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THE ICHNEUMONIDAE OF THE KEVOJOKI  
AREA IN INARI LAPLAND (FINLAND)

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Turku 1965

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## 1. INTRODUCTION

The Ichneumonid fauna of Lapland has been studied to some extent for a long time and has been the subject of publications. The oldest mention of it is in "Insecta Lapponica descripta" (ZETTERSTEDT 1838). This work deals mainly with Swedish Lapland, less with Norwegian and not at all with Finnish Lapland. Since then, some other publications have added to our knowledge of the Ichneumonidae of Lapland. Among the earlier scientists, mention may be made of the Swedes A. E. HOLMGREN, C. G. THOMSON and A. ROMAN. The last-named, especially, increased our knowledge of the Ichneumonid fauna of Lapland with his publication "Ichneumoniden aus dem Sarekgebirge" (1909) and with a great number of minor papers, too. Dr. W. HELLÉN is the only Finnish scientist to have published a noteworthy number of papers on the Ichneumonidae of Finnish Lapland.

The object of the present work is to throw further light on the Ichneumonid faunistics in a small part of this large region. The material for my report was collected in the summers of 1956, 1959 and 1961. In the year 1956 I made an expedition to the Kevojoki area with Mr. V. KAITANEN and Mr. J. AALTONEN, who were making geographical investigations there. We were in the study area during the period 30. VI.—20. VII. We walked from the mouth of the Kevojoki as far as its upper course. The summer was earlier than usual. *Trollius europaeus* and *Geranium silvaticum* were in flower and the birches in full leaf from the beginning. The weather was excellent. It only rained on the first two days. Later there was sunshine almost the whole time. It is true that the north wind brought cold weather in the last few days.

Most of the material was collected in the year 1959. Then, too, I made my way from the mouth of the Kevojoki river to its upper course with Mr. U. LAINE, M.A. and Mr. I. RUTANEN. The former investigated the plants and the latter the Coleoptera of the Kevojoki area. During the expedition (4.—23. VII.) there was both rain and sunshine. My last expedition was made in the year 1961 with my wife RITVA JUSSILA. This time both the mouth and the upper course of the Kevojoki were the principal objects of my investigations. The sun shone all the time (9.—19. VII.) and it was very warm.

I wish to thank Professor CARL H. LINDROTH of Lund University, Pro-

fessor LARS BRUNDIN of Riksmuseum, Stockholm, Mr. HUGO ANDERSSON of Lund and Mr. PER INGE PERSSON of Stockholm, who have kindly sent me type material.

Professor PAAVO VOIPPIO, Head of the Department of Zoology of Turku University, Professor PAAVO KONTKANEN of Helsinki, Professor PAAVO KALLIO of Turku and Dr. WOLTER HELLÉN of Helsinki have given valuable information and helpful advice during the course of the study. To all of them I am deeply indebted.

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Turku, May 4, 1965

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## 2. THE AREA STUDIED

The Kevojoki area (KALLIO 1961 and 1964), part of which belongs to the Kevo nature reserve, is situated in the biogeographical province of Inari Lapland (InL) and the commune of Utsjoki (figs. 1 and 2). The Kevojoki river itself empties from the southwest into the Utsjoki river by way of

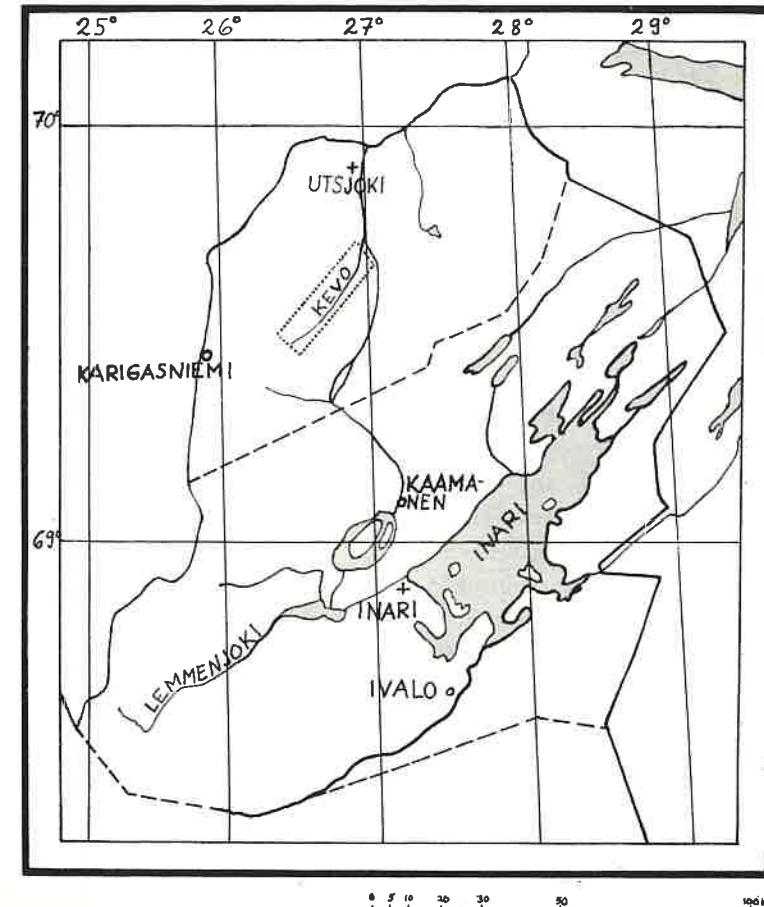
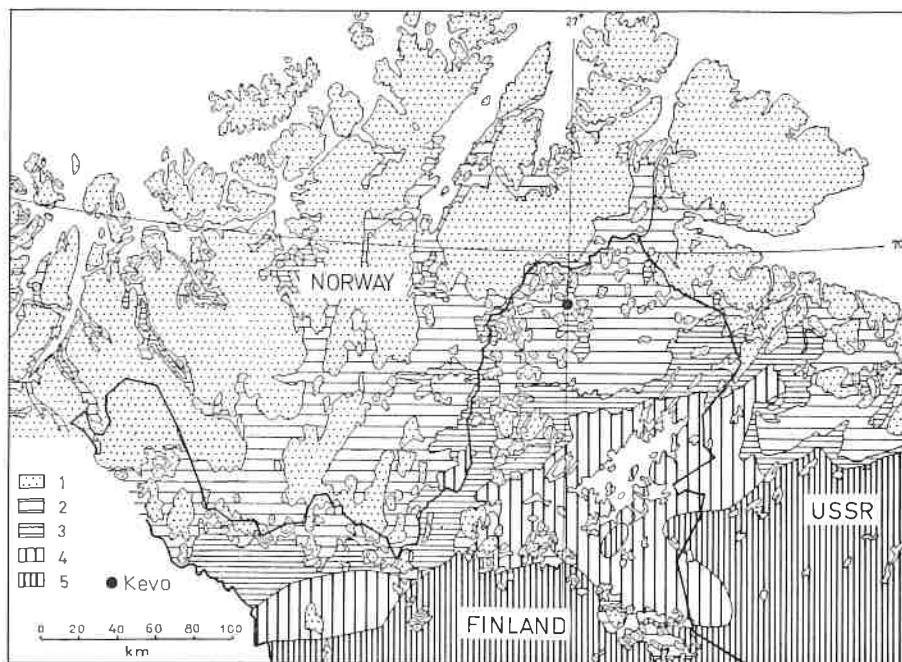


Fig. 1. Inari Lapland (InL). The Kevojoki area indicated with dotted lines, and the communes of Utsjoki and Inari with dashed lines.

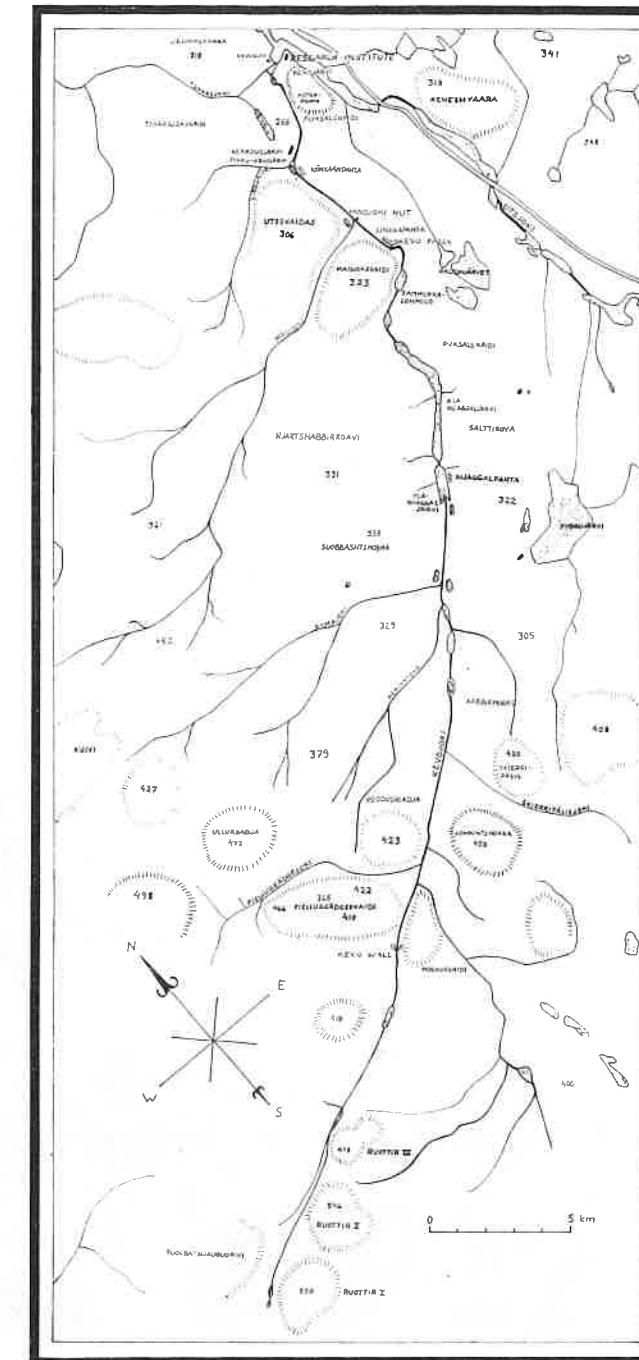


*Fig. 2.* Biotic zones in northernmost Finland. 1. Tundra and barren felds. 2. Birch bushes and birch forests. 3. Birch forests and small groves of pines. 4. Pine forest. 5. Coniferous forest (pine and spruce). Redrawn from Atlas of Finland, 1960. — KALLIO 1964.

Kevojärvi Lake (cf. fig. 3), on the southern shore of which, on the Kevo-Cape, the Research Institute of Turku University is situated (fig. 4). The northernmost part of the area studied, the mouth of the Kevojoki, is situated about latitude  $69^{\circ}45' N.$ , and the southernmost, the Ruottir mountains, about  $69^{\circ}25' N.$  The area lies between the meridians  $26^{\circ}25'$  and  $27^{\circ}05' E.$  It is about 50 kilometres in length.

In the southwest, in the upper course of the Kevojoki, the terrain is distinctly higher. Here there are numerous mountains, whose peaks rise above the timber line (350—400 metres above sea level). The greatest altitude, 550 metres above sea level, is reached in the Ruottir mountains. Fiellugeädgeskaidi is 466 and Poddusroadja 423 metres high. At the outlet the terrain is considerably lower. Thus Madjokskaidi is 323 and Utsskaidas 306 metres high. These do not rise above the timber line.

The valley of the Kevojoki forms a canyon. In its lower course, admittedly, it is broad and the banks sloping (fig. 5). But in the middle and upper courses the valley is narrower and the banks steep (fig. 6). The southeastern side of the river is more steep-walled throughout. In many places the banks rise to over 100 metres. Such steep-walled cliffs are seen, for example, at Kotka-



*Fig. 3.* The Kevojoki area and its vicinity



*Fig. 4.* Kevo Station. — Photo M. SULKINOJA.



*Fig. 5.* The river Kevojoki in its lower course. The valley is broad, with sloping banks. — JUSSILA 1963 a.



*Fig. 6.* The Kevojoki in its upper course. The river flows in a steep canyon. — Photo R. J.

pahta near the mouth of the Kevojoki, Linkkapahta by the Kevo Falls or Kevonkönäs (fig. 7), and Njaggalpahta. On both sides, the river is flanked by a terrain of gently sloping fjelds typical of Utsjoki commune, the "skaidi".

In many places the river widens to form lakes. The most important of these are Kevojärvi at the mouth of the Kevojoki, Pikku Kevojärvi and the upper and lower Njaggal lakes (Ylänjaggal and Alanjaggal) in the middle course of the river. Many tributaries empty into the Kevojoki both from the east and from the west. These include the river Tsharsjoki, which only partly joins the Kevojoki by Kevojärvi, the river Siedgajoki, which empties into Pikku-Kevojärvi, the rivers Madjoki and Kamajoki, the Roajaatshe river, the Fiellugeädgejoki river and the Skierrifälisjoki river. Most of the tributaries have their own smaller canyons, too.

Through the southern part of the area the boundary of the granulitic types of rock typical of Inari Lapland runs from the southeast to the northwest. The granulite, which is rich in garnets, is here strongly schistose, containing norite strata. In the area north of this boundary there are also less acid types of rock in addition to granulite. The bulk of the top soil in the area studied consists of moraine, which also covers the mountain peaks, and to a small extent the gravel of the ridges, too. Through continuous

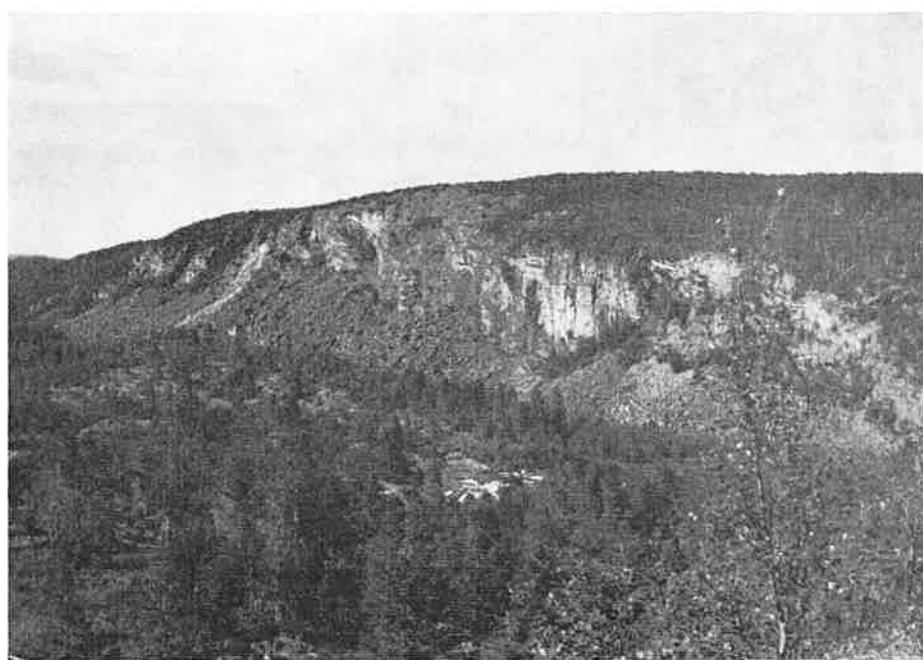


Fig. 7. Linkkapahta with its "rakka" and the Kevo Falls. — JUSSILA 1963 a.

surface disintegration talus and big boulders, the "rakka", are formed the walls of the canyon (fig. 7).

In spite of the nearness of the Arctic Ocean, the climate of the Kevojoki basin has a distinctly continental character (JOHANSSON 1936). This is proved by an annual amplitude of 28°C. In the Kevojoki canyon, as in steep-walled valleys in general, the continental microclimate is very clear. Both seasonal and diurnal changes are very marked. The latter are intensified by the faces of cliffs exposed to great changes of temperature and in summertime, especially, the contrast between the temperature of these strongly warming cliffs and the cold spring water streaming along the bottom is great. The latter differences of temperature occasionally give rise to mists, which compensate for the lack of rain in the canyon. Furthermore, the valley is well protected from the winds that blow from the Arctic Ocean in summertime. Thus in summer the Kevojoki canyon turns into a real oasis of warmth during periods with much sunshine. But during very cloudy and rainy periods no significant microclimatological differences seem to exist between the tops of the felds and bottom of the canyon (NUORTEVA 1965). On the bottom of the canyon in winter there are great amounts of snow, which makes an excellent insulating cover for wintering insects.

In the Kevojoki area the *birch region* is the prevalent vegetation zone. The most characteristic feature is the mountain form of *Betula pubescens*, which at higher levels is low and bushy, but at lower altitudes forms uniform woods (cf. HÄMET-AHTI 1963). The following are the most important biotopes in the Kevojoki area (cf. LAINE 1956):

A. The dry birch heaths occurring everywhere on poor, gravelly ground: at the bottom of the valley, on the banks and above them. They form units with sparse low trees and resemble apple orchards (fig. 8). Typical plants are *Cladonia* spp., *Empetrum hermaphroditum*, *Vaccinium vitis-idaea*, *V. myrtillus* and *Betula nana*.

B. The moist birch heaths. These are woodlands rich in mosses and dwarf shrubs (fig. 9). Characteristic species are *Vaccinium myrtillus*, *Empetrum hermaphroditum*, *Cornus suecica*, *Lastrea* spp. and, on better soil, *Geranium silvaticum*.

C. The meadow forests (fig. 10). The mosses and dwarf shrubs are lacking as a rule. *Trollius europaeus*, *Geranium silvaticum*, *Saussurea alpina*, *Viola biflora*, *Equisetum* spp. and ferns are typical plants.

D. The meadows rich in *Trollius* represent the semi-cultivated fields,



Fig. 8. Dry birch heath on the bottom of the Kevojoki canyon near the mouth of the Roajaatshe. — Photo R. J.



Fig. 9. Moist birch heath above the Kevojoki canyon opposite to the mouth of the Madjoki. This photograph also shows a dried-up pine and behind this a fresh pine. However, the birches are dominant. — Photo R. J.



Fig. 10. Meadow forest at the mouth of the Kevojoki. The birches and tall willows constitute thickets. In the foreground *Trollius europaeus* in bloom. — Photo R. J.

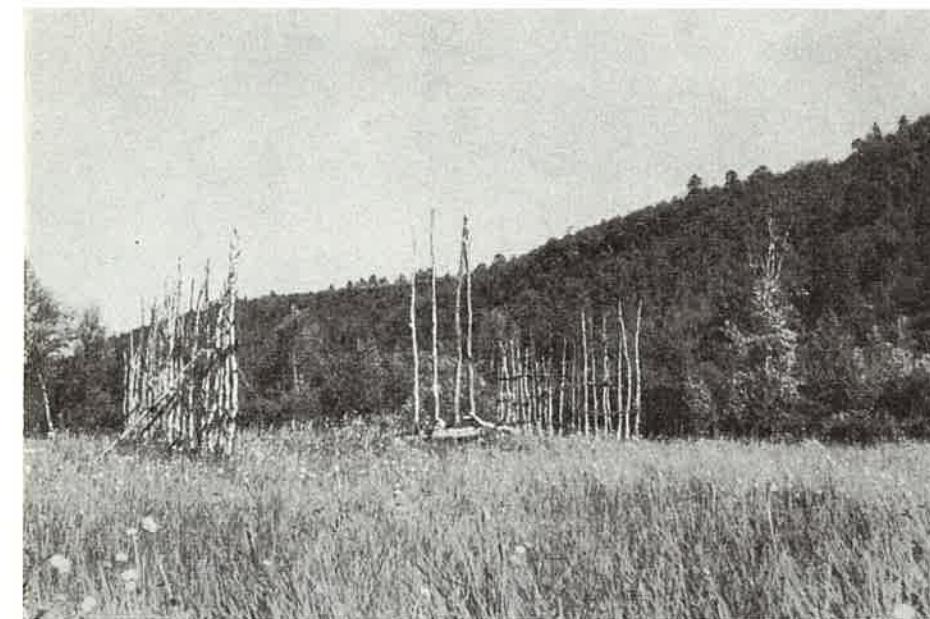


Fig. 11. Meadow in the canyon near the mouth of the Kevojoki. *Trollius* in full bloom. — JUSSILA 1963 a.



Fig. 12. A patch of willows on the western shore of Pikku-Kevojärvi. — JUSSILA 1963 a.



Fig. 13. Bog north of Pikkö-Kevojärvi. — Photo R.J.

which are typical of Lapland (fig. 11). In autumn the Lapps mow hay there, and so the meadows are prevented from becoming wooded.

E. Patches of willows (fig. 12) are found on the lower shores of the canyon. They are thickets on damp ground. The plant species include as a rule *Salix glauca*, *S. hastata*, *S. lapponum* and less frequently *S. lanata*. *Betula nana* is also abundant.

F. The bogs in the canyon and on the "skaidi" (fig. 13). Plant species are *Betula nana*, *Salix myrsinoides*, *S. phyllicifolia*, *Rubus chamaemorus*, *Carex* spp. and many mosses.

In the canyon of the Kevojoki the birch region is interspersed with small fragments of the coniferous region composed of Scotch pine (*Pinus sylvestris*) (fig. 14). The pine finds its way to slopes and hills with dry ground covered with esker gravel. The pine woods are thus nearest to the meagre *Vaccinium-Empetrum-Cladonia* type (KUJALA 1929). A typical species is *Arctostaphylos uva-ursi*.

Only in the higher southwestern districts of the area studied is there a barren region with *Cetraria nivalis*—*Carex bigelowii* heaths without trees (fig. 15). In the barren region of the Kevojoki area there are only the following two biotopes:



Fig. 14. The *Pinus sylvestris* wood of the coniferous region north of the lakes Njaggala-järvet. — JUSSILA 1963 a.

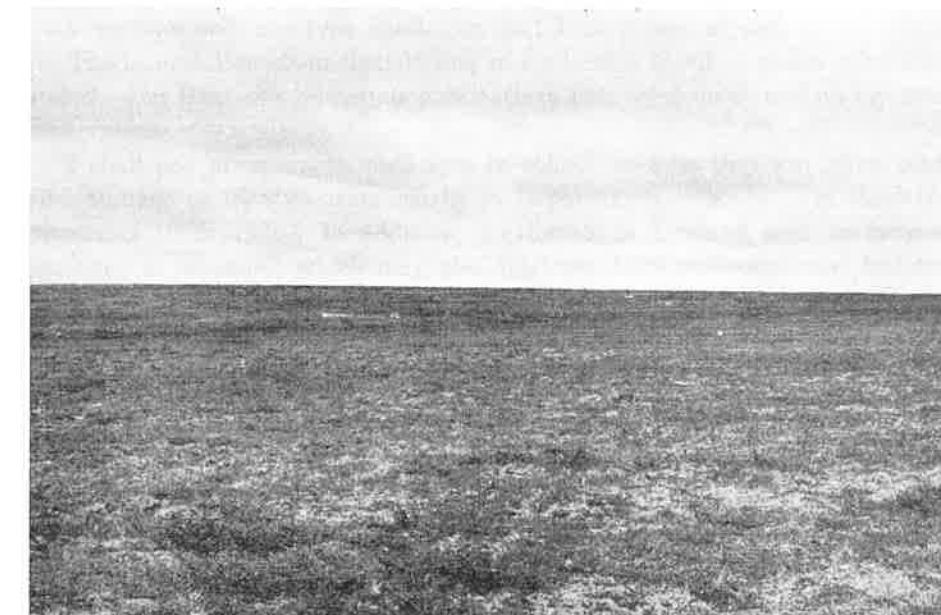


Fig. 15. Barren region of the Poddusroadja mountain. — JUSSILA 1963 a.

A. Dry heaths. This biotope is found only on the summits of the fjelds. *Cladonia* lichens constitute the ground cover in addition to *Empetrum hermaphroditum* and *Vaccinium vitis-idaea*. *Betula nana* is abundant. Other typical plants are *Arctostaphylos alpina*, *Diapensia lapponica* and *Salix herbacea*.

B. Moist heaths are found on lower levels of the barren region. Lichens do not predominate, but bryophytes. Typical plants are *Vaccinium myrtillus* and *Phyllocoete coerulea*. *Empetrum hermaphroditum* and *Betula nana* grow bigger than on the dry heaths.

### 3. SYNOPSIS OF THE SPECIES

Up to the present time the Ichneumonologists all over the world have used the method of dividing the Ichneumonidae into five subfamilies. This method dates back the 19th century (cf. e.g. ASHMEAD 1900, MORLEY 1903, 1907—1911, 1914 a, SCHMIEDEKNECHT 1902—1927 and CONSTANTINEANU 1961 b): 1) *Ichneumoninae*, 2) *Cryptinae*, 3) *Ophioninae*, 4) *Pimplinae* and 5) *Tryphoninae*. Difficulties, however, encountered in placing some genera (e.g. *Adelognathus* and *Metopius*) in one of these classical subfamilies. Hence, in the 1940's and 1950's some corrections were made, especially in U.S.A. (TOWNES 1944—1945) and England (PERKINS 1959). Thus the subfamilies were divided more naturally. My taxonomy is in full agreement with that of TOWNES, TOWNES & GUPTA (1961) and PERKINS (1959 and 1960), with a few exceptions which I have found necessary.

I mention only the type specimens that I have seen myself.

The information about distribution in Finland is based — unless otherwise stated — on HELLÉN's numerous publications (see references) and on my own observations.

I shall pay attention to variations of colour, because they are often used misleadingly as identification marks in important handbooks (e.g. SCHMIEDEKNECHT 1902—1936). In addition, the insects in Lapland seem to have a tendency to melanism which may also originate from environmental factors. Thus BERGMAN (1951—1953) has published a theory of melanistic modifications. According to this theory, dark forms may develop under the influence of warmth and cold, while the extreme temperatures endured by the insects may give rise to light forms. But the northern melanism may be genetic, too (DOBZHANSKY 1959). This kind of geographic race is separated from the more southern subspecies either without intermediate forms or with a cline forming a uniform series, which usually grows darker towards the north.

I have enclosed — as a greater faunistical background for my study — all the Ichneumonid species that have been found in Inari Lapland, but not in the Kevojoki area. They are printed in small type.

## FAMILY ICHNEUMONIDAE

Subfamily *Ephialtinae**Scambus sagax* (Hart.)*Pimpla brevicornis* var. 1 GRAVENHORST 1829 d, p. 213.*Pimpla sagax* HARTIG 1838, p. 267, ♂ ♀.*Pimpla linearis* RATZEBURG 1844 (see PERKINS 1943 b).*Pimpla atro-coxata* PFEFFER 1913, p. 343, ♀.*Ephialtes geniculatus* var. *suecicus* ROMAN 1917, p. 270, ♂ ♀.*Epiurus sagax*, HELLÉN 1940, p. 10.*Scambus sagax*, TOWNES & TOWNES 1951, p. 186.

*Occurrence in the Kevojoki area:* ♀ : 10. VII. 1961, the S.W. slope of Ruottir I, a dry heath between the barren and birch regions.

*Distribution:* Throughout Finland. Northern, Central and Western Europe (SCHMIEDEKNECHT 1934), Eastern Europe (MEYER 1934) and Siberia (ŠEDIVÝ 1963 a).

*Remarks:* The specimen from Ruottir has light femora.

*Biology:* A parasite of mining Microlepidoptera and Coleoptera (SCHMIEDEKNECHT 1934 and FULMEK 1962).

*Scambus brevicornis* (Grav.)*Pimpla brevicornis* GRAVENHORST 1829 d, p. 211, ♂ ♀.*Pimpla nigriscaposa* THOMSON 1877, p. 755, ♂ ♀.*Pimpla punctiventris* THOMSON 1877, p. 756, ♂ ♀.*Pimpla depositor* FÖRSTER (see ROMAN 1931 a), new synonymy.*Epiurus bicoloripes* ASHMEAD 1902, p. 201, ♀.*Phthorimus anomalus* MORLEY 1911, p. 339, ♀.*Epiurus brevicornis*, HELLÉN 1915, p. 36.*Scambus brevicornis*, WALLEY in TOWNES & TOWNES 1960, p. 55.

I have studied a large collection of specimens agreeing with the description of *brevicornis* (WALLEY in TOWNES & TOWNES 1960) and *depositor* (ROMAN 1931 a), and I have found no distinct morphological differences between the two species. Moreover, there are numerous intermediate forms.

*Occurrence in the Kevojoki area:* ♀ : 5. VII. 1959, a patch of willows at the mouth of the Kevojoki; ♀ : 6. VII. 1959, the mouth of the Kevojoki, a *Cornus suecica* — *Vaccinium uliginosum* heath of the birch region; ♀ : 10. VII. 1959, a moist heath of the birch region at the southern end of Ylängaggaljärvi; 2 ♂ ♂ : 13. VII. 1959, a meadow forest by the Kevo Wall; ♀ : 19. VII. 1961, a damp meadow with *Trollius europaeus* predominating at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. A holarctic species: the greater part

of Europe (MEYER 1934, CEBALLOS 1956 and PETERSEN 1956), Northern Asia (ROMAN 1931 a: Kamchatka) and North America (WALLEY in TOWNES & TOWNES 1960).

*Remarks:* The female varies geographically in the colour of the legs. The northern specimens have black coxae as a rule and most of the southern females have reddish coxae. The length of the specimen in South Finland is 5—7 mm, in the Kevojoki area 3—5 mm. — *Scambus (Epiurus) calobata* (Grav.), new combination, (see HELLÉN 1915) is a different species (SCHMIEDEKNECHT 1934) and has not been found in Finland.

*Biology:* A parasite of Microlepidoptera and nematine sawflies (WALLEY in TOWNES & TOWNES 1960 and FULMEK 1962).

*Dolichomitus tuberculatus tuberculatus* (Fourer.)*Ichneumon tuberculatus* FOURCROY 1785, p. 395, ♀.*Ichneumon leucopterus* GMELIN 1790, p. 2699.*Pimpla Ressigii* RATZEBURG 1848, p. 89, ♂ ♀.*Ephialtes gigas* WALSH 1848, p. 110.*Ephialtes tuberculatus*, HELLÉN 1915, p. 28.*Dolichomitus tuberculatus*, TOWNES & TOWNES 1960, p. 125.*Occurrence in Inari Lapland:* The Inari Lake, B. Poppius leg. (HELLÉN 1915).

*Distribution:* Throughout Finland. Also the Kola Peninsula (HELLÉN 1915). Almost all parts of Europe (MEYER 1934, OZOLS 1941, HEINRICH 1949 a, CEBALLOS 1956 and ŠEDIVÝ 1963 a), North America (TOWNES & TOWNES 1960). In Japan the subspecies *D. t. jezoensis* (UCHIDA) was found (UCHIDA 1928 and TOWNES & TOWNES 1960).

*Biology:* It parasitizes Coleoptera boring under the bark of *Pinus* (TOWNES & TOWNES 1960). In Czechoslovakia bred from *Synthetodon spheciformis* (Lep., Aegeriidae) (ŠEDIVÝ 1963 a), in Finland from *Acanthocinus aedilis* (Col., Cerambycidae) (KONTKANEN 1929).

*Tromatobia variabilis* (Hlmgr.)*Pimpla variabilis* HOLMGREN 1856 b, p. 88, ♂ ♀.*Pimpla rufovariata* CRESSON 1870, p. 149, ♀.*Polysphincta cingulata* PROVANCHER 1875, p. 141, ♀.*Pimpla epeirae* BIGNELL 1893, p. 37.*Pimpla hibernica* MORLEY 1908, p. 60, ♂ ♀.*Polysphincta forsiusi* HELLÉN 1915, p. 45, ♂ ♀.*Tromatobia variabilis*, TOWNES & TOWNES 1951, p. 190.

*Occurrence in the Kevojoki area:* ♀ : 30. VI. 1956, the meadow of the Madjoki hut; ♂ : 15. VII. 1956: the mouth of the Roajaatshe; ♀ : 11. VII. 1959, a bog of the "skaidi" near the Skierrifälis mountain; ♂ : 13. VII. 1959, a patch of willows in the Kevojoki canyon near Ruottir III; 2 ♂ ♂ : 17. VII. 1959, the meadow and the meadow forest of the Madjoki hut.

*Distribution:* Throughout Finland and Europe (ROMAN 1924, AUBERT 1957 and ŠEDIVÝ 1959). A holarctic species, which has also been found in

Asia (MOMOI 1961: Saghalien and the Kuriles) and North America (TOWNES & TOWNES 1960).

*Remarks:* Abdomen generally black, but sometimes partly ferruginous.

*Biology:* A parasite of spider's eggs (TOWNES & TOWNES 1960). Apparently confined to moist localities.

*Clistopyga incitator* (F.)

*Ichneumon incitator* FABRICIUS 1793, p. 29.

*Pimpla incitator* FABRICIUS 1804, p. 117.

*Clistopyga incitator*, GRAVENHORST 1829 d, p. 134, ♀. MORLEY 1908, p. 139, ♂ ♀.

*Clistopyga haemorrhoidalis* GRAVENHORST 1829 d, p. 135, ♀.

*Polysphincta elegans* RATZEBURG 1848, p. 101, ♀.

*Glypta albicoxa* WALKER 1874, p. 304, ♀.

*Clistopyga Sauberi* BRAUNS 1898, p. 70, ♀.

*Occurrence in the Kevojoki area:* ♂ : 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* Throughout Finland. Also in Sweden (ROMAN 1917), Spain (CEBALLOS 1956), Germany (NIELSEN 1929), England (ROMAN 1917), Eastern Europe (MEYER 1934) and Japan (UCHIDA 1928).

*Remarks:* The species found in the Kevojoki area has a completely black abdomen and face.

*Biology:* In Germany a parasite of the eggs of the spider *Sergestia senoculata* (NIELSEN 1929) and in England in galls of *Cynips* (Hym., Cynipidae) (ROMAN 1917).

*Acrodactyla degener* (Hal.)

*Acrodactyla degener* HALIDAY 1838, p. 117, ♂ ♀.

*Sympylus hadrodaetus* FÖRSTER 1871, p. 106, ♂ ♀.

*Sympylus polistus* FÖRSTER 1871, p. 106, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta; (♂ : 14. VII. 1959, the Luomush river, a meadow near the road to Karigasniemi).

*Distribution:* Throughout Finland. A holarctic species: Northern (HELLÉN 1915), Western and Central Europe (SCHMIEDEKNECHT 1934), North America (TOWNES & TOWNES 1960).

*Biology:* A parasite of spider's eggs (TOWNES & TOWNES 1960).

*Schizopyga frigida* Cress.

*Schizopyga frigida* CRESSON 1870, p. 159, ♀.

*Schizopyga atra* KRIECHBAUMER 1877, p. 87, ♂ ♀.

*Polysphincta pontiaci* VIERECK 1917, p. 317, ♂.

*Occurrence in the Kevojoki area:* ♂ : 7. VII. 1959, the Kevo Cape, a dry heath of the coniferous region.

*Distribution:* Throughout Finland. A holarctic species: Sweden, Germany, Hungary, Czechoslovakia, European U.S.S.R. (ŠEDIVÝ 1963 a) and North America (TOWNES & TOWNES 1960).

*Remarks:* The male from the study area is darker than the specimens from further south: femora black.

*Biology:* A parasite of spider's eggs (TOWNES & TOWNES 1960).

*Polysphincta carbonator carbonator* Grav.

*Cryptus carbonator* GRAVENHORST 1807, p. 264.

*Pimpla carbonator* GRAVENHORST 1818, p. 290.

*Polysphincta carbonator* GRAVENHORST 1829 d, p. 123, ♂ ♀.

*Oxyrrhexis carbonator*, TOWNES & TOWNES 1951, p. 193.

*Occurrence in the Kevojoki area:* ♀ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Also found in Norway (including Norwegian Lapland: ROMAN 1942), Germany (HEINRICH 1949 a: the Bavarian Alps) and European U.S.S.R. (MEYER 1934). A holarctic species. In North America there is the subspecies *P. c. texana* Cress. (TOWNES & TOWNES 1960).

*Biology:* A parasite of spider's eggs (NIELSEN 1923 and ŠEDIVÝ 1963 b).

*Polysphincta tuberosa tuberosa* Grav.

*Polysphincta tuberosa* GRAVENHORST 1829 d, p. 115, ♀. HOLMGREN 1860 b, p. 31, ♂ ♀.

*Polysphincta Taschenbergi* WOLDSTEDT 1877 a, p. 396, ♀.

*Oxyrrhexis tuberosa*, TOWNES & TOWNES 1960, p. 243.

*P. tuberosa v. rufipes* Grav. (see HELLÉN 1940) is a different species *P. rufipes* Gravenhorst 1829 d, p. 116, ♂ ♀ (ŠEDIVÝ 1963 b).

*Occurrence in the Kevojoki area:* ♂ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Also found in Ireland, Germany, Poland, Czechoslovakia (ŠEDIVÝ 1963 a) and U.S.S.R. (MEYER 1934: Leningrad). A holarctic species: in North America there is the subspecies *P. t. bruneti* Prov. (TOWNES & TOWNES 1960), and in Kamchatka the subspecies *P. t. sculpturata* Rn (ROMAN 1931 a).

*Biology:* A parasite of spider's eggs (SCHMIEDEKNECHT 1934).

*Itoplectis alternans* (Grav.) *aterrima*, new subspecies

*Itoplectis alternans* ac. *aterrima* HELLÉN 1915, p. 40.

HELLÉN (1915) reported from North Finland the aberratio coloris *aterrima*, whose tibiae have no reddish colour. Later ROMAN (1924) changed it to v. *kolthoffi* Auriv. (holotype from Greenland). Now, however, it has been observed (TOWNES & TOWNES 1960) that the latter belongs to the species *I. quadringulata* (Prov.), which has only been found in the Nearctic zone. Under these circumstances I have readopted HELLÉN's original name and separated *aterrima* as a northern subspecies.

*Occurrence in the Kevojoki area:* ♀ (holotype): 18. VII. 1959, the meadow forest at the foot of Linkkapahta (coll. JUSSILA); ♂ (allotype): 11. VII. 1959, a bog of the "skaidi" about 4 kilometres from the mouth of the Roajaatshe into the upper course of the Kevojoki (coll. JUSSILA).

*Distribution:* *I. a. alternans* (GRAV.) has been found in South and Central Finland. Also in almost all parts of Europe (e.g. CEBALLOS 1956) and India (TOWNES, TOWNES & GUPTA 1961). *I. alternans* *aterrima* has been found in Kamchatka (ROMAN 1931 a), and in China there is the subspecies *I. a. epinotiae* Uchida (ROMAN 1936 b).

*Biology:* The species has been bred from *Orgyia ericae* (Lep., Lymantriidae) (HELLÉN 1939) in Finland. According to ROMAN (1924), bred from a *Cidaria* species (Lep., Geometridae) in North Sweden. A parasite of mining Microlepidoptera and sawflies (FULMEK 1962). Some Diptera and Coleoptera are occasionally hosts, too (ŠEDIVÝ 1963 a).

*Coccygomimus aquilonius* (Cress.) *flavicoxis* (Thoms.)

*Pimpla flavicoxis* THOMSON 1877, p. 747, ♂ ♀.

*Coccygomimus contemplator* Müll. a. *flavicoxis*, HELLÉN 1939, p. 57.

*Coccygomimus aquilonius* *flavicoxis*, TOWNES & TOWNES 1960, p. 324.

*Occurrence in the Kevojoki area:* ♂: 4. VII. 1959, a moist birch heath at the mouth of the Kevojoki.

*Distribution:* Common throughout Finland. LK: Valamo in European U.S.S.R. (KERRICH 1939), Europe (ŠEDIVÝ 1963 a), Iceland and the Faroes (PETERSEN 1959), Canary Islands (HELLÉN 1949). In North America there is the subspecies *C. a. aquilonius* (Cress.) (TOWNES & TOWNES 1960); hence the species is holarctic.

*Remarks:* The specimen of the area studied is very small: the length only 3 mm, while the average length of the males of South Finland is 6—7 mm. However, the size varies very much according to the host (TOWNES 1958).

*Biology:* A parasite of Lepidoptera (ŠEDIVÝ 1963 a).

*Coccygomimus sodalis* *sodalis* (Ruthe)

*Pimpla sodalis* RUTHE 1859, p. 371, ♂ ♀.

*Pimpla Nordenskiöldi* HOLMGREN 1872, p. 97, ♀.

*Pimpla longiceps* THOMSON 1877, p. 746.

*Pimplidae sodalis*, ROMAN 1936 a, p. 12.

*Coccygomimus sodalis*, HELLÉN, 1940, p. 10.

*Occurrence in Inari Lapland:* The Lemmenjoki river in Inari commune, W. Hellén leg. (HELLÉN 1939).

*Distribution:* EnL: Kilpisjärvi in Finland (HELLÉN 1939). A holarctic species: Norway (ROMAN 1936 a), Iceland (ROMAN 1931 c), Germany (HEDWIG 1960 b), Britain (PERKINS 1941), Roumania (CONSTANTINEANU & PISICĂ 1960), Greenland (HOLMGREN 1872) and North America (TOWNES & TOWNES 1960). In North America there is also the Alpine subspecies *C. s. longigenalis* (Cushm.) (TOWNES & TOWNES 1960).

*Delomerista mandibularis* (Grav.)

*Pimpla mandibularis* GRAVENHORST 1829 d, p. 180, ♀. THOMSON 1877, p. 750, ♂ ♀.

*Delomerista mandibularis*, MORLEY 1914 b, p. 76.

*Occurrence in the Kevojoki area:* ♂ ♀: 13. and 16. VII. 1956, the mouth of the Roajaatshe; ♀: 5. VII. 1959, a patch of willows at the mouth of the Kevojoki; ♂: 12. VII. 1961, the S. slope of Ruottir I, a dry heath of the barren region.

*Distribution:* Throughout Finland, rarer in the north. Known from the greater part of Europe, especially in the highlands (ROMAN 1909). Asia (MOMOI 1961: the Kuriles). Perhaps the same species as the nearctic *D. novita* (Cress.) (TOWNES & TOWNES 1960).

*Remarks:* Face either wholly or partly pale (♂) or wholly black (♀).

*Biology:* A parasite of sawflies (HEDWIG 1950 a).

*Delomerista texana* (Cress.)

*Pimpla texana* CRESSON 1870, p. 145, ♀.

*Pimpla laevifrons* THOMSON 1877, p. 750, ♂ ♀.

*Delomerista texana*, CUSHMAN 1922, p. 11.

*Occurrence in the Kevojoki area:* Common in heaths of the barren and birch regions.

*Distribution:* Throughout Finland, commoner in the north. A holarctic species: Europe (HELLÉN 1915: the Kola peninsula, ROMAN 1936 a: Norwegian Lapland and OZOLS 1959 a: Latvia), Asia (ROMAN 1913 a: the tracts of Yenisei and Lena) and North America (TOWNES & TOWNES 1960).

*Remarks:* *D. texana* is distinct from *mandibularis*, and can be recognized with the aid of the following key:

<i>mandibularis</i> (Grav.)	<i>texana</i> (Cress.)
♂ ♀: clypeus not convex.	♂ ♀: clypeus convex.
♂: abdominal tergites beyond the third segment coriaceous.	♂: abdominal tergites granular in sculpture.
♂ ♀: malar space half of basal width of mandible.	♂ ♀: malar space longer than basal width of mandible.
♀: wings hyaline.	♀: wings more or less brown.
♀: ovipositor tip (see fig. 16 A).	♀: ovipositor tip (see fig. 16 B).

Face black and white (♂) or black with white genae.

*Neoxorides varipes* (Hlmgr.)

*Xorides varipes* HOLMGREN 1860 b, p. 66, ♂.

*Xorides variipes* SCHMIEDEKNECHT 1908, p. 1369, ♂.

*Neoxorides variipes*, HELLÉN 1939, p. 56, ♂ ♀.

*Occurrence in Inari Lapland:* Ivalo in the commune of Inari, W. Hellén leg. (HELLÉN 1939).

*Distribution:* Ks: Vuorikylä in U.S.S.R. (HELLÉN 1939) and Swedish Lapland (SCHMIEDEKNECHT 1908).

Subfamily *Adelognathinae*

*Adelognathinae* parasitize sawflies, especially *Nematinae* (Schmiedeknecht 1911).

*Adelognathus brevicornis* Hlmgr.

*Adelognathus brevicornis* HOLMGREN 1855, p. 197, ♂ ♀.

*Adelognathus limbatus* THOMSON 1888 e, p. 1275, ♀.

*Occurrence in the Kevojoki area:* ♀: 5. VII. 1959, the "skaidi" south to the mouth of the Kevojoki, a dry heath of the birch region.

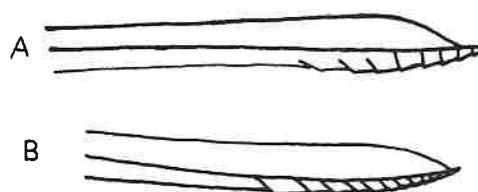


Fig. 16. Ovipositor tips. A. *Delomyrta mandibularis* (Grav.), B. *D. texana* (Cress.). — Orig.

*Distribution:* InL: Lemmenjoki (W. Hellén leg.); rare throughout Finland. According to PERKINS (1943 a), one of the commonest European species of this genus; ROMAN (1918): Scandinavia, Germany and England. North America (TOWNES & TOWNES 1951); hence the species is holarctic.

*Remarks:* The fine pubescence of the 2nd tergite is a distinguishing feature of this species (PERKINS 1943 a). However, in the specimen of the Kevojoki area the pubescence is very thin, although very little is left in the central area of the tergite. According to ROMAN (1918) and PERKINS (1943 a), the front wing always has vein 3rm (cf. RICHARDS 1956). The same is true of the specimens from V: Karuna and V: Turku (R. Jussila leg.). The Kevo specimen has no such veins. The same is true of the specimen from Lemmenjoki, which I have studied. The specimen from the study area has hind coxae with dark bases (in the specimens of South Finland the coxae are light).

*Adelognathus chrysopygus* (Grav.)

*Hemiteles chrysopygus* GRAVENHORST 1829 e, p. 839, ♀. SCHMIEDEKNECHT 1897, p. 527, ♂ ♀.

*Adelognathus chrysopygus*, THOMSON 1883 b, p. 870.

*Occurrence in the Kevojoki area:* ♀: 19. VII. 1959, the Kevo Cape, a coniferous heath.

*Distribution:* Throughout Finland. In Northern and Central Europe (ROMAN 1918), England (PERKINS 1943 a) and U.S.S.R. (MEYER 1935: Leningrad).

*Remarks:* Easily distinguishable by its entirely black frons, yellow face and polished 2nd tergite, bearing very sparse hairs with a large glabrous central area.

*Adelognathus pallipes* (Grav.)

*Plectiscus pallipes* GRAVENHORST 1829 c, p. 981, ♀.

*Adelognathus pallipes*, THOMSON 1883 b, p. 878, ♂ ♀.

*Adelognathus pallidipes* MORLEY 1911, p. 316. ♂ ♀.

*Adelognathus persimilis* CUSHMAN 1922, p. 3.

*Occurrence in the Kevojoki area:* ♂: 5. VII. 1959, a patch of willows at the mouth of the Kevojoki; ♂: 14. VII. 1959, the bank of the Kevojoki by Ruottir II, a moist heath of the birch region.

*Distribution:* Throughout Finland, one of the commonest Finnish species of this subfamily. Known from Northern and Central Europe (ROMAN 1918),

England (PERKINS 1943 a), U.S.S.R. (MEYER 1935: Leningrad) and North America (TOWNES & TOWNES 1951); hence the species is holarctic.

*Remarks:* This species can be distinguished from the other species of the genus found in the area studied by the very weak epicnemias. Differs from *chrysopygus* in the yellow frontal orbits, too. The pronotum of the specimen from the mouth of the Kevojoki is mainly yellow, that of the other specimen black.

*Adelognathus tetricinctorius* (Thnbg.)

*Ichneumon tetricinctorius* THUNBERG 1822, p. 279, ♀.

*Adelognathus scabriculus* THOMSON 1883 b, 877, ♀; lectoholotype ♀: Lapland, labelled "Lpl.", hereby designated (coll. University, Lund).

*Adelognathus tetricinctorius*, ROMAN 1912, p. 282, ♀ & 1918, p. 19, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1959, the N.E. slope of Ruottir II, barren region.

*Distribution:* Throughout Finland. Also Kk: Rajajoki in European U.S.S.R. (HELLÉN 1937 a). Rather common in Sweden (ROMAN 1918).

*Remarks:* The female is recognizable by its dull propodaeum, yellow apical margins of tergites, black face with yellow lateral margins, and yellow frontal orbits. Front wing with vein 3rm. I have two females from South Finland, which differ from the Ruottir specimen in the following respects: face lighter, coxae and femora also light (♀ of Ruottir has black femora and coxae, THOMSON's type specimen and another female have black coxae, too). HELLÉN (1946, but not 1937 a) regards *A. tetricinctorius* and *scabriculus* as separate species. I have found no distinct difference, and consider such an assumption unjustified.

*Adelognathus nigrifrons* Hlmgr.

*Adelognathus nigrifrons* HOLMGREN 1855, p. 197, ♀. ROMAN 1918, p. 13, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Distribution:* One of the commonest *Adelognathinae* species of Finland. Kk: Želenogorsk in European U.S.S.R. (HELLÉN 1937 a), Northern and Central Europe (ROMAN 1918).

