Names of uncertain application and some previously unpublished synonyms, in the European Cheilosia fauna (Diptera, Syrphidae)

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37 nominal Cheilosia species appearing in recent European lists are shown to be either junior synonyms (15 taxa) or of such doubtful interpretation (22 taxa) that to list them as species is meaningless. The 118 Cheilosia species now known from Europe are listed, together with 13 additional species known from the periphery of Europe.

Justification is presented for regarding 22 of the European Cheilosia names listed as nominal species in Peck (1988) as being of such uncertain application that they can only be regarded as nomina dubia. It is recommended that in future species lists these names only appear as "doubtful species", until and unless some basis can be established for deciding to which species they apply. An additional 15 European Cheilosia names are established as junior synonyms and in the process lectotypes are designated for Cheilosia angustipennis Becker, 1894; Cheilosia confinis Becker, 1894; Cheilosia curvinervis Becker, 1894; Cheilosia lenis Becker, 1894; Cheilosia mixta Becker, 1894 and Cheilosia omissa Becker, 1894. An updated list of the European Cheilosia species is provided, taking into account the changes introduced in this text.


Key words: Cheilosia, Europe, nomina dubia, new synonyms, species list.
Zusammenfassung

Von den in Peck (1988) für Europa aufgeführten nominellen Arten der Gattung *Cheilosia* werden 22 Namen in ihrer spezifischen Zuordnung als so unsicher bewertet, dass sie lediglich als "nomina dubia" eingestuft werden können. Es wird daher empfohlen, diese Namen in zukünftigen Artenlisten zumindest so lange als "zweifelhafte Arten" zu führen, bis irgendeine Grundlage für ihre verlässliche Zuordnung geschaffen ist. Weitere 15 Namen europäischer *Cheilosia*-Arten werden als jüngere Synonyme erkannt; in diesem Zusammenhang werden Lectotypen festgelegt für *Cheilosia angustipennis* Becker, 1894; *Cheilosia confinis* Becker, 1894; *Cheilosia curvinervis* Becker, 1894; *Cheilosia lenis* Becker, 1894; *Cheilosia mixta* Becker, 1894 und *Cheilosia omissa* Becker, 1894.


Introduction

In 1894 Becker published his "Revision der Gattung *Chilosia* Meigen", in which he described what he believed to be more than 70 new European species in the genus known today as *Cheilosia*. He subsequently described additional European *Cheilosia* species in other publications. The catalogue of Palaearctic Syrphidae provided by Peck (1988) shows nearly all of those Becker's species names still listed as applying to distinct European species. But during the last 25 years more critical work on the genus has demonstrated 35% of those Becker's species names to be junior synonyms of other *Cheilosia* species, many of them also described by Becker. Today it is possible to recognise that many of Becker's descriptions are inadequate as a basis for recognition of the taxa to which they apply, that his concept of intra-specific variability in *Cheilosia* species was too narrow and that his descriptions were all too often based on insufficient material. The same could probably be said of most 19th century syrphid taxonomists, with the hindsight provided by 100 years of further taxonomic activity, but Becker's dominant position in respect of the genus *Cheilosia* – he was responsible for describing
50% of the European *Cheilosia* listed in Peck (1988) – means that any shortcomings characteristic of his work have potentially serious implications to the study of this genus in Europe today.

Here we have attempted to identify those European *Cheilosia* names that are of such uncertain application that logically they can only be regarded as nomina dubia, so that continuing to include them in lists of recognised European species is meaningless, until and unless some basis can be found for adequately redefining the taxa to which they apply. While the starting point for this exercise has been the species names introduced to the literature by Becker, in his various publications, we have also tried, where possible, to highlight similar inadequacies in application of *Cheilosia* names introduced to the literature by other authors writing on the European syrphid fauna. Further, we have taken this opportunity to deal with previously unpublished synonymies among European *Cheilosia* species that have become apparent during revisionary work carried out on the European species by one of us (CC). Finally, in Appendix 1, we provide an updated list of European *Cheilosia* species, which takes into account the synonymies established here and excludes the names we recommend should be regarded as nomina dubia.

