Chapter 1

Nerioidea
McAlpine (in Oosterbreuk) describes the Family as follows:

Moderately slender, minute to small flies, 2-5mm in length; **head** - face with pair of sclerotised lateral plates, its median section usually desclerotised, at least on the lower part; postvertical bristles convergent; vibrissa, ocellar, and 2-4 pairs of reclinate fronto-orbital bristles present; antenna porrect; segment 3 rounded with dorsal (not sub-basal) arista; **wing** - costa with subcostal break; subcosta distally desclerotised to variable extent, approximated to R1; cell dm present or confluent with cell bm; cell cup sometimes indistinctly enclosed; vein A1 sclerotised, often long; alula distinct; **thorax** - prosternum narrow; dorsocentral bristles usually 4 or 5 pairs; scutellars 2 or 3 very unequal pairs; anepisternal bristle absent; **legs** of moderate length.

Adult pseudopomyzids usually live in shaded forests and are rarely collected and apparently also rare in nature. To find them sweep around fallen tree trunks or near rotting logs or set up malaise traps in these areas. Early stages are largely undescribed but larvae of Palaearctic species have been found under the bark, including the roots, of deciduous trees (more references in Oosterbreuk, Greve & Godfrey).

**Pseudopomyza Strobl, 1893**

38 ------ Head with 3 pairs of front-orbitals, thorax with 4 pairs of dorsocentrals & 2 pairs of long scutellars. Face bare between antennae, mesopleuron bare & costa without spines.

**Pseudopomyza atrimana**

In the UK this is known from Denny Wood, New Forest (Ivan Perry 1994) and Cuckoo Wood, Kent (Peter Chandler 23/7/72 with more recent records from Godfrey, 1994 and in Wales (Cartmel, SN602164) by Peter Chandler in 2009.
Greve (1995) states that the striking male postabdomen makes this species easily identifiable amongst Malaise trap material.
49: Micrópezidae

**Key to subfamilies**

39 ------ No crossvein separating second basal cell (bm) and discal cells (dm) of wing; fronto-orbital setae absent

- Costa practically bare from base to end of subcostal vein, this subcostal vein (R1) with small bristles on the upper surface. One distinct, strong, sternopleural bristle. Occiput very prominent and postvertical bristles present.
- No ventral pregenital lobes in males of British species and no thoracic dorso-central bristles. At least the four posterior tibiae with small bristles.

    **Micropezidae (Micropez(a))**

41

-------- Crossvein present between second basal and discal cells; fronto-orbital setae present

- Costa setulose to base. One, two (or even three) pairs of dorso-central bristles. Usually no single strong sternopleural bristle though often a fan of finer bristly hairs. Males with ventral abdominal lobes.

    **Micropezinae (Micropez(a))**

40

-------- Postvertical bristles present. Clypeus strongly developed and projecting, shining black.

    Anterior fronto-orbital setae far from eye margin. Male epandrium without surstyli

        **Taeniapterinae (Raineria)**

45

-------- Postvertical bristles absent. Clypeus small, projecting only slightly beyond the mouth opening. Fronto-orbitals in two nearly parallel rows close to eye margins. Male epandrium with surstyli

    **Calobatinae**

46
### Key to subfamilies

<table>
<thead>
<tr>
<th>Micropezinae</th>
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<tbody>
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<td><img src="image1.png" alt="Wing Diagram" /></td>
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### Terminology

**Fronto-orbital setae**: If you can distinguish distinct orbital (posterior) and frontal (anterior) plates (actually paired sclerites which run along the inner edges of the compound eyes) on the frons then you can use the terms orbital and frontal for the setae, otherwise it is not clear to which plate the setae belong and the term fronto-orbital is used.
**Micropezinae**

**Micropeza Meigen, 1803**

Rohácek, 1990 provides a key to the Central European Micropezids, there seems to be a reasonable chance of discovering others, especially *brevipennis* (check collections of *corrigiolata*).

41 ------ Thorax black, any yellowish colouration confined to the humeral callus and sides of scutellum

42 ------ Thorax with large areas of yellow or orange [ ]

42 ------ Propleuron with a row of long setae on the ventral margin; two basal segments of the antenna yellow.