*Remarks:* In the specimen from the area studied the vein 3rm is visible, although only faintly.

*Adelognathus punctiventris* Thoms.

*Adelognathus punctiventris* THOMSON 1883 b, p. 877, ♀; lectoholotype ♀: Southern Sweden, labelled "Tkro 23/7", hereby designated (coll. University, Lund). ROMAN 1918, p. 15, (♂ ?) ♀.

*Occurrence in the Kevojoki area:* ♂ (allotype): 12. VII. 1959, the N.E. slope of Ruottir I, a dry heath of the barren region (coll. JUSSILA).

*Distribution:* EH: Sääksmäki in Finland (HELLÉN 1937 a). Also in Sweden (ROMAN 1918).

*Male:* Differs from the female type only in the following respects: frontal orbits yellow only to front ocelli (in ♀ to hind ocellus), tergites entirely brown, and coxae yellow (in ♀ hind coxae with brown basis). Length 3 mm. Structurally the male resembles *A. pallipes* ♂, but differs from this species in its longer and thinner antennae (length: thickness of 3rd flagellar segment in *pallipes* = 2: 1 and in *punctiventris* 3: 1), and in its lack of epicnemias. Head and thorax black; mouth, clypeus, genae, face, frontal orbits, tegulae and seapes yellow; in addition, prothorax and mesopleurae yellow dorsally; legs entirely light; abdomen and stigmata brown.

*Remarks:* The males described by ROMAN (1918) (coll. Riksmuseum, Stockholm) do not belong to this species, because they have a sculptured 2nd tergite and partly yellow flagella.

*Biology:* In Sweden bred from sawflies (SCHMIEDEKNECHT 1911).

*Pammicra dorsalis* (Grav.)

*Hemiteles dorsalis* GRAVENHORST 1829 e, p. 266, ♂ ♀.

*Hemiteles tener* PROVANCHER 1874, p. 333, ♂.

*Adelognathus dorsalis*, THOMSON 1883 b, p. 880.

*Notomeris glabrosus* DAVIS 1897, p. 242, ♀.

*Adelognathus deganti* CUSHMAN 1933, p. 14, ♀.

*Adelognathus (Pammicra) dorsalis*, PERKINS 1943 a, p. 113.

*Pammicra dorsalis*, TOWNES & TOWNES 1951, p. 210.

*Occurrence in the Kevojoki area:* ♂: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. According to ROMAN (1918), one of the commonest Swedish species of this subfamily. Also in Central Europe (SCHMIEDEKNECHT 1911) and North America (TOWNES & TOWNES 1951); hence a holarctic species.

*Remarks:* The specimen of the Kevojoki area has an entirely dark brown abdomen and a yellow pronotum and frontal orbits.

### Subfamily *Tryphoninae*

#### *Phytodietus polyzonias* (Forst.)

- Ichneumon polyzonias* FORSTER 1771, p. 85.  
*Ichneumon gelitorius* THUNBERG 1822, p. 278, ♀.  
*Ichneumon arcuatorius* THUNBERG 1822, p. 279, ♀.  
*Phytodietus segmentator* GRAVENHORST 1829 c, p. 944, ♂ ♀.  
*Phytodietus coryphaenus* GRAVENHORST 1829 c, p. 945, ♀.  
*Phytodietus polyzonias*, GRAVENHORST 1829 d, p. 68, ♂.  
*Phytodietus pectoralis* GRAVENHORST 1829 d, p. 69, ♂.  
*Phytodietus geniculatus* THOMSON 1877, p. 774, ♀.

The species of the genus *Phytodietus* are difficult to separate from each other. This is especially true of the *polyzonias* complex, in which many species have been separated (e.g. ŠEDIVÝ 1960). But the differences are often only slight, and there are intermediate forms. Consequently, HELLÉN (1961 c) has united most of the Finnish species in *polyzonias*, and I agree with him.

*Occurrence in the Kevojoki area:* ♀ : 6. VII. 1959, the Kevo Cape, a heath of the birch region; ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* Throughout Finland, Europe (ŠEDIVÝ 1960), Kamchatka (ROMAN 1931 a) and India (TOWNES, TOWNES & GUPTA 1961).

*Remarks:* The specimen from the Kevo Cape has the mesoscutum with yellowish ivory shoulder marks and the hind coxae mottled with red and black, but the other specimen has an entirely black mesonotum and red hind coxae.

*Biology:* A parasite of many Lepidopterous species (THOMPSON 1957).

#### *Ecytus ornatus* Hlmgr.

- Ecytus ornatus* HOLMGREN 1855, p. 127, ♂ ♀.  
*Oedemopsis ornatus*, SNELLEN VAN VOLLENHOVEN 1878, p. 51.  
*Hybophanes ornatus*, DALLA TORRE 1902, p. 520.

*Occurrence in the Kevojoki area:* Very common in meadows and meadow forests.

*Distribution:* Throughout Finland, rarer in the south. In Northern, Central and Western Europe, but everywhere rare (SCHMIEDEKNECHT 1912); Kamchatka (ROMAN 1931 a).

*Remarks:* The colouring varies greatly. Thus, the mesopleurae of the males may be yellow, almost black or mottled with red and black. The apical margins of the abdominal tergites are yellow, or a yellow streak runs along the dorsal surface of the whole abdomen. The females always have

more red colour than the males, but it varies in abundance. It may be the main colour of the abdomen, or may give place to black, so that the colouring is as in the males.

*Biology:* Hosts: *Tortrix* sp. (Lep., Tortricidae) in Central Europe (SCHMIEDEKNECHT 1912) and *Pteronidea pavida* (Hym., Tenthredinidae) in Switzerland (HINZ 1961).

#### *Polyblastus strobilator* (Thnbg)

- Ichneumon strobilator* THUNBERG 1822, p. 270, ♂.  
*Tryphon varians* GRAVENHORST 1829 b, p. 688 & 1829 c, p. 222, ♂ ♀.  
*Tryphon cothurnatus* GRAVENHORST 1829 c, p. 285, ♀.  
*Polyblastus Drewseni* SCHIÖDTE 1839, p. 15, ♀.  
*Polyblastus affinis* WOLDSTEDT 1874, p. 38, ♀.  
*Erromenus annulipes* ASHMEAD 1902, p. 212, ♀.  
*Polyblastus strobilator*, HELLÉN 1937 c, p. 126.

*Occurrence in the Kevojoki area:* Very common in the birch and coniferous regions.

*Distribution:* Common throughout Finland. Found in all parts of Europe, in North Africa (SCHMIEDEKNECHT 1912) and North America (TOWNES & TOWNES 1949), and thus a holarctic species.

*Remarks:* The colouring varies greatly. In addition to specimens with red femora, there are also those with black ones; the hind coxae are either black or red. The median tergites of the abdomen are red, as a rule. Two females (the mouth of the Roajaatshe 16. VII. 1956 and the Kevo Cape 7. VIII. 1959) have a black abdomen, however.

*Biology:* An ectoparasite of *Tenthredinidae* (Hym.) (TOWNES & TOWNES 1949).

#### *Polyblastus palaemon* Schiödte

- Polyblastus palaemon* SCHIÖDTE 1838, p. 140, ♀. TOWNES & TOWNES 1949, p. 332, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀ : 16. VII. 1956, the mouth of the Roajaatshe; ♀ : 9. VII. 1959, a meadow at the Ylänjaggallompalo Lake; ♀ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. A holarctic species: Northern and Central Europe and North America (TOWNES & TOWNES 1949).

*Remarks:* The specimen of the area studied has a yellow clypeus and red coxae.

*Biology:* A parasite of *Tenthredinidae* (Hym.) (personal observation).

*Polyblastus carbonarius* Grav.

*Polyblastus carbonarius* GRAVENHORST 1829 c, p. 141, ♂. TOWNES & TOWNES 1949, p. 335, ♂ ♀.

*Occurrence in the Kevojoki area:* One of the commonest Ichneumonid species. Common everywhere.

*Distribution:* Throughout Finland. A holarctic species: Northern Norway (ROMAN 1936 a), Latvia (OZOLS 1941 and 1942), Sweden, Germany, Steiermark in Austria, Switzerland (HELLÉN 1961 c) and North America (TOWNES & TOWNES 1949).

*Remarks:* It differs from *palaemon* in the following respects: clypeus red, basally black, 1st and 2nd tergites more strongly rugose and face with shorter hairs. According to HELLÉN (1961 c) and TOWNES & TOWNES (1949), the hind coxae are black. Many specimens of the Kevojoki area, however, have red coxae, like *palaemon*.

*Biology:* In U: Munkkiniemi bred from a nematine sawfly (*Hym., Tenthredinidae*) (HELLÉN 1963).

*Polyblastus subalpinus* Hlmgr.

*Polyblastus subalpinus* HOLMGREN 1855, p. 211, ♂ ♀.

*Occurrence in Inari Lapland:* Utsjoki and Ivalo in Inari, W. Hellén leg. (HELLÉN 1961 c).

*Distribution:* North and Central Finland. Also Scandinavia and England (HELLÉN 1961 c).

*Polyblastus wahlbergi wahlbergi* Hlmgr.

*Polyblastus Wahlbergi* HOLMGREN 1855 (see SCHMIEDEKNECHT 1912, p. 2449, ♂ ♀).

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a dry heath at the mouth of the Kevojoki.

*Distribution:* EH: Sääksmäki in Finland (HELLÉN 1937 c). PsL: Petsamo (HELLÉN 1937 c) and Latvia (OZOLS 1958) in U.S.S.R. and Germany (HEDWIG 1950 b). A holarctic species, which has also been found in Kamchatka (ROMAN 1931 a: *P. wahlbergi wesmaeli* Hlmgr.) and in North America (TOWNES & TOWNES 1949: *P. w. rubescens* Town.).

*Polyblastus pyramidatus* Hlmgr.

*Polyblastus pyramidatus* HOLMGREN 1855, p. 219, ♀; holotype ♀: Quiejok, Swedish Lapland, labelled "Lp.", "Bun." (coll. Riksmuseum, Stockholm). JUSSILA 1963 b, p. 279, ♂; allotype ♂: the Kevojoki area in Finnish Lapland (coll. JUSSILA).

*Occurrence in the Kevojoki area:* ♂ (allotype): 13. VII. 1961, the mouth of the Kevojoki, a damp meadow with *Trollius europaeus* predominating.

*Distribution:* New to the Finnish fauna (JUSSILA 1963 b). Also in Swedish Lapland (HOLMGREN 1855).

*Remarks:* *P. pyramidatus* is easy to recognize by its high, almost pyramidal scutellum (fig. 17), by the appearance of the vein 3rm in the front wings, by the black tibiae with white rings in the middle and by the red coxae.

*Male:* Resembles the female in structure and colouring. In addition to the foregoing characteristics: head broad, narrowing roundish backwards, length : breadth of face = 1 : 1.5; clypeus ridgelike apically, otherwise rather rounded; propodaeum completely areolated, area superomedia broad; stigma of fore wings dark, rather long and narrow; Cu, of hind wings (cf. RICHARDS 1956) antefurcal, upper part : lower part = 2 : 1; length : apical breadth of petiolar segment = 1.3 : 1, with two strong parallel ridges reaching beyond the middle; abdominal tergites shining and smooth, except the 1st and the base of the 2nd, which are duller. Black, flagella beneath reddish, scapes beneath, clypeus, palpi and mandibles yellowish white, mandibular teeth reddish; legs reddish, coxae of fore and middle legs and trochanters yellowish white, hind tarsi blackish, paler at the base; tegulae yellowish white; distal ridge of 2nd, 3rd and 4th tergites narrowly reddish; ventral fold of abdomen whitish.



Fig. 17. Scutellum of *Polyblastus pyramidatus* Hlmgr., in dextro-lateral view. — JUSSILA 1963 a.

*Polyblastus grammicus* Hlmgr.

*Polyblastus grammicus* HOLMGREN 1855, p. 215, ♂ ♀.

*Polyblastus pumilus* HOLMGREN 1855, p. 215.

*Polyblastus stenocentrus* BRISCHKE 1878, p. 100, ♂ ♀.

*Occurrence in the Kevojoki area:* Rather common in both the barren and birch regions.

*Distribution:* Throughout Finland. Northern and Central Europe, commoner in the north (ROMAN 1909 and 1942, OZOLS 1941); Kamchatka (ROMAN 1927).

*Remarks:* Differs from the preceding *Polyblastus* species in the absence of vein 3rm of the front wings. The hind coxae are in general black, but in the females found on 4. VII. and 6. VII. 1959 they are red.

*Polyblastus melanostigmus* Hlmgr.

*Polyblastus melanostigmus* HOLMGREN 1855, p. 214, ♂.

*Polyblastus (Nemioblastus) melanostigma*, THOMSON 1883 b, p. 901, ♂ ♀.

*Occurrence in Inari Lapland*: Utsjoki 23. VII. 1947, W. Hellén leg. (HELLÉN 1953 a).

*Distribution*: Northern and Central Europe (HELLÉN 1953 a); Kamchatka (ROMAN 1931 a).

*Remarks*: Probably a form of *P. grammicus* (HELLÉN 1953 a).

#### *Ctenochira gilvipes* (Hlmgr.), new combination

*Polyblastus gilvipes* HOLMGREN 1855, p. 208, ♂ ♀.

*Polyblastus rivalis* HOLMGREN 1855, p. 208, ♂ ♀.

*Polyblastus sordidus* HOLMGREN 1855, p. 208, ♂.

*Polyblastus hilaris* HOLMGREN 1855, p. 209.

*Scopiorus gilvipes*, HELLÉN 1937 e, p. 125.

*Ctenochira* FÖRSTER 1855, p. 266; type: *Ctenochira bisinuata* Först., monobasic.

*Occurrence in the Kevojoki area*: Common in all regions.

*Distribution*: Throughout Finland. Found in PsL: Pummanni and the Kola Peninsula in U.S.S.R. (HELLÉN 1937 e). Also in Sweden and Germany (ROMAN 1909).

*Remarks*: The absence of the vein 3rm in the front wing is a diagnostic character, but a female found on 10. VII. 1951 has vestiges of the nerve in its right wing. The face is usually black, but many specimens of the Kevojoki area have whitish lateral marks. Even in other respects the colouring varies: the coxae may be red or black, and the antennae either light or wholly or dorsally black. Notaulices are wanting.

#### *Ctenochira pastoralis* (Grav.)

*Tryphon pastoralis* GRAVENHORST 1829 c, p. 248, ♀.

*Polyblastus mutabilis* HOLMGREN 1855, p. 206, ♂ ♀.

*Polyblastus nitidiventris* HOLMGREN 1855, p. 214, ♀. ROMAN 1909, p. 297, ♂.

*Polyblastus ruficornis* BRISCHKE 1871, p. 92, ♂.

*Scopiorus pastoralis*, ROMAN 1913 a, p. 109.

*Scopiorus pastoralis*, ROMAN 1931 a, p. 18.

*Ctenochira pastoralis*, JUSSILA 1962 b, p. 57.

*Occurrence in the Kevojoki area*: 2 ♂ ♂ and 2 ♀ ♀: 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution*: Throughout Finland and Europe (ROMAN 1909 and SCHMIEDEKNECHT 1912). Also found in Northern Asia (ROMAN 1913 a: Yenisei and 1931 a: Kamchatka).

*Remarks*: Differs from the foregoing species above all in the short, but distinct notaulices. The colouring varies. All the specimens found in the Kevojoki area have dark apices of the hind femora and tibiae. The abdominal tergites are black and the apical margins of the 1st, 2nd and 3rd tergites are light in one of the males. The same specimen is very small, only 3.5 mm long. The other specimens of the area studied are 4.5—5 mm and those of South Finland 5.5 mm.

*Biology*: In Central Europe bred from *Nematus myosotidis* (Hym., Tenthredinidae) (SCHMIEDEKNECHT 1912).

#### *Ctenochira infesta* (Hlmgr.)

*Polyblastus infestus* HOLMGREN 1855, p. 204, ♀.

*Polyblastus bipustulatus* HOLMGREN 1855 (see HELLÉN 1961 e).

*Scopiorus infestus*, ROMAN 1931 a, p. 18, ♂ ♀.

*Ctenochira infestus*, HELLÉN 1961 e, p. 91, ♂ ♀.

*Occurrence in Inari Lapland*: Utsjoki and Lemmenjoki, W. Hellén leg. (HELLÉN 1961 e).

*Distribution*: EnL: Kilpisjärvi in Finland, Sweden, Norway and European U.S.S.R. (HELLÉN 1961 e); Kamchatka (ROMAN 1931 a).

#### *Ctenochira angustata* (Rn), new combination

*Polyblastus (Scopiorus) angustatus* ROMAN 1909, p. 297, ♀.

*Scopiorus angustatus* ROMAN 1913 a, p. 109.

*Scopiorus angustatus*, HELLÉN 1944 a, p. 3, ♂ ♀.

*Ctenochira* FÖRSTER 1855, p. 226; type: *Ctenochira bisinuata* Först., monobasic.

*Occurrence in the Kevojoki area*: ♂: 17. VII. 1959, the meadow forest of the Madjoki hut.

*Distribution*: InL: Kilpisjärvi in Finland (HELLÉN 1944 a), Sweden (ROMAN 1909: Sarek), Northern Norway (ROMAN 1942) and Yenisei (ROMAN 1913 a).

*Remarks*: According to HELLÉN (1944 a), the abdomen of the male is almost black. But in the specimen of the area studied the 3rd and 4th tergites and the apical margin of the 2nd tergite are mostly red.

#### *Ctenochira nigripalpis* (Thoms.)

*Polyblastus nigripalpis* THOMSON 1883 b, p. 902, ♂.

*Ctenochira nigripalpis*, HELLÉN 1961 e, p. 91, ♂ ♀.

*Occurrence in the Kevojoki area*: ♀: 4. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* EnL: Kilpisjärvi and Malla, InL: Lemmenjoki in Finland and Swedish Lapland (HELLÉN 1961 c).

*Remarks:* In spite of the name of this species, the palpi are not always black, but often rather light. The clypeus is small and upwardly curved, making the mouth open, lightish and basally black (fig. 18). Length : apical breadth of the 2nd tergite = 1 : 2, the transverse groove is weaker than that of *C. rufipes*, the sculpture of the 2nd tergite is clear and longitudinal, the apical margin being smooth and polished. The coxae are red, basally dark.



Fig. 18. Clypeus and mandibles of *Ctenochira nigripalpis* (Thoms.) ♂.  
— Orig.

#### *Ctenochira rufipes* (Grav.), new combination

*Tryphon rufipes* GRAVENHORST 1829 e, p. 148, ♀.

*Polyblastus consobrinus* HOLMGREN 1855, p. 216, ♀.

*Polyblastus glabellus* HOLMGREN 1855, p. 216, ♀.

*Polyblastus praedator* HOLMGREN 1855, p. 217, ♀.

*Polyblastus nigellus* HOLMGREN 1855, p. 217, ♀.

*Polyblastus mixtus* HOLMGREN 1855, p. 217, ♀.

*Polyblastus limosus* HOLMGREN 1855, p. 217, ♀.

*Polyblastus anilis* HOLMGREN 1855, p. 218, ♀.

*Polyblastus senilis* HOLMGREN 1855, p. 219, ♂ ♀.

*Polyblastus vetustus* HOLMGREN 1855, p. 219, ♂ ♀.

*Polyblastus Holmgreni* WOLDSTEDT 1874, p. 49, ♀.

*Polyblastus rufipes*, ROMAN 1909, p. 295.

*Scopiorus rufipes*, HELLÉN 1940, p. 17.

*Ctenochira Förster* 1855, p. 226; type: *Ctenochira bisinuata* Först., monobasic.

*Occurrence in the Kevojoki area:* 2 ♂♂: the N.E. slope of Ruottir III, a dry heath of the barren region; 2 ♂♂: 14. VII. 1959, the N.E. slope of Ruottir II, a dry heath of the barren region; ♂: 12. VII. 1961, the S. slope of Ruottir I, a dry heath of the barren region; (♀: 4. VII. 1959, the Luomush river, a patch of willows near the road to Karigasniemi).

*Distribution:* Rather common throughout Finland. Also found in Sweden and Germany (ROMAN 1909), Northern Norway (ROMAN 1936 a), Latvia (OZOLS 1958), Spain (CEBALLOS 1956) and Siberia (ROMAN 1913 a: Yenisei).

*Remarks:* The colouring varies very greatly. In the males found on 14. VII. 1959 the clypeus is reddish yellow, basally black; the bases of the tarsal segments and hind tibiae are whitish. The legs of the males taken in 1959, except for the coxae, almost entirely red. The female resembles the first-mentioned males. The male from 1961 has black coxae and an almost black clypeus.

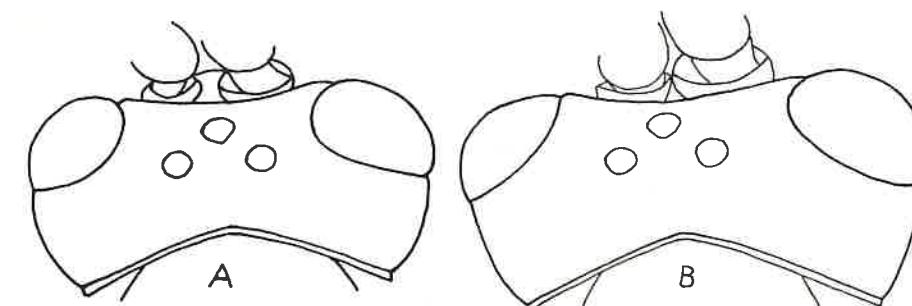


Fig. 19. Head, in dorsal view. A. *Ctenochira rufipes* (Grav.), B. *C. haemosterna* (Hal.). — Orig.

#### *Ctenochira haemosterna* (Hal.), new combination

*Tryphon haemosternus* HALIDAY 1839 (see ROMAN 1924).

*Pimpla breviseta* RATZEBURG 1852, p. 97, ♂ ♀.

*Polyblastus senilis* HOLMGREN 1855, p. 219, ♂ ♀.

*Scopiorus rufipes* var. *haemosternus*, ROMAN 1924, p. 28.

*Scopiorus rufipes* a. *haemosternus*, HELLÉN 1940, p. 17.

*Ctenochira Förster* 1855, p. 226; type: *Ctenochira bisinuata* Först., monobasic.

Greatly resembles the foregoing species and has been regarded as a mere variety (e.g. ROMAN 1924, SCHMIEDEKNECHT 1912 and HELLÉN 1940). However, I regard it as an independent species. It differs from *C. rufipes* in the following respects:

1. Head less rounded backwardly (fig. 19).
2. Notaulices of mesoscutum stronger.
3. Clypeus entirely white.
4. The ventral part of the mesopleurae and mesosternum red with yellow marks (in *rufipes* black).
5. The white parts of the hind tibiae and tarsi clearer.

*Occurrence in the Kevojoki area:* ♀: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Finnish Lapland; in addition I have found one ♀ in EP: Vaasa. Norway (ROMAN 1942) and Central Europe (SCHMIEDEKNECHT 1912).

#### *Ctenochira pygobarbata* (Rn)

*Scopimenus pygobarbatus* ROMAN 1937, p. 63, ♀.

*Ctenochira pygobarbata*, TOWNES, TOWNES & GUPTA 1961, p. 105.

*Occurrence in Inari Lapland:* The Keneshjärvi Lake in Utsjoki 20. VII. 1948, H. Ahlvist leg. (HELLÉN 1953 a).

*Distribution:* PsL: Salmijärvi and the Kola Peninsula in U.S.S.R., Sweden (HELLÉN 1953 a) and England (ROMAN 1937).

*Biology:* In England bred from *Pontania capreae* (Hym., Tenthredinidae) (ROMAN 1937).

*Erromenus punctulatus* Hlmgr.

*Erromenus punctulatus* HOLMGREN 1855, p. 222, ♂.

*Tryphon crassus* CRESSON 1868, p. 107, ♀.

*Occurrence in the Kevojoki area:* ♂: 9. VII. 1959, the meadow forest at the foot of Tammukkaphta; ♂: 12. VII. 1959, the mouth of the Fielluge-ägejoki, a moist heath of the birch region; ♀: 12. VII. 1961, the S. slope of Ruottir I, a dry heath of the barren region; 2 ♀ ♀: 14. VII. 1961, the N.E. slope of Ruottir III, a dry heath of the barren region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912). A holarctic species: found in Northern Asia (ROMAN 1931 a: Kamchatka) and North America (TOWNES & TOWNES 1949), too.

*Remarks:* Easily recognizable with a dull, densely punctuate abdomen, with oblique grooves of the 2nd tergite, and with the vein 3rm of the front wing. The abdomen is usually black dorsally, but the apical margin of the tergites may be light (♂ 12. VII. 1959).

*Biology:* A parasite of Tenthredinidae (Hym.) (TOWNES & TOWNES 1949).

*Erromenus junior* (Thnbg)

*Ichneumon junior* THUNBERG 1822, p. 273.

*Exochus frenator* GRAVENHORST 1829 c, p. 532, ♂ ♀.

*Erromenus junior*, ROMAN 1912, p. 292.

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1956, the mouth of the Roajaatshe; ♀: 6. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* In Finland hitherto only found in the south (HELLÉN 1961 a). Northern and Central Europe (SCHMIEDEKNECHT 1912).

*Remarks:* Differs from the foregoing species mainly with respects to the abdomen, which is less sculptured and more polished. Both the specimens of the area studied have black abdominal tergites with a light apical margin. The specimen from 1956 has red legs with black coxae and dark trochanters, the specimen from 1959 has dark brown femora.

*Biology:* In U: Helsinki rural district, bred from *Nematus cognatus* (Hym., Tenthredinidae) (HELLÉN 1961 b).

*Erromenus brunnicanus* (Grav.)

*Tryphon brunnicanus* GRAVENHORST 1829 c, 270, ♂ ♀.

*Erromenus brunnicanus*, HOLMGREN 1855, p. 221.

*Occurrence in the Kevojoki area:* 2 ♂ ♂: 14.—16. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912).

*Remarks:* In the specimen found on 16. VII. tergites 2 to 5 have a dark brown medio-apical mark. The length of the specimens from South Finland is 5.5 and those from the Kevojoki area 5 mm.

*Erromenus bipunctatus* (Woldst.)

*Trichocalymma bipunctatum* WOLDSTEDT 1877 b, p. 456, ♀.

*Erromenus brevitarvis* THOMSON 1833 b, p. 904, ♂ ♀.

*Erromenus bipunctatus*, SCHMIEDEKNECHT 1912, p. 2479.

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* Hitherto only found in South Finland, Scandinavia (SCHMIEDEKNECHT 1912) and Leningrad (WOLDSTEDT 1877 b).

*Remarks:* The specimen of the area studied is typical: the 2nd tergite has two great depressions and the legs are rather dark.

*Erromenus simplex* Thoms.

*Erromenus simplex* THOMSON 1883 b, p. 905, ♂ ♀.

*Erromenus defectivus* STROBL 1903, p. 74, ♂ ♀.

*Erromenus nitens* STROBL 1903, p. 74, ♂.

*Occurrence in the Kevojoki area:* 2 ♂ ♂: 13. VII. 1961, the N.E. slope of Ruottir I, a moist heath between the barren and birch regions.

*Distribution:* Throughout Finland. Also in Sweden (SCHMIEDEKNECHT 1912), Norway (ROMAN 1942), Latvia (OZOLS 1941) and Kamchatka (ROMAN 1931 a).

*Remarks:* Differs from the following *E. melanotus* in the stronger sculpture of the abdominal tergites (especially basally) and in the backwardly less tapering head. The sculpture may vary, however. In all specimens of the Kevojoki area the tergites (except the 1st) have a red apical margin.

*Biology:* In U: Helsinki bred from *Lygaenematus varipes* (Hym., Tenthredinidae) (HELLÉN 1963).

*Erromenus melanotus* (Grav.)*Tryphon melanotus* GRAVENHORST 1829 c, p. 269, ♀.*Erromenus exarcolatus* BRISCHKE 1871, p. 96, ♂.*Trichocalymma punctatum* WOLDSTEDT 1877 b, p. 456, ♂.*Erromenus carigena* THOMSON 1883 b, p. 904, ♂ ♀.*Erromenus melanotus*, PFANKUCH 1907, p. 21.*Occurrence in the Kevojoki area:* Common in the heaths of all regions.*Distribution:* Rather rare throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912); Leningrad (WOLDSTEDT 1877 b).

*Remarks:* With the two foregoing species forms its own *Erromenus* complex in the area studied, characterized by lack of the vein 3rm of the front wings. But remains of the nerve are sometimes visible. *E. melanotus* differs from *bipunctatus* in the backwardly rather strongly tapering head and the longer tarsi. The degree of punctuation of the tergites varies. The specimens of the Kevojoki area have the 2nd and 3rd tergites red, medially darkened in many specimens. The male found on 2. VII. 1956 at the mouth of the Kevojoki has a black abdomen, and the apical margins of the tergites from 2 to 4 are red.

*Biology:* In Finland bred from *Pristiphora alnivora* (Hym., Tenthredinidae) (HELLÉN 1961 c).

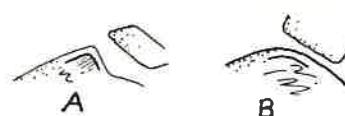


Fig. 20. Dorsal ridge of mesopleurum, in sinistro-lateral view. A. *Erromenus zonarius* (Grav.), B. *E. melanotus* (Grav.), — Orig.

*Erromenus zonarius* (Grav.)*Ichneumon zonarius* GRAVENHORST 1820, p. 380, ♀.*Tryphon zonarius* GRAVENHORST 1829 c, p. 268, ♂ ♀.*Erromenus zonarius*, HOLMGREN 1855, p. 221.*Occurrence in the Kevojoki area:* ♀: 6. VII. 1959, a meadow forest at the mouth of the Kevojoki.*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912).

*Remarks:* Resembles *E. melanotus*, but in the front wings there is the vein 3rm, and the upper margin of the mesopleurum forms a sharp appendage under the tegula (fig. 20 A), while it is blunter in *melanotus* (fig. 20 B).

*Tryphon brunniventris* Grav.*Tryphon brunniventris* GRAVENHORST 1829 c, p. 281, ♂ ♀.*Tryphon fulviventris* HOLMGREN 1855, p. 191, ♂ ♀.*Occurrence in the Kevojoki area:* Rather common in meadows and meadow forests.*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912).*Remarks:* Hind femora as a rule red, dark at the apex, but in many specimens they are almost or entirely black.*Biology:* In Germany bred from *Dolerus* species (Hym., Tenthredinidae) (HINZ 1961).*Tryphon incestus* Hlmgr.*Tryphon rutilator* var. 8 GRAVENHORST 1829 c, p. 311, ♂ ♀.

*Tryphon incestus* HOLMGREN 1855, p. 188, ♂ ♀; lectotype ♂: labelled "Hlm.", "Bhn", designated by J.-F. AUBERT (coll. Riksmuseum, Stockholm); lectotype ♀: labelled "Lp.", "P.Wg.", designated by J.-F. AUBERT (coll. Riksmuseum, Stockholm).

*Occurrence in the Kevojoki area:* Common in meadows and meadow forests.*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912), e.g. the Bavarian Alps (HEINRICH 1949 a).*Remarks:* Resembles the preceding species and has sometimes been united with it (e.g. HELLÉN 1940). Differs from this in the following respects:*incestus* Hlmgr.

Proximal tergites of abdomen rough.

Length : apical breadth of 1st abdominal tergite = about 1.7 : 1 in ♂ and 1.4 : 1 in ♀.

Femora of *incestus* are always black.*brunniventris* Grav.

Proximal tergites of abdomen punctate.

Length : apical breadth of 1st abdominal tergite = about 1.25 : 1 in ♂ and 1.1 : 1 in ♀.

*Tryphon exclamacionis* Grav.*Tryphon exclamacionis* GRAVENHORST 1828 c, p. 279.*Tryphon confinis* HOLMGREN 1855, p. 191, ♂.*Tryphon heliophilus* THOMSON 1883 b, p. 889, ♂ ♀.*Tryphon brunniventris* var. *exclamacionis*, ROMAN 1909, p. 286.*Occurrence in the Kevojoki area:* Very common in all biotopes.*Distribution:* Throughout Finland. Also in Sweden (ROMAN 1909), Northern Norway (ROMAN 1936 a) and Germany (HEDWIG 1950 b).

*Remarks:* In addition to those with red femora, there are sometimes specimens with black or blackish hind femora in the area studied.

*Smicroplectrus bohemani* (Hlmgr.)

*Exyston Bohemani* HOLMGREN 1855, p. 229, ♂ ♀.

*Microplectron Bohemani*, SCHMIEDEKNECHT 1911, p. 2311.

*Smicroplectrus Bohemani*, ROMAN 1913 b, p. 128.

*Occurrence in the Kevojoki area:* ♀: 5. VII. 1956, the ground between the lakes Keärdusjärvi and Pikk-Kevojärvi; ♀: 12. VII. 1956, about 1 kilometre from the peninsula between the lakes Ylä- and Alanjaggaljärvi to the southwest; ♀: 6. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Also in Sweden, England, Holland, Belgium and Czechoslovakia (KERRICH 1952), Northern Norway (ROMAN 1936 a), Germany (HEINRICH 1949 a: the Bavarian Alps), Siberia (KERRICH 1952) and Kamchatka (ROMAN 1931 a).

*Remarks:* The specimen found on 12. VII. 1956 has red femora with black apices; in the other specimens they are almost black.

*Smicroplectrus jucundus jucundus* (Hlmgr.)

*Exenterus jucundus* HOLMGREN 1855, p. 227, ♂ ♀.

*Smicroplectrus jucundus*, THOMSON 1883 b, p. 888.

*Smicroplectrus costulatus* THOMSON 1883 b, p. 888.

*Occurrence in the Kevojoki area:* 2 ♂♂ and ♀: 5. VII. 1956, the ground between the lakes Keärdusjärvi and Pikk-Kevojärvi.

*Distribution:* Throughout Finland. Also in Sweden, England, Switzerland (KERRICH 1952), Germany (HEINRICH 1949 b: the Bavarian Alps). A holarctic species: in North America (Canada and Alaska) the subspecies *S. j. albolineatus* (Walsh) is found (MASON 1956).

*Remarks:* The species has for a long time been united with the foregoing species (e.g. HELLÉN 1940). However, it is really an independent species (KERRICH 1952 and MASON 1956), which differs from *bohemani* in the less strong genal costa, among other things. One of the males from the area studied has almost black legs; so has the other but the femora are red. In addition, the female has red hind tibiae (but apex dark).

*Eudiaborus boreoalpinus* Kerr.

*Eudiaborus boreoalpinus* KERRICH 1952, p. 417, ♂ ♀.

*Eudiaborus maculiventris* Ashm. *boreoalpinus*, MASON 1955, p. 55.

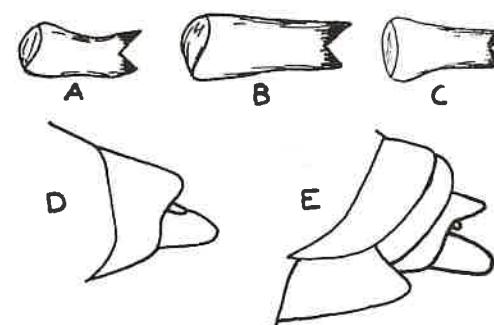


Fig. 21. Right mandible. A. *Cteniscus dahlbomi* (Hlmgr.) ♀, B. ♂, C. *C. rufonotatus* (Hlmgr.) ♀. — ♀: apex, in sinistrolateral view. D. *C. dahlbomi*, E. *C. rufonotatus*. — Orig.

*Occurrence in the Kevojoki area:* ♀: 16. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.

*Distribution:* Ks: Kuusamo, Salla and KemL: Pelkosenniemi in Finnish Lapland (KERRICH 1952). Also reported from Scottish Highlands, the Bavarian Alps, Austria, Switzerland and the Carpathians (KERRICH 1952 and 1953).

*Cteniscus rufonotatus* (Hlmgr.)

*Exenterus rufonotatus* HOLMGREN 1855, p. 243, ♀.

*Cteniscus breviventris* THOMSON 1883 b, p. 890, ♀.

*Exenterus fulvipes* KRIECHBAUMER 1896 a, p. 369, ♂.

*Cteniscus rufonotatus*, SCHMIEDEKNECHT 1912, p. 2350.

*Occurrence in the Kevojoki area:* ♀: 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* U: Hanko and PH: Keuruu in Finland (HELLÉN 1937 c and KERRICH 1952). Throughout Europe (SCHMIEDEKNECHT 1912).

*Remarks:* The face is black, the clypeus, genae and lateral margins of the face and the frons are white in the specimen from the area studied; the legs are darker than usual: hind tibiae and tarsi nearly black. Apex of gaster in fig. 21 E.

*Cteniscus dahlbomi* (Hlmgr.)

*Exenterus Dahlbomi* HOLMGREN 1855, p. 242, ♀; lectotype ♀: Dovre, Norway, labelled "Dv.", "Bhm.", hereby designated (coll. Riksmuseum, Stockholm).

*Cteniscus Dahlbomi*, SCHMIEDEKNECHT 1912, p. 2349.

*Occurrence in the Kevojoki area:* ♂ (allotype): 15. VII. 1956, the mouth of the Roajaatshe (coll. JUSSILA); ♀: 18. VII. 1959, a moist heath of the birch region by Linkkapahta.

*Distribution:* New to the fauna of Finland (JUSSILA 1963 b). Reported from Norway (HOLMGREN 1855) and Latvia (OZOLS 1958).

*Remarks:* The female most closely resembles *C. rufonotatus* and has sometimes been united with it (ROMAN 1914). KERRICH (1952), however, regards these two as separate species and I agree with him. *C. dahlbomi* differs from *rufonotatus*, among other things, in the following respects: mandibles slightly narrowing to the middle and then expanding, lower tooth shorter than the upper (fig. 21 A), in *rufonotatus* (according to KERRICH) the lower is a little longer than the upper, but in the specimen from the present study area the lower is as long as the upper (fig. 21 C); female hypopygium pointed at the apex (fig. 21 D); lower face yellow, median dark black; scutellum and postscutellum yellow at the mid-apex.

*Male:* Resembles the female (e.g. the lower face, cheeks and lower angle of pronotum with pale markings and the hind femora dark), but the middle narrowing of the mandible is not so strong, but almost non-existent (fig. 21 B) (the lower tooth is shorter than the upper, as in the female); the abdomen is narrower, length : apical breadth of the 2nd tergite = 1:1.5 (in ♀ 1:1.9); the scutellum and postscutellum black; length 6 mm.

KERRICH (1952) says that the male type of *C. gracilis* (Hlmgr.) [type: labelled "Dlc.", "Bhn" (coll. Riksmuseum, Stockholm)] corresponds well with *dahlbomi*, and thinks that the latter may be regarded as synonymous with it. But in the *gracilis* type the lower face, cheeks and lower angle of the pronotum bear no pale markings, and the hind femora are dark.

#### *Cteniscus gnathoxanthus* (Grav.)

*Tryphon gnathoxanthus* GRAVENHORST 1829 c, p. 147, ♀.

*Cteniscus gnathoxanthus*, HALIDAY 1838, p. 113.

*Exenterus gnathoxanthus*, HOLMGREN 1855, p. 241, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀: 19. VII. 1959, a moist heath of the birch region at the mouth of the Siedgajoki; ♀: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Also in Sweden, England, Ireland, Germany, France and Czechoslovakia (KERRICH 1952). A holarctic species: Siberia and Alaska (TOWNES & TOWNES 1951).

*Remarks:* The specimen found on 19. VII. is only 5.5 mm long (in Finland on average 6—9 mm). In both specimens the clypeus, genae and ventral surface of the face (except for the centre) are yellowish white.

#### *Cteniscus flavomaculatus* (Grav.)

*Tryphon flavomaculatus* GRAVENHORST 1829 c, p. 252, ♂.

*Exenterus hostilis* HOLMGREN 1855, p. 239, ♂.

*Exenterus pumilis* HOLMGREN 1855, p. 240, ♀.

*Exenterus praecustus* HOLMGREN 1855, p. 242, ♂ ♀.

*Exenterus umbellatarum* WOLDSTEDT 1874, p. 51, ♀.

*Cteniscus quadrinotatus* THOMSON 1883 b, p. 892, ♀.

*Cteniscus minutulus* PFANKUCH 1907, p. 17, ♀.

*Cteniscus flavomaculatus*, SCHMIEDEKNECHT 1912, p. 2346.

*Cteniscus basalis* STEPHENS (see HELLÉN 1937 c).

*Occurrence in the Kevojoki area:* Common everywhere except in bogs.

*Distribution:* Throughout Finland. Also PsL: Petsamo in European U.S.S.R. (HELLÉN 1937 c), Northern, Central and Southern Europe (SCHMIEDEKNECHT 1912 and CABALLOS 1956), Kamchatka (ROMAN 1931 a) and Yenisei (ROMAN 1913 a).

*Remarks:* The colouring varies very much. The material from the area studied includes specimens in which the face and genae have yellow markings. Tergites 2 to 4 and the hind femora are red. Specimens like these are found only in Lapland (HELLÉN 1937 c). In addition, in the Kevojoki area specimens have been found which differ from the foregoing in having a black face and genae or black hind femora. In some specimens tergites 2 to 4 are black with red longitudinal streaks medially. I have also found one ♂ (17. VII. 1959, the meadow of the Madjoki hut) and two ♀ ♀ (14. VII. 1956, the mouth of the Roajaatshe, and 13. VII. 1959, a patch of willows by Ruottir III), the abdomen of which is black; only the apical margins of the tergites are light. These resemble *C. rufonotatus*, but differ from it, among other things, in the slightly narrower stigma, the cell 3R<sub>1</sub> (cf. RICHARDS 1956) in the front wings, and in the thicker flagellae. The size varies, too: the smallest specimens (2 ♀ ♀) are 3.8, the largest (2 ♂ ♂) 7 mm long.

#### *Cteniscus aurifluus* (Hal.)

*Tryphon (Cteniscus) aurifluus* HALIDAY in CURTIS 1832, p. 399. HALIDAY 1838, p. 113.

*Exenterus geniculosis* SCHIÖDTE 1839, p. 11. HOLMGREN 1855, p. 241, ♂ ♀.

*Exenterus approximatus* HOLMGREN 1855, p. 239, ♂.

*Cteniscus geniculosis*, BRISCHKE 1871, p. 98.

*Exenterus aurifluus*, MORLEY 1913 b, p. 261.

*Cteniscus aurifluus*, KERRICH 1952, p. 446, ♂ ♀.

*Occurrence in Inari Lapland:* Ivalo, W. Hellén leg. (HELLÉN 1937 c).

*Distribution:* In Finland V: Usikaupunki (HELLÉN 1937 c). Russia, Northern, Western and Central Europe (KERRICH 1952).

#### *Eridolius schiödtei* (Hlmgr.)

*Exenterus Schiödtei* HOLMGREN 1855, p. 243, ♀.

*Exenterus Zetterstedti* HOLMGREN 1855, p. 244, ♂.

*Cteniscus Schiödtei*, THOMSON 1883 b, 892.

*Eridolius Schiödtei*, SCHMIEDEKNECHT 1912, p. 2353.

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1956, the mouth of the Roajaatshe; ♀: 10. VII. 1959, a heath of the coniferous region on the W. shore of Ylänjaggaljärvi; ♂: 13. VII. 1959, the meadow forest by the Kevo Wall; ♀: 18. VII. 1959, a meadow forest at the foot of Linkkapahta.

*Distribution:* Rare throughout Finland. Also reported from Swedish Lapland (SCHMIEDEKNECHT 1912).

*Remarks:* The species is easily identifiable by its small size (about 4 mm long), and narrow, long area superomedia and by the scutellum, which has a rounded top. In addition, the face of the male is yellow, and that of the female black with yellow margins. In the female a reddish brown streak runs over the abdomen, as a rule, but in the specimen found on 18. VII. 1959 it is hardly visible.

#### *Eridolius bimaculatus* (Hlmgr.)

*Exenterus bimaculatus* HOLMGREN 1855, p. 245, ♂ ♀.

*Cteniscus bimaculatus*, BRISCHKE 1878, p. 106.

*Eridolius bimaculatus*, SCHMIEDEKNECHT 1912, p. 2353.

*Occurrence in the Kevojoki area:* ♂: 2. VII. 1956, Kevusuu.

*Distribution:* Throughout Finland, but rather rare. Kk: Rajajoki in European U.S.S.R. (HELLÉN 1937 c), Northern and Central Europe (SCHMIEDEKNECHT 1912).

*Remarks:* Differs from the foregoing species in its larger size (the specimen of the Kevojoki area is 6.5 mm long), stronger body structure, backwardly less rounded head, broader area superomedia and scutellum, which has a flat top. In the specimen from the area studied the ventral surface of the face is yellow and the upper surface black.

#### Subfamily *Banchinae*

#### *Glypta mandibulator* (Thnbg) *parvula*, new subspecies

*Glypta mandibulator* var. *parvula* HELLÉN 1915, p. 60.

*G. m. parvula* differs from *G. m. mandibulator* (Thnbg) (*Ichneumon mandibulator* THUNBERG 1882, p. 273, ♂; *Glypta xanthognatha* THOMSON 1889 a, p. 1335, ♂ ♀) in the following respects: size smaller (5—7 mm, length of

the more southern subspecies 7—10 mm) and tergites with stronger grooves. Antennae darker, although not quite black, as HELLÉN (1915) and SCHMIEDEKNECHT (1907) claim, but basally lighter.

*Occurrence in the Kevojoki area:* ♀ (holotype): 14. VII. 1961, the N.W. slope of Ruottir III, a moist heath of the barren region (coll. JUSSILA); ♂ (allotype): 13. VII. 1959, the meadow forest by the Kevo Wall (coll. JUSSILA); common in the area studied, especially in drier biotopes, but not uncommon in lush habitats, either.

*Distribution:* The subspecies *G. m. parvula* occurs only in the north besides Utsjoki KemL: Muonio, InL: Lutto and the Kola Peninsula (HELLÉN 1915). *G. m. mandibulator* is rather common in South and Central Finland. A holarctic species: found in Northern (PETERSEN 1956: in Iceland, too) and Central Europe and in North America (ROMAN 1931 b); Roumania (CONSTANTINEANU & PISICA 1962).

#### *Glypta ceratites* Grav.

*Pimpla ceratites* GRAVENHORST 1829 a, p. 21, ♂ ♀.

*Glypta ceratites* GRAVENHORST 1829 d, p. 18.

*Conoblasta ceratites*, SCHMIEDEKNECHT 1907, p. 1220.

*Occurrence in the Kevojoki area:* 2 ♂ ♂: 14. and 15. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* Common throughout Finland. Almost all parts of Europe (SCHMIEDEKNECHT 1934); Asia: Yenisei (ROMAN 1913 a).

*Biology:* A parasite of mining Microlepidoptera (SCHMIEDEKNECHT 1934 and FULMEK 1962).

#### *Glypta heterocera* Thoms.

*Glypta heterocera* THOMSON 1889 a, p. 1337, ♀.

*Conoblasta heterocera*, SCHMIEDEKNECHT 1906, p. 1221, ♂ ♀.

*Occurrence in the Kevojoki area:* Common, especially in drier biotopes, but also found in more lush habitats, too.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1934), Roumania (CONSTANTINEANU & PISICA 1962).

*Remarks:* Most specimens of the area studied have light coxae, but those of 2 ♀ ♀ (12. VII. 1959, a moist birch heath at the mouth of the Fiellugeädgejoki, and 17. VII. 1959, the meadow of the Madjoki hut) are black. The species differs from the closely related *G. ceratites* in respect of the frons horn. In *heterocera* it is smaller and its distal end sharp. The size of the horn is variable in both species, in *heterocera* very much so.

*Glypta breviventris* Thoms.

*Glypta breviventris* THOMSON 1889 a, p. 1347, ♀.

*Glypta parvicaudata* Bridgm. var. *breviventris*, HELLÉN 1915, p. 67, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀ : 14. VII. 1959, the N.E. slope of Ruottir II, a barren heath.

*Distribution:* Throughout Finland, not very rare. Known from Swedish Lapland and Kamchatka (ROMAN 1931 a).

*Remarks:* The species differs from the closely related *G. scalaris* Grav. and *parcicauda* Bridgm. in the short propodaeum, which is dorsally almost non-areolated.

*Glypta dentifera* Thoms.

*Glypta dentifera* THOMSON 1889 a, p. 1350, ♀.

*Occurrence in the Kevojoki area:* ♀ : 6. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Also Germany and Roumania (SCHMIEDEKNECHT 1934).

*Pimplopterus gracilentus* (Hlmgr.), new combination

*Lissonota gracilenta* HOLMGREN 1860 b, p. 57, ♀. HABERMEHL 1930 a, p. 112, ♂ ♀.

*Pimplopterus* ASHMEAD 1900, p. 52; type: (*Pimplopterus alaskensis* Ashm.) = *frigidus* Cress., original designation.

*Occurrence in the Kevojoki area:* ♂ : 7. VII. 1959, the Kevo Cape, a dry heath of the coniferous region.

*Distribution:* In Finland V: Korppoo (A. Wegelius leg.), U: Hanko, St: Säkylä (HELLÉN 1937 a) and ES: Ruokolahti (O. Nyblund leg.). Also Swedish Lapland (ROMAN 1909) and ? the Bavarian Alps (HEINRICH 1952).

