

Additions to the revision of the genus *Atractodes* (Hymenoptera: Ichneumonidae) of the Palaearctic Region. III.

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More faunistic and taxonomic information about the species of the genus *Atractodes* of the Palaearctic Region are reported. The following species are described as new: *A. cylindraceus* sp. n., *A. foveoclypeatus* sp. n., *A. kasparyani* sp. n., *A. magnus* sp. n. and *A. rossicus* sp. n. The females of *A. procerus* Foerster and *A. remotus* Jussila, and the male of *A. turkuensis* Jussila are described. *A. ficticius* (Foerster) is a senior synonym of *A. genuinus* Foerster, and *A. helveticus* (Foerster) a senior secondary homonym of *A. helveticus* Foerster and a senior synonym of *A. oreophilus* Foerster. *A. areolaris* (Habermehl) is a new junior synonym of *A. gravidus* Gravenhorst and *A. cinctus* (Foerster) a junior synonym of *A. fumatus* (Haliday). *A. remotus* Jussila is given a species rank. New combinations are *A. cinctus* (Foerster) and *A. helveticus* (Foerster). Renewed keys to the females and males of western Palaearctic *Atractodes* have been made.

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1. Introduction

This paper is the third addition to my revision of the genus *Atractodes* Gravenhorst, 1829 of the Palaearctic Region (Jussila 1979). After that paper and my two additions (Jussila 1983, 1994) I have had the possibility to study a great number of *Atractodes* specimens from different places in that district, also from its eastern parts. Therefore, I have been able to study more accurately the taxonomy and faunistics of this genus.

The morphological terminology adopted in this work follows that used by Gauld & Bolton (1988) and Gauld (1991). The list about the known distribution of *Atractodes* species is according to Jussila (1979) and Yu (1999).

Subgenus *Atractodes* Gravenhorst, 1829

Atractodes alpestris Roman, 1918

One male specimen has been found in Finland, *Ta*: the rural district of Mikkeli 638:50 16.VII.1978 (M. Koponen leg.). The species is new to the Finnish fauna. 1 ♂ has been found in Byelorussia (Pripyat' river) and Mongolia 6–7.VII.1975 (D. Kasparyan leg.). It has already been recorded from Sweden, Russia, United Kingdom, Eire and Germany.

New records from Russia: Murmansk region (1 ♂ 24.VII.1974), Polar Ural (Vorkuta, 1 ♂ and 1 ♀ 3.VII–11.VIII.1972), Yaroslavl' region (Gadenovo, 1 ♀ 25.V–20.VI.1918, A. Shestakow

leg.) and Chukotka (Chayanskaya guba close to Pevek, 1 ♂), Kasparyan leg.

***Atractodes arator* Haliday, 1839**

1 ♂ and 2 ♀♀ have been found in Poland (Beskid and Kielce, J. Sawoniewicz leg.), some specimens from many places in Scotland (coll. Edinburgh) and many ♂♂ in Spain (coll. Burjasot). It has also been found in Russia (1 ♀ from Transbaikalia: Chita region 14.VII.1973 and 2 ♀♀ from Yakutia: Yakutsk, Kasparyan leg.), Ukraine (1 ♀ from the Carpathians 23.VII.1989, Kasparyan leg.), Armenia (1 ♀ from Dilizhan 21.VIII.1982, Kasparyan leg.) and 1 ♀ in Northern Caucasus (southern slope of Elbrus mountain 16.VI.1972, Kasparyan leg.). The species has already been recorded from Finland, Sweden, Norway, United Kingdom, Eire, Germany and Austria.

***Atractodes bicolor bicolor* Gravenhorst, 1829**

1 ♂ and 5 ♀♀ have been found in various places in Scotland (coll. Edinburgh), 4 ♀♀ in Ukraine, the Carpathians (4 ♀♀ 23.VII–8.VIII.1989, Kasparyan leg.). This subspecies has also been found in Finland (southern and central parts), Sweden, Norway, Denmark, Iceland, Latvia, Russia, Poland, former Czechoslovakia, the Netherlands, Belgium, Germany, United Kingdom, Switzerland, Austria, Hungary, Romania, Greenland and Mongolia.

New records from Russia: the Murmansk region (1 ♀ 24.VII.1974), St. Petersburg (2 ♀♀ 10.IX.1967 and 30.VII.1972), Transbaikalia (Chita region, 4 ♀♀ 12.VII.1975) and Kamchatka (Petropavlovsk, 1 ♂), Kasparyan leg.

***Atractodes bicolor arcticus* Holmgren, 1872**

This subspecies has been found in Finnish, Swedish, Norwegian and Russian Lapland, and Greenland.

New records from Russia: Murmansk region (3 ♂♂ and 1 ♀ 24–25.VII.1974) and Polar Ural (Vorkuta, 1 ♂ 12.VIII.1972), Kasparyan leg.

***Atractodes cylindraceus* sp. n.**

The holotype female was found in Sweden, Vb: Kronlund, Hällnäs from a marshy meadow at the river Vindelälven 3.IX.1977, A. Nilsson leg. (coll. R. Jussila, Paattinen). 4 paratype ♀♀ and 2 paratype ♂♂ 6. and 12.VIII.1977, 1 paratype ♂ 14.X.1976 have been found in the same place (A. Nilsson leg.), and one paratype ♀ in Upl: Söderfors 2.IX.1980, K. Müller leg. (coll. Jussila).

Holotype female: Length about 5.0 mm. Head polished, punctured on frons and cheek; temple not narrowed behind compound eyes; head, seen from above, cubic; temple equally broad; genal carina straight; occipital carina rounded on its middle part; malar space about $0.8 \times$ width of mandible; clypeus only slightly convex, polished and punctured, with median 0.3 of its apical margin somewhat swollen, width about $2.3 \times$ its length; upper tooth of mandible a little longer and wider than lower tooth; compound eye with long hairs; flagellum with 19 flagellomeres, length-to-thickness ratios: 2nd flagellomere about 2.1, 3rd 2.0, 5th 1.6, 7th 1.5, 10th 1.3 and penultimate about 1.2; the apical flagellomeres spherical. Thorax cylindrical (length:height about 2.0); mesoscutum polished with some shallow punctures, notaulus reaching about 0.2 the distance to scutellum; mesopleuron polished with some shallow punctures, slightly rough around caudal part of sternaulus; propodeum rugulose with distinct carinae, median area a little broadened in its middle part with distinct transverse striae, length about $2.5 \times$ its width, no apophysis or crest, propodeal spiracle small. In fore wing 3rs-m present and 2m-cu with two bullae; in hind wing abscissa of Cu between M+Cu and cu-a somewhat postfurcal. Length of hind femur about $3.8 \times$ its width, tarsal claws longer than arolium, rather thin and sharply curved (Fig. 1a). Metasoma fairly long, in lateral view rather acute apically, seen from above compressed from segment 2 to apex; apex of segment 1, seen laterally, distinctly curved, length of postpetiole about $1.2 \times$ its width, tergite 1 shining, carinae weak; tergite 2 polished, its length about $1.35 \times$ its width; the other tergites and hypopygium without punctures.

Black; brown to dark brown on apical ridge of clypeus, antenna, tegula and pterostigma yellow to yellowish on scape, pedicel, palpi, mandible

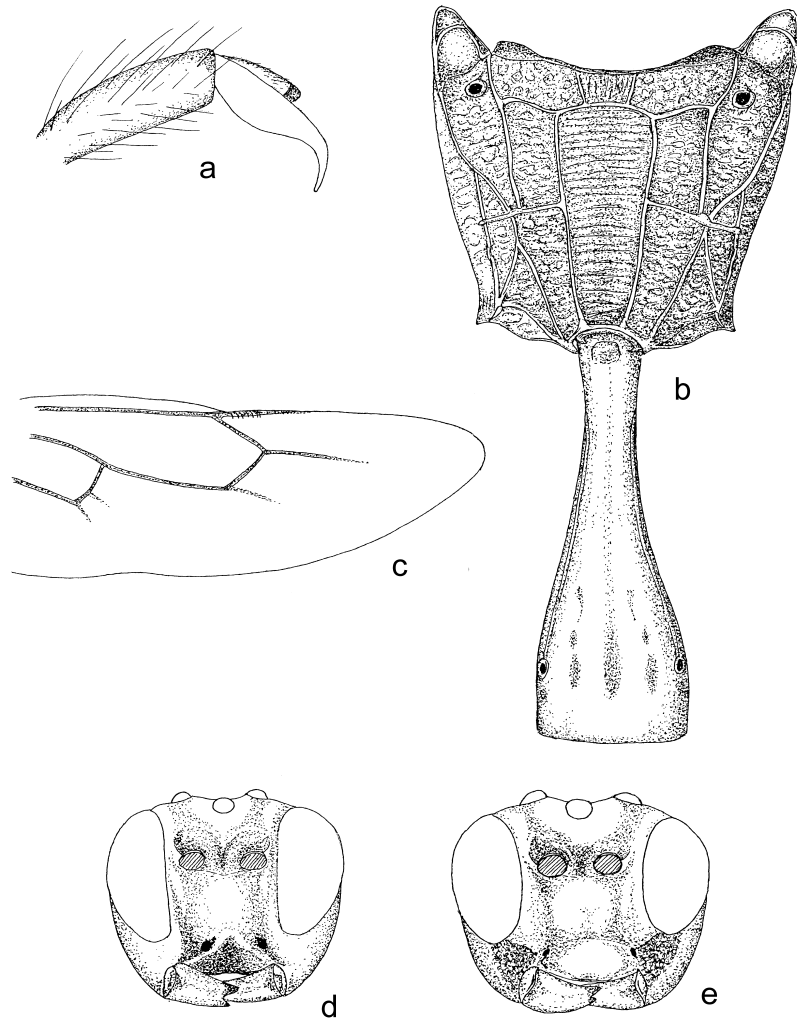


Fig. 1. — a. Apex of left hind leg of *Atractodes cylindraceus* sp. n., in sinistro-lateral view (holotype). — b. Propodeum and 1st metasomal segment of *A. magnus* sp. n., in dorsal view (holotype). — c. Right hind wing of *A. kasparyani* sp. n. (holotype). — d. Head of *A. foveoclypeatus* sp. n. (holotype). — e. Head of *A. kasparyani* sp. n. (holotype).

except for brown teeth and metasoma except for black tergite 1 (tergites from 2 to apex partly yellowish brown). Legs brownish yellow, brown on basal part of hind coxa.

The paratype females resemble exactly the holotype but the mesopleuron can be somewhat more punctured around the sternaulus. The length:width of the postpetiole varies from 1.1 to 1.2 and the length of the whole insect from 4.2 to 6.2 mm.

Male: Length about 4.0 mm. Head, thorax and tergites of metasoma resemble those of the female. Flagellum with 19 flagellomeres, length to thickness ratios: 2nd and 3rd flagellomeres 2.8–3.2, 5th 1.8–2.0, 7th 1.7–2.0, 10th 1.1–1.2 and penultimate 1.2–1.3, the apical flagellomeres not spheri-

cal. Length of postpetiole about $2.0 \times$ its width.

The coloration resembles that of the female but the metasoma is somewhat darker.

A. cylindraceus may easily be distinguished from the similar species *A. obsoletor* Zetterstedt, *A. pusillus* Foerster and *A. tenuipes* Thomson by its cylindrical thorax and by its thicker flagellomeres (see the descriptions of these three species in Jussila 1979).

***Atractodes fumatus* Haliday, 1839**

Atractodes fumatus Haliday, 1839: 119, ♀.

Exolytus cinctus Foerster, 1876: 59, ♂; holotype ♂

(Foerster described it erroneously as ♀): Germany, Aachen (coll. Munich), junior synonym of *Atractodes fumatus* Foerster.

About the other synonyms, see Jussila (1979, 1994).

This species has earlier been recorded from Finland (southern and central districts), Sweden, Norway, Denmark, Russia, Germany, Austria, Hungary, Eire, Italy, Bulgaria, Greece and the U.S.A. New countries are Lithuania (Jurbarkas, Kasparyan leg.), Poland (altogether 3 ♂♂ and 20 ♀♀ from many places, Sawoniewicz *et al.* leg.), the Netherlands (2 ♀♀ from Nijmegen Oude Wuul 21.VII.1977. G. van Rossem leg.), United Kingdom (1 ♂ and 7 ♀♀ from various places in England and Scotland, coll. Edinburgh), France [bred from field collected puparia developing in bovine excreta; the host was *Hylemya strenua* (Robineau-Dwesvoidy), Dipt., Anthomyiidae, H. Hoyer leg.], Croatia (1 ♀ from Dunovici 11.VI.1919, coll. DEI, Eberswalde), Byelorussia (Kasparyan leg.), Ukraine (the Carpathians, Kasparyan leg.), Georgia (Kazbegi, Kasparyan leg.), Armenia (Dilizhan, Kasparyan leg.), Azerbaijan (Kakhi, Kasparyan leg.) and Uzbekistan (Bukhara region, Karakul reservation, Kasparyan leg.). The species is Holarctic.

New records from Russia: Volgograd and Ural (Nizhniy Tagil), Kasparyan leg.

Atractodes gilvipes Holmgren, 1860

One ♂ has been found in Estonia (Saare, Ohesaare Pank 11.VI.1996, R. Jussila leg.) and 2 ♀♀ in Ukraine (Carpathians 7.VII.1989, Kasparyan leg.). The species is new to Estonia and Ukraine. It has already been recorded from Finland (in the whole of the country), Sweden, Norway, Russia, Poland, United Kingdom, Germany, Austria, Hungary, France and Bulgaria.