Previously unpublished synonymy

The following paragraphs provide details of the type material of 16 *Cheilosia* taxa that we conclude are junior synonyms of other species and include lectotype designations for *C. angustipennis*, *C. confinis*, *C. curvinervis*, *C. lenis*, *C. mixta* and *C. omissa*, in order to fix the identity and future consistent interpretation of these names. Taxa are considered in alphabetical order. In indicating the whereabouts of type material acronyms have been used for the names of various institutions. The acronyms used are as follows:

Acronyms of institutions holding type material referred to:
- BMNH = The Natural History Museum, London
- HNHM = Hungarian National Museum, Budapest
- MGAB = Muséum d'Histoire Naturelle Grigore Antipa, Bucarest
- NHMW = Naturhistorisches Museum, Wien
- NMBA = Naturhistorisches Museum des Benediktinerstiftes Admont
- RMNH = National Museum of Natural History, Naturalis, Leiden
- UMO = University Museum, Oxford
- ZMAN = Instituut voor Taxonomische Zoologie, Zoölogisch Museum, Amsterdam
- ZMHU = Zoologisches Museum der Humboldt Universität, Berlin

*aestivalis* Becker, 1894: 472 (*Chilosia*)

Syntypes 1 ♂ 1 ♀ (ZMHU) lost, "Süd-Tirol, vom Rolle-Paß, 20. Juni" [Italy: Alps].

In 1990 the Loew/Becker collection included a pin without a specimen, labelled "*aestivalis* Beck." and 1 ♀ labelled "*aestivalis* Beck.", "Schweiz 44/42". This latter specimen cannot be a syntype, because it is not from the type locality. It is a small ♀
of *Cheilosia melanura*. The diagnostic characters provided by Becker (1894) for separation of *C. aestivalis* and *C. melanura* fit well within the range of variability of *C. melanura* as currently recognised. For this reason we conclude that *Cheilosia aestivalis* Becker, 1894 should be regarded as a junior synonym of *Cheilosia melanura* Becker, 1894; syn. nov.

*amicorum* van der Goot, 1964: 425 (*Cheilosia*)

Holotype ♀, in RMNH, labelled, "M. Nebrodici, Biviere di Cesarió, 1250-1350 m, 30-VII - 7-VIII 1961", "Italia, Sicilia, V. S. v.d. Goot", "Holotype" [red], "Cheilosia amicorum* nov. spec. det. V. S. v.d. Goot 1963". Paratype ♀, in RMNH, with the same data as the holotype, but labelled as "Paratype". – Holotype and paratype are *Cheilosia hypena* Becker, 1894. We conclude that *Cheilosia amicorum* van der Goot, 1964 should be regarded as a junior synonym of *Cheilosia hypena* Becker, 1894; syn. nov.

*angustipennis* Becker, 1894: 483 (*Chilosia*)

Lectotype ♀, "St. Moritz (Schweiz)", here designated, in ZMHU.

Described from 2 females. Lectotype labelled "St Moritz 28/6 9904", "angustipennis B. det. Becker", "Typus", "Zool. Mus. Berlin". – Both wings broken; one wing is glued to a piece of card and pinned with the specimen. The lectotype is *Cheilosia lenis* Becker, 1894. The second ♀ syntype mentioned in the description, from Reinerz (Schlesien) [Poland], is apparently lost. We conclude that *Cheilosia angustipennis* Becker, 1894 should be regarded as a junior synonym of *Cheilosia lenis* Becker, 1894; syn. nov.

Syntypes of *C. lenis* could not be found in the Loew/Becker collection in ZMHU (CC 1990/1996). But 1 ♂ and 1 ♀ syntype of *C. lenis* were located in the Girschner collection, now in BMNH. The ♂ is labelled "Syntype" [round, blue-margined], "Dippesthal 16.V.87" [presumable East Germany], "Grschn", "Ex Girschner Collection". The ♂ has been labelled (CC 1992) as the lectotype and is now so designated. The genitalia were dissected, stored in glycerol or partly embedded in Entellan and pinned with the specimen. The lectotype is a little mouldy and is lacking the left fore leg, but is otherwise in fair condition. It agrees fully with Becker's original description. The second syntype is labelled "Syntype" [round, blue-margined], "Chilosia lenis Beck. Original.", "Sammlung Girschner", "Ex Girschner Collection", it was labelled as paralectotype in 1992 (CC).

*confinis* Becker, 1894: 465 (*Chilosia*)

Lectotype ♂, "Wiener Schneeberg" [Austria], here designated, in ZMHU.

