Linzer biol. Beitr.	44/1	863-873	31.7.2012

The valid name for *Megachile leachella* CURTIS 1828 (Hymenoptera: Apidae) and some comments

M. SCHWARZ & F. GUSENLEITNER

A b s t r a c t : *Megachile leachella* CURTIS 1928 is an available name, contrary to the opinion of SCHWARZ & GUSENLEITNER 2011.

K e y w o r d s : Hymenoptera, Apidae, *Megachile leachella* CURTIS, nomenclature notices.

Introduction

SCHWARZ & GUSENLEITNER (2011) proposed a name change for *Megachile leachella* CURTIS 1828. They considered it to be a nomen nudum, and they chose the next available name, *Megachile dorsalis* PÉREZ 1879, to replace it. This decision was based on an unpublished information from Donald Burton Baker (1922-2004), a critical and well-informed melittologist. Also, we were convinced that the original description by CURTIS was not valid in the sense of the International Code of Zoological Nomenclature:

"3. *Leachella* Kirby's MSS. – The smallest species of the Genus and maybe the *M. Papaveris* LATR. Specimens are preserved in the British Museum".

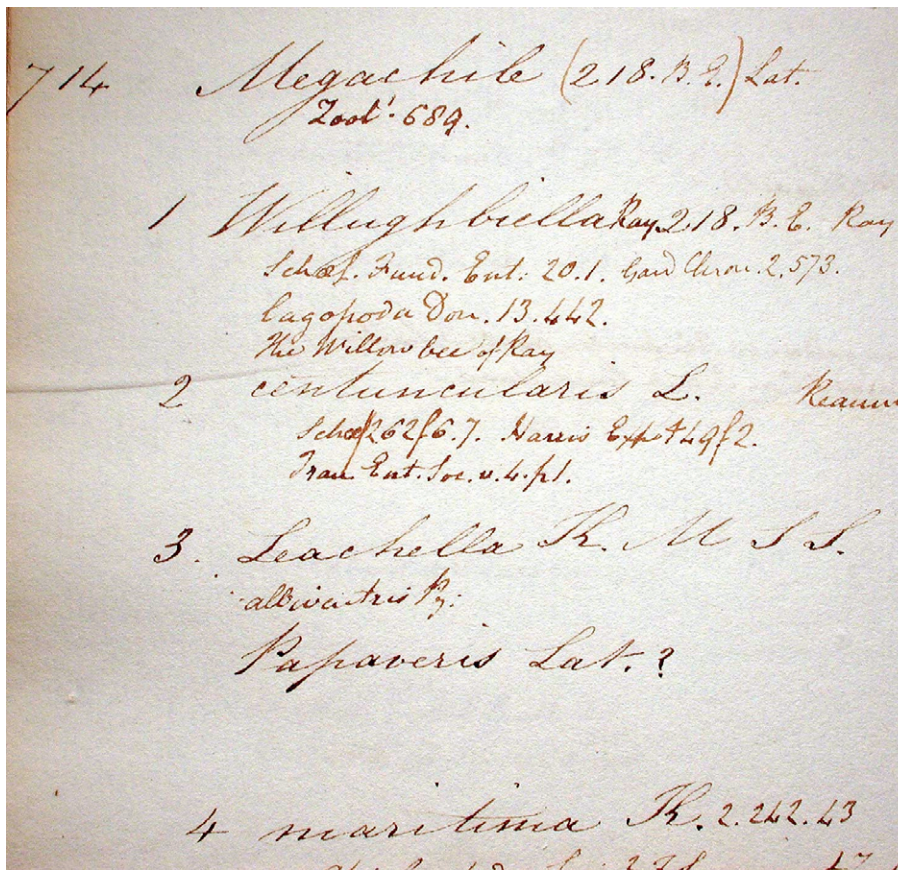
It has to be noticed that *Megachile centuncularis* (L.) is in many cases smaller than *M. leachella* CURTIS.

