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Review of the Genus *Synacra* Foerster (Hymenoptera, Diapriidae: Pantolytini) in the Palaearctic Region, with Description of New Species

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Abstract–A review of eleven Palaearctic species of the genus *Synacra* Foerster is provided, four of which are described as new to science: *S. azepylopria* **sp. n.** (Russia: Kunashir Island; Japan: Honshu Island), *S. compressigastra* **sp. n.** (Russia: northern European part and East Siberia (Yakutia), southern Far East), *S. gigantea* **sp. n.** (Russia: Primorskii Territory) and *S. tobiasi* **sp. n.** (South Kazakhstan). The following new synonymy is established: *Synacra* Foerster, 1856 = *Foeldia Szabó, 1974,* **syn. n.***; Synacra sociabilis* (Kieffer, 1904) = *Foeldia triclavicanthiger* Szabó, 1974, **syn. n.** All the Palaearctic species of *Synacra* are keyed and illustrated.

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INTRODUCTION

The genus *Synacra* Foerster, 1856 includes small and very rare entomophages of the diapriid subfamily Belytinae. *Synacra* species are the most specialized parasitoids associated with larvae of the Sciaridae (Diptera) and probably Agromyzidae (Diptera) species. To date, ten recent species of this genus are known in the world fauna; among these, seven species have been recorded in the Palaearctic Region (Johnson, 1992; Macek, 1995; Buhl, 1997). All the Palaearctic *Synacra* species: *S. atracta* Macek, 1995, *S. brachialis* (Nees, 1834)*, S. giraudi* (Kieffer, 1910), *S. holconota* Kieffer, 1910, *S. incompleta* Buhl, 1997, *S. paupera* Macek, 1995, *and S. sociabilis* (Kieffer, 1904), were described from Europe. The most valuable revision of the Palaearctic *Synacra* species was published 25 years ago by J. Macek (1995). In this article he established numerous new synonymies and provided new diagnoses and an original key to six valid species. Subsequently, only one new species was described from Norway (Buhl, 1997), but several other undescribed species from the West Palaearctic fauna are present in various collections.

J. Macek classified six European species of *Synacra* in three subgenera: *Paratelopsilus* Whittaker, 1930, *Sundholmiella* Hedqvist, 1975, and *Synacra* s. str. However, as he correctly noted in the revision, "Without inclusion of extralimital species, the impact of this classification is limited." We have not followed the subgeneric classification in the present paper because subgeneric affiliation of some new species is very problematic. Moreover, we have found an aberrant specimen of *S. (Synacra) brachialis* (Nees, 1834) which has a compressed body and is similar to *S. (Sundholmiella) giraudi* (Kieffer, 1910).

Most of the *Synacra* species are distributed in the Holarctic Region but *S. paupera* Macek, 1995 is a cosmopolitan synanthropic species. M. Kozlov (1978) recorded only two species of *Synacra*, *S. brachialis* and *S. sociabilis* (Kieffer, 1904), in the Russian fauna (both from the European part).

The aim of this study is reviewing *Synacra* species occurring in Russia and neighboring countries, description of new species, and preparation of a new identification key to and detailed illustrations of all the Palaearctic species.

MATERIALS AND METHODS

This study is based on examination of the material from collections of the Zoological Institute of the Russian Academy of Sciences (St. Petersburg, Russia; ZIN),

the Kanagawa Prefectural Museum of Natural History (Odawara, Japan; KPMNH), comprehensive material from the collection of J. Macek in the National Museum Prague (Czech Republic; NMPC), type material from the Hungarian National History Museum (Budapest, Hungary; HNHM) and the Zoological Museum of the University of Copenhagen (Denmark; ZMUC).

Material for this study was collected in various parts of Russia and several neighboring countries with yellow pan traps (YPT), Malaise traps (MT), Flight intercept traps or by net sweeping. The studied material including holotypes of the new species and most of the paratypes are housed in the ZIN collection, some paratypes are in KPMNH. The morphological terminology and abbreviations follow Naumann (1982), Masner and García (2002), Yoder (2004), and Yoder et al. (2010). The measurements mostly follow Yoder (2004). The measurements of venation are shown in Fig. 1. The term "verriculate tubercle" is used here after Yoder (2004) and is explained in Chemyreva and Kolyada (2019). The term "subalar bridge" is used after Karlsson and Ronquist (2012).

New records are marked with an asterisk (*). The general distribution of species is given after Nixon (1957), Hellén (1964), Kozlov (1978), and Macek (1995). Species of *Synacra* can be recognized using the generic keys by Nixon (1957), Kozlov (1978), and Macek (1989, 1990).

All the color photographs were obtained using a Leica M165 stereomicroscope equipped with a Leica DFC450 camera. Image stacking was performed with Helicon Focus 5.0.

TAXONOMIC PART

Genus ***SYNACRA*** Foerster, 1856
(Figs. 1–72)

Foerster, 1856 : 128, 130, 134. Kieffer, 1916 : 340–345. Nixon, 1957 : 13. Kozlov, 1978 : 588. Macek, 1995 : 469.

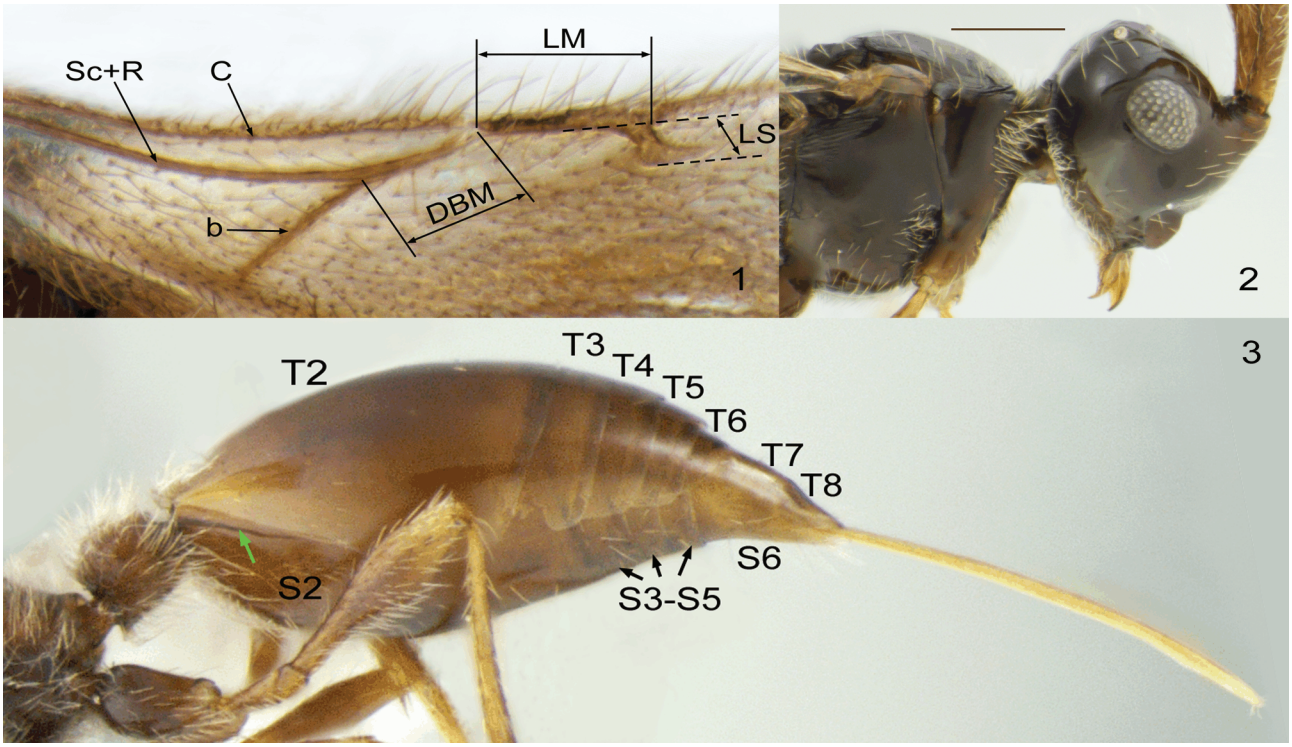
Type species: *Diapria brachialis* Nees, 1834 (designated by Ashmead, 1893).

Synonyms. *Artibolus* Haliday, 1857; *Neuropria* Kieffer, 1904; *Prosynacra* Kieffer, 1905; *Foeldia* Szabó, 1974, syn. n.

Diagnosis. Small (1.2–2.8 mm) wasps with melanic to yellowish body. Head with mouthparts hypognathous; mandibles beak-shaped, bidentate, with apices weakly crossing; labrum exposed, sclerotized, semicircular to subtriangular; clypeus convex, weakly transverse (Fig. 12) to keel-shaped (Figs. 5, 6); tentorial pits placed in large depressions; antennal shelf distinctly prominent. Female antenna 12-segmented, slender and gradually weakly clavate; male antenna 14-segmented, filiform, A3 modified. Mesosoma as wide as high to compressed; pronotum with distinct cervix and epomia, with pubescent outer pronotal pits (Figs. 2, 46); mesonotum slightly convex; notauli complete or totally absent in specialized species; scutellum with large anterior scutellar pit; mesopleuron without mesopleural pit; propodeum with median keel (simple or bifurcate), plicae, and transverse keel along posterior margin in ancestral state (Fig. 59) to almost smooth in derived state (Fig. 55). Wing venation reduced; costal, subcostal, marginal and reduced stigmal veins tubular; postmarginal and radial veins nebulous to absent; basal vein nebulous; marginal vein as long as distance from it to basal vein or distinctly longer (Fig. 1). Petiole subcylindrical with striate sculpture to swollen and smooth in derived states. Metasoma of female fusiform, compressed, sharply pointed posteriorly; metasoma with seven tergites (T2–T8) and five (S2–S6) sternites (Fig. 3). Male metasoma not pointed posteriorly, with seven tergites and seven sternites. In both sexes T2 with striate sculpture and few long setae to smooth with dense pubescence at base; S2 with incomplete belytoid line (Fig. 3, arrow); base of S2 rounded or humped.

