A new species of *Nilea* Robineau-Desvoidy (Diptera, Tachinidae) with notes on the genus and a key to the North European species

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A new tachinid species (Diptera, Tachinidae), *Nilea ambigua* n. sp. from Sweden and Russia, is described. The new species resembles the Palaearctic relative *N. hortulana* (Meigen) in external morphological features but is easily recognized by the male terminalia. Differences from other species of *Nilea* Robineau-Desvoidy are presented and a key to the North European species of the genus is provided. Information is given on the holotype of *Nilea hortulana* (Meigen) and the correctness of its present synonyms is evaluated. No host is yet known for *N. ambigua*. Confirmed Scandinavian host-records for *N. hortulana* shows that this species has a clear preference for *Acronicta*-larvae (Noctuidae).

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The genus *Nilea* Robineau-Desvoidy, 1863 in the extended sense of Wood (1987) and O'Hara & Wood (2004) is widespread throughout the world and includes also the Holarctic genus *Pseudoperichaeta* Brauer & Bergenstamm, 1889 and two additional generic synonyms in the Nearctic Region. Lacking a sound revision, the genus *Nilea* is in the present paper treated in the traditional and more restricted sense; e.g., of Herting (1984), Herting & Dely-Draskovits (1993) and Tschorsnig et al. (2004). Six species were hitherto known from the Palaearctic Region, namely *N. breviunguis* Chao & Li 1998 from the Shanxi province in China, *N. anatolica* Mesnil, 1954 from Turkey and Transcaucasia, *N. brigantina* Herting, 1977 from the French and Swiss Alps, and three species widespread throughout the Palaearctic region, *N. hortulana* (Meigen, 1824), *N. innoxia* Robineau-Desvoidy, 1863, and *N. rufiscutellaris* (Zetterstedt, 1859). In this paper a seventh Palaearctic species, *Nilea ambigua* n. sp., is described from Sweden and Russia.

The genus *Nilea* Robineau-Desvoidy belongs to the large and multiform tribe Eryciini (Herting 1984, O'Hara & Wood 2004). Most Eryciini are known to deposit incubated macrotype eggs directly on the host integument, although some, e.g., *Aplomya* Robineau-Desvoidy, 1830 and *Prooppia* Townsend, 1926 (Herting 1960) have been shown to deposit unembryonated eggs on the host. The published host-records of *Nilea* comprise species of Noctuidae (Lepidoptera) and various other lepidopteran families, but not all of them are confirmed. The most common species (*N. hortulana*) shows a clear preference for *Acronicta*-larvae (Noctuidae), and the majority of host-records of two other species (*N. innoxia* and *N. rufiscutellaris*) belong to *Acronicta* too.

The taxonomy of Palaearctic *Nilea* species was difficult because of the problem of evaluat-

ing the nominal species described by Robineau-Desvoidy (1850, 1863) and Macquart (1849), and is further complicated by morphological similarities to unrelated taxa. As a result of such similarities *Nilea hortulana* was included by Mesnil (1954) in the genus *Platymya* Robineau-Desvoidy, 1830 (subgenus *Himera* Robineau-Desvoidy, 1863) which is correctly placed in the tribe Goniini. Herting (1960: 69), however, stated that the species of *Nilea* are well-characterized by larval features.

Nilea will key out at two separate couplets in Tschorsnig & Herting (1994), Tschorsnig & Richter (1998) and Wood (1987). At least the North European members of the genus are characterized by the following combination of external morphological features: eye covered with long hairs; male frons relatively broad, without proclinate outer orbital seta; usually only 1 strong reclinate inner orbital seta in *N. hortulana* and *N. ambigua*, often with 1-2 additional smaller reclinate frontal setae in front of it in *N. innoxia* and *N. rufiscutellaris*. Males usually with outer vertical setae (not differentiated in *N. hortulana* and *N. ambigua*). Facial ridge with some small setae ascending in the lower 2/5 in *N. hortulana* and *N. ambigua*; in the lower 1/2 or 3/5 in *N. innoxia* and *N. rufiscutellaris*. Antenna black; first flagellomere in ♂ 3.3-5.4 times, in ♀ 2.5-3.4 times as long as pedicel. Back of head covered with white or greyish white hairs, with numerous small black setulae behind the postocular row. – Thorax: First postsutural supra-alar seta longer and stouter than the notopleural setae; prosternum haired; proepisternum bare; postpronotum with 3 basal setae arranged in an almost straight line and with a smaller anterior seta inserted between the middle and inner basal setae; scutum with 3(4)+3-4 pairs of dorsocentral setae; katepisternum with 3-4 setae; katepimeron bare, or in the anterior part at most with 1-5 hairs; scutellum with rather strong crossed horizontal or slightly raised apical setae; costal spine weakly developed; fourth costal portion longer than sixth costal portion; vein R4+5 dorsally with 2-4 small setae basally; section of M between crossvein dm-cu and bend usually longer than distance between bend of M and margin of wing; mid tibia with 2-3 anterodorsal setae. – Abdomen: Mid-dorsal depression on syntergite 1+2 extending back to hind margin; tergite 2 with 2 and tergite 3 with 2-6 pairs of median marginal setae; tergites 4 and 5 without or with (*N. hortulana*, *N. ambigua*) shiny black fields with more or less recumbent hairs ventrally.

Further studies, especially on earlier stages, will be necessary to solve the question whether the genus *Nilea* in its restricted sense is a monophyletic group.