*Biology:* According to ROMAN (1905), common on Swedish mountains.

*Exetastes laevigator* (Vill.)

*Ichneumon laevigator* VILLERS 1789, p. 193.

*Cryptus laevigator*, GRAVENHORST 1818, p. 288.

*Exetastes bicoloratus* GRAVENHORST 1829 d, p. 421, ♂ ♀.

*Exetastes laevigator*, GRAVENHORST 1829 d, p. 424, ♂ ♀.

*Tryphon (Exetastes) incurvator* ZETTERSTEDT 1838, p. 386 (partly).

*Exetastes alpinus* KRIECHBAUMER 1888, p. 354, ♂ ♀.

*Exetastes lacvigatus*, HELLÉN 1961 c, p. 93.

*Occurrence in the Kevojoki area:* ♂ : 6. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland and Europe (SCHMIEDEKNECHT 1910).

*Exetastes geniculosis* Hlmgr.

*Exetastes geniculosis* HOLMGREN 1860 a, p. 152, ♂ ♀.

*Tryphon (Exetastes) incurvator* ZETTERSTEDT 1838, p. 386 (partly).

*Occurrence in Inari Lapland:* Lemmenjoki, W. Hellén leg. (HELLÉN 1946).

*Distribution:* Kn: Suomussalmi in Finland (HELLÉN 1946). Ks: Vuorikylä and PsL: Yläluostari in European U.S.S.R. (HELLÉN 1946), Northern and Central Europe (SCHMIEDEKNECHT 1910), the Bavarian Alps (HEINRICH 1949 a), Spain (CEBALLOS 1956) and Roumania (CONSTANTINEANU & PISICĂ 1959).

#### Subfamily *Scolobatinae*

*Synocctes tenuicornis* (Grav.)

*Tryphon tenuicornis* GRAVENHORST 1829 c, p. 228, ♂. HOLMGREN 1855, p. 192, ♂ ♀.

*Syndipnus (Polyrhysius) tenuicornis*, THOMSON 1894 a, p. 1999.

*Polyrhysia tenuicornis*, SCHMIEDEKNECHT 1912, p. 2371.

*Synocctes tenuicornis*, TOWNES & TOWNES 1951, p. 329.

*Occurrence in Inari Lapland:* Ivalo, W. Hellén leg. (HELLÉN 1944 a).

*Distribution:* East and Central Finland, too. LK: Sortavalala in European U.S.S.R. (HELLÉN 1944 a), Northern and Central Europe (SCHMIEDEKNECHT 1912).

*Perilissus filicornis* (Grav.)

*Ichneumon filicornis* GRAVENHORST 1820, p. 368, ♂.

*Mesoleptus filicornis* GRAVENHORST 1829 c, p. 94, ♂ ♀.

*Perilissus filicornis*, HOLMGREN 1855, p. 121.

*Occurrence in the Kevojoki area:* ♀ : 6. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912), the Bavarian Alps (HEINRICH 1952).

*Remarks:* The specimen from the Kevojoki area has a reddish, laterally black face.

*Biology:* Bred from *Nematus* and mining *Fenusaa* species (Hym., Tenthredinidae) (SCHMIEDEKNECHT 1912).

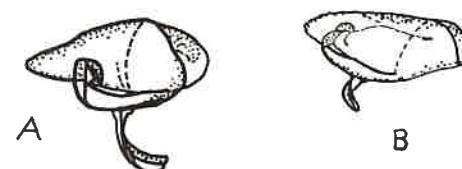


Fig. 22. Male genitalia, in dextrolateral view.  
A. *Perilissus pallidus* (Grav.), B. *P. orbitalis* (Grav.). — Orig.

#### *Perilissus pallidus* (Grav.)

*Mesoleptus pallidus* GRAVENHORST 1829 c, p. 30, ♂.  
*Perilissus subcinctus* HOLMGREN 1855, p. 123, ♂ ♀.  
*Perilissus pallidus*, HOLMGREN 1855, p. 124, ♂ ♀.  
*Perilissus Holmgreni* HABERMEHL (see HELLÉN 1961 c).

*Occurrence in the Kevojoki area:* Common in meadows and meadow forests.

*Distribution:* Throughout Finland. Northern, Central and Western Europe (SCHMIEDEKNECHT 1912 and AUBERT 1957).

*Remarks:* The colouring varies very much. All specimens from the Kevojoki area have a black head, mesothorax and abdomen. The abdomen dorsally with a red median mark. Hind coxae basally, hind femora, and also hind tibiae to a great extent black. The sculpturing of the mesopleurae varies, too. Among the specimens of Kevo there are males (2., 5. and 7. VII. 1959) whose sculpturing is almost non-existent. Genitalia of the male in fig. 22 A.

#### *Perilissus orbitalis* (Grav.)

*Tryphon orbitalis* GRAVENHORST 1829 c, p. 254, ♂.  
*Perilissus bucculentus* HOLMGREN 1855, p. 70, ♂.  
*Perilissus (Eccinops) orbitalis*, THOMSON 1883 b, p. 913.  
*Perilissus orbitalis*, MORLEY 1911, p. 259, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 5. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♀: 6. VII. 1959, a meadow forest near the mouth of the Kevojoki; ♂: 17. VII. 1959, the meadow forest of the Madjoki hut; ♂: 19. VII. 1961, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912).

*Remarks:* Resembles *P. pallidus* with short malar spaces, distinct notaularies and the antefurcalis Cu<sub>1</sub>-vein of hind wings, but differs from this in the shorter 1st tergite. In *orbitalis* length : greatest breadth of this tergite =

about 1.7:1 and in *pallidus* about 2.5:1. All specimens of the area studied (and a specimen from EP: Vaasa, R. Jussila leg.) have a black face, yellow clypeus and mandibles. The light colour of the male taken on 5. VII. 1959 is reddish yellow. Costula may be present or lacking. The genitalia of the males (*orbitalis*: fig. 22 B) exhibit no differences.

#### *Perilissus pictilis* Hlmgr.

*Perilissus pictilis* HOLMGREN 1855, p. 125, ♂ ♀.

*Perilissus (Laphyroscopus) pictilis*, THOMSON 1883 b, p. 915.

*Perilissus (Laphyroscopus) nigricollis* THOMSON 1883 b, p. 915, ♂ ♀.

*Perilissus minutus* BRIDGMAN 1887, p. 370, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀: 19. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912).

#### *Himerta bisannulata* Thoms.

*Euryproctus defectivus* HOLMGREN (not GRAVENHORST 1829) 1855, p. 112, ♂, junior homonym.

*Euryproctus (Himertus) bisannulatus* THOMSON 1883 b, p. 927.

*Himertus bisannulatus* THOMSON 1894 a, p. 1985.

*Himerta bisannulata*, TOWNES & TOWNES 1961, p. 330.

*Occurrence in Inari Lapland:* The fountainhead of the Lemmenjoki river, 6. VII. 1937, W. Hellén leg. (HELLÉN 1941).

*Distribution:* Scandinavia (THOMSON 1883 b).

#### *Mesoleius sectator* (Thnbg)

*Ichneumon sectator* THUNBERG 1822, p. 66, ♂.

*Mesoleptus ruficornis* GRAVENHORST 1829 c, p. 43, ♂ ♀.

*Mesoleptus lugubris* WOLDSTEDT 1874, p. 31, ♀.

*Mesoleius (Alexeter) ruficornis*, HOLMGREN 1876, p. 50.

*Alexeter sectator*, SCHMIEDEKNECHT 1914, p. 2858.

*Mesoleius ruficornis*, TOWNES, TOWNES & GUPTA 1961, p. 215.

*Mesoleius sectator*, JUSSILA 1962 b, p. 58.

*Occurrence in the Kevojoki area:* ♂: 18. VII. 1956, the mouth of the Fiellugeädgejoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1914), Asia: Yenisei (ROMAN 1913 a), Kamchatka (ROMAN 1931 a) and N.W. China (ROMAN 1936 b).

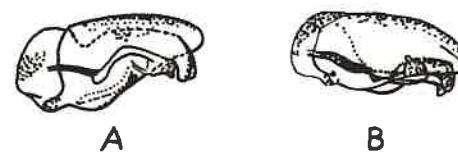


Fig. 23. Male genitalia, in dextro-lateral view. A. *Mesoleius alpinus* (Rn), B. *M. nasutus* (Grav.). — Orig.

**Remarks:** The specimen of the area studied is smaller than usual: 8 mm (average length 11–13 mm in Finland).

**Biology:** In Central Europe bred from *Pachyprotas simulans* and *Tenthredo atra* (Hym., Tenthredinidae) (HINZ 1961).

#### *Mesoleius nasutus* (Grav.), new combination

- Tryphon nasutus* GRAVENHORST 1829 c, p. 264, ♂ ♀.  
*Mesoleius confusus* HOLMGREN 1856 a, p. 376, ♂ ♀.  
*Mesoleius erosus* HOLMGREN 1856 a, p. 382, ♀.  
*Spudaeus confusus*, THOMSON 1894 a, p. 2011.  
*Spudaea nasuta*, PFANKUCH 1907, p. 21.  
*Spudaea confusa*, ROMAN 1919, p. 347.

**Occurrence in the Kevojoki area:** Common in meadows and meadow forests, but found in moist heaths of the birch region, too.

**Distribution:** Ks: Salla in Finland (HELLÉN 1937 c). Northern and Central Europe (SCHMIEDEKNECHT 1914).

**Remarks:** The specimens of the area studied correspond well to SCHMIEDEKNECHT's description (1914), but the front and middle coxae are white and the hind coxae apically more or less white. Genitalia of the male in fig. 23 B.

#### *Mesoleius alpinus* (Rn), new combination

*Spudaea alpina* ROMAN 1909, p. 347, ♂ ♀; lectoholotype ♀: 14. VII. 1907, Sarek, hereby designated (coll. Riksmuseum, Stockholm); lectotype ♂: 18. VII. 1904, Sarek in Swedish Lapland, hereby designated (coll. Riksmuseum, Stockholm).

*Mesoleius* HOLMGREN 1856 b, p. 69; type: *Tryphon aulicus* Grav., designated by VIERECK 1914.

**Occurrence in the Kevojoki area:** ♀: 13. VII. 1959, the moist heath of the birch region on the Kevo Wall; ♀: 13. VII. 1959, the mouth of the Fielugeädjeköki, a moist heath of the birch region; ♀: 13. VII. 1959, a patch of willows in the Kevo Canyon by Ruottir III; 2 ♀ ♀: 10. VII. 1961, the N.E. slope of Ruottir I, a dry heath between the barren and birch regions; ♂: 12. VII. 1961, the S. slope of Ruottir II, a dry heath of the barren region.

**Distribution:** Finnish and Swedish Lapland (ROMAN 1909).

**Remarks:** Very close to *M. nasutus*. According to ROMAN (1909) and SCHMIEDEKNECHT (1914), differs from the latter in having a red clypeus, dark sternites and ventro-median fold of the abdomen, and an entirely black face in the male. The colouring of the clypeus and abdomen may vary, however. I have therefore tried to find more precise distinguishing features. I have come to the following conclusion: *alpinus* is a little stronger-bodied, length : breadth of 1st tergite  $\leq 1.2:1$  in *alpinus* and  $\geq 1.2:1$  in *nasutus*. In addition, the sculpturing of the 1st and 2nd tergites is rougher in *alpinus*. The genitalia of the males (*alpinus*: fig. 23 A) exhibit no differences.

**Biology:** Prevails in more rugged biotopes than *nasutus*.

#### *Mesoleius compactor* (Thnbg), new combination

- Ichneumon compactor* THUNBERG 1822, p. 273, ♀.  
*Trematopygus atratus* HOLMGREN 1855, p. 181, ♀. MORLEY 1911, p. 177, ♂ ♀.  
*Bassus quadriguttatus* SNELLEN VAN VOLLENHOVEN 1873, p. 211, ♀.  
*Spudaea atrata*, SCHMIEDEKNECHT 1914, p. 2883.  
*Spudaea compactor*, HELLÉN 1940, p. 19.  
*Mesoleius* HOLMGREN 1856 b, p. 69; type: *Tryphon aulicus* Grav., designated by VIERECK 1914.

**Occurrence in the Kevojoki area:** 2 ♂ ♂: 13. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1914).

**Remarks:** One of the specimens from the Kevojoki area is abnormal: on the left front wing the vein 3rm is visible. The quer grooves of the tergites are not very distinct in either of the specimens from the area studied. The length of one is 7.5 and of the other 5.5 mm.

#### *Mesoleius frontator* (Thnbg), new combination

- Ichneumon frontator* THUNBERG 1822, p. 266, ♂.  
*Bassus (Tryphon) rufolabris* ZETTERSTEDT 1838, p. 380, ♀.  
*Mesoleius rufolabris*, HOLMGREN 1855, p. 171 & 1876, p. 46, ♂ ♀.  
*Scopetes frontator*, ROMAN 1912, p. 292.

**Occurrence in the Kevojoki area:** ♂: 12. VII. 1961, the S. slope of Ruottir II, a dry heath of the barren region; ♂: 14. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1914).

*Remarks:* The specimens of the area studied are 6 and 7 mm long, of Central Finland ( $\delta \delta$ ) 8—9 mm.

*Biology:* In Central Europe bred from a *Tenthredo* species (Hym., Tenthredinidae) (SCHMIEDEKNECHT 1914).

#### *Mesoleius tegularis* Thoms.

*Mesoleius tegularis* THOMSON 1894 b, p. 2031,  $\delta \varphi$ .  
*Scopetus tegularis*, SCHMIEDEKNECHT 1914, p. 2931.

*Occurrence in the Kevojoki area:*  $\delta$ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Hitherto only in Southern and Central Finland (HELLÉN 1944 a). Also reported from Sweden (THOMSON 1894 b), Latvia (OZOLS 1958), Czechoslovakia (GREGOR 1930) and Germany (HEINRICH 1949 a: the Bavarian Alps).

*Remarks:* Front and hind coxae only apically yellow in the specimen of the area studied.

#### *Mesoleius alticola* Hlmgr.

*Mesoleius alticola* HOLMGREN 1855, p. 150,  $\varphi$ . BRISCHKE 1871, p. 76,  $\delta$ .

*Occurrence in the Kevojoki area:*  $\delta$ : 7. VII. 1959, the Kevo Cape, a coniferous heath;  $\delta$ : 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* Hitherto only KemL: Muonio (WOLDSTEDT 1874) and EnL: Kilpisjärvi (W. Hellén leg.) in Finland. Also found in Sweden and ?Germany (SCHMIEDEKNECHT 1925).

#### *Mesoleius armillatorius* (Grav.)

*Ichneumon armillatorius* GRAVENHORST 1807, p. 262.  
*Tryphon armillatorius* GRAVENHORST 1829 c, p. 182,  $\delta$ .  
*Tryphon luteifrons* GRAVENHORST 1829 c, p. 215,  $\varphi$ .  
*Mesoleius armillatorius*, HOLMGREN 1856 b, p. 70,  $\delta \varphi$ .  
*Mesoleius similis* BRISCHKE 1878, p. 35,  $\delta \varphi$ .

*Occurrence in the Kevojoki area:*  $\delta$ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Common in the greater part of Europe (SCHMIEDEKNECHT 1924).

*Remarks:* The specimen from the Kevojoki differs from more southern males in having a quite black scutellum and mesosternum.

#### *Mesoleius aulicus* (Grav.)

*Tryphon aulicus* GRAVENHORST 1829 c, p. 113,  $\varphi$ .  
*Tryphon armillatorius* var. 3 GRAVENHORST 1829 c, p. 182,  $\delta$ .  
*Mesoleius aulicus*, HOLMGREN 1855, p. 134,  $\delta \varphi$ .

*Occurrence in the Kevojoki area:*  $\varphi$ : 14. VII. 1956, the mouth of the Roajaatshe; 2  $\varphi \varphi$ : 19. VII. 1956, the mouth of the Fiellugeädgejoki;  $\varphi$ : 10. VII. 1961, the N.E. slope of Ruottir I, a heath between the barren and birch regions;  $\delta$ : 14. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1924).

*Biology:* Seems to be a species of rugged biotopes. Hosts are sawflies (SCHMIEDEKNECHT 1924).

#### *Mesoleius coriaceus* Hlmgr.

*Mesoleius coriaceus* HOLMGREN 1855, p. 145,  $\varphi$ ; lectotype  $\varphi$ : Swedish Lapland, labelled "Lp.m.", "Bhn.", designated by R. HINZ 1962 (coll. Riksmuseum, Stockholm).

*Occurrence in the Kevojoki area:*  $\varphi$ : 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* Finnish Lapland. Also reported from Swedish Lapland (HOLMGREN 1855); ?Norwegian Lapland (ROMAN 1936 a).

*Remarks:* The specimen of the area studied differs from the type specimen in the stigmata of the front wings, which are brownish yellow, but not yellow.

#### *Mesoleius opticus* (Grav.)

*Tryphon opticus* GRAVENHORST 1829 c, p. 176,  $\varphi$ .  
*Mesoleius opticus*, HOLMGREN 1855, p. 136,  $\delta \varphi$ .

*Occurrence in the Kevojoki area:*  $\delta$ : 13. VII. 1955, the meadow forest by the Kevo Wall.

*Distribution:* EH: Heinola in Finland (HELLÉN 1937 c). Northern and Central Europe (SCHMIEDEKNECHT 1925).

**Remarks:** The species is identifiable by the rather broad hind tarsi and red, rather polished mesosternum, which is both punctate and wrinkled. The tergites are black, the sternites and ventral fold of the abdomen with black spots.

*Mesoleius latipes* Brke

*Mesoleius latipes* BRISCHKE 1871, p. 76, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀: 12. VII. 1956, about 1 kilometre from the peninsula between the lakes Ylä- and Alanjaggaljärvi to the southwest.

**Distribution:** PH: Rautalampi in Finland (HELLÉN 1944a). Also Latvia (OZOLS 1958) and Western Prussia (BRISCHKE 1871).

**Remarks:** The species is easy to recognize by the broad hind tarsi and apices of the hind tibiae (fig. 24) and the median furrow of the 1st tergite, which is bounded by two strong carinae. The sculpturing is strong and rough. The colouring of the specimen from the Kevojoki area differs from BRISCHKE's (1871) description in the following respects: the scutellum and postscutellum are black, the tegulae and markings under the wings red.

**Biology:** BRISCHKE has bred the species from a *Nematus* species (*Hym., Tenthredinidae*).



Fig. 24. *Mesoleius latipes* Brke ♀ :  
apical part of hind leg, in sinistro-lateral view. — Orig.

*Mesoleius dubius* Hlmgr.

*Tryphon aulicus* var. 1 GRAVENHORST 1829 e, p. 173, ♀.

*Mesoleius dubius* HOLMGREN 1876, p. 33, ♀.

**Occurrence in the Kevojoki area:** ♀: 19. VII. 1961, a meadow at the mouth of the Kevojoki.

**Distribution:** V: Karjalohja (W. Hellén leg.), U: Helsinki (O. Nybom leg.), St: Karkku (Hellén leg.), EH: Ruovesi (HELLÉN 1937 e) and EH: Ylöjärvi (A. Saarinen leg.) in Finland. Also Germany, Sweden, England and Steiermark in Austria (SCHMIEDEKNECHT 1925), ?Norway (ROMAN 1936 a), Czechoslovakia (GREGOR 1930), Latvia (OZOLS 1958) and Ks: Paanajärvi in European U.S.S.R. (HELLÉN leg.).

**Remarks:** The specimen of the Kevojoki area corresponds to SCHMIEDEKNECHT's (1925) description, but the hind femora are almost entirely red

(= not black apically). The hind tibiae are also red, apically black, and no yellowish white colour is present. Corresponds to TEUNISSEN's (1945) description.

**Biology:** In England bred from a *Nematus* species (*Hym., Tenthredinidae*) (SCHMIEDEKNECHT 1925).

*Mesoleius fuscipes* Hlmgr.

*Mesoleius fuscipes* HOLMGREN 1855, p. 158, ♂ & 1876, p. 34, ♂ ♀.

**Occurrence in the Kevojoki area:** ♂: 15. VII. 1956, the mouth of the Roajaatshe; ♂: 14. VII. 1959, the N.E. slope of Ruottir I, a heath of the barren region.

**Distribution:** Common throughout Finland. Also from Sweden, Norway (ROMAN 1936 a), Czechoslovakia (GREGOR 1930), Latvia (OZOLS 1941), Germany (HEINRICH 1952: the Bavarian Alps) and Kamchatka (ROMAN 1931 a).

**Remarks:** The specimen from the year 1959 differs from HOLMGREN's (1855) description only in the following respects: its hind legs are entirely red, except for the coxae, which are black, apically yellowish white, and trochanters, of which the proximal is black, apically yellowish white, and the distal entirely yellowish white. The specimen from the year 1956 resembles the foregoing, but the sculpturing of the mesopleurae is not as rough and the hind tibiae are apically dark.

*Mesoleius geniculatus* Hlmgr.

*Mesoleius geniculatus* HOLMGREN 1855, p. 152, ♂ ♀.

**Occurrence in the Kevojoki area:** Common.

**Distribution:** Common throughout Finland. Also Sweden and Germany (SCHMIEDEKNECHT 1925).

**Remarks:** The red area of the scutellum varies in size, and the postscutellum may lack or be red.

**Biology:** Does not seem to require a fixed biotope.

*Mesoleius gracilicornis* Hlmgr.

*Mesoleius gracilicornis* HOLMGREN 1855, p. 155, ♂ ♀.

**Occurrence in the Kevojoki area:** Very common everywhere.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1924).

*Remarks:* Easy to recognize by the large ocelli. The light colour of the mesosternum and terigites varies in its width. The northern specimens are smaller than those of South Finland: the males of the Kevojoki area are 6 and females 6.5 mm long, those of EH: Lempäälä 7 and 7.5 mm.

*Biology:* Does not require a fixed biotope. In South Finland flies at night and comes abundantly to a light. At least in the Kevojoki area, the male seems to emerge about one week earlier than the female.

#### *Mesoleius linitus* Hlmgr.

*Mesoleius linitus* HOLMGREN 1855, p. 175, ♂.

*Mesoleius sanguinosus* HOLMGREN 1876, p. 28, ♀.

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♂: 13. VII. 1959, the moist heath of the birch region on the Kevo Wall; ♂: 17. VII. 1959, the meadow forest of the Madjoki hut; ♂: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Fairly common throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1924).

*Remarks:* The male resembles that of the foregoing species, but the ocelli are smaller. In addition, the mesosternum has no red colour, but only a yellow streak on each side (the specimen found on 17. VII. has an entirely black mesosternum). The extent of the light colour on the abdomen varies: the males from 13. and 20. VII. having only a little on the 3rd and 4th tergites.

#### *Mesoleius marginellus* (Grav.)

*Tryphon marginellus* GRAVENHORST 1829 c, p. 167, ♀.

*Mesoleius simulans* HOLMGREN 1855, p. 154, ♀.

*Mesoleius sanguinosus* HOLMGREN 1855, p. 156, ♂.

*Mesoleius facetus* THOMSON 1894 b, p. 2053, ♀.

*Mesoleius marginellus*, PFANKUCH 1906, p. 95.

*Occurrence in the Kevojoki area:* ♂: 14. VII. 1956, the mouth of the Roajaatshe; ♂: 13. VII. 1959, the meadow forest by the Kevo Wall; ♂: 18. VII. 1959, the meadow forest on Linkkapahta.

*Distribution:* Throughout Finland. Also in Sweden, Germany and Austria (SCHMIEDEKNECHT 1925).

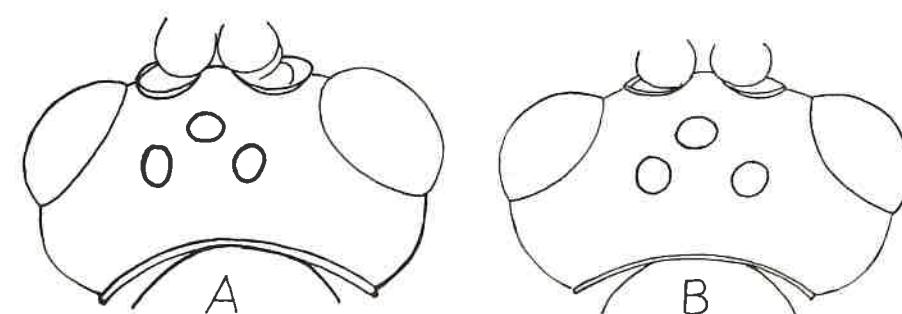


Fig. 25. Head, in dorsal view. A. *Mesoleius marginellus* (Grav.), B. *M. linitus* Hlmgr. — Orig.

*Remarks:* This species resembles *M. linitus*, but the head is not so much narrowed behind the eyes (fig. 25). In addition, the mesosternum is yellow with a little red colour. The dorsal surface of the abdomen is entirely or almost entirely black, and the apical margins of the tergites white. The specimen found in the year 1956 has a brown mesosternum with a yellow mark on each side.

#### *Mesoleius luctuosus* Hlmgr.

*Mesoleius luctuosus* HOLMGREN 1855, p. 158, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 5. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♂: 13. VII. 1959, the meadow forest by the Kevo Wall; ♀: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Northern and Central Europe (HELGÉN 1953 a).

*Remarks:* HOLMRGEN's (1855) and SCHMIEDEKNECHT's (1925) descriptions are indefinite, and we must adopt a cautious altitude towards them, because the species is variable. Head narrowed rather strongly backwards; face narrows downwards; compound eyes large and genae short (especially in male); vein cua of front wing interstitial in male; area superomedia and posteromedia of propodeum absent in female, but almost lost in male.

#### *Mesoleius haematodes* (Grav.)

*Tryphon haematodes* GRAVENHORST 1829 c, p. 177, ♀.

*Mesoleius haematodes*, HOLMGREN 1855, p. 137, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀: 22. VII. 1959, a moist heath of the birch region at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1925).

*Remarks:* The specimen from the Kevojoki area differs from southern females in the following respects: mesoscutum entirely black, abdominal tergites 3 to 4 yellowish red with large black marks laterally, and 2nd tergite with a yellowish red triangle on the apically margin.

*Biology:* In Central Europe bred from a *Nematus* species (Hym., Tenthredinidae) (HINZ 1961).

#### *Mesoleius ignavus* Hlmgr.

*Mesoleius ignavus* HOLMGREN 1855, p. 174, ♂ ♀.

*Occurrence in the Kevojoki area:* Throughout the area studied, ♂ more common.

*Distribution:* Throughout Finland. Also in Sweden, England, Germany, France (ROMAN 1909), Norway (ROMAN 1942) and Czechoslovakia (GREGOR 1930).

*Remarks:* A polymorphic species, e.g. length : breadth of the 1st tergite, depth of notaulices and width of the light colour of the abdominal tergites vary.

#### *Mesoleius juvenilis* Hlmgr.

*Mesoleius juvenilis* HOLMGREN 1855, p. 143, ♀. THOMSON 1894 b, p. 2057, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀: 7. VII. 1959, the Kevo Cape, a coniferous heath.

*Distribution:* EK: Imatra (O. Nybom leg.) and LK: Parikkala (W. Hellén leg.) in Finland; the species is new to the Finnish fauna. Also found in PsL: Pummanki and the Kola Peninsula in U.S.S.R. (HELLÉN 1937 c), Norway (Dovre, Hellén leg.), Swedish Lapland (HOLMGREN 1855) and Iceland (PETERSEN 1956).

#### *Mesoleius fennicus*, new species

*Occurrence in the Kevojoki area:* ♀ (holotype): 19. VII. 1956, the mouth of the Fiellugeädgejoki (coll. JUSSILA); ♂ (allotype): 13. VII. 1959, the meadow forest by the Kevo Wall (coll. JUSSILA).

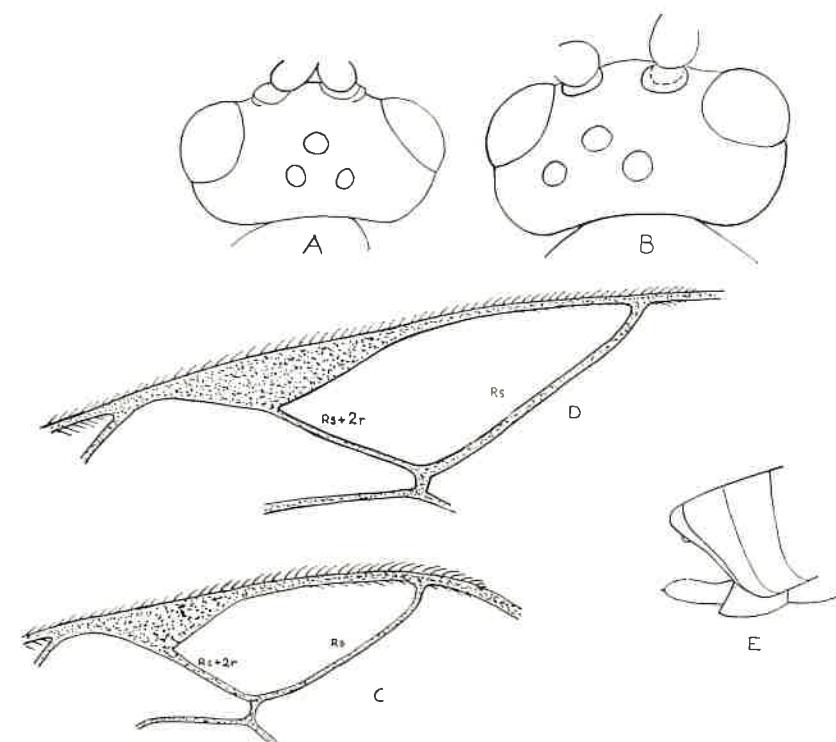


Fig. 26. *Mesoleius fennicus* n.sp. Head in dorsal view: A. ♀, B. ♂; part of front wing: C. ♀, D. ♂; E. ♀: apex of gaster, in sinistrolateral view. — Orig.

*Female:* Head strongly narrowed behind eyes (fig. 26 A); length of malar space = half of mandibular base; length : breadth of 1st flagellar segment = 4 : 1, length of 1st flagellar segment : that of 2nd = 1.6 : 1, length of 1st + 2nd flagellar segments = length of 1st tarsal segment, length : breadth of 2nd flagellar segment = 2.5 : 1; clypeus polished, weakly punctate, convex and apically rather shallowly emarginate; face and mesoscutum rugose-punctate; propleura and mesopleura dull and rugose, speculum polished; propodaeum rugose, with strong carinae, length : breadth of area superomedia = 2 : 1, area posteromedia transverse but not strongly so; front wing without vein 3rm; front wing with vein cua vertical, vein  $Rs+2r$  emitted a little below middle of stigma and vein  $Rs$  apically bent (fig. 26 C); hind wing with vein cua antefurcal but not strongly so; hind leg not broadened, hind tarsus a little longer than hind tibia, with 2nd equal to 4th + 5th; petiolar segment finely rugose with two distinct dorsal keels to beyond middle, length : greatest breadth of petiolar segment = 1.3 : 1; tergite 2 rugose-punctate, length : greatest breadth = 1 : 1.5; remainder of gaster finely punctate,

polished; female third valvulae in fig. 26 E. Head and thorax black, but the following yellow: palpi, mandibles (except apically), clypeus, hind angle of pronotum and tegulae; antennae brownish red, dorsally darker; stigma of front wing brown; legs reddish, but front and middle coxae and trochanters yellow, hind coxae and proximal trochanters black; abdomen red, petiolar segment wholly and 2nd tergite basally black, apical margins of last tergites yellow; ventral fold of abdomen yellow. Length 4.7 mm. — Most closely resembles *M. spoliatus* Teun. (TEUNISSEN 1945, p. 202, ♀), but head more strongly narrowed behind eyes, hind and middle coxae entirely yellow, middle and hind femora and tibiae entirely red. Length of *spoliatus* is 6.5 mm.

*Male:* Structure and colouring resemble female. Differs from the holotype in the following respects: head less narrowed behind eyes (fig. 26 B), mesoscutum more polished, vein *cua* of hind wing more antefureal, antennae dark black, length : greatest breadth of petiolar segment = 1.4 : 1 and that of 2nd = 1 : 1.2, front and middle coxae black with yellow apices. Veins *Rs + 2r* and *Rs* in fig. 26 D. Length 6 mm.

#### *Mesoleius sahlbergi* Woldst.

*Mesoleius Sahlbergi* WOLDSTEDT 1874, p. 44, ♀. HOLMGREN 1876, p. 26, ♂.  
*Mesoleius rubidus* THOMSON 1883 b, p. 935, ♀.  
*Mesoleius lituratus* Hlmgr. var. *Sahlbergi*, ROMAN 1909, p. 346.

*Occurrence in the Kevojoki area:* ♂ : 15. VII. 1959, the N. slope of Ruottir III, a heath between the barren and birch regions.

*Distribution:* Finnish, Swedish and Norwegian Lapland (ROMAN 1909). A holarctic species: also found in Novaya Zemlia (ROMAN 1923 c), Yenisei (ROMAN 1913 a) and North America (TOWNES & TOWNES 1951: Labrador).

*Remarks:* The sculpture of the mesopleurae is not very strong. In the specimen from Ruottir the mesoscutum is black with yellow shoulder markings, the scutellum, postscutellum, mesosternum and mesopleurae have red markings.

#### *Mesoleius mixtus* Hlmgr.

*Mesoleius mixtus* HOLMGREN 1855, p. 146, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 19. VII. 1956, the mouth of the Fiellugeädgejoki.

*Distribution:* In Finland the only previous find 1 ♀ in the birch region of EnL: Malla (HELLÉN 1953 a). Also reported from Swedish Lapland (HOLMGREN 1855) and Novaya Zemlia (ROMAN 1923 c).

*Remarks:* A small species. The male is recognizable by the strong dorsal carinae of the petiolar segment and the yellow apical and lateral margins of the tergites; head a little narrowed backwards, antennae thin, length : breadth of 1st flagellar segment = 6 : 1, length : greatest breadth of petiolus = 2 : 1.

#### *Mesoleius molestus* Hlmgr.

*Mesoleius molestus* HOLMGREN 1855, p. 147, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 19. VII. 1956, the mouth of the Fiellugeädgejoki.

*Distribution:* Throughout Finland. Also in Sweden, England and Germany (SCHMIEDEKNECHT 1924).

*Remarks:* The sculpture of the specimen from the area studied is fine, and hence the polish is rather strong; the dorsally light colour of the abdomen makes only a dorsal stripe.

#### *Mesoleius multicolor* (Grav.)

*Tryphon multicolor* GRAVENHORST 1829 c, p. 168, ♀.  
*Mesoleius multicolor*, HOLMGREN 1855, p. 160, ♂ ♀.  
*Mesoleius napaeus* HOLMGREN 1855, p. 161, ♂ ♀.  
*Mesoleius dives* HOLMGREN 1855, 162, ♂.

*Occurrence in the Kevojoki area:* ♂ : 2. VII. 1956, the mouth of the Kevojoki.

*Distribution:* Throughout Finland and Europe (SCHMIEDEKNECHT 1924).

*Biology:* A parasite of sawflies (HINZ 1961).

#### *Mesoleius spurius* Hlmgr.

*Mesoleius spurius* HOLMGREN 1855, p. 135, ♀.

*Occurrence in the Kevojoki area:* 2 ♀ ♀ : 18.—19. VII. 1956, the mouth of the Kevojoki; ♀ : 13. VII. 1959, the N.E. slope of Ruottir III, a heath of the barren region; ♀ : 12. VII. 1961, the N.E. slope of Ruottir I, a moist heath of the barren region; ♀ : 16. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* Finnish Lapland. Swedish Lapland, Steirmark in Austria (ROMAN 1909) and Norwegian Lapland (ROMAN 1936 a).

**Remarks:** The specimen of the area studied differs from TEUNISSEN's (1945) description in the respect that the length of the 2nd flagellar segment = the length of 3rd segment of the hind tarsus. The strength of the sculpturing of the mesopleurae is variable. Every specimen of the Kevojoki area has a yellow clypeus.

*Mesoleius obtusus* Hlmgr.

*Mesoleius obtusus* HOLMGREN 1855, p. 139, ♀.

*Mesoleius confirmis* HOLMGREN 1855, p. 139, ♀.

**Occurrence in the Kevojoki area:** ♀: 16. VII. 1956, the mouth of the Roajaatshe.

**Distribution:** In Finland EnL: Kilpisjärvi (W. Hellén leg.) and "trakten af Nyslott" (WOLDSTEDT 1874). Also reported from PsL: Petsamo (K. Lahti-virta leg.) and Pummanni (Hellén leg.) in U.S.S.R., Sweden: Lapland (SCHMIEDEKNECHT 1925) and Dalarna (TEUNISSEN 1945), ?Norwegian Lapland (ROMAN 1936 a).

**Remarks:** The specimen of the Kevojoki area is only 4.5 mm long; the average length, according to SCHMIEDEKNECHT (1925), is 7—8 mm.

*Mesoleius patagiatus* Hlmgr.

*Mesoleius patagiatus* HOLMGREN 1876, p. 15, ♀. ROMAN 1931 a, p. 25, ♂ ♀.

**Occurrence in the Kevojoki area:** ♂: 6. VII. 1959, a meadow at the mouth of the Kevojoki; ♀: 14. VII. 1959, the N.E. slope of Ruottir II, a heath of the barren region; ♂: 14. VII. 1959, the bank of the Kevojoki by Ruottir I, a moist heath of the birch region; ♂: 17. VII. 1959, the meadow forest of the Madjoki hut; ♂: 13. VII. 1961, the N.E. slope of Ruottir I, a heath between the barren and birch regions.

**Distribution:** EnL: Kilpisjärvi, Malla in Finland and PsL: Pummanni in U.S.S.R. (HELLÉN 1961 a), Northern Sweden (SCHMIEDEKNECHT 1925), Norway (HELLÉN 1961 a: Dovre and ROMAN 1963 a: Norwegian Lapland), Latvia (OZOLS 1941), Germany and Kamchatka (ROMAN 1931 a).

**Remarks:** The males of the birch region usually have yellow faces, and mesoscuta and mesosterna with yellow marks. The males found on 14. VII. 1959 and 13. VII. 1961 have black faces with 2 yellow marks near the clypeus. In the female the face, mesoscutum and mesosternum are black, and the scutellum red (black in the male).

*Mesoleius ruficollis* Hlmgr.

*Mesoleius ruficollis* HOLMGREN 1855, p. 172, ♀. ROMAN 1909, p. 346, ♂ ♀.

**Occurrence in the Kevojoki area:** In all regions.

**Distribution:** Rather common throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1925).

**Remarks:** In the female found on 19. VII. 1961 in a coniferous heath of the Kevo Cape the mesoscutum is black, and not, as generally, red; only the scutellum is red. The size of the specimens found in the Kevojoki area varies: ♀ ♀ 5.5—8 mm, the only ♂ 8 mm long; the average length of the Central European species 6—7 mm (SCMIEDEKNECHT 1925).

*Mesoleius segmentator* Hlmgr.

*Mesoleius segmentator* HOLMGREN 1855, p. 165, ♀ & 1876, p. 14, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀: 10. VII. 1956, about 3 kilometres from Linkkapahta to the west; ♀: 16. VII. 1956, the mouth of the Roajaatshe; ♂: 11. VII. 1959, the "skaidi" about 3 kilometres from the mouth of the Roajaatshe to the southwest, a moist heath of the birch region.

**Distribution:** Throughout Finland. Northern (including Iceland) and Central Europe, Russia and Spain (PETERSEN 1956).

**Remarks:** In the male of the area studied the face is yellow, the mesoscutum, mesosternum and scutellum black, the last-named with a light apex. In the female found on 10. VII. 1956 the face, shoulder markings on the mesoscutum, mesosternum, postscutellum and the sides of the scutellum are yellow; in the mesosternum and propodaeum near the hind coxae there are red markings. This specimen has mesopleurae with a stronger punctuation and a slightly longer 2nd tergite than in the other specimens. In the female found on 16. VII. 1956 the face, apart from a yellow mark above the clypeus, is black, the yellow marks of the mesoscutum small, the mesosternum, postscutellum (with small red marks in both sides) and propodaeum black.

**Biology:** In Finland bred from a nematine sawfly (*Hym., Tenthredinidae*) (HELLÉN 1953 a).

*Mesoleius torvus* Hlmgr.

*Mesoleius torvus* HOLMGREN 1876, p. 30, ♂ ♀.

**Occurrence in the Kevojoki area:** ♂: 16. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.

*Distribution:* A species new to the Finnish fauna. Previously reported from PsL: Petsamo in U.S.S.R. (HELLÉN 1953 a), Swedish (ROMAN 1909) and Norwegian Lapland (ROMAN 1936 a).

*Remarks:* The specimen from the area studied agrees entirely with HELLEN's (1953 a) description; with SCMIEDEKNECHT's (1925) description, too, although the face is not yellow but black with a yellow mark above the clypeus and with two small marks laterally. ROMAN (1909) describes a black-faced male with black in the ventral fold of the abdomen from Sarek, Swedish Lapland. The specimen from Kevo has an entirely yellow abdominal fold.

*Mesoleius efferus* Hlmgr.

*Mesoleius efferus* HOLMGREN 1876, p. 19, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 15. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* New to the fauna of Finland. Previously known from Swedish Lapland (HOLMGREN 1876).

*Remarks:* This species resembles *M. torvus*, but the notauleces are deeper, the mesopleurae less rough and the area posteromedia has a median carina. The male of the area studied has a yellow face with a dark X-shaped mark and almost black tergites.

*Mesoleius descendens* Hlmgr.

*Mesoleius descendens* HOLMGREN 1885, p. 144, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀ : 14. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* In Finland only InL: Lemmenjoki (HELLÉN 1961 a). In Sweden, Germany (HELLÉN 1961 a) and ?Northern Norway (ROMAN 1936 a).

*Remarks:* This species resembles *M. torvus*, but the flagellum is thinner (length : thickness of 2nd flagellar segment = 3 : 1, in *torvus* 2 : 1). Abdominal tergites with yellow apical margins, and ventral fold of abdomen basally dark.

*Mesoleius tristis* Hlmgr.

*Mesoleius tristis* HOLMGREN 1855, p. 140, ♀ & 1876, p. 21, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀ : 7. VII. 1959, the Kevo Cape, a coniferous heath.

*Distribution:* New to the Finnish fauna (cf. JUSSILA 1963 b); another specimen from InL: Ivalo 15. VII. 1938 (E. Lindqvist leg.). PsL: Kuvernööri and Pummanni in U.S.S.R. (HELLÉN 1961 a), Northern Sweden and Steiermark in Austria (SCHMIEDEKNECHT 1925).

*Remarks:* Like *M. descendens* but the first tergite shorter, in the specimen from Kevo length : greatest breadth = 1.1 : 1 (in *descendens* 1.5 : 1). According to TEUNISSEN (1945), however, in *tristis* length : breadth of 1st tergite = 1 : 1. Notaulices much deeper than those of *descendens*; the length : greatest breadth of the 2nd tergite does not seem to be a good specific characteristic, since TEUNISSEN reports it as 2 : 1, while in the specimen from the Kevojoki area it is 3 : 1.

*Mesoleius curvicrus* Hlmgr.

*Mesoleius curvicrus* HOLMGREN 1876, p. 18, ♀.

*Occurrence in Inari Lapland:* Utsjoki 25. VI. 1947, W. Hellén leg. (HELLÉN 1953 a).

*Distribution:* Sweden (TEUNISSEN 1945) and Central Europe (HINZ 1961).

*Biology:* In Central Europe bred from *Amauronematus fallax* (Hym., Tenthredinidae) (HINZ 1961).

*Mesoleius mollis* (Grav.)

*Tryphon mollis* GRAVENHORST 1829 c, p. 137, ♀.

*Mesoleius mollis*, HOLMGREN 1855, p. 142, ♀.

*Mesoleius perspicuus* HOLMGREN 1855, p. 143, ♂.

*Occurrence in the Kevojoki area:* ♂ : 19. VII. 1956, the mouth of the Fiellugeädgejoki.

*Distribution:* Finnish Lapland. Northern and Central Europe (SCHMIEDEKNECHT 1925).

*Remarks:* Mesopleurae punctate, in the upper half polished; mesoscutum black; ventral fold of abdomen mottled with black and yellow.

*Mesoleius variegatus* (Jur.) *alpestris* Hlmgr., new status

*Mesoleius alpestris* HOLMGREN 1876, p. 12, ♂ ♀; syntypes ♂ and ♀ : labelled "Dv.", "Bhn." (coll. Riksmuseum, Stockholm); lectotype, designated by R. HINZ, in Leiden.

*Occurrence in the Kevojoki area:* ♀ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* *M. v. alpestris*: Finnish, Swedish and Norwegian Lapland

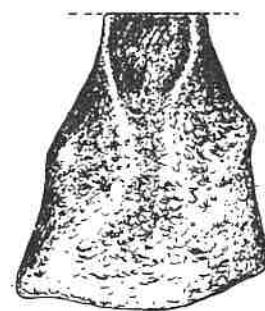


Fig. 27. *Mesoleius stenocerus* Thoms. ♀ : petiolar segment, in dorsal view. — Orig.

(SCHMIEDEKNECHT 1925). *M. v. variegatus* (*Anomalon variegatum* JURINE 1807, p. 116, ♂): South and Central Finland, Northern and Central Europe (SCHMIEDEKNECHT 1925).

**Remarks:** *M. v. alpestris* differs from *M. v. variegatus* in the red mesosternum (♀), black mesoscutum and backwardly less rounded head. The specimen of the Kevojoki area is 6 mm long and HOLMGREN's syntypes 7 mm.

**Biology:** The species is a parasite of *Tenthredinidae* (Hym.) (SCHMIEDEKNECHT 1925 and HELLÉN 1963). The Coleoptera can be hosts, too (OZOLS 1928).

*Mesoleius frontatus* Thoms.

*Mesoleius frontatus* THOMSON 1894 b, p. 2069, ♂ ♀.

**Occurrence in Inari Lapland:** Outakoski in Utsjoki 30. VI. 1947, W. Hellén leg. (HELLÉN 1953 a).

**Distribution:** Sweden (THOMSON 1894 b), ?Northern Norway (ROMAN 1936 a).

*Mesoleius stenocerus* (Thoms.).

*Spudaeus stenocerus* THOMSON 1894 a, p. 2013, ♂ ♀.

*Mesoleius stenocerus*, SCHMIEDEKNECHT 1924, p. 3025.

**Occurrence in the Kevojoki area:** ♀ : 17. VII. 1959, the meadow of the Madjoki hut.

**Distribution:** A species new to the Finnish fauna; EP: Vaasa in June 1956—1959 (R. Jussila leg.). Also Sweden (SCHMIEDEKNECHT 1924) and ?Norway (ROMAN 1942).

**Remarks:** SCHMIEDEKNECHT's (1924) description is fully valid for the Finnish specimens. *M. stenocerus* most nearly resembles *M. sanguinipes* (Thoms.), especially in the structure of the head and clypeus, but it is much smaller (respective lengths 5 and 8 mm), its 1st tergite is stronger and punctate, without median furrow (fig. 27) and the glymmae are smaller.

*Saotis heteropus* Thoms.

*Saotis heteropus* THOMSON 1883 b, p. 934, ♀. ROMAN 1909, p. 325, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 13. VII. 1959, a patch of willows in the Kevojoki canyon by Ruottir III.

**Distribution:** A species new to the Finnish fauna. Also in Swedish Lapland (ROMAN 1909).

**Remarks:** All coxae and femora black, the latter apically and other parts of the legs reddish yellow; flagellum with 21 segments; apex of gaster in fig. 28. The specimen of the Kevojoki area has a yellow clypeus with black base. It is 5 mm long.

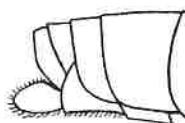


Fig. 28. *Saotis heteropus* Thoms. ♀ : apex of gaster, in dextralateral view. — According to ROMAN 1909.

*Rhorus extirpatorius* (Grav.)

*Tryphon extirpatorius* GRAVENHORST 1829 e, p. 213, ♂ ♀.

*Polyblastus laevigatus* HOLMGREN 1856 b, p. 75, ♂ ♀.

*Monoblastus extirpatorius*, PFANKUCH 1906, p. 289.

*Rhorus extirpatorius*, HELLÉN 1940, p. 17.

**Occurrence in the Kevojoki area:** ♂ : 12. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1912).

**Remarks:** The specimen of the area studied differs from the more southern specimens in its darkness: scutellum and tergites black, the latter apically light; also hind legs dark.

**Biology:** In Finland bred from *Pteronidea pavida* and *Pristiphora conjugata* (Hym., Tenthredinidae) (HELLÉN 1963).

*Rhorus longigena* (Thoms.).

*Monoblastus longigena* THOMSON 1883 b, p. 903. ROMAN 1909, p. 288, ♂ ♀.

*Rhorus longigena*, HELLÉN 1948, p. 50.

**Occurrence in the Kevojoki area:** Rather common.

**Distribution:** In Finland previously reported from EnL: Kilpisjärvi; also known from Swedish Lapland, the Kola Peninsula and PsL: Vaitolahti in U.S.S.R. (HELLÉN 1948).

**Remarks:** Recognizable by long genae, black face and entirely shining tergites.

**Biology:** Seems interest in the barren region, but also flies in the birch region, even in luxuriant biotopes.

#### *Trematopygus melanocerus* (Grav.)

*Tryphon melanocerus* GRAVENHORST 1829 e, p. 265, ♂.

