

telona suurin piirtein valmiiksi Suomen Hyönteistieteellisen Aikakauskirjan hakemiston, joka jäikin hänen viimeiseksi työksensä. Hän oli kuin luotu tällaiseen laajoja ja monipuolisia biologisia tietoja kysyvään tarkkuustyöhön, mikä pitkäaikaisen kokemuksen kanssa kehitti hänet hakemistojen laadinnassa suoranaiseksi taituriksi.

Reuter oli myös suuri kukkien ystävä ja niiden kasvattaminen ja viljeleminen oli hänen lempiharrastuksiaan. Etenkin hänen kaunis ja lajirikas kivikkokasvipuutarhansa sukutilallaan Paraisten Lofsdalissa oli hänen erityisen huolenpitonsa kohteena.

Professori Enzio Reuterissa maamme eläintieteellinen tutkimus menetti monipuolisen ja erittäin ansiotuneen tutkijan, joka monin tavoin on suuresti edistänyt myös entomologista tutkimustamme.

Esko Suomalainen.

Hemipterological observations.

R. LINNAVUORI.

1. *The Finnish species of the genus Micronecta Kirk.*

J. SAHLBERG (1920, p. 206) mentions the following *Micronecta* species from Finland: *M. minutissima* L., v. *poweri* DGL. Sc. and *M. rugicollis* HORV. The last-named species has been described by HORVATH (1901, p. 144 – 145) from a single specimen taken from Sammatti (U) by J. SAHLBERG. J. SAHLBERG later determined several specimens from Hattula (EH) (WEGELIUS leg.) as *rugicollis*. HÅKAN LINDBERG (1924, p. 5 – 6) mentions, however, that the type of *rugicollis* belongs to *minutissima* L., while the specimens from Hattula are v. *poweri* DGL. Sc. LUNDBLAD (1928, p. 11), who has examined the types, has certified its identity with *minutissima*. Not knowing this, I have reported a *Micronecta* species taken by me from Tuulos (EH) as belonging to *rugicollis* and have then stated this to be a good species (LINNAVUORI 1949, p. 64). Assuming that LUNDBLAD's opinion is correct, my species is thus, however, new. LUNDBLAD, in the year 1936, described the species *M. borealis* LUNDBL. from Sweden. This is, however, identical with *M. poweri* DGL. Sc., which has previously been thought to be a variety of *M. minutissima* L. (OSSIANILSSON 1947, p. 4). I have now investigated the Finnish *Micronecta* and have established that we have 3 species in Finland: *M. minutissima* L., *M. wagneri* LINNAV. and *M. poweri* DGL. Sc.

M. minutissima L. (= *rugicollis* HORV.) The commonest species occurring in South and Central Finland. I have found it in Raisio (V) in the shore

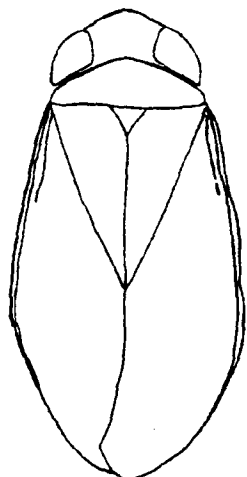


Fig. 1. *Micronecta wagneri* n. sp. - Orig.

water of a river in sandy places. I have also found it at Lammi (EH) in water on a sandy lake shore. Finds in Finland: V: Raisio [R. L. (= R. LINNAVUORI)], Lohja [LINNANIEMI, H. L. (= H. LINDBERG)]. EH: Lammi (R. L.). St: Kankaanpää (LAURILA). PH: Jyväskylä (J. S. = J. SAHLBERG).

M. wagneri LINNAV. The type of *M. rugicollis* HORV. has unfortunately disappeared and I have not been able to examine it. As LUNDBLAD (op. c). states this to be identical with *minutissima*, I describe as new the species which I have previously thought to be *rugicollis*. I name it *M. wagneri* after the prominent German authority on the Hemiptera, Dr. EDUARD WAGNER, who has assisted me greatly in my entomological work.

M. wagneri n. sp. Fig. 1. Length 2 mm. The colouring of the head brownish yellow, with a broad brown stripe in the middle of the vertex. In *minutissima* the head is yellowish with the same brownish stripe on the vertex. The pronotum and elytrae dark brown, the basal part of the clavus lighter. Young specimens may be a little lighter. The body is brown-yellow. *M. minutissima* is usually lighter brownish yellow, sometimes gray-yellow, a form, which resembles then *M. poweri* in its colouring. The head in *M. wagneri* is a little longer and more roundish forwards. The vertex between the eyes is much narrower, being only $1.55 \times$ as broad as the eye (in *minutissima* $1.7 - 1.8 \times$ as broad). The antennae (fig. 2 D) are much smaller and sharper than in *minutissima*. The pronotum is as long as the head or a little shorter. The pala (fig. 2 B) is much larger and broader. The claw of the middle leg is $0.78 \times$ as long as the tarsus, in *minutissima* only $0.58 - 0.65 \times$. The hind leg is similar in both species. The 5th abdominal segment is seen in fig. 3 A. The strigil in the 6th abd. segment (fig. 3 B) is a little smaller and narrower than in *minutissima*. In the middle of the right side of the 7th abd. segment (fig. 3 C) there is a sharp angle. The appendage of this segment is long and narrow, as in *minutissima*. The 8th abd. segment is almost similar in both species. The appendage of the left side is seen in fig. 3 E. The 9th abd. segment as in fig. 3 D. The right stylus (fig. 2 F) is longer and narrower. The ventral side is smooth, without the angle which appears in *minutissima*. The left stylus (fig. 2 H) is also dissimilar in both species.