Materials and Methods

All four *Nilea* species recorded from the Nordic countries, i.e. *N. ambigua*, *N. hortulana*, *Nilea innoxia* and *Nilea rufiscutellaris* have been studied in the present paper. The dissection of male terminalia was performed following the method described by O'Hara (2002). Dissected terminalia are preserved in glycerine in a small plastic tube pinned together with the specimen. External morphological colour images (Fig. 1) was taken with a Nikon D2X digital camera mounted on a bellows and a macro-optical tube. Images of the male terminalia (Figs. 2-4) were taken with a digital camera mounted on a stereoscopic microscope. To create a completely focused image, a series of images of each object were taken at different focal planes. Using HeliconFocus, a program that combines the focused areas from the several partially focused images, one completely focused image was created.

Terminology of external morphology and terminalia as well as measurements and ratios of head follow Tschorsnig (1985) and Tschorsnig & Richter (1998).

Data on the labels of type material are listed using the following symbols:

/ = end of a line;

// = end of a label (labels cited from top to bottom on the same pin);

Acronyms of depositories

This study was been based upon *Nilea* specimens deposited in the following institutions and private collections:

CB – Private Collection of C. Bergström, Uppsala, Sweden

NMW – Naturhistorisches Museum, Vienna, Austria (P. Sehnal)

MHNL – Musée d'Histoire Naturelle, Lille, France (P. De bleeckere)

MNHN – Muséum Nationale d'Histoire Naturelle, Paris, France (C. Daugeron)

MS – Private Collection of M. Sörensson, Lund, Sweden

NHRS – Swedish Museum of Natural History (= Naturhistoriska Riksmuseet), Department of Entomology, Stockholm, Sweden (B. Viklund)

MZF – Museo Zoologico de "La Specola", Firenze, Italy (P. Cerretti)

MZH – Zoological Museum, Division of Entomology, Helsinki, Finland (J. Laiho)

MZLU – Museum of Zoology, Lund University, Sweden (R. Danielsson)

SMNS – Staatliches Museum für Naturkunde, Stuttgart, Germany (H.-P. Tschorsnig)

Description of *Nilea ambigua* n. sp.

Material

Holotype (♂): Sweden, [138] // Up. Uppsala / Hågadalen, Predikstolen / 22. VII. 1982 / leg. Christer Bergström [NHRS].

Paratypes: Sweden: 1 ♂, [139], otherwise as holotype [CB]. – 1 ♂, [140] (dissected) otherwise as holotype [SMNS]. – 1 ♂, [644] // Vr. Kristine- / hamn, Stensta (Vattent.) / 28. VI. 1986 / leg. Christer Bergström [CB]. – 1 ♂, [2401] // Vr. Torsby distr. / Sysslebäck 06. VII. 2002 / leg. Christer Bergström [NHRS]. – 1 ♂, [254 / 2007] // Öl., Vickleby / Beijershamn 15. VI. 2007 / leg. Christer Bergström [CB]. – 1 ♂, Sm., Bolmen / July -41 / coll. O. Ringdahl // 1982 / 472 // Nilea / hortulana Meig. /B. Herting det. (dissected) [MZLU]. – 1 ♂, Sk., Skäralid / 17. VI. 1938 / coll. O. Ringdahl // 1982 / 474 // Nilea / hortulana Meig. / B. Herting det. (dissected) [MZLU]. – Russia: 1 ♂, Karelia Republic / Sortavala // L. Tiensuu // 10. VII. 1937 (dissected) [MZH].

The numbers in square brackets refer to the author's notebook.

Etymology

From the Latin word *ambigua* meaning ambiguous or wavering. The species name *ambigua* is selected for the new species because of its remarkable similarity with *N. hortulana* in outer morphology.

Description

Male (statements within square brackets refer to male holotype):

Colour and pruinosity: Head mostly black with a greyish white pruinosity; frontal vitta blackish brown; face at mouth margin, upper anterior portion of parafacial, and genal groove reddish brown. Antenna black, arista brownish in its basal 2/5-1/2. Palpus yellow at apex, gradually more brownish towards base. Thorax (scutum) black, dorsally covered with light grey or bluish grey pruinosity; five dark longitudinal stripes on thorax, the middle one at least partly missing in front of suture; the lateral pair sub-triangular. Post-alar callus brownish black. Scutellum predominantly black, reddish brown in apical 1/3-1/2. Wing hyaline with light brown veins. Tegula black, basicosta blackish brown. Calypters yellowish white, at inner margin of lower calypter near scutellum brownish yellow. Halter brownish yellow at base and stem, knob brownish. Legs brownish black. Abdomen black with a pair of reddish brown spots laterally on tergite 3. Syntergite 1+2 practically without pruinosity, tergites 3-5 dorsally with a rather dense greyish white or greyish yellow pruinosity, with a distinct black longitudinal middle stripe; posterior 1/5-1/4 of tergites 3 and 4 black, tergite 5 shiny black in its apical 1/2-3/5; tergite 3 in posterior view with a pair of trapezoid blackish spots.