*Amorphognathon melanocerus*, KRIECHBAUMER 1897, p. 185, ♂ ♀.

*Trematopygus melanocerus*, HELLÉN 1926, p. 95.

*Trematopygus melanoceros*, HELLÉN 1940, p. 18 (error).

**Occurrence in the Kevojoki area:** ♀ : 6. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** In Finland earlier from U: Karjalohja (HELLÉN 1926). Also in Germany and France (SCHMIEDEKNECHT 1914).

**Remarks:** The specimen of the Kevojoki area is 6 mm long; according to SCHMIEDEKNECHT (1914), the average length of this species is 8 mm.

#### *Trematopygus vellicans* (Grav.)

*Tryphon vellicans* GRAVENHORST 1829 e, p. 263, ♂.

*Trematopygus vellicans*, HOLMGREN 1855, p. 182, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 30. VI. 1956, the meadow forest of the Madjoki hut; ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1913).

**Remarks:** The specimen of the area studied only differs from the more southern specimens in having red coxae.

**Biology:** In Central Europe bred from *Dolerus* species (*Hym., Tenthredinidae*) (HINZ 1961).

*Trematopygus scabriculus* Thoms.

*Trematopygus scabriculus* THOMSON 1883 b, p. 930, ♂ ♀.

**Occurrence in Inari Lapland:** Utsjoki, W. Hellén leg. (HELLÉN 1937 c).

**Distribution:** Throughout Finland. Also Northern Sweden (ROMAN 1909), Northern Norway (ROMAN 1936 a) and Kamchatka (ROMAN 1931 a).

*Trematopygus niger* Hlmgr.

*Trematopygus niger* HOLMGREN 1855, p. 181, ♂. BRISCHKE 1878, p. 90, ♀.

**Occurrence in Inari Lapland:** Ivalo (HELLÉN 1941).

**Distribution:** PsL: Yläluostari in U.S.S.R. (HELLÉN 1941), Norway and Sweden (ROMAN 1914), Central Europe (HINZ 1961).

**Biology:** In Central Europe bred from *Dolerus gessneri* (*Hym., Tenthredinidae*) (HINZ 1961).

*Xenoschesis resplendens* (Hlmgr.)

*Notopygus resplendens* HOLMGREN 1855, p. 116, ♂ ♀.

*Erigloca polita* KRIECHBAUMER 1891, p. 299, ♂ ♀.

*Erigloca galita* KRIECHBAUMER 1891, p. 300, ♀.

*Erigloca fulvicornis* KRIECHBAUMER 1891, p. 300, ♀.

*Notopygus (Prosmorus) resplendens*, THOMSON 1894 a, p. 1983.

*Polyancistrus resplendens*, SCHMIEDEKNECHT 1913, p. 2650.

*Xenoschesis resplendens*, HELLÉN 1944 a, p. 8.

**Occurrence in Inari Lapland:** Lemmenjoki, W. Hellén leg. (HELLÉN 1944 a).

**Distribution:** Throughout Finland. Also Sweden and Germany (SCHMIEDEKNECHT 1913).

**Biology:** In Germany bred from *Pamphilius depressus* and *P. hortorum* (*Hym., Pamphilidae*) (HINZ 1961).

#### *Zaplethocornia procurator* (Grav.)

*Ichneumon procurator* GRAVENHORST 1820, p. 379, ♂.

*Tryphon procurator* GRAVENHORST 1829 e, p. 266, ♂ ♀.

*Trematopygus procurator*, HOLMGREN 1855, p. 184.

*Zaplethocornia procurator*, SCHMIEDEKNECHT 1913, p. 2597.

**Occurrence in the Kevojoki area:** ♂ : 16. VII. 1959, a dry heath of the birch region by Kotkapahta.

**Distribution:** Common throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1913).

**Remarks:** The specimen of the area studied is only 5 mm long. The average length of specimens from EP is 6 mm.

#### *Rhaestes ophthalmicus* (Hlmgr.)

*Grypocentrus ophthalmicus* HOLMGREN 1855, p. 195, ♂ ♀.

*Rhaestes ophthalmicus*, THOMSON 1894 a, p. 1976.

**Occurrence in the Kevojoki area:** ♀ : 6. VII. 1959, a meadow at the mouth of the Kevojoki; ♀ : 18. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** In Finland EH: Sääksmäki (W. Hellén leg.), Pohjois-Pirkkala (A. Saarinen leg.), Aitolahti (Saarinen leg.) and EnL: Kilpisjärvi (HELLÉN 1937 c). Also in European U.S.S.R. (Hellén leg.) and Sweden (SCHMIEDEKNECHT 1913).

*Hypamblys albopictus* (Grav.)

- Tryphon albopictus* GRAVENHORST 1829 c, p. 255, ♂.  
*Mesoleius transfuga* HOLMGREN 1855, p. 169, ♂ ♀.  
*Euryproctus (Syndipnus) transfuga*, THOMSON 1883 b, p. 928.  
*Euryproctus (Hypamblys) transfuga*, THOMSON 1894 a, p. 2008.  
*Euryproctus albopictus*, STROBL 1902, p. 38.  
*Calliphrurus popofensis* ASHMEAD 1902, p. 221, ♀.  
*Calliphrurus glacialis* ASHMEAD 1902, p. 222, ♂.  
*Syndipnus albopictus*, PFANKUCH 1907, p. 18.  
*Hypamblys albopictus*, SCHMIEDEKNECHT 1913, p. 2791.  
*Mesoleius gymnonychi* ROHWER 1920, p. 223, ♀.

**Occurrence in the Kevojoki area:** One of the commonest Ichneumonidae, flying in nearly all the biotopes from the barren to the coniferous region.

**Distribution:** Throughout Finland. Northern (also Iceland), Central and Eastern Europe (PETERSEN 1956). A holarctic species, which has also been found in Western Greenland and Canada (PETERSEN 1956).

**Remarks:** Among the specimens of the Kevojoki area there are many with black tergites; hind coxae red → black; mesoscutum entirely black or with yellow markings; strength of carinae and middle groove in 1st tergite and of notauleces varies.

**Biology:** Hosts are sawflies (SCHMIEDEKNECHT 1913).

*Hypamblys buccatus* (Hlmgr.)

- Mesoleius buccatus* HOLMGREN 1855, p. 145, ♂ ♀.  
*Syndipnus (Hypamblys) buccatus*, THOMSON 1894 a, p. 2008.  
*Hypamblys buccatus*, SCHMIEDEKNECHT 1913, p. 2790.

**Occurrence in the Kevojoki area:** 2 ♂ ♂ : 13. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** A species new to the Finnish fauna. Also in Sweden and Steiermark, Austria (SCHMIEDEKNECHT 1913).

**Remarks:** Length : thickness of postanellus = 2.5 : 1; head a little narrowed behind eyes, length : greatest breadth of 2nd tergite = 1.1 : 1. Abdomen dorsally black, apical margins of tergites 3—8 narrowly yellow, ventral fold of

abdomen also yellow. One of the specimens from the area studied has red legs, except for black coxae, trochanters and marks on the ventral side of the hind femora; in the other male, the apices of the hind tibiae and hind tarsi are black, and the middle legs partly dark. Flagellar segments 22—23. The specimens of Kevo are 4.5 and 5.5 mm (according to SCHMIEDEKNECHT, the average length is 8 mm).

*Syndipnus alutaccus* (Hlmgr.)

- Trematopygus alutaccus* HOLMGREN 1855, p. 181, ♂ ♀.  
*Syndipnus alutaccus*, THOMSON 1894 a, p. 2006.

**Occurrence in the Kevojoki area:** 2 ♂ ♂ and 2 ♀ ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** EH: Aitolahti and ES: Lapvesi in Finland (HELLÉN 1937 c). Also Sweden (HOLMGREN 1855), Norway (ROMAN 1942) and Czechoslovakia (GREGOR 1930).

**Remarks:** One of the females from the area studied has a yellow longitudinal streak on the ventral side of the mesopleura. Length : breadth of hind femora = 5 : 1 in ♂ ♂. Carinae of propodaeum rather distinct in one of the females, on the other wanting.

*Syndipnus lateralis* (Grav.)

- Tryphon lateralis* GRAVENHORST 1829 b, p. 690, ♂.  
*Syndipnus punctiscuta* THOMSON 1894 a, p. 2005, ♂ ♀.  
*Syndipnus latralis*, PFANKUCH 1907, p. 19.

**Occurrence in the Kevojoki area:** ♂ : 12. VII. 1959, the shore of the Alanjaggaljärvi lake.

**Distribution:** Common throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1913).

*Syndipnus monticola* (Hlmgr.)

- Mesoleius monticola* HOLMGREN 1855, p. 141, ♀ ; holotype ♀ : labelled "Dle. alp.", "Bhn" (coll. Riksmuseum, Stockholm).  
*Syndipnus monticola*, THOMSON 1894 a, p. 2006.

**Occurrence in the Kevojoki area:** ♀ : 14. VII. 1959, the N.E. slope of Ruottir II, a heath of the barren region.

*Distribution:* Finnish Lapland. Also found in Swedish Lapland (HOLMGREN 1855).

*Remarks:* The specimen from Ruottir differs from the holotype in the following respects: apical margins of tergites 1—3 are broadly red and the length only 5 mm (holotype 7 mm long). Length : greatest breadth of 1st tergite = 1.25 : 1 in both specimens.

*Syndipnus maculiventris* Rn

*Syndipnus maculiventris* ROMAN 1909, p. 318, ♀; lectoholotype ♀ : 16. VII. 1904, Sarek in Swedish Lapland, hereby designated (coll. Riksmuseum, Stockholm).

*Occurrence in the Kevojoki area:* ♀ : 11. VII. 1959, a bog of the "skaidi" about 4 kilometres from the mouth of the Roajaatshe to the southwest; ♂ (allotype): 12. VII. 1961, the S. slope of Ruottir I, a dry heath of the barren region (coll. JUSSILA).

*Distribution:* PH: Pihtipudas in Finland (HELLÉN 1948) and Sarek in Swedish Lapland (ROMAN 1909).

*Male:* Resembles female, but mesoscutum more shining, notalices deeper, sculpture of mesopleura a little stronger, length : greatest breadth of petiolar segment = 2 : 1 (in ♀ 1.1 : 1), and length : greatest breadth of 2nd abdominal segment = 1 : 1 (in ♀ 1 : 1.2). Length 6 mm.

*Remarks:* The female of the area studied also has deeper notalices than the lectoholotype.

*Syndipnus macrocerus* Thoms.

*Euryproctus* (*Syndipnus*) *macrocerus* THOMSON 1883 b, p. 928, ♂ ♀.

*Syndipnus macrocerus* THOMSON 1894 a, p. 2005.

*Occurrence in the Kevojoki area:* Common both in the barren and in the birch region.

*Distribution:* EnL: Kilpisjärvi in Finland, Sweden (HELLÉN 1948) and Norwegian Lapland (ROMAN 1936 a).

*Remarks:* Recognizable by the strong narrowing of the head behind the eyes, the indistinct carinae and strong sculpturing of the propodaeum, the long petiolus without a median furrow, and the variolae of the 2nd tergite.

*Biology:* Does not seem to require a fixed biotope.

*Syndipnus angulatus* Rn

*Syndipnus angulatus* ROMAN 1909, p. 319, ♀; type ♀ : 21. VIII. 1904, Sarek in Swedish Lapland (coll. Riksmuseum, Stockholm).

*Occurrence in the Kevojoki area:* ♀ : 13. VII. 1961, the N.E. slope of Ruottir I, the boundary between the barren and birch regions.

*Distribution:* A species new to the Finnish fauna; another specimen from KemL: Muonio (J. Montell leg.). PsL: Salmijärvi in U.S.S.R. (HELLÉN 1941), Swedish (ROMAN 1909) and Norwegian Lapland (ROMAN 1936 a).

*Remarks:* In the specimen from Ruottir length 5.5 mm (in the type specimen 7 mm), stigma of front wing brown (in the type specimen black), vein cua of hind wing opposite (in the type specimen antefurcal); legs red, apart from black coxae and trochanters.

*Philotymma chrysostomus* (Grav.)

*Ichneumon chrysostomus* GRAVENHORST 1820, p. 370.

*Mesoleptus chrysostomus* GRAVENHORST 1829 c, p. 103, ♀.

*Euryproctus chrysostomus*, HOLMGREN 1856 a, p. 377. BRISCHKE 1878, p. 70, ♂ ♀.

*Ipoctonus chrysostomus*, THOMSON 1889 c, p. 1432.

*Philotymma chrysostomus*, TOWNES, TOWNES & GUPTA 1961, p. 217.

*Occurrence in the Kevojoki area:* ♀ : 11. VII. 1956, about 3 kilometres from Linkkapahta to the southwest; ♂ : 21. VII. 1959, a meadow forest at the mouth of the Tsharsjoki; ♀ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (HELLÉN 1948).

*Remarks:* The colouring varies: in the male from the Kevojoki area the 1st tergite, except for the apical margin, is black (in more southern specimens from black to red), and in the females the 1st tergite is red. In all specimens from Kevo the hind tibiae and tarsi are red. Length 5.5, in specimens of South Finland 6—8 mm.

*Sychnoporthus erosus* (Hlmgr.)

*Trematopygus erosus* HOLMGREN 1855, p. 179, ♂; STROBL 1903, p. 67, ♂ ♀.

*Mesolcius* (*Spudaeus*) *erosus*, THOMSON 1883 b, p. 932.

*Spudacus erosus*, THOMSON 1894 a, p. 2014.

*Sychnoporthus erosus*, SCHMIEDEKNECHT 1913, p. 2713.

*Occurrence in the Kevojoki area:* ♂ : 13. VII. 1959, the N.E. slope of Ruottir III, a moist heath of the barren region; ♀ : 14. VII. 1959, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* Rare throughout Finland. Also known from Steiermark, Austria, Swedish Lapland (SCHMIEDEKNECHT 1913) and Norwegian Lapland (ROMAN 1936 a).

*Remarks:* The male of the Kevojoki area differs from SCHMIEDEKNECHT's (1913) description in the colouring of its head: black, clypeus (base excluded) and mandibles (except apically) yellow.

*Synomelix albipes* (Grav.)

- Tryphon albipes* GRAVENHORST 1829 c, p. 221, ♀.  
*Tryphon ochrostomus* GRAVENHORST 1829 c, p. 227, ♀.  
*Trematopygus albipes*, BRISCHKE 1878, p. 91, ♀.  
*Syndipnus curvulus* THOMSON 1894 a, p. 2000, ♀.  
*Spudacus ochrostomus*, THOMSON 1894 a, p. 2010, ♂ ♀.  
*Synomelix Sieboldii* KRIECHBAUMER 1897, p. 188, ♀.  
*Synomelix albipes*, PFANKUCH 1906, p. 291, ♂ ♀.  
*Pantorhaestes curvulus*, ROMAN 1909, p. 313.

*Occurrence in the Kevojoki area:* Common in both the barren and birch regions.

*Distribution:* Throughout Finland. Northern, Western and Central Europe (SCHMIEDEKNECHT 1913).

*Remarks:* In the specimens of the area studied hind tibiae reddish, dark apically; face of the females black, of males yellow; length 6—6.5, in specimens from South Finland 7—8 mm.

*Synomelix xanthostomus* (Grav.)

- Tryphon xanthostomus* GRAVENHORST 1829 c, p. 257, ♀. BRISCHKE 1878, p. 87, ♂ ♀.  
*Mesolcetus rufocinctus* GRAVENHORST 1829 c, p. 686, ♀.  
*Euryproctus hilarellus* HOLMGREN 1856 a, p. 377, ♀.  
*Euryproctus* (*Syndipnus*) *xanthostomus*, THOMSON 1883 b, p. 927, ♂ ♀.  
*Syndipnus* (*Trophoconus*) *xanthostomus*, THOMSON 1894 a, p. 2000.  
*Pantorhaestes xanthostomus*, PFANKUCH 1907, p. 18.  
*Euryproctus xanthostomus*, MORLEY 1911, p. 249.  
*Synomelix xanthostomus*, HELLÉN 1940, p. 19.

*Occurrence in the Kevojoki area:* ♂: 19. VII. 1961, the Kevo Cape, a coniferous heath.

*Distribution:* Throughout Finland. Also in Sweden, Germany and England (SCHMIEDEKNECHT 1913).

*Hadrodactylus typhae* (Fourer.)

- Ichneumon typhae* FOURCROY 1785, p. 413.  
*Mesoleptus typhae*, GRAVENHORST 1829 c, p. 62, ♀. HOLMGREN 1855, p. 104, ♂ ♀.  
*Hadrodactylus typhae*, KRIECHBAUMER 1891, p. 133.

*Occurrence in the Kevojoki area:* ♀: 15. VII. 1956, the mouth of the Roajaatshe; ♀: 12. VII. 1959, a meadow forest at the mouth of the Fiellugeädgejoki; ♀: 12. VII. 1961, the N.E. slope of Ruottir I, a moist heath of the barren region.

*Distribution:* Throughout Finland. Almost all parts of Europe, North America (SCHMIEDEKNECHT 1913). Hence a holarctic species.

*Remarks:* The specimens from the area studied are 8.5—10 mm and those from South Finland 9.5—13 mm long.

*Hadrodactylus femoralis* (Hlmgr.)

- Mesoleptus typhae* var. 3 GRAVENHORST 1829 c, p. 62, ♀.  
*Mesoleptus femoralis* HOLMGREN 1855, p. 105, ♂ ♀.  
*Hadrodactylus nigricoxa* THOMSON 1894 a, p. 1979, ♂ ♀.  
*Hadrodactylus nigricoxis*, PFANKUCH 1906, p. 27.  
*Hadrodactylus femoralis*, SCHMIEDEKNECHT 1913, p. 2675.

*Occurrence in the Kevojoki area:* ♀: 19. VII. 1956, the mouth of the Fiellugeädgejoki.

*Distribution:* Common throughout Finland. Elsewhere uncertain, because confused with the species *H. confusus* (Hlmgr.) (*Mesoleptus confusus* HOLMGREN 1855, p. 376, ♂ ♀), but possibly throughout Europe and Northern Asia (HELLÉN 1961 c).

*Hadrodactylus faciator* (Thnbg.)

- Ichneumon faciator* THUNBERG 1822, p. 266 & 1824, p. 323, ♂.  
*Tryphon vulneratorius* ZETTERSTEDT 1838, p. 378, ♂.  
*Mesoleptus vulneratorius*, HOLMGREN 1855, p. 102, ♂ ♀.  
*Mesoleptus curtus* HOLMGREN 1855, p. 105, ♂.  
*Hadrodactylus vulnerator* THOMSON 1883 b, p. 921.  
*Hadrodactylus faciator*, ROMAN 1912, p. 254.

*Occurrence in the Kevojoki area:* ♂: 14. VII. 1956, the mouth of the Roajaatshe; 2 ♂ ♂: 19. VII. 1956, the mouth of the Fiellugeädgejoki; ♂: 9. VII. 1959, a meadow forest of the lake Tammukkalopoloo; ♀: 18. VII. 1959, the meadow forest at the foot of Linkkapahta; ♀: 19. VII. 1961, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1913), Yenisei (ROMAN 1913 a).

*Remarks:* The northern specimens, as a rule, have black coxae. But one of the females taken in 1956 resembles the more southern specimens in its red

hind coxae. The same specimen has a red apex of the abdomen; the other specimens are black. Both males of the Kevojoki area have a mesoscutum with yellowish white markings.

#### Subfamily *Porizontinae*

*Pyracmon pectoralis* Kriechb.

*Pyracmon pectoralis* KRIECHBAUMER 1890, p. 484, ♂. HABERMEHL 1904, p. 32, ♂ ♀.

*Occurrence in Inari Lapland:* Ivalo, W. Hellén leg. (HELLÉN 1962).

*Distribution:* PsL: Petsamo and Kk: Želenogorsk in U.S.S.R., Germany and Austria (HELLÉN 1962).

#### *Sinophorus crassifemur* (Thoms.)

*Limneria crassifemur* THOMSON 1887 a, p. 1106, ♂ ♀.

*Eulimneria crassifemur*, SCHMIEDEKNECHT 1909, p. 1657.

*Limnerium crassifemur*, MORLEY 1913 a, p. 485.

*Sinophorus crassifemur*, TOWNES, TOWNES & GUPTA 1961, p. 220.

*Occurrence in the Kevojoki area:* ♀ : 19. VII. 1956, the mouth of the Fiellugeädejoki; 2 ♂ ♂ : 13. VII. 1961, the N.E. slope of Ruottir I, the boundary between the barren and birch regions; 2 ♂ ♂ : 19. VII. 1961, Pukalskaidi, the birch region.

*Distribution:* Throughout Finland. Also in Northern Norway (ROMAN 1942), Sweden and Germany (SCHMIEDEKNECHT 1909), U.S.S.R. (MEYER 1935), India and Ceylon (TOWNES, TOWNES & GUPTA 1961).

*Remarks:* The colour of the tegulae varies from whitish to darkish brown and is not always white, as SCHMIEDEKNECHT (1909) claims.

*Biology:* Bred from a *Psyche* species (*Lep.*, *Psychidae*) (MORLEY 1913 a).

#### *Sinophorus rufifemur* (Thoms.), new combination

*Limneria rufifemur* THOMSON 1887 a, p. 1106, ♂ ♀.

*Eulimneria rufifemur*, SCHMIEDEKNECHT 1909, p. 1657.

*Limnerium rufifemur*, ROMAN 1942, p. 23.

*Sinophorus* FÖRSTER 1868 b, p. 153; type: [*Limneria (Sinophorus) canarsiae* Ashm.] = *validus* Cress., included by ASHMEAD 1897.

*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1944 a).

*Distribution:* V: Lohja in Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), U.S.S.R. (MEYER 1935 and HELLÉN 1944 a), Northern Norway (ROMAN 1936 a), Iceland (ROMAN 1931 c) and Estonia (OZOLS 1959 b).

*Biology:* In Central Europe bred from *Polyploca flavigornis* and *Palimpsestis or* (*Lep.*, *Thyatiridae*) (HEDWIG 1950 a).



Fig. 29. Ovipositor tip of *Campoplex abbreviatus* (Brke). — Orig.

#### *Campoplex abbreviatus* (Brke), new combination

*Limneria abbreviata* BRISCHKE 1880, p. 157, ♀.

*Omorgus abbreviatus*, SCHMIEDEKNECHT 1909, p. 1715.

*Campoplex* GRAVENHORST 1829 d, p. 453; type: (*Campoplex difformis* Grav.) = *difformis* Gmel., designated by WESTWOOD 1840.

*Occurrence in the Kevojoki area:* ♀ : 20. VII. 1959, the meadow forest at the foot of Linkkapahta.

*Distribution:* A species new to the Finnish fauna. Germany (SCHMIEDEKNECHT 1909), the Italian Alps (W. Hellén leg.) and European U.S.S.R. (MEYER 1935).

*Remarks:* The specimen of the study area corresponds entirely with SCHMIEDEKNECHT's (1909) description. Length : height of thorax = 1.4 : 1; petiolus, in dorsal view, narrowest at a point  $\frac{1}{3}$  of its length from the base; length : greatest breadth of 2nd tergite = 1.04 : 1 and smallest breadth : greatest breadth = 1 : 2; ovipositor apically bended upwards (fig. 29); mandibles, palpi, tegulae, front and hind trochanters, and ventral fold of abdomen yellow.

#### *Campoplex coracinus* (Thoms.), new combination

*Omorga coracina* THOMSON 1887 a, p. 1130, ♀; lectotype ♀ : labelled "Fogelsäng", designated by R. HINZ 1954 (coll. University, Lund).

*Omorgus coracinus*, SCHMIEDEKNECHT 1909, p. 1720.

*Campoplex* GRAVENHORST 1829 d, p. 453; type: (*Campoplex difformis* Grav.) = *difformis* Gmel., designated by WESTWOOD 1840.

*Distribution:* ♂ (allotype): 27. VII. 1954, EP: Vaasa, R. Jussila leg. (coll. JUSSILA); throughout Finland. Also from Southern Sweden (ROMAN 1917).

*Male:* Resembles female: mesoscutum and mesopleurae dull; length : breadth of area superomedia = 1.1 : 1, length : breadth of postpetiolus = 1 : 1, that of 2nd tergite = 1 : 1.15. Head, thorax and abdomen black, ventral fold of abdomen partly yellow (= 2nd tergite entirely and apical margins of other sternites). Legs reddish yellow, coxae and trochanters black, bases of middle and hind femora, bases and apices of hind tibiae and apices of tarsi dark. Length 5 mm.

*Occurrence in the Kevojoki area:* ♂ ♀ : 14. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.

*Remarks:* The male from the area studied has a rather dark ventral fold of the abdomen. The female is abnormal in venation: the right front wing has no vein 3rm.

*Campoplex faunus* Grav.

*Campoplex faunus* GRAVENHORST 1829 d, p. 517, ♀.

*Limneria faunus*, HOLMGREN 1860 a, p. 55.

*Omorga faunus*, THOMSON 1887 a, p. 1126, ♂ ♀.

*Omorgus faunus*, SCHMIEDEKNECHT 1909, p. 1710.

*Occurrence in the Kevojoki area:* ♂ : 15. VII. 1956, the mouth of the Roajaatshe; ♀ : 14. VII. 1959, the bank of the Kevojoki, a moist heath by Ruottir II; ♀ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. The greater part of Europe (SCHMIEDEKNECHT 1909).

*Biology:* A parasite of Microlepidoptera (HEDWIG 1950 a).

*Campoplex bilobus* (Thoms.), new combination

*Omorga biloba* THOMSON 1887 a, p. 1126, ♂ ♀.

*Omorgus bilobus*, SCHMIEDEKNECHT 1909, p. 1712.

*Campoplex* GRAVENHORST 1829 d, p. 453; type: (*Campoplex difformis* Grav.) = *difformis* Gmel., designated by WESTWOOD 1840.

*Occurrence in Inari Lapland:* Lemmenjoki, W. Hellén leg. (HELLÉN 1939).

*Distribution:* Sweden (ROMAN 1924) and Germany (SCHMIEDEKNECHT 1909).

*Biology:* In Sweden bred from *Tortrix paleana* (Lep., Tortricidae) (ROMAN 1924).

*Campoplex borealis* (Zett.), new combination

*Porizon borealis* ZETTERSTEDT 1838, p. 395.

*Campoplex subcinctus* RATZBURG 1848, p. 82, ♂.

*Limneria borealis*, HOLMGREN 1860 a, p. 98, ♂ ♀.

*Omorga borealis*, THOMSON 1887 a, p. 1129.

*Omorgus borealis*, SCHMIEDEKNECHT 1909, p. 1717.

*Occurrence in the Kevojoki area:* ♂ ♀ : 19. VII. 1961, the Kevo Cape, a coniferous heath.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), Spain (CEBALLOS 1956).

*Remarks:* In the female from the area studied the vein cua of the hind

wing is almost straight, in the male distinctly broken; in the male, in addition, the vein 3rm of the front wing obsolete.

*Biology:* A parasite of Microlepidoptera, especially mining species (FULMEK 1962).

*Casinaria moesta* (Grav.)

*Campoplex moestus* GRAVENHORST 1829 d, p. 599, ♂.

*Casinaria moesta*, WOLDSTEDT 1877 a, p. 391. THOMSON 1887 a, p. 1100, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀ : 13. VII. 1961, the N.E. slope of Ruottir I, the boundary of the barren and birch regions; ♂ : 14. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* A species new to the Finnish fauna. Rare in Central and Southern Europe (SCHMIEDEKNECHT 1909); reported from Swedish Lapland, too (TENOW 1963).

*Remarks:* The specimens from the area studied correspond to SCHMIEDEKNECHT's (1909) description, but they are larger: ♂ 7 and ♀ 10 mm long (the average length of the Central European species 5 mm). In both specimens the abdomen is black, 3rd tergite (apical margin excluded), 4th entirely and 5th partly red. The excavation of the compound eye is not very strong.

*Biology:* In Swedish Lapland bred from *Poecilopsis pomonaria* (Lep., Geometridae) (TENOW 1963), which has been found in the Kevojoki area, too (JUSSILA 1963 a).

*Campoletis varians* (Thoms.), new combination

*Campoplex zonatus* var. 2 GRAVENHORST 1829 d, p. 585.

*Sagaritis zonata* varr. 2 & 3 HOLMGREN 1860 a, p. 45.

*Sagaritis varians* THOMSON 1887 a, p. 1109, ♂ ♀.

*Campoletis* FÜRSTER 1868 b, p. 157; type: *Mesoleptus tibiator* Cress., included by HOUGHTON 1907.

*C. crassicornis* (Tschech) (*Sagaritis crassicornis* TSCHEK 1871, p. 51, ♂ ♀) is a separate species from *varians*: antennae and legs, especially hind femora, short; mesopleura and mesoscutum distinctly punctate (in *varians* otherwise rough), and speculum dull (according to R. HINZ's, who has seen the types of both species, information by letter).

*Occurrence in the Kevojoki area:* Rather common in the barren region.

*Distribution:* V: Turku, EP: Vaasa, Isokyrö and Koivulahti (R. Jussila leg.) in Finland. Distribution uncertain, as the species has been confused with *crassicornis*.

*Campoletis femoralis* (Grav.), new combination*Campoplex femoralis* GRAVENHORST 1829 d, p. 592, ♀.*Sagaritis laticollis* HOLMGREN 1860 a, p. 46, ♂ ♀.*Sagaritis femoralis*, THOMSON 1887 a, p. 1192, ♂ ♀.*Campoletis* FÖRSTER 1868 b, p. 157; type: *Mesoleptus tibiator* Cress., included by HOUGHTON 1907.*Occurrence in the Kevojoki area:* ♂ : 3. VII. 1956, the terrain between the mouth of the Kevojoki and the Keärdusjärvi Lake.*Distribution:* Common throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), the Bavarian Alps (HEINRICH 1952), European U.S.S.R. (MEYER 1935).*Remarks:* In the specimen from the area studied the femora are apically red.*Biology:* According to SCHMIEDEKNECHT (1909), bred from a species of *Plusia* (*Lep.*, *Noctuidae*). This genus has been found in the Kevojoki area (JUSSILA 1963 a).*Campoletis latrator* (Grav.), new combination*Campoplex latrator* GRAVENHORST 1829 d, p. 586, ♂ ♀.*Sagaritis mitis* HOLMGREN 1860 a, p. 46, ♂ ♀.*Sagaritis latrator*, TSCHEK 1871, p. 48.*Sagaritopsis latrator*, AUBERT 1957, p. 228.*Campoletis* FÖRSTER 1868 b, p. 157; type: *Mesoleptus tibiator* Cress., included by HOUGHTON 1907.*Occurrence in the Kevojoki area:* 3 ♀ ♀ : 2. VII. 1956, the mouth of the Kevojoki; ♂ : 14. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.*Distribution:* Throughout Finland. Northern Norway (ROMAN 1936 a), Russia (MEYER 1935), Estonia (OZOLS 1959 b), France (AUBERT 1957), Central and Southern Europe (SCHMIEDEKNECHT 1909).*Biology:* In Central Europe bred from a *Heterarthrus* species (*Hym.*, *Tenthredinidae*) (FULMEK 1962).*Dusona delusor* (Thnbg)*Ichneumon delusor* THUNBERG 1822, p. 265 & 1824, p. 268, ♀.*Campoplex stragifex* FÖRSTER 1868 a, p. 811, ♂ ♀.*Campoplex delusor*, ROMAN 1912, p. 290.*Campoplegidea delusor*, AUBERT 1957, p. 227.*Dusona delusor*, JUSSILA 1962 b, p. 58.*Occurrence in the Kevojoki area:* ♂ : 15. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.*Distribution:* Common throughout Finland. Also reported from Northern Norway (ROMAN 1942), Germany (SCHMIEDEKNECHT 1908), France (AUBERT 1957), Latvia (OZOLS 1958) and Russia (MEYER 1935).*Remarks:* The specimen from the area studied differs from the more southern specimens in its smaller size (length 9 mm, average length of the South Finnish males 13 mm), and black 4th tergite.*Dusona debilis* (Först.)*Campoplex debilis* FÖRSTER 1868 a, p. 859, ♀. THOMSON 1887 a, p. 1087, ♂ ♀.*Dusona debilis*, HINZ 1962, p. 10.*Occurrence in Inari Lapland:* Lemmenjoki, Utsjoki, W. Hellén leg. (HELLÉN 1951).*Distribution:* EnL: Kilpisjärvi in Finland, Russian and Swedish Lapland (HELLÉN 1951).*Nepiera collector* (Thnbg)*Ichneumon collector* THUNBERG 1822, p. 271.*Limneria concinna* HOLMGREN 1860 a, p. 84, ♂ ♀.*Nepiera collector*, PERKINS 1942, p. 64, ♂ ♀.*Occurrence in the Kevojoki area:* ♂ : 10. VII. 1959, the W. shore of the Ylänjaggaljärvi Lake, a coniferous heath; ♂ : 19. VII. 1961, the Kevo Cape, a coniferous heath; ( ♀ : 20. VII. 1955, the valley of the river Tenojoki).*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), Iceland (ROMAN 1931 c), Spain (CEBALLOS 1956), England (PERKINS 1942), Faroe Islands (ROMAN 1915), Madeira (HELLÉN 1961 a), Canary Islands (HELLÉN 1949) and U.S.S.R. (MEYER 1935: Leningrad).*Diadegma cerophaga* (Grav.)*Campolex cerophagus* GRAVENHORST 1829 d, p. 470, ♂ ♀.*Angitia cerophaga*, THOMSON 1887 a, p. 1158.*Diadegma cerophagus*, TOWNES, TOWNES & GUPTA 1961, p. 236.*Occurrence in the Kevojoki area:* ♂ : 20. VII. 1956, Poddusroadja, a heath of the barren region; ♀ : 18. VII. 1959, the meadow forest at the foot of Linkkapahta; ♂ ♀ : 19. VII. 1959, the mouth of the Fiellugeädgejoki.*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), Spain (CEBALLOS 1956), Northern China (UCHIDA 1952), Fiji Islands, Java, Sumatra, Tasmania and New Zealand (TOWNES, TOWNES & GUPTA 1961).

**Biology:** SCHMIEDEKNECHT (1909): a parasite of *Emphytus* species (Hym., Tenthredinidae). In Finland bred from *Lozopera fennicana* (Lep., Phaloniidae) (HELLÉN 1944 a). In Indo-Australia bred from *Plutella maculipennis* (Lep., Hyponomeutidae) (TOWNES, TOWNES & GUPTA 1961).

*Diadegma armillata* (Grav.), new combination

*Campoplex armillatus* GRAVENHORST 1829 d, p. 514, ♂.

*Campoplex chrysostinctus* var. 2 GRAVENHORST 1829 d, p. 524, ♂ ♀.

*Limneria armillata*, HOLMGREN 1860 a, p. 61.

*Angitia armillata*, THOMSON 1887 a, p. 1158.

*Diadegma* FÖRSTER 1868 b, p. 153; type: *Campoplex crassicornis* Grav., included by SCHMIEDEKNECHT 1909.

**Occurrence in the Kevojoki area:** ♀: 13. VII. 1959, the N.E. slope of Ruottir III, a dry heath of the barren region; ♀: 15. VII. 1961, the N.E. slope of Ruottir III, a moist heath between the barren and birch regions; ♀: 19. VII. 1961, Puksalskaidi, birch region; (♀: 10. VII. 1961, the mountain of Kätkikielas, the boundary between the barren and birch regions).

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), U.S.S.R. (MEYER 1935).

**Remarks:** In the specimen from the year 1959 the hind femora are blackish brown, in others (as usual) red. The length of the ovipositor is variable, the specimens from the area studied having short ovipositors. The length of the petiolar segment is also variable, its length : greatest breadth = 1.5—2 : 1.

**Biology:** A parasite of the genera *Hyponomeuta* (Lep., Hyponomeutidae) and *Talaeporia* (Lep., Talaeporiidae) (ROMAN 1924, OZOLS 1928 and HEDWIG 1950 a). The latter genus has been found in the Kevojoki area (JUSSILA 1963 a).

*Diadegma fenestralis* (Hlmgr.)

*Limneria fenestralis* HOLMGREN 1860 a, p. 59, ♂ ♀.

*Angitia fenestralis*, THOMSON 1887 a, p. 1156.

*Angitia trochanterata* THOMSON 1887 a, p. 1157, ♂ ♀.

*Diadegma fenestralis*, TOWNES, TOWNES & GUPTA 1961, p. 173.

**Occurrence in the Kevojoki area:** ♀: 10. VII. 1956, about 3 kilometres southwest of Linkkapahta; ♂: 12. VII. 1956, about 1 kilometre from the peninsula between the lakes Ylä- and Alanjaggaljärvi to the mouth of the Kevojoki; ♂: 15. VII. 1961, a dry heath of the birch region between the Kevo Wall and Ruottir III.

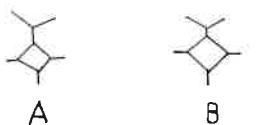


Fig. 30. *Diadegma fenestralis* (Hlmgr.).  
Areola of front wing: A. in a specimen  
of the Kevojoki area, B. in a specimen  
from South Finland. — Orig.

**Distribution:** Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1909 and MEYER 1935). India, Pakistan and New Zealand (TOWNES, TOWNES & GUPTA 1961).

**Remarks:** The specimen from the area studied have black antennal scapes. The size of the areola seems to vary; in the specimens from the Kevojoki area it is smaller than in the South Finnish specimens (fig. 30).

**Biology:** A parasite of Microlepidoptera (SCHMIEDEKNECHT 1909), e.g. *Plutella maculipennis* (Hyponomeutidae) (MORLEY 1913 a).

*Diadegma interrupta* (Hlmgr.), new combination

*Limneria interrupta* HOLMGREN 1860 a, p. 62, ♂ ♀.

*Angitia interrupta*, THOMSON 1887 a, p. 1162.

*Diadegma* FÖRSTER 1868 b, p. 153; type: *Campoplex crassicornis* Grav., included by SCHMIEDEKNECHT 1909.

**Occurrence in the Kevojoki area:** ♂: 13. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), European U.S.S.R. (MEYER 1935).

**Biology:** A parasite of *Scopula* (Lep., Geometridae) (SCHMIEDEKNECHT 1909). *Scopula* species have been found in the Kevojoki area (JUSSILA 1963 a).

*Diadegma majalis* (Grav.), new combination

*Campoplex majalis* GRAVENHORST 1829 d, p. 462, ♂ ♀.

*Limneria majalis*, BRISCHKE 1880, p. 150.

*Angitia majalis*, THOMSON 1887 a, p. 1161.

*Diadegma* FÖRSTER 1868 b, p. 153; type: *Campoplex crassicornis* Grav., included by SCHMIEDEKNECHT 1909.

**Occurrence in the Kevojoki area:** ♂: 5. VII. 1959, a birch heath at the mouth of the Kevojoki.

**Distribution:** Common throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1909 and MEYER 1935).

*Diadegma rufipes* (Grav.), new combination*Campoplex rufipes* GRAVENHORST 1829 d, p. 461, ♀.*Porizon erucator* ZETTERSTEDT 1838, p. 349, ♂ ♀.*Limneria rufipes*, MARSHALL 1872, p. 58.*Angitia rufipes*, THOMSON 1887 a, p. 1168.*Diadegma* FÖRSTER 1868 b, p. 153; type: *Campoplex crassicornis* Grav., included by SCHMIEDEKNECHT 1909.

*Occurrence in the Kevojoki area:* ♂ : 5. VII. 1959, a dry heath of the birch region at the mouth of the Kevojoki; ♂ : 12. VII. 1961, the N.E. slope of Ruottir I, a moist heath of the barren region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), Spain (CEBALLOS 1956), Roumania (CONSTANTINEANU & PETCU 1960) and U.S.S.R. (MEYER 1935).

*Remarks:* According to SCHMIEDEKNECHT (1909), this species greatly resembles *Campoplex* (*Omorga*) species. But this view is not correct, for *rufipes* differs distinctly from these in the structure of its petiolar area (cf. TOWNES, TOWNES & GUPTA 1961).

*Biology:* A parasite of Microlepidoptera (SCHMIEDEKNECHT 1909).

*Diadegma nana* (Grav.), new combination*Campoplex nanus* GRAVENHORST 1829 d, p. 469, ♀.*Limneria nana*, MARSHALL 1872, p. 57.*Angitia nana*, THOMSON 1887 a, p. 1164, ♂ ♀.

*Diadegma* FÖRSTER 1868 b, p. 153; type: *Campoplex crassicornis* Grav., included by SCHMIEDEKNECHT 1909.

*Occurrence in the Kevojoki area:* ♂ : 16. VII. 1959, a bog of the coniferous region between Kotkapahta and the Keärdusjärvi Lake; ♂ : 21. VII. 1959, a meadow forest at the mouth of the Tsharsjoki; ♀ : 22. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Distribution:* In Finland formerly recorded from EH: Nokia and PH: Keuruu (HELLÉN 1944 a). Also PsL: Pumanki in European U.S.S.R. (HELLÉN 1944 a), Sweden, England and Germany (SCHMIEDEKNECHT 1909).

*Remarks:* In the area studied the male from the bog has entirely black femora, those of the other specimens being brown with black bases.

*Hyposoter albicans* (Brke), new combination*Limneria albicans* BRISCHKE 1880, p. 158, ♀.*Anilastus albicans*, SCHMIEDEKNECHT 1909, p. 1809.*Anilasta albicans*, HELLÉN 1951, p. 103, ♂ ♀.*Hyposoter* FÖRSTER 1868 b, p. 152; type: *Limnerium* (*Hyposoter*) *parorgyiae* Vier., included by VIERECK 1910.

*Occurrence in the Kevojoki area:* ♀ : 2. VII. 1956, the mouth of the Kevojoki; ♀ : 15. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* In Finland A: Hammarland, V: Karjalohja, St: Säkylä, LK: Parikkala and EH: Heinola (HELLÉN 1951). EK: Vyborg, Ks: Paanajärvi in European U.S.S.R. (HELLÉN 1951), Poland (BRISCHKE 1880), England and France (AUBERT 1957).

*Remarks:* The specimens from the Kevojoki area correspond to HELLÉN's (1951) description. These differ from SCHMIEDEKNECHT's (1909) description in the following two respects: the costulae distinct and the 2nd tergite broader than its length.

*Hyposoter inquinatus* (Hlmgr.), new combination*Limneria inquinata* HOLMGREN 1860 a, p. 75, ♀. BRISCHKE 1880, p. 164, ♂.*Anilasta inquinata*, THOMSON 1887 a, p. 1173.*Anilastus inquinatus*, SCHMIEDEKNECHT 1909, p. 1810.

*Hyposoter* FÖRSTER 1868 b, p. 152; type: *Limnerium* (*Hyposoter*) *parorgyiae* Vier., included by VIERECK 1910.

*Occurrence in the Kevojoki area:* ♀ : 15. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909).

*Remarks:* The female from the Roajaatshe differs from the more southern specimens in the following respects: speculum more dull than shining, costulae a little visible, all femora and tibiae yellowish red, the latter with dark apices. Length 5.5 mm (according to SCHMIEDEKNECHT 6 mm).

*Hyposoter argentatus* (Grav.), new combination*Campoplex argentatus* GRAVENHORST 1829 d, p. 543, ♀ (partly).*Limneria argentata*, HOLMGREN 1860 a, p. 81, ♂ ♀.*Holocremna argentata*, THOMSON 1887 a, p. 1181.*Holocremnus argentatus*, SCHMIEDEKNECHT 1909, p. 1840.

*Hyposoter* FÖRSTER 1868 b, p. 152; type: *Limnerium* (*Hyposoter*) *parorgyiae* Vier., included by VIERECK 1910.

*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1951).

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909), Germany (HEDWIG 1950 b), Spain (CEBALLOS 1956) and European U.S.S.R. (HELLÉN 1951).

*Biology:* Bred from many sawflies (SCHMIEDEKNECHT 1909), and in Denmark from *Elachista cerusella* (Lep., Elachistidae) (FULMEK 1962).

*Olesicampe annulitarsis* (Thoms.), new combination*Holocremna annulitarsis* THOMSON 1887 a, p. 1179, ♂ ♀.*Holocremnus annulitarsis*, SCHMIEDEKNECHT 1909, p. 1834.*Olesicampe* FÖRSTER 1868 b, p. 153; type: *Ichneumon longipes* Müll., designated by VIERECK 1912.

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1956, the mouth of the Roajaatshe; 2 ♀ ♀: 6. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♀: 10. VII. 1959, a dry birch heath on the S. shore of the lake Ylännjaggallompolo; ♀: 13. VII. 1959, the N.E. slope of Ruottir III, a dry heath of the barren region; (♀: 18. VII. 1961, a meadow forest by the crossing of the river Luomushjoki and the road to Karigasniemi).

*Distribution:* Throughout Finland. Also reported from Sweden (THOMSON 1887 a) and Spain (CEBALLOS 1956).

*Remarks:* The colouring of the abdomen varies: it is either latero-apically red or, in addition, apically the margins of the tergites are more or less red.

*Olesicampe vetula* (Hlmgr.), new combination*Limneria vetula* HOLMGREN 1860 a, p. 91, ♂ ♀.*Holocremna vetula*, THOMSON 1887 a, p. 1180.*Holocremnus vetulus*, SCHMIEDEKNECHT 1909, p. 1836.

*Olesicampe* FÖRSTER 1868 b, p. 153; type: *Ichneumon longipes* Müll., designated by VIERECK 1912.

*Occurrence in the Kevojoki area:* ♀: 17. VII. 1956, the mouth of the Fiellugeädgejoki; ♀: 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* Finnish Lapland. The Kola Peninsula (HELLÉN 1938), Swedish (HOLMGREN 1860 a) and ? Norwegian Lapland (ROMAN 1942).

*Remarks:* Like the foregoing species, but slenderer and the colouring of the hind legs more even.

*Olesicampe clandestina* (Hlmgr.), new combination*Limneria clandestina* HOLMGREN 1860 a, p. 90, ♂ ♀.*Holocremna clandestina*, THOMSON 1887 a, p. 1178.*Holocremnus clandestinus*, SCHMIEDEKNECHT 1909, p. 1832.

*Olesicampe* FÖRSTER 1868 b, p. 153; type: *Ichneumon logipes* Müll., designated by VIERECK 1912.

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1959, the N.E. slope of Ruottir I, a barren heath.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909).

*Remarks:* The specimen from Ruottir is darker than the more southern specimens: front coxae, trochanters and hind femora basally dark; the 2nd and 3rd tergites entirely black. Length 5 mm, that of more southern specimens 7–8 mm.

*Olesicampe ratzeburgi* (Tschek), new combination*Limneria Ratzeburgi* TSCHEK 1871, p. 64, ♂ ♀.*Holocremnus Ratzeburgi*, SCHMIEDEKNECHT 1909, p. 1831.*Holocremna Ratzeburgi*, HELLÉN 1940, p. 24.

*Olesicampe* FÖRSTER 1868 b, p. 153; type: *Ichneumon longipes* Müll., designated by VIERECK 1912.

*Occurrence in the Kevojoki area:* ♂: 12. VII. 1959, the N.E. slope of Ruottir I, a barren heath.

*Distribution:* Rather rare throughout Finland. Estonia (OZOLS 1959 b), Latvia (OZOLS 1958), Russia (MEYER 1935), Germany and Austria (SCHMIEDEKNECHT 1909).

*Remarks:* Resembles the foregoing species, the only important difference, according to SCHMIEDEKNECHT (1909), being its black abdomen. *O. clandestina*, however, has a lighter and shorter stigma of the front wing.

*Olesicampe tarsator* (Thoms.), new combination*Holocremna tarsator* THOMSON 1887 a, p. 1180, ♂ ♀.*Holocremnus tarsator*, SCHMIEDEKNECHT 1909, p. 1834.

*Olesicampe* FÖRSTER 1868 b, p. 153; type: *Ichneumon longipes* Müll., designated by VIERECK 1912.

*Occurrence in the Kevojoki area:* ♂: 11. VII. 1956, the terrain about 3 kilometres to the southwest of Linkkapahta; ♂: 5. VII. 1959, a meadow forest at the foot of the Kevojoki; ♀: 9. VII. 1959, a meadow forest at the foot of Tammukkapahaht; ♂: 14. VII. 1959, the N.E. slope of Ruottir II, a barren heath.

*Distribution:* Throughout Finland. Northern Germany (SCHMIEDEKNECHT 1909).

*Olesicampe proterva* (Brke)*Limneria proterva* BRISCHKE 1880, p. 171, ♀.*Olesicampa retusa* THOMSON 1887 a, p. 1144, ♂ ♀.

- Olesicampa punctitarsis* THOMSON 1887 a, p. 1146, ♀.  
*Olesicampa subcallosa* THOMSON 1887 a, p. 1146, ♂ ♀.  
*Olesicampa simplex* THOMSON 1887 a, p. 1147, ♂ ♀.  
*Olesicampa luteipes* THOMSON 1887 a, p. 1147, ♂ ♀.  
*Olesicampe proterva*, SCHMIEDEKNECHT 1909, p. 1746.

