hindwings grey; cilia light grey.’

Male genitalia (figs. 71-73). – Globular part of gnathos small, rounded. Tegumen small, medially with an Y-shaped reinforcement. Transstilla small, subtriangular. Valvula small, well sclerotized, extended on the ventral margin. Cucullus long, apically slightly wider than basally. Saccus with complex structure: from the ventral margin rises a long process in the form of an acute horn, reaching base of dorsal angle; a short, curved protuberance, on lateral margin near ventral angle, and a slightly longer one on dorsal angle. Phallotheca with two sclerotized, almost symmetrical rods, apically with curved, acute point. Cornutus small, like a spine.

Structure of abdominal supports (fig. 74). – No posterior lateral struts; transverse strut straight, more sclerotized on proximal margin. Tergal disks, with small conical spines, about twice longer than wide (3rd tergite).

Remark. – The species, of which the female is unknown, belongs to the 30th group of Toll’s system. The structure of the saccus resembles more or less that of *C. gymnocarpella* Walsingham, 1907, whose genitalia were illustrated by Baldizzone (1994).

Biology. – Unknown.

Distribution. – South-western India: Dharwar plateau; Sri-Lanka: western region, Puttalam.

**Coleophora percnoceros** Meyrick
(figs. 12, 75-78)

**Coleophora percnoceros** Meyrick, 1933: 365. Holotype ♂, INdia. – ‘Holotype’ (round purple-edged BMNH label), ‘Killanmarg, Kashmir, 10500‘ TBF, 7‘, ‘percnoceros Meyr.’ (Meyrick’s handwritten label), ‘Coleophora percnoceros Meyr., 1/1, E. Meyrick det., in Meyrick coll.’,
'Meyr., 1917:73. Lectotype *Coleophora niphomesta* (Meyr., teste K. Sattler, 1986' (BMNH) [examined].

Description. – The original description is correct: '12 mm. Head, thorax light grey slightly mixed white. Palpi without projection, grey, internally white. Antennae dark grey, scape smooth. Forewings light ash-grey; costal edge suffused whitish from base to beyond middle; veins indicated by faint streaks of whitish suffusion: cilia pale grey, on costa whitish except near apex of wing. Hindwings light grey; cilia pale grey.'

Male genitalia (figs. 75-77). – Spinose part of gnathos suboval. Tegumen with two long, externally dilated arms. Transtilla slender, long. Valvula rounded on ventral margin. Cucullus compact, ear-shaped. Saccus big, narrow, characterised by small triangular tooth in ventral angle, a curved one in dorsal angle, and a smaller one on lateral margin halfway between preceding ones. Phallotheca with two robust rods, the longer terminating in a conical point, the other with small tooth dorsally on apex. Two small cornuti, basally joined, forming a spine.

Structure of abdominal supports (fig. 78). – No posterior lateral struts; transverse strut straight, wide, with thicker proximal margin, distal margin more slender and convex. Tergal disks, with small conical spines, about 5 times longer than wide (3rd tergite).

Remark. – The species, of which the female is unknown, belongs to the 30th group of Toll’s system, and resembles *C. leonensis* Baldizzone & van der Wolf, 2000, although the structure of the sacculus is different: longer on the lateral margin.

Biology. – Unknown.

Distribution. – Kashmir.

*Coleophora niphomesta* Meyrick (figs. 14, 79-83, 84-86)


Description. – The very detailed original description is based on a single specimen: '11 mm. Head and thorax white. Palpi white, externally with a grey line, scales hardly projecting at apex of second joint beneath. Antennae white ringed with pale fuscous, basal joint somewhat roughened with scales anteriorly. Abdomen whitish-grey. Posterior tibiae white with a fuscous longitudinal line. Forewings lanceolate; whitish-ochreous; a white streak along costa from base to ⅔, one suffused along dorsum from base to ⅔, and one along fold throughout; two or three suffused white streaks on veins towards costa posteriorly, and one from middle of disc somewhat downward-sinuate to termen beneath apex: cilia pale greyish, with white scales at base. Hindwings pale grey; cilia ochreous-whitish-grey.’ When studying several specimens from Iran and Afghanistan we noticed that sometimes the forewings have no white lines along the veins, but are almost unicolorous, white dirty-ochreous sprinkled with some darker scales.

Male genitalia (figs. 79-82). – Spinose part of gnathos small, globular. Tegumen with two long arms. Transtilla slender, extended. Valvula small, sclerotized, with rounded ventral margin. Cucullus club-shaped. Saccus characterised by large rounded protuberance in ventral angle, and in dorsal angle a big curved horn, with triangular tooth on inner side. Phallotheca with two curved almost symmetrical rods, with a tooth on dorsal side in variable position according to the specimen, normally at ⅓ before apex; another smaller subtriangular more or less acute tooth on apex. Cornuti rather small, 2-3, joined into spine-like formation.

