

# New Taxa of Carpophilinae (Coleoptera, Nitidulidae) from the Himalaya and Northern Indochina. Part 1<sup>1</sup>

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**Abstract**—A review of the subgenera *Askocarpolus* Kirejtshuk, 2008, *Gaplocarpolus* Kirejtshuk, 2008, *Megacarpolus* Reitter, 1919, and *Semocarpolus* Kirejtshuk, 2008 of the genus *Carpophilus* Stephens, 1829 is given including data on the formerly described and descriptions of new species from the Himalaya, North Indochina, and other Asian territories and neighboring insular systems: *C. (Askocarpolus) bursiferus* sp. n., *C. (A.) hartmanni* sp. n., *C. (A.) longulus* sp. n., *C. (A.) marsupiferus* sp. n., *C. (A.) vicarius* sp. n., *C. (Gaplocarpolus) lucidus* sp. n., *C. (G.) transgressus* sp. n., *C. (Megacarpolus) annae* sp. n., and *C. (Semocarpolus) adjunctus* sp. n. Keys to species of the mentioned subgenera are elaborated. Type series of the members of these subgenera were examined, and the lectotypes of *Carpophilus cuneiformis* Murray, 1864, *C. marginellus* Motschulsky, 1858, *C. rubescens* Murray, 1864, *C. suturalis* Lea, 1921 and *C. variolosus* Murray, 1864 are designated. Neotype of *Carpophilus funereus* Murray, 1864 is designated. The synonymy of *Carpophilus marginellus* Motschulsky, 1858 and *C. suturalis* Lea, 1921, **syn. n.** is established.

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This paper presents results of a continuation of the studies which were started when the monograph of the subfamily Epuraeinae of the Himalaya and Northern Indochina (Kirejtshuk, 1999) was being prepared and it deals with several subgenera of *Carpophilus* Stephens, 1829. The mentioned lands with areas southeast to them including Zunda Islands and Philippines have the highest recent diversity of the subfamily Carpophilinae, and many species related to the groups spread in these continental mountain areas are also included in this paper. In the general classification proposed by Kirejtshuk (2008) this genus was subdivided into nine subgenera (*Askocarpolus* Kirejtshuk, 2008, *Carpophilus* s. str., *Ecnomorphus* Motschulsky, 1858, *Gaplocarpolus* Kirejtshuk, 2008, *Caplothorax* Kirejtshuk, 1997, *Megacarpolus* Reitter, 1919, *Myothorax* Murray, 1864, *Plapennipolus* Kirejtshuk, 1997, and *Semocarpolus* Kirejtshuk, 2008), although some other taxa described or regarded as separate genera are treated as subgenera of the genus *Carpophilus*, namely *Ctilodes* Murray, 1864 and *Loriarulus* Kirejtshuk, 1987 (the latter was initially established as a subgenus of *Carpophilus*). Most subgenera of the *Carpophilus* have been recorded or can be expected in the area under consideration (except the

West Hemispheran *Caplothorax* and *Plapennipolus*). In this part only four subgenera are considered, other subgenera will be reviewed in the next subsequent parts. References were included in this paper only if they represent publications containing the taxonomic information or data important for systematics. The reference sources, including catalogues, are here omitted if they repeat correct information published before.

Traditional optic devices were used in the study: MBS-10 stereomicroscope and Leica MZ 12.0 stereomicroscope in the Zoological Institute of RAS, and many other microscopes were used by the author in the course of the visits to scientific organizations. The specimens examined are housed in the following collections: **AMNY**—American Museum of Natural History, New York; **BMNH**—Natural History Museum [formerly British Museum (Natural History)], London; **DEI**—Senckenberg Deutsches Entomologisches Institut, Müncheberg; **FMNH**—Field Museum of Natural History, Chicago; **IRSN**—Institut royal des sciences naturelles, Bruxelles; **MAK**—Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn; **MMUE**—Entomology Department, Museum at Manchester University; **MNHN**—Muséum national d'histoire naturelle, Paris; **NMB**—Naturhistorisches Museum, Basel; **NMC**—National Museum and Gallery of Wales, Cardiff; **NME**—Naturhistorisches Museum, Erfurt; **NMP**—Narodní muzeum v Praze;

<sup>1</sup> This article was originally submitted by the author in English and is first published here.

**NMW**—Naturhistorisches Museum, Wien; **NRS**—Naturhistoriska Riksmuseet, Stockholm; **OMNH**—Oxford University Museum of Natural History; **RMNH**—Rijkmuseum van natuurlijke Historie, Leiden; **ROM**—Royal Ontario Museum, Toronto; **QMB**—Queensland Museum, Brisbane; **SMNS**—Staatliches Museum für Naturkunde, Stuttgart; **TMB**—Magyar Természettudományi Múzeum, Budapest; **ZIN**—Zoological Institute of the Russian Academy of Sciences, St. Petersburg; **ZMB**—Museum für Naturkunde der Humboldt-Universität zu Berlin; **ZMMU**—Zoological Museum at Moscow State University; **ZMO**—Zoologisk Museum at Oslo University; **ZMUC**—Zoologisk Museum at Copenhagen University, København.

Genus *CARPOPHILUS* Stephens, 1829 s. lato

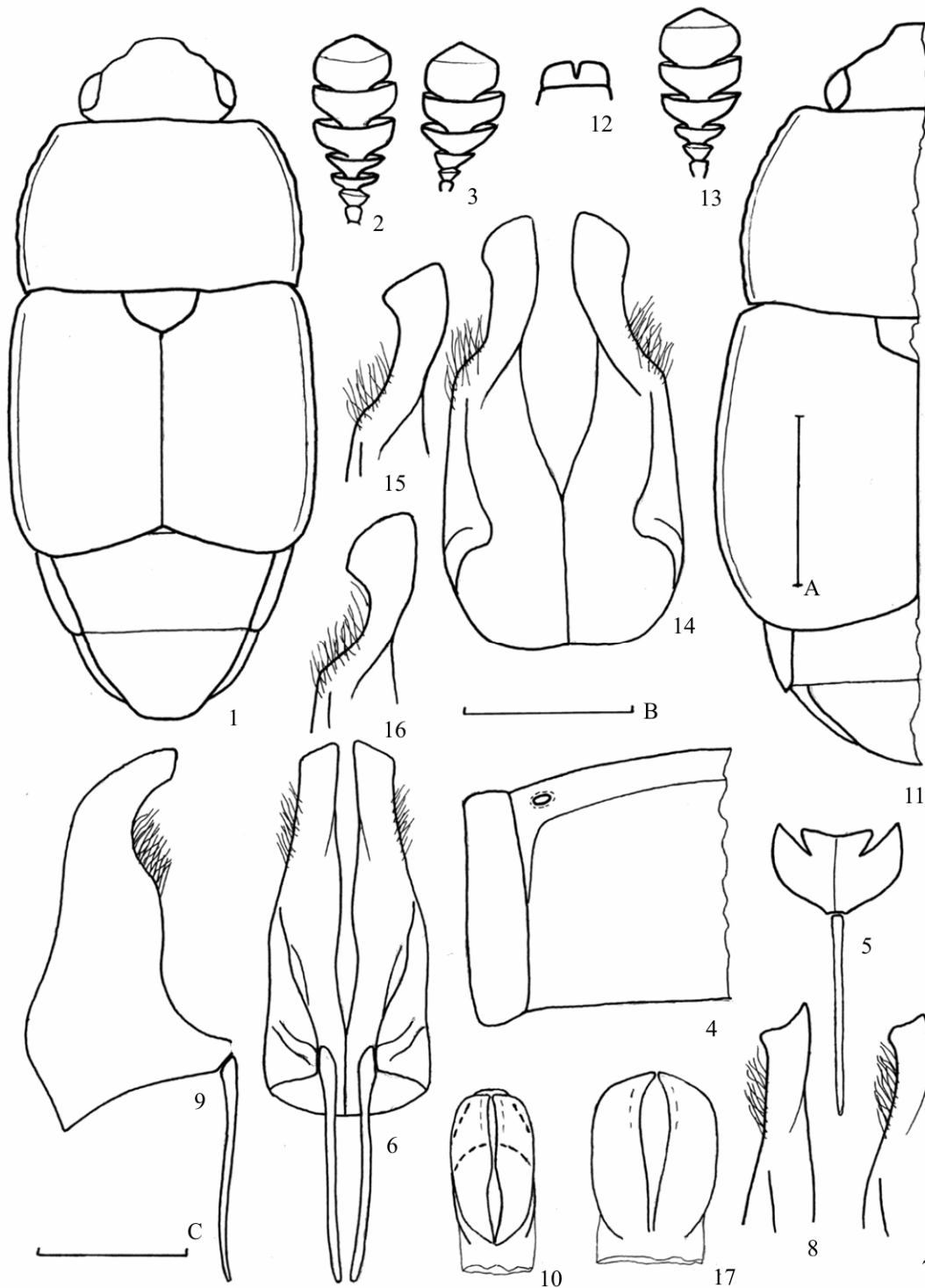
*Carpophilus* Stephens, 1829 : 8. Type-species: *Dermestes hemipterus* Linnaeus, 1758 (designated by Parsons, 1943).

I. Subgenus *Megacarpolus* Reitter, 1919  
(Figs. 1–34, 113)

*Carpophilus (Megacarpolus)* Reitter, 1919 : 54. Type-species: *Carpophilus grandis* Motschulsky, 1860 (by monotypy); Kirejtshuk, 1992 : 161; 2008 : 109.

**Comparative notes.** This subgenus is here accepted as interpreted by Kirejtshuk (1992). It is closely related to *Askocarpolus*, *Carpophilus* s. str., *Gaplocarpolus* and *Semocarpolus*. *Megacarpolus* is characterized by the oval or moderately transverse spiracles of the abdominal segment 6 and rather deeply angularly excised posterior edge of metaventricle between metacoxae (somewhat similar to that in *Askocarpolus* and *Gaplocarpolus*). It differs from *Carpophilus* s. str. in the evenly and moderately (not steeply) sloping pronotal and elytral sides, moderately explanate/sub-explanate pronotal and elytral sides (as widely explanate as width of antennal flagellum), absence of the distal plate of mesoventrite, although *Megacarpolus* and *Carpophilus* s. str. share some specific features, viz. strongly widened apex of the prosternal process, reduction of the postmesocoxal line, and the tendency to development of depressions on the male hypopygidium. *Megacarpolus* differs from *Askocarpolus* in the much shorter elytra, in the generally finer, denser and less distinct punctation of the dorsal sclerites, simple mesoventrite (without distal plate and deep paramedian pockets) covered with dense and rather

coarse punctation. *Megacarpolus* is distinct from *Gaplocarpolus* and *Semocarpolus* in the evenly and moderately (not steeply) sloping pronotal and elytral sides, moderately explanate pronotal and elytral sides, in the generally finer and less distinct punctation of dorsal sclerites, densely and coarsely punctate mesoventrite, and from the first also in the moderately compact antennal club and not strongly convex medially female pygidium. The lack of clear postmesocoxal lines deviating from the posterior edge of mesocoxal cavity in members of this subgenus is shared with the representatives of *Loriarulus*. However, species of *Megacarpolus* differ from species of the latter in the somewhat smaller and much more convex body, shorter elytra with normally rounded outer apical angles, rounded anterior angles of pronotum, different body coloration and peculiar structures of abdominal apex in both sexes. Almost all representatives of *Megacarpolus* are characterized by the comparatively large, subquadrangular to suboval and black or dark to a varying extent body, frequently also rather dark appendages, very dense punctation and slight shine of dorsal sclerites, comparatively large and often rather compact antennal club (although Indo-Malayan representatives do not always have compact club in both sexes). The male pygidium of all Indo-Malayan species of *Megacarpolus* has the apex very widely rounded or subtruncate, and the hypopygidium has no depressions at the medioapical excision. In contrast to those in many other groups of *Carpophilus*, the ventral plate of the male genital capsule of *Megacarpolus* is not fused with the *spiculum gastrale* and has a distinct median suture (discrimen). The penis trunk is slightly sclerotized and with visible unpigmented sclerites. A peculiar character of Indo-Malayan members of this subgenus is also the weakly transverse abdominal spiracles of abdominal segment 6, which very rarely look like narrow cracks, but usually have oval outline (at least in all Indo-Malayan species). Nevertheless, these spiracles in some of Nearctic *Megacarpolus* species have strongly extended transverse outline as in many representatives of other genera of Carpophilinae, and Palaearctic representatives have the shape of these spiracles intermediate between the mentioned extremes. The variability in width of spiracles of this segment is shown in Figs. 4, 31–34. It should also be noted that these spiracles in the Palaearctic *C. (M.) grandis* Motschulsky, 1860 and *C. (M.) triton* Murray, 1864 as well as in the Nearctic pairs: *C. (M.) transitans* Sharp, 1889 and *C. (M.) sayi* Parsons, 1943; *C. (M.) lugubris* Murray, 1864 and



**Figs. 1–17.** *Carpophilus (Megacarpolus)*: (1–10) *C. (M.) annae* sp. n. [(1) male body with contour of explanate sides of pronotum and elytra, dorsal; (2) male antennal club; (3) female antennal club; (4) right half of abdominal segment 6 with a spiracle, dorsal; (5) ventral plate and spiculum gastrale; (6) tegmen, ventral (Thailand: Suthep); (7) lateral lobe of tegmen, ventral (India, Darjeeling: Rinkingpong); (8) lateral lobe of tegmen, ventral (India, Uttar Pradesh: Almora); (9) tegmen, lateral (the same specimen); (10) penis trunk, dorsal (Thailand: Doi-Suthep)]; (11–17) *C. (M.) funereus* Murray [(11) male body with contour of explanate sides of pronotum and elytra, dorsal; (12) male antennal club; (13) female antennal club; (14) tegmen, ventral (Taiwan: "Kosempo"); (15) lateral lobe of tegmen, ventral (Vietnam: Tam Dao); (16) lateral lobe of tegmen, ventral (Java: Sodong); (17) penis trunk, dorsal (Thailand: Suthep)]. Scales: A—1.0 mm to Figs. 1, 11, 12; B—0.5 mm to Figs. 2–5, 13; C—0.25 mm to Figs. 6–10, 14–17. (Orig.)

*C. (M.) funebris* Murray, 1864; *C. (M.) brevipennis* (Blanchard, 1842) and *C. (M.) californicus* Schaeffer, 1911 have a close width in each pair. Each spiracle of abdominal segment 6 in *C. (M.) morio* Murray, 1864 is expanded along a quarter of the width of the tergite base.

**Bionomy.** The Palaearctic representatives of this subgenus appear in the middle of spring and live mostly under the bark of living trees and at exuded sap of deciduous trees (species of *Salix*, *Betula*, *Alnus*, *Populus* etc.), occurring until late autumn, although not infrequently imagines also visit fruit-bodies of fungi on trees and various decaying substrates of plant origin (Kirejtshuk, 1992). Their larvae usually develop under bark during late spring and early summer, although Hayashi (1978) has also recorded larvae of this subgenus in a fermenting apple-fruit. According to the museum labels of the specimens examined, the Indo-Malayan representatives have similar ecological and phenologic characteristics, but they are recorded also in logs of *Pinus longifolia*.

**Distribution and composition.** This subgenus is represented in the Indo-Malayan Region by three species, here considered. It includes also *C. (M.) grandis* and *C. (M.) triton* in the Far East (Khabarovsk and Primorskii territories, Sakhalin, Kuriles, Korea and Japan), *C. (M.) morio* Murray, 1864 (initially described in *Carpophilus* s. str.) endemic to Madagascar, and 11 species in the Western Hemisphere, predominantly in Central America [most of them are here attributed to *Megacarpolus* for the first time: *C. (M.) brevipennis*; *C. (M.) californicus*; *C. (M.) deflectus* Sharp, 1889; *C. (M.) funebris*; *C. (M.) lugubris*; *C. (M.) rufitarsis* Murray, 1864; *C. (M.) sayi* (= *Carpophilus niger* auctt., non *Cercus niger* Say, 1823); *C. (M.) similis* Sharp, 1889; *C. (M.) transitans* Sharp, 1889; *C. (M.) tristis* Erichson, 1843, and *C. (M.) viduatus* Sharp, 1889].

*Key to Species of the Subgenus Megacarpolus  
of the Himalaya, Indochina and Adjacent Territories  
(Including the Palaearctic Far East)*

1 a. Pronotum with completely smooth interspaces between punctures, which are larger than half of a puncture diameter; head and metaventricle with denser punctation and smooth interspaces; body usually entirely black or, rarely, dark brown with lighter antennal flagella and legs. Male: hypopygidium usually with slight depression along medioapical excision. Female: pygidium flattened

and truncate at apex. 3.8–6.4 mm. (Kirejtshuk, 1992: figs. 80, 5–8). Russian Far East: Khabarovsk and Primorskii territories ..... *C. (M.) grandis* Motschulsky, 1860.

