

# A Review of the Subgenera *Diaparsis* s. str. and *Pectinoparsis* subgen. n. of the Genus *Diaparsis* Förster (Hymenoptera, Ichneumonidae, Tersilochinae)

A. I. Khalaim

Zoological Institute, Russian Academy of Sciences, 199034 St. Petersburg, Russia

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**Abstract**—A new subgenus, *Pectinoparsis* subgen. n., with a single species *D. (P.) improvisator* sp. n. is described. The subgenus *Diaparsis* Förster is reviewed. The following 14 species of this genus are described: *D. baikovae* sp. n., *D. convexa* sp. n., *D. denticauda* sp. n., *D. ecarinata* sp. n., *D. egregia* sp. n., *D. flaventis* sp. n., *D. mendeleevi* sp. n., *D. metacarpator* sp. n., *D. minutissima* sp. n., *D. neoplicator* sp. n., *D. parabasalis* sp. n., *D. platyura* sp. n., *D. ultimator* sp. n. and *D. valvator* sp. n. The new synonymy is established: *Diaparsis* subg. *Diaparsis* Förster, 1869 = *Diaparsis* subg. *Pseudaneuclis* Horstmann, 1971. New data on the distribution of Palaearctic species of the subgenus *Diaparsis* are presented. Keys to subgenera of the genus *Diaparsis* and to Palaearctic species of the subgenus *Diaparsis* are given.

The subgenera *Ischnobatis* Förster, *Lanugoparsis* Khalaim, and *Nanodiaparsis* Horstmann were analyzed in the preceding paper of the author, which treated the genus *Diaparsis* Förster (Khalaim, 2002). In the present paper, a review of species of the large Palaearctic subgenus *Diaparsis* s. str. is given; a new subgenus, *Pectinoparsis* subgen. n., is described; and the subgeneric name *Pseudaneuclis* Horstmann, 1971 is considered to be a synonym of the name *Diaparsis*. Fourteen new species of the subgenus *Diaparsis* and 1 new species of the subgenus *Pectinoparsis* subgen. n. are described. The following 7 species have been recorded from Russia for the first time: *D. carinifer* (Thoms.), *D. hyperae* Kusig., *D. jucunda* (Holmg.), *D. nitida* Horstm., *D. punctipleuris* Horstm., *D. temporalis* Horstm., and *D. truncata* (Grav.). Keys to subgenera of the genus *Diaparsis* and to Palaearctic species of the subgenus *Diaparsis* are given.

The work is mainly based on the material deposited at the Zoological Institute, Russian Academy of Sciences, St. Petersburg.

The types of new species, except for those especially marked, are deposited at the Zoological Institute, Russian Academy of Sciences, St. Petersburg. Distribution of species in Europe is given according to Horstmann (1971, 1981). An asterisk (\*) before the serial number designates species recorded from Russia for the first time.

## Genus *DIAPARSIS* Förster, 1869

Type species *Porizon truncatus* Gravenhorst, 1829 (*Porizon nutritor* sensu Gravenhorst, 1829).

This is a large, worldwide genus comprising 41 species; among these, 35 (including new ones described below) occur in the Palaearctic Region (Yu and Horstmann, 1997). Many species from North America (Townes, 1971), southeastern Asia (my original data), and Africa and Australia (Gauld, 1984) have not been described.

### A Key to Subgenera of the Genus *Diaparsis*

1. Prepectal carina reaching anterior margin of mesopleura at very acute angle. Width of eye slightly greater than, or equal to length of temple. Sternaulus absent or very weak. Basal carina of propodeum 0.5–1.2 times as long as apical area ..... 2.
- Prepectal carina reaching anterior margin of mesopleura at angle of 30° or more. Width of eye significantly exceeding temple length. Sternaulus frequently in the form of deep crenulate groove. Basal carina of propodeum usually 0.5 times as long as apical area, or shorter ..... 3.
2. Entire propodeum irregularly and coarsely wrinkled and densely pubescent. Antenna short, club-shaped (ultimate segment significantly enlarged). Ovipositor very fine, its sheath nearly as long as body ..... *Lanugoparsis* Khalaim.

- Propodeum not wrinkled, without dense pubescence. Antenna not shortened, filiform, its ultimate segment not enlarged. Ovipositor rather thick; body significantly longer than sheath of ovipositor ..... *Nanodiaparsis* Horstm.
3. Lower part of occipital carina elevated in the form of wide lobe, separated from temple by crenulate groove, forming ventrally elongate tooth in place of connection with hypostomal carina. Ovipositor with 2 dorsal subapical teeth, its sheath 1.5 times as long as tergite I ..... *Ischnobatis* Först.
- Lower part of occipital carina only slightly lobiform elevated, not separated from temple by crenulate groove. No teeth found on this part of occipital carina in place of connection with hypostomal carina. Ovipositor varying in shape and length ..... 4.
4. Leg claws not pectinate. Ovipositor more or less strongly curved upwards and usually longer ..... *Diaparsis* Först.
- Leg claws distinctly pectinate (Fig. 5). Ovipositor very short and nearly straight (Fig. 17), its sheath 0.5 times as long as tergite I ..... *Pectinoparsis* subgen. n.
2. 2nd recurrent vein interstitial; petiolus of metasomal segment I rounded in cross-section ..... 3.
- 2nd recurrent vein postfurcal; petiolus of metasomal segment I rounded or trapezoid in cross-section ..... 5.
3. Tiridia 3 times as long as wide; basal width of mandible exceeding length of gena; metacarpus reaching fore-wing apex; sternaulus well developed; mesopleura and dorsolateral area of propodeum usually with punctures of medium size.—Antenna 18–23-segmented in female and 23–26-segmented in male ..... 9. *D. hyperae* Kusig.
- Tiridia slightly longer than wide; length of gena exceeding basal width of mandible or equal to it; metacarpus not reaching fore-wing apex; sternaulus ill-defined or absent; mesopleura and dorsolateral area of propodeum with small punctures or impunctate ..... 4.
4. Ovipositor with 2 dorsal subapical teeth (Fig. 8); its sheath 1.5–1.6 times as long as tergite I; female antenna 20–22-segmented ..... 5. *D. denticauda* sp. n.
- Ovipositor with dorsal emargination, without dorsal teeth; its sheath 1.2–1.4 times as long as tergite I; female antenna 18–20-segmented ..... 14. *D. minutissima* sp. n.

#### Subgenus *Diaparsis* s. str.

*Pseudaneuclis* Horstmann, 1971, **syn. n.**

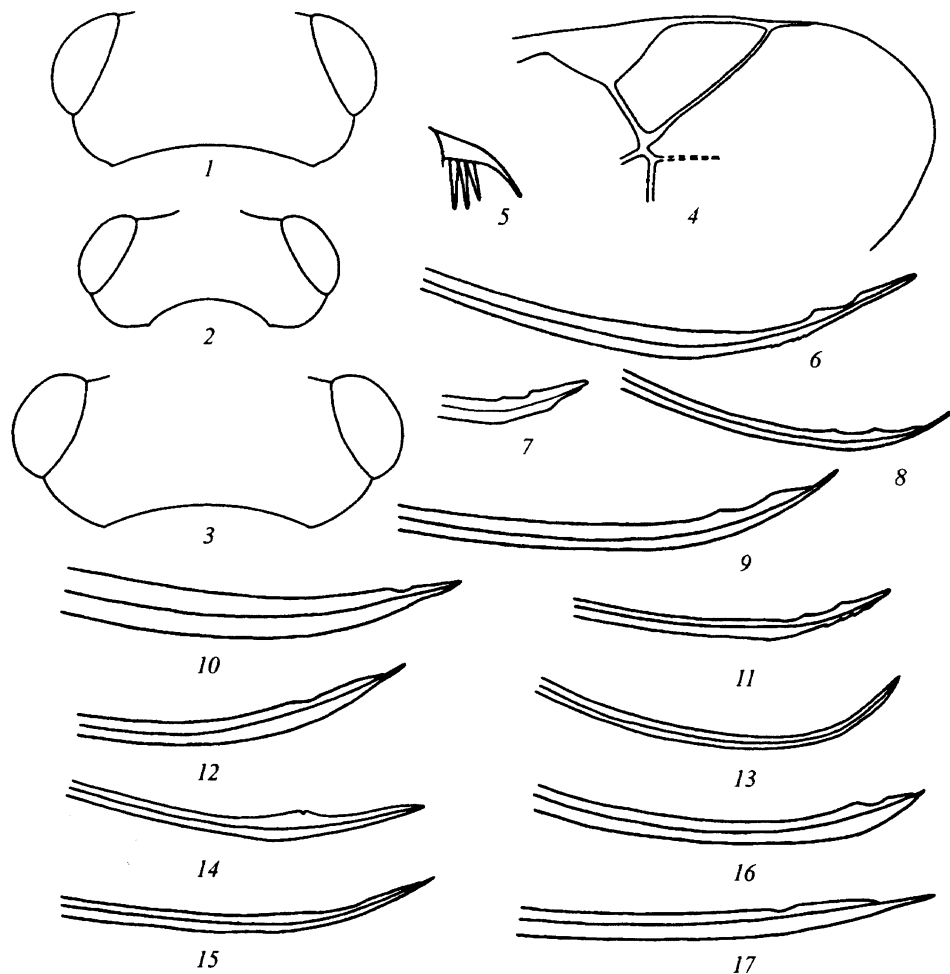
Type species *Porizon truncatus* Gravenhorst, 1829 (*Porizon nutritor* sensu Gravenhorst, 1829).