Finds: EH: Tuulos 16 VIII. 1948 (R. L.) and Hattula (WEGELIUS). The type in my collection. The paratypes ebenda and in the collection of the Finnish University in Turku. The species occurred in Tuulos in water on the sandy and stony shore of a lake.

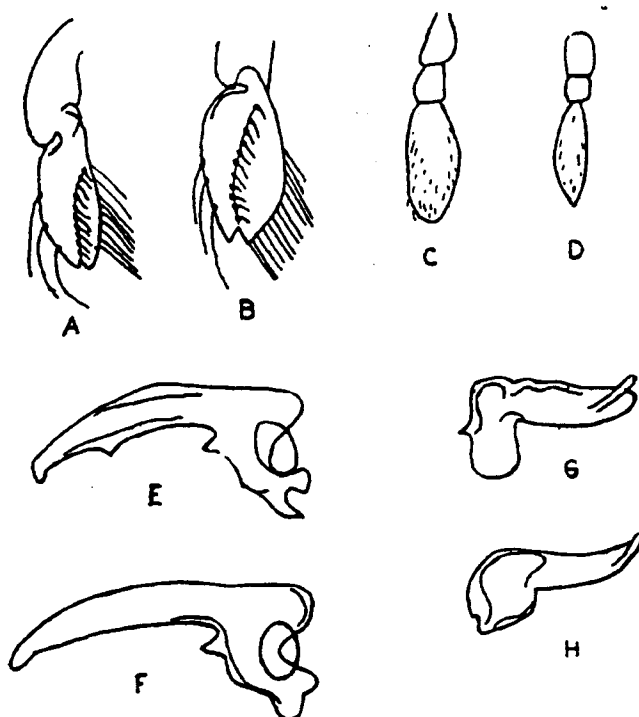


Fig. 2. *Micronecta wagneri* n. sp. B, D, F, and H. *M. minutissima* L, A, C. E and G. A, B pala C, D antenna. E, F right stylus. G, H left stylus. - Orig.

M. poweri DGL. SC. (= *borealis* LUNDBL.). J. SAHLBERG (op. c.) mentions the variety *poweri* as being more common than the main form. The majority of specimens determined as *poweri* belong, however, to *minutissima*, being slightly darker specimens of this. Some specimens belong to *wagneri*, as I mentioned above. I have, however, some specimens from Kuusamo, Yli-Juumajärvi (R. L.) and from Raisio (V), (R. L.) which belong to *poweri*, which is thus new for Finland.

2. *Temnostethus pusillus* H. S. and *T. gracilis* Horv.

ED. WAGNER proved in the year 1940 that *T. gracilis* HORV., which had previously been considered to be a variety of *T. pusillus* H. S., is a good species. HÅKAN LINDBERG later announced (1945, p. 116) that all *Temnostethus* specimens found in Finland belong to *T. gracilis*. 23. VIII. 1950 in Ruissalo (V), however, I got a specimen of the macropterous form of *T. pusillus* by shaking the lower branches of an oak. *T. pusillus* is thus new for Finland.

T. pusillus and *T. gracilis* can be distinguished as follows:

Antennae dark brown - black. The dorsal surface of the animal evenly

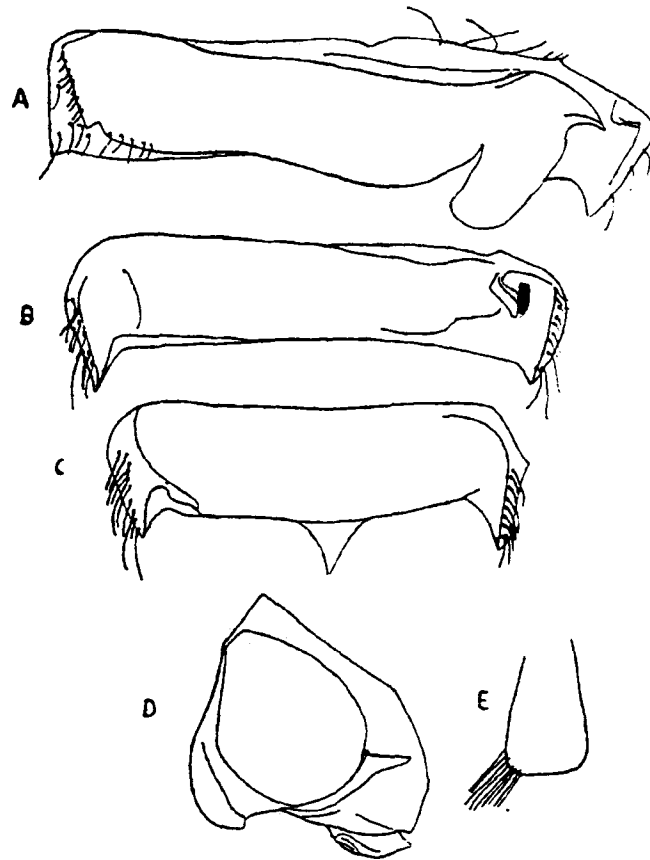


Fig. 3. *Micronecta wagneri* n. sp. A. 5., B 6., C 7., D 8. abd. segment (dorsal view) E appendage of the 8. abd. segment. - Orig.

covered by light hairs. Penis with short, dense hairs. Style broad, as in fig. 4 A. *T. pusillus* H. S.