Relationships. *Synacra* is closely related to the genera *Acanosema* Kieffer, 1908 and *Polypeza* Foerster, 1856, from which it differs in a single autapomorphy, the 12-segmented antenna in females. The delimitation of *Synacra* males against *Polypeza* and *Acanosema* proved to be problematic implying close relations of all the three genera. A future study based on the material from different geographic areas and molecular evidence may result in their unification into one comprehensive genus.

Remarks. *Foeldia* Szabó, 1974 was described as a genus with a single species *F. triclavicanthiger* based on the characters of the wing venation and the male antennae structure (Szabó, 1974). However, 14-segmented male antennae and modified third antennal segment are



Figs. 1–3. *Synacra* Foerster. (1) *S. azepylopria* sp. n., venation (DBM, distance from basalis to marginalis veins; LM, length of marginal vein; LS, length of stigmal vein); (2) *S. incompleta* Buhl, head and mesosoma, lateral view; (3) *S. incompleta*, metasoma, lateral view. Scale 200 μm.

the most common characters of the whole subfamily Belytinae. Reduction of the fore wing venation is typical of most of the Pantolytini species. All the other features listed by Szabó as diagnostic for the genus fully correspond to the diagnosis of *Synacra*. The type species is synonymous with *S. sociabilis*, which is closely related to *S. brachialis* and undoubtedly belongs to *Synacra*.

A Key to the Palaearctic Species of the Genus Synacra

1. Notauli absent or incomplete ..... 2.

—Notauli fully developed ..... 4.

2. Body strongly compressed (Fig. 69); margin of toruli projecting in the form of a small denticle (Figs 7, 8); propodeum with transverse keel along posterior margin (Fig. 60) ..... ***S. giraudi.***

—Body not compressed, cylindrical (Figs. 64, 66); margin of toruli rounded (Figs. 5, 9); propodeum without transverse keel along posterior margin (Figs. 54, 55) ..... 3.

3. Notauli totally absent (Fig. 36); female antennae stout, moniliform, A4–A11 as wide as long (Fig. 17); A1 without pointed flange apically (Fig. 5) .... ***S. holconota***.

—Notauli incomplete, missing in posterior one-fifth (Fig. 37); female antennae more slender and filiform, A4–A11 distinctly elongate (Fig. 19); A1 with sharply pointed flange apically (Fig. 9) .. .. ***S. incompleta***.

4. Petiole and base of T2 with dense, semi-erect and tangled pubescence (Figs. 52, 53) ..... 5.

—Petiole and base of T2 with erect and not tangled pubescence (Figs. 56–61) ..... 6.

5. Mandibles long (Fig. 6); propodeum without posterior transverse keel (Fig. 52); female antennae stout, A4–A11 as long as wide to transverse (Fig. 16); male A5–A14 of equal width or gradually narrowed apically (Fig. 29) ..... ***S. brachialis***.

—Mandibles short (Fig. 4); propodeum with posterior transverse keel (Fig. 53); female antennae slender, A4–A11 distinctly elongate (Fig. 18); male

A5–A14 weakly gradually broadened apically (Fig. 34) ..... ***S. sociabilis***.

6. Female antennae clavate apically, clava 5-segmented; A8–A12 distinctly compressed (Fig. 20); male A3–A14 each with a whorl of long setae (Fig. 28); axillar depression with verriculate tubercle (Fig. 44) ..... ***S. paupera***.

—Female antennae not clavate apically; A8–A12 of same width in lateral and dorsal views; male A3–A14 with uniform short pubescence (Figs. 30–35); axillar depression without verriculate tubercle (Figs. 41–43) ..... 7.

7. Eyes bare; occipital flange sculptured (Fig. 46) ..... ***S. gigantea*** sp. n.

—Eyes pubescent; occipital flange smooth (Figs. 41–43) ..... 8.

8. Petiole distinctly elongate, not swollen, subcylindrical and striate (Fig. 59); mesopleuron postero-dorsally with subalar bridge (Fig. 48) ..... ***S. azepylopria*** sp. n.

—Petiole as long as wide, weakly swollen and smooth (Figs 57, 58); mesopleuron postero-dorsally smooth, without subalar bridge (Fig. 50) ..... 9.

9. Lower part of mesonotal suture with scattered erect pale setae (Fig. 49); body strongly compressed .... ***S. compressigastra*** sp. n.

—Lower part of mesonotal suture with dense white tangled pubescence (Fig. 50); body not compressed, cylindrical ..... 10.

10. Mandibles weakly curved (Fig. 12); base of T2 with short and deep striae (Fig. 58); propodeum with posterior transverse keel high and complete (Fig. 58) ..... ***S. atracta***.

—Mandibles straight (Fig. 13); base of T2 without striation (Fig. 57); propodeum with posterior transverse keel incomplete, smoothed medially (Fig. 57) ..... ***S. tobiasi*** sp. n.

Synacra atracta Macek, 1995
(Figs. 12, 26, 58, 65)

Synacra atracta Macek, 1995 : 477.

Material. Russia. *Republic of Karelia*: Keret Vill., 14.VIII.1980 (N. Storozheva), 1 ♀. *Murmansk Prov.*: Kola Peninsula, near Murmansk, 26.VIII and 28.IX.1923 (V. Fridolin), 2 ♀.

Variation. Body length 2.0–2.6 mm; female A10–A12 elongate, 1.16–1.43 times as long as wide; A13 as wide as, or wider than A12.

Distribution. West and East Europe, *Russia (European part), Nepal.

Biology. Unknown.

Synacra azepylopria Chemyreva et Kolyada, sp. n.
(Figs. 1, 10, 21, 35, 42, 48, 59, 68)

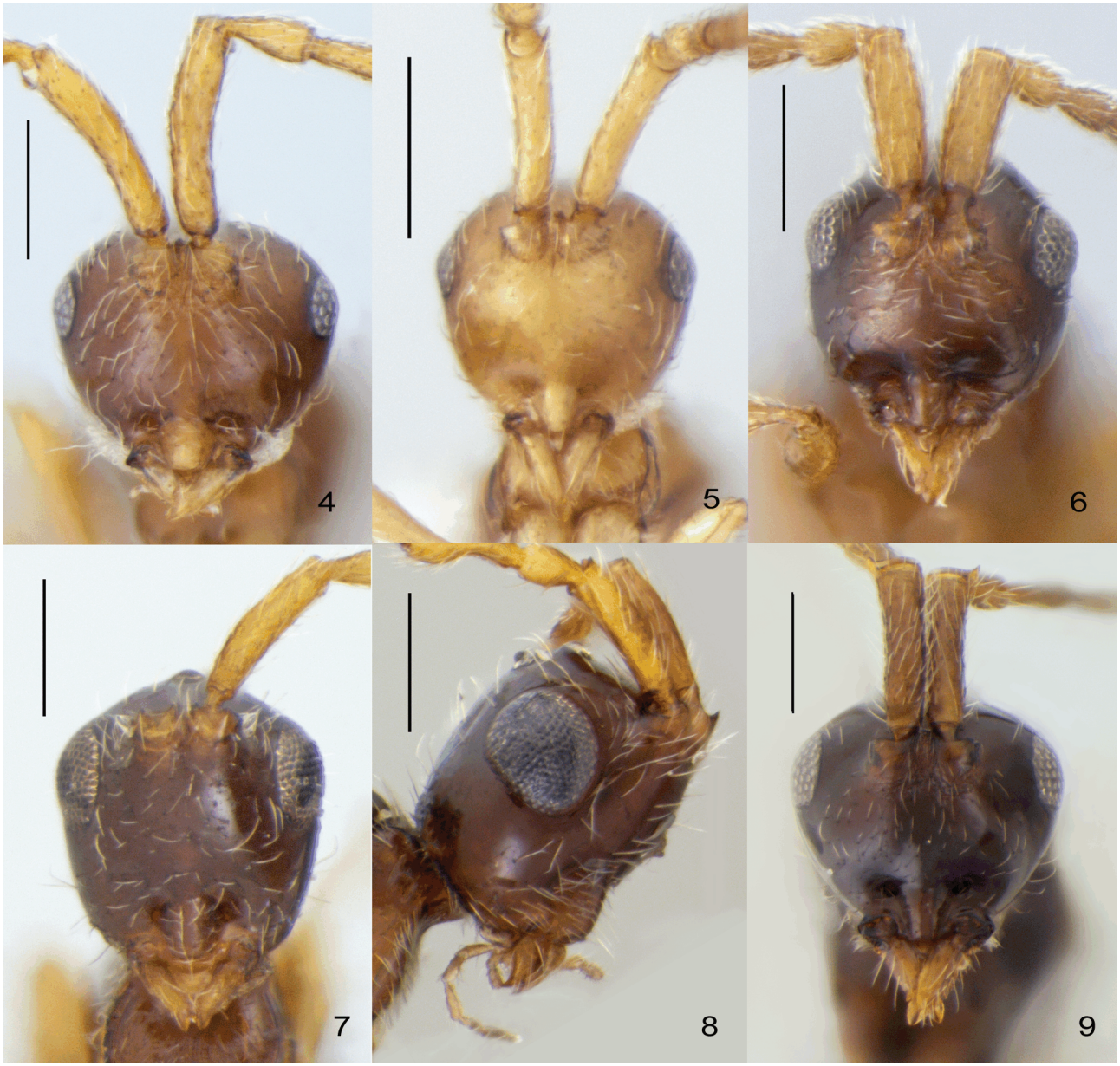
Type material. Holotype, ♀ (ZIN): "**Japan,** Honshu, Tochigi Pref., Nikko, 2–3.X.1999, S. Belokobylskij leg." Paratypes: 1 ♂ (ZIN), "**Russia,** Kunashir I., vicinity of Grozovoe, Ivanovskiy Cape, 8–18.VIII.2008, Yu. Sundukov leg." 2 ♀, 2 ♂ (ZIN), 2 ♀, 2 ♂ (KPMNH): "**Japan,** Honshu, Aichi Pref., Nishinagura (by Pref. route 507), Shitara-chô, 26.VII.–1.VIII.2015, Flight intercept trap, J. Imura leg."