Described from an unspecified number of males and females. Lectotype labelled "Wien Schneeberg 6/6 90 25032", "confinis Beck. det. Becker", "Typus", "Zool. Mus. Berlin". 2 females labelled "Rolle-Paß 20/6 25585", "Ch. confinis B. det. Becker" and one of these females with the additional labels "Zool. Mus. Berlin" and "Typus" have been labelled as paralectotypes. A further female labelled "Coll. H. Loew", "confinis
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Beck." is not considered a syntype. Lectotype and paralectotypes are Cheilosia lenis Becker, 1894. We conclude that Cheilosia confinis Becker, 1894 should be regarded as a junior synonym of Cheilosia lenis Becker, 1894; syn. nov.

curvinervis Becker, 1894: 484 (Chilosia)

Lectotype ♀, "Reinerz (Schlesien)" [Poland], here designated, in ZMHU.

Described from an unspecified number of females, but only the lectotype in ZMHU. Lectotype labelled "Reinerz", "Lectotypus Cheilosia curvinervis Becker ♀ des. Claußen 1990", "Cheilosia ♀ omissa Beck. det. Claußen 1990". This specimen is Cheilosia lenis Becker, 1894 as currently recognised. We conclude that Cheilosia curvinervis Becker, 1894 should be regarded as a junior synonym of Cheilosia lenis Becker, 1894; syn. nov.

dacica Brădescu, 1977: 11 (Cheilosia)

Holotype ♂, "Roumanie, Carpates Méridionales, Massif du Retezat, clairiere Gemenele (1930-2000m) de la réserve scientifique Gemenele – Taul Negru, environ 6km ESE de Gura Zlata; 25.VII.1974", in MGAB.


drenowskii Szilády, 1936: 67 (Chilosia)

Syntypes presumably lost (Horn et al. 1990: 386, 439), "Alibotuschgebirge ... 1500m" [South-Bulgaria], formerly in HNHM.

Described from an unspecified number of males and females. Characterised by Szilády (1936) as related to Cheilosia siciliana Becker, 1894. European Cheilosia related to C. siciliana and known to occur in the Balkan Peninsula are C. lenta Becker, 1894 and C. rhynchops. The description of C. drenowskii fits in all respects both of these species. We propose that Cheilosia drenowskii Szilády, 1936 should be regarded as a junior synonym of Cheilosia rhynchops Egger, 1860; syn. nov., the more common and more predominantly black pilose of these two taxa.

granulata Becker, 1894: 388 (Chilosia)

Holotype ♀, lost, "aus Deutschland" [Germany], formerly in coll. H. Loew (ZMHU).

The type could not be found in the Loew/Becker collection in 1990/1996 (CC). C. granulata was characterised by Becker (l.c.) as very close to C. barbata Loew, but differing slightly in its smaller 3rd antennal segment, paler legs, and more coarsely punctured mesoscutum. All of these characters fit well within the range of variation of C.
barbata as currently understood. We conclude Cheilosia granulata should be regarded as a junior synonym of Cheilosia barbata Loew, 1857; syn. nov.

metallina Becker, 1894: 398 (Chilosia)

Holotype ♀, in coll. Bigot, now in UMO. Type locality: Nearctic, erroneously given as "Frankreich" [France] in Becker (1894).

Holotype labelled "metallina n. sp. m.", "Ch. metallina Beck. coll. Bigot", the latter inscription on the underside of a round blue label. Type locality not given. Type in fairly good condition, but antennae lost and scutellar marginal setae partly broken. – The type was compared with a female of the Nearctic Cheilosia hoodiana (Bigot, 1883) from "Mts. Moscow/Ida Jly 10/RC Shannon" [USA: Idaho]; it was concluded that these specimens were conspecific (CC in 1988). Cheilosia metallina Becker, 1894 should be regarded as a junior synonym of Cartosyrphus hoodiana Bigot, 1883. This synonymy was previously published in Barkalov (1998: 76), but without further information.

mixta Becker, 1894: 481 (Chilosia)

Lectotype ♀, "Lermoos in Bayern" [Germany], here designated, in ZMHU.

