

1 Table S1. Information and summary statistics on all 45 samples used to determine the ingroup  
 2 for this study.

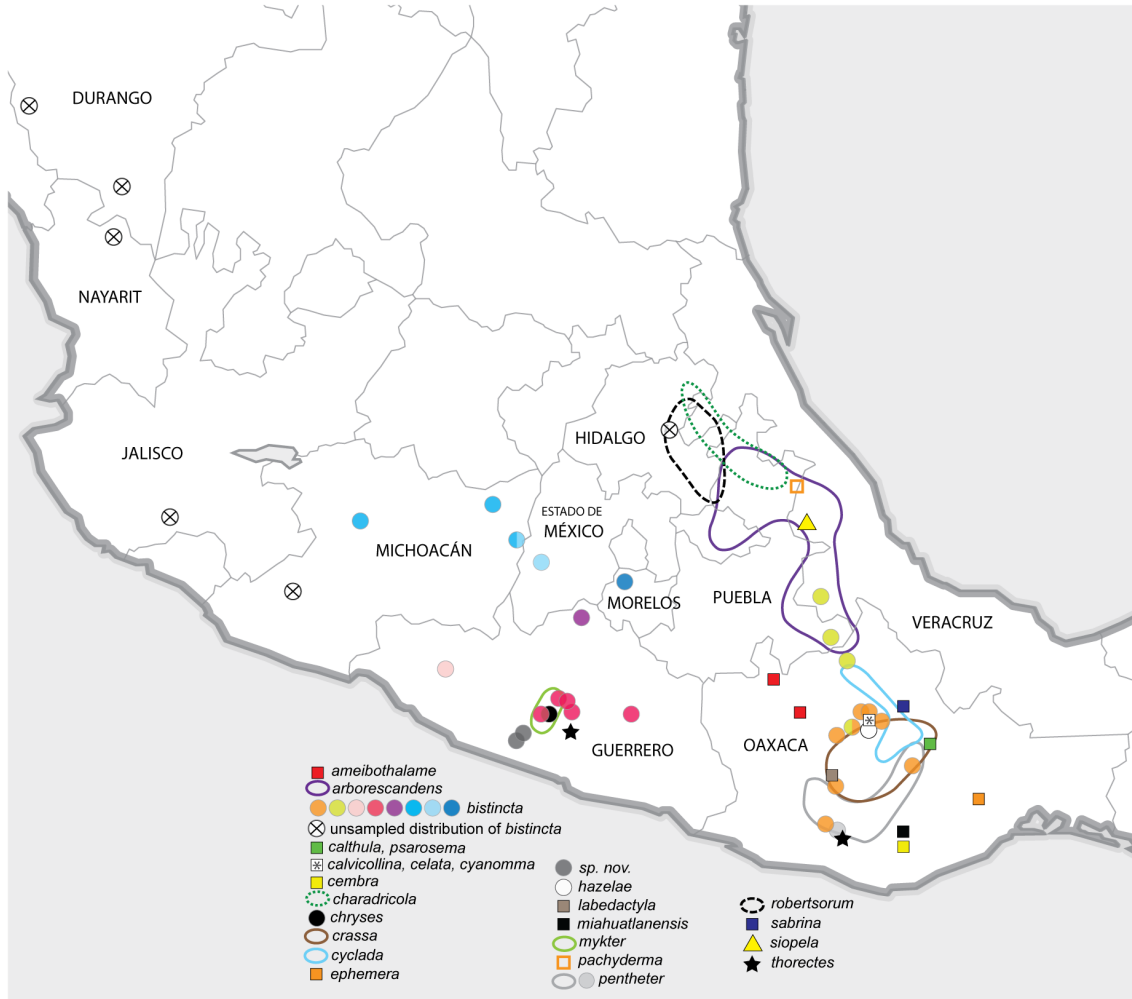
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Field Number	UMMZ Number	Current Taxonomy	State	Locality	Latitude	Longitude	Trimmed Paired Reads	UCEs	Average UCE length	mtDNA reads	mtDNA average coverage	mtDNA average quality	Fig 1 Map Number	mtDNA Accession
MK 618	UMMZ 239796	<i>Sarcophya bistincta</i>	MICHOACAN	LOS AZUFRES / SAN PEDRO ROAD	19.791051	-100.660542	1,889,670	2323	529.7	3381	20.8	86	1	
MK 627-31	UMMZ 239683	<i>Sarcophya bistincta</i>	MICHOACAN	PARQUE BARRANCA DEL CUPATITZIO URUAPAN	19.426646	-102.073574	1,933,019	2254	370.9	3415	20.8	85	2	
MK 666	UMMZ 239745	<i>Sarcophya bistincta</i>	MICHOACAN	13 KMS ROAD ZITACUARO MACHERO (LITTLE TOWN WHERE THERE IS A MONARCH BUTTERFLY SANCTUARY)	19.3452	-100.3128	2,186,871	2350	621.3	3900	23.4	83	3	MH899567
MK 600	UMMZ 239679	<i>Sarcophya bistincta</i>	MEXICO	CARRETERA VALLE DE BRAVO-SAN PEDRO TENEYAC ARROYO 1 (6860 FEET) (POR ALBARRADA)	19.150083	-100.1469	932,448	2174	500.8	2377	15.7	83	4	MH899566
MK 600 (1)	UMMZ 239678	<i>Sarcophya bistincta</i>	MEXICO	CARRETERA VALLE DE BRAVO-SAN PEDRO TENEYAC ARROYO 1 (6860 FEET) (POR ALBARRADA)	19.150083	-100.1469	1,217,987	2267	532.8	2570	16.4	84	4	
MK 645	UMMZ 239749	<i>Sarcophya bistincta</i>	MORELOS	BOSQUE BIEN CONSERVADO Y HUMEDO OF LA BARRANCA WHERE THE SALTO SAN ANTONIO IS	18.922402	-99.244151	2,217,054	2406	532.5	3494	21.8	86	5	
MK 645 dupe	UMMZ 239749	<i>Sarcophya bistincta</i>	MORELOS	2 KMS OUT OF CUERNAVACA ON THE CUERNAVACA CHALMA RD. (PASSING CONJUNTO CERRADO) OF LA BARRANCA WHERE THE SALTO SAN ANTONIO IS	18.922402	-99.244151	548,585	1964	513.0	841	7.4	60	5	
MK 759	UMMZ 239701	<i>Sarcophya bistincta</i>	GUERRERO	CA 100 DEG KMS FROM CIUDAD ALTAMIRANO VIA IXTAPA ZIHUATANEJO	18.0013	-101.1716	1,224,835	2199	557.6	2522	16.2	84	6	MH899573
MK 760	UMMZ 239705	<i>Sarcophya bistincta</i>	GUERRERO	CA 100 DEG KMS FROM CIUDAD ALTAMIRANO VIA IXTAPA ZIHUATANEJO	18.0013	-101.1716	1,074,315	2203	559.4	743	6.9	58	6	
