

**Supplementary Table 1** List of all fungi isolated from the beetle mycangium and brood galleries of ambrosia beetles infesting *A. crassicarpa*.

CMW Culture number Isolate	Host	Country	Date collected	Preliminary identification (Closest hit on NCBI)
51753	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51754	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51755	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51756	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51757	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51758	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51759	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51760	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51761	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	Unidentified
51762	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51763	Infested <i>Acacia crassicarpa</i>	Riau, Indonesia	October 2017	Unidentified

51764	Infested <i>Acacia crasscarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51765	Infested <i>Acacia crasscarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51766	Infested <i>Acacia crasscarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51767	Infested <i>Acacia crasscarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51768	Infested <i>Acacia crasscarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
51769	Infested <i>Acacia crasscarpa</i>	Riau, Indonesia	October 2017	<i>Fusarium</i> sp.
52862	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	<i>Fusarium</i> sp.
52864	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	<i>Fusarium</i> sp.
52865	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	<i>Fusarium</i> sp.
52866	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	<i>Fusarium</i> sp.
52867	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	<i>Fusarium</i> sp.
52868	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	<i>Fusarium</i> sp.
52869	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	<i>Fusarium</i> sp.
-	Beetle gallery in <i>A. crasscarpa</i>	Riau, Indonesia	April 2018	99% <i>Phaeoacremonium Fusariumcum</i>

52848	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	100% <i>Gliomastix polychroma</i>
52849	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	99% <i>Xylariales</i> sp.
52850	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	99% <i>Phialemonium curvatum</i>
52851	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	Unidentified
52852	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	98% <i>Ascomycota</i> sp.
52853	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	98% <i>Paracremonium contagium</i>
52854	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	100% <i>Chaetomium</i> sp.
52855	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	99% <i>Xenoacremonium recifei</i>
52856	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	99% <i>Gliomastix polychrom</i>
52857	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	100% <i>Cosmospora butyri</i>
52858	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	99% <i>Xylariales</i> sp.
52859	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	99% <i>Ambrosiella roeperi</i>
52860	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	Unidentified
52861	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	Unidentified

52863	Beetle gallery in <i>A. crassicarpa</i>	Riau, Indonesia	April 2018	99% <i>Phialemonium</i> sp.
53687	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53688	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53689	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53690	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53691	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53692	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53693	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	95% <i>Actinomucor elegans</i> var. <i>meitauzae</i> strain
53694	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53695	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53696	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53697	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	Unidentified
53698	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	Unidentified
53699	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.

53700	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53701	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53702	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53703	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53704	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	97% <i>Hypocreales</i> sp.
53705	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53706	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53707	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53708	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53709	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	96.7% <i>Phialemoniopsis curvata</i>
53710	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	96.7% <i>Phialemoniopsis curvata</i>
53711	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53712	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	Unidentified
53713	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.

53714	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53715	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53716	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53717	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53718	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53719	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53720	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53721	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53722	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53723	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53724	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53725	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	99.5% <i>Graphium euwallaceae</i>
53726	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	94.2% <i>Rhizomucor variabilis</i>
53727	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	99.7% <i>Geotrichum ghanense</i>

53728	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53729	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
"-	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53730	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53731	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53732	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	Unidentified
53733	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	97.4% <i>Hypocreales</i> sp.
53808	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	Unidentified
53734	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53735	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	<i>Fusarium</i> sp.
53736	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	97% <i>Hypocreales</i> sp.
53737	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	98% <i>Hypocreales</i> sp.
53738	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	99% <i>Hypocreales</i> sp.
53739	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	Unidentified

53740	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	99% <i>Hypocreales</i> sp.
53741	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	99% <i>Hypocreales</i> sp.
53742	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	Unknown
53743	<i>Xylerborini</i> beetle mycangium	Riau, Indonesia	September 2018	99% <i>Hypocreales</i> sp.

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