To the Knowledge of the Genera *Tatyanapion*, *Loborhynchapion*, and *Mesotrichapion* (Coleoptera, Brentidae, Apioninae) in the Asian Fauna

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Abstract—The genus *Tatyanapion* is redescribed and compared with closely related genera. Keys to Asian species of the genera *Loborhynchapion* and *Mesotrichapion* and lists of their species in the world faund are given.

In a study of the North Asian fauna of the subfamily Apioninae, family Brentidae, I established the new genus Tatyanapion Legalov [Legalov, 1996 (1997)] for a very distinctive species, Apion laticeps Desbrochers. The species was described from a female collected in Perm (Desbrochers, 1870) and was subsequently placed in the subgenus Perapion Wagner (Wagner, 1910). Later, Wagner (1942) described a male of this species, collected in Joutseno (Finland), as Apion lindbergi in the subgenus Loborhynchapion Wagner, 1930, nomen nudum. The synonymy of A. lindbergi with A. laticeps was established by Bajtenov, who retained this species in the subgenus Perapion. A more thorough examination of its morphology and trophic associations has shown that A. laticeps does not have many of the characters typical of the tribe Aplemonini containing the genus Perapion and belongs to the tribe Oxystomatini, being closely related to the genera Loborhynchapion Györffy and Mesotrichapion Györffy. Since the original description is brief, I give below a redescription of the genus Tatyanapion, keys to the genera Loborhynchapion and Mesotrichapion and to their Asian species, and a list of species of these genera in the world fauna.

The style of the all descriptions follows that used by Alonso-Zarazaga (1990).

The material used in the paper is deposited at the Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZIN), and in Siberian Zoological Museum, Institute of Animal Systematics and Ecology, Siberian Division, Russian Academy of Sciences, Novosibirsk (SZMN).

FAMILY BRENTIDAE BILLBERG, 1820 Subfamily APIONINAE Schoenherr, 1823 Tribe OXYSTOMATINI Alonso-Zarazaga, 1990 Subtribe Oxystomatina Alonso-Zarazaga, 1990

Genus *Tatyanapion* Legalov, 1997 (Figs. 1; 2h, 2i, 2k–2m, 2t; 3a, 3b; 4e; 5i; 6f) *Tatyanapion* Legalov, 1996 (1997): 284.

Type species *Apion laticeps* Desbrochers, 1870, by original designation.

Description. Body 2.4–2.6 mm long, black, shining. Elytra occasionally with faint bluish metallic shine. Tibiae apically or, occasionally, entirely and also tarsi and 1st antennal segment dark fuscous. Occasionally, legs and antennal funicle entirely black. Antennal scape pale yellowish brown to dark reddish brown. Body covered with short white appressed hairs. Raised hairs present only along ventral margin of eyes and on genae, underside of rostrum, and antennae (Figs. 1; 2i). On meso- and metathorax, hairs denser. On elytral intervals, hairs forming 2 usually regular rows. Each elytral stria with 1 row of hairs.

Structure of rostrum exhibiting sexual dimorphism (Figs. 1; 2h; 3a, 3b). In male, rostrum short, rather weakly curved, 1.04–1.18 times as long as pronotum, rather wide, narrowing from eyes to antennal base; its length 2.78–3.25 times its width at antennal insertion and 1.17–1.36 times its apical width. Surface covered with elongate punctures occasionally forming indis-

