

(that is, a group with rounded sclerenchyma bundles and a group with elongated sclerenchyma bundles), but further investigations are still needed.

The molecular analyses support the distinction of the different species as defined by the morphology and group the morphologically similar *C. fruticosus* and *C. squarrosus* in close relation. The *Boerhavia* species are divided into two subclades. *Boerhavia cordobensis*, *B. diffusa* var. *diffusa* and *B. erecta* are species alien to southern Africa and form a distinctive subclade. *Boerhavia deserticola*, *B. hereroensis* and *B. repens* subsp. *repens* are indigenous to southern Africa and group together in a second subclade. *Boerhavia coccinea* var. *coccinea* (whose origin is not known) groups with the indigenous *Boerhavia* species. The groupings of the *Commicarpus* species are varied and not ascribable to specific non-molecular trends. The extra-African *C. plumbagineus* and *C. helenae* var. *helenae*, and the African limited *C. pentandrus* and *C. decipiens* group together, but this is not supported by the morphology.

This investigation of the phylogeny was indeed preliminary, as more samples and genes still need to be incorporated and the results interpreted in combination with the morphological, anatomical, palynological and biogeographical data.