43 ------ Haltere and fore coxa yellow; usually 2-4 pairs of longer setae on the metasternum; male cercus usually yellowish; female ovipositor sheath completely black ventrally; wing longer.  

    cf *M. lateralis*: Smaller, mainly black species. Vertex and occiput black. Thorax practically entirely black. Male hypopygium mainly black. 5 - 6.5mm

44 ------ Arista brown; propleuron without ventral setae; scutellum at most medially with a brownish spot, otherwise yellow; abdominal tergites largely dirty yellow

44 ------ Arista white; propleuron with well developed ventral setae; scutellum almost completely brown; tergites dark brown with raw sienna [ ] hind margins

    cf *M. corrigiolata*: Larger, brown and sienna species. Vertex and occiput streaked and spotted with sienna. Side margins of thoracic disc, and lower part of pleurae sienna. Male hypopygium mainly sienna. 6 - 8.5mm
Nerioidea

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Micropezidae

Micropeza

Micropeza corrigiolata

Micropeza lateralis

Nerioidea
Taeniapterinae

Rainieria Rondani, 1843

The genus is characterised by the presence of well developed postocellar setae and the massive shining clypeus projecting beyond the mouth cavity.

45 ------ All femora black at base

Rainieria calceata

British Isles: Windsor Forest, June & July on felled beech. Donisthorpe, 1930. Chandler, 1975 reviews its status but has no sites beyond Windsor Forest and no dates earlier than August. Denton (2001) reports it from West End Common, Esher, Surrey (TQ16) under the drying remains of the fungus Nothopanus lignatilis in August. Skidmore also reports it at Juniper Hall (TQ15)

Hungary: Nagy-irtás, Vespermfajsz (E 17°54’16” N 47°01’37”) running around sap runs & rot holes, 31 May 1998 (Sumner)

Slovenia: Otosce, high meadow (E 14°02’54” N 45°46’11”) running along beech log, 2 June 2003 (Sumner).

Hudicevec (E 14°05’30” N 45°45’15”), 2 June 2003 (Pavett).

Warmer springs in central europe would account to some extent for the much earlier dates but I would suspect that U.K. flight periods could actually extend much earlier.

-------- All femora or at least fore femora light at base

European ------------------------ latifrons, hennigi
Japanese ------------------------ boninensis

Refer to Krivosheina, 1996
Taeniapterinae

Rainieria calceata

[Images of Rainieria calceata]
Calobatinae

46 ------ Palpi short, not reaching the anterior part of the mouth opening. Ends of mediastinal (Sc1/Sc2) and subcostal (R1) veins ending very close together in costa, (by a distance slightly >1x middle (discal) crossvein length or <1x posterior crossvein (tp) length).

♂: claspers on 5th sternite not filiform (but they are curved, posteriorly directed.)

Neria (Compsobata) ----------------------------------- 50

-------- Palpi long and always easily visible, in the mouth opening. Ends of mediastinal (Sc1/Sc2) and subcostal (R1) veins ending well apart in the costa (by a distance >2x middle (discal) crossvein length or >1x posterior crossvein (tp) length).

♂: claspers on 5th sternite filiform (inwardly and anteriorly bent in apical halves.)

Two other features distinguish the Calobata/Cnodacophora group from all other genera: sternite 6 is flat and Y-shaped and sternite 4 is dilated at the middle of the posterior margin (Andersson, 1989)

Calobata & Cnodacophora----------------------------- 47


♂ without a ventral projection between hind coxae.

Calobata------------------------------------------ 48

-------- Only one pair of dorsocentral bristles [? prescutellar acrostichals]. If humeri and female ovipositor yellowish, arista bearing long pubescence, and whole of prothoracic episterna bearing hairs as well as microscopic pile. Anal vein (A₁) abbreviated.

♂ with a projection of metasternum towards the rear, between hind coxae.

Examine scutellum, if its bristles are not on the margin then the rare Central European Calobotella longiceps may key here

Cnodacophora -------------------------------------- 49
### Micropiezidae

#### Calobatinae

<table>
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<tr>
<th>Neria</th>
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#### Calobata & Cnodacophora

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#### Calobata

#### Cnodacophora
Calobata Meigen, 1803

One species only:

48 ------ Male: 5th abdominal sternite - each lobe is bidentate, with a short inner tubercular and long tubular outer projection, directed anteriorly, both with long hairs at the tips; 4th sternite - a pair of curved, hairless, tubular projections from each side margin directed posteriorly; 3rd sternite - a pair of small tubular projections one from each side margin directed posteriorly. 5 - 7.5mm

Note that in side view each of the last two pairs of projections may appear to arise from the previous segment, the sternites are not positioned directly underneath the corresponding tergites.

