

Table A. Cross-amplification of *Geosmithia morbida* specific microsatellite locus GS 004 across fungal isolates known to co-inhabit walnut tree galleries.

Strain	Amplification with GS004	BLAST ID	E-Value	Coverage	Similarity	GenBank Accession
NGM33-1	NO	<i>Aureobasidium pullulans</i> strain CBS 584.75	0	99%	100%	KT693733
NGM33-2	NO	<i>Chaetothyrium agathis</i> MFLUCC 12-0113	0	96%	85%	NR_132914
NGM33-3	NO	<i>Cytospora cf. austromontana</i> strain CBS:122688	0	100%	99%	EU552119
NGM33-6	NO	<i>Cladosporium pini-ponderosae</i> strain CBS 124456	0	100%	99%	NR_119730
NGM33-7	NO	<i>Cladosporium pini-ponderosae</i> strain CBS 124456	0	100%	99%	NR_119730
NGM33-9	NO	<i>Aureobasidium pullulans</i> strain CBS 584.75	0	100%	100%	KT693733
NGM33-10	NO	<i>Aureobasidium pullulans</i> strain CBS 584.76	0	98%	100%	KT693734
NGM33-11	NO	<i>Cladosporium pini-ponderosae</i> strain CBS 124456	0	100%	99%	NR_119730
NGM33-12	NO	<i>Aureobasidium pullulans</i> strain CBS 584.76	0	98%	100%	KT693734
NGM33-13	NO	<i>Tremella aurantia</i> strain CBS 6965	0	100%	99%	AF444315
NGM33-15	NO	<i>Aureobasidium pullulans</i> strain CBS 584.76	0	97%	100%	KT693734
NGM33-16	NO	<i>Alternaria destruens</i> ATCC 204363	0	98%	100%	NR_137143
NGM33-17	NO	<i>Alternaria destruens</i> ATCC 204364	0	98%	100%	NR_137144
NGM34-1	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.89	0	100%	95%	NR_103597
NGM34-2	NO	<i>Wickerhamomyces hampshirensis</i> strain CBS 7208	0	73%	99%	HM156504
NGM34-3	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.89	0	100%	95%	NR_103597
NGM34-4	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.90	0	100%	94%	NR_103597
NGM34-5	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.91	0	100%	95%	NR_103597
NGM34-6	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.91	0	100%	95%	NR_103597
NGM34-8	NO	<i>Yamadazyma mexicana</i> CBS:7066	0	98%	99%	EF568069
NGM34-9	NO	<i>Paraconiothyrium archidendri</i> strain CBS 168.77	0	98%	99%	JX496049
NGM34-10	NO	<i>Penicillium kongii</i> strain NRRL:62674	0	100%	100%	KC427191
NGM34-11	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.91	0	96%	98%	NR_103597
NGM34-12	NO	<i>Hormonema viticola</i> FMR 13040	0	100%	99%	NR_137620
NGM34-13	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.91	0	91%	98%	NR_103597
NGM34-16	NO	<i>Yamadazyma mexicana</i> CBS:7066	0	100%	99%	EF568069
NGM34-17	NO	<i>Pezicula sporulosa</i> strain CBS 225.96	0	100%	99%	KR859262
NGM34-18	NO	<i>Cladosporium pini-ponderosae</i> strain CBS 124456	0	100%	100%	NR_119730
NGM34-19	NO	<i>Boeremia exigua</i> strain CPC 25093	0	100%	99%	KT193802
NGM34-21	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.91	0	100%	94%	NR_103597
NGM34-22	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.92	0	100%	95%	NR_103598

