

***Ectatops grandis* sp. nov. from Vietnam and an annotated list of the genus *Ectatops* (Hemiptera: Heteroptera: Pyrrhocoridae)**JAROSLAV L. STEHLÍK¹ & PETR KMENT²¹ Department of Entomology, Moravian Museum, Hviezdoslavova 29a, CZ-627 00 Brno-Slatina, Czech Republic; e-mail: j.stehlik@seznam.cz² Department of Entomology, National Museum, Cirkusová 1740, CZ-193 00 Prague 9-Horní Počernice, Czech Republic; e-mail: sigara@post.cz

STEHLÍK J. L. & KMENT P. 2017: *Ectatops grandis* sp. nov. from Vietnam and an annotated list of the genus *Ectatops* (Hemiptera: Heteroptera: Pyrrhocoridae). *Acta Musei Moraviae, Scientiae biologicae* (Brno) **101(1): 1–20**. – *Ectatops grandis* sp. nov., is described, illustrated, and compared with *E. dembickyi* Stehlík, 2007. The new species originates from central Vietnam and is the largest known species of the genus *Ectatops* Amyot et Serville, 1843 (Hemiptera: Heteroptera: Pyrrhocoridae). A list of all the species of *Ectatops* is provided and their distribution is reviewed. New distributional records are given for the following taxa (first records marked by an asterisk*): *E. coloratus* Walker, 1873 (Indonesia: Seram), *E. dembickyi* (India: *Assam), *E. fuscus* Stål, 1871 (Philippines: Luzon), *E. gracilicornis* Stål, 1863 (Indonesia: *Bacan Is., Papua, *Salawati Is., *Waigeo Is., West Papua, Papua New Guinea: *New Britain; Solomon Islands: Guadalcanal), *E. indignus* (Walker, 1873) (India: Assam, Laos, *Malaysia: *Kedah, Thailand, Vietnam), *E. limbatus* Amyot et Serville, 1943 (Indonesia: Java), *E. nervosus* Breddin, 1901 (Indonesia: *Kalimantan, Malaysia: Sarawak), *E. obscurus* de Vuillefroy, 1864 (Indonesia: Sumatra), *E. ophthalmicus* (Burmeister, 1835) (Indonesia: Java; Malaysia: *Johor, Perak, Sabah. Sarawak, Selangor; Philippines: Palawan), and *E. speculum* Breddin, 1901 (*Malaysia: Perak).

Key words. Hemiptera, Heteroptera, Pyrrhocoridae, new species, taxonomy, new records, Oriental Region

Introduction

The genus *Ectatops* was established by AMYOT & SERVILLE (1843: 273) for two new species, *E. limbatus* Amyot et Serville, 1843 and *E. rubiaceus* Amyot et Serville, 1843, of which *E. limbatus* was subsequently designated as the type species by DISTANT (1903a). The genus currently includes 28 species with prominent, stalked eyes, colouration usually dark brown or combining red and black, medium-large in size. The body length of the species described ranges between 7.99 mm in the male of *E. schoenitzeri* Stehlík et Jindra, 2008 (STEHLÍK & JINDRA 2008) and 15.98 mm in the female of *E. dembickyi* Stehlík, 2007 (STEHLÍK 2007). The distribution range of *Ectatops* covers most of the Oriental Region from southern China and Karnataka in India, extending further east to the Australasian Region in Papua New Guinea and the Solomon Islands. This contribution describes *Ectatops grandis* sp. nov., a further species of the genus, from Vietnam. It is the largest representative of the genus known to date.

Material and methods

A slash (/) is used to indicate data in different rows of a single label; a double slash (//) is used to separate different labels; data on the labels are given verbatim, with the abbreviations hw = handwritten, p = printed.

The measurements were made with an eyepiece micrometer and subsequently standardized. The morphological terminology follows STEHLÍK *et al.* (2016).

The specimens mentioned are deposited in the following collections:

BMNH	.....	The Natural History Museum, London, England, United Kingdom
EHIA	.....	Ernst Heiss collection, Tiroler Landesmuseum, Innsbruck, Austria
HNHM	.....	Hungarian Natural History Museum, Budapest, Hungary
ISNB	.....	Institut Royal des Sciences Naturelles, Brussels, Belgium
MMBC	.....	Moravian Museum, Brno, Czech Republic
MNHN	.....	Museum National d'Histoire Naturelle, Paris, France
NHMW	.....	Naturhistorisches Museum, Vienna, Austria
NHRS	.....	Naturhistoriska Riksmuseet, Stockholm, Sweden
NMPC	.....	National Museum, Prague, Czech Republic
RMNH	.....	National Museum of Natural History (Naturalis), Leiden, the Netherlands
SDEI	.....	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany
USNM	.....	National Museum of Natural History, Washington, D.C., USA
ZJPC	.....	The Zdeněk Jindra collection, Prague, Czech Republic
ZMHB	.....	Museum für Naturkunde (former Zoologisches Museum, Humboldt Universität), Berlin, Germany
ZMPA	.....	Zoological Institute, Polish Academy of Sciences, Warsaw, Poland
ZSMC	.....	Zoologisches Staatssammlung, Munich, Germany

Review of the species of *Ectatops* Amyot et Serville, 1843

Ectatops Amyot et Serville, 1843: 273. Type species: *E. limbatus* Amyot et Serville, 1843, subsequently designated by DISTANT (1903a: 302).

Ectatops adustus Walker, 1873

Ectatops adustus Walker, 1873: 22 (key), 25 (original description). Syntype(s): ♂, Singapore (BMNH).

Distribution. Singapore (WALKER 1873, LETHIERRY & SEVERIN 1894, HUSSEY 1929).

Ectatops bipunctatus Taueber, 1927

Ectatops bipunctatus Taueber, 1927: 183–184 (original description). Holotype: ♂, Philippines, S Mindanao, Port Banga (BMNH).

Distribution. Philippines: Mindanao (TAEUBER 1927, HUSSEY 1929).

Ectatops coloratus Walker, 1873

Ectatops coloratus Walker, 1873: 23 (key), 27 (original description). Syntype(s): ♂, Indonesia, Maluku Islands, Seram Is. (BMNH).

Material examined. INDONESIA: Maluku Islands: Seram: Solea, 12 km of Wahai, 17.i.–4.ii.1997, 2 ♀♀; 12 km SE Wahai, 31.x.–4.xi.1998, 3 ♂♂ 1 ♀; 35 km E Pasahari, 24.–30.x.1998, 1 ♀, all J. Horák lgt., J. L. Stehlík det. (ZJPC).

Distribution. Indonesia: Maluku Isls.: Seram (WALKER 1873, LETHIERRY & SEVERIN 1894, DISTANT 1902, HUSSEY 1929).

Ectatops dembickyi Stehlík, 2007

Ectatops dembickyi Stehlík, 2007: 122–124 (original description), 129 (habitus photo). Holotype: ♂, India, Meghalaya, SW of Cherrapunjee, 25°13.15'N, 91°40'E (MMBC).