Description. Female. Body length 2.3 mm; fore wing length 1.9 mm; antennae length 1.6 mm.

Color. Head, meso- and metasoma brown; antennae, mandibles, legs and venation pale brown; palpi yellowish brown.

Head in dorsal view slightly longer than wide (34 : 32), wider than mesosoma (32 : 30), smooth, with a few scattered long setae and denser pubescence between frons and antennal shelf. Antennal shelf strongly projecting, head nasiform. Temples in dorsal view receding behind (Fig. 42). Head in lateral view as high as long. Malar space longer than largest diameter of eye (14 : 12). Antennal shelf in front view with fine coriaceous sculpture below toruli. Face smooth, finely pubescent. Genae in front view slightly convex and converging toward mouthparts. Clypeus as wide as high. Labrum small, semicircular (Fig. 10). Mandibles beak-shaped, bidentate, with apices weakly crossing, 0.8 times as long as distances between pleurostomal carinae (Fig. 10).

Antennae slender, weakly broadened apically (Fig. 21). Ratios of length to width of A1–A12 in dorsal view: A1 30.0 : 5.0; A2 11.0 : 5.0; A3 14.0 : 4.5; A4 8.0 : 4.5; A5 7.0 : 4.5; A6 7.0 : 5.0; A7 7.0 : 6.0; A8 7.0 : 6.0; A9 7.0 : 6.0; A10 7.0 : 6.0; A11 7.0 : 6.5; A12 13.0 : 7.0.



Figs. 4–9. *Synacra* spp., face: (4) *S. sociabilis* (Kieffer), (5) *S. holconota* Kieffer, (6) *S. brachialis* (Nees), (7, 8) *S. giraudi* Kieffer, (9) *S. incompleta* Buhl. Scale 200 μm.

Mesosoma slightly compressed, weakly higher than wide (22 : 20), in dorsal view longer than wide (35 : 22). Sides of pronotum bare, pronotal collar with scattered long setae; epomia strongly prominent, with distinct pronotal pit on neck; the pit weakly pubescent (Fig. 48). Mesoscutum transverse (17 : 13), convex, with a few scattered thin setae. Notauli complete and deep throughout. Anterior scutellar pit deep, rounded. Scutellum large, widened posteriorly. Axillar depression scarcely pubescent, without verriculate tubercle (Fig. 42). Mesopleuron postero-dorsally with subalar bridge, bare and smooth medially and scarcely pubescent along margins; its antero-ventral area deepened and pubescent (Fig. 48). Metascutellum narrow, pubescent; dorsellum distinct, with three short longitudinal keels. Propodeum transverse (17 : 10), scarcely pubescent, with simple median keel, plicae and irregular sculpture at sides. Sides of propodeum entirely pubescent and with small white cushion near lower part of mesonotal

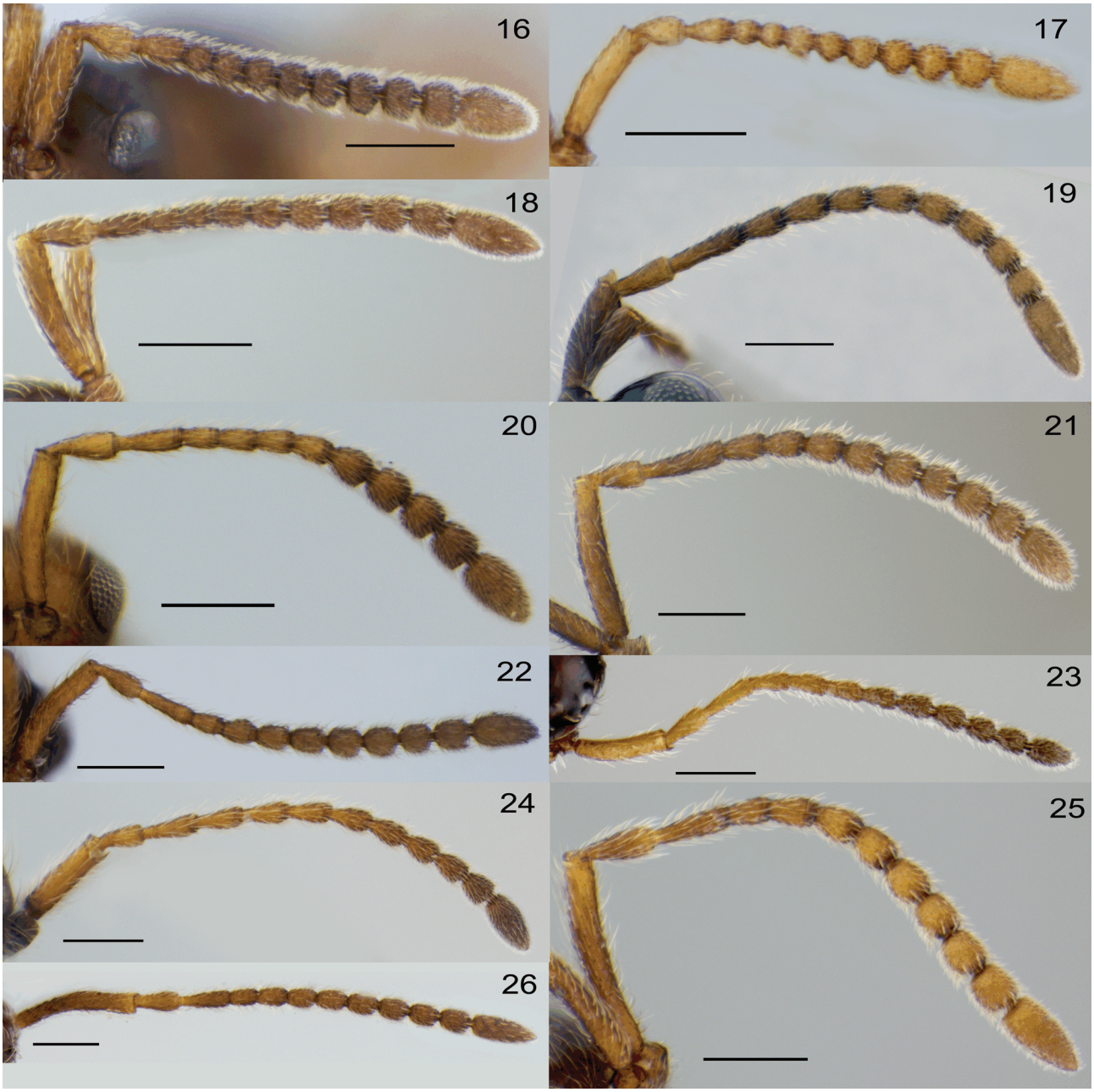
Figs. 10–15. *Synacra* spp., face: (10) *S. azepylopria* sp. n., (11) *S. paupera* Macek, (12) *S. atracta* Macek, (13) *S. tobiasi* sp. n., (14) *S. compressigastra* sp. n., (15) *S. gigantea* sp. n. Scale 200 μm.

suture (Fig. 48). Transverse keel along posterior margin of propodeum complete (Fig. 59).

Wing venation. Fore wing with reduced radial cell; marginal vein longer than distance from it to basal vein (Fig. 1). Legs slender (Fig. 68).

Metasoma. Petiole cylindrical, longer than wide (16 : 11), with longitudinal keels, a few scattered setae dorsally and denser pubescence ventrally; posterior margin of petiole weakly arcuate (Fig. 59). T2 anteriorly with five deep and short grooves, scarcely pubescent; T3–T6 narrow, scarcely pubescent; T7 and T8 long, strongly compressed laterally. S2 with numerous erect scattered setae; S3–S5 narrow, with scattered setae; S6 distinctly elongate and compressed, with a few scattered setae.

Male. Body length 2.1 mm. Similar to female except following characters: antenna filiform; antennomeres cylindrical, covered by uniform short pubescence; A1 slender, 5.5 times as long as wide and 0.75 times as