*Occurrence in the Kevojoki area:* 2 ♂ ♂ and ♀ : 4. VII. 1959, a meadow at the mouth of the Kevojoki; 2 ♀ ♀ : 5. VII. 1959, the terrain between the mouth of the Kevojoki and the lake Keärdusjärvi; 2 ♀ ♀ : 17. VII. 1959, the meadow of the Madjoki hut; ♂ : 13. VII. 1961, the valley of the Kevojoki by Ruottir I, birch region; ♀ : 13. VII. 1961, Tuolba-Njauguoaiivi, a moist heath of the barren region; (2 ♀ ♀ : 16.—17. VII. 1961, a patch of willows on the N.E. shore of the lake Luomushjärvi).

*Distribution:* Throughout Finland; Sweden and Germany (HELLÉN 1951).

*Remarks:* The colouring varies very much. Among the females from the area studied there are many specimens with more or less white, basally black front coxae, and with entirely black hind femora. In the other specimens from Kevo the front coxae are yellow and the hind femora more or less red.

#### *Olesicampe sericea* (Hlmgr.)

- Campoplex sericeus* HOLMGREN 1856 b, p. 115, ♀.  
*Limneria serica* HOLMGREN 1860 a, p. 89, ♂ ♀.  
*Olesicampa sericea*, THOMSON 1887 a, p. 1141.  
*Olesicampe sericea*, SCHMIEDEKNECHT 1909, p. 1741.

*Occurrence in the Kevojoki area:* ♀ : 19. VII. 1961, Puksalskaidi, birch region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909).

#### *Eriborus dorsalis* (Grav.)

- Campoplex dorsalis* GRAVENHORST 1829 d, p. 528, ♂.  
*Limneria dorsalis*, HOLMGREN 1860 a, p. 96, ♂ ♀.  
*Meloboris dorsalis*, THOMSON 1887 a, p. 1149.  
*Zaporus dorsalis*, SCHMIEDEKNECHT 1909, p. 1638.  
*Eriborus dorsalis*, TOWNES, TOWNES & GUPTA 1961, p. 243.

*Occurrence in the Kevojoki area:* ♂ : 21. VII. 1959, a meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909).

*Remarks:* In the specimen from the Kevojoki area front and middle coxae yellowish, basally black, hind coxae and 1st tergite entirely black; 2nd tergite with its apical angles and 3rd tergite apically and laterally red, 4th with its basal angles and centre red, and length 5.5 mm. The average length of the Central European specimens is 7—8 mm (SCHMIEDEKNECHT 1909).

#### *Nythobia pusio* (Hlmgr.)

*Meloboris pusio* HOLMGREN 1860 a, p. 100, ♀; lectoholotype ♀ : labelled "Hlm.", "Bhn", designated by H. K. TOWNES (coll. Riksmuseum, Stockholm).

*Angitia pusio*, THOMSON 1887 a, p. 1165.

*Nythobia pusio*, SCHMIEDEKNECHT 1909, p. 1647.

*Distribution:* ♂ (allotype): 18. VIII. 1956, EP: Vaasa, R. Jussila leg. (coll. JUSSILA); common throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1909).

*Male:* Its structure resembles that of the female, but antennae thick, length : thickness of 3rd flagellar segment = 3 : 1 in ♂ (4 : 1 in ♀). Head, thorax and abdomen black; palpi, mandibles and tegulae whitish; stigma of front wing brownish white; legs red, coxae, hind proximal trochanters and hind femora black, bases and apices of hind tibiae and tarsi dark; ventral fold of abdomen yellow. Length 4 mm.

*Occurrence in the Kevojoki area:* Very common (both males and females) in the barren region of the Ruottir mountains in the year 1961.

*Remarks:* Tergites of the females of the Kevojoki area entirely black, and tergites 2—3 without the red present in more southern specimens.

*Biology:* A parasite of mining Microlepidoptera (FULMEK 1962).

#### Subfamily Cremastinae

##### *Cremastus signatus* Hlmgr.

*Cremastus signatus* HOLMGREN 1860 a, p. 108, ♀. THOMSON 1890 a, p. 1447, ♂ ♀.

*Cremastus albipennis* HOLMGREN 1860 a, p. 109, ♂ (♀ partly).

*Occurrence in Inari Lapland:* Ivalo, W. Hellén leg. (HELLÉN 1942).

*Distribution:* EH: Hattula and Kn: Hyrynsalmi in Finland (HELLÉN 1942). Northern and Central Europe (SCHMIEDEKNECHT 1910), European U.S.S.R. (MEYER 1935).

#### Subfamily Tersilochinae

##### *Tersilochus nutritor* (F.)

*Ophion nutritor* FABRICIUS 1804, p. 139.

*Porizon nutritor*, GRAVENHORST 1829 d, p. 762, ♂ ♀.

*Diaparsus nutritor*, THOMSON 1889 b, p. 1373.  
*Diaparsis nutritor*, SCHMIEDEKNECHT 1911, p. 2082.  
*Tersilochus nutritor*, HELLÉN 1958, p. 9.

*Occurrence in the Kevojoki area*: ♂ : 4. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♂ : 12. VII. 1959, the S. slope of Fiellugeädgeskaidi, a meadow forest with aspens predominating.

*Distribution*: V: Lohja and EH: Tammela in Finland, and throughout most of Europe (HELLÉN 1958 and MEYER 1935).

*Remarks*: The specimen from Fiellugeädgeskaidi has a petiolar segment with a weak dorsomedian furrow.

#### *Tersilochus microcephalus* (Grav.)

*Porizon microcephalus* GRAVENHORST 1829 d, p. 766, ♀.  
*Thersilochus xanthopus* HOLMGREN 1860 a, p. 138, ♀.  
*Thersilochus pallipes* HOLMGREN 1860 a, p. 138, ♀.  
*Thersilochus microcephalus*, BRISCHKE 1880, p. 193, ♂ ♀.  
*Diaparsus microcephalus*, THOMSON 1889 b, p. 1375.  
*Diaparsis microcephalus*, SCHMIEDEKNECHT 1911, p. 2085.  
*Tersilochus microcephalus*, HELLÉN 1958, p. 9.

*Occurrence in the Kevojoki area*: ♀ : 18. VII. 1956, the mouth of the Fiellugeädgejoki; ♀ : 10. VII. 1959, a coniferous heath on the W. shore of the Ylänjaggaljärvi Lake; 2 ♂ ♂ : 12. VII. 1959, a moist heath of the birch region at the mouth of the Fiellugeädgejoki; ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall; 2 ♂ ♂ : 21. VII. 1959, the meadow of Kevusuu.

*Distribution*: Throughout Finland; Sweden, England, Germany (HELLÉN 1958) and U.S.S.R. (MEYER 1935).

*Remarks*: Abdomen and legs, as a rule, entirely yellow. But the female found 13. VII. 1959 has a brownish abdomen; in the male from 21. VII. 1959 it is black and the legs brown.

#### *Tersilochus pygmaeus* (Zett.)

*Porizon pygmaeus* ZETTERSTEDT 1838, p. 397, ♀.  
*Thersilochus pygmaeus*, HOLMGREN 1860 a, p. 142, ♂ ♀.  
*Tersilochus pygmaeus*, HELLÉN 1958, p. 11.

*Occurrence in Inari Lapland*: Ivalo, W. Hellén leg. (HELLÉN 1958).  
*Distribution*: Throughout Finland, Sweden, Norway (HELLÉN 1958); PsL: Petsamo and Leningrad in U.S.S.R. (HELLÉN 1958 and MEYER 1935).

#### *Tersilochus moderator* (L.)

*Ichneumon moderator* LINNAEUS 1758, p. 564.  
*Cynips ichneumon strobilicla* CHRIST 1791, p. 385.

*Porizon moderator*, GRAVENHORST 1829 d, p. 783, ♂ ♀.  
*Thersilochus gibbus* HOLMGREN 1860 a, p. 143, ♂.  
*Thersilochus moderator*, HOLMGREN 1860 a, p. 144, ♀. THOMSON 1889 b, p. 1395, ♂ ♀.  
*Thersilochus striola* THOMSON 1889 b, p. 1396, ♀.

*Tersilochus moderator*, HELLÉN 1958, p. 13.  
*Occurrence in Inari Lapland*: Ivalo, W. Hellén leg. (HELLÉN 1958).

*Distribution*: Throughout Finland and in most parts of Europe (HELLÉN 1958); European U.S.S.R. (MEYER 1935) and China (UCHIDA 1952).

*Biology*: Bred from mining Curculionidae (Col.) in Germany and France (FULMEK 1962).

*Tersilochus melanogaster* Thoms.  
*Thersilochus melanogaster* THOMSON 1889 b, p. 1392, ♂ ♀.  
*Tersilochus melanogaster*, HELLÉN 1958, p. 14.

*Occurrence in Inari Lapland*: Utsjoki, A. Saarinen leg. (HELLÉN 1958).

*Distribution*: Throughout Finland. Also reported from Sweden, Hungary (HELLÉN 1958) and Switzerland (FULMEK 1962).

*Biology*: In Switzerland bred from the mining Ccutorryncus quadridens (Col., Curculionidae) (FULMEK 1962).

*Tersilochus saltator* (F.)  
*Ichneumon saltator* FABRICIUS 1781, p. 433.  
*Ophion saltator* FABRICIUS 1804, p. 137.

*Porizon saltator*, GRAVENHORST 1829 d, p. 777, ♂ ♀.  
*Thersilochus saltator*, HOLMGREN 1860 a, p. 140, ♂ ♀.  
*Tersilochus saltator*, HELLÉN 1958, p. 14.

*Occurrence in Inari Lapland*: Inari, W. Hellén leg. (HELLÉN 1958).

*Distribution*: Throughout Finland. Also in Sweden and Germany (HELLÉN 1958), Britain (FULMEK 1962) and France (ROMAN 1909).

*Biology*: In Central Europe bred from the mining Heringocrania unimaculella (Lep., Eriocraniidae) (FULMEK 1962).

*Tersilochus lapponicus* Hellén  
*Tersilochus lapponicus* HELLÉN 1958, p. 15, ♀.

*Occurrence in Inari Lapland*: Utsjoki, W. Hellén leg. (HELLÉN 1958).  
*Distribution*: KemL: Muonio and EnL: Kilpisjärvi in Finland, U.S.S.R. and Norway (HELLÉN 1958).

*Tersilochus heterocerus* Thoms.  
*Thersilochus heterocerus* THOMSON 1889 b, p. 1383, ♂ ♀.  
*Isurgus heterocerus*, SZÉPLIGETI 1905, p. 530.

*Tersilochus heterocerus*, HELLÉN 1958, p. 16.

*Occurrence in Inari Lapland*: Ivalo, W. Hellén leg. (HELLÉN 1958).

*Distribution*: Throughout Finland. European U.S.S.R., Sweden, Germany and France (HELLÉN 1958).

*Phradis interstitialis* (Thoms.)*Thersilochus interstitialis* THOMSON 1889 b, p. 1389, ♂ ♀.*Heterocola interstitialis*, SZÉPLIGETI 1905, p. 529.*Phradis interstitialis*, HELLÉN 1958, p. 19.*Occurrence in Inari Lapland*: Ivalo, W. Hellén leg. (HELLÉN 1958).*Distribution*: Throughout Finland. Sweden, Denmark, England, Austria (HELLÉN 1958) and Spain (CEBALLOS 1956).*Barycnemis claviventris* (Grav.)*Porizon claviventris* GRAVENHORST 1829 d, p. 755, ♀.*Porizon (Barycnemis) claviventris*, THOMSON 1889 b, p. 1364, ♂ ♀.*Barycnemis claviventris*, SCHMIEDEKNECHT 1911, p. 2068.*Barycnemis slossonae* CUSHMAN 1922, p. 8, ♀.*Occurrence in the Kevojoki area*: ♀ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.*Distribution*: Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911), Iceland (ROMAN 1931 e), Hungary (PETERSEN 1956), European U.S.S.R. (MEYER 1935). A holarctic species, which has also been found in Greenland (ROMAN 1928) and North America (PETERSEN 1956).*Remarks*: The specimen from the area studied is 6 mm and a female from EP: Vaasa 5 mm long. The average length of the Central European specimens is 4 mm (SCHMIEDEKNECHT 1911).*Biology*: A parasite of *Cynips folii* (Hym., Cynipidae) (MEYER 1935).*Barycnemis anurus* (Thoms.)*Porizon (Barycnemis) anurus* THOMSON 1889 b, p. 1365, ♀.*Barycnemis anurus*, SCHMIEDEKNECHT 1910, p. 2069.*Occurrence in Inari Lapland*: Utsjoki, Nuorgam, W. Hellén leg. (HELLÉN 1938).*Distribution*: EnL: Kilpisjärvi in Finland (HELLÉN 1938). Also known from Sweden (THOMSON 1889 b) and Northern Norway (ROMAN 1936 a).

## Subfamily Anomalinae

*Gravenhorstia cerinops* (Grav.)*Anomalon cerinops* GRAVENHORST 1829 d, p. 658, ♂ ♀.*Ophion (Anomalon) pubescens* ZETTERSTEDT 1838, p. 393, ♂.*Gravenhorstia cerinops*, TOWNES & TOWNES 1951, p. 337.*Paranomalon cerinops*, ŠEDIVÝ 1956, p. 131.*Occurrence in the Kevojoki area*: ♂ : 5. VII. 1956, near the Madjoki hut; ♀ : 12. VII. 1961, the N.E. slope of Ruottir I, a moist heath of the barren region.*Distribution*: Throughout Finland. Throughout Europe, North Africa (ŠEDIVÝ 1956), ? Greenland (TOWNES & TOWNES 1951).*Remarks*: The specimens from the area studied have a vertex with two red marks and hind femora with black bases. In the male the flagella are black and in the female red with black bases.*Biology*: A parasite of *Noctuae* (Lep.) (ŠEDIVÝ 1956).*Agrypon flaveolatum* (Grav.)*Ophion flaveolatum* GRAVENHORST 1807, p. 268.*Anomalon flaveolatum* GRAVENHORST 1829 d, p. 664, ♂ ♀.*Agrypon flaveolatum*, FÜRSTER 1860, p. 152.*Occurrence in the Kevojoki area*: ♀ : 19. VII. 1956, the mouth of the Fiellugeädgejoki.*Distribution*: Throughout Finland. Throughout Europe (PETERSEN 1956), Asian U.S.S.R. (ŠEDIVÝ 1956), Japan, the Kuriles, Saghalien, Korea and China (UCHIDA 1958).*Remarks*: The specimen from the area studied differs from the more southern specimens in the colour of the sides of its head behind the compound eyes, which is black instead of red.*Biology*: A parasite of many Lepidopterous species (PETERSEN 1956 and ŠEDIVÝ 1956).

## Subfamily Ophioninae

*Ophion kevoensis*, new species*Occurrence in the Kevojoki area*: 2 ♂♂ (of which the one is the holotype) : 14. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region at noon in sunshine, the holotype flying in a juniper shrub (coll. JUSSILA).*Male*: Head narrowed behind compound eyes; face coarsely punctate; length of malar space : basal breadth of mandible = 1 : 1.3; distance between hindmost ocelli = distance between them and compound eyes (fig. 31 A); flagellum with 54 segments. Notaulices strong, extending almost to the middle; propodaeum with weak areolation; front carinae and only a little of lateral carinae left of area superomedia; in hind angles, in addition, short transverse and longitudinal carinae. Hind tibia with median spur shorter than half of metatarsus. Postpetiolus rather broad compared with petiolar segment, longer

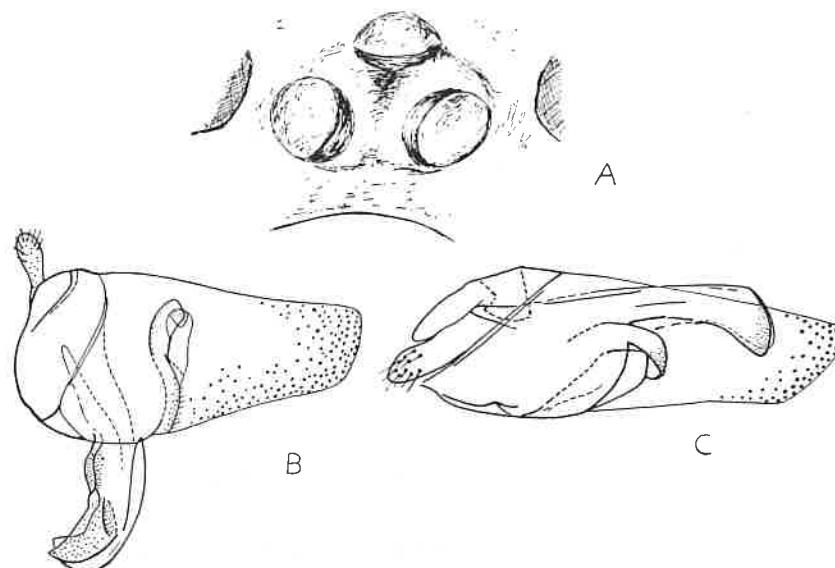


Fig. 31. A. ocelli of *Ophion kevoensis* n.sp., in dorsal view, B. male genitalia of *O. kevoensis*, C. male genitalia of *O. luteus* (L.), in sinistrolateral view.—Orig.

than its breadth; genitalia in fig. 31 B. Reddish yellow; face laterally of flagella yellow and mandibles apically dark brown. Length 16 mm.

Resembles the male of *Ophion luteus* (L.) (*Ichneumon luteus* LINNAEUS 1758, p. 566. *Ophion distans* THOMSON 1888 a, p. 1191, ♂ ♀), but malar space longer (in *luteus* length of malar space : basal breadth of mandible  $\leq 1:3$ ); genae reddish yellow and not yellow; distance between hindmost ocelli and compound eyes greater (in *luteus* this distance < distance between hindmost ocelli); aedeagus thicker and paramere more obtuse (male genitalia of *luteus* in fig. 31 C).

*Female:* Unknown.

*Biology:* The *Ophion* species are generally nocturnal and crepuscular active, and hence the locality and time are exceptional, but perhaps typical of this species.

#### Subfamily Mesochorinae

##### *Astiphromma analis* (Hlmgr.)

*Mesochorus analis* HOLMGREN 1860 a, p. 120, ♂ ♀.

*Astiphrommus analis*, THOMSON 1885 b, p. 331.

*Astiphromma analis*, SCHMIEDEKNECHT 1910, p. 1953.

*Occurrence in the Kevojoki area:* Common in dry and rather dry biotopes.

*Distribution:* Finnish Lapland. Also known from Sweden and the Alps (SCHMIEDEKNECHT 1910).

*Remarks:* The last tergites (from 4th to apex) may be either entirely black or with light apical margins. In the male found 13. VII. 1959, the greater part of 4th tergite is red.

##### *Astiphromma leucogrammum* (Hlmgr.)

*Mesochorus leucogrammus* HOLMGREN 1860 a, p. 121, ♂ ♀.

*Astiphrommus leucogrammus*, THOMSON 1885 b, p. 331.

*Astiphromma leucogrammum*, SCHMIEDEKNECHT 1910, p. 1956.

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1956, the mouth of the Roajaatshe; ♀: 16. VII. 1956, the mouth of the Fiellugeädgejoki; ♀: 14. VII. 1959, the bank of the Kevojoki, a moist heath of the birch region by Ruottir II.

*Distribution:* Throughout Finland, commonest in Lapland (HELLÉN 1961 c). The Kola Peninsula (HELLÉN 1937 b), Northern and Central Europe (SCHMIEDEKNECHT 1910), Kamchatka (ROMAN 1931 a).

*Biology:* Bred from species of the following genera: *Eupithecia* (Lep., Geometridae), *Dusona* (Hym., Ichneumonidae), *Rhogas* and *Microgaster* (Hym., Braconidae) (SCHMIEDEKNECHT 1910). The genera *Eupithecia* and *Dusona* have been found in the Kevojoki area (JUSSILA 1963 a and this publication).

##### *Astiphromma marginellum* (Hlmgr.)

*Mesochorus marginellus* HOLMGREN 1860 a, p. 121, ♂ ♀.

*Astiphrommus marginellus*, THOMSON 1885 b, p. 329.

*Astiphromma marginellum*, SCHMIEDEKNECHT 1910, p. 1950.

*Occurrence in the Kevojoki area:* ♀: 5. VII. 1956, the terrain between the lakes Keärdusjärvi and Pikku-Kevojärvi.

*Distribution:* A species new to the Finnish fauna. Northern and Central Europe (SCHMIEDEKNECHT 1910), European U.S.S.R. (MEYER 1935).

*Remarks:* The specimen from the Kevojoki area differs from SCHMIEDEKNECHT's (1910) description in having entirely light flagella, hind tibiae and tarsi.

*Biology:* Bred from *Nematus latipes* (Hym., Tenthredinidae) (MEYER 1935).

*Mesochorus nigriceps* Thoms.

*Mesochorus nigriceps* THOMSON 1885 b, p. 334, ♂ ♀.

*Mesochorus Thomsoni* DALLA TORRE 1901, p. 59.

*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1937 b).

*Distribution:* EuL: Kilpisjärvi in Finland, PsL: Pummanki and the Kola Peninsula in U.S.S.R. (HELLÉN 1937 b), Northern and Central Europe (SCHMIEDEKNECHT 1910), Faroe Islands (ROMAN 1915).

*Biology:* Bred from *Aporia crataegi* (Lep., Pieridae) (MEYER 1935).

#### *Mesochorus confusus* Hlmgr.

*Mesochorus confusus* HOLMGREN 1860 a, p. 129, ♂ ♀.

*Occurrence in the Kevojoki area:* Common in the birch and coniferous regions.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1910), U.S.S.R. (MEYER 1935).

*Remarks:* Colouring varies. In the area studied the females and a few males have dark hind tarsi; in South Finnish specimens they are plain. The male found 20. VII. 1959 has an entirely red thorax and the tergites are black except for whitish apical margins. The female from 5. VII. 1959 has a clypeus that sickly has distended with its environment.

*Biology:* Bred from Lepidoptera and parasitic Hymenoptera (SCHMIEDEKNECHT 1910). In South Finland crepuscular active.

#### *Mesochorus punctipleuris* Thoms.

*Mesochorus punctipleuris* THOMSON 1885 b, p. 334, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 10. VII. 1956, the terrain about 3 kilometres southwest of Linkkapahta; ♂: 1. VII. 1959, a bog of the Skierifäls mountain, birch region; ♂: 12. VII. 1961, the S. slope of Ruottir I, a dry heath of the barren region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1910), France (AUBERT 1957).

*Remarks:* Only the specimen from the year 1961 has darkish stigmata.

*Biology:* In South Finland bred from *Orgyia ericae* (Lep., Lymantriidae) (JUSSILA 1962 b). In South Finland crepuscular active.

#### *Mesochorus vitticollis* Hlmgr.

*Mesochorus splendidulus* var. 7 GRAVENHORST 1829 c, p. 965, ♂.

*Mesochorus vitticollis* HOLMGREN 1860 a, p. 128, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 4. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1910).

*Remarks:* In the specimen from the Kevojoki area the mesoscutum and mesosternum are entirely black, the mesopleurae almost entirely black and the stigmata darkish. Because the ventral tooth of the mandible is greater than the dorsal and the mesopleurae punctate, this specimen belongs to the species *vitticollis*.

*Biology:* In Central Europe bred from Lepidoptera, sawflies and parasitic Hymenoptera (SCHMIEDEKNECHT 1910, HEDWIG 1950 a and HINZ 1961). In South Finland crepuscular active.

#### Subfamily Microleptinae

##### *Cylloceria melancholica* (Grav.), new combination

*Ichneumon melancholicus* GRAVENHORST 1820, p. 372, ♂.

*Tryphon melancholicus* GRAVENHORST 1829 c, p. 135, ♂.

*Phytodictus niger* GRAVENHORST 1829 c, p. 935, ♀.

*Lissonota defectiva* GRAVENHORST 1829 d, p. 38, ♀.

*Bassus affinis* ZETTERSTEDT 1838, p. 382, ♂ ♀.

*Lampronota fracticornis* HALIDAY 1838, p. 121.

*Cylloceria nigra*, SCHIÖDTE 1839, p. 23, ♂ ♀.

*Chalinocerus longicornis* RATZEBURG 1852, p. 130, ♂.

*Chalinocerus defectivus*, RUTHE 1855, p. 80.

*Lampronota nigra*, HOLMGREN 1860 b, p. 47.

*Lampronota melancholica*, DALLA TORRE 1901, p. 517.

*Occurrence in the Kevojoki area:* ♂: 16. VII. 1956, the mouth of the Roajaatshe; ♀: 19. VII. 1956, the mouth of the Fiellugeädgejoki; ♂: 19. VII. 1959, the Kevo Cape, a dry heath of the coniferous region.

*Distribution:* Throughout Finland and Europe (ROMAN 1909 and SCHMIEDEKNECHT 1934); Japan (UCHIDA 1928).

##### *Cylloceria striolata* (Hellén), new combination

*Lampronota melancholica* var. *striolata* HELLÉN 1915, p. 48, ♂ ♀.

*Lampronota striolata* HELLÉN 1937 a, p. 12, ♂ ♀.

*Cylloceria* SCHIÖDTE 1839, p. 140; type: *Phytodictus caligatus* Grav., designated by VIERECK 1914.

*Occurrence in the Kevojoki area:* ♀: 10. VII. 1961, the N.E. slope of Ruottir I, a moist heath between the barren and birch regions; ♀: 14. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region; ♂:

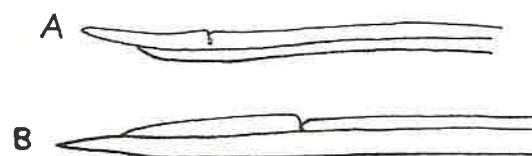


Fig. 32. Ovipositor tips. A. *Cylloceria melancholica* (Grav.), B. *C. striolata* (Hellén). — Orig.

15. VII. 1961, the meadow forest by the Kevo Wall; ♂ : 16. VII. 1961, a moist heath of the birch region by the source of the Kevojoki.

**Distribution:** Only Finnish Lapland (EnL: Muonio and Enontekiö, InL: Utsjoki) and the Kola Peninsula (HELLÉN 1915 and 1937 a).

**Remarks:** The species differs from the preceding species above all in its larger size (9–10 mm, *melancholica* 7–9 mm long), less strongly developed carinae of the propodaeum, longer and less sculptured middle tergites, completely red hind tibiae and in the structure of the ovipositor tip (fig. 32).

**Biology:** Seems to like higher biotopes than the preceding species.

#### *Cylloceria fusciventris* Hellén

*Lampronota langei* BRAUNS. HELLÉN 1915, p. 46, ♂ ♀, a wrong identification.

*Lampronota fusciventris* HELLÉN 1940, p. 12, ♂ ♀.

*Cylloceria fusciventris* HELLÉN 1953 a, p. 2.

**Occurrence in Inari Lapland:** Inari, J. Sahlberg leg. (HELLÉN 1915).

**Distribution:** EnL: Enontekiö in Finland (HELLÉN 1915).

#### *Cylloceria nunciator* (F.), new combination

*Ichneumon nunciator* FABRICIUS 1793.

*Phytodietus caligatus* GRAVENHORST 1829 c, p. 936, ♂ ♀.

*Bassus nuntiator* ZETTERSTEDT 1838, p. 381, ♂ ♀.

*Cylloceria caligata*, SCHIÖDTE 1839, p. 23, ♂ ♀.

*Lampronota nunciator*, HELLÉN 1915, p. 48, ♂ ♀.

**Occurrence in Inari Lapland:** Inari, J. Sahlberg and B. Poppius leg. (HELLÉN 1915).

**Distribution:** Throughout Finland, Northern Europe (ROMAN 1942), ImL: Kantalahti (HELLÉN 1915) and Kamchatka (ROMAN 1931 a) in U.S.S.R., and Spain (CEBALLOS 1956).

#### *Symplicis basalis* Brke

*Symplicis basalis* BRISCHKE 1880, p. 146, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 14. VII. 1956, the mouth of the Roajaatshe; ♂ and 2 ♀ ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** V: Turku (R. Jussila leg.), Uusikaupunki and Karjalohja (HELLÉN 1937 a) in Finland. Also reported from East and West Prussia (SCHMIEDEKNECHT 1911), France (AUBERT 1957) and U.S.S.R. (MEYER 1935).

#### *Blapticus crassulus* Thoms.

*Blapticus crassulus* THOMSON 1888 c, p. 1289, ♂ ♀.

*Acroblapticus crassulus*, SCHMIEDEKNECHT 1911, p. 2175.

**Occurrence in the Kevojoki area:** ♀ : 12. VII. 1959, the meadow forest at the mouth of the Fiellugeädgejoki.

**Distribution:** PK: Joensuu in Finland (HELLÉN 1946), Sweden (THOMSON 1888 c), Germany (SCHMIEDEKNECHT 1911) and European U.S.S.R. (MEYER 1935).

**Remarks:** The specimen from the Kevojoki area is smaller (4, according to Schmiedeknecht 5 mm) and darker (front and middle coxae yellowish brown and hind legs brown) than the average.

#### *Blapticus dentifer* Thoms.

*Blapticus dentifer* THOMSON 1888 c, p. 1288, ♂ ♀.

*Acroblapticus dentifer*, SCHMIEDEKNECHT 1911, p. 2174.

**Occurrence in the Kevojoki area:** ♂ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** PH: Keuruu in Finland (HELLÉN 1937 a). Also in Sweden, Germany (SCHMIEDEKNECHT 1911) and European U.S.S.R. (MEYER 1935).

**Remarks:** In the specimen from the area studied the hind coxae are black, apically brown. The specimens from Central Europe have dark red hind coxae (SCHMIEDEKNECHT 1911) and those from Sweden dark brown → black (THOMSON 1888 c).

#### *Blapticus leucostomus* Först.

*Blapticus leucostomus* FÜRSTER 1871, p. 83, ♂.

**Occurrence in Inari Lapland:** Lemmenjoki, W. Hellén leg. (HELLÉN 1946).

**Distribution:** Northern and Central Europe (SCHMIEDEKNECHT 1911).

#### *Entypoma robustum* Först.

*Entypoma robustum* FÜRSTER 1871, p. 82, ♂ ♀.

*Blapticus (Entypomus) robustus*, THOMSON 1888 c, p. 1289.

**Occurrence in the Kevojoki area:** ♂ : 6. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** Throughout Finland, Northern and Central Europe (SCHMIEDEKNECHT 1911), England (ROMAN 1923 b) and U.S.S.R. (MEYER 1935: Leningrad).

**Remarks:** The specimen from the area studied is 3 mm long, as is also a specimen from V: Turku; the length of the Central European specimens is 4—5 mm (SCHMIEDEKNECHT 1911).

**Biology:** In England bred from *Dynatosoma fuscicorne* (Dipt., Nematocera) (ROMAN 1923 b).

*Catonicrus trichops* Thoms.

*Catonicrus tricops* THOMSON 1888 e, p. 1293, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall.

**Distribution:** Throughout Finland. Also PsL: Kuvernöri, the Kola Peninsula (HELLÉN 1937 a) and Leningrad (MEYER 1935) in U.S.S.R., Sweden and Steiermark, Austria (SCHMIEDEKNECHT 1911).

*Eusternix basalis* Först.

*Eusternix basalis* FÖRSTER 1871. THOMSON 1888 e, p. 1293, ♂ ♀.

**Occurrence in the Kevojoki area:** ♂ : 13. VII. 1959, the Kevo Wall, a moist heath of the birch region; ♀ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** Throughout Finland. Also Kk: Želenogorsk (HELLÉN 1939) and Latvia (OZOLS 1958) in U.S.S.R., Sweden, Germany and Czechoslovakia (GREGOR 1941).

**Remarks:** In the specimen from the Kevojoki area the 1st tergite is black, the other tergites brown, the 2nd to 4th tergites having yellowish apical margins. Length 4 mm; in Central Europe 4 mm, too (GREGOR 1941).

*Eusternix moesta* Först.

*Eusternix moesta* FÖRSTER 1871. SCHMIEDEKNECHT 1911, p. 2189, ♀.

**Occurrence in the Kevojoki area:** ♀ : 2. VII. 1956, the mouth of the Kevojoki.

**Distribution:** In Finland PH: Keuruu (HELLÉN 1937 a). Also in Central Europe (FÖRSTER 1871).

**Remarks:** Recognizable by the last flagellar segment, which is twice as long as the two foregoing segments, and the stronger structure. The specimen from the Kevojoki area has a black abdomen and brown legs with black hind femora. Length 4 mm.

*Eusternix oligomera* Först.

*Eusternix oligomera* FÖRSTER 1871. THOMSON 1888 e, p. 1295, ♂ ♀.

**Occurrence in the Kevojoki area:** 2 ♂ ♂ and 2 ♀ ♀ : 19. VII. 1961, the Kevo Cape, a coniferous heath; 4 ♂ ♂ and ♀ : 19. VII. 1961, Puksalskaidi, birch region.

**Distribution:** Throughout Finland, the commonest of the Finnish *Eusternix* species. Also Scandinavia, Germany, Czechoslovakia and France (GREGOR 1941).

**Remarks:** Size and form of compound eyes vary, the latter from round to oval; strength of costula varies from strong to almost absent; 2nd tergite can be quite shining or a little dull, and not (as GREGOR claims) always without sculpture. Average length of the specimens from the area studied 3 mm, of those from Central Europe (according to GREGOR) 3.5—4 or (SCHMIEDEKNECHT 1911) 3—4 mm.

*Holomeristus tenuicinctus* Först.

*Holomeristus tenuicinctus* FÖRSTER 1871, p. 81, ♀. THOMSON 1888 e, p. 1296, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 19. VII. 1959, a moist birch region at the mouth of the Siedgajoki.

**Distribution:** PH: Keuruu in Finland (HELLÉN 1937 a). Northern and Central Europe (SCHMIEDEKNECHT 1911), U.S.S.R. (MEYER 1935: Leningrad).

**Remarks:** Antenna of the female from Siedgajoki with only 19 segments and with darker colouring. Specimens found in the Alps of Steiermark are also dark, but with 21 antennal segments (STROBL 1904).

*Aperileptus electus* Först.

*Aperileptus electus* FÖRSTER 1871. SCHMIEDEKNECHT 1911, p. 2196, ♀.

**Occurrence in the Kevojoki area:** ♀ : 18. VII. 1959, the meadow of the Madjoki hut.

**Distribution:** In Finland A: Jomala, U: Helsinki (HELLÉN 1946) and EH: Lempäälä (O. Sotavalta leg.). Also in Central Europe (FÖRSTER 1871).

**Remarks:** Recognizable by its 23 antennal segments, large stigmata and strongly sculptured petiolar segment. In the specimen of the Kevojoki area abdomen black with 2nd and 3rd tergites partly yellow.

*Aperileptus infuscatus* Först.

*Aperileptus infuscatus* FÖRSTER 1871. SCHMIEDEKNECHT 1911, p. 2194, ♀.

*Occurrence in the Kevojoki area:* ♀ : 12. VII. 1959, the meadow forest at the mouth of the Fiellugeädgejoki; ♀ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Also in Central Europe (FÖRSTER 1871).

*Remarks:* Recognizable by its black or dark brown abdomen and 18 antennal segments. Length of ovipositor varies, but always shorter than abdomen; stigma small and narrow.

*Aperileptus penetrans* Först.

*Aperileptus penetrans* FÖRSTER 1871. SCHMIEDEKNECHT 1911, p. 2194, ♀.

*Occurrence in the Kevojoki area:* ♀ : 4. VII. 1959, a moist birch region at the mouth of the Kevojoki.

*Distribution:* In Finland V: Turku (R. Jussila leg.), EH: Lempäälä (O. Sotavalta leg.) and PH: Keuruu (HELLÉN 1946). Also in Central Europe (FÖRSTER 1871).

*Remarks:* Ovipositor longer than abdomen. SCHMIEDEKNECHT (1911) and HELLÉN (1946) say that the antenna has 20 segments. But all the specimens I have seen have antennae with 21 segments (= 3 + 18).

*Plectiscidea canaliculata* (Först.), new combination

*Plectiscus canaliculatus* FÖRSTER 1871, p. 86, ♀. THOMSON 1888 c, p. 1303, ♂ ♀.

*Plectiscidea* VIERECK 1914, p. 118; type: *Plectiscus collaris* Grav., original designation.

*Occurrence in the Kevojoki area:* 3 ♂♂ and ♀ : 17.—19. VII. 1956, the mouth of the Fiellugeädgejoki; ♂ : 11. VII. 1956, a moist heath of the birch region at the mouth of the Roajaatshe.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911), England (ROMAN 1909) and Spain (CEBALLOS 1956).

*Plectiscidea crassicornis* (Först.), new combination

*Plectiscus crassicornis* FÖRSTER 1871, p. 89, ♀.

*Plectiscus nefastus* FÖRSTER 1871, p. 89, ♂.

*Plectiscidea* VIERECK 1914, p. 118; type: *Plectiscus collaris* Grav., original designation.

*Occurrence in the Kevojoki area:* ♀ : 16. VII. 1956, the mouth of the Roajaatshe.

*Distribution:* Throughout Finland. Also Central Europe (SCHMIEDEKNECHT 1911) and European U.S.S.R. (MEYER 1935).



Fig. 33. Clypeus. A. *Plectiscidea crassicornis* (Först.), B. *P. eurystigma* (Thoms.). — Orig.

*Plectiscidea eurystigma* (Thoms.)

*Plectiscus eurystigma* THOMSON 1888 c, p. 1301, ♂ ♀.

*Plectiscidea eurystigma*, HELLÉN 1952, p. 78.

*Occurrence in the Kevojoki area:* ♀ : 23. VII. 1959, the Kevo Cape, a coniferous heath.

*Distribution:* LK: Parikkala in Finland (HELLÉN 1946) and Sweden (THOMSON 1888 c).

*Remarks:* Resembles the foregoing species, but lateral pits of clypeus deeper (fig. 33), ovipositor shorter, hind coxae darker and postpetiolus broader (length : breadth = 1.5 : 1, in *crassicornis* 1.7 : 1).

*Plectiscidea collaris* (Grav.)

*Plectiscus collaris* GRAVENHORST 1829 c, p. 987, ♀. THOMSON 1888 c, p. 1300, ♂ ♀.

*Plectiscidea collaris*, VIERECK 1914, p. 118.

*Occurrence in the Kevojoki area:* ♀ : 5. VII. 1959, a patch of willows at the mouth of the Fiellugeädgejoki; ♂ : 12. VII. 1959, the mouth of the Fiellugeädgejoki, a moist heath of the birch region; ♀ : 21. VII. 1959, a meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911), Iceland, Faroe Islands (PETERSEN 1956), European U.S.S.R. (MEYER 1935) and Greenland (ROMAN 1916 b).

*Remarks:* In the specimens from the area studied the legs are dark (brown → black), so that these resemble the species *P. monticola* (Först.), new combination, (*Plectiscus monticola* FÖRSTER 1871, p. 89, ♀). But the specimens differ from the latter species in several features, including the shorter and deeper notaulices and the vein *cua* of the hind wing, which is opposite.

*Plectiscidea hyperborea* (Hlmgr.)*Plectiscus hyperboreus* HOLMGREN 1869, p. 21.*Plectiscus bistriatus* THOMSON 1888 e, p. 1288, ♂ ♀.*Plectiscidea hyperborea*, PETERSEN 1956, p. 90.

*Occurrence in the Kevojoki area:* ♂ : 6. VII. 1959, a meadow at the mouth of the Kevojoki; ♂ : 12. VII. 1959, a moist heath of the birch region at the mouth of the Fiellugeädgejoki; ♂ : 13. VII. 1959, the meadow forest by the Kevo Wall; ♂ : 13. VII. 1959, the N.E. slope of Ruottir III, a barren heath.

*Distribution:* Throughout Finland. PsL: Pummanki in U.S.S.R. (HELLÉN 1937 a); common in Northern Europe, but rare in Central Europe. Novaya Zemlia, Spitzbergen, West and East Greenland (PETERSEN 1956).

*Remarks:* According to PETERSEN (1956), *P. hyperborea* most nearly resembles *collaris*, but differs in its petiolar segment, which has striped sculpturing.

*Plectiscidea sodalis* (Först.), new combination*Plectiscus sodalis* FÖRSTER 1871, p. 88, ♀. THOMSON 1888 e, p. 1303, ♂ ♀.*Plectiscidea VIERECK* 1914, p. 118; type: *Plectiscus collaris* Grav., original designation.

*Occurrence in the Kevojoki area:* ♀ : 14. VII. 1959, the bank of the Kevojoki by Ruottir II, a moist heath of the birch region.

*Distribution:* Throughout Finland. Kk: Želenogorsk in European U.S.S.R. (HELLÉN 1939), Northern and Central Europe (SCHMIEDEKNECHT 1911), England (ROMAN 1923 b) and Faroe Islands (ROMAN 1915).

*Biology:* In England bred from *Mycetophila lineola* (Dipt., Nematocera) (ROMAN 1923 b).

*Plectiscidea monticola* (Först.), new combination*Plectiscus monticola* FÖRSTER 1871, p. 89, ♀.*Plectiscidea VIERECK* 1914, p. 118; type: *Plectiscus collaris* Grav., original designation.*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1937 a).

*Distribution:* Throughout Finland. Also known from Sweden, Steiermark in Austria (ROMAN 1909) and Switzerland (SCHMIEDEKNECHT 1911).

*Plectiscidea terebrator* (Först.), new combination*Plectiscus terebrator* FÖRSTER 1871, p. 81, ♀.*Plectiscidea VIERECK* 1914, p. 118; type: *Plectiscus collaris* Grav., original designation.

*Occurrence in the Kevojoki area:* ♂ : 13. VII. 1961, the terrain between Ruottir I and Tuolba-Njauguoavi, birch region.

*Distribution:* V: Karjalohja and U: Espoo in Finland (HELLÉN 1937 a). Also in Germany (SCHMIEDEKNECHT 1911).

*Remarks:* The identification is uncertain, because the male is unknown, and both FÖRSTER's (1871) and SCHMIEDEKNECHT's (1911) descriptions are incomplete. I have not seen the type specimen.

*Proclitus autumnalis* Först.*Proclitus autumnalis* FÖRSTER 1871, p. 115, ♀.*Plectiscus (Proclitus) autumnalis*, THOMSON 1888 e, p. 1306, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 5. VII. 1959, a patch of willows at the mouth of the Kevojoki; ♂ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911).

*Remarks:* The specimens from the area studied are 2 mm long (in Central Europe 3—3.5 mm, according to SCHMIEDEKNECHT 1911) and with almost black legs.

*Proclitus praetor* (Hal.)*Clepticus praetor* HALIDAY 1838, p. 116.*Proclitus grandis* FÖRSTER 1871, p. 116, ♀ & 119, ♂.*Proclitus praetor*, HELLÉN 1937 a, p. 11.

*Occurrence in the Kevojoki area:* 2 ♂ ♂ and ♀ : 19. VII. 1956, the mouth of the Fiellugeädgejoki; ♂ : 15. VII. 1961, a dry heath of the birch region between Ruottir III and the Kevo Wall.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911).

*Proclitus mesoxanthus* Först.*Proclitus mesoxanthus* FÖRSTER 1871, p. 116, ♀. HELLÉN 1937 a, p. 11, ♂ ♀.*Plectiscus (Proclitus) mesoxanthus*, THOMSON 1888 e, p. 1307.

*Occurrence in the Kevojoki area:* ♂ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta; ♀ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911), France (AUBERT 1957).

*Pantisarthrus luridus* Först.*Pantisarthrus luridus* FÖRSTER 1871, p. 110, ♀.*Plectiscus (Pantisarthrus) luridus*, THOMSON 1888 c, p. 1309, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 13. VII. 1961, the terrain between Ruottir I and Tuolba-Njauguoavi, barren region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911), U.S.S.R. (MEYER 1935: Leningrad).

*Remarks:* In the specimens from the Kevojoki area the vein *cua* of the hind wing is a little broken. That is why the straight *cua* is not a reliable distinguishing mark of the genus *Pantisarthrus*, as SCHMIEDEKNECHT (1911) claimed. The same break is seen in a *P. inaequalis* specimen from V: Turku (R. Jussila leg.). This genus differs from *Proclitus* chiefly in its dull 1st tergite.

*Pantisarthrus inaequalis* Först.*Pantisarthrus inaequalis* FÖRSTER 1871, p. 110, ♀.*Plectiscus (Pantisarthrus) inaequalis*, THOMSON 1888 c, p. 1309, ♂ ♀.*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1937 a).

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911), U.S.S.R. (MEYER 1935: Moscow and Leningrad).

*Helictes borealis* (Hlmgr.)*Megastylus borealis* HOLMGREN 1855, p. 129, ♂ ♀.*Idioxenus borealis*, BRISCHKE 1878, p. 77.*Helictes borealis*, SCHMIEDEKNECHT 1911, p. 2249.

*Occurrence in the Kevojoki area:* Males abundant in heaths of the birch and coniferous regions.

*Distribution:* EH: Ruovesi in Finland (HELLÉN 1939). Northern Sweden (SCHMIEDEKNECHT 1911); ?Latvia (OZOLS 1941) and Leningrad (MEYER 1935) in U.S.S.R.

*Megastylus hirticornis* (Strobl), new combination*Diclus hirticornis* STROBL 1904, p. 141, ♀.

*Megastylus* SCHIÖDTE 1838, p. 139; type: *Megastylus cruentator* Schiödte, designated by FÖRSTER 1871 b.

*Occurrence in the Kevojoki area:* ♂ (allotype): 10. VII. 1959, a coniferous heath on the W. shore of the Ylänjaggaljärvi Lake (coll. JUSSILA); ♀ : 13. VII. 1959, a moist heath of the birch region on the Kevo Wall.

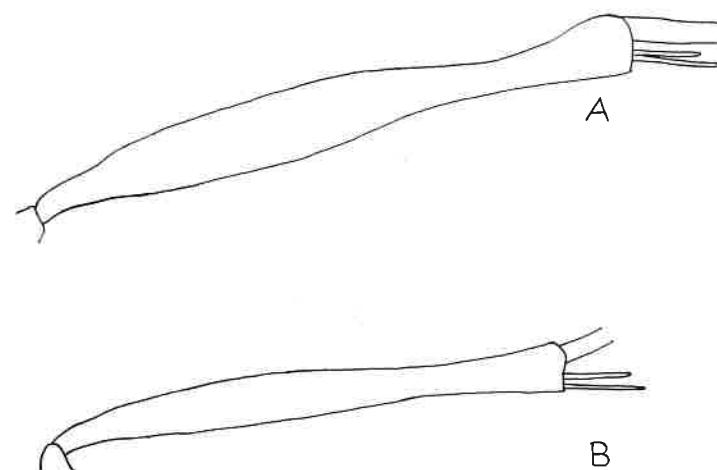


Fig. 34. Left hind femur of *Megastylus hirticornis* (Strobl). A. ♀, B. ♂. — Orig.

*Distribution:* A species new to the Finnish fauna. Also reported from EK: Vyborg in European U.S.S.R. (HELLÉN 1937 c) and Steiermark, Austria (STROBL 1904).

*Male:* Resembles the female, but face and clypeus yellow; legs longer and thinner, length : greatest breadth of hind femur = 10 : 1 (in ♀ 9.2 : 1); apical stricture of hind tibia weaker (fig. 34); legs and prothorax lighter; propleura, front and middle coxae yellowish white; flagellum with 21 segments, which are thinner than in ♀, e.g. length : thickness of 2nd segment = 5.5 : 1 (in ♀ 3 : 1). Length 4.5 mm.

*Remarks:* The female from the area studied is 4.5 mm long, too; the specimen from Steiermark 6 mm (SCHMIEDEKNECHT 1911).

*Megastylus insectator* (Först.)*Diclus insectator* FÖRSTER 1871, p. 97, ♀.*Megastylus (Diclus) insectator*, THOMSON 1888 c, p. 1316, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀ : 19. VII. 1961, birch region of Pukalskaidi.

*Distribution:* In Finland EH: Lempäälä (O. Sotavalta leg.) and PH: Keuruu (HELLÉN 1937 c). Also Sweden, Germany and France (SCHMIEDEKNECHT 1911).

*Remarks:* Differs from the foregoing species among other things in its apically very small wrinkled hind tibiae, more cranially wrinkled propodaeum and distinct costulae. Mesopleurae entirely red.

*Megastylus rufipleuris* (Först.)

*Myriarthrus rufipleuris* FÖRSTER 1871, p. 193, ♀.

*Megastylus* (*Myriarthrus*) *rufipleuris*, THOMSON 1888 c, p. 1315, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 12. VII. 1959, a meadow forest at the mouth of the Fiellugeädgejoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1911).

*Remarks:* In the specimen of the Fiellugeädgejoki the mesosternum and ventral parts of the mesopleurae are partly reddish yellow and partly yellow.

#### Subfamily Orthocentrinae

May generally be parasites of Diptera (SCHMIEDEKNECHT 1925).

*Stenomacrus pusillus* (Hlmgr.)

*Orthocentrus pusillus* HOLMGREN 1856 a, p. 341, ♀.

*Stenomacrus pusillus*, THOMSON 1897, p. 2436.

*Occurrence in the Kevojoki area:* ♀: 2. VII. 1956, Kevusuu.

*Distribution:* A species new to the Finnish fauna. Kk: Želenogorsk in European U.S.S.R. (HELLÉN 1937 b) and Northern Sweden (THOMSON 1897).

*Remarks:* The specimen of the Kevojoki area corresponds entirely to SCHMIEDEKNECHT's (1925) description.