Material examined. INDIA: Assam: Assam, Atkinson Coll., 92-6, 2 ♀♀, J. L. Stehlík 2009 det. (BMNH).

Distribution. India: ?Assam (this paper), Meghalaya (STEHLÍK 2007).

Comments. The Atkinson record from Assam pertains to a larger area of the former political area of Assam, which then included certain adjacent territories, e.g. Meghalaya.

Several authors have published records of *E. rubiaceus* (= *E. ophthalmicus*) from north-east India and Bangladesh: DISTANT (1903a) and AHMAD & PARVEEN (1990) from Meghalaya, MITRA *et al.* (1977) from Arunachal Pradesh, AHMAD & PARVEEN (1990) from Nagaland, and from Bangladesh (DISTANT 1903a). However, as far as there is no confirmed record of *E. ophthalmicus* from that area, those records may refer to *E. dembickyi* (see STEHLÍK 2007) or to *E. indignus* (= *E. rubiacea* sensu DISTANT 1903a).

Ectatops distinctus de Vuillefroy, 1864

Ectatops distinctus de Vuillefroy, 1864: 144 (key, diagnosis). Syntype(s): Bangladesh, Silhet [= Sylhet] (?MNHN).

Distribution. Bangladesh (DE VUILLEFROY 1864, STÅL 1870, WALKER 1873, DISTANT 1903a, HUSSEY 1929, AHMAD & PARVEEN 1990).

Comment. The depository of the type(s) is unknown. HORN *et al.* (1990) wrote about the whereabouts of the collection of Felix de Vuillefroy-Cassini: 'Hem. ex parte via A. Lèveillé, via E. Le Moults vereinzelt [= scattered]; exot. Hem. ex parte 1916 an [= to] Mus. Nation. Hist. Nat. Paris, ex parte (Hom. und [= and] Het.) 1924 an [= to] T. Esaki, Japan'. The type depositories of *Appasus japonicus* de Vuillefroy, 1864 and *Kirkaldyia deyrolli* (de Vuillefroy, 1864) (Belostomatidae) are also unknown (cf. POLHEMUS 1995).

Ectatops erythromelas Stål, 1863

Ectatops erythromelas Stål, 1863: 396 (original description). Holotype: ♀, Cambodia (NHRS).

Distribution. Cambodia (STÅL 1863; WALKER 1873; HUSSEY 1929), Philippines (STÅL 1870; LETHIERRY & SEVERIN 1894; HUSSEY 1929).

Comment. STÅL (1870) gives the distribution as 'Patria: Manila. (Mus. Holm.)' without further comment; he does not mention Cambodia. The true distribution of the species therefore remains uncertain.



Figs 1–2. Habitus of *Ectatops* spp. 1 – *E. fuscus* Stål, 1871: ♂, Philippines, Luzon, Mt. Maquiling, body length 10.7 mm (MMBC); 2 – *E. gelanor* Kirkaldy & Edwards, 1902: ♀, Laos, 8 km NE Ban Nape, body length 11.3 mm (MMBC, see STEHLÍK 2005a). Photos: L. Dembický.

***Ectatops funebris* Stehlík, 2006**

Ectatops funebris Stehlík, 2006: 674–675 (original description). Holotype: ♀, Malaysia, Borneo, Sarawak, foot of Mt. Dulit, Junction of rivers Tinjar and Lelok (BMNH).

Distribution. Malaysia: Borneo: Sarawak (STEHLÍK 2006).

***Ectatops fuscus* Stål, 1871**

(Fig. 1)

Ectatops fuscus Stål, 1871: 667 (original description). Syntypes: ♂♀, Philippines (NHRS).

Material examined. PHILIPPINES: Luzon: Luzon, P.I., Mt. Maquiling, 50 m a.s.l., 22.ii.1946, 1 ♂, L. L. Gant lgt.; 50 m a.s.l., 9.xi.1948, 1 ♀, Uichanco lgt.; 100 m a.s.l., 31.viii.1948, 1 ♂ 1 ♀, B. Gaac lgt.; 150 m a.s.l., 8.xi.1949, 1 ♂ 1 ♀, C. M. Bascos lgt.; 200 m a.s.l., 29.viii.1948, 1 ♀, P. Catalan lgt.; 200 m a.s.l., 12.iii.1949, 1 ♂, C. R. Bottgear lgt.; 200 m a.s.l., 2.ix.1949, 2 ♂♂, J. Juban lgt.; 250 m a.s.l., 2.ix.1949, 1 ♂ 1 ♀, J. Juban lgt.; 290 m a.s.l., 2.ix.1949, 1 ♂ 1 ♀, J. Juban lgt.; 290 m a.s.l., 17.vi.1949, 1 ♀, J. O. Davide lgt.; 290 m a.s.l., 4.xi.1949, 1 ♀, G. Francisco lgt.; 300 m a.s.l., 29.viii.1949, 1 ♂ 2 ♀♀, 17.ix.1949, 1 ♀, no collector; 300 m a.s.l., 11.ix.1949, 1 ♀, Q. Onoos lgt.; 390 m a.s.l., 4.xi.1949, 1 ♂, G. Francisco lgt.; all J. L. Stehlík det. (MMBC).

Distribution. Philippines (STÅL 1871, 1874); Luzon (TAEUBER 1927, BLÖTE 1931).



Figs 3–4. Habitus of *E. gracilicornis* Stål, 1863: 3 – ♀, Solomon Islands, Guadalcanal, ca. 4.5 km S of Barana, body length 12.15 mm (NMPC); 4 – ♀, Solomon Islands, Guadalcanal, ca. 3.5 km SE of Barana, body length 13.85 mm (NMPC). Photos: P. Kment.

***Ectatops gelanor* Kirkaldy et Edwards, 1902**

(Fig. 2)

Ectatops gelanor Kirkaldy et Edwards, 1902: 167 (original description). Syntype(s): Myanmar: “Carin Cheba, Ascini, 1200–1300 m a.s.l.” [= Karen Hills, ca. 19°13′N 96°35′E – see JENDEK 2003] (USNM, see KERZHNER 2001).

Distribution. China: Yunnan (HSIAO 1964, LIU 1981, HUA 2000); India: Meghalaya (PAIVA 1919, STEHLÍK 2007), Himachal Pradesh or Punjabi (KAUR & PATIA 2012, one of two possible localities); Laos (STEHLÍK 2005a); Myanmar (KIRKALDY & EDWARDS 1902, DISTANT 1903a); Thailand (STEHLÍK & JINDRA 2003).

***Ectatops gracilicornis* Stål, 1863**

(Figs 3–4)

Ectatops gracilicornis Stål, 1863: 396 (original description). Holotype: ♀, Indonesia, West Papua: ‘Insula Mysol’ [= Misool Is.] (NHRS).