This is the largest subgenus comprising most of species of the genus, distributed worldwide. 27 species have been recorded from the Palaearctic Region, including *D. minquanensis* Sheng et Wu from China, that is not presented in the key below. Representatives of the subgenus are mainly known as parasites of larvae of beetles of the families Curculionidae and Chrysomelidae. *D. carinifer* (Thoms.) and *D. temporalis* Horstm. are parasites of the dangerous wheat pest *Oulema* spp. (Chrysomelidae), being introduced into the USA for pest control.

#### A Key to Species and Subspecies of the Subgenus *Diaparsis*

1. Clypeus with distinct tooth on lower margin ..... 17. *D. niphadoctona* He.
- Clypeus without tooth, its lower margin rounded .... 2
5. Metacarpus very short, slightly projecting behind radial vein (Fig. 4); pterostigma brownish yellow.—Clypeus, face, vertex, and temple smooth and shining; face with sparse punctures; female antenna 17-segmented, club-shaped (male antenna 19-segmented, not club-shaped); ovipositor with 2 dorsal subapical teeth, distinctly pectinate ventrally (Fig. 11); its sheath 2.4 times as long as tergite I .... 12. *D. metacarpator* sp. n.
- Metacarpus distinctly longer, frequently reaching fore-wing apex; pterostigma yellow to blackish brown ..... 6.
6. Mesopleura finely granulate, impunctate or indistinctly punctate; apical area of propodeum pointed in anterior part at an acute angle; sternaulus absent or indistinct ..... 7.
- Mesopleura distinctly punctate over smooth or granulate surface, and (or) apical area of propodeum rounded in anterior part or pointed at an obtuse angle; sternaulus frequently deep, crenulate ..... 10.

7. Apical area pointed in anterior part at an angle of 80°. Ovipositor widened near apex (Fig. 12) ..... 21. *D. platyura* sp. n.  
 —Apical area in anterior part pointed at an angle of 60°. Ovipositor not widened near apex ..... 8.
8. Temple finely granulate, matte ..... 3. *D. carinifer* (Thoms.).  
 —Temple smooth and shining ..... 9.
9. Metasoma mainly black; longitudinal carinae of apical area usually well developed, reaching transverse carina ..... 24a. *D. temporalis temporalis* Horstm.  
 —Metasoma mainly red behind tergite I; longitudinal carinae of apical area usually not reaching transverse carina ..... 24b. *D. temporalis rufigaster* Horstm.
10. Propodeum with longitudinal wrinkles or groove at place of basal carina; sternaulus in the form of deep crenulate S-shaped groove nearly along entire length of mesopleura ..... 11.  
 —Propodeum with basal carina; sternaulus present or absent ..... 13.
11. Sheath of ovipositor 1.2 times as long as tergite I; propodeum with groove instead of basal carina ..... 6. *D. ecarinata* sp. n.  
 —Tergite I distinctly longer than sheath of ovipositor; propodeum with several longitudinal wrinkles instead of basal carina ..... 12.
12. Head and thorax entirely granulate ..... 20. *D. parabasalis* sp. n.  
 —At least temple and mesopleura smooth ..... 2. *D. basalis* Horstm.
13. Ovipositor thickened before apex (Fig. 16), tergite I distinctly longer than sheath of ovipositor.—Apical area of propodeum pointed in anterior part; sternaulus absent; length of gena equal to basal width of mandible ..... 27. *D. valvator* sp. n.  
 —Ovipositor of other shape, its sheath longer than tergite I or of the same length ..... 14.
14. Dorsolateral area of propodeum distinctly punctate over smooth or granulate surface, occasionally, coarsely wrinkled; antenna no less than 20-segmented; sternaulus frequently deep, with coarse transverse wrinkles; mesopleura usually with large punctures; body length 4–7 mm ..... 15.  
 —Dorsolateral area of propodeum impunctate and usually finely granulate; antenna no less than 22-segmented; sternaulus absent or weakly rugulose; mesopleura, as maximum, with median punctures; body length about 3 mm ..... 23.
15. Antenna 30–36-segmented, distinctly narrowing toward apex; antenna, tegula, and hind femur black.—Ovipositor short and thick (Fig. 10), its sheath as long as tergite I ..... 10. *D. jucunda* (Holmgr.).  
 —Antenna less than 30-segmented, filiform or slightly narrowing toward apex; antenna, tegula, and hind femur frequently pale ..... 16.
16. Sternaulus hardly visible, in the form of a shallowly depressed area.—Sides of apical area of propodeum half as long as central part; sheath of ovipositor more than twice as long as tergite I ..... 17.  
 —Sternaulus in the form of a distinct groove, frequently with coarse transverse wrinkles ..... 18.
17. Mesoscutum smooth and shining, with large punctures; lower part of occipital carina lobiform elevated; antenna 26–29-segmented ..... 15. *D. multiplicator* Aub.  
 —Mesoscutum finely punctate over finely granulate matte surface; lower part of occipital carina not elevated or slightly elevated; antenna 24–26-segmented ..... 15. *D. neoplicator* sp. n.
18. Metasomal segment I with distinct dorsolateral carinae; petiolus trapezoid in cross-section.—Sheath of ovipositor about 1.5 times as long as tergite I ..... 19.  
 —Metasomal segment I without dorsolateral carinae; petiolus rounded in cross-section.
19. Antenna entirely reddish yellow; propodeum smooth; ovipositor weakly flattened dorsoventrally at apex, more strongly curved upwards, with weak dorsal subapical emargination, pectinate ventrally before this emargination (Fig. 6) ..... 1. *D. baikovae* sp. n.  
 —Antenna black, occasionally pale at base; propodeum wrinkled; ovipositor of uniform width along entire length; ovipositor pectinate ventrally at apex ..... 25. *D. truncata* (Grav.).
20. Length of temple nearly half width of eye (Fig. 1); metacarpus reaching fore-wing apex; antenna 20–22-segmented ..... 21.



**Figs. 1–17.** *Diaparsis* Förster: (1, 9) *D. egregia*, sp. n.; (2, 4, 11) *D. metacarpator* sp. n.; (3, 5, 17) *D. improvisator* sp. n.; (6) *D. baikovae* sp. n.; (7) *D. basalis* (according to Horstmann); (8) *D. denticauda* sp. n.; (10) *D. jucunda*; (12) *D. platyura* sp. n.; (13) *D. punctipleuris*; (14, 15) *D. rara*; (16) *D. valvator* sp. n.; (1–3) head, dorsal view; (4) distal part of fore wing; (5) leg claw; (6–17) apex of ovipositor, lateral view.

—Length of temple pronouncedly more than half as width of eye; metacarpus not reaching fore-wing apex; antenna 23–26-segmented ..... 22.

21. Clypeus nearly fused with face; surface slightly concave at place of their connection; upper part of clypeus with small sparse punctures; distance between punctures significantly exceeding their diameter ..... 7. *D. egregia* sp. n.

—Clypeus separated from face by distinct depression, with relatively large punctures in upper part; distance between punctures subequal to their diameter ..... 4. *D. convexa* sp. n.

22. Sheath of ovipositor as long as tergite I; apical area of propodeum usually pointed in apical part; antenna and hind coxa black; hind femur brown ..... 18. *D. nitida* Horstm.

—Sheath of ovipositor as long as tergite I; apical area of propodeum usually pointed in apical part; antenna and hind coxa black; hind femur brown ..... 18. *D. nitida* Horstm.

23. Metasoma behind tergite I and legs yellow; hind coxa brownish; temple finely granulate, matte.—Sheath of ovipositor slightly longer than tergite I; antenna 20-segmented ..... 8. *D. flaventis* sp. n.

—Metasoma dark brown to black; posterior segments occasionally with yellow lateral spots; at least hind coxa dark brown; temple usually smooth and shining ..... 24.

24. Subapical antennal segments nearly 1.5 times as long as wide; clypeus distinctly narrower than face; length of gena equal to basal width of mandible or longer ..... 11. *D. mendeleevi* sp. n.

—Subapical antennal segments slightly longer than wide; clypeus as wide as face; basal width of mandible frequently exceeding length of gena ..... 25.

25. Mesopleura impunctate or very finely and sparsely punctate (if this character unclear, then length of gena subequal to basal width of mandible); temple smooth and impunctate; antenna 16–19-segmented ..... 23. *D. rara* Horstm.

—Mesopleura finely and rather densely punctate (if this character unclear, then length of gena half basal width of mandible); temple very finely punctate; antenna 19–22-segmented ..... 26.

26. Length of gena subequal to basal width of mandible; ovipositor strongly curved upwards at apex (Fig. 13); antenna 21–22-segmented ..... 22. *D. punctipleuris* Horstm.

—Length of gena half basal width of mandible; ovipositor uniformly curved upwards along entire length; antenna 19-segmented ..... 22. *D. ultimator* sp. n.

1. *Diaparsis (Diaparsis) baikovae* Khalaim, sp. n.  
(Fig. 6)

**Diagnosis.** The species differs from the closely related *D. truncata* in the 26-segmented reddish antenna, shining and smooth (not wrinkled) dorsolateral area, and also in the shape of the ovipositor (Fig. 6).

