ABSTRACT
The flowering and fruit development of *Schismatoglottis tecturata* (Schott) Engl. is illustrated.

KEY WORDS
Acroscopically splitting spathe, basiscopically, mediascopically

INTRODUCTION
*Schismatoglottis tecturata* (Schott) Engl. is a facultative rheophyte (*Figure 1*) widespread and often locally common on Borneo, and with a distribution disjunction on Gunung Ranai (Pulau Ranai, Natuna islands, Riau Archipelago, Indonesia). *Schismatoglottis tecturata* is a highly distinctive species, one of about five *Schismatoglottis* species in which
the petiolar sheath is reduced to a very short thickened collar, and the protective role of the sheath is taken on by the cataphylls which alternate with the foliage leaves (Hay & Yuzammi 2000; Boyce & Wong 2013) – Figures 7 & 8. In nature the leaves variable with respect to width and markings of the leaf blades, even within a single population (Figures 2–6), although inflorescences do not vary significantly (Figures 12–17).

Schismatoglottis tecturata also differs from all other described Schismatoglottis species in the manner in which it senesces: only the marginal and distal parts of the spathe limb wither after anthesis, while the remainder persists well into infructescence. This is in marked contrast with almost all other Schismatoglottis in which the spathe limb is deciduous from its junction with the persistent lower spathe, with the point usually marked by a constriction (Figures 9–11). It is evident that the withering portion of the spathe in Schismatoglottis tecturata is homologous with the spathe limb in other Schismatoglottis.

Here we provide a photo essay of the process of anthesis, spathe senescence, infructescence development, and fruit release in Schismatoglottis tecturata.
**Figure 1.** *Schismatoglottis tecturata* (Schott) Engl. in habitat, central Sarawak. Although on a river back the plants are well-above the normal maximum flood-zone, although in exceptionally wet periods they would be subject to spathe flow.

**Figures 2 – 6.** *Schismatoglottis tecturata* (Schott) Engl. showing typical variation in leaf blade proportions and markings.

Figure 7. *Schismatoglottis tecturata* (Schott) Engl. Detail of the very short petiolar sheath – the curving reddish brown collar at the base of the left hand petiole. The decomposing brown tissue enclosing the right hand petiole is a degrading cataphyll.

Figure 8. *Schismatoglottis tecturata* (Schott) Engl. Overall view of the petiole bases. The brown cataphyll surrounding the petiole of most recently-emerged leaf is clearly visible.
Figure 9. *Schismatoglottis tecturata* (Schott) Engl. Inflorescence at pistillate anthesis

Figure 10. *Schismatoglottis* sp. The typical constriction separating the persistent lower part and the deciduous limb is readily seen.

Figure 11. *Schismatoglottis* sp. Spathe limb being shed during staminate anthesis.

Figure 12. *Schismatoglottis tecturata* (Schott) Engl. Inflorescence at late pistillate anthesis. The two insects are *Colocasionyia* (Diptera).
Figure 13. *Schismatoglottis tecturata* (Schott) Engl. Inflorescence at late pistillate anthesis with nearside spathe artificially removed to display the spadix.

Figure 14. *Schismatoglottis tecturata* (Schott) Engl. Inflorescence at late pistillate anthesis showing detail of the basal two thirds of the spadix.

Figure 15. *Schismatoglottis tecturata* (Schott) Engl. Spathe artificially removed to better display the ring of large staminodes at the base of the pistillate flower zone.

Figure 16. *Schismatoglottis tecturata* (Schott) Engl. Spadix at pistillate anthesis.
Figure 17. *Schizomatoglottis tecturata* (Schott) Engl. Spadix at late staminate anthesis. Note the change in the appearance of the staminate flowers as compared with the same flowers in Figure 16. Note, too, that the spadix appendix is now clearly differentiated.

Figure 18. *Schizomatoglottis tecturata* (Schott) Engl. flowering in habitat. The beetles are Chrysomelidae plundering the inflorescences for pollen.
Figures 19 & 20. *Schismatoglottis tecturata* (Schott) Engl. inflorescence at early staminate anthesis. Note that the margins and distal portion of the spathe limb is beginning to darken (compare with Figures 9 & 12).

Figures 21 & 22. *Schismatoglottis tecturata* (Schott) Engl. inflorescence at late staminate anthesis. The spathe margins and distal portion of the spathe are now beginning to degrade.

Figures 23 – 25. *Schismatoglottis tecturata* (Schott) Engl. inflorescence post staminate anthesis. The degradation of the spathe margins and distal portion of the spathe is now quite clear. Note in Figure 25 that the tissue at the horizon of the still green spathe and the degraded margin is now dead.
Figures 26 & 27. *Schismatoglottis tecturata* (Schott) Engl. in habitat with post-anthesis inflorescences. Note the dry tissue along the margins and the distal part of the spathe. Compare the position of this degraded tissue with the spathe limb being shed in Figure 11. It is plausible that the green portion of the spathe in *S. tecturata* is the equivalent of the lower spathe in other *Schismatoglottis* species, as exemplified in Figure 11.
Figures 28 & 29. *Schismatoglottis tecturata* (Schott) Engl. in habitat with post-anthesis inflorescences. In this instance persistent wetness has resulted in the rotting (deliquescing) of the spent parts of the spathe. Note that the basal part of the spathe is now swelling owing to the developing fruits. Note, too, that the persistent portion of the spathe has become green.

Figures 30 – 33. *Schismatoglottis tecturata* (Schott) Engl. in habitat with developing infructescences. The scar left by the shedding of the margins and distal portion of the spathe is clearly visible in Figure 33.
Figure 34. *Schismatoglottis tecturata* (Schott) Engl. Splitting of the spathe at fruit ripeness. Note that the spathe has turned brown.

Figure 35. *Schismatoglottis tecturata* (Schott) Engl. Spathe, split from the peduncle/spathe insertion, with the spathe walls curling acroscopically. Compare this with the mediascopically (Figure 39) and basiscopically (Figure 40) splitting of spathes.

Figure 39. *Schismatoglottis* sp. Infuctescence splitting mediascopically.

Figure 40. *Schismatoglottis* sp. Infuctescence splitting basiscopically.
References


Acknowledgements

This is part of an on-going research which is funded by the Ministry of Higher Education, Malaysia by the Exploratory Research Grant Scheme Vote No. NRGS/1089/2013-(03).