Described from an unspecified number of females. Lectotype labelled "Lermoos Fernst. 10/7.78", "Chilosia mixta Becker ♀ det. K. Malski 19", "Lectotypus Cheilosia mixta Becker ♀ des. Claußen 1990". A further female labelled "Breslau bot. Gart. 28.4.51", "Coll. H. Loew", "11516", "mixta Beck.", is here accepted as paralectotype and labelled accordingly. Lectotype and paralectotype are Cheilosia bergenstammi Becker, 1894. We conclude that Cheilosia mixta Becker, 1894 should be regarded as a junior synonym of Cheilosia bergenstammi Becker, 1894; syn. nov.

omissa Becker, 1894: 466 (Chilosia)

Lectotype ♂, "Wiener Schneeberg" [Austria], here designated, in ZMHU.

Described from an unspecified number of males and females. Lectotype labelled "Wiener Schneeberg 6/6 90 25028", "Typus", "omissa", "Zool. Mus. Berlin"; specimen in good condition. 1 ♂ labelled "Wölfelsfall 17/5 26526" [Poland], "Cheilosia omissa Beck. ♂, det. K. Malski 19", "Typus", "Zool. Mus. Berlin"; antennae lost, is labelled as paralectotype. Lectotype and paralectotype are Cheilosia lenis Becker, 1894. We conclude that Cheilosia omissa Becker, 1894 should be regarded as a junior synonym of Cheilosia lenis Becker, 1894; syn. nov.

romigi Claußen & Van de Weyer, 2004 (Cheilosia [Taeniochilosia])

Holotype ♂, "Italy, Prov. Aosta, Fenille (Val Savarenche), 1150m"; in ZMAN.

C. romigi was described only recently, and with the description features are provided for separation of this taxon from all of the then known European species of the subgenus
Taeniochilosia with a red 3rd antennal segment. The type material of Cheilosia pedestris Becker, 1894 was re-examined during preparation of the present text. The female holotype of C. pedestris in NHMW is labelled "♀ Visp 11/6" [Switzerland, Rhone valley], "Alte Sammlung", "pedestris Beck. det. Becker." [in Becker's hand]. The holotype is in fairly good condition, except that the right wing is missing. Re-examination revealed that Becker's (1894: 452) recognition of C. pedestris as a member of his species-guild with hairy eyes, bare face and scutellar marginal bristles was erroneous. The eyes in the type of C. pedestris are bare, even under high magnification, and the legs are completely black, except for the apices of the femora and the bases of the tibiae, that are narrowly of a vaguely brownish colour. C. pedestris should thus be consigned to the subgenus Taeniochilosia, a fact not previously taken into account in studies of the genus. From comparison between the type material of C. pedestris and C. romigi we conclude that Cheilosia romigi Claußen & Van de Weyer, 2004 should be regarded as a junior synonym of Cheilosia pedestris Becker, 1894; syn. nov.

strobl Becker, 1894: 524 (Chilosia)

Holotype ♂, "Nieder-Oesterreich (Melk)" [Austria], in NMBA.

The ♂ in NMBA is accepted as the holotype, because only a single measurement is given for wing- and body-length in the original description. In cases where more than a single specimen were included in the description, Becker (1894) consistently provided intervals of measurements. Holotype labelled "1265", "Cheilosia strobeli [!] Becker, Tyten-Exemplar rev. G. Morge 1961", "Ch. brachysoma Egg. [unreadable inscription in shorthand] /5 ♂" [green, in Strobl's hand], "Ch. Strobeli [!] Beck.", "Holotypus Cheilosia strobli Beck. ♂, det. Claußen 1988", "Cheilosia chloris Meig., ♂ det. Claußen, 1988". The holotype is Cheilosia chlorus Meigen, 1822. We conclude that Cheilosia strobli Becker, 1894 should be regarded as a junior synonym of Cheilosia chlorus Meigen, 1822, syn. nov.

stupida Becker, 1894: 413 (Chilosia)

Holotype ♂ presumably lost (Horn et al. 1990: 439), "Ungarn" [Hungary], formerly in HNHM.

The original description of C. stupida fits perfectly the concept of Cheilosia flavipes (Panzer, [1798]), especially the broadly yellow apices of the femora, flat face, body completely pale pilose, lack of scutellar marginal setae, and wide parafacial strips, that are considered as diagnostic. Because of these characters we conclude that Cheilosia stupida Becker, 1894 should be regarded as a junior synonym of Cheilosia flavipes (Panzer, [1798]), syn. nov.

styriaca Franz, 1989: 62 (Cheilosia)

Holotype ♂, "Jägerboden b. Kaiserau nächst Admont" [Austria: Steiermark], in NHMW.
Described from 2 females. Holotype and female paratype are *Melangyna quadrimaculata* (Verrall, 1873). We conclude that *Cheilosia styriaca* Franz, 1989 should be regarded as a junior synonym of *Melangyna quadrimaculata* (Verrall, 1873); syn. nov.