New records from Russia: the Murmansk region (1 ♂ and 1 ♀ 17–25.VII.1974), Novgorod region (3 ♀♀ 13–14.VI.1992, Tobias leg.), “Smolensk poozer’e” National Park (1 ♀ 11.VI.1993), Arkhangelsk region (Emtsa, 1 ♂), Novgorod region (Tychino near Pestovo, 1 ♀), Polar Ural (Seida, 2 ♀♀ and 9 ♀♀ 11–13.VIII.1972), Tit-Ary, 80 km NW of Tiksi (1 ♀ 31.VII.1990), Salekhard by the Ob’ river and Enisei river (Dudinka, 3 ♀♀ 20.VIII.1972 and 1 ♀ 30.VII.1988)

and Yakutia (Yakutsk, 1 ♀ 31.VII.1990), Kasparyan leg.

Atractodes gravidus Gravenhorst, 1829

Atractodes gravidus Gravenhorst, 1829: 793, ♀.
Atractodes fraternus Foerster, 1876: 111, ♀.
Exolytus areolaris Habermehl, 1909: 636, ♀; syn. n.
Atractodes archangelicae Roman, 1913: 21, ♂.
Atractodes brevicornis Bauer, 1958: 185, ♀.

In Finland, this species has earlier been found only in Lapland. New records have been done from southern parts: *Ab*: Sauvo and Turku, *N*: Espoo, and *Ta*: Urjala (T. Brander, O. Ranin and R. Jussila leg.). It has also been found in Sweden, Russia, Latvia, Poland, United Kingdom, Germany, Austria, former Czechoslovakia, France, Hungary, Spain, Romania, Azerbaijan, China, Korea and Japan.

Atractodes magnus sp. n.

Two females have been found in Russia, Promorskij territory: the holotype 13.VIII.1992 (Sawoniewicz leg.; coll. Jussila) and the paratype 8.VIII.1992 (Sawoniewicz leg.; coll. Sawoniewicz), and one paratype ♀ from Spassk-Dal’niy (Belokobylskij leg.) (coll. St. Petersburg).

Holotype female: Length about 11.0 mm. Head shagreened on face and malar space, rest of head polished and punctured; temple not narrowed behind compound eyes; temple broadest in its middle part; genal carina moderately curved; malar space about 0.8 × width of mandible; clypeus weakly convex, polished with distinct punctures, its apical margin swollen on the median third, width about 2.0 × its length; upper tooth of mandible longer and wider than lower tooth; compound eye bare; flagellum with 19 flagellomeres, length-to-thickness ratios: 2nd flagellomere about 2.0, 3rd 1.9 5th 1.8, 7th 1.6, 10th 1.4 and penultimate about 1.2. Mesoscutum polished with distinct punctures, notaulus rather deep reaching about half the distance to scutellum; propodeum rugulose bearing distinct carinae, median area with transverse striae, its median area nearly parallel-sided but somewhat broader in its cranial part (Fig. 1b), length about 2.2 × its width, no apophy-

sis or crest, propodeal spiracle not large. In forewing 3rs-m absent and 2m-cu with one bulla; in hind wing abscissa of Cu between M+Cu and cu-a vertical. Length of hind femur about $3.6 \times$ its width; tarsal claws slender, almost $2 \times$ as long as arolium. Metasoma, in lateral view, apically acute and, cigar-shaped from above; apex of segment 1, in lateral view, distinctly curved, petiole dorsoventrally distinctly compressed, length of post-petiole about $1.0 \times$ its width; tergite 1 polished and without punctures, with three longitudinal furrows between spiracles (Fig. 1b); tergite 2 polished, length about $2.0 \times$ its width; hypopygium without punctures.

Black; brown on mandible except for its black teeth and base. Legs mainly black; fore and middle tibiae, tarsi and trochantelli are dark brown to brown.

The paratype females agree well the holotype but the mesosoma can be smoother, and the specimen from Primorskij territory 8.VIII.1992 is only about 6.0 mm long.

Male: unknown.

The species most resembles *A. fumatus* Haliday, but it is much bigger and darker and its antennae are thicker.

***Atractodes obsoletor* (Zetterstedt, 1838)**

1 ♂ and 4 ♀♀ have been found in Poland (among others from Gizycko and Ochotnica-Jaszczce, Sawoniewicz and Czechowski leg.), Bulgaria (Rhodopi 21.VI.1977, Kolarov leg.) and Yugoslavia (1 ♂ from Durmitor 18.VI.1985, M. Glavendekic leg.). The species has also been found in Russia (5 ♂♂ and 2 ♀♀ from the Murmansk region 19–24.VII.1974, 11 ♂♂ from Polar Ural: Vorkuta 13.VIII.1972 and 7 ♀♀ 8–12.VIII.1992 from Taz river in Western Siberia) and Ukraine (10 ♀♀ from the Carpathians, Vorokhta in Ivano-Frankovsk province and Bogdan in Uzhgorod province 28.VII–8.VIII.1989), Kasparyan leg. The species is new to the Russian, Ukrainian, Polish, Bulgarian and Yugoslavian faunas. It has already been recorded from Finland (sparsely throughout the country), Sweden, Norway, Denmark, Great Britain, Germany, Austria and France. This species is new to Wales (Glyn Ceiriog River Valley, 1 ♀ 23.VII.1995, R. Minney leg.).

***Atractodes pauxillus* Foerster, 1876**

This species has been found in many areas of Finland, and in Sweden, Norway, the Faroe Islands, Russia, United Kingdom, Germany, Switzerland, Eire and Spain. New records are Estonia (one ♀ from Saare, Taga laht 12.VI.1996, R. Jussila leg.) and Poland (1 ♂ and 4 ♀♀ from Łomne at Warsaw and Trcianne at Monki, Sawoniewicz leg.).

New records from Russia: Murmansk region (Kirovsk, 1 ♀ 2.VIII.1974), Polar Ural (Vorkuta, 3 ♀♀ 7.VIII.1972), Yakutia (Zhigansk, 3 ♀♀ 15–31.VII.1996) and Tit-Ary, 80 km NW of Tiksi (3 ♀♀ 15–31.VII.1991), Kasparyan leg.

***Atractodes pusillus* Foerster, 1876**

This species has been found throughout Finland and Sweden, in Norway (a new record is Spitsbergen, Ny-Alesund: 4 ♂♂ and 1 ♀ 3.VIII.2000, S. Coulson leg.), Denmark, Russia, United Kingdom, Eire, Germany, Austria, Switzerland, France, Italy, Bulgaria, Turkey and China. New records are Poland (1 ♂ and 22 ♀♀, Sawoniewicz *et al.* leg.), Spain (1 ♂ from Tredós, coll. Burjasot), Ukraine (1 ♀ from the Carpathians, near Bogdan 7.VIII.1989, Kasparyan leg.) and Yugoslavia (2 ♂♂ and 1 ♀ from Durnoi, M. Glavendekic leg.).

New records from Russia: Murmansk region (1 ♀ 24.VII.1974), St. Petersburg region (Ladoga, 2 ♂♂ and 3 ♀♀), Polar Ural (Vorkuta, 1 ♀ 11.VII.1976), W Siberia (2 ♀♀ 26.VII.1992), Yakutia (3 ♂♂ and 5 ♀♀ from Yakutsk to Tiksi 13–31.VII.1990), Transbaikalia (Chita region, 1 ♂ 14.VII.1975) and Kamchatka (Avacha river close to Petropavlovsk, 1 ♀ 27.VII.1985), Kasparyan leg.

***Atractodes ruficollis* Jussila, 1979**

This species has been found in Finland (1 ♂ from *LkE*: Sodankylä: Sompio Nature Reserve, Sompiojärvi 755:51 3.VII.1989, R. Jussila leg.), Norway (Hardangervidda) and Russia: Murmansk Prov.: Kuola, Gavrilovo), Polar Ural (Vorkuta) and Yakutia (Jussila 1979, 1993a).

***Atractodes tenuipes* Thomson, 1884**

Atractodes tenuipes Thomson, 1884: 1022.

Atractodes riparius Ruschka, 1913: 48 (Horstmann 1997: 111).

This species is new to Finland. The Finnish localities are *Ab*: Turku, *N*: Nurmijärvi and Pyhtää, *Ka*: Kotka and Vehkalahti, *St*: Huittinen, *Kb*: Lieksa, Liperi and Polvijärvi, *Om*: Haapavesi, and *Ks*: Kuusamo (A. Albrecht, R. Jussila, M. Koponen, J. Mikkola, L. Luukkonen and V.-M. Mussalo leg.).

It has also been found as a new species for Poland (4 ♂♂ and 17 ♀♀ from many places (Sawoniewicz *et al.* leg.) and Andorra (coll. Hinz). This species has already been recorded from southern and central Sweden, Russia, former Czechoslovakia, Germany and France.

Host records are *Hydroraea albipunctata* in England (Lancs, near Shaw 1963, P. Kildmose leg.), and *Calliophrys* (recte *Limnophora*) *riparia* (Fallén) (Dipt., Muscidae) in Germany: Thüringen and Westfalen (Horstmann 1997).

***Atractodes thomsoni* (Dalla Torre, 1902)**

One female has been found from Poland, Topiło at Hajnówka 9–21.X.1987, Sawoniewicz leg. The only hitherto known specimen has been the holotype from Sweden.

***Atractodes townesi* Jussila, 1983**

Atractodes thomsoni Jussila, 1979: 14; jun. prim. hom.

Atractodes townesi Jussila, 1983: 202.

One specimen has been found in Finland, *Al*: Föglö, Jyddö 668:13 23.VII.1976 (R. Jussila leg.), and 1 ♀ in Scotland, Jura Leargubrek 1984. This species is new to Finland and to the United Kingdom. It has only been recorded from Sweden (Jussila 1979, 1983).

The Finnish specimen resembles the holotype but it is smaller (length about 5.0 mm). In addition, its clypeus and metasoma are wholly black and hind coxae have no dark colour. The Scottish specimen still more closely resembles the type specimen. For the designation of the holotype, see Jussila (1979).

Subgenus *Hadratractodes* Jussila, 1979***Atractodes romani* Jussila, 1979**

One female has been found in Finland, *Tb*: Keuruu, Haapamäki 690:36 1975 (Y. Ermala leg.) and one female in Sweden, *PL*: Laisvall 2.VIII.1972 (L. Huggert leg.). This species is new to the Finnish fauna. It has been recorded only from Sweden (Jussila 1979). The two specimens entirely resemble the holotype.

***Atractodes vicinus* Foerster, 1876**

This species has already been recorded from the whole of Finland, in Sweden, Russia, the Netherlands, Belgium, Germany, Hungary and Mongolia. It is here recorded from Poland for the first time (1 ♀ from Nagoszewo at Ostrów Maz. 15–28.VII.1986, Sawoniewicz leg.).

Subgenus *Rugatractodes* Jussila, 1979***Atractodes alpinus* Foerster, 1876**

This species is rather common in northernmost Finland (from *Lk* to *Li*), but also known from *Oa*: Ilmajoki 696:27 (1 ♂), R. Jussila leg., Sweden, Norway, Russia, Germany, Austria, Switzerland, France, and Italy. New records are United Kingdom (2 ♀♀ from Scotland, coll. Edinburgh), Yugoslavia (10 ♂♂ and 1 ♀ from Durnitor Zabjak 16.VI.1988, M. Glavendekic leg.) and Mongolia (2 ♂♂ and 1 ♀ 2–7.VII.1975, Kasparyan leg.).

New records from Russia: Murmansk region (1 ♂ 15–30.VII.1974, Kasparyan leg.), Polar Ural (Vorkuta, 1 ♂ 11.VIII.1972, Kasparyan leg.), Yaroslavl' region (Gadenovo, 1 ♂ 1916, A. Shestakow leg.) and southern Ural (Ilmen. Reserv, 2 ♂♂ and Chukotka, Chaunskaya guba close to Pevek, 1 ♂ 6.VII.1970, Kasparyan leg.).

***Atractodes fennoscandicus* Jussila, 1979**

Atractodes fennoscandicus fennoscandicus Jussila, 1979: 25. ♂♀.

This species has been found in the whole of Fin-

land. It has also been found in Sweden [1 ♂ and 1 ♀ from *Dls!*: Transtrand (G. van Rossem leg.), 2 ♀♀ from Messaure and *PL*: Laisvall 2.VII.1972 (L. Huggert leg.), and 3 ♂♂ in Kvikkjokk 10–11.VII.1964 (Hinz leg.)], Norway, Russia, Germany, Austria and Italy.

A new record from Russia: Jaroslavl', Enisei river (8 ♂♂ 18.VII.1988, Kasparyan leg.).

See *A. remotus*. p. 200.

Atractodes incrassator Roman, 1926

This species has been found in the whole of Finland, in northern Sweden, Norway, Russia, Austria and Switzerland. It is here recorded from south Sweden, *Dls!*: Transtrand 1976 (G. van Rossem leg.). New records are also from Germany (1 ♂ from Einbeck, coll. Hinz) and United Kingdom (1 ♂ from Scotland, Enterlen Buon, coll. Edinburgh).

New records from Russia: Murmansk region (2 ♂♂ and 2 ♀♀ 24.VII–2.VIII.1974), Polar Ural (Vorkuta, 1 ♀♀ 11.VIII.1972), Yakutia (1 ♀ 16.VII.1990), Zhigansk on Lena river and Kamchatka (1 ♀ 27.VII.1985), Kasparyan leg.

Atractodes pediophilus Foerster, 1876

Two ♀♀ have been found in Poland (Łomna Stacja at Warsaw 19.V.1987 and Kielce 14.V.1994, Sawoniewicz leg.), and 1 ♀ has been found in Austria (Salzburg 26.VI.1987, M. Schwarz leg.). The species are new to the Polish and Austrian faunas. It has also been found in Finland, Russia, Germany, Switzerland, Italy and Bulgaria. In Finland *A. pediophilus* is distributed from *Al* to *Lkk* (2 ♂♂ and 2 ♀♀ from *Lkk*: Kolari 750:37–38 30.VI–1.VII.1997, R. Jussila leg.).

