

A key to Northern European higher Aleocharinae genera with 5-5-5 tarsal formula (Coleoptera, Staphylinidae)

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A new identification key is presented for the Northern European higher Aleocharinae genera with tarsal formula 5–5–5. The area covered includes Scandinavia, Finland and the Baltic States. The only previous key for these genera was published more than fifty years ago and many changes in nomenclature and generic combinations have taken place since. Contrary to earlier attempts, microscopic details of ventral mouthparts are not used in this key.

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Palm (1968, 1972) provided the first (and only) keys for the North European aleocharine genera with five tarsomeres on all legs. One genus with this tarsal formula, *Gymnusa* Gravenhorst, is very distantly related to higher Aleocharinae (e.g. Orlov et al. 2022) and has been omitted here. All the other genera with 5-5-5 tarsal formula are included in the present key. Palm called this group, his “9. släktgruppen”, the tribe Aleocharini. Lohse (1974), when treating the same taxa from the Central European perspective, divided them into three tribes: Dinardini, Oxypodini and Aleocharini. Both these important publications share one problematic feature. They rely heavily on several characters drawn from the ventral mouthparts of the beetles in question. Irrespective of the evolutionary value of these characters, they are simply very hard to observe. High magnification is required and the European tradition of mounting insects on cards prevents direct views in most cases. In addition, some of the parts – especially labial palps and ligula – are

weakly sclerotized and may lose their original shape when drying. An effective use of these features requires permanent slide mounts and a compound microscope. The present author has never been able to use these keys without such equipment and this led to the idea of trying to create a more user-friendly key. It appeared that there was no way to get rid of the high magnification requirement, but removal of glued specimens in order to study mouthparts could be avoided. Palm (1972) included many fine – even if schematic – illustrations of mouth parts in case one wishes to study them.

Unless otherwise stated, the illustrations were taken by the author from specimens in the author’s collection.

The number of species in Northern Europe is given in parenthesis after the generic name. Northern Europe refers to Norway, Sweden, Finland, Estonia, Lithuania, Latvia and Denmark. The generic divisions and nomenclature follow Schülke & Smetana (2015), except for two genera: *Parocyusa* Benhauer (Assing 2021)

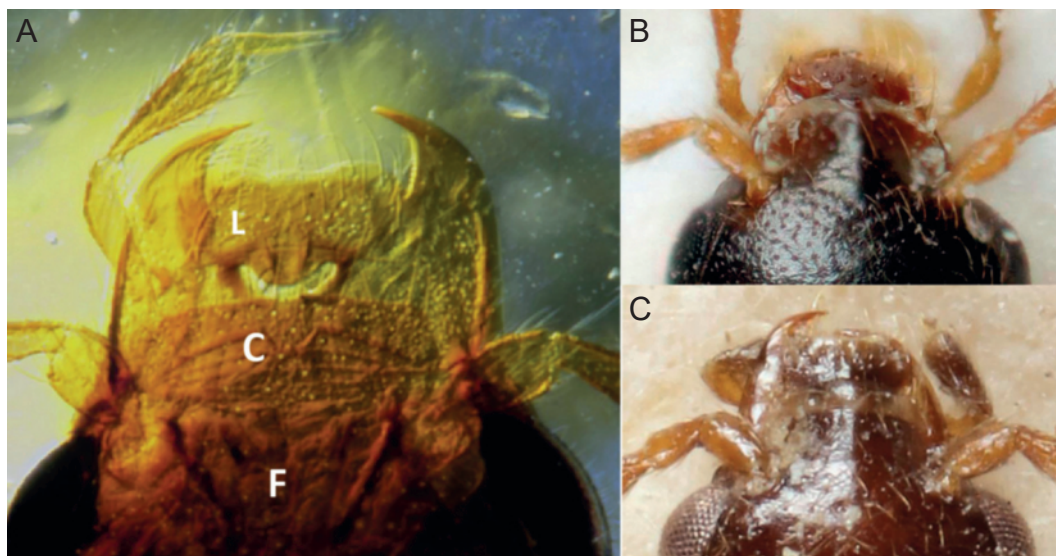


Figure 1. Head, dorsal view; – A) *Pentanota* sp., Finland, Ristiina, mounted in Euparal; – B) *Pentanota* sp., Finland, Kuusamo; – C) *Stichoglossa semirufa* (Erichson), Austria, Pongau. C = clypeus, F = frons, L = labrum.

Figur 1. Huvud, dorsal vy; – A) *Pentanota* sp., Finland, Ristiina, monterad i Euparal; – B) *Pentanota* sp., Finland, Kuusamo; – C) *Stichoglossa semirufa* (Erichson), Österrike, Pongau. C = clypeus, F = frons, L = labrum.

and *Gnathusa* Fenyés (Muona in press). The species belonging to *Aleochara* Gravenhorst are keyed out as six separate groups in order to stress the variation present in the group.

Remarks dealing with distribution, identification and biology aim at updating the information available in Palm (1972).

An excellent place to get further information of the taxa here discussed is the internet site of the Nordic Coleoptera Group (www.beetlebase.com). The images are not to scale.

About characters

One “new” character is introduced, the presence or absence of the frontal suture (e.g. Seevers 1978). There are two separate sclerotized parts at the front end of the head, clypeus (*mundsköld*) being attached to the frontal part of the head capsule and labrum (överläpp) to the front edge of the clypeus. The suture between labrum and clypeus is always easy to see even though the transparent front edge of the clypeus can cause some confusion (Figs 1B–C). In permanent transparent mounts the suture between frons and clypeus is always clear, forming a sclerotized thickening in the head capsule (Fig. 1A).

However, in normal surface light this suture is not visible if the sclerites are seamlessly fused. Examples of “frontal suture not visible” character state are *Pentanota* Bernhauer (Fig. 1B) and *Stichoglossa* Fairmaire & Laboulbène (Fig. 1C), with a transparent mount version of *Pentanota* head showing the hidden suture (Fig. 1A). Examples of “frontal suture visible” character state with well-developed seam between frons and clypeus are *Ocyusa* Kraatz (Fig. 2C) and *Calodera* Mannerheim (Fig. 2D). In a few cases the suture is not actually visible as a seam, but the frons and the clypeus are so strongly different in their surface sculpture that one easily sees the border as a seam. In such case, this character was not used in the present key. *Thiasophila* Kraatz (Fig. 2A) and *Acrostiba* Thomson (Fig. 2B) are examples of this.

