

"Taxonomic revision of the *Brachycorythis*-complex (Orchidaceae)"
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Increasing knowledge about plant species richness on the Earth and estimating the biodiversity are the fundamental steps for effective conservation and utilization of natural resources for the future. Africa is one of the most important species-rich biodiversity regions. Unfortunately, its botanical exploration is still far from complete. The group of species representing the *Brachycorythis*-complex (Orchidaceae, Orchidinae) is, from the taxonomic point of view, one of the unrecognized taxa. It constitutes seven terrestrial orchid genera and forty-four species occurring in sub-Saharan Africa, Madagascar and southern Asia. The purpose of this work was the taxonomic revision of the complex.

Comprehensive morphological descriptions, being a result of detailed studies, were provided for each of studied taxa (including infraspecific units) and detailed analytical line drawings (showing the key characters) of the vegetative, flower and generative parts as well. The full synonymy and complete list of type material for each species were given (basing on research of the protologues and historical collections of type specimens). The ecological data concerning preferred habitats and flowering time as well as the information about geographical distribution (GPS data for the studied specimens), were collected for each species. There were 1.000 specimens from ten most important world herbaria, studied.

The data cumulated were used to conduct the ecological niche modelling (ENM) analysis. The distribution maps of potential suitable niches (both, for present times and also during LGM) were presented for sixteen species, representing five genera of the complex. The analyses showed the new areas, where the suitable habitats for species can be possibly found. Moreover, it was estimated that the geographical range for most of the studied taxa were rather narrower during LGM than nowadays. Phylogenetic analyses were conducted to establish relations between taxa within the subtribe Orchidinae. The diversification time of particular lineages within the Orchidinae were reconstructed. The results showed that diversification of *Brachycorythis* started c. 14 Mya and the youngest taxa are the Asiatic representatives of the group.