**Description. Female.** Body entirely smooth and shining, mostly distinctly punctate. Head very strongly and roundly narrowing behind eyes; width of eye distinctly exceeding length of temple. Antenna 26-segmented, all segments of flagellum slightly longer than wide. Mandible in basal half with dense large punctures, upper tooth significantly longer than lower one. Upper half of clypeus with moderately dense large punctures. Length of gena equal to basal width of mandible. Face (except for nearly smooth area in center) and frons with large and distinct dense punctures. Vertex and temple very finely and diffusely punctate (slightly more densely on vertex and near occipital carina).

Mesoscutum sparsely punctate in central part, moderately densely punctate in anterior part and laterally. Mesopleura and mesosternum mostly punctate. Sternaulus in the form of weakly curved and nearly horizontal deep crenulate groove; sternaulus about 0.66 times as long as mesopleura. Dorsolateral area of propodeum with dense and large punctures with indistinct

borders. Distance between spiracle of propodeum and pleural carina nearly twice diameter of spiracle. Basal carina well developed, about 0.3 times as long as apical area. Apical area irregularly wrinkled, impunctate, weakly rounded in anterior part; its lateral parts with distinct longitudinal wrinkles.

2nd recurrent vein postfurcal, not pigmented in anterior half. Metacarpus short, not reaching fore-wing apex.

Petiolus of metasomal segment I with developed dorsolateral carinae, trapezoid in cross-section. Glymma shallow, drop-shaped, situated at middle of segment I. Tiridia distinctly longer than wide, very superficial, its inner margin indistinct. Ovipositor strongly curved at apex, with 2 weak dorsal subapical teeth, very finely pectinate ventrally (denticles situated somewhat basal to dorsal teeth, Fig. 6), its sheath 1.7 times as long as tergite I.

Body black. Palpi, mandible (except for teeth), lower part of clypeus, antenna, tegula, and legs yellow to reddish yellow. Pterostigma mostly brown, with yellow distal spot. Metasomal segment I reddish brown. Metasoma behind segment I reddish yellow.

Size (mm). Body length 6.6; fore-wing length 3.5; head width 1.12; length of mesosoma 2.15, width 1.12; length of tergite I 1.4, its width in posterior part 0.42; length of tergite II 0.57; length of ovipositor sheath 2.4.

**Male** unknown.

**Material.** Holotype: ♀, Kazakhstan, Akmola Prov., southern bank of Lake Zharkol, N of Kokchetau Mts., on flowers, 17.VII.1957 (Tobias).

**Etymology.** The species is named for Irina Borisovna Baikova.

**Distribution.** Northern Kazakhstan.

2. *Diaparsis (Diaparsis) basalis* Horstmann, 1981  
(Fig. 7)

**Material.** Hungary: "SzSztMiklós Biro. 91 1.X." (=Szigetszentmiklós near Budapest), 1 ♂ (paratype in collection of Horstmann).

**Distribution.** Middle Europe.

\*3. *Diaparsis (Diaparsis) carinifer* (Thomson, 1889)

**Material.** A total of 33 ♀ and 10 ♂ were examined. Russia: Novgorod Prov. (Tychkino Vill., 20 km NW

Pestovo), Yaroslavl, Kabardino-Balkaria (Upper Balkaria), Karachaevo-Cherkessia (Arkhyz), Primorskii Terr. (Vladivostok; 20 km SE Ussuriisk, Gornotaezhnoe; Nezhino, Troitsa Harbor; Volno-Nadzhinskoe; Spassk), Kuril Islands (Shikotan Island, Krabozavodsk). England (Leicester). Lithuania: Panevėžys, Zarasai (Tilže), Rokiškis, Kaunas (Pavejuonis), Alytus (Lusnenai), Vilnius. Ukraine: Zakarpatskaya Prov. (Beregovo), Crimea (Crimean Reserve, Asport Cordon, Alma River). Uzbekistan: Pskem Mt. Range, Nanai Vill., 3000 m; 15–18 km N Khumsan); Chatkal Reserve, 1200–1600 m.

**Distribution.** Northern and middle Europe, Central Asia and southern Russian Far East. The species was introduced in the USA for control of *Oulema melanopus* (L.) (Chrysomelidae) (Dysart *et al.*, 1973).

**Biology.** A parasite of *Oulema* spp. (Chrysomelidae) (Hilterhaus, 1965; Dysart *et al.*, 1973; Montgomery and DeWitt, 1975; Kolarov, 1988). Emergence continues from May to August.

4. *Diaparsis (Diaparsis) convexa* Khalaim, sp. n.  
(Fig. 6)

**Diagnosis.** The species differs from the closely related *D. egregia* sp. n. in the convex clypeus separated from the face and covered with large dense punctures in the upper part and also in the darkened middle and hind coxae.

**Description. Female.** Head strongly and roundly narrowing behind eyes; width of eye nearly twice length of temple. Antenna 21–22-segmented, all segments longer than wide. Nearly entire mandible with dense large punctures, upper tooth significantly longer than lower one. Clypeus smooth, distinctly punctate in upper 2/3 (in upper part, punctures denser). Length of gena distinctly exceeding basal width of mandible. Face and frons with large and distinct dense punctures (diameter of punctures mostly exceeding distance between them). Vertex and temple finely rather densely punctate over mostly smooth surface.

Entire mesoscutum distinctly and densely punctate over finely granulate surface. Mesopleura and mesosternum densely punctate over smooth surface. Sternaulus in the form of wide and deep groove in anterior part of mesopleura, with strong transverse wrinkles, inclined at 45°. Dorsolateral area of propodeum with dense and large punctures over nearly smooth surface. Distance between spiracle of propodeum and pleural carina about 1.5 times diameter of spiracle. Basal ca-

rina well developed, 0.35–0.4 times as long as apical area. Apical area irregularly wrinkled, posterior part also with transverse wrinkles, rounded in anterior part; its longitudinal carinae well developed, reaching transverse carina anteriorly. Lateral part about 0.6 times as long as central part.

2nd recurrent vein postfurcal, not pigmented in anterior half. Metacarpus reaching fore-wing apex.

Petiolus of metasomal segment I rounded in cross-section. Glymma small, oval, situated near middle of segment I. Tiridia distinctly longer than wide. Ovipositor with very weak, wide dorsal subapical emargination, without teeth; its sheath twice as long as tergite I.

Body black. Palpi, mandible (except for teeth), lower part of clypeus, tegula, and legs brownish yellow. Pterostigma dark brown. Metasoma behind segment I brownish yellow to brown dorsally.

Size (mm). Body length 5.25; fore-wing length 3.5; head width 1.2; length of mesosoma 1.86, width about 1; length of tergite I 1.3, its width in posterior part 0.3; length of tergite II 0.54; length of ovipositor sheath 2.5.

**Male unknown.**

**Material.** Holotype ♀, Russia, Primorskii Terr., Lozovyi Mt. Range, 10 km SSW Partizansk, 12.VII.1996 (Belokobylskij). Paratype: Primorskii Terr., environs of Novokachalinsk, bank of Lake Khanka, mixed forest, clearings, 11.VIII.2001 (Belokobylskij), 1 ♀.

**Distribution.** Southern Russian Far East.

5. *Diaparsis (Diaparsis) denticauda* Khalaim, sp. n.  
(Fig. 8)

**Diagnosis.** The species is similar to *D. hyperae* and *D. minutissima* sp. n. in the interstitial position of the 2nd recurrent vein, but clearly differs from them in the presence of 2 dorsal teeth at the apex of the ovipositor (Fig. 8). It also differs from *D. hyperae* in the short tiridia, gena, and metacarpus, weak sternaulus, and sculpture of the mesosoma.

**Description. Female.** Head strongly and roundly narrowing behind eyes; width of eye significantly exceeding length of temple. Antenna 20–22-segmented, all segments distinctly longer than wide. Mandible finely punctate in basal part, upper tooth significantly longer than lower one. Clypeus almost entirely smooth and shining, sparsely punctate in upper part. Length of

gena equal to basal width of mandible. Face with fine dense punctures over very finely granulate surface. Frons granulate, with indistinct punctures in lower part. Vertex and temple matte, impunctate.

Entire mesoscutum granulate (occasionally mesosternum smooth and shining). Mesoscutum, mesopleura, mesosternum, and dorsolateral area of propodeum usually also finely punctate (punctures indistinct because of granulation). Sternaulus in the form of weakly depressed wrinkled area. Distance between spiracle of propodeum and pleural carina 3 times diameter of spiracle. Basal carina well developed, 0.35–0.45 times as long as apical area. Apical area rounded in anterior part; its lateral part about 0.6 times as long as central part.

2nd recurrent vein interstitial, not pigmented in anterior half. Metacarpus nearly reaching fore-wing apex.

Metasomal segment I entirely smooth, its petiolus rounded in cross-section. Glymma absent. Tiridia distinctly wider than, or as wide as long. Ovipositor with 2 distinct dorsal subapical teeth (Fig. 8), its sheath 1.6 times as long as tergite I.

Body black. Palpi, mandible (except for teeth), tegula, and legs yellow (in the holotype, palpi and mandible reddish brown). Antenna brownish yellow at base, darkening toward apex. Clypeus brownish yellow in lower part (occasionally entirely), darkening to reddish brown in upper part (in the holotype, clypeus entirely reddish brown). Pterostigma pale brown. Metasoma, including segment I, yellowish brown to dark brown or even black (dorsally).

Size (mm). Body length 3.7; fore-wing length 2.7; head width 0.83; length of mesosoma 1.2, width 0.63; length of tergite I 0.92, its width in posterior part 0.21; length of tergite II 0.34; length of ovipositor sheath 1.5.

