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New species of *Chalastonepsia* and *Pectinepsia* gen. nov. (Diptera: Mycetophilidae) from the Oriental and Australasian Regions

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Abstract. Two new species of *Chalastonepsia* Søli, 1996 (Diptera: Mycetophilidae), *C. montana* sp. nov. (Indonesia, Malaysia) and *C. nigricoxa* sp. nov. (Thailand), are described. A new genus, *Pectinepsia* gen. nov., is proposed for two new species, *P. pulcherrima* sp. nov. (Malaysia, type species of the genus) and *P. sumatrensis* sp. nov. (Indonesia). New Oriental and Australasian records of *Chalastonepsia hokkaidensis* Kallweit, 1998 (Taiwan, Thailand, Malaysia, Brunei, Indonesia, Papua New Guinea) and *C. orientalis* Søli, 1996 (Thailand, Malaysia, Brunei, Indonesia, Papua New Guinea) are presented and hitherto unknown females of both species are figured.

Key words. Diptera, Sciaroidea, Mycetophilidae, fungus gnats, taxonomy, new species, new genus, new records, Oriental Region, Australasian Region

Introduction

The tribe Metanepsiini of the family Mycetophilidae was established by Matile (1971) for one Oriental and two Afrotropical species of *Metanepsia* Edwards, 1927. Søli (1996) established a new genus, *Chalastonepsia*, for a single species *C. orientalis* Søli 1996 described on the basis of one male from Peninsular Malaysia and provided a revised diagnosis of the tribe. Kallweit (1998) described an additional species of both *Metanepsia* and *Chalastonepsia* from Malaysia and Japan, respectively. He also slightly broadened the diagnosis of the latter genus and pointed out the difficulty in separating the tribe Metanepsiini from Gnoristini as delimited by Väisänen (1986), who also attributed the former tribes a subfamiliar rank. The subfamily Metanepsiinae currently comprises eight species of *Metanepsia* (see Edwards 1927; Matile 1971, 1980; Kallweit 1998) and one species of *Chalastonepsia* (Søli 1996).

Studying unsorted samples of fungus gnats deposited in the Natural History Museum (London) and other collections, we found a rather extensive material of various species of

Metanepsiinae, including several remarkable undescribed species. In this paper, two new species of *Chalastonepsia* are described and a new genus is proposed for a further two new species. New records of both previously described species of *Chalastonepsia* are also provided.

Material and methods

The morphological terminology principally follows that by SØLI (1997). The material is preserved in the following collections:

BPBM Bishop Museum, Honolulu, USA; **BMNH** Natural History Museum, London, United Kingdom; **JSOC** Jan Ševčík, Ostrava, Czech Republic; MBBJ Museum Zoologi, Bogor, Indonesia; MTD Staatliches Museum für Tierkunde, Dresden; NHRS Swedish Museum of Natural History, Stockholm; **NMNS** National Museum of Natural Science, Taichung, Taiwan: Queen Sirikit Botanic Garden, Chiang Mai, Thailand. **OSBG**

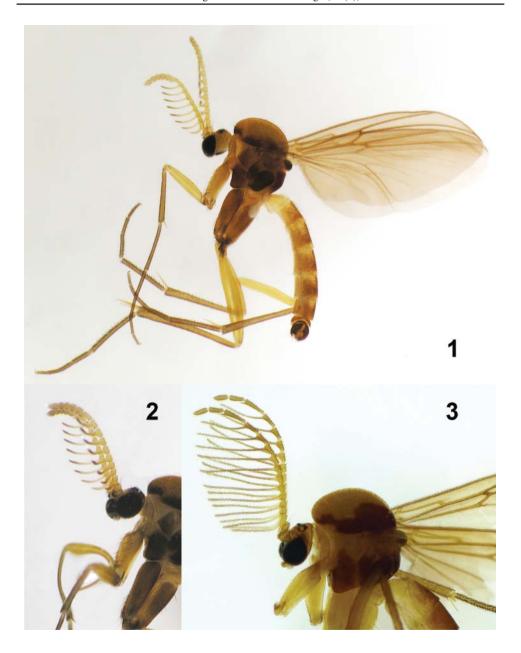
Taxonomy

Chalastonepsia montana sp. nov.

