



Table S1: Samples of the genus *Asaccus* that were used in this study. Accession numbers for sequences that were retrieved from Genbank are marked with an asterisk.

Voucher number	Species	Locality	Latitude	Longitude	Genbank Accession number		
					12S	Cytb	MC1R
ERP 1215	<i>Asaccus tangestanensis</i>	Iran, Bushehr Province- On the road from Ahram to Khaeez	28.81	51.38	MT828126	MT828220	-
ERP 1423	<i>Asaccus sp1</i>	Iran, Fars province- Kazeroun- Pole abgine- Parishan region	29.53	51.78	MT828064	MT828158	-
ERP 1755	<i>Asaccus iranicus</i>	Iran, Fars province, 5Km south of Mohr City, Tange Mohr	27.53	52.85	MT828072	MT828166	MT828236
ERP 1756	<i>Asaccus iranicus</i>	Iran, Fars province, 5Km south of Mohr City, Tange Mohr	27.53	52.85	MT828073	MT828167	MT828237
ERP 1757	<i>Asaccus iranicus</i>	Iran, Fars province, 5Km south of Mohr City, Tange Mohr	27.53	52.85	MT828074	MT828168	MT828238
ERP 2403	<i>Asaccus kurdestanensis</i>	Iran, Kordestan province, Palangan	35.06	46.6	MT828122	MT828216	MT828275
ERP 2411	<i>Asaccus sp6</i>	Iran, Kordestan province, 25 km North of Paveh on the road of Nosod	35.11	46.25	MT828123	MT828217	-
As1	<i>Asaccus sp2</i>	Iran, Kermanshah province, between Gilan Gharb and Ghasr Shirin	-	-	MT828035	MT828132	-
As2	<i>Asaccus sp2</i>	Iran, Kermanshah province, between Gilan Gharb and Ghasr Shirin	-	-	MT828036	MT828133	-
As3	<i>Asaccus sp2</i>	Iran, Kermanshah province, between Gilan Gharb and Ghasr Shirin	-	-	MT828037	MT828134	-
As20	<i>Asaccus sp3</i>	Iran, Kermanshah province, around Gilan Gharb	-	-	MT828051	MT828148	-

As21	<i>Asaccus sp3</i>	Iran, Kermanshah province, around Gilan Gharb	-	-	MT828052	MT828149	-
As22	<i>Asaccus sp3</i>	Iran, Kermanshah province, around Gilan Gharb	-	-	MT828050	MT828147	-
As7	<i>Asaccus griseonutus</i>	Iran, Lorestan province, (Makhmalkuh)	-	-	MT828040	MT828137	-
As8	<i>Asaccus griseonutus</i>	Iran, Lorestan province, (Makhmalkuh)	-	-	MT828039	MT828136	-
As9	<i>Asaccus griseonutus</i>	Iran, Lorestan province, (Makhmalkuh)	-	-	MT828038	MT828135	-
As13	<i>Asaccus kurdestanensis</i>	Iran, Kurdistan province, Ghalej	-	-	MT828041	MT828138	-
As14	<i>Asaccus kurdestanensis</i>	Iran, Kurdistan province, Ghalej	-	-	MT828042	MT828139	-
As15	<i>Asaccus kurdestanensis</i>	Iran, Kurdistan province, Ghalej	-	-	MT828043	MT828140	-
As16	<i>Asaccus kurdestanensis</i>	Iran, Kurdistan province, Ghalej	-	-	MT828044	MT828141	-
8a	<i>Asaccus griseonutus</i>	Iran, Kermanshah province, Between Islam-Abad and Kerend	-	-	MT828053	MT828150	-
9a	<i>Asaccus griseonutus</i>	Iran, Kermanshah province, Between Islam-Abad and Kerend	-	-	MT828054	MT828151	-
17c	<i>Asaccus kermanshahensis</i>	Iran, Kermanshah Province, 35km NE Kermanshah city	-	-	MT828033	MT828130	-
37b	<i>Asaccus kermanshahensis</i>	Iran, Kermanshah Province, 35km NE Kermanshah city	-	-	MT828034	MT828131	-
ERP 2412	<i>Asacus sp6</i>	Iran, Kordestan province, 25 km North of Paveh on the raod of Nosod	35.11	46.25	MT828124	MT828218	-
ERP 2413	<i>Asaccus granularis</i>	Iran, Ilam province, 5km of Dareh shahr, Modakto	35.11	47.36	MT828065	MT828159	MT828229
ERP 2414	<i>Asaccus nasrullahi</i>	Iran, Ilam province, 5km of Dareh shahr, Sarab	33.08	47.36	MT828112	MT828206	MT828266
ERP 2415	<i>Asaccus nasrullahi</i>	Iran, Ilam province, 5km of Dareh shahr, Sarab	33.08	47.36	MT828113	MT828207	MT828267
ERP 2416	<i>Asaccus nasrullahi</i>	Iran, Ilam province, 5km of Dareh shahr, Sarab	33.08	47.36	MT828114	MT828208	MT828268
ERP 2418	<i>Asaccus granularis</i>	Iran, Ilam province, 5km of Dareh shahr, Modakto	35.11	47.36	MT828066	MT828160	MT828230
ERP 2949	<i>Asaccus griseonutus</i>	Iran, Lorestan province, (Makhmalkuh)	33.5	48.4	MT828119	MT828213	MT828272