Structure of abdominal supports (fig. 83, 86). – No posterior lateral struts; transverse strut almost straight, with two clear margins in male, and merged ones in female. Tergal disks, covered with small conical spines, 2.5 times longer than wide in male, and 3.5 times in female (3rd tergite).

Female genitalia (figs. 84-85). – Papillae analis oval, long. Apophyses posteriores about twice length of anteriores. Sterigma subtrapezoidal, with rounded distal margin. Ostium bursae arched. Colliculum a widened beaker. Ductus bursae with spinose sleeve in distal section, which is about ⅓ of its total length; other part of ductus transparent, ending in bag-shaped bursa copulatrix containing a leaf-like signum.

Remark. – The species belongs to the 30th group of Toll’s system, near *C. beduina* Baldizzone, 1987.

Biology. – The larva lives on *Aerva persica* (Amaranthaceae), the plant on which F. Kasy found it in Iran (Baldizzone 1994: 173).

Distribution. – Turkmenistan, Iran, Pakistan, Afghanistan.

*Coleophora chordoscelis* Meyrick (figs. 13, 87-89)

Description. – The original description is correct: ‘δ, ξ. 12 mm. Head and thorax glossy light grey, extreme lateral edge of crown whitish. Palpi smooth, light grey, edges white. Antennae stout towards base, white suffusedly ringed with grey. Abdomen light grey. Posterior tibiae white with a fine median longitudinal fuscous line. Forewings narrow-lanceolate; glossy light greyish-ochreous suffused with light grey; costal edge white from base to about ¾: cilia pale greyish, on costa whitish. Hindwings and cilia light grey.’

Female genitalia (figs. 87-88). – Papillae anales narrow, long. Apophyses posteriores about twice length of anteriores. Sterigma subtrapezoidal, very simple. Oesium bursae large, arched. Colliculum a long beaker. Ductus bursae, about 4 times longer than length of sterigma, totally transparent, with speckled sclerotization on two small coils joining bursa copulatrix, which is oval, with horn-shaped signum.

Structure of abdominal supports (fig. 89). – No posterior lateral struts; transverse strut slender, slightly convex. Tergal disks, with some small conical spines, 8-9 times longer than wide (3rd tergite).

Remark. – The species, whose male is unknown, belongs to the 30th group of Toll’s system, but the structure of the female genitalia does not allow a more precise position near other species. It should be noted that Meyrick in his description mentions four specimens of both sexes, while in the BMNH collection there are only females.

Biology. – Unknown.

Distribution. – South-eastern India: Tamil Nadu, Madras.

Coleophora leucochares Meyrick
(fig. 41)


Description. – The very simple original description corresponds well with the only specimen known: ‘10 mm. Head, palpi, antennae, thorax white. Forewings narrow, acute-pointed; shining white: cilia white. Hindwings pale grey; cilia grey-whitish.’

Remark. – The specimen on which the description is based is in poor condition and the abdomen is missing. For this reason it is not possible to give a precise diagnosis.

Biology. – Unknown.

Distribution. – South-eastern India: Tamil Nadu, Shillong.

Species excluded from Coleophoridae

Coleophora aphyynota Meyrick
(figs. 1, 17-18)


Description. – The material examined corresponds well with the original description.

Male genitalia (fig. 17).

Structure of abdominal supports (fig. 18).

Remark. – This species does not belong to Coleophoridae, but to Batrachedridae, as shown by the male genitalia (S. Yu. Sinev in litt.). The female is not known.

Biology. – Unknown.


Coleophora crossophanes Meyrick
(figs. 2, 19-20)

Coleophora crossophanes Meyrick,1917:70. Lectotype δ (here designated), SRI LANKA. – ‘LECTOTYPE’ (round blue-edged BMNH label), Maskeliya, Ceylon, Pole.10.05'; ‘Coleophora crossophanes Meyr., 2/3, E. Meyrick det., in Meyrick Coll.,’ ‘Meyrick Coll., B.M. 1938-290,’ ‘crossophanes Meyr.’ (Meyrick’s handwritten label) [not examined].


Description. – The original description corresponds well with the specimen examined.

Male genitalia (fig. 19).

Structure of abdominal supports (fig. 20).

Remark. – It should be noted that among the three original specimens there are only males and no females, as indicated by Meyrick in his description. Based on external morphology and male genitalia it is clear that this species does not belong to Coleophoridae. It could belong to the Mophididae (K. Sattler in litt.).

Biology. – Unknown.

Distribution. – Sri Lanka: Maskeliya.

Coleophora tarsocoma Meyrick
(fig. 16)


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REFERENCES


CONCLUSIONS

The study of the species of the Indian region, although very interesting, does not yield a great amount of information, mainly because of the small number of specimens known. If one tries to separate the species according to zoogeographical regions, it is clear that all species of the northern sector (C. aegra, C. argopleura, C. castalia, C. versurella, C. aphrocrossa, C. echyropis, C. pernoceros, C. niphomesta, C. leucochares) correspond more or less with the palaearctic groups (following Toll’s classification (1953, 1962, pending a modern revision). A certain number of new species from Nepal, Kashmir and Northern India are still to be added to Meyrick’s material; they all belong to the palaearctic fauna. Among them is also a species close to C. argopleura, a noteworthy species, which belongs to a group which appears to be characteristic for that region.