- 1 b. Pronotum with alutaceous or microreticulate interspaces between punctures, which are markedly narrower than half of a puncture diameter; if interspaces are completely smooth and punctures are very dense, the combination of other characters is different. Male: hypopygidium without depression along medioapical excision ..... 2.
- 2 (1) a. Body more slender and dark brown (never black), with lighter antennal flagella and legs; elytra usually with coarser punctation only somewhat finer than that on pronotum. Female: pygidium with narrowly rounded or subacute apex. 3.8–6.2 mm. (Kirejtshuk, 1992: figs. 80, 1–4). Russian Far East (Amurskaya Prov., Khabarovsk and Primorskii territories, Sakhalin, Kuriles), Korea, Japan, Taiwan ..... *C. (M.) triton* Murray, 1864 (= *titanus* Reitter, 1884).
- 2 (1) b. Body more robust and usually completely black, sometimes brown or with lighter antennal flagella and legs; elytra usually with punctation much finer than that on pronotum ..... 3.
- 3 (2) a. Antennal club of male with 5, of female, with 4 antennomeres; body more slender with elytral sides subparallel; surface behind mentum with conspicuous hairs, longer in males than in females. Pubescence of prosternal process usually sexually dimorph: hairs along midline of male prosternum denser and more conspicuous than on other underside sclerites. Male: pygidium rather widely rounded than truncate at apex. Female: pygidium with widely subtruncate and subflattened apex. 4.0–5.1 mm. Figs. 1–10, 113. India (Uttar Pradesh, Darjeeling), Thailand ..... *C. (M.) annae* sp. n.
- 3 (2) b. Antennal club in both sexes with not more than 4 antennomeres; body more robust with elytra widely arcuate at sides. Pubescence of prosternal process without sexual dimorphism. Male: pygidium rather truncate than widely rounded at apex. Female: pygidium distinctly depressed at the subacute apex or with a median tubercle at the widely subtruncate apex ..... 4.

- 4 (3) a. Body narrower, less rounded (Fig. 11). Male: lateral lobes of tegmen longer and widened toward apex. 3.8–4.3 mm. Figs. 11–21. India (Darjeeling, Tamil Nadu), Sri Lanka, Taiwan, Myanmar (Burma), Thailand, Malaysia (Perak, Penang, Sarawak), Indonesia (Sumatra, Kalimantan) ..... *C. (M.) funereus* Murray, 1864.
- 4 (3) b. Body wider, more rounded (Fig. 22). Male: lateral lobes of tegmen shorter and narrowed toward apex. 3.0–5.0 mm. Figs. 22–30. Malaysia (Kalimantan: Kinabalu) .....  
..... *C. (M.) variolosus* Murray, 1864.

*Carpophilus (Megacarpolus) annae* Kirejtshuk, sp. n.  
(Figs. 1–10, 113)

**Material.** **India.** Holotype, male (NMB) and 16 paratypes (NMB, SMNS, ZIN)—“Kalimp., 1000 m, Rinkingpong, 22.IV.1987,” “Darjeeling, Ch.J. Rai.” Other paratypes. 9 (BMNH, ZIN)—“W. Almora, U.P., 58.'16, H.G.C.” (H.G. Champion), “In Chir logs (*Pinus longifolia*);” 3 (BMNH, ZIN)—“W. Almora Divn. Kumaon, U.P., July, 1916, H.G.C.” (H.G. Champion); 1 (BMNH)—“U.P., Chakrata Divn., 7 000 ft, IV.1928, H.G. Champion;” 4 (BMNH)—“Ranikhet, U.P., 6–8.'16, H.G. Champion.” **Thailand.** 11 (NMP, ZIN)—“Chiang Mai Prov., Doi-Suthep, 19–22.IV.1991, S. Bilý;” 3 (NMP, ZIN)—“1–7.V.1992, Mae Hong Son, Ban Si Lang, 1000 m, S. Bilý.”

**Description.** **Male** (holotype). Length 4.3, width 2.0, height 0.9 mm. Moderately convex dorsally and ventrally; black, with dark brown abdominal ventrites, antennal flagella, mouthparts and legs (tarsi almost reddish); shining (especially on head and pronotum); dorsal surface with inconspicuous fine and long grayish hairs more than 2.5 times as long as distance between their insertions; underside with conspicuous and much shorter pubescence, but hairs along prosternum midline considerably longer and denser.

Head and pronotal integument with distinct regular and deep punctures, much more than twice as large as eye facets in diameter, interspaces between them about 1/4 of a puncture diameter, with smooth and isodiametric microreticulation (at pronotal sides punctures becoming denser, shallower, irregular and contiguous). Elytral surface somewhat similar to that on head and pronotal disc, but with punctures markedly finer and denser, interspaces between them with sharper microreticulation. Surface of abdominal tergite VI and

ventrites 1–4 with small and shallow punctures slightly coarser than eye facets, very narrow interspaces between them smoothly microreticulate; surface of pygidium and hypopygidium similar, but interspaces sharply microreticulate. Surface of prosternum, mesoventrite and sides of metaventrite nearly microgranulate and densely alutaceous. Disc of metaventrite with quite distinct and very fine punctures slightly coarser than eye facets, interspaces between them about as large as a puncture diameter, sharply and very densely microreticulate.

Head about 5/6 as long as distance between eyes (composed of very fine facets), scarcely convex and with weak depressions at antennal insertions. Antennae about as long as head width, their 5-segmented club comprising nearly 1/3 of total antennal length, about 1.5 times as long as wide, antennomeres 9 and 10 subequal in width.

Pronotum evenly convex, widest at basal third and narrowed both anteriorly and posteriorly, its anterior edge shallowly emarginate, posterior edge distinctly biemarginate, lateral edges finely undulate and moderately narrowly explanate/subexplanate [as widely (sub)explanate as width of antennal flagella], posterior angles of pronotum distinctly pointed and slightly projecting. Scutellum subpentagonal, with rounded apex. Elytra subflattened on disc and moderately vaulted at sides, moderately widely explanate at lateral edges [as widely explanate as width of antennal flagella], about 13/16 as long as combined width. Pygidium about as long as tergite VI, with very widely rounded apex.

Antennal grooves clearly outlined, minimal distance between them markedly less than width of mentum. Ultimate labial palpomere transverse, strongly widened toward apex. Mentum subpentagonal, with scarcely projecting apex and more than triple as wide as long. Distance between procoxae less than half, and that between metacoxae about 2/3 that between mesocoxae. Prosternal process medially convex, rather widened before the widely rounded apex, at most about 1.5 times as wide as antennal club. Mesoventrite with very weak median carina. Metaventrite subflattened and with deeply angularly excised posterior edge between metacoxae. Abdominal ventrite I somewhat longer than ventrite IV and nearly as long as exposed part of hypopygidium, without depressions at medio-apical excision.

Tibiae with almost straight inner edge, protibia about 4/5, meso- and metatibiae 2/3 as wide as antennal club, outer subapical angle not projecting, meso- and metatibiae with rows of short and moderately thick setae. Femora with arcuate anterior and posterior edges, profemur about twice, meso- and metafemora 2.5 times as wide as corresponding tibiae. Protarsus about 2/3, and mesotarsus 1/3 as wide as corresponding tibiae, but metatarsus very narrow, appearing almost simple, with small hairs brushes on ventral surface of tarsomeres 1–3; claws simple and moderately developed.

Tegmen heavily, and ventral plate and *spiculum gastrale* moderately sclerotized; inner sac of penis with paired and indistinctly outlined elongate and slightly sclerotized sclerites.

**Female.** Antennal club involves only antennomere 8 (but not antennomere 7) into usual block of antennomeres 9–11. It also differs from male in narrower protarsus (not wider than half of protibia), very widely rounded or subtruncate apex of pygidium, and widely rounded apex of hypopygidium. Not infrequently females have wider and more robust body and hairs along the midline of prosternum as dense and conspicuous as on rest underside. Ovipositor rather long and moderately sclerotized, with sclerites of usual configuration [shaped as those in *C. (M.) variolosus*—see Fig. 30], but with apex only slightly pigmented.

**Variations.** Length 3.3–5.2, width 1.4–2.3, height 0.8–1.1 mm. Punctuation and sculpture of sclerites vary to a certain extent. The sexual dimorphism in pubescence of prosternum frequently is slightly expressed in males. Some paratypes have somewhat coarser punctures on the metaventricle than those in the holotype, and interspaces between them are rather smoothed. All females have 4-segmented antennal club, but some males have club rather 4-segmented than 5-segmented (as in the holotype), and some males from Almora have markedly larger antennal club.

**Comparative diagnosis.** This new species is rather similar to the both Indo-Malayan species, but quite distinct from them in the characters listed in the above key. In addition, it differs from them in the structure of the male genitalia (particularly in the structure of the wide tegmen with strongly curved lateral lobes) and in the slightly more expressed undulation of the pronotal sides and frequently slightly coarser and denser punctuation of the dorsal body surface.

**Notes.** Some previous references to *C. (M.) funereus* and *C. (M.) variolosus* may pertain to this new species and should be checked by re-examination of specimens identified by A. Grouvelle.

**Etymology.** The new species is named after the author's mother, Anna Antonovna Kirejtshuk (Zele-nina).

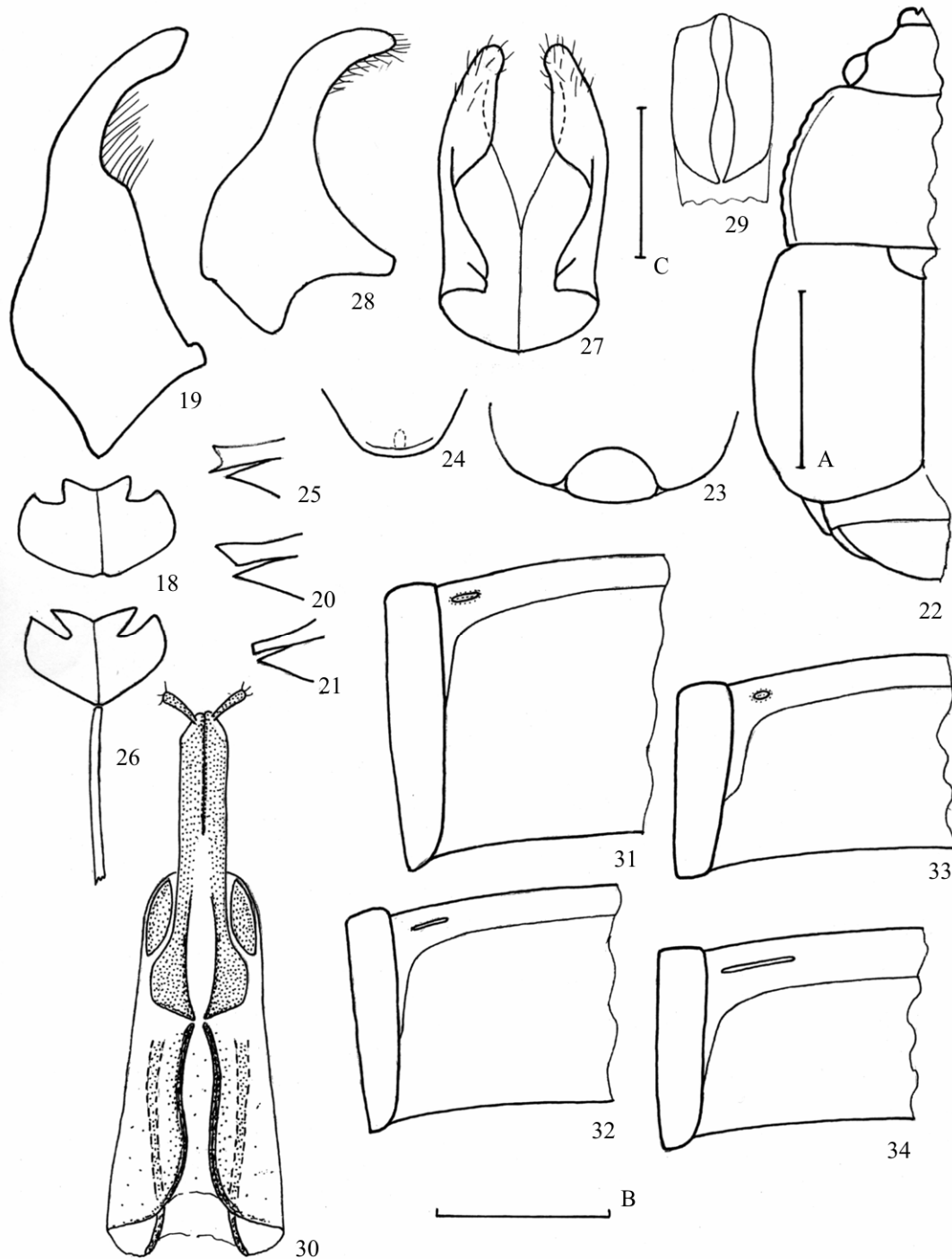
*Carpophilus (Megacarpolus) funereus* Murray, 1864 (Figs. 11–21)

*Carpophilus (Carpophilus) funereus* Murray, 1864 : 358 (Sri Lanka), non Reitter, 1884.

*Carpophilus (Carpophilus) funereus*: Grouvelle, 1903a : 109 (India: Darjeeling); 1908 : 332 [India (Nilgiri Hills), Sri Lanka, Myanmar (Burma)]; 1914 : 38 (Taiwan); Kirejtshuk, 2015 : 58. Erroneous reference: Reitter, 1884a : 259 (Japan; rejected in Grouvelle, 1913 : 90).

*Carpophilus (Megacarpolus) sp.*: Kirejtshuk and Kabakov, 1997 : 18 (Vietnam).

**Material.** **India.** 1 (BMNH)—“*Darjeeling*, Ghoom, 26.V.1931, Dr. M. Cameron;” 3 (BMNH)—“H.L. Andrewes, Nilgiri Hills” (identified by A. Grouvelle); 2 (BMNH, ZIN)—“Homfrey's Sts., Nicobar, G. Rogers, 1907–203.” **China (Taiwan).** 1 (DEI)—“Kosempo, Formosa, H. Sauter, 1912,” “22.V.” **Myanmar (Burma).** 1 (BMNH)—“Toungoo” (identified by A. Grouvelle). **Vietnam.** 1 (ZIN)—“Tam Dao, 13–24.5.1989, A. Olexa;” 1 (ROM)—“Cao Bang: Ba Be Natl. Park, trail along south end of Lake Ba Be to ethnic village, 23–27 May 1995, C. Condy,” “Pitfall traps (banana), on ground;” 1 (ZIN)—(Nghe tinh), “Song-Chu, Khiñ, 27.8.1962, Kabakov.” **Thailand.** 5 (NMB, ZIN)—“18–23.IV.1991, Doi-Suthep-Pul, 1300–1500 mm P. Pachelátko;” 1 (NMP)—“*Chiang Mai Prov.*, Doi-Suthep, 19–22.IV.1991, S. Bilý;” 3 (NMB, ZIN)—“Thailand bor. occ., 19–23.4.1991, Doi Suthep, Jan Farkač.” **Malaysia.** Neotype, male, here designated (BMNH)—“Perak, Doherty,” “Fry Coll. 1905-100” (identified probably by A. Murray); 9 (BMNH)—“Penang Is., Oct., G.E. Bryant;” 5 (NRS, ZIN)—“Mt. Tibang, 1,700 m,” “O. Borneo, Mjöberg.” **Indonesia.** 10 (SMNS, ZIN)—“E-Jawa, Ijen. pl. Nat. P., 1800 m, Sodong, 26–27.II.1994, Bolm;” 12 (NMB, ZIN, ZMO)—“Sumatra (N), Brastagi, G. Sibayak, 1450–1900 m, 19–23.II.1991, Bocák & Bocáková.” **Malaysia or Indonesia.** 7 (NRS, ZIN)—“Palau River, 1,700 m,” “O. Borneo, Mjöberg.”



**Figs. 18–34.** *Carpophilus (Megacarpolus)*: (18–21) *C. (M.) funereus* Murray, male (18, 19) and female (20, 21) [(18) ventral plate and spiculum gastrale; (19) tegmen, lateral (Taiwan: “Kosempo”); (20, 21) abdominal apex, lateral (20—Vietnam: Song Chu; 21—Kalimantan: “Kinepai”)]; (22–30) *C. (M.) variolosus* Murray [(22) male body with contour of explanate sides of pronotum and elytra, dorsal; (23) apex of male hypopygidium, ventral; (24) apex of female hypopygidium, ventral; (25) abdominal apex of female, lateral; (26) ventral plate and spiculum gastrale; (27) tegmen, ventral; (28) idem, lateral; (29) penis trunk, dorsal; (30) ovipositor, ventral]; (31–34) right half of abdominal segment 6 with spiracle, dorsal [(31) *C. (M.) grandis* Motschulsky, (32) *C. (M.) lugubris* Murray, (33) *C. (M.) transitans* Sharp, (34) *C. (M.) brevipennis* (Blanchard)]. Scales: A—1.0 mm to Fig. 22; B—0.5 mm to Figs. 18, 20–21, 23–26, 31–34; C—0.25 mm to Figs. 19, 27–30. (Orig.)

