

**Pollen morphology in the tribe Sipaneeae (Rubiaceae, Ixoroideae)**Delprete P.G.<sup>1,2\*</sup>, Van der Beeten I.<sup>3</sup> & De Block P.<sup>3</sup><sup>1</sup>AMAP Lab, IRD, CNRS, CIRAD, INRA, Université de Montpellier, Montpellier, France. <sup>2</sup>AMAP Lab, IRD, Herbarier de Guyane, Cayenne, French Guiana, France. <sup>3</sup>Meise Botanic Garden, Meise, Belgium.

\*Presenting author: Delprete P.G. E-mail: piero.delprete@ird.fr

The tribe Sipaneeae has its center of diversity on the Guiana Shield (northern South America), where 9 of the 10 genera occur, and a total of 44 species. It includes the genera *Chalepophyllum* (3 spp.), *Dendrosipanea* (3 spp.), *Limnosipanea* (3 spp.), *Maguireothamnus* (3 spp.), *Neblinathamnus* (2 spp.), *Neobertiera* (5 spp.), *Pteridocalyx* (1 sp.), *Sipanea* (17 spp.), *Sipaneopsis* (8 spp.), and *Steyermarkia* (1 sp.). The pollen morphology of all the genera of the tribe was studied. For pollen preparation, nearly mature flower buds (just before anthesis) were taken from herbarium material. Pollen grains destined for light microscope (LM) studies were mounted in Kaiser's glycerine jelly. Pollen grains for scanning electron microscope (SEM) studies were suspended in ethanol and mounted on aluminium stubs using carbon adhesive tape and coated with a platinum palladium. Values of the length of polar and equatorial axes were based on LM-measurements. In all the genera, pollen grains are released in monads, and are 3- or 4-colporate. In most genera the number of colpi are consistently 3 or 4, which represents a significant diagnostic character. The largest pollen grains are found in *Maguireothamnus*, which is also the genus with the largest corollas in the tribe. The second largest grains in the tribe are found in *Chalepophyllum*, which is the genus with the second largest corollas in the tribe. The smallest pollen grains are found in *Neobertiera*, *Pteridocalyx*, and *Sipanea*, which are the genera with the smallest corollas in the tribe. The exine is externally foveolate-reticulate in *Chalepophyllum*, *Neblinathamnus*, *Pteridocalyx*, and *Sipanea*, foveolate or foveolate-reticulate in *Dendrosipanea*, shallowly foveolate, without perforations or finely perforated in *Limnosipanea*, smooth or finely foveolate in *Maguireothamnus*, and foveolate in *Neobertiera*, *Sipaneopsis*, and *Steyermarkia*. Possible pollen dimorphism was observed only in populations of *S. pratensis* var. *pratensis*, in which pollen grains dimensions and external ornamentation were found to be similar.