**Male** unknown.

**Material.** Holotype ♀, Russia, Primorskii Terr., environs of Ussuriisk, motley grass, 5.VII.1969 (Tanasichuk); Paratypes: Primorskii Terr., Troitsa Harbor, hill slopes, 13.VII.1972 (Kozlov), 1 ♀; Novokachalinsk, Lake Khanka, 12.VI.1979 (Zinovjev), 1 ♀; Vladivostok, Morskoe Kladbishche (Marine Cemetery), forest, clearings, 3.VII.1996 (Belokobylskij), 1 ♀.

**Distribution.** Southern Russian Far East.

## 6. *Diaparsis (Diaparsis) ecarinata* Khalaim, sp. n.

**Diagnosis.** The species differs from all other species of the subgenus in the presence of a distinct groove at the place of the basal carina of the propodeum. The species differs from *D. basalis* and *D. parabasalis* (in which the basal carina is replaced by longitudinal wrinkles) in the long ovipositor sheath.

**Description. Female.** Head strongly and roundly narrowing behind eyes; width of eye nearly twice length of temple. Antenna 20–25-segmented (in the holotype, 25-segmented), all segments distinctly longer than wide, narrowing apically. Mandible indistinctly punctate in middle part, upper tooth significantly longer than lower one. Clypeus smooth and shining in upper part, matte and finely punctate in lower part. Length of gena about 0.7 times basal width of mandible. Face, frons, and vertex with fine and very dense punctures over finely granulate surface (in places, punctures indistinct because of granulation). Temple finely granulate, impunctate.

Mesoscutum finely and very densely punctate over densely granulate surface (occasionally, punctures indistinct because of granulation). Mesopleura and mesosternum smooth and shining, occasionally also very finely punctate. Sternaulus in the form of deep, crenulate, S-shaped groove running nearly along entire length of mesopleura. Distance between spiracle of propodeum and pleural carina equal to diameter of spiracle. Propodeum entirely granulate. Apical area rounded in anterior part; its longitudinal carinae well developed.

2nd recurrent vein postfurcal, not pigmented in anterior half. Metacarpus reaching fore-wing apex.

Metasomal segment I entirely smooth, its petiolus rounded in cross-section. Glymma small, oval. Tiridia very slightly longer than wide. Ovipositor with weak and wide dorsal subapical emargination, without teeth, its sheath 1.6 times as long as tergite I.

Body black, with reddish tint. Palpi, mandible (except for teeth), scape and pedicel, and legs yellow. Antennal flagellum yellowish brown at base, darkening toward apex. Tegula yellow to brown. Pterostigma brown. Metasoma behind segment I yellowish brown ventrally to dark brown dorsally.

Size (mm). Body length 4.5; fore-wing length 3.6; head width 1.05; length of mesosoma 1.5, width 0.9; length of tergite I 1, its width in posterior part 0.35; length of tergite II 0.5; length of ovipositor sheath 1.2.

**Male.** Antenna 24-segmented. Length of gena 04 times basal width of mandible. Temple very finely and diffusely punctate. Distance between spiracle of propodeum and pleural carina 1.5 times diameter of spiracle. Dorsolateral area of propodeum smooth and shining. Glymma absent. Tiridia 1.5 times as long as wide. Other characters as those in female.

**Material.** Holotype ♀, Russia, Primorskii Terr., Lozovyi Mt. Range, 10 km SSW Partizansk, 13.VII.1996 (Belokobylskij). Paratypes: Primorskii Terr., environs of Spassk, forest, clearings, 20.VI and 25.VII.1996 (Belokobylskij), 1 ♀, 1 ♂.

**Distribution.** Southern Russian Far East.

7. *Diaparsis (Diaparsis) egregia* Khalaim, sp. n.  
(Figs. 1, 9)

**Diagnosis.** The species differs from all other species of the subgenus in the nearly fused face and clypeus.

**Description. Female.** Head strongly and roundly narrowing behind eyes (Fig. 1); width of eye nearly twice length of temple (Fig. 1). Antenna 20–22-segmented, all segments distinctly longer than wide. Mandible almost entirely covered with dense large punctures, upper tooth significantly longer than lower one. Clypeus smooth, with sparse small punctures in upper part; distance between punctures significantly longer than their diameter. Basal width of mandible significantly exceeding length of gena. Face and frons with fine and rather dense punctures over finely granulate, matte surface. Vertex and temple finely and moderately densely granulate over mostly smooth surface.

Mesoscutum entirely, densely and distinctly punctate over finely granulate surface. Mesopleura (mostly) and mesosternum (entirely) densely punctate, smooth. Sternaulus in the form of deep, crenulate groove in anterior part of mesopleura, inclined at angle of 50°. Dorsolateral area of propodeum with dense and large punctures over nearly smooth matte surface. Spiracle of propodeum large, distance between spiracle and pleural carina slightly longer than diameter of spiracle. Apical area irregularly wrinkled, also with transverse wrinkles in posterior part, rounded in anterior part; its longitudinal carinae well-developed, reaching transverse carina at anterior end. Lateral part of apical area 0.6 times as long as its central part.

2nd recurrent vein postfurcal, not pigmented in anterior half. Metacarpus reaching fore-wing apex.

Petiolus of metasomal segment I rounded in cross-section. Glymma very small, situated somewhat behind middle of 1st segment. Tiridia distinctly longer than wide. Ovipositor with very weak and wide dorsal subapical emargination, without teeth (Fig. 9), its sheath more than twice as long as tergite I.

Body black. Palpi, mandible (except for teeth), scape, pedicel, clypeus (occasionally darkened in upper part), tegula, and legs yellow to brownish yellow. Antennal flagellum brownish at base, gradually darkening toward apex. Pterostigma dark brown. Metasoma mainly brown.

Size (mm). Body length 5.1; fore-wing length 3.5; head width 1.11; length of mesosoma 1.65, width 0.88; length of tergite I 1.25, its width in posterior part 0.27; length of tergite II 0.5; length of ovipositor sheath 2.85.

**Male unknown.**

**Material.** Holotype ♀, Primorskii Terr., Peishula, mixed forest 29.VII.1972 (Kuslitsky). Paratypes: Primorskii Terr., environs of Spassk, shrubs, meadows, 15.IX.1987 (Belokobylskij), 1 ♀; same locality, oak-deciduous forest, 30.VI.1985 (Kasparyan), 1 ♀; 30 km SE Ussuriisk, mixed forest, 14.VII.2001 (Belokobylskij), 1 ♀.

**Distribution.** Southern Russian Far East.

8. *Diaparsis (Diaparsis) flaventis* Khalaim, sp. n.

**Diagnosis.** See the key.

**Description. Female.** Head strongly narrowed behind eyes; width of eye nearly twice length of temple. Antenna 20-segmented, all segments slightly longer than wide. Mandible almost entirely covered with distinct punctures, upper tooth significantly longer than lower one. Clypeus strongly convex, smooth in lower third, with diffuse punctures over finely granulate surface in upper 2/3. Basal width of mandible slightly exceeding length of gena. Face and frons finely granulate and partly indistinctly punctate. Vertex and temple very finely granulate, matte.

Mesoscutum densely punctate over finely granulate surface. Mesopleura more or less densely punctate, mostly very finely granulate, smooth in upper part. Mesosternum distinctly and rather densely punctate over smooth surface. Sternaulus in the form of shallow depression with transverse wrinkles in anterior part of mesopleura, adjoining prepectal carina. Propodeum



entirely finely granulate and impunctate (occasionally, with several small punctures in anterior part of dorso-lateral area). Distance between spiracle and pleural carina nearly 1.5 times diameter of spiracle. Basal carina about 0.66 times as long as apical area. Apical area rounded in anterior part; its longitudinal carinae well-developed, reaching transverse carina in anterior part. Lateral part of apical area nearly half as long as its central part.

2nd recurrent vein postfurcal, not pigmented in anterior half. Metacarpus not reaching fore-wing apex.

Petiolus of metasomal segment I rounded in cross-section. Glymma absent. Tiridia slightly longer than wide. Ovipositor with 2 dorsal subapical teeth (occasionally indistinct), finely pectinate ventrally; its sheath slightly longer than tergite I.

Body black. Palpi, mandible (except for teeth), lower third of clypeus, tegula, legs, and metasoma behind segment I yellow (hind coxa, hind femur, and metasoma brownish dorsally). Upper 2/3 of clypeus dark brown. Antenna varying from brownish yellow at base to brown at apex. Pterostigma and metasomal segment I brown.

Size (mm). Body length 3.5; fore-wing length 2.55; head width 0.86; length of mesosoma 1.14, width 0.66; length of tergite I 0.9, its width in posterior part 0.24; length of tergite II 0.3; length of ovipositor sheath 1.

**Material.** Holotype ♀, Russia, Primorskii Terr., 30 km E Spassk, oak-deciduous forest, 26.VI.1985 (Kasparyan). Paratype: Primorskii Terr., 20 km SE Spassk, Evseevka, forest, 9.VII.1983 (Belokobylskij), 1 ♀.

**Distribution.** Southern Russian Far East.

\*9. *Diaparsis (Diaparsis) hyperae* Kusigemati, 1980

**Material.** A total of 54 ♀ and 3 ♂ were examined. Russia. Amur Prov. (Novospasskii, Bureya River), Primorskii Terr. (10 km SE Chernigovka; environs of Spassk; 15 km SW Artem; Novokachalinsk, bank of Lake Khanka; 15 km SE Slavyanka, Ryazanovka; 20 km SE Slavyanka, Gorshkova Harbor; "Kedrovaya Pad" Nature Reserve; Molchanovka; Novogeorgievka, Razdolnaya River).

