

BIO I 90.378/33,255

# REICHENBACHIA

Staatliches Museum für Tierkunde Dresden

Band 33

Ausgegeben: 30. März 2000

Nr. 55

## ***Andrena pilipes* FABRICIUS, 1781: designation of neotype (Insecta: Hymenoptera: Apoidea: Andrenidae)**

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**Abstract.** *Andrena pilipes* of authors is a composite comprising at least two distinct species, *A. spectabilis* SMITH, 1853, and *A. nigrospina* THOMSON, 1872. The syntypes of *Andrena pilipes* FABRICIUS, 1781, are in a very poor state of preservation and cannot with any degree of certainty be associated with either of the two later-described taxa. The name has been variously applied. In the interests of stability, a neotype is designated fixing *pilipes* in the sense of *spectabilis*.

Recent authors (E. STÖCKHERT 1930, PITTIONI & SCHMIDT 1943, F. K. STÖCKHERT 1954, KOCOUREK 1966, DYLEWSKA 1974 and 1987, BAKER 1994) have distinguished, on morphological and biological grounds, between two widely distributed, broadly sympatric, European species of *Andrena* formerly confused under the names *carbonaria* [*Andrena carbonaria* F., 1793, a misidentification of *Apis carbonaria* L., 1767, a species of *Scolia* (DAY 1979: 580)] or *pilipes* [*Andrena pilipes* F., 1781<sup>1)</sup>]. BAKER (1994<sup>2)</sup>) sought to establish the names correctly to be used for these two species. These names were identified as *Andrena nigrospina* THOMSON, 1872 (= *nigrospina sensu* STÖCKHERT, PITTIONI, KOCOUREK; *carbonaria sensu* DYLEWSKA) and *A. spectabilis* SMITH, 1853 (= *carbonaria* auctt., p.p.; *pilipes sensu* DYLEWSKA). The name *pilipes* was not accepted for either species, since, although a lectotype had purportedly been designated by WARNCKE (1970: 31), WARNCKE, recognizing only a single species, '*carbonaria*', had done nothing to clarify the application of the name.

WARNCKE's pretended lectotype designation, consisting solely of the words '♀, Lectotypus (Kopenhagen) mit einem handgeschriebenen Zettel „*pilipes*” = *Andrena carbonaria* (LINNÉ, 1767)', gave no information to distinguish the specimen from another female syntype similarly labelled in the same collection and may be disregarded as invalid. Of the three Copenhagen specimens now standing as *pilipes*, WARNCKE's 'lectotype', as already indicated (BAKER 1994) cannot safely be identified either with *spectabilis* or with *nigrospina*. As to the other two existing syntypes (neither referred to by, nor labelled as paralectotypes by WARNCKE), a male and a

<sup>1)</sup> *Andrena pilipes* F., 1781, was described (Species Insectorum p. 474, no. 12), in the terms 'A atra glabra, pedibus posticis albo ciliatis, alis fuscis. Habita in Italia. D. Allioni. Statura et magnitudo A. haemorrhoidalis tota glabra, atra, thorace obscuro, abdomine nitido. Alae omnes fuscae. Pedes nigri postici ciliati.' FABRICIUS later (1793: 312) amplified the locality, giving 'Habita in agro Paedemontano Dr. Allioni'

<sup>2)</sup> '*Apis*' *pilipes* F. on p. 282 of this paper is a *lapsus* for *Andrena pilipes* F.

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female, both are in fragmentary condition, broken, extensively damaged by an anthrenid, and affected by mould growth. Further, (1) the male (without original label) has lost its head and the greater part of the metasoma, making examination of the genitalia – which would have been immediately diagnostic – impossible; and (2) the female (with old label '*pilipes*') has lost the metasoma and all appendages except one antenna. All three specimens are clearly referable to the *Andrena spectabilis* / *nigrospina* complex. They may be conspecific, and, assuming that all were received at the one time from ALLIONI<sup>3)</sup>, probably are conspecific. However, as to their identity, while, on the one hand, WARNCKE's 'lectotype' appeared on examination, though no particular morphological, pigmentary or vestitural character engendered any great confidence in the identification, to be referable to *nigrospina*, on the other, since ALLIONI obtained his specimens in Piedmont, his species would more probably have been *spectabilis*<sup>4)</sup>. Beyond this it did not, in 1994, seem possible to go. At the same time, since it seemed reasonable to suppose that at some later date the problem might be resolved by non-morphological methods, the designation of a neotype was not considered appropriate.