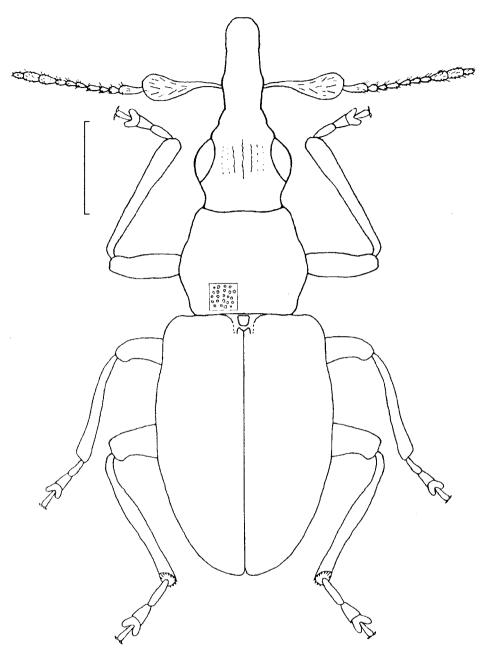


Fig. 1. Tatyanapion laticeps Desbr., male, dorsal view. Scale bar 0.5 mm for Figs. 1–5 and 7.

tinct striae, intervals finely reticulate. Apex nearly smooth. At antennal insertion, rostrum weakly widening (Figs. 1; 3h), nearly cylindrical laterally. Antennal scrobes directed toward eyes. In female, rostrum 1.17–1.19 times as long as pronotum, narrower, more strongly curved (Fig. 3b); its length 3.85–3.90 times its width at antennal insertion and 1.09–1.18 times its apical width.

Head wide, narrowing behind eyes. Eyes convex, more strongly so, in female (Fig. 2h). Frons flat, striate medially; 1.06–1.25 and 1.28–1.29 times as wide as rostrum at antennal insertion in male

and female, respectively. Elongate punctures present near eyes. Vertex covered with dense punctures larger than those on rostrum. Gular suture obsolete, shining laterally. Underside of head densely punctate.

Antennae long, 1.22–2.04 times as long as rostrum. Scape enlarged (Figs. 1; 2i), claviform in male. First funicular segment 2.0–2.67 times as long as 2nd segment, 0.33–0.42 times as wide as scape; 2nd funicular segment smallest, conical; 3rd oval; 4th oblong-conical; 5–7th widely conical. Club narrow, 3-segmented, nearly as wide as funicle (Figs. 1; 2i).

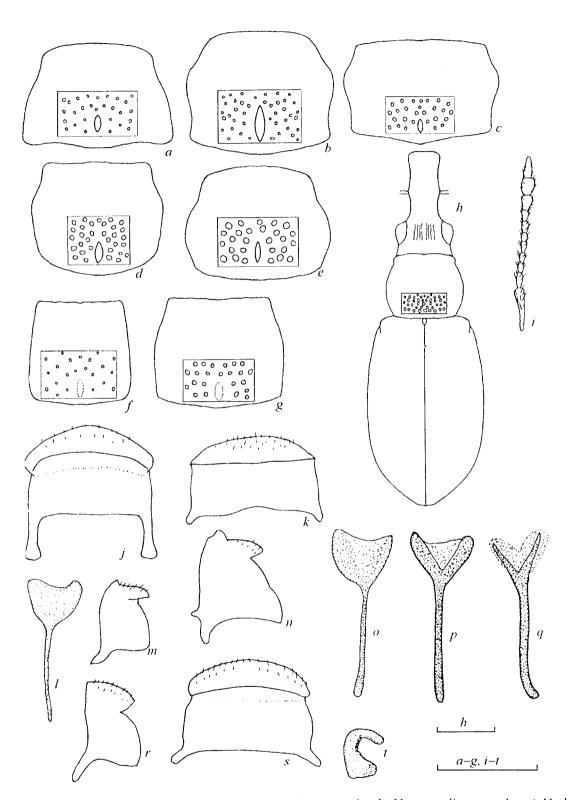


Fig. 2. (a, b, c, d, e, f, g) Pronotum: (a) Mesotrichapion punctirostre, male; (b) M. wrangelianum, male; (c) M. dauricum, female; (d) M. insidiosum, male; (e) M. dudkorum, male; (f) Loborhynchapion amethystinum, male; (g) L. lobirostre, male. (h) Tatyanapion laticeps, female head, pronotum, and elytra. (i) T. laticeps, female antenna. (j, k, s) Pygidium, dorsal view: (j) L. lobirostre; (k) T. laticeps; (s) M. wrangelianum. (m, n, r) Pygidium, lateral view: (m) T. laticeps; (n) L. lobirostre. (r) M. wrangelianum: (l, o, p, q) Sclerotized part of spiculum gastrale, male: (l) T. laticeps; (o) L. lobirostre; (p) M. wrangelianum; (q) M. dudkorum. (t) T. laticeps, spermatheca.