**Distribution.** Russia (Russian Far East) and Japan (Hokkaido).

**Biology.** A parasite of *Hypera nigrirostris* F (Curculionidae) (Kusigemati, 1980). Emergence occurs from June to October.

\*10. *Diaparsis (Diaparsis) jucunda* (Holmgren, 1860) (Fig. 10)

**Material.** A total of 38 ♀ and 25 ♂ were examined. Russia: Leningrad Prov. (Kobralovo-Semrino, 40–42 km W St. Petersburg), Novgorod Prov. (Tychkino Vill., 20 km NW Pestovo), Smolensk Prov. ("Smolenskoe Poozerje" National Park, Przhevalskoe), Chelyabinsk Prov. (Chebarkul District, N Kundravy), Khabarovsk Terr. (Slavyanka, 20 km NW Troitskoe), Kamchatka Prov. (Milkovo; 20 km N Kozyrevsk, Kabanovskaya Dacha; Kozyrevsk; 20 km S Kozyrevsk; Elizovo).

**Distribution.** Northern and middle Europe and Russian Far East. A Transpalearctic forest species.

11. *Diaparsis (Diaparsis) mendeleevi* Khalaim, sp. n.

**Diagnosis.** The species differs from the closely related *D. rara*, *D. punctipleuris*, and *D. ultimator* sp. n. in the long subapical antennal segments, narrow clypeus, and long gena.

**Description. Female.** Head strongly and nearly straightly narrowed behind eyes; width of eye distinctly exceeding length of temple. Antenna 18–20-segmented, all segments slightly longer than wide. Mandible mostly covered with distinct punctures, upper tooth significantly longer than lower one. Clypeus smooth in lower part, moderately densely punctate and matte in upper part. Length of gena exceeding basal width of mandible. Face and frons densely punctate over granulate surface (punctures usually indistinct because of granulation). Vertex granulate, occasionally also finely and rather densely punctate laterally. Temple very finely granulate, matte.

Mesoscutum densely punctate over granulate surface. Mesopleura and mesosternum distinctly and densely punctate over mostly granulate surface. Sternaulus absent. Propodeum entirely granulate and impunctate, with weak carinae. Distance between spiracle and pleural carina nearly twice diameter of spiracle. Basal carina short, about 0.3 times as long as apical area. Longitudinal carinae of apical area reaching transverse carina anteriorly. Half of central part of apical area slightly longer than its lateral part.

2nd recurrent vein postfurcal, not pigmented in anterior part. Metacarpus not reaching fore-wing apex.

Petiolus of metasomal segment I nearly rounded in cross-section, slightly flattened only dorsally, entirely smooth. Glymma small, oval, situated in middle of

segment. Tiridia distinctly longer than wide. Ovipositor without noticeable emarginations and teeth, uniformly pointed apically; its sheath 1.7 times as long as tergite I.

Body black. Palpi, mandible (except for teeth), and legs brownish yellow (coxa darkened). Lower part of clypeus reddish brown. Tegula, pterostigma, and hind femur brown. Metasoma behind segment I from yellowish brown ventrally to dark brown dorsally.

Size (mm). Body length about 1.9; fore-wing length 2.15; head width 0.73; length of mesosoma 1, width 0.54; length of tergite I 0.7, its width in posterior part 0.2; length of tergite II 0.33; length of ovipositor sheath 1.2.

**Male unknown.**

**Material.** Holotype ♀, Russia, Kuril Islands, Kunashir, 7 km N Mendelevo Vill., mixed forest, bamboo, 2.VIII.1981 (Belokobylskij). Paratype: as holotype, 1 ♀.

**Etymology.** The species is named for D.I. Mendeleev.

**Distribution.** Southern Russian Far East.

12. *Diaparsis (Diaparsis) metacarpator* Khalaim, sp. n. (Figs. 2, 4, 11)

**Diagnosis.** The species clearly differs from all the other species of the subgenus in the short metacarpus (Fig. 4), brownish yellow pterostigma, and shape of the ovipositor.

**Description. Female.** Head very strongly roundly narrowed behind eyes (Fig. 2); length of temple distinctly less than width of eye (Fig. 2). Antenna 17-segmented, all segments longer than wide. Mandible mostly distinctly punctate, upper tooth distinctly longer than lower one. Clypeus entirely smooth and shining, with sparse punctures in upper part. Length of gena slightly exceeding basal width of mandible. Face with sparse punctures, smooth and shining in lower part, very finely granulate in upper part.

Mesoscutum smooth and shining in anterior part and laterally, finely granulate in central part and posteriorly, partly with more or less distinct, sparse punctures. Mesopleura mainly granulate (nearly smooth in upper part, also finely and sparsely punctate). Sternaulus in the form of shallowly depressed area with denser granulation. Propodeum entirely granulate, impunctate. Distance between spiracle of propodeum

and pleural carina nearly twice diameter of spiracle. Basal carina half as long as apical area. Apical area weakly tapered in anterior part; its longitudinal carinae (occasionally indistinct because of wrinkles) reaching transverse carina at anterior end. Lateral part of apical area about 0.6 times as long as its central part.

2nd recurrent vein interstitial, not pigmented in anterior 0.6. Metacarpus very short, slightly projecting distal to radial vein (Fig. 4).

Metasomal segment I mostly smooth, slightly striate before glymma. Glymma rounded, lying in central part of segment I. Tiridia small, wider than long. Ovipositor distinctly pectinate ventrally, with 2 dorsal subapical teeth (Fig. 11); its sheath 2.5 times as long as tergite I.

Body black. Palpi, scape, pedicel, mandible (except for teeth), lower half of clypeus, tegula, and legs yellow (coxae darkened). Upper half of clypeus reddish dark brown. Pterostigma and wing veins brownish yellow to pale brown (pterostigma with small yellow spots at proximal and distal ends). Metasoma behind segment I mainly dark brown.

Size (mm). Body length 3.2; fore-wing length 2.5; head width 0.9; length of mesosoma 1.27, width 0.72; length of tergite I 0.75, its width in posterior part 0.3; length of tergite II 0.23; length of ovipositor sheath 1.85.

**Male.** Antenna 19-segmented. Other characters as those in female.

**Material.** Holotype: ♀, Kazakhstan, Eastern-Kazakhstan Prov., left bank of Chernyi Irtysh River, 10 km from the boundary, 16–18.IX.1970 (Tanasiichuk). Paratypes: Eastern-Kazakhstan Prov., as holotype, 1 ♂; near Koton-Karagai, Bukhtarma River floodlands, 2500 m, undergrowth, 1–3.IX.1970 (Tanasiichuk), 1 ♀.

13. *Diaparsis (Diaparsis) minquanensis* Sheng et Wu, 1999

**Distribution.** Eastern China: Henan Prov..

**Biology.** A parasite of *Lema decempunctata* Gebler (Chrysomelidae) (Sheng *et al.*, 1999). Emergence occurs in May.

14. *Diaparsis (Diaparsis) minutissima* Khalaim, sp. n. (Figs. 2, 4, 11)

**Diagnosis.** The species is similar to *D. hyperae* and *D. denticauda* sp. n. in the interstitial position of the

2nd recurrent vein, but clearly differs from *D. hyperae* in short tiridia, long gena, short metacarpus, and sculpture of the mesosoma, and from *D. denticauda*, in the number of antennal segments, shape of the ovipositor, and its short sheath.

**Description. Female.** Head strongly and roundly narrowing behind eyes; width of eye 1.5 times length of temple. Antenna 18–20-segmented, all segments distinctly longer than wide. Mandible with sparse punctures, upper tooth significantly longer than lower one. Clypeus usually smooth and impunctate, matte, only occasionally with sparse punctures in upper part. Length of gena slightly exceeding basal width of mandible. Face, frons, and median part vertex finely granulate and impunctate. Temple impunctate, mainly smooth and shining, matte, usually very finely granulate in lower part.

Entire mesoscutum granulate, impunctate (occasionally nearly smooth and shining). Sternaulus absent; in this area, surface slightly depressed. Distance between spiracle of propodeum and pleural carina 3–5 times diameter of spiracle. Basal carina usually 0.4–0.5 times as long as apical area (occasionally, basal carina indistinct). Apical area rounded in anterior part; its longitudinal carinae usually reaching transverse carina at anterior end.

2nd recurrent vein interstitial, mostly not pigmented. Metacarpus not reaching fore-wing apex.

Metasomal segment I smooth, with petiolus rounded in cross-section. Glymma absent. Tiridia distinctly wider than long or as wide as long, occasionally slightly longer than wide. Ovipositor with weak and wide dorsal subapical emargination, without teeth; its sheath 1.2–1.4 times as long as tergite I.

Body usually reddish brown. Palpi, mandible (except for teeth), tegula, and legs yellow to yellowish brown. Clypeus yellowish brown to brown. Coxae and hind femur usually brownish to brown. Pterostigma pale brown to brown.

Size (mm). Body length 2.6; fore-wing length 2.2; head width 0.66; length of mesosoma 0.84, width 0.46; length of tergite I 0.61, its width in posterior part 0.16; length of tergite II 0.24; its width in anterior part 0.19; length of ovipositor sheath 0.86.

**Male.** Antenna 19–22-segmented. Length of gena equal to, or slightly less than basal width of mandible. Tiridia wider than, or as wide as long, occasionally longer than wide. Other characters as those in female.