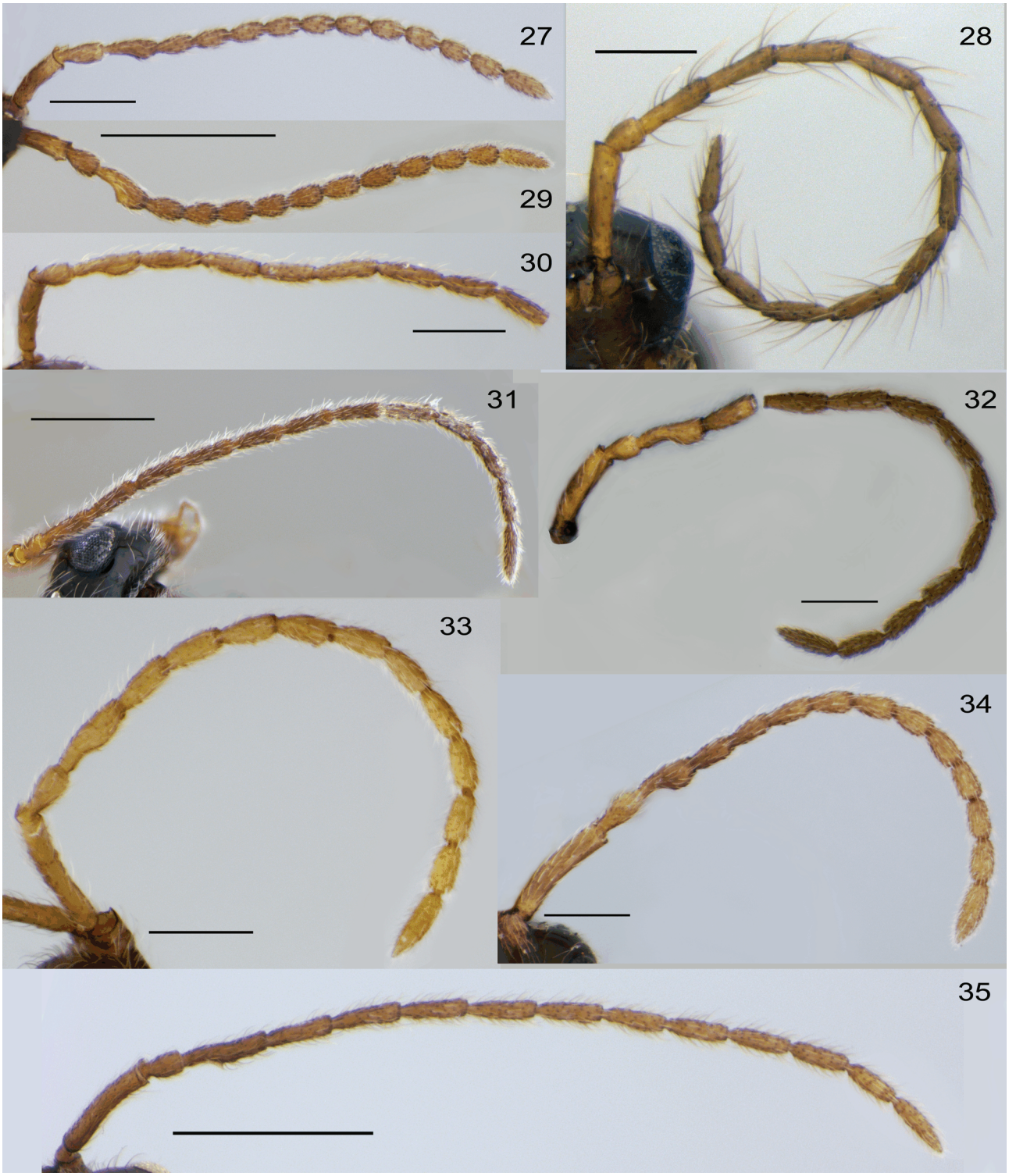
Figs. 16–26. *Synacra* spp., face female antenna: (16) *S. brachialis* (Nees), (17) *S. holconota* Kieffer, (18) *S. sociabilis* (Kieffer), (19) *S. incompleta* Buhl, (20) *S. paupera* Macek, (21) *S. azepylopria* sp. n., (22) *S. compressigastra* sp. n., (23) *S. giraudi* Kieffer, (24) *S. gigantea* sp. n., (25) *S. tobiasi* sp. n., (26) *S. atracta* Macek. Scale 200 μm.

long as head width; A3 emarginate, with keel extending to half of A3 length (Fig. 35); ratios of length to width of A1–A5 in lateral view: 14.0 : 3.0; 4.0 : 3.0; 13.0 : 3.0; 13.0 : 2.5; 14.0 : 2.2; petiole twice as long as wide; T3–T7 narrow, with scattered pubescence; S2 with numerous erect scattered setae; S3–S7 narrow, with scattered erect setae; T8 and S8 subtriangular, rounded apically.

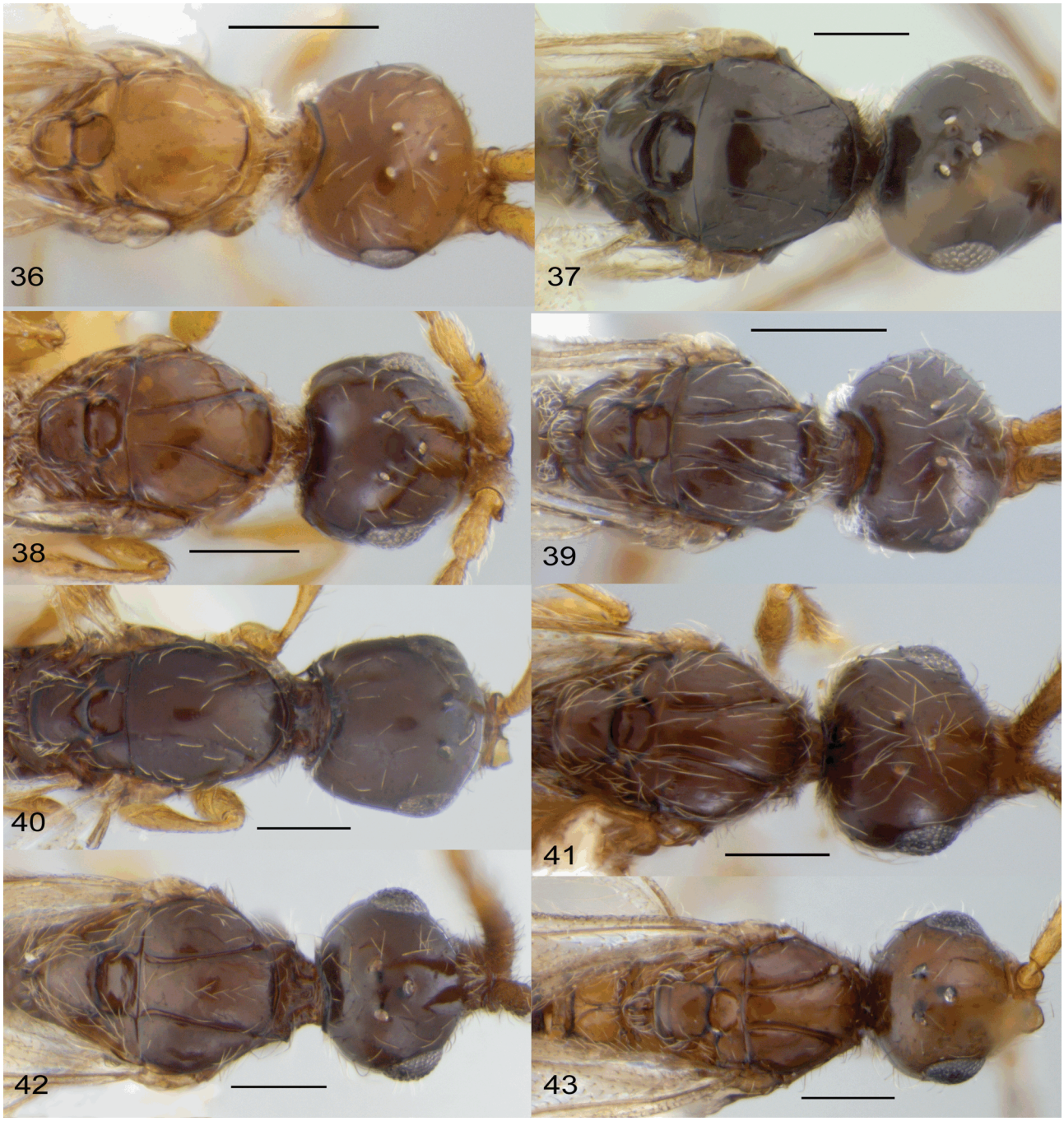
Variation. Body length 1.6–2.3 mm. Distance from marginal to basal veins 0.65–0.90 times length of marginal vein.

Distribution. Russia (Kunashir I.), Japan (Honshu I.)

Etymology. The species name is a Latin noun in apposition, an anagram of the genus name *Polypeza* (read right to left) with an ending "ria;" the name refers to



Figs. 27–35. *Synacra* spp., male antennae: (27) *S. holconota* Kieffer, (28) *S. paupera* Macek, (29) *S. brachialis* (Nees), (30) *S. compressigastra* sp. n., (31) *S. gigantea* sp. n., (32) *S. giraudi* Kieffer, (33) *S. tobiasi* sp. n., (34) *S. sociabilis* (Kieffer), (35) *S. azepylopria* sp. n. Scale: (29, 31, 35) 500 μm; the rest 200 μm.

