Distribution: Iceland, Denmark.

Biology: In Salix phylicifolia scrub in a luxuriant, though dry, meadow. August 20th.

166. *Tetrastichus thysanotus* Förster.

Tetrastichus thysanotus Förster 1861 p. 38; Bakkendorf 1955 p. 155, figs. 14, 26, 40, 41.

Iceland records:

Tetrastichus sp. Lindroth 1931 p. 345.
Geniocerus charoba Lindroth 1931 p. 345.
Geniocerus clavicornis Lindroth 1931 p. 345.
Tetrastichus thysanotus Bakkendorf 1955 p. 155.

Occurrence in Iceland: *N.:* Vatnsdalshólar (H.B.). *S.:* Kvisker and Fagurhólsmýri, Öræfi (H.B.); Hnausar, Meðalland (Lth.); Pétursey, Mýrdalur (Lth.).

Commonest in the southern region, where 26 specimens have been caught in a number of localities. In the northern region 5 specimens were caught in one locality.

Distribution: The Faroes, Switzerland.

Biology: Taken in a sandy meadow near a river, in a rich vegetation on a slope, and under old hay in a potato-pit. Only females have been found in Iceland. July 18th to August 27th.

167. *Tetrastichus brachycerus* Thomson.

Tetrastichus brachycerus Thomson 1878 p. 296.

Iceland record:

Tetrastichus brachycerus Bakkendorf 1955 p. 154.

Occurrence in Iceland: *E.:* Egilsstaðir.

Only one female. Swept on grass. August 11th.

Distribution: Sweden.

168. *Tetrastichus* sp.

Tetrastichus sp. Bakkendorf 1955 p. 156.

Iceland record:

Tetrastichus sp. Bakkendorf 1955 p. 156.

Occurrence in Iceland: *E.:* Egilsstaðir.

One male specimen was swept in grass. August 11th.

Chalcid sp. Falk 1940 p. 32, 38. Taken in the Snæfell-district northeast of Vatnajökull.

The identity is quite uncertain.

9. Fam. Mymaridae.

169. *Polynema atratum* Haliday.

Polynema ovulorum Bakkendorf 1934 p. 81, figs. 95–102; Polynema atratum Hincks 1950 p. 199.

Iceland record:

Polynema atratum Bakkendorf 1955 p. 156.

Occurrence in Iceland: *N.W.:* Hagi, Barðaströnd.

A single female has been captured.

Distribution: England, Denmark, Belgium, Esthonia, probably common all over Europe.

Biology: In Denmark bred from jassid eggs in Juncus species.

Remarks: According to Bakkendorf the specimen differs from typical *atratum* specimens in having smaller and more parallel-sided wings.

170. *Anaphes* sp.

Anaphes sp. Bakkendorf 1955 p. 156, fig. 41.

Iceland records:

Mymar sp. Lindroth 1931 p. 343.
Anaphes sp. Bakkendorf 1955 p. 156.

Occurrence in Iceland: *S.:* Drangshlíð, south of Eyjafjöll (Lth.).

Only a single female. On a dry south-facing slope. June 24th.

Biology: The species of this genus are parasites in insect eggs.

Gen. sp. (*Mymarinae*) Lindroth 1931 p. 343. One specimen captured at Akureyri, on hard grassy ground near the sea. August 11th or 12th.

The specimen could not be found in the collection of Lindroth in Göteborg, and must be regarded as lost (Bakkendorf 1955 p. 135).

Proctotrupoidea.

10. Fam. Proctotrupidae.

171. *Exallonyx ligatus* Nees ab Esenbeck.

Exallonyx ligatus Kieffer 1914 b p. 52; Nixon 1938 p. 437, figs. 6, 15, 20.

Occurrence in Iceland: *S.:* Hornafjörður (G.G.); Kvísker, Öræfi (H.B.). May 25th to July.

Two females, only, of this new Icelandic species have been taken in two different localities in the southeastern part of the country.

Distribution: Shetland Isles, and common all over Europe; also recorded from Algeria.

Biology: A parasite of larvae of staphylinid beetles such as *Aleochara* and *Quedius*.

11. Fam. Diapriidae.

172. *Platymischus dilatatus* Westwood.

Platymischus dilatatus Kieffer 1916 p. 34, fig. 11.

Occurrence in Iceland: *W.:* Near Reykjavík (also G.G.). May and August.

Distribution: Great Britain, Belgium, and Sweden.

Biology: In Europe the species is a parasite in the puparia of Diptera living in seaweed.

173. *Loxotropa aptera* Ruthe.

Diapria suspecta Thomson 1858 p. 364; Loxotropa aptera Kieffer 1916 p. 173; Loxotropa laticeps Kieffer 1916 p. 175; Loxotropa thomsoni Kieffer 1916 p. 182.

Iceland records:

Diapria aptera Ruthe 1859 p. 313.
Loxotropa aptera Lindroth 1931 p. 341.
Phaenopria halterata Tuxen 1944 p. 202, table 12.

Occurrence in Iceland: *N.W.:* Reykhólar (Lth. unpubl.); Staður, Reykjanes (Lth. unpubl.); Hagi, Barðaströnd. *N.:* Mælifell: Skíðastaðalaug near Mælifell (Tuxen); Slúttnes in Mývatn (Lth.); Þórshöfn (Lth. unpubl.). *E.:* Vopnafjörður (Lth.); Egilsstaðir; Seyðisfjörður (Lth. unpubl.); Reyðarfjörður (Lth. unpubl.). *S.:* Dynjandi. Hornafjörður (Lth. unpubl.); Kvísker, Öræfi (H.B.); Fagurhólsmýri. Öræfi (H.B.); Svínafell, Öræfi (Lth. unpubl.); Hnausar, Meðalland (Lth. unpubl.); Gröf, Skaftártunga (Lth. unpubl.); Pétursey, Mýrdalur (Lth.): Ölfusá (G.G.). *W.:* Near Þingvellir (Ruthe); Reykjavík (G.G.); Seltjarnarnes near Reykjavík (G.G.); Suður Reykir (Lth. unpubl.).

Common in all coastal regions, so far not taken in the central highland.

Distribution: The Faroes, Great Britain, Denmark (new record), and Sweden (Stockholm and Skåne).

Biology: In Iceland taken in different kinds of vegetation, often grasses, near water, lakes, brooks, rivers, and the sea, in several localities also taken near hot springs. At the hot spring Skíðastaðalaug taken a few centimetres from the spring water in soil of a temperature of 41° C. In a few localities taken in drier biotopes such as south-facing slopes with a rich vegetation. June 26th to August 27th.