*towiuci* Brădescu, 1977: 13 (*Cheilosia*)

*Cheilosia toniuci* Brădescu, 1977 should be regarded as a junior synonym of *Cheilosia proxima* (Zett., 1843); syn. nov.

European *Cheilosia* names of doubtful application

More than 20% of Becker's European *Cheilosia* names remain of very uncertain application and have seemingly been retained in lists largely because there is no secure basis for deciding what to do with them. We list these doubtful taxa in Table 1, together with equally doubtful European *Cheilosia* taxa originating with other authors. In compiling this table we have used various indicators of the status of each taxon. These indicators may be defined as follows:

- **Criterion A:** original description adequate i.e. sufficiently diagnostic to demonstrate that the taxon is distinct from all other known European *Cheilosia* species
- **Criterion B:** type material available i.e. known not to have been destroyed or lost or so damaged as to be rendered unrecognisable
- **Criterion C:** still listed for country of origin i.e. still listed as a species occurring in the country/countries from which its type material was derived. A question mark (?) in Table 1 denotes cases where the type material originated in a country for which there is no recent syrphid list (e.g. Austria, European Russia). A blank denotes cases where no country of origin was given in the original description of the taxon.
- **Criterion D:** cited for other countries i.e. listed as occurring in at least one European State other than the State(s) from which the type material was derived. Instances of listing that have subsequently been proved to be due to misdetermination have been discounted.
- **Criterion E:** included in keys provided in revisions/reviews of the species group to which the taxon supposedly belongs. Blanks in Table 1 indicate cases where there have been no recent revisions of the species groups involved.

In reality, no credibility can be attached to any published record of an occurrence of these taxa until and unless their identity as distinct species is established by comprehensive redescription, accompanied by neotype designation. That being so it is our contention that, in the interim, all of them should be regarded as nomina dubia and, in
countries where these names are still in use, they should in future be relegated to a category of "doubtful species", rather than being given equal status with well-established species. Similarly, we recommend that these names no longer appear in lists of European species other than in a separate section headed, as in Peck (1988), "Doubtful species of Cheilosia", to indicate that there is currently no basis upon which to establish the identity of the species to which these names apply.

Table 1: Doubtful European Cheilosia taxa, with indications of their status in respect of the five criteria (A-E) described in the text.

<table>
<thead>
<tr>
<th>Species name</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
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<tr>
<td>acutilabris Becker, 1894</td>
<td>no</td>
<td>no</td>
<td>?</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>atriseta (Oldenberg, 1916)</td>
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<td>yes</td>
<td>yes</td>
<td>no</td>
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<td>baldensis Marcuzzi, 1941</td>
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<td>no</td>
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<td>no</td>
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</tr>
<tr>
<td>barovskii Stackelberg, 1930</td>
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<td>?</td>
<td>?</td>
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<tr>
<td>brachiptera Palma, 1863</td>
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<td>no</td>
<td>yes</td>
<td>no</td>
<td></td>
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<td>no</td>
<td>no</td>
<td>no</td>
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<tr>
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<td>no</td>
<td>?</td>
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<tr>
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<td>yes</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>gerstaeckeri Becker, 1894</td>
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<td>yes</td>
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<td></td>
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<tr>
<td>gibbosa Becker, 1894</td>
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<td>imperfecta Becker, 1921</td>
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<td>polita Becker, 1894</td>
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<td>submodesta Becker, 1922</td>
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<td>umbrisquama Becker, 1894</td>
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<td>no</td>
<td>no</td>
<td>yes</td>
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<td>varians Becker, 1889</td>
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<td>no</td>
<td>yes</td>
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<td>violaceozonata Palma, 1863</td>
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</table>
Discussion