**Notes.** The type series supposedly is deposited in the collection of University of Oxford (Murray, 1864: 358: "Found by Mr. Templeton or Colonel Champion in the island of Ceylon, and now in the collection of the University of Oxford"—OMNH), however, during last 20 years this series was not found in this collection. The present interpretation is based on the original description and specimens probably examined by A. Murray (see above). Moreover, the designated neotype belongs to the third Indo-Malayan species of the subgenus *Megacarpolus* and its designation is reasonable to fix the use of the formerly proposed available name.

*Carpophilus (Megacarpolus) variolosus* Murray,  
1864  
(Figs. 22–30)

*Carpophilus (Carpophilus) variolosus* Murray,  
1864 : 360 (Sarawak, syntypes).

*Carpophilus (Carpophilus) variolosus*: erroneous reference: Grouvelle, 1913 : 179 (New Guinea).

**Material. Malaysia:** lectotype of *Carpophilus (Carpophilus) variolosus*, male (BMNH), here designated—"51845," "Wallace," "ex coll. Murray," "Borneo, Sar.," "Fry Coll. 1905-100." 1 paralectotype (BMNH)—"Sar.," "68.106," "*variolosus*"; 4 (DEI)—"Kina Balu," "coll. Kraatz, Grouvelle det.," "*Carpophilus variolosus* Murr.;" 1 (ZMB)—"N. Borneo, Kina Balu." 1 (FMNH)—"Kinabalu, Borneo;" 1 (ZMB)—"N. Borneo, Kina-Balu, Waterstradt S."

**Note.** The lectotype of this species was designated from the specimens examined and identified by A. Murray.

II. Subgenus *Semocarpolus* Kirejtshuk, 2008  
(Figs. 35–55, 114)

*Semocarpolus* Kirejtshuk, 2008 : 113. Type-species: *Carpophilus marginellus* Motschulsky, 1858.

*Key to the Species of the Subgenus Semocarpolus*

1 a. Body more slender (Fig. 42) and usually more shining; pronotum about 1 and 1/4 as wide as long; elytra about 13/16 as long as their combined width; difference between punctation of pronotum and elytra, if traceable, very fine: interspaces between very distinct punctures on pronotum and elytra 1/3 of one puncture diameter, smoothly and finely microreticulate to completely smooth; prosternal process impunctate,

smooth and in its widest part at apex only slightly narrower than antennal club; postmesocoxal line deviating from inner third of posterior edge of mesocoxal cavities; spiracles of abdominal segment 6 transverse, but comparatively weakly extended along base of tergite VI. Male: anal sclerite widely rounded at apex. 2.2–3.8 mm. Figs. 42–49. Subcosmopolitan in stored products, nearly everywhere in natural habitats in tropical and subtropical climate, and also in some areas with temperate climate .....  
..... *C. (S.) marginellus* Motschulsky, 1858.

1 b. Body more robust, oval or subquadrate (Figs. 35, 50, 124), frequently rather matt; pronotum about 1.5 times as wide as long; punctation of dorsal surface coarser; postmesocoxal line deviating from about the middle of posterior edge of mesocoxal cavities ..... 2.

2 (1) a. Body rather oval, chestnut-brown and bright reddish: coloration of dorsal surface and appendages more contrasting, sides of pronotum and tergite VI bright reddish in contrast to dark chestnut-brown rest of dorsal surface; dorsal pubescence less conspicuous, consisting of hairs 1.0–1.5 times as long as distance between their insertions on pronotum; ultimate labial palpomere slightly widened toward apex and markedly longer than wide at apex; interspaces between punctures on pronotum and elytra more than a puncture diameter; elytra leaving uncovered tergite VI and pygidium; each spiracle of abdominal segment 6 about 2/5 as wide as tergite VI. Male: anal sclerite widely rounded at apex. 2.2–3.3 mm. Figs. 50–55. Sri Lanka, Thailand, Vietnam, Malaysia (Malacca, Sarawak), Indonesia (Sumatra, Mentawai, Kalimantan), Brunei ....  
..... *C. (S.) rubescens* Murray, 1864.

2 (1) b. Body more subquadrate, dark brown and reddish: dorsal surface subunicolorous or less contrasting; gorsal pubescence moderately conspicuous, consisting of hairs 1.5–2.0 times as long as distance between their insertions on pronotum; interspaces between punctures on pronotum and elytra about as large as a puncture diameter or narrower; elytra leaving uncovered only apex of tergite VI and pygidium. Male: anal sclerite clearly angular at apex. 2.1–3.3 mm. Figs. 35–41, 114. India (Assam), Sri Lanka, Thailand, Vietnam, Malaysia (Malacca, Kalimantan), Philippines (Panay) .....  
..... *C. (S.) adjunctus* sp. n.



*Carpophilus (Semocarpulus) adjunctus*

Kirejtshuk, sp. n.  
(Figs. 35–41, 114)

**Material. Philippines.** Holotype, male (ZMB) and 6 paratypes (ZIN, ZMB)—“Port Banga bei Capiz, Insel Panay, leg. Böttcher,” “9.1.1915” (also 7.1.1915). Other paratypes. **India.** 10 (MAK, ZIN)—“Assam–Arunachal borber, Bhalukpong, 150 m, 27°00'48"N, 92°39'08"E, L. Dembický leg., 1–8.V.2012.” **Sri Lanka.** 5 (BMNH, ZIN)—“Peradeniya, Gannoruwa Forest, on *Goniothalamus gardneri* (Annonaceae), BMNH Enquiry 2002-112.” **Thailand.** 6 (ZIN, ZMUC)—“Chiang Mai Province, Fang Horticult. Exp. Station, 550–600 m, 20.X.1981, Zool. Mus. Copenhagen leg.,” 1 (ZMUC)—“7 km NW of Fang, Horticultural Experimental Station, 30.X–2.XI.1979, Zool. Mus. Copenhagen Exped.,” 1 (ZMUC)—“Chiang Mai Province, Doi Inthanon N. P.: Huai Sai Luang, 1000–1100 m, 13.X.1981, Zool. Museum Copenhagen leg.,” 1 (NMP)—“Chiang Mai Prov., Doi Suthep, 19–22.IV.1991, S. Bilý.” **Vietnam.** 1 (ZIN)—“gory (mountains) W Ha Tinh, Kim Kuong, 1.4.1963, O. Kabakov.” **Malaysia.** 1 (ZIN)—“Pulau Pinang, nr. Georgetown, Bot. Gardens, 14.X.1976 (76 079);” 1 (NMC)—“Pahang, Genting Highlands, Dec. 1986, Malaise trap/dist. primary forest, A.D. Austin;” 1 (BMNH)—“Penang, G.E. Bryant, X.1913;” 1 (BMNH)—“Sabah: Malaysia, Sandakan (Sepilok), mis-blowing, Sept.Oct.1998, A. Chung,” “MB 6/1;” 2 (BMNH)—“Sandukan, N. Borneo, W.B. Pryer.” **Indonesia.** 1 (RMNH)—“Dr. B. Hagen, Tandjong, Morawa, Serdang (N.O. Sumatra),” “*Carpophilus cuneiformis* det. Murr.”

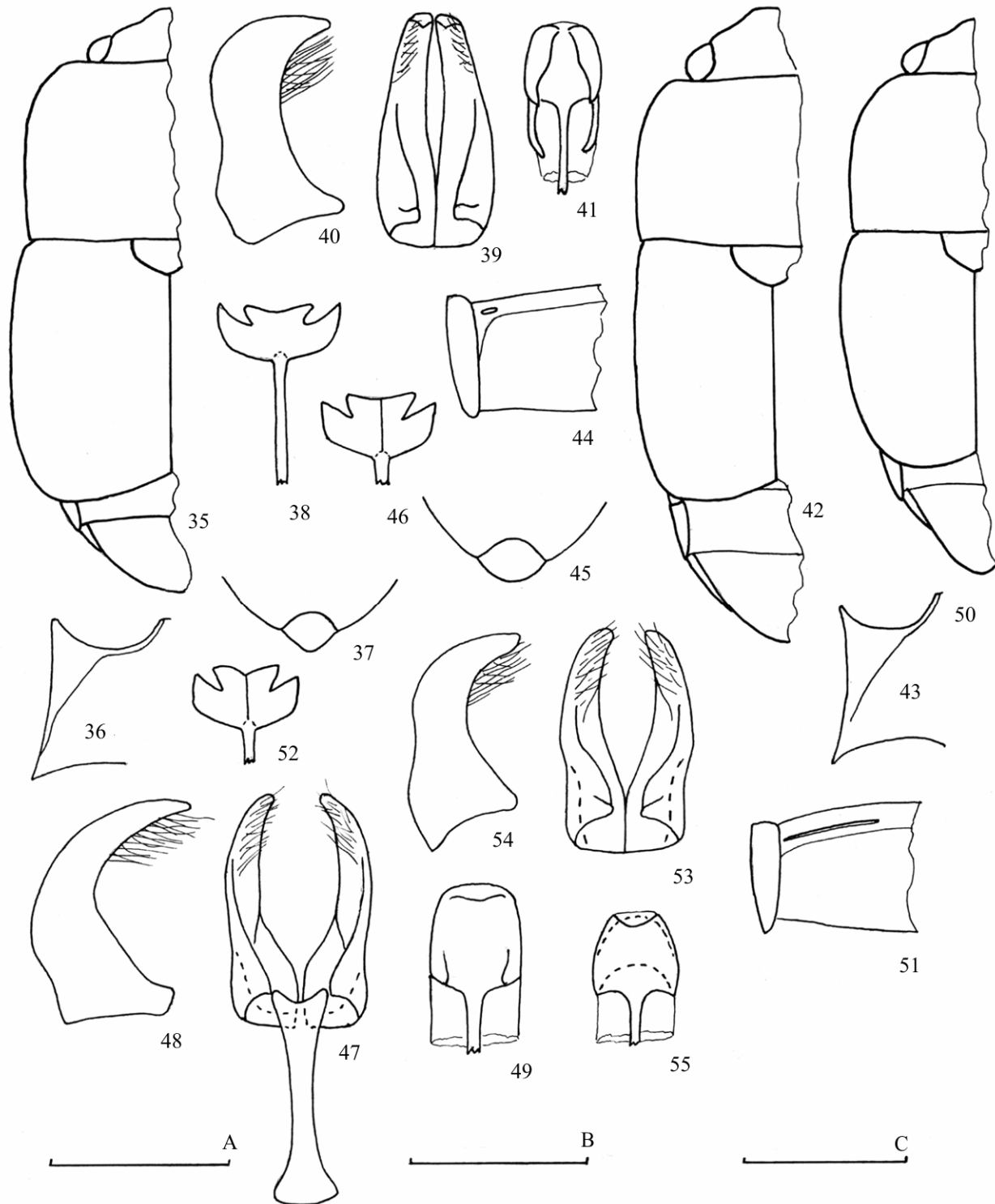
**Description. Male** (holotype). Length 2.3, width 1.3, height 0.7 mm. Rather convex dorsally and moderately convex ventrally; dorsal surface almost unicolorous dark chestnut-brown; underside and tergites uncovered by elytra, mouthparts, antennae and legs slightly lighter (dark reddish); slightly shining; dorsal surface with fine, subrecumbent and moderately conspicuous gray yellowish hairs about twice as long as distance between their insertions, underside with somewhat denser pubescence.

Head integument with distinct shallow punctures about 1.5 times as large as eye facets, interspaces between them nearly one puncture diameter or somewhat larger, with very fine isodiametric microreticulation. Pronotum with distinct and regular punctures, those on disc markedly more than twice as coarse as eye facets,

interspaces between them subequal to or narrower than one puncture diameter, with fine and smooth isodiametric microreticulation, at sides punctation becoming finer and denser (at anterior edge almost contiguous). Elytra with punctures nearly intermediate in size between those on head and those on pronotum, interspaces between punctures about one puncture diameter, with fine isodiametric smooth microreticulation. Abdominal tergites uncovered by elytra and ventrites with indistinct fine punctures somewhat larger than eye facets, interspaces between them much larger than one puncture diameter (especially on proximal ventrites), with dense and rather coarse microreticulation. Prosternal surface with large, very dense and very shallow punctures without distinct edges, but distinctly much more than twice as coarse as eye facets, interspaces between punctures and bottom of the latter with dense isodiametric microreticulation, although median part of prosternal process with only few punctures and smoothly alutaceous. Metaventricle with distinct fine punctures about as large as those on head, interspaces between them 1.5–2.0 puncture diameters and with rather smooth isodiametric microreticulation.

Head about 6/7 as long as distance between eyes (composed of very fine facets); subflattened, but with an arcuate and very weak depression between antennal insertions. Labrum moderately exposed and widely excised in the middle. Antennae about as long as head width, antennomere 2 slightly shorter than antennomere 3 and markedly longer than antennomere 4, club suboviform (about 1 and 1/5 as long as wide), nearly 1/4 of total antennal length and with penultimate antennomere widest. Pronotum rather convex on disc and steeply sloping at sides, with scarcely emarginate anterior and slightly convex posterior edges (somewhat sinuate at posterior angles), its sides almost smooth, arcuately narrowed from the middle to the rounded anterior angles, subparallel-sided in posterior 2/3, but narrowed just at posterior angles, distinctly pointed and slightly projecting. Scutellum subpentagonal with rounded apex. Elytra about 14/17 as long as their combined width, with clearly raised shoulders and subflattened disc, with sides steeply sloping to lateral edges and apices. Pygidium with apical edge widely rounded to subtruncate.

Antennal grooves distinctly outlined along both inner and outer edges, strongly and almost rectilinearly convergent, minimal distance between them at level of posterior eye edges, nearly 1 and 3/4 as great as width



**Figs. 35–55.** *Carpophilus* (*Semocarpolus*): (35–41) *C. (S.) adjunctus* sp. n. [(35) male body, dorsal; (36) postmesocoxal line of metaventre; (37) apex of male hypopygidium, ventral; (38) ventral plate and spiculum gastrale; (39) tegmen, ventral; (40) idem, lateral; (41) penis trunk, dorsal]; (42–49) *C. (S.) marginellus* [(42) male body, dorsal; (43) postmesocoxal line of metaventre; (44) right half of abdominal segment 6 with spiracle, dorsal; (45) apex of male hypopygidium, ventral; (46) ventral plate of male; (47) tegmen, ventral; (48) idem, lateral; (49) penis trunk, dorsal]; (50–55) *C. (S.) rubescens* Murray [(50) male body, dorsal; (51) right half of abdominal segment 6 with spiracle, dorsal; (52) ventral plate of male; (53) tegmen, ventral; (54) idem, lateral; (55) penis trunk, dorsal]. Scales: A—1.0 mm to Figs. 35, 42, 50; B—0.5 mm to Figs. 36–38, 43–46, 51, 52; C—0.25 mm to Figs. 39–41, 47–49, 53–55. (Orig.)

of antennal club. Ultimate labial palpomere clearly widened toward apex, somewhat longer than wide at apex, with latter oblique. Distance between procoxae about 0.7 times as, and that between metacoxae subequal to that between mesocoxae. Prosternal process medially convex to smoothly subcarinate at narrowest place and behind it subflattened and strongly widened before angular (subrhombic) apex, at most much less than twice as wide as antennal club. Mesoventrite medially evenly convex and with distinct narrow shining carina. Metaventrite subflattened, with median suture slightly depressed at rectilinear anterior edge between mesocoxae, its posterior edge between metacoxae feebly angularly excised. Postmesocoxal line deviating from middle of posterior edge of mesocoxal cavities, almost rectilinearly directed to middle of metepisternum. Abdominal ventrite I about 1 and 1/3 as long as ventrite IV; hypopygidium about 1.5 times as long as ventrite I and without depressions at medioapical excision. Epipleura at base somewhat narrower than antennal club.

Tibiae comparatively short; protibia subequal in width to, meso- and metatibiae distinctly narrower than antennal club, with nearly straight inner edge and subrounded outer subapical angle, outer edge of meso- and metatibiae with rows of moderately dense, inclined, short stout setae. Femora moderately wide, with anterior and posterior edges gently curved, profemur about 1 and 3/4, mesofemur almost twice, and metafemur about triple as wide as corresponding tibiae. Tarsi comparatively short, protarsus about 3/4 as wide as protibia, claws long and narrow.

Tegmen moderately sclerotized; inner sac of penis in proximal part with one baculiform sclerite between branches of U-shaped, moderately sclerotized and weakly outlined sclerite.