Palm (1970) and Benick & Lohse (1974) used the pronotal hair patterns extensively in their Athetini keys, but practically not at all when dealing with the rest of the Aleocharinae (Palm 1972; Lohse 1974). As about one fourth of the genera included here differed from the rest with this character it was certainly a useful one. Höeg (1945) discovered and described the pronotal

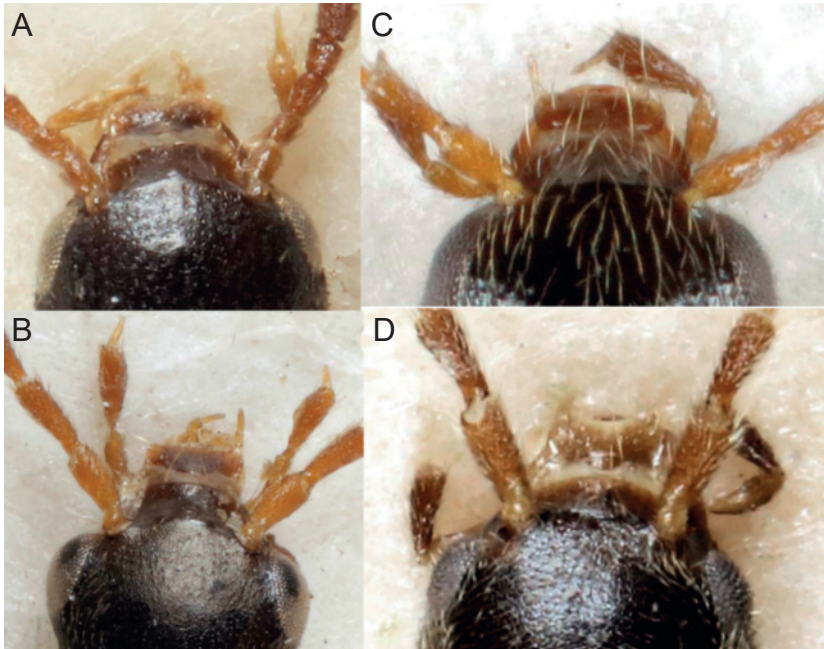


Figure 2. Head, dorsal view; – A) *Thiasophila wockii* (Schneider), Sweden, Skåne; – B) *Acrostiba borealis* Thomson, Finland, Kuusamo; – C) *Ocyusa maura* (Erichson), Finland, Helsinki; – D) *Calodera protensa* Mannerheim, Denmark, Damhus.

Figur 2. Huvud, dorsal vy; – A) *Thiasophila wockii* (Schneider), Sverige, Skåne; – B) *Acrostiba borealis* Thomson, Finland, Kuusamo; – C) *Ocyusa maura* (Erichson), Finland, Helsinki; – D) *Calodera protensa* Mannerheim, Danmark, Damhus.

hair patterns in detail and a set of the commonly used ones are illustrated in Hansen (1954), Palm (1968) and Benick & Lohse (1974). Four types were present in the genera here treated. Type **one** has midline hairs directed cephalad, type **two** has them directed caudad, type **three** has hairs directed caudad on basal half and cephalad on apical half and type **five** is similar to type two, but the midline of hairs is vaguely defined.

In extreme cases of type five all the pronotal hairs are more or less directed caudad (e.g. *Phloeopora* Erichson). The types two and five merge to each other and most of the genera listed here are really of type five, lacking a distinctly separate median column of hairs. Among the genera included here, *Emplenota* Casey has a peculiar version of type one. A very narrow section of the pronotal midline is bare and on both sides of it the hairs are directed nearly straight towards head and hairs lateral to these are increasingly more directed laterad. Both *Acrostiba* and *Pyroglossa* Bernhauer have the type three hair pattern, but the basal, caudad directed section of hairs is distinctly shorter than the apical, cephalad directed one. Assing & Wunderle erroneously (1997) stated that



Figure 3. Junction of elytron and abdomen, dorsal view; – A) *Haploglossa gentilis* (Märkel), Sweden, Uppland; – B) *Aleochara curtula* (Goeze), Finland, Joutseno. Arrow points at dorsally visible metathoracic sideplate in *Aleochara*.

Figur 3. Kopplingen mellan elytron och abdomen, dorsal vy; – A) *Haploglossa gentilis* (Märkel), Sverige, Uppland; – B) *Aleochara curtula* (Goeze), Finland, Joutseno. Pilen pekar på den dorsalt synliga metathoracic sidoplattan i *Aleochara*.

Pyroglossa had hair pattern type two, although Palm (1972) had reported this correctly as type three. Palm (1972) erroneously stated that *Ocalea* Erichson has hair pattern type two, in fact it is of type one.

Aleochara s. lat. and *Haploglossa* Kraatz have spines in addition to hairs on lateral surfaces of pronotum and mesotibiae. These spines are not always easy to see and comparing specimens of other genera

with *Aleochara* is helpful in learning this character. *Aleochara moerens* Gyllenhal is a common autumn species found in mushrooms and serves as an easily obtainable example for comparison (Fig. 4B). *Aleochara* has the ventral metathoracic sideplates visible from above at hind corners of

elytra. In *Haploglossa*, these are mostly hidden when viewed from above, but the degree of visibility varies to some extent, depending on species (Fig. 3). Among the taxa here treated visible sideplates are widespread, so the state seen in *Haploglossa* is the less common one.