New records from Russia: the Yaroslavl' region (Gadenovo, 8 ♂♂ 25.V–20.VI.1918, A. Shestakow leg.) and Transbaikalia (the Chita region, 1 ♀ 2–3.VII.1975, Kasparyan leg.).

Atractodes procerus Foerster, 1876

This species has been found rarely throughout Finland from *U* to *Li*. One ♂ has been found in

Austria, Brenner 27.VII.1960, Hinz leg., and 5 ♂♂ in Mongolia (2–7.VII.1975, Kasparyan leg.). It has also been found in Sweden, Germany and Russia.

New records from Russia: St. Petersburg (1 ♀ 2.VIII.1972) and Polar Ural: Vorkuta (1 ♀ 2–13.VIII.1972), Kasparyan leg. The female has hitherto been unknown.

Other female specimens: 1 ♀ Finland, Ka: Kotka, Mussalo 671:50 11.VI–4.VII.1998 (L. Luukkonen leg.), 1 ♀ Sweden, *Vb*: Åmsele 25.VI.1972 (L. Huggert leg.), 1 ♀ Russia, Polar Ural: Vorkuta 13.VIII.1972 (Kasparyan leg.) and 1 ♀, labelled only 86312.

Female: Length about 5.0 mm. Head shagreened and matt on face and malar space, less shagreened or ± polished on temple and cheek; temple narrowed behind compound eyes; temple broadest in its middle; malar space 1.0–1.2 × width of mandible; clypeus rather flat, punctured with smooth and polished apical margin, median 0.3 somewhat swollen, width about 2.0 × its length; upper tooth of mandible a little longer and wider than lower tooth; compound eye with very short hairs; flagellum with 17–19 flagellomeres, length-to-thickness ratios: 2nd flagellomere 2.9–3.1, 3rd about 2.8, 5th 2.2–2.3, 7th 2.0–2.1, 10th 1.8–2.0 and penultimate 1.2–1.3, apical flagellomeres not spherical. Mesoscutum polished and ± punctured, notaulus reaching about 0.3 the distance to scutellum; mesopleuron finely shagreened, like leather, speculum with its surroundings polished; propodeum rugulose and matt, bearing distinct carinae, median area parallel-sided and shagreened, length 2.8–3.0 × its breadth, no apophysis or crest, propodeal spiracle small. In fore wing 3rs-m absent and 2m-cu with one bulla; in hind wing abscissa of Cu between M+Cu and cu-a postfurcal. Length of hind femur about 5.0 × its width; tarsal claws not longer than arolium. Metasoma, in lateral view, apically acute and, seen from above, compressed from segment 3 to apex; apex of 1st segment, in lateral view, distinctly curved, cross section of petiole circular, length of postpetiole about 1.2 × its width; tergite 1 shagreened, apical margin polished, carinae rather distinct; tergite 2 obscurely shagreened with polished apex, length 2.1–2.4 × its width.

Black; brown on apical margin of clypeus and whole antenna (in the Russian specimen) to only

on its apex (in the Swedish specimen whose antenna is mainly yellowish); brownish yellow on apex of tergite 2 and base of tergite 3; yellowish on mandible except for brown teeth, and palpi. Legs yellowish; brownish on hind coxa (and hind femur in the Russian specimen).

The female resembles the male but the temple is more narrowed behind the compound eyes, the compound eyes are shortly hairy, the flagellae somewhat thickened apically and the first metasomal segment, in lateral view, more curved.

***Atractodes remotus* Jussila, 1979**

Atractodes fennoscandicus remotus Jussila, 1979: 25, ♂.

As both *A. f. fennoscandicus* and *A. f. remotus* have been found in the same places they cannot belong to the same species. *A. remotus* is, therefore, given species rank.

2 ♂♂ have been found in Finland: *Obs*: Ii, Seljanperä 724:42 2.VII.1997 (shore vegetation, R. Jussila leg.) and *Lkk*: Kolari, Ylläs 750:38 30.VI.1997 (a grove of Varkaankuru, Jussila). The species is new to the Finnish fauna. It has already been recorded from Norway, Russia, Germany, Austria and Italy. A new record is Sweden (1 ♂ from Kiruna 18.VII.1964, Hinz leg.).

New records from Russia: Western Siberia, Taz river (many specimens, also ♀♀) and Enisei river, Turukhansk (8 ♂♂ 19.VII.1988), Kasparyan leg. The female sex has been hitherto unknown.

Female: Length 5.0–6.0 mm. Head wholly shagreened and ± matt; temple somewhat rounded behind compound eyes; genal carina straight, occipital carina rounded in its middle part, malar space about 0.2 × width of mandible; clypeus rather flat, punctured and shagreened, with smooth and polished apical margin, median 0.2 of clypeal margin somewhat swollen, width 2.0–2.2 × its length; upper tooth of mandible longer and wider than lower tooth; compound eye bare; flagellum with 17 flagellomeres, length-to-thickness ratios: 2nd flagellomere 3.0–3.1, 3rd 2.7–2.9, 5th 2.4–2.5, 7th 2.2–2.3, 10th 1.8–1.9 and penultimate about 1.5. Mesoscutum ± polished, more dull and shagreened on the caudal part between notauli, notaulus reaching about 0.5 the distance to scutellum; mesopleuron sparsely punctured and matt throughout; propodeum rugulose and matt,

with distinct carinae, median area parallel-sided, length about 3.0 × its breadth; basal transverse carina strong; propodeal spiracle small. In fore wing 3rs-m absent and 2m-cu with two bullae; in hind wing abscissa of Cu between M+Cu and cu-a postfurcal. Length of hind femur about 5.0 × its width; tarsal claws not longer than arolium. Metasoma, seen from side, apically slightly acute, seen from above, compressed from segment 3 to apex; apex of 1st segment, seen from side, clearly curved, cross section of petiole oval; length of postpetiole 1.4–1.5 × its width; tergite 1 rugulose-punctured and matt; longitudinal carinae not distinct; tergite 2 obscurely shagreened with polished apical margin, length 1.4–1.6 × its width; hypopygium without punctures.

Black; brownish to yellowish brown on palpi and pterostigma; brownish yellow to orange on mandible except brown teeth and base, and tergite 3 except for black apical margin. Legs brownish yellow; base of middle and hind coxae dark.

The female is similar to the male but it is a little larger (length of the male about 4.0 mm), and the male has 18 flagellomeres.

Subgenus *Asyncrita* Foerster, 1876

***Atractodes acuminator* Roman, 1909**

1 ♂ and 1 ♀ have been found in Denmark (eastern Jylland, Horsted 21–25.VII.1976, K. Munk leg.), 2 ♂♂ and 3 ♀♀ in Poland (Hamnerna at Warsaw, G. Świątokryszkie and Pieniny, Sawoniewicz *et al.* leg.), 1 ♂ in Great Britain (Norfolk 6–16.VIII.1980, M. R. Shaw leg.) and 4 ♀♀ in Ukraine (the Carpathians 26.VII–9.VIII.1990, Kasparyan leg.). It has been found throughout Finland. It has been recorded from Sweden, Norway, Russia, Germany, Austria, Italy and Moldova.

New records from Russia: Archangelsk region (Emtsa), Murmansk province (Onega, 4 ♂♂ and 6 ♀♀ 15–30.VII.1974), Polar Ural (Vorkuta), Yakutia (1 ♀ 8.VII.1990) and Transbaikalia (Chita region, 1 ♀ 2–3.VII.1975), Kasparyan leg.

***Atractodes albovinctus* Haliday, 1839**

1 ♂ and 3 ♀♀ have been found in the Netherlands

(G. van Rossem leg.). The species has already been recorded from Sweden, Denmark, Russia, United Kingdom, Belgium, Germany, Austria, Italy and Azerbaijan.

***Atractodes ambiguus* Ruthe, 1859**

1 ♀ has been found in Bulgaria 20.VII.1980 (Kolarov leg.) and 5 ♀♀ in Ukraine: the Carpathians 7–27.VII.1989 (Kasparyan leg.). This species is new to the Bulgarian and Ukrainian faunas. It has already been recorded from Finland (mainly in the northern parts), northern Sweden, Norway, Denmark, Iceland, Russia, United Kingdom, Germany, Switzerland, Austria, Italy, U.S.A. and Canada. The species is Holarctic.

New records in Russia: Novgorod region (Pestovo, 1 ♀ 1.VII.1991, V. Tobias leg.), Yakutia (Tit-Ary, 80 km NW of Tiksi, 1 ♀ 23.VII.1990, Kasparyan leg.), Chukotka (Chaunskaya guba close to Pevek, 1 ♀, Kasparyan leg.), and Kamchatka, Kozyrevsk (2 ♀♀ 16.VII.1985 Kasparyan leg.)

***Atractodes angustipennis* Foerster, 1876**

This species has been found in Finland (throughout the country), Sweden, Norway, Russia, Poland, United Kingdom, Eire, Belgium, Germany, Switzerland, Austria, France, Italy, Spain, Bulgaria, USA and Canada. A new record is Byelorussia (Pripyat' river) (Kasparyan leg.). The species is Holarctic.

New records in Russia: Murmansk region (1 ♂ and 1 ♀ 17–22.VII.1974), "Smolensk poozer'e" National Park (2 ♂♂ and 3 ♀♀ 12.VII–1.VIII.1978) and Yartsevo on Enisei river (1 ♀ 15.VII.1988), Kasparyan leg.

***Atractodes assimilis* Foerster, 1876**

2 ♀♀ have been found in Scotland (St. Kilda, coll. Edinburgh) and 2 ♀♀ in Bulgaria (Rhodopi 22.VII.1979, Kolarov leg.). The species has already been recorded from Finland (the southern and central parts), Sweden, Norway, Poland, Belgium, Germany, Switzerland, Bulgaria and Turkey.

***Atractodes croceicornis* Haliday, 1839**

This species has been found in Estonia, Saaremaa (2 ♂♂ 13.VI.1996, M. Koponen leg.), Poland (6 ♂♂, Sawoniewicz leg.), the Netherlands (numerous ♂♂ and ♀♀, G. van Rossem leg.), Byelorussia (Pripyat', Kasparyan leg.), Spain (1 ♂ and 2 ♀♀ from Tredós and Valdelindres, coll. Burjasot), Yugoslavia (1 ♀, M. Glavendekic leg.) and Mongolia (1 ♂ 2–3.VII.1975, Kasparyan leg.). *A. croceicornis* is the most common species in the Western Palaearctic Region: it has already been recorded from Finland (throughout the country), Sweden, Norway, Denmark, Russia, Poland, Czech Republic, United Kingdom, Eire, Belgium, Germany, Switzerland, Austria, Hungary, France, Italy, Bulgaria and Japan.

New records in Russia: Murmansk region (1 ♂ 19.VI.1974), "Smolensk poozer'e" National Park (2 ♀♀ 10–14.VI.1973), Yaroslavl', Ural (Nizhniy Tagil, 1 ♀), Enisei river (Krasnoyarsk, 4 ♀♀ 15–28.VII.1988), Transbaikalia, Chita region (2 ♂♂ 2.VIII.1975) and Kamchatka, Kozyrevsk (3 ♀♀ 17.VII.1985), Kasparyan leg.

***Atractodes cryptobius* Foerster, 1876**

This species has been recorded from Finland (throughout the country but more commonly in the south), Sweden, Norway, Denmark, Russia, Poland, United Kingdom, Eire, Germany, Austria, Hungary and Italy. A new country is the Netherlands (1 ♂ and 1 ♀ from Ede, G. van Rossem leg.).

***Atractodes designatus* (Foerster, 1876)**

5 ♂♂ and 14 ♀♀ have been found in Poland (Beskid, Kielce and Koluszki, Sawoniewicz leg.), 1 ♀ in France (Valais 8.VIII.1967, J.-F. Aubert leg.), 3 ♀♀ in Ukraine (the Carpathians 26.VII–8.VIII.1985, Kasparyan leg.) and 1 ♀ in Mongolia (9.VII.1970, Kasparyan leg.). This species is new to the Polish, French, Ukrainian and Mongolian faunas. It has been found also throughout Finland and Sweden, in Norway, Russia, Germany, Austria, Switzerland and Italy.

New records from Russia: St. Petersburg (2 ♀♀

15.VI.1991), Murmansk region (5 ♂♂ and 5 ♀♀ 19–25.VII.1974), Polar Ural, Vorkuta (3 ♂♂ and 1 ♀ 11–13.VII.1972), Khabarovsk territory (*ex Hylemia* on *Larix*) and Kamchatka (Atlasovo and Kozyrevsk, 3 ♀♀ 10.VII.1985), Kasparyan leg. It has also been found in the Yaroslavl' region (3 ♂♂ and 2 ♀♀ 9.VII.1916 and 2–31.V.1918).

Atractodes exilis Haliday, 1839

This very common species has been found throughout Finland and Sweden, in Norway, Russia, Latvia, Poland, Czech Republic, United Kingdom, Eire, the Netherlands, Belgium, Germany, Switzerland, Austria, Hungary, Italy, Spain, Bulgaria and Greenland. New records are Yugoslavia (1 ♂ from Durmitor 17.VIII.1986, M. Glavendekic leg.), Ukraine (8 ♀♀ from the Carpathians 26.VII–21.VIII.1989, Kasparyan leg.) and Armenia (2 ♀♀ from Dilizhan 21.VII.1982, Kasparyan leg.).