MK 760 (2)	UMMZ 239704	<i>Sarcophya bistincta</i>	GUERRERO	CA 100 DEG KMS FROM CIUDAD ALTAMIRANO VIA IXTAPA ZIHUATANEJO	18.0013	-101.1716	927,774	2246	579.2	906	9.4	6	6	
MK 691 (5)	UMMZ 239744	<i>Sarcophya bistincta</i>	GUERRERO	2-3 KMS IN THE ROAD TO JALEACA FROM POINT WHERE ROAD TRIFURCATE TO PTO. DEL GALLO / YEXTLA / ANDIALEACA.COMMING FROM CARRIZAL DE BRAVO / IN RIVER UNDER THE BRIDGE	17.5324	-99.8994	2,084,203	2353	672.5	1678	11.9	80	7	
MK 650 (1)	UMMZ 239725	<i>Sarcophya bistincta</i>	GUERRERO	MOUNTAINS W. OF CHILPANINGO / TOWN LOS MORROS	17.6843	-99.80339	941,101	2124	556.6	1278	9.7	74	8	
MK 650 (2)	UMMZ 239726	<i>Sarcophya bistincta</i>	GUERRERO	MOUNTAINS W. OF CHILPANINGO / TOWN LOS MORROS	17.6843	-99.80339	2,224,898	2394	506.4	1737	12.2	79	8	
MK 652	UMMZ 239727	<i>Sarcophya bistincta</i>	GUERRERO	MOUNTAINS W. OF CHILPANINGO / TOWN LOS MORROS	17.6843	-99.80339	3,423,330	2444	526.0	1396	10.4	74	8	MH899571
MK 671 (4)	UMMZ 239733	<i>Sarcophya bistincta</i>	GUERRERO	BEHIND CHICHIHUALCO / ON ROAD TO CARRIZAL DE BRAVO / 2 KMS FROM ENTRONQUE	17.6407	-99.6797	1,012,300	2107	557.0	842	7.4	62	9	
MK 672	UMMZ 239738	<i>Sarcophya bistincta</i>	GUERRERO	BEHIND CHICHIHUALCO / ON ROAD TO CARRIZAL DE BRAVO / 2 KMS FROM ENTRONQUE	17.6407	-99.6797	297,782	1667	439.8	400	5.1	41	9	
MK 656 (1)	UMMZ 239729	<i>Sarcophya bistincta</i>	GUERRERO	3 KMS FROM THE TOWN OF OMLITEME IN THE ROAD OMLITEME CHILPANINGO	17.552603	-99.662569	580,194	1950	497.6	547	5.9	42	10	
MK 674 (1)	UMMZ 239690	<i>Sarcophya bistincta</i>	GUERRERO	ON ATZACUALOYA HUEYCATENANGO RD.	17.5087	-99.1258	659,418	1941	565.4	1086	8.7	68	11	
MK 675 (2)	UMMZ 239879	<i>Sarcophya bistincta</i>	GUERRERO	ON ATZACUALOYA HUEYCATENANGO RD.	17.5087	-99.1258	336,474	1565	519.1	227	4.2	24	11	
MK 662	UMMZ 239731	<i>Sarcophya bistincta</i>	GUERRERO	1.6 KMS FROM THE TOWN OF TETIPAC ON THE TETIPAC TAXCO ROAD (MAYBE ARROYO LAS DAMAS)	18.635895	-99.6491	1,137,742	2130	548.7	796	7.2	56	12	MH899572
MK 697 (3)	UMMZ 239789	<i>Sarcophya bistincta</i>	VERACRUZ	ON ATZOMPA XXOCOTLA RD. 1.5 KMS FROM XXOCOTLA	18.6585	-97.1574	1,524,182	2214	625.6	2479	16.0	82	13	