*Stenomacrus callidulus* (Hlmgr.)

*Orthocentrus callidulus* HOLMGREN 1856 a, p. 338, ♂ ♀.

*Stenomacrus callidulus*, THOMSON 1897, p. 2438.

*Occurrence in Inari Lapland:* Utsjoki 19. VI. 1947, W. Hellén leg. (HELLÉN 1953 a).

*Distribution:* Sweden (HOLMGREN 1856 a).

*Stenomacrus affinis* (Zett.)

*Bassus affinis* ZETTERSTEDT 1838, p. 379, ♀.

*Orthocentrus palustris* HOLMGREN 1856 a, p. 345, ♂ ♀, new synonymy.

*Orthocentrus affinis*, HOLMGREN 1856 a, p. 347.

*Stenomacrus affinis*, THOMSON 1897, p. 2449.

Although I have examined a great number of specimens, I have found no distinct differences between the species *S. affinis* and *palustris*. With regard to all the characteristics mentioned by SCHMIEDEKNECHT (1925), I have ob-

served an intergradation from one to the other. Thus, the 2nd tergite can be entirely smooth and shining → basally with longitudinal streaking; vein  $Rs + 2r$  of front wing wanting in middle → basally part of stigma; length : breadth of hind femur = 4–5 : 1; thickness of hind tibia varies; vein  $Rs$  of front wing apically straight → curved; emitting point of vein  $Cu_{1a}$  in cell  $Cu_{1b}$  of front wing varies. The almost black face of *palustris* and yellow of *affinis* have been mentioned as the best distinctive marks. In my collection, however, there are specimens whose faces are largely or very largely yellow. In addition, all these characteristics may be present in any combination. I have also observed other variations: vein  $3rm$  of front wing can be very strongly developed or (in smaller specimens) lacking, or be present in one and lacking in the other wing; in newly-developed specimens the chitin crust can be so soft that it shrinks by drying and the specimens become slenderer; hind femora and coxae yellowish brown → brown → black. Length 2.5–3.5 mm.

*Occurrence in the Kevojoki area:* Very common in biotopes of all kinds, except the barren region.

*Distribution:* Common throughout Finland. Also Sweden, ? England (SCHMIEDEKNECHT 1925), Steiermark in Austria (ROMAN 1909), Northern Norway (ROMAN 1936 a), Faroe Islands (ROMAN 1915) and Iceland (PETERSEN 1956).

*Stenomacrus confinis* (Hlmgr.)

*Orthocentrus confinis* HOLMGREN 1856 a, p. 348, ♂ ♀.

*Stenomacrus confinis*, THOMSON 1897, p. 2448.

*Occurrence in the Kevojoki area:* ♂: 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Rare throughout Finland. Northern, Western and Central Europe (SCHMIEDEKNECHT 1925).

*Remarks:* Differs from the foregoing species in its light legs (hind coxae black, however) and brown, broad stigma. In the specimen from the area studied prosternum, ventral parts of mesopleurae, front and middle coxae yellow; propodaeum without areolation.

*Stenomacrus minutus* (Hlmgr.)

*Orthocentrus minutus* HOLMGREN 1856 a, p. 340, ♀.

*Stenomacrus minutus*, THOMSON 1897, p. 2449.

*Distribution:* ♂ (allotype): 11. VII. 1958, EP: Vaasa, R. Jussila leg. (coll. JUSSILA); throughout Finland. Northern Sweden (SCHMIEDEKNECHT 1925).

*Occurrence in the Kevojoki area:* 2 ♂♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki; 2 ♂♂ : 22. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Remarks:* This species differs from *S. affinis* in its dull and punctate face.

*Male:* Resembles the female, but flagellum a little longer, with yellowish white ventral side, and face yellowish white. Legs brown, front and middle coxae (bases excluded) and trochanters yellowish white. Length 3 mm (the males from the Kevojoki area 2.5 mm long).

*Stenomacrus nemoralis* (Hlmgr.)

*Orthocentrus nemoralis* HOLMGREN 1856, p. 345, ♂♀.

*Stenomacrus nemoralis*, THOMSON 1897, p. 2448.

*Occurrence in the Kevojoki area:* ♂ : 6. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♀ : 12. VII. 1959, the mouth of the Fiellugeäidgejoki, a moist heath of the birch region; ♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Northern and Central Finland. Sweden (THOMSON 1897), LK: Sortavala in European U.S.S.R. (WOLDSTEDT 1874).

*Stenomacrus silvaticus* (Hlmgr.)

*Orthocentrus silvaticus* HOLMGREN 1856 a, p. 342, ♂♀.

*Orthocentrus femoralis* HOLMGREN 1856 a, p. 346, ♂♀.

*Stenomacrus silvaticus*, MORLEY 1911, p. 77.

*Occurrence in the Kevojoki area:* ♂ : 19. VII. 1956, the mouth of the Kevojoki; ♀ : 12. VII. 1959, the meadow forest at the mouth of the Fiellugeäidgejoki; ♂ : 12. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1925), Spain (CEBALLOS 1956).

*Remarks:* The males from the area studied have vein 3rm in front wing, the female does not have it.

*Stenomacrus cubiceps* Thoms.

*Stenomacrus cubiceps* THOMSON 1897, p. 2447, ♂♀.

*Occurrence in the Kevojoki area:* ♂ : 17. VII. 1959, the meadow of the Madjoki hut.

*Distribution:* In Finland U: Helsinki rural district, PH: Keuruu (HELLÉN 1937 b) and EP: Vaasa (R. Jussila leg.). Kk: Želenogorsk in European U.S.S.R. (HELLÉN 1937 b), Northern Norway (ROMAN 1936 b), Sweden and England (SCHMIEDEKNECHT 1925).

*Remarks:* The specimen from the Kevojoki area has a black face, scapes with reddish yellow marks and length : thickness of 3rd flagellar segment = 1.3 : 1. Length 3 mm.

*Picrostigeus hastatus* (Hlmgr.)

*Orthocentrus hastatus* HOLMGREN 1856 a, p. 352, ♀.

*Picrostigeus hastatus*, SCHMIEDEKNECHT 1926, p. 3283.

*Occurrence in the Kevojoki area:* ♀ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Southern Lapland in Sweden (SCHMIEDEKNECHT 1925).

*Remarks:* The best distinguishing marks of the species are the punctate base of the 2nd tergite and its oblique lateral furrows.

*Picrostigeus antennalis* Rn

*Picrostigeus antennalis* ROMAN 1909, p. 355, ♀.

*Occurrence in the Kevojoki area:* ♂ (allotype): 14. VII. 1959, the N.E. slope of Ruottir II, a heath of the barren region (coll. JUSSILA); ♀ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta; ♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki; ♂ : 19. VII. 1961, the Kevo Cape, a coniferous heath.

*Distribution:* EnL: Kilpisjärvi in Finland (HELLÉN 1953 a), Sarek in Swedish Lapland (ROMAN 1909) and the Kola Peninsula (HELLÉN 1953 a).

*Male:* Resembles the male of *P. anomalus* (Hlmgr.) (*Orthocentrus anomalus* HOLMGREN 1856 a, p. 351, ♀). *Orthocentrus recticauda* THOMSON 1897, p. 2431, ♂♀, but length of pedicellus : length of postannellus = 1 : 2 (in *anomalus* 1 : 4); vein 3rm of front wing visible; face yellow, centrally more or less dark; hind coxae and femora (apices excluded), apices of hind tibiae and tarsi black, middle femora a little dark. Thorax and tergites dark brown. Length 3 mm.

*Remarks:* The dark colour of ♂ may sometimes be black, and the male found on 21. VII. 1959 has a blackish face with a yellow dorsal margin. In the female of the Kevojoki area the head colour is brown, vein 3rm of front wing lacking and length only 2 mm.

*Orthocentrus asper* (Grav.)*Exochus asper* GRAVENHORST 1829 b, p. 649, ♀.*Orthocentrus discolor* HOLMGREN 1856 a, p. 332, ♂ ♀.*Orthocentrus asper*, PFANKUCH 1913, p. 180.

*Occurrence in the Kevojoki area:* Very common in both the barren and the birch regions.

*Distribution:* Throughout Finland. Also Kk: Želenogorsk in European U.S.S.R. (HELLÉN 1937 b), Sweden, England and France (SCHMIEDEKNECHT 1925).

*Orthocentrus attenuatus* Hlmgr.*Orthocentrus attenuatus* HOLMGREN 1856 a, p. 330, ♀.

*Occurrence in the Kevojoki area:* ♂ (allotype): 12. VII. 1959, a moist heath of the birch region at the mouth of the Fiellugeäidgejoki (coll. JUSSILA); common in moist heaths of the birch region and especially in meadow forests.

*Distribution:* Throughout Finland. Sweden, Germany, England and France (SCHMIEDEKNECHT 1925).

*Male:* Resembles female, but antennae longer (length : thickness of 2nd flagellar segment = 1.75 : 1); antennae ventrally and face yellow; legs light; front and middle femora ventrally and hind femora entirely black, hind coxae black, hind tibiae and tarsi brown. Length 4.5 mm.

*Remarks:* Many males of the area studied have face with centre black. In an other ♂ found 12. VII. 1959 the thorax is almost entirely, mesosternum and all legs entirely yellow.

*Orthocentrus monilicornis* Hlmgr.*Orthocentrus monilicornis* HOLMGREN 1856 a, p. 332, ♂ ♀.

*Occurrence in the Kevojoki area:* 2 ♀ ♀ : 5. VII. 1959, a patch of willows at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. EK: Vyborg, Kk: Želenogorsk and Metsäpirtti in European U.S.S.R. (HELLÉN 1937 b); Northern Sweden and England (SCHMIEDEKNECHT 1925).

*Orthocentrus protuberans* Hlmgr.*Orthocentrus protuberans* HOLMGREN 1856 a, p. 332, ♂ ♀.*Atmetus insularis* ASHMEAD 1899, p. 337, ♂.

*Occurrence in the Kevojoki area:* ♀ : 12. VII. 1959, Moskuskaidi, a heath of the barren region.

*Distribution:* Throughout Finland. Northern, Central and Western Europe (SCHMIEDEKNECHT 1925, ROMAN 1942 and OZOLS 1958). A holarctic species, which has also been found in the Faroe Islands (ROMAN 1916 a), Novaya Zemlia (SCHMIEDEKNECHT 1925) and North America (TOWNES & TOWNES 1951).

*Orthocentrus stigmaticus* Hlmgr.*Orthocentrus stigmaticus* HOLMGREN 1856 a, p. 325, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 5. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♀ : 19. VII. 1961, Puksalskaidi, birch region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1925), Faroe Islands (ROMAN 1915).

*Remarks:* Tergites 1—3 shining, but rather strongly sculptured.

*Biology:* In Central Europe bred from *Tinea cognatella* (Lep., Tineidae) (SCHMIEDEKNECHT 1925).

Subfamily *Diplazontinae**Homotropus incisus* Thoms.*Homotropus incisus* THOMSON 1890 b, p. 1511, ♀.*Homocidus incisus*, MORLEY 1905, p. 424, ♂ & 1911, p. 104, ♂ ♀.*Syrphoctonus incisus*, JUSSILA 1962 a, p. 88.

*Occurrence in the Kevojoki area:* ♀ : 4. VII. 1959, a moist heath of the birch region at the mouth of the Kevojoki; 2 ♀ ♀ : 7. VII. 1959, the Kevo Cape, a moist birch heath and a coniferous heath.

*Distribution:* A species new to the Finnish fauna (JUSSILA 1962 a). Sweden (BEIRNE 1941), Latvia (OZOLS 1941) and Czechoslovakia (GREGOR 1930).

*Remarks:* *H. incisus* most nearly resembles *H. crassicrus* Thoms. (THOMSON 1890 b, p. 1516, ♀), among the Finnish species, but hind femora almost entirely black, stigmata black with light bases, and 1st and 2nd tergites a little shorter. All specimens from the area studied have light shoulder marks and a black scutellum. Face usually black, but the specimen found on 4. VII., in addition, has a yellow central mark.

*Homotropus pictus* (Grav.)*Bassus pictus* GRAVENHORST 1829 d, p. 336, ♂ ♀.*Bassus pumilus* HOLMGREN 1856 a, p. 364, ♀ (partly).

- Homotropus pumilus*, THOMSON 1890 b, p. 1513, ♂ ♀.  
*Homocidus pictus*, MORLEY 1911, p. 104.  
*Homotropus pictus*, GREGOR 1930, p. 22.  
*Syrphoconus pictus*, HELLÉN 1956, p. 140.

*Occurrence in the Kevojoki area:* ♀ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1926), England, Ireland (BEIRNE 1941) and Czechoslovakia (GREGOR 1930).

#### *Homotropus tarsatorius* (Panz.)

- Bassus tarsatorius* PANZER 1809, 9: 102, T. 19, ♀. GRAVENHORST 1829 d, p. 932, ♀.  
*Bassus exsultans* GRAVENHORST 1829 d, p. 328, ♂.  
*Bassus insignis* GRAVENHORST 1829 d, p. 349, ♀.  
*Bassus flavus* DESVIGNES 1862, p. 219, ♂.  
*Bassus pulchellus* DESVIGNES 1862, p. 221, ♂.  
*Bassus desvignesii* MARSHALL 1872, p. 82, ♂.  
*Homotropus tarsatorius*, THOMSON 1890 b, p. 1503.  
*Bassus indicus* CAMERON 1909, p. 728, ♂.  
*Homocidus tarsatorius*, MORLEY 1911, p. 97.  
*Syrphoconus tarsatorius*, NARAYANAN & LAL 1958, p. 281.

*Occurrence in the Kevojoki area:* ♂ : 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1926), Czechoslovakia (GREGOR 1930), Western and Southern Europe (DASCH 1964), India (NARAYANAN & LAL 1958), Japan, China and North America (DASCH 1964).

*Biology:* Hosts are *Syrphidae* (Dipt.), Lepidoptera and Coleoptera (DASCH 1964).

#### *Homotropus borcalis* (Hlmgr.)

- Bassus borcalis* HOLMGREN 1856 a, p. 357, ♂.  
*Homotropus borcalis*, ROMAN 1909, p. 350, ♂.  
*Homocidus borcalis*, MORLEY 1914 b, p. 129, ♂.

*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1942).

*Distribution:* In Finland EnL: Kilpisjärvi and Saana (HELLÉN 1942) and in Swedish Lapland (ROMAN 1909).

#### *Homotropus pallipes* (Grav.)

- Bassus pallipes* GRAVENHORST 1829 d, p. 325, ♀.  
*Homotropus pallipes*, THOMSON 1890 b, p. 1519, ♂ ♀.

- Homotropus pallidipennis* DALLA TORRE 1901, p. 238.  
*Homocidus pallidipcs*, MORLEY 1911, p. 111.  
*Homocidus pallipes*, SCHMIEDEKNECHT 1927, p. 3443.

*Occurrence in the Kevojoki area:* ♂ : 15. VII. 1956, the mouth of the Roajaatshe ; 2 ♂ ♂ : 18.—19. VII. 1956, the mouth of the Fiellugeäidgejoki ; ♂ : 10. VII. 1959, the W. shore of the Ylänjaggaljärvi Lake, a coniferous heath ; ♂ : 11. VII. 1959, a coniferous heath at the mouth of the Roajaatshe ; ♂ : 17. VII. 1959, the meadow of the Madjoki hut ; ♂ : 21. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Also reported from Sweden, Germany, Switzerland, England, Ireland (BEIRNE 1941), Estonia (OZOLS 1959 b), France (DE GAULLE 1917), Italy, Mexico, U.S.A. and Canada (DASCH 1964).

*Remarks:* Most males from the area studied correspond to the type description. However, the males found on 15., 21. and 18. VII. 1959 have a black scutellum and black mesopleurae ; in the latter specimen, in addition, the abdomen is almost unicoulores. In view of these characteristics the specimens may belong to the species *H. gracilentus* (Hlmgr.) (*Bassus gracilentus* HOLMGREN 1856 a, p. 308, ♂ ♀), which has not hitherto been found in Finland. However, I have not connected these males with this new species, because I have observed no exact morphological differences. It is possible that *gracilentus* is a synonym of *pallipes*, because the latter is a variable species as to the sculpture of the mesoscutum, etc., and the colouring.

#### *Homotropus elegans* (Grav.)

- Bassus elegans* GRAVENHORST 1829 d, p. 313, ♂. HOLMGREN 1856 a, p. 371, ♂ ♀.  
*Bassus rufonotatus* HOLMGREN 1856 a, p. 369, ♂ ♀.  
*Homotropus elegans*, THOMSON 1890 b, p. 1520.  
*Homocidus elegans*, MORLEY 1911, p. 109.

*Occurrence in the Kevojoki area:* ♂ : 12. VII. 1959, the N.E. slope of Ruottir I, a moist heath of the barren region.

*Distribution:* Throughout Finland. A holarctic species: Northern and Central Europe (SCHMIEDEKNECHT 1927), Czechoslovakia (GREGOR 1930), England (MORLEY 1911) and North America (DASCH 1964).

*Biology:* Hosts are *Episyrrhus baleatus* (Dipt., Syrphidae) and *Lasiocampa quercus* (Lep., Lasiocampidae) (DASCH 1964).

#### *Tymmophorus rufiventris* (Grav.)

- Bassus rufiventris* GRAVENHORST 1829 d, p. 312, ♂.  
*Bassus suspiciosus* BRISCHKE 1871, p. 106, ♀.

- Bassus holmgreni* BRIDGMAN 1882, p. 161, ♂ ♀.  
*Zootrepes rufiventris*, THOMSON 1890 b, p. 1488.  
*Zootrepes antennatus* DAVIS 1895, p. 23, ♂.  
*Tymmophorus lacustris* SCHMIEDEKNECHT 1913, p. 2714, ♀.  
*Zootrepes rufiventris*, SCHMIEDEKNECHT 1926, p. 3373.  
*Tymmophorus rufiventris*, TOWNES, TOWNES & GUPTA 1961, p. 330.

*Occurrence in the Kevojoki area:* ♀ : 20. VII. 1959, the meadow forest at the foot of Kotkapahta; ♀ : 22. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1926), the British Isles (BEIRNE 1941), Latvia (OZOLS 1958) and North America (DASCH 1964). Hence the species is holarctic.

#### *Tymmophorus graculus graculus* (Grav.)

- Bassus graculus* GRAVENHORST 1829 d, p. 339, ♀.  
*Bassus obscuripes* HOLMGREN 1856 a, p. 369, ♂ ♀.  
*Bassus rufocinctus* DESVIGNES 1862, p. 215, ♂ ♀.  
*Bassus pictans* DESVIGNES 1862, p. 217, ♂ ♀.  
*Homotropus graculus*, THOMSON 1890 b, p. 1494.  
*Diplazon graculus*, BEIRNE 1941, p. 676.  
*Tymmophorus graculus*, DASCH 1964, p. 76.

*Occurrence in the Kevojoki area:* ♀ : 11. VII. 1959, the mouth of the Roajaatshe, a patch of willows; 3 ♂ ♂ and 2 ♀ ♀ : 13. VII. 1959, the meadow forest and a moist birch heath by the Kevo Wall; ♀ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* In Finland EP: Vaasa (R. Jussila leg.), KemL: Muonio and EnL: Enontekiö (WOLDSTEDT 1874). Northern and Central Europe (SCHMIEDEKNECHT 1926), England, Scotland, Ireland (BEIRNE 1941), Czechoslovakia (GREGOR 1930), Faroe Islands (ROMAN 1916 a), Spitsbergen (FULMEK 1962) and North America (DASCH 1964). In North America there is also the subspecies *T. g. nigrofemoratus* Dasch (DASCH 1964). The species is holarctic.

*Remarks:* The dark colour of the legs is sometimes (at last in the specimens from the Kevojoki area) very reduced.

*Biology:* In Spitsbergen bred from *Tinagma dryadis* (Lep., Douglasiidae) (FULMEK 1962).

#### *Syrphophilus tricinctarius tricinctarius* (Thnbg)

- Ichneumon tricinctarius* THUNBERG 1822, p. 278, ♂.  
*Bassus cinctus* GRAVENHORST 1829 d, p. 327, ♀.

- Bassus lateralis* GRAVENHORST 1829 d, p. 342, ♂.  
*Bassus scabriculus* HOLMGREN 1856 a, p. 347, ♂ ♀.  
*Bassus albocinctus* DESVIGNES 1862, p. 218, ♂.  
*Bassus hyperboreus* MARSHALL 1877, p. 241.  
*Bassus takaozanus* UCHIDA 1930, p. 259, ♂.  
*Homotropus tricinctarius*, GREGOR 1930, p. 21.  
*Diplazon tricinctarius*, BEIRNE 1941, p. 647.  
*Syrphophilus tricinctarius*, DASCH 1964, p. 67.

*Occurrence in the Kevojoki area:* ♂ : 14. VII. 1956, the mouth of the Roajaatshe; ♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1926), Czechoslovakia (GREGOR 1930), England (BEIRNE 1941), Kamchatka (ROMAN 1931 a), Spitsbergen (MARSHALL 1877), Japan and North America (DASCH 1964). In North America there is also the subspecies *S. t. niveus* Dasch (DASCH 1964). Hence *S. tricinctarius* is a holarctic species.

#### *Diplazon pectoratorius* (Thnbg)

- Ichneumon pectoratorius* THUNBERG 1822, p. 280, ♂.  
*Ichneumon angustorius* THUNBERG 1822, p. 280, ♀.  
*Bassus pectoratorius* GRAVENHORST 1829 d, p. 333, ♂ ♀.  
*Homotropus pectoratorius*, THOMSON 1890 b, p. 1496.  
*Homocidus pectoratorius*, MORLEY 1911, p. 92.  
*Bassus wrupensis* UCHIDA 1935, p. 118, ♂ ♀.  
*Diplazon pectoratorius*, BEIRNE 1941, p. 681.

*Occurrence in the Kevojoki area:* ♂ : 6. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Distribution:* Common throughout Finland. Almost throughout Europe (SCHMIEDEKNECHT 1926). Also reported from Japan, Mexico, U.S.A. and Canada (DASCH 1964).

*Biology:* Hosts are *Cacoecia lecheana* (Lep., Tortricidae) and a *Cidaria* species (Lep., Geometridae) in England (KERRICH 1942), Lepidoptera (DASCH 1964) and perhaps *Syrphidae* (Dipt.) (SCHMIEDEKNECHT 1926).

#### *Diplazon annulatus* (Grav.)

- Bassus annulatus* GRAVENHORST 1829 d, p. 348, ♀. THOMSON 1890 b, p. 1468, ♂ ♀.  
*Bassus albosignatus* HOLMGREN 1856 a, p. 354, partly.  
*Diplazon annulatus*, ROMAN 1936 a, p. 20.

*Occurrence in the Kevojoki area:* Common both in the barren and in the birch region.

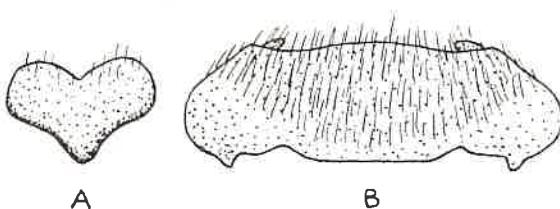


Fig. 35. *Diplazon annulatus* (Grav.) ♂. A. ninth abdominal sternite, B. fused ninth and tenth tergites. — According to BEIRNE 1941.

**Distribution:** Throughout Finland. Also PsL: Pummanki in U.S.S.R. (HELLÉN 1937 b), Latvia (OZOLS 1958), Sweden, England (SCHMIEDEKNECHT 1926), Ireland, Germany (BEIRNE 1941), Northern Norway (ROMAN 1936 a), Czechoslovakia (GREGOR 1930), Austria, France (ROMAN 1909), Spain (CEBALLOS 1956) and East Greenland (ROMAN 1933).

**Remarks:** Colour of the male varies: face generally entirely yellow, but some of the specimens from Kevo have a black face with yellow lateral margins, central part and clypeus; some have a yellow face with black streaks from the antennae downwards all over the face. Some specimens have yellow hind coxae, so that SCHMIEDEKNECHT's (1926) and BEIRNE's (1941) keys are not valid for these. The male is recognizable by its 9th abdominal sternite and fused 9th and 10th tergites (fig. 35).

#### *Diplazon tibiatorius tibiatorius* (Thunberg)

*Ichneumon tibiatorius* THUNBERG 1822, p. 280, ♀.

*Bassus albosignatus* GRAVENHORST 1829 d, p. 343, ♀ (excluding var. 4). RATZEBURG 1844, p. 122, ♂ ♀.

*Bassus laponicus* ZETTERSTEDT 1838, p. 378, ♂ ♀.

*Diplazon albosignatus*, ROMAN 1936 a, p. 20.

*Diplazon tibiatorius*, HELLÉN 1940, p. 14.

*Diplazon tibiatorius* v. *albosignatus*, HELLÉN 1940, p. 14.

**Occurrence in the Kevojoki area:** ♀ : 14. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.

**Distribution:** Throughout Finland. Almost throughout Europe (SCHMIEDEKNECHT 1926). In Canada there is the subspecies *D. t. occidentalis* Dasch (DASCH 1964). Hence the species is holarctic.

**Remarks:** In the specimen from the area studied the hind coxae are only slightly dark. Length 5 mm, that of more southern specimens 6—8 mm.

**Biology:** In Central Europe bred from *Syrphus* species (Dipt., Syrphidae) (SCHMIEDEKNECHT 1926).

#### *Promethes sulcator sulcator* (Grav.)

*Bassus sulcator* GRAVENHORST 1829 d, p. 320, ♂ ♀.

*Bassus festivus* ZETTERSTEDT 1838, p. 328, ♀.

*Bassus arcolatus* HOLMGREN 1856 b, p. 85, ♂ ♀.

*Bassus costalis* PROVANCHER 1874, p. 58, ♀.

*Bassus longicornis* PROVANCHER 1883, p. 12, ♀.

*Bassus aciculatus* PROVANCHER 1888, p. 368, ♂.

*Bassus auriculatus* PROVANCHER 1888, p. 429, ♂.

*Promethes sulcator*, THOMSON 1890 b, p. 1479.

*Promethes sulcator*, SCHMIEDEKNECHT 1926, p. 3361.

**Occurrence in the Kevojoki area:** ♀ : 17. VII. 1959, the meadow forest of the Madjoki hut; ♀ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1926), Madeira (HELLÉN 1961 a), Kamchatka (ROMAN 1931 a), China (ROMAN 1936 b), India (TOWNES, TOWNES & GUPTA 1961) and North America (TOWNES & TOWNES 1951). In North America also the subspecies *P. s. splendidus* Dasch (DASCH 1964).

**Biology:** Bred from *Syrphus* and *Tephritis* species (Dipt., Syrphidae) in Central Europe (SCHMIEDEKNECHT 1926).

#### *Sussaba pulchella pulchella* (Hlmgr.)

*Bassus festivus* var. 2 & 3 GRAVENHORST 1829 d, p. 316.

*Bassus sulcator* var. 1, 3 & 4 GRAVENHORST 1829 d, p. 321.

*Bassus pulchellus* HOLMGREN 1856 a, p. 366, ♂ ♀.

*Promethes pulchellus*, THOMSON 1890 b, p. 1483.

*Sussaba bicarinata* CAMERON 1909, p. 728, ♀.

*Promethes pulchellus*, SCHMIEDEKNECHT 1926, p. 3366.

*Sussaba pulchella*, DASCH 1964, p. 245.

**Occurrence in the Kevojoki area:** Common in all regions.

**Distribution:** Throughout Finland. Throughout Europe (PETERSEN 1956), Faroe Islands (ROMAN 1915), China (ROMAN 1936 b), India (TOWNES, TOWNES & GUPTA 1961), and Canada (DASCH 1964). In North America there is the subspecies *S. p. coriacea* Dasch, too (DASCH 1964).

#### *Sussaba cognata cognata* (Hlmgr.)

*Bassus cognatus* HOLMGREN 1856 a, p. 366, ♂ ♀.

*Promethes albicoxa* THOMSON 1890 b, p. 1479, ♂ ♀.

*Promethes cognatus*, THOMSON 1890 b, p. 1481.

*Promethes cognatus*, SCHMIEDEKNECHT 1926, p. 3363.

*Promethes cognatus* v. *albicoxa*, HELLÉN 1940, p. 14.

*Sussaba cognata*, DASCH 1964, p. 263.

*Occurrence in the Kevojoki area:* 2 ♂♂ : 13. VII. 1959, the meadow forest by the Kevo Wall; ♀ : 14. VII. 1959, the N.E. slope of Ruottir I, a barren heath; ♀ : 17. VII. 1959, the meadow of the Madjoki hut.

*Distribution:* Throughout Finland. EK: Vyborg in European U.S.S.R. (HELLÉN 1937 c), Northern and Central Europe (SCHMIEDEKNECHT 1926), England, Ireland (BEIRNE 1941), Czechoslovakia (GREGOR 1930), Faroe Islands (ROMAN 1916 a), Kamchatka (ROMAN 1931 a) and the Kuriles (DASCH 1964). In North America there is the subspecies *S. c. faceta* Dasch (DASCH 1964). Hence the species is holarctic.

#### Subfamily Metopiinae

*Exochus nigripalpis nigripalpis* Thoms.

*Exochus nigripalpis* THOMSON 1887 b, p. 209, ♂♀.

*Occurrence in the Kevojoki area:* ♀ : 4. VII. 1959, the mouth of the Kevojoki, a moist heath of the birch region; ♀ : 6. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♀ : 10. VII. 1959, the W. shore of the Ylänjaggala-järvi Lake, a coniferous heath; ♀ : 13. VII. 1959, the N.E. slope of Ruottir III, a barren heath.

*Distribution:* Throughout Finland. LK: Sortavala in European U.S.S.R. (HELLÉN 1937 b), Northern and Central Europe (SCHMIEDEKNECHT 1925), Czechoslovakia (GREGOR 1930). A holarctic species: in North America the subspecies *E. n. tectulum* Town. and *E. n. subobscurus* Town. (TOWNES & TOWNES 1959).

*Exochus prosopius* Grav.

*Exochus prosopius* GRAVENHORST 1829 c, p. 349, ♂.

*Exochus maculatus* BRISCHKE 1871, p. 100.

*Exochus gravipes* var. 4 HOLMGREN 1873, p. 64.

*Exochus procrus* HOLMGREN 1873, p. 68, ♂♀ (partly).

*Occurrence in the Kevojoki area:* Common in the barren and birch regions.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1925), Czechoslovakia (GREGOR 1930), Spain (CEBALLOS 1956), LK: Sortavala and Valamo in European U.S.S.R. (KERRICH 1939); if *E. litus* Town. is the same species, then in North America, too (TOWNES & TOWNES 1959).

*Remarks:* Some males (4 from the barren region and from the boundary between the barren and the birch regions) have a black face and hence resemble

the foregoing species. However, *prosopius* differs from *nigripalpis* in the wedge-shaped epipleurum of the 3rd tergite (in *nigripalpis* this epipleurum is semicircular). Black faces are not surprising, because the faces of the males from the Kevojoki area show a tendency to blackening. In the barren region there are also males with yellow faces.

*Biology:* In England bred from specimens belonging to the family Tortricidae (Lep.) (SCHMIEDEKNECHT 1925).

*Exochus morionellus* Hlmgr.

*Exochus morionellus* HOLMGREN 1856 a, p. 313, ♂.

*Occurrence in Inari Lapland:* Lemmenjoki, W. Hellén leg. (HELLÉN 1942).

*Distribution:* PsL: Liinahamari in European U.S.S.R. (HELLÉN 1942), Swedish Lapland (SCHMIEDEKNECHT 1925).

#### Subfamily Ichneumoninae

*Coelichneumonops solutus* (Hlmgr.)

*Ichneumon solutus* HOLMGREN 1864, p. 145, ♀.

*Coelichneumon solutus*, ROMAN 1909, p. 213, ♂♀.

*Coelichneumonops vockerothi* HEINRICH 1958, p. 739, ♂♀.

*Coelichneumonops solutus*, HEINRICH 1960, p. 83.

*Occurrence in the Kevojoki area:* ♀ : 19. VII. 1956, the mouth of the Kevojoki; ♀ : 12. VII. 1961, the N.E. slope of Ruottir I, a moist heath of the barren region.

*Distribution:* Finnish Lapland. Also reported from Swedish Lapland, Roumanian mountains (CONSTANTINEANU 1959), Scottish Highlands (PERKINS 1953), Norwegian Lapland, East Greenland (ROMAN 1936 a) and North America (HEINRICH 1960). Hence the species is holarctic.

*Remarks:* In the specimen taken in 1959 the hind coxae are without seopae (they may be worn with time), and tergites 2—4 with partly reddish lateral margins (in the other specimen the tergites are entirely black).

*Cratichneumon försteri* (Wesm.)

*Ichneumon Försteri* WESMAEL 1848, p. 185, ♂. SCHMIEDEKNECHT 1929, p. 403, ♂♀.

*Cratichneumon boreosicarius* ROMAN 1913 b, p. 116, ♀.

*Cratichneumon Försteri*, HABERMEHL 1923, p. 40.

*Occurrence in the Kevojoki area:* ♀ : 19. VII. 1956, the mouth of the Fiellugeädgejoki; ♀ : 19. VII. 1959, a meadow about 1 kilometre north of the Madjoki hut (det. GERT H. HEINRICH).

*Distribution:* Throughout Finland. Sweden (ROMAN 1913 b), Germany, England, Hungary and Roumania (CONSTANTINEANU 1959).

*Remarks:* In the female from the area studied the yellowish-reddish stripe on the frontal orbits is less distinct than usual in *försteri* specimens, but it is nevertheless visible.

*Ichneumon luteipes* Wesm.

*Ichneumon luteipes* WESMAEL 1855, p. 378, ♀.

*Amblyteles alpestris* HOLMGREN 1871, p. 229, ♂.

*Occurrence in the Kevojoki area:* ♂ : 20. VII. 1956, Poddusroadja, a barren heath.

*Distribution:* In Finland EH: Vilppula (HELLÉN 1936). Also reported from Swedish Lapland (ROMAN 1913 b), Northern Norway (ROMAN 1936 a and 1942), Estonia (OZOLS 1959 b), the Bavarian Alps (HEINRICH 1949 a), Germany, Switzerland, Austria, France, Hungary, Roumania (CONSTANTINEANU 1959) and Spain (CEBALLOS 1956).

*Remarks:* Recognizable by black thorax and abdomen, brown pubescence and reddish yellow tibiae and tarsi. The specimen from the area studied has an entirely black face.

*Ichneumon gravipes* Wesm.

*Ichneumon gravipes* WESMAEL 1855, p. 379, ♀. HOLMGREN 1879, p. 171, ♂ ♀.

*Pterocormus gravipes*, CEBALLOS 1924, p. 127.

*Occurrence in Inari Lapland:* Ivalo 2. VII. 1928, W. Hellén leg. (HELLÉN 1942).

*Distribution:* PsL: Petsamo in European U.S.S.R. (HELLÉN 1942), Swedish Lapland, Austria, Germany, U.S.S.R. (Tomsk, Novaja Zemlia) and Roumania (CONSTANTINEANU 1959), France (AUBERT 1957), the Alps (ROMAN 1904) and Spain (CEBALLOS 1924).

*Ichneumon thomsoni thomsoni* Hlmgr.

*Ichneumon Thomsoni* HOLMGREN 1864, p. 85, ♀ & 1880, p. 77, ♂.

*Occurrence in the Kevojoki area:* ♀ : 4. VII. 1956, a dry heath of the birch region at the mouth of the Kevojoki.

*Distribution:* Rare in Finnish Lapland. Also in Northern Norway (ROMAN 1936 a), Swedish Lapland, Steiermark in Austria (SCHMIEDEKNECHT 1904), Kamchatka (ROMAN 1927) and Siberia (ROMAN 1904: *I. th. connectens* Rn.).

*Ichneumon vulneratorius* Zett.

*Ichneumon vulneratorius* ZETTERSTEDT 1838, p. 364, ♀. HOLMGREN 1864, p. 118, ♂ ♀.

*Ichneumon rubeculinis* DESVIGNES 1856, p. 29.

*Occurrence in the Kevojoki area:* ♂ : 12. VII. 1961, the S. slope of Ruotir I, a dry heath of the barren region.

*Distribution:* Throughout Finland. Also Norway (ROMAN 1942), Sweden, England, Germany (SCHMIEDEKNECHT 1903) and European U.S.S.R. (MEYER 1933 a).

*Ichneumon eremitorius* Zett.

*Ichneumon eremitorius* ZETTERSTEDT 1838, p. 364, ♂.

*Ichneumon stigmatorius* ZETTERSTEDT 1838, p. 364, ♀.

*Ichneumon ignobilis* WESMAEL 1855, p. 357.

*Ichneumon eremitorius* var. *ignobilis*, CONSTANTINEANU 1959, p. 362.

*Occurrence in the Kevojoki area:* ♂ : 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Also in Northern Norway (ROMAN 1936 a), Sweden, Germany, England, Hungary, European U.S.S.R. (SCHMIEDEKNECHT 1904), France (AUBERT 1957), Kamchatka and Irkutsk (MEYER 1933 a).

*Ichneumon incomptus* Hlmgr.

*Ichneumon incomptus* HOLMGREN 1864, p. 89, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀ : 2. VII. 1956, Kevusuu.

*Distribution:* Throughout Finland. Northern and Central Europe, U.S.S.R. and Roumania (CONSTANTINEANU 1959).

*Remarks:* The specimen from the Kevojoki area has only a little white at the apex of the abdomen.

*Ichneumon nereni nereni* Thoms.

*Ichneumon raptorius* GRAVENHORST and authors (nee LINNAEUS).

*Ichneumon Nereni* THOMSON 1887 c, p. 8, ♂ ♀.

*Amblyteles raptorius*, THOMSON 1888 d, p. 118.

*Spilichneumon raptorius*, THOMSON 1894 c, p. 2088.

*Pterocormus raptorius*, CEBALLOS 1924, p. 123.

*Occurrence in Inari Lapland:* Utsjoki (HELLÉN 1951).

*Distribution:* Throughout Finland. Almost throughout Europe, U.S.S.R. (Harkov, Leningrad, Jakutsk) (CONSTANTINEANU 1959), PsL: Yläluostari in European U.S.S.R. (HELLÉN 1951), Britain (PERKINS 1960), Spain (CEBALLOS 1924). In North America the subspecies *I. n. emigrator* Heinr. is found (HEINRICH 1961).

*Biology:* In Petsamo bred from a *Brenthis* species (*Lep., Nymphalidae*) (HELLÉN 1951) and in Europe from *Maniola jurtina* (*Lep., Satyrididae*) (HEINRICH 1961).

*Stenichneumon ringii* (Hlmgr.)

*Ichneumon Möllerii* ♂ HOLMGREN 1884, p. 63 [♀ belongs to *Stenichneumon hercartericus* (Wesm.), cf. HELLÉN 1940].

*Ichneumon Ringii* HOLMGREN 1884, p. 64, ♂ ♀.

*Stenichneumon Ringii*, HELLÉN 1940, p. 2.

*Occurrence in the Kevojoki area:* ♀ : 19. VII. 1961, Puksalskaidi, birch region.

*Distribution:* Finnish and Swedish Lapland (HELLÉN 1948).

*Remarks:* The specimen from the area studied has almost entirely black tegulae.

*Amblyteles lapponicus* Hlmgr.

*Amblyteles lapponicus* HOLMGREN 1871, p. 274, ♀.

*Occurrence in the Kevojoki area:* ♀ : 19. VII. 1961, Puksalskaidi, birch region.

*Distribution:* Very rarely in Finnish and Swedish Lapland (SCHMIEDEKNECHT 1930).

*Rhyssolabus arcticus* Hellén

*Rhyssolabus arcticus* HELLÉN 1942, p. 77, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 16. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* EnL: Kilpisjärvi and InL: Lemmenjoki in Finland (HELLÉN 1942). Also reported from Scottish Highlands (PERKINS 1959).

*Platylabus borealis* Hlmgr.

*Platylabus borealis* HOLMGREN 1871, p. 324, ♀. HELLÉN 1930, p. 73, ♂.

*Platylabus rufiventris* var. *borealis*, BERTHOUMIEU 1896, p. 327.

*Occurrence in Inari Lapland:* Inari, B. Poppius leg. (HELLÉN 1930).

*Distribution:* Sweden and European U.S.S.R. (HELLÉN 1930 and MEYER 1933 a).

*Herpestomus nasutus* Wesm.

*Herpestomus nasutus* WESMAEL 1844, p. 171, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 5. VII. 1959, a meadow forest at the mouth of the Kevojoki; 3 ♂ ♂ : 6. VII. 1959, a meadow and a meadow forest at the mouth of the Kevojoki.

*Distribution:* PH: Keuruu in Finland (HELLÉN 1942). Also EK: Tytärsäari in U.S.S.R. (HELLÉN 1942), Norway (ROMAN 1942), the British Isles (PERKINS 1959) and Spain (CEBALLOS 1956).

*Remarks:* The males are readily distinguishable from those of allied species, especially by the black face with a yellow mark ventrally of the antennae. In the specimens from the area studied the trochanters are dark. One of the males, taken on 6. VII., is abnormal, having a postpetiolus with very weak punctation.

*Dicaelotus pusillator* (Grav.)

*Ichneumon pusillator* GRAVENHORST 1829 b, p. 605, ♀. MEYER 1933 a, p. 396, ♂ ♀.

*Dicaelotus morosus* WESMAEL 1844, p. 60, ♂. HOLMGREN 1889, p. 364, ♂ ♀.

*Dicaelotus pusillator*, WESMAEL 1844, p. 75, ♀.

*Occurrence in the Kevojoki area:* ♂ : 11. VII. 1959, a meadow about 1 kilometre from the Madjoki hut towards the mouth of the Kevojoki.

*Distribution:* Almost throughout Finland. Northern and Central Europe (HELLÉN 1956).

*Remarks:* South Finnish specimens have red legs (hind coxae excluded); specimens from Lapland at least with dark coxae and femora, but sometimes (♂) also with dark hind tibiae.

*Biology:* Bred from *Cossus cossus* (Lep., Cossidae) and a *Polychrosis* species (Lep., Eucosmidae) (MEYER 1933 a).

*Epitomus pygmaeus* (Brke)

*Hemiteles pygmaeus* BRISCHKE 1890, p. 106, ♂ ♀.

*Epitomus parvus* THOMSON 1891 b, p. 1626, ♂ ♀.

*Phacogena alpicola* STROBL 1901, p. 182, ♂.

*Epitomus pygmaeus*, SCHMIEDEKNECHT 1904.

*Occurrence in the Kevojoki area:* ♂ : 4. VII. 1959, a moist heath of the birch region at the mouth of the Kevojoki; ♀ : 13. VII. 1961, birch region between Ruottir I and Tuolba-Njauguoaiivi.

*Distribution:* Throughout Finland. Also Germany (BRISCHKE 1890), Austria (SCHMIEDEKNECHT 1904) and the British Isles (PERKINS 1959).

*Remarks:* The male from the area studied with the vein 3rm of the front wing. The specimens of Kevo 4 mm long; average length 3 mm (SCHMIEDEKNECHT 1904).

*Biology:* In Finland bred from a psychid species (Lep., Psychidae) (JUS-SILA 1962 b).

*Phaeogenes heterogonus* Hlmgr.

*Phaeogenes heterogonus* HOLMGREN 1889, p. 431, ♀; lectotype ♀: labelled "Hlm.", "Bhn.", hereby designated (coll. Riksmuseum, Stockholm). BERTHOUMIEU 1896, p. 372, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 10. VII. 1959, a meadow forest on the "skaidi" about 1½ kilometres from the Ylänjaggallompolo Lake to the south; ♂: 19. VII. 1959, a meadow about 1 kilometre from the Madjoki hut towards the mouth of the Kevojoki; 2 ♂ ♂: 20. VII. 1959, the meadow forest at the foot of Kotkapahta; 2 ♂ ♂: 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Also reported from Sweden (ROMAN 1914), the British Isles (PERKINS 1959) and Spain (CEBALLOS 1956).

*Remarks:* The males of the genus *Phaeogenes* are very difficult to identify. I have included the above-mentioned specimens in this species chiefly on account of the elypterus and the shape of the head (cf. PERKINS 1959), and after comparison with the type specimen.

*Phaeogenes infirmus* Wesm.

*Phaeogenes infirmus* WESMAEL 1844, p. 191, ♀.

*Occurrence in the Kevojoki area:* ♀: 18. VII. 1959, the meadow forest on Linkkapahta.

*Distribution:* Throughout Finland. Also in Sweden (ROMAN 1917), the British Isles (PERKINS 1959) and Spain (CEBALLOS 1956).

*Phaeogenes osculator* (Thnbg.)

*Ichneumon osculator* THUNBERG 1822, p. 271, ♂.

*Phaeogenes nanus* WESMAEL 1844, p. 190, ♀. THOMSON 1891 b, p. 1655, ♂ ♀.

*Phaeogenes osculator*, MEYER 1933 a, p. 449.

*Occurrence in the Kevojoki area:* ♂: 14. VII. 1956, the mouth of the Roajaatshe; ♂: 19. VII. 1959, a meadow about 1 kilometre from the Madjoki hut towards the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Norway (ROMAN 1942), Sweden (THUNBERG 1822), Latvia (OZOLS 1941), Germany (HEDWIG 1950 b), the British Isles (PERKINS 1959), Siberia (ROMAN 1904) and Kamchatka (ROMAN 1927).

*Remarks:* Recognizable particularly by its elypterus with the apical margin narrowly but distinctly flattened, above this evenly convex to the base. In the specimens from the area studied the elypterus is black; in a male found in EP: Vaasa it is only slightly dark.

*Phaeogenes elongatus* Thoms.

*Phaeogenes elongatus* THOMSON 1891 b, p. 1651, ♂ ♀.

*Proscus elongatus*, SCHMIEDEKNECHT 1904, p. 357.

*Occurrence in Inari Lapland:* Utsjoki, E. Lindqvist & A. Saarinen leg. (HELLÉN 1956).

*Distribution:* Throughout Finland. Also Germany (MEYER 1933 a) and the British Isles (PERKINS 1959).

Subfamily *Gelinae**Agrothereutes solitarius* (Tschech.)

*Cryptus solitarius* TSCHEK 1870 b, p. 410, ♂ ♀.

*Spilocryptus zygacinarum* THOMSON 1873, p. 504, ♂ ♀.

*Spilocryptus solitarius*, SCHMIEDEKNECHT 1890, p. 131 & 134.

*Agrothereutes solitarius*, TOWNES & TOWNES 1962, p. 42.

*Occurrence in the Kevojoki area:* Common in all kinds of biotopes both in the valley and in the barren region.

*Distribution:* Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1931 and CEBALLOS 1931).

*Biology:* The host of this species in the Kevojoki area, *Zygaena exulans* (Lep., Zygaenidae) (THOMSON 1873), is common throughout the area, flying in both dry and moist heaths (JUSSILA 1963 a).

*Agrothereutes grossus* (Grav.), new combination

*Cryptus grossus* GRAVENHORST 1829 c, p. 614, ♀.

*Spilocryptus grossus*, THOMSON 1873, p. 508, ♀ & 1896, p. 2369, ♂ ♀.

*Spilocryptus nigricornis* KRIECHBAUMER 1896 b, p. 128, ♀.

*Spilocryptus nubeculatus* SCHMIEDEKNECHT 1904, p. 527, ♂.

*Spilocryptus subalpinus* SCHMIEDEKNECHT 1904, p. 528, ♀.

*Gambrus grossus*, MEYER 1933 b, p. 78.

*Agrothereutes* FÜRSTER 1850, p. 71; type: (*Pezomachus abbreviator* Grav.) = *abbreviator* F., designated by VIERECK 1914.

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a dry heath of the birch region at the mouth of the Kevojoki.

*Distribution:* Rare throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1931).

*Remarks:* Easily recognizable by its oval abdomen and elongate spiracles of the propodaeum. The specimen from the area studied has tergites 6—7 with white marks.

*Gambrus incubitor* (L.)

*Ichneumon incubitor* LINNAEUS 1758, p. 563.  
*Cryptus ornatus* GRAVENHORST 1829 c, p. 620, ♀.  
*Spilocryptus ornatus*, THOMSON 1873, p. 506.  
*Gambrus maculatus* BRISCHKE 1888, p. 106, ♂.  
*Gambrus ornatus*, THOMSON 1896, p. 2374, ♂ ♀.  
*Gambrus incubitor*, ROMAN 1932, p. 7.

*Occurrence in the Kevojoki area:* ♀ : 6. VII. 1959, a meadow at the mouth of the Kevojoki; ♂ : 19. VII. 1959, a meadow about 1 kilometre from the Madjoki hut towards the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1904 and MEYER 1933 b).

*Remarks:* The possible hosts are *Zygaena* species (*Lep.*, *Zygaenidae*) (ROMAN 1917).

*Caenocryptus vindex* (Tschech)

*Cryptus vindex* TSCHEK 1870 a, p. 138, ♀.  
*Cryptus polytomi* TSCHEK 1872, p. 248, ♂.  
*Caenocryptus tener* THOMSON 1873, p. 496, ♂ ♀.  
*Habrocyptus vindex*, SCHMIEDEKNECHT 1904, p. 508.  
*Habrocyptus polytomi*, SCHMIEDEKNECHT 1904, p. 509.  
*Caenocryptus vindex*, HABERMELH 1930 b, p. 48.