Head (Figs. 1a,b): Eye covered with hairs; each hair as long as the combined diameter of 3-4 eye facets. Length of frons about as long as length of face. Frons at its narrowest point 0.83-0.94 [0.94] times as wide as an eye in dorsal view. Interfrontal area at a midpoint as broad as or slightly broader than corresponding parafrontal area. Inner vertical seta 0.5-0.6 of eye-height, outer vertical seta undifferentiated. Ocellar setae proclinate and about as strong as the inner vertical setae. A row of 8-11 crossed frontal setae descending to level of apex of pedicel; upper frontal setae weak, the hindermost sometimes reclinate; 1 strong reclinate inner orbital seta. Parafrontal outside the frontal setae with numerous long hairs, some as long as 1/3 of the strongest frontal setae; 1-5 [1] hairs descending below level of lowest frontal seta. Parafacial narrowing below, at its narrowest point approximately as wide as maximal width of palpus. Facial ridge with 5-8 setulae and some additional setulose hairs in lower 2/5. Back of head covered with white hairs, behind the postocular setae with one or two rows of black setulae. Flagellomere 1 about 3 times as long as broad, evenly curved at apex, 4.2-4.8 [4.4] times as long as pedicel. Arista thickened on its basal 1/3-2/5. Sclerotized part of prementum about 2 times as long

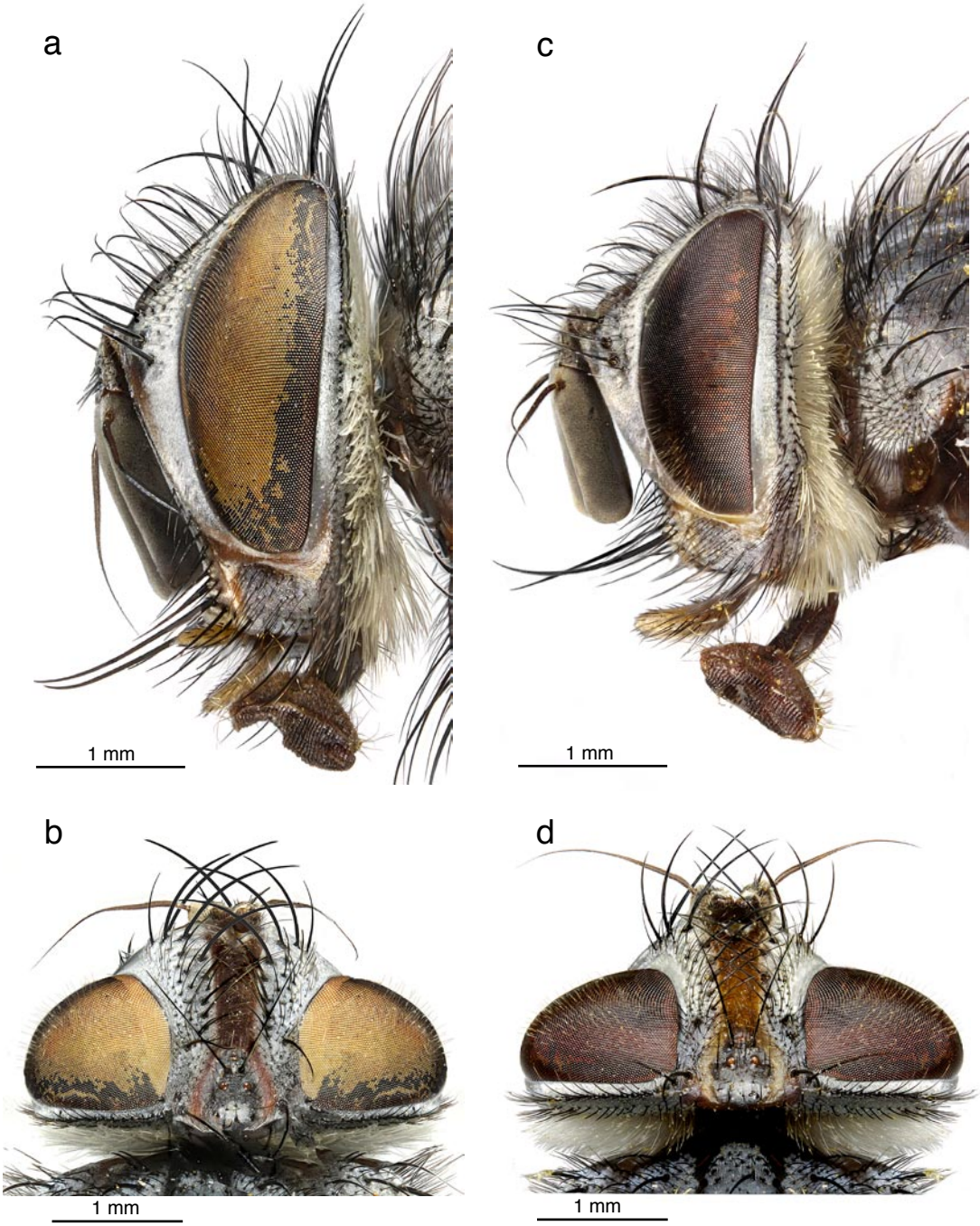

Figure 1. ***Nilea*** *sp., head of ♂♂, lateral (a,c) and dorsal (b,d) views.– a,b)* ***N. ambigua*** *n. sp., paratype. – c,d)* ***N. hortulana****.*