**Material.** Holotype ♀, Russia, Kamchatka Prov., Kozyrevsk, birch forest with *Larix*, 12.VII.1985 (Kasparyan). Paratypes. Russia, Tumen Prov.: Taz River, 2 km upstream from Krasnoselkup, 14 and 16.VIII.1992 (Kasparyan), 3 ♀; Buryatia, left bank of Dzhida River, Khamnei Vill., sparse oak forest with *Larix*, 27.VI.1971 (Kasparyan), 1 ♀, 1 ♂; Kuril Islands, Kunashir, Yuzhokurilsk Vill., 30.VII.1976 (Ermolenko), 1 ♀ [Schmallhausen Institute of Zoology, Kiev, Ukraine (CIZK)]; Kamchatka Prov.: Milkovo, alder forest, 6.VII.1985 (Kasparyan), 1 ♂. Kazakhstan, Vostochno-Kazakhstanskaya Prov.: Salyk, motley grass, 19.VI.1961 (Tobias), 1 ♀; floodland of Kendyrylyk River, 8 km upstream of Kendyrylyk Vill., 13.VI.1961 (Tobias), 1 ♀; 18 km SE Zaisan, Temirsu area, meadow in river floodland with thickets, 10.VI.1973 (Kozlov), 1 ♀; Uzbekistan: Pskem Mt. Range, 2000 m, near Nanai Vill., steppe-meadow on plateau, 27.V.1963 (Tobias), 5 ♀, 3 ♂; same locality, 2000–2200 m, river floodland and slopes, 25.V.1963 (Sugonyaev), 2 ♀; Ugama Range, canyon of Ugama River, 18–23 km N Khumsan, 18.V.1963 (Sugonyaev, Tobias), 6 ♀, 2 ♂; 15 km N Khumzaabad, slope with Central Asian juniper and shrubs, 11.VII.1982 (Belokobylskij), 1 ♂. Mongolia: Khentei aimak, 8 km S Norovlin, birch forest, clearings, meadows, 1–2.VII.1976 (Kozlov, Kerzhner), 2 ♀; Eastern aimak, 20 km ENE Baian-Ula somon, 8.VII.1976 (Kerzhner), 1 ♀; same locality and date (Kozlov), 2 ♀.

**Distribution.** An Eastern Palaearctic forest species.

#### 15. *Diaparsis (Diaparsis) multiplicator* Aubert, 1969

**Material.** A total of 10 ♀ and 3 ♀ were examined. Ukraine: Kherson Prov. (Black Sea Nature Reserve), Kiev (Novoselki), Kharkov Prov. (Kuryazh).

**Distribution.** Northern and middle Europe. Records of this species from northeastern China (Lyao Ning Prov.) (Sheng *et al.*, 1999) need verification.

**Biology.** Hosts are unknown. Emergence occurs from April to June.

#### 16. *Diaparsis (Diaparsis) neoplicator* Khalaim, sp. n.

**Diagnosis.** The species is closely related to *D. multiplicator*, differs from it in the sculpture of the mesoscutum and the number of antennal segments; its occipital carina is not elevated in the ventral part.

**Description. Female.** Head strongly and roundly narrowing behind eyes; width of eye distinctly exceed-

ing length of temple. Antenna 23–26-segmented, all segments slightly longer than wide. Mandible punctate in basal part, its upper tooth significantly longer than lower one. Clypeus distinctly convex, impunctate in lower part, smooth and shining; in upper part, matte and finely punctate over very finely granulate matte surface. Basal width of mandible slightly exceeding length of gena. Lower part of occipital carina slightly lobiform elevated. Face, frons, and vertex with fine and very dense punctures over granulate surface. Temple with moderately dense punctures over very finely granulate, occasionally partly smooth surface.

Mesoscutum finely and very densely punctate over densely granulate surface. Mesopleura and mesosternum entirely and finely punctate over finely granulate, occasionally partly, or entirely smooth surface. Sternaulus absent. Propodeum mostly finely granulate and moderately densely punctate, usually with well-developed carinae. Spiracle of propodeum large, distance between spiracle and pleural carina exceeding diameter of spiracle. Apical area rounded or weakly pointed in anterior part, usually weakly wrinkled in posterior part; its longitudinal carinae reaching or nearly reaching transverse carina at anterior end.

2nd recurrent vein postfurcal, not pigmented in anterior part. Metacarpus nearly reaching fore-wing apex.

Metasomal segment I entirely smooth, its petiolus rounded in cross-section. Glymma rounded or oval, situated in, or slightly lower than middle of segment, or absent. Tiridia 1.5–2.0 times as long as wide. Ovipositor uniformly and rather strongly curved upward along entire length, with very weak and wide dorsal subapical emargination, without teeth, its sheath more than twice as long as tergite I.

Body black. Palpi, mandible (except for teeth), and legs brownish yellow. Antenna yellowish brown at base, darkening toward apex. Tegula yellowish brown to dark brown. Pterostigma dark brown. Metasoma behind segment I mainly reddish yellow, partly dark brown dorsally.

Size (mm). Body length 6; fore-wing length 4.5; head width 1.35; length of mesosoma 2.1, width 1.1; length of tergite I 1.62, its width in posterior part 0.38; length of tergite II 0.62; length of ovipositor sheath about 3.6.

**Male.** Antenna 25-segmented. Length of gena distinctly exceeding basal width of mandible. Temple

smooth. Distance between spiracle of propodeum and pleural carina twice diameter of spiracle. Glymma small, oval, situated slightly before middle of segment. Clypeus entirely darkened. Metasoma dark brown. Other characters as those in female.

**Material.** Holotype ♀, Russia, Primorskii Terr., 20 km SE Ussuriisk, Gornotaezhnoe, forest, 30.V.1990 (Belokobylskij). Paratypes. Primorskii Terr., as holotype, 3 ♀; Vladivostok, Sedanka, forest, 27.V.1990 (Belokobylskij), 1 ♀; environs of Spassk, forest, clearings, 13.VI.1990 (Belokobylskij), 2 ♀; Evseevka, 20 km SE Spassk, 28.V.1985 (Belokobylskij), 1 ♀; Ussuru District, Kamenushka and GTS, 17.V–13.VI.1989 (Kireitshuk), 4 ♀; same locality, arboretum, at light, 3.V.1983 (Sinev), 1 ♀, 1 ♂; Kamenushka, 30 km SE Ussuriisk, 6.VI.1979 (Zinovjev), 1 ♀.

**Distribution.** Southern Russian Far East.

#### 17. *Diaparsis (Diaparsis) niphadoctona* He, 1995

**Diagnosis.** The species is similar to *D. punctipleuris* in the ovipositor strongly curved upward at the apex, but clearly differs from this, and all the other congeners, in the presence of a distinct tooth pointed downwards on the lower margin of the clypeus.

**Distribution.** Central China: Gansu Prov.

**Biology.** A parasite of *Niphades castanea* Chao (Curculionidae) on the Chinese chestnut (He and Li, 1995). Emergence continues from June to July.

#### \*18. *Diaparsis (Diaparsis) nitida* Horstmann, 1981

**Material.** A total of 10 ♀ and 10 ♂ were examined. Russia: Khabarovsk (Khekhtsir), Primorskii Terr. (50 km SE Ussuriisk, Suvorovka River). Ukraine: Kherson Prov. (Black Sea Nature Reserve), Crimea (Kara Dag). Azerbaijan (Akulis, 5 km W Ordubad). Kazakhstan: Kzyl-Orda Prov. (Tyumen-Aryk Vill.), Dzhzhkazgan Prov. (10 km N Kense, Zhaty Konyr desert; 35 km NW Zhana-Arka Vill.), Mangyshlak Prov. (Tauchik).

**Distribution.** Middle and southern Europe, Caucasus, Kazakhstan, and southern Russian Far East. A transpalearctic boreal species.

**Biology.** Hosts are unknown. Emergence continues from April to May and occurs in October in the western Palaearctic Region and from June to July, in the Russian Far East.

#### 19. *Diaparsis (Diaparsis) nutritor* (Fabricius, 1804)

**Material.** A total of 20 ♀ and 9 ♂ were examined. Lithuania: Trakai (Paluknys). Moldavia (Kishinev,

20 km S Kagul, Flemina locality). Ukraine: Odessa Prov. (25 km S Kaushany, Lesnoe), Kherson Prov. (Black Sea Nature Reserve, Barkuty Vill., Aleksandrovka Vill.), Donetsk Prov. ("Kamennye Mogily" Reserve), Lugansk Prov. ("Provalskaya Step" Reserve). Armenia (8 km W Berd, 1350 m).

**Distribution.** A European and Caucasian species.

**Biology.** Hosts are unknown. Emergence continues from May to July.

20. *Diaparsis (Diaparsis) parabasalis* Khalaim, sp. n.

**Diagnosis.** The species is similar to *D. basalis* in the structure of the propodeum and differs from it in a mainly granulate body surface.

**Description. Female.** Head strongly and roundly narrowing behind eyes; width of eye distinctly exceeding length of temple. Antenna 22–24-segmented, all segments distinctly longer than wide. Mandible punctate in basal part, its upper tooth significantly longer than lower one. Clypeus mostly moderately and densely punctate over finely granulate surface; its lower part smooth and impunctate. Length of gena 0.6 times basal width of mandible. Head entirely granulate (occasionally, temple nearly smooth, matte). Face and frons with moderately large and dense punctures; vertex and temple finely and diffusely punctate.