The species of the southern region and of Sri-Lanka (C. crypsiphanes, C. thienemanni, C. statherota, C. byrsostola, C. centrota, C. ogmotona, C. thiophaea, C. argopleura, C. echyropis, C. argopleura, C. leucochares) correspond more or less with the palaeartic groups (following Toll’s classification (1953, 1962, pending a modern revision). A certain number of new species from Nepal, Kashmir and Northern India are still to be added to Meyrick’s material; they all belong to the palaearctic fauna. Among them is also a species close to C. argopleura, a noteworthy species, which belongs to a group which appears to be characteristic for that region.

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Figs. 1-2. Males of ‘Coleophora’ spp., now excluded from Coleophoridae. – 1, C. aphypnota, lectotype; 2, C. crossophanes, paralectotype. – Figs. 3-8. Males of Coleophora spp. 3, C. crypsiphanes, lectotype; 4, C. aegra, Afghanistan, Barikot; 5, C. thiophaea, lectotype; 6, C. echyropis, holotype; 7, C. byrosiota, Mahableswar, 8.5.30; 8, C. centrota, holotype.
Figs. 17-18. *Coleophora* aphynota, lectotype, slide BMNH 24473. – 17, Male genitalia; 18, abdomen. – Figs. 19-20. *Coleophora* crossophanes, paralectotype, slide BMNH 24479. – 19, Male genitalia; 20, abdomen.
Figs. 21-24. *Coleophora crypsiphanes*, lectotype, slide BMNH 24477. – 21, Male genitalia; 22, detail of genitalia at high magnification; 23, abdomen; 24, labels.
Figs. 25-27. Coleophora crypsiphanes, paralectotype, slide BMNH 24478. – 25, Female genitalia; 26, sterigma at high magnification; 27, abdomen.
Figs. 28-31. *Coleophora aegra*, lectotype, slide BMNH 24452. – 28, Male genitalia; 29, detail of genitalia at high magnification; 30, detail, slide Bldz 8180; 31, abdomen.
Figs. 32-36. *Coleophora thiophaea*, lectotype, slide BMNH 24465. – 32, Male genitalia; 33, detail of genitalia at high magnification; 34, detail of distal part of gnathos at high magnification; 35, detail of distal part of phallotheca at high magnification; 36, abdomen.
Figs. 42-44. *Coleophora statherota*, paralectotype, slide BMNH 24476. – 42, Female genitalia; 43, sterigma at high magnification; 44, abdomen.
Figs. 45-48. *Coleophora byrostola*, slide BMNH 24454. – 45 Male genitalia; 46, detail of genitalia at high magnification; 47, detail, slide BMNH 24456; 48, cornuti at high magnification, slide BMNH 24456; 49, abdomen, slide BMNH 24454.
Figs. 50-53. Coleophora byrostola, slide BMNH 24469. – 50; Female genitalia; 51, sterigma at high magnification; 52, slide BMNH 24455; 53, abdomen.
Figs. 54-57. Coleophora argopleura, slide Bldz 12874. – 54, Male genitalia; 55, detail of genitalia at high magnification; 56, cornuti at high magnification; 57, abdomen.
Figs. 58-60. Coleophora argopleura, slide BMNH 24451, holotype. – 58, Female genitalia; 59, sterigma at high magnification; 60, abdomen.
Figs. 61-64. Coleophora castalia, slide Bldz 7895. – 61, Male genitalia; 62, detail of genitalia at high magnification; 63, cornuti at high magnification; 64, abdomen.
Figs. 68-70. Coleophora aphrocsosa, slide BMNH 24441, holotype. – 68, Female genitalia; 69, sterigma at high magnification; 70, abdomen.
Figs. 71-74. *Coleophora ogmotona*, slide BMNH 24470. – 71, Male genitalia; 72, detail of genitalia at high magnification; 73, cornutus at high magnification; 74, abdomen.
Figs. 75-78. Coleophora percnoceros, slide BMNH 24439, holotype. – 75, Male genitalia; 76, detail of genitalia at high magnification; 77, cornuti at high magnification; 78, abdomen.
Figs. 79-83. *Coleophora niphomesta*, slide Bldz 8696. – 79, Male genitalia; 80, detail of genitalia at high magnification; 81, cornutus at high magnification, slide Bldz 9608; 82, cornutus, slide Bldz 9234; 83, abdomen.
Figs. 84-86. *Coleophora niphomesta*, slide Bldz 8699. – 84, Female genitalia; 85, sterigma at high magnification; 86, abdomen.
Figs. 87-89. *Coleophora chordoscelis*, slide BMNH 24474, lectotype. – 87, Female genitalia; 88, sterigma at high magnification; 89, abdomen.