

S1 Appendix. The key to *Calypogeia* with blue oil bodies

1. Underleaves as large as leaves or somewhat smaller, transversely elliptic, with a round to shallow emarginate apex *C. aeruginosa*
1. Underleaves smaller than 1/2-1/3 of leaf size, rounded to obtuse, deeply bilobed to bisbifid **2**
2. Underleaves bifid, with rounded lateral margins or with small additional teeth on one or each lateral side **3**
2. Underleaves bisbifid **4**
3. Undivided area between underleaf sinus bottom and rhizoid initial cells 5-6 cells high, oil bodies botryoidal, deep blue [boreal to temperate Europe and North America] *C. azurea*
3. Undivided area between the bottom of the underleaf sinus and rhizoid initial cells with 2-3 cells high, oil bodies coarsely granular, deep blue to blue brown [a meta-Himalayan subtropical taxon currently known in southern China and North Vietnam] *C. sinensis*
4. Leaves acute, not bifid **5**
4. Leaves commonly bifid, rarely acute **6**
5. Oil bodies coarsely granular, plants flaccid, brown to yellow-brown [meta-Himalaya to Indochina] *C. lunata*
5. Oil bodies botryoidal, plants not flaccid (merely rigid), greenish to bluegreen [temperate amphi-Pacific East Asia] *C. orientalis*
6. Oil bodies botryoidal and deep blue ... [temperate amphi-Pacific East Asia] ... *C. orientalis*
6. Oil bodies coarsely granular, deep blue to gray and brown **7**
7. Oil bodies finely granular, blue to brown and gray, with color variation in the same leaf [temperate amphi-Pacific East Asia, extending south-west as far as the Chinese province of Guizhou] *C. granulata*

7. Oil bodies coarsely granular, deep blue throughout [tropical areas or temperate North America] **8***
8. [South-East Asia extending eastward to Samoa] *C. goebelii*
8. [New World: eastern North America and Neotropics] *C. peruviana*

* - the relationships between the two taxa keyed out below are unclear, we did not have sufficient material arrive at reliable conclusions.