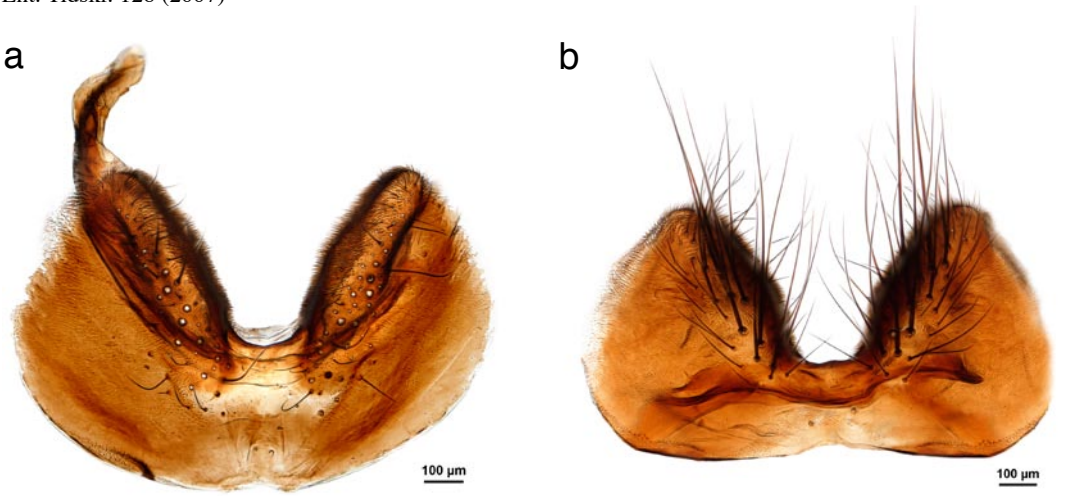

Figure 2. ***Nilea*** *sp., abdominal sternite 5 (and dark contour of sternite 6), ventral view. – a)* ***N. ambigua*** *n. sp., paratype. – b)* ***N. hortulana****. – Scales: 0.1 mm.*

as wide. Palpus widened and slightly flattened apically, distinctly shorter than flagellomere 1, with dense and short hairs at apex.

Thorax: Prosternum haired, proepisternum bare. Postpronotum with 3 basal setae arranged in an almost straight line, and with 1 weaker anterior seta placed between middle and inner basal seta. Scutum with 3+3 pairs of acrostichal setae, 3+4 pairs of dorsocentral setae, and 1 + 3 [left side 0+3] pairs of intra-alar setae. First postsutural supra-alar seta strong. Katepisternum with 3 setae. Katepimeron with 1-5 hairs in its anterior half. Anepimeral seta rather weak, approximately as strong as the weakest katepisternal seta. Scutellum with 1 strong pair each of basal and subapical setae, 1 pair of rather weak lateral setae and crossed and almost horizontal apical setae. Dorsal surface of scutellum with the normal pair of discal setae, subequal to apical and lateral setae.

Wing: Costal spine weakly developed; second costal sector bare ventrally; R4+5 dorsally with 1-3 [2] setulae at its base. Fourth and fifth costal sector together 2.6-3.6 [3.1] times as long as sixth costal section. Bend of M at right angle or slightly obtuse rounded without an appendage. Apical section of M distinctly concave. Section of M between crossvein dm-cu and bend 1.2-2.4 [1.5] times as long as distance between bend of M and margin of wing. Last section of CuA1 shorter than crossvein dm-cu.

Legs: Fore tarsus with claws and pulvilli longer than fifth tarsal segment. Fore tibia with 2 posterior setae and a row of 5-6 short anterodorsal setulae; preapical anterodorsal seta distinctly shorter than preapical dorsal seta. Mid tibia with 2 strong anterodorsal setae and sometimes an additional setula in the proximal third, 2 posterior setae and 1 strong ventral seta. Hind tibia with a fairly irregular row of 14-16 anterodorsal setae, with a much stronger seta at middle; a row of 5-7 short posterodorsal setulae ending with a strong seta at level of the strong anterodorsal seta; 2 strong ventral setae, sometimes accompanied by 1-2 setulae; 2 dorsal preapical setae; preapical posteroventral seta not differentiated. Hind coxa bare on posterior margin.

Abdomen: Oval in shape. Ventral edges of tergites 2-4 entirely overlapping the corresponding sternites. Mid-dorsal depression on syntergite 1+2 extending back to hind margin of that segment. Tergite 2 with 2 median and 1-2 lateral marginal setae; tergite 3 with 2-4 [3] median and 2-3 lateral marginal setae, without or with 2 median discal setulae; tergite 4 with a complete row of 11-14 [13] marginal setae, with 2 strong discal setae and often some additional setulose hairs; tergite 5 with a complete row of marginal setae and a row of rather weak discal setae.

Body length 8.7-9.6 [9.6] mm.

Male terminalia (four dissections) (Figs. 2a, 3a,b, 4a): Sternite 5 (Fig. 2a) approximately 1.4 times as wide as long; anterior margin slightly concave in the middle; two sensorial pits (sensilla trichodea) close to anterior margin; posterior margin with a deep V-shaped and rounded cleft reaching about 3/5 of that segment; posterior portion with several strong hairs; inner margin of lobes densely setulose; transversal membranous strip somewhat indistinct. Tergite 6 divided into two hemitergites, rarely with a single setula at posterior margin. Sternite 6 well developed, strongly asymmetrical. Segment 7+8 with setulae. Epandrium relatively short and convex, anterior prolongation well developed. Cerci in dorsal view rather narrow, evenly tapering towards apex, approximately 3.3 times as long as wide at middle; its basal third with a membranous median suture, narrowly separated in about apical 2/3; densely covered with minute hairs basally, inner side non-serrate apically; in lateral view pointed and slightly curved ventrally at apex. Surstylus not fused with epandrium, its base in lateral view covered by the epandrium, distinctly shorter than cerci and strikingly narrow, laterally covered with short black setulae in its apical 2/3. Pregonite long and hook-like, with 5–7 hairs along its posterior margin. Postgonite broad and rounded with some sensorial hairs. Basiphallus with a well developed epiphallus which is about half as wide as the postgonite in lateral view. Distiphallus with a median projection of the dorsal sclerite; lateroventral region with a sclerotized, distinctly spinulose plate that is distinctly expanded laterally in the medioventral region.