(Figs. 3, 6-7, 12)

Type material. HOLOTYPE: &, INDONESIA: SUMATERA UTARA: Semangat Gunung, 1300 m, 16.iii.1992, Malaise trap in jungle, H. Hippa leg. (NHRS). PARATYPE: &, MALAYSIA: PAHANG: Cameron Highlands, Gunung Jasar, Malaise trap, 1700 m, 24.–27.xi.1994, T. Pape leg. (NHRS).

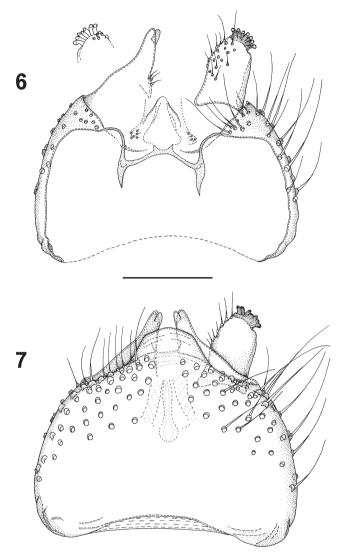
Description. Male. Body length 3.6 mm. **Head** yellowish, with dark brown patch around each ocellus. Three ocelli, almost in one line. Lateral ocellus larger than the median one, the former separated from the eye margin for a distance of about its diameter. Antenna strongly pectinate. Scape and pedicel yellowish, slightly prolonged backwards. Flagellum mostly dark, its basal half lighter, with 14 flagellomeres. Flagellomeres 1 to 11 with a long anterior projection, 1 to 1.5 as long as the height of head, covered by thin setae about twice as long as the diameter of the projection. The apical three flagellomeres without such projection, only flagellomere 12 with a short apical one, not longer than its diameter. Mouthparts much reduced, palpus with only one visible palpomere. Thorax. Mesonotum yellowish, with lateral and hind margins dark brown. Scutellum all dark brown. Mediotergite and most lateral sclerites dark brown and bare. Laterotergite all dark brown, with several long setae on its posterior half. Anepimeron and preepisternum 2 dark brown, anepisternum yellow with its lower margin brown. Proepisternum and antepronotum yellow, with several short setae. Haltere brownish yellow. Wing hyaline, unmarked, membrane covered only with microtrichia, without macrotrichia. Wing length 3.4 mm. Costa produced beyond R5 to two thirds of the distance between the tips of R5 and M1. Sc short, bare, ending in R1 well before base of ta. Crossvein ta twice as long as Rs. The stem of M-fork short, 1.3 times as long as ta. Base of Cu-fork before the base of M-fork. CuP weak, shorter than A1. Legs mostly yellowish, covered with dark trichia and setae. Basal third of fore coxa dark brown. Tibiae without strong bristles. The apex



Figs. 1-3. 1-2-Chalastonepsia nigricoxa sp. nov. (paratype) (1-habitus; 2-head from below). 3-C. montana sp. nov. (paratype), head and thorax.



Figs. 4-5. 4-Pectinepsia pulcherrima gen. et sp. nov. (holotype), habitus; 5-P. sumatrensis gen. et sp. nov. (paratype, JSOC), habitus.



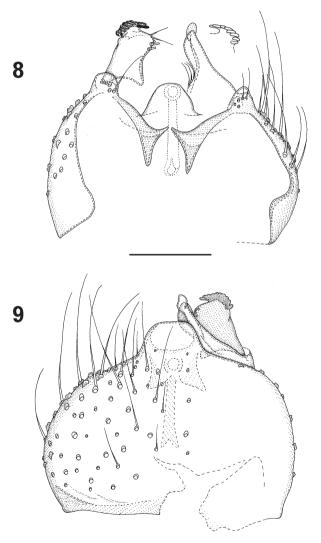
Figs. 6–7. *Chalastonepsia montana* sp. nov. (holotype). 6 – male terminalia, dorsal view (tergite 9 and cerci removed); 7 – same, ventral view. Scale bar: 0.1 mm.

of the fore tibia without distinct tibial organ. Mid tibia without sensory organ. **Abdomen** mostly dark brown, tergites 1 and 2 laterally yellow. **Terminalia** (Figs. 6–7, 12). Tergite 9 subrectangular, almost twice as broad as long and about twice as long as tergite 8, caudally with medial protuberance covered by fine setae. Cerci as long as tergite 9, hidden behind it. Sternite 8 narrow, as long as tergite 8 but four times shorter than sternite 7. Gonocoxites completely fused, with posterior margin slightly tapering. Gonostylus rectangular, half as long as gonocoxite, with a comb of black setae apically.