= *Ectatops gracilicornis* var. *buruanus* Blöte, 1933: 590 (original description). Holotype: Indonesia, Maluku Is.: Buru Is. (RMNH).

Material examined. **INDONESIA: Maluku Islands: Bacan Is.:** Kampung Wayamiga, 27.–31.vii.1981, 1 ♂, A. C. Messer lgt., J. L. Stehlik det. (ZSMC). **Papua:** Jayawijaya Prov., Sentani Lake, 300 m a.s.l., iii.1992, 1 ♀, J. Kolibáč, J. L. Stehlik det. (ZSMC); Jayawijaya Prov., Samboka, upper Kolff River, ca. 200 m a.s.l., 10.–14.x.1996, 1 ♀, A. Riedel lgt., J. L. Stehlik det. (ZSMC). **West Papua:** Sorong, Ayawasi, 800 m a.s.l., 3.–11.xi.1994, 2 ♂♂, V. Cihlár lgt., J. L. Stehlik det. (ZJPC). **Salawati Is.:** Kalobo, ca. 10–30 m a.s.l., 19.–22.x.1996, 1 ♂ 1 ♀, A. Riedel lgt., J. L. Stehlik det. (ZSMC). **Waigeo Is.:** Camp Nok, 2500 ft [= 762 m a.s.l.], iv.1938, 2 ♂♂, L. E. Cheesman lgt., J. L. Stehlik det. (BMNH). **PAPUA NEW GUINEA: Madang Province:** Mis, 5°9'20"S 145°45'49"E, 70 m a.s.l., forest, 7.v.2011, 3 ♂♂, J. Votýpka & J. Lukeš lgt., P. Kment det. (NMPC). **Oro Province:** Kokoda, 1200 ft [= 366 m a.s.l.], vi.1933, 2 ♂♂, ix.1933, 1 ♀, L. E. Cheesman lgt., J. L. Stehlik det. (BMNH); Mt. Obree, Avenagora, 1921, 1 ♀, R. Neill Rothschild lgt., J. L. Stehlik det. (BMNH); Popondetta District, Sangara, 22.iii.1956, 1 ♂, E. S. Brown lgt., J. L. Stehlik det. (MMBC). **New Britain:** Vudal, on taun [= *Pometia pinnata*], 8.v.1968, 1 ♀, F. R. Wylie, J. L. Stehlik det. (BMNH). **SOLOMON ISLANDS: Guadalcanal Is.:** Mt. Austen, 29.ii.1963, 1 ♂, P. Greenlade lgt., J. L. Stehlik det. (BMNH); ca 3.5 km SE of Barana village, clearing in secondary forest, at light, 6°29.8'S 159°59.5'E, 190 m a.s.l., 24.xi.–14.xii.2013, 1 ♂ 2 ♀♀, J. Hájek lgt., P. Kment det. (NMPC); ca 4.5 km S of Barana village, forest near 'Japanese camp' & Moka river, 6°30.3'S 159°58.9'E, 275 m a.s.l., 5.–6.xii.2013, 1 ♀, J. Hájek lgt., P. Kment det. (NMPC).

Distribution. Indonesia: Maluku Is.: Aru Is. (WALKER 1873), Bacan Is. (new record), Buru Is. (BLÖTE 1933, var. *buruanus*), Gebe Is. (BLÖTE 1931), Kai Is. (WALKER 1873); West Papua (DISTANT 1912, 1914; BLÖTE 1931; SCHOUTEDEN 1933; STEHLÍK 2005b); Misool Is. (STÅL 1863, 1870; WALKER 1873; LETHIERRY & SEVERIN 1894; HUSSEY 1929), Salawati Is. (new record); Waigeo Is. (new record); Papua (STEHLIK 2005b); Biak Is. (STEHLIK 2005b); Papua New Guinea (STEHLIK 1965): New Britain (new record); Solomon Islands: Guadalcanal Is. (STEHLIK 1965).

Comment. Record from Sulawesi: Tondano (BLÖTE 1931) requires confirmation.

***Ectatops grandis* sp. nov.**

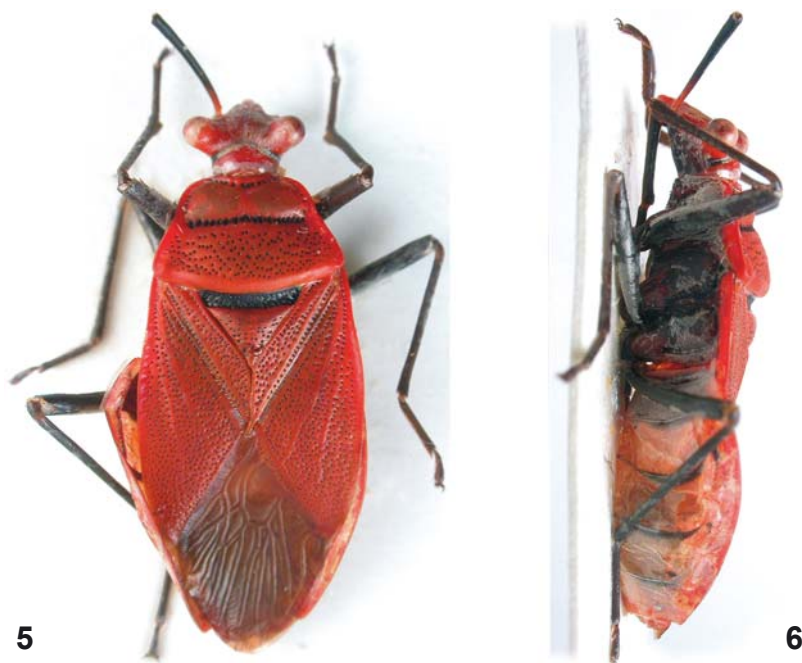
(Figs 5–6)

Type locality. Vietnam, Hue env., Bach Ma N.P., 16°12'N, 107°52'E.

Type material. Holotype: ♀, "Coll. I.R.Sc.N.B. / C Vietnam, Bach Ma N.P. / 16°12'N, 107°52'E day coll. / 12–17.vii.2011 leg. J. Constant / & J. Bresseel, I.G. 31.933 [p, yellow label] // ♀ [p, white label] // HOLOTYPUS [p] / Ectatops / grandis [hw] / Stehlik & Kment 201[p] 5[hw, red label]" (ISNB). The holotype is card-mounted; right antenna and hind leg, left antennomeres II–IV missing.

Description. *Female. Colouration.* Head dorsally including eye sockets and antenniferous tubercle red, head ventrally, bucculae and labium black. Antennomere I black, only its base narrowly red. Pronotum red. Anterior depressed portion of scutellum black, remaining posterior portion black. Clavus and corium red. Membrane completely black. Punctures on pronotum, scutellum, clavus and corium black. Thorax ventrally and legs (including coxae) black. Sternite III black, IV–VII yellowish-red with intersegmental sulci laterally and small areas surrounding trichobothria black.

