



Phytotaxa 37: 1–131 (2011)
www.mapress.com/phytotaxa/
Copyright © 2011 Magnolia Press

Monograph

ISSN 1179-3155 (print edition)
PHYTOTAXA
ISSN 1179-3163 (online edition)



PHYTOTAXA

37

Revision of *Lobostemon* (Boraginaceae)

MATT H. BUYS

Compton Herbarium, South African National Biodiversity Institute, Kirstenbosch, Private Bag X7, 7735 Claremont and Department of Botany & Zoology, University of Stellenbosch, Private Bag XI, 7602 Matieland, South Africa. Email: mattbuys@gmail.com



Magnolia Press
Auckland, New Zealand

Accepted by M. Christenhusz: 23 Aug. 2011; published: 20 Dec. 2011

MATT H. BUYS

Revision of *Lobostemon* (Boraginaceae)

(*Phytotaxa* 37)

131 pp.; 30 cm.

20 Dec. 2011

ISBN 978-1-86977-841-5 (paperback)

ISBN 978-1-86977-842-2 (Online edition)

FIRST PUBLISHED IN 2011 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: magnolia@mapress.com

<http://www.mapress.com/phytotaxa/>

© 2011 Magnolia Press

All rights reserved.

No part of this publication may be reproduced, stored, transmitted or disseminated, in any form, or by any means, without prior written permission from the publisher, to whom all requests to reproduce copyright material should be directed in writing.

This authorization does not extend to any other kind of copying, by any means, in any form, and for any purpose other than private research use.

ISSN 1179-3155 (Print edition)

ISSN 1179-3163 (Online edition)

Table of contents

Abstract	3
Introduction	3
Historical review	4
Material	7
Methods	7
Characters and states	8
Cladistic analysis	25
Phytogeography	28
Species richness	29
Endemism	31
Taxonomic treatment	31
Key to the sections	31
I. <i>Lobostemon</i> section <i>Argentei</i> Levyns	32
II. <i>Lobostemon</i> section <i>Fruticosi</i> Levyns	40
III. <i>Lobostemon</i> section <i>Trichotomi</i> Levyns	83
IV. <i>Lobostemon</i> section <i>Lobostemon</i>	109
Acknowledgements	124
Index of names	125
Appendix 1: Data matrix used in the cladistic analysis of <i>Lobostemon</i>	127
Appendix 2: Elucidation of the 32 informative characters listed in Appendix 1.	128
References	128

Abstract

A multi-disciplinary approach based on extensive field work and herbarium specimens was followed towards a revision of *Lobostemon*. Morphological characters pertaining to especially the flowers were supplemented by leaf indumentum and anatomy, as well as fruit and anthocyanin data. Diagnostic characters are largely confined to the flowers and to a lesser extent to the leaves and fruit. Twenty eight species of *Lobostemon* are recognised and a number of informal infraspecific entities are documented. A cladistic analysis of morphological data resulted in revised sectional delimitations and sister-taxon relationships. The taxonomic treatment includes a brief historical review of *Lobostemon*, a discussion of pertinent characters and character states, phytogeographical analyses, keys to the sections and species, detailed descriptions with nomenclatural and taxonomic notes, as well as comments on distribution, ecology and conservation status. Illustrations and distribution maps are provided for each species.

Key words: *Boraginaceae*, *Lobostemon*, revision, South Africa, taxonomy

Introduction

According to the Angiosperm Phylogeny Group (APG III 2009) classification, Boraginaceae, the borage or forget-me-not family, includes shrubs, trees, and herbs, totalling about 2750 species in about 150 genera worldwide (Stevens 2009). The family is especially well represented in the Mediterranean region, but is also found in most temperate to subtropical areas (Heywood 1993). *Lobostemon* Lehmann (1830: 378), with 28 species, is the largest southern African genus in the Boraginaceae s.l. It is endemic to the region, mainly confined to the winter-rainfall area of South Africa, occurring from Springbok to Mossel Bay, and further eastward along the coast to about Grahamstown, where the rain occurs throughout the year.

Agtdaegeneesbos (eight day healing bush), *Douwurbos* (dew worm bush), *Luibos* (lazy bush) and *Geneesbos* (healing bush) are the most common vernacular names for *Lobostemon* known to most rural folk in the Western Province of South Africa, and to those interested in South African medical plants in particular. In the majority of cases the species in question is *L. fruticosus* (L.) Buek (1837: 134). The common names imply the use of *Lobostemon* for the cure of various ailments, especially those concerning wounds, blood poisoning, ringworms, skin diseases and syphilis. The remedies all require an infusion of the leaves or a paste is made by either pounding the leaves or chewing them—the slimy paste is then topically applied to the