The female of *N. ambigua* can at present not be distinguished with certainty from *N. hortulana* (see below).

Distribution

In Sweden known from five provinces. Three records originate from Uppland [Up.], two from Värmland [Vr.] and single records are from Skåne [Sk.], Småland [Sm.] and Öland [Öl] respectively. The new species is apart from Sweden only known from the Russian Republic of Karelia.

Biology

The author's six specimens of the new species were collected in broadleaved groves and mixed woodland, some of them from foliage of *Alnus glutinosa* and *Tilia cordata*.

Flight period: mid June to late July, indicating one generation per year.

Host unknown.

Comparison with other species of *Nilea*

Males of *Nilea ambigua* and *N. hortulana* differ from other European species of *Nilea* by the abdominal tergites 4 and 5 which are shiny black ventrally with dense fields of more or less recumbent hairs. Males of the new species *N. ambigua* (Figs. 1a,b) are in outer morphology very similar to *N. hortulana* (Figs. 1c,d). The frons, however, is usually distinctly wider in *N. ambigua*. Furthermore, the male terminalia of *N. ambigua* and *N. hortulana* are clearly different (see key below).

A female collected in the Karelia Republic and labelled Sortavala // L. Tiensuu might perhaps represent *N. ambigua*. It is probably collected together with the male paratype from the same locality (listed above). A short description is given below, including some features that should be evaluated in the future when more specimens are available. Some features of the terminalia that seem to differ from females of *N. hortulana* (7 dissections) are also given.

The female from Sortavala differs from the male of *N. ambigua* as follows: Frons at its narrowest point as wide as an eye in dorsal view. Parafrontal with 2 proclinate outer orbital setae. First flagellomere 3.2 times as long as pedicel. Claws and pulvilli slightly shorter than fifth tarsal segment. Mid tibia with 3 anterodorsal setae.

Terminalia: Tergite 6 divided longitudinally into two hemitergites, with numerous hairs in the posterior third, the longest hairs along the posterior margin and about 1.5 times as long as the tergite; sternite 6 short approximately 1.1 times as long as intersegmental membrane between abdominal segment 6 and 7, with less dense and slightly shorter hairs than tergite 6 but covered with extremely short hairs and ventrally with a medial pair of sensorial pits at the anterior margin; tergite 7 divided into two thin

hemitergites, in lateral view 3.6 times as long as high and about 1.3 times as long as tergite 6; sternite 7 in lateral view 2.0 times as long as high at anterior margin and about 1.5 times as long as sternite 6, in ventral view 1.9 times as long as wide at anterior margin, apex with free rounded distal portion, ventrally with the medial pair of sensorial pits in membrane; 6th and 7th spiracles in tergite 6, both close to the lower margin, 7th spiracle closer to 6th spiracle than to posterior margin of tergite 6; sternite 8 strongly reduced and partly divided; epiproct weakly sclerotized, without setulae; hypoproct short at middle, with setulae along posterior margin; cerci well developed with long setulae.

The terminalia of *N. hortulana* differs as follows: Sternite 6 longer, 1.3-1.7 times as long as intersegmental membrane between segment 6 and 7; sternite 7 relatively shorter, in lateral view about 1.4-1.7 times as long as high, in ventral view 1.2-1.7 times as long as wide.

Key to the north European species of *Nilea* Robineau-Desvoidy.

The following key is modified after Tschorsnig & Herting (1994). A safe determination of *N. ambigua* and *N. hortulana* should preferably rely on the examination of the male terminalia.

1 Supravibrissal setae reach the lower 1/5-2/5 of the facial ridge (rarely almost the lower half). Scutellum predominantly black, only at the tip lighter reddish brown, in some males reddish brown in slightly more than apical half. Palpus yellow at apex, brownish at base. 3 katepisternal setae. – ♂♂: Tergites 4 and 5 ventrally shiny black, with dense fields of more or less recumbent hairs..... 2

– Supravibrissal setae reach 1/2-2/3 of the facial ridge. Scutellum predominantly reddish yellow (at least in its apical 3/5). Palpus yellow, brown or black. 3-4 katepisternal setae. – ♂♂: Tergites 4 and 5 without such fields..... 3

2 Frons 0.83-0.94 times as wide as an eye in males, females are not known with certainty. – Male terminalia: Cerci pointed apically, in dorsal view narrow and separated in about apical 2/3 (Figs. 3a,b). Gonites and aedeagus as in Fig. 4a. Sternite 5 about 1.5 times as wide as long (Fig. 2a)……... *N. ambigua* n. sp.

