Systematics of *Senecio* section *Crociseris* (Compositae, Senecioneae)

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Abstract

The complexity of the evolutionary history of Senecio is reflected in its conflicted taxonomy. Within this genus, Senecio section Crociseris (Compositae, Senecioneae), a group of perennial herbs distributed in Europe, western and Central Asia, and northwestern Africa, was not fully revised. A worldwide revision of this section recognizing 28 species and eight subspecies is presented here. The main morphological characters revealed as useful for distinguishing between species are the number and shape of supplementary and involucral bracts, synflorescence architecture, indumentum, and the shape and size of leaves and achenes. In this new taxonomic treatment S. provincialis and S. lagascamus have been segregated from S. doronicum, within which three subspecies are recognized (S. doronicum subsp. orientalis is validly published herein). On the other hand, S. ruthenensis from France and S. lusitanicus from Portugal have been synonymized to S. lagascamus, as well as S. ovatifolius, S. pisidicus, and S. tooleus from Anatolia to S. kolenatianus, S. olympicus, and S. castagneanus respectively, S. bertramii from Lebanon to S. ciliicus, and S. delhesianus from Syria to S. racemosus subsp. racemosus. Sixty eight names are lectotypified, the names S. barrelieri, S. pyrenaicus, and S. scopolii are neotypified, and one epitype is designated for the name S. perralderianus. Descriptions and distribution maps are provided for all of the species included, as well as an identification key. Nine species are illustrated for the first time.

Keywords: Asteraceae, Eurasia, Jacobaea, lectotypification, northwestern Africa, Senecio section Crociseris, Senecio, taxonomy

Introduction

The genus Senecio Linnaeus (1753: 866) (Compositae, Senecioneae) comprises ca. 1250 species and is one of the largest genera of flowering plants (Bremer 1994, Pelser 2007, Nordenstam 2007). It is almost cosmopolitan, although remarkable diversification occurs mainly in the Mediterranean climate zones, i.e., South Africa, Chile, and the Mediterranean Basin. Fewer representatives may be found in Australasia and Mesoamerica, and no native species inhabit the West Indies (Nordenstam et al. 2009). Along its distribution area, the genus Senecio shows an extraordinary morphological diversity in which almost all life forms are present (annual and perennial herbs, subshrubs or shrubs, small trees), successfully colonizing a wide range of habitats (Bremer 1994, Nordenstam 2007).

The high variability in the concept of Senecio and its sections employed by different authors makes difficult to reach a consensus on its delimitation (Jeffrey 1977) and the number of sections that it includes. In the geographical frame where our study group occurs (i.e., western Eurasia and northwestern Africa), four main sections are classically recognized: Senecio sect. Crociseris (Reichenbach 1831–1832: 242) Boissier (1844: 13), Senecio sect. Doria (Fabricius 1759: 73) Godron (1850: 117), Senecio sect. Jacobaea (Miller 1754: [667]) Gray (1821: 469), and Senecio sect. Senecio. During the last decades, several genera, such as Caucasia Nordenstam (1997: 22), Iranecio Nordenstam (1989a: 53), and Tephroseris (Reichenbach in Mössler 1829: 1498) Reichenbach (1841: 87) were segregated from the Eurasian Senecio with a widespread acceptance (Bremer 1994, Nordenstam 2007, Pelser et al. 2007, 2010, Greuter 2008, Blanca & Quesada 2009, Hamzaoğlu et al. 2011). By contrast, the genus Turanecio Hamzaoğlu (2011: 484) does not seem to be accepted (Euro+Med PlantBase 2006+). The recent