MK 699 (1)	UMMZ 239791	<i>Sarcophya bistincta</i>	VERACRUZ	ON STREAM CROSSING THE TOWN OF XXOCOTLA	18.6477	-97.1574	1,342,010	2206	610.9	1769	12.3	79	13	
MK 700 (2)	UMMZ 239750	<i>Sarcophya bistincta</i>	PUEBLA	IN THE STREAM LOCATED AFTER THE TOWN OF ZQUITLAN TURNING DOWN AT THE CENTRO DE SALUD	18.322	-97.0285	2,203,360	2298	697.8	4155	24.8	86	14	
MK 705 (1)	UMMZ 239862	<i>Sarcophya bistincta</i>	OAXACA	56 KMS FROM TEOITILAN VIA HUAUTLA	18.1576	-96.8684	2,529,703	2417	644.6	3164	19.6	85	15	
MK 715	UMMZ 239755	<i>Sarcophya bistincta</i>	OAXACA	NEAR "EL TEJOCOTE" (FRENTE AL KINDER)	17.239	-97.0032	347,152	1712	437.7	254	4.3	31	16	
MK 716 (1)	UMMZ 239758	<i>Sarcophya bistincta</i>	OAXACA	ON ROAD BETWEEN THE TOWNS OF SAN JUAN DEL ESTADO AND SAN MIGUEL ALDAPAN	17.3036	-96.793	52,461	594	267.4	8	3.0	1	17	
MK 718 (2)	UMMZ 239765	<i>Sarcophya bistincta</i>	OAXACA	PASSING SAN MIGUEL ALDAPAN	17.4211	-96.6876	606,978	2014	568.6	366	4.9	37	18	
MK 755 (1)	UMMZ 239786	<i>Sarcophya bistincta</i>	OAXACA	ON ROAD SAN JUAN ATEPEC SAN MIGUEL ABEJONES	17.4153	-96.5671	871,034	2062	563.2	1022	8.4	69	19	
MK 751	UMMZ 239785	<i>Sarcophya bistincta</i>	OAXACA	3.8 KMS PASSING "RANCHO TEXAS" ON THE ROAD FROM THE TOWN OF IXTLAN DE JUAREZ	17.316	-96.4435	1,577,190	2342	621.5	2376	15.4	84	20	MH899574
MK 748 (2)	UMMZ 239780	<i>Sarcophya bistincta</i>	OAXACA	CA 37 KMS FROM MITLA ON THE ROAD MITLA AYUTLA	16.9791	-96.1364	91,912	1009	302.5	23	3.1	3	22	
MK 748 (4)	UMMZ 239782	<i>Sarcophya bistincta</i>	OAXACA	CA 37 KMS FROM MITLA ON THE ROAD MITLA AYUTLA	16.9791	-96.1364	1,058,426	2170	553.8	499	5.7	42	22	
MK 767	UMMZ 239788	<i>Sarcophya bistincta</i>	OAXACA	9.2 KMS E STA MARIA ALBARRADAS / SIERRA MIXE	16.985888	-96.135816	1,083,058	2206	524.7	617	6.3	52	22	
MK 721	UMMZ 239767	<i>Sarcophya bistincta</i>	OAXACA	2 KMS N. THE TOWN OF STA. MARIA LAXICHIO VIA THE TOWN OF SAN SEBASTIAN RIO DULCE	16.7377	-97.0384	146,471	1215	376.0	62	3.3	10	23	
MK 766	UMMZ 239794	<i>Sarcophya bistincta</i>	OAXACA	CERRO DE VIDRIO VIA A PUERTO ESCONDIDO	16.25216	-97.15359	994,521	2166	577.4	467	5.5	43	24	
