A generic revision and new combinations in the Hyptidinae (Lamiaceae), based on molecular and morphological evidence

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Abstract

An earlier molecular study demonstrated the monophyly of the Hyptidinae and most of the genera within it. However, the largest genus, Hyptis, is paraphyletic and all other genera seem to be derived from a Hyptis ancestor. Most of the different lineages which comprise Hyptis are already established sections, some of which are now raised to generic rank, augmenting the subtribe to 19 genera and with a greatly reduced but monophyletic Hyptis, in which the genus Peltodon is included as a section. The sections Mesosphaeria and Polydesmia are also shown not to be monophyletic, making it necessary to reassign some species from the former to the latter, and then raising the two sections to generic rank as Mesosphaerum and Cantinoa respectively, the latter a new genus name. A new genus Oocephalus is also created from two former subsections of Hyptis sect. Polydesmia. The genus Condea, formed from three former sections of Hyptis, is itself divided into two sections. A key to all recognized genera is included, together with a generic conspectus, with brief distributional data, differentiating the new genera and listing their component species. The necessary nomenclatural changes comprise 142 new combinations, 30 new or replacement lectotypifications, four neotypes, 23 new synonymies, eight stat. nov., six newly coined generic names, five new epitypes and four new names.

Key words: generic key, Hyptis, molecular data, morphology, new genera, taxonomy

Introduction

The Lamiaceae have recently undergone major changes of both delimitation and reorganization of constituent taxa, as a result of morphological and molecular phylogenetic studies (e.g., Cantino 1992a, 1992b, Wagstaff et al. 1995, 1998), with many genera, formerly placed in Verbenaceae, being incorporated (Harley et al. 2004).