Cnodacophora Czerny, 1930

49 ------ Thorax entirely covered in greyish dust. Larger species. Second antennal joint blackish. Prothoracic episterna hairy. 6 - 8mm

Costal area from the end of the radial vein to the tip of the wing is infuscated (except in tenerals). Male: ventral abdominal lobes curving forwards towards the base of the abdomen somewhat as those on the fifth sternite in petronella, but simple not bidentate; they appear to arise from beneath the sides of the 4th tergite but are really part of the 5th sternite.

-------- Thorax with polished black stripes or patches. Smaller species. Second antennal joint yellow. Prothoracic episterna without hairs except on ridge above base of front coxae. 4.5 - 6mm

Frons with the upper half black. Shining black areas on thorax include a patch at middle in front and two side stripes abbreviated both in front and behind. A broad grey-dusted middle stripe divides into two diverging narrow stripes in front which extend to each humerus and widens out behind to cover the postalar calli and the scutellum. Male: abdominal lobes arise from the fifth sternite and are similar to those of sellata, situated at about half way down the abdomen. Female: ovipositor also resembling that of sellata in being more tapering in outline than in cibaria or cothurnata.

Scotland, Spey Valley, Spey/Nethy confluence, Strathglass - late May, June & July.

Note:

In life the membranous pluera of the abdomen may be substantially distended (the illustration of the abdomen of Calobata petronella is from life.) After death this membrane contracts and frequently obscures visibility of the male appendages.
### Calobata & Cnodacophora

<table>
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<tr>
<th>Calobata petronella</th>
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<th>Cnodacophora sellata</th>
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<th>Cnodacophora stylifera</th>
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Neria Robineau-Desvoidy, 1830

50 ------ Wing with large areas free of microtrichia basally; mainly reddish-yellow thorax (black on front margin and scutellum) and often two dark annulations on hind femora.

- Small species with short and narrow wings, whole of prothoracic episterna with hairs as well as pile. (Palpi not quite extending to front of mouth opening). 4 - 5mm
- Microtrichia character is used in some keys to separate this Neria from Compsobata (now all are Neria - Andersson, 1989)

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51 ------ Upper (posterior) half of frons velvety black; male with an unpaired (median flat) process of the 6th sternum projecting anteriorly between the large but slender processes (curved towards each other and semitubular but dilated knob-like at the tip) of the 5th sternum, anal "cerci" with not very long hairs; female ovipositor sheath entirely black, without a transverse row of long hairs at tip beneath. Arista entirely pale yellow. 5 - 7mm

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Neria commutata

------ Frons orange up to the ocellar triangle; male without the unpaired process on the 6th sternum, claspers much more robust; female ovipositor sheath reddish-brown at least subapically

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52 ------ First tergite with a small lateral polished area; male sternal claspers not bulbous, with a forked internal tip; female ovipositor sheath dorsolaterally constricted.

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Neria cibaria (cothurnata)

------ First tergite completely microtomentose; male claspers bulbously hemispherical; female ovipositor sheath without dorsolateral constriction

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Arista darkened about the base. Upper half of frons yellow/red even on each side of the ocellar triangle. 5 - 7.5mm. Yellow on upper half of frons extending to the sides of the ocellar triangle, this colour may also be red. Male ventral lobes similarly curved towards each other as in commutata but each one much wider, especially about the base, though abruptly narrowed near the tip where they are flattened out into an anterior rounded dilation and a smaller more pointed posterior tooth; they are not preceded by a median ventral projection. Anal cerci with much longer hairs, longer than cerci. Female ovipositor with a transverse row of long pale hairs at the tip beneath.
### Nerioidea

<table>
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#### Neria ephippium

![Image of Neria ephippium](image1)

#### Neria commutata

![Image of Neria commutata](image2)

#### Neria cibaria

![Image of Neria cibaria](image3)

#### Neria femoralis

![Image of Neria femoralis](image4)
References - Nerioidea


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