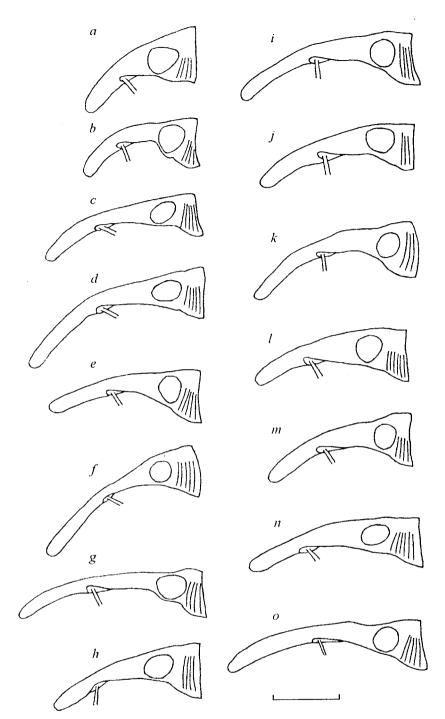


Fig. 3. Rostrum, lateral view: (a, b) Tatyanapion laticeps, male and female, respectively; (c, d) Mesotrichapion punctirostre, male and female, respectively; (e, f) M. wrangelianum, male and female, respectively; (g) M. dauricum, female; (h, i) M. dudkorum, male and female, respectively; (j, k) M. insidiosum, male and female, respectively; (l, m) Loborhynchapion amethystinum, male and female, respectively; (n, o) L. lobirostre, male and female, respectively.

Pronotum campaniform (Figs. 1; 2h), only slightly (1.08–1.26 times) wider than long, narrowing to apex and base, without distinct constriction, widest somewhat behind middle. Disc weakly convex, densely punctate, shining, without longitudinal grooves or carinae. Base straight. Scutellum oblong-rectangular (Fig. 1), glabrous, not raised above elytral surface.

Elytra oblong-oval (Figs. 1; 2h), wider than pronotum, widest in the middle in male and somewhat behind middle in female, 1.62–1.94 times as long as wide. Humeri developed. Elytral intervals wide, flat, shining, finely punctate and rugose. Striae deepformed by separate punctures. Bases of striae free, apices not deepened. At elytral apex, 1st stria merged