Structure. Body large and wide (see Measurements). Head wide, eye sockets strongly raised upwards, bucculae posteriorly acuminate, much surpassing first segment of labium. Pronotum trapezoidal, wide, anterior (callar) lobe strongly gibbose, posterior (pronotal) lobe only slightly convex. Lateral margin of pronotum relatively wide, rounded, only slightly insinuated between calar and pronotal lobe. Scutellum basally with deep, narrow, transverse depression, posterior portion of scutellum gibbose, sloping



Figs 5–6. Habitus of *Ectatops grandis* sp. nov., ♀, holotype, body length 16.79 mm (ISNB). Photos: L. Dembický.

towards apex. Costal margin of corium rounded. Profemora (in contrast with other two pairs) not incrassate, ventrally with two pairs of denticles standing in opposition (inner one approximately in apical third, outer one anteapically). Intersegmental sulci between sternites strongly S-shaped.

Punctuation. Head without punctures. Callar lobe and rounded lateral margins without punctures; callar lobe encircled by ring of large, deep punctures, those in posterior row especially large and longitudinally elongate; disc of pronotal lobe with regular fine punctation. Scutellum with regular punctation except for its smooth tip and smooth, transverse, gibbose portion in middle. Clavus and corium with regular, fine punctation, only costal margin smooth.

Pilosity. Head ventrally and thorax with adpressed white setae.

Measurements (mm). Female (holotype). Body length 16.79; head: width (including eyes) 3.56, interocular width 2.36; lengths of antennomeres: I – 3.62, II–IV – missing; pronotum: length 3.62, width 5.53; scutellum: length 2.16, width 3.24; corium: length 8.26, width 3.19.

Differential diagnosis. *Ectatops grandis* sp. nov. resembles *E. dembickyi* Stehlík, 2007 from India (Meghalaya), previously considered the largest representative of the genus.

However, *E. dembickyi* differs in pale membrane with large, round, black spot at centre and its smaller size (measurements of one female (mm): body length 15.98; head width across eyes 3.40; interocular width 2.00; length of antennomere I 3.35; pronotum: length 3.24, width 5.18; scutellum: length 2.11, width 2.92; corium: length 7.83, width 3.13) (cf. STEHLÍK 2007).

Habitat. The holotype was collected in tropical evergreen forest (J. Constant, pers. comm.).

Etymology. The species name is the Latin adjective *grandis* (-is, -e), meaning “great” or “large”.

Distribution. Central Vietnam (this paper).

***Ectatops indignus* (Walker, 1873)**

(Figs 7–10)

Dindymus indignus Walker, 1873: 10 (original description). Syntype(s): Thailand: “Siam” (BMNH).

= *Ectatops largoides* Walker, 1873: 23 (key), 24–25 (original description). Syntype(s): ♂, Thailand: “Siam” (BMNH). Synonymized with *E. indignus* by DISTANT (1902: 36).

= *Dindymus imitator* Walker, 1873: 7 (original description). Syntype(s): Thailand: “Siam” (BMNH). Synonymized with *E. ophthalmicus* by DISTANT (1902: 37); removed from that synonymy by KERZHNER & VOIGT (2001: 78); synonymized with *E. indignus* by STEHLÍK (2005a: 154).

= *Ectatops rubiaceus* (not AMYOT & SERVILLE 1843): DISTANT (1903a): 104 (misidentification). See KERZHNER & VOIGT (2001: 78).

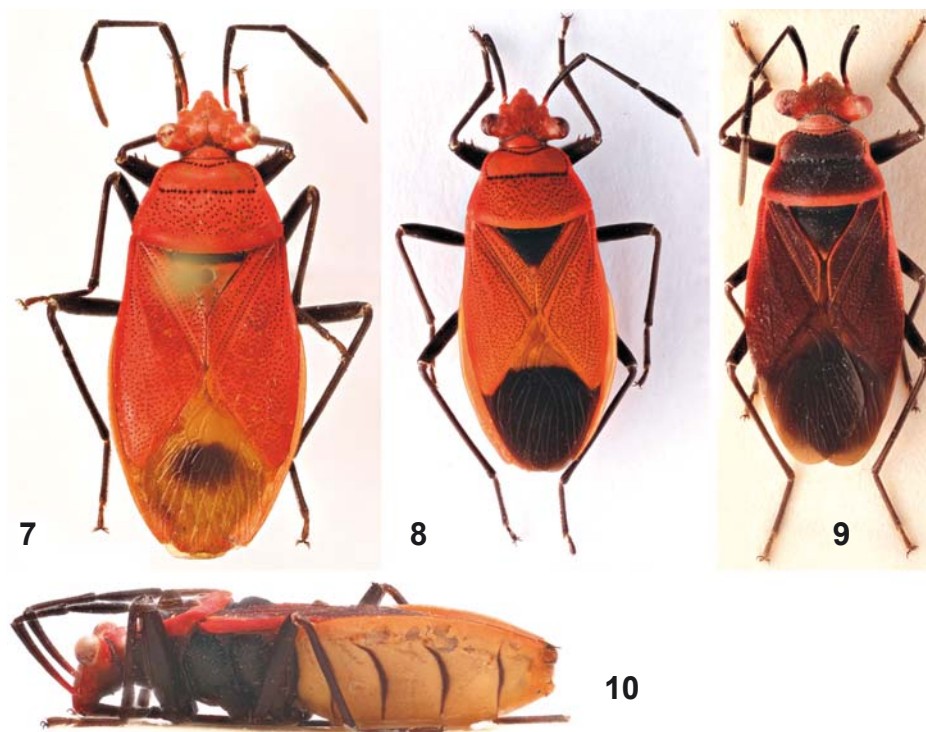
= *Ectatops rubiaceus* var. *extensus* (partim): SCHMIDT (1932): 241 (1 syntype – see KERZHNER & VOIGT 2001).

Material examined. INDIA: Assam: 5 km N of Umrangso, 25°27'N 92°43'E, 700 m a.s.l., 21.v.1999, 2 ♀♀, L. Dembický & P. Pacholátko lgt., J. L. Stehlik det. (MMBC). **LAOS: Khammouan Province:** Ban Khoun Ngeun env., 18°07'N 104°29'E, 20.–25.v.2014, 2 ♂♂, E. Jendek & O. Šauša lgt., J. L. Stehlik / Z. Jindra det. (1 ♂ MMBC, 1 ♂ NMPC). **Vientiane Province:** Vientiane, 2 ♀♀, J. L. Stehlik det. (ISNB). **MALAYSIA: Kedah:** Pulau Langkawi Is., NW, Datai rainforest, 2.–10.xi.2002, 1 ♂, E. Heiss lgt., J. L. Stehlik det. (EHIA). **THAILAND: Trang Province:** Trang waterfall, 3 ♀♀, Dajak Layang Gaddi lgt., J. L. Stehlik det. (ISNB). **Trat Province:** Ko Chang Island, WGS 84: 12°05'N 102°21'E, 0–200 m a.s.l., 6.–13.vii.2002, 1 ♀, R.+H. Fouqué lgt., J. L. Stehlik det. (NMPC). **VIETNAM: Ha Giang Province:** Tonkin, Rég. d'Ha-Giang, 1915, 1 ♀, Siebens Olivier lgt., J. L. Stehlik det. (MNHN). **Ba Ria-Vung Tau Province:** Con Dao N.P., Con Dao Isl., 8°41'30"N 106°38'00"E, day collecting, 17.–24.vi.2012, 1 ♀, I.G.: 32.161, J. Constant & J. Bresseel lgt., P. Kment det. (ISNB).