- The second antennal joint light yellow, only the base and the apical part dark. The dorsal surface almost bare. Penis smooth. Style long and narrow, as in fig. 4 B *T. gracilis* HORV.

3. *Tetraphleps bicuspis* H. S. and *T. aterrima* J. Sahlb.

J. SAHLBERG (1920, p. 101) mentions that *Tetraphleps bicuspis* H. S. is very rare in this country (found only in Pyhäjärvi, Kk). Likewise he says that *T. aterrima* J. SAHLB. has been found only in Loviisa (U). I have now determined the *Tetraphleps* specimens available to me.

T. bicuspis H. S. seems to be rather rare in Southwest Finland on *Larix*. I have found it many times in Ruissalo (V.) - Finds known to me: V:Ruissalo (R. L.), Paimio (larva) R. L.). U: Hanko (R. L.) KK; Pyhäjärvi (J. S.). EH: Lammi (larva) (R. L.), PH: Jyväskylä (J. S. and R. L.).

T. aterrima J. SAHLB. has an eastern distribution and does not occur in

Sweden. In Finland it has rather a large distribution area. The most westerly finds of this species are in Turku and Kaskerta (V). In Turku I found it to be very common in a park on a *Pinus* species. I found it very common in Jyväskylä also (PH) in a park. Dr. LINDBERG has found several specimens in Sortavala (LK). The most northern find is in Kuusamo where I got a specimen from a lark.

T. bicuspis and *T. aterrima* resemble each other very much. *T. aterrima* has, however, a much darker colouring, the antennae are thicker and darker and the hair cover is long and upstanding. *T. bicuspis* is much lighter brown, the second antennal joint is lighter and the hair cover is very short and smooth.

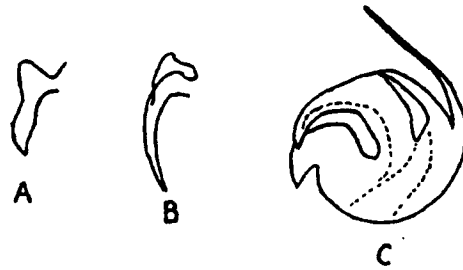


Fig. 4. *Temnostethus pusillus* H. S. A stylus. *T. gracilis* HORV. B stylus (according to Wagner) and *Orius horvathi* REUT. (from Finland) C stylus. — Orig.

4. *Orius horvathi* Reut. new for Finland.

On August 13th, 1950, by sweeping at Ispoinen near Turku (V) from a very dry fallow field among *Matricaria chamomilla* and *M. inodora*, five specimens of an *Orius* species, besides several specimens of *O. niger* WFF., were obtained, which proved to belong to *O. horvathi* REUT. Later I found one specimen in Raisio (V) 17. VIII. 1950 beside a field. The male genitalia of the Finnish specimens (for stylus see fig. 4 C) are quite similar to the description by RIBAULT (1923, p. 527). The find of *O. horvathi* in Finland is very surprising, as the species has previously only been found in France, Jugo-Slavia and Hungary.

5. *Lyctocoris dorni* E. Wagn.

All the Finnish *Lyctocoris* specimens in my collection have proved to belong to *L. dorni* E. WAGN., which has previously been found very rarely and only in Hungary where it has been described by E. WAGNER, 1942. *L. dorni* differs from *L. campestris* L. in the shorter membrane, which does not extend over the apex of the abdomen. The larva (fig. 5) is darkish brown, the head and the margins of thorax and abdomen being lighter yellowish. The antennae and legs are yellow.

L. dorni seems to be a nidicolous species. I found 1 specimen in Rymättylä (V) 29. VI. 1949 in a barn by sifting a heap of dry litter, where rats were living. 27. V. 1950 I found several specimens and larvae in Turku from a loft, where there had been many pigeons' nests. The specimens were living among birds' excrement.

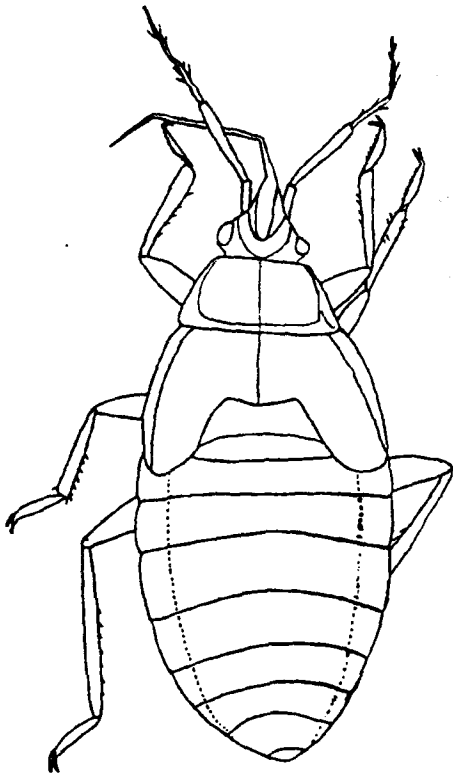


Fig. 5. *Lyctocoris dorni* E. WAGN.
larva. - Orig.

6. *Phytocoris reuteri* Saund.