Differential diagnosis. The new species is related to *Ch. hokkaidensis* Kalweit, 1998 from which it differs mainly in the coloration of the body (yellow areas on scutum and lateral thoracic sclerites), long projection on flagellomere 11, relatively long projections on flagellomeres 1 to 10, and details on the male terminalia (e.g. setose medial protuberance on T9, gonocoxites posteriorly tapering).

Etymology. From the Latin adjective *montana*, referring to the montane habitat of the species.

Distribution. Malaysia (Malayan Peninsula: Pahang), Indonesia (Sumatra).



Figs. 8–9. *Chalastonepsia nigricoxa* sp. nov. (holotype). 8 – male terminalia, dorsal view (tergite 9 and cerci removed); 9 – same, ventral view. Scale bar: 0.1 mm.

Chalastonepsia nigricoxa sp. nov.

(Figs. 1, 2, 8-11)

Type material. Holotype: 3, N.W. THAILAND: CHIANG MAI PROVINCE: Doi Pha Hom Pok, 2000 m, N 20 7.644 E 99 8.89, Malaise trap, 24.–30.vii.2006, leg. M.V.L. Barclay & H. Mendel, BMNH (E) 2006-128 (BMNH). PARATYPE: 3, the same data as holotype (JSOC).

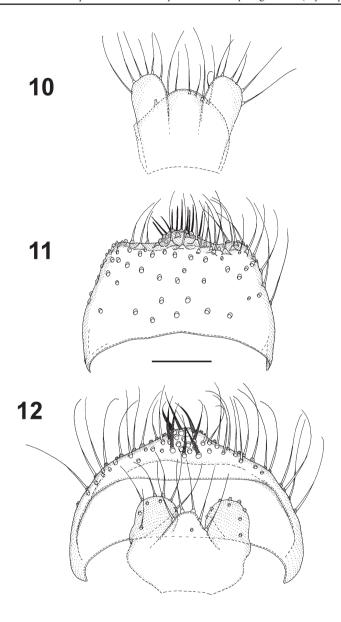
Description. Male. Body length 4.1 mm. **Head** yellowish, vertex and occiput covered with dark setae. Small dark brown patch around each ocellus. Three ocelli, almost in one line. Lateral ocellus larger than the median one, the former separated from the eve margin for a distance of about its diameter. Antenna pectinate. Scape and pedicel yellowish, slightly prolonged backwards, Flagellum mostly vellow, flagellar projections apically darker. Flagellomeres 1 to 8 with an anterior projection, at most as long as the height of head, covered by thin setae about as long as the diameter of the projection. The apical six flagellomeres without such projection, only flagellomere 9 with a short anteroapical one, not longer than its diameter, and flagellomeres 10 to 12 with even shorter ones. Mouthparts much reduced, palpus with only one visible palpomere. **Thorax.** Mesonotum vellowish, with front, lateral and hind margins dark brown. Scutum covered by dark setae, with thin bare longitudinal stripes. Scutellum all dark brown, with a row of short apical setae. Mediotergite and most lateral sclerites dark brown and bare. Laterotergite all dark brown, with dark setae on its ventroposterior two thirds. Anepimeron, preepisternum 2 and anepisternum dark brown, the latter with its posterior half yellow. Proepisternum and antepronotum yellow, with several short setae. Haltere brownish yellow. Wing hyaline, unmarked, membrane covered only with microtrichia, without macrotrichia. Wing length 3.7 mm. Costa produced beyond R5 to one third of the distance between the tips of R5 and M1. Sc short, bare, ending in R1 well before base of ta. Crossvein ta thrice as long as Rs. The stem of M-fork short, as long as ta. Base of Cu-fork before the base of M-fork, CuP weak, shorter than A1. Legs covered with dark trichia and setae. All coxae dark brown, femora yellow. Tibiae brownish yellow, without strong bristles. The apex of the fore tibia without distinct tibial organ. Mid tibia without sensory organ. Abdomen mostly dark brown. Tergite 1 all yellow, tergites 2 to 6 with front margins yellow. **Terminalia** (Figs 8.-11). Tergite 9 subrectangular, 0.6 times as long as broad and about twice as long as tergite 8, caudally with medial protuberance covered by thick black setae. Cerci almost as long as tergite 9, hidden behind it. Sternite 8 narrow, as long as tergite 8 but 3-4 times shorter than sternite 7. Gonocoxites completely fused, caudal margin with a distinct medial protuberance. Gonostylus subrectangular, about half as long as gonocoxite, with a comb of black setae apically.