MK 730 (2)	?	<i>Sarcophya bistincta</i>	?	?			2,967,630	2404	716.9	3581	21.7	84		
MK 685 (2)	UMMZ 239739	<i>Sarcophya bistincta</i>	GUERRERO	ON ATOYAC PTO DE GALLO RD. / BETWEEN 10 - 20 KMS NORTH OF THE TOWN "EL PARAISO"	17.3812	-100.2009	269,729	1645	450.6	184	4.0	20	25	MH899575
MK 689 (2)	UMMZ 239740	<i>Sarcophya bistincta</i>	GUERRERO	ON ATOYAC PTO DEL GALLO RD. / 500 M. NORTH OF THE TOWN OF SAN VICENTE	17.3	-100.2792	67,313	502	221.6	32	3.1	6	26	
MK 727 (2)	UMMZ 239772	<i>Sarcophya pentheter</i>	OAXACA	RIO "EL SALADO" / 8 KMS N SAN JUAN LACHAO ON HWY 135	16.1916	-97.0958	17,052	381	247.1	10	3.0	2	27	MH899576
MK 691 (3)	UMMZ 239651	<i>Plectrohyla chryses</i>	GUERRERO	2-3 KMS IN THE ROAD TO JALEACA FROM POINT WHERE ROAD TRIFURCATE TO PTO. DEL GALLO / YEXTLA / ANDIALEACA.COMMING FROM CARRIZAL DE BRAVO / IN RIVER UNDER THE BRIDGE	17.5324	-99.8994	2,267,946	2347	663.6	4919	33.4	83	28	MH899570
MK 770	UMMZ 239802	<i>Plectrohyla hazelae</i>	OAXACA	EL PUNTO SIERRA JUAREZ	17.22156	-96.58386	538,500	2066	526.2	557	5.9	44	29	MH899569
MK 667	UMMZ 239952	<i>Sarcophya arborescendens</i>	VERACRUZ	PUERTO DEL AIRE (ARRIBA DE ALCUTZINGO)	18.6787	-97.3485	923,330	2116	511.8	1154	9.0	69		MH899576
MK 700 (1)	UMMZ 239813	<i>Sarcophya cyclada</i>	PUEBLA	IN THE STREAM LOCATED AFTER THE TOWN OF ZQUITLAN TURNING DOWN AT THE CENTRO DE SALUD	18.322	-97.0285	2,490,616	2385	661.4	2961	18.4	82		
MK 701	UMMZ 239814	<i>Sarcophya cyclada</i>	OAXACA	24 KMS FROM THE TOWN OF TEOITILAN DE FLORES MAGON VIA HUAUTLA DE JIMENEZ	18.1781	-97.0054	1,166,574	2129	565.5	1061	8.7	69		
MK 742 (1)	UMMZ 239954	<i>Sarcophya arborescendens</i>	VERACRUZ	LEFT ROAD BIFURCATING FROM ROAD TO THE TOWN OF "LAS MINAS"	19.6758	-97.1751	1,074,225	2240	553.8	1750	12.0	79		
MK 768	UMMZ 239833	<i>Exerodonta xera</i>	PUEBLA	5 KM SW ZAPOTITLAN DE SALINAS	18.311958	-97.51266	1,257,938	2288	581.5	3506	21.4	84		

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5 **Additional Files**

6 Fig. S1. Sampled and unsampled parts of *S. bistincta* range in relation to known distributions (or  
 7 localities, where distributional information is lacking) of other *Sarcohylla* species.