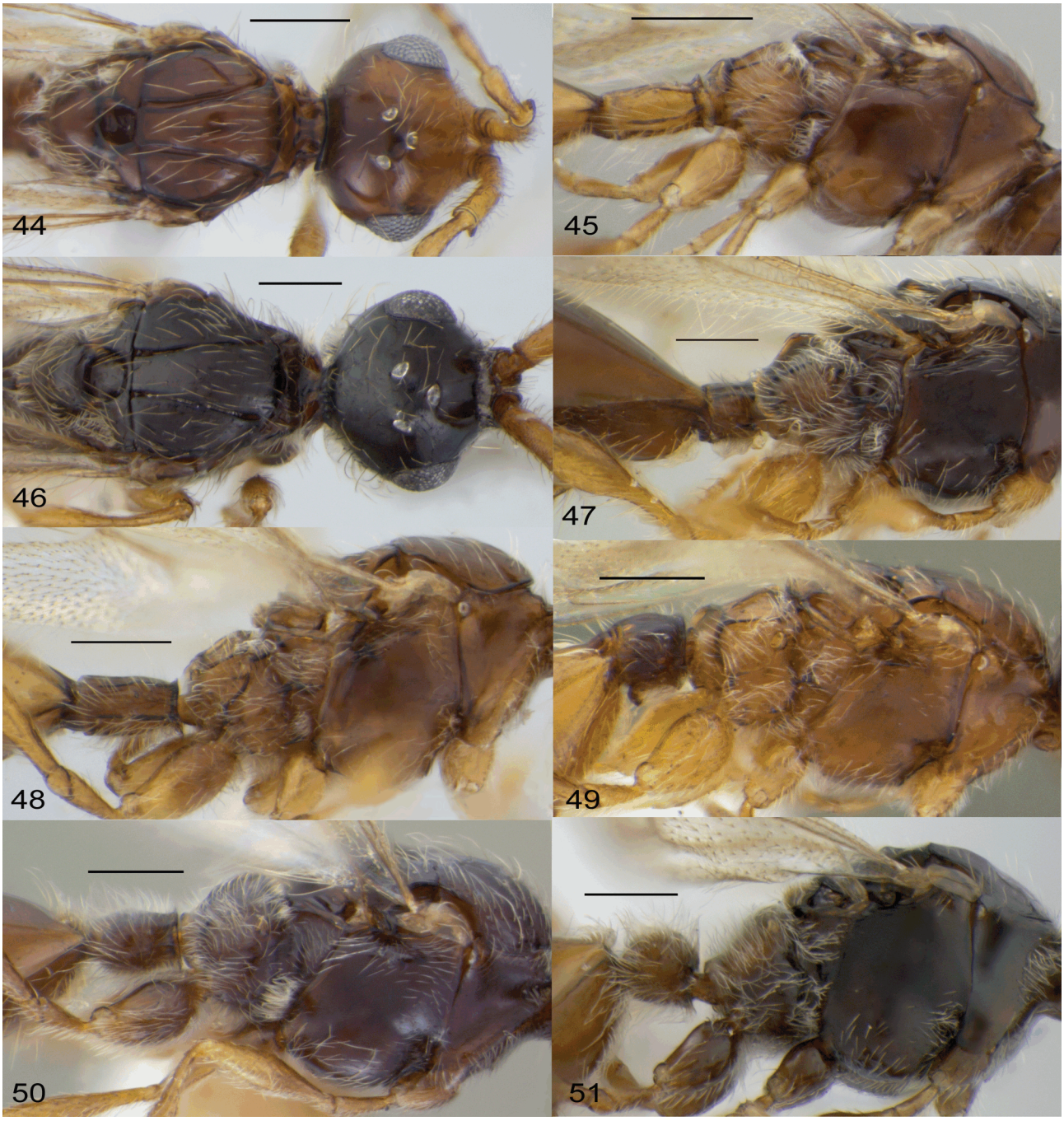


Figs. 36–43. *Synacra* spp., head and mesosoma (dorsal view): (36) *S. holconota* Kieffer, (37) *S. incompleta* Buhl, (38) *S. brachialis* (Nees), (39) *S. sociabilis* (Kieffer), (40) *S. giraudi* Kieffer, (41) *S. tobiasi* sp. n., (42) *S. azepylopria* sp. n., (43) *S. compressigastra* sp. n. Scale 200 μm.

close similarity of the new species to members of the genus *Polypeza*.

Biology. Unknown.

Differential diagnosis. *Synacra azepylopria* sp. n. can be distinguished from all known *Synacra* species by the combination of following characters: head nasiform (Fig. 42); mandibles 0.8 times as long as distances between pleurostomal carinae (Fig. 10); pronotal pits weakly pubescent (Fig. 48); mesopleuron with subalar bridge postero-dorsally (Fig. 48); propodeum with simple medial keel, complete plicae and transverse keel along posterior margin (Figs. 48, 59); petiole cylin-



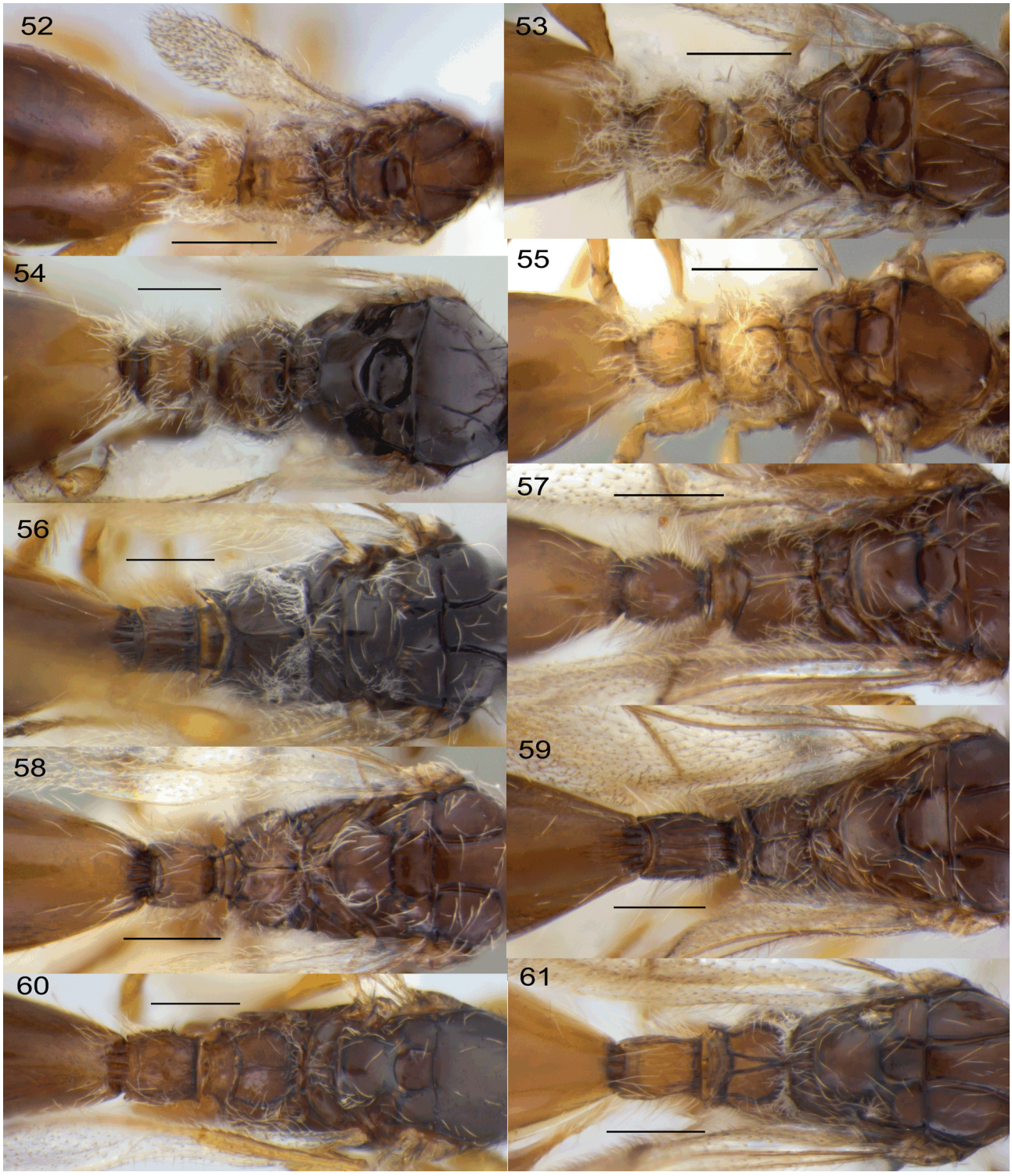
Figs. 44–51. *Synacra* spp., head and mesosoma in dorsal view (44, 46) and mesosoma in lateral view (45, 47–51): (44, 45) *S. paupera* Macek, (46, 47) *S. gigantea* sp. n., (48) *S. azepylopria* sp. n., (49) *S. compressigastra* sp. n., (50) *S. tobiasi* sp. n., (51) *S. incompleta* Buhl. Scale 200 μm.

drical, elongate, with longitudinal keels and few scattered erect setae; T2 anteriorly with five deep grooves, scarcely pubescent (Fig. 59); male antennae with short uniform pubescence, A1 long and slender, without apical flange, A3 emarginate, with keel extending to half of A3 length (Fig. 35).

Synacra brachialis (Nees, 1834)
(Figs. 6, 16, 29, 38, 52, 63)

Diapria brachialis Nees, 1834.

Synacra acutipennis Kieffer, 1910 (synonymized by Macek, 1995).



Figs. 52–61. *Synacra* spp., meso- and metasoma (dorsal view): (52) *S. brachialis* (Nees), (53) *S. sociabilis* (Kieffer), (54) *S. incompleta* Buhl, (55) *S. holconota* Kieffer, (56) *S. gigantea* sp. n., (57) *S. tobiasi* sp. n., (58) *S. atracta* Macek, (59) *S. azepylopria* sp. n., (60) *S. giraudi* Kieffer, (61) *S. paupera* Macek. Scale 200 μm.

S. brevipennis Kieffer, 1910 (synonymized by Macek, 1995).

S. flavistilus Kieffer, 1910 (synonymized by Macek, 1995).

Material. Moldova. Kishinev, 2.IX.1959 (E. Sugonyaev), 1 ♂; Taraclia District, Ciumai, 16.VI.1974 (S. Kononova), 1 ♂; Dubasari, 18.VII.1962 (V. Talitskiy), 1 ♂; Copanca, 5.VII.1961 (V. Talitskiy), 1 ♂; Kotovskoye, 12.VII.1961 (V. Talitskiy), 1 ♂. *Transnistria.* Rîbnita, 12.V.1959 (V. Talitskiy), 2 ♂; Carmanova, 14.VI.1963 (V. Talitskiy), 1 ♂. **Ukraine.** *Zakarpattia Prov.* Vynohradiv Distr., Ust-Chorna Vill., 4.VIII.1989 (Kotenko), 1 ♂; Mukachevskiy Distr., Lisarnya Vill., 12.VIII.1988 (O. Chervonenko), 2 ♂. *Odessa Prov.* Karolino-Buhaz, 9.VII.1961 (V. Talitskiy), 1 ♂. *Vinnytsia Prov.*: Oksanivka Vill., 20–21.VII.1988 (O. Chervonenko), 1 ♂. *Kharkiv Prov.* Vicinity of Krasnokutsk, 28.VII.1993 (Vermenko), 1 ♂. *Zaporizhia Prov.* Vicinity of Vasylivka, 11.VII.1974 (S. Kononova), 1 ♂. *Kherson Prov.* Black Sea Biosphere Reserve, 1.VI.1971 and 1.VI.1974 (S. Kononova), 5 ♂; same area, 1.IX.1991 (N. Storozheva), 1 ♂; Askania-Nova Reserve, 8.V.1974 (D. Kasparyan), 2 ♂; same area, 26.V.1974 (A. Kotenko), 1 ♂. *Cherkasy Prov.* Vicinity of Kanev, 10–14.VII.1971 and 11–12.VII.1972 (S. Kononova), 5 ♂. **Russia.** *Republic of Crimea*. Inkerman, 21.I.1912 (V. Pliginski), 4 ♀. *Vladimir Prov.* Petushinskiy Distr., Ostrovishchi Vill., 16.VI.1971 (V. Alekseev), 1 ♂. *Ryazan Prov.* Skopinsky Distr., Ivanovka Vill., 22.VIII.1973 (V. Alekseev), 1 ♂. *Voronezh Prov.* Ramon, 4.VIII.1980 (V. Trjapitzin), 2 ♂. *Stavropol Terr.* Georgievskiy Distr., Prietokskiy Vill., 28.VIII–6.IX.2002 (V. Kostjukov), 2 ♂. *Yakutia*. Megino-Kangalassky Distr., Maya Vill., 9–15.VIII.1990 (V. Alekseev), 3 ♀, 1 ♂. *Primorskii Terr.* Ussuriysk Distr., vicinity of Kamenushka and Kaymanovka villages, 25.VIII.2010 (E. Tselikh), 1 ♂. *Sakhalin Prov.* Shikotan I., Malokurilskoe, 20–21.VIII.1973 (D. Kasparyan), 1 ♂. **Azerbaijan.** *Lankaran Prov.* Vicinity of Lankaran, 5–6.X.1968 (V. Tanasijchuk), 3 ♂; same area, 5–7.V.1971 (V. Tobias), 1 ♂. *Goranboy Prov.* Yukhary Agdzhakend near Shaumianovsk, 1300 m, 21.V.1974 (A. Ponomarenko), 1 ♀. **Kazakhstan.** *Karaganda Prov*. Karkarala Mountains, 15.VI.1959 (V. Tobias), 3 ♂; same area, 6.VI.1961 (V. Tobias), 3 ♂; Kent, 16.VI.1959 (V. Tobias), 1 ♂. **Mongolia.** *Govisümber Aimag*: Sümber sum, 13.VII.1975 (E. Sugonyaev), 4 ♂; same area and date (M. Kozlov), 1 ♂. *Arkhangai Aimag*: Khangai sum, 7.VII.1975 (E. Sugonyaev), 4 ♂.