19. VIII. 1949 in a park in Turku I found one specimen of a *Phytocoris* species, which I later sent to Dr. E. WAGNER for determination. It returned with the name *Ph. reuteri* SAUND. and is thus new for Finland. In Sweden it has been found in the provinces Sk. and Upl. (OSSIAN-NILSSON 1947, p. 10 - 11). In addition to this it occurs in Central Europe, at least in England, Germany and Hungary (PUTON 1899).

7. The Finnish species of the *Lygus* (*Exolygus*) *pratensis* group.

Dr. E. WAGNER has dealt in some papers (1940, 1947, 1949 a, 1949 b and 1950) with the European species of the *Lygus pratensis* group, for which he has described the new subgenus *Exolygus*. He

has distinguished 5 species: *L. pratensis* L., *L. rutilans* HORV., *L. gemellatus* H. S., *L. maritimus* E. WAGN., *L. italicus* E. WAGN. and *L. pubescens* REUT. REUTER named this last species in the year 1912. In 1911 POPPIUS described the species *L. rugulipennis*, which is according the typus examined by me identical with *pubescens* REUT. The name given by POPPIUS is thus older. I have now revised the Finnish specimens of this group available to me and have found that we have 4 species in this country: *L. pratensis*, *L. rutilans*, *L. gemellatus*, and *L. rugulipennis*.

L. pratensis L. This species has been assumed to be very common in Finland (J. SAHLBERG 1920; p. 122 - 123 and LINDBERG 1935, p. 2). I have, however, seen only 10 specimens in the material examined by me. All the specimens have been found in the southernmost part of Finland. *L. pratensis* seems, therefore, to be rather rare in this country. - Finds known to me: V: Raisio (R. L., A. MÄKINEN), Lohja (LINNANIEMI), U: Tvärminne Segelskär (FREY), Tvärminne Brännskär (FREY), Huopalahti (SAARINEN), Helsingin pitäjä (PALMÉN). ES: Ristiina (E. PESONEN). KK: Kivennapa (SAARINEN). - *L. pratensis* also occurs in Sweden and is very common in Central and Southern Europe (WAGNER 1949 b., p. 5). I have also seen specimen from Asia: Issyk-Kul (STENROOS leg.).

L. rutilans HORV. To this species belong most specimens determined as

L. pratensis. The species is common throughout the country. *L. rutilans* has a boreoalpine range. It has previously been known from the Alps and the mountain areas of Germany. According to WAGNER (1949 b, p. 5), it evidently occurs in Sweden also, but is lacking in North Germany.

L. gemellatus H. S. The species seems to have spread rather generally in South and Central Finland, occurring on dry, sandy places. It lives especially on *Artemisia campestris* but also on *A. vulgaris*. *L. gemellatus* is an eastern species, which is lacking in Sweden (WAGNER 1949 b, p. 5). The northernmost find in Finland is from Vehmersalmi (ES) (HEMDAL).

L. gemellatus f. *autumnalis* E. WAGN. I have seen 1 Finnish specimen which belong to this reddish form from Viipuri (EK) (E. THUNEBERG).

L. rugulipennis POPP. 1911 (= *pubescens* REUT. 1912). This is the commonest species of the group, occurring over the whole country on dryish, cultivated areas. It has very many food plants such as *Tanacetum*, *Chrysanthemum* and *Urtica*.

8. *Orthotylus prasinus* Fall. new for Finland.

11. VII. 1949 I caught one specimen of *Orthotylus prasinus* FALL. (det. E. WAGNER) from an elm in Turku among several specimens of *O. viridinervis* KBM. *O. prasinus* is new for this country. The species has spread over Central Europe. It has been found in several places in Sweden, too (OSSIANNILSSON 1947, p. 16 - 17). JENSEN-HAARUP (p. 253) mentions the species as living on hazel and elm.

9. *Psallus vitellinus* Schltz. and *Ps. dilutus* Fieb.

On July 27th, 1947, on *Larix* in the botanical garden of Helsinki University I caught 1 specimen of a *Psallus*, which has been determined as *Ps. vitellinus* SCHLTZ. in my collection. When, however, in the years 1948-49 I found several specimens of the true *Ps. vitellinus* in Turku and Raisio (V), I found that the specimen from Helsinki could not belong to *vitellinus*. I later sent it to Dr. E. WAGNER, who determined it as *Ps. dilutus* FIEB., which has previously been found only in Switzerland (PUTON 1899). To this species belong also the specimens from Helsinki (LINDBERG and KARVONEN leg. et det.), which I have seen. *Ps. dilutus* differs distinctly from *vitellinus* in its colouring, which is light yellow (in *vitellinus* always red - yellow or dirty yellow). In *dilutus* the antennae are wholly light yellow and the head is distinctly broader. *Ps. dilutus* has probably been transported to Helsinki with foreign plants.

Ps. vitellinus SCHLTZ., which is new for Finland, seems to have spread to South Finland. I have found it in V: Turku and Raisio and ES: Joutseno. In Raisio I have found it very numerous on a spruce hedge beside a garden. In Joutseno I caught one specimen on *Larix*.

10. *Aphrophora salicina* Gze. and *A. forneri* Hpt.

Dr. W. WAGNER (1948. p. 128 - 131) has proved that *Aphrophora forneri* HPT., which had been described as a form of *salicina* by HAUPT, 1937, is a good species. I have examined the Finnish *salicina* specimens available to me and found that they belong to *forneri*. The true *salicina* does not occur in Finland and seems to be a more southern species.