With the synonyms established here taken into account, and the doubtful taxa listed above also removed, the surviving European *Cheilosia* names originating with Becker are surprisingly few – only 27, to be exact (see list in Appendix). If one examines the question of why this might be, apart from ill-defined species concepts that resulted repeatedly in description of the same taxa a number of times under different names, the most significant factor would seem to be loss of type material that rendered taxa uninterpretable – a loss caused primarily by the hostilities in Europe during the first half of the 20th century. Did these lost types represent species that were extant in Europe in the 19th century, but which have since become extremely scarce, or extinct, so that they have not been found subsequently? We cannot know. Many of Becker's species were described from montane/subalpine locations in the Alps and it is clear that subalpine habitats there have suffered badly during the last hundred years, due firstly to over-grazing, then due to "improvement" (primarily use of fertilisers) and now due to effects of climatic warming. It is demonstrable that the greater part (68% – see Speight et al., 2006) of Europe's *Cheilosia* biodiversity occurs in montane/subalpine habitats and, although further investigation is much needed, there are indications that this diversity may now be shrinking (Speight and Castella, 2005). Work on diverse *Cheilosia* faunas, like that of the Alps, can only be inhibited by nomenclatural confusion and difficulties of determination. Hopefully, the present text may contribute somewhat to a reduction in the level of nomenclatural confusion involved.

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Van der Goot, V.S. (1964) Summer records of Syrphidae (Diptera) from Sicily, with field notes and descriptions of new species. – Zoologische Mededelingen 39, 414-432.

Appendix: Revised list of European Cheilosia species

Geographic coverage of list: Europe, bounded to the East by the Ural Mountains and the river Ural southward to the Caspian Sea; bounded to the South by the Black Sea, the Mediterranean and Caucasus mountains. Also included on the list are 11 species known from along the south-eastern border of Europe in the Caucasus Mountains, plus C. parva (Morocco) and C. sulcifrons (eastern Turkey). While these additional

<table>
<thead>
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<th>Areas</th>
<th>species</th>
<th>subspecies</th>
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<tr>
<td>Europe</td>
<td>118</td>
<td>3</td>
</tr>
<tr>
<td>restricted to Morocco</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>restricted to the Caucasus and/or eastern Turkey</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Σ</td>
<td>131</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 2: Number of taxa included.
species are not strictly European, they would seem to be European in origin and their occurrence in Europe would not be unexpected.

List of European Cheilosia species

Format: name, author, year of publication, range for species with restricted distribution (e.g.: CA = Caucasus and its spurs, MO = Morocco, TR = Turkey). Both Peck (1988) and Barkalov (1998) show synonyms of the species they list. In the list presented here synonyms that have been published since Barkalov (1998) are indicated, including those established in the present text. The complex synonymy and status of the taxa included here as C morio (Zetterstedt) and C. scanica (Ringdahl) will be dealt with in a separate publication (Claüßen and Doczkal, in preparation). Cheilosia marokkana Becker, 1894 was recently synonymised with Cheilosia latifrons (Zetterstedt, 1843) by Kassebeer (1998). Re-examination of the type material of C. marokkana, C. latifrons, and C. griseiventris provides grounds to regard C. marokkana as a junior synonym of C. griseiventris and not as a junior synonym of C. latifrons (Claüßen & Reemer, in press), a course that has been followed here.