*Occurrence in the Kevojoki area:* ♂ : 11. VII. 1956, about 3 kilometres from Linkkapahta to the southwest.

*Distribution:* EH: Pohjois-Pirkkala in Finland (HELLÉN 1937 a). Northern and Central Europe (SCHMIEDEKNECHT 1931).

*Remarks:* In the specimen from the area studied the face is yellow with two black streaks from the antennae to the clypeus; the outer orbits with yellow ventrally.

*Aritranis occisor* (Grav.), new combination

*Cryptus occisor* GRAVENHORST 1829 b, p. 615, ♀.  
*Hoplocryptus occisor*, THOMSON 1873, p. 512, ♂ ♀.

*Aritranis* FÖRSTER 1868 b, p. 187; type: *Cryptus explorator* Tschech, designated by VIERECK 1914.

*Occurrence in Inari Lapland:* Utsjoki and Lemmenjoki, W. Hellén leg. (HELLÉN 1956).

*Distribution:* EP (v. ESSEN 1910), V: Särkisalo, KemL: Muonio and EnL: Kilpisjärvi (HELLÉN 1956) in Finland. Throughout Europe (SCHMIEDEKNECHT 1904).

*Ischnus alternator* (Grav.)

*Cryptus alternator* GRAVENHORST 1829 b, p. 588, ♀. TASCHENBERG 1865, p. 92, ♂ ♀.  
*Cryptus annulipes* TASCHENBERG 1865, p. 100, ♀.

*Habrocyptus alternator*, THOMSON 1873, p. 499.  
*Ischnus porrectorius* var. *alternator*, HELLÉN 1956, p. 131.  
*Ischnus alternator*, TOWNES & TOWNES 1962, p. 134.

*Occurrence in the Kevojoki area:* ♂ : 14. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1931 and CEBALLOS 1931).

*Remarks:* Resembles the species *I. inquisitorius* (Müll.) (*Ichneumon inquisitorius* MÜLLER 1776, p. 151, ♂). *Ichneumon porrectorius* FABRICIUS 1787, p. 260, ♂, but the apical transverse carina of the propodaeum distinct and sharp medially (in *inquisitorius* it is entirely lacking). In the specimen from the Kevojoki area head, abdomen and hind coxae black; hind femora red, apically black; hind tibiae black, basally white; hind tarsi black with the 1st and 4th tergites basally and the 2nd and 3rd tergites entirely white.

*Ischnus punctiger* (Thoms.), new combination

*Habrocyptus punctiger* THOMSON 1896, p. 2364, ♂ ♀.  
*Habrocyptus porrectorius* var. *punctiger*, HELLÉN 1956, p. 131.  
*Ischnus* GRAVENHORST 1829 b, p. 638; type: (*Ichneumon porrectorius* F.) = *inquisitorius* Müll., designated by WESTWOOD 1840.

*Occurrence in the Kevojoki area:* ♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Finnish Lapland (HELLÉN 1956), but as a species new to the Finnish fauna. Northern and Central Europe (SCHMIEDEKNECHT 1931), Czechoslovakia (ORBTEL 1953) and Kamchatka (MEYER 1933 b).

*Remarks:* Differs from the foregoing species principally in the apical transverse carina of the propodaeum, which is medially indistinct. In the specimen of the area studied the face and vertex laterally white; the 1st segment of the hind tarsi black.

*Trachysphyrus obscuripes* (Zett.), new combination

*Cryptus obscuripes* ZETTERSTEDT 1838, p. 369, ♂.  
*Cryptus borealis* THOMSON 1896, p. 2353, ♂ ♀.  
*Trachysphyrus* HALIDAY 1836, p. 314; type: *Trachysphyrus imperialis* Hal., monobasic.

*Occurrence in the Kevojoki area:* ♂ and ♀ : 10. VII. 1961, the N.E. slope of Ruottir I, a moist heath of the barren region; ♂ : 13. VII. 1961, the N.E. slope of Ruottir I, the boundary between the barren and the birch regions; ♂ and ♀ : 13. VII. 1961, a birch region between Ruottir I and Tuolba-

Njauguoaiivi; ♀: 13. VII. 1961, Tuolba-Njauguoaiivi, a moist heath of the barren region; ♀: 19. VII. 1961, Puksalskaidi, birch region.

*Distribution:* Rather common in Finnish Lapland. Northern parts of Europe and Schwarzwald (SCHMIEDEKNECHT 1930), the Bavarian Alps (HEINRICH 1952), Canary Islands (HELLÉN 1949).

*Hidryta frater* (Cress.)

*Cryptus frater* CRESSON 1864, p. 303, ♀.

*Cryptus sordidus* TSCHEK 1870 b, p. 409, ♀.

*Brachycryptus erythrocerus* THOMSON 1873, p. 488, ♀. SCHMIEDEKNECHT 1904, p. 478, ♂ ♀.

*Hidryta frater*, TOWNES & TOWNES 1951, p. 266.

*Occurrence in the Kevojoki area:* ♂: 18. VII. 1959, the meadow forest at the foot of Linkkapahta.

*Distribution:* Till now only found in South and Central Finland (HELLÉN 1956). Northern and Central Europe (SCHMIEDEKNECHT 1931), North America (TOWNES & TOWNES 1962). Hence a holarctic species.

*Remarks:* In the specimen from the Kevojoki area the hind femora are black and the postpetiolus without punctation.

*Biology:* In North America among the coarse grasses and sedges of marshy meadows (TOWNES & TOWNES 1962).

*Trychosis legator* (Thnbg)

*Ichneumon legator* THUNBERG 1822, p. 268, ♀.

*Cryptus abnormis* TSCHEK 1870 a, p. 146, ♂ ♀.

*Cryptus plcebus* TSCHEK 1870 a, p. 147, ♂ ♀.

*Goniocryptus clypearis* THOMSON 1873, p. 494, ♂ ♀.

*Goniocryptus legator*, ROMAN 1912, p. 262.

*Trychosis legator*, HELLÉN 1956, p. 130.

*Occurrence in the Kevojoki area:* ♂: 12. VII. 1959, the meadow forest at the mouth of the Fiellugeädgejoki.

*Distribution:* Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1904).

*Cubocephalus anatorius* (Grav.)

*Cryptus anatorius* GRAVENHORST 1829 e, p. 361, ♀.

*Cratocryptus anatorius*, THOMSON 1873, p. 524, ♂ ♀.

*Cubocephalus anatorius*, TOWNES & GUPTA 1962, p. 87.

*Occurrence in the Kevojoki area:* ♂: 28. VI. 1956, the meadow of the Madjoki hut; ♂: 17. VII. 1956, the meadow forest of the Madjoki hut; ♂: 19. VII. 1959, a moist heath of the birch region at the mouth of the Siedgajoki; ♂: 13. VII. 1961, the N.E. slope of Ruottir I, the boundary between the barren and birch regions.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1905), the Bavarian Alps (HEINRICH 1949 b), the British Isles (MORLEY 1907), Spain (CEBALLOS 1956), Yenisei (ROMAN 1913 a), Kamchatka, Saghalien and the Kuriles (UCHIDA 1936).

*Remarks:* The specimens from the area studied differ from the more southern specimens in having partly black tegulae.

*Biology:* A parasite of wood-feeding Coleoptera (ROMAN 1915).

*Cubocephalus sternocerus* (Thoms.)

*Cratocryptus sternocerus* THOMSON 1873, p. 523, ♂ ♀.

*Chacrytymma bipunctata* STROBL 1901, p. 194, ♂.

*Cubocephalus sternocerus*, TOWNES & GUPTA 1962, p. 42.

*Occurrence in the Kevojoki area:* Common in heaths of the birch region, but it is also found in meadow forests and in the barren region.

*Distribution:* In Finland V: Uusikaupunki and EH: Hattula (HELLÉN 1937 a). Northern and Central Europe (SCHMIEDEKNECHT 1905), the Bavarian Alps (HEINRICH 1949 b), Czechoslovakia (ORBTEL 1953), Latvia (OZOLS 1934), U.S.S.R. (MEYER 1933 b).

*Remarks:* As a rule the face of the male is entirely black, but in two specimens (13. VII. 1959, the meadow forest by the Kevo Wall, and 9. VII. 1961, a dry birch heath on the peninsula between the lakes of Luomushjärvet) the lateral margins are yellow as in the specimens of *C. anatorius*. However, *sternocerus* differs distinctly from the latter in the duller frons, with its rougher sculpture. The tegulae are black, and many males from the area studied have abdominal tergites with a little red.

*Cubocephalus opaculus* (Thoms.), new combination

*Microcryptus opaculus* THOMSON 1883 a, p. 851, ♀ & 1896, p. 2383, ♂.

*Cubocephalus* RATZEBURG 1848, p. 12; type: (*Cryptus fortipes* Grav.) = *distinctor* Thnbg, monobasic.

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a meadow forest at the mouth of the Kevojoki; ♀: 12. VII. 1959, a moist heath of the birch region at the mouth of the Fiellugeädgejoki.

*Distribution:* Rare throughout Finland. Also in Sweden, Germany (SCHMIEDEKNECHT 1905), Latvia (OZOLS 1934) and Czechoslovakia (ORBTEL 1953).

*Cubocephalus improbus* (Grav.), new combination

*Phygadeuon improbus* GRAVENHORST 1829 e, p. 670, ♀ (excl. ♂ and var. 2).

*Microcryptus improbus*, THOMSON 1883 a, p. 851, ♂ ♀.

*Cubocephalus* RATZEBURG 1848, p. 12; type: (*Cryptus fortipes* Grav.) = *distinctor* Thnbg, monobasic.

*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1941).

*Distribution:* Throughout Finland. Also in Germany (HEDWIG 1950 b), the British Isles (MORLEY 1907) and Spain (CEBALLOS 1956).

*Parmortha pleuralis pleuralis* (Thoms.)

*Cratocryptus pleuralis* THOMSON 1873, p. 526, ♀.

*Parmortha pleuralis*, TOWNES & GUPTA 1962, p. 18, ♂ ♀.

*Parmortha* (*Cratocryptus*) *erythropus* (Grav.) (see HELLÉN 1940) is *Parmortha parvula* (Grav.) (*Cratocryptus parvulus*) (see TOWNES & GUPTA 1962).

*Occurrence in the Kevojoki area:* ♂: 30. VI. 1956, a meadow of the Madjoki hut; ♀: 18. VII. 1956, the terrain about 1 kilometre from the peninsula between the lakes Ylä- and Alanjaggaljärvi towards the mouth of the Kevojoki; ♂: 19. VII. 1956, the mouth of the Roajaatshe; ♂: 13. VII. 1959, the meadow forest by the Kevo Wall; ♂: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Northern Norway (ROMAN 1936 a), Sweden, Denmark (SCHMIEDEKNECHT 1905), Germany (TOWNES & GUPTA 1962); a holarctic species, of which other subspecies have been found in North America and Japan (TOWNES & GUPTA).

*Remarks:* The male found on 13. VII. 1959 has a face with a white centre and an areola which is not so broad as in the other specimens; hence, the identification of this specimen is uncertain.

*Aptesis nigrocinctus* (Grav.)

*Ichneumon nigrocinctus* GRAVENHORST 1815, p. 35, ♀.

*Ichneumon sudeticus* GRAVENHORST 1815, p. 37, ♀.

*Cryptus hostilis* GRAVENHORST 1829 e, p. 512, ♂.

*Phygadeuon flaveolatus* GRAVENHORST 1829 e, p. 655, ♂.

*Phygadeuon jueundus* GRAVENHORST 1829 e, p. 658, ♂.

*Pezomachus nigrocinctus* GRAVENHORST 1829 e, p. 880, ♀.

*Aptesis nigrocincta*, FÜRSTER 1850, p. 85, ♀.

*Microcryptus nigrocinctus*, THOMSON 1883 a, p. 857, ♂ ♀.

*Aptesis nigrocinctus*, TOWNES & TOWNES 1951, p. 255.

*Occurrence in the Kevojoki area:* ♂: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1905).

*Remarks:* The specimen from the area studied differs from the more southern males in its entirely black antennae and tegulae.

*Biology:* Bred from *Hibernia defoliaria* (Lep., Geometridae) and has also been found in an anthill (MORLEY 1907); also bred from an *Arge* species (Hym., Cynipidae) in Latvia (OZOLS 1934).

*Aptesis septentrionalis* (Thoms.)

*Microcryptus septentrionalis* THOMSON 1883 a, p. 863, ♀. ROMAN 1909, p. 251, ♂ ♀.

*Aptesis septentrionalis*, HELLÉN 1956, p. 135.

*Occurrence in the Kevojoki area:* Common in the birch and coniferous regions.

*Distribution:* Finnish Lapland. Swedish and Norwegian Lapland (ROMAN 1909 and 1942), Yenisei (ROMAN 1913 a).

*Remarks:* The males are very difficult to identify, because their colouring and sculpture vary. Recognizable by the dull frons and abdomen, with red femora and tibiae, and with white frontal marks, which are sometimes lacking (♂: 11. VII. 1959, a coniferous heath at the mouth of the Roajaatshe).

*Biology:* This species seems not to require a fixed biotope.

*Aptesis alpineti* (Rn)

*Microcryptus alpineti* ROMAN 1913 b, p. 119, ♂ ♀; lectotype ♀: Torne Lappmark in Swedish Lapland, labelled "T.Lp., 1908", "26/7, ARn", hereby designated (coll. Riksmuseum, Stockholm); lectotype ♂: Torne Lappmark, labelled "T.Lp., 1908", "24/7, ARn", hereby designated (coll. Riksmuseum, Stockholm).

*Aptesis alpineti*, HELLÉN 1956, p. 134.

*Occurrence in the Kevojoki area:* ♂: 17. VII. 1959, the meadow forest of the Madjoki hut.

*Distribution:* A species new to the Finnish fauna. Swedish (ROMAN 1913 b) and Russian Lapland (HELLÉN 1956).

*Remarks:* Identifiable by its small size: the specimen of the Kevojoki area 4 mm (syntypes 4.5—5 mm). Length: greatest breadth of petiolar segment =

1.8 : 1; that of 2nd tergite = 1 : 1; length of 1st flagellar segment : that of 2nd segment = 1.1 : 1; 1st and 2nd tergites polished, very finely sculptured. Abdomen dorsally black, 1st, 4th and 5th tergites apically with reddish yellow, 2nd and 3rd tergites apically with a reddish yellow triangle; legs reddish yellow, coxae and hind femora black, hind tibiae and tarsi dark. The specimen from the area studied has antennae, with 24 flagellar segments.

**Biology:** According to ROMAN (1913 b), this species usually flies in the barren region.

#### *Aptesis micropterus* (Grav.)

*Ichneumon micropterus* GRAVENHORST 1815, p. 26, ♀.  
*Ichneumon brachypterus* GRAVENHORST 1815, p. 29, ♀.

*Phygadeuon jejunator* var. 1 GRAVENHORST 1829 c, p. 717. TASCHENBERG 1865, p. 46, ♂.  
*Pezomachus micropterus* GRAVENHORST 1829 c, p. 879, ♀.

*Aptesis microptera*, FÖRSTER 1850, p. 89.

*Microcryptus micropterus*, THOMSON 1883 a, p. 865, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 2. VII. 1956, the mouth of the Kevojoki.

**Distribution:** U: Tärminne (HELLÉN 1939) and EP (v. ESSEN 1910) in Finland. Northern and Central Europe (SCHMIEDEKNECHT 1905), Iceland (PETERSEN 1956), Latvia (OZOLS 1941), the British Isles (MORLEY 1907), U.S.S.R. (MEYER 1933 b: Leningrad).

#### *Rhembobius caudatus* (Rn), new combination

*Acanthocryptus caudatus* ROMAN 1909, p. 244, ♀; lectoholotype ♀ : 3. VIII. 1907, Sarek in Swedish Lapland, Poppius leg., hereby designated (coll. Riksmuseum, Stockholm).

*Rhembobius* FÖRSTER 1868 b, p. 184; type: (*Phygadeuon quadrispinosus* Grav.) = *quadrispinosus* Grav., designated by ASHMEAD 1900.

**Occurrence in the Kevojoki area:** ♂ (allotype): 14. VII. 1956, the mouth of the Roajaatshe (coll. Jussila).

**Distribution:** A species new to the Finnish fauna. Swedish (ROMAN 1909) and Norwegian Lapland (ROMAN 1936 a).

**Male:** In its structure and colouring it resembles the female. Head as broad as thorax; face and frons sculptured, head behind compound eyes and vertex polished; antennal pits non-existent; length of gena : basal breadth of mandible = 1.2 : 1; antenna rather thick, length : thickness of 4th flagellar segment = 1.5 : 1, flagellum with 19 segments; mesoscutum polished, notaulices

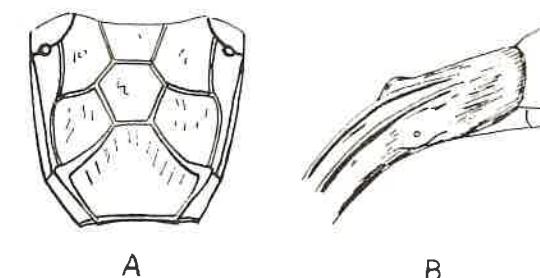


Fig. 36. *Rhembobius caudatus* (Rn) ♂. A. propodaeum, in dorsal view, B. petiolar segment, in sinistro-dorsal view. — Orig.

rather short, reaching about  $\frac{1}{4}$  of the length of mesoscutum; mesopleura sculptured, speculum shining; the furrow in front of scutellum with longitudinal carinae; propodaeum entirely areolated (fig. 36 A), area superomedia sixangled, costula emitted a little basally from the middle, latero-caudal angle of area dentipara with rather broad spine; hind wing with vein Cu<sub>1</sub> antefurcal and broken caudally from the middle; legs rather slender; abdomen shining; dorsal carinae of petiolar segment strong and extending beyond spiracles (fig. 36 B); length : greatest breadth of 2nd tergite = 1 : 1.3; that of 3rd tergite = 1 : 1.5. Length 4.5 mm (♀ syntypes 3.2—4.3 mm, lectoholotype 4.3 mm). Head, antennae and thorax black; coxae and basal parts of trochanters black; hind femora blackish, front and middle red, basally dark; tibiae and tarsi red, latter a little dark (hind tarsi entirely); abdomen dorsally black, 2nd and 3rd tergites for the greater part red, only laterally black and medially with a blackish transverse streak.

#### *Demophelcs caliginosus* (Grav.)

*Phygadeuon caliginosus* GRAVENHORST 1829 c, p. 645, ♂ ♀.

*Phygadeuon corruptor* TASCHENBERG 1865, p. 49, ♀.

*Mccocryptus caliginosus*, THOMSON 1884 a, p. 1007.

*Demophelcs caliginosus*, SCHMIEDEKNECHT 1905, p. 604.

**Occurrence in the Kevojoki area:** ♂ : 6. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1905), the British Isles (MORLEY 1907).

**Biology:** In Central Europe bred from a *Synanthedon* species (Lep., Aegeriidae) (HEDWIG 1950 a). *Synanthedon* species have been found in the Kevojoki area (JUSSILA 1963 a).

*Endasys erythrogaster* (Grav.)

*Phygadeuon erythrogaster* GRAVENHORST 1829 c, p. 741, ♀.  
*Stylocryptus erythrogaster*, THOMSON 1883 a, p. 872, ♂ ♀.  
*Glyphicnemis erythrogaster*, MORLEY 1907, p. 70.  
*Endasys erythrogaster*, HELLÉN 1956, p. 136.

*Occurrence in the Kevojoki area:* ♂: 11. VII. 1956, the terrain about 3 kilometres from Linkapahta to the southwest; 2 ♂ ♂: 12. VII. 1961, the S. slope of Ruottir I, a dry heath of the barren region.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1905), Latvia (OZOLS 1941), the British Isles (MORLEY 1907), the Bavarian Alps (HEINRICH 1949 a), Spain (CEBALLOS 1956) and Roumania (CONSTANTINEANU 1961 a).

*Remarks:* The specimens from the Kevojoki area differ from South Finnish specimens in the following respects: all femora, apex and ventral fold of abdomen black.

*Biology:* In Central Europe bred from *Pachynematus scutellatus* (Hym., Tenthredinidae) (ORBTEL & KŘISTEK 1958).

*Endasys parviventris* (Grav.)

*Phygadeuon parviventris* GRAVENHORST 1829 c, p. 746, ♂ ♀.  
*Stylocryptus parviventris*, THOMSON 1883 a, p. 870.  
*Glyphicnemis parviventris*, MORLEY 1907, p. 68.  
*Endasys parviventris*, HELLEN 1956, p. 137.

*Occurrence in the Kevojoki area:* ♂: 4. VII. 1959, a meadow at the mouth of the Kevojoki; ♂: 22. VII. 1959, the meadow of Kevusuu.

*Distribution:* Throughout Finland. The greater part of Europe (MORLEY 1907, OZOLS 1934 and CEBALLOS 1956).

*Remarks:* The male differs from the male of the foregoing species in its longer antennae (length : thickness of postannellus = 1.5 : 1; in *erythrogaster* 1.2—1.3 : 1) and in its punctate 2nd tergite (in *erythrogaster* entirely smooth). In the specimens from the area studied coxae, femora and ventral surface of antennae red.

*Biology:* Prefers more luxuriant biotopes than the foregoing species.

*Medophron afflictor* (Grav.)

*Phygadeuon afflictor* GRAVENHORST 1829 c, p. 642, ♀. THOMSON 1884 a, p. 942, ♂ ♀.  
*Medophron niger* BRISCHKE 1881, p. 344, ♀.  
*Stylocryptus montanus* LANGE 1911, p. 542, ♂.  
*Medophron afflictor*, HELLÉN 1940, p. 7.

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1905), Latvia (OZOLS 1959 a).

*Remarks:* In the specimen from Kevo the area superomedia is not so broad as SCHMIEDEKNECHT (1905) stated.

*Phygadeuon rugipectus* Thoms.

*Phygadeuon rugipectus* THOMSON 1884 b, p. 1040, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* EH: Hattula in Finland (v. ESSEN 1910). Also in Sweden (THOMSON 1884 b).

*Remarks:* Identifiable by the entirely black antennae, clypeus without teeth, and strong lateral spines in the propodaeum.

*Phygadeuon laeviventris* Thoms.

*Phygadeuon laeviventris* THOMSON 1884 a, p. 985, ♂ ♀; lectotype ♀: Sweden, labelled "LL", designated by J.-F. AUBERT (coll. University, Lund).

*Occurrence in the Kevojoki area:* Common in the birch region.

*Distribution:* Throughout Finland. Also in Sweden (THOMSON 1884 a) and Spain (CEBALLOS 1956).

*Remarks:* Because of its variability a very difficult species. Dorsally the abdomen may be black or medially very light in colour; the colour of the legs varies, too. Length : breadth of area superomedia = 1 : 1—2; the 2nd tergite smooth; vein 3<sup>rm</sup> of the hind wings may be lacking. The average length of the specimens from the Kevojoki area is 3.5 mm (the lectotype ♀ 4 mm).

*Phygadeuon brachyurus* Thoms.

*Phygadeuon brachyurus* THOMSON 1884 a, p. 955, ♂ ♀; lectoholotype ♀: Sweden, labelled "Öst.", hereby designated (coll. University, Lund); lectoallotype ♂: Sweden, labelled "Öst.", hereby designated (coll. University, Lund).

*Occurrence in the Kevojoki area:* Males common in all regions.

*Distribution:* Throughout Finland. Also in Sweden and England (SCHMIEDEKNECHT 1932).

*Remarks:* A species as difficult as the foregoing. Differs from it in its sculptured 2nd tergite. Also in *P. brachyurus* the front wings sometimes have no vein 3rm. The average length of the specimens from the Kevojoki area is 4 mm (the type specimens are 3 mm long).

*Phygadeuon oppositus* Thoms.

*Phygadeuon oppositus* THOMSON 1884 a, p. 960, ♀; lectotype ♀: Lund, Sweden, designated by J.-F. AUBERT (coll. University, Lund). SCHMIEDEKNECHT 1905, p. 714, ♂ ♀.

*Phygadeuon fumator* var. *subalpinus* ROMAN 1909, p. 240, ♂ ♀.

*Occurrence in the Kevojoki area:* Males common in the birch and coniferous regions.

*Distribution:* Rare throughout Finland. Also in Sweden (THOMSON 1884 a and ROMAN 1909), Germany (SCHMIEDEKNECHT 1905) and France (AUBERT 1957).

*Phygadeuon detestator detestator* (Thnbg.)

*Ichneumon detestator* THUNBERG 1822, p. 269, ♂ ♀.

*Phygadeuon fumator* GRAVENHORST 1829 c, p. 687, ♂ ♀.

*Phygadeuon detestator*, ROMAN 1912, p. 250 & 292.

*Occurrence in the Kevojoki area:* Common in the birch region.

*Distribution:* Throughout Finland. Throughout Europe (ROMAN 1909 and MEYER 1933 b).

*Biology:* In Scotland bred from the mining *Chirosia crassiseta* (Dipt., Muscidae) (FULMEK 1962).

*Phygadeuon detestator nivalis* Hlmgr., new status

*Phygadeuon nivalis* HOLMGREN 1883, p. 149, ♂ ♀.

*Phygadeuon fumator* var. *borealis* ROMAN 1909, p. 239, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ ♀: 21. VII. 1959, a meadow of Kevuu; 3 ♂ ♂: 12. VII. 1961, Ruottir I, a heath of the barren region; 2 ♂ ♂: 14.—16. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region; ♂: 16. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.

*Distribution:* A subspecies new to the Finnish fauna. Swedish Lapland (ROMAN 1909). Specimens like *Ph. d. nivalis* have been found in the Rou-

manian mountains (CONSTANTINEANU 1961 a) and Yenisei (ROMAN 1913 a).

*Remarks:* This subspecies differs from *Ph. d. detestator* in the following respects: abdomen entirely black or 3rd tergite with a little brownish red; antennae, coxae and femora black, front femora apically red. In the female from the area studied length of ovipositor = length of 1st tergite. This subspecies flies chiefly in the barren region.

*Phygadeuon cylindraceus* Ruthe

*Phygadeuon cylindraceus* RUTHE 1859, p. 367, ♀. THOMSON 1884 a, p. 949, ♂ ♀.

*Occurrence in the Kevojoki area:* 6 ♂ ♂ and 2 ♀ ♀: 4. and 22. VII. 1959, a meadow at the mouth of the Kevojoki; ♂: 17. VII. 1959, the meadow of the Madjoki hut.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1932), Iceland (PETERSEN 1956), Faroe Islands (ROMAN 1928), Greenland (ROMAN 1916 b and 1933) and Kamchatka (PETERSEN 1956).

*Biology:* In Iceland bred from *Fucellia fucorum* (Dipt., Muscidae) (PETERSEN 1956). *P. cylindraceus* is a meadow species.

*Phygadeuon canaliculatus* Thoms.

*Phygadeuon canaliculatus* THOMSON 1889 c, p. 1409, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 11. VII. 1956, the terrain about 3 kilometres to the southwest of Linkkapahta.

*Distribution:* U: Huopalahti in Finland (HELLÉN 1956). Northern and Central Europe (HELLÉN 1956), Latvia (OZOLS 1958), Russia (MEYER 1933 b) and Spain (CEBALLOS 1956).

*Remarks:* The male is recognizable by its longitudinally striate postpetiolus with a strong longitudinal furrow. The specimen from the area studied differs from SCHMIEDEKNECHT's (1932) description in its entirely red coxae and femora. The specimen from Kevo is 5 mm long.

*Phygadeuon lapponicus* Thoms.

*Phygadeuon lapponicus* THOMSON 1884 a, p. 952, ♂ ♀; lectotype ♀: Lapland, designated by TOWNES & TOWNES (coll. University, Lund).

*Occurrence in the Kevojoki area:* 7 ♂ ♂: 4. and 22. VII. 1959, a meadow at the mouth of the Kevojoki.

*Distribution:* Common in Finland; I have found *lapponicus* specimens from EH: Lempäälä, EP: Koivulahti and Vaasa. Swedish and Norwegian Lapland (ROMAN 1909 and 1936 a), Kamehatka (MEYER 1933 b).

*Phygadeuon exiguus* Grav.

*Phygadeuon exiguus* GRAVENHORST 1829 e, p. 666. TASCHENBERG 1865, p. 28, ♀. THOMSON 1884 a, p. 958, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ ♀ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1932), Latvia (OZOLS 1958), England (MORLEY 1907), France (AUBERT 1957), Spain (CEBALLOS 1956) and Roumania (CONSTANTINEANU 1961 a).

*Remarks:* The female from the area studied is 4 and the male only 2.5 mm long.

*Phygadeuon rugulosus* Grav.

*Phygadeuon rugulosus* GRAVENHORST 1829 e, p. 686, ♂. THOMSON 1884 a, p. 951, ♂ ♀.  
*Phygadeuon semipolitus* TASCHENBERG 1865, p. 28, ♀.

*Occurrence in the Kevojoki area:* ♂ : 12. VII. 1956, the terrain about 1 kilometre from the peninsula between the lakes Ylä- and Alanjaggaljärvi towards the mouth of the Kevojoki; (♂ : 17. VII. 1961, a patch of willows on the shore of the Luomushjärvet Lakes).

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1932), Latvia (OZOLS 1941), European U.S.S.R. (MEYER 1933 b), the British Isles (MORLEY 1907) and Spain (CEBALLOS 1956).

*Remarks:* Width of the red mark on the dorsal surface of the abdomen varies; hind femora black → red; antennal scape black → ventrally red.

*Phygadeuon infernalis* Ruthe

*Phygadeuon infernalis* RUTHE 1859, p. 366, ♀.  
*Phygadeuon liogaster* THOMSON 1884 a, p. 949, ♀. ROMAN 1909, p. 242, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂ : 19. VII. 1959, Kevo Cape, a coniferous heath; ♀ : 15. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.

*Distribution:* Finnish Lapland. Swedish (ROMAN 1909) and Norwegian Lapland (ROMAN 1936 a) and the Kola Peninsula (HELLÉN 1937 a).

*Remarks:* In the specimen from the area studied the front wings have no vein 3rm.

*Phygadeuon arcticus* Thoms.

*Phygadeuon arcticus* THOMSON 1884 a, p. 998, ♀.  
*Phygadeuon apertus* ROMAN 1909, p. 236, ♂ ♀.

*Occurrence in the Kevojoki area:* 2 ♂ ♂ : 30. VI. 1956, the meadow forest of the Madjoki hut; 4 ♀ ♀ : 2. VII. 1956, the mouth of the Kevojoki; 3 ♂ ♂ and ♀ : 14.—15. VII. 1956, the mouth of the Roajaatshe; 12 ♂ ♂ and 7 ♀ ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall; ♂ : 13. VII. 1959, a patch of willows in the Kevojoki valley by Ruottir III; ♂ : 17. VII. 1959, the meadow forest of the Madjoki hut.

*Distribution:* North Finland. Also in Northern Sweden (ROMAN 1916 a) and Yenisei (ROMAN 1913 a).

*Biology:* According to the finds, *arcticus* seems to thrive in luxuriant biotopes of the birch region.

*Bathythrix claviger* (Taschb.)

*Cryptus claviger* TASCHENBERG 1865, p. 76, ♂.  
*Mesostenus scriccus* PROVANCHER 1875, p. 264, ♂.  
*Cryptus sericeifrons* PROVANCHER 1879, p. 132, ♀.  
*Leptocryptus claviger*, THOMSON 1884 a, p. 964, ♂ ♀.  
*Agerona hirticeps* CAMERON 1909, p. 722.  
*Bathythrix tibialis* CUSHMAN 1917, p. 458, ♂ ♀.  
*Panargyrops pacificus* CUSHMAN 1920, p. 262, ♀.  
*Thysiotorus (Panargyrops) tegularis* VIERECK 1925, p. 78, ♀.  
*Thysiotorus (Panargyrops) conjunctus* VIERECK 1925, p. 78, ♂ ♀.  
*Bathythrix claviger*, TOWNES 1944, p. 170.

*Occurrence in the Kevojoki area:* ♂ : 10. VII. 1956, the terrain about 3 kilometres southwest of Linkkapahta; ♂ : 14. VII. 1956, the mouth of the Roajaatshe; ♂ : 17. VII. 1959, the meadow forest of the Madjoki hut; ♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1905), the Bavarian Alps (HEINRICH 1949 b), Latvia (OZOLS 1934), Russia (MEYER 1933 b), Yenisei (ROMAN 1913), Kamehatka, the Kuriles, Korea, Japan (UCHIDA 1936), India (TOWNES, TOWNES & GUPTA 1961) and North America (TOWNES & TOWNES 1951).

*Bathythrix pellucidator* (Grav.), new combination*Cryptus pellucidator* GRAVENHORST 1829 c, p. 583, ♂.*Leptocryptus pellucidator*, THOMSON 1884 a, p. 965, ♀ & 1896, p. 2388, ♂.*Panargyrops pellucidator*, MORLEY 1907, p. 195.*Bathythrix* FÖRSTER 1868 b, p. 176; type: *Bathythrix meteori* How., designated by VIERECK 1914.

*Occurrence in the Kevojoki area:* ♂: 2. VII. 1956, the mouth of the Kevojoki area; 3 ♂ ♂: 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* Throughout Finland. Also reported from Sweden and Germany (SCHMIEDEKNECHT 1905).

*Bathythrix ruficaudatus* (Bridgmn.), new combination*Hemiteles ruficaudatus* BRIDGMAN 1883, p. 149, ♀.*Leptocryptus ruficaudatus*, THOMSON 1884 a, p. 966, ♂ ♀.*Bathythrix* FÖRSTER 1868 b, p. 176; type: *Bathythrix meteori* How., designated by VIERECK 1914.

*Occurrence in the Kevojoki area:* ♂: 6. VII. 1959, a meadow forest at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1904), Spain (CEBALLOS 1956).

*Remarks:* Identifiable by the veins of its front wing: *Rs+M* and *1m—cu* (see RICHARDS 1956) are not parallel. In the specimen from the area studied the abdomen and legs are blackish brown; length only 4 mm.

*Mesoleptus scrutator* (Hal.), new combination*Atractodes scrutator* HALIDAY 1838, p. 118, ♂ ♀.*Atractodes flavipes* THOMSON 1884 a, p. 1021, ♂ ♀.*Exolytus flavipes*, SCHMIEDEKNECHT 1906, p. 986.*Exolytus scrutator*, HELLÉN 1940, p. 8.*Mesoleptus* GRAVENHORST 1829 c, p. 3; type: *Ichneumon laevigatus* Grav., designated by CURTIS 1837.

*Occurrence in the Kevojoki area:* 6 ♂ ♂: 17. VII. 1959, the meadow forest of the Madjoki hut; ♂: 18. VII. 1959, the meadow forest at the foot of Linkkapahta; ♂: 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki; 5 ♂ ♂: 22. VII. 1959 and 19. VII. 1961, a meadow at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Also in Sweden (SCHMIEDEKNECHT 1906), England (MORLEY 1907) and France (AUBERT 1957).

*Remarks:* Identifiable by the obsolete vein *Sc+R* of its hind wing.

*Biology:* A species of luxuriant biotopes.

*Atractodes canaliculatus* (Hellén), new combination*Asyncrita canaliculata* HELLÉN 1944 b, p. 12, ♂ ♀.*Atractodes* GRAVENHORST 1829 d, p. 789; type: *Atractodes bicolor* Grav., designated by WESTWOOD 1840.

*Occurrence in the Kevojoki area:* 2 ♀ ♀: 2. VII. 1956, the mouth of the Kevojoki; ♀: 20. VII. 1956, Poddusroadja, a moist heath of the barren region; ♂: 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki; ♂: 12. VII. 1961, the N.E. slope of Ruottir II, a moist heath of the barren region.

*Distribution:* Throughout Finland, commonest in the north. This species has been found only in Finland.

*Atractodes foveolatus* Grav.*Atractodes foveolatus* GRAVENHORST 1829 d, p. 794.*Atractodes cutellator* HALIDAY 1838, p. 120.*Asyncrita foveolata*, FÖRSTER 1876, p. 30.*Atractodes foveolator* THOMSON 1884 a, p. 1025, ♂ ♀.

*Occurrence in the Kevojoki area:* ♀: 17. VII. 1959, the meadow forest of the Madjoki hut; ♀: 19. VII. 1959, a meadow about 1 kilometre from the Madjoki hut towards the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Northern Europe (SCHMIEDEKNECHT 1906) and Yenisei (ROMAN 1913 a).

*Remarks:* In the first-named specimen the hind femora are yellowish red, in the latter black.

*Atractodes spiraculator* Rn*Atractodes spiraculator* ROMAN 1918, p. 28, ♂ ♀.*Occurrence in Inari Lapland:* Utsjoki, W. Hellén leg. (HELLÉN 1942).

*Distribution:* PsL: Pummanki in European U.S.S.R. (HELLÉN 1942) and Swedish Lapland (ROMAN 1918).

*Atractodes alpinus* Först.*Atractodes alpinus* FÖRSTER 1876, p. 122, ♀. ROMAN 1918, p. 21, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 18. VII. 1956, the mouth of the Fiellugeädgejoki; ♂: 13. VII. 1959, the meadow forest by the Kevo Wall; ♀: 14. VII. 1959, the N.E. slope of Ruottir II, a moist heath of the barren region; ♂: 14. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region; ♂ ♀: 19. VII. 1961, Puksalskaidi, birch region.

*Distribution:* V: Turku, EP: Mustasaari and Vaasa (R. Jussila leg.), KemL: Muonio and EnL: Kilpisjärvi (HELLÉN 1937 a). Also Sweden, the Alps (ROMAN 1918) and Norway (ROMAN 1942).

*Remarks:* Identifiable by its densely and very roughly sculptured mesopleurae, rather shining mesoscutum without punctures, and long notauleces. Abdomen black; in one male (18. VII. 1956) the 3rd tergite with red.

#### *Atractodes oreophilus* Först.

*Atractodes oreophilus* FÖRSTER 1876, p. 124, ♂. ROMAN 1918, p. 27, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 19. VII. 1959, a meadow about 1 kilometre from the Madjoki hut towards the mouth of the Kevojoki; ♂: 21. VII. 1959, the meadow of Kevusuu.

*Distribution:* In Finland A: Eckerö (B. Lingonblad leg.), EH: Sääksmäki (HELLÉN 1937 a) and EP: Mustasaari (R. Jussila leg.). Also in Norway (ROMAN 1942), Sweden and Switzerland (ROMAN 1918).

*Remarks:* Differs from the foregoing species in the densely but evenly punctate mesopleura and mesoscutum, and the very short notauleces.

#### *Atractodes angustipennis* Först.

*Atractodes angustipennis* FÖRSTER 1876, p. 132, ♀.

*Atractodes flavicoris* FÖRSTER 1876, p. 136.

*Atractodes flavicoxa*, THOMSON 1884 a, p. 1024, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Also in Sweden (ROMAN 1918) and England (KERRICH 1942).

*Remarks:* The specimen from the area studied otherwise corresponds to ROMAN's (1918) description, but the area superomedia is not broader in the middle.

*Biology:* In England perhaps bred from *Delia cilicrura* (Dipt., Anthomyidae) (KERRICH 1942).

#### *Atractodes croceicornis* Hal.

*Atractodes croceicornis* HALIDAY 1838, p. 119, ♀.

*Atractodes fatalis* FÖRSTER 1876, p. 133, ♀.

*Atractodes ruficornis* BRISCHKE 1880, p. 178.

*Atractodes compressus* THOMSON 1884 a, p. 1023, ♂ ♀.

*Occurrence in the Kevojoki area:* Common in the birch region, rarer in the barren region.

*Distribution:* Throughout Finland. Also in Sweden (THOMSON 1884 a), Northern Norway (ROMAN 1936 a), Ireland (MORLEY 1907) and the Kuriles (UCHIDA 1936).

*Remarks:* Mesoscutum and mesopleurae of this species are coarsely punctate.

#### *Atractodes exilis* Curt.

*Atractodes exilis* CURTIS 1840, p. 538. THOMSON 1884 a, p. 1813, ♂ ♀.

*Atractodes acuminator* ROMAN 1909, p. 224, ♂ ♀.

*Atractodes exilis* var. *acuminator*, HELLÉN 1940, p. 8.

*Occurrence in the Kevojoki area:* Very common in all regions.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1906), the British Isles (MORLEY 1907).

*Remarks:* Differs from the foregoing species in its mesopleurae and mesoscutum, which have no punctures, in its smaller size (the average size of *exilis* 6 and of *croceicornis* 7 mm), and in its slenderer body structure (in *exilis* ♂ the 3rd tergite is longer than its breadth, in *croceicornis* ♂ length = breadth).

#### *Atractodes parallelus* Thoms.

*Atractodes parallelus* THOMSON 1884 a, p. 1024, ♂ ♀.

*Occurrence in the Kevojoki area:* The most numerous species of Ichneumonidae. Common in all regions and in all biotopes. Males much more frequent than females.

*Distribution:* Throughout Finland. Sweden (ROMAN 1918) and Norway (ROMAN 1942).

#### *Atractodes breviscapus* Thoms.

*Atractodes breviscapus* THOMSON 1884 a, p. 1023, ♂ ♀.

*Occurrence in the Kevojoki area:* 6 ♂♂ : 4. VII. 1959, a meadow at the mouth of the Kevojoki; ♂ : 12. VII. 1959, the meadow forest at the mouth of the Fiellugeädgejoki; 2 ♂♂ : 13. VII. 1959, the N.E. slope of Ruottir III, a heath of the barren region; ♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* Throughout Finland. Also reported from Sweden (SCHMIEDEKNECHT 1906).

#### *Atractodes gilvipes* Hlmgr.

*Atractodes gilvipes* HOLMGREN 1860 a, p. 112. THOMSON 1884 a, p. 1022, ♀. ROMAN 1918, p. 25, ♂♀.

*Occurrence in the Kevojoki area:* ♂ : 11. VII. 1959, a patch of willows at the mouth of the Roajaatshe; ♀ : 13. VII. 1959, the meadow forest by the Kevo Wall; ♀ : 17. VII. 1959, the meadow of the Madjoki hut; ♂ : 21. VII. 1959, the meadow forest at the mouth of the Tsharsjoki.

*Distribution:* In Finland A: Ekerö, U: Espoo (HELLÉN 1937 a) and EP: Vaasa (R. Jussila leg.). Northern Europe (SCHMIEDEKNECHT 1906) and the British Isles (MORLEY 1907).

*Biology:* In England bred from *Scopula marginipunctata* (Lep., Geometridae) (MORLEY 1907).

#### *Atractodes gravidus* Grav.

*Atractodes gravidus* GRAVENHORST 1829 d, p. 793, ♂. THOMSON 1884 a, p. 1023, ♂♀.

*Occurrence in the Kevojoki area:* ♀ : 13. VII. 1961, the N.E. slope of Ruottir I, the boundary between the barren and birch regions.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1906), Latvia (OZOLS 1934), the British Isles (MORLEY 1907) and Spain (CEBALLOS 1956).

#### *Stilpnus tenebricosus* (Grav.)

*Hemiteles tenebricosus* GRAVENHORST 1829 c, p. 785, ♂.

*Ichnecumon nitidulator* ZETTERSTEDT 1838, ♀. ROMAN 1918, p. 30.

*Atractodes vestalis* CURTIS 1840, p. 538. HOLMGREN 1860 a, p. 112, ♂♀.

*Polyrhembia tenebricosa*, FÖRSTER 1876, p. 47, ♂♀.

*Stilpnus tenebricosus*, TOWNES & TOWNES 1951, p. 250.

*Occurrence in the Kevojoki area:* ♀ : 5. VII. 1959, a patch of willows at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. SCHMIEDEKNECHT (1906): "Zerstreut, mehr in Gebirgsgegenden", ROMAN (1918): Swedish Lapland, MORLEY (1907): the British Isles, and TOWNES & TOWNES (1951): Greenland.

#### *Haplaspis capreolus* (Thoms.), new combination

*Hemiteles capreolus* THOMSON 1884 a, p. 940, ♂♀.

*Astomaspis capreolus*, ROMAN 1924, p. 13.

*Haplaspis* TOWNES 1944, p. 190; type: *Hemiteles mandibularis* Prov., original designation.

*Occurrence in the Kevojoki area:* 2 ♂♂ : 2. VII. 1956, the mouth of the Kevojoki; ♂ : 10. VII. 1956, the terrain about 3 kilometres southwest of Linkkapahta; 2 ♀♀ : 15.—16. VII. 1956, the mouth of the Roajaatshe; ♂ : 17. VII. 1959, the meadow of the Madjoki hut; ♀ : 13. VII. 1961, the N.E. slope of Ruottir I, the boundary between the barren and birch regions.

*Distribution:* Throughout Finland. Also in Sweden, Germany (SCHMIEDEKNECHT 1932), Northern Norway (ROMAN 1936 a) and the British Isles (MORLEY 1907).

*Biology:* In Central Europe bred from rose galls (SCHMIEDEKNECHT 1932).

#### *Haplaspis pallidicarpus* (Thoms.), new combination

*Hemiteles pallidicarpus* THOMSON 1884 a, p. 970, ♀.

*Astomaspis pallidicarpus*, ROMAN 1924, p. 13.

*Haplaspis* TOWNES 1944, p. 190; type: *Hemiteles mandibularis* Prov., original designation.

*Occurrence in the Kevojoki area:* ♀ : 16. VII. 1956, the mouth of the Roajaatshe; ♀ : 19. VII. 1956, the mouth of the Fiellugeädgejoki; ♂ (allotype): 6. VII. 1959, a meadow forest at the mouth of the Kevojoki (coll. JUSSILA).

*Distribution:* A species new to the Finnish fauna; this species has also been found in A: Maarianhamina and Lemland, LK: Parikkala and PH: Keuruu (W. Hellén leg.). Sweden (SCHMIEDEKNECHT 1932) and Latvia (OZOLS 1934).

*Remarks:* In the female stigma of front wing light; flagella medially a little thicker; sculpture of 2nd tergite with strong longitudinal and oblique streaks; ovipositor as long as petiolar segment; legs light, hind coxae basally and hind femora apically black; abdomen dorsally black, tergites from 2nd with light apical margins, 3rd and 4th tergites also with light lateral margins.

*Male:* Its structure resembles the female, but abdomen dorsally less sculptured and flagella threadlike. Black; scapes ventrally, mandibles (except

apices), front and middle legs yellowish; hind legs reddish yellow, hind coxae black, hind femora basally, hind tibiae apically and hind tarsi dark; front wings with brownish yellow stigmata; 2nd and 3rd tergites with light apical margins. Length 3.5 mm.

*Haplaspis infirmus* (Grav.), new combination

*Hemiteles infirmus* GRAVENHORST 1829 c, p. 797, ♀.

*Astomaspis infirmus*, ROMAN 1924, p. 13.

*Haplaspis* TOWNES 1944, p. 190; type: *Hemiteles mandibularis* Prov., original designation.

*Occurrence in the Kevojoki area:* ♀: 10. VII. 1956, the mouth of the Fiellugeädgejoki; ♂ (allotype): 10. VII. 1961, the N.E. slope of the Kätki-kielas mountain, a grass on the boundary between the barren and birch regions (coll. JUSSILA).

*Distribution:* New to the Finnish fauna; this species has also been found in A: Jomala and V: Lohja (W. Hellén leg.). Northern and Central Europe (SCHMIEDEKNECHT 1932), the British Isles (MORLEY 1907) and U.S.S.R. (MEYER 1933 b: Leningrad).

*Remarks:* The body structure and colouring of the female from the Fiellugeädgejoki resemble SCHMIEDEKNECHT's (1905 and 1932) descriptions, but the length of its ovipositor is only  $\frac{1}{3}$  of the length of the abdomen. *H. infirmus* ♀ differs from *capreolus* in the following respects: occiput not medially hollowed; propodaeum more shining, its area petiolaris visible; hind wing with vein Cu<sub>1</sub> antefureal; front wing with light stigma; legs light, hind coxae basally and hind tibiae apically dark; abdomen dorsally black, tergites from the 2nd with light apical margins.

*Male:* Its structure resembles the female, but head and mesoscutum more shining, notaulices stronger, flagella threadlike, abdomen not punctate, petiolar segment slenderer (length : greatest breadth = 3 : 1, in the female 2 : 1) and hind wing with vein Cu<sub>1</sub> not broken. Head, thorax and abdomen entirely black, mandibles and legs red, hind coxae black, hind tibiae and tarsi dark. Length 3 mm.

*Haplaspis microstomus* (Thoms.), new combination

*Hemiteles microstomus* THOMSON 1884 a, p. 960, ♀; lectotype ♀: Sweden, labelled "Blm", hereby designated (coll. University, Lund).

*Astomaspis microstomus*, ROMAN 1924, p. 13.

*Haplaspis* TOWNES 1944, p. 190; type: *Hemiteles mandibularis* Prov., original designation.

*Occurrence in the Kevojoki area:* ♀: 12. VII. 1961, the S. slope of Ruotir I, a dry heath of the barren region.

*Distribution:* A species new to the Finnish fauna. Sweden (THOMSON 1884 a).

*Remarks:* Resembles the foregoing species, but head more narrowed behind compound eyes, genae dull and sculpture of 2nd tergite and mesopleurae stronger. In the specimen from the Kevojoki area stigmata, abdomen and hind femora darker than in the type female.

