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KIM TIMMERMANN & MICHAEL KUHLMANN



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Table of contents

Abstract	5
Introduction	5
Material and Methods	6
Taxonomy	6
Subgenus <i>Patellapis</i> Friese 1909	8
Key to species	8
<i>Patellapis bifurcata</i> species-group	10
<i>Patellapis (Patellapis) bifurcata</i> sp. n. Timmermann	10
<i>Patellapis (Patellapis) depressa</i> sp. n. Timmermann	13
<i>Patellapis (Patellapis) gessorum</i> sp. n. Timmermann	16
<i>Patellapis (Patellapis) pseudorubicata</i> sp. n. Timmermann	18
<i>Patellapis (Patellapis) rubricata</i> sp. n. Timmermann	20
<i>Patellapis cincticauda</i> species-group	24
<i>Patellapis (Patellapis) cincticauda</i> (Cockerell 1946)	24
<i>Patellapis (Patellapis) doleritica</i> sp. n. Timmermann	26
<i>Patellapis (Patellapis) hakkiesdraadi</i> sp. n. Timmermann	29
<i>Patellapis (Patellapis) impunctata</i> sp. n. Timmermann	32
<i>Patellapis (Patellapis) montagui</i> (Cockerell 1941)	34
<i>Patellapis (Patellapis) pseudomontagui</i> sp. n. Timmermann	38
<i>Patellapis (Patellapis) richtersveldi</i> sp. n. Timmermann	41
<i>Patellapis minutior</i> species-group	43
<i>Patellapis (Patellapis) bidentata</i> sp. n. Timmermann	44
<i>Patellapis (Patellapis) braunsi</i> sp. n. Timmermann	47
<i>Patellapis (Patellapis) minutior</i> (Friese 1909)	49
<i>Patellapis (Patellapis) schultzei</i> (Friese 1909)	52
Isolated species	54
<i>Patellapis (Patellapis) braunsella</i> Michener 1978	54
<i>Patellapis (Patellapis) communis</i> (Smith 1879)	57
<i>Patellapis (Patellapis) karoensis</i> sp. n. Timmermann	62
<i>Patellapis (Patellapis) leonis</i> (Cockerell 1940)	65
<i>Patellapis (Patellapis) longifacies</i> sp. n. Timmermann	66
<i>Patellapis (Patellapis) mandela</i> sp. n. Timmermann	68
<i>Patellapis (Patellapis) problematica</i> sp. n. Timmermann	70
<i>Patellapis (Patellapis) reticulata</i> sp. n. Timmermann	73
Subgenus <i>Lomatalictus</i> Michener, 1978	76
<i>Patellapis (Lomatalictus) malachurina</i> (Cockerell 1937)	76
Subgenus <i>Chaetalictus</i> Michener, 1978	80
Key to species	80
<i>P. capillipalpis</i> species-group	82
<i>Patellapis (Chaetalictus) capillipalpis</i> (Cockerell 1946)	83