Female. Unknown.

Differential diagnosis. This new species closely resembles *C. montana* sp. nov. but differs mainly in the following characters: apical six flagellomeres without long projection, projections on flagellomeres 1 to 8 shorter and apically darkened, different colour pattern of thorax and abdomen (see Figs. 1 and 3), dark coxae and details on the male terminalia (e.g. apical dark setae on gonostylus slightly bent, posterior margin of T9 more straight with medial protuberance less distinct).

Etymology. The name is a Latin noun in apposition, *nigricoxa*, black-coxa, referring to the colour of coxae.

Distribution. Thailand (Chiang Mai province).



Figs 10–12. 10–11 – *Chalastonepsia nigricoxa* sp. nov. (holotype), male terminalia (10 – cerci; 11 – tergite 9). 12 – *C. montana* sp. nov. (holotype), male terminalia, tergite 9 and cerci. Scale bar: 0.1 mm.

Pectinepsia gen. nov.

Type species. *Pectinepsia pulcherrima* sp. nov.

Description. Male antennae strongly pectinate, with 11 to 14 flagellomeres. All flagellomeres except the apical one with a long anterior projection, up to twice as long as the height of the head. Palpi reduced, with only one visible segment. Three ocelli, lateral ones not touching eye margins. Scutum with distinct anterior parapsidal suture. Both mediotergite and laterotergite bare. Radial sector of the wing complete. Vein Sc long, ending free, reaching behind the base of ta. Costa produced beyond R5 to half the distance between the tips of R5 and M1. Ta (= R-m) as long as the stem of M and four times as long as Rs. Base of Cu-fork well before the stem of M-fork. Legs without special tibial organs. Male terminalia with gonocoxites fused only basally, each gonocoxite apically prolonged to ventrocaudal projection. Gonostylus subtriangular, placed dorsally to this projection. Tergite 9 short, at most as long as tergite 8. Cerci twice as long as tergite 9.

Differential diagnosis. The new genus falls into the subfamily Metanepsiinae as currently defined (reduced palpi, modified antennae, absence of tibial organ on fore leg) and probably forms a sister group to *Chalastonepsia*, from which it differs by longer flagellar projections, bare laterotergites, long vein Sc ending free, short stem of M-fork (at most as long as *ta*), and mainly the overall structure of the male terminalia (short T9, apically prolonged gonocoxites, gonostylus without the apical comb of thick setae).

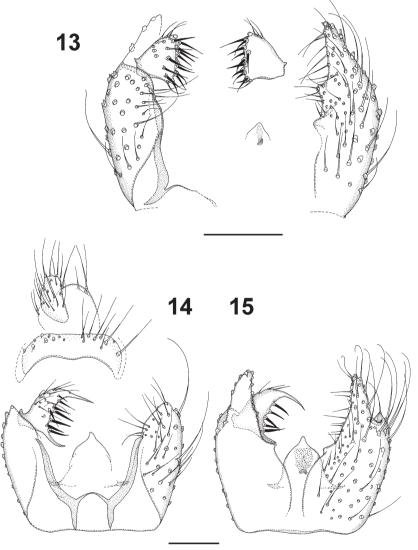
Etymology. The name is modified from the name *Metanepsia*, a related genus, by the Latin word *pecten*, comb, referring to the pectinate antennae. Gender is feminine.

Pectinepsia pulcherrima sp. nov.

(Figs. 4, 13)

Type material. HOLOTYPE: &, MALAYSIA: SARAWAK: Gunung Mulu National Park, limestone forest in Melinau Gorge, 5.–22.ii.1978, Malaise trap, N. M. Collins leg. (BMNH). PARATYPES: &, the same data as holotype (JSOC); 2 &&, the same data except 5.–20.iv.1978 (BMNH, JSOC).