Distribution. India: Arunachal Pradesh (DISTANT 1903a, as *E. indigna*); Assam (DISTANT 1903a, as *E. indigna* and *E. rubiacea*; this paper); Meghalaya (DISTANT 1903a, as *E. rubiacea*); Myanmar (DISTANT 1902, 1903a, as *E. indigna* and *E. rubiacea*; KERZHNER & VOIGT 2001); Thailand (WALKER 1873, as *E. largoides*; DISTANT 1902, 1903a, as *E. indigna* and *E. rubiacea*; STEHLÍK & JINDRA 2003); Laos (STEHlíK 2005a); Vietnam (KERZHNER & VOIGT 2001); Malaysia: Kedah (new record); Indonesia: Sumatra (SCHMIDT 1932, one syntype of *E. rubiaceus* var. *extensus*; KERZHNER & VOIGT 2001).

Comment. Record from “D.N.G., Toem” (Indonesia: Papua) by AHMAD & PARVEEN (1990) is definitely erroneous.

Several authors have published records of *E. rubiaceus* (= *E. ophthalmicus*) from north-eastern India and Bangladesh: DISTANT (1903a) and AHMAD & PARVEEN (1990) from Meghalaya, MITRA *et al.* (1977) from Arunachal Pradesh, AHMAD & PARVEEN



Figs 7–10. Habitus of *Ectatops indiginus* (Walker, 1873): 7 – ♀, India, Assam, 5 km N of Umrangso, body length 14.5 mm (MMBC); 8 – ♀, Vietnam, Con Dao N.P., body length 13.85 mm (ISNB); 9 – ♂, Laos, Ban Khoun Nguen env., body length 10.62 mm (NMPC); 10 – ♀, Thailand, Ko Chang Island, body length 14.15 mm (NMPC). Photos: 7 – L. Dembický, 8–10 – P. Kment.

(1990) from Nagaland, and DISTANT (1903a) from Bangladesh. However, insofar as there is no confirmed record of *E. ophthalmicus* from that general area, these records may pertain to *E. dembickyi* (see STEHLÍK 2007) or to *E. indignus* (= *E. rubiacea* sensu DISTANT 1903a).

***Ectatops lateralis* de Vuillefroy, 1864**

Ectatops lateralis de Vuillefroy, 1864: 144 (key, diagnosis). Syntype(s): Bangladesh, Silhet [= Sylhet] (?MNHN).

Distribution. Bangladesh (DE VUILLEFROY 1864, WALKER 1873, DISTANT 1903a, HUSSEY 1929).

Comment. Concerning the possible type depository, see Comment under *Ectatops distinctus*.

***Ectatops limbatus* Amyot et Serville, 1843**

Ectatops limbatus Amyot et Serville, 1843: 273 (diagnosis). Holotype: ♀, Indonesia, Java (NHMW).
= *Ectatops limbatus* var. *divergens* Schmidt, 1932: 241 (diagnosis). Holotype: ♀, Indonesia, Java (ZMHB).

Material examined. INDONESIA: Java: Jawa, 1 ♂ 1 ♀, no collector, J. L. Stehlik det. (ISNB); Jawa (east), Malangsari village env., Meru Behri N.P., iv.1996, 1 ♂, S. Jakl lgt., J. L. Stehlik det. (ZJPC); Jawa (west), Radjamandala, Gg Djampang Wetan, 15.iii.1937, 3 ♀♀, M. E. Walsch lgt., J. L. Stehlik det. (ZMHB); Jawa (west), Salatri, 6.i.1938, 2 ♂♂ 2 ♀♀, M. E. Walsch lgt., J. L. Stehlik det. (ZMHB); Jawa (west), Wijnkoops Bay, 18.ii.1937, 2 ♂♂ 2 ♀♀, M. E. Walsch lgt., J. L. Stehlik det. (ZMHB).

Distribution. Vietnam: Saigon (AHMAD & PARVEEN 1990) [?]; Indonesia/Malaysia: Borneo (BLÖTE 1931) [?], Java (AMYOT & SERVILLE 1843; STÅL 1863, 1870; DE VUILLEFROY 1864; WALKER 1873; LETHIERRY & SEVERIN 1894; BLÖTE 1931; SCHMIDT 1932; AHMAD & PARVEEN 1990), Timor (BLÖTE 1931) [?].

Comments. STÅL (1870) provided the distribution as “Patria: Java, India orientalis”. WALKER (1873) reported the species from Hindostan [archaic area, approximately India norther of the Deccan] and Java. DISTANT (1879) recorded it from Assam (in the larger historico-political context) but DISTANT (1903a) listed it from India with reference to Stål. LETHIERRY & SEVERIN (1894) listed the species from India in his catalogue. HUSSEY (1929) listed both India and Assam with question marks. The occurrence of *E. limbatus* in India seems erroneous, while other records outside Java also require confirmation.

***Ectatops nervosus* Breddin, 1901**

(Figs 11–12)

Ectatops nervosus Breddin, 1901a: 11 (diagnosis). Lectotype (designated by GAEDIKE 1971: 122): Indonesia, Borneo, Sabah, ‘Banguay’ [= Banggi Is.] (SDEL).

Material examined. INDONESIA: West Kalimantan: Ng. Ella district, Ng. Nyurug env., 5.–10.viii.1993, 1 ♀, R. Dunda lgt., P. Kment det. (MMBC). **MALAYSIA: Sarawak:** [Kubah NP], Matang, 9 ♀♀, Xantus lgt., J. L. Stehlik det. (HNHM).

Distribution. Indonesia: Kalimantan (new record); Malaysia: Sabah: Banggi Isl. (BREDDIN 1901a,b, 1905; TAEUBER 1927; HUSSEY 1929, SCHRÖDER 1964); Sarawak (BREDDIN 1901a,b; HUSSEY 1929, SCHRÖDER 1964).