Recently, however, SCHWARZ *et al.* have reverted (1996: 49) to the use of the name *pilipes* for what they consider to be a single species<sup>5)</sup>. These authors' remark (p. 50), 'Geht man von einer einzigen Art aus, wäre der Name *A. pilipes* FABRICIUS gültig' is tantamount to saying that those who are competent to do so may recognize two species, those who are not may continue to use the name *pilipes*. This is hardly an acceptable solution. *Andrena spectabilis* and *A. nigrospina* are two morphologically and biologically distinct species, as such competent authors as E. STÖCKHART, M. KOCOUREK and M. DYLEWSKA have made clear. The males, throughout the area in which the species are sympatric, which includes the greater part of north-western and central Europe, are readily and consistently separable by a number of genitalic and other struc-

<sup>3)</sup> Carlo ALLIONI, 23 September 1728 [or 3 September 1729] – 30 July 1804, was Professor of Botany in the University of Torino. The exact provenance of his *pilipes* is uncertain, but is likely to have been Torino or its surroundings. The possibility of the survival of other ALLIONI specimens of the same species in other collections is equally uncertain. According to HORN & KAHLE (1935: 4), copied by HORN *et al.* (1990: 16), ALLIONI's collection went to the University Museum in Torino, but, according to ZIMSEN (1964: 17), it was destroyed. There is of course no certainty that any ALLIONI *pilipes* that might survive in collections would be identical with the specimen(s) seen by FABRICIUS and so help to resolve the problem of identity. SPINOLA had '*carbonaria*' from 'Ostrogothie', received from DAHLBOM [probably *nigrospina*], and '*pilipes*' from Lombardy, the latter probably collected by himself since no collector's or donor's name is recorded (CASOLARI & CASOLARI MORENO 1980: 156, 158). ALLIONI does not appear in the list of names (Codice collezioni di provenienza o donatori, p. 25) included by CASOLARI and CASOLARI MORENO in their catalogue of taxa represented in SPINOLA's collection of Hymenoptera, now in the Museo Regionale di Scienze Naturali in Torino.

<sup>4)</sup> Material examined subsequently to the present author's previous paper indicates that *nigrospina* may be more widely distributed in southern Europe than was then evident. A series of both sexes from Puglia is in the OUM Collection (Brindisi, 16 iv 1900, ♂ ♀, 16 iv 1901, ♀ ♀, 17 iv 1901, ♂ ♂ ♀ ♀, 7 vi 1901 (all *F.D. Morice*)). In the majority of the ♂ ♂, the mesoscutum is conspicuously grey-haired, agreeing in this with material from more northerly localities. It is clear that MORICE, a shrewd observer, recognized, or at least suspected, the presence of two entities in his series standing as *pilipes*: two of his preparations of the genitalia and apical sterna, unfortunately not otherwise labelled or associated with specimens, are labelled '? *nigrospina*' and '*pilipes* Italy'

<sup>5)</sup> Other recent, uncritical, faunal compilations have variously either failed to recognize the existence of two species (e.g., BANASZAK 1991: 26, for Poland) or have recognized two species but have misused for *spectabilis* the name '*carbonaria* (L.)' (e.g., RASMONT *et al.* 1995: 34, for France, Belgium, Switzerland and Luxembourg). [*Apis carbonaria* L., 1767, was a species of *Scolia* (cf. DAY 1979: 58, who noted that KIRBY had already in 1802 remarked this fact). *Andrena carbonaria* F., 1781, was a misidentification of Linnaeus' species, not a newly described species. Cf. BAKER 1994: 28.]

tural characters. The emphasis on a difference in the breadth of the penis valves (BAKER 1994) was occasioned solely by the fact that this was one of the characters most readily appreciable and therefore most useful for purposes of routine identification; the configuration of the gonocoxites also is diagnostic (see BAKER 1994, fig. 1, 2), and other characters facilitating discrimination were given both by BAKER and, more extensively, by DYLEWSKA (1974, 1987). The fact that related forms, described and undescribed, exist in the Balkans, the Levant and further east<sup>6)</sup> is irrelevant for nomenclatural purposes: no earlier available name that is not a *nomen dubium* and which might reasonably be conjectured to prove ultimately a senior synonym of either *spectabilis* or *nigrospina* appears to exist.

Since retention of the name *pilipes* as a *nomen dubium* (BAKER 1994: 282) could threaten the stability of other names, quite apart from its recent use (SCHWARZ *et al.* 1996) for what is demonstrably a composite corpus and from conflicting earlier interpretations, it would appear desirable to resolve the question of its application. Although type material exists, application to this, as has been made clear above, does not resolve the problem. The two courses open would appear to be (1) the submission to the International Commission on Zoological Nomenclature of a formal proposal for the suppression, except for homonymy, of the name *Andrena pilipes* F., 1781; or (2) the designation of a neotype defining the taxon and allowing the name to be restored to use. The latter course is adopted. Given the terms of WARNCKE's purported lectotype designation, one of numerous such dubious or plainly invalid designations on the part of that author, a formal submission for its setting aside by the Commission would not appear to be necessary.