Description. Male. Body length 2.7 mm. **Head** dark brown. Three ocelli, almost in one line. Lateral ocellus larger than the median one, the former separated from the eye margin for a distance slightly less than its diameter. Antenna strongly pectinate. Scape and pedicel brown, pedicel slightly prolonged backwards. Flagellum brown, with 14 flagellomeres. Flagellomeres 1 to 13 with a long anterior projection, the longest ones more than twice as long as the height of head, all covered by thin setae twice as long as the diameter of the projection (Fig. 4). The apical flagellomere as long as the projection of the previous flagellomere. Mouthparts much reduced, palpus with only one brownish yellow palpomere. Thorax. All dark brown. Scutum covered by sparse dark setae, with bare longitudinal stripes. Distinct anterior parapsidal suture. Scutellum with a row of short apical setae. Mediotergite and most lateral sclerites bare. Laterotergite bare. Preepisternum 2 dark brown with its ventral third yellowish. Anepisternum with anterodorsal corner yellow. Proepisternum and antepronotum dark brown, with several short setae. Haltere brownish yellow. Wing hyaline, unmarked, membrane covered only with microtrichia, without macrotrichia. Wing length 2.6 mm. Costa produced beyond R5 to half the distance between the tips of R5 and M1. Vein Sc long, ending free, reaching behind the base of ta. Crossvein ta four times as long as Rs. The stem of M-fork short, as long as ta. Base of Cu-fork before the base of M-fork and before the base of *ta*. CuP apically weak, about as long as A1. **Legs** brownish yellow, covered with dark trichia and setae. Tibiae without strong bristles. The apex of the fore tibia without distinct tibial organ. Mid tibia without sensory organ. **Abdomen** mostly dark brown. Tergite 1 laterally yellow. **Terminalia** (Fig. 13). Tergite 9 very short, shorter than both tergite 8 and cerci. Cerci twice as long as tergite 9, placed caudally to tergite 9, not hidden behind it. Sternite 8 narrow, slightly shorter than tergite 8



Figs. 13–15. 13 – *Pectinepsia pulcherrima* gen. et sp. nov. (holotype), male terminalia, dorsal and ventral view; 14–15 – *P. sumatrensis* gen. et sp. nov. (holotype) (14 – male terminalia in dorsal view, including tergite 9 and cerci; 15 – the same, ventral view). Scale bar: 0.1 mm.

and at least 3 times shorter than sternite 7. Gonocoxites fused only basally, forming a deep ventral excavation. Gonocoxite with a ventrocaudal projection, half as long as gonocoxite. Gonostylus subtriangular, placed dorsally to this projection.

Female, Unknown.

Differential diagnosis. This species differs from *P. sumatrensis* sp. nov. in the number of flagellomeres, relative length of flagellar projections, and the shape of gonostylus.

Etymology. The name is a Latin adjective, *pulcherrima*, the most beautiful, referring to the beautiful appearance of the fly.

Distribution. Malaysia (Sarawak).

Pectinepsia sumatrensis sp. nov.

(Figs. 5, 14-15)

Type material. Holotype: \lozenge , INDONESIA: Sumatra: Aceh, Gunung Leuser National Park, Ketambe res. st., 3°41′N 97°39′E, young forest, closed canopy, 350 m, 9.–21.ix.1989, Malaise trap, C. D. Darling, ROM 893087 (MBBJ). Paratypes: 2 $\lozenge\lozenge\lozenge$ (JSOC) and 3 $\lozenge\lozenge\lozenge$ (MBBJ), with the same data as holotype.

Description. Male. Body length 3.1 mm. Length of wing 2.6 mm. Antennae with only 11 flagellomeres. The flagellar projections at most 1.5 times as long as the height of the head. Preepisternum 2 dark brown with its ventral two thirds yellowish. Gonostylus medially excavated, both basally and apically tapering into a sharp bare projection (Figs 14–15).

The other characters as in the previous species.

Female. Unknown.

Differential diagnosis. This species is unique in having only 11 flagellomeres, otherwise it is very similar to *P. pulcherrima* sp. nov. Gonostylus of *P. sumatrensis* is medially excavated, both basally and apically tapering.

Etymology. The name is an adjective derived from the type locality by the Latin suffix *-ensis* denoting place.

Distribution. Indonesia (Sumatra).