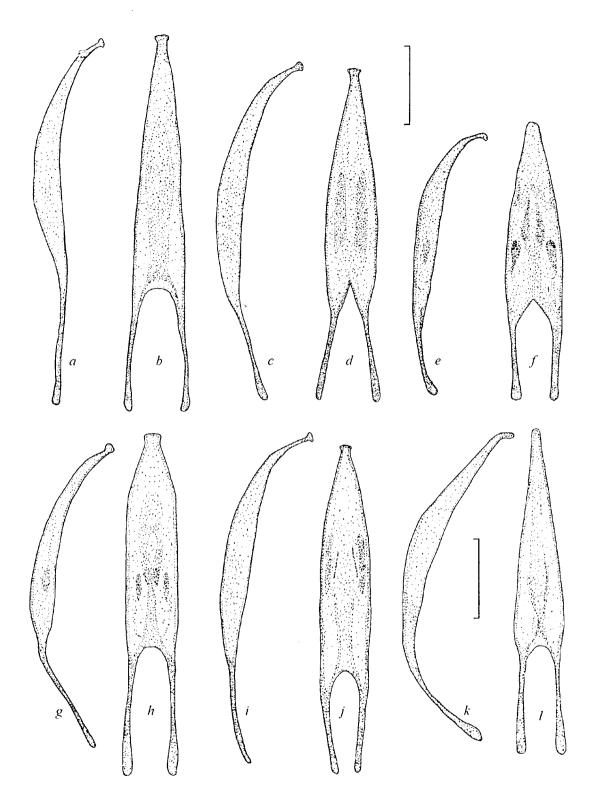


Fig. 4. Penis, lateral and dorsal view: (a, b) Mesotrichapion insidiosum; (c, d) M. dudkorum; (e, f) Tatyanapion laticeps; (g, h) Loborhynchapion amethystinum; (i, j) M. wrangelianum; (k, l) L. lobirostre.

with 9th stria, 3rd with 4th, and 5th with 6th and 7th. Apical elytral declivity gently sloping. Apices jointly rounded.

Legs long (Fig. 1). Femora moderately wide and slightly flattened, wider than tibiae. Female femora narrower than male ones. Tibiae long, weakly curved,

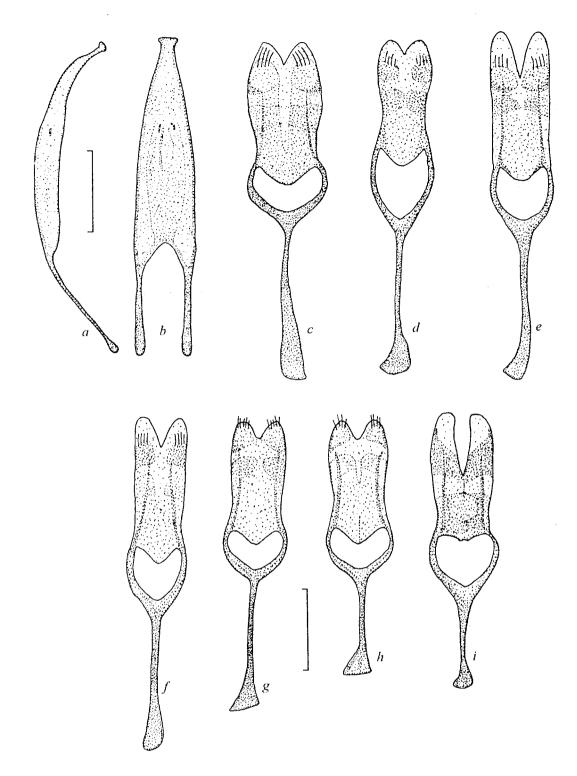


Fig. 5. (a, b) Penis, lateral and dorsal view, Mesotrichapion punctirostre. (c, d, e, f, g, h, i) Tegmen, dorsal view: (c) M. wrangelianum; (d) M. insidiosum; (e) M. dudkorum; (f) M. punctirostre; (g) Loborhynchapion lobirostre; (h) L. amethystinum; (i) Tatyanapion laticeps.

widened apicad. Fore tibia nearly straight, with apical ring of setae. Middle tibia without mucro at apex. Tarsi long. First segment strongly elongate, longer than 2nd. Third segment bilobed, wider than 2nd segment, with brushes of hairs on underside; in fore

tarsus slightly, in middle and hind tarsi, considerably shorter than 2nd segment. Apices of 1st and 2nd segments somewhat protruding sie ways. Claw-segment narrow, longer than 3rd, with widely separate, free claws.

Prosternum finely punctate, nearly matte. Coxal cavities fused. Coxae widely conical. Mesosternal apophysis weakly convex, dividing middle coxae. Metasternal apophysis weak. Anterior metasternal rim obsolete, smoothen. Metathorax wide, punctate, punctate-rugose medially, convex; in male, bearing tubercle at posterior margin, 1.6–2.07 times as wide as middle coxae. Two basal ventrites long, convex, punctate. Third and fourth ventrites very short; 0.70–0.81 and 0.72–0.76 times as long combined as 2nd ventrite in male and female, respectively. Fifth sternite convex in male, flattened in female. Pygidium of the apionoid type, with deep groove. Apex weakly punctate, with very short hairs (Figs. 2k, 2m).

