

# ADA Lindl.

The genus *Ada*, dedicated to the sister of Artemisia of Caria, was established by John Lindley in 1854, in his *Folia Orchidacea* for *Ada aurantiaca*. This remarkable plant, collected in Colombia by Schlim, has bright orange flowers produced in a close raceme enveloped in membranous bracts, which do not spread out completely. Although he compared the new genus with the glumaceous species of *Brassia* R. Br. and with Reichenbach's *Brachtia*, Lindley failed to recognize the close relationship between *Ada* and his *Brassia* section *Glumaceae*.

In 1972, Norris H. Williams revised the genus, showing that the features proposed by Lindley to separate *Ada* from the group of the glumaceous *Brassias* had no support. By comparing features of the vegetative architecture, as well as floral features and pollinarium morphology, Williams (1972) proposed a new realignment of *Ada*, recognizing that the resemblances of the flowers with some species of *Brassia* are superficial, and that the two groups are not closely related. He expanded the concept of *Ada* to include *Brassia* section *Glumaceae*, showing that the genus is closely related to *Mesospinidium* Rchb.f., and both genera are phylogenetically related to *Gomesa* R. Br. and *Brachtia*. Molecular analysis by Chase & Palmer (199X) supports William's conclusions and the inclusion of the glumaceous *Brassias* within *Ada*.

As currently understood, *Ada* includes some fourteen species, mostly South American, ranging from Nicaragua to Venezuela and Ecuador. The plants of *Adas* usually present numerous distichous leaves (often of a pale green color and with quite pronounced veins on the underside) and reduced, monophyllous pseudobulbs (with the exception of *A. allenii*, which has no leaf at the top). The inflorescences are numerous, not branching, and the flowers are subtended by a large, papery bract as long as or longer than the pedicel. Sepals and petals are similar, and the lip, provided with a large callus of two parallel lamellae, is often reflexed. The base of the column forms a cavity that does not contain nectar.

Although the flowers of *A. aurantiaca* are probably pollinated by hummingbirds, the only available data recorded pollination of *A. allenii* by small wasps of the family Pompilidae. This is a group of predatory wasps that probably visit the flowers in search of prey, as happens with Pompilidae and Scoliididae wasps that pollinate species of *Brassia*. The similarity between the flowers of *Ada* and *Brassia* is likely the result of convergence driven by adaptation to the same pollination syndrome.

The only species of the genus in Costa Rica, *A. chlorops*, was originally described by A. R. Endrés and Reichenbach filius in 1873 as *Brassia chlorops*, on a plant collected by Endrés in Costa Rica, without specifying locality. In 1925 Oakes Ames and Charles Schweinfurth described it again with the name of *Brassia parviflora*, on the basis of a Costa Rican collection by Anastasio Alfaro from Cascajal. It has also been recorded from western Panama and Nicaragua.

*Ada chlorops* is still locally common in moist and wet premontane and lower montane forests at 1000-2000-meter elevations around the Central Valley in Costa Rica, where it grows as a large epiphyte in shady positions, mostly restricted to the largest branches of old trees. The densely cespitose plants, about 30 cm. tall, have very reduced pseudobulbs and produce short inflorescences (usually not longer than the almost plicate leaves) with three to ten attractive flowers. Most of the flowering records in Costa Rica are from October and November, but scattered plants flower randomly from August to December.

Plants of *A. chlorops* proved to be successfully cultivated in pots with a substratum that can retain high humidity. Although some specimens were spotted as low as 200 m. elevation, the condition best suited for its culture is the moist, mild climate of the mid-elevations. The plants must be have substantial shade and good ventilation.

*Ada chlorops* (Endrés & Rchb.f.) N.H. Williams

Heredia: San Rafael, Residencial El Castillo, ca. 1 km toward Monte de la Cruz, 1760 m, flowered in cultivation at Jardín Botánico Lankester, F. Pupulin & M. Prada 1724. Photographed: November 1999. Reproduction ratio 2:1

