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Rediscovery of two species of *Microlicia* (Melastomataceae) in Minas Gerais, Brazil

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Abstract

Studies carried out in Minas Gerais state have led to the rediscovery of *Microlicia maximowicziana* and *M. riedeliana*, known previously only by the type collections made 190 years ago by Ludwig Riedel. We present descriptions, comments on the affinities among closely related species and conservation assessments, as well as illustrations. Lectotypes for both species are designated and the varieties of *M. maximowicziana* are synonymised.

Resumo

Estudos conduzidos no estado de Minas Gerais permitiram a redescoberta de *Microlicia maximowicziana* e *M. riedeliana,* conhecidas anteriormente apenas pelas coleções tipo realizadas há mais de 190 anos por Ludwig Riedel. Apresentamos descrições, comentários sobre afinidades com espécies próximas, bem como o estado de conservação e ilustrações. São designados lectótipos para as duas espécies e as varidedades de *M. maximowicziana* são consideradas sinônimos.

Key words: *campo rupestre*, endemic, IUCN categories, lectotypes, new synonym, Microlicieae, Riedel

Introduction

Microlicia D. Don is represented by 130 species in Brazil and 66 species in Minas Gerais (Romero & Woodgyer 2014). Despite the high diversity, some species are little known and/or poorly collected. Most of the species were tenuously delimited and morphological characteristics have frequently overlapped. In recent years some synonyms have been proposed (Romero 2003a; 2013a; 2013b) and eight species of *Lavoisiera* (Almeda & Martins 2001) and three of *Chaetostoma* (Koschnitzke & Martins 2007) were transferred to *Microlicia*.

Wide morphological variation within and between many species of *Microlicia* make this genus difficult to understand. A number of factors have impeded a comprehensive study of the genus. Some species are poorly represented in herbaria making identification of newly acquired material problematic. Several new species are recognized, but still cannot be published because there is not enough fertile herbarium material to provide complete descriptions and safe distinction of closely related species. Some areas of *campo rupestre* can have several sympatric species of *Microlicia* flowering at the same time, which often gives rise to mixed collections under the same collection number. Some validly published binomials were never used, but names published later for the same species were used instead, and became more widely known in herbarium collections and access to type material in European herbaria has until recently been difficult. These factors highlight the need for further extensive collecting of *Microlicia* in the states of Minas Gerais and Bahia where it is most diverse. This would also benefit the work being carried out by the first author towards a revision of *Microlicia* sect. *Microlicia* Cogn.

Intensive field work carried out in Minas Gerais during the last 20 years has led to the discovery of seven new species of *Microlicia* and material to support nomenclatural updates (Romero 2000, 2003b, 2005, 2010, 2013a, 2013b, 2013c; Romero & Woodgyer 2010, 2011; Romero & Versiane 2014), as well as the rediscovery of *M. maximowicziana* Cogn. and *M. riedeliana* Cogn., known previously only by the type collections.

During examination of material from recent field work in Minas Gerais, these two species were initially thought to be new and undescribed as they did not match collections at K or HUFU. However, during comprehensive study of herbaria in Europe by the first author, type material of *M. maximowicziana* and *M. riedeliana* collected by Ludwig

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Taxonomy:—Cogniaux (1883) described *Microlicia riedeliana* citing material of *Riedel 1098* deposited in several herbaria (*Herb. Hort. Petrop., Acad. Petrop., Berol., Monac. et Vindob.*). The specimen at LE is designated here as lectotype of this species, since the vegetative and reproductive parts are in agreement with the protologue of the species, the specimen is of good quality and the label gives locality details and date of collection.

Discussion:—Digital images of *L. Riedel 1098* from BR and NY are available on JSTOR (2014). An illustration (Fig. 3) is presented here to show the characteristics of *M. riedeliana* and photographs of the flowers (*Zappi 2570*) and the habitat in Serra do Cipó where the specimens *Zappi 2570* and *2612* were collected are also included (Fig. 2 D–E).

The collection *Zappi 2612* is interesting as it has a creeping habit with short, unbranched, procumbent stems rather than an erect habit with branched stems as is the case with the type material and the collection *Zappi 2570*. According to Daniela Zappi (pers. comm.) the plants were growing in very poor soil, almost pure sand in very exposed locations and this could have affected their growth.

Microlicia riedeliana bears some resemblance to *M. tetrasticha* Cogn. (1883: 80), which occurs in Serra do Cipó, Serra da Moeda, Serra do Cabral, Itacambira, Grão Mogol, Diamantina and Gouveia, in Minas Gerais. Both are branched subshrubs to shrubs with grooved stems, glutinous, impressed glandular punctate, imbricate, sessile leaves, flowers in clusters at tips of branches, purple/magenta petals and dimorphic stamens with tetrasporangiate, bicolorous anthers. *Microlicia tetrasticha* differs in having leaves 2–5 × 1–3.5 mm, blades elliptic to ovate and apices acuminate, calyx lobes acute, ca. 2 mm long and petals ca. 11 × 5 mm.

Microlicia riedeliana also resembles *M. longipedicellata* Almeda & A.B. Martins (2001: 3), a species endemic to Diamantina, Minas Gerais. They are both branched shrubs with glutinous, impressed glandular punctate, imbricate, sessile leaves and dimorphic stamens with tetrasporangiate, bicolorous anthers. *Microlicia longipedicellata* differs in having leaves 15–20 × 8–10 mm, blades ovate to elliptic with 3–5-nerves, elongate pedicels 5–10 mm long, 8–10-merous flowers and a 5-locular ovary.

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