

Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: Sampling information and results. Naming authority and geographic information were collected from the World Checklist of Selected Families at <https://wcsp.science.kew.org>.

File name: Supplementary Data 2

Description: Accession information of all sequences included in the ITS phylogeny.

File name: Supplementary Data 3

Description: ITS phylogeny of morning glories with EAs. ITS phylogeny adapted from Munoz et al.²⁷ colorized with our EA data. Orange species are EA- and blue species are EA+.

File name: Supplementary Data 4

Description: All herbarium specimens used in the study. Source data for Figure 1.

File name: Supplementary Data 5

Description: *Ipomoea*, *Argyrei*, *Stictocardia*, and *Turbina* occurrence data from GBIF. Source data for Figure 1.

File name: Supplementary Data 6

Description: RaxML phylogeny. Source data for Figure 2, 3, and 4.

File name: Supplementary Data 7

Description: Metadata for species in the phylogeny. Source data for Figure 2.

File name: Supplementary Data 8

Description: Ergot alkaloid data for species in the phylogeny. Source data for Figure 4.

File name: Supplementary Data 9

Description: Source data for Figure 5.