– Frons 0.55-0.83 times as wide as an eye in males, 0.81-1.04 times in females (reared specimens). – Male terminalia: Cerci robust, broadly rounded apically, in dorsal view wide and separated in slightly less than apical 1/2 (Figs. 3c,d). Gonites and aedeagus as in Fig. 4b. Sternite 5 about 1.8 times as wide as long (Fig. 2b)..... .. ..*N. hortulana* (Meigen)

3. 3 katepisternal setae. Palpus (at least in the distal half) yellow. The setulae above the vibrissa reach 1/2 of the facial ridge or scarcely more. Tergites 3 and 4 without discal setae. Tergite 5 often somewhat shorter than tergite 4. The ocelli usually form an isosceles triangle (distance between the posterior ocelli shorter). .... *N. innoxia* Robineau-Desvoidy

– 4 katepisternal setae. Palpus black or dark brown. The setulae above the vibrissa reach 2/3 of the facial ridge, rarely only to 1/2. Tergite 4 almost always with irregular discal setae. Tergite 5 at least as long as tergite 4. The triangle formed by the ocelli is equilateral (same distance between all ocelli). ..... *N. rufiscutellaris* (Zetterstedt)

Notes on *Nilea hortulana* (Meigen)

Nilea hortulana can be found in deciduous woodland. The species is rarely collected in the field, but rather frequently reared from its hosts (see below). It is in Europe distributed northwards to England, Sweden (Västerbotten), Finland (Österbotten) and the Leningrad oblast (not yet recorded from Greece, Macedonia and Albania).

Holotype and synonyms

Before describing *Nilea ambigua*, it was – apart from examining the holotype of *Nilea hortulana* –necessary to check the extant primary types of the purported synonyms of *N. hortulana* described by Macquart (1849), Robineau-Desvoidy (1850, 1863), Rondani (1859) and Brauer & Bergenstamm (1891), to find out if there was already a name available for the assumed new species.

The following list of synonyms of *Nilea hortulana* (Meigen, 1824) is either based on direct examination of the primary types by the author, or on photo-images, or follows the revisions published by Herting (1969, 1972, 1974, 1976).

Tachina hortulana Meigen, 1824: 330, holotype ♂, Stolberg (Germany) [MNHN]. (Herting 1972: 8). – A safe determination is not possible based on the original description of Meigen (1824). Photo-images of the holotype have been examined; width of frons in dorsal view 0.66 times as wide as an eye.

Exorista acronyctarum Macquart, 1849: 404, holotype ♂, Paris (France). (Herting 1976: 2) –Type(s)