*Haplaspis alpivagus* (Strobl), new combination

*Hemiteles alpivagus* STROBL 1901, p. 236, ♂.

*Astomaspis alpivagus*, ROMAN 1924, p. 13.

*Haplaspis* TOWNES 1944, p. 190; type: *Hemiteles mandibularis* Prov., original designation.

*Occurrence in the Kevojoki area:* 2 ♂♂: 13. VII. 1959, the meadow forest by the Kevo Wall.

*Distribution:* New to the Finnish fauna. Austria: in Alpine meadows of Steiermark (STROBL 1901).

*Remarks:* Differs from the most nearly allied *Haplaspis scabriculus* (Thoms.), new combination, (*Hemiteles scabriculus* THOMSON 1884 a, p. 960, ♂ ♀) in its shining, coarsely punctate head and mesoscutum. Vein Cu<sub>1</sub> of hind wing antefureal, stigma blackish brown with white base; propodaeum with complete areolation; abdominal tergites 1—3 dull, the others shining and smooth. Black, front femora apically and tibiae brownish yellow. The specimens from the area studied are 3 mm long; the average length of the males from Steiermark 4.5 mm.

*Gnypetomorpha gracilis* (Thoms.)

*Hemiteles gracilis* THOMSON 1884 a, p. 989, ♂ ♀.

*Hemiteles solutus* THOMSON 1884 a, p. 990, ♂ ♀, new synonymy.

*Hemiteles minutus* BRIDGMAN 1886, p. 340, new synonymy.

*Aclastus gracilis*, ROMAN 1909, p. 325.

*Aclastus gracilis* var. *solutus*, ROMAN 1909, p. 325.

*Astomaspis gracilis*, ROMAN 1924, p. 13.

*Aclastus gracilis* v. *minutus*, HELLÉN 1940, p. 8.

*Gnypetomorpha gracilis*, TOWNES & TOWNES 1951, p. 245.

From the taxonomic standpoint, *solutus* and *minutus* are only extreme forms of a variable species.

*Occurrence in the Kevojoki area:* Common in the birch region, rarer in the coniferous region.

*Distribution:* Throughout Finland. Northern, Central and Western Europe (SCHMIEDEKNECHT 1933), Iceland (ROMAN 1931 c), Faroe Islands (ROMAN 1916 a), Canary Islands (HELLÉN 1949), Madeira (HELLÉN 1961 a), Novaya Zemlia (ROMAN 1923 c), Greenland (ROMAN 1916 b and 1928), Bear Islands and Kamchatka (PETERSEN 1956).

*Biology:* PETERSEN (1956) suggests that the species in Iceland may be a parasite in the eggs of the spider *Lycosa tarsalis*.

#### *Alegina biannulata* (Grav.), new combination

*Hemiteles biannulatus* GRAVENHORST 1829 c, p. 846, ♀.

*Hemiteles homocerus* THOMSON 1885 a, p. 29, ♂ ♀.

*Philonygmus homocerus*, ROMAN 1924, p. 16.

*Philonygmus biannulatus* v. *homocerus*, HELLÉN 1940, p. 8.

*Alegina* FÖRSTER 1868 b, p. 176; type: (*Algina alaskensis* Ashm.) = (*Stilboscopus*) *solitaria* (Ashm.), included by ASHMEAD 1902.

*Occurrence in the Kevojoki area:* ♂: 12. VII. 1956, the terrain about 1 kilometre from the peninsula between the lakes Ylä- and Alanjaggaljärvi towards the mouth of the Kevojoki; 2 ♂ ♂: 13. VII. 1959, the N.E. slope of Ruottir III, a heath of the barren region and a patch of willows of the birch region; ♂: 11. VII. 1961, a bog between the barren and birch regions and between Ruottir I and II; ♂: 22. VII. 1961, a meadow at the mouth of the Kevojoki.

*Distribution:* Rare in Finland (see HELLÉN 1923). Also in Sweden, Germany, England and France (SCHMIEDEKNECHT 1933).

*Remarks:* The size of the lateral spines of the propodaeum varies and the hind femora may be either black or red.

*Biology:* Bred from *Limnophilus griseus* (Trich., *Limnophilidae*) and *Neuronia glathrata* (Trich., *Phryganeidae*) (MEYER 1933 b).

#### *Hemiteles areolaris* Thoms.

*Hemiteles areolaris* THOMSON 1884 a, p. 986, ♂ ♀; ♀ (not syntype): Börringe, Sweden (coll. University, Lund).

*Hemiteles clausus* THOMSON 1888 b, p. 1245.

*Occurrence in the Kevojoki area:* ♂: 4. VII. 1959, a moist birch heath at the mouth of the Kevojoki; (♀: 14. VII. 1959, the crossing of the Luomushjoki river and the road to Karigasniemi).

*Distribution:* New to the Finnish fauna; also found from EP: Mustasaari 7. VI. 1956 (R. Jussila leg.). Sweden (THOMSON 1884 a) and U.S.S.R. (MEYER 1933 b).

*Remarks:* Female: head narrowed behind compound eyes and densely punctate, dull; flagella thick, thickness : length of 1st flagellar segment = 1 : 1; thorax rather shining; propodaeum entirely areolated, area superomedia transverse; front wing with vein 3rm; abdomen dorsally shining, 1st and 2nd tergites smoothly punctate; length of ovipositor : length of abdomen = 1 : 1.3; colour black, legs (except hind and middle coxae) yellowish red, antennae sometimes basally red. The specimen from Börringe entirely yellowish red. The male of the area studied: like female, but length : breadth of area superomedia = 1 : 1; hind femora black, scapes ventrally, front coxae and trochanters whitish, vertex, mesoscutum and basal tergites more shining.

#### *Hemiteles subzonatus* (Grav.)

*Ichnecumon subzonatus* GRAVENHORST 1815, p. 40.

*Pezomachus crassicornis* GRAVENHORST 1829 c, p. 847.

*Pezomachus subzonatus* GRAVENHORST 1829 c, p. 887, ♀.

*Therescopus subzonatus*, FÖRSTER 1850, p. 101, ♀.

*Hemiteles subzonatus*, SCHMIEDEKNECHT 1905, p. 875, ♀. MORLEY 1907, p. 140, ♂ ♀.

*Occurrence in the Kevojoki area:* ♂: 20. VII. 1959, the meadow forest at the foot of Kotkapahta.

*Distribution:* Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1933), England (MORLEY 1907).

#### *Hemiteles melanogaster* Thoms.

*Hemiteles melanogaster* THOMSON 1884 a, p. 523, ♂ ♀; lectotype ♀: labelled "Scan", hereby designated (coll. University, Lund); ♂: place of discovery unknown (coll. University, Lund).

*Occurrence in the Kevojoki area:* ♀: 14. VII. 1961, the N.E. slope of Ruottir III, a moist heath of the barren region.

*Distribution:* A species new to the Finnish fauna. Also known from Sweden, England (SCHMIEDEKNECHT 1933), Germany (FULMEK 1962) and France (AUBERT 1957).

*Remarks:* Female: head, thorax and tergites dull, roughly punctate, middle tergites with shining apical margins; 1st tergite with 2 longitudinal carinae; wings of normal length, front wings with no vein 3rm, hind wings with antefurcal and broken vein Cu<sub>1</sub>; length of ovipositor : length of petiolar segment = 1.1 : 1; thorax and abdomen black, 2nd and 3rd tergites with red

apical margins; wings without dark oblique streaks; legs red, coxae basally black.

**Biology:** In Germany bred from the mining *Bucculathrix thoracella* (Lep., *Lithocolletidae*) and *Cosmopteryx eximia* (Lep., *Momphidae*) (FULMEK 1962).

#### *Hemiteles sordipes* Grav.

*Hemiteles sordipes* GRAVENHORST 1829 c, p. 798, ♀. SCHMIEDEKNECHT 1905, p. 829, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 11. VII. 1959, the "skaidi" near the mountain Skierrifälis, under the bark of a birch; ♂ : 16. VII. 1959, the mouth of the Roajaatshe; ♀ : 10. VII. 1961, the N.E. slope of Ruottir I, the boundary between the barren and birch regions.

**Distribution:** A species new to the Finnish fauna. Northern and Central Europe (SCHMIEDEKNECHT 1933), England (MORLEY 1907).

**Remarks:** Female: head narrowed behind compound eyes; head and thorax rather dull, mesopleura more shining; tergites 1—2 or 1—3 punctate, the other tergites smooth and shining; wings normal, front wing without vein 3<sub>rm</sub>, hind wing with vein Cu<sub>1</sub> antefurcal and broken right at its caudal base; length of ovipositor : length of abdomen = 1 : 1.06 (in the female of the area studied); head, antennae, thorax and abdomen black; legs red, coxae black or red; length 4—6 mm. Male: petiolar segment rather short and broad, its length : greatest breadth = 1.6 : 1; the first three tergites punctate, the other tergites and apical margin of the 3rd smooth and shining; head, antennae, thorax and abdomen black, scapes and mandibles with yellowish; legs red, coxae, apex of hind tibiae, and hind tarsi black; length of the male from the area studied 4.5 mm.

**Biology:** In England bred from *Cynips collaris* (Hym., Cynipidae) (MORLEY 1907).

#### *Hemiteles micator* Grav.

*Hemiteles micator* GRAVENHORST 1829 c, p. 832, ♂. TASCHENBERG 1865, p. 122, ♀.

**Occurrence in the Kevojoki area:** ♂ : 7. VII. 1959, the Kevo Cape, a coniferous heath.

**Distribution:** Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1933).

**Remarks:** Identifiable by the inner tooth of the pedicel. In the specimen from the area studied abdomen and legs nearly black.

#### *Hemiteles hemipterus* (F.)

*Ichneumon hemipterus* FABRICIUS 1793, p. 190.

*Cryptus hemipterus* FABRICIUS 1804, p. 91.

*Hemiteles dissimilis* GRAVENHORST 1829 c, p. 842.

*Pezomachus hemipterus*, GRAVENHORST 1829 c, p. 874, ♀.

*Aptesis hemiptera*, FÖRSTER 1850, p. 87, ♀. BRIDGMAN 1887, p. 364, ♂.

*Hemiteles hemipterus*, THOMSON 1884 a, p. 993, ♂ ♀.

**Occurrence in the Kevojoki area:** ♂ : 4. VII. 1959, a moist heath of the birch region at the mouth of the Kevojoki; ♂ : 5. VII. 1959, a dry heath on the "skaidi" near the mouth of the Kevojoki; ♂ : 6. VII. 1959, a meadow forest at the mouth of the Kevojoki.

**Distribution:** Throughout Finland. Also in Germany, the British Isles (MORLEY 1907) and U.S.S.R. (MEYER 1933 b).

#### *Hemiteles punctiventris* Thoms.

*Hemiteles punctiventris* THOMSON 1884 a, p. 977, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 21. VII. 1959, the meadow of Kevuu.

**Distribution:** New to the Finnish fauna. Also in Sweden (THOMSON 1884 a).

**Remarks:** Female: head not narrowed behind compound eyes; head and thorax punctate, shining; antennae thick (length : thickness of 1st flagellar segment = 2.6 : 1 in the specimen of the area studied); propodaeum with entire areolation; front wing without vein 3<sub>rm</sub>; hind wing with vein Cu<sub>1</sub> antefurcal; 1st tergite broad (in the specimen from the area studied length : greatest breadth = 1.5 : 1) and streaked; abdomen dorsally shining, 2nd and 3rd tergites strongly punctate; length of ovipositor = length of postpetiolus; head and thorax black (in the specimen from the area studied flagella basally red); abdomen black, 1st tergite apically, 2nd and 3rd segments entirely and 4th tergite basally red; legs red (in the specimen from the area studied hind femora with black apex, hind tibiae with black base and apex, and hind tarsi darkish); length 6 mm.

#### *Hemiteles subarcticus*, new species

**Occurrence in the Kevojoki area:** ♀ (holotype) : 30. VII. 1956, the meadow of the Madjoki hut (coll. Jussila); ♂ (allotype) : 6. VII. 1959, the meadow forest at the mouth of the Kevojoki (coll. JUSSILA).

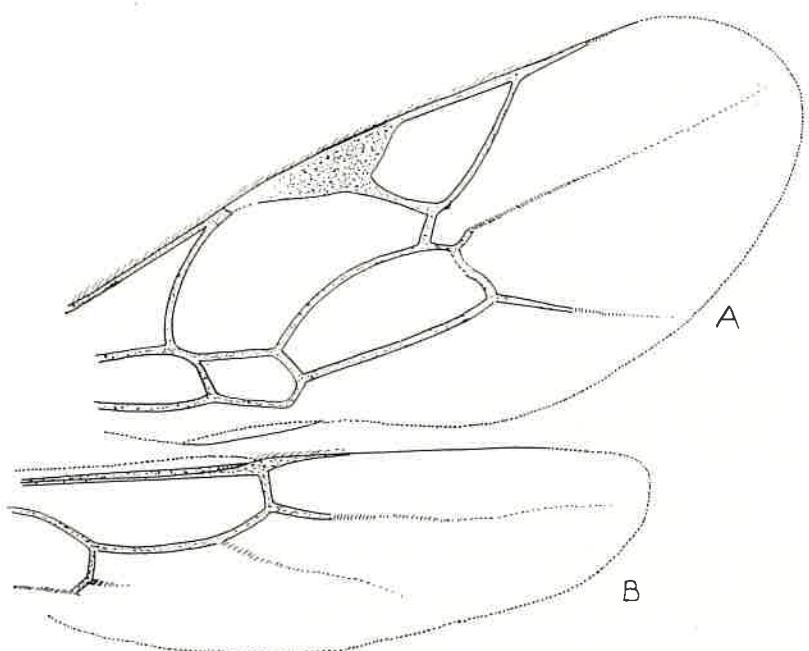


Fig. 37. Right wings of *Hemiteles subarcticus* n.sp. A. front, B. hind wing. — Orig.

**Female:** Head narrowed behind compound eyes; face and vertex densely punctate and dull; clypeus strongly convex with apical margin narrowly but distinctly flattened; antennae long and thin, length : thickness of 1st flagellar segment = 5.5 : 1. Thorax densely punctate, only specula shining; propodaeum without costulae, area superomedia a little longer than broad. Wings hyaline; front wing (fig. 37 A) without vein 3rm, vein Rs very short; hind wing (fig. 37 B) with vein Cu<sub>1</sub> antefurcal and broken. Legs slender. Petiolar segment slender and long, its length : greatest breadth = 2 : 1; all tergites densely punctate and dull, apically more shining, 1st tergite with some longitudinal streaks; length of ovipositor : length of petiolar segment = 1 : 1.4. Head and thorax black, mandibles apically red; stigmata of front wings brown; legs red, middle and hind proximal trochanters, apices of hind and middle femora, bases and apices of hind and middle tibiae black; abdomen dorsally black; 2nd and 3rd tergites entirely and 4th basally red. Length 4 mm.

Resembles *H. punctiventris* ♀, but smaller, slenderer and duller; antennae thinner and entirely black, vein Rs shorter, ovipositor a little longer, clypeus more convex and head rounded behind compound eyes.

**Male:** Resembles the female, but propodaeum with costulae, area superomedia as long as broad and only tergites 2 and 3 red. Length 4.5 mm.

#### *Hemiteles cynipinus* Thoms.

*Hemiteles cynipinus* THOMSON 1884 a, p. 977, ♂ ♀.

**Occurrence in the Kevojoki area:** 3 ♂ ♂ : 2. VII. 1956, the mouth of the Kevojoki; ♂ : 6. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** Throughout Finland. Also in Sweden and England (SCHMIEDEKNECHT 1933).

#### *Hemiteles similis* (Gmel.)

*Ichneumon similis* GMELIN 1790, p. 2720, ♀.

*Hemiteles similis*, TASCHENBERG 1865, p. 123, ♂ ♀.

**Occurrence in the Kevojoki area:** ♀ : 5. VII. 1959, a meadow at the mouth of the Kevojoki.

**Distribution:** EP: Lapua in Finland (HELLÉN 1923). Central Europe (SCHMIEDEKNECHT 1933), England (MORLEY 1907).

**Biology:** A parasite upon *Microgaster* cocoons (*Hym., Braconidae*) and galls of *Cynips* (*Hym., Cynipidae*), of many *Lepidoptera* and *Epeira diadema* (*Araneida*) (MORLEY 1907).

#### *Hemiteles tenuipes* (Grav.)

*Phygadeuon tenuipes* GRAVENHORST 1829 c, p. 720, ♂.

*Hemiteles tenuicornis* GRAVENHORST 1829 c, p. 843, ♂ ♀.

*Hemiteles tenuipes*, HELLÉN 1937 a, p. 8.

**Occurrence in the Kevojoki area:** ♀ : 12. VII. 1961, the S. slope of Ruotir II, a dry heath of the barren region.

**Distribution:** Throughout Finland. Northern and Central Europe (SCHMIEDEKNECHT 1933), France (AUBERT 1957).

**Remarks:** In the specimen from the Kevojoki area the wings have no dark blotch, but are entirely fuscous.

#### *Hemiteles arcticus* Thoms.

*Hemiteles arcticus* THOMSON 1884 a, p. 998, ♀.

**Occurrence in the Kevojoki area:** ♀ : 18. VII. 1959, the meadow forest at the foot of Linkkapahta.

**Distribution:** New to the Finnish fauna. Also in Northern Sweden (THOMSON 1884 a).

*Remarks:* The female resembles *H. alpinus* Thoms. (*Hemiteles alpinus* THOMSON 1884 a, p. 997, ♀; lectotype ♀: Sweden, labelled "Årc", hereby designated, coll. University, Lund), but head, thorax and abdomen smoother and more shining, antennae thinner, petiolus slenderer and size smaller (the specimen from the area studied is 3 mm and the type specimen of *alpinus* 5 mm).

#### *Gelis vagans* (Ol.)

*Ichneumon vagans* OLIVIER 1792, p. 204, ♀.

*Pezomachus vagans*, GRAVENHORST 1829 c, p. 890, ♀ (excl. varr.). BRIDGMAN 1883, p. 163, ♂.

*Pezomachus discendens* FÖRSTER 1850, p. 204, ♀.

*Pezomachus latrator* FÖRSTER 1850, p. 215, ♀.

*Gelis vagans*, HELLÉN 1926, p. 94.

*Occurrence in the Kevojoki area:* ♀: 10. VII. 1959, a moist birch heath on the W. shore of the Ylänjaggaljärvi Lake; ♀: 16. VII. 1959, a bog of the coniferous region at the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Also in Sweden, Germany (SCHMIEDEKNECHT 1906) and England (MORLEY 1907).

#### *Gelis acarorum* (L.)

*Mutilla acarorum* LINNAEUS 1758, p. 593.

*Ichneumon acarorum*, FABRICIUS 1793, p. 191, ♀.

*Cryptus acarorum*, FABRICIUS 1804, p. 92, ♀.

*Pezomachus acarorum*, GRAVENHORST 1829 c, p. 919, ♀. THOMSON 1884 a, p. 1017, ♂ ♀.

*Gelis acarorum*, ROMAN 1914, p. 23.

*Occurrence in the Kevojoki area:* ♀: 17. VII. 1959, under a shore stone near the Madjoki hut.

*Distribution:* Throughout Finland. Throughout Europe (SCHMIEDEKNECHT 1906).

*Biology:* In Germany bred from *Apanteles* sp. (Hym., Braconidae), which is a parasite of *Pieris brassicae* (Lep., Pieridae) (HEDWIG 1950 a) and from the mining *Norellisoma spinimanum* (Dipt., Scatophagidae) (FULMEK 1962).

#### *Gelis exareolatus* (Först.)

*Pezomachus exareolatus* FÖRSTER 1850, p. 74, ♀. THOMSON 1884 a, p. 1008, ♂ ♀.

*Gelis exareolatus*, MEYER 1933 b, p. 279.

*Occurrence in the Kevojoki area:* ♂: 14. VII. 1959, the N.E. slope of Ruottir II, a heath of the barren region.

*Distribution:* Throughout Finland. Also in Germany, Sweden and France (AUBERT 1957).

#### *Gelis festinans* (Grav.)

*Pezomachus festinans* GRAVENHORST 1829 c, p. 926, ♀. FÖRSTER 1850, p. 73, ♂ ♀.

*Pezomachus posthumus* FÖRSTER 1850, p. 183, ♀.

*Pezomachus ocissimus* FÖRSTER 1851, p. 36, ♂.

*Gelis festinans*, HELLÉN 1931, p. 65.

*Occurrence in the Kevojoki area:* ♂: 10. VII. 1956, the terrain about 3 kilometres from Linkapahta to the southwest; ♂: 16. VII. 1959, a moist birch heath by Kotkapalha.

*Distribution:* Throughout Finland. Also in Germany (SCHMIEDEKNECHT 1906).

#### *Gelis hortensis* (Grav.)

*Pezomachus hortensis* GRAVENHORST 1829 c, p. 907, ♂ ♀.

*Gelis hortensis*, HELLÉN 1923, p. 31.

*Occurrence in the Kevojoki area:* ♀: 6. VII. 1959, a meadow forest at the foot of the Kevojoki; (♀: 16. VII. 1961, a patch of willows on the N.E. shore of the Luomushjärvi Lakes).

*Distribution:* Throughout Finland. Also Germany, England (SCHMIEDEKNECHT 1906) and European U.S.S.R. (MEYER 1933 b).

*Remarks:* Recognizable by its abdomen, which is densely pubescent.

*Biology:* In Central Europe bred from *Hyponomeuta padellus* (Lep., Hyponomeutidae) (SCHMIEDEKNECHT 1933).

#### *Gelis instabilis* (Först.)

*Pezomachus vagans* var. 4 GRAVENHORST 1829 c, p. 892, ♀.

*Pezomachus instabilis* FÖRSTER 1850, p. 195, ♀. MORLEY 1907, p. 227, ♂ ♀.

*Hemimachus rufocinctus* RATZEBURG 1852, p. 157, ♂.

*Gelis instabilis*, ROMAN 1924, p. 19.

*Occurrence in the Kevojoki area:* Common in the birch and coniferous regions.

*Distribution:* Throughout Finland. Throughout Europe (ROMAN 1909 and 1942, SCHMIEDEKNECHT 1933, OZOLS 1934, CEBALLOS 1956 and BLUNCK 1957), Siberia (MEYER 1933 b).

*Biology:* Hosts many parasitizing Hymenoptera, especially Braconidae (BLUNCK 1957). In Sweden bred from *Cidaria dilutata* (Lep., Geometridae) (ROMAN 1942).

#### *Gelis tonsus* (Först.)

*Pezomachus tonsus* FÖRSTER 1850, p. 208, ♀. THOMSON 1884 a, p. 1017, ♂ ♀.  
*Gelis tonsus*, HELLÉN 1926, p. 94.

*Occurrence in the Kevojoki area:* ♀ : 11. VII. 1959, a very moist heath on the "skaidi" about 3 kilometres from the mouth of the Roajaatshe towards the mouth of the Kevojoki.

*Distribution:* Throughout Finland. Sweden, Germany (SCHMIEDEKNECHT 1906) and Spain (CEBALLOS 1956).

*Biology:* In Central Europe bred from *Apanteles cognestus* (Hym., Braconidae), which parasitizes *Plusia gamma* (Lep., Noctuidae) (SCHMIEDEKNECHT 1933).

#### *Gelis kiesenwetteri* (Först.)

*Pezomachus Kiesenwetteri* FÖRSTER 1850, p. 133, ♂. THOMSON 1884 a, p. 1004, ♂ ♀.  
*Pezomachus bellicosus* FÖRSTER 1850, p. 141.  
*Pezomachus Debeyi* FÖRSTER 1850, p. 142.  
*Gelis kiesenwetteri*, MEYER 1933 b, p. 282.  
*Gelis (Cryptogelis) Kiesenwetteri*, HELLÉN 1944 a, p. 2.

*Occurrence in the Kevojoki area:* ♂ : 20. VII. 1959, Poddusroadja, a heath of the barren region.

*Distribution:* In Finland V: Särkisalo and Karjalohja (HELLÉN 1944 a). Kk: Muolaa in European U.S.S.R. (HELLÉN 1944 a), Sweden (THOMSON 1884 a), Germany (SCHMIEDEKNECHT 1906) and the British Isles (MORLEY 1907).

#### SOME CONCLUDING REMARKS

In the Kevojoki area 318 Ichneumonid species have been found (= 88.3 % of the total number of species till now found in Inari Lapland):

Subfamily <i>Ephialtinae</i> .....	12 species
" <i>Adelognathinac</i> ....	7 "
" <i>Tryphoninac</i> .....	33 "
" <i>Banchinac</i> .....	7 "
" <i>Scolobatinac</i> .....	65 "
" <i>Porizontinae</i> .....	30 "
" <i>Tersilochinac</i> .....	3 "
" <i>Anomalinac</i> .....	2 "
" <i>Ophioninac</i> .....	1 "
" <i>Mesochorinac</i> .....	6 "
" <i>Microleptinac</i> .....	29 "
" <i>Orthocentrinac</i> .....	14 "
" <i>Diplazontinae</i> .....	14 "
" <i>Metopiinac</i> .....	2 "
" <i>Ichneumoninac</i> .....	16 "
" <i>Gelinac</i> .....	77 "

The specimens of 36 of these species (= 11.3 % of the total number of species found) are distinctly darker in the area studied than further south and only two of the species (= 0.6 %) lighter. In 25 species (= 7.8 %) the specimens from the Kevojoki area are distinctly smaller than usual and only in 3 cases (= 0.9 %) bigger. The difference in size may be due both to the smaller size of the hosts and to the shorter period of development. Both genetic and environmental factors may contribute to it (TOWNES 1958).

#### 4. OCCURRENCE OF ICHNEUMONIDAE IN THE BIOTOPES

The absence or presence of hosts in a biotope or its immediate surroundings has a decisive effect on the Ichneumonid fauna in the biotope. The imagos fly in biotopes where suitable hosts live. Few species of the Ichneumonidae are monophagous. At one time it was thought that a parasitic species usually attacked a single species of host. But the more breeding experiments have been carried out, the more mistaken this idea has proved. The polyphagy of most of the Ichneumonidae is due to the fact that the females have rather stereotyped habits when searching for hosts (TOWNES 1958). Some search for hosts only as borers in dead wood, others search for larvae feeding on the terminal shoots of conifers, and others look for pupae on tree trunks or under dead leaves, etc. Then there are the physiological factors, such as the response of the female to certain odours, or the ability of the parasite larva to survive on or in a given host. All these factors, in addition to geographical distribution and time of occurrence, narrow the host range, but usually not to a single species, and not even to a single order. Consequently *Mesoleius variegatus* and *Scambus sagax* have been bred from Hymenoptera or Lepidoptera and Coleoptera, *Scambus brevicornis*, *Diadegma cerophaaga* and *Aptesis nigrocinctus* from Hymenoptera and Lepidoptera, *Homotropus tarsatorius* from Lepidoptera, Coleoptera and Diptera, and *Hemiteles similis* from Hymenoptera, Lepidoptera and Araneida.

In addition to the adaptation of the species to the food available and so to the conditions presented by the flora of a biotope, the conditions required of the biotope by the imago are important.

The synopsis clearly proves that most and especially the commonest species (in particular *Polyblastus carbonarius*, *Cteniscus flavomaculatus*, *Glypta heterocera*, *Hypamblys albopictus*, *Mesochorus confusus*, *Sussaba p. pulchella*, *Exochus prosopius*, *Agrothereutes solitarius*, *Aptesis septentrionalis*, *Phygadeuon laeviventris*, *Atractodes croceicornis* and *A. parallelus*) are not confined to one biotope but live in different habitats. Hence rarer species which live exclusively or mainly in one biotope characterize this.

The following species can be regarded as characteristic of the Ichneumonidae in the Kevojoki area (these conclusions are supported by the observations on the biotopes made beyond the area studied):

Dry barren heaths: *Ctenochira rufipes* (not, however, very characteristic, for it is found by the Luomushjoki in the birch region); not a very clear characteristic species

Moist barren heaths: *Sychnoporthus crosus* and *Ophion kevoensis*

Dry birch heaths: no characteristic species

Moist birch heaths: no characteristic species

Meadow forests: *Mesoleius marginellus*, *M. luctuosus*, *Syndipnus alutaceus*, *Tersilochus nutritor*, *Symplicis basalis*, *Stenomacrus minutus* and *Phygadeuon arcticus*

Meadows: *Ctenochira pastoralis*, *Phygadeuon cylindraccus* and *Ph. lapponicus*

Patches of willows: no clear characteristic species; the only possible one is *Orthocentrus monilicornis*, but it is questionable, too

Bogs: no clear characteristic species

Coniferous heaths: possibly *Nepiera collector*.

As this list shows, the number of Ichneumonid species clearly characteristic of the various biotopes is either very small or no characteristic species occur at all. This may be due not only to the ability of Ichneumonidae to adapt themselves to different biotopes but also to the fact that many biotopes resemble each other in providing suitable environments. Hence most Ichneumonidae fly in all of them. We may call these areas which provide similar conditions for the existence of Ichneumonidae biotope groups.

The biotopes in the Kevojoki area may be grouped as follows:

1. The whole barren region. Characteristic of this biotope group are the Ichneumonid species that mainly live only in the two biotopes of this group. In the Kevojoki area such Ichneumonidae are *Campoletis varians*, *Nythobia pusio*, *Phygadeuon detestator nivalis* and the arctic species (see p. 166).

2. The biotope group rich in dwarf shrubs. The birch and coniferous heaths belong to this group. Characteristic species are *Homotropus incisus*, *Eusternix oligomera*, *Megastylus hirticornis*, *Helictes borealis* and *Phygadeuon infernalis*.

3. The biotope group rich in grass. The Ichneumonid fauna of the meadow forests and meadows belonging to this group is very similar and rich in characteristic species: *Eclytus ornatus*, *Tryphon brunniventris*, *T. incestus*, *Perilissus pallidus*, *P. orbitalis*, *Trematopygus vellicans*, *Rhaestes ophthalmicus*, *Philotymma chrysostomus*, *Hadrodactylus faciator*, *Promethes s. sulcator*, *Herpestomus nasutus*, *Hidryta frater*, *Phaeogenes heterogonus*, *Mesoleptus scrutator*, *Atractodes foveolatus*, *Hemiteles subarcticus* and *Haplaspis alpivagus*.

4. The bogs and patches of willows. I have found no clearly characteristic species among the Ichneumonidae, comparable, e.g., with the Macrolepidopterous *Clossiana eunomia montana* B.Pet. (JUSSILA 1964).

## 5. ZOOGEOGRAPHICAL REMARKS

The distributions of the Ichneumonid species found in the Kevojoki area are more or less different. Hence grouping of the species into various types is possible. Naturally, this presents great difficulties. Nature seldom has distinct limits, and there are borderline cases of different grades. In addition, grouping is made difficult by the shortcomings and gaps in the relevant studies: the distribution of Ichneumonidae is in fact only known on the basis of a few scattered observation points.

In this study attention is only paid to the European distribution of the species.

### A. ARCTIC SPECIES

This group includes species which live principally in arctic, oroboreoarctic (in Finland, see AHTI, HÄMET-AHTI & JALAS 1964) and sometimes also in alpine (Central European) biotopes.

<i>Eudiaborus borealpinus</i>	<i>Coclichneumonops solutus</i>
<i>Mesolcius spurius</i>	<i>Rhyssolabus arcticus</i>
<i>M. torvus</i>	<i>Phygadeuon detectator nivalis</i>
? <i>Syndipnus monticola</i>	? <i>Hemiteles arcticus</i> .
<i>Ophion kevoensis</i>	

### B. SUBARCTIC SPECIES

In northwestern Europe, species belonging to this group principally live in fjeld birch forests (see HUSTICH 1952 and SJÖRS 1963).

<i>Polyblatus pyramidatus</i>	<i>M. patagiatus</i>
<i>Ctenochira angustata</i>	<i>M. efferus</i>
<i>C. nigripalpis</i>	<i>M. tristis</i>
<i>Mesolcius alpinus</i>	<i>M. variegatus alpcstris</i>
<i>M. alticola</i>	<i>Saotis heteropus</i>
<i>M. coriaceus</i>	<i>Rhorus longigena</i>
<i>M. fennicus</i>	<i>Hypamblys buccatus</i>
<i>M. sahlbergi</i>	<i>Syndipnus macroccrus</i>
<i>M. mixtus</i>	<i>S. angustatus</i>
<i>M. spurius</i>	<i>Campoplex abbreviatus</i>

<i>Olcacicampe vctula</i>	<i>A. alpineti</i>
<i>Astiphromma analis</i>	<i>Rhembobius caudatus</i>
<i>Cylloceria striolata</i>	<i>Phygadeuon infernalis</i>
<i>Picrostigeus antennalis</i>	<i>Ph. arcticus</i>
<i>Ichnumon th. thomsoni</i>	<i>Stilpnus tenebriocosmus</i>
<i>Stenichneumon ringii</i>	<i>Haplaspis alpivagus</i>
<i>Amblyteles lapponicus</i>	<i>Hemiteles subarcticus.</i>
<i>Aptesis septentrionalis</i>	

### C. HIGH BOREAL SPECIES

High boreal species have been found throughout Fennoscandia as far south as the limit of *Quercus* (i.e. in the Northern, Central and Southern Boreal Zones, see AHTI, HÄMET-AHTI & JALAS 1964).

<i>Adelognathus tetricinctorius</i>	<i>Stenomacrus pusillus</i>
<i>A. punctiventris</i>	<i>S. affinis</i>
<i>Cteniscus dahlbomi</i>	<i>S. minutus</i>
<i>Eridolius schiödtei</i>	<i>S. nemoralis</i>
<i>Glypta breviventris</i>	<i>Picrostigcus hastatus</i>
<i>Pimplopterus gracilentus</i>	<i>Trachyspyrus obscuripennis</i>
<i>Mesoleius opticus</i>	<i>Phygadeuon rugipectus</i>
<i>M. geniculatus</i>	<i>Ph. lapponicus</i>
<i>M. juvenilis</i>	<i>Atractodes canaliculatus</i>
<i>M. obtusus</i>	<i>A. foveolatus</i>
? <i>M. descendens</i>	<i>A. alpinus</i>
<i>M. mollis</i>	<i>A. oreophilus</i>
<i>M. stenocerus</i>	<i>A. angustipennis</i>
<i>Rhaestes ophthalmicus</i>	<i>A. parallelus</i>
<i>Syndipnus maculiventralis</i>	<i>A. breviseptatus</i>
<i>Sychnoporthus crosus</i>	<i>Haplaspis microstomus</i>
<i>Plectiscidea eurystigma</i>	<i>Hemiteles areolaris</i>
<i>Megastylus hirticornis</i>	<i>H. punctiventris.</i>

### D. COMMON BOREAL SPECIES

The southern limit of the area runs through the Alps and Pyrenees (see NIELSEN, RINGDAHL & TUXEN 1954). The Hemiboreal and Boreomeridional Zones (AHTI, HÄMET-AHTI & JALAS 1964) belong to this area, too.

<i>Scambus sagax</i>	<i>D. texana</i>
<i>Acrodactyla degener</i>	<i>Adelognathus brevicornis</i>
<i>Schizopyga frigida</i>	<i>A. chrysopygus</i>
<i>Polysphincta carbonator</i>	<i>A. pallipes</i>
<i>P. t. tuberosa</i>	<i>A. nigrifrons</i>
<i>Delomerista mandibularis</i>	<i>Pammicra dorsalis</i>

<i>Phytodictus glitorius</i>	<i>Trematopygus melanocerus</i>
<i>Ecytus ornatus</i>	<i>T. vellicans</i>
<i>Polyblastus palaeomon</i>	<i>Zaplethocornia procurator</i>
<i>P. carbonarius</i>	<i>Hypamblys albopictus</i>
<i>P. w. wahlbergi</i>	<i>Syndipnus alutaceus</i>
<i>P. grammicus</i>	<i>S. lateralis</i>
<i>Ctenochira gilvipes</i>	<i>Philotymma chrysostomus</i>
<i>C. haemosterna</i>	<i>Synomelix albipes</i>
<i>Erromenus punctulatus</i>	<i>S. xanthostomus</i>
<i>E. junior</i>	<i>Hadrodactylus typhae</i>
<i>E. brunnicanus</i>	<i>H. faciator</i>
<i>E. bipunctatus</i>	<i>Campoplex coracinus</i>
<i>E. simplex</i>	<i>Campoletis femoralis</i>
<i>E. melanotus</i>	<i>Dusona dclusor</i>
<i>E. zonarius</i>	<i>Diadegma armillata</i>
<i>Tryphon brunniventris</i>	<i>D. interrupta</i>
<i>T. incestus</i>	<i>D. nana</i>
<i>T. exclamationis</i>	<i>Hyposoter albicans</i>
<i>Smicroplectrus bohmani</i>	<i>H. inquinatus</i>
<i>S. j. jucundus</i>	<i>Olesicampe clandestina</i>
<i>Cteniscus gnathoxanthus</i>	<i>O. ratzeburgi</i>
<i>Eridolius bimaculatus</i>	<i>O. tarsator</i>
<i>Glypta mandibulator</i>	<i>O. protcrva</i>
<i>G. heterocera</i>	<i>O. scricea</i>
<i>G. dentifera</i>	<i>Eriborus dorsalis</i>
<i>Pterilissus filicornis</i>	<i>Nythobia pusio</i>
<i>P. pallidus</i>	<i>Tersilochus microcephalus</i>
<i>P. orbitalis</i>	<i>Barycnemis claviventris</i>
<i>P. pictilis</i>	<i>Astiphronma leucogrammum</i>
<i>Mesoleius sectator</i>	<i>A. marginellum</i>
<i>M. nasutus</i>	<i>Mesochorus confusus</i>
<i>M. compactor</i>	<i>M. punctipleuris</i>
<i>M. frontator</i>	<i>Symplicis basalis</i>
<i>M. tegularis</i>	<i>Blapticus crassulus</i>
<i>M. armillatorius</i>	<i>B. dentifer</i>
<i>M. aulicus</i>	<i>Entypoma robustum</i>
<i>M. opticus</i>	<i>Catomicus trichops</i>
<i>M. latipes</i>	<i>Eusternix basalis</i>
<i>M. dubius</i>	<i>E. oligomera</i>
<i>M. fuscipes</i>	<i>Holomeristus tenuicinctus</i>
<i>M. gracilicornis</i>	<i>Plectiscidea crassicornis</i>
<i>M. linitus</i>	<i>P. collaris</i>
<i>M. marginellus</i>	<i>P. hyperborea</i>
<i>M. luctuosus</i>	<i>P. sodalis</i>
<i>M. haematodes</i>	<i>P. terebrator</i>
<i>M. ignavus</i>	<i>Proclitus autumnalis</i>
<i>M. molestus</i>	<i>P. praetor</i>
<i>M. ruficollis</i>	<i>P. mesoxanthus</i>
<i>Rhorus extirpatorius</i>	<i>Pantisarthrus luridus</i>

<i>Helictes borealis</i>	<i>Parmortha p. pleuralis</i>
<i>Megastylus insectator</i>	<i>Aptesis micropterus</i>
<i>M. rufipleuris</i>	<i>Demopheles caliginosus</i>
<i>Stenomacrus confinis</i>	<i>Medophron afflitor</i>
<i>S. cubiceps</i>	<i>Phygadeuon brachyurus</i>
<i>Orthocentrus asper</i>	<i>Ph. oppositus</i>
<i>O. attenuatus</i>	<i>Ph. cylindraceus</i>
<i>O. monilicornis</i>	<i>Bathythrix claviger</i>
<i>O. protuberans</i>	<i>B. pellucidator</i>
<i>O. stigmaticus</i>	<i>Mesoleptus scrutator</i>
<i>Homotropus incisus</i>	<i>Atractodes croceicornis</i>
<i>H. pictus</i>	<i>A. exilis</i>
<i>H. elegans</i>	<i>A. gilvipes</i>
<i>Tymmophorus rufiventris</i>	<i>Haplaspis capreolus</i>
<i>T. g. graculus</i>	<i>H. pallidicarpus</i>
<i>Syrphophilus t. tricinctorius</i>	<i>H. infirmus</i>
<i>Sussaba c. cognata</i>	<i>Alegina biannulata</i>
<i>Exochus n. nigripalpis</i>	<i>Hemitelcs subzonatus</i>
<i>Cratichneumon försteri</i>	<i>H. melanogaster</i>
<i>Ichneumon vulneratorius</i>	<i>H. sordipes</i>
<i>I. eremitorius</i>	<i>H. hemipterus</i>
<i>I. incomptus</i>	<i>H. cynipinus</i>
<i>Dicaelotus pusillator</i>	<i>H. similis</i>
<i>Epitomus pygmacus</i>	<i>H. tenuipes</i>
<i>Phaeogenes osculator</i>	<i>Gclis vagans</i>
<i>Agrothereutes grossus</i>	<i>G. exarcolatus</i>
<i>Cacnoeryptus vindex</i>	<i>G. festinans</i>
<i>Hidryta frater</i>	<i>G. hortensis</i>
<i>Cubocephalus sternocerus</i>	<i>G. kiesenwetteri</i>
<i>C. opaculus</i>	

#### E. BOREOMEDITERRANEAN SPECIES

The area of this group of species comprises Southern Europe, too.

<i>Scambus brevicornis</i>	<i>M. segmentator</i>
<i>Tromatobia variabilis</i>	<i>Sinophorus crassifemur</i>
<i>Clistopyga incitator</i>	<i>Campoplex faunus</i>
<i>Itoplectis alternans</i>	<i>C. borealis</i>
<i>Coccygomimus aquilonius flavicoxis</i>	<i>Casinaria moesta</i>
<i>Polyblastus strobilar</i>	<i>Campoletis latrator</i>
<i>Ctenochira pastoralis</i>	<i>Nepicra collector</i>
<i>C. rufipes</i>	<i>Diadegma cerophaga</i>
<i>Cteniscus rufonotatus</i>	<i>D. fencustralis</i>
<i>C. flavomaculatus</i>	<i>D. majalis</i>
<i>Glypta ceratites</i>	<i>D. rufipes</i>
<i>Exetastes laevigatus</i>	<i>Olesicampe annulitarsis</i>
<i>Mesoleius multicolor</i>	<i>Tersilochus nutritor</i>

<i>Gravenhorstia corinops</i>	<i>Gambrus incubitor</i>
<i>Agrypon flaveolatum</i>	<i>Ischnus alternator</i>
<i>Mesochorus vitticollis</i>	<i>Trychosis legator</i>
<i>Cylloceria melancholica</i>	<i>Cubocephalus anatorius</i>
<i>Plectiscidca canaliculata</i>	<i>Aptesis nigrocinctus</i>
<i>Stenomacrus silvaticus</i>	<i>Endasys crythrogaster</i>
<i>Homotropus tarsatorius</i>	<i>E. parviventris</i>
<i>H. pectoratorius</i>	<i>Phygadeuon lacviventris</i>
<i>H. pallipes</i>	<i>Ph. d. detectator</i>
<i>Diplazon annulatus</i>	<i>Ph. canaliculatus</i>
<i>D. t. tibiatorius</i>	<i>Ph. exiguis</i>
<i>Promethes s. sulcator</i>	<i>Ph. rugulosus</i>
<i>Sussaba p. pulchella</i>	<i>Bathythrix ruficaudatus</i>
<i>Exochus prosopius</i>	<i>Atractodes gravidus</i>
<i>Ichneumon luteipes</i>	<i>Gnypetomorpha gracilis</i>
<i>Herpestomus nasutus</i>	<i>Hemiteles micator</i>
<i>Phacogenes heterogonus</i>	<i>Gelis acarorum</i>
<i>Ph. infirmus</i>	<i>G. instabilis</i>
<i>Agrothereutes solitarius</i>	<i>G. tonsus.</i>

#### F. CONCLUSION

As the lists show, of the Ichneumonid species of the Kevojoki area 2.6 % are arctic, 11.2 % subarctic, 11.5 % high boreal, 54.2 % common boreal and 20.5 % boreo-mediterranean.

Because there are no analogous studies from other similar areas, comparisons are impossible. A similar grouping has been made from distant Iceland (PETERSEN 1956). But the circumstances there are different and the area studied larger. There northern Ichneumonid species (= arctic-alpine, arctic-highboreal and arctic-high-middleboreal) constitute 27.6 % of the total fauna, while in the Kevojoki area (= arctic, subarctic and high boreal species) they amount to 25.3 %.

The Ichneumonid fauna of the Kevojoki area has no strong arctic character; it is caused above all by physical circumstances. The part played by the southern species (common boreal and boreo-mediterranean) is noticeable (74.7 %), more noticeable than e.g. in the Macrolepidopterous fauna (JUSSILA 1957).

In the Macrolepidopterous fauna of the Kevojoki area use has been made of the grouping presented by VALLE (1933), which only pays attention to Fennoscandia. According to this, 70.5 % of the Macrolepidopterous fauna is northern (= arctic, subarctic and boreal), and species whose distribution has no northern character (= common Fennoscandian), amount to 29.5 %.

In addition to the Ichneumonidae, the avifauna (SILVOLA 1955 and 1956, LAINE 1964) and flora (KALLIO 1961) are also southern in character.

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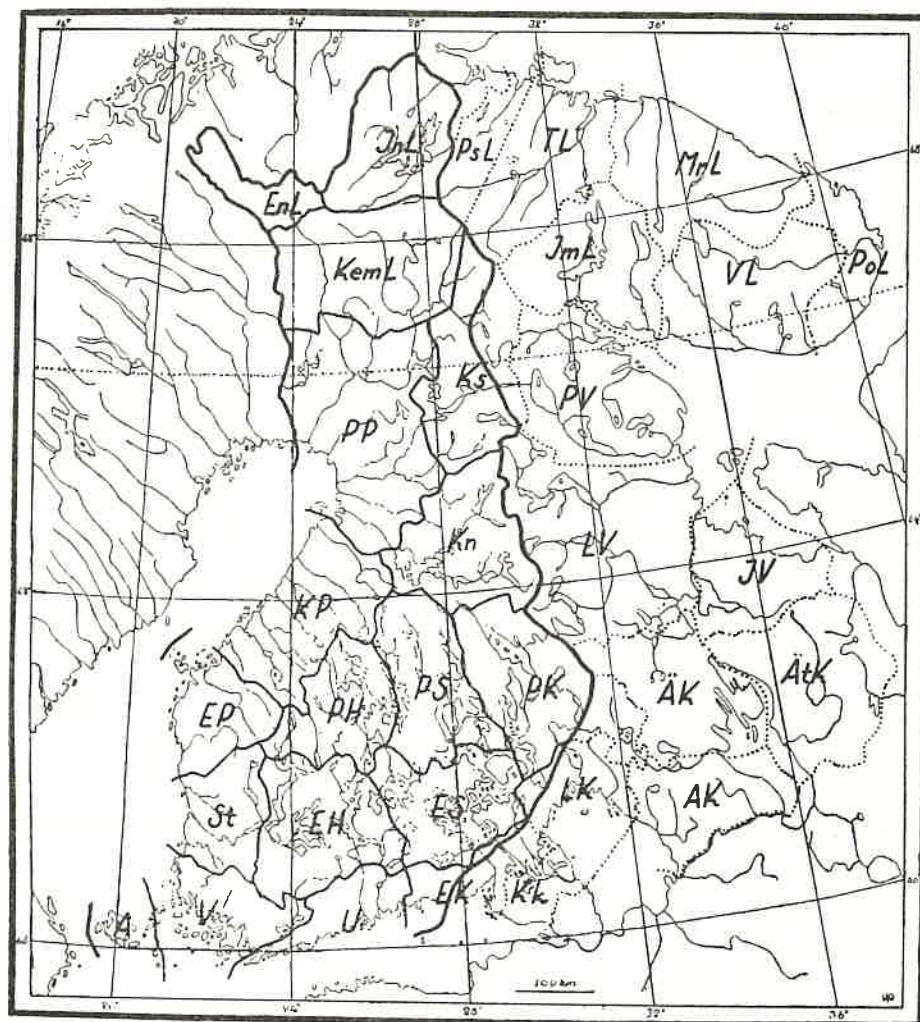
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The biogeographical provinces of Eastern Fennoscandia

A	= Ahvenanmaa	KemL	= Kemin Lappi
V	= Varsinais-Suomi	EnL	= Enontekiön Lappi
U	= Uusimaa	InL	= Inarin Lappi
EK	= Etelä-Karjala	Kk	= Karjalan kannas
St	= Satakunta	AK	= Aunuksen Karjala
EH	= Etelä-Häme	ÄK	= Äänisen Karjala
ES	= Etelä-Savo	ÄtK	= Äänisen takainen Karjala
LK	= Laatokan Karjala	LV	= Länsi-Vienna
EP	= Etelä-Pohjanmaa	IV	= Itä-Vienna
PH	= Pohjois-Häme	PV	= Pohjois-Vienna
PS	= Pohjois-Savo	ImL	= Imanteron Lappi
PK	= Pohjois-Karjala	VL	= Varsugan Lappi
KP	= Keski-Pohjanmaa	PoL	= Ponoin Lappi
Kn	= Kainuu	PsL	= Petsamon Lappi
PP	= Pohjois-Pohjanmaa	TL	= Tuuloman Lappi
Ks	= Kuusamo	MrL	= Muurmannin Lappi