A NEW COMBINATION IN THE GENUS Lycianthes
(Solanaceae: Solanoideae: Capsiceae)

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ABSTRACT

During the verification of nomenclature in connection with the preparation for ‘Studies of Solanaceae in Eastern Ghats’ the authors came across a species Solanum uncinellum Lindl. that need to be updated in accordance with the changing generic characters for the genus Lycianthes. Accordingly the required new name and new combination is proposed here.

Keywords: Lycianthes, Solanum uncinellum

INTRODUCTION

Dunal (1852: 29, 156) published Solanum sect. Pachystemonum Dunal, which included five subsections (Solanum subsect. Lycianthes Dunal) and several unranked infrageneric names. In later, the status of subsect. Lycianthes varied: Solanum Sect. Lycianthes (Dunal) Wettst. (Wettstein, 1891: 22); Solanum subgen. Lycianthes (Dunal) Bitter (1917: 424, 442) and gen. Lycianthes (Dunal) Hassl. Based on the occurrence of reduced inflorescences and the presence of large stone cells in fruits, Hassler (1917: 89) justified the distinctness of Lycianthes from Solanum L. Subsequently, the genus name Lycianthes was conserved (Wiersema, 2015). According to Mabberley (2017: 545), Lycianthes is distributed in Tropical America (ca. 150 species) and East Asia (ca. 20 species). Some works recognize 200 species, with ca. 40 taxa native to Mexico (Hunziker, 2001; Villasenor, 2016; Barboza and Hunziker, 1992; Rojas and D’Arcy, 1997). For India, Deb (1980) recorded seven Lycianthes species. Molecular studies of the Solanaceae family by Olmstead et al. (1999) and have shown that the tribe Capsiceae include a group identified by chloroplast DNA data consisting of the genera Capsicum and Lycianthes. Distinctive calyx morphology, shared by these two genera (D’Arcy, 1986; Barboza & Hunziker, 1992) gives further support for this group. It has been concluded that Capsicum is derived from Lycianthes. Currently the most widely accepted taxonomic position recognizes Lycianthes as a separate genus (Mc Vaugh, 1973; Bitter, 1914 & 1919; Danert, 1969; D’Arcy, 1986; Barboza and Hunziker, 1992; Rojas and D’Arcy, 1997; Olmstead et al., 1999; Hunziker, 2001; Villasenor, 2016).

The genus Lycianthes is distinct within the tribe Capsiceae by its free portion of the stamina-filaments being markedly unequal, one filament 2-5 mm long, the other four filaments 1-2 mm long and cup-shaped calyx, often with 5 or 10 sub-apical teeth arising near base of apical rim, rotate corolla and anthers dehiscing by apical pores. Lindley (1840) described Solanum uncinellum and noted the species, uncertain generic placement and furthermore, the character states of S. uncinellum conflict with what currently define Solanum. While revising the family Solanaceae, it was observed that the species S. uncinellum was found to be coming under the genus Lycianthes because of the distinguishable characters, such as the presence of unequal anthers, hooked petals, and calyx with 10 sub-apical teeth. The purpose of this paper is to assign a correct placement for this species formerly placed in Solanum. As there is no combination in the genus Lycianthes for this species, we propose the new combination (Art. 41.2 of the ICN; Turland et al., 2018), based on morphological analysis of the species Solanum uncinellum Lindl., it is transferred to the genus Lycianthes (Dunal) Hassler, and the new combination Lycianthes uncinella (Lindl.) Kalidass and Madhusmita Mallia are made.

Nomenclature and Taxonomy

Lycianthes uncinella (Lindl.) Kalidass & Madhusmita Mallia, comb. nov.
Type: This plant flowered in the year 1837 in the garden of the Horticultural Society [Chiswick, England], in the month of July 1837, Lectotype, designated here (or perhaps holotype): Anonymous s.n. (CGE).
Homo-synonyms:


Notes: It is uncertain whether Lindley (1840) based his description of Solanum uncinellum solely on the single specimen housed at the CGE. Therefore, the CGE specimen is designated as the lectotype. Alternatively, it may be the holotype. Bitter treated three Solanum species, viz., S. rantonetti Carriere, Lycianthes dombeyi Dunal, and S. laevis Dunal as Lycianthes species, viz., L. rantonetti (Carriere) Bitter, L. dombeyi (Dunal) Hassl., and L. laevis (Dunal) Bitter. Likewise, now we also treat Solanum uncinellum Lindl. as a Lycianthes taxon and make the new combination L. uncinella.

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