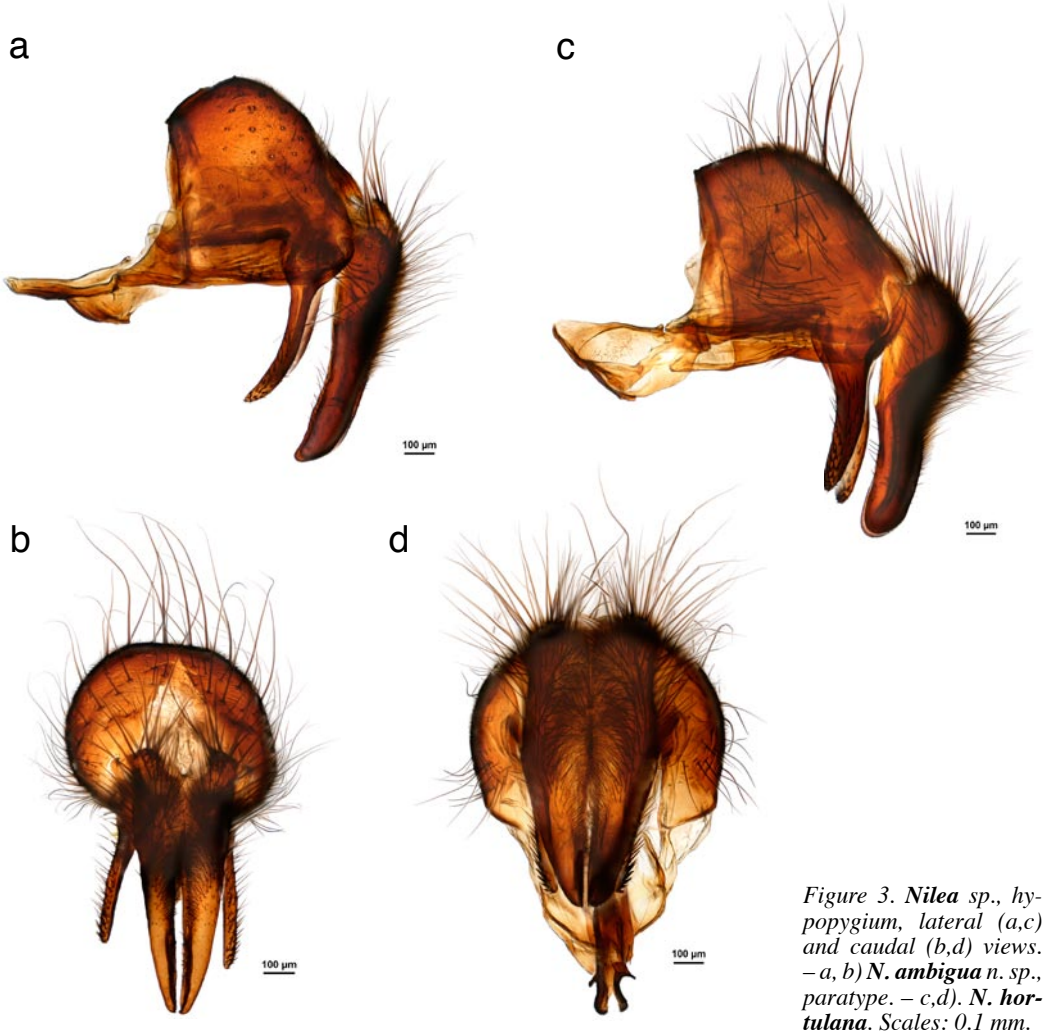

Figure 3. ***Nilea*** *sp., hypopygium, lateral (a,c) and caudal (b,d) views. – a, b)* ***N. ambigua*** *n. sp., paratype. – c,d).* ***N. hortulana****. Scales: 0.1 mm.*

missing but recorded from *Acronicta psi* and therefore most probably representing *N. hortulana*.

Exorista major Macquart, 1849: 381, holotype ♂, Lestrem (France) [MHNL]. (Herting 1976: 6). – Photos of the holotype examined; width of frons in dorsal view 0.74 times as wide as an eye.

Hubneria acronyctaea Robineau-Desvoidy, 1850: 167 (also *acronita*), ♀ (France), [= *Phorcida acronyctae* Robineau-Desvoidy, 1863: 250]. (Herting 1974: 8). – Type(s) missing, but the host *Acronicta megacephala* and also the description indicate *Nilea hortulana*.

Exorista noctuicida Rondani, 1859: 126, syntypes 3 ♂♂, 1 ♀, Parma (Italy) [MZF]. (Herting 1969: 197). – The original description states that both sexes emerged from the pupa of an unidentified nocturnal Lepidoptera. Width of frons compared to the width of an eye for the syntypes is according to P. Cerretti (in litt.): 0.74, 0.83 and 0.83 for the 3 ♂♂ and 0.90 for the ♀.

Himera meigenii Robineau-Desvoidy, 1863: 1126, unnecessary new name for *Tachina hortulana* Meigen (Herting 1974: 29).

Parexorista blepharipoda Brauer & Bergenstamm, 1891: 322, holotype ♂, Austria [NMW]. (Herting 1974: 136). – Holotype examined; labelled as follows: [red label printed] / Type / [handwritten] / Oesterreich / [handwritten] / blepharipoda / B. B. /. Width of frons in dorsal view 0.73 times as wide as an eye which is in accordance with the original description.