Variation. Female. Body length 1.5–2.4 mm. Wings 0.24–0.88 times as long as body.

Male. Body length 1.4–2.1 mm. Antennae from stout to slender; A3 with keel reaching 0.60–0.75 of the segment length; A4 0.64–0.80 times as wide as A3; A4–A13 1.4–2.0 times as long as wide, subcylindrical to moniliform. Two aberrant males are present: first one with notauli in distal one-fifth of mesoscutum obliterate; second one with strongly shortened antenna (A4–A13 transverse) and with head shape similar to that in *S. giraudi* (Figs. 7, 8).

In both sexes, stigmal vein totally reduced to have length 1.5 times marginalis vein width. Distance from marginalis vein to basalis vein 0.3–0.9 times length of marginalis vein.

Distribution. Everywhere in Europe, including *Moldova, *Ukraine, Russia (European part, *Siberia, *Far East), *Azerbaijan, *Kazakhstan, and *Mongolia.

Biology. Nixon (1957) recorded one female from the nest of *Ponera coarctata* Nees (Formicidae); Donisthorpe (1927, according to Nixon, 1957) found this species together with *Lasius brunneus* (Latreille) (Formicidae).

Synacra compressigastra Chemyreva et Kolyada, sp. n.
(Figs. 14, 22, 30, 43, 49, 70)

Type material (ZIN). **Russia.** Holotype, ♀: "*Komi Republic*, 70 km S of Vorkuta, 18.VI–13.VIII.1991, D. Kasparyan leg." Paratypes. 1 ♀, "*Yakutia*, Srednekolymsk, 18.VI–13.VIII.1991, V. Alekseev leg." 1 ♂, "*Khabarovsk Terr*., Lake Udyl, 29–31.VIII.1970, D. Kasparyan leg."

Description. Female. Body length 2.1 mm; fore wing length 1.8 mm; antennae length 1.6 mm.

Color. Head, meso- and metasoma brown; A1–A12, mandibles, palpi, venation and legs pale brown (Fig. 70).

Head in dorsal view as long as wide, wider than mesosoma (22 : 20), with a few very long erect setae. Antennal shelf weakly projecting, head not nasiform; the area between frons and toruli bare. Temples in dorsal

view receding behind eyes (Fig. 43). Occipital flange very narrow. Postgenal area bare. Head in lateral view higher than long (27 : 22); vertex roundly convex. Malar space longer than diameter of eye (10 : 8). Toruli separated from each other by a not deep gap. Face smooth, pubescent. Genae in front view not convex and converging toward mouthparts. Clypeus as wide as high. Tentorial pits large. Labrum triangular, longer than wide. Mandibles beak-shaped, bidentate, with apices weakly crossing, 0.67 times as long as distances between pleurostomal carinae (Fig. 14).

Antennae slender, gradually weakly broadened apically (Fig. 22). A1 slender, 0.73 times as long as head width, without apical flanges (Fig. 14). Ratios of length to width of A1–A12 in dorsal view: A1 16.0 : 3.5; A2 6.0 : 3.0; A3 7.0 : 2.5; A4 4.0 : 2.5; A5 4.5 : 3.0; A6 4.5 : 3.5; A7 4.5 : 3.5; A8 4.5 : 4.0; A9 4.5 : 4.0; A10 4.5 : 4.0; A11 4.0 : 4.5; A12 8.0 : 4.5.

Mesosoma slightly compressed, higher than wide (23 : 21), in dorsal view much longer than wide (40 : 21). Sides of pronotum smooth and bare, pronotal collar with scattered long setae; epomia slightly prominent, with not deep pronotal pit; the pit with fine pubescence (Fig. 49). Mesoscutum weakly elongate (20 : 19), convex, with a few scattered thin setae. Notauli complete and distinct throughout. Anterior scutellar pit deep . Scutellum large, widened posteriorly. Axillar depression with a few setae, without verriculate tubercle (Fig. 43). Mesopleuron smooth, mainly bare but with a few scarce setae; its anteroventral area with small pubescent pit (Fig. 49). Metascutellum narrow; dorsellum distinct, with three short longitudinal keels and numerous long setae. Propodeum transverse (14 : 9), dorsally almost bare, on sides pubescent; median propodeal keel bifurcate at posterior half; plicae and transverse keel along posterior margin of propodeum full, distinct; posterior margin of propodeum in dorsal view not arcuate (Fig. 43).

Wing venation. Fore wing with reduced radial cell. Marginal vein longer than distance from it to basal vein (9 : 6). Legs slender (Fig. 70).

Metasoma. Petiole subquadrate, as long as wide, smooth and bare dorsally and densely pubescent at sides and ventrally; posterior margin of petiole in dorsal view weakly arcuate. Anterior margin of T2 bare, with five deep and short grooves; T3–T6 narrow, with a few erect setae; T7 and T8 long, slightly compressed laterally, with scattered erect setae. Anterior part of S2 slightly projecting, with long pubescence (Fig. 49); S3–S5 narrow, with a few erect setae; S6 distinctly elongate, with scattered setae.

Male. Body length 1.9 mm. Similar to female except for following: antenna brown, filiform; antennomeres cylindrical, covered with uniform pubescence; A1 more stout, without apical flanges, its length 0.56 times width of head; A3 emarginate, with keel extending to 0.58 of A3 length (Fig. 30); ratios of length to width of A1–A5 in lateral view: 22.0 : 6.5; 10.0 : 5.5; 18.0 : 5.0; 17.0 : 5.0; 17.0 : 5.0; head distinctly wider than mesosoma in dorsal view (27 : 23)*;* petiole elongate (11 : 8), with weakly concave posterior margin; T3–T7 and S3–S7 narrow, with scattered erect setae; T8 and S8 subtriangular, rounded apically.

Variation. Body length 1.9–2.2 mm. A3 emarginate, with keel extending to 0.3–0.4 of A3 length. Plicae complete to partly reduced. Sides of propodeum more or less pubescent. Petiole weakly transverse in female and weakly elongate in male.

Distribution. Russia (European part, East Siberia, Far East).

Etymology. The specific epithet "compressigastra" is a composite Latin adjective (compressigaster, -tra, -trum) formed by the union of the stem of the adjective "compressus" ('compressed'), a linking vowel "-i-," and the Latinized Greek noun "gaster" ('belly,' referring to the metasoma).

Differential diagnosis. *Synacra compressigastra* sp. n. can be distinguished from all the known *Synacra* species by the combination of the following characters: A1 slender; mandibles two-thirds as long as distances between pleurostomal carinae (Fig. 14); head in dorsal view not nasiform (Fig. 43); mesoscutum weakly elongate; propodeum with plicae and transverse keel along posterior margin of propodeum entirely distinct (Fig. 43); petiole swollen, smooth and bare dorsally; anterior margin of T2 sculptured and pubescent (Fig. 49).

Synacra holconota Kieffer, 1910
(Figs. 5, 17, 27, 36, 55, 64)

Synacra holconota Kieffer, 1910.

Prosynacra nigriceps Kieffer, 1910 (synonymized by Macek, 1995).

Material. Russia. *Kaliningrad Prov.* Kurshskaya Kosa (= Curonian Spit) National Park, 55°09′16.83″N, 20°51′27.03″E, Rybachiy Vill., 24.VII–4.VIII.2006 (V. Kolyada), 4 ♀, 11 ♂. *Kirov Prov.* Bolsheromanovo Vill., 9–10.VIII.1994 (V. Kolyada leg), 1 ♂. *Krasnodar Terr.* Krasnaya Polyana Vill., 17.VII.1976 (V. Belov), 3 ♂.

Variation. Body length 1.3–1.9. Head and mesosoma yellowish brown to dark brown. Propodeum with keel along posterior margin developed to absent. Male A4–A14 equal in width to weakly broadened apically.

Distribution. West, South and East Europe, *Russia (European part).

Biology. According to the collection data, *Phytomyza albiceps* Meigen and *Agromyza spiraeae* Kaltenbach (Diptera, Agromyzidae) are the hosts of this species (Macek, 1995).

Synacra incompleta Buhl, 1997
(Figs. 2, 3, 9, 19, 37, 51, 54, 66)

Synacra incompleta Buhl, 1997 : 55.

Material. Holotype, ♀ (ZMUC): "Holotype," "*Synacra incompleta* P.N. Buhl det. 1996," "MOSVIK, 7.9.94, MT. ST : 17, STORFR," "ZMUC 00021284."

Distribution. Norway.

Remarks. This species is known only from the holotype.

Biology. Unknown.

