

Contents

Acknowledgements	5	Masarina: Masarina	41
Introduction	6	Distribution	41
World distribution	7	Flower visiting	41
Southern African distribution	8	Water visiting	42
Morphology of pollen wasp mouthparts	12	Nesting	42
Taxonomy	12	Provision	44
Life history	13	Sleeping and sheltering	44
Associated organisms	14	Male behaviour	44
Note on classifications used	15	Associated organisms	44
Literature cited	15	Currently recognised species	45
Further literature consulted	15	Literature consulted	45
Priscomasarina: Priscomasaris	18	Masarina: Celonites	46
Distribution	18	Distribution	46
Flower visiting	18	Flower visiting	46
Water visiting	18	Water visiting	47
Nesting	18	Nesting	47
Provision	21	Provision	48
Sleeping and sheltering	22	Sleeping and sheltering	49
Male behaviour	22	Male behaviour	49
Associated organisms	22	Associated organisms	49
Currently recognised species	22	Currently recognised species	49
Literature consulted	22	Literature consulted	49
Masarina: Ceramius	23	Masarina: Quartinia	51
Distribution	23	Distribution	51
Flower visiting	24	Flower visiting	51
Water visiting	24	Water visiting	52
Nesting	25	Nesting	52
Provision	30	Provision	54
Sleeping and sheltering	30	Sleeping and sheltering	55
Male behaviour	30	Male behaviour	55
Associated organisms	32	Associated organisms	55
Currently recognised species	34	Currently recognised species	56
Literature consulted	34	Literature consulted	57
Masarina: Jugurtia	36	Pollen wasps as flower visitors and potential pollinators	59
Distribution	36	Requirements for a flower visitor to be a pollinator	59
Flower visiting	36	Flowers visited by pollen wasps	60
Water visiting	37	Dicotyledons	60
Nesting	37	Aizoaceae and Molluginaceae	60
Provision	38	Asteraceae	64
Sleeping and sheltering	39	Scrophulariaceae	67
Male behaviour	39	Campanulaceae	70
Associated organisms	39	Zygophyllaceae	73
Currently recognised species	39	Fabaceae	74
Literature consulted	39	Malvaceae (including Sterculiaceae)	78
		Geraniaceae	80
		Boraginaceae (including Hydrophyllaceae)	82

Crassulaceae	84
Neuradaceae	86
Amaranthaceae	86
Acanthaceae	87
Lamiaceae	87
Nyctaginaceae	87
Plumbaginaceae	87
Euphorbiaceae	87
Brassicaceae (including Capparaceae)	87
Vahliaceae	87
Monocotyledons	88
Asphodelaceae	88
Iridaceae	88
Pollen wasps as pollinators of the flowers they visit	89
Literature consulted	90
Impact of land use practices on pollen wasps	91
Winter-rainfall area	91
Summer-rainfall area	93
Land management for maintaining essential populations of pollen wasps, other aculeate wasps and bees: pollinators and predators	94
Coastal development and invasion by alien plants and snails	94
Literature consulted	95
Appendix 1:	
Variations in familial classification of flowering plant families visited by pollen wasps in southern Africa	96
Appendix 2:	
Records of flower visiting by pollen wasps in southern Africa	98
Appendix 3:	
Flowers visited by pollen wasps in southern Africa	125
Addendum:	
12 new species of <i>Quartinia</i> described and published after the text had been finalised;	
11 species with flower-visiting records	134
Index to scientific names of pollen wasps, other insects, and mites	135
Index to scientific names of plants	141