Comment. Description of *E. nervosus* has been published twice: BREDDIN (1901a) provided brief but sufficient diagnosis to make the name available: “Aehnlich dem *E. speculum* m., jedoch die Flügelmembran schwarz, nur die Adern sämtlich und fast bis zum Rande gelb. [= Similar to *E. speculum* m[ihi] but hind wing membrane black, only all the veins yellow, reaching near to its margin.]”. He provided no details on type material except “Borneo, Banguay”. In a footnote, BREDDIN (1901b: 141) repeated this diagnosis in Latin, together with short comparison with *E. speculum*, and the following information on types: “Borneo (Baram flumen, Kükenthal leg.), Banguay”. The paper by BREDDIN (1901a) was published on April 15, 1901 [see *Societas Entomologica* Vol. 16(2): 9], and BREDDIN (1901b: 140), published in May, 1901 [see *Entomologische Zeitung* (Stettin) Vol. 62(1–6): 218], therefore its publication date is established arbitrarily in May 31, 1901 – see Article 21.3.1 of ICZN (1999).

Based on BREDDIN (1901a,b), the species was described on the basis of syntypes from Sarawak (Baram River) and Banggi Island. However, BREDDIN (1905) wrote



Figs 11–12. Habitus of *Ectatops nervosus* Stehlik et Jindra, 2006: ♀, Indonesia, W Kalimantan, Ng. Nyuruh env., body length 11.38 mm (MMBC). Photos: P. Kment.

explicitly that the species is known only from Banguay. This indicated to TAEUBER (1927) a degree of uncertainty as to whether the species really occurs in Borneo at all. The existence of a syntype from “Borneo, Baramfluß” was confirmed by SCHRÖDER (1964).

***Ectatops notatus* Stehlik et Jindra, 2006**

Ectatops notatus Stehlik et Jindra, 2006: 36 (habitus photo), 39–40 (original description). Holotype: ♂, Malaysia, Sarawak, Mt. Dulit, Dulit Trail (BMNH).

Distribution. Malaysia: Sarawak (STEHLÍK & JINDRA 2006).

***Ectatops obscurus* de Vuillefroy, 1864**

Ectatops obscurus De Vuillefroy, 1864: 144 (original description). Syntype(s): Malay Peninsula (?MNHN).

Material examined. INDONESIA: Sumatra: Sumatra (west), Mt. Tandikat, 25 km N of Pariaman, 400–600 m a.s.l., i.2007, 1 ♂, S. Jakl lgt., J. L. Stehlik det. (ZJPC).

Distribution. Thailand: Pattani (DISTANT 1903b); Malaysia: Melaka: “Malacca” (WALKER 1873, LETHIERRY & SEVERIN 1894, HUSSEY 1929); Indonesia: Sumatra (BREDDIN 1901b, SCHMIDT 1932, HUSSEY 1929).

Comment. Concerning the possible type depository, see Comment under *Ectatops distinctus*.

***Ectatops ophthalmicus* (Burmeister, 1835)**

(Figs 13–17)

Pyrrhocoris ophthalmicus Burmeister, 1835: 284 (original description). Syntypes: Indonesia, Java (ZMHB, see SCHMIDT 1932: 242).

= *Ectatops ophthalmicus* var. *disjunctus* Schmidt, 1932: 242 (diagnosis). Holotype: ♀, Indonesia, Sumatra, Soekaranda (Mus. Stettin → ZMPA, see KERZHNER 2001, KERZHNER & VOIGT 2001).

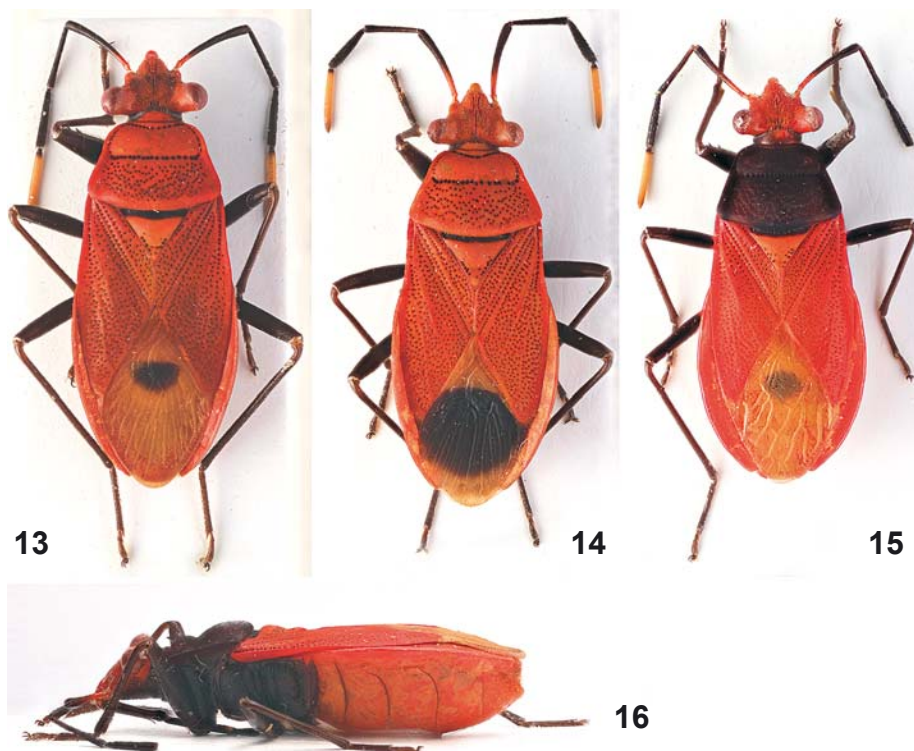
= *Ectatops ophthalmicus* var. *nigriventris* Blöte, 1931: 106 (diagnosis). Holotype: ♀, Indonesia, Timor (RMNH). According to KERZHNER & VOIGT (2001: 77), the status of this taxon is doubtful as it co-occurs in Timor with the typical colour form and may constitute a separate species.

= *Ectatops rubiaceus* Amyot et Serville, 1843: 273 (diagnosis). Lectotype (designated by SEHNAL & KERZHNER 1999: 132): ♀, Indonesia, Java (NHMW). Synonymized with *E. ophthalmicus* by BREDDIN (1900: 161; 1901b: 140) and KIRKALDY & EDWARDS (1902: 166); kept as variety of *E. ophthalmicus* by BLÖTE (1931: 105); upgraded to species by DISTANT (1903a: 104) and SCHMIDT (1932: 241) based on misidentification of *E. indignus*.

= *Ectatops rubiaceus* var. *extensus* Schmidt, 1932: 241 (diagnosis). Syntypes: Indonesia, Sumatra, Soekaranda (Mus. Stettin → ZMPA, KERZHNER 2001, KERZHNER & VOIGT 2001).