Synacra gigantea Chemyreva et Kolyada, sp. n.
(Figs. 15, 24, 31, 46, 47, 56, 72)

Type material (ZIN). **Russia,** *Primorskii Terr*. Holotype, ♀: "Lazovskiy Nature Reserve, 43°1517′N 134°0759′E, YPT, 5–25.VII.2005, K. Makarov leg." Paratypes. 2 ♀, 3 ♂, "Lazovskiy Nature Reserve, net-sweeping, 9–17.VII.2008, A. Khalaim leg." 1 ♀, "20 km SE of Spassk-Dalniy, Evseevka, 17.VII.1995, S. Belokobylskij leg." 1 ♂, "Anisimovka, 6–7.VIII.1993, S. Belokobylskij leg."

Description. Female. Body length 2.4 mm; fore wing length 2.0 mm; antennae length 1.6 mm.

Color. Head, meso- and metasoma black; A8–A12 dark brown; A1–A7, mandibles, labrum, palpi, venation, and legs brown.

Head in dorsal view slightly wider than long (26 : 24), as wide as mesosoma , with a few very long erect setae. Antennal shelf strongly projecting, head nasiform; the gap between frons and toruli with dense white pubescence. Temples in dorsal view receding behind eyes (Fig. 46). Occipital flange narrow but sculptured. Postgenal area with cushion of white setae. Head in lateral view higher than long (29 : 24); vertex strongly prominent. Malar space weakly shorter than diameter of eye (11 : 12). Antennal shelf in front view with coriaceous sculpture below toruli. Face smooth, pubescent. Genae in front view not convex and converging toward mouthparts. Clypeus as wide as high. Tentorial pits large. Labrum triangular, longer than wide. Mandibles beak-shaped, bidentate, with apices weakly crossing, 0.85 times as long as distances between pleurostomal carinae (Fig. 15).

Antennae slender, gradually weakly broadened apically (Fig. 24). A1 stout, 0.55 times as long as width of head (Fig. 15). Ratios of length to width of A1–A12 in dorsal view: A1 25.0 : 6.0; A2 11.0 : 5.5; A3 13.0 : 5.0; A4 11.5 : 5.0; A5 11.0 : 5.0; A6 11.0 : 5.0; A7 10.5 : 5.5; A8 10.0 : 6.0; A9 9.0 : 6.0; A10 8.5 : 6.5; A11 8.0 : 7.0; A12 16.0 : 7.5.

Mesosoma slightly compressed, weakly higher than wide (28 : 26), in dorsal view longer than wide (45 : 26). Sides of pronotum smooth and bare, pronotal collar with scattered long setae; epomia distinctly prominent, with deep outer pronotal pit; the pit with dense white setosity (Fig. 46). Mesoscutum transverse (24 : 19), convex, with a few scattered thin setae. Notauli complete and deep throughout. Anterior scutellar pit deep, rounded. Scutellum large, widened posteriorly. Axillar depression with white pubescence, without verriculate tubercle (Fig. 46). Mesopleuron bare medially, smooth; its antero-ventral area with deep and densely pubescent pit (Fig. 47). Metascutellum narrow; dorsellum distinct, with three short longitudinal keels and numerous long setae. Propodeum in dorsal view transverse (25 : 17), anteriorly covered by short and dense white pubescence; median propodeal keel full, weakly bifurcate posteriorly; plicae smoothed in anterior half; transverse keel along posterior margin of propodeum high; posterior margin of propodeum in dorsal view weakly arcuate (Fig. 56); sides of propodeum with several keels and white pubescence. Legs slender (Fig. 72).

Figs. 62–68. *Synacra* spp., lateral habitus: (62) *S. sociabilis* (Kieffer), (63) *S. brachialis* (Nees), (64) *S. holconota* Kieffer, (65) *S. atracta* Macek, (66) *S. incompleta* Buhl, (67) *S. tobiasi* sp. n., (68) *S. azepylopria* sp. n. Scale: (62–64, 66) 500 μm; (65, 67, 68) 1 mm.

Wing venation. Marginal vein longer than distance from it to basal vein (16 : 14). Basal vein tubular.

Metasoma. Petiole cylindrical, weakly transverse (12 : 10), with striate sculpture, few erect setae dorsally and denser erect pubescence ventrally; posterior margin of petiole in dorsal view weakly arcuate (Fig. 56). Anterior margin of T2 sculptured and almost bare (with several erect setae) (Fig. 56); T3–T6 narrow, with few erect setae; T7 and T8 long, slightly compressed laterally, with scattered erect setae. Anterior part of S2 pubescent, projecting (Fig. 47); S3–S5 narrow, with a few erect setae; S6 distinctly elongate, with scattered setae.

Figs. 69–72. *Synacra* spp., dorsal (69) and lateral habitus (70–72): (69) *S. giraudi* Kieffer, (70) *S. compressigastra* sp. n., (71) *S. paupera* Macek, (72) *S. gigantea* sp. n. Scale: (70, 71) 500 μm; (69, 72) 1 mm.

Male. Body length 2.5 mm. Similar to female except for following: antenna brown, filiform; antennomeres cylindrical, covered by uniform pubescence (Fig. 31); A1 stouter, with apical flanges, 0.48 times as long as width of head ; A3 emarginate, with keel extending to 0.4 of A3 length; ratios of length to width of A1–A5 in lateral view: 22.0 : 6.5; 10.0 : 5.5; 18.0 : 5.0; 17.0 : 5.0; 17.0 : 5.0; head slightly wider than mesosoma in dorsal view (33 : 30); petiole elongate (11 : 10) with straight posterior margin; T3–T7 and S3–S7 narrow, with scattered erect setae; T8 and S8 subtriangular, rounded apically.

Variation. Body length 2.4–2.8 mm. Postmarginalis vein short to totally absent.

Distribution. Russia (Far East).

Etymology. The species name refers to the relatively large size of the parasitoid.

Differential diagnosis. *Synacra gigantea* sp. n. can be distinguished from all the known *Synacra* species by the combination of the following characters: A1 stout,with more or less distinct apical flange; mandibles 0.85 times as long as distances between pleurostomal carinae; vertex strongly prominent (Fig. 15); occipital flange sculptured; postgenal area and gap between frons and toruli with cushion of white setae; pronotum with extremely deep and densely pubescent outer pronotal pits; notauli sculptured (Fig. 46); propodeum with white short pubescence dorso-anteriorly; transverse keel along posterior margin of propodeum fully developed (Fig. 56); basal vein tubular; distance from marginal vein to basal vein 0.9 times as long as marginal vein; petiole cylindrical, transverse to weakly elongate, sculptured; anterior margin of T2 sculptured and almost bare (Fig. 56); anterior part of S2 projecting (Fig. 47).

Synacra giraudi (Kieffer, 1910)
(Figs. 7, 8, 23, 32, 40, 60, 69)

Prosynacra giraudi Kieffer, 1910.

Material. Russia. *Novgorod Prov.* 20 km NW of Pestovo, Tychkino Vill., 16.VII.1992 (V. Tobias), 1 ♂. *Moscow Prov*. Malakhovka, 23.VII.1995 (M. Mostovsky), 1 ♂.

Remarks. No distinct variation of the morphological characters was found in the studied specimens.

Distribution. West and East Europe, *Russia (European part).

Biology. Host records by Kieffer (1916) of the larvae of *Tomicus piniperda* (L.) and *Orthotomicus laricis* (F.) (Curculionidae: Scolytinae) appear dubious. The rare

adults of this species were captured in coniferous forests.

Synacra paupera Macek, 1995
(Figs. 11, 20, 28, 44, 45, 61, 71)

Synacra paupera Macek, 1995 : 478.

Material. Russia. *Primorskii Terr.* Khasan, 30.VIII.2003 (S. Belokobylskij), 2 ♂; near Spassk-Dalniy, 7.VII and 1–6.VIII.1995 (S. Belokobylskij), 4 ♂; near Novokachalinsk, Lake Khanka, 28–29.VIII.1987 (S. Belokobylskij), 1 ♂; Lazovskiy Nature Reserve, 16–22.VIII.2010 (E. Tselikh), 1 ♂; same area, YPT, 43°15′17″N, 134°07′59″E, VII.2005 (K. Makarov), 1 ♀, 4 ♂. *Sakhalin Prov*. Sakhalin, near Ozersk, 11–13. VIII.1981 (S. Belokobylskij), 1 ♂. **South Korea.** Jirisan, Hamyang-gun, Macheon-Myon, Samjeong-Li, 700 m, forest, MT, 35°20′55″N, 127°38′21″E, 15.IX–13.X.2002, 3 ♀; same area, 15–22.VI.2003, 1 ♀; Kangwon-Do, Chuncheon, Nam-Myeon, Hudong-Li, MT in semi-shade near forest edge, 31.VII–16.VIII.2003, 1 ♀. **Japan.** Honshu, Aichi Pref., Nishinagura (by Pref. route 507), Shitara-chô, Flight intercept trap, 26.VII–1.VIII.2015 (J. Imura), 2 ♀, 2 ♂.

Variation. Body length 1.5–2.3 mm. Mesosoma as high as wide to distinctly compressed. Verriculate tubercle large (mainly specimens from South Korea and Japan) to small or totally absent (mainly specimens from Russia: Primorskii Terr.). Median propodeal keel broadly bifurcate from base (often) to simple and weakly bifurcate in posterior one-third. Marginal vein as long as distance from it to basal vein or distinctly shorter. Male petiole 1.7–2.1 times as long as wide.

Distribution. Denmark, Netherlands, *Russia (Far East), *South Korea, Japan, Malaysia, Canada, USA.

Biology. The species is associated with agriculture—mushroom cultivations, green houses, backyards. Host—*Bradysia difformis* Frey, 1948 (=*Bradysia paupera* (Tuomikoski, 1960)) (Diptera, Sciaridae) (Macek, 1995; Notton, 1997).

Synacra sociabilis (Kieffer, 1904)
(Figs. 4, 18, 34, 39, 53, 62)

Neuropria sociabilis Kieffer, 1904.

Neuropria inquilina Kieffer, 1905 (synonymized by Macek, 1995).

Neuropria proxima Kieffer, 1910 (synonymized by Pschorn-Walcher, 1957).