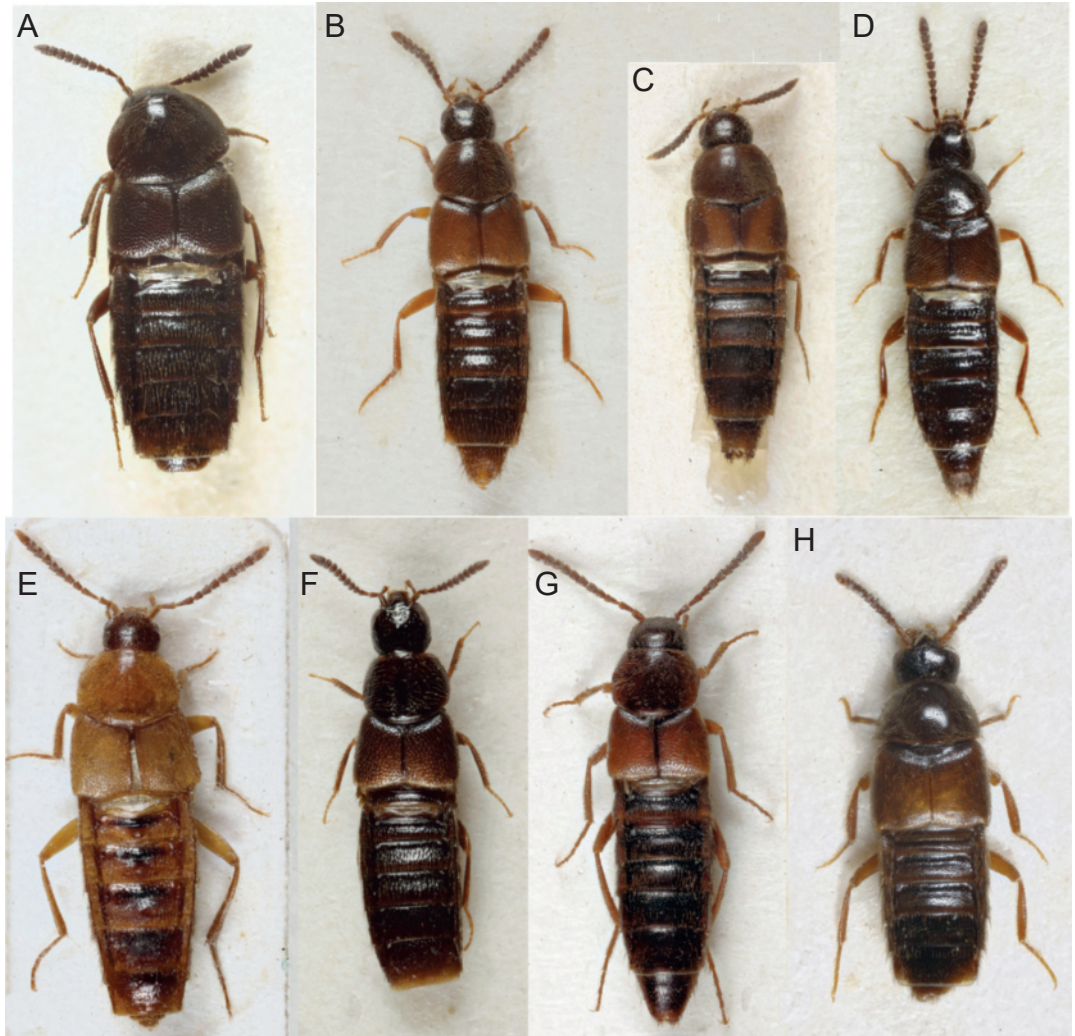


Figure 4. – A) *Aleochara curtula* (Goeze), Finland, Joutseno; – B) *Aleochara moerens* Gyllenhal, Finland, Helsinki; – C) *Aleochara puberula* Klug, Finland, Keuruu; – D) *Aleochara stichai* Likovsky, Sweden, Jämtland; – E) *Aleochara (Ceranota) ruficornis* Gravenhorst, Finland, Lohja; – F) *Aleochara (Coprochara) brundini* Bernhauer, Finland, Kuusamo; – G) *Aleochara (Rhaeochara) spadicea* (Erichson), Finland, Seglinge; – H) *Haploglossa gentilis* (Märkel), Sweden, Upland.

Figur 4. – A) *Aleochara curtula* (Goeze), Finland, Joutseno; – B) *Aleochara moerens* Gyllenhal, Finland, Helsinki; – C) *Aleochara puberula* Klug, Finland, Keuruu; – D) *Aleochara stichai* Likovsky, Sverige, Jämtland; – E) *Aleochara (Ceranota) ruficornis* Gravenhorst, Finland, Lohja; – F) *Aleochara (Coprochara) brundini* Bernhauer, Finland, Kuusamo; – G) *Aleochara (Rhaeochara) spadicea* (Erichson), Finland, Seglinge; – H) *Haploglossa gentilis* (Märkel), Sverige, Upland.

Identification key to Northern European higher Aleocharinae genera with 5-5-5 tarsal formula

Although mostly dichotomous, the key has a few couplets with three possibilities.

- 1. Myrmecophilous species with tightly fitting antennomeres, at most tergites 1–2 feebly impressed basally.....2
- Antenna with clearly visible stalks between antennomeres, at least tergites 1–3 basally impressed.....3

- 2. Pronotum more than twice as wide as long at midline, much wider than elytra, hind corners sharply projecting, elytra with keeled lateral borders, length more than 3.5 mm.....*Dinarda* (Fig. 6D)
- Pronotum less than 1.7 times as wide as long, at most slightly wider than elytra, hind corners not sharply projecting, tergites 1–3 without impressions basally, length less than 3.2 mm*Thiasophila* (Fig. 8C)

- 3. Pro- and mesotibiae with hairs on lateral surfaces, without spines.....4
- Pro- and mesotibiae with spines in addition to hairs on lateral surfaces, (“*Aleochara*-type”).....28

- 4. Pronotal hair pattern of type three.....5
- Pronotal hair pattern of type one.....6
- Pronotal hair pattern of type two or five.....8

- 5. Pronotum with faint bronze shine, strongly narrowing cephalad.....*Acrostiba* (Fig. 9A)
- Pronotum without metallic shine, feebly narrowing cephalad.....*Pyroglossa* (Fig. 9B)

- 6. Shiny, elongated species, length 3.5–6.0 mm, sides of pronotum with conspicuous long sensory setae*Ocalea* (Fig. 5A)
- Parallel-sided, flat species with strong microsculpture, length 2.3–3.3 mm, sides of pronotum with short setae.....7

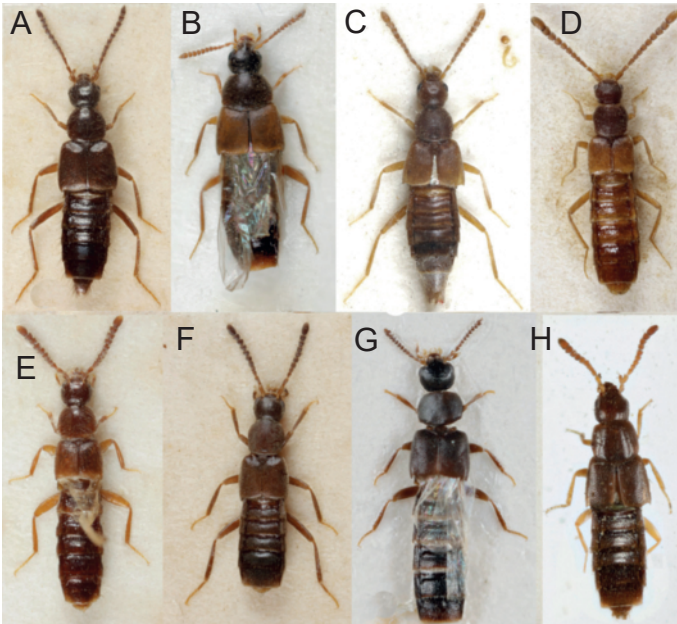


Figure 5.– A) *Ocalea concolor* Kiesenwetter, Denmark, Silkeborg; – B) *Pentanota* sp., Finland, Kuusamo; – C) *Parocysa crebrepunctata* (Strand), Sweden, Västerbotten; – D) *Ilyobates bennetti* Donisthorpe, Germany, Berlin; – E) *Amarochara forticornis* (Lacordaire), Finland, Lohja; – F) *Calodera protensa* Mannerheim, Denmark, Damhus; – G) *Chanoma vorbringeri* (Bernhauer), Sweden, Gästrikeland; – H) *Cousya longitarsis* (Thomson), Sweden, Skåne.

Figur 5.– A) *Ocalea concolor* Kiesenwetter, Danmark, Silkeborg; – B) *Pentanota* sp., Finland, Kuusamo; – C) *Parocysa crebrepunctata* (Strand), Sverige, Västerbotten; – D) *Ilyobates bennetti* Donisthorpe, Tyskland, Berlin; – E) *Amarochara forticornis* (Lacordaire), Finland, Lohja; – F) *Calodera protensa* Mannerheim, Danmark, Damhus; – G) *Chanoma vorbringeri* (Bernhauer), Sverige, Gästrikeland; – H) *Cousya longitarsis* (Thomson), Sverige, Skåne.

