
Zygella S. Moore, a Synonym of *Larentia* Klatt (Iridaceae)

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ABSTRACT. The identity of *Zygella* S. Moore, a genus of Iridaceae of Mato Grosso, Brazil, has never been satisfactorily established. Plants described by S. M. Moore in 1895 as *Zygella graminea* appear to us to be conspecific with *Larentia linearis* (Kunth) Klatt, type species of *Larentia* Klatt, a plant well represented in herbaria, mostly from grasslands of Venezuela. We reduce *Zygella* to synonymy in *Larentia*, and *Z. graminea* becomes a synonym of *L. linearis*. A second species, *Z. mooreana* Hoehne, described in 1910 and also from Mato Grosso, is likewise conspecific with *L. linearis* and a lectotype is designated for that species. *Cypella mexicana* C. V. Morton & R. C. Foster, which shares the characters of *Larentia*, is transferred to the genus as *L. mexicana* (C. V. Morton & R. C. Foster) Goldblatt; with this addition, *Larentia* now includes three species.

Key words: Brazil, Iridaceae, *Larentia*, Mato Grosso, Tigridieae, Venezuela, *Zygella*.

The genus *Zygella* was described by S. M. Moore in 1895 for a species of Iridaceae collected in Mato Grosso in interior Brazil two years previously, and at the time consisted of only one species, *Z. graminea* S. Moore. Both genus and species appear to have been overlooked by systematists dealing with the Iridaceae of South America and have remained, at least technically, recognized until now. The characteristics of *Zygella* include a bulbous rootstock; linear, unifacial leaves with pleated blades; and an inflorescence of the *Iris*-type, a rhipidium, enclosed in a pair of large opposed leafy bracts. The flowers have three free stamens with the anthers appressed to narrow, compressed style branches that each bear a pair of small crests, below which lies a bilobed stigmatic lip. These features place the genus squarely in tribe Tigridieae of subfamily Iridoideae (Goldblatt, 1990), an exclusively New World tribe of some 15 genera and over 175 species (Goldblatt & Manning, 2008; Goldblatt et al., 2008).

Illustrations accompanying the protologue show a plant with a branched stem; a distinctive, narrow, attenuate leaf subtending the lowermost branch; narrow rhipidia with the outer spathe about half as long as the inner; and flowers with subequal, laxly spreading, unmarked tepals. *Zygella mooreana* Hoehne (Hoehne, 1910), also from Mato Grosso, is evidently conspecific with *Z. graminea*, but the illustrations of the flowers in Hoehne's publication are more carefully drawn and show the tepals to be markedly clawed, with the narrow claws and limb bases darkly speckled. The illustrations and type specimen at the Natural History Museum, London, are a close match to the Venezuelan *Larentia linearis* (Kunth) Klatt (Klatt, 1882). We have not been able to locate the syntypes of *Z. mooreana*. Differences in the flowers illustrated in Moore's and Hoehne's publications are probably not significant. More likely those in the former illustration are simply poorly rendered, perhaps because they were drawn from dried flowers revived in water, whereas the latter appears to have been drawn from life.

Larentia Klatt (Klatt, 1882) was described with the single species *L. linearis* of grassland habitats of Venezuela. The genus was included in *Cypella* Herb., a genus mainly (possibly exclusively) of temperate South America, by Baker (1892), now including ca. 30 species. The American specialist of the systematics of New World Iridaceae, R. C. Foster (1945), followed Baker's taxonomy in this instance. In contrast, Ravenna (1977) regarded *Larentia* as separate from *Cypella* and added one species, *L. rosei* (R. C. Foster) Ravenna, to the genus. A molecular study using five plastid DNA regions (Goldblatt et al., 2008) shows one species of *Larentia*, *L. rosei*, and the very similar *C. mexicana* C. V. Morton & R. C. Foster, no doubt correctly a species of *Larentia*, to be sister to *Cipura* Aubl. and not immediately allied to *Cypella*, a result that justifies Ravenna's recognition of *Larentia* as separate from *Cypella*. We infer that *L. linearis* plus two Mexican species, *L. rosei* and *C. mexicana* (here

transferred to *Larentia*), constitute a genus sister to *Cipura*. Rodriguez and Sytsma (2006), using both nuclear and chloroplast genes, likewise showed *Larentia* sister to *Cipura* (using *L. rosei* as *C. rosei* R. C. Foster), but their study did not include any true *Cypella* species; their analysis thus provides no evidence directly relevant to this discussion. *Larentia* now includes three species.

