

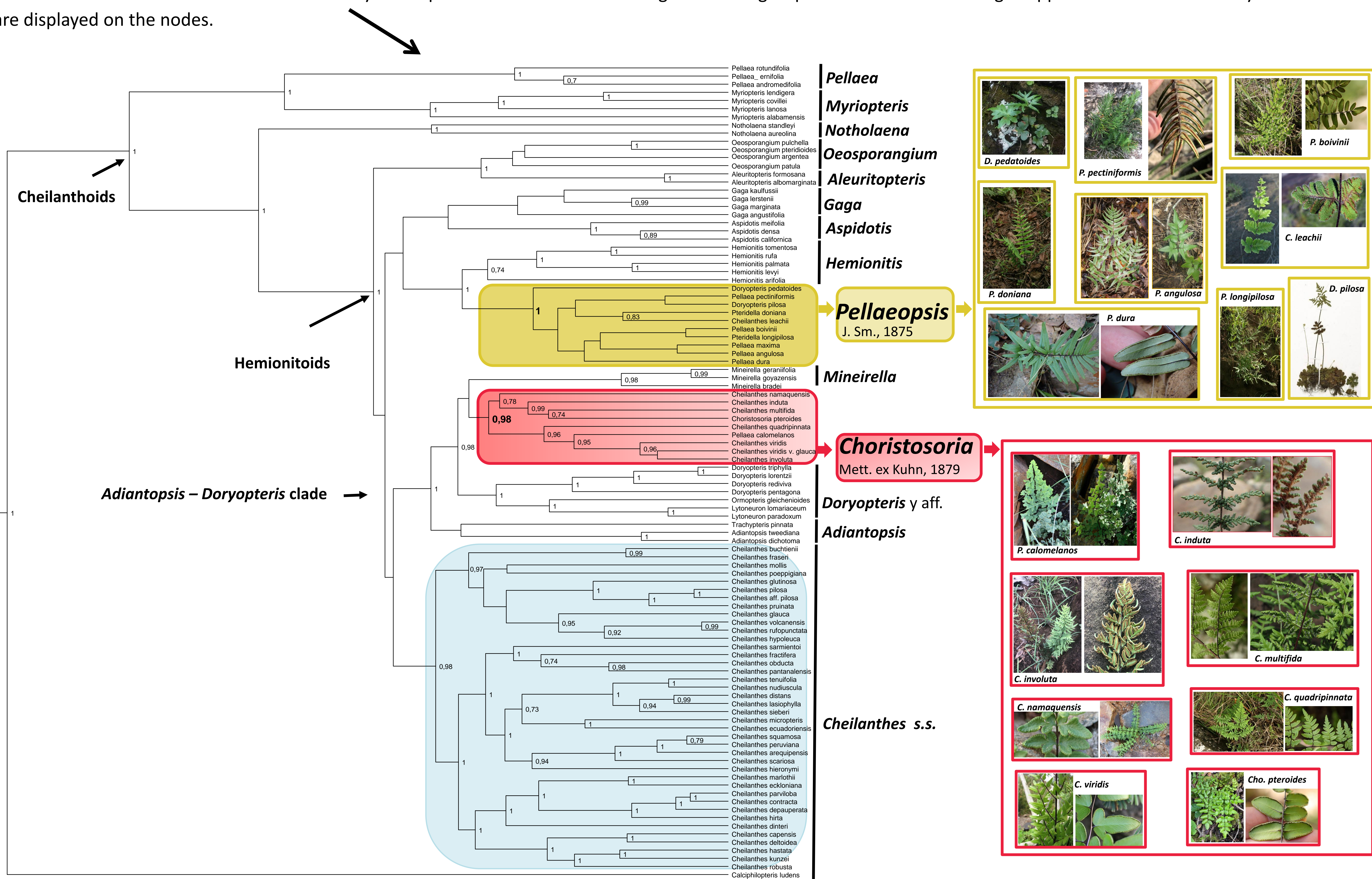
Introduction - Cheilanthoid ferns in their current classification (PPG 1, 2016), comprise 23 genera and 430 species worldwide distributed. The group still presents an evident phylogenetic and taxonomic problematic, since groups based on morphological similarities are not supported, due to the homoplasy present in the group.

-Therefore, the delimitation of monophyletic groups based on molecular studies contributes greater to the credibility of the classificatory task.

-In the global phylogeny of cheilanthoid ferns that we carried out to advance into *Cheilanthes* s.s. delimitation (Ponce & Scataglini, 2018, 2020), it was shown that species from Africa and Madagascar usually assigned to *Cheilanthes*, *Doryopteris* and *Pellaea*, would correspond to two ancient paleotropical genera that need to be restored, redefined, and their species transferred.

Methodology - We analyzed own and Genbank sequences of 3 combined markers (rbcL, trnL, rps4), with Bayesian inference, using Beast 1.8.1 (Drummond et al., 2012).

Results - We obtained the Maximum Credibility tree. Species from Africa and Madagascar were grouped in two clades with high support. Posterior Probability values ≥ 0.70 are displayed on the nodes.



0.02

Discussion: The inclusion of South American species to the Cheilanthoid phylogeny generated results with high resolution which allowed us to delimit *Cheilanthes* s.s. (Ponce & Scataglini, 2018, 2020), the *Adiantopsis-Doryopteris-Mineirella* clade, and also to define clades with high support for species from Madagascar and Africa, related to South American genera, which remained with an uncertain taxonomic position until now.

Ten African and Malagasy species that were grouped forming the sister clade of the genus *Hemionitis* would constitute the genus *Pellaeopsis* J. Sm. Smith described *Pellaeopsis* in 1875, based on *Pellaea articulata* Kaulf. (type species) and *P. burkeana* Baker (\equiv *P. angulosa* (Bory) Baker). In 1879, Kuhn described *Pteridella*, including these two species plus six other species of *Pellaea*, with *P. doniana* Hook. as the type. In our phylogeny, species of *Pellaeopsis* and *Pteridella* are grouped with paleotropical species traditionally assigned to *Cheilanthes*, *Doryopteris* and *Pellaea*, constituting a highly supported clade, which would correspond to the name with priority *Pellaeopsis*.

Other eight African and Malagasy species formed a high supported group included in the American clade of *Adiantopsis-Doryopteris*. This group would correspond to *Choristosoria* Mett. ex Kuhn. *Choristosoria* was described in 1879 as monotypic, based on *Choristosoria pteroides* (L.) Mett. ex Kuhn. In our phylogeny, *C. pteroides* is grouped with incertae sedis paleotropical species of *Cheilanthes* and *Pellaea*, some of them previously included by Yesilyurt et al. (2015) under the «Choristosoria grade» but without support until now.

The resurgence and re-definition of these two genera would be a progress to define the monophyly of the genus *Pellaea* and also to advance towards the circumscription of the groups of cheilanthoid species that remain as incertae sedis.