In Sweden taken under decaying vegetables and under seaweed on the shore (Thomson l.c.); in England common on the coast (Nixon in litt.).

Remarks: After examination of some Icelandic specimens of *aptera*, G. E. J. Nixon was able to state that they were identical with specimens identified by him as *Diapria suspecta* Thoms. nec Nees. A comparison of Icelandic specimens with specimens from the collection of Thomson at Lund, Sweden, showed that Nixon was quite right. The female described by Thomson (= *laticeps* Kieff. new name) belongs to a female form of *aptera* Ruthe with the wings almost reaching the tip of the abdomen, thus not strongly reduced, as described in *aptera*, that is, with wings not reaching the base of the abdomen. Females with well developed wings are rather rare in the Icelandic material, only 4 specimens out of 31 known to me. In one female in this material the wings were absent. The female antenna is shown in fig. 20 a.

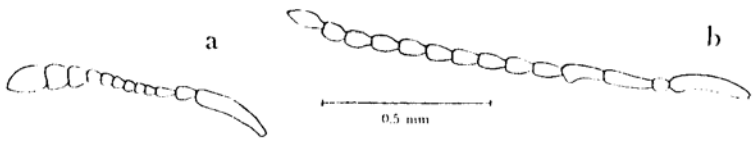

Fig. 20. *Loxotropa aptera* Ruthe. a. Female antenna. b. Male antenna.

The male of *suspecta* Thoms. (= *thomsoni* Kieff. new name), in accordance with Icelandic males of *aptera* Ruthe, has hitherto not been described. They seem always to have highly reduced wings or to be wingless (29 Icelandic males examined); the antenna (fig. 20 b) is about the length of antennal segment 14 longer than the head and body together, and provided with fine hairs shorter than the width of the segments. The abdomen is comparatively shorter than in the female and rounded behind. Otherwise like the female.

Thomson states the head of *suspecta* to be almost double the width of the thorax ("fere duplo latiori"). Actually the head is only 1½ times as broad as the thorax.

I have not seen the females mentioned by Ruthe, the type material of *aptera*. They were not found in the collection of Ruthe in Wien and are possibly lost. Nevertheless I think it safe, on the basis of the description and a correctly determined Icelandic material, to propose to drop *Diapria suspecta* Thoms. nec Nees and as a consequence the new names for this species, *laticeps* Kieff. and *thomsoni* Kieff., as synonyms of *Loxotropa aptera* Ruthe, according to the investigations mentioned above.

In some individuals with much reduced wings a tendency to a decrease in the size of the foveae of the scutellum can be seen; thus the foveae

are almost absent in one of the specimens mentioned by Tuxen (l.c.) as *Phaenopria halterata*; this justifies the determination to the genus *Phaenopria*.

174. *Loxotropa succica* Kieffer.

Basalys dispar Thomson 1858 p. 368; Loxotropa succica Kieffer 1916 p. 175.

Iceland records:

Loxotropa sp. (no. 26) Lindroth 1931 p. 341 (female).
Loxotropa sp. (no. 27) Lindroth 1931 p. 341 (male).

Occurrence in Iceland: *N.W.*: Staður, Reykjanes (Lth.). –*N.*: Skútustaðir, Mývatn (Lth.).

Only a male and a female have been captured.

Distribution: The Faroes, Sweden, and Denmark (new record).

Biology: Taken on grassy ground near a lake and on a south-facing slope with small stones. July 17th and August 17th or 18th.

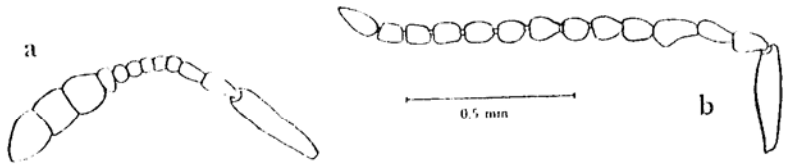

Fig. 21. *Loxotropa succica* Kieff. a. Female antenna. b. Male antenna.

Remarks: Both the male and the female agree with specimens of *dispar* in the Thomson collection. It seems probable that species like *crassiceps* Kieff., *crassicornis* Kieff., *crassiclava* Kieff. and perhaps *pedisequa* Kieff. and *pedestris* Kieff. are varieties or even synonyms of this species, but it will be necessary to examine the types before making any statements. The female and male antennae are shown in figs. 21 a, b.

175. *Galesus frontalis* Thomson.

Galesus frontalis and clypeatus Thomson 1858 p. 373, 374; Kieffer 1916 p. 219.

Iceland record:

Galesus bispinosus Lindroth 1931 p. 342.

Occurrence in Iceland: *N.W.*: Hagi, Barðaströnd.—*S.*: Kvísker, Öræfi (H.B.); Skaftafell, Öræfi (G.G.); Ölfusárbrú (Lth.). *W.*: Reykjanes, Reykjanesskagi (G.G.); Reykjavík (G.G.); Borgarholt (G.G.); Búðir (G.G.).

So far only captured in the western and southern parts of the country.

Distribution: South Sweden, Denmark (new record).

Biology: At Ölfusárbrú taken near a river on somewhat sandy, hilly ground on turf soil. July 15th to September 22nd.

Remarks: All the specimens, also those mentioned by Lindroth as *bispinosus* Kieff., have an emarginated frontal prominence and they cannot, therefore, belong to *bispinosus* according to Kieffer's key to *Galesus* (1916 p. 203). They belong to *Galesus frontalis* Thoms. Comparisons with the very type specimens of *frontalis*, a male and a female in copula collected by Boheman, see Thomson (l.c.), were kindly undertaken by A. Sundholm, Karlskrona (Sweden), who, while working with Swedish *Galesus*, borrowed the types from Stockholm. Before Sundholm's investigations were performed, I had referred the Icelandic specimens to *Galesus clypeatus* Thoms. because a comparison showed that the Icelandic females agreed in details with the female type material of *clypeatus* in Thomson's collection at Lund. This species, however, is probably a synonym of *frontalis*. Sundholm, who had seen type material of both species, informed me that he considers the two species conspecific. Measurements have proved that the length-ratio of antennal segments 2 and 3 in the female is too variable to be of specifying value, as stated by Thomson. Intermediate forms with a length-ratio between segments 2 and 3 of 1.20—1.30 are commoner than the extremes, regarded by Thomson as different species, namely *frontalis* with the said segments almost of equal length and *clypeatus* with segment 2 almost 1.50 times longer than segment 3. The length-ratios of segments 2 and 3 in four Icelandic females are: 1.18, 1.27, 1.29, 1.43 (averages of measurements of both antennae).