7. Antennae yellow, slender, antennomeres 9–10 slightly transverse.....*Gnathusa* (Fig. 8A)
 - Antennae brown, stout, antennomeres 5–10 wider than long.....*Mniusa* (Fig. 7G)
8. Frontal suture visible (Figs 2C, D).....9
 - Frontal suture not visible (Figs 1B, C).....17
9. Head constricted, neck at most half as wide as head at widest point.....10
 - Neck less pronounced, about 2/3 as wide as head at widest point.....11

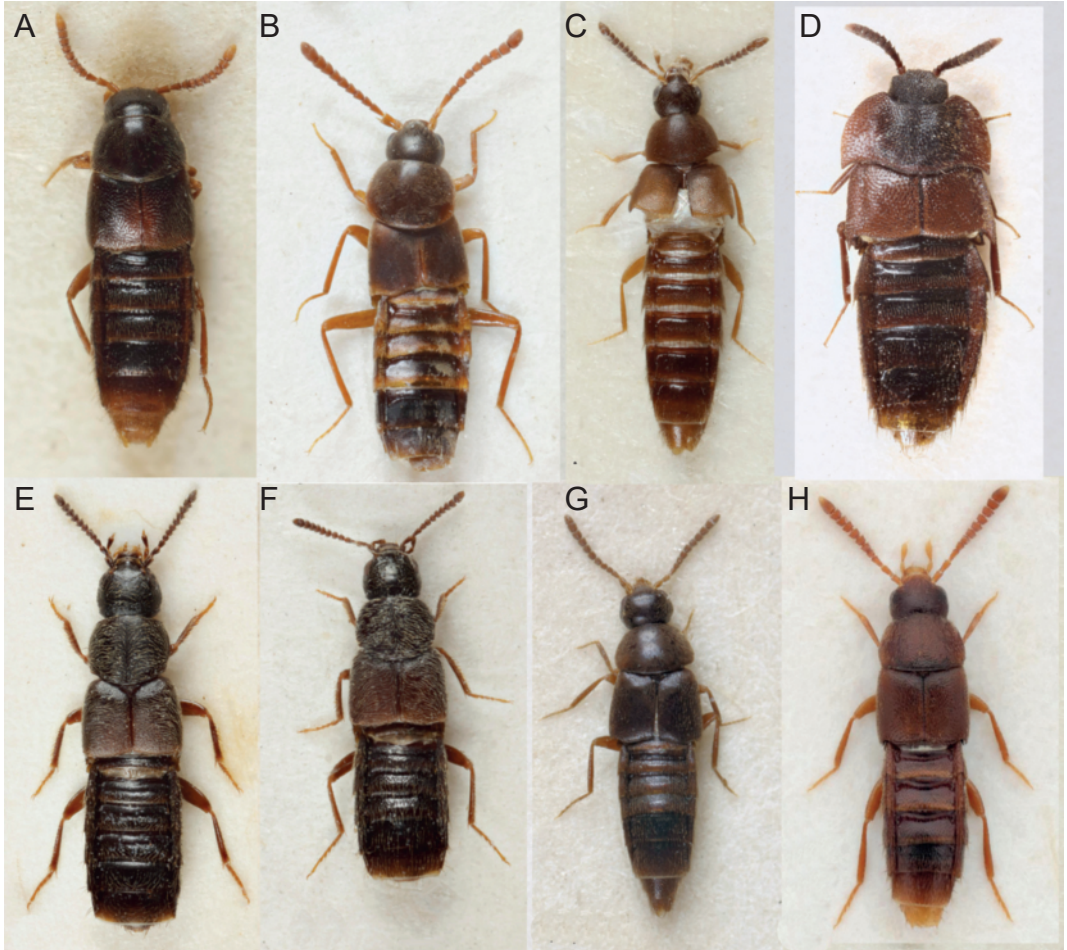


Figure 6. – A) *Crataraea suturalis* (Mannerheim), Russia, Petrozavodsk; – B) *Devia prospera* (Erichson), Canada, Dunville; – C) *Hylota ochracea* Casey, Norway, Ostfold; – D) *Dinarda maerkeli* Kiesenwetter, Russia, Zaporozskoje; – E) *Aleochara (Emplenota) obscurella* Gravenhorst, Denmark, Bildsö strand; – F) *Aleochara (Polystomota) grisea* Kraatz Finland, Seglinge; – G) *Hygropora cunctans* (Erichson), Finland, Vilppula, – H) *Dexiogygia corticina* (Erichson), Denmark. Image from www.BilleBank.dk. Photo: Aslak Kappel Hansen.

Figur 6. – A) *Crataraea suturalis* (Mannerheim), Ryssland, Petrozavodsk; – B) *Devia prospera* (Erichson), Kanada, Dunville; – C) *Hylota ochracea* Casey, Norge, Ostfold; – D) *Dinarda maerkeli* Kiesenwetter, Ryssland, Zaporozskoje; – E) *Aleochara (Emplenota) obscurella* Gravenhorst, Danmark, Bildsö strand; – F) *Aleochara (Polystomota) grisea* Kraatz Finland, Seglinge; – G) *Hygropora cunctans* (Erichson), Finland, Vilppula, – H) *Dexiogygia corticina* (Erichson), Danmark. Bild från www.BilleBank.dk. Foto: Aslak Kappel Hansen.

10. Abdominal tergites 1–4 with strong basal impressions.....	<i>Calodera</i> (Fig. 5F)
- Abdominal tergites 1–3 with strong basal impressions.....	<i>Parocyusa</i> (Fig. 5C)
11. Black, shiny species, vestiture never fine and dense, not <i>Oxypoda</i> -type.....	12
- Rarely black, if so then not shiny and with fine and very dense vestiture, of <i>Oxypoda</i> -type.....	14
12. Shiny, distinctly punctate species, body convex, not flat.....	13
- Faintly punctate, flat species.....	<i>Cephalocousya</i> (Fig. 7I)
13. Punctures unusually strong, especially on head, as in <i>Poromniusa</i>	<i>Zoosetha</i> (Fig. 7E)
- Punctures well-developed, but not unusually strong.....	<i>Ocyusa</i> (Figs 7B–C)
14. Pronotum about as long as wide, nearly equally converging caudad and cephalad, metatarsomere 1 as long as 2–4 combined, vestiture moderately dense.....	<i>Cousya</i> (Fig. 5H)
- Pronotum more transverse, usually more strongly converging cranial than caudad, vestiture very fine and dense.....	15
15. Meso- and metatarsomeres 1 and 2 of about equal length.....	<i>Hylota</i> (Fig. 6C)
- Metatarsomere 1 at least as long as 2 and 3 combined.....	16
16. Meso- and metatarsomere 1 as long as 2–4 combined, mandibles with bifid apex, form wide, color brown with paler margins, size 3.5–4.5 mm.....	<i>Devia</i> (Fig. 6B)
- Mesotarsomere 1 always shorter than 2–4 combined, metatarsomere 1 never shorter than 2+3 combined, mandibles not bifid, form rarely wide, color often darker, size frequently under 3.5 mm.....	<i>Oxypoda</i> (Figs 8E–H)
17. Very small species, length less than 2.2 mm.....	18
- Length 2.5 mm or more.....	19
18. Black, shiny, strongly punctate species with convex dorsum.....	<i>Poromniusa</i> (Fig. 7H)
- Brown to yellow flat species with poorly developed punctation.....	<i>Meotica</i> (Fig. 7F)
19. Head constricted, neck at most half as wide as head at widest point.....	20
- Neck less pronounced, about 2/3 as wide as head at widest point.....	22
20. Metatarsomere 1 shorter than 2+3, antennae short, simple.....	<i>Phleopora</i> (Fig. 8B)
- Metatarsomere 1 at least as long as 2+3, antennae long and powerfully built.....	21
21. Head and pronotum exceptionally densely and strongly punctate, dull.....	<i>Ilyobates</i> (Fig. 5D)
- Head and pronotum shiny, punctation faint.....	<i>Amarochara</i> (Fig. 5E)
22. Metatarsomere 1 at most as long as 2+3 combined, usually slightly longer than 2.....	23
- Metatarsomere 1 as long as 2–4 combined, size 3.5–5.0 mm, abdomen strongly punctate, apically punctation sparser, body bicolored, head dark, elytra partly reddish brown.....	<i>Pentanota</i> (Fig. 5B)
23. Abdomen and head black, pronotum and most of elytra bright reddish.....	<i>Stichoglossa</i> (Fig. 7A)
Mostly brownish or black species.....	24
24. Black, flattish species with very strong microsculpture.....	<i>Chanoma</i> (Fig. 5G)
- If black, not with strong microsculpture.....	25