Mesoscutum densely punctate over granulate surface. Mesopleura and mesosternum more or less densely punctate over finely granulate, and partly nearly smooth surface. Sternaulus in the form of wide, crenulate S-shaped groove, adjoining prepectal carina in anterior part of mesopleura. Narrow part of mesopleura above sternaulus usually impunctate. Propodeum granulate, dorsolateral area occasionally also finely punctate. Distance between spiracle of propodeum and pleural carina 1.5–2.0 times diameter of spiracle. Basal carina indistinct because of accompanying wrinkles, 0.5–0.65 times as long as apical area. Apical area rounded in anterior part. Lateral part of apical area about 0.75 times as long as its central part.

2nd recurrent vein postfurcal, not pigmented in anterior part. Metacarpus reaching fore-wing apex.

Metasomal segment I entirely smooth, its petiolus rounded in cross-section. Glymma very small or absent; when present, situated strongly apically. Tiridia slightly longer than wide, usually very superficial. Ovipositor very short, without noticeable teeth, usually with very weak and wide dorsal subapical emargin-

ation, without teeth; its sheath half as long as tergite I.

Body black. Palpi, antennal scape and pedicel, mandible (except for teeth), lower margin of clypeus, tegula, and legs yellow to brownish yellow (coxa darkened). Antennal flagellum brownish yellow at base, becoming darker toward apex. Pterostigma brown. Metasoma behind segment I brownish yellow ventrally to black dorsally.

Size (mm). Body length 3.8; fore-wing length 3.2; head width 1.1; length of mesosoma 1.45, width 0.8; length of tergite I 1, its width in posterior part 0.25; length of tergite II 0.38; length of ovipositor sheath 0.5.

**Male unknown.**

**Material.** Holotype ♀, Russia, Primorskii Terr., 15 km S Slavyanka, Ryazanovka, sparse oak forest, meadow, 21.IX.1987 (Belokobylskij). Paratypes: Primorskii Terr., Spassk, forest, shrubs, 18.IX.1987 (Belokobylskij), 1 ♀; same locality, same collector, forest, clearings, shrubs, 4.IX.2001, 1 ♀; environs of Vladivostok, Akademgorodok, clearings in deciduous forest, 20.VII.1972 (Kozlov), 1 ♀; Anisimovka (= Kangaus), deciduous forest, 18.VIII.1972 (Kuslitsky), 1 ♀; same locality, meadows, forest clearings, 2 and 3.IX.1988 (Belokobylskij), 2 ♀.

**Distribution.** Southern Russian Far East.

21. *Diaparsis (Diaparsis) platyura* Khalaim, sp. n.  
(Fig. 12)

**Diagnosis.** See the key.

**Description. Female.** Head almost entirely granulate, impunctate, strongly and roundly narrowing behind eyes; width of eye distinctly exceeding length of temple. Antenna 17-segmented, short; all segments distinctly longer than wide. Mandible mostly punctate, its upper tooth significantly longer than lower one. Clypeus almost entirely finely punctate over finely granulate surface, smooth and impunctate only at lower margin. Length of gena equal to basal width of mandible.

Mesosoma entirely granulate, impunctate. Sternaulus in the form of slightly depressed area with denser granulation and very fine wrinkles. Distance between spiracle of propodeum and pleural carina nearly twice diameter of spiracle. Basal carina somewhat indistinct, 0.4 times as long as apical area. Apical area pointed in

anterior part under angle of about 80°; its longitudinal carinae weak, indistinct in anterior part. Lateral part of apical area about 0.6 times as long as its central part.

2nd recurrent vein weakly postfurcal, not pigmented in anterior part. Metacarpus short, its second abscissa less than half as long as distance between apex of radial vein and apex of fore wing.

Metasomal segment I smooth, its petiolus rounded in cross-section. Glymma absent. Tiridia very slightly longer than wide. Ovipositor weakly curved upwards along entire length, slightly widened at apex, with shallow dorsal subapical emargination, without teeth (Fig. 12); its sheath slightly longer than tergite I.

Body black. Palpi, mandible (except for teeth), and legs brownish yellow (coxa darkened). Antennal scape and pedicel yellowish brown. Lower part of clypeus, tegula, and metasoma behind segment I dark brown. Pterostigma, coxae, and hind femur brown.

Size (mm). Body length 3; fore-wing length 2.4; head width 0.72; length of mesosoma 1.05, width 0.58; length of tergite I 0.7, its width in posterior part 0.2; length of tergite II 0.3; length of ovipositor sheath 0.87.

**Male unknown.**

**Material.** Holotype ♀, Russia, Primorskii Terr., 30 km SE Chuguevka, taiga, 31.V.1993 (Belokobylskij).

**Distribution.** Southern Russian Far East.

\*22. *Diaparsis (Diaparsis) punctipleuris* Horstmann, 1981 (Fig. 13)

**Material.** Russia: Krasnodar Terr. (Golovinka, 2 ♀). Ukraine: Nikolaev Prov. (Kazakskii Distr., Vladimirskii forest, 1 ♀), Donetsk Prov. (Olkhovatka, SE of Debaltsevo, 1 ♀), Lugansk Prov. (3 km NW Antratsit, 1 ♀, paratype). Georgia: Abkhazia (Dzhali, 1 ♀).

**Distribution.** Southern Russia and Caucasus.

23. *Diaparsis (Diaparsis) rara* (Horstmann, 1971) (Figs. 14, 15)

**Material.** A total of 20 ♀ and 3 ♂ were examined. Russia: Novgorod Prov. (Tychkino Vill., 20 km NW Pestovo), Karachaevo-Cherkessia (Arkhyz), North Ossetia (Tsei, 35 km NW Alagyr, 2200 m), Buryatia (S of Zakamensk), Chita Prov. (Bylyra; Kurort-Darasun; Karymskaya Vill., Ingoda River; Andrianovka Vill., 15 km SE Karymskaya; Kozlovo, 35 km

N Kalga), Khabarovsk Terr. (Jewish Autonomous Terr., 40 km N Amurzet, Samara River floodlands), Primorskii Terr. (Gornotaezhnoe, 20 km SE Ussuriisk). Hungary (Köszy [Köszeg], 20 km N Szombately). Lithuania (Bargailiai, 30 km S Radviliškis; Ukmerge). Belarus: Brest Prov. (Pripyat River floodlands, Goryn River mouth), Gomel Prov. (Turov). Ukraine: Zakarpatskaya Prov. (Karpatskii Nature Reserve, 10 km N Bogdan). Kazakhstan: Semipalatinsk Prov. (Staropyatigorskoe, Tarbagatai Mt. Range, 1400–2200 m).

The *D. rara* f. *pseudorara* is characterized by the ovipositor lacking the apical dorsal tooth (Fig. 14). In the typical form, this tooth is well-developed, possessing a small narrow apical emargination (Fig. 15). The *D. rara* f. *pseudorara* is known only from the southern Russian Far East.

**Material.** Russia: Khabarovsk Terr. (Vysokogornyi, Mulinka River floodlands, 1 ♀, 1 ♂), Primorskii Terr. (Spassk, 1 ♀; 15 km SSW Nezhino, 1 ♂).

**Distribution.** Middle Europe, Caucasus, Kazakhstan, southern Siberia, and southern Russian Far East. A transpalearctic south-boreal species.

**Biology.** Hosts are unknown. Emergence continues from June to August.

24a. *Diaparsis (Diaparsis) temporalis temporalis* Horstmann, 1979

**Distribution.** Middle Europe (Spain, France, Belgium, Germany, and Italy). It was introduced into USA for control of *Oulema melanopus* (L.) (Chrysomelidae) (Dysart *et al.*, 1973).

**Biology.** A parasite of *Oulema melanopus* (L.) (Chrysomelidae) (Horstmann, 1979). Emergence continues from April to July.

\*24b. *Diaparsis (Diaparsis) temporalis rufigaster* Horstmann, 1979

**Material.** A total of 44 ♀ and 8 ♂ were examined. Russia: Novgorod Prov. (Tychkino Vill., 20 km NW Pestovo Vill.), Krasnodar Terr. (Slavyansk-on-Kuban), Daghestan (Sergokala), Stavropol Terr. (Shpakovskoe). Hungary (Orfalu), Moldavia (Barkalovka). Ukraine: Donetsk Prov. (“Khomutovskaya Step” Nature Reserve, Gruzskii Elanchik River floodlands), Zaporozhye Prov. (Vasilyevka), Kherson Prov. (Aleksandrovka Vill.; Black Sea Reserve), Lugansk Prov. (“Provalskaya Step” Nature Reserve). Georgia (Vashlovan Reserve). Azerbaijan (Akulis, 5 km W Ordu-

bad). Kazakhstan: Aktyubinsk Prov. (Mugodzhary Mts: 15 km E Yubileinyi Vill.; Akul'inskoe reservoir).

**Distribution.** Northern and southern Europe, Caucasus, and Kazakhstan.

**Biology.** A parasite of *Oulema melanopus* (L.) (Chrysomelidae) (Horstmann, 1979). In Europe and Kazakhstan, emergence continues from June to July; in the Caucasus, from April to July.

\*25. *Diaparsis (Diaparsis) truncata*  
(Gravenhorst, 1829)

**Material.** Russia: Volgograd (Bakalda, 1 ♀). Ukraine: Donetsk Prov. (Krivaya Luka Vill, northern bank of Severskii Donets River, 2 ♀; "Kamennye Mogily" Nature Reserve, 4 ♀, 1 ♂; "Khomutovskaya Step" Nature Reserve, Gruzskii Elanchik River floodlands, 1 ♀). Kazakhstan: Dzhezkazgan Prov. (40 km S Zhana-Arka Vill. (Atususskii), near Koksengir Mt., 1 ♀).