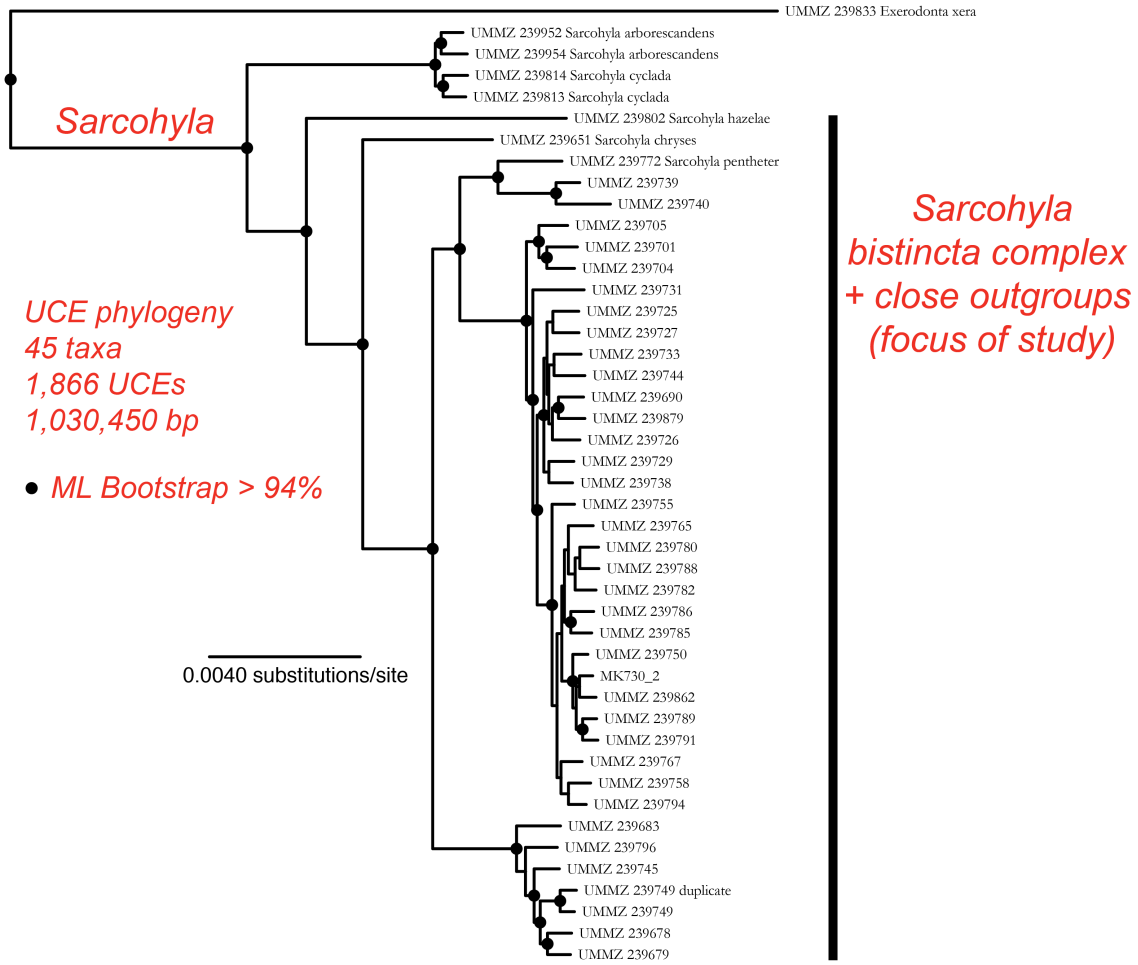


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16 Fig. S2. UCE tree of 45 samples of *Sarcohyla* and outgroup *Exerodonta xera* used to determine the  
17 ingroup.

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