**Female** differs from the male only in the narrower protarsus, rounded and flat pygidial apex and also in the somewhat longer and widely rounded apex of the hypopygidium.

**Variations.** Length 2.1–3.3 mm, width 1.2–1.5, height 0.7–0.9 mm. Coloration, punctation, sculpture and pubescence are somewhat variable, although within the range of the variation characteristic of other members of this subgenus. The sides of pronotum of the larger specimens are slightly arcuate at base, but those in smaller specimens are subparallel-sided in basal 2/3. The dorsal surface, underside and appendages of some specimens are subunicolorous, and punctation of the dorsal sclerites is almost uniform.

The ultimate labial palpomere of the specimens from Philippines is more widened apically than those of the specimens from other parts of the range.

**Comparative diagnosis.** This species is very similar to *C. (Semocarpolus) rubescens*, differing from it only in the characters listed in the above key as well as in the structure of the male ventral plate and aedeagus. The both species differ from *C. (S.) marginellus* in the more robust body, usually lighter coloration of underside and tergites uncovered by elytra, coarser punctation, and particularly in the structure of the male ventral plate and aedeagus. The postmesocoxal line of all more robust specimens starts to deviate from the mesal edge of the coxal cavity at the level of apex of the mesotrochanter, while that in *C. (S.) marginellus* is deviating from the level of the middle of mesotrochanter. This new species differs from the Neotropical *C. (? Semocarpolus) succisus* Erichson, 1843 at least in the larger and more robust body, finer and much denser punctation of the dorsal surface, gently narrowed abdominal apex, shape of the ultimate labial palpomere and narrower leg segments (particularly tibiae).

**Etymology.** The epithet of this species means “adjoining,” “neighboring,” “joint,” “inherent,” “characteristic” etc.

*Carpophilus (Semocarpolus) marginellus*

Motschulsky, 1858

(Figs. 42–49)

*Carpophilus marginellus* Motschulsky, 1858 : 40 (“East Indies”).

*Carpophilus (Carpophilus) marginellus* : Murray, 1864 : 347 (East Indies, Sri Lanka, Hongkong, etc.); Reitter, 1884 : 258 (Japan); Grouvelle, 1892a : 837 (Myanmar (Burma): Carin Chebá); 1893 : 384 (Sri Lanka); 1902a : 481; 1903c : 340 (India: Pondicherry); 1908 : 330 (“Asia meridionale, Chine orientale,” also Madagascar); Hinton, 1943 : 275 (Great Britain; pest of flour); Blackwelder, 1945 : 412 (Argentina); Hinton, 1945 : 84 (Indo-Malayan Region; bionomy, stored food, control); Dobson, 1954b : 390 (quarantine); Hisamatsu, 1956 : 163 (Amani Islands); Connell, 1957 : 45 (larva, bionomy); Allen, 1958 : 70 (under natural condition—southern England); Horion, 1960 : 89 (Germany); Dobson, 1960 : 157 (quarantine); Gillogly, 1962 : 154 (Micronesia); Spornraft, 1968 : 123; Gillogly, 1969 : 246 (Philippines); Hisamatsu, 1970 : 130

(jack fruit); Hayashi, 1978 : 7 (larva); Connell, 1984 : 161 (synonymy); Kirejtshuk, 1992 : 160 (cosmopolitan; under natural conditions—Caucasus); Spornraft, 1992 : 93; Kirejtshuk, 1996 : 27; Kirejtshuk and Kabakov, 1997 : 18 (Vietnam, Laos); Kirejtshuk, 1999 : 23.

*Carpophilus (Semocarpolus) marginellus*: Kirejtshuk, 2008 : 113.

*Carpophilus (Carpophilus) nitens* Fall, 1910 : 125 (USA : Alabama); Parsons, 1943 : 177; Hinton, 1943 : 276 (synonymy).

*Carpophilus (Carpophilus) suturalis* Lea, 1921 : 186 (Australia: Queensland), syn. n.

**Material. Sri Lanka.** Lectotype of *Carpophilus (Carpophilus) marginellus* (ZIN), male, here designated, and 14 paralectotypes (ZIN, ZMMU)—“*Carpophilus marginellus* Motsch., Ceylon” (“Ind. or., Ceylon”). 1 ? paralectotype (ZMB)—“*Carpophilus marginellus* Motsch., Ceylon,” “Coll. L.W. Schaufuss;” 1 (ZMB)—“Ceylon, Nietner.” **India.** 3 ? paralectotypes of *C. marginellus* (NRS)—“Ind. or.,” “Murray.” Over 400 specimens have been examined also from **Nepal** (NMB, NMP, NMW), **China** (BMNH, NMB, NMC, ZIN), **India** (BMNH, MAK, MMUE, NMB, SMNS, ZIN), **Sri Lanka** (AMNY, OMNH, ZIN), **Indonesia** (Sumatra, Lombok, Bali) (NRS, SMNS, ZIN), **Myanmar (Burma)** (NRS), **Thailand** (NMB, SMNS, ZMUC), **Vietnam** (ROM, TMB, ZIN), **Malaysia** (MMUE, ZIN), **Philippines** (Leyte, Mindanao) (SMNS), and **Australia**: lectotype of *Carpophilus suturalis*, male (QMB), here designated, and 1 paralectotype, female (QMB) of *C. suturalis*—“N. Queensland, Blackb. Coll.”

**Notes.** Motschulsky (1858) adopted a wide concept of the West Indies or erroneously wrote that this species (*Carpophilus (Semocarpolus) marginellus*) originated from there, while on the labels written by him and pinned under the type specimens the locality was given as “Ceylon.” The lectotype of *C. (S.) marginellus* is designated from the specimens examined and supplied by the identification label by V. Motschulsky. The type specimens of *C. (S.) suturalis* recently re-examined by the author are undoubtedly conspecific with *C. marginellus* because of their similarity in all characters. The lectotype of *C. (S.) suturalis* was designated from the specimens examined and supplied by the identification label by A.M. Lea. Hinton (1943) established the synonymy of *C. marginellus* and

*C. nitens*. The type series of *C. (S.) nitens* was deposited in the collection of the Museum of Comparative Zoology at Harvard College (Cambridge, Massachusetts).

**Bionomy.** This species is quite common under natural conditions in many areas of the Eastern Hemisphere with warm climate and is rather characteristic of stored products of plant origin, in particular of rotten jack fruits, dry fruits, seeds and corn (including sweet corn ears, rice, cacao etc.) and copra. It is also known to occur in great numbers in flour-mills. *Carpophilus (Semocarpolus) marginellus* seems to be an agent of transmission of *Ceratocystis*, *Fusarium* and other infections and recorded in connection with infestation of fruits (Lindegren and Ocumura, 1973, also references above and Williams et al., 1983). It was collected in most types of forests in the territories under consideration. Under natural conditions this species was collected according to specimens deposited in ZIN in the Ulyanovsk Region and West Caucasus (Kirejtshuk, 1992) in Russia as well as in Tadjikistan, Afghanistan and China and some northern European countries (Allen, 1958; Horion, 1960; etc.).

*Carpophilus (Semocarpolus) rubescens* Murray, 1864 (Figs. 50–55)

*Carpophilus (Carpophilus) rubescens* Murray, 1864 : 348 (Kalimantan, Sarawak).

*Carpophilus (Carpophilus) rubescens*: Kirejtshuk and Kabakov, 1997 : 18 (Vietnam).

*Carpophilus (Semocarpolus) rubescens*: Kirejtshuk, 2008 : 114.

**Material. Malaysia.** Lectotype of *Carpophilus rubescens*, female (BMNH), here designated—“Sar.,” “*rubescens*,” “68.106.” 2 (BMNH, ZIN)—“Sabah, Sandakan, S. Lokan (LF), Sept. 96, A.Y.C. Chung,” “FIT 3/3/3” (5/3/3) (flight intercept trapping); 1 (BMNH)—“Malaysia, Sandakan (Sepilok), misblowing, A. Chung,” “MB 6/3;” 9 (BMNH, ZIN)—“Sarawak, 4<sup>th</sup> Division, Gn. Mulu NP,” “nr. Base Camp, 50–100 m,” “alluvial forest,” “Malaise Trap,” “P.M. Hammand & J.E. Marshall, v–vii.1978;” 1 (BMNH)—“Malaya, Kuala Lumpur, nr. Lake Gaeden, Sept. 1934,” “H.M. Pendlebury.” **Indonesia.** 1 female (BMNH)—“51832,” “Wallace,” “ex Mus. Murray,” “Maluccas, Muki,” “TYPE,” “Fry Coll. 1905-100;” (placed in collection together with *C. (Gaplocarpolus) cuneiformis*); 1 (RMNH)—

“Dr. B. Hagen, Tandjong, Morawa, Serdang (N.O. Sumatra),” “*Carpophilus cuneiformis* det. Murr.,” 1 (BMNH)—“Mentawai, Sipora, Sereinu, V–VI.94, Modigliani,” “ex Mus. Genoa,” “*Carpophilus cuneiformis* Murr” (written by A. Grouvelle); 13 (BMNH, ZIN)—“Indonesia Borneo Kalimantan, Tengah, Busang/Rekut confl., 0°03'S 13°59'E,” “flight Intercept FIT 6, Brendell, Mendel, August 2001,” “Barito Ulu 2001.” **Brunei.** 1 (BMNH)—“Ground Malaise 18, 610 m alt., 7.II.92, N. Mawdsley, NM301,” “Brunei, E115 7' N4 34', Kuala Belalong FSC, Dipterocarp forest.”

**Note.** Only one specimen from Sarawak (“Sar.”) collected by A.R. Wallace and identified by A. Murray as “*rubescens*” was found in the collection of BMNH. A. Murray (1864) wrote in his monograph that the type series was “Collected at Sarawak in Borneo by Mr. Wallace” (p. 348) without mention of the number of specimens. Therefore the examined specimen from this series is designated as the lectotype of this species.

### III. Subgenus *Gaplocarpolus* Kirejtshuk, 2008 (Figs. 56–80, 115, 118–125)

*Gaplocarpolus* Kirejtshuk, 2008 : 114. Type-species: *Carpophilus cuneiformis* Murray, 1864.

#### *Key to the Species of the Subgenus Gaplocarpolus*

- 1 a. Elytra with coarse punctures; base of pronotum with distinct border; mesotibia gradually widened toward apex; body with less arcuate sides; ultimate labial palpomere slightly widened toward apex and markedly longer than wide at apex; prosternal process with convex posterior edge; head, pronotum and elytra unicolorous chestnut-brown, tergites uncovered by elytra reddish; dorsal pubescence poorly visible; each spiracle of abdominal segment 6 about 1/5 as wide as tergite VI. Male: hypopygidium without a pair of paramedian depressions at medioapical excision. Female: pygidium subflattened medially and subacute at apex. 3.3–4.5 mm. Figs. 70–80, 115. Thailand, China (Yunnan) ..... *C. (G.) transgressus* sp. n.
- 1 b. Elytra with nearly obsolete punctures; base of pronotum with obsolete border; ultimate labial palpomere strongly widened toward apex and shorter than wide at apex; prosternal process with subangular posterior edge; mesotibia sub-

parallel-sided in distal half; dorsal surface reddish with darkened disc of pronotum as well as lateral and apical parts of elytra; body with more arcuate sides; dorsal pubescence rather conspicuous. Male: hypopygidium with a pair of shallow paramedian depressions at medioapical excision ..... 2.

- 2 (1) a. Antennomere 3 about 2/3 as long as scape; antennal club more subtriangular and about 1 and 1/2 as long as wide; pronotum with more distinct and coarser punctures (more than twice as large as eye facets); tergites uncovered by elytra with finer and sparser punctures separated by 3–4 puncture diameters. Male: lateral lobes of tegmen more or less gradually curved along posterior edge viewed laterally. 3.0 mm. Figs. 118–125. China (Yunnan) ..... *C. (G.) lucidus* sp. n.
- 2 (1) b. Antennomere 3 nearly as long as scape; antennal club more oval and about 1 and 1/3 as long as wide; pronotum with less distinct and finer punctures (about 1.5 times as large as eye facets); tergites uncovered by elytra with coarser and denser punctures separated by 1.0–1.5 puncture diameters; each spiracle of abdominal segment 6 about 2/5 as wide as tergite VI. Male: lateral lobes of tegmen curved only at base and at apex viewed laterally. Female: pygidium convex medially and subtruncate at apex. 3.0–3.8 mm. Figs. 56–69. Vietnam, Indonesia (Mentawai, Sulawesi) ..... *C. (G.) cuneiformis* Murray, 1864.

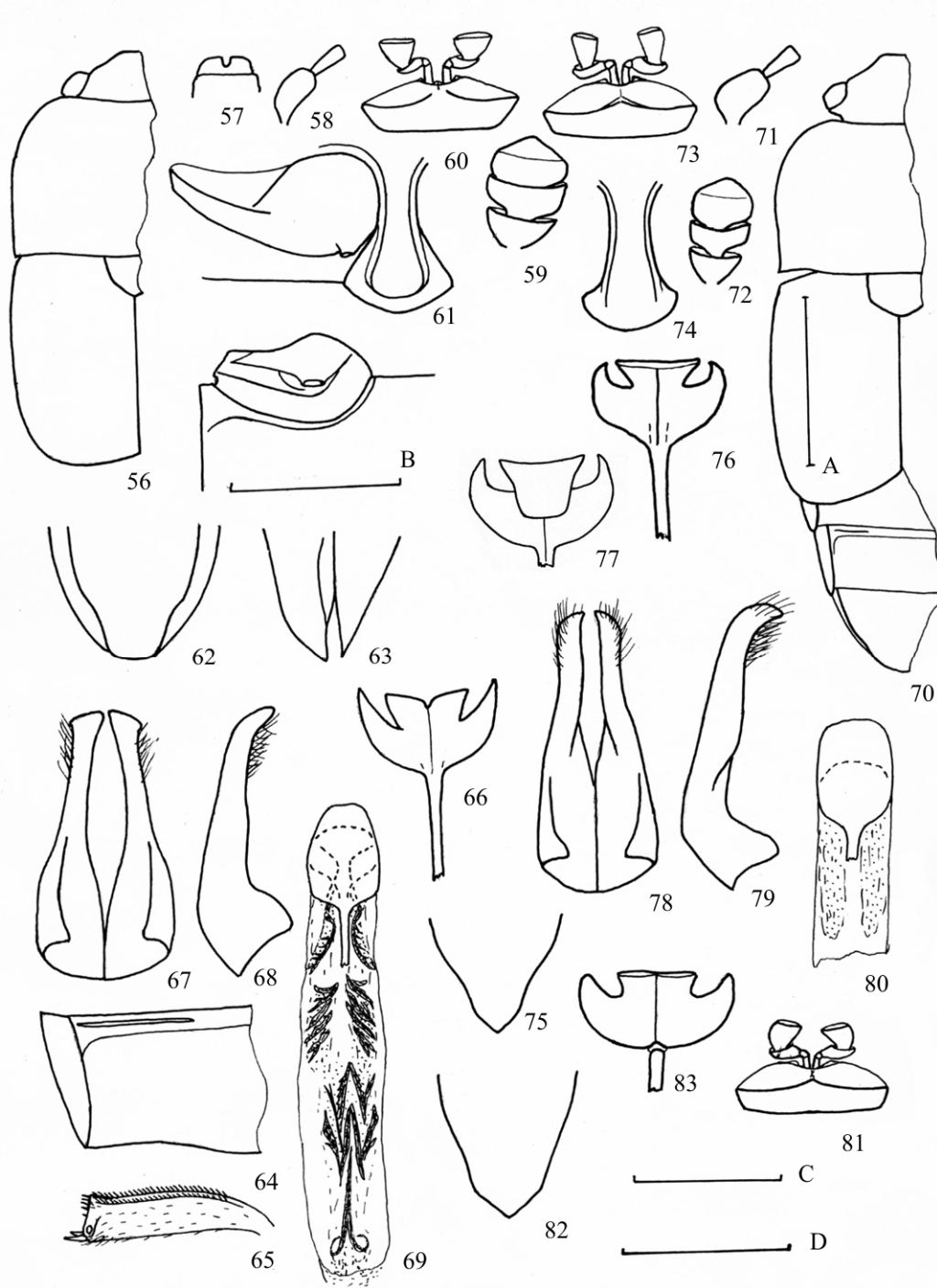
#### *Carpophilus (Gaplocarpolus) cuneiformis* Murray, 1964 (Figs. 59–69)

*Carpophilus (Carpophilus) cuneiformis* Murray, 1964 : 348 (Sulawesi).

*Carpophilus (Carpophilus) cuneiformis* : Kirejtshuk and Kabakov, 1997 : 18 (Vietnam).

*Carpophilus (Gaplocarpolus) cuneiformis* : Kirejtshuk, 2008 : 114.