New records from Russia: Murmansk region (Kirovsk, 15 ♂♂ and 2 ♀♀), Polar Ural (Vorkuta, 3 ♀♀ 22.VII–2.VIII.1972), Yaroslavl' (Enisei river, 2 ♀♀ 19–28.VII.1988), "Smolensk poozer'e" National Park (2 ♂♂ and 12 ♀♀ 10–14.VI.1973) and Kamchatka (3 ♀♀ 17.VII.1985), Kasparyan leg.

Atractodes exitialis exitialis Foerster, 1876

This subspecies has been recorded from southern and central Finland, in Sweden, Norway, Russia, Germany, Switzerland, Austria and Italy. New records are Poland (3 ♀♀ from Chylice at Jaktorów, Sawoniewicz leg.) and United Kingdom (1 ♂ from Scotland, Sutherland: Achfary 10–31.VII.1982, D. Hofield leg.).

Atractodes exitialis alpigena Foerster, 1876

This subspecies has been found in Finnish (the southernmost district is *Ks*: Kuusamo) and Swedish Lapland, the Norwegian fjelds, NW Russia, and in the Alps of Germany, Switzerland, Austria and Italy. It favours clearly cooler regions than *A. e. exitialis*.

Atractodes ficticius (Foerster, 1876)

Exolytus ficticius Foerster, 1876:57, ♂; holotype ♂ (Foerster described it erroneously as ♀): Switzerland, Ponteresina in Oberengadin (coll. Munich), senior synonym of *Atractodes genuinus* Foerster.

Atractodes genuinus Foerster, 1876: 143, ♂; holotype ♂: Germany, Lousberg (coll. Munich).

Atractodes funebris Foerster, 1876: 158, ♂, holotype ♂: Switzerland, Splügen (coll. Munich).

Atractodes ebeninus Foerster, 1876: 170, ♂; holotype ♂: Germany, Lousberg (coll. Munich).

Atractodes major Roman, 1909: 226, ♀; holotype ♀: Sweden, *Lul*: Rapadalen in Sarek (coll. Stockholm).

One female specimen has been found in Estonia, Saare: Rahuste 11.VI.1996 (R. Jussila leg.) as a new species to the Estonian fauna. It has already been recorded from Finland (throughout the country), northern Sweden, Norway, Denmark, north-west Russia, Germany, Switzerland, Austria and Italy.

Atractodes foveoclypeatus sp. n.

The holotype and paratype specimens (♂♂) have been found in Bulgaria, Rhodopi 21.VI.1978, Kolarov leg. (coll. R. Jussila, Paattinen).

Female: unknown.

Holotype male: Length about 5.0 mm. Head polished, distinctly punctured on face, shagreened on frons and malar space; temple narrowed behind compound eyes; temple broadest in its middle; genal carina straight; occipital carina rounded in middle part; malar space about $0.8 \times$ width of mandible; clypeus not convex but strongly concave inwards and clypeal suture lacking (Fig. 1d), it is polished with distinct punctures, width about $2.0 \times$ its length; upper tooth of mandible distinctly longer and wider than lower tooth; compound eye bare; flagellum with 18 flagellomeres; length-to-thickness ratios: 2nd flagellomere about 2.7, 3rd 2.3, 5th 2.2, 7th 2.0, 10th 1.9 and penultimate about 1.8, tyloids on flagellomeres 9–11. Mesoscutum polished and shallowly punctured, notaulus reaching about 0.5 the distance to scutellum; mesopleuron polished; propodeum rugulose, bearing distinct carinae, median area broader in its cranial part, rugulose, length about $2.0 \times$ its width, no apophysis or crest, propodeal spiracle small. In forewing 3rs-m present and 2m-cu with two

bullae; in hind wing abscissa of Cu between M+Cu and cu-a slightly postfurcal. Length of hindfemur about $4.5 \times$ its width; claws rather thick, not longer than arolium. Metasoma, in lateral view, apically rounded, apex of segment 1, in lateral view, slightly curved, cross section of petiole oval, length of postpetiole about $1.35 \times$ its width; tergite 1 rather shagreened, carinae distinct, tergite 2 polished, length about $0.9 \times$ its width.

Black; brown on apical part of antenna and pterostigma; yellowish on proximal part of antenna, mandible (except for brownish teeth), palpi, hind corner of pronotum, tegula and metasoma (except for black petiole, basal and lateral parts of postpetiole and apical margins of tergites 3–8). Legs yellowish.

The paratype male exactly resembles the holotype but it is smaller (length about 4.0 mm) and its tergites 4–8 are wholly black.

Atractodes foveoclypeatus is easily recognisable by its peculiar clypeus.

Atractodes foveolatus Gravenhorst, 1829

This species has been found throughout Finland and Sweden, in Norway, north-western Russia, Poland, United Kingdom, the Netherlands, Germany, Austria, France, Azerbaijan Turkey and Japan. New records are Greece (1 ♂ from Corfu 24.IV.1994, M. Koponen leg.) and Ukraine (1 ♀ from the Carpathians 27.VII.1989, Kasparyan leg.).

New records in Russia: Novaya Zemlya (Matochkin Shar, 1 ♀) and Enisei river (Krasnoyarsk, 2 ♀♀ 7.VII.1988), Kasparyan leg.

Atractodes holmgreni Roman, 1918

3 ♂♂ and 5 ♀♀ and one have been found in Poland (Gdansk 9.VIII.1988, Nagoszewo at Ostrów Maz. 28.VII–12.VIII.1986, Łomna 19.X.1984 and 10.VIII.1984, Sawoniewicz and G. Świątokrzyskie leg.), Ukraine (1 ♀ from the Carpathians 19.VII.1989, Kasparyan leg.) and Armenia (from Dilizhan 3 ♀♀ 21.VII.1984, Kasparyan leg.). Earlier it has been recorded from southern and central Finland (the northernmost district is *Ob*: Pudasjärvi), Sweden, Germany and Russia.

Atractodes kasparyani sp. n.

A female (the holotype) has been found in Russia, 50 km NW Labytnangi, Sob' river 8.VII.1994, Kasparyan leg. (coll. R. Jussila, Paattinen).

Holotype female: Length about 6.5 mm. Head polished, punctured on face and cheek, beyond malar space largely shagreened (Fig. 1e); temple somewhat narrowed behind compound eyes, temple broadest in its middle; genal carina very slightly curved; occipital carina rounded in its middle part; malar space about $0.9 \times$ width of mandible; clypeus rather flat, polished, with large punctures, median 0.3 of its margin swollen, width of clypeus about $2.0 \times$ its length; upper tooth of mandible longer and wider than lower tooth; compound eye scattered hairy; flagellum with 18 flagellomeres, length-to-thickness ratios: 2nd flagellomere about 4.0, 3rd 3.5, 5th 2.75, 10th 2.25 and penultimate about 1.2. Mesoscutum polished with punctures, notaulus deep; mesopleuron polished and smooth except for shagreened dorso-cranial corner and punctured ventral part; propodeum wrinkled and with distinct carinae, propodeal spiracle small. In fore wing 3rs-m absent and 2m-cu with two bullae; in hind wing abscissa of Cu between M+Cu and cu-a opposite (Fig. 1c). Length of hind femur about $4.4 \times$ its width; tarsal claws broad and not longer than arolium. Metasoma basally rather thick but strongly compressed from tergite 3 to apex; 1st metasomal segment thick and broad, seen from side curved, length of petiole about $1.5 \times$ length of postpetiole, cross section of petiole oval, width of postpetiole about $1.0 \times$ its length; tergites smooth and shiny; length of tergite 2 about $1.5 \times$ its width; hypopygium without punctures.

Black; brownish yellow on palpi and base of antenna; orange on metasomal segments 2 to 4. Legs brownish-orange.

The species resembles *Atractodes turkuensis* but its polished head has larger punctures and a larger shagreened area on the malar space, and the compound eye is scattered hairy. The flagellomeres are longer. The metasomal tergite 1 is longer and all tergites are smooth and shiny. The colour of the legs is more brownish.

Male: unknown.

***Atractodes picipes* Holmgren, 1860**

This species has already been recorded from central and northern Finland (the southernmost district *Sa*: Valkeala), Swedish Lapland, the Norwegian fjelds, Denmark, northern Russia, former Czechoslovakia, Germany, Switzerland, Austria, Hungary, France, Italy, Bulgaria, Greenland and Canada. New records are Poland (6 ♂♂ and 5 ♀♀ from many districts, Sawoniewicz leg.), Ukraine (2 ♀♀ from the Carpathians 27.VII.1989, Kasparyan leg.), Bulgaria (8 ♂♂ and 1 ♀ from Rhodopi 1977–1978, Kolarov leg.) and Yugoslavia (1 ♀ from Durmitr 28.VII.1989, M. Glavendekic leg.).

New records in Russia: Murmansk region (1 ♂ 24.VII.1974), the Novgorod region (Tychino near Pestovo, 1 ♂ and 1 ♀), Polar Ural (Vorkuta, 1 ♂ and 1 ♀ 11–13.VII.1972), Yakutia (Zhigansk, 3 ♀♀ 16–30.VII.1990), Tit-Ary, 80 km NW of Tiksi, and Kamchatka (Avacha close to Petropavlovsk-Kamchatkiy, 2 ♂♂ and 5 ♀♀ 26–27.VII.1985), Kasparyan leg.

***Atractodes podagricus* Roman, 1909**

Three ♂♂ have been found in Sweden, Kiruna 3.VIII.1986, Hinz leg. This species has been found only in northern Sweden and Russia.

***Atractodes rossicus* sp. n.**

One female specimen (the holotype) has been collected in Russia, Tisul' (Tomsk province, 70 km SE Mariinsk) 2–4.VI.1911 (Torchokovskij leg.) (coll. R. Jussila, Paattinen).

Holotype female: Length about 9.0 mm. Head shagreened on malar space, polished elsewhere, punctuate on face, cheek and temple; temple rounded behind compound eyes, temple uniformly broad; genal carina straight, occipital carina rounded in middle part; malar space about 0.6 × width of mandible; clypeus only a little convex, polished and sparsely punctuate, and with middle 0.5 of apical margin swollen, its width about 2.2 × its length; upper tooth of mandible a little longer and wider than lower tooth; compound eye bare; length-to-thickness ratios of flagellomeres: 2nd flagellomere about 3.9, 3rd 3.1, 5th 2.4, 7th 2.2 and 10th about 1.7.

Mesoscutum polished with shallow punctures; notaulus reaching about 0.3 the distance to scutellum; mesopleuron polished, ventral part somewhat shagreened; propodeum shagreened and with weak carinae, median area nearly parallel-sided but somewhat broader in its cranial part, length about 1.0 × its width, no apophysis or crest, propodeal spiracle very small (diameter = thickness of the pleural carina). In fore wing 3rs-m present and 2m-cu with two bullae; in hind wing abscissa of Cu between M+Cu slightly postfurcal. Length of hind femur about 4.2 × its width; tarsal claws not longer than arolium. Metasoma, in lateral view, apically acute, seen from above, compressed from segment 3 to apex; apex of 1st segment, seen from side, moderately curved, petiole conspicuously flattened, in the middle distinctly broader than high; length of postpetiole about 0.8 × its width; tergite 1 shagreened, carinae weak; tergite 2 basally shagreened, apically polished like the other tergites, length of tergite 2 about 1.35 × its width; hypopygium without punctures.

Black; brown on tegula and pterostigma; brownish yellow on mandible and sternites. Legs brownish yellow; black to dark brown on coxae, trochanters and hind femur.

A. rossicus female most resembles *A. exitialis* Foerster but it is much bigger (length of *exitialis* is 3.5–3.8 mm), its malar space shorter (in *exitialis* it is about 1.0 × the width of the mandible), and the median area of the propodeum and postpetiole distinctly broader (in *exitialis* the length-to-breadth ratios are 2.5 and 2.2–2.3 respectively).

Male: unknown.

***Atractodes scutellatus* (Hellén, 1944)**

One ♂ and 1 ♀ have been found in Germany, Mellum FS (16–24.VIII.1986, K. Horstmann leg.) as a new species to the German fauna. It has been recorded only from Finland and Russia (Jussila 1979).

A new record in Russia: Novaya Zemlya, Matochkin Shar (Kasparyan leg.).

***Atractodes spiraculator* Roman, 1918**

1 ♂ and 3 ♀♀ have been found in Germany, Memmert FS 16–24.VII.1985, K. Horstmann

leg.), and 2 ♀♀ in Scotland, St. Kilda 1961 (coll. Edinburgh). It has already been recorded from northern Finland, Sweden, Russia and Hungary.

Atractodes striativentris Jussila, 1979

One male specimen has been found in Sweden, Kvikkjokk 10.VII.1964 (Hinz leg.), one ♀ in Russia, Murmansk region 22.VII.1974 (Kasparyan leg.) and one ♂ in Bulgaria, Rhodopi 2.VII.1978 (Kolarov leg.). This species is new to the Swedish, Russian and Bulgarian faunas. It has been recorded only from Finland (Jussila 1979).

Atractodes turkuensis Jussila, 1979

Some ♂♂ and ♀♀ have been found in Finland, Ta: Janakkala 676:38 from the swamp Suurisuo 26.V.1997 (V. Vikberg leg.). The male sex was hitherto unknown. 1 ♀ has also been found in Poland (Jussila 1986).