However, as Dr. Douglas Yanega pointed to us, this case is governed by Article 12 of the International Code on Zoological Nomenclature which stipulates that "To be available, every new name published before 1931 must satisfy the provisions of Article 11 and must be accompanied by a description of a definition of the taxon that it denotes, or by an indication". He also indicated that "the smallest species of the genus" is indeed a valid description. We now agree with him.

Our intention now is to inform our melittologist colleagues about this controversial name change, and to reintroduce *M. leachella* as a valid name, and this is why we asked for clarifications our competent American colleagues, Dr. John S. Ascher and Dr. Douglas Yanega (the latter a commissioner of the International Commission on Zoological Nomenclature).

"*Alas, the Code reads: 13.1. Requirements. To be available, every new name published after 1930 must satisfy the provisions of Article 11 and must 13.1.1. be accompanied by a description or definition that states in words characters that are purported to differentiate the taxon, or That's all it takes. The phrase "smallest species" does PURPORT to differentiate the taxon, even if it is* ***worthless****. There are species whose description is*

*"occupies node X on a cladogram" or "higher mean body length". The characters don't have to be valid to be code-compliant. The accuracy of a descriptive character has no bearing on whether it makes a name available. I know of several cases in which a description bears little or no resemblance to the taxon it describes (in one case, the insect is black and it was described as red, another in which the insect is purple and was described as green, and in another case, the description mentions three ocelli in an inverted triangle, when the entire family to which the taxon belongs lacks ocelli!). Use of an erroneous character does not invalidate the name. Likewise, there is no technical requirement for multiple characters. The Commission has, in recent years, been asked to contend with a number of "descriptions" that are far worse than Curtis', where the sole "character" was (e.g.) a higher *mean number* of belly scutes in a snake, or the position on a cladogram of a cluster of lizard genotypes. There was not one member of the Commission who personally *approved* of such worthless "descriptions", but there was not one member who believed that these names did not satisfy the "letter of the law" regarding the Code - even if only because the characters used were not *explicitly excluded* under Article 12.3. Those few exclusions are the only ones the Code recognizes; the phrase "the smallest of the genus" is perfectly adequate under the Code".*



Original manuscript (description) of Curtis in which he also noted "3" is *Megachile albiventris* PZ.

Original description of *Megachile leachella* in CURTIS 1828.

BRITISH ENTOMOLOGY;

BEING

ILLUSTRATIONS AND DESCRIPTIONS

OF

THE GENERA OF INSECTS

FOUND IN

GREAT BRITAIN AND IRELAND:

CONTAINING

Coloured Figures from Nature

OF THE MOST RARE AND BEAUTIFUL SPECIES, AND IN MANY INSTANCES OF THE PLANTS UPON WHICH THEY ARE FOUND.

BY

JOHN CURTIS,

FELLOW OF THE LINNEAN SOCIETY.

VOL. V.

LONDON:

PRINTED FOR THE AUTHOR: AND SOLD BY JOHN CUMBERLAND, 19 LUDGATE HILL; SHERWOOD, GILBERT, AND PIPER, 20 PATERNOSTER ROW; SIMPKIN AND MARSHALL, STATIONERS' COURT; J. BOOTH, DUKE STREET, PORTLAND PLACE; GOSSLING AND EGLEY, 69 NEW BOND STREET; G. B. SOWERBY, 156 REGENT STREET; J. B. BAILLIERE, 3 BEDFORD STREET, BEDFORD SQUARE; AND NO. 14 RUE DE L'ECOLE DE ME'DECINE A' PARIS.

1828.

218.

MEGACHILE WILLUGHBIELLA.

ORDER Hymenoptera. FAM. Apiariæ *Lat.* Apidæ *Leach.*

Type of the Genus Apis centuncularis *Linn.*

MEGACHILE *Lat., Leach.*—Trachusa *Jur.*—Xylocopa, Centris, Anthophora *Fab., Panz.*—Phyllotoma *Dum.*—Apis *Linn., Kirby, Panz.* *Antennæ* inserted at the middle of the face, rather remote, filiform, slightly geniculated; 13-jointed in the male, basal joint long, 2nd minute, 3rd small and slender, the 9 following of equal length, oblong cylindric, last joint longer wedge-shaped (1): shorter and 12-jointed in the female.