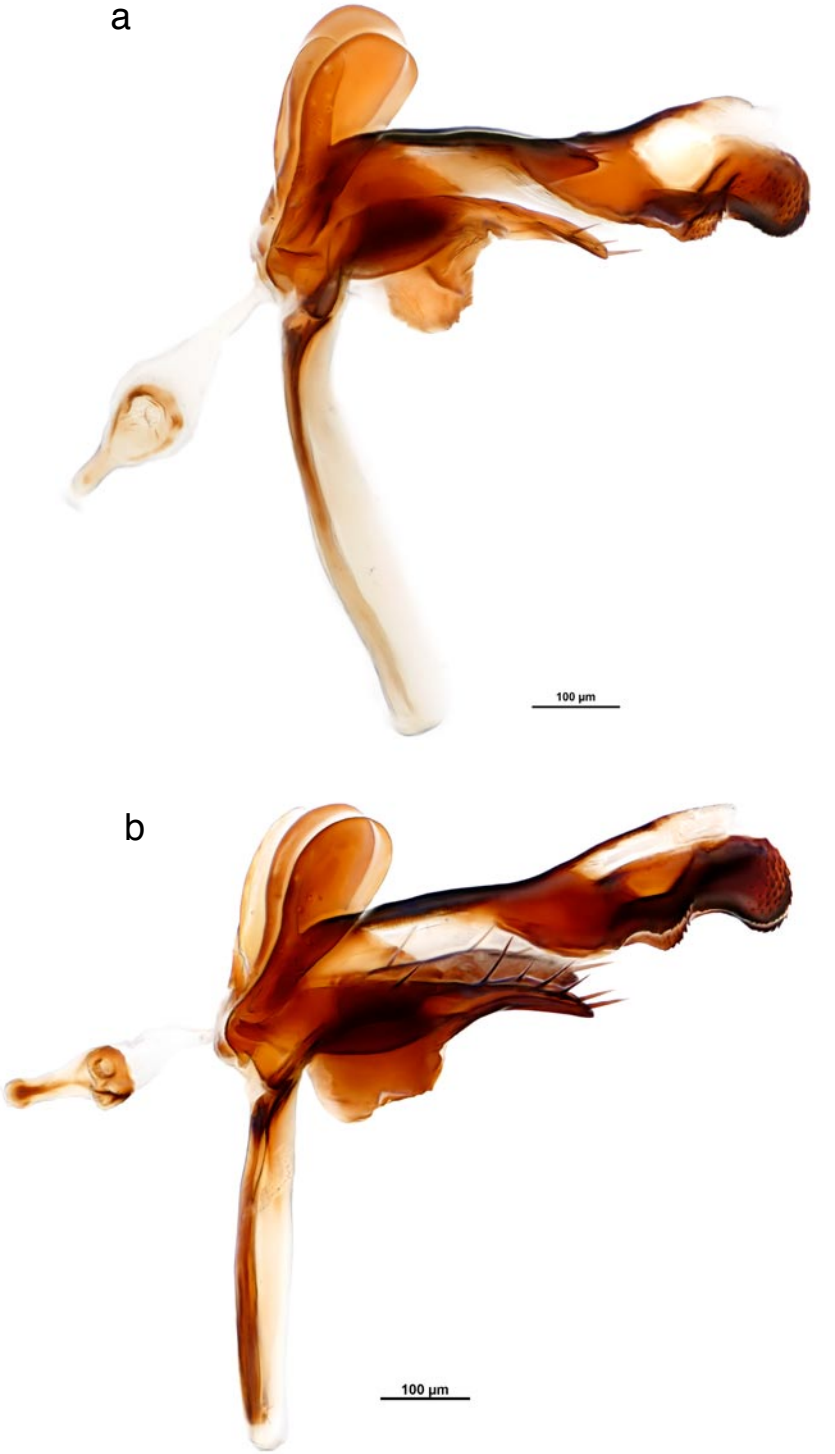

Figure 4. ***Nilea*** *sp., aedeagus, pregonites, postgonites, aedeagal apodeme and ejaculatory apodeme in (oblique) lateral views. – a)* ***N. ambigua*** *n. sp., paratype. – b).* ***N. hortulana.*** *Scales: 0.1 mm.*

Host records

No host is yet known for *Nilea ambigua*, whereas numerous host records exist for *N. hortulana*, predominantly from larvae of the genus *Acronicta* Ochsenheimer, 1816 (Lepidoptera, Noctuidae). There are also some hosts other than *Acronicta* cited (Herting 1960, Tschorsnig pers. comm.), but the majority of those records might be erroneous.

It would be a time-consuming task to check all host-records cited in the literature, but the following Scandinavian records have been confirmed during the present study (abbreviated countries: S = Sweden, SF = Finland).

Acronicta auricoma (Denis & Schiffermüller, 1775): SF, St., Suoniemi (=Nokia), 2 ♂♂, 1 ♀; 1944; leg. A. Saarinen; det. Bergström; [MZH].

Acronicta megacephala (Denis & Schiffermüller, 1775): SF, Ny., Tvärminne, 1 ♂; 1932; leg. Nordman; det. Bergström; [MZH]. – S, Up., Resarö, 1 ♂, 1 ♀; leg. Malaise; det. Bergström; [MZLU].

Acronicta psi (Linnaeus, 1758): SF, EF., Turku, 18 sp.; 1918-1919; leg. H. Klingstedt; det. Bergström; [MZH]. – SF, EF., Strömma V., 2 ♂♂, 3 ♀♀; ex. L., 1944; leg. Hellman; det. Bergström; [MZH]. – SF, EF., Karjalohja; ex. L.; leg. Nordman; det Bergström; [MZH]. – SF, Ny., Helsinki, 2 ♂♂, 2 ♀♀; ex. L., 1946; leg. A. Saarinen; det. Bergström; [MZH]. – S, Ha., Tylösand, 1 ♂; 3.1928; leg. F. Nordström; det. Mesnil, 1953 [as Platymyia (Himera) hortulana Meig.]; [MZLU].

Acronicta tridens (Denis & Schiffermüller, 1775): S, Sö., Oxelösund, Bötet, 2 ♀♀; host collected 2.9.1984; leg. H. Elmqvist; det. Bergström; [MS]. – S, Sm., Bottnaryd, 1 ♀.; 19.6.1946; det. B. Herting; [MZLU]. – S, Up., Yxlan, 1 ♀; 9.5.1933; det. B. Herting; [MZLU]. – S, Sö., Lunda, Dammossen, RN 6507 1550, 1 ♂, 1 ♀; ex. L 13.9.1991, em. 29.6.1992; leg. N. Ryrholm; det. Bergström; [CB]. – S, Vsm., Fellingsbro norra, V. Svarttjärnmossen, RN 6612 1481, 5 ♂♂, 4 ♀♀; ex. L 8.9.1991, em. 28.5.– 3.6.1992; leg. N. Ryrholm; det. Bergström; [CB]. – S, Vsm., Hed, Oxögsmossen, RN 6221 1488, 2 ♀♀; ex. L 8.9.1991, em. 2-3.6.1992; leg. N. Ryrholm; det. Bergström; [CB].

Acronicta sp.: SF, STa., Heinolan pit, 4 sp.; 1944; leg. V.A. Seppälä; det. Bergström; [MZH].

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Fin bok om våra humlor

Holmström, G. 2007. Humlor - Alla Sveriges arter. Så känner du igen dem i naturen - och i trädgården. – Brutus Östlings bokf Symposion. ISBN 978-91-7139-776-8. Pris ca 176 kr.

Det här är något så ovanligt som en nyutgiven svensk insektsbok skriven av en icke-entomolog. Fast om man har författat en bok om humlor så bör man ha tillskansat sig rätten att kalla sig entomolog?

Författaren heter Göran Holmström och jobbar som journalist på Hemmets Veckotidning. Boken riktar sig både till den stora gruppen av "naturintresserade" och till mer specifikt humleintresserade. De senaste åren har det kommit ut en del litteratur om insektsgrupper som är relativt lättbestämda, karismatiska och som innehåller ett överskådligt antal arter. Exempel är trollsländor och fjärilar. Och nu sällar sig humlorna, som ju också är en sådan grupp dit. Ett