Male: Length about 6.5 mm. Head shagreened on face and malar space, more obscurely on frons, polished elsewhere; temple very little narrowed behind compound eyes, temple broadest in its middle; genal carina straight; occipital carina rounded in its middle part; malar space about 1.0 × width of mandible; clypeus rather flat, shagreened, median 0.3 of its apical margin swollen, width about 2.0 × its length; upper tooth of mandible longer and wider than lower tooth; compound eye bare; flagellum with 21 flagellomeres, length-to-thickness ratios: 2nd flagellomere about 3.25, 3rd 2.8, 5th 2.25, 10th 1.2 and penultimate about 1.25. Mesoscutum fairly polished with very shallow punctures, notaulus deep, reaching about 0.5 the distance to scutellum; mesopleurum smooth and polished except for slightly rugulose dorso-cranial corner and shagreened ventral part; propodeum wrinkled, carinae distinct, median segment parallel-sided, transversely wrinkled, no apophysis or crest, propodeal spiracle small. In fore wing 3rs-m absent and 2m-cu with two bullae; in hind wing abscissa of Cu between M+Cu and cu-a somewhat antefurcal. Length of hind femur about 4.25 × its width; tarsal claws broad and not longer than arolium. Metasoma apically truncate; segment 1 thick and broad, seen from side,

strongly curved, length of petiole about 1.4 × length of postpetiole, cross section of petiole oval, width of postpetiole about 1.2 × its length; tergite 1 longitudinally shagreened except for smooth and polished apical margin; tergite 2 basally somewhat shagreened and apically polished, its length about 0.9 × its width (measured apically).

Black; dark brown on pterostigma, brownish yellow on palpi, dark orange on tergites 2 and 3. Legs dark orange, dark brownish to brownish on coxae and trochanters.

This species (together with *A. kasparyani* sp. n.) is easily recognisable by its very short petiolar segment.

Subgenus *Cyclaulatractodes* Jussila, 1979

Atractodes alutaceus Thomson, 1884

3 ♀♀ have been found in Russia, Turukhansk, birch forest by the Enisei river 19.VII.1998 and 1 ♀ in Russia, Labytnangi by the Ob' river 3.VII.1994 (Kasparyan leg.). This species has also been found in Finland, Sweden, and the Netherlands.

Atractodes helveticus (Foerster, 1876)

Exolytus helveticus Foerster, 1876: 57 ♂; holotype ♂ (Foerster described it erroneously as ♀): Switzerland, Ponteresina in Oberengadin (coll. Munich), a senior secondary homonym of *Atractodes helveticus* Foerster and a new senior synonym of *A. oreophilus* Foerster.

Atractodes oreophilus Foerster, 1876: 124, ♀; holotype ♀: Switzerland, Samaden (coll. Munich).

Atractodes helveticus Foerster, 1876: 132, ♂; holotype ♂: Switzerland, Splügen (coll. Munich), a junior secondary homonym of *Exolytus helveticus* Foerster.

One ♀ has been found in Poland, Świętokryskie in 1983 (Sawoniewicz leg.), and eastern Kazakhstan (Tarbagatay), Kasparyan leg. The species is new to the Polish and Kazakhstania faunas. It has already been recorded throughout Finland and Sweden, in Norway, Russia, Czech Republic (Bohemia), United Kingdom, Eire, Germany, Austria, Switzerland, France and Italy.

In Russia it has been found also at Enisei river (1 ♀ 28.VII.1988, Kasparyan leg.).

***Atractodes punctator* Roman, 1909**

This species has been found throughout Finland (from *N*: Helsinki to *Le*: Kilpisjärvi). 4 ♂♂ and 6 ♀♀ have been found in Scotland from various places (coll. Edinburgh). 1 ♂ and 2 ♀♀ were collected in Germany (Einbeck, coll. Hinz), Austria (3 ♂♂ and 3 ♀♀ from Brenner, coll. Hinz), Ukraine (from the Carpathians, Kasparyan leg.). It has also been found in Sweden, Norway, Russia, Poland and Italy.

New records in Russia: Murmansk region (3 ♂♂ 17.VII.1974), Moscow, Ural (Ilmen reservation), Enisei river (Turukhansk, 1 ♂ 17.VII.1988), Transbaikalia (Chita region, 3 ♂♂ 3.VII.1975), and Northern Caucasus (Teberda, 1 ♀ 22.VII.1989), Kasparyan leg.

Summary

In summary I will list the species of *Atractodes* that are new to various countries.

- Andorra: *A. tenuipes* Thomson.
- Armenia: *A. arator* Haliday, *A. exilis* Haliday, *A. fumatus* Haliday and *A. holmgreni* Roman.
- Austria: *A. pediophilus* Foerster.
- Azerbaijan: *A. fumatus*.
- Bulgaria: *A. ambiguus* Ruthe, *A. foveoclypeatus* sp. n., *A. obsoleto* (Zetterstedt), *A. picipes* Holmgren and *A. striativentris* Jussila.
- Byelorussia: *A. angustipennis* Foerster, *A. croceicornis* and *A. fumatus*.
- Croatia: *A. fumatus*.
- Denmark: *A. acuminator* Roman.
- Estonia: *A. croceicornis* Haliday, *A. ficticius* (Foerster), *A. gilvipes* Holmgren and *A. pauxillus* Foerster.
- Finland: *A. alpestris* Roman, *A. remotus* Jussila, *A. romani* Jussila, *A. tenuipes* and *A. townesi* Jussila.
- France: *A. designatus* (Foerster) and *A. fumatus*.
- Germany: *A. incrassator* Roman, *A. punctator* Roman, *A. scutellatus* (Hellén) and *A. spiraculator* Roman.
- Georgia: *A. fumatus*.
- Greece: *A. foveolatus* Gravenhorst.
- Kazakhstan: *A. helveticus* (Foerster).

- Lithuania: *A. fumatus*.
- Mongolia: *A. alpestris*, *A. alpinus* Foerster, *A. croceicornis*, *A. designatus* and *A. procerus* Foerster.
- The Netherlands: *A. albovinctus* Haliday, *A. croceicornis*, *A. cryptobius* Foerster and *A. fumatus*.
- Poland: *A. acuminator*, *A. arator*, *A. designatus*, *A. e. exitialis* Foerster, *A. fumatus*, *A. helveticus*, *A. holmgreni*, *A. obsoleto*, *A. pauxillus*, *A. pediophilus*, *A. picipes*, *A. pusillus* Foerster, *A. tenuipes*, *A. thomsoni* (Dalla Torre) and *A. vicinus* Foerster.
- Russia: *A. alutaceus* Thomson, *A. arator*, *A. kasparyani* sp. n., *A. magnus* sp. n., *A. obsoleto*, *A. rossicus* sp. n. and *A. striativentris*.
- Spain: *A. pusillus*.
- Sweden: *A. cylindrator* sp. n., *A. remotus* Jussila and *A. striativentris*.
- Ukraine: *A. ambiguus*, *A. acuminator*, *A. arator*, *A. b. bicolor* Gravenhorst, *A. designatus*, *A. exilis*, *A. foveolatus*, *A. fumatus*, *A. gilvipes*, *A. holmgreni*, *A. obsoleto*, *A. picipes*, *A. punctator* and *A. pusillus*.
- United Kingdom: *A. acuminator*, *A. alpinus*, *A. assimilis* Foerster, *A. e. exitialis*, *A. fumatus*, *A. incrassator*, *A. punctator* and *A. townesi*.
- Uzbekistan: *A. fumatus*.
- Yugoslavia: *A. alpinus*, *A. croceicornis*, *A. exilis*, *A. obsoleto*, *A. picipes* and *A. pusillus*.

Renewed key to the females of the Palaearctic species of *Atractodes*

1. Wings dark *nigripennis* Hellén
— Wings clear 2
2. Wings short, not useful for flight . *brevipennis* Jussila
— Wings fully developed 3
3. Propodeal spiracle large: its diameter greater than basal breadth of hind metatarsus (Fig. 2a). Antenna very thick (length of 5th flagellomere about 1.2 × its thickness). Tarsal claws not long *spiraculator* Roman
— Propodeal spiracle not so large (Fig. 3i). Antenna in general thinner 4
4. Antenna with a white band. Propodeum with distinct apophyses. Length 5.0–8.0 mm . *albovinctus* Haliday
— Antenna without a white band 5
5. Mesoscutum with dense and coarse punctation. Notaulus very short 6
— Mesoscutum with sparse and fine punctation. Notaulus long and distinct 8

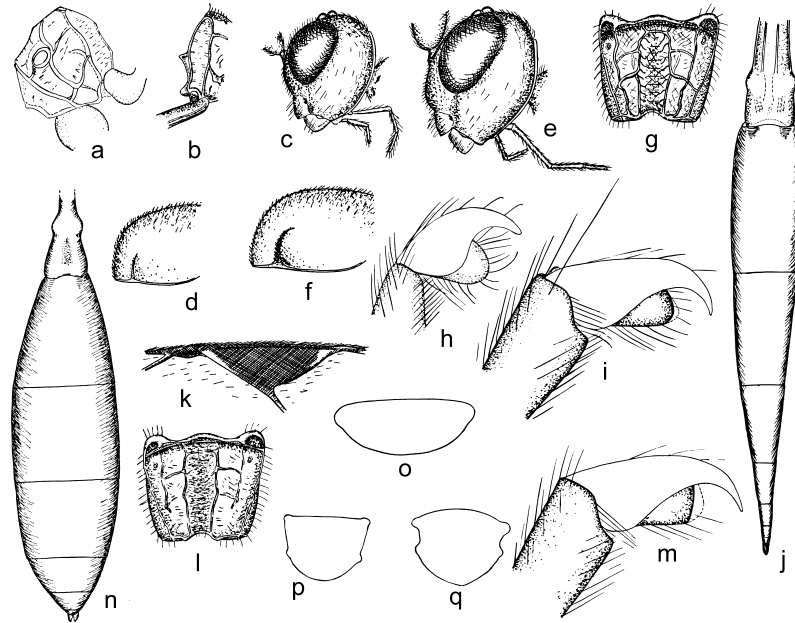


Fig. 2. — a. *Atractodes spiraculator* Roman. Propodeum, in sinistro-lateral view (♀, holotype). b. *Atractodes albovinctus* Haliday. A part of propodeum, in dextro-caudal view (♂, labelled "F 7/8"). c–d. *Atractodes holmgreni* Roman. — c. Head, in sinistro-lateral view (♀, holotype). — d. Mesoscutum, in sinistro-lateral view (♀, holotype). e–k. *Atractodes croceicornis* Haliday. — e. Head, in sinistro-lateral view (♀ from Finland, Ab: Naantali). — f. Mesoscutum, in sinistro-lateral view (♀ from Naantali). — g. Propodeum, in dorsal view (♀ from Finland, Kb: Koli). — h. Apex of left hind leg, in sinistro-lateral view (♀ from Aachen). — i. Same (♂ from Finland, Oa: Mustasaari). — j. Metasoma, in dorsal view (♀ from Utsjoki). — k. Stigma of right front wing (♂ from Finland, Oa: Sulva). l–m. *Atractodes ficticius* (Foerster). — l. Propodeum, in dorsal view (♀ from Utsjoki). — m. Apex of left hind leg, in sinistro-lateral view (♂, holotype). n. *Atractodes cryptobius* Foerster. Metasoma, in dorsal view (♂ from Finland, Ab: Sauvo). o–q. Cross-section of petiole. — o. *Atractodes alutaceus* Thomson (♀, lectotype). — p. Same (♂, allotype). — q. *Atractodes punctator* Roman (♀, holotype). — Figures originally published in 1979 in Acta Entomol. Fennica 34: 1–44.

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| <p>6. A small species: length 3.5–4.0 mm. Mesosoma and metasoma very finely and densely punctured, shagreened like leather. Median area of propodeum punctured and matt. Cross-section of petiole dorsally flattened (Fig. 2o)..... <i>alutaceus</i> Thomson
 — Larger species: length 7.0–8.0 mm. Mesosoma strongly and coarsely punctate (distance between punctures = at least their diameter). Median area of propodeum shining with transverse carinulae. Cross-section of petiole dorsally convex (Fig. 2q)..... 7</p> <p>7. Mesoscutum and mesopleuron rather coarsely punctured (distance between punctures = their diameter). Speculum small..... <i>helveticus</i> (Foerster)
 — Mesoscutum and mesopleuron sparsely punctured (distance between punctures longer than their diameter). Speculum large..... <i>punctator</i> Roman</p> <p>8. Mesopleuron strongly shagreened. Compound eye with at most sparsely and short hairy..... 9
 — Mesopleuron not shagreened. Compound eye sometimes densely and long hairy..... 16</p> | <p>9. Mesopleuron distinctly punctured.....
 <i>pediophilus</i> Foerster
 — Mesopleuron not distinctly punctured..... 10</p> <p>10. Metasoma apically long and strongly compressed, its apex (from segment 3 onwards) more than 2.5 × length of 2nd segment (Fig. 4b). Mesopleuron coarsely sculptured only in its ventral half..... <i>acuminator</i> Roman
 — Apex of metasoma distinctly shorter and less compressed. Mesopleuron more extensively coarsely sculptured..... 11</p> <p>11. A large and robust species: length 9.5–10.0 mm. Tarsal claws thick, longer than arolium. Metasoma stout, cigar-shaped (Fig. 5l). Propodeum very coarsely sculptured with indistinct carinae..... <i>robustus</i> Roman
 — Smaller species: length at most 8 mm. Tarsal claws as long as arolium. Metasoma compressed apically (Fig. 5m). Surface and shape of propodeum as usual..... 12
 12</p> <p>12. Mesopleuron finely shagreened, like leather..... 13
 — Mesopleuron more strongly shagreened..... 15</p> |
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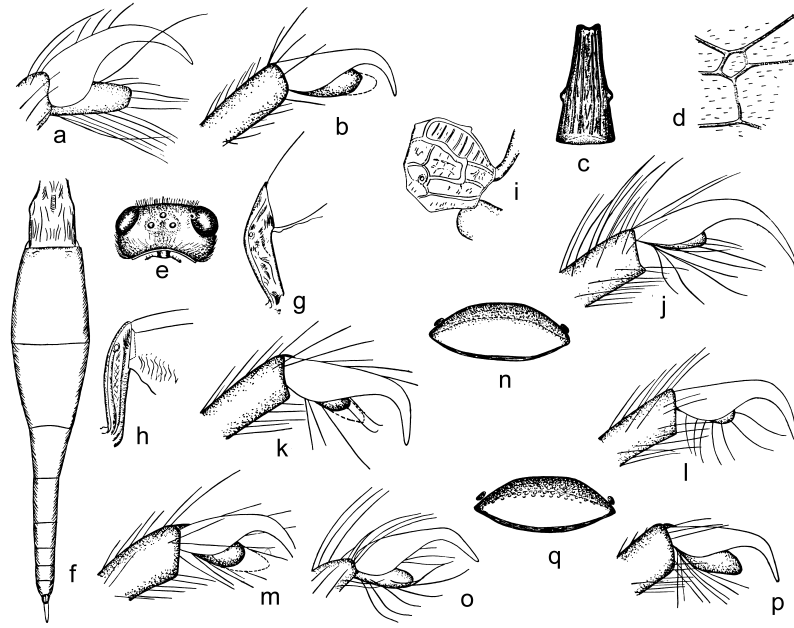