Labrum inflected large, elongate-quadrate, a little dilated at the base, convex, rough, pubescent, slightly ciliated (2).

Mandibles meeting over the proboscis and labrum, convex, bent, pilose, quadridentate, the external tooth the largest in some species, sometimes nearly wanting in the males (3).

Maxillæ long, terminal lobe with a rib at the back, long, lanceolate, acute, inflexed, internal edge and apex ciliated (4a). *Palpi* very short, attached to a fixed scape, having the appearance of a basal joint, biarticulate, 1st joint globose, 2nd subovate (4b). *Mentum* horny elongate linear (5). *Palpi* larger than the lip 4-jointed, 1st and 2nd joints compressed, internally membranous, pubescent, basal joint long and broad, 2nd much longer, attenuated and pubescent at the apex, 3rd inserted near the apex of the 2nd, small obovate, 4th a little longer, subclavate (b). *Tongue* as long as the 2 first joints of the palpi fleshy slender cylindric hollow, externally pubescent (c) with a bundle of hairs towards the apex in some (c*). *Paraglossæ* very short acuminated.

Head *broad, almost as large as the thorax.* Ocelli 3 *in triangle.* Abdomen *oval and convex in the males, subtrigonate, depressed above, and thickly pubescent beneath, in the females.* Wings, *superior with* 1 *costal,* 2 *subcostal and* 3 *discoidal cells, posterior limb without nervures.* Legs *robust.* Tibiæ *subtrigonate, short, furnished with a bent spine at the apex, the posterior pair having* 2. Tarsi *longer in the male than female,* 5*-jointed, basal joint the longest and most robust,* 3 *following short,* 5*th longer.* Claws *hooked and bifid.*

Fig. 1 & 8 are from *M. Willughbiella mas.* c* from *M. ligniseca mas.*

WILLUGHBIELLA *Ray, Kirby's Mon. Ap. Ang.* 2. 233. 41.

Male. Black, minutely punctured, clothed with pale sulphur-coloured pubescence, especially the face. Antennæ with the terminal joint compressed ovate, subcapitate (1). Abdomen notched at the apex. Anterior thighs produced internally, the apex of their tibiæ and the tarsi straw colour, the latter palmate, basal joint very large and hollow, which with the 3 following are united on one side, by a pilose and deeply ciliated membrane (8). *Female,* less pubescent than the male above, the face clothed with shorter and darker hairs, the apex of the antennæ simple. Abdomen with the segments whitish at their margins, the hairs beneath bright ferruginous, black at the apex (6). Anterior feet simple.

In the Author's and other Cabinets.

THE large mandibles of these Bees have supplied the generic appellation of *Megachile*, which has been retained in justice to Mons. Latreille, although Mons. Dumeril's name of Phyllotoma (Leaf-cutters) is more characteristic. They all form their nests either in decaying trees or under ground; and the skill displayed by these little animals in cutting the petals of flowers and the leaves of plants to construct their curious cells is so wonderful and interesting, that the reader will be highly gratified by referring to the following works, which contain their histories: namely, Reaumur, tom. 6. Mem. 4; Donovan's "British Insects," vol. 4. p. 31; Kirby's "Monographia Apum Angliæ," vol. 1. p. 156. and vol. 2. p. 244; and Kirby and Spence's "Introduction to Entomology," vol. 1. p. 438 or 441.

The following are British species of Megachile:

1. Willughbiella *Ray, Kirby, Nob.*

Inhabits the decaying trunks of Willows in low meadows: found in July in Suffolk, and on the banks of the Thames, at Brentford, Fulham, &c.

2. centuncularis *Linn., Fab., Kirby.—Schæf. Icon.* 262. *f.* 6. 7. —*Harris, Exp. t.* 49. *f.* 2.

The nests of this Bee are formed in walls and decayed trees; the cells are composed of the leaves of roses, the Laburnum and *Mercurialis annua.* They are found in August upon Thistles.

3. Leachella *Kirby's MSS.*

The smallest species of the genus, and may be the *M. Papaveris* Lat. Specimens are preserved in the British Museum.