11. *Oncopsis fortior* W. Wagn. 1934 = *O. subangulatus* J. Sahlb. 1871.

In 1871 (p. 125 - 126) J. SAHLBERG described the species *Pediopsis subangulatus* on the basis of one female caught by him in Yläne (St). I have examined the type (in the coll. of the Finnish Univ. in Turku) and found it to be a very typical specimen of *Oncopsis fortior* W. WAGN. Other specimens, also, which SAHLBERG later found and determined as *subanglatus*, belong to *fortior*. The name given by SAHLBERG is older, of course.

12. *Macrosteles binotatus* J. Sahlb.

J. SAHLBERG (1871, p. 242) described the species *Macrosteles binotatus* on the basis of female specimens. LINDBERG (1924, p. 35) briefly described the male, but the description is not, however, sufficient for modern systematics. As on 20. VII. 1951 in Joutseno (ES) I found some males of *binotatus* by sweeping *Agropyrum repens* and *Calamagrostis* on a dry sandy railway embankment, I here redescribe the male.

M. binotatus J. SAHLB. ♂. Very closely related to *M. anderi* Oss., of which I have only one rather defective specimen. The head is yellow or greenish yellow with two large round spots. The face yellowish with darker markings, which may be very distinct in some specimens. The frontoclypeus is narrower than

in *anderi*. Pronotum greenish yellow, scutellum yellowish. The fore wings greenish, semi-transparent, much longer than the abdomen. Abdomen blackish. Fore and middle femora yellow with fuscous spots, which may be very distinct in darker specimens. Length 3.75 mm (in *anderi* 3.1 - 3.3 mm.). The genitalia as in fig. 6. The shape of the penis (A, B) is similar in both species; the thorns in the basal part are however lacking in *binotatus*.

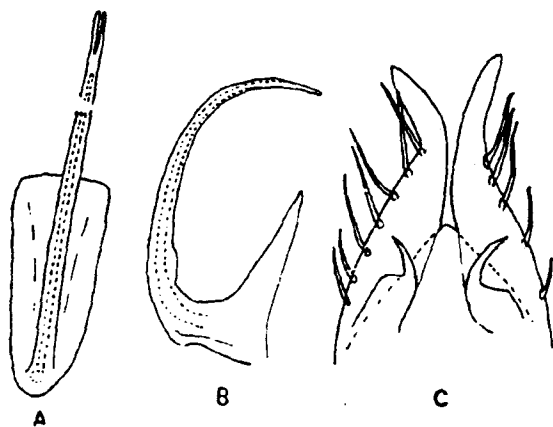


Fig. 6. *Macrosteles binotatus* J. SAHLB. A penis from behind, B penis from the side, C genital plates. - Orig.

13. *Psammotettix majusculus* Linnav. n. sp.

LINDBERG, 1948, p. 150, has mentioned having found in Cyprus two species of the leafhopper genus *Psammotettix* HPT.: *Ps. provincialis* RIB. and *Ps. (Deltocephalus* auct.) *cerinus* LINDB. He mentions having found 3 specimens of the former from Perivolia. One of them is *Aconura instabilis* RIB., the others belong to a *Psammotettix*, yellow in colouring. I have one of these in my collection. I have examined its genitalia and I think that it belongs to a new species and not to *provincialis*, of which I have one specimen from Czecho-Slovakia (det. DLABOLA). I name the species *Ps. majusculus* LINNAV.

Ps. majusculus n. sp. ♂. Length 3.6 mm. Colouring light yellow. Head anteriorly a little blunter than in *provincialis*, much shorter than the pronotum, being only 0.70 × as long (in my *provincialis* specimen 0.82 ×), a little broader than the pronotum. Face yellow with indistinct brownish stripes. Pronotum yellow, the hind margin a little insinuated. Fore wings much longer than the abdomen, yellowish, transparent, apex smoky, veins yellow. Legs yellow. Abdomen above light brownish yellow, beneath yellow, the sides especially bright yellow. The genital parts (fig. 7) resemble those of *provincialis* but the shape of the penis is different. The »spoon blade» is distinctly much longer and nearly parallel, the fore margin is smoothly incurved. In *provincialis* the »spoon blade» is much shorter, deeper and strongly broadening backwards and in the middle of the insinuated fore margin there is always a deep curve. The basal part of the penis is roundish and not so broad as in *provincialis*. The female is unknown.

This new species is closely related to *provincialis*, but differs from it in the dissimilar colour, the greater size and in the shape of the penis. — The type in my collection.

14. *Mocuellus collinus* Boh. new for Finland.

MR. O. SIITONEN gave me some leafhoppers caught by him during the summer, 1948, in Simpele (LK). Among them I found one female of the species *Mocuellus collinus* BOH., which is new for this country. The species has

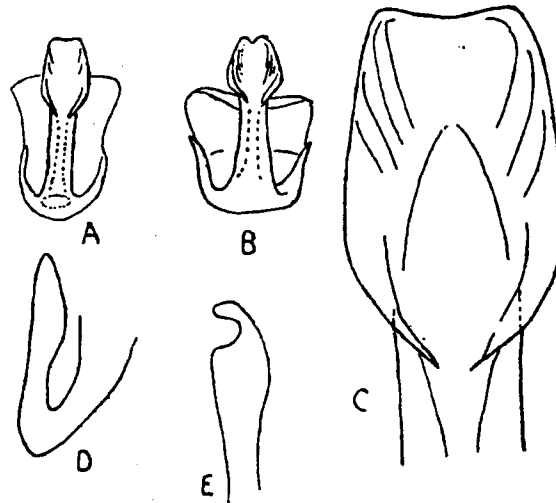


Fig. 7. *Psammotettix majusculus* n. sp. A, C, D and E. Orig. *Ps. provincialis* RIB. B (according Ribaut). A and B penis from behind, C spoon blade of the penis from behind (with greater enlargement). D penis, lateral view.