**Material. Vietnam.** 2 (SMNS, ZIN)—“40 km NO Thai-Nguyên, 200–600 m, Kabakov, 30.X–1,” (2.XI.1962); 2 (ZIN)—“40–50 km NO Thai-Nguyên, 200–600 m, Kabakov, 2.03.1963;” 1 (NMP)—“900 m, Tam Dao, 13–24.5.1989, A. Olexa.” **Indonesia.** Lectotype, male (BMNH), here designated—“Celebes,”



**Figs. 56–83.** *Carpophilus* Stephens: (56–69) *C. (Gaplocarpolus) cuneiformis* Murray [(56) anterior part of male body, dorsal (lectotype); (57) anterior part of frons and labrum; (58) antennomeres 1 and 2; (59) antennal club; (60) mentum and labial palpi, ventral; (61) median part of right side of thoracic sterna with postmesocoxal line of metaventrite; (62) apex of female abdomen, dorsal; (63) idem, lateral; (64) right half of abdominal segment 6 with spiracle, dorsal; (65) mesotibia, ventral; (66) ventral plate of male; (67) tegmen, ventral; (68) idem, lateral; (69) penis trunk with armature of inner sac, dorsal], (70–80) *C. (G.) transgressus* sp. n. [(70) male body, dorsal (holotype); (71) antennomeres 1 and 2; (72) antennal club; (73) mentum and labial palpi, ventral; (74) prosternal process, ventral; (75) apex of female pygidium, dorsal; (76) ventral plate of male, ventral; (77) idem, dorsal; (78) tegmen, ventral; (79) idem, lateral; (80) penis trunk, dorsal], (81–83) *C. (Askocarpolus) bursiferus* sp. n. [(81) mentum and labial palpi, ventral; (82) apex of female pygidium, dorsal; (83) ventral plate of male, ventral]. Scales: A—1.0 mm to Figs. 56, 70; B—0.5 mm to Figs. 57–66, 71–76, 81–83; C—0.25 mm to Figs. 67–69, 78–80; D—0.25 mm to Fig. 77. (Orig.)

“*cuneiformis*,” “68.106;” 1 male (BMNH)—“51832,” “Wallace,” “ex Mus. Murray,” “Maluccas, Muki,” “TYPE,” “Fry Coll. 1905-100;” 2 (SMNS, ZIN)—“C. Sulawesi, 17 km E Pendolo, 800 m, 120.45.49 E, 2.06.33 S, 4–9 Jul. 1999, Bolm;” 1 (BMNH)—“Mentawai, Sipora, Sereinu, V–VI.94, Modigliani.”

**Notes.** One specimen from Sulawesi (“Celebes”) collected by A.R. Wallace and identified by A. Murray as “*cuneiformis*” was found in the collection of BMNH. A. Murray (1864) wrote in his monograph that the type series of the species under consideration was “From Celebes. Collected by Mr. Wallace” (p. 349) without mention of the number of specimens. Therefore the examined specimen from this series is here designated as the lectotype. Another probable member of this series was standing together with the lectotype of *C. (Gaplocarpolus) cuneiformis*, female (BMNH)—“51832,” “ex Mus. Murray,” “Moluccas Muki,” “Wallace” which, however, looks like *C. (Semocarpolus) rubescens* (see above). Also one male (BMNH) with similar labels is certainly conspecific with lectotype of *Carpophilus cuneiformis*. The both latter specimens cannot be designated as paralectotypes because they are labeled as originated from Moluccas, while according to the descriptions the type series of *C. (Gaplocarpolus) cuneiformis* came from Sulawesi, and *C. (Semocarpolus) rubescens*, from Sarawak (see above).

***Carpophilus (Gaplocarpolus) lucidus***

Kirejtshuk, sp. n.  
(Figs. 118–125)

**Material.** **China.** Holotype, male (IRSN)—“Yunnan, Jinhong, Mengyang, 05.III.1999, 2 Rainforest, P. Grootaert.”

**Notes.** This new species is very similar to *C. (G.) cuneiformis* and *C. (G.) transgressus* sp. n. Therefore, the characters shared by these two species are omitted in the description of the new species where the attention is drawn to the characters different from those of *C. (G.) cuneiformis*.

**Description.** **Male** (holotype). Length 3.0, width 1.4, height 0.7 mm. Moderately convex dorsally and ventrally; dorsal surface chestnut-brown with lighter prescutellar part of elytra and with darkened (to blackish) pronotal disc and lateroapical parts of elytra; underside, tergites uncovered by elytra and appendages reddish; slightly shining; with recumbent and clearly conspicuous grayish yellow hairs, about subequal to or

somewhat longer than distance between their insertions.

Head, pronotal and metaventrite integument with distinct regular punctures 2–3 times as coarse as eye facets, interspaces between them 1/2–2/3 of a puncture diameter (but on metaventrite they exceed one puncture diameter), smoothly microreticulate or alutaceous. Elytral surface with fine and sparse shallow punctures slightly coarser than eye facets, interspaces between them about 2 puncture diameters and rather coarsely alutaceous to smoothly and finely microreticulate. Tergites uncovered by elytra with indistinct sparse punctures about as coarse as those on elytra, but interspaces between them 3–4 puncture diameters and finely alutaceous. Prosternal surface with quite distinct punctures, somewhat less than 1.5 times as coarse as eye facets in diameter, interspaces between them 1.5–2.0 puncture diameters and with smooth microreticulation (prosternal process with sparser punctures and smooth interspaces). Antennomere 3 about 2/3 as long as scape; antennal club more subtriangular and about 1.5 times as long as wide. Mentum subpentagonal, about twice as wide as long. Male hypopygidium slightly longer than abdominal ventrite I and with one pair of shallow depressions at medioapical excision.

Tegmen moderately sclerotized; inner sac of penis with complex set of paired sclerites of different outlines and size (Figs. 122, 123).

**Comparative diagnosis.** See the Key to species above.

**Etymology.** The epithet of this new species means “light,” “bright,” “brilliant,” “evident,” “clear.”

***Carpophilus (Gaplocarpolus) transgressus***

Kirejtshuk, sp. n.  
(Figs. 70–80, 115)

**Material.** **Thailand.** Holotype (NMP) and 2 paratypes (NMP, ZIN)—“1–7.5.1992, Mae Hong Son, Ban Si Lang, 1000 m, S. Bilý.” Other paratypes. 1 (NMP)—“Chieng Mai Prov., Doi Suthep, 19–22.4.1991, S. Bilý.” **China.** 1 (NMB)—“Yunnan, 2300 m, Jizu Mts., 18–20 Jul. 1995, Bolm.”

**Description.** **Male** (holotype). Length 3.7, width 1.6, height 0.8 mm. Moderately convex dorsally and ventrally; reddish with dark chestnut-brown dorsal side of head, pronotum and elytra and with darkened antennal club; slightly shining; with recumbent weakly conspicuous grayish yellow hairs, about as long as or

somewhat longer than distance between their insertions.

Head, pronotal, elytral, prosternal and metaventrite integument with distinct regular and coarse punctures, more than triple as coarse as eye facets (on head not more than triple), interspaces between them 1/3–1/2 of a puncture diameter, with smooth isodiametric microreticulation. Sclerotized tergites (uncovered by elytra) and hypopygidium with indistinct sparse and fine punctures, but interspaces between them with sharp isodiametric microreticulation. Abdominal ventrites I–IV with not quite distinct punctures somewhat coarser than eye facets, interspaces between them 1.5–2.0 puncture diameters, with regular isodiametric, slightly smoothed microreticulation.

Head slightly shorter than distance between eyes (composed of very fine facets), subflattened to a varying degree. Antennae slightly longer than width of head, their club elongate oval (about 5/6 as wide as long), slightly more than 3/10 of total antennal length. Pronotum moderately convex, with moderately emarginate anterior and distinctly bisinuate posterior edges; its sides extremely narrowly explanate and have smooth edges, arcuately narrowed from middle to the rounded anterior angles and slightly narrowed to the distinctly pointed and rather projecting posterior angles. Scutellum subpentagonal, widely arcuate at apex. Elytra about 7/8 as long as their combined width, with clearly raised shoulders and subflattened disc, sides steeply sloping to lateral edges. Pygidium about twice as long as previous tergite, slightly and evenly convex and with apical edge widely rounded.

Antennal grooves with distinctly outlined both inner and outer edges, strongly and arcuately convergent, minimal distance between them at the level of posterior eye edge nearly 1 and 1/2 as great as width of antennal club. Ultimate labial palpomere slightly widened toward apex, markedly longer than wide. Mentum subhexagonal, triple as wide as long. Distance between procoxae 0.7 as great as, and that between metacoxae somewhat greater than distance between mesocoxae. Prosternal process smooth and shining at narrowest point and behind it, medially convex and moderately widened before arcuately convex posterior edge, at most about as wide as antennal club. Metaventrite subflattened, its anterior edge between mesocoxae almost straight and posterior edge between metacoxae moderately deeply angularly excised. Postmesocoxal line subparallel to posterior edge of cavities and devi-

ating from it only at anterior angle of metaventrite. Abdominal ventrite I longer than ventrite IV; hypopygidium about 1.5 times as long as ventrite IV and without depressions at medioapical excision. Epipleura at base slightly narrower than antennal club.

Tibiae rather narrow and slightly widened toward apex; protibia about 5/6, mesotibia 4/5, and metatibia 3/4 as wide as antennal club, with rounded to a varying degree outer subapical angle, outer edge of meso- and metatibiae with rows of dense and short stout setae. Femora narrow, with anterior and posterior edges gently curved, pro- and mesofemora about 1.5 times, and metafemur more than twice as wide as corresponding tibiae. Protarsus about 2/3 as wide as protibia, claws long and narrow.

Tegmen moderately sclerotized; inner sac of penis with many poorly sclerotized, vaguely outlined sclerites and three long baculiform sclerites in proximal part of sac (unpaired one between two paired ones). Ventral plate comparatively large.

**Female** differs from the male in the narrower protarsus (about 2/5 as wide as protibia) and shape of sclerites of the last abdominal segment: pygidium more than twice as long as tergite VI and distinctly acute at apex; hypopygidium more than twice as long as ventrite I and widely rounded at apex. Ovipositor of usual configuration and moderate sclerotization of sclerites.

**Variations.** Length 3.3–4.5 mm. A small variability is observed in the punctation, sculpture and coloration of the dorsal integument. In some paratypes the posterior angles of pronotum are so strongly projecting that sides show distinct concavity at base.

**Comparative diagnosis.** See the Key to species above.

**Etymology.** The epithet of this species means “transition,” “transfer,” “crossing.”

#### IV. Subgenus *Askocarpolus* Kirejtshuk, 2008 (Figs. 81–112, 116, 117, 126–140)

*Askocarpolus* Kirejtshuk, 2008 : 115. Type-species: *Carpophilus oblongopunctatus* Grouvelle, 1903.

#### *Key to the Species of the Subgenus Askocarpolus*

- 1 a. Body elongate and rather convex, about 2.5 times as long as wide; elytra about 1 and 1/5 as long as their combined width; depressions on disc of



- pronotum and elytra scarcely expressed; ultimate labial palpomere slightly shorter than wide; sides of elytra and pronotum very narrowly (sub) explanate (narrower than width of antennal flagellum); lower surface of head with a small but distinct fold at inner edge of eye, clearly visible behind temples from above; dorsal surface and metaventrite chestnut-brown with light spot at elytral shoulder or also with 2 additional small lighter spots on each elytron (along the middle in distal half); remainder of underside and appendages reddish brown. Male: hypopygidium without punctures and hairs only just at medioapical excision but not at base of hypopygidium. Female: pygidium about 2/3 as long as pronotum, slightly explanate at the middle of each of its sides and at subangular apex. 3.5–4.4 mm. Figs. 90–93, 116, 126–130. China (Yunnan, Sichuan) ..... *C. (A.) longulus* sp. n.
- 1 b. Body elongate oval and moderately convex, about twice as long as wide; elytra shorter, about as long as their combined width; depressions on disc of pronotum and elytra well expressed; combination of other characters different ..... 2.
- 2 (1) a. Anterior edge of pronotum with distinct border along entire length; body blackish and dull with somewhat lighter appendages; elytra with shallow but distinct oval punctures; paramedian depressions at base of pronotum and in proximal half of elytra quite distinct; prosternal process subtruncate at apex. Male unknown. Female: pygidium moderately convex, with truncate apex. 4.1 mm. Figs. 102, 103, 106, 107. India (Darjeeling) ..... *C. (A.) oblongopunctatus* Grouvelle, 1903.
- 2 (1) b. Anterior edge of pronotum without distinct border along entire length, at most trace of border raised at anterior angles of pronotum; combination of other characters different ..... 3.
- 3 (2) a. Elytra with indistinct punctation on disc; paramedian depressions at base of pronotum and in proximal half of elytra scarcely expressed; sides of elytra not more widely subexplanate/explanate than width of antennal flagellum; dorsal surface dark brown and dull; microsculpture between punctures on head, pronotum and underside rather distinct; prosternal process with slightly convex posterior edge. Male unknown. Female: pygidium elongate and carinate at subtruncate apex; hypopygidium elongate, with widely subtruncate apex. 5.0 mm. Figs. 108–112. China (Yunnan) ..... *C. (A.) vicarius* sp. n.
- 3 (2) b. Elytra with varyingly distinct punctation on disc; paramedian depressions at base of pronotum and in proximal half of elytra quite distinct; microsculpture between punctures on head, pronotum and underside moderately sharp or somewhat smoothed ..... 4.
- 4 (3) a. Punctures on pronotum almost contiguous; punctures on elytra almost irregular and mostly contiguous; prosternal process about twice as wide as antennal club, slightly curved and very widely rounded at apex; ultimate labial palpomere rather transverse than elongate, very strongly and asymmetrically widened apically; body more robust with dorsal surface usually blackish and less shining. Male: median part of hypopygidium distinctly punctate and pubescent. Female: pygidium subtruncate to bluntly angular at apex. 3.5–4.8 mm. Figs. 94–101, 104, 105, 117. Vietnam ..... *C. (A.) marsupiferus* sp. n.
- 4 (3) b. Punctures on pronotum separated at least by about 1/3 of a puncture diameter; punctures on elytra more regular and mostly distinctly separated (about as regular as on pronotum); prosternal process not more than 1.5 times as wide as antennal club; ultimate labial palpomere somewhat longer than wide and less strongly widened apically ..... 5.
- 5 (4) a. Pronotum and head nearly glabrous; prosternal process strongly curved and subangular at apex; antennal club shorter (about 1 and 1/4 as long as wide); metafemur about 1.5 times as wide as antennal club; body about as that in *C. (A.) marsupiferus* sp. n.: more robust with dorsal surface usually blackish and less shining. Male: median part of hypopygidium without punctures and hairs. Female: pygidium subtruncate at apex. 3.4–4.6 mm. Figs. 131–140. Nepal (Manaslu), Bhutan (Thimphu) ..... *C. (A.) hartmanni* sp. n.
- 5 (4) b. Pronotum and head with fairly distinct hairs (clearly visible laterally); prosternal process very weakly curved and widely rounded at apex; antennal club longer (about 1 and 1/3 as long as wide), with antennomeres 9–11 subequal in width; metafemur much less than 1.5 times as wide as antennal club; body more slender with

dorsal surface chestnut-brown and more shining. Male: median part of hypopygidium distinctly punctate and pubescent. Female: pygidium narrowly rounded to subangular at apex. 3.5–4.0 mm. Figs. 81–89. China (Yunnan, Sichuan) ..... *C. (A.) bursiferus* sp. n.

*Carpophilus (Askocarpolus) bursiferus*

Kirejtshuk, sp. n.

(Figs. 81–89)

**Material.** **China.** Holotype, male (NMP)—“Sichuan prov., 27.VI–3.VII.1991, Z. Kejval,” ”Liziping env., near Shimien, 200 km SW of Ya’an.” Paratypes: 1 female (ZIN)—“S. Sichuan, Luojuishan, 2200–2800 m, 16–25.VII.1995, S. Kazantzev;” 1 female (NMB)—“Yunnan, 2300 m, Jizu Mts., 18–20 Jul. 1995, Bolm.”

**Description.** **Male** (holotype). Length 3.8, width 1.6, height 0.8 mm. Moderately convex dorsally and ventrally; head, pronotal disc, tergites uncovered by elytra, and thoracic sclerites dark chestnut-brown; scutellum, elytra, underside and appendages reddish brown (pronotal sides, prohypomera and epipleura uniformly reddish) with darker antennal club; moderately shining; most of dorsal surface with rather fine recumbent and slightly conspicuous hairs (moderately conspicuous on elytra) somewhat more than 1.5 times as long as distance between their insertions; abdominal tergites uncovered by elytra and underside with more conspicuous, markedly shorter hairs.