Sclerotized spiculum gastrale with long narrow manubrium and wide, apically emarginate lobe (Fig. 2*l*).

Parameroid lobes elongate (Fig. 5i), without long macrochaetae apically. Fenestra situated in the middle of tegminal plate. Apices of lobes not darkened. Base of prostegium nearly straight. Parameroid lobes separated nearly as far as apex of prostegium. Linea arquata obsolete. Free ring wide; manubrium long, narrow, widening apically. Penis narrow, narrowing from base to apex (Figs. 4e, 4f), narrowing-attenuate in apical third; apex strongly curved. Spermatheca strongly curved, thickened at base (Fig. 2t). Sclerotized spiculum ventrale with narrow lobe and narrow manubrium weakly widening basad.

Tatyanapion laticeps (Desbrochers, 1870)

Apion laticeps Desbrochers, 1870: 205; Apion (Perapion) laticeps: Schilsky, 1902: 27; Apion (Perapion) laticeps, Wagner, 1930: 1386; Apion (Loborhynchapion) lindbergi Wagner, 1942: 157; Apion lindbergi Bajtenov, 1974: 279; Apion (Perapion) laticeps, Bajtenov, 1977: 14–15; Apion lindbergi: Krivets, 1980: 43; Apion laticeps: Krivets, 1981: 80; Apion lindbergi, Bajtenov, 1983: 19–20; Apion (?) laticeps, Isaev, 1994: 11; Apion (Eutrichapion) laticeps: Gonget, 1995: 222–224; Tatyanapion laticeps: Legalov, 1998: 220.

Material. Finland: 2 ♂, 2 ♀, "Joutseno, G. Blomqvist, E. Thunberg" (ZIN). Russia. Leningrad Prov.: 4 ♂, 3 ♀, Aleksandrovskaya, 10–17.VIII.1992. V. Prasolov (ZIN). Arkhangelsk Prov.: 9 ♂, 13 ♀, Shipitsyno, left bank of the Severnaya Dvina River, 2.VIII.1942, V. Stark (ZIN); 3 ♂, Kotlas, 2.VIII.1942. V. Stark (ZIN). Vologda Prov.: 1 ♂, Spasskoe-Kurpino, 28.VII.1921, L. Bogdanova-Kat'kova (ZIN). Ul'-

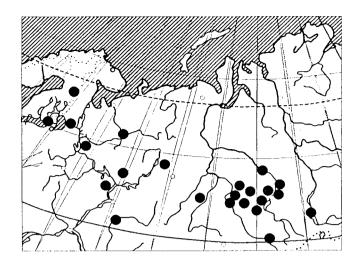


Fig. 6. Distribution of Tatyanapion laticeps.

yanovsk Prov.: 3 ♂, 5 ♀, Lyakhovka, 29.VII.1989, A. Isaev (ZIN). Kirov Prov.: 1 ♀, Vyatka, 2.VIII.1931, Khokhlova (ZIN). Perm Prov.: 4 ♂, 2 ♀, Kyn, 5.VIII.1956, Mikhlin (ZIN). Kurgan Prov.: 1 ♀, Lebyazh'e, 8.VIII.1962, Tibatina (SZMN). Tomsk Prov.: 2 ♂, 1 ♀, Ust'-Churul'ka, 29.VIII-6.1X.1966, Minyailo (SZMN). 1 ♂, 1 ♀. Tomsk: 4.VIII.1973, S. Komarova (SZMN). Novosibirsk Prov.: 1 3, Vengerovo, 14.VIII.1992, Kondratova (SZMN); 3 3, 12 ♀, Zonovo, 30.VII.1961, V. Mordkovich (SZMN); 4 ♂, 2 ♀, Lake Ubinskoe, 20.VII.1962, Tibatina (SZMN); 1 3, 15 km S of Chulym, Sherstobitovskii ryam, 7.VII.1992, S. Chernyshev (SZMN); 1 2, Korolevka, 31.VIII.1959, Knysh (SZMN); 1 \(\capprox\), Oktyabr'skoe, 15.VIII.1992, A. Legalov (SZMN); 1 \mathcal{Q} , Zherebtsovo, 13.VIII.1995, Korneeva (SZMN); 2 3, L'nikha, VII.1991 (SZMN); 1 &, Novyi Sharap, 17.VII.1961, F. Opanasenko (SZMN); 5 ♂, 5 €, Proletarskii, 22.VII.1962, Tibatina (SZMN); 2 €, 1 ♀, Khomutovo Vill., 17.VII.1962, Tibatina (SZMN). Altai Territory: 2 3, Zmeinogorsk, Lake Beloretskoe, 5.VIII.1930, F. Luk'yanovich (ZIN). Kazakhstan: Ural'sk Prov., environs of Ural'sk, 1 2, 2.IX.1925, Mamontov (ZIN).

