

Supporting Information

for

Polarity in cuticular ridge development and insect attachment on leaf surfaces of *Schismatoglottis calyptrata* (Araceae)

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Additional figures



Leaf size versus leaf age in *Schismatoglottis calyptrate*

Figure S1: The leaf size was measured from the leaf sheath to leaf tip in rolled leaves in growth stages 1 and 2, and from the base to tip in unrolled leaves in stages 3 and 4. The leaves unrolled between day 12 to 21.

Comparison of characteristic variations in the surface morphology of adaxial *Hevea brasiliensis* and *Schismatoglottis calyptrata* leaves

(a) 10 µm Cuticular ridge development on adaxial Schismatoglottis calyptrata leaves

Cuticular ridge development on adaxial Hevea brasiliensis leaves



Figure S2: Comparison of characteristic variations in the surface morphology of adaxial *Hevea brasiliensis* (**a-c**), and *Schismatoglottis calyptrata* (**d-f**) leaves. Three distinct levels of surface morphology was observed on the leaves of both species during development – (**a,d**) smooth cells, (**b,e**) high aspect ratio and dense ridges, and (**c,f**) aged ridges with labyrinth-type arrangement in *Hevea brasiliensis* and loosely arranged ridges with smooth anticlinal fields in *Schismatoglottis calyptrata*. Moreover, the ridges on *Schismatoglottis calyptrata* leaves are relatively thicker when compared to those on *Hevea brasiliensis* leaves. (**a-c**) were reproduced from [1] (© 2020 V. A. Surapaneni et al., distributed under the terms of the Creative Commons Attribution 4.0 International License, <u>https://creativecommons.org/</u>licenses/by/4.0). (**d-f**) are identical to Figure 1 **b, c,** and **f** from this paper.



Schematic of division of the Schismatoglottis calyptrata leaves

Figure S3: A schematic of division of the *Schismatoglottis calyptrata* leaves to study spatial variations in ridge morphology. A total of 36 spots at the intersections of the divisions on leaf replicas were recorded using confocal laser scanning microscopy.

References

 Surapaneni, V. A.; Bold, G.; Speck, T.; Thielen, M. R. Soc. Open Sci. 2020, 7, 201319. doi:<u>10.1098/rsos.201319</u>