25. Pronotum narrower than elytra at base, about rectangular.....*Ischnoglossa* (Fig. 7D)
 - Pronotum clearly more strongly narrowing cephalad than caudad, basally close to as wide as elytra at base.....26
26. Dorsum light brown, head and belt across abdomen darker.....*Dexiogyia* (Fig. 6H)
 - Dorsum very dark, mostly black or dark brown.....27
27. Dorsum blackish, elytra partly brown, abdominal apex yellowish, pronotum 1.45 (female) to 1.6 (male) times as wide as long, abdomen sparsely punctate towards apex, elytra strongly punctate*Cratarea* (Fig. 6A)

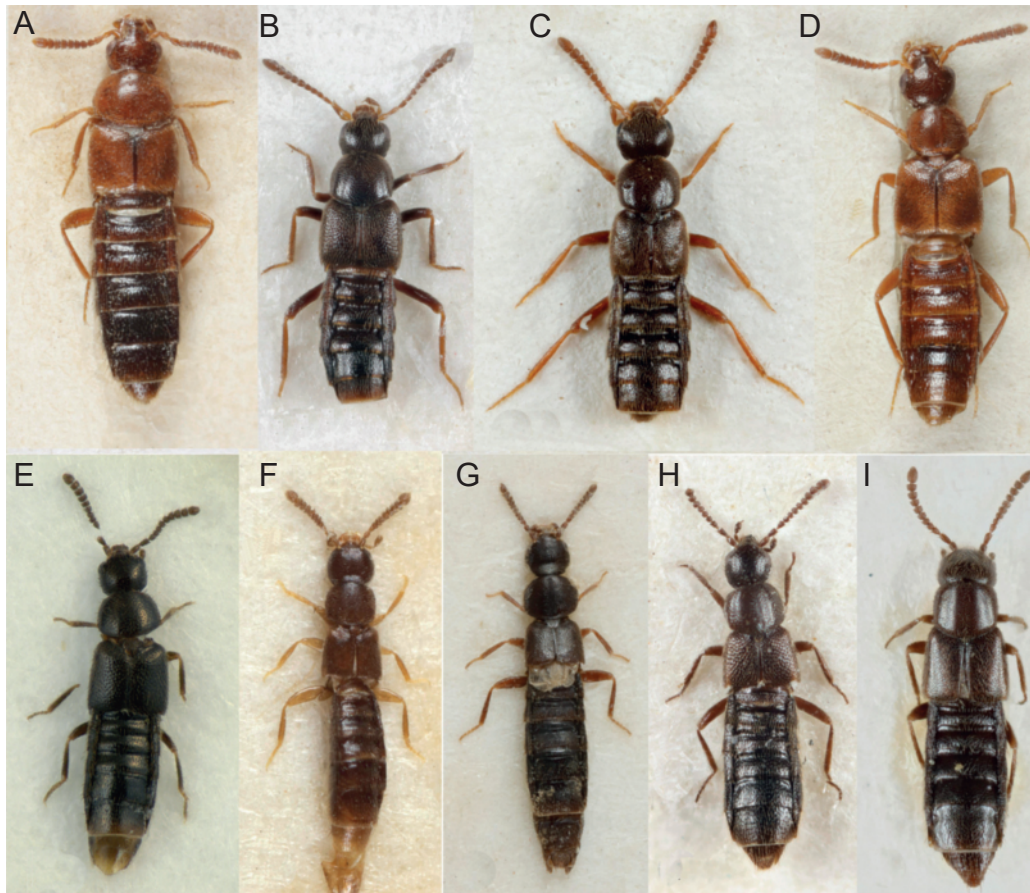


Figure 7. – A) *Stichoglossa semirufa* (Erichson), Austria, Pongau; – B) *Ocyusa maura* (Erichson), Finland, Helsinki; – C) *Ocyusa picina* (Aube), Denmark, Bygholm; – D) *Ischnoglossa prolixa* (Gravenhorst), France, Iserre; – E) *Zoosetha incisa* Assing, Sweden, Skåne (M. Sörensson leg. and photo); – F) *Meotica exilis* (Knoch), Sweden, Skåne; – G) *Mniusa incrassate* (Mulsant & Rey), Finland, Utsjoki; – H) *Poromniusa prociua* (Erichson), Finland, Kiiminki; – I) *Cephalocousyva nivicola* (Thomson), Finland, Muonio.

Figur 7. – A) *Stichoglossa semirufa* (Erichson), Österrrike, Pongau; – B) *Ocyusa maura* (Erichson), Finland, Helsinki; – C) *Ocyusa picina* (Aube), Danmark, Bygholm; – D) *Ischnoglossa prolixa* (Gravenhorst), Frankrike, Iserre; – E) *Zoosetha incisa* Assing, Sverige, Skåne (M. Sörensson leg. och foto); – F) *Meotica exilis* (Knoch), Sverige, Skåne; – G) *Mniusa incrassate* (Mulsant & Rey), Finland, Utsjoki; – H) *Poromniusa prociua* (Erichson), Finland, Kiiminki; – I) *Cephalocousyva nivicola* (Thomson), Finland, Muonio.