Host plant. Lathyrus pratensis L. (Isaev, 1994).

Distribution. NE and E Europe, W Siberia, W and N Kazakhstan.

Key to the Genera Mesotrichapion, Tatyanapion, and Loborhynchapion

1. Tegmen with macrochaetae not extending to apices of parameroid lobes (Figs. 5c-5f). Rostrum at base of antennae weakly widened in male, not widened

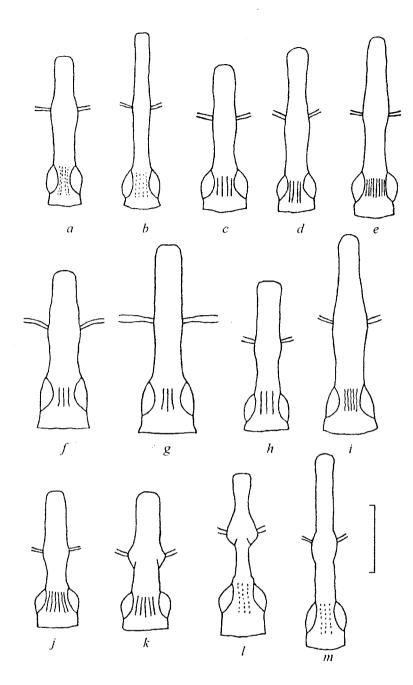


Fig. 7. Rostrum, dorsal view: (a, b) Mesotrichapion punctirostre, male and female, respectively; (c, d) M. wrangelianum, male and female, respectively; (e) M. dauricum, female; (f, g) M. dudkorum, male and female, respectively; (h, i) M. insidiosum, male and female, respectively; (j, k) Loborhynchapion amethystinum, male and female, respectively; (l, m) L. lobirostre, male and female, respectively.

in female (Figs. 7a–7i), 1.08–1.30 times as wide as at apex. Male antennal scape not thickened. Eyes usually weakly convex (Figs. 7a–7i). Rostrum longer (Figs. 3c–3k; 7a–7i), cylindrical; its length 1.33–1.66 and 1.58–1.91 times that of pronotum in male and female, respectively; length of rostrum 4.29–5.42 and 5.57–6.83 times its width in male and female, respectively. Pronotum usually not narrowing basad and apicad, coarsely punctate, with

deep longitudinal depression at base (Figs. 2a-2e). Elytra strongly widened behind middle (Figs. 8a, 8b, 8g-8l). Antennae narrower and longer. Upper side of body usually metallic blue, green, or copper, rather sparsely scaled. Sides of meso- and metathorax usually sparsely covered with hairs, ventral margin of eyes usually with rather sparse hairs. Hairs present over entire surface of pygidial apex (Figs. 2r, 2s). Penis as in Figs. 4a-4d, 4i, 4j;