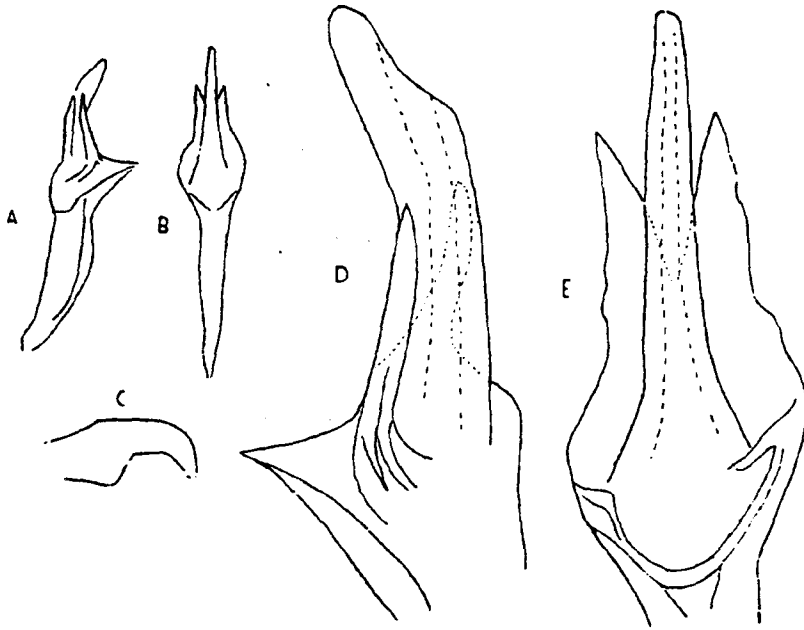


Fig. 8. *Empoasca lindbergi* n. sp. A penis lateral view, B same, ventral view, D apical part of penis lateral and E ventral view (with greater enlargement), C appendage of the anal tube. — Orig.

spread over most of Europe. In Northern Europe it has been found in Sweden, where it is rather common, in Denmark and in the Baltic States. In Norway it has not yet been caught (OSSIANILSSON 1948, p. 20–21). According to OSSIANILSSON (1947, p. 202) the species occurs in dry, sandy places.

15. *Empoasca lindbergi* Linnav. n. sp.

27. VII. 1949 I found in Jyväskylä (PH) on a dry, sandy ridge on *Betula* 2 ♂♂ and several ♀♀ of an *Empoasca*, unknown to me, belonging to the *smaragdula* group. In summer, 1950, I got several specimens of the same species in Turku on *Betula* in a park and 14. VIII. still some specimens in Raisio (V), likewise on *Betula*. I think that the species is new and describe it here, naming it *E. lindbergi* after my friend, the hemipterologist Dr. HÅKAN LINDBERG.

E. lindbergi n. sp. ♂. Length and colouring as in *smaragdula*. Appendages of the anal tube approximately as those of *smaragdula* (fig. 8 C). Penis as in fig. 8 A, B, D, E. The lateral lobes are longer and obliquely directed dorsally, not parallel with the median part as in *smaragdula*. In the ventral view the lateral lobes lie much nearer the median part than in *smaragdula*. The female similar to the corresponding sex of *smaragdula*.

The new species is closely related to *E. smaragdula* FALL., but differs from it in the shape of the penis and in the food plant. (*E. smaragdula* lives on *Alnus*). — Types in my collection.

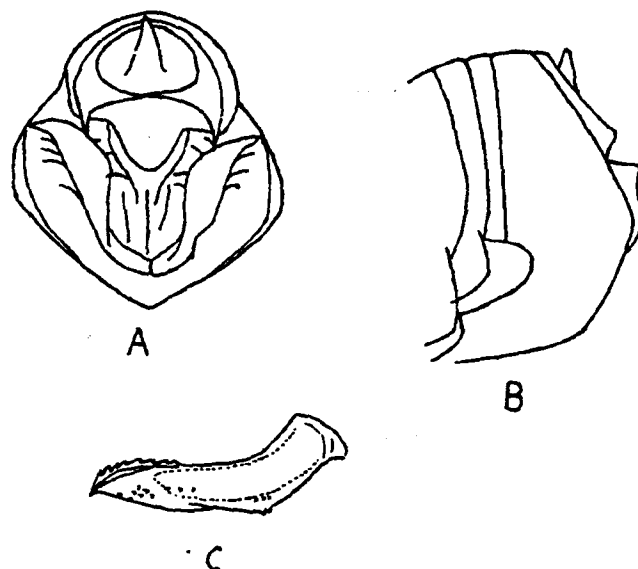


Fig. 9. *Calligypona litoralis* REUT. ♂. A genital segment from behind B same, lateral view, C penis. - Orig.