\[
\begin{align*}
\text{abagoensis} & \quad \text{Skufjin, 1979} – \text{(CA, NW-spurs)} \\
\text{aerea} & \quad \text{Dufour, 1848} \\
\text{ahenea} & \quad \text{(von Roser, 1840)} \\
\text{alba} & \quad \text{Vujić & Claüßen, 2000} \\
\text{albipila} & \quad \text{Meigen, 1838} \\
\text{albitarsis} & \quad \text{(Meigen, 1822)} \\
\quad & \quad \text{= lapponica} \quad \text{Becker, 1894 – Syn. by Doczkal (2000)} \\
\text{alpestris} & \quad \text{Becker, 1894} \\
\text{alpina} & \quad \text{(Zetterstedt, 1838)} \\
\text{andalusiaca} & \quad \text{Torp Pedersen, 1971 – (Spain)} \\
\text{angustigena} & \quad \text{Becker, 1894} \\
\text{antiqua} & \quad \text{Meigen, 1822} \\
\text{arisata} & \quad \text{Barkalov & Ståhls, 1997} \\
\text{armeniaca} & \quad \text{Stackelberg, 1960 – (CA: Armenia)} \\
\text{atypica} & \quad \text{Barkalov, 1993 – (CA)} \\
\text{bakurianiensis} & \quad \text{Kuznetzov, 1987 – (CA)} \\
\text{balkana} & \quad \text{Vujić, 1994} \\
\text{barbata} & \quad \text{Loew, 1857} \\
\quad & \quad \text{= granulata} \quad \text{Becker, 1894 – Syn. by Claüßen & Speight (present text)} \\
\text{beckeri} & \quad \text{Strobl, 1910} \\
\text{bergenstammi} & \quad \text{Becker, 1894} \\
\quad & \quad \text{= mixta} \quad \text{Becker, 1894 – Syn. by Claüßen & Speight (present text)} \\
\text{brachysoma} & \quad \text{Egger, 1860} \\
\text{bracusi} & \quad \text{Vujić & Claüßen, 1994} \\
\text{brunnipennis} & \quad \text{Becker, 1894} \\
\quad & \quad \text{= schineri} \quad \text{of Becker, 1894, not Egger, 1860 – misdetermination} \\
\text{caeruleascens} & \quad \text{(Meigen, 1822)} \\
\text{caeruleascens} & \quad \text{calculosa} \quad \text{Skufjin, 1977} \\
\text{canicularis} & \quad \text{(Panzer, 1801)} \\
\text{carbonaria} & \quad \text{Egger, 1860} \\
\text{chlorus} & \quad \text{Meigen, 1822} \\
\quad & \quad \text{= strobi} \quad \text{Becker, 1894 – Syn. by Claüßen & Speight (present text)} \\
\text{chrysocoma} & \quad \text{(Meigen, 1822)} \\
\text{clama} & \quad \text{Claüßen & Vujić, 1995} \\
\text{clausseni} & \quad \text{Barkalov & Ståhls, 1997} \\
\text{crassiseta} & \quad \text{Loew, 1859} \\
\text{cumanica} & \quad \text{Szilády, 1938} \\
\text{cynocephala} & \quad \text{Loew, 1840} \\
\text{derasa} & \quad \text{Loew, 1857} \\
\text{fasciata} & \quad \text{Serness & Egger, 1853} \\
\text{faucis} & \quad \text{Becker, 1894} \\
\text{flavipes} & \quad \text{(Panzer, 1798)} \\
\quad & \quad \text{= stupida} \quad \text{Becker, 1894 – Syn. by Claüßen & Speight (present text)} \\
\text{flavissima} & \quad \text{Becker, 1894 – re-instated by Claüßen & Ståhls (2006)} \\
\quad & \quad \text{= pallipes} \quad \text{of authors, not Loew, 1863 – misdetermination} \\
\text{fraterna} & \quad \text{(Meigen, 1830)} \\
\text{frontalis} & \quad \text{Loew, 1857} \\
\text{gagatea} & \quad \text{Loew, 1857} \\
\text{gigantea} & \quad \text{(Zetterstedt, 1838)} \\
\quad & \quad \text{= gracilis} \quad \text{Hellén, 1914 – Syn. by Nielsen & Claüßen (2001)} \\
\text{griseifacies} & \quad \text{Vujić, 1994} \\
\text{griseiventris} & \quad \text{Loew, 1857} \\
\quad & \quad \text{= marokkana} \quad \text{Becker, 1894 – Syn. by Claüßen & Reemer (in press)} \\
\text{grisella} & \quad \text{Becker, 1894} \\
\text{grossa} & \quad \text{(Fallén, 1817)} \\
\text{herculana} & \quad \text{Brădescu, 1982} \\
\text{hercyniae} & \quad \text{Loew, 1857} \\
\text{himantopus} & \quad \text{(Panzer, 1798)} \\
\quad & \quad \text{= naso} \quad \text{Becker, 1894 – Syn. by Stuke & Claüßen (2000)} \\
\text{? delittor} & \quad \text{Strobl, 1897 – Syn. by Stuke & Claüßen (2000)} \\