Galesus frontalis is by Kieffer synonymised with *Galesus cornutus* Panz., and Thomson assumes it to be the same as *Galesus* (*Diapria*) *cornutus* Nees. A solution of these problems must await further investigations.

12. Fam. Belytidae.

176. *Atelopsilus borealis* nov. spec.

Atelopsilus Kieffer 1916 p. 381.

Occurrence in Iceland: *N.:* Reykjafjarðarós, Paralátursnes. — *N.:* Nyrðri Súlur at Akureyri (Lth. unpubl.). — *S.:* Gröf, Skaftártunga (Lth. unpubl.). *W.:* Reykjavík.

Not common, but apparently occurring all over the country. Five females.

Distribution: ?Sweden.

Biology: At Akureyri taken in the heath formation 615 metres above sea-level. In other places in mixed vegetation and once under an old beam. June 25th to September 4th.

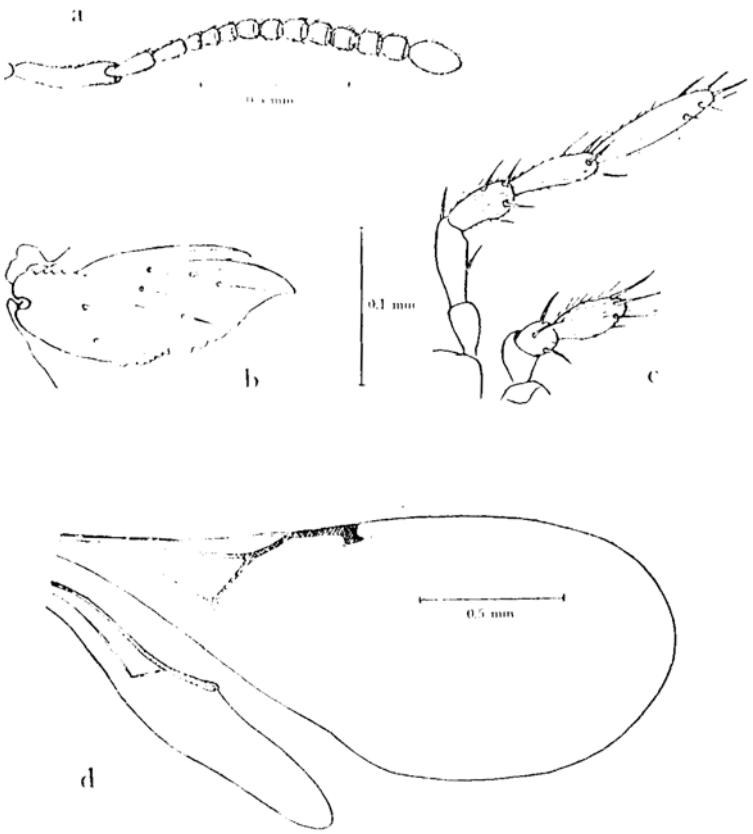

Fig. 22. *Ptelopsilus borealis* nov. spec. a. Female antenna. b. Mandible. c. Labial and maxillary palps. d. Wings.

Description: Female. The head is about one-fifth shorter than broad, of the same length as the scapus of the antenna, the width is like that of the thorax. The female antenna is shown in fig. 22 a. The scapus provided with a stronger and a more minute point distally, is about one-third of the flagellum. The rather slender segment 3 is as long as segment 2 and twice as long as segment 3. The shape of the mandible, the maxillary, and the labial palps are shown in figs. 22 b, c. Only the distal segments of the palps are hairy.

The parapsidal furrows are deeply impressed. Scutellum smooth and evenly rounded behind, with a large fovea. Postscutellum bearing a median keel. The comparatively small propodeum is carinated behind and divided by a median keel into two smooth hairless areas. Abdomen is of the same width as the thorax and almost as long as thorax and head combined.

oblong, tapering at the apex. The almost cylindrical, above somewhat flattened petiolus, sparsely haired on the sides, is about as long as wide with a few feeble longitudinal striations. Tergite 2 is more than half the length of the whole abdomen without any sculpture apart from a few very short, feeble striations at the very base.

The fore wings are about as long as the body, the venation is shown in fig. 22 d. The radial cell is lacking; the marginal vein is only slightly longer than the basal vein; the postmarginalis is not seen. Hind wings with a basal cell (fig. 22 d).

Colours. Black to dark-brown; the antennae, the mouthparts, the tegulae, the wing venation, however, are reddish-brown and the legs light red-brown to brownish-yellow.

Length: about 2 – 2.5 mm. Wing expanse: about 4 mm.

Description made from five females taken in Iceland, as stated above. Holotype (from Nyrðrí Súlur at Akureyri) and two paratypes in the Museum of Natural History in Göteborg, Sweden, in the Lindroth collection of Icelandic Hymenoptera. Two paratypes in the Zoological Museum of Copenhagen.

Remarks: *Borealis* is easily distinguished from the only other species of the genus, the American *Atelopsilus brunneus* Ashm., by characters of the antennae and the petiolus. In *brunneus* the scapus is half as long as the flagellum and segment 3 is one and a half times longer than segment 4, whereas in *borealis* the scapus is only one-third of the flagellum and segment 3 fully two times as long as segment 4. In *brunneus* the petiolus is twice as long as wide, in *borealis* the length and the width are the same. Also the colour distinguishes the two species from each other. *Brunneus* is very much lighter coloured than *borealis*. C. F. W. Muesebeck, Washington, kindly compared some of the Icelandic specimens with the type material of *brunneus* and found them to be congeneric with that species but specifically different from it. He sent me sketches of the female antenna and the wing venation of *brunneus*.

From Europe the genus *Atelopsilus* is only recorded by Jansson (1939 p. 160) from Sweden. Some specimens were kindly lent to me. In my opinion they hardly differ from the Icelandic specimens, but G. E. J. Nixon, who has seen the Icelandic and some of the Swedish specimens, informed me (in litt.) that he thinks that the Icelandic specimens are specifically different from, at least a part of, the Swedish ones, which are referred to *Opazon ciliatum* Thoms. (Thomson 1858 p. 179), a species which Nixon thinks has got a 14-segmented antenna in the female and therefore refers to the genus *Atelopsilus*. The question about the relationship between the Icelandic and Swedish *Atelopsilus* specimens as well as a closer definition of the subtle characters distinguishing

borealis from *ciliatum* Thoms. (sensu Nixon) must wait until a revision of the Belytinae, at present worked out by Nixon, has been published.

177. *Pantoclis trisulcata* Kieffer.

Pantoclis trisulcata Kieffer 1916 p. 483.

Iceland record:

Gen. sp. (Belytini) Lindroth 1931 p. 342.