16. *Calligypona pargasensis* Reut. 1881 = *C. dubia* Kbm. 1868.

REUTER (1881, p. 197) described the species *Liburnia pargasensis* on the basis of one male from Parainen (V). I have examined the type specimen and have found that it is identical with *C. dubia* KBM. 1868, p. 26. The name given by KIRSCHBAUM is thus older.

17. *Calligypona litoralis* Reut.

REUTER (1881, p. 198) has described the species *Liburnia litoralis* caught by him in some specimens from Parainen (V). The species is very closely related to *C. paludosa* FL. and HAUPT (1937) has said that *C. litoralis* is perhaps identical with *paludosa*. I have now examined the type specimens of *litoralis*, and in my opinion *C. litoralis* is a good species. The male is very similar to *paludosa*, but is a little bigger. The anal segment (fig. 9 A), seen from behind, is broader than in *paludosa*, the anal tube especially being much broader. The penis (fig. 9 C) is also different. The styles are similar in both species. The female closely resembles *paludosa*, but is distinctly bigger and robuster. Length 2.6–3 mm. Vertex and frontoclypeus are broader. The areas between the ridges of the frontoclypeus are black or blackish brown.

C. litoralis seems to be very rare in Southwest Finland. It has been found only by REUTER, as mentioned above. He found the specimens from a sea shore on *Heleocharis* and *Phragmites*. *C. paludosa* lives in general in swamps among *Carex* and *Sphagnum*. I have, however, found one male on *Heleocharis* from a sea shore in Raisio (V).

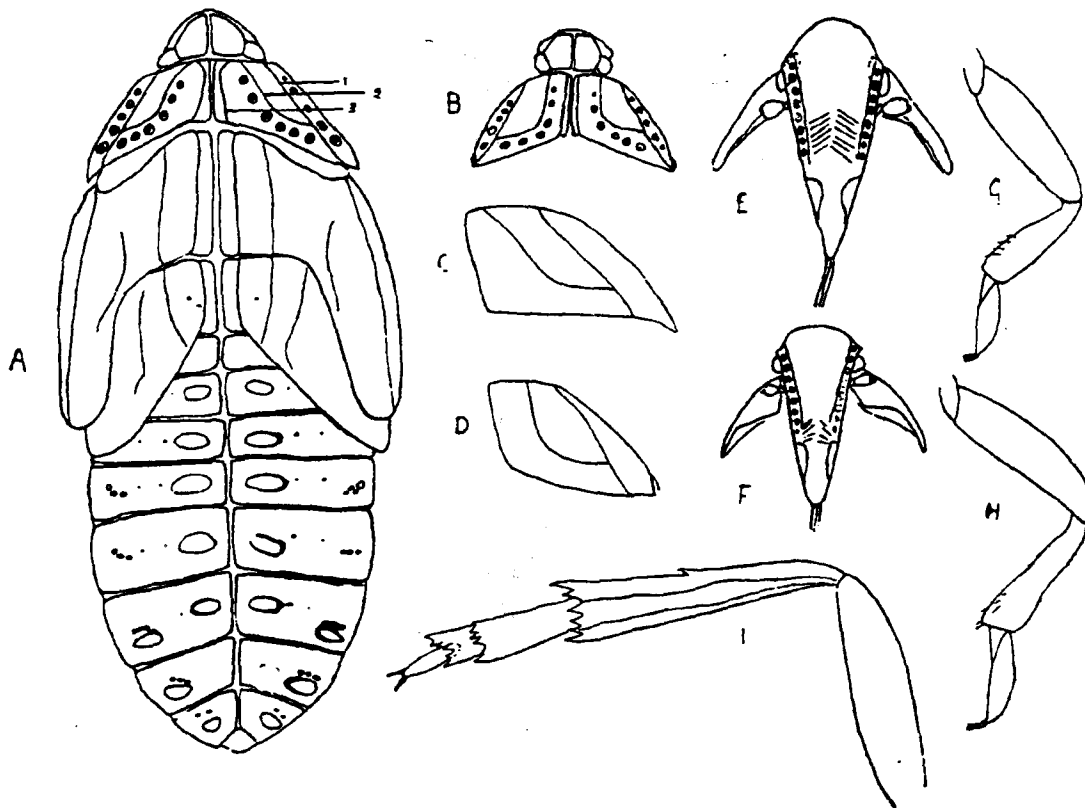


Fig. 10. *Cixidia confinis* ZETT. B, C and F. *Helicoptera lapponica* ZETT. A, D, C, E, G, H and I. A larva, dorsal view, B head and pronotum of *Cixidia* from above, C and D right side of pronotum with the ridges, E and F head and pronotum and the basalpart of rostrum, ventral view G fore leg, H middle leg, I hind leg. 1, 2 and 3 the ridges of the pronotum. - Orig.

18. *Cixidia confinis* Zett. and *Helicoptera lapponica* Zett.