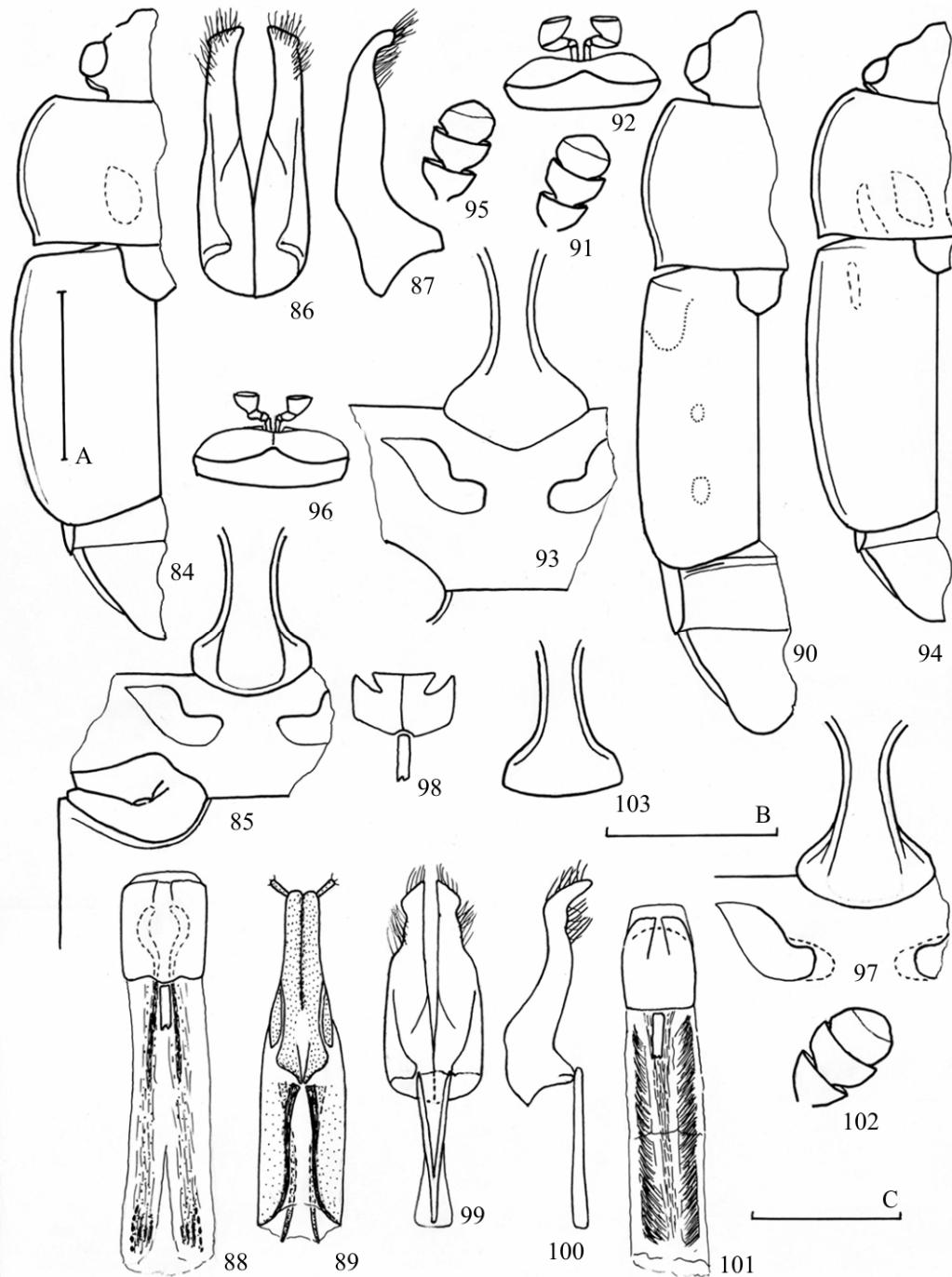
Head, pronotal and metaventrite integument with distinct punctures about twice as large as eye facets, interspaces between them 1/3–2/3 of a puncture diameter (up to one puncture diameter on pronotal disc), with smoothed traces of microreticulation on head and pronotum, and smoothed microreticulation on metaventrite. Elytral surface with much shallower, indistinct and finer suboval punctures, interspaces between them with distinct isodiametric microreticulation. Abdominal tergites uncovered by elytra and ventrites I–IV with punctures somewhat larger than eye facets, interspaces between them slightly greater than one puncture diameter, contrastingly microreticulate. Prosternum and mesoventrite with obsolete punctation, but with sparse microgranulation and isodiametric microreticulation. Hypopygidium without distinct punctures, extremely sharply microreticulate, almost microgranulate.

Head about as long as distance between eyes, moderately convex in posterior half and with weak transverse depression behind antennal insertions, with very small fold on lower surface behind temples. Antennae as long as head width, their club regularly elongate oval, comprising slightly less than 1/3 of total antennal length, about 1 and 1/3 as long as wide and with comparable width of antennomeres 9–11. Pronotum distinctly bordered along base, lateral edges and at sides of anterior edge, with paramedian depressions at base well expressed, sides arcuately narrowed (somewhat more strongly anteriorly than posteriorly), lateral edges rather narrowly explanate. Elytra about as long as their combined width and moderately sloping to the slightly arcuate sides with extremely narrowly explanate edges, each elytron with shallow elongate depression between scutellum and shoulder, and with two very weak depressions along suture. Pygidium about 3/5 as long as pronotum, gently convex and widely rounded at apex.

Antennal grooves sharply outlined externally and strongly convergent. Ultimate labial palpomere moderately widened toward the truncate apex, slightly asymmetrical and almost as long as wide at apex. Mentum subhexagonal and more than triple as wide as long. Distance between procoxae less than half that between metacoxae and that between mesocoxae. Prosternal process with weak median elevation, slightly curved along coxae and strongly widened before subarcuate posterior edge, at most about 1.5 times as wide as antennal club. Mesoventrite with minimal distance between paramedian pockets as great as width of antennal club. Postmesocoxal line closely following posterior coxal edge. Abdominal ventrite I much longer than ventrite IV and slightly longer than hypopygidium.

Tibiae significantly narrower than antennal club, without projecting outer subapical angle, meso- and metatibiae with strongly raised subapical outer spine and with sparse rows of fine spines along outer edge. Femora of usual shape, with convex anterior and posterior edges, pro- and mesofemora about twice, and metafemur more than 2.5 times as wide as corresponding tibiae. Protarsus about 1/2 as wide as protibia, meso- and metatarsi even narrower, claws fine and simple.

Tegmen weakly sclerotized; inner sac of penis with many very small and weakly sclerotized sclerites of unclear shape (Fig. 88).



**Figs. 84–103.** *Carpophilus (Askocarpolus)*: (84–89) *C. (A.) bursiferus* sp. n. [(84) male body with contour of explanate pronotal and elytral sides, and intermitted outline of paramedian depression at base of pronotum, dorsal (holotype); (85) prosternal process, median part of right side of mesoventrite, mesocoxa with postmesocoxal line of metaventrte; (86) tegmen, ventral; (87) idem, lateral; (88) penis trunk with armature of inner sac, dorsal; (89) ovipositor, ventral]; (90–93) *C. (A.) longulus* sp. n. [(90) female body with contour of explanate side of pronotum (outline of light spots on elytra dotted), dorsal (paratype); (91) antennal club; (92) mentum and labial palpi, ventral; (93) prosternal process, median part of right side of mesoventrite]; (94–101) *C. (A.) marsupiferus* sp. n. [(94) male body with contour of explanate pronotal and elytral sides, intermitted outline of paramedian depression at base of pronotum, and longitudinal depression at shoulder, dorsal; (95) antennal club; (96) mentum and labial palpi, ventral; (97) prosternal process and right paramedian pocket of mesoventrite, ventral; (98) ventral plate of male; (99) tegmen, ventral; (100) idem, lateral; (101) penis trunk with armature of inner sac, dorsal]; (102, 103) *C. (A.) oblongopunctatus* Grouvelle (holotype) [(102) antennal club; (103) prosternal process, ventral]. Scales: A—1.0 mm to Figs. 84, 90, 94; B—0.5 mm to Figs. 85, 91–93, 95–97, 102, 103; C—0.25 mm to Figs. 86–89, 98–101. (Orig.)

**Female** differs from the male in the narrower pro-tarsus (about 1/3 as wide as protibia) and longer sclerites of last abdominal segment: pygidium about 2/3 as long as pronotum, slightly explanate at the middle of each side and at the narrowly rounded, subangular apex; hypopygidium almost 1.5 times as long as ventrite I, with arcuate posterior edge. Ovipositor is comparatively small, of usual structure and proportions and with slightly pigmented apex.

**Variations.** Length 3.5–4.0, width 1.5–1.7, height 0.8 mm. Shoulders and anterior edge of elytra in both paratypes are somewhat lightened, but underside of the specimens from Yunnan is very dark, almost blackish. Pubescence on uncovered tergites and on underside of both paratypes formed by partly suberect hairs (on pygidium much shorter than distance between their insertions). Prosternal process of one paratype has some quite distinct punctures about as large as those on head, pronotum and metaventrite.

**Comparative diagnosis.** This new species can be easily diagnosed by the above key. It is also well characterized by the pronotum markedly more narrowed posteriorly than that in most members of the subgenus, by an unusual distance between paramedian pockets on the mesoventrite, postmesocoxal line following closely posterior coxal edge, and by the aedeagus structure.

**Etymology.** The epithet of this species is formed from the Latin “*bursa*” (bag, pouch) and “*fero*” (to carry, bear, wear).

*Carpophilus (Askocarpolus) hartmanni*

Kirejtshuk, sp. n.  
(Figs. 131–140)

**Material. Bhutan.** Holotype (NME) and 5 paratypes (NME, ZIN)—“Bhutan, W. distr. Thimphu, E Dochu, Menshunang, 2400 m, NN, 7.VII.1988, C. Holzschuh.” **Nepal.** Paratype, male (NME)—“Manaslu Mts., S of Bara Pokhari, 2000 m, NN, 01.IV.1999, H. Lau & J. Schmidt.”

**Description. Male** (holotype). Length 4.1, width 1.7, height 0.9 mm. Moderately convex dorsally and ventrally; blackish, but mouthparts, antennal flagella, prohypomera, epipleura, tibiae and tarsi dark brown; moderately shining; head and pronotum nearly glabrous, elytra and tergites uncovered by elytra with very short, rather fine recumbent and slightly conspicuous hairs about as long as distance between their

insertions or somewhat longer; thoracic sterna with similar but more conspicuous hairs, and abdominal ventrites with very short and slightly subsquamous hairs.

Head, pronotal and metaventrite integument with distinct punctures 1.5–2.0 times as large as eye facets, interspaces between them somewhat narrower than one puncture diameter, with smoothed microreticulation (punctures coarser and denser at sides). Elytra with distinct oval punctures markedly coarser and much denser than those on head and pronotum, rather narrow interspaces between punctures with distinct isodiametric microreticulation. Abdominal tergites uncovered by elytra and ventrites with punctures somewhat larger than eye facets, interspaces between them somewhat narrower than one puncture diameter, contrastingly microreticulate; but wide median stripe on hypopygidium only with fine wavy rugosity and without punctures. Prosternum and mesoventrite microgranulate and microreticulate, although in middle and on prosternal process punctures quite distinct and coarse, and interspaces between them nearly smooth.

Head about as long as distance between eyes, slightly convex to subflattened, with clearly raised fold on lower surface behind temples. Antennae about as long as head width, their club elongate oval, comprising slightly less than 1/3 of total antennal length, about 1 and 1/4 as long as wide and with antennomere 10 somewhat wider than antennomeres 9 and 11. Pronotum distinctly bordered along base and lateral edges, but basal border at posterior angles very narrow and anterior edge unbordered, with weakly expressed paramedian depressions at base, sides arcuately narrowed (somewhat more strongly anteriorly than posteriorly), lateral edges rather narrowly explanate. Elytra not longer than their combined width and moderately sloping toward the slightly arcuate sides with narrowly subexplanate/explanate edges [about as widely subexplanate/explanate as width of antennal flagellum], each elytron with very shallow longitudinal depression between scutellum and shoulder, subflattened along suture. Pygidium about 1/2 as long as pronotum, gently convex and widely rounded to subtruncate at apex.

Antennal grooves clearly outlined externally and strongly convergent. Ultimate labial palpomere somewhat widened to subtruncate apex, strongly asymmetrical and almost as long as wide at apex. Mentum subhexagonal and more than triple as wide as long. Distance between procoxae about 3/5 as great as that be-

tween metacoxae and almost 3/4 as great as that between mesocoxae. Prosternal process with smooth median carina, rather curved along procoxae and strongly widened before rather subangular than arcuate posterior edge, at most almost twice as wide as antennal club. Mesoventrite with minimal distance between paramedian pockets as great as width of antennal club. Postmesocoxal line slightly arcuately deviating from posterior edge of median part of coxal cavity. Abdominal ventrite I much longer than ventrite IV. Hypopygidium slightly longer than ventrite I, with wide medioapical median excision and median stripe devoid of punctation and pubescence.

Tibiae significantly narrower than antennal club and without projecting outer subapical angle, meso- and metatibiae with moderately raised subapical outer spine and sparse rows of fine spines along outer edge. Femora of usual shape, with convex anterior and posterior edges, pro- and mesofemora about twice, and metafemur more than 2.5 times as wide as corresponding tibiae. Protarsus about 2/3 as wide as protibia, meso- and metatarsi considerably narrower, claw fine and simple.

Aedeagus heavily sclerotized; inner sac of penis with complex set of many weakly and heavily sclerotized sclerites of different outline and size, including three narrow and elongate ones in the end of sac (Figs. 136–138).

**Female** differs from the male in the narrower protarsus (about half as wide as protibia) and longer sclerites of last abdominal segment: pygidium about 2/3 as long as pronotum, slightly subexplanate/explanate at the middle of each side at subtruncate apex; hypopygidium almost 1 and 1/3 as long as ventrite I, with subtruncate edge. Ovipositor is of usual structure and proportions, weakly sclerotized.

**Variations.** Length 3.4–4.6 mm. The lightest paratypes are nearly subunicolorous chestnut-brown, and the darkest has entire body almost blackish. The pronotum and elytra in some paratypes possess similar punctation and microsculpture.

**Comparative diagnosis.** This new species can be easily diagnosed by the above key to species. In general it is very similar to *C. (A.) oblongopunctatus*, *C. (A.) marsupiferus* sp. n. and *C. (A.) vicarius* sp. n., although *C. hartmanni* sp. n. is characterized by the rather coarse punctation of elytra. The lack of punctation on median part of the male hypopygidium is a rather characteristic feature of this new species.

**Etymology.** This species is named for M. Hartmann (NME) who contributed much to the organization of the NME expeditions to Himalaya and assisted the author in his study.

*Carpophilus (Askocarpolus) longulus*

Kirejtshuk, sp. n.

(Figs. 90–93, 126–130)

**Material.** **China.** Holotype, male (NME)—“Yunnan, Dali zhou, Weishan county, Weibaoshan, 2700–3000 m, 30.VI–17.VII.1993. leg. C. Holzschuh.” Paratypes. 1 male (NMB)—“Yunnan, 24–26 May, 1997, Yulong mts., 27.01N 100.12E, Bolm, 3200 m;” 1 female (ZIN)—“S Sichuan, Luojishan, 2200–2800 m, 16–25.VII.1996, S. Kazantsev;” 1 female (NMP)—“N. Yunnan, Yulongshan mts., 2500–2800 m, Ganghaizi/Lijiang road, D. Král, 24–26/7'90;” 1 female (NMB)—“N. Yunnan, Lijiang, 2600 m, 30.6–2.7.1990, L. & M. Bocák;” 1 female (NMB)—“Yunnan Prov., 27°06N, 100°15E, 3000–3500 m, Yulongshan mts., Gannaizi pass/Lijiang, 18–23.VII.1990, Vít Kubán.”

**Description.** **Male** (holotype). Length 3.7, width 1.4, height 0.8 mm. Rather convex dorsally and moderately convex ventrally; dorsal surface and thoracic sterna dark chestnut-brown, but anterior and posterior angles of pronotum, scutellum and shoulders yellowish, tergite 6 as well as underside and appendages reddish brown to reddish with darker antennal club; moderately shining; largest part of dorsal surface with rather fine recumbent, poorly visible hairs (but rather conspicuous on elytra) somewhat more than 1.5 times as long as distance between their insertions; abdominal tergites uncovered by elytra and underside with partly suberect hairs (on pygidium much shorter than distance between their insertions).

Head, pronotal and metaventrite integument with distinct punctures about triple as large as eye facets, interspaces between them 1/3–2/3 of puncture diameter on dorsal sclerites and about one puncture diameter on metaventrite, with smooth microreticulation between punctures. Elytral surface with suboval punctures somewhat shallower and indistinct, but clearly outlined and equal-sized to those on head and pronotum, interspaces between them with smooth isodiametric microreticulation. Abdominal tergites uncovered by elytra, prosternum, mesoventrite and abdominal ventrites with dense punctures, somewhat finer than those on the remainder of ventral surface, very shallow and

not quite distinct, rather narrow interspaces between them distinctly microreticulate.