Occurrence in Iceland: *S.:* Kvísker, Öræfi (H.B.); Varmahlíð, Eyjafjöll (Lth.).

Only two males and a female.

Distribution: The Faroes, Scotland.

Biology: At Varmahlíð taken on a slope exposed to the south with a rich vegetation. June 22nd and August 5th.

Remarks: C. E. J. Nixon determined this new Icelandic species. Also the female mentioned by Lindroth was determinable even though its wings were damaged.

A comparison of Faroe specimens of *Xenotoma scotica* Kieff. (Kryger & Schmiedeknecht 1938 p. 78) with Icelandic *trisulcata* showed that they were conspecific.

178. *Cinetus* sp.

Cinetus Kieffer 1916 p. 551.

Occurrence in Iceland: *N.W.:* Horn.—*N.:* Vaglaskógur, Fnjóskadalur.

Only two females.

Biology: At Horn taken on horse-dung. July 19th and 31st.

Remarks: The specimens are in such a poor condition that they can hardly be determined to species. They seem to have some affinity to *Cinetus filicornis* Thoms. and perhaps *tenuicornis* Thoms. They were compared with specimens in the Thomson collection.

13. Fam. Ceraphrontidae.

179. *Ceraphron nigriceps* Thomson.

Calliceras nigriceps Kieffer 1914b p. 87; Szelényi 1939 p. 86.

Iceland records:

Calliceras nigriceps Lindroth 1931 p. 340.
Calliceras xanthosoma Lindroth 1931 p. 340.
Calliceras nana Lindroth 1931 p. 340.
Calliceras nigriclavis Lindroth 1931 p. 340.

Occurrence in Iceland: *N.:* Mývatn; Skútustaðir, Mývatn

(Lth.); Slúttnes in Mývatn (Lth.). — *E.:* Vopnafjörður (Lth.); Hauksstaðir, Vopnafjörður (Lth.); Djúpivogur, Búlandsnes (Lth.). *S.:* Kvísker, Öræfi (H.B.); Breiðabólsstaður (Lth.); Pétursey, Mýrdalur (Lth.); Ölfus (G.G.).

So far not captured in the western and northwestern parts of the country or in the central highland.

Distribution: The Faroes, Great Britain, Denmark, Sweden, and possibly also Germany (as *nana* Nees) and Switzerland (as *nigriclavis* Först.).

Biology: Mostly taken in grass-fields with different vegetation, varying from moist ground with Carex and Calamagrostis near a small lake to dry meadows with Salix phylicifolia. Even found on dry stony slopes with Archangelica. July 15th to September 7th.

Remarks: In the material examined 11 out of 29 females had normal, fully developed, wings (*nigriceps* Thoms.), 17 had much shortened wings not reaching behind the thorax (*nigriclavis* Först.), and 1 female was apparently without wings (*nana* Nees). Of 15 males 3 had normal wings and 12 shortened wings. The specimens with shortened wings are smaller than those with normal wings but otherwise there seem to be no differences between the specimens and they should probably be referred to one and the same species, as done here by G. E. J. Nixon, who determined the material.

Xanthosoma Kieff. mentioned by Lindroth (l.c.) turned out to belong to the form with reduced wings of *nigriceps*.

180. *Ceraphron abdominalis* Thomson.

Calliceras abdominalis Kieffer 1914 b p. 95.

Iceland record:

Calliceras abdominalis halterata Lindroth 1931 p. 340.

Occurrence in Iceland: *E.:* Hauksstaðir, Vopnafjörður (Lth.).

A single female has been captured on hard, though not dry grassy ground with a sparse vegetation of Salix lanata near a brook. August 26th.

Distribution: South Sweden.

Remarks: The specimen has strongly reduced wings just reaching as far back as to the distal ends of the striations of tergite 2, and belongs to the short-winged variety of *abdominalis* mentioned by Thomson (1858 p. 303). It was compared with specimens in Thomson's own collection at Lund.

Thomson's *abdominalis* var. was considered by Szelényi (1939 p. 88) to be a synonym of *Calliceras crassiceps* Kieff. This seems correct, but needs confirmation, Szelényi having not, apparently, seen type-specimens of either *abdominalis* or *abdominalis* var., as he states.

He had seen specimens from Stockholm, probably from the Boheman collection, which had no doubt been determined by Thomson, but these specimens cannot be regarded as types, for in his diagnosis of *abdominalis* Thomson does not mention any specimens from the Boheman collection – as he does for example in the case of *Callicera nigriceps* (1858 p. 302) – but he states that *abdominalis* has been collected near Lund, which indicates that the specimens belong to his own collection belonging to Zoologiska Institutionen, Lund.

181. *Lagynodes pallidus* Boheman.

Lagynodes pallidus Kieffer 1911b p. 134–136, fig. 79; Lagynodes rufescens ibid. p. 136; Lagynodes pallidus Szelényi 1936 p. 60.

Iceland records:

Lagynodes rufescens Ruthe 1859 p. 311.
Ceraphron sp. Ruthe 1859 p. 312.
Lagynodes pallidus Lindroth 1931 p. 311.
Lagynodes pallidus Jansson 1952 p. 74–76.

Occurrence in Iceland: *E.:* Egilsstaðir; Seyðisfjörður (Lth.); Djúpivogur, Bulandsnes (Lth.). *S.:* Dynjandi, Hornafjörður (Lth.); Hoffell, Hornafjörður (Lth.); Kvísker, Öræfi (H.B.); Foss, Síða (Lth.); Breiðabólsstaður (Lth.); Ölfusárbrú (Lth.); Grímsnes near Sog (G.G.).– *W.:* Near Þingvellir (Ruthe).

The species seems to be of a south-eastern distribution in Iceland. It has never been taken in the northern and central parts of the country, and as to the western region it is only recorded from a single locality in the South. (Fig. 28 c, p. 155).

Distribution: All over Europe, Caucasus.

Biology: The species seems to prefer rather warm biotopes in Iceland, having often been taken on south-facing slopes with grass-vegetation but also with Archangelica on stony ground; once taken in birch-scrub. July 14th to September 7th.

Remarks: From Wien I borrowed a pin bearing the following notes on four labels: "18/7 Standg. Island 1861 Ruthe Type Lagynodes rufescens m." Unfortunately the pin was empty, and as the description of *rufescens* was based on a single female, the holotype of the species must therefore now be regarded as lost.

As shown by Szelényi (l.c.), on the basis of the description, *Lagynodes rufescens* is merely a form of the variable *Lagynodes pallidus*. This view is supported by Jansson (l.c.), who has seen Icelandic specimens. The description of *rufescens* fits all the small specimens of *pallidus*. In the Icelandic material of *Lagynodes* both the form *rufescens* and the typical *pallidus* as well as intermediate forms are represented.