New records

Chalastonepsia hokkaidensis Kallweit, 1998

(Figs. 16-17)

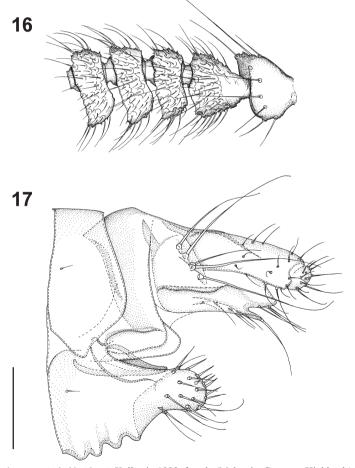
Material examined. JAPAN: Hokkaido: Otaru, Okusawa-Suigenchi area, 27.–28.viii.1996, 1 ♂ (holotype, MTD). TAIWAN: Nantou, Jenai Chunyang, 9.vi.–6.vii.1998, 1 ♂, leg. C. S. Lin & W. T. Yang, Malaise trap (NMNS). N.W. THAILAND: Chiang Mai Prov., Queen Sirikit Botanic Gardens, 300–700 m, N 18 53.306 E 98 51.432, Malaise trap, vii.2006, 1 ♂, leg. M. V. L. Barclay & H. Mendel (BMNH); Chiang Mai Prov., Doi Pha Hom Pok, 2000 m, 20°7.644′N 99°8.89′E, Malaise trap, 24.–30.vii.2006, 1 ♂, leg. M. V. L. Barclay & H. Mendel, BMNH (E) 2006-128 (BMNH); THAILAND, Phitsanulok, Thung Salaeng Luang NP, mixed deciduous forest, 16°50.563′N 100°51.757′E, 481 m, Malaise trap, 11.–18.ix.2006, 3 ♂♂, Pongpitak Pranee leg., T927 (QSBG); THAILAND, Chiang Mai, Doi Phahompok NP, Kiewlom1: Montane Forest, 20°3.455′N 99°8.551′E, 2174 m, Malaise trap, 7.–14.viii.2007, 7 ♂♂, Komwuan Srisom & Prasit Wongchai leg., T2805 (QSBG); THAILAND, Kamphaeng Phet, Mae Wong NP Chong Yen, 16°5.968′N 99°6.472′E, 1306 m, Malaise trap, 3.–10.ix.2007, 1 ♂, 1.–8.x.2007, 4 ♂♂ 1 ♀, Chumpol Piluk & Aram Inpuang leg., T2812, T2816 (QSBG); THAILAND, Chiang Mai, Doi Chiang Dao NP, Nature trail, 19°24.278′N 98°55.311′E, 491 m, Malaise trap, 7.–14.x.2007, 4 ♂♂, Songkran & Apichart leg. T3175 (QSBG). INDONESIA: Sumatera Utara: Semangat Gunung, 1300 m, 16.iii.1992, 4 ♂♂, Malaise trap in jungle, H. Hippa leg. (SMNH).Sulawesi: Mogonipa Summit, 1000 m, 15.vi.–4.vii.1985, 1 ♂, Malaise trap (BMNH). MALAYSIA:

PAHANG: Cameron Highlands, Malaise trap 2, 1300 m, 15.–20.xi.1994, 1 ♂ 1 ♀, T. Pape leg. (NHRS); Cameron Highlands, Robinson Falls, 26.i.2009, 1 ♂, J. Ševčík leg. (JSOC). SABAH: Danum Valley, 18.xii.1986–18.i.1987, 1 ♂, Malaise trap, M. Still leg. (BMNH). BRUNEI: Ulu Temburong, 9.iii.1982, 2 ♂♂, Malaise trap, M. C. Day leg. (BMNH). PAPUA NEW GUINEA: Mt. Kaindi, 2350 m, 5.vii.1971, 3 ♂♂, Malaise trap, Tawi leg. (BPBM).

Description of female. Similar to male, except for antennae and terminalia. All flagellomeres simple, slightly prolonged anteriorly, at most 2.5 times as broad as long (Fig. 16). Terminalia as in Fig. 17. Cercus II small, about six times shorter than cercus I. Gonocoxite 8 apically rounded from lateral view.

Variation. We noted a considerable variation in body size. The specimens from Papua New Guinea are the largest and also differ from the others in having dark brown legs.

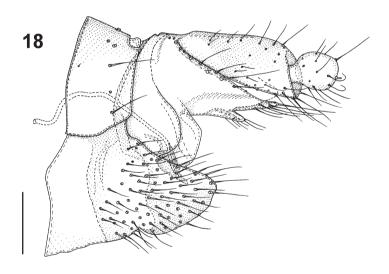
Distribution. This species has hitherto been known only from the holotype male collected in Japan. The above mentioned records suggest that it is a relatively common and widely distributed species throughout the Oriental Region to Papua New Guinea.