\quad & \quad \text{= fulvitarsis} \quad \text{van der Goot, 1964 – Syn. by Stuke & Claüßen (2000)}
\end{align*}
\]
hypena Becker, 1894
  = amicorum van der Goot, 1964 – Syn. by Claußen & Speight (present text)
iberica Marcos-Garcia & Claussen, 1989
illustrata (Harris, 1780)
illustrata portschinskiana Stackelberg, 1960
  – (CA)
impressa Loew in Schiner, 1857
impudens Becker, 1894
ingerae Nielsen & Claussen, 2001
insignis Loew, 1857
katará Claussen & Vujić, 1993
kertész Szilády, 1938
kuznetzovae Skufjin, 1977
laeviseta Claussen, 1987
laeviventris Loew, 1857
lasiopa Kowarz, 1885
laticornis Rondani, 1857
latifrons (Zetterstedt, 1843)
latígenis Claussen & Kassebeer, 1993
lenis Becker, 1894
  = angustipennis Becker, 1894 – Syn. by Claußen & Speight (present text)
  = confinis Becker, 1894 – Syn. by Claußen & Speight (present text)
  = curvinervis Becker, 1894 – Syn. by Claußen & Speight (present text)
  = omissa Becker, 1894 – Syn. by Claußen & Speight (present text)
lena Becker, 1894
limbicornis (Strobl, 1909) – (Spain)
loewi Becker, 1894
longula (Zetterstedt, 1838)
lucashovae Barkalov, 1993 – (CA, TR)
marginata Becker, 1894
melanopa (Zetterstedt, 1838)
melanopa redi Vujić, 1996
melanura Becker, 1894
  = aestivalis Becker, 1894– Syn. by Claußen & Speight (present text)
  melanura rubra Vujić, 1996
montana Egger, 1860
"morio" (Zetterstedt, 1838)" – status and nomenclature under review
mutabilis (Fallén, 1817)
  = ruralis (Meigen, 1822) – Syn. by Claußen & Speight (1999)
nebulosa Verral, 1871
nigripes (Meigen, 1822)
nivalis Becker, 1894
orthotricha Vujić & Claussen, 1994
pagana (Meigen, 1822)
paragigantea Barkalov, 1993 – (CA)
paralobi Malski, 1962
parva Kassebeer, 1998 – (MO)
pascuorum Becker, 1894
pedemontana Rondani, 1857
pedestris Becker, 1894
  = romigi Claußen & van de Weyer, 2004 – Syn. by Claußen & Speight (present text)
personata Loew, 1857
pictipennis Egger, 1860
pilifer Becker, 1894
pini Becker, 1894
pollinifacies Stackelberg, 1968 - (CA)
proxima (Zetterstedt, 1843)
  = toniuci BrăDESCu, 1977 – Syn. by Claußen & Speight (present text)
pseudogrossa Stackelberg, 1968 – (CA)
psilophthalma Becker, 1894
pubera (Zetterstedt, 1838)
rarmunculi Doczkal, 2000
reniformis Hellén, 1930 – (boreal)
rhodiolae Schmid, 2000
rhynchos Egger, 1860
  = dacica BrăDESCu, 1977 – Syn. by Claußen & Speight (present text)
  = drenowskii Szilády, 1936 – Syn. by Claußen & Speight (present text)
rodgersi Wainwright, 1911 – (NW-Africa, southern Spain)
rotundiventris Becker, 1894
ruficollis Becker, 1894
rufimana Becker, 1894
sahlbergi Becker, 1894
"scanica Ringdahl, 1937" – status and nomenclature under review
schineri Egger, 1860
schnabli Becker, 1894
scutellata (Fallén, 1817)
semifasciata Becker, 1894
siciliana Becker, 1894 – (Italy)
sootryeni Nielsen, 1970 – (northern Scandinavia)
soror (Zetterstedt, 1843)
subpictipennis Claussen, 1998
sulcifrons Kaplan, 1981 – (TR)
teberdensis Barkalov, 1993 – (CA)
thesala Claussen & Ståhls, 2006
tonsa Sack, 1938
transcaucasia Stackelberg, 1960 – (CA)
urbana (Meigen, 1822)
   = fulvipes (Wiedemann in Meigen, 1822)
   – Syn. by Claussen & Speight (1999)
   = ruralis of authors, not Meigen (in part)
   – Syn. by Claussen & Speight (1999)
   = praecox (Zetterstedt, 1843) – Syn. by Claussen & Speight (1999)

Doubtful European species of Cheilosia

acutilabris Becker, 1894
atriseta (Oldenberg, 1916)
baldensis Marcuzzi, 1941
bardus (Harris, 1780)
barovskii Stackelberg, 1930
brachiptera Palma, 1863
brevipennis Becker, 1894
christophori Becker, 1894
corydon (Harris, 1780)
curvitibia Becker, 1894
flavicorns (Fabricius, 1781)
funebris (Harris, 1780)
gerstaeckeri Becker, 1894
gibbosa Becker, 1894
imperfecta Becker, 1921

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