

Appendix 1

Localities for sampling sites. I. Pantai Sampadi (PS), Lundu, II. Kubah National Park (KNP), Matang, III. Kampung Segong (KS), Bau, IV. Mount Singai (MS), Bau, V. Kampung Peninjau Lama (KPL), Bau, VI. Ranchan Recreational Park (RRP), Serian, VII. Forest Research Institute Malaysia (FRIM), Selangor.

Appendix 1



Appendix 2

List of *Tacca* specimens investigated in this study: taxon, collection locality, geographic coordinate, and voucher. Taxa are arranged alphabetically.

Taxon	Locality	Geographic coordinate	Voucher
<i>Tacca bibracteata</i> Drenth	MALAYSIA. Sarawak: Sri Aman, Lubok Antu.	1°6'N, 111°39'E	S.Y. Wong & P.C. Boyce TA-96 (SAR)
<i>Tacca borneensis</i> Ridl.	MALAYSIA: Sarawak, Kuching, Bau, Rajah Brooke Heritage.	1°25'N, 110°13'E	K.S. Chua TA-86 (SAR)
<i>Tacca borneensis</i> Ridl.	MALAYSIA: Sarawak, Kuching, Bau, Singai.	1°30'N, 110°10'E	K.S. Chua TA-110 (SAR)
<i>Tacca borneensis</i> Ridl.	MALAYSIA: Sarawak, Kuching, Matang, Kubah National Park.	1°36'N, 110°11'E	K.S. Chua TA-84 (SAR)
<i>Tacca borneensis</i> Ridl.	MALAYSIA: Sarawak, Kuching, Serian, Taman Rekreasi Ranchan.	1°8'N, 110°34'E	K.S. Chua (SAR)
<i>Tacca cristata</i> Jack	MALAYSIA. Selangor: Gombak, FRIM.	3°13'N, 101°36'E	S.Y. Wong & P.C. Boyce TA-55 (SAR)
<i>Tacca havilandii</i> S.Y. Wong and K.S. Chua	MALAYSIA: Sarawak, Kuching, Bau, Kampung Segong.	1°31'N, 110°8'E	K. S. Chua TA-92 (SAR)
<i>Tacca havilandii</i> S.Y. Wong and K.S. Chua	MALAYSIA: Sarawak, Kuching, Matang, Kubah National Park.	1°36'N, 110°11'E	K. S. Chua TA-88 (SAR)
<i>Tacca leontopetaloides</i> (L.) Kuntze	MALAYSIA: Sarawak, Kuching, Lundu, Sampadi.	1°41'N, 110°5'E	K. S. Chua TA-81 (SAR)
<i>Tacca palmate</i> Blume	MALAYSIA: Sarawak, Kuching, Bau, Rajah Brooke Heritage.	1°25'N, 110°13'E	K. S. Chua TA-87 (SAR)
<i>Tacca palmate</i> Blume	MALAYSIA: Sarawak, Kuching, Lundu, Sampadi.	1°41'N, 110°5'E	K. S. Chua TA-80 (SAR)
<i>Tacca palmate</i> Blume	MALAYSIA: Sarawak, Kuching, Serian, Taman Rekreasi Ranchan.	1°8'N, 110°34'E	K. S. Chua TA-83 (SAR)
<i>Tacca reducta</i> P.C. Boyce and S. Julia	MALAYSIA: Sarawak, Kuching, Bau, Rajah Brooke Heritage.	1°25'N, 110°13'E	K. S. Chua TA-85 (SAR)
<i>Tacca reducta</i> P.C. Boyce and S. Julia	MALAYSIA: Sarawak, Kuching, Serian, Taman Rekreasi Ranchan.	1°8'N, 110°34'E	K. S. Chua TA-82 (SAR)

Appendix 3

(A) stigmatic liquid (indicated in arrow) of *T. reducta*. (B) and (C) thecae (indicated in arrows) during bud and opening stage of *T. reducta*. (D) *Forcipomyia (Lasiohelea)* sp. 1 on *T. havilandii* at Kampung Segong. (E) *Forcipomyia (Lasiohelea)* sp. 2 on *T. reducta* at Ranchan Recreational Park. (F) *Culicoides hinnoi* on *T. borneensis* at Kubah National Park. (G) *Forcipomyia (Lasiohelea)* sp. on *T. palmata* at Ranchan Recreational Park. (H) Larvae of fungus gnat in flower of *T. cristata*.

Appendix 3



Supplementary video A1

Ceratopogonid midges visit and enter flower of *T. havilandii*. In the video, midges can be seen flying around the erect, anthetic flower. At 0:07, a midge enters the flower, while midges leaving the flower is observed at 0:08 and 0:15. Midges enter the flower through the gaps between stamen caps and stigmatic lobes, and stay in the flower for a few seconds (sometimes to a few minutes) before flying away rapidly.

Table A1. The number of targeted plants, observational period, number of inflorescences and flowers observed for each species on flowering phenology [localities in parentheses: Pantai Sampadi (PS; 1°41'55.5"N, 110°5'46.9"E, 25 m elev.), Kubah National Park (KNP; 1°36'24.7"N, 110°11'18.8"E, 200 m elev.), Kampung Segong (KS; 1°31'12.1"N, 110°8'18.9"E, 53 m elev.), Mount Singai (MS; 1°30'13.3"N, 110°10'36.1"E, 130 m elev.), Kampung Peninjau Lama (KPL; 1°25'51.4"N, 110°13'32.4"E, 130 m elev.), Ranchan Recreational Park (RRP; 1°8'34.4"N, 110°34'55.3"E, 57 m elev.), and Forest Research Institute Malaysia, Peninsular Malaysia (FRIM; 3°13'59.1"N, 101°37'53.4"E, 83 m elev.)]. Number of inflorescences tested in field manipulation experiment and controlled pollination experiment (number of flowers in parentheses).

Species	No. of targeted plants	Observation period	No. of inflorescences observed	No. of flowers observed	Control	Removal of bracts and bracteoles	Controlled pollination		
							experiment		Autonomous pollination test
							Manual self	Manual cross	
<i>T. borneensis</i>	KNP: 15		3 (KNP),	31 (KNP),					
	KPL: 1	April 2017	2 (MS),	11 (MS),	26	4 (82)	2 (21)	2 (17)	2 (48)
	MS: 25	– June 2018	1 (RRP)	10 (RRP)	(432)				
	RRP: 3								
<i>T. havilandii</i>	KNP: 7	June 2017 –	2 (KNP),	6 (KNP),	24	6 (45)	9 (38)	7 (21)	2 (10)

	KS: 17	June 2018	3 (KS)	7 (KS)	(137)				
<i>T. leontopetaloides</i>	PS: 40	September 2017	1 (PS)	11 (PS)	–	–	–	–	–
<i>T. palmata</i>	KPL: 2 PS: 10 RRP: 5	August 2017 – January 2018	2 (PS), 2 (RRP)	3 (PS), 6 (RRP)	–	–	–	–	–
<i>T. reducta</i>	KPL: 20 RRP: 140	March 2017 – March 2018	8 (RRP), 2 (KPL)	30 (RRP), 4 (KPL)	45 (214)	28 (123)	16 (70)	24 (111)	5 (21)
<i>T. cristata</i>	FRIM: 85	March 2017 – March 2018	5 (FRIM)	15 (FRIM)	30 (337)	13 (135)	–	–	1 (7)