- Dark brown to black, conspicuously uniformly colored, pronotum 1.6 times as wide as long, whole abdomen very densely and uniformly punctate, *Oxyroda*-like.....*Hygropora* (Fig. 6G)
- 28. Sides of pronotum bent ventral, hiding hypomera in lateral view.....29
 - Sides of pronotum sinuate, hypomera partly visible in lateral view.....32
- 29. Abdominal tergites 1–4 with basal impressions, whole body reddish brown.....*Aleochara* (*Ceranota*) (Fig. 4E)
 - Abdominal tergites 1–3 with basal impressions, color predominantly dark, elytra often paler.....30
- 30. Pronotal hair pattern of type three.....*Aleochara puberula* (Fig. 4C)
 - Pronotum with two longitudinal rows of punctures, midline widely glabrous.....*Aleochara* (*Coprochara*) (Fig. 4F)
 - Pronotal hair pattern of type two or five, punctate over whole surface.....31
- 31. Ventral metathoracic sideplates visible from above at hind corners of elytra (Fig. 3B).....*Aleochara* s.str. (Figs 4A–D)
 - Metathoracic sideplates at most poorly visible from above (Fig. 3A).....*Haploglossa* (Fig. 4H)
- 32. Pronotal hair pattern of type one, but midline very narrowly without hairs.....*Aleochara* (*Emplenota*) (Fig. 6E)
 - Pronotal hair pattern of types two or five, hairs along midline directed towards abdomen.....33
- 33. Apical antennomeres elongate, slender, shiny species with long extremities.....*Aleochara* (*Rhaeochara*) (Fig. 4G)
 - Apical antennomeres strongly transverse, robust, dull species.....*Aleochara* (*Polystomota*) (Fig. 6F)

Taxa

Acrostiba Thomson, 1858 (1)

The narrow neck, pronotum with metallic shine and pronotal hair pattern three characterize this genus. The only known species, *A. borealis* Thomson, is transpalearctic and has been recorded from Norway, Sweden, Finland, Bulgaria, Russia and North Korea. It is attracted to fresh dung and prefers that of larger mammals.

Aleochara Gravenhorst, 1802 (37)

Six *Aleochara* subgenera are keyed out separately in order to emphasize their possible generic status: *Aleochara*, *Ceranota*, *Coprochara*, *Emplenota*, *Polystomata* and *Rhaeochara*. *Emplenota*, *Polystomata* and *Rhaeochara* were regarded as separate genera in Seevers (1978) and Lohse (1989), but this was not accepted in the Palearctic catalogue (Schülke & Smetana (2015), following Maus et al. (2001). *A. puberula* Klug is separated in the key in order to point out the unique pronotal hair pattern. If

all subgenera regarded as valid in Schülke & Smetana (2015) were treated as genera, only *Aleochara curtula* (Goeze) would remain in *Aleochara* s. str. and twenty species would be placed in the genus *Xenochara* Mulsant & Rey, 1874.

On the basis of an extensive molecular study (Maus et al. 2001), *Tinotus morion* (Gravenhorst) should be included in the *Aleochara* subgenus *Coprochara* even though its tarsal formula is 4-5-5 and it has an evenly punctate pronotum. Additional morphological features supporting this placement include a spermatheca with basal coil and completely carinate mesosternum. The tibial spines in *Tinotus* are fairly weak and high magnification is needed to observe them.

With one exception [*A. (Heterochara) clavicornis* Redtenbacher] *Aleochara* species develop as solitary ectoparasitoids of cyclorrhapheous Diptera (Maus et al. 1998).

***Aleochara* sg. *Ceranota* Stephens, 1839 (1)**

Because of overall pale yellow color and large size, *A. ruficornis* (Gravenhorst) cannot be confused with any other species in the area. Besides scattered finds from Denmark, it has been caught once with pitfall trap placed to capture shrews in Finland.

All *Ceranota* species have been associated with rodent burrows.

***Aleochara* sg. *Coprochara* Mulsant & Rey, 1874 (4)**

In addition to the unique pronotal punctation pattern, the characteristic spermatheca with a basal coil supports the monophyly of *Coprochara*. The taxonomy of this group is challenging. Five species have been reported from the area, Palm (1972) listed only four. For identification

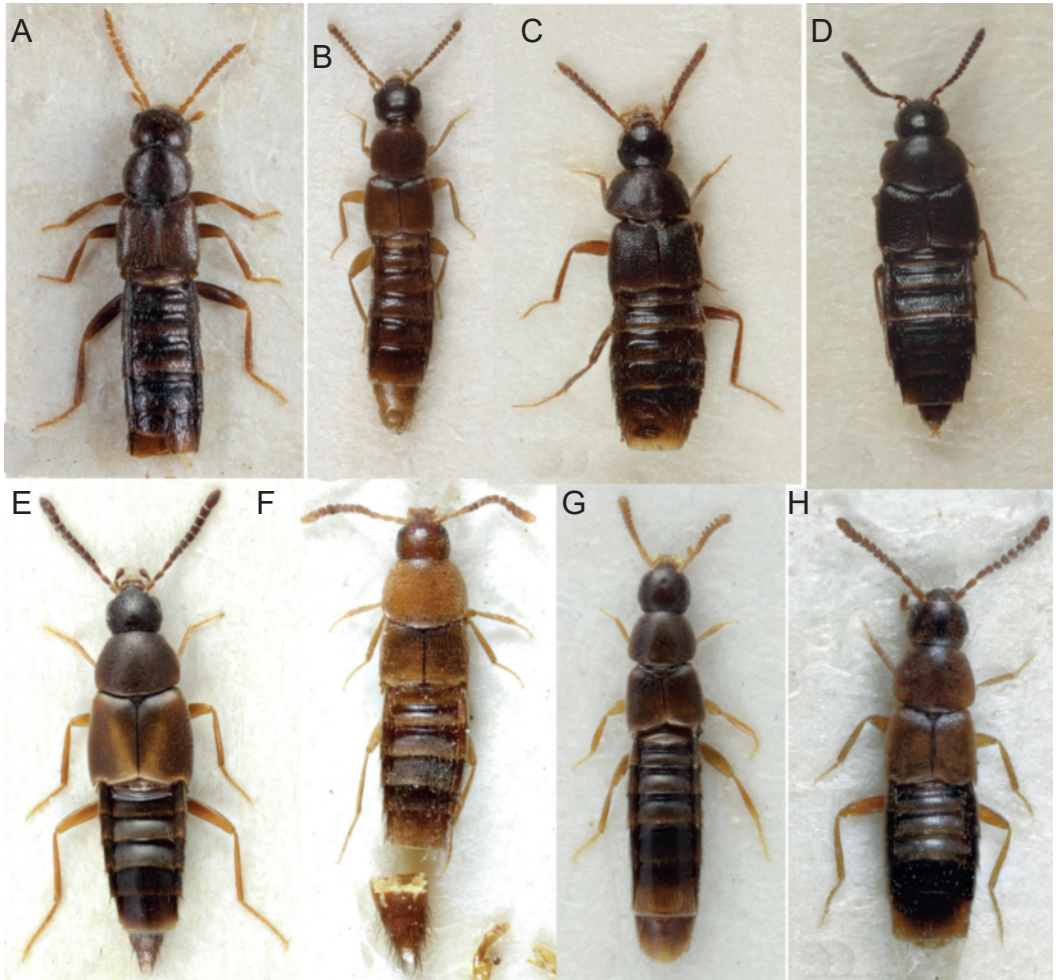


Figure 8. – A) *Gnathusa grandiceps* (J. Sahlberg), Russia, Yakutia; – B) *Phloeopora testacea* (Mannerheim) Finland, Helsinki; – C) *Thiasophila wockii* (Schneider), Sweden, Skåne; – D) *Tinetus morion* (Gravenhorst), Canary Islands, Hierro; – E) *Oxypoda vittata* Märkel, Sweden, Öland; – F) *Oxypoda strandi* Scheerpeltz, Finland, Hyvinkää; – G) *Oxypoda haemorrhoea* (Mannerheim), Finland, Mäntsälä; – H) *Oxypoda islandica* Kraatz, Finland, Kuusamo.