4. maritima *Kirby Mon. Ap. Ang.* 2. 242. 43.

Taken near Landguard Fort, on the coast of Suffolk, in July.

5. ligniseca *Kirby* 2. 243. 44. *tab.* 16. *f.* 11. *mas.*—argentata? *Panz.* 99. 16. *mas.*—centuncularis *Panz.* 55. 12. *fem.*—*Don.* 4. *pl.* 120.

Found in September. It forms its cells of the leaves of roses and of elms, in the trunks of this tree and of the oak also.

6. circumcincta *Kirby* 2. 246. 45, *tab.* 16. *f.* 10. *fem.*

This Bee was first discovered by the Rev. Dr. Goodenough (the late Lord Bishop of Carlisle), in the month of May, on a bank of a southern aspect at Dartford in Kent. I once dug some of the centunculi out of a bank on the beautiful domains of Lord Stafford, at Costessey in Norfolk: they were formed of rose leaves.

7. xanthomelana *Kirby* 2. 246. 46.—parietina? *Fourcroy. Ent. Par. n.* 4.

A single specimen was taken by the Rev. W. Kirby in July, creeping upon a clay bank at Somersham, near Ipswich, Suffolk.

The plant figured, *Mercurialis annua* (Annual Mercury), is represented as cut by the *M. centuncularis.*

Donald Bakers unpublished manuscript concerning *Megachile leachella* CURTIS

Megachile dorsalis PEREZ 1879

Megachile dorsalis PEREZ, 1879, Contrib.: 107; ♀ nec ♂; Bordeaux: environs de l'ètang de Cazaux; Arcachon: Royan. Lectotype ♀ MNHNP. Labeled 'Arcach' and with gold and yellow disc, rev. Baker, 1976. [No. 832 in Pérez' MS catalogue. ♀♀ from Arcachon, Marseille, Royan and Algérie; ♂ from Bordeaux. PÉREZ' supposed ♂ was not in fact conspecific: cf. *burdigalensis* BENOIST.

Megachile leachella (KIRBY MS) CURTIS, 1828. Brit. Ent.,5: expl. pl. 218: sex not indicated: locality not indicated. Nom. nud. Against the entry for leachella in his list of British species of 'Megachile' actually a mixture of species of *Megachile* and *Osmia*. CURTIS commented: "The smallest species of the genus, and may be the *M. papaveris* LAT. [i.e., *Anthocopa papaveris* LATR., 1799]. Specimens are presserved in the British Museum". Given that this comment does relate to *dorsalis*, it does not constitute a description within the meaning of the Code (Glossary, 253) and it was obviously not intended as a description: CURTIS's descriptions throughout his British Entomology, if often short, are regularly given in conventional, factual, form.

*Curtis' intentions, and evidence of his behaviour in other contexts, are irrelevant. Every description of every organism is, and must be, self-contained, and all of its parameters (authorship, spelling, description, type designation, genders, etc.) self-evident. Virtually the only place in the entire ICZN where one is allowed to use *external* evidence for *any* purpose is Article 72.4.1.1, for determining the constituency of the type series of a taxon published before 2000.*

To treat it as a definition. "A statement in words that purports to give characters differentiating a taxon" (Cod, l.c.), or according to the French text "Une enonce ecrit destiné [present italics] à donner les caractères [plural !] qui differencient un taxon" (Cod, 276), would be to strech interpretation of the Code beyond the bounds of common sense.

It does indeed stretch common sense, but that is what Code interpretations commonly do. Again, it does not require more than one character for a description to be Code-compliant. You will never find a Commissioner that would uphold so strict an interpretation of the wording..... Old names that are already available are always "grandfathered" in. As such, leachella Curtis is an available name, and will remain so. But just because it is available does not mean it is valid.