Material examined. INDONESIA: Java: West Java, Mts. Djampang, Radjamandala, 1200 m a.s.l., x.1936, 1 ♂ 1 ♀, R. Mus. Hist. Nat. Belg. I. G. 11.161, J. L. Stehlik det. (MMBC). **MALAYSIA: Johor:** Endau – Rompin, Selendang, 1.–4.iii.1997, 1 ♂, I. Jeniš lgt., Z. Jindra det. (NMPC). **Perak:** Cameron Highlands, Batu [= Mile] 19 village env., 4°22.2'N 101°20.0'E, 590 m a.s.l., 22.–27.iv.2009, 1 ♀, 5.–15.v.2009, 1 ♀, J. Hájek lgt., J. L. Stehlik det. (NMPC); same locality, sweeping/beating along stream, 22.iv.–15.v.2009, 2 ♂♂ 2 ♀♀, P. Baňář, P. Pacholátko & M. Trýzna lgt., J. L. Stehlik det. (MMBC); Cameron Highlands, Batu [= Mile] 25 village env., 4°23.2'N 101°22.8'E, 740 m a.s.l., 25.–29.iv.2009, 2 ♀♀ 1 larva, 1.v.2009, 3 ♂♂ 4 ♀♀, J. Hájek lgt., J. L. Stehlik det. (NMPC); the same locality, ca. 780 m a.s.l., sweeping/beating along stream, 1.–7.v.2009, 1 ♀, P. Baňář & M. Trýzna lgt., J. L. Stehlik det. (MMBC); Cameron Highlands, Lata Iskandar [waterfall] env., 4°19.5'N 101°19.5'E, 445 m a.s.l., 6.v.2009, 3 larvae, J. Hájek lgt., J. L. Stehlik det. (NMPC). **Sabah:** Crocker Range N.P., W of Apin Apin, v.1999, 2 ♀♀, M. Snížek lgt., Z. Jindra det. (MMBC, NMPC). **Sarawak:** Borneo, [Kubah NP], Matang, 1 ♂ 7 ♀♀, Xantus lgt., J. L. Stehlik det. (MMBC). **Selangor:** N of Kuala Lumpur, Tampler Park, 10.ii.1998, 1 ♂, S. Bečvář lgt., J. L. Stehlik det. (MMBC). **PHILIPPINES: Palawan:** Palawan, 1 ♀, J. L. Stehlik det. (NMPC); N Palawan, Binaluan, Taeuber Coll., B.M. 1949-474, xi.–xii.1913, 6 ♂♂ 7 ♀♀, G. Boettcher lgt., J. L. Stehlik det. (BMNH); Palawan, Irawan Forest, B.M. 1988-2, 1000 ft [= 305 m a.s.l.], on poles of forest hut, 15.i.1988, 1 ♂, 19.i.1988, 2 ♂♂ 1 ♀; 1000 ft [= 305 m a.s.l.], ground searching, i.–ii.1988, 2 ♀♀; ca. 1500 ft [= 457 m a.s.l.], i.–ii.1988, 1 ♀; 700 ft [= 213 m a.s.l.], swept by river, i.–ii.1988, 1 ♀; all J. H. Martin lgt., J. L. Stehlik det. (BMNH); Palawan, Cleopatra Needle, 10°01'N 119°01'E, La Boudeuse, 1999–2000, 3.–4.i.2000, 1 ♀, H. Perrin lgt., J. L. Stehlik det. (MNHN).

Distribution. China: Hainan (LIU 1981, HUA 2000), Guangxi (LIU 1981, HUA 2000), Yunnan (HSIAO 1964, LIU 1981, HUA 2000); India: Arunachal Pradesh (MITRA *et al.* 1977, as *E. rubiaceus* [?], Karnataka (KERZHNER & VOIGT 2001), Meghalaya (AHMAD & PARVEEN 1990, as *E. rubiaceus* [?], Nagaland (AHMAD & PARVEEN 1990, as *E. rubiaceus* [?], Bangladesh: Sylhet (DISTANT 1903a) [?]; Cambodia (NOUALHIER & MARTIN 1904, as *E. rubiaceus*); Vietnam: Saigon (AHMAD & PARVEEN 1990, as *E. rubiaceus*); Malaysia:



Figs 13–16. Habitus of *Ectatops ophthalmicus* (Burmeister, 1835): 13 – ♂, Malaysia, Perak, Batu 25 village env., body length 11.38 mm (NMPC); 14 – ♀, Malaysia, Perak, Batu 25 village env., body length 14.00 mm (NMPC); 15–16 – ♀, Malaysia, Perak, Batu 25 village env., body length 12.92 mm (NMPC). Photos: P. Kment.

Johor (new record), Melaka: “Malacca” (WALKER 1873, as *E. rubiaceus*; LETHIERRY & SEVERIN 1894; BREDDIN 1900), Pahang (DISTANT 1903b, as *E. rubiaceus*), Perak (DISTANT 1903b, as *E. rubiaceus*; KERZHNER & VOIGT 2001), Sabah (incl. Banggi Is.) (BREDDIN 1905, BLÖTE 1931, SCHMIDT 1932, AHMAD & PARVEEN 1990, KERZHNER & VOIGT 2001), Sarawak (WALKER 1873, as *E. rubiaceus*; BREDDIN 1900; AHMAD & PARVEEN 1990), Selangor (AHMAD & PARVEEN 1990, partly as *E. rubiaceus*); Singapore (WALKER 1873, as *E. rubiaceus*); Indonesia: Java (BURMEISTER 1835; AMYOT & SERVILLE 1843; STÅL 1863, 1870, both as *E. rubiaceus*; WALKER 1873, as both *E. ophthalmicus* and *E. rubiaceus*; LETHIERRY & SEVERIN 1894; BREDDIN 1900, 1905; BLÖTE 1931; SCHMIDT 1932; SCHOUTEDEN 1933; KERZHNER & VOIGT 2001), Kalimantan (BLÖTE 1931, KERZHNER & VOIGT 2001, STEHLÍK 2006), Sumatra (LETHIERRY & SEVERIN 1894; BREDDIN 1900, 1901b, 1905; BLÖTE 1931; SCHMIDT 1932; AHMAD & PARVEEN 1990, as



Fig. 17. Habitus of *Ectatops ophthalmicus* (Burmeister, 1835), larva, Lata Iskandar, body length 6.86 mm (NMPC). Photo: P. Kment.

E. rubiaceus; KERZHNER & VOIGT 2001), Timor (BLÖTE 1931); Philippines: Palawan (BREDDIN 1900, 1901b, 1905; BANKS 1909; TAEUBER 1927; KERZHNER & VOIGT 2001).

Comment. In the case of DISTANT (1903b) there is some doubt as to whether the records published under the name *E. rubiaceus* belong to *E. ophthalmicus* or *E. indignus*.

Several authors have published records of *E. rubiaceus* (= *E. ophthalmicus*) from north-east India and Bangladesh: DISTANT (1903a) and AHMAD & PARVEEN (1990) from Meghalaya, MITRA *et al.* (1977) from Arunachal Pradesh, AHMAD & PARVEEN (1990) from Nagaland, and DISTANT (1903a) from Bangladesh. However, insofar as there is no confirmed record of *E. ophthalmicus* from that area, these records may belong to *E. dembickyi* (see STEHLÍK 2007) or to *E. indignus* (= *E. rubiaceus* sensu DISTANT 1903a). The record of one female of *E. ophthalmicus* from “Vorderindien, Merkaru”, here interpreted as Madikeri (or Mercara) in Karnataka, provided in material examined by KERZHNER & VOIGT (2001), seems to be the only reliable record from India, but remains in need of further confirmation.