**Distribution.** Middle Europe and Kazakhstan.

**Biology.** A parasite of *Crioceris duodecimpunctata* L. (Chrysomelidae) (Horstmann, 1981). Emergence continues from June to July.

26. *Diaparsis (Diaparsis) ultimator* Khalaim, sp. n.

**Diagnosis.** The species differs from the closely related *D. punctipleuris* in the short gena, shape of the ovipositor, and number of the antennal segments.

**Description. Female.** Head almost entirely granulate, impunctate, strongly and roundly narrowed behind eyes; width of eye distinctly exceeding length of temple. Antenna 19-segmented, all segments slightly longer than wide. Mandible almost entirely covered with distinct punctures, upper tooth slightly longer than lower one. Lower third of clypeus smooth, separated from finely granulate upper part by weak groove. Basal width of mandible twice length of gena.

Mesoscutum densely and finely punctate over densely granulate surface (punctures mostly indistinct because of granulation). Mesopleura mostly granulate (occasionally nearly smooth in upper part) and more or less distinctly punctate. Mesosternum finely and not quite distinctly punctate over finely granulate, occasionally nearly smooth surface. Sternaulus in the form of shallow depression with wrinkles and denser granulation. Distance between spiracle and pleural carina nearly 1.5 times diameter of spiracle. Basal carina

about 0.33 times as long as apical area. Apical area rounded in anterior part; its longitudinal reaching transverse carina at anterior end.

2nd recurrent vein postfurcal, not pigmented in anterior half. Metacarpus not reaching fore-wing apex.

Metasomal segment I smooth, weakly flattened dorsally; its petiolus rounded in cross-section. Glymma oval, distinct, situated slightly behind middle of segment I. Tiridia slightly longer than wide. Ovipositor uniformly and weakly curved upwards along entire length, with very weak dorsal subapical emargination, without teeth; its sheath 1.75 times as long as tergite I.

Body black. Palpi, mandible (except for teeth), tegula, and legs brownish yellow (coxa darkened). Lower part of clypeus and antenna dark brown. Pterostigma brown. Metasoma behind segment I dark brown to black.

Size (mm). Body length 3.8; fore-wing length 2.6; head width 0.86; length of mesosoma 1.3, width 0.7; length of tergite I 0.74, its width in posterior part 0.26; length of tergite II 0.28; length of ovipositor sheath 1.3.

**Material.** Holotype ♀, Russia, Perm Prov., Ural Area. Posad (= Kishert), forestry, "netting in a meadow with Pimp. Rhinanthus", 19.VIII.1961 (Ponomareva). Paratype: Kazakhstan, Semipalatinsk Prov., 45 km ENE Tarbagatai, Tarbagatai Mt. Range, shrubs, steppe slopes, 22.VII.1983 (Belokobylskij, 1 ♀).

**Distribution.** Middle Urals and eastern Kazakhstan.

27. *Diaparsis (Diaparsis) valvator* Khalaim, sp. n.  
(Fig. 16)

**Diagnosis.** The species differs from the closely related *D. basalis* and *D. parabasalis* in the well-developed basal carina, shape of the ovipositor (Fig. 16), and absence of sternauli. The species also differs from *D. parabasalis* sp. n. in the smooth temple.

**Description. Female.** Head strongly and roundly narrowing behind eyes; width of eye 1.5 times length of temple. Antenna 25-segmented, distinctly narrowing toward apex, all antennal segments distinctly longer than wide. Mandible punctate in basal part, its upper tooth significantly longer than lower one. Clypeus smooth, punctate in upper 2/3. Length of gena subequal to basal width of mandible. Lower part of occipital carina slightly lobiform elevated. Face and

frons densely punctate over finely granulate surface. Temple smooth and very finely punctate.

Mesoscutum densely and finely punctate over granulate surface. Mesopleura and mesosternum entirely and densely covered with rather large punctures over nearly smooth matte surface. Sternaulus absent, cuticle depressed in this area. Propodeum distinctly punctate over finely granulate surface. Distance between spiracle of propodeum and pleural carina equal to diameter of spiracle. Basal carina 0.33 times as long as apical area. Apical area rounded in anterior part, its longitudinal carinae reaching transverse carina at anterior end. Lateral part of apical area half as long as its central part.

2nd recurrent vein postfurcal, not pigmented in anterior part. Metacarpus reaching fore-wing apex.

Metasomal segment I smooth, its petiolus rounded in cross-section. Glymma absent. Tiridia distinctly longer than wide, 1.5–2.0 times as long as wide. Ovipositor thick, widened apically, with distinct wide dorsal subapical emargination, without teeth (Fig. 16); its sheath very short, 0.62 times as long as tergite I.

Body black. Palpi, mandible (except for teeth), lower margin of clypeus, and legs brownish yellow (coxa darkened). Pterostigma, tegula, and hind femur brown. Metasoma behind segment I mainly yellow brown, dark brown dorsally.

Size (mm). Body length about 4; fore-wing length 3.5; head width 1.07; length of mesosoma 1.54, width 0.84; length of tergite I 0.96, its width in posterior part 0.26; length of tergite II 0.5; length of ovipositor sheath 0.6.

**Male** unknown.

**Material.** Holotype ♀, Russia, Primorskii Terr., Anisimovka (= Kangauz), forest between village and mountain, 5.VII.1972 (Kuslitsky). Paratype: Khabarovsk, Khekhtsir, 18th km, 13.VI.1985 (Kasparyan), 1 ♀.

**Distribution.** Southern Russian Far East.

Subgenus *Pectinoparsis* Khalaim, subgen. n.

Type species *Diaparsis* (*Pectinoparsis*) *improvisator* sp. n.

**Diagnosis.** The subgenus is closely related to the subgenus *Diaparsis* s. str., but clearly differs from this and other subgenera of the genus *Diaparsis* in the distinctly pectinate leg claws (Fig. 5).

**Description. Female.** Head wide, strongly narrowing behind eyes (Fig. 3); width of eye distinctly exceeding length of temple (Fig. 3). Antenna 27–28-segmented; all antennal segments longer than wide, weakly narrowing toward apex. Mandible moderately densely punctate in basal part, its upper tooth significantly longer than lower one. Clypeus convex, smooth, punctate in upper 2/3. Basal width of mandible significantly exceeding length of gena. Face and frons densely and distinctly punctate over finely granulate surface. Vertex and temple very finely punctate over smooth shining surface.

Mesoscutum entirely densely and distinctly punctate over granulate surface. Mesopleura smooth and shining, distinctly punctate: densely ventrally, moderately densely dorsally; mesosoma almost impunctate along upper margin of sternaulus. Mesosternum densely punctate over smooth shining surface. Sternaulus very wide, with coarse transverse wrinkles; sternaulus situated in anterior part of mesopleura, strongly inclined there, stretched upwards along prepectal carina (in this place, wrinkles merged with prepectal carina) and beyond anterior margin of mesopleura; in upper part of mesopleura, sternaulus pointed backwards, forming deep crenulate groove below subtegular carina. Propodeum coarsely wrinkled. Spiracle large; distance between spiracle of propodeum and pleural carina 2.3–3.0 times diameter of spiracle. All carinae of propodeum well-developed. Basal carina 0.5–0.6 times as long as apical area. Apical area rounded in anterior part, its central part with irregular wrinkles and large indistinct punctures. Lateral part of apical area 0.75 times as long as its central part. Leg claws distinctly pectinate (Fig. 5).

2nd recurrent vein postfurcal, not pigmented in anterior part. Metacarpus nearly reaching fore-wing apex.

Metasomal segment I entirely smooth, rounded in cross-section. Glymma elongate, not deep (usually shallow, occasionally absent). Tiridia superficial, usually strongly longer than wide. Ovipositor very short and nearly straight, with weak dorsal subapical emargination (Fig. 17); its sheath half as long as tergite I.

Body black. Palpi, antennal scape and pedicel, mandible (except for teeth and dark spot at base), lower third of clypeus, and legs yellow (coxae strongly darkened). Antennal flagellum yellowish brown at base, darkened apically. Tegula yellowish brown. Pterostigma and hind femur brown. Apex of hind tibia



brownish. Metasoma behind segment I yellow (in lower part) to black (in upper part).

1. *Diaparsis (Pectinoparsis) improvisator* Khalaim, sp. n. (Figs. 3, 5, 17)

**Description. Female** (see description of the subgenus).

Size (mm). Body length 5.4; fore-wing length 4; head width 1.3; length of tergite I 1.55, its width in posterior part 0.3; length of tergite II 0.61, its width in anterior part 0.34; length of ovipositor sheath 0.75.

**Material.** Holotype ♀, Russia, Primorskii Terr., 25 km SE Spassk, Evseevka, 28.VI.1985 (Kasparyan). Paratypes: Primorskii Terr., labeled as holotype, 1 ♂; Pogranichnyi Distr., Barabash-Levada, floodland forest, motley grass, 22.VI.1972 (Kozlov), 1 ♀. South Korea: "Gyeongsangham Prov., 30 km NNW Jinju", 800 m, forest, 12 and 29.VI.2002 (Belokobylskij), 1 ♀, 1 ♂.

**Distribution.** Southern Russian Far East and South Korea.

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