Figur 8. – A) *Gnathusa grandiceps* (J. Sahlberg), Ryssland, Yakutia; – B) *Phloeopora testacea* (Mannerheim) Finland, Helsinki; – C) *Thiasophila wockii* (Schneider), Sverige, Skåne; – D) *Tinetus morion* (Gravenhorst), Kanarieöarna, Hierro; – E) *Oxypoda vittata* Märkel, Sverige, Öland; – F) *Oxypoda strandi* Scheerpeltz, Finland, Hyvinkää; – G) *Oxypoda haemorrhoea* (Mannerheim), Finland, Mäntsälä; – H) *Oxypoda islandica* Kraatz, Finland, Kuusamo.

of species, Lohse (1974 and 1989) should be consulted.

***Aleochara* sg. *Emplenota* Casey, 1884 (1)**

A. obscurella (Gravenhorst) differs from all other species by having the pronotal midline very narrowly bare, giving the impression of having type one pronotal hair pattern. It is strictly restricted to seashores.

***Aleochara* sg. *Polystomota* Casey, 1906 (2)**

Polystomata species resemble superficially *A. obscurella* in having dull, flattish dorsum and living on seashores, but their pronotal hair pattern is of type five.

***Aleochara* sg. *Rhaeochara* Mulsant & Rey, 1875 (1)**

On the basis of the structure of the median lobe and the simple spermatheca in addition to the external features, *Rhaeochara spadicea* (Erichson) seems to deserve separate generic status as suggested both in Seevers (1978) and in Lohse (1989).

***Amarochara* Thomson, 1858 (3)**

Amarochara is unique in having the apex of the scape deeply grooved for reception of the pedicel. This feature is present in other genera as well (e.g. *Ilyobates*), but it is much less pronounced in those. All species appear to live in association with subterranean mammal burrows.

***Calodera* Mannerheim, 1830 (8)**

Assing (1996) revised the genus and many old records need to be checked. The commonest species, *C. aethiops* (Gravenhorst), turned out to be a complex of species and the North European fauna has not been revised.

Ityocara Thomson is included in *Calodera* today.

All species prefer wet habitats, many inhabit riparian zones.

***Cephalocousya* Lohse, 1971 (1)**

This is an arctic and alpine genus with only one European species, *C. nivicola* (Thomson). From the other species formerly placed in "*Ocyusa*" it is easily recognized by parallel form and very fine dorsal punctation.

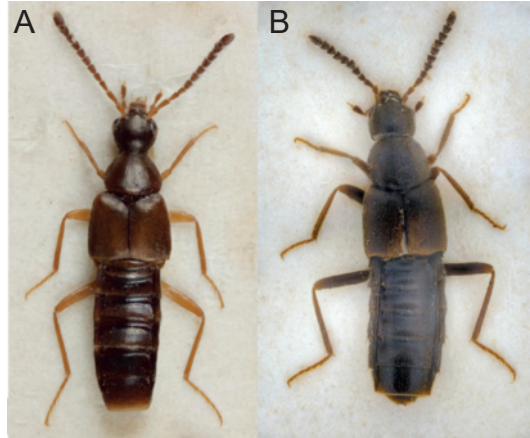


Figure 9. – A) *Acrostiba borealis* Thomson, Finland, Kuusamo – B) *Pyroglossa pulcherrima* (Bernhauer), Finland, Utsjoki. T. Clayhills leg. & coll. Photo: K. Kaunisto.

Figur 9. – A) *Acrostiba borealis* Thomson, Finland, Kuusamo – B) *Pyroglossa pulcherrima* (Bernhauer), Finland, Utsjoki. T. Clayhills leg. & coll. Foto: K. Kaunisto.

C. nivicola is widespread and fairly common in Lapland and the fjeld-region of Scandinavia (e.g. Brundin 1934, Sahlberg 1876)

***Chanoma* Blackwelder, 1952 (1)**

A genus with one very rare species first described as *Pseudaphana vorbringeri* Bernhauer, 1907. The generic name was changed to *Chanoma* Blackwelder, 1952 (a replacement name) when it was realized that *Pseudaphana* Bernhauer was a junior homonym. In the meanwhile the species had been found in Sweden and described as *Ocyusa tullgreni* Palm, 1939.

***Cousya* Mulsant & Rey, 1875 (1)**

Cousya longitarsis (Thomson) is a brownish, slender species with narrow pronotum, very long legs and long, fairly slender antennae. The frontal carina is visible, but the suture can be easily overlooked. In that case *C. longitarsis* would end in couplet 22, having metatarsi similar to *Pentanota*, but being much smaller and uniformly brown.

***Crataraea* Thomson, 1858 (1)**

Crataraea suturalis (Mannerheim) is a fairly nondescript, dark species habitually similar to *Haploglossa* spp., but instantly separable from those by uniformly pale antennae, these being

bicolored, basally pale in *Haploglossa*. The males have a conspicuously more transverse pronotum than the females.

***Dexiogyia* Thomson, 1858 (1)**

Dexiogyia corticina (Erichson) is a pale yellowish to brown species similar to some *Oxypoda*, but without a visible frontal suture. Contrary to most *Oxypoda*, *Dexiogyia* lives under the bark of trees.

***Devia* Blackwelder, 1952 (1)**

Devia prospera (Erichson) appears to be an apomorphic large *Oxypoda* with apically bifid mandibles, very long meso- and metatarsomere one and only faintly basally impressed tergites 1-3.

***Dinarda* Leach, 1819 (3)**

Dinarda cannot be confused with any other genus due to the body shape. The three forms living in nests of different ants were formerly considered to be “biological races” – whatever that means – but are regarded as separate species today.

***Gnathusa* Fenyés, 1909 (1)**

Gnathusa and *Mniusa* differ from all other old “*Ocyusa*” species in having pronotal hair pattern of type one. *Gnathusa grandiceps* (J. Sahlberg) differs from *Mniusa incrassata* (Mulsant & Rey) in having very long sickle-shaped mandibles and pale, slender antennae (Seevers, 1978; Muona, in press).

Klimaszewski et al. (2014) showed that *Mniusa* and *Gnathusa* were separate taxa, but failed to realize that both genera were Holarctic. Pace (2012) described *Drepasiagonusa* from China without realizing that it was a junior subjective synonym of *Gnathusa*. Assing (2021) realized this error, but re-introduced *Eurylophus* J. Sahlberg as the valid name for the genus, overlooking the fact that this name was a junior homonym of *Eurylophus* Schönherr and thus permanently unavailable.