The specimen selected and now designated, in accordance with the *International Code of Zoological Nomenclature* (3rd Edition, 1985, Recommendation 75E) as **neotype** of *Andrena pilipes* F., 1781, is a ♂ (chosen in preference to a ♀ as better securing stability of nomenclature: ICZN Article 75D(4)) from Toscana, labelled 'Pisa / Marina / iv [19]08', collected by the Rev. F.D. Morice, in the Hope Entomological Collections, University Museum of Natural History, Oxford. (Marina di Pisa is the nearest locality to the original type locality, 'Italia' [Piedmont], represented in available material.) This specimen will be transferred on publication to the Zoologisk Museum, Københavns Universitet, Denmark. A ♀ with similar data, but '16 iv 08', believed to be conspecific, satisfies FABRICIUS' description.

The neotype agrees in all essentials with the species characterized and the specimen figured by BAKER (1994: 284, fig. 2, 6, 12) under the name *spectabilis*. The essential synonymy of the two species-group taxa immediately concerned therefore becomes:

***Andrena pilipes* F., 1781: 474; [♀]; Italia. Neotype ♂ (Italy: Toscana: Pisa Marina) Zoologisk Museum, Københavns Universitet.**

*Andrena spectabilis* SMITH, 1853: 105; ♀; Albania. Lectotype Natural History Museum, London (B.M. Type Hym. 17 a 1299).

*Andrena praetexta* SMITH, 1872: 106; ♀; South Devon, High Peak. Holotype ♀ University Museum of Natural History, Oxford (Smith Collection).

*Andrena pilipes* F., DYLEWSKA, 1987: 433.

<sup>6)</sup> *Andrena dolorosa* NURSE, 1904 (syntypes, Natural History Museum, London, B.M. Type Hym. 17 a 1357, examined), synonymized by SCHWARZ *et al.* (1996: 49) with '*pilipes*' in their composite, sense, is a species closely related to *pilipes* F. Recent material examined is from Afghanistan: Bamian, Bamian valley, c. 2700 m, 3 viii 1977 (♀ ♀) and Bamian, Band-e-Amir, c. 2900 m, 4 viii 1977 (♂ ♂) (Cambridge Afghanistan Expedition 1977, P. H. B. Baker). Afghanistan records for '*carbonaria* (L.)' given by WARNCKE (1973: 1620) are substantially worthless since WARNCKE did not distinguish between *nigrospina*, *spectabilis* and *dolorosa*.

*Andrena nigrospina* THOMSON, 1872: 80; ♀; Sällsynt; funen på Gualöfs sandfält i Skåne. Holotype ♀ Museum of Zoology and Entomology, Lund University.

*Andrena carbonaria* F., DYLEWSKA, 1987: 435. [*Andrena carbonaria* F., 1793: 312 ([♂]; Germania) was not a newly described species (vide BAKER, 1994: 282) but a misidentification of *Apis carbonaria* L., 1767, a species of *Scolia* (cf. DAY, 1979: 58, who noted that KIRBY already in 1802 had remarked this fact). Subsequently, FABRICIUS (1798: 275) described from Tranquebar, again giving the same reference to LINNAEUS ('Linn. Syst. Nat. 2. 954. 7'), an *Andrena carbonaria* which he recognized as being 'Distincta omnino ab *Andrena carbonaria*'. This 1798 *carbonaria* was a species of *Euaspsis*, vide BAKER, 1995: 283 (= *Euaspsis edentata* BAKER, 1995). The name *carbonaria* cannot be applied to any species of *Andrena*.]

### Acknowledgements

The author is indebted to Dr Rudolf MEIER and to the late Dr Borge PETERSEN, for the loan of type material of FABRICIUS from the Kiel collection, and to Mr C. O'TOOLE, University Museum of Natural History, Oxford, for making available the extensive Italian material standing as *pilipes* in the Morice Collection.

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(Received on June 21, 1999)

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Zeitschrift/Journal: [Reichenbachia](#)

Jahr/Year: 1999-2000

Band/Volume: [33](#)

Autor(en)/Author(s): Baker Donald B.

Artikel/Article: [Andrena pilipes Fabricius, 1781: designation of neotype \(Insecta: Hymenoptera: Apoidea: Andrenidae\) 421-425](#)