Synacra picea Kieffer, 1910 (synonymized by Pschorn-Walcher, 1957).

Labolips anommati Morley, 1931 (synonymized by Macek, 1995).

Foeldia triclavicanthiger Szabó, 1974: 358, syn. n.

Neuropria astigmata Szabó, 1978 : 144 (synonymized by Macek, 1995).

Neuropria pannonica Szabó, 1978 : 144 (synonymized by Macek, 1995).

Material. Bulgaria. Kostinbrod Town, Kherakovo Vill., 17.VII.1973, 1 ♀. **Ukraine.** *Chernihiv Prov.*. Bakhmach Distr., Obmachev Vill., 5.VII.1993 (Vermenko), 1 ♀. **Russia.** *Leningradskaya Prov.* Ladozhskoe Ozero (= 'Lake Ladoga') Station, 18.VI.1961 (M. Kozlov), 1 ♀. *Moscow Prov*. Moscow City, Krylatskoe, Rublevskiy forest, 1–15.VI.2004 (V. Kolyada), 1 ♀; vicinity of Stupino, 6.VIII.1995 (V. Kolyada), 1 ♀; Malakhovka, 28.VII.1994 (M. Mostovsky), 1 ♀; vicinity of Orekhovo-Zuevo, from *Formica rufa* nest, 22.VIII.1978 (V. Alekseev), 1 ♂; vicinity of Nikolina Gora Vill., from *F. rufa* nest, IX.1958 (V. Mesnyakov), 1 ♀. *Altai Terr.* Tigirek Vill., 5.VII.2005 (A. Reshchikov), 2 ♀. *Primorskii Terr.* Ussuriysk Distr., Gornotayozhnoye, 200 m, 43.66°N 132.25°E, MT, 17–23.VII.2003 (M. Michailovskaya), 1 ♀; Lazovskiy Nature Reserve, Tachingouza Bay, 20.VIII.1948 (V. Gussakovskiy), 1 ♀.

Type material. 1 ♂, "Holotypus *Foeldia triclavicanthiger* Szabó, 1974," "Mongolia, Archangaj aimak, Koschoo zaidam am Chogschin-Orchon, 35 km N von Somon Lun, 1490 m, Exp. Dr. Z. KASZAB, 1964," "Nr. 247, 2.VII.1964," "Hym.Typ. No. 2627 / Mus. Budapest."

Variation. Body length 1.6–2.1 mm. Propodeum as long as wide or distinctly transverse. Median keel simple to bifurcate in posterior one-third. Postmarginal vein weakly developed to totally absent; stigmal vein varying from distinct to obsolete.

Distribution. West, North and East Europe, including *Bulgaria, *Ukraine, Russia (European part, *Siberia, *Far East), *Mongolia.

Biology. The species is associated with nests of *Formica* and *Lasius* species (Formicidae); some specimens were reared from sciarid larvae in a mushroom (Macek, 1995). Macek (1995) collected this species in yellow

pan-traps placed in rotten tree hollows colonized by *Lasius brunneus* (Latreille) (Formicidae). We have two specimens collected from *Formica rufa* L. nests.

Differential diagnosis. *Synacra sociabilis* can be distinguished from all the known *Synacra* species by the combination of the following characters: A1 long and slender, with small apical flanges; male A3 emarginate, with keel extending to 0.6 of A3 length (Fig. 34); head not nasiform (Fig. 39); mandibles 0.8 times as long as distances between pleurostomal carinae (Fig. 4); postgenal cushion white and dense (Fig.4); notauli deep and complete; propodeum with simple median keel, plicae and transverse keel along posterior margin fully developed (Fig. 53); pronotal pits, sides of propodeum, petiole and base of T2 with dense white and tangled pubescence (Figs. 39, 53); petiole swollen and smooth, as long as wide (Fig. 53); T2 bare anteriorly.

Remarks. The diagnostic characters of the holotype of *Foeldia triclavicanthiger* are fully consistent with the diagnosis of *Synacra sociabilis*.

Synacra tobiasi Chemyreva et Kolyada, sp. n.
(Figs. 13, 25, 33, 41, 50, 57, 67)

Type material (ZIN). Holotype, ♀: "South **Kazakhstan,** headwaters of Ugam River, 15 km from Khumsan, 17–18.V.1963, V. Tobias leg." Paratypes. 8 ♂, same label as in holotype; 1 ♀, 1 ♂, "South Kazakhstan, western slope of Ugam Mountain Range, Ugam River, 12.V.1963, V. Tobias leg." 1 ♀, 1 ♂, "South Kazakhstan, Ugam Mountain Range, 20 km N of Khumsan, 18.V.1963, E. Sugonyaev leg." 4 ♂, "South Kazakhstan, Pskem Mountain Range, vicinity of Nanay Vill., 24.IV.1962, V. Tobias leg." 2 ♂, "South Kazakhstan, Dzungarian Alatau, Koktuma Vill., Lake Alakol, 25.VI.1962, V. Tobias leg." 1 ♂, "**Tajikistan,** Kondara Canyon near Dushanbe, 7.X.1969, V. Tobias leg."

Description. Female. Body length 2.6 mm; fore wing length 2.2 mm; antennae length 1.6 mm.

Color. Head, meso- and metasoma brown; antennae, mandibles and venation pale brown; legs and palpi yellowish brown (Fig. 67).

Head in dorsal view slightly longer than wide (36 : 34), wider than mesosoma width (34 : 32), with numerous homogeneous long erect setae. Antennal shelf in dorsal view strongly projecting, head nasiform. Temples in dorsal view weakly projecting behind eyes (Fig. 41). Head in lateral view as high as long. Malar space longer than largest diameter of eye (12 : 10). Antennal shelf in front view with fine coriaceous sculpture below toruli; toruli contiguous (Fig. 13). Face smooth, pubescent. Genae in front view slightly convex and converging toward mouthparts. Clypeus as wide as high. Tentorial pits large. Labrum small, subtriangular. Mandibles beak-shaped, bidentate, with apices weakly crossing, 0.7 times as long as distances between pleurostomal carinae (Fig. 13).

Antennae slender, gradually weakly broadened apically (Fig. 25). Ratios of length to width of A1–A12 in dorsal view: A1 32.0 : 4.5; A2 10.0 : 4.5; A3 13.0 : 3.5; A4 6.0 : 4.5; A5 7.0 : 5.0; A6 7.0 : 5.5; A7 7.0 : 5.5; A8 7.0 : 5.5; A9 7.0 : 6.0; A10 7.0 : 6.0; A11 7.0 : 6.0; A12 15.0 : 7.0.

Mesosoma slightly compressed, weakly higher than wide (33 : 27), in dorsal view longer than wide (50 : 27). Sides of pronotum bare, pronotal collar with scattered long setae; epomia moderately prominent; outer pronotal pit distinct and pubescent. Mesoscutum transverse (25 : 19), convex, with a few scattered thin setae. Notauli complete and deep throughout. Anterior scutellar pit deep, rounded. Scutellum large, widened posteriorly. Axillar depression scarcely pubescent, without verriculate tubercle (Fig. 41). Mesopleuron bare medially and scarcely pubescent along margins, smooth; its anteroventral area deepened and finely pubescent (Fig. 50). Metascutellum narrow, pubescent, with three short longitudinal keels. Propodeum transverse (17 : 12), entirely pubescent, with numerous erect setae, with full simple median keel only; plicae absent (Fig. 57). Sides of propodeum smooth, entirely pubescent and with white cushion near lower part of mesonotal suture; transverse keel along posterior margin of propodeum partly reduced medially and laterally (Fig. 50). Legs slender (Fig. 67).

Wing venation. Fore wing with reduced radial cell. Marginal vein longer than distance from it to basal vein.

Metasoma. Petiole broadened medially, weakly longer than wide (19 : 18), smooth, with scattered erect setae dorsally and denser erect pubescence ventrally. Anterior margin of T2 smooth and pubescent (Fig. 57); T3–T6 narrow, with few setae; T7 and T8 long, strongly compressed laterally. Anterior part of S2 densely pubescent (Fig. 50); S3–S5 narrow, with few erect setae;

S6 distinctly elongate and compressed, with scattered setae.

Male. Body length 2.0 mm. Similar to female except for following: antenna yellowish, filiform; antennomeres cylindrical, covered by homogeneous short pubescent; A1 slender; A3 emarginated, with keel extending to half of A3 length (Fig. 33); ratios of length to width of A1–A5 in lateral view: 30.0 : 4.5; 9.0 : 4.0; 14.0 : 4.0; 12.0 : 4.0; 12.0 : 4.0; temples in dorsal view more distinctly projecting behind eyes; T3–T7 and S3–S7 narrow, with scattered erect setae; T8 and S8 subtriangular, rounded apically.

Variation. Body length 1.7–2.5 mm. A1 6.0–7.4 times as long as wide. Transverse keel along posterior margin of propodeum partly reduced medially and laterally to fully developed. Petiole as long as wide to 1.5 times as long as wide.

Differential diagnosis. *Synacra tobiasi* sp. n. can be distinguished from all the known *Synacra* species by the combination of the following characters: A1 long and slender, without apical flange (Fig. 13); male A3 emarginated with keel extending to half of A3 length (Fig. 33); marginal vein longer than distance from it to basal vein; head nasiform, temples in dorsal view projecting behind eyes (Fig. 41); mandibles 0.65–0.75 times as long as distances between pleurostomal carinae (Fig. 13); propodeum without plicae, sides of propodeum smooth, entirely pubescent and with white cushion near lower part of mesonotal suture (Fig. 50); transverse keel along posterior margin of propodeum partly reduced medially and laterally; petiole broadened medially, weakly elongate, smooth, with scattered erect setae dorsally and dense erect setae ventrally; anterior margin of T2 smooth and pubescent (Fig. 57).

Distribution. Kazakhstan, Tajikistan.

Etymology. The species is named in honor of the famous Russian hymenopterist and expert on Braconidae, Professor Vladimir Ivanovich Tobias, who collected most of the specimens.

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ADDITIONAL INFORMATION

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