The *Ceraphron* sp. mentioned by Ruthe was also borrowed from Wien. It is a male of *Lagynodes pallidus*, taken on the same date as the female of *rufescens*.

182. *Lygocerus rufipes* Thomson.

Lygocerus rufipes Kieffer 1914b p. 153.

Iceland record:

Lygocerus ?basalis Lindroth 1931 p. 341.

Occurrence in Iceland: *N.*: Akureyri (Lth.). *S.*: Kvísker, Öræfi (H.B.).

Only one female and one male.

Distribution: South Sweden.

Biology: At Akureyri taken on hard grassy ground near the sea. August 11th and 15th.

Remarks: The specimens agree with specimens of *rufipes* in the Thomson collection at Lund, with which they were compared. They were also compared with specimens of *basalis* Thoms., to which the Icelandic male was provisionally referred by Lindroth. The Icelandic specimens were absolutely specifically different from that species.

183. *Lygocerus* sp.

Lygocerus Kieffer 1914b p. 145.

Iceland record:

Conostigmus norvegicus Lindroth 1931 p. 341.

Occurrence in Iceland: *N.W.*: Hagi, Barðaströnd. *N.*: Borgará near Brenniborg: Akureyri (Lth.): Grímsstaðir, Mývatn (Lth. unpubl.). *S.*: Kvísker, Öræfi (H.B.): Fagurhólsmýri, Öræfi (G.G.: H.B.).

Hitherto only taken in the northern region and in the area of Öræfi in the southern region.

Distribution: The Faroes (as *Lygocerus rectangularis* Kieff.).

Biology: At Akureyri taken on flowers of Archangelica officinalis infested with aphids, possibly the host of the species. July 25th to September 10th.

Remarks: The Icelandic specimens belong, no doubt, to the same species as is mentioned by Kryger & Schmiedeknecht (1938 p. 76) from the Faroes as *Lygocerus rectangularis* Kieff., with which they were compared. However, *rectangularis* does not seem to be the right name for the species, for both Icelandic and Faroese specimens differ rather considerably from the description of *rectangularis* given by Kieffer (1914b p. 154). The scapus of the female is about as long

as the following 3 segments of the antenna, not as long as the following 4 segments; the segments of the antenna in the male are more elongated, almost two times longer in proportion to the widths than figured by Kieffer (l.c., fig. 92); the frenum lines of the scutellum meet very near the front line of the scutellum, not far behind, and they are not connected with the front line by a longitudinal line.

The female mentioned by Lindroth as *Conostigmus norvegicus* Thoms. as well as a female labelled *Conostigmus borealis* Thoms. (det. Biró) from the Iceland collection of Lindroth (not published) belong to one and the same species. They were compared with specimens of the respective species in the Thomson collection at Lund, from which they were quite different.

G. E. J. Nixon, who has seen some of the specimens, referred them to the genus *Lygocerus* Först., not to *Conostigmus* Dahlb. I agree with him in this, but I must admit that the differences between the two genera are so vague that in more important characters, also, the Icelandic specimens agree with the genus *Conostigmus*. A determination as to species must await further investigations of these genera.

14. Fam. Scelionidae.

184. *Telenomus* sp.

Telenomus Kieffer 1926 p. 24.

Iceland records:

Telenomus phalaenarum Lindroth 1931 p. 342.
Telenomus sp. Lindroth 1931 p. 342.

Occurrence in Iceland: *N.W.:* Hagi, Barðaströnd. — *N.:* Vatnsdalshólar (H.B.): Goðdalir: Akureyri (Lth.); Goðafoss (Lth.). *E.:* Vopnafjörður (Lth.). *S.:* Hólar, Hornafjörður (G.G.); Kvísker, Öræfi (H.B.): Knappavellir, Öræfi (Lth.); Hof, Öræfi (Lth.); Núpsstaður (Lth.): Breiðabólsstaður (Lth.); Drangshlíð, Eyjafjöll (Lth.). — *W.:* Reykholt.

The species has been found in all coastal regions but not in the central highland. It is commonest in the southern parts of the country.

Distribution: The Faroes (as *Telenomus phalaenarum* Nees, Kryger & Schmiedeknecht 1938 p. 78; Faroe and Icelandic specimens were compared and were found to be conspecific).

Biology: In Iceland very often taken in grass-meadows and especially on more or less dry grass-slopes exposed to the south. Once taken in a moor and once in the heath formation. June 24th to August 27th. *Telenomus*-species are parasites in insect-eggs, mostly eggs of Lepidoptera and Hemiptera.

Remarks: G. E. J. Nixon preferred not to give a definite name to the species, and I follow him in this, though one should think that it would be possible to determine the species with as big a material as 40 specimens at hand; but, as a matter of fact, these specimens may agree with the often rather brief descriptions of several species of the genus, and it is therefore absolutely necessary to compare them with type-material, or at least a well determined material, to be able to give the exact name, and this has for the present been impossible.

The specimens do not seem to belong to *phalaenarum* Nees as mentioned by Lindroth (l.c.) for they have a coriaceous vertex, antennal segment 2 almost 1½ times longer than antennal segment 3, and the legs darker, namely black with tips of joints, tarsi, and sometimes tibiae of the front legs of a lighter, brownish colour.

Mesonotum has a stronger coriaceous sculpture than the vertex, more or less dull; the scutellum is rather shiny with some few punctures; tergite 2 is strongly striated at base, and in some of the specimens a very faint striation can be seen further back; tergite 2 is a little broader than long; the ovipositor is rather long, about 1/5 the length of the abdomen, but the length is rather variable. The wings are smoky.

A comparison of the specimens mentioned as *Telenomus* sp. by Lindroth with the specimens referred to *phalaenarum* showed that they doubtless belong to the same species.

185. *Baeus seminulum* Haliday.

Baeus seminulum Kieffer 1926 p. 148, fig. 93.

Occurrence in Iceland: *N.*: Mælifell, Skagafjörður.

A single female has been caught in the northern region. Fell-field with sparse vegetation ("Melar"). August 12th.

Distribution: Great Britain, Sweden, Denmark, Germany, Belgium, and Hungary.

Biology: In Denmark the species has been bred from spider-eggs (*Theridion* sp.).

186. *Trimorus pedestris* Nees.

Hoplogryon (Hoplogryon) pedestris Kieffer 1926 p. 189.