***Ectatops riedeli* Stehlík et Jindra, 2008**

Ectatops riedeli Stehlík et Jindra, 2008: 640–644 (original description, habitus photo, drawing of pygophore and paramere). Holotype: ♂, Indonesia: Sulawesi: Sulawesi Selatan Province, ca. 15 km W of Palopo (ZSMC).

Distribution. Indonesia: Sulawesi: Sulawesi Selatan (STEHLÍK & JINDRA 2008).

***Ectatops rubens* Stål, 1870**

Ectatops rubens Stål, 1870: 105–106 (original description). Holotype: ♂, Philippines, Luzon: “Manila” (NHRS).

Distribution. Philippines: Luzon (STÅL 1870; TAEUBER 1927, with ?), Mindanao (TAEUBER 1927).

***Ectatops saturnides* Kirkaldy et Edwards, 1902**

Ectatops saturnides Kirkaldy et Edwards, 1902: 166–167 (original description). Syntype(s): Indonesia: Maluku Islands: “Amboina” [= Ambon Is.] (USNM).

Distribution. Indonesia: Maluku: Ambon Is. (KIRKALDY & EDWARDS 1902, HUSSEY 1929).

***Ectatops schoenitzeri* Stehlík et Jindra, 2008**

Ectatops schoenitzeri Stehlík et Jindra, 2008: 643–645 (original description, habitus photo, drawing of pygophore and paramere). Holotype: ♂, Indonesia: Sulawesi: Sulawesi Selatan Province, ca. 15 km W of Palopo (ZSMC).

Distribution. Indonesia: Sulawesi: Sulawesi Selatan (STEHLÍK & JINDRA 2008).

***Ectatops seminiger* Stål, 1863**

Ectatops seminiger Stål, 1863: 397 (original description). Syntypes: ♂♀, Philippines, Luzon: ‘Manilla’ (NHRS).

Distribution. Philippines: Basilan (TAEUBER 1927), Luzon (STÅL 1863, 1870; HUSSEY 1929), Masbate (TAEUBER 1927), Mindanao (TAEUBER 1927).

***Ectatops signoreti* Distant, 1910**

Ectatops signoreti Distant, 1910: 94 (original description). Syntype(s): Bangladesh, Silhet [= Sylhet] (NHMW).

Distribution. Bangladesh (DISTANT 1910, HUSSEY 1929).

***Ectatops simalurensis* Blöte, 1931**

Ectatops simalurensis Blöte, 1931: 106–107 (original description, habitus drawing). Holotype: ♂, Indonesia, Simalur [= Simeule] Is., Sinabang (RMNH).

Distribution. Indonesia: Simeule Is. 150 km W Sumatra (BLÖTE 1931).

***Ectatops speculum* Breddin, 1901**

(Figs 18–19)

Ectatops speculum Breddin, 1901a: 11 (original description). Syntypes: Indonesia, Sumatra, Soekaranda (Mus. Stettin → ZMPA).

New records. MALAYSIA: Perak: Cameron Highlands, Batu [= Mile] 19 village env., 4°22.2'N 101°20.0'E, 590 m a.s.l., 22.–27.iv.2009, 2 ♂♂, J. Hájek lgt., J. L. Stehlík det. (NMPC).

Distribution. Indonesia: Sumatra (BREDDIN 1901a,b; SCHMIDT 1932; HUSSEY 1929); Malaysia: Perak (new record).

Remark. The description of *E. speculum* was published twice: BREDDIN (1901a: 11), on April 15, 1901 [see *Societas Entomologica* Vol. 16(2): 9], and BREDDIN (1901b: 140), on



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Figs 18–19. Habitus of *Ectatops speculum* Breddin, 1901: ♂, Malaysia, Perak, Batu 19 village env., body length 9.38 mm (NMPC). Photos: P. Kment.

May, 1901 [see *Entomologische Zeitung* (Stettin) Vol. 62(1–6): 218], publication date is therefore established arbitrarily as May 31, 1901 – see Article 21.3.1 of ICZN (1999).

***Ectatops subjectus* Walker, 1873**

Ectatops subjectus Walker, 1873: 23 (key), 26 (original description). Syntype(s): ♂, Indonesia, Sulawesi: “Celebes” (BMNH).

Distribution. Indonesia: Sulawesi: Sulawesi Tengah, Sulawesi Tenggara (Butong Island) (WALKER 1873, LETHIERRY & SEVERIN 1894, BREDDIN 1901c, STEHLÍK & JINDRA 2008).

***Ectatops sulawesiensis* Stehlík et Jindra, 2006**

Ectatops sulawesiensis Stehlík et Jindra, 2006: 36 (habitus photo), 37–38 (original description). Holotype: ♂, Indonesia, Sulawesi Utara, Dumoga-Bone Nat. Park, Hogg’s Back Subcamp (ISNB).

Distribution. Indonesia: Sulawesi: Sulawesi Utara (STEHLÍK & JINDRA 2006).

***Ectatops webbi* Stehlík, 2006**

Ectatops webbi Stehlík, 2006: 656 (habitus photo), 675–676 (original description). Holotype: Sulawesi, Sulawesi Utara, Dumoga-Bone N.P. (BMNH).

Distribution. Indonesia: Sulawesi: Sulawesi Utara (STEHLÍK 2006).

Discussion

The distribution range of *Ectatops* covers most of the Oriental Region from southern China and Karnataka in India extending further east to Australasian Region in Papua New Guinea and Solomon Islands. The centre of its biodiversity is in the islands of Indonesia and Philippines, harbouring together 22 species; the highest number of species is recorded from Great Sunda Islands (including the small adjacent islands) – 9, followed by Philippines with 6 species, Sulawesi with 5 species, Maluku Islands with 3 species, and Lesser Sunda Islands with 2 species (both from Timor Island). On the other hand, only one species, *E. gracilicornis* Stål, 1863, spreads from Maluku Islands eastwards to Papua New Guinea (including adjacent islands) and Solomon Islands (Guadalcanal Is.). The Asian continent harbours only 12 species, 5 of them shared with Great Sunda Islands and Palawan (Philippines): 7 species are recorded from the Indian subcontinent (including Bangladesh), 6 species from southeastern Asia (between Southern China, Burma and Thailand), and only 3 species in the Malay Peninsula. However, 5 of the species described from Bangladesh, Cambodia/Philippines and Singapore have never been reported since their description in 1863–1910 (*E. adustus*, *E. distinctus*, *E. erythromelas*, *E. lateralis*, *E. signoreti*) and their validity is in need of revision.

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