NGM34-24	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.93	0	99%	95%	NR_103599
NGM34-25	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.94	0	98%	94%	NR_103600
NGM34-26	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.95	0	87%	97%	NR_103601
NGM34-27	NO	<i>Wickerhamomyces hampshirensis</i> strain CBS 7208	0	75%	99%	HM156504
NGM34-28	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.95	0	100%	95%	NR_103601
NGM34-29	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.96	0	90%	98%	NR_103602
NGM34-30	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.97	0	96%	98%	NR_103603
NGM34-31	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.98	0	91%	98%	NR_103604
NGM34-32	NO	<i>Yamadazyma mexicana</i> CBS:7066	0	94%	99%	EF568069
NGM34-33	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.98	0	89%	98%	NR_103604
NGM34-34	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.98	0	100%	95%	NR_103604
NGM34-36	NO	<i>Ophiostoma nigrocarpum</i> strain CMW1468	0	98%	99%	AF484457
NGM34-37	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.98	0	100%	95%	NR_103604
NGM34-38	NO	<i>Alternaria burnsii</i> CBS 107.38	0	98%	99%	NR_136119
NGM34-39	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.98	0	90%	98%	NR_103604
NGM34-40	NO	<i>Ophiostoma narcissi</i> strain CBS138.50	0	100%	94%	AY194510
NGM34-41	NO	<i>Ceratocystiopsis collifera</i> (<i>Ophiostoma colliferum</i>) CBS 126.98	0	96%	98%	NR_103604
NGM35-1	NO	<i>Aureobasidium pullulans</i> strain CBS 584.76	0	100%	100%	KT693734
NGM35-2	NO	<i>Phaeoacremonium viticola</i> strain CBS 101737	0	100%	100%	KF764574
NGM35-3	NO	<i>Cladosporium colombiae</i> CBS 274.80B	0	100%	99%	NR_119729
NGM35-4	NO	<i>Cytospora rhodophila</i> strain ATCC 38695	0	92%	99%	DQ243809
NGM35-6	NO	<i>Ascochyta rabiei</i> strain CBS 237.37	0	100%	98%	EU167600
NGM35-7	NO	<i>Alternaria arborescens</i> CBS 102605	0	99%	100%	NR_135927
NGM35-8	NO	<i>Aureobasidium pullulans</i> strain CBS 584.76	0	98%	100%	KT693734
NGM35-9	NO	<i>Phaeoacremonium viticola</i> strain CBS 101738	0	99%	100%	KF764574
NGM35-10	NO	<i>Diatrypella atlantica</i> voucher HUEFS 194228	0	100%	98%	KM396615
NGM35-12	NO	<i>Pezicula sporulosa</i> strain CBS 225.96	0	100%	98%	KR859262
NGM35-13	NO	<i>Cladosporium pseudocladosporioides</i> UTHSC DI-13-233	0	100%	99%	LN834383
NGM35-14	NO	<i>Cladosporium gossypiicola</i> strain ATCC 38026	0	100%	100%	AF393702
NGM35-16	NO	<i>Cladosporium cladosporioides</i> strain ATCC 6721	0	100%	100%	KP780438
NGM35-17	NO	<i>Phaeoacremonium viticola</i> strain CBS 101738	0	100%	100%	KF764574
NGM35-18	NO	<i>Cytospora rhodophila</i> strain ATCC 38695	0	100%	99%	DQ243809
NGM35-19	NO	<i>Phaeosphaeriopsis agapanthi</i> strain CPC 26303	0	100%	92%	KX228260
NGM35-20	NO	<i>Epicoccum nigrum</i> strain CBS 318.83	0	100%	99%	AJ279448
NGM35-21	NO	<i>Alternaria alternata</i> strain ATCC 6663	0	100%	100%	KU729030

NGM35-22	NO	<i>Phaeoacremonium viticola</i> strain CBS 101738	0	100%	99%	KF764574
NGM35-23	NO	<i>Epicoccum nigrum</i> strain CBS 318.83	0	100%	99%	AJ279448
NGM35-24	NO	<i>Alternaria alternata</i> strain ATCC 6663	0	100%	100%	KU729030
NGM35-25	NO	<i>Phaeoacremonium viticola</i> strain CBS 101738	0	99%	100%	KF764574
NGM35-26	NO	<i>Trichoderma trixiae</i> strain CBS 189.79	0	100%	100%	KJ482546
NGM35-27	NO	<i>Trichoderma trixiae</i> strain CBS 189.79	0	100%	100%	KJ482546
NGM36-1	NO	<i>Trichoderma trixiae</i> strain CBS 189.79	0	100%	99%	KJ482546
NGM36-2	NO	<i>Cladosporium pseudocladosporioides</i> UTHSC DI-13-233	0	100%	100%	LN834383
NGM36-3	NO	<i>Cladosporium langeronii</i> CBS:101880	0	98%	100%	DQ780380
NGM36-4	NO	<i>Flagellospora fusarioides</i> strain CCM F-14583	0	100%	92%	KC834048
NGM36-5	NO	<i>Cladosporium langeronii</i> CBS:101880	0	98%	100%	DQ780380
NGM36-6	NO	<i>Cladosporium pini-ponderosae</i> strain CBS 124456	0	100%	100%	NR_119730
NGM36-7	NO	<i>Cladosporium colombiae</i> CBS 274.80B	0	100%	100%	NR_119729
NGM36-8	NO	<i>Cladosporium ruguloflabelliforme</i> strain CPC:19707	0	100%	100%	KT600458
NGM36-10	NO	<i>Cladosporium tenuissimum</i> strain ATCC 38027	0	100%	100%	AF393724
NGM36-11	NO	<i>Aureobasidium pullulans</i> strain MFLUCC 14-0288	0	100%	100%	KM388542
NGM36-12	NO	<i>Alternaria arborescens</i> strain MUCL 44260	0	100%	100%	DQ242505
NGM36-13	NO	<i>Cladosporium pini-ponderosae</i> strain CBS 124456	0	100%	100%	NR_119730
NGM36-14	NO	<i>Cladosporium cladosporioides</i> isolate MUT 1396	0	100%	100%	KF415084
NGM36-15	NO	<i>Cladosporium langeronii</i> CBS:101880	0	98%	100%	DQ780380
NGM36-16	NO	<i>Alternaria arborescens</i> strain MUCL 44260	0	100%	100%	DQ242505
NGM36-17	NO	<i>Cladosporium cladosporioides</i> strain ATCC 6721	0	99%	99%	KP780438
NGM36-18	NO	<i>Cladosporium pini-ponderosae</i> strain CBS 124456	0	100%	100%	NR_119730
NGM36-19	NO	<i>Pichia hampshirensis</i> strain ATCC 62896	0	100%	99%	FJ381694
NGM36-20	NO	<i>Epicoccum nigrum</i> strain UAMH 3247	0	100%	100%	AY625064
NGM36-22	NO	<i>Epicoccum nigrum</i> strain UAMH 3247	0	100%	100%	AY625064
NGM36-23	NO	<i>Pichia hampshirensis</i> strain ATCC 62896	0	100%	99%	FJ381694
NGM4-1b	NO	<i>Trichoderma trixiae</i> strain CBS 189.79	0	100%	99%	KJ482546
NGM4-2	NO	<i>Phaeoacremonium inflatipes</i> CBS 391.71	0	100%	100%	NR_103566
NGM7-1	NO	<i>Sarocladium strictum</i> CBS 346.70	0	100%	99%	NR_111145
NGM7-2	NO	<i>Wickerhamomyces hampshirensis</i> strain CBS 7208	0	78%	99%	HM156504
NGM13-1	NO	<i>Pichia mexicana</i> CBS:7066	0	98%	99%	EF568069
NGM24-1	NO	<i>Aspergillus terreus</i> ATCC 1012	0	100%	100%	NR_131276
TN1-28	NO	<i>Trichoderma lixii</i> strain GJS 90-22	0	100%	99%	AY737761