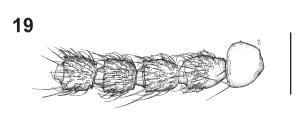


Figs. 16–17. *Chalastonepsia hokkaidensis* Kallweit, 1998, female (Malaysia, Cameron Highlands). 16 – five basal segments of antenna; 17 – terminalia in lateral view. Scale bar: 0.1 mm.

Chalastonepsia orientalis Søli, 1996 (Figs. 18, 19)

Material examined. THAILAND: Nakhon Nayok, Khao Yai NP, behind Headmasters House, 14°24.781'N 101°22.689′E, 770 m, Malaise trap, 12.–19.vii.2006, 6 ♂♂, Pong Sandao leg., T147; THAILAND, Nakhon Nayok, Khao Yai NP, nature trail in secondary forest, 14°24.522′N 101°22.434′E, 750 m, Malaise trap, 19.–26.viii.2006, 6 33. Pong Sandao leg., T405; THAILAND, Phetchabun, Nam Nao NP, hill evergreen forest, 16°44.371'N 101°34.549'E, 834 m, Malaise trap, 26.v.-2.vi.2007, 1 %, Leng Janteab leg., T2429; THAILAND, Kamphaeng Phet, Mae Wong NP Chong Yen, 16°5.968'N 99°6.472'E, 1306 m, Malaise trap, 1.–8.x.2007, 10 ♂♂1 ♀, Chumpol Piluk & Aram Inpuang leg., T2816; THAILAND, Chanthaburi, Khao Khitchakut NP, 100 m N/Prabaht Unit, 12°48.842'N 102°9.144'E, 203 m, Malaise trap, 7.–14.vii.2008, 20 ♂♂ 1 ♀, Suthida & Charoenchai leg., T2973; THAILAND, Chiang Mai, Doi Chiang Dao NP, Nature trail, 19°24.278′N 98°55.311′E, 491 m, Malaise trap, 7.–14.x.2007, 1 &, Songkran & Apichart leg., T3175 (all QSBG). MALAYSIA: SARAWAK: Gunung Mulu National Park, limestone forest in Melinau Gorge, 5.–22.ii.1978, 2 ♂♂, Malaise trap, N. M. Collins leg. (BMNH). **BRUNEI:** Ulu Temburong, 16.–22.ii.1982, 1 A, Malaise trap, M. C. Day leg. (BMNH). INDONESIA: Sumarra: Aceh, Gunung Leuser National Park, Ketambe res. st., 3°41′N, 97°39′E, young forest, light gap, 350 m, 1.–31.i.1990, 1 Å, Malaise trap, D. C. Darling, IIS 900001 (MBBJ). SULAWESI UTARA: Dumoga Bone N.P., "1440 camp", 30.vi.–25.vii.1985, Malaise trap, 3 ♂♂ 1 ♀ (BMNH). PAPUA NEW GUINEA: MADANG PROVINCE: Hapurpi village, near Halopa mission, 700 m, primary rain forest, January 2001, 3 & Malaise trap, Ch. Amari & V. Novotný leg. (JSOC).





Figs. 18–19. Chalastonepsia orientalis Søli, 1996, female (Thailand, Mae Wong NP). 18 – terminalia; 19 – five basal segments of antenna in lateral view. Scale bar: 0.1 mm.

Description of female. Similar to male, except for antennae and terminalia. All flagellomeres simple, about as long as broad (Fig. 19). Abdomen slightly darker in comparison with male. Terminalia as in Fig. 18. Cercus I about 2.5 times as long as cercus I. Gonocoxite 8 slightly tapering from lateral view.

Comments. Only the holotype collected at Fraser's Hill (Peninsular Malaysia) was previously known. The above mentioned records show that it is a common and widespread species from Thailand to Papua New Guinea. Female antenna and terminalia are figured here for the first time. This species distinctly differs from the other currently known species of *Chalastonepsia*, mainly in the peculiar structure of the male antennae (flagellomeres with long setae and stalk-like apical part, as in some Cecidomyiidae), short stem of Cu-fork and small gonostyli without the apical comb of thick setae. It could thus be well placed in a separate genus but we prefer to leave this for careful phylogenetic analysis of the Metanepsiinae and Gnoristinae (including all the tropical taxa hitherto referred to as *Dziedzickia* Johannsen, 1909), which is beyond the scope of this paper.

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