For the reasons outlined above, Goldblatt and Manning (2008) followed Ravenna in recognizing *Larentia*, pending a more extensive molecular systematic analysis of Tigridieae. We therefore reduce *Zygella* to synonymy in *Larentia*. We also refer two species of *Zygella* to *L. linearis*. Until now it has not been clear in the literature that *L. linearis* occurs in Brazil, but apart from the collections included in the two species of *Zygella*, we have found specimens identified as *L. linearis* from Brazil, e.g., *Hatschbach* 33300 (MO) from Goias, and several more. The Brazilian plants seem to us in no way different from those from Venezuela. Location of the type material of Hoehne's *Z. mooreana* remains problematic, as it has not been located at SP where expected. For this reason, we have chosen a lectotype for the species, the illustration accompanying the protologue.

Larentia Klatt, Abh. Naturf. Ges. Halle 15: 362. 1882. TYPE: *Larentia linearis* (Kunth) Klatt.

Zygella S. Moore, Trans. Linn. Soc. London, Bot., ser. 2, 4: 493. 1895, syn. nov. TYPE: *Zygella graminea* S. Moore (= *Larentia linearis* (Kunth) Klatt).

Larentia linearis (Kunth) Klatt, Abh. Naturf. Ges. Halle 15: 362. 1882. Basionym: *Moraea linearis* Kunth, in Humb., Bonpl. & Kunth, Nov. Gen. Sp. (quarto ed.) 1: 321. 1815 [1816]. TYPE: Venezuela. "Crescit in humidis calidisque Guayanae prope El Trapiche de Farreras," June, *Humboldt & Bonpland s.n.* (type, P).

Zygella graminea S. Moore, Trans. Linn. Soc. London, Bot., ser. 2, 4: 494. 1895, syn. nov. TYPE: Brazil. Mato Grosso: Santa Cruz, *S. Moore* 993 (holotype, BM).

Zygella mooreana Hoehne, Commiss. Linhas Telegr. Estratég. Matto Grosso Amazonas 1: 19. 1910, syn. nov.

TYPE: Brazil. Mato Grosso: Porto Esperidiao (lectotype, designated here, fig. 58 in Hoehne, 1910).

Larentia mexicana (C. V. Morton & R. C. Foster) Goldblatt, comb. nov. Basionym: *Cypella mexicana* C. V. Morton & R. C. Foster, Contr. Gray Herb. 171: 22. 1950. TYPE: Mexico. Guerrero: Montes de Oca, 15 June 1937, *G. Hinton et al.* 10322 (holotype, US; isotypes, GH, MO, NY).

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Literature Cited

- Baker, J. G. 1892. Handbook of the Irideae. George Bell, London.
- Foster, R. C. 1945. Studies in the Iridaceae, III. Contr. Gray Herb. 155: 3–54.
- Goldblatt, P. 1990. Phylogeny and classification of Iridaceae. Ann. Missouri Bot. Gard. 77: 607–627.
- & J. C. Manning. 2008. The *Iris* Family: Natural History and Classification. Timber Press, Portland.
- , A. Rodriguez, T. J. Davies, J. C. Manning, M. P. Powell, M. van der Bank & V. Savolainen. 2008. Iridaceae "Out of Australasia"? Phylogeny, biogeography, and divergence time based on plastid DNA sequences. Syst. Bot. 33: 495–508.
- Hoehne, F. C. 1910. Comissão de Linhas Telegraphicas Estratégicas de Matto Grosso ao Amazonas. Annex no. 5, Historia natural. Botanica, Pt. 1. Rio de Janeiro.
- Klatt, F. W. 1882. Ergänzungen und Berichtigungen zu Baker's Systema Iridacearum. Abh. Naturf. Ges. Halle 15: 44–404.
- Moore, S. le M. 1895. The phanerogamic botany of the Matto Grosso Expedition, 1891–92. Trans. Linn. Soc. London, Bot. 4: 265–516.
- Ravenna, P. 1977. Notas sobre Iridaceae V. Notic. Mens. Mus. Nac. Hist. Nat. (Santiago) 21(249): 7–9.
- Rodriguez, A. & K. Sytsma. 2006. Phylogeny of the tiger-flower group (Tigridieae: Iridaceae): Molecular and morphological evidence. Pp. 412–424 in J. T. Columbus, E. A. Friar, J. M. Porter, L. M. Prince & M. G. Simpson (editors), Monocots: Comparative Biology and Evolution, Vol. 1. Rancho Santa Ana Botanical Garden, Claremont, California.



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