Occurrence in Iceland: *N.W.*: Staður, Reykjanes (Lth. unpubl.). *E.*: Egilsstaðir. *S.*: Fagurhólsmýri, Öræfi (H.B.); Núpsstaður; Breiðabólsstaður; Hnausar, Meðalland; Gröf, Skaftártunga; Stóra Mörk; Barkarstaðir, Fljótshlíð (these 6 localities Lth. unpubl.). *W.*: Kollafjörður (Lth. unpubl.).

Hitherto not taken in the northern and central regions; the species

seems to be most frequent in the southern parts of the country. (Fig. 28 d, p. 155).

Distribution: Norway (Dovre), Sweden (as far north as Lapland), Belgium, and Germany.

Biology: Taken in grass-fields, ranging from rather moist conditions near a brook to very dry conditions on slopes exposed to the south. Also taken in a bog, and among grass-turfs and old hay on bare sandy ground and under seaweed on the seashore. At Kollafjörður taken near a hot spring in a meadow with luxuriant vegetation. June 10th to August 25th.

187. *Trimorus cursor* Kieffer.

Hoplogryon (Hoplogryon) cursor Kieffer 1926 p. 192.

Iceland record:

Hoplogryon cursor Tuxen 1944 p. 202, table 12.

Occurrence in Iceland: *N.:* Skíðastaðalaug, Skagafjörður (Tuxen). *W.:* Suður Reykir (Lth. unpubl.).

Rarely taken in Iceland; the findings in the northern as well as in the south-western parts of the country may indicate that the species occurs all over the country, if not restricted to hot spring areas only.

Distribution: Scotland.

Biology: At Skíðastaðalaug in soil close to the hot spring water (temperature of the soil from 23° C to 41° C), at Suður Reykir in compost at glass-houses near hot springs. June 21st to August 8th.

Remarks: G. E. J. Nixon compared the Icelandic specimens with a type specimen in the British Museum and confirmed the determination.

188. *Trimorus brachypterus* Thomson.

Hoplogryon (Hoplogryon) brachypterus Kieffer 1926 p. 191.

Occurrence in Iceland: *N.:* Stapi, Hjeraðsvötn; Mælifell: Stafn, Svartárdalur, Húnavatnssýsla; Goðdalir; Akureyri (Lth. unpubl.). Skútustaðir, Mývatn (Lth. unpubl.).

The species has a limited northern distribution within Iceland. (Fig. 30 d, p. 158).

Biology: At Mælifell and Stafn (500 m above sea-level) taken in a heath-formation; at Akureyri taken in a dry grass-field near the sea. July 10th to August 22nd.

Distribution: Sweden.

Remarks: The Icelandic specimens show accordance with females of *brachypterus* Thoms. in Thomson's own collection, with which they were compared.

189. *Trimorus* sp.

Hoplogryon Kieffer 1926 p. 182.

Occurrence in Iceland: *N.:* Mælifell. – *E.:* Hauksstaðir, Vopnafjörður (Lth. unpubl.). *S.:* Skaftafell, Öræfi: Núpsstaður: Hnausar, Meðalland: Gröf, Skaftártunga: Barkarstaðir, Fljótshlíð (all Lth. unpubl.). – *W.:* Suður Reykir (Lth. unpubl.).

The species is commonest in the southern parts of the country; so far not taken in the northwestern and central regions.

Biology: Among grasses in homefields and on grass-slopes, once taken in grass-turfs and old hay on bare sand and once taken in compost near glasshouses. June 5th to August 26th.

Remarks: It has been impossible to give a definite name to these Icelandic specimens with only the unfortunately brief descriptions of the species in question at hand. They may belong to a relatively small, dark-coloured species with much reduced wings, a relatively strong metanotal spine, and with tergite 3 without striations at base, but scale-like coriaceous all over.

190. *Trimorus punctulator* Ruthe.

Paragryon punctulator Kieffer 1926 p. 235.

Iceland records:

Prosacantha punctulator Ruthe 1859 p. 342.
Prosacantha punctulator Lindroth 1931 p. 342.

Occurrence in Iceland: *N.:* Siglufjörður. *S.:* Kvísker, Öræfi (H.B.): Hof, Öræfi; Hnausar, Meðalland: Gröf, Skaftártunga: Vík, Mýrdalur: Drífandi, Seljaland; Stóra Mörk, Stóri Dalur; Langadalur, Þórsmörk: Þórólfsgil, Fljótshlíð (last eight localities Lth. unpubl.). – *W.:* Near Þingvellir (Ruthe); Reykjavík.

The species seems to be by far commonest in the southern parts of the country. Hitherto only taken in one locality in the northern region and not at all in the north-western, eastern, and central regions.

Distribution: The Faroes.

Besides from *punctulator* mentioned by Kryger & Schmiedeknecht (1938 p. 79) from the Faroes, also *Hoplogryon ovata* Thoms. of the same authors belongs to this species. The true *ovata* Thoms. is not conspecific with *punctulator* Ruthe; comparisons with the material in the Thomson collection at Lund were made.

Biology: In Iceland taken in more or less cultivated grassfields, on grassy slopes, two times near brooks, once in flowers of Archangelica. May 30th to July 25th.

Remarks: The type material, two females, belong to the Natur-

historisches Museum in Wien. An examination showed that they differ only very little from the description. Ruthe states that they are apterous; as a matter of fact they have wings, though greatly reduced ones, not much longer than the scutellum. Ruthe also states that the post-scutellum is without a spine; it is more correct to describe the post-scutellum as provided with a very minute spine not longer than basally wide; this character is seen in the type material as well as in the new Icelandic specimens. Thus *punctulator* is intermediate between the genera *Hoplogryon* and *Paragryon* in Kieffer (1926).

The sculpture of tergite 3 is described by Ruthe as "sehr zierlich gedrängt punktiert, fast wie fein gekörnelt". This gives a false impression, I am afraid; the sculpture may be termed reticulated, the fine meshes of the net cutting out units resembling oblong, flat scales.

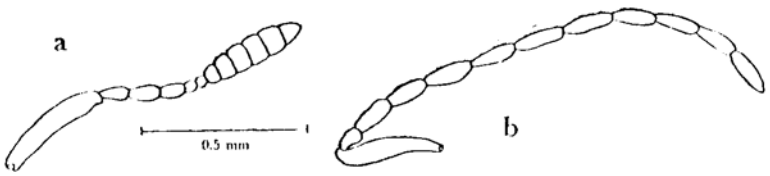

Fig. 23. *Trimorus punctulator* Ruthe. a. Female antenna. b. Male antenna.

The head is provided with a relatively strong keel in the median line from the base of the antennae almost to the front ocelli. The upper part of the head is more or less granulated coriaceous, whereas the lower parts are striated with the striae radiating from the base of the mandibles and the antennae; a smooth, shiny area can be seen on each side of the median keel. The female antenna is shown in fig. 23 a.

