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A TAXONOMIC REVISION OF *POGOSTEMON* (LAMIACEAE) FROM CHINA

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Abstract

Based on field observation and extensive herbarium studies, a comprehensive taxonomic revision of the genus *Pogostemon* in China was carried out. Twenty-seven species and two varieties are recognized, among of which eleven species and one variety are endemic to China. A new species, *P. henanensis*, is described and illustrated. Two new combinations, *P. glaber* var. *tsingpingensis* and *P. latifolius*, are proposed. Six names are reduced to synonymy, eleven names are lectotypified and a name is neotypified. The record of *P. menthoides* in China is corrected as *P. fraternus*. One species, *P. pressii*, is listed as dubious species in China. In addition, nomenclature, descriptions and distribution maps of each species and variety as well as a key to Chinese *Pogostemon* taxa are presented.

Key words: *Dysophylla*, Labiatae, Lamioideae, Pogostemoneae, taxonomy

Introduction

Pogostemon Desfontaines (1815: 154) belongs to tribe Pogostemoneae (Lamiaceae: Lamioideae) as defined by Bendiksby *et al.* (2011), together with *Achyrospermum* Blume (1826: 840), *Anisomeles* (1810: 503), *Colebrookea* Smith (1805: 111), *Comanthosphace* Moore (1877: 293), *Craniotome* Reichenbach (1825: 39), *Eurysolen* Prain (1898: 43), *Leucosceptrum* Smith (1805: 113), *Microtoena* Prain (1889: t. 1872) and *Rostrinucula* Kudô (1929: 304). It consists of about 80 species distributed mainly in tropical and subtropical regions of Asia, and with five species endemic to Africa (Bhatti & Ingrouille 1997, Wu & Huang 1977, Harley *et al.* 2004, Scheen *et al.* 2010, Bendiksby *et al.* 2011). The highest species diversity is found in the Indian subcontinent (Bhatti & Ingrouille 1997). *Pogostemon* can be distinguished from other Lamiaceae by the presence of exerted stamens bearing moniliform hairs (Hasskarl 1842, Kuntze 1891, Press 1982, Bhatti & Ingrouille 1997).

The relationship between the genera *Pogostemon* in a narrow sense and *Dysophylla* Blume (1826: 826) has been debated in the past. *Pogostemon* s.s. was usually considered to include terrestrial herbs or subshrubs with opposite, broad and petiolate leaves as well as solid stems, whereas *Dysophylla* was a group from aquatic and marshland habitats, with opposite or verticillate, linear to filiform and sessile leaves as well as hollow stems (El-Gazzar & Watson 1967, Wu *et al.* 1977, Wu & Huang 1977, Li & Hedge 1994, Bhatti & Ingrouille 1997). However, some species in *Dysophylla* including its type, *D. auricularia* (Linnaeus 1767: 81) Blume (1826: 826) exhibit opposite leaves and seem to be intermediate between these two genera (Li 1975, Bhatti & Ingrouille 1997). Some authors (Bentham 1848, Hooker 1885, Briquet 1897, Airy Shaw 1967, Keng 1969, Li 1975, Wu *et al.* 1977, Wu & Huang 1977, Press 1982, Li & Hedge 1994) suggested that those species with opposite leaves in *Dysophylla* should be transferred to *Pogostemon* s.s., and *Dysophylla* then includes only those species with verticillate leaves. Recent molecular phylogenetic studies implied that *Pogostemon* s.l. is strongly supported to be monophyletic and all species sampled included in *Dysophylla* are nested within *Pogostemon* (Bendiksby *et al.* 2011, Yao & Ge unpublished). Therefore, a broad concept of *Pogostemon* including *Dysophylla* is accepted in this study.

When preparing the *Flora Reipublicae Popularis Sinicae*, Chinese taxonomists described a number of new taxa in genus *Pogostemon* s.l. from China, and many taxa were morphologically compared only with related Chinese species (Sun & Hu 1966, Wu *et al.* 1965, Wu *et al.* 1977). In the *Flora Reipublicae Popularis Sinicae*, Wu & Huang (1977) treated the species in *Dysophylla* and *Pogostemon* independently, and twenty-two species and four

Excluded species

The following species were placed in *Pogostemon* or *Dysophylla* previously but are now excluded from *Pogostemon*. Accepted names are in bold type.

Dysophylla communis Collett & Hemsley (1890: 114) = ***Elsholtzia communis*** (Coll. & Hemsl.) Diels (1912: 47).

Dysophylla ianthina Maxim. ex Kanitz (1891: 46). *Pogostemon ianthinus* (Maxim. ex Kanitz) Lévêille (1911: 219) = ***Elsholtzia densa*** Benth (1835: 714).

Dysophylla mairei Lévêillé (1912b: 236) = ***Elsholtzia pilosa*** (Benth 1830: 30) Benth (1833: 163).

Pogostemon cyprianii (Pavolini 1908: 434) Pampanini (1910: 708) = ***Elsholtzia cyprianii*** (Pavol.) S. Chow ex Hsu (1965: 170).

Pogostemon japonicus Benth & Hooker (1876: 1180) = ***Comanthosphace japonica*** (Miquel 1865: 103) Moore (1877: 293)

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