Head about 4/5 as long as distance between eyes, subflattened and with one pair of very small and weak depressions behind antennal insertions, with very short fold on lower surface at temples. Antennae somewhat longer than head width, their club regularly elongate oval, comprising slightly less than 1/3 of total antennal length, 1 and 1/3 as long as wide and with comparable width of antennomeres 9–11. Pronotum distinctly bordered only along lateral edges, but with very fine border along base and at sides of anterior edge, with weakly expressed paramedian depressions at base; sides arcuately and equally narrowed anteriorly and posteriorly, lateral edges rather narrowly explanate. Elytra about 1 and 1/5 as long as their combined width and rather steeply (subvertically) sloping to subparallel sides with extremely narrowly explanate edges, slightly depressed along suture. Each spiracle of abdominal segment 6 expanded along 1/4 of width of tergite VI. Pygidium about 2/3 as long as pronotum, slightly explanate at middle of each side and at the subangular apex.

Antennal grooves not so sharply outlined externally and strongly convergent. Ultimate labial palpomere widened to suboblique apex, slightly asymmetrical and somewhat longer than wide at apex. Mentum subhexagonal and more than triple as wide as long. Distance between procoxae about 2/3 that between metacoxae and that between mesocoxae. Prosternal process with weak median elevation, slightly curved along procoxae and strongly widened before subangular posterior edge, at most nearly twice as wide as antennal process. Mesoventricle with minimal distance between paramedian pockets less than half width of antennal club. Postmesocoxal line closely following posterior edge of coxal cavity. Abdominal ventrite I much longer than ventrite IV. Hypopygidium slightly longer than ventrite I, with wide medioapical median excision and without punctures and hairs only just at medioapical excision but not on large surface of hypopygidium, including its base.

Tibiae significantly narrower than antennal club (meso- and metatibiae almost 2/3 as wide as latter); protibia with projecting outer subapical angle, meso- and metatibiae with strongly raised subapical outer spine and rows of fine and sparse spines along outer edge but without projecting outer subapical angle. Femora of usual shape, with convex anterior and posterior edges, profemur about twice, meso- and meta-

femora more than 2.5 times as wide as corresponding tibiae. Protarsus half as wide as protibia, meso- and metatarsi considerably narrower, claws fine and simple.

Tegmen well sclerotized; inner sac of penis with a complex set of many small sclerites of varying shape and size and with one pair of narrow long and elongate sclerites at apex (Figs. 127, 128).

**Female** differs from the male in the longer sclerites of the last abdominal segment: pygidium about 3/5 as long as pronotum, slightly subexplanate/explanate at the middle of each side at subangulate apex; hypopygidium almost 1.5 times as long as ventrite I, with narrowly arcuate edge. Ovipositor of usual structure and proportions, weakly sclerotized.

**Variations.** Length 3.5–4.4 mm. One paratype from Yunnan (Lijiang) has more exposed apical abdominal segments (length of this paratype 4.4 mm), 3 small yellowish spots on each elytron (one at shoulder and two along suture in distal half); pronotal sides somewhat more converging toward base. Another paratype (Ganhaizi) has completely unicolorous brownish elytra. Some variation can be observed in the characters of punctuation and sculpture of the integument.

**Comparative diagnosis.** This new species can be easily diagnosed by the above key. In comparison with consubgenera it has a more convex body, steeply (subvertically) sloping elytral sides, not sharply outlined antennal grooves, different proportions in the distances between the coxae in each pair. It is also characterized by the rather expanded spiracles of abdominal segment 6 (each about 1/4 as wide as tergite).

**Etymology.** The name of this species means “somewhat elongate,” “long.”

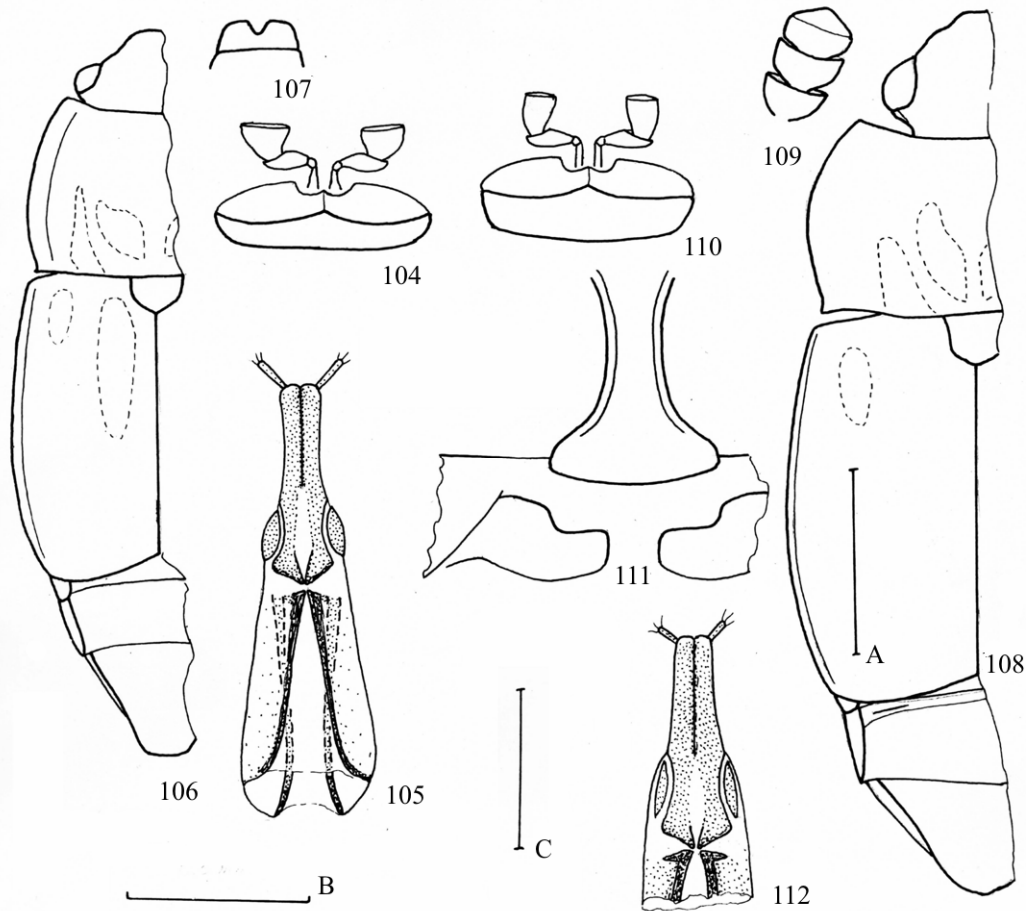
*Carpophilus (Askocarpolus) marsupiferus*

Kirejtshuk, sp. n.

(Figs. 94–101, 104, 105)

*Carpophilus (Carpophilus) oblongopunctatus*: Kirejtshuk and Kabakov, 1997 : 18 (Vietnam), non Grouvelle, 1903a (misidentification).

**Material.** Vietnam, *Vin Phuc Prov.*: Holotype, male (NMP) and 3 paratypes (NMP, ZIN)—“900 m, Tam Dao, 13–24.5.1989, A. Olexa.” Other paratypes. 1 (ZIN)—“Gory u (“montains at” in Russian) Sapa, 1600–2000 m, 3.VI.1963, O. Kabakov;” 1 (ZIN)—“gory NO Thai Nguyen, 8.02.1963, 300 m, Kabakov;” “v gnilom plode liany (“in decaying fruit of liana” in



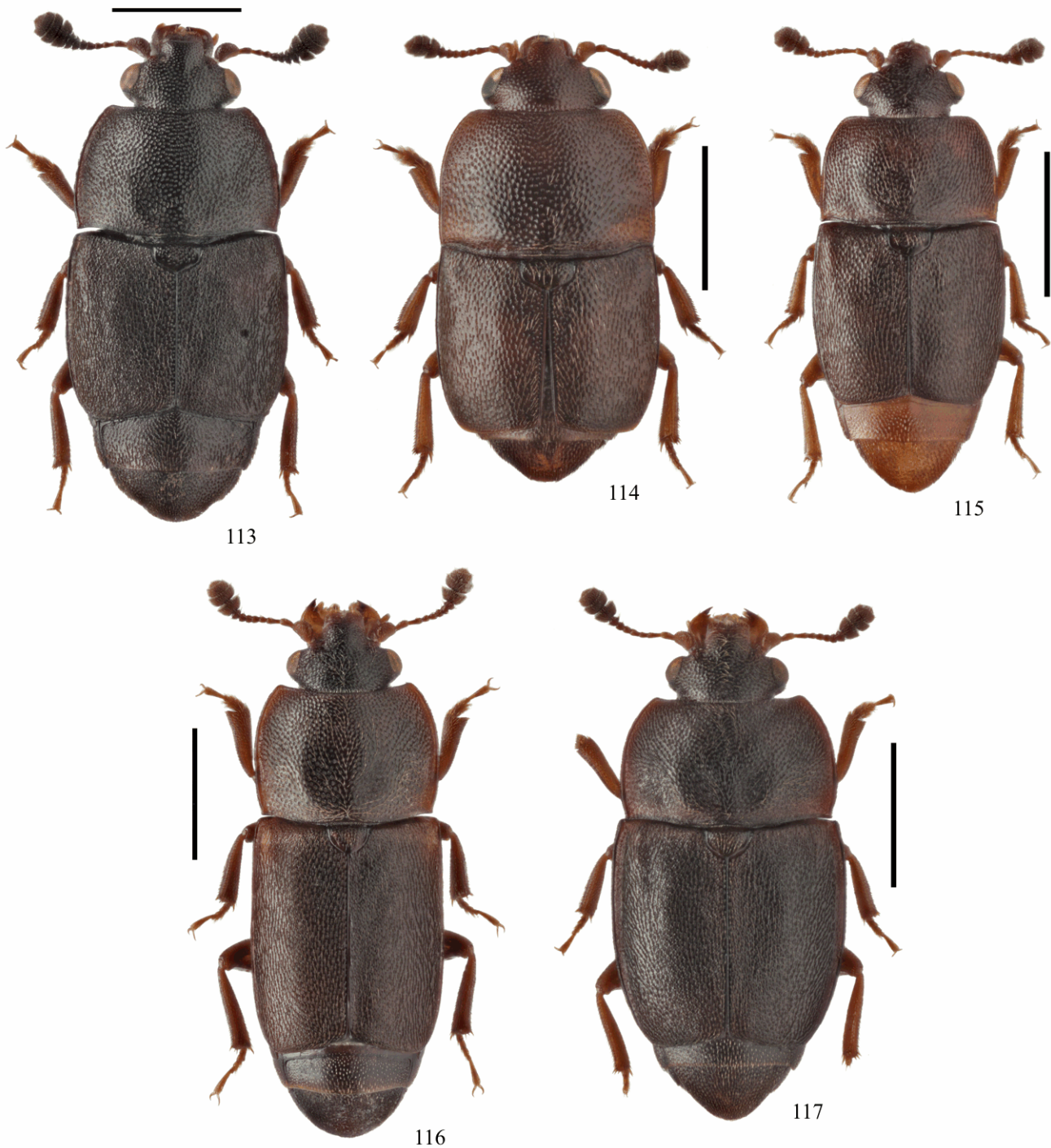
**Figs. 104–112.** *Carpophilus* (*Askocarpolus*): (104, 105) *C. (A.) marsupiferus* sp. n. [(104) mentum and labial palpi, ventral; (105) ovipositor, ventral]; (106, 107) *C. (A.) oblongopunctatus* Grouvelle (holotype) [(106) female body with contour of explanate pronotal and elytral sides, intermitted outline of paramedian depressions at base of pronotum and longitudinal depressions at shoulder and along suture, dorsal; (107) anterior part of frons and labrum]; (108–112) *C. (A.) vicarius* sp. n. (holotype) [(108) female body with contour of explanate pronotal and elytral sides, intermitted outline of paramedian depressions at base of pronotum, longitudinal depressions at shoulder and along suture, dorsal; (109) antennal club; (110) mentum and labial palpi, ventral; (111) prosternal process and paramedian pockets of mesoventrite; (112) apex of ovipositor, dorsal]. Scales: A—1.0 mm to Figs. 106, 108; B—0.5 mm to Figs. 104, 107, 109–111; C—0.25 mm to Figs. 105, 112. (Orig.)

Russian) *Hodgsonia*;" 1 (NMP)—"900 m, Tam Dao, 27.5–2.6.[ 19]86, A. Olexa;" 1 (ZIN)—"900 m, Tam Dao, 27.5–2.6.1986, Vinh Phu Prov., Jan Horák;" 2 (NMP, ZIN)—"1985, Tam dao, 3–10.6, 900–1400 m, Jelínek;" 1 male (NMB)—"21.27N 105.39E, 70 km NW Hanoi, Tam Dao, 1–8.VI.1996, 900–1200 m, Pacholátko & Dembický."

**Description. Male** (holotype). Length 4.2, width 1.8, height 0.9 mm. Moderately convex dorsally and ventrally; dorsal surface, antennal clubs and meta-ventrite blackish, remainder of underside and femora dark reddish brown, mouthparts, antennal flagella, tibiae and tarsi reddish; moderately shining; most of dorsal surface with rather fine recumbent and slightly conspicuous hairs (but moderately conspicuous on

elytra) somewhat more than 1.5 times as long as distance between their insertions; abdominal tergites uncovered by elytra and underside with more conspicuous and markedly shorter hairs.

Head, pronotal and metaventrite integument with distinct punctures, twice as large as eye facets, interspaces between them 1/3–2/3 of a puncture diameter, with smoothed trace of microreticulation. Elytral surface with shallower, not quite distinct suboval punctures, narrow interspaces between them with distinct isodiametric microreticulation. Abdominal tergites uncovered by elytra and ventrites with punctures somewhat coarser than eye facets, interspaces between them somewhat narrower than one puncture diameter, sharply microreticulate. Prosternum and mesoventrite microgranulate and microreticulate.

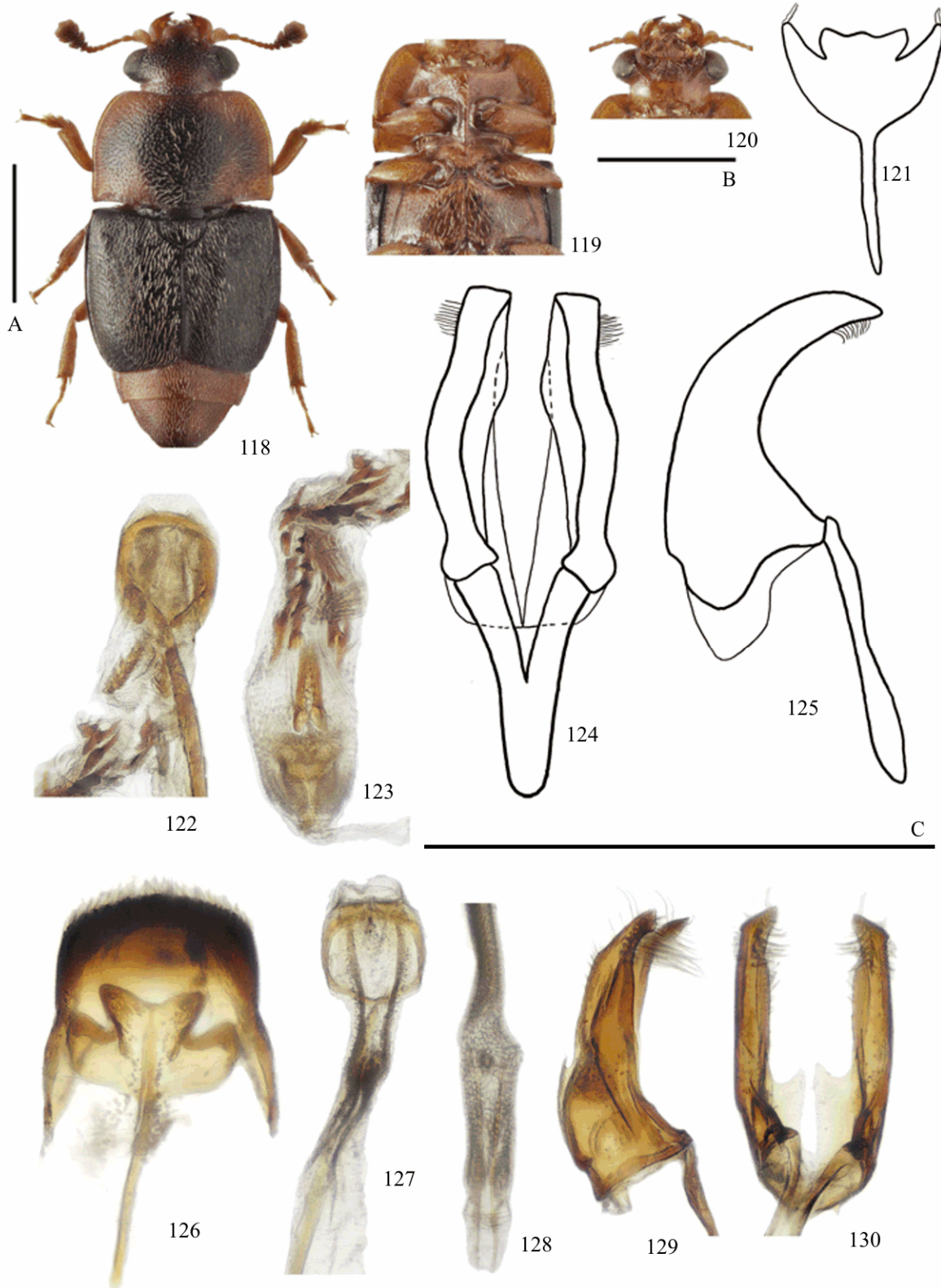


**Figs. 113–117.** *Carpophilus* Stephens, male body, dorsal: (113) *C. (Megacarpolus) annae* sp. n. (holotype), (114) *C. (Semocarpolus) adjunctus* sp. n. (paratype, Sri Lanka), (115) *C. (Gaplocarpolus) transgressus* sp. n. (holotype), (116) *C. (Askocarpolus) longulus* sp. n. (holotype), (117) *C. (Askocarpolus) marsupiferus* sp. n. (holotype). Scale bar = 1.0 mm. (Orig.)

