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Transfer of *Geoblasta pennicillata* to *Bipinnula* (Chloraeinae, Orchidaceae)

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The genus *Bipinnula* Comm. ex Jussieu (1789: 65) includes 11–12 species distributed in two disjunct areas of southern South America. One of these comprises southern Brazil, Uruguay, and eastern Argentina, where six species occur, and the other is Chile where the rest of the species are found (Gosewijn 1993, Pridgeon *et al.* 2003, Cisternas *et al.* 2012). Szlachetko & Margońska (2001), based on intuitive assessments of floral characters, speculated that *Bipinnula* 'is polyphyletic and consists of two apparently unrelated groups, *Bipinnula* and *Jouyella* Szlachetko & Margońska (2001: 124). However, *Jouyella* is identical in circumscription to *Bipinnula* section *Multiflorae* Gosewijn (1993: 15) and we do not see the advantage of inflating nomenclature with further genera for which monophyly has not been formally tested. Therefore, we consider *Jouyella* as a synonym of *Bipinnula*.

Recent phylogenetic analyses of Chloraeinae based on DNA sequences (Chemisquy & Morrone 2012, Cisternas *et al.* 2012) have shown that the single species of the genus *Geoblasta* Barbosa Rodrigues (1891: 132), *G. pennicillata* (Reichenbach 1878: 51) Hoehne (1940: 198) ex Correa (1968: 71) is embedded in *Bipinnula*. In those analyses, *G. pennicillata* has been consistently recovered as the sister of *Bipinnula montana* Arechavaleta (1899: 282), with which it is partially sympatric in Uruguay, with strong support (bootstrap percentage 100%, Bayesian posterior probability 1.00). A previous taxonomic study based on morphological characters of the labellum and column (Correa 1968) also suggested that *G. pennicillata* is more closely related to *Bipinnula* than to *Chloraea* Lindley (1827: 47), the genus in which *G. pennicillata* was included originally (as *Chloraea pennicillata* Rchb.f.).

The most obvious characteristic that customarily has permitted the distinction of *Bipinnula* from other Chloraeinae is the possession of a fimbriate-pectinate apical extension in the lateral sepals, which, however, is absent in *B. apinnula* Gosewijn (1993: 11). Of the three sections recognized in *Bipinnula* by Gosewijn (1993), *G. pennicillata* is most similar to section *Bipinnula*, which consists of species from the Río de la Plata coastal region in eastern Argentina, Uruguay and southern Brazil (Izaguirre 1973). Section *Bipinnula* includes four species, among these *B. bipilumata* Reichenbach.f. (1883: 62; type species of the genus) and *B. montana*, and is characterized by the usually one-flowered inflorescence, absence of nectariferous channels in the often insect-like labellum (with exception of *B. montana*), and wingless column. *Geoblasta pennicillata* shows all these features and therefore fits in section *Bipinnula*. In order to achieve monophyly of *Bipinnula* and make taxonomy consistent with the phylogenetic position and structural similarity of *G. pennicillata* to species of that genus, here we propose the transfer of the latter to *Bipinnula*. We consider the several new combinations in *Geoblasta* proposed by Szlachetko & Margońska (2001) as inseparable from that species and, accordingly, include them in its synonymy (following Hoehne 1940 and Correa 1968).