

## Phylogeny and ecology of the Cixiidae of Seychelles

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15 Cixiidae species are present in Seychelles (DISTANT 1917, WEBB 1975, HOLZINGER 2009 a, b). The most diverse group is Oecleini, represented by two genera: *Volcanalia* DISTANT, 1917 and *Fipsianus* HOLZINGER, 2009. The genus *Volcanalia* comprises five species: *V. typica* DISTANT, 1917, *V. atrostriata* DISTANT, 1917, *V. barbarae* HOLZINGER, LÖCKER & LÖCKER, 2010, *V. cardui* DISTANT, 1917 and *V. uniformis* DISTANT, 1917. In the genus *Fipsianus*, two species are known: *F. picturatus* (DISTANT, 1917) and *F. andreae* HOLZINGER, 2009. *Volcanalia* and *Fipsianus* species all feed only on endemic palms (*Phoenicophorium*, *Roscheria*, *Veschaffeltia*, *Nephrospermum*), with exception of *V. cardui* feeding on *Pandanus seychellarum*.

A phylogenetic analysis including the Oecleini taxa occurring on the Seychelles as well as the two malagasy Oecleini species, *Borbonomyndus pandanicola* ATTÍE & BOURGOIN & BONFILS, 2002 and *Nesomyndus australis* JACOBI, 1917, and outgroups from continental Africa, is presented. The cladistic analysis shows, that Oecleini of Seychelles are a holophyletic taxon of Gondwana origin (palaeo-endemics), closely related to *Borbonomyndus* from Reunion and *Nesomyndus* from Madagascar. The cladogram of Seychelles Oecleini matches the cladogram of the host plants very well. It seems probable that the separation of the ancestor of the Oecleini of Seychelles was initiated by host-plant shift from *Pandanus* to the ancestor palm of the *Phoenicophorium*-clade. The subsequent radiation of Oecleini happened presumably by a combination of sympatric speciation by host plant shift (and co-evolution with host plants) and allopatric speciation by separation of islands.

### References

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