Known variation in the pilosity of *Megachile leachella* present in Europe

Megachile leachella ♀-British and Scandinavian populations	***Megachile leachella*** ♀-French and Central European populations	***Megachile leachella*** ♀-Sicily, Spain and North-African populations
Pilosity of the thorax intensely yellow-ochre	Pilosity of the thorax brown-yellow	Pilosity of the thorax almost white
Pilosity of tergum 3 long, erect, yellow basally and black apically	Pilosity of tergum 3 very short, almost apressed, dark	Pilosity of tergum 3 very short, almost apressed, dark
Pilosity of terga 4. and 5. long, erect	Pilosity of terga 4 and 5 very short, almost apressed	Pilosity of terga 4 and 5 very short, almost apressed

Acknowledgements

We sincerely thank Dr. John S. Ascher and Dr. Douglas Yanega for their help with this problem, and further Dr. W.J. Pulawski and Dr. Christophe Praz for there comments and suggestions, Dr. Paul Westrich for the copy of the original manuscript notes of Curtis' manuscript and Wolfgang Schwarz for producing photos.

Zusammenfassung

Vorliegende Arbeit behandelt die nomenklatorische Gültigkeit von *Megachile leachella* CURTIS 1928, sowie die geografische Behaarungsvariabilität dreier europäischer Populationen.

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Fig. 1-3: *Megachile leachella* CURTIS, ♀. Habitus dorsally: (**1**) Sweden), (**2**) France, (**3**) Italy [Sicily].

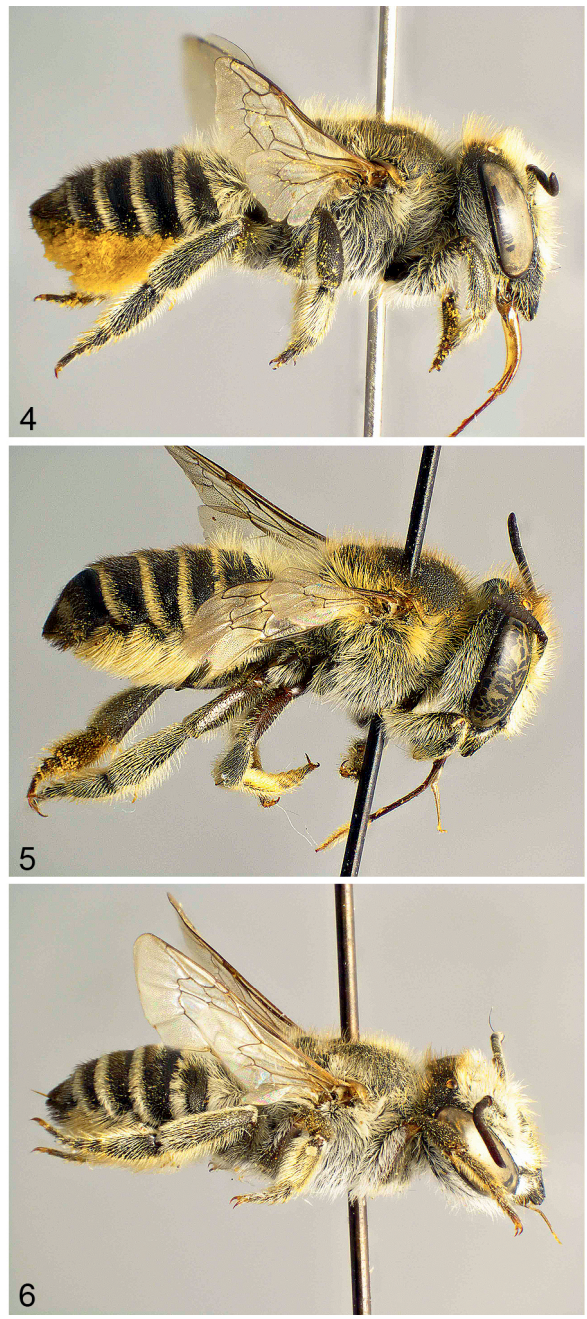

Fig. 4-6: *Megachile leachella* CURTIS, ♀. Habitus laterally: (**4**) Sweden), (**5**) France, (**6**) Italy [Sicily].

Fig. 7-9: *Megachile leachella* CURTIS, ♀. Abdomen pilosity laterally: (**7**) Sweden), (**8**) France, (**9**) Italy [Sicily].