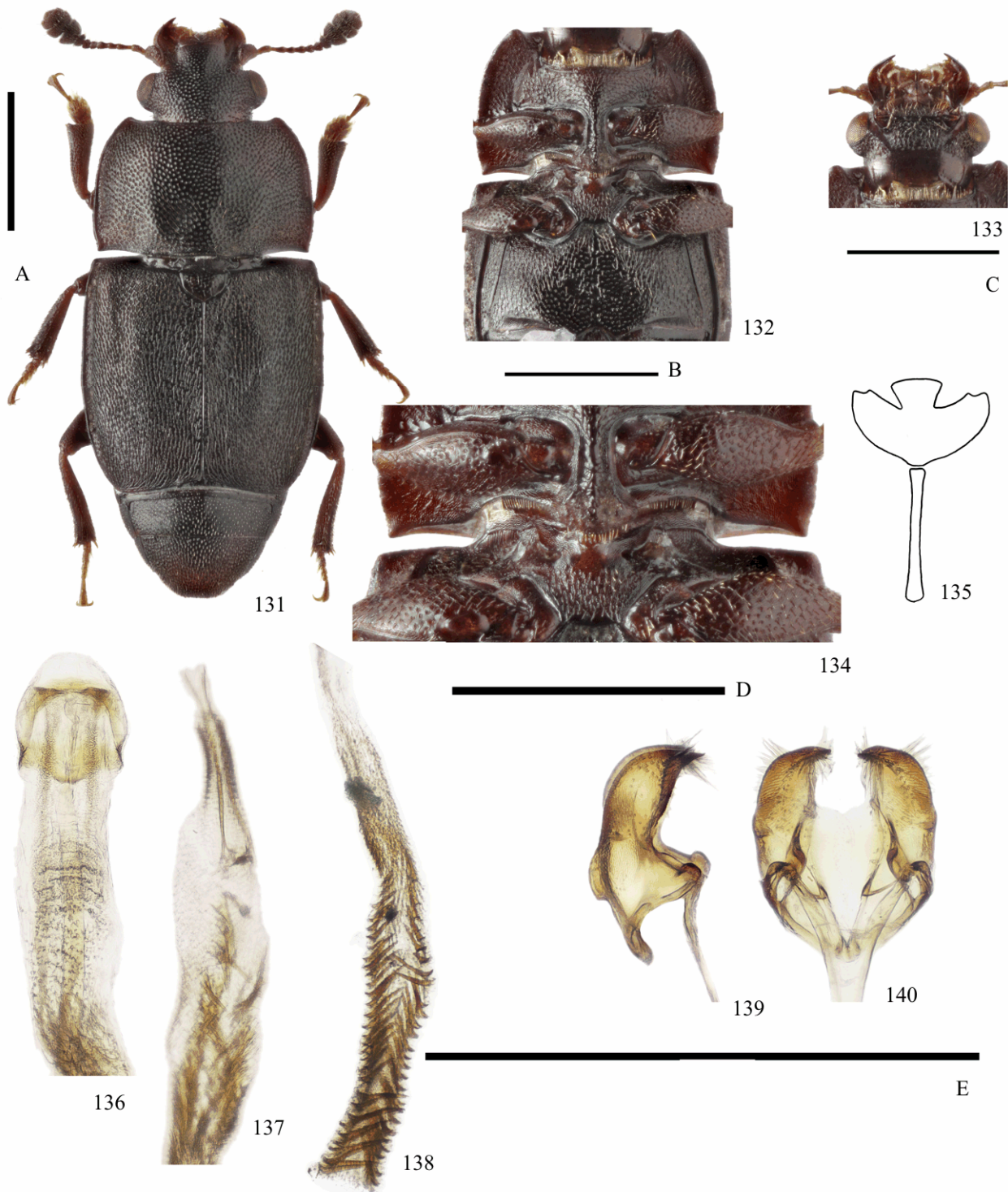
Head about  $4/5$  as long as distance between eyes, slightly and almost evenly convex, with clearly raised fold on lower surface behind temples. Antennae about as long as head width, their club elongate oval, comprising slightly less than  $1/3$  of total antennal length,

about  $1$  and  $1/3$  as long as wide and with comparable width of antennomeres 9–11. Pronotum distinctly bordered along base, lateral edges and at sides of anterior edge, with paramedian depressions at base well expressed, sides arcuately narrowed (somewhat more





**Figs. 118–130.** *Carpophilus* Stephens: (118–125) *C. (Gaplocarpolus) lucidus* sp. n. (holotype) [(118) male body, dorsal; (119) anterior part of body, ventral; (120) head, ventral; (121) ventral plate and spiculum gastrale, ventral; (122) penis trunk, dorsal; (123) proximal part of inner sac, dorsal; (124) tegmen, ventral; (125) idem, lateral], (126–130) *C. (Askocarpolus) longulus* sp. n. (holotype) [(126) male genital capsule, ventral; (127) penis trunk, dorsal; (128) proximal part of inner sac, dorsal; (129) tegmen, lateral; (130) idem, ventral]. Scale bar = 1.0 mm: A—to Fig. 118; B—to Figs. 119, 120; C—to Figs. 121–130. (Orig.)



**Figs. 131–140.** *Carpophilus (Askocarpolus) hartmanni* sp. n.: (131–137, 139, 140) holotype [(131) male body, dorsal; (132) anterior part of body, ventral; (133) head, ventral; (134) prosternal process, mesoventrite, profemora; (135) ventral plate and spiculum gastrale, ventral; (136) penis trunk, dorsal; (137) distal part of inner sac, dorsal; (139) tegmen, lateral; (140) idem, ventral]; (138) paratype (Nepal), proximal part of inner sac, dorsal. Scale bar = 1.0 mm: A—to Fig. 131, B—to Fig. 132, C—to Fig. 133, D—to Fig. 134, E—to Figs. 135–140. (Orig.)

strongly anteriorly than posteriorly), lateral edges rather narrowly explanate. Elytra slightly longer than their combined width and moderately sloping to slightly arcuate sides with narrowly subexplanate/explanate edges [more widely subexplanate/explanate than width of antennal flagellum], each elytron with shallow elongate depression between scutellum and shoulder, subflattened along suture. Pygidium about 3/4 as long as pronotum, gently convex and widely rounded at apex.

Antennal grooves clearly outlined externally and strongly convergent. Ultimate labial palpomere rather widened to truncate apex, strongly asymmetrical and almost as long as wide at apex. Mentum subhexagonal and more than 3 times as wide as long. Distance between procoxae about half as great as that between metacoxae and that between mesocoxae. Prosternal process with distinct median carina, slightly curved along procoxae and strongly widened before the rather subangular than arcuate posterior edge, at most almost twice as wide as antennal club. Mesoventrite with minimal distance between paramedian pockets as great as the width of antennal club. Postmesocoxal line slightly arcuately deviating from posterior edge of median part of coxal cavity and returning to posterior edge in outer part. Abdominal ventrite I much longer than ventrite IV and much longer than hypopygidium.

Tibiae significantly narrower than antennal club and without projecting outer subapical angle, meso- and metatibiae with moderately raised subapical outer spine and sparse rows of fine spines along outer edge. Femora of usual shape, with convex anterior and posterior edges, pro- and mesofemora about twice, and metafemur more than 2.5 times as wide as corresponding tibiae. Protarsus about 2/3 as wide as protibia, meso- and metatarsi considerably narrower, claws fine and simple.

Tegmen moderately sclerotized; inner sac of penis with complex set of three elongate sclerites in distal part (Fig. 101) and one pair of very long distinct sclerites in proximal part.

**Female** differs from the male in the narrower protarsus (about 1/3 as wide as protibia) and longer sclerites of the last abdominal segment: pygidium about 2/3 as long as pronotum, slightly subexplanate/explanate at the middle of each side and at the nar-

rowly rounded, subangular apex; hypopygidium almost 1 and 1/3 as long as ventrite I, with arcuate posterior edge. Ovipositor of usual structure and proportions, with slightly pigmented apex.

**Variations.** Length 3.5–4.8, width 1.5–2.3, height 0.8–1.1 mm. The lightest paratype has chestnut-brown dorsal surface, and the darkest has entire body almost blackish but with lighter hypopygidium and appendages (except black antennal clubs). Additionally the lightest paratype (male form Tam Dao in NMB) is rather shining, not very widely subexplanate/explanate elytral sides [but not less widely subexplanate/explanate than width of antennal flagellum] and with somewhat different punctuation consisting of separated punctures. Pubescence on tergites uncovered by elytra and underside of females is with partly suberect hairs (on pygidium much shorter than distance between their insertions). The posterior edge of prosternal process tends to be rather angular than arcuate.

**Comparative diagnosis.** This new species can be easily diagnosed by the above key. In general it is similar to *C. (A.) oblongopunctatus*, *C. (A.) hartmanni* sp. n. and *C. (A.) vicarius* sp. n., differing from them mostly in the sexual dimorphism characters.

**Etymology.** The epithet of this species is formed from the Latin “*marsupium*” (bursa) and “*fero*” (to carry, bear, wear).

*Carpophilus (Askocarpolus) oblongopunctatus*

Grouvelle, 1903

(Figs. 102, 103, 106, 107)

*Carpophilus (Carpophilus) oblongopunctatus* Grouvelle, 1903a : 108 (India, Darjeeling).

*Carpophilus (Carpophilus) oblongopunctatus*: Grouvelle, 1908 : 332.

*Carpophilus (Askocarpolus) oblongopunctatus*: Kirejtshuk, 2008 : 115.

**Material. India.** Holotype, female (MNHN)—“Darjeeling, Harmand, 1890,” “*Carpophilus oblongopunctatus* ty. Grouv.” (written by A. Grouvelle).

*Carpophilus (Askocarpolus) vicarius*

Kirejtshuk, sp. n.

(Figs. 108–112)

**Material. China.** Holotype, female (NMB)—“Yunnan, 2300–3100 m, 25,58N 100, 21E, 30/5–3/6. 1993, Jizushan mts., Vít Kubáň.”

**Description. Female** (holotype). Length 5.0, width 2.0, height 0.9 mm. Moderately convex dorsally and ventrally; head and pronotum rather dark brown to almost blackish, elytra, tergites uncovered by elytra and thoracic sclerites dark chestnut-brown, but prohypomera, epipleura, abdominal ventrites and appendages reddish brown to reddish (except blackish antennal clubs); slightly shining; most of dorsal surface with rather fine recumbent and slightly conspicuous hairs (but rather conspicuous on elytra), somewhat more than 1.5 times as long as distance between their insertions; abdominal tergites uncovered by elytra and underside with partly suberect hairs (on sclerites of abdominal apex much shorter than distance between their insertions).

Head, pronotal and metaventrite integument with distinct punctures, about twice as large as eye facets in diameter, interspaces between them 1/4–1/2 of a puncture diameter, moderately sharply microreticulate. Elytral surface with extremely shallow, scarcely visible and apparently smaller suboval punctures, rather sharply microreticulate and with traces of transrugosity in anterior half. Tergites uncovered by elytra, prosternum, mesoventrite and abdominal ventrites with not quite distinct punctures somewhat finer and sparser than those on the remainder of ventral surface, interspaces between them rather sharply microreticulate, but on prosternum and mesoventrite punctures partly substituted by small tubercles.

Head about as long as distance between eyes, slightly convex and with one pair of very small and weak depressions behind antennal insertions, with moderately raised fold on lower surface at temples. Antennae somewhat longer than head width, their club elongate oval, comprising about 1/3 of total antennal length, 1.5 times as long as wide and with antennomere 10 widest. Pronotum fairly distinctly bordered only along lateral edges, along base and at sides of anterior edge, with well expressed paramedian depressions at base, sides arcuately narrowed (somewhat more strongly so anteriorly than posteriorly), lateral edges rather narrowly explanate. Elytra about 1.1 times as long as their combined width, moderately sloping to arcuate sides with extremely narrowly explanate edges, each elytron with shallow longitudinal depression between scutellum and shoulder, subflattened along suture. Pygidium about 2/3 as long as pronotum, rather widely explanate at the

middle of each of its sides and subtruncate at the carinate apex.

Antennal grooves not so sharply outlined externally, strongly convergent. Ultimate labial palpomere widened to the truncate apex, rather asymmetrical and about as long as its apex wide. Mentum subhexagonal and more than triple as wide as long. Distance between procoxae about half that between metacoxae and that between mesocoxae. Prosternal process with weak median elevation, slightly curved along procoxae and strongly widened before the arcuate posterior edge, at most nearly 1.5 times as wide as antennal club. Mesoventrite with minimal distance between paramedian pockets less than half width of antennal club. Postmesocoxal line slightly arcuately deviating from posterior edge of median part of coxal cavity and returning to posterior edge in outer part. Abdominal ventrite I much longer than ventrite IV, hypopygidium almost 1.5 times as long as ventrite I, with subtruncate apex.

Tibiae about 2/3 as wide as antennal club and without projecting outer apical angle, meso- and metatibiae with clearly raised subapical outer spine and sparse rows of fine spines along outer edge. Femora of usual shape, with convex anterior and posterior edges, profemur about twice, meso- and metafemora more than 2.5–3.0 times as wide as corresponding tibiae. Protarsus about 1/3 as wide as protibia, meso- and metatarsi considerably narrower, claw fine and simple.

Ovipositor of usual structure, weakly sclerotized.

**Comparative diagnosis.** This new species can be easily diagnosed by the above key. In comparison with other species of the subgenus it is also well characterized by the very narrowly explanate pronotal and elytral sides, very weak depressions on discs of pronotum and elytra as well as by the scarcely visible punctation of elytra. *Carpophilus (A.) vicarius* sp. n. is most similar to *C. (A.) oblongopunctatus*, *C. (A.) hartmanni* sp. n. and *C. (A.) marsupiferus* sp. n. (including structure of its prosternal process and paramedian pockets of mesoventrite), but in addition to the mentioned characters it differs from all of them in the larger antennal club, comparatively narrower and more convex pronotum, shorter distance between paramedian pockets on mesoventrite, subtruncate apex of hypopygidium; from the first also in the lack of the border

along the middle of anterior edge of the pronotum and carinate apex of the female pygidium; from two others—in the widely explanate sides in distal half of the pygidium. The antennal club of *C. (A.) vicarius* sp. n. is more compact in comparison with other consubgenera and similar to that of *C. (A.) oblongopunctatus* rather than to that of *C. (A.) hartmanni* sp. n. and *C. (A.) marsupiferus* sp. n. Finally, the ultimate labial palpomere of *C. (A.) vicarius* sp. n., in contrast to that of *C. (A.) hartmanni* sp. n. and *C. (A.) marsupiferus* sp. n., is less widened toward apex and is somewhat elongate. The distance between the paramedian pockets of mesoventrite is smaller in *C. (A.) oblongopunctatus*, but in *C. (A.) hartmanni* sp. n. and *C. (A.) marsupiferus* sp. n. it is distinctly greater than minimal width of prosternal process; the styli of the first are about as long as the cross-section of ovipositor apex, but those in the two others are distinctly shorter than the latter.

**Etymology.** The epithet of this new species means “substituting.”

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