Table B. Cross amplification of *Pityophthorus juglandis* (WTB) specific microsatellite loci across twenty-four woodborning beetle species that are closely related to *P. juglandis* or are associated frequently with walnut trees.

Beetle Species (Family: Subfamily)	(Source) County, State	# Individuals Tested	Amplification of WTB 192	Cross-Amplification into Additional WTB Microsatellite Loci
Curculionidae: Cossinae				
<i>Stenoscelis brevis</i>	Anderson, TN	5	NO	
Curculionidae: Cossoninae				
<i>Stenomimus pallidus</i>	Knox & Blount, TN	19	NO	
Curculionidae: Scolytinae				
<i>Cnestus mutilatus</i>	Anderson & Knox, TN	5	NO	
<i>Euwallacea validus</i>	Anderson, TN	1	NO	
<i>Hypothenemus interstitialis</i>	Knox, TN	1	NO	
<i>Hypothenemus seriatica</i>	Knox, TN	2	NO	
<i>Hypothenemus crudiae</i>	Knox, TN	1	NO	
<i>Monarthrum mali</i>	Knox, TN	2	NO	WTB12
<i>Monarthrum fasciatum</i>	Knox, TN	2	NO	WTB12
<i>Phloeotribus liminaris</i>	Marshall, IN	5	NO	
<i>Pityophthorus lautus</i>	Knox, TN	11	NO	WTB2,13 and 19
<i>Pityophthorus liquidambarus</i>	Alachua , FL	10	NO	WTB 1,12,13,19,128,130
<i>Pityophthorus pulicarius</i>	Alachua , FL	10	NO	WTB 1,2,12,13,14,19,128,130
<i>Xyleborinus saxesenii</i>	Knox, TN	6	NO	
<i>Xyleborus affinis</i>	Anderson, TN	5	NO	
<i>Xyleborus ferrugineus</i>	Anderson, TN	5	NO	
<i>Xylosandrus crassiusculus</i>	Anderson, TN	5	NO	
<i>Xylosandrus germanus</i>	Knox, TN	3	NO	
Bostrichidae				
<i>Xylobiops basilaris</i>	Anderson, TN	5	NO	
Platypodidae				
<i>Euplatypus compositus</i>	Anderson, TN	1	NO	
<i>Oxoplatypus quadridendatus</i>	Anderson, TN	1	NO	
Buprestidae				
<i>Chrysobothris sexsignata</i>	Knox, TN	8	NO	
Cerambycidae				
<i>Neoclytus acuminatus</i>	Knox, TN	11	NO	
<i>Lepturges confluens</i>	Knox, TN	5	NO	

Fig. A. An example of QIAxcel gel view and electropherogram of positive samples using GS 004 (upper) and WTB 192 (lower) microsatellite loci.