<i>Patellapis (Chaetalictus) eardleyi</i> sp. n. Timmermann	85
<i>Patellapis (Chaetalictus) fynbosensis</i> sp. n. Timmermann	87
<i>Patellapis (Chaetalictus) sabinae</i> sp. n. Timmermann	89
<i>Patellapis (Chaetalictus) stoeberia</i> sp. n. Timmermann	90
<i>Patellapis pearstonensis</i> species-group	94
<i>Patellapis (Chaetalictus) africana</i> sp. n. Timmermann	94
<i>Patellapis (Chaetalictus) andrenoides</i> (Friese 1909)	95
<i>Patellapis (Chaetalictus) chubbi</i> (Cockerell 1937)	96
<i>Patellapis (Chaetalictus) cinctifera</i> (Cockerell 1946)	98
<i>Patellapis (Chaetalictus) cockerelli</i> sp. n. Timmermann	100
<i>Patellapis (Chaetalictus) disposita</i> (Cameron 1905)	101
<i>Patellapis (Chaetalictus) micheneri</i> sp. n. Timmermann	104
<i>Patellapis (Chaetalictus) namaquensis</i> sp. n. Timmermann	107
<i>Patellapis (Chaetalictus) natalensis</i> sp. n. Timmermann	109
<i>Patellapis (Chaetalictus) pastinella</i> (Cockerell 1939)	110
<i>Patellapis (Chaetalictus) pastiniformis</i> (Cockerell 1939)	113
<i>Patellapis (Chaetalictus) pearstonensis</i> (Cameron 1905)	114
<i>Patellapis (Chaetalictus) platti</i> (Cockerell 1937)	119
<i>Patellapis (Chaetalictus) pondoensis</i> (Cockerell 1937)	121
<i>Patellapis (Chaetalictus) rozeni</i> sp. n. Timmermann	124
<i>Patellapis (Chaetalictus) semipastina</i> (Cockerell 1940)	127
<i>Patellapis (Chaetalictus) turneri</i> sp. n. Timmermann	128
<i>Patellapis (Chaetalictus) virungae</i> sp. n. Timmermann	129
<i>Patellapis (Chaetalictus) vumbensis</i> (Cockerell 1940)	132
<i>Patellapis pulchrinitens</i> species-group	134
<i>Patellapis (Chaetalictus) abnormis</i> sp. n. Timmermann	134
<i>Patellapis (Chaetalictus) drakensbergensis</i> sp. n. Timmermann	137
<i>Patellapis (Chaetalictus) minima</i> (Friese 1909)	138
<i>Patellapis (Chaetalictus) pulchrinitens</i> (Cockerell 1942)	141
<i>Patellapis (Chaetalictus) renosterveldi</i> sp. n. Timmermann	143
<i>Patellapis (Chaetalictus) sakagamii</i> sp. n. Timmermann	147
<i>Patellapis (Chaetalictus) spinulosa</i> (Cockerell 1941)	150
<i>Patellapis (Chaetalictus) timpageleri</i> sp. n. Timmermann	153
Isolated species	156
<i>Patellapis (Chaetalictus) calviniensis</i> (Cockerell 1934)	156
<i>Patellapis (Chaetalictus) cameroni</i> sp. n. Timmermann	159
<i>Patellapis (Chaetalictus) corallina</i> (Benoist 1944)	161
<i>Patellapis (Chaetalictus) dispositina</i> (Cockerell 1934)	163
<i>Patellapis (Chaetalictus) flavorufa</i> (Cockerell 1937)	164
<i>Patellapis (Chaetalictus) friesei</i> sp. n. Timmermann	166
<i>Patellapis (Chaetalictus) gruenebergensis</i> sp. n. Timmermann	168
<i>Patellapis (Chaetalictus) ninae</i> sp. n. Timmermann	169
<i>Patellapis (Chaetalictus) pastina</i> (Cockerell 1937)	170
<i>Patellapis (Chaetalictus) paulyi</i> sp. n. Timmermann	171
<i>Patellapis (Chaetalictus) serrifera</i> (Cockerell 1937)	173
<i>Patellapis (Chaetalictus) tenuihirta</i> (Cockerell 1939)	175
<i>Patellapis (Chaetalictus) terminalis</i> (Smith 1853)	176
<i>Patellapis (Chaetalictus) villosicauda</i> (Cockerell 1937)	178
Species erroneously placed in <i>Patellapis</i>	180
<i>Patellapis mosselina</i> (Cockerell 1945)	180
<i>Patellapis pastinops</i> (Cockerell 1941)	180
<i>Patellapis tenuicineta</i> (Cockerell 1939)	181
Species of uncertain taxonomic status	181
<i>P. katangensis</i> (Cockerell 1934)	181
<i>P. rufiventris</i> (Friese 1909)	181
<i>P. volutatoria</i> (Cameron 1905)	181
Acknowledgements	181
References	181
Appendix . Gazetteer of collecting sites (in alphabetical order).....	183

Abstract

The African bee subgenera *Patellapis* (s. str.), *P. (Chaetalictus)* and *P. (Lomatalictus)* are revised. They comprise 71 species, of which 39 species are here described as new: *P. (P.) bidentata* sp. n., *P. (P.) bifurcata* sp. n., *P. (P.) braunsi* sp. n., *P. (P.) depressa* sp. n., *P. (P.) doleritica* sp. n., *P. (P.) gessorum* sp. n., *P. (P.) hakkiesdraadi* sp. n., *P. (P.) impunctata* sp. n., *P. (P.) karoensis* sp. n., *P. (P.) longifacies* sp. n., *P. (P.) mandela* sp. n., *P. (P.) problematica* sp. n., *P. (P.) pseudomontagui* sp. n., *P. (P.) pseudorubricata* sp. n., *P. (P.) reticulata* sp. n., *P. (P.) richtersveldi* sp. n., *P. (P.) rubricata* sp. n., *P. (Ch.) abnormis* sp. n., *P. (Ch.) africana* sp. n., *P. (Ch.) cameroni* sp. n., *P. (Ch.) cockerelli* sp. n., *P. (Ch.) drakensbergensis* sp. n., *P. (Ch.) eardleyi* sp. n., *P. (Ch.) friesei* sp. n., *P. (Ch.) fynbosensis* sp. n., *P. (Ch.) gruenebergensis* sp. n., *P. (Ch.) micheneri* sp. n., *P. (Ch.) namaquensis* sp. n., *P. (Ch.) natalensis* sp. n., *P. (Ch.) ninae* sp. n., *P. (Ch.) paulyi* sp. n., *P. (Ch.) renosterveldi* sp. n., *P. (Ch.) rozeni* sp. n., *P. (Ch.) sabinae* sp. n., *P. (Ch.) sakagamii* sp. n., *P. (Ch.) stoeberia* sp. n., *P. (Ch.) timpageleri* sp. n., *P. (Ch.) turneri* sp. n. and *P. (Ch.) virungae* sp. n.