***Haploglossa* Kraatz, 1856 (5)**

The dorsally poorly visible metathoracic sideplates separate *Haploglossa* from *Aleochara*. This is sometimes hard to judge and a useful additional feature is the color of the antennae. Most *Haploglossa* have dark antennae with strikingly paler basal segments, whereas *Aleochara* species

rarely show this color pattern. If nothing else helps, *Haploglossa* species have four-segmented maxillary palps, *Aleochara* five-segmented ones.

***Hylota* Casey, 1906 (1)**

Hylota ochracea Casey, 1906 is an introduced species first found in Europe in Norway and subsequently described as *Stichoglossa forticornis* Strand, 1939 and later on placed in the genus *Dexiogyia*. Seevers (1978) placed *Hylota* in synonymy with *Oxypoda*, probably because of the visible frontal carina and overall similarity. The peculiar structure of the spermatheca and pronounced male secondary sexual characters do not support such a placement. Because of the visible frontal suture *Hylota* does not seem to be a junior synonym of *Dexiogyia* either, but *S. forticornis* is clearly a junior subjective synonym of *H. ochracea*. Thus the combination *Hylota ochracea* Casey seems to be the correct one.

***Hygropora* Kraatz, 1856 (2)**

The two *Hygropora* species occurring in the region resemble small, blackish *Oxypoda* spp., but differ from them in not having a visible frontal suture. They inhabit riparian zones unlike most *Oxypoda*.

***Ilyobates* Kraatz, 1856 (2)**

Ilyobates is a highly characteristic genus due to the very densely punctate front body with interstices between punctures reduced to ridges.

***Ischnoglossa* Kraatz, 1856 (3)**

Gillerfors (1993) provided an excellent source for identifying the three subcortical species occurring in the region. Palm (1972) listed only one species.

***Meotica* Mulsant & Rey, 1873 (7)**

The identification of *Meotica* species is not possible without consulting Assing & Vogel (2021).

***Mniusa* Mulsant & Rey, 1875 (1)**

Mniusa and *Gnathusa* differ from all other old “*Ocyusa*” species in having the pronotal hair pattern of type one. *Mniusa incrassata* (Mulsant & Rey) differs from *Gnathusa grandiceps* (J. Sahlberg) in having dark antennae with distinctly transverse apical antennomeres.

***Ocalea* Erichson, 1837 (5)**

Ocalea is characterized by the long setae on sides of pronotum and abdomen combined with pronotal hair pattern one. Palm (1972) erroneously reported the pronotal hair pattern as being of type two.

***Ocyusa* Kraatz, 1856 (2)**

Deubelia Bernhauer is regarded as a subjective junior synonym of *Ocyusa*. *Ocyusa* as defined today includes only two species in the region. Both are shiny, strongly punctate and with visible frontal suture.

***Oxypoda* Mannerheim, 1830 (50)**

Oxypoda is a grouping that should be redefined and possibly dismembered. Even within the relatively small area included in this work, *Oxypoda* contains unresolved taxonomic questions, undescribed species and questionable synonymizations.

O. rufa Kraatz does not have a visible frontal suture and may not belong to *Oxypoda* at all. Because of the very long metatarsomere 1 it would end in couplet 22 with the differently colored and much larger *Pentanota*. The frontal suture is sometimes hard to see in another species with elongated metatarsi, *O. vittata* Märkl. It can be easily separated from *Pentanota* by being uniformly covered with extremely dense, fine punctation and vestiture.

***Parocytusa* Bernhauer, 1902 (2)**

Parocytusa is characterized by visible frontal suture, narrow neck and basally impressed abdominal tergites 1–3. All species are slender and have long legs and antennae. Because of taxonomic and nomenclatural confusion these species have been united with different incorrect generic names earlier: *Chilopora*, *Chiloporata* and *Tetralaucopora* (Assing 2021).

***Pentanota* Bernhauer, 1905 (1)**

The Nordic species is not *Pentanota meuseli* Bernhauer, but an undescribed one (Muona in press). In addition to Norway, Sweden and Finland, it is known from Northern Germany (Schleswig-Holstein). Palm (1972) uses antennal structure to separate *Pentanota* and *Pyroglossa*. This is complicated by the sexual dimorphism in *Pentanota*, male antennae being about as slender as those of *Pyroglossa* females, whereas female

antennae, as shown in Palm's drawing, have much more transverse apical antennomeres.

***Phleopora* Erichson, 1837 (6)**

Phleopora species are tiny subcortical beetles with short legs and antennae and an unusual variety of pronotal hair pattern type five with most hairs directed caudad.

***Poromniusa* Ganglbauer, 1895 (2)**

Poromniusa species resemble *Zoosetha incisa* (Assing) in being small, blackish in color and having unusually large dorsal punctures. They lack visible frontal suture, however.

***Pyroglossa* Bernhauer, 1901 (1)**

The combination of large size, over 4 mm, and pronotal hair pattern type three is unmistakable. Assing & Vogel (1997) listed the hair pattern type as two, but this was an error. Although seventeen specimens of *P. pulcherrima* (Bernhauer) have been collected from Sweden, Norway and Finland this far, the male still remains unknown. Both the genus *Pyroglossa* and the species *pulcherrima* were described in the same year, but not in the same article. *P. pulcherrima* was originally placed in the genus *Ocalea*.

***Stichoglossa* Fairmaire & Laboulbène, 1856 (1)**

The strikingly bicolored dorsum and short metatarsomere one characterize *Stichoglossa semirufa* (Erichson)

***Thiasophila* Kraatz, 1856 (5)**

The tightly fitting antennomeres typical for all myrmecophilous aleocharines combined with a generalized aleocharine form characterize this genus. The antennomeres can be stretched when the specimen is mounted on a card and this may cause problems. *Thiasophila* has another good diagnostic feature, however. The abdominal tergites 1–3 are simple, not basally impressed as in most other aleocharines. *Homoeusa* Kraatz is another myrmecophilous genus which could be found in the region. *H. acuminata* (Märkl) is associated with the ant *Lasius fuliginosus* and is known from Germany (north to Niedersachsen), Netherlands and southeastern England. It is less than 2.6 mm long, uniformly yellowish *Oxypoda*-type species

with a very transverse pronotum, more than 1.7 times wider than long.

***Zoosetha Mulsant & Rey, 1874* (1)**

Zoosetha incisa Assing was reported from Southern Sweden recently (Frisch & Sörensson, 2016). Because of the strong dorsal punctation it resembles *Poromniusa* species, but contrary to those, it has a clearly visible frontal suture.

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Sammanfattning

En ny bestämningsnyckel presenteras för de nord-europeiska högre Aleocharinae-släktena med tarsalformel 5–5–5. Området som omfattas omfattar Skandinavien, Finland och de baltiska staterna. Den enda tidigare nyckeln för dessa släkten publicerades för mer än femtio år sedan och många förändringar i nomenklatur och generiska kombinationer har skett sedan dess. I motsats till tidigare försök används inte mikroskopiska detaljer av ventrala mundelar i denna nyckel.