In a material of 31 specimens, only one single specimen of the hitherto unknown male was found. It agrees with the female except for the antennae (fig. 23 b), which are slender, about as long as the body, with segment 1 (scapus) as long as the following 3 segments, segment 2 is short and only half the length of segment 3; this is inconsiderably shorter and broader than the following segments, which are nearly equal in size, being about 3 times as long as broad, the distal segment, however, nearly 4 times as long as broad.

15. Fam. Platygastridae.

191. *Polygnotus opacus* Ruthe.

Platygaster opacus Ruthe 1859 p. 313; Platygaster (Polygnotus) striolatus Thomson 1859 p. 83; Polygnotus pleuron Kieffer 1926 p. 739, figs. 300 a–b; Platygaster opaca Kieffer 1926 p. 830.

Iceland records:

Platygaster opacus Ruthe 1859 p. 313.
Polygnotus longestriolatus Lindroth 1931 p. 342.
Platygaster opacus Lindroth 1931 p. 343.

Occurrence in Iceland: *S.:* Kvísker, Öræfi (H.B.); Fagurhólsmýri, Öræfi (Lth. unpubl.); Skaftafell, Öræfi (Lth. unpubl.); Gröf, Skaftártunga (Lth.); at Drífandi, Seljaland (Lth.); Þórólfsgil and Barkarstaðir, Fljótshlíð (Lth.); Rauðumýrarmúli near Laugarvatn.—*W.:* Near Þingvellir (Ruthe); Reykjavík (Lth. unpubl.); Suður Reykir (Lth.).—*Centr.:* Víðidalur north-east of Vatnajökull (G.G.).

Common, but only found in the southern parts of the country. Once in the south-eastern part of the central highland, presumably in a locality with a relatively warm climate.

Distribution: West Greenland (new record); Sweden (as *Polygnotus striolatus* Thoms.), Denmark (new record), and England (as *Polygnotus pleuron* Walk. sensu Kieffer l.c.).

Biology: Often taken in grass on more or less moist ground, thus found on rather moist grassy ground near a bog and in moss and grass close to a brook. Further, on rather dry homefields sometimes near farms. Also taken in a compost-heap, and at Suður Reykir taken in a meadow near hot springs. May 30th to July 10th.

Remarks: The holotype of this species was borrowed from the Naturhistorisches Museum in Wien. The specimen is complete except for the right antenna, which is missing.

All the Icelandic specimens of *Polygnotus*, also the specimens mentioned as *longestriolatus* by Lindroth, agree in all respects with the holotype. A comparison with specimens of *longestriolatus* in Thomson's own collection showed that they are quite different from Icelandic specimens. *Longestriolatus* is of a more elongate habit, also the antennae are more slender, its wings are smoky, and the sculpture of the head, mesonotum, and scutellum is not of the dull, regular, coarse-granulated scale-like character as is found in *opacus;* especially the sculpture of the vertex of *longestriolatus*, which is transversely striated, makes it easily distinguishable from *opacus*.

The Icelandic specimens have striations on about two-thirds of abdominal segment 2, the striations being very fine on the distal half of the segment just as described for *longestriolatus*. This character was also seen in all the specimens standing under the name of *striolatus* in Thomson's collection. This was surprising, for Thomson in his Swedish comments to the diagnosis of *striolatus* says that the fine striae of segment 2 only extend almost to the middle of the segment. He has apparently overlooked the microscopically fine striations further back on the segment.

A comparison of Thomson's *striolatus*-specimens with Icelandic specimens showed furthermore that they agreed in other characters, also, to such an extent that they undoubtedly belong to one and the same species. *Platygaster striolatus* Thoms. must accordingly be suppressed as a synonym of *Polygnotus opacus* Ruthe (syn. nov.). Whether *striolatus*

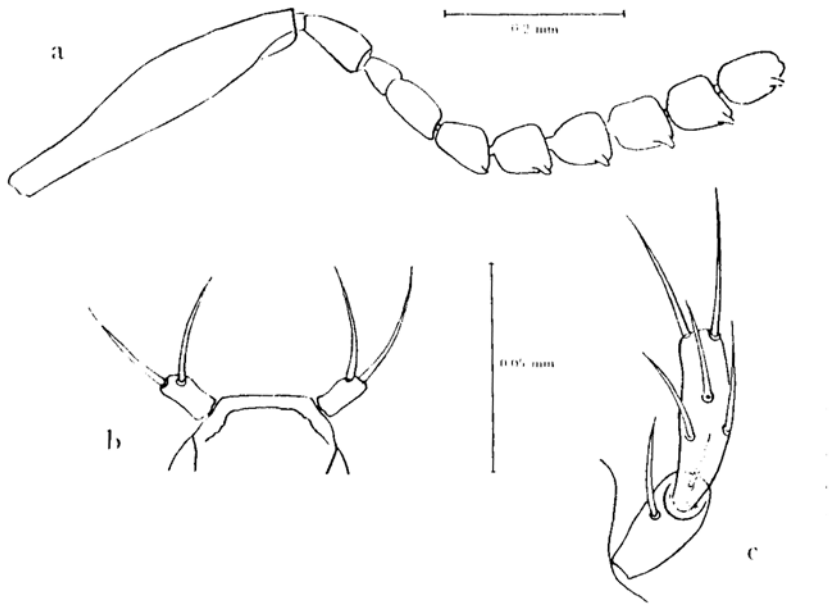

Fig. 24. *Polygnotus opacus* Ruthe. a. Female antenna. b. Labial palps. c. Maxillary palp.

Thoms. is really a synonym of *striolatus* Nees, as assumed by Thomson, cannot be settled before the type material of *striolatus* Nees has been examined. If they are synonyms, and the description of *striolatus* Nees does not speak against it, *opacus* Ruthe should be replaced by the older name, *striolatus* Nees.

Some of the Icelandic specimens were examined by G. E. J. Nixon, who in a letter suggests that they may belong to *Polygnotus pleuron* Walker. This seems very likely: Walker's description does not speak against it, but only an examination of his type-material can prove it. The Icelandic *Polygnotus*-specimens as well as Swedish specimens from Thomson's collection are, without great doubt, identical with the species described as *pleuron* Walk. by Kieffer (1926 p. 739) apart from the sculpture of tergite 2, a character which may prove to be of no importance.

Kieffer gives a re-description of the species much more comprehensive than Walker's original diagnosis, but unfortunately he does not state whether the re-description is based on examination of Walker's types or other material determined by himself; it is therefore doubtful whether or not the species described by Kieffer is the true *pleuron* Walk.