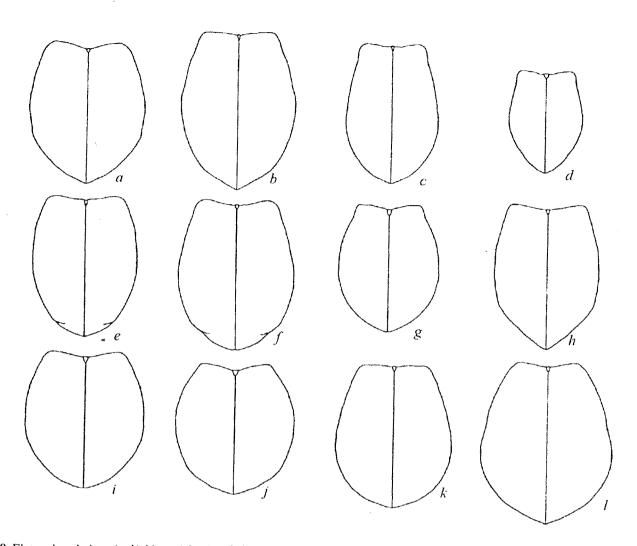


Fig. 8. Elytra, dorsal view: (a, b) Mesotrichapion dudkorum, male and female, respectively; (c, d) Loborhynchapion amethystinum, male and female, respectively; (e, f) L. lobirostre, male and female, respectively; (g, h) M. punctirostre, male and female, respectively; (i, j) M. wrangelianum, male and female, respectively; (k, l) M. insidiosum, male and female, respectively.

—Long macrochaetae of parameroid lobes, if present, situated at apex of lobe and protruding beyond tegmen margin (Figs. 5*g*–5*i*). Antennal scape in male enlarged and occasionally thickened (Fig. 1). Rostrum at antennal base strongly (in male *Loborhynchapion*) or weakly (in *Tatyanapion*, female *Loborhynchapion*) widened (Figs. 1; 2*h*; 7*j*–7*m*), 1.09–1.82 times as wide as at apex. Eyes strongly convex (Figs. 1; 2*h*; 7*j*–7*m*). Rostrum shorter (Figs. 1; 2*h*; 3*a*, 3*b*, 3*l*–3*o*; 7*j*–7*m*), 1.04–1.50 and 1.17–1.95 times as long as pronotum in male and female, respectively. Pronotum cylindrical or nar-

2. Parameroid lobes strongly elongate, without long macrochaetae apically (Fig. 5i). Prostegium not stretched or tapering toward manubrium. Fenestra lying in the middle of tegminal plate. Apices of lobes not darkened. Antennal scape in male

strongly enlarged and club-like swollen (Figs. 1). Rostrum at antennal insertion weakly widened (Figs. 1; 2h). Pronotum narrowing apicad and basad, very densely punctate, without longitudinal depression at base (Figs. 1; 2h). Antennae longer (Figs. 1; 2i). Club less compact, somewhat wider than funicle. Rostrum shorter (Figs. 1; 2h; 3a, 3b). Elytra narrower (Figs. 1; 2h), 1.62-1.94 times as long as wide. Gular suture obsolete. Anterior metasternal rim obsolete, smoothen. Metasternum long: in male, with small tubercle at posterior margin. Pygidium narrow, with hairs over entire surface of its apex (Figs. 2k, 2m). Abdomen narrow, densely punctate. Body densely covered with white hairs denser on meso- and metathorax and ventral margin of eyes. Apical third of penis uniformly narrowing (Figs. 4e, 4f). Spiculum gastrale in male less sclerotized (Fig. 21). Spermatheca small (Fig. 2t) *Tatyanapion*