New synonymies are proposed for *P. (P.) pallidicinctula* (Cockerell 1939) syn. n. = *P. (P.) communis* (Smith 1879); *P. (Ch.) micropastina* (Cockerell 1940) syn. n. = *P. (Ch.) pastinella* (Cockerell 1939); *P. (Ch.) schönlandi* (Cameron 1905) syn. n., *P. (Ch.) probita* (Cockerell 1933) syn. n., *P. (Ch.) neli* (Cockerell 1937) syn. n., *P. (Ch.) calvini* (Cockerell 1937) syn. n., *P. (Ch.) ausica* (Cockerell 1945) syn. n. = *P. (Ch.) pearstonensis* (Cameron 1905); *P. (Ch.) rubrotibialis* (Cockerell 1946) syn. n. = *P. (Ch.) platti* (Cockerell 1937); *P. (Ch.) sanguinibasis* (Cockerell 1939) syn. n. = *P. (Ch.) pondoensis* (Cockerell 1937); *P. (Ch.) atricilla* (Cockerell 1940) syn. n. = *P. (Ch.) vumbensis* (Cockerell 1940); *P. (L.) levisculpta* (Cockerell 1939) syn. n., *P. (L.) suprafulva* (Cockerell 1946) syn. n. = *P. (L.) malachurina* (Cockerell 1937). The species *P. mosselina* (Cockerell 1945), *P. pastinops* (Cockerell 1941) and *P. tenuicincta* (Cockerell 1939) are transferred to *Lasioglossum*. The type material of *P. katangensis* (Cockerell 1934), *P. rufiventris* (Friese 1909), and *P. volutatoria* (Cameron 1905) was not retrievable. All species are (re)described, a key for species identification is provided and species distributions are mapped.

Key words: new species, systematics, key, distribution

Introduction

With more than 1600 species, the Halictini is the largest tribe within the subfamily of sweat bees (Halictinae). It includes 23 genera *sensu* Michener (2007), of which *Patellapis* Friese 1909 is one genus. Little is known about the biology of *Patellapis* species, although they are assumed to play a major role as pollinators due to their local abundance (Timmermann 2005). Timmermann and Kuhlmann (2008a) recently provided the first detailed observations of the nesting biology, foraging, and social behaviour in this genus. Although the phylogenetic relationships of *Patellapis* were studied recently, the intrageneric relationships still largely remain uncertain with most subgenera apparently paraphyletic or polyphyletic (Danforth *et al.* 2008) resulting in a need for a taxonomic revision.

The name *Patellapis* was first used by Friese (1909) proposing a subgenus *Patellapis* for a group of black *Halictus* found in South Africa, characteristic for having a large rounded apical plate on the abdomen of the male. Friese described three species namely *Halictus (Patellapis) schultzei* Friese, *H. (P.) minor* Friese and *H. (P.) minimus* Friese, all collected at Steinkopf in Namaqualand, South Africa, by L. Schultze. In 1920 Cockerell designated *H. (P.) schultzei* as the type of *Patellapis*. Michener (1978) raised the subgenus *Patellapis* to generic rank. Today, the bee genus *Patellapis* is subdivided into seven subgenera of which *Lomatalictus*, *Chaetalictus*, *Archihalictus*, *Dictyohalictus* and *Patellapis sensu stricto* are restricted to Subsaharan-Africa, whereas *Zonalictus* also occurs eastward to Yemen and *Pachyhalictus* is widespread in the Indo-Australian region (Michener 2007). In total 161 species were listed by Pauly (1999) belonging to *Patellapis sensu* Michener (2007). Eardley and Urban (2006) provided a catalogue of Afrotropical bees with 80 new combinations and name changes in *Patellapis* but without studying type material.

Based on the recent redefinition of the subgeneric limitations of *Patellapis* s. str., *Chaetalictus* and *Lomatalictus* (Timmermann and Kuhlmann 2008b), the present study aims to revise the species of these subgenera and to provide keys for species identification.