Only females have been captured in Iceland: fig. 24a shows the antenna. The male antennae of *opacus* are much like the antennae of *pleuron* as figured by Kieffer (1926 figs. 300a–b); males were seen in the Thomson collection.

The shape of the labial and maxillary palps of *opacus* is shown in figs. 24b, c. The oblong form of the labial palp shows that the species belongs to the genus *Polygnotus* as conceived by Kieffer.

192. *Platygaster splendidulus* Ruthe.

Platygaster splendidulus Ruthe 1859 p. 313; Platygaster leptocerus Thomson 1859 p. 87; Platygaster leptocera Kieffer 1926 p. 825; Platygaster splendidula Kieffer 1926 p. 831.

Iceland records:

Platygaster splendidulus Ruthe 1859 p. 313.
Platygaster splendidulus Lindroth 1931 p. 343.

Occurrence in Iceland: *N.*: Vatnsdalshólar (H.B.). *S.*: Kvísker, Öræfi (H.B.); Skaftafell, Öræfi: Núpsstaður: Breiðabólsstaður: Hnausar, Meðalland; Pétursey, Mýrdalur; Drangshlíðarfjall, Eyjafjöll (last six localities Lth. unpubl.). *W.*: Near Þingvellir (Ruthe).

Only a single specimen has been captured in the northern region, whereas the species is common in the southern parts of the country: at Kvísker taken in numerous specimens. (Fig. 29a p. 156).

Distribution: The Faroes (as *Platygaster leptocerus* Kryger & Schmiedeknecht 1938 p. 82), Sweden (as *Platygaster leptocerus* Thoms.).

Biology: Taken on south-facing grass-slopes or slopes with different kinds of vegetation, on homefields more or less cultivated, once in a bog and once in grass-turf and old hay on bare sand. Kryger & Schmiedeknecht (l.c.) mention that in the Faroes the species were bred from pupae of *Cecidomyidae* in grasses.

Remarks: The type-material (2 females) of this species belong to the Naturhistorisches Museum in Wien, whence it was borrowed. An examination of Faroe specimens of *Platygaster leptocerus* Thoms. mentioned by Kryger & Schmiedeknecht (1938 p. 82) showed that these specimens were identical with *splendidulus*. This observation gave grounds for an examination of Thomson's material of *leptocerus* in his collection; it was found that Thomson's specimens were identical

with *splendidulus* Ruthe. and *Platygaster leptocerus* Thoms. is therefore to be regarded as a synonym of *Platygaster splendidulus* Ruthe (syn. nov.).

The shape of the female antennae and labial and maxillary palps are shown in figs. 25 a–c. Ruthe describes the species as totally smooth

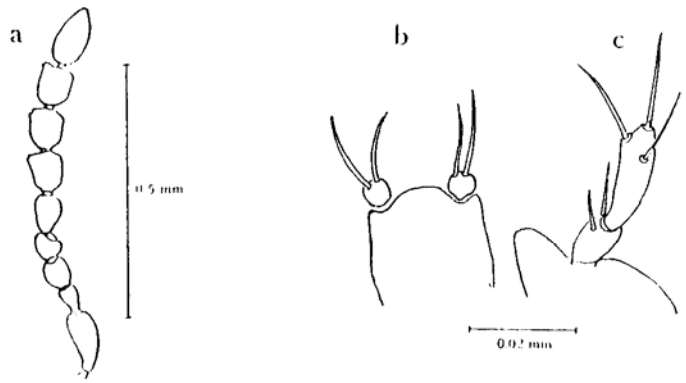

Fig. 25. *Platygaster splendidulus* Ruthe. a. Female antenna. b. Labial palps. c. Maxillary palp.

and shining, and generally it looks smooth, but in some places it has a fine granulate coriaceous sculpture not very dull in appearance, such as in the lateral parts of the vertex of the head and in small areas along the parapsides. The middle part of the vertex is finely transversely striated, and tergite 2 is basally striated, most strongly in the oblong lateral grooves, the striae disappearing gradually toward the middle of the tergite.

The colour is black, as stated by Ruthe, but distally the legs are growing lighter-coloured; thus the tibia and tarsi are brown to light reddish brown, and also the front femur is often brown.

Bethyloidea.

16. Fam. Bethylidae.

193. *Bethylus fuscicornis* Jurine.

Bethylus fuscicornis Kieffer 1914a p. 513.

Iceland records:

Bethylus fuscicornis Lindroth 1931 p. 340.
Bethylus fuscicornis Tuxen 1944 p. 151, table 11.

Occurrence in Iceland: *S.:* Kvísker, Öræfi (H.B.). *W.:* Kollafjörður (Lth.).

Only two females.

Distribution: All over Europe, North Africa.

Biology: At Kollafjörður taken in a moist meadow with a luxuriant vegetation near a hot spring. July 21st and August 4th.

In Europe found to be a parasite of the larvae of some moths.

Scolioidea.

18. Fam. Formicidae.

194. *Ponera punctatissima* Roger.

Ponera punctatissima Stitz 1939 p. 61, figs. 44, 45, 46; Larsson 1943 p. 50, figs. 19 A, C, fig. 20 A.

Occurrence in Iceland: *W.:* Laufskálar, Mýrasýsla (G.G.). Numerous in a glasshouse. November.

Distribution: Mediterranean Europe and also Central Europe, but here most frequently synanthropous, in houses, glasshouses, etc.

Vespoidea.

19. Fam. Vespidae.

195. *Vespula germanica* Fabricius.

Vespa germanica Berland 1928 p. 82, 83, 87, figs. 137, 144, 151.

Occurrence in Iceland: *W.:* Reykjavík (G.G.). January 1937. Only a single specimen has been caught in Iceland, undoubtedly introduced.

Distribution: All over Europe and palaearctic Asia.

Apoidea.

20. Fam. Apidae.

196. *Bombus jonellus* Kirby.

Bombus jonellus Hedicke 1930 p. 234, 239.

Iceland records:

Hunangsfluga Guðmundsson c. 1640 (1924) p. 21.
Apis terrestris Olafsen & Povelsen 1772 p. 603, 712.
Apis terrestris Mohr 1786 p. 93.
Hunangsfluga Pálsson 1791—97 (1945) p. 256.
Bombus subterraneus Pfeiffer 1852 p. 273.
Bombus terrestris Staudinger 1857 p. 220.
Bombus hortorum Ruthe 1859 p. 379.
Bombus terrestris Walker 1889 p. 224, 275; 1890 b p. 377.
Bombus hortorum Walker 1889 p. 301.
Bombus terrestris Mason 1890 p. 199.
Hunangsflugur Thoroddsen 1911 p. 576; 1913 p. 374.