18. VI 1950 at Lammi (EH) in a large, fallen pine trunk in a natural forest I found two imago fragments of *Cixidia confinis* ZETT. and several larvae from which some days later there developed two *Helicoptera lapponica* ZETT. adults and one *Cixidia*. The larvae were found only in places in the trunk where the wood was rather hard, white and dry. They occurred in small colonies, about 10 - 15 larvae in each, ca. 2 - 5 cm. under the surface. In the trunk was also a whitish *Poria* fungus. The larvae of these species have not yet been described and so I describe them here. The larvae of the two species much resemble each other. The vertex (fig. 10 A, B) is surrounded by ridges and in the middle there is also a sharp ridge. In *Helicoptera* the vertex is roundish forwards, in *Cixidia* blunter and even. Face (fig. 10 E, F) triangularly tapering backwards in both species; forwards it is much longer and more roundish in *Helicoptera*. Each cheek has a row of sensory pits. The first antennal joint is small, the second large and roundish and the third very small and

hairlike. Rostrum long, reaching much over the hind coxae. The ventral surface is whitish in colouring in both species. Pronotum (fig. 10 A, B) with distinct ridges. In the areas between the side margin and the 1st ridge and between the 2nd and the 3rd ridges there are large, round sense pits. In *Helicoptera* the 1st and the 2nd ridges are parallel and the area between them is trapezoidal; in *Cixidia* the 2nd and 3rd ridges are \pm parallel. The middle parts of the pronotum and of the whole body are whitish and less strongly chitinised in both species. In the thorax are the wing pads, which have some longitudinal ridges. The abdominal segments have in the middle a white, weakly chitinised stripe and on either side of this there is a large oval spot in each segment. In the sides are the openings of the stigmata. The last abd. segments have a large oval whitish pit on the sides. In the segment around the anus are some sensory pits. The legs (fig. 10 G, H, I) are similar in both species. They are strong. In the fore and middle femora are some hairs and the tarsus has two joints. The hind legs have several thick thorns and the tarsus has 3 joints. The colouring of the body is dark gray in *Helicoptera* and the white areas and the sensory pits are therefore very distinct. The larva of *Cixidia* is whitish, yellow whitish or gray white and the sensory pits are difficult to see. The best distinction is, however, in the shape of the head, as mentioned above.

The larvae can secrete white wax, like the leafhoppers of the genus *Oliarus* STÅL. Especially before the molt, the whole abdomen is covered with wax.

Both *Cixidia* and *Helicoptera*, in contrast to the majority of leafhoppers, are wood insects living in large, fallen trunks in natural forest. They seem to be very rare and to have become extinct in most parts of this country. It is also interesting that the two species live together, as was observed by ZETTERSTEDT, too (1840).

19. *Psylla pruni* Scop. new for Finland.

HELLÉN (1935, p. 11) does not mention this species from Finland. I have in my collection, however, one specimen of *Ps. pruni* taken from Naantali (V) 7. VII. 1948. HAUPT (1937) mentions that the species lives on *Prunus* spp.

20. *Psylla myrtilli* W. Wagn. found in Finland.

In summer, 1948, in Raisio (V) probably on *Vaccinium myrtillus* I caught one female of a *Psylla*, which Dr. OSSIANNILSSON determined as *Ps. myrtilli* W. WAGN. The species has been described by W. WAGNER, 1947, p. 83 - 85. According to WAGNER it has previously been found only in the Eastern Alps, where it occurs only above a height of 1400 meters. The species lives

there on *Vaccinium myrtillus*, being obviously rather common. The find in Finland is very interesting, proving that *Ps. myrtilli* is a boreo-alpine species. WAGNER mentions that the male of *Ps. myrtilli* is very rare (on lyone specimen has been found) and supposes that the species is parthenogenetic.

21. *Psylla nigrita* Zett. (= *dudai* Sulc) and *Ps. pulchra* Zett.

HELLÉN (1935, p. 11) mentions from Finland only the species *Psylla nigrita* ZETT. I have in my collection specimens of both the above-mentioned species: *Ps. pulchra* from V: Turku (R. L.), Naantali (R. L.) EH: Lammi (R. L.) and *Ps. nigrita* from Petsamo, Nautsi (LINNANIEMI) and Ivalo (E. KANERVO). The first-mentioned species is thus new for Finland.

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Zur Kenntnis der früheren Entwicklungsstadien von *Carpophilus ligneus* Murray (Col., Nitidulidae).

UNIO SAALAS

Um die Novembermitte 1923 brachte mir Dr. phil. EINAR FIEANDT eine Anzahl Larven, Puppen und Imagines einer Nitidulide, die eine Schülerin des Mädchenlyzeums in Helsinki, ihrer Angabe gemäss, in den Kernen aus Afrika importierter Kokosnüsse gefunden hatte. Eine nähere Untersuchung erwies, dass es sich um *Carpophilus ligneus* MURRAY oder nach dem damals gebräuchlichen Namen *C. decipiens* HORN handelte. Ich hob sämtliche Imagines auf und legte einen Teil der Larven und Puppen in Spiritus. Den grössten Teil der Larven und Puppen bewahrte ich aber lebend in einem Glasgefäss auf. Bei einer am 3. II. 1924 vorgenommenen Besichtigung des Zuchtgefässes fand ich darin über 50 Imagines, fast sämtliche tot, dazu waren jetzt auch mehrere von den Larven und Puppen gestorben. Auf jeden Fall war nun auf diesem Wege die Bestätigung dafür gefunden, dass die Larven und Puppen — was freilich auch ohnehin offenbar erschien — derselben Art wie die Imagines zugehörten.

Vor dreissig Jahren finden wir bei HELLEN (1921, p. 118) eine Erwähnung, dass die Art (unter dem Namen *C. decipiens*) von V. KARVONEN und Å. v. SCHOULTZ in Helsinki (U) und TH. GRÖNBLOM in Tampere (EH) gefunden