-Parameroid lobes less strongly elongate, with long macrochaetae apically (Figs. 5g, 5h). Prostegium stretched and tapering toward manubrium. Fenestra lying in apical third of tegminal plate. Lobes entirely darkened. Antennal scape not thickened in both sexes. Rostrum at antennal insertion strongly widened (Figs. 7k, 7l). Antennae shorter. Club more compact, much wider than funicle. Pronotum nearly cylindrical, less densely and more coarsely punctate, with weak longitudinal depression at base (Figs. 2f, 2g). Elytra wider (Figs. 8c-8f), rather sparsely punctate. Gular suture distinct. Anterior metasternal rim distinct. Metasternum short; in male, with strong tubercle at posterior margin. Hairs of pygidium noticeable only on its prominence in lateral view (Figs. 2j, 2n). Body uniformly covered with dense or sparse hairs; or hairs denser at eyes, on fore and middle coxae, and meso- and metathorax. Apical third of penis attenuate toward apex (Figs. 4g, 4h, 4k, 4l). Spiculum gastrale more strongly sclerotized (Fig. 20). Spermatheca largerLoborhynchapion

Key to the Asian Species of the Genus Mesotrichapion

- 1. Punctation of pronotum finer (Figs. 2a, 2b) 2.
- —Punctation of pronotum coarser (Figs. 2c-2e) 3.
- 2. Elytra longer and narrower (Figs. 8g, 8h), metallicblue-green. Humeri more prominent. Wings developed. Rostrum in male longer and narrower

- —Elytra short and wide (Figs. 8a, 8b, 8i–8l). Punctation of pronotum coarser (Figs. 2d, 2e) 4.
- Pronotum with straight base, without distinct basal depression. Body black, shining. Elytra bluish. Body length 2.6–2.8 mm M. subinsidiosum

- —Pronotum with coarser punctation (Fig. 2e), widest behind the middle, 0.75 times as wide as elytra across humeri. Elytra widest before the middle (Figs. 8a, 8b). Penis wider, rather sharply narrowing in apical third (Figs. 4c, 4d). Tegmen as in Fig. 5e. Body length 2.5–3.1 mm M. dudkorum

Key to Asian Species of the Genus Loborhynchapion

1. Rostrum shorter and wider (Figs. 7j, 7k). Pronotum (Fig. 2f) 0.73-0.76 times as wide as elytra across humeri (Figs. 8c, 8d), with finer and sparser punctation (Fig. 2f). Body dark, with faint copper shine, sparsely covered with white hairs. Elytra blue with greenish tint; head and pronotum darker, with copper shine. Penis wide, sharply narrowing in apical

Species of the Genus Mesotrichapion in the World Fauna

M. punctirostre (Gyllenhal, 1839) = M. schmidti (Bach, 1854): Europe, Asia Minor, Caucasus, W Kazakhstan, W Siberia, Mongolia; M. scandinavicum (Dieckmann, 1977): Sweden = M. punctirostre ssp. scandinavicum (Brundin, 1934 nomen nudum); M. wrangelianum (Korotyaev, 1977): NE Siberia— Wrangel Island; M. dauricum (Faust, 1888): S Siberia; M. dudkorum Legalov, 1997: SE Altai; M. conocephalum (Desbrochers, 1875) = M. punctirostre var. araxellum (Reitter, 1916): Syria, Daghestan, Armenia, Azerbaijan—Talysh, Nakhichevan; M. insidiosum (Desbrochers, 1874): Syria, Iran, S Kazakhstan, Uzbekistan, Tajikistan—Hissar Range, Pamirs, Vakhsh; M. subinsidiosum (Bajtenov, 1974): S Kazakhstan; M. subglabrum (Desbrochers, 1870) = M. glabratum (Kiesenwetter, 1864) non Gerstaecker, 1854 = M. glabratum (Gemminger, 1871): southern part of Central Europe.

Species of the Genus Loborhynchapion in the World Fauna

L. lobirostre (Reitter, 1901): Altai, SE and S Kazakhstan, Uzbekistan, S Kirghizia, Tajikistan, Turkmenia, N Afghanistan; L. amethystinum (Miller, 1875): Central and E Europe, Turkey, Syria, Azerbaijan (Nakhichevan), Kazakhstan, Siberia, Chukchi Peninsula, Mongolia, China; L. obtusum (Desbrochers, 1866): W Alps; L. brundini (Wagner, 1943): N Scandinavia; L. cyanitinctum (Fall, 1927): Canada: Quebec, Manitoba.

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