

BARCODING THE SPECIES OF *PLEUROTHALLIS* SUBSECTION *MACROPHYLLAE-FASCICULATAE*

MARK WILSON

Biology Department, The Colorado College, Colorado Springs, CO 80903, USA
mwilson@coloradocollege.edu

The long-term goal of this project is to have a genetic “barcode” for the described species in *Pleurothallis* subsection *Macrophyllae-Fasciculatae* (syn. *Acronia* Luer) to facilitate identification, recognition of new species, biodiversity assessment, and conservation of this genus in Mesoamerica and the Andes. To this end, a living collection is being assembled at Colorado College with plants from commercial operations in South America (Ecuagenera; Colomborquídeas; Orquídeas del Valle) and the U.S. (Andy’s Orchids; Hanging Gardens; J & L Orchids); and private collections in the U.S. (O’Shaughnessy). As these plants flower and identities are confirmed, photos are taken; in the future, herbarium sheets will be prepared

and flowers preserved in spirits. For some species, or from some locations such as Central America (private collection of Archila), only leaf samples have been obtained. Between living plants and leaf samples ~100 different species have been assembled, which is approximately 46% of the described species. A genetic barcode for this subsection of *Pleurothallis* will likely consist of three sequences. While only nrITS has been sequenced for these plants so far, the chloroplast sequences *rpoB2*, *rpoC1*, and the 3’ and 5’ ends of *ycf1* are currently being investigated to determine which provide greatest variability, perhaps to combine with *matK* or *trnH-psbA* as per the CBOL Plant Working Group.