Fig. 3. a–c. *Atractodes gravidus* Gravenhorst. — a. Apex of left hind leg, in sinistral view (♀ from Sweden, Torne Lappmark). — b. Same (♂ from Russia, Moscow). — c. Petiolar segment, in dorsal view (♂ from Moscow). d–e. *Atractodes fumatus* Haliday. — d. A part of right fore wing (♀ from Aachen). — e. Head, in dorsal view (♂ from Aachen). f–g. *Atractodes alpestris* Roman (♀, holotype). — f. Metasoma, in dorsal view. — g. Petiolar segment, in sinistral view. h. *Atractodes townesi* Jussila. Petiolar segment, in sinistral view (♀, holotype). i–k. *Atractodes arator* Haliday. — i. Propodeum, in sinistral view (♀ from Sweden, Östergötland). — j. Apex of left hind leg, in sinistral view (♀ from Östergötland). — k. Same (♂ from Sweden, Skåne). l–n. *Atractodes gilvipes* Holmgren. — l. Apex of left hind leg, in sinistral view (♀, lectotype). — m. Same (♂ from Sweden, Rodga). — n. Clypeus (♂ from Rodga). o–q. *Atractodes bicolor* Gravenhorst. — o. Apex of left hind leg, in sinistral view (♀ from the Austria, Seisser Alps). — p. Same (♂ from Aachen). — q. Clypeus (♂ from Aachen). — Figures originally published in 1979 in Acta Entomol. Fennica 34: 1–44.

13. Dorsal part of mesopleuron and speculum polished. Pterostigma brownish yellow except for transparent basal and apical corners. Metasoma medially dark orange. Length 5.0–7.0. mm *procerus* Foerster
- Mesopleuron including speculum entirely finely shagreened and matt. Pterostigma lighter. Length 4.0–4.5 mm 14
14. In fore wing 3rs-m present and 2m-cu with one bulla. Basal flagellomeres shorter (length-to-thickness ratios: 2nd 1.9–2.1, 3rd 2.0–2.3, 5th 1.8–2.0, 7th 1.6–1.8, 10th 1.5–1.6 and penultimate about 1.2). Mesopleuron ± matt. Basal transverse carina of propodeum less strong *fennoscandicus* Jussila
- 3rs-m absent and 2m-cu with two bullae. Basal flagellomeres longer (length-to-thickness ratios 3.0–3.1, 2.7–2.9, 2.4–2.5, 2.1–2.3 and 1.8–1.1). Mesoscutum ± polished. Basal transverse carina stronger *remotus* Jussila
15. Median area of propodeum coarsely sculptured and matt. Antenna thicker (length of 7th flagellomere at most 1.8 × its thickness). Pterostigma broad (Fig. 5n) *alpinus* Foerster
- Median area of propodeum with transverse carinulae. Antenna thinner (length of 7th flagellomere at least 2.0 × its thickness). Pterostigma narrower (Fig. 5o) *incrassator* Roman
16. Hind femur very thick: length about 2 × its breadth. Hind tarsus more than 2 × as long as tibia *podagricus* Roman
- Hind femur more slender. Hind tarsus less than 2 × as long as tibia 17
17. Flagellum apically thickened (thickness of last flagellomere at least 1.5 × thickness of 1st segment; Fig. 5j); length of 3rd flagellomere about 2 × its thickness. Metasomal segment 2 shorter than wide 18
- Flagellum not so club-shaped (thickness of last flagellomere at most 1.3 × thickness of 1st flagellomere. Metasomal segment 2 longer than wide 19
18. Last flagellomere the thickest. Face shagreened, ± matt *vicinus* Foerster

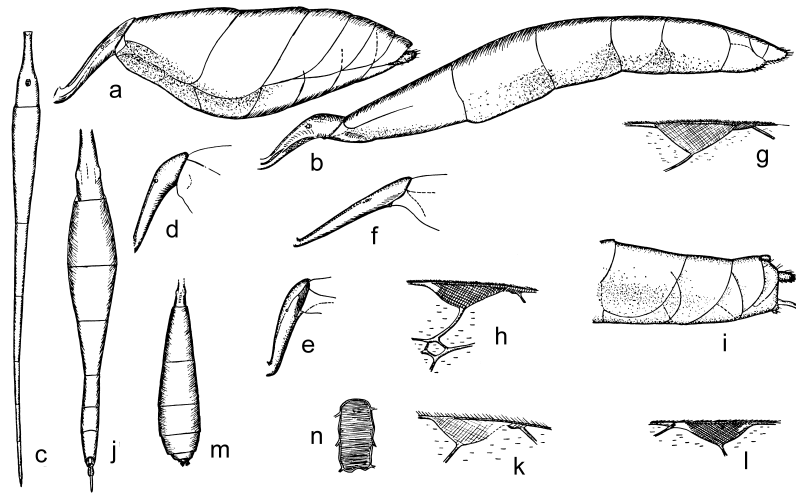


Fig. 4. a–b. Metasoma, in sinistral view. — a. *Atractodes picipes* Holmgren (♀, holotype). — b. *Atractodes acuminator* Roman (♀, lectotype). c–e. *Atractodes foveolatus* Gravenhorst. — c. Metasoma, in dorsal view (♀ from Finland, *Oa*: Vaasa). — d. Petiolar segment, in sinistral view (♀, lectotype). — e. Same (♂ from Vaasa). f. *Atractodes designatus* (Foerster). Petiolar segment, in sinistral view (♂ from Finland, *Ob*: Tornio). g. *Atractodes vicinus* (Foerster). Stigma of left front wing (♀ from Aachen). h–j. *Atractodes ambiguus* Ruthe. — h. A part of left fore wing (♀ from Sweden, Torne Lappmark). — i. Apex of metasoma, in sinistral view (♀ from Torne Lappmark). — j. Metasoma, in dorsal view (♀ from Torne Lappmark). k. *Atractodes exitialis exitialis* Foerster. Stigma of left fore wing (♀, holotype). l–m. *Atractodes exitialis alpigena* Foerster. — l. Stigma of right fore wing (♂, holotype). — m. Metasoma, in dorsal view (♂ from Finland, *Li*: Utsjoki). n. *Atractodes assimilis* Foerster. Median segment of propodeum (♂ from Germany, Eupen). — Figures originally published in 1979 in *Acta Entomol. Fennica* 34: 1–44.

- Flagellomeres 10–12 the thickest. Face punctured and polished *romani* Jussila
- 19. Tarsal claws longer than arolium, narrow and apically as if stretched (Fig. 1a, and Figs. 3a, j, l, o, 5f, i). Antenna wholly dark. Apical flagellomeres ± spherical 20
- Tarsal claws as long as arolium or very little longer, thicker (Fig. 2h). Apical flagellomeres not spherical 36
- 20. Length-to-thickness ratio of 10th flagellomere at most 1.0 and that of 2nd flagellomere at most 2.0. Postpetiole broader than or as broad as long. In hind wing abscissa of Cu between M+Cu and cu-a opposite to slightly antefurcal. Length 5.5–7.0 mm *gravidus* Gravenhorst
- Flagellomeres distinctly longer and thinner 21
- 21. Orange on pronotum, mesonotum, mesopleuron and scutellum *ruficollis* Jussila
- Mesosoma wholly black (sometimes yellowish on hind corner of pronotum) 22
- 22. In fore wing 3rs-m absent and 2m-cu with one bulla (Fig. 3d). Tarsal claws longer than 4th segment of hind tarsus. Compound eye bare. Tegula black 23
- 2m-cu with two bullae. Tarsal claws at most as long as 4th segment of hind tarsus. 24
- 23. Wholly black. Flagellum thick (e.g. length of 2nd flagellomere about 2.0 and 10th about 1.4 × thickness). Mesopleuron with distinct punctures. Length about 11.0 mm *magnus* sp. n.
- Metasoma and legs greatly light. Flagellum thinner (e.g. length of 2nd flagellomere 3.6–4.0 and 10th 1.7–2.1 × thickness). Mesopleuron without punctures. Length 4.5–6.0 mm *fumatus* Haliday
- 24. 1st metasomal tergite broad, both shagreened and streaked, matt; postpetiole as broad as or broader than long. Apical flagellomeres almost cubical: length 1.1–1.2 × its thickness 25
- 1st metasomal tergite smooth and shining or (in larger specimens) at most very obscurely shagreened; in general, postpetiole and apical flagellomeres narrower (some specimens of *A. pusillus* have broad postpetioles, but their first tergite is not coriaceous or shagreened, and some specimens of *A. bicolor* have thick apical segments, but they have a punctured hypopygium) 26
- 25. 1st metasomal tergite, seen from side, fairly straight and flat (Fig. 3h). Sculpturing of it and of propodeum rather fine. Tegula light. In fore wing 3rs-m present. Metasoma, seen from above, cigar-shaped *townesi* Jussila
- 1st metasomal tergite, seen from above, strongly curved and high (Fig. 3g). Sculpturing of it and of propodeum very coarse. Tegula black. 3rs-m absent. Apex of metasoma, seen from above, compressed (Fig. 3f)

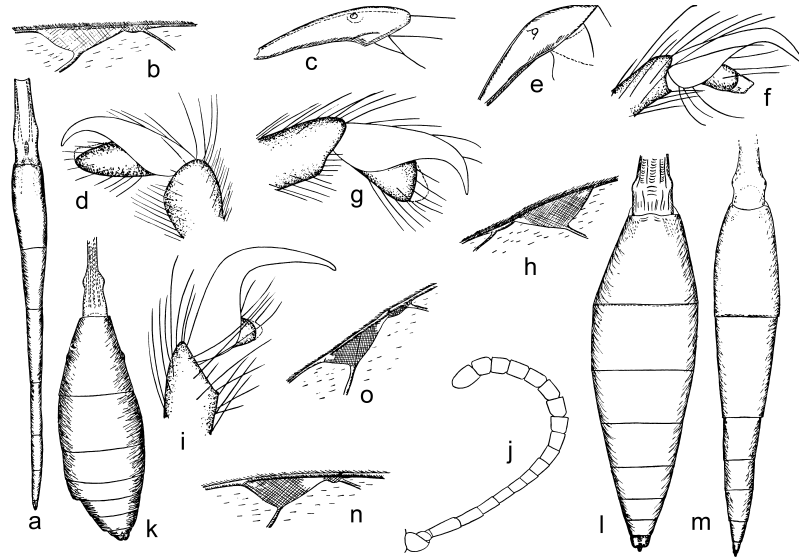


Fig. 5. — a. *Atractodes lapponicus* Jussila. Metasoma, in dorsal view (♀, holotype). b–d. *Atractodes obsoleto* (Zetterstedt). — b. Stigma of left front wing (♀ from Aachen). — c. Petiolar segment, in sinistro-lateral view (♀ from Aachen). — d. Apex of right hind leg, in dextro-lateral view (♂ from Germany, Rheinhardstein). e. *Atractodes pauxillus* Foerster. Petiolar segment, in sinistro-lateral view (♀, holotype). f–h. *Atractodes pusillus* Foerster. — f. Apex of left hind leg, in sinistro-lateral view (♀ from Sweden, “Ör tofta”). — g. Apex of left hind leg, in sinistro-lateral view (♀, holotype). — h. Stigma of left fore wing (♀, holotype). i. *Atractodes tenuipes* Thomson. Apex of left hind leg, in sinistro-lateral view (♀, holotype). j–k. *Atractodes vicinus* Foerster. — j. Left antenna (♀ from Sweden, Pålsjö). — k. Metasoma, in dorsal view (♂ from Sweden, Kimstod). l. *Atractodes robustus* Roman. Metasoma, in dorsal view (♀, holotype). m–n. *Atractodes alpinus* Foerster. — m. Metasoma, in dorsal view (♀, holotype). — n. Stigma of left fore wing (♂ from Germany, Lousberg). o. *Atractodes incrassator* Roman. Stigma of left fore wing (♂ from Finland, Li: Utsjoki). — Figures originally published in 1979 in Acta Entomol. Fennica 34: 1–44.

- *alpestris* Roman
- 26. Metasoma strongly compressed from tergite 2 onwards but not longer than hind leg (Figs. 5a and 6) 27
- Metasoma shorter and thicker or longer than hind leg (as in Figs. 2j and 4j) 28
- 27. Hind coxa long: length, seen from below, about 2.5 × its breadth; length of hind femur about 6.4 × its breadth. Flagellomeres long (e.g. 1st about 5.0, 10th 2.4 and penultimate about 2.0 × longer than thick). Clypeus, coxae, trochanters, and middle and hind femora black *lapponicus* Jussila
- Hind coxa not so long: length, seen from below, about 1.8 × its breadth; length of hind femur about 2.8 × its breadth. Flagellomeres not so long (e.g. 1st about 3.5, 10th 1.8 and penultimate about 1.1 × longer than thick). Clypeus partly and legs wholly light *thomsoni* Dalla Torre
- 28. Tarsal claws long and weakly curved, with thin base (Fig. 3j). Femora and tibiae red; base of hind tibia black. Carinae of propodeum very strong. Tegula black. 1st metasomal tergite strongly curved near its middle. Length 7.0–8.0 mm *arator* Haliday
- Tarsal claws more strongly curved, with broader base (Fig. 3l). Hind tibia not red with its black base. Carinae of propodeum weaker. Tegula light to dark. 1st metasomal tergite different. Length 7.0–8.0 mm 29
- 29. Length of 2nd flagellomere at least 4.4 × its thickness. Metasoma most often wholly black. 3rs-m of fore wing present. Hind coxa ventrally shagreened and matt. Compound eye hairy *gilvipes* Holmgren
- Length of 2nd flagellomere at most 3.9 × its thickness 30
- 30. Hypopygium punctured. 3rs-m of fore wing present .. *bicolor* Gravenhorst
- Hypopygium not punctured 31
- 31. Compound eye bare or with some short hairs 32
- Compound eye with long hairs 34
- 32. Metasoma longer than hind leg, knife-like compressed. Pterostigma broad (Fig. 4g) *fittoni* Jussila
- Metasoma shorter. Pterostigma narrower (as in Fig. 4h) 33
- 33. 1st metasomal tergite, seen from side, fairly straight (Fig. 5c). Penultimate flagellomere short: length about 1.0 × thickness. Hind coxa ventrally matt. Mesopleuron

- and sternaulus (especially its hind part) with coarse sculpture *obsoletor* (Zetterstedt)
- 1st metasomal tergite, seen from side, more curved (Fig. 5e). Penultimate flagellomere longer: length about $1.2 \times$ its thickness. Hind coxa ventrally coarsely punctured. Mesopleuron nereby sternaulus coarsely sculptured *pauxillus* Foerster
- 34. Length-to-thickness ratio of 10th flagellomere at most 1.2 and that of penultimate at most 2.1. Thorax cylindrical (length : height at least 2.4)
..... *cylindraceus* sp. n.
- Length-to-thickness ratio of 10th flagellomere at least 2.0 and that of penultimate at least 2.8. Thorax normal 35
- 35. Hind tarsal claws shorter, apical part shorter than basal part (Fig. 5f). Metasoma most usually wholly dark. Length 3.5–4.5 mm *pusillus* Foerster
- Hind tarsal claws longer, apical part as long as basal part (Fig. 5i). Metasoma medially reddish to yellowish. Length about 5.0–5.5 mm *tenuipes* Thomson
- 36. Metasoma longer than hind leg, strongly compressed (Fig. 4c). Pterostigma broad (as in Fig. 4g) 37
- Metasoma shorter and thicker. Pterostigma narrower (like in Figs. 5b, 4k and 2k) 39
- 37. 1st metasomal tergite, seen from side, strongly curved (Fig. 4d). Petiole narrow, not broader than high. Postpetiole a little longer than broad with a long median groove *foveolatus* Gravenhorst
- 1st metasomal tergite, seen from side, \pm straight (Fig. 4f). Petiole broader than high. Postpetiole about twice as long broad, smooth or with 1–3 small pits 38
- 38. Temple not narrowed behind compound eyes. Flagellomeres 1 and 2 equally long. Scutellum normal. 4th segment of hind tarsus about $2 \times$ as long as thick. Clypeus black *designatus* (Foerster)
- Temple distinctly narrowed behind compound eyes. 1st flagellomere longer than 2nd. Scutellum raised. 4th segment of hind tarsus more than $2 \times$ as long as thick. Apical margin of clypeus \pm light *scutellatus* (Hellén)
- 39. Apex of metasoma truncate (Fig. 4i); tergites 4 to 7 long, 8 usually not visible (Fig. 4j). Mesopleuron indistinctly punctured, but partly shagreened, e.g. around sternaulus. Compound eye bare. In fore wing 3rs-m present (Fig. 4h). Antenna wholly dark; legs \pm black; metasoma black, at most medially lighter
..... *ambiguus* Ruthe
- Apex of metasoma more pointed (if truncate, tergites 4 to 6 short) 40
- 40. All coxae and femora wholly, tibiae and tarsi \pm black; metasoma often black, at most medially brown. Compound eye with elongate conspicuous hairs, distance between them shorter than their length, which is at least half of length of hairs on vertical orbit and more than half of diameter of ocellus (in older specimens the hairs can be worn off). 1st metasomal tergite fairly flat and only weakly curved. Apex of metasoma acute (Fig. 4a). Mesopleuron most often wholly and strongly punctured except for smooth speculum. Length 4.5–5.0 mm



Fig. 6. *Atractodes thomsoni* (Dalla Torre) (♀, holotype of *Atractodes rufipes* Thomson). Metasoma, in dorsal view. Figure originally published in *Contr. Amer. Entomol. Inst.* 20: 201–204.

- *picipes* Holmgren
- Legs lighter, at most middle and hind coxae and femora \pm dark. Other characters not as in above combination 41
- 41. Metasoma long and strongly compressed; its apex (from segment 3 onwards) more than $2.5 \times$ length of 2nd segment (Fig. 4b). Mesopleuron shagreened in its ventral half. Metasoma black, in its middle slightly brown to brownish yellow *acuminator* Roman
- Apex of metasoma distinctly shorter and less compressed, black. Mesopleuron smooth and punctured. .
..... 42
- 42. Metasoma black to brown. Compound eye bare. Length 3.0–9.0 mm 43

- Metasoma medially orange to brownish yellow. Compound eye often hairy. Length 4.5–9.0 mm 46
43. Median area of propodeum rough. Length of 2nd flagellomere 3.8–4.0 × its thickness. In fore wing 3rs-m usually present 44
- Median area of propodeum with transverse carinulae. Length of 2nd flagellomere 3.3–3.5 × its thickness. 3rs-m usually absent 45
44. Length about 9.0 mm. Malar space about 0.6 × width of mandible. Median area of propodeum and postpetiole broad (length-to-breadth ratios about 1.0 and 0.8, respectively) *rossicus* sp. n.
- Length 3.5–5.8 mm. Malar space about 1.0 × width of mandible. Median segment of propodeum and postpetiole narrower (ratios about 2.5 and 2.2–2.4, respectively) *exitialis* Foerster
45. Length 3.0–3.5 mm. Length of hind femur 4.5–4.7 × its breadth. 2m-cu of fore wing with one bulla *assimilis* Foerster
- Length 5.0–5.1 mm. Length of hind femur about 5.7 × its breadth. 2m-cu with two bullae. *faroensis* Roman
46. 1st metasomal segment short and broad: postpetiole about 1.0 × as broad as long, and petiole at most 1.5 × as long as postpetiole 47
- 1st metasomal segment longer and narrower 48
47. Petiole only 1.35 × as long as postpetiole. Compound eye bare. Flagellum shorter (length of 2nd flagellomere about 3.7, 5th 1.8 and 10th about 1.5 × its thickness) *turkuensis* Jussila
- Petiole about 1.5 × as long as postpetiole. Compound eye with scattered hairs. Flagellum thicker (length of 2nd flagellomere about 4.0, 5th 2.75 and 10th about 2.25 × its thickness) *kaspariani* sp. n.
48. Mesopleuron shiny, not punctured, or at most with some shallow punctures below speculum. Metasoma, seen from above, with curving to straight sides. Length about 5 mm 49
- Mesopleuron not very shiny, ± punctured (throughout, although often coarsely, or only in dorso-cranial part below fore wing), punctures rather deep. Metasoma with ± curving sides (Fig. 2j). Length 5–7 mm 51
49. Metasoma broader, more strongly compressed from segment 3 onwards; length 2nd tergite at most 2.5 × its width. 1st tergite rather curved *angustipennis* Foerster
- Metasoma narrower, more strongly compressed from segment 2 onwards; length of 2nd tergite at least 2.6 × its width. 1st tergite fairly straight 50
50. Length 5.0–5.5 mm. Notaulus reaching about 0.3 the distance to scutellum. Propodeum slightly shagreened with distinct carinae *exilis* Haliday
- Length about 9.0 mm. Notaulus rather deep, reaching about 0.45 the distance to scutellum. Propodeum fairly strongly shagreened, only basal and apical transverse carinae and median longitudinal carina partly distinct *klinckowstroemi* Roman
51. Mesopleuron strongly and evenly punctured. Antenna wholly yellowish (seldom apically brownish yellow); coxae yellowish to orange (hind coxa sometimes ± dark). 1st metasomal tergite polished 52
- Mesopleuron at least centrally not (or sparsely) punctured. Antenna at least apically dark; coxae black 53
52. Flagellum with 21–23 flagellomeres, length of 2nd flagellomere 2.9–3.3 × its thickness. Notaulus shallow, reaching 0.2–0.3 the distance to scutellum. Propodeum shagreened with a strong apical transverse carina forming short apophyses. Length of hind femur 4.5–5.6 × its width. Tergite 1 with distinct longitudinal carinae, length-to-width ratio of postpetiole about 1.0 and that of 2nd tergite 1.7–2.0. Metasoma black, medially dark orange *cryptobius* Foerster
- Flagellum with 18 flagellomeres, length of 2nd flagellomere about 3.6 × its thickness. Notaulus deep, reaching about 0.4 the distance to scutellum. Propodeum rather polished, with apical transverse carina indistinct. Length of hind femur about 3.2 × its width. Tergite 1 without longitudinal carinae, length-to-width ratio of postpetiole about 1.6 and that of 2nd tergite about 2.7. Metasoma wholly dark orange *cultellator* Haliday
53. Basal flagellomeres of antenna orange. 3rs-m of fore wing ± present. Notaulus weak (Fig. 2d). Temple broadest in its oral part, genal carina straight (Fig. 2c) *holmgreni* Roman
- Base of antenna at least dorsally dark. 3rs-m absent. Notaulus strong (Fig. 2f). Temple broadest medially, genal carina S-shaped (Fig. 2e) 54
54. Median area of propodeum ± polished and transversely shagreened or wrinkled, parallel-sided or slightly broadened in its middle, and dorsally rounded; carinae on propodeum distinct, apical transverse carina strong (Fig. 2g). 1st metasomal tergite ± polished *croceicornis* Haliday
- Median area of propodeum matt and rough, parallel-sided and rectangular in dorsal view (Fig. 2l); carinae of propodeum indistinct, apical transverse carina not strong. 1st metasomal tergite ± shagreened and dull *ficticius* (Foerster)

Renewed key to the males of the Palearctic species of *Atractodes*

1. Wings dark *nigripennis* Hellén
- Wings clear 2
2. Clypeus strongly depressed inwards (Fig. 1d), clypeal suture lacking *foveoclypeatus* sp. n.
- Clypeus not depressed inwards, clypeal suture distinct 3
3. Propodeal spiracle large: its diameter greater than basal breadth of fore metatarsus (as in Fig. 2a). Antenna very thick (length of 5th flagellar flagellomere about 2.0 × its thickness). Tarsal claws not long *spiraculator* Roman
- Propodeal spiracle not so large (as in Fig. 3i). Antenna in general thinner 4

4. Mesoscutum with dense and coarse punctation. Notaulus very short 5
 — Mesoscutum with sparse and fine punctation. Notaulus long and distinct 8
5. A small species: length 3.5–4.0 mm. Thorax and metasoma very finely and evenly punctured, shagreened like leather. Median area of propodeum punctate and matt. Cross section of petiole dorsally flattened (Fig. 2p) *alutaceus* Thomson
 — Larger species: length 6–8 mm. Thorax strongly and coarsely punctured (distance between punctures at most their diameter). Median area of propodeum with transverse striae and shiny. Cross section of petiole dorsally convex (as in Fig. 2q) 6
6. Apical transverse carina of propodeum high, forming a crest or \pm distinct apophyses (Fig. 2b). Length of 2nd metasomal tergite = its width. A rather large and robust species: length 6.0–8.0 mm *albovinctus* Haliday
 — Apical transverse carina low, not forming a crest or apophyses. Length of 2nd metasomal tergite 1.1–1.5 \times its width Slightly smaller and slender species: length 6.0–7.5 mm. 7
7. Mesoscutum and mesopleuron rather coarsely punctured (distance between punctures = their diameter). Speculum small *helveticus* (Foerster)
 — Mesoscutum and mesopleuron sparsely punctured (distance between punctures larger than their diameter). Speculum large *punctator* Roman
8. Mesopleuron strongly shagreened. Compound eye with at most short and sparse hairs (except for *A. picipes*).
 9
 Mesopleuron not shagreened. Compound eye sometimes with long dense hairs 16
9. Surface of compound eye bearing elongate conspicuous hairs. Legs wholly black (or tibiae lighter); also metasoma black *picipes* Holmgren
 — Surface of compound eye at most with sparse pubescence. Legs lighter 10
10. Mesopleuron also strongly punctured
 *pediophilus* Foerster
 — Mesopleuron not strongly punctured 11
11. Mesopleuron finely shagreened, like leather 12
 — Mesopleuron more strongly coarse 14
12. Speculum and its surroundings polished. Pterostigma dark. Length 5.5–7.0 mm *procerus* Foerster
 — Speculum wholly finely shagreened and matt. Pterostigma light. Length 4.0–4.5 mm 13
13. In fore wing 3rs-m present and 2m-cu with one bulla. Basal flagellomeres shorter (length-to-thickness ratios: 2nd 2.2–2.5, 3rd 2.2–2.4 and 5th 2.1–2.4). Mesoscutum less polished. Basal transverse carina of propodeum less strong *fennoscandicus* Jussila
 — 3rs-m absent and 2m-cu with two bullae. Basal flagellomeres longer (length-to-thickness ratios: 2nd 2.8–3.2, 3rd 2.8–3.0, 5th 2.3–2.9). Mesoscutum more polished. Basal transverse carina stronger
 *remotus* Jussila
14. Mesopleuron coarsely sculptured only in its ventral half. A slender species, with length-to-width ratio of 2nd flagellomere at least 3.4 and that of 2nd metasomal tergite at least 2.0 *acuminator* Roman
 — Mesopleuron more extensively sculptured. More robust species, with length-to-width ratio of 2nd flagellomere less than 2.6 and that of 2nd metasomal tergite at most 2.0 15
15. Median area of propodeum coarsely sculptured and matt. Antenna thick (length of 7th flagellomere at most 2.0 \times its thickness). Pterostigma broad (Fig. 5n)
 *alpinus* Foerster
 — Median area of propodeum with transverse striae. Antenna thinner (length of 7th flagellomere at least 2.5 \times its thickness). Pterostigma narrower (Fig. 5o)
 *incrassator* Roman
16. 1st metasomal segment very broad, postpetiole wider than long, shining and with longitudinally striae (Fig. 3c). 2nd flagellomere 2 \times as long as thick and 10th flagellomere almost square (length = about 1.2 \times its thickness). Median segment of propodeum wide, broadest in middle, \pm polished in its centre and with transverse striae. Tarsal claws a little longer than arolium, apically sharp (Fig. 3b)
 *gravidus* Gravenhorst
 — 1st metasomal segment narrower, postpetiole longer than broad (or as long as broad in *A. alpestris*). Flagellomeres in general thinner 17
17. 2m-cu of fore wing with one long bulla (Fig. 3d). Hind tibia with black base; tarsal claws apically slender, longer than arolium. Compound eye bare; temple not to moderately rounded behind compound eyes (Fig. 3e); antenna without distinct tyloids. Length 4.5–5.5 mm
 *fumatus* Haliday
 — 2m-cu with two bullae (small specimens have sometimes one bulla, but they are distinguished by shorter bulla or by temple narrowing behind compound eyes or by hind tibia without black base) 18
18. Tarsal claws longer than arolium, narrow and apically as if stretched (Figs. 3k, m, p; it should be noted that the claws are not so long in many males as in the females) 19
 — Tarsal claws broader and \pm as long as arolium (Figs. 2i, m, 5d, g) 26
19. Tarsal claws only a little longer than arolium (Figs. 5d, g) 38
 — Tarsal claws distinctly longer than arolium (Figs. 3k, m, p) 20
20. Tegula and hind corner of pronotum \pm light 21
 — Tegula dark, pronotum wholly black 23
21. Orange on mesoscutum, scutellum, pronotum and mesopleuron *ruficollis* Jussila
 — Mesoscutum, scutellum, pronotum (except for hind corner) and mesopleuron black 22
22. Clypeus higher (breadth at most 2.5 \times its height), upper edge distinctly more convex than lower edge, rather polished with large punctures on its upper part (Fig. 3q). Tarsal claws less sharply bent (Fig. 3p). Length 5.0–6.5 mm *bicolor* Gravenhorst

- Clypeus more transverse (breadth at least $2.5 \times$ its height), upper edge as convex as lower edge, more shagreened with smaller punctures on its upper part (Fig. 3n). Tarsal claws not so sharply bent (Fig. 3m). Length 4.0–5.0 mm *gilvipes* Holmgren
23. Hindtarsal claws strongly bent (as in Fig. 5i). Hind leg (and parts of the others) dark. Carination of propodeum normal 24
- Hindtarsal claws less bent (Fig. 3k). Hind tibia with dark base. Carination of propodeum very strong... 25
24. Metasoma rather broad, length of 2nd tergite at most $1.4 \times$ its width and 3rd tergite wider than long (Fig. 5k). Dorsomedian carina of 1st tergite distinct *vicinus* Foerster
- Metasoma narrower, length of 2nd tergite at least $1.8 \times$ its width and 3rd tergite longer than wide. Dorsomedian carina of 1st tergite less distinct.... *tenuipes* Thomson
25. Femora basally dark. Length of 2nd flagellomere about $2.2 \times$ its breadth *alpestris* Roman
- Femora basally light. Length of 2nd flagellomere about $3.5 \times$ its breadth *arator* Haliday
26. 1st metasomal segment short and broad; postpetiole about $1.2 \times$ as broad as long and petiole only $1.4 \times$ as long as postpetiole *turkuensis* Jussila
- 1st abdominal segment longer and narrower 27
27. Apical transverse carina of propodeum high, forming a crest or \pm distinct apophyses (Fig. 2b). A large and robust species: length 7.0–8.0 mm, and length of 2nd metasomal tergite = its width *albovinctus* Haliday
- Apical transverse carina low, nor forming a crest or apophyses. Length 3.0–8.0 mm. 2nd metasomal tergite at least $1.1 \times$ as long as wide 28
28. Compound eye with elongate conspicuous hairs, distance between them smaller than their length, which is at least half of length of hairs on vertical orbit and more than half of diameter of ocellus (in older specimens the hairs can be worn off). All coxae and femora wholly black, tibiae and tarsi \pm black; metasoma also black. Mesopleuron most often wholly and strongly punctured except for smooth speculum. Length 4.5–6.0 mm..... *picipes* Holmgren
- Compound eye at most with sparse pubescence: length of hairs distinctly shorter than half of diameter of ocellus. Legs lighter (except sometimes in *A. exitialis*) 29
29. Distinct tyloids on flagellomeres 8–10; compound eye bare. Median segment of propodeum matt. 2m-cu of fore wing with one bulla, 3rs-m \pm absent. Antenna, tegula, and all femora and coxae \pm wholly dark; metasoma most often wholly black. A small species: length 3.0–4.0 mm. *pauxillus* Foerster
- Not this combination of characters 30
30. Hind femur thick: length about $4 \times$ its breadth. Hind tarsus more than $2 \times$ as long as tibia *podagricus* Roman
- Hind femur normal. Hind tarsus more than $2 \times$ as long as tibia 31
31. Median area of propodeum parallel-sided, wide (length at most $2.5 \times$ its width), matt and with transverse carinulae as in many *Mesoleptus* species (Fig. 4n). Metasoma black, medially slightly brownish yellow *assimilis* Foerster
- Length-to-width ratio of median area of propodeum at least 2.6, if ratio smaller, median area widest in the middle and/or centrally shiny 32
32. Antenna thick: length of 3rd flagellomere at most $2.2 \times$ its thickness; compound eye bare or with some hairs; 3rs-m of fore wing \pm present. Metasoma black, at most medially a little lighter 33
- Antenna thinner: length of 3rd flagellomere at least $2.5 \times$ thickness; compound eye bare (or with long hairs in *A. cylindraceus*) 36
33. Pterostigma of fore wing narrow (as in Fig. 4h). Length of 2nd metasomal tergite at most $1.2 \times$ its width *ambiguus* Ruthe
- Pterostigma broad (as in Fig. 5m). Length of 2nd metasomal tergite at least $1.8 \times$ its width 34
34. 1st metasomal segment, seen from side, strongly curved (Fig. 4e). Petiole narrow, not broader than high. Postpetiole a little longer than broad, with a long median groove *foveolatus* Gravenhorst
- 1st metasomal segment, seen from side, \pm straight (as in Fig. 4f). Petiole broader than high. Postpetiole about $2 \times$ as long as broad, smooth or with 1–3 small pits 35
35. Temple not narrowed behind compound eyes. Flagellomeres 1 and 2 equally long. Scutellum normal. 4th segment of hind tarsus about $2 \times$ as long as thick. Clypeus black *designatus* (Foerster)
- Temple distinctly narrowed behind compound eyes. 1st flagellomere longer than 2nd. Scutellum strongly raised. 4th segment of hind tarsus more than $2 \times$ as long as thick. Apical margin of clypeus light *scutellatus* (Hellén)
36. Mesopleuron \pm coarsely sculptured in its ventral half. A very slender species: length-to-width ratio of 2nd flagellomere more than 3 and that of 2nd metasomal tergite at least 2. 3rs-m of fore wing \pm absent. Metasoma black (at most medially a little lighter); antenna, tegula, middle and hind legs wholly dark. Length 5.5–6.0 mm *acuminator* Roman
- Mesopleuron coarsely sculptured and matt at most around sternaulus. More robust and/or lighter species 37
37. Tarsal claws rather long and narrow with thin apex, and fairly sharp or right-angled bent (Figs. 5d, g). Pterostigma moderately broad (Fig. 5h). 2nd and 3rd flagellomere at most $3 \times$ as long as thick. Metasoma black (at most a little lighter medially); tegula nearly always and antenna largely dark 38
- Tarsal claws shorter and broader with thicker apex, bent and not right-angled (Figs. 2i, m). Pterostigma narrower or broader (Figs. 2k and 4l). Flagellomeres 2 and 3 at least $3 \times$ as long as thick (except in *A. exitialis* and *faroensis*). Tegula and/or middle part of metasoma light

- (except in *exitialis*) 40
38. Length-to-thickness ratio of 2nd flagellomere about 1.5 and that of 10th flagellomere about 1.2. Mesosoma cylindrical (its length : height at least 2.0 : 1)
 *cylindraceus* sp. n.
 — Length-to-thickness ratio of 2nd flagellomere least 2.0 and that of 10th flagellomere 1.8. Mesosoma normal 39
39. Hind coxa ventrally matt. Mesopleuron around sternaulus \pm rough *obsoletor* (Zetterstedt)
 — Hind coxa ventrally coarsely punctured and shining. Mesopleuron around sternaulus not or only slightly coarsely sculptured *pusillus* Foerster
40. Metasoma black (at most medially slightly brownish yellow); 2nd and 3rd flagellomeres and hind femur dark. Compound eye bare. Pterostigma fairly narrow (Figs. 4k, l). Metasoma, seen from above, truncate (Fig. 4m). Length at most 5.0 mm 41
 — Middle of metasoma \pm light (orange or brownish yellow); 2nd flagellomere \pm light. Pterostigma broader (Fig. 2k). Metasoma, seen from above, less truncate (Fig. 2n). Length at least 4.0 mm 42
41. Small species: length 3.0–3.5 mm. 2m-cu of fore wing most often with one bulla. Median segment of propodeum wide: length about 2.5 \times its width
 *exitialis* Foerster
 — Larger species: length about 5.0 mm. 2m-cu with two bullae. Length of median segment of propodeum about 3.5 \times its width *faroensis* Roman
42. Mesopleuron shiny, without puncturing or at most with some shallow punctures below speculum. Metasoma with curved to quite straight sides. Length about 5 mm 43
 — Mesopleuron not very shiny, \pm punctured (throughout though often only rough, or only in dorso-cranial part below fore wing); punctures moderately deep. Metasoma with somewhat curved sides (Fig. 2n). Length 5–7 mm 47
43. Small species: length 3.0–3.5 mm. 2m-cu of fore wing most often with one bulla. Metasoma, seen from above, apically truncate (Fig. 4m) *exitialis* Foerster
 — Larger species: length at least 4.0 mm. 2m-cu with two bullae. Metasoma, seen from above, apically rounded 44
44. Metasoma rather broad, length of 2nd tergite at most 1.4 \times its width and 3rd tergite wider than long (Fig. 5k). Dorsomedian carina of 1st tergite distinct
 *vicinus* Foerster
 — Metasoma narrower, length of 2nd tergite at least 1.6 \times its width and 3rd tergite longer than wide. Dorsomedian carina of 1st tergite less distinct 45
45. Length of 2nd metasomal tergite at most 1.4 \times its width
 *angustipennis* Foerster
 — Length of 2nd metasomal tergite at least 1.5 \times its width 46
46. Length about 7.5 mm. Notaulus deep, reaching about 0.45 the distance to scutellum; propodeum rather strongly coarsely sculptured, only basal and apical transverse carinae and median longitudinal carina partly distinct *klinckowstroemi* Roman
 — Length 5.0–6.0 mm. Notaulus shallower, reaching about 0.3 the distance to scutellum; propodeum slightly coarsely sculptured with distinct carinae
 *exilis* Haliday
47. Postpetiole and 2nd metasomal tergite with strong longitudinal striation; tergite 3 medially striate
 *striativentris* Jussila
 — Tergites 2 and 3 not striate 48
48. Apical transverse carina of propodeum high, forming a crest or \pm distinct apophyses (Fig. 2b)
 *albovinctus* Haliday
 — Apical transverse carina low, forming no crest or apophyses 49
49. Mesopleuron strongly and evenly punctured. Scape and 1st flagellomere \pm wholly light; coxae \pm wholly orange to yellow *cryptobius* Foerster
 — Mesopleuron at least centrally not (or sparsely) punctured. Scape, 1st flagellomere and coxae at least dorsally dark 50
50. Basal segments of antenna orange. In fore wing 3rs-m present. Notaulus weak (as in Fig. 2d). Temple broadest in its oral part, genal carina straight (as in Fig. 2c)
 *holmgreni* Roman
 — Base of antenna at least dorsally dark. 3rs-m absent. Notaulus strong (as in Fig. 2f). Temple broadest in its middle, genal carina S-shaped (as in Fig. 2e) 51
51. Median area of propodeum \pm polished and transversely shagreened or wrinkled, parallel-sided or slightly broadened in the middle, and dorsally rounded; carinae on propodeum distinct, apical transverse carina strong (as in Fig. 2g). 1st metasomal tergite \pm polished
 *croceicornis* Haliday
 — Median area of propodeum matt and rough, parallel-sided, and rectangular in dorsal view; carinae of propodeum indistinct, apical transverse carina not strong (as in Fig. 2l). 1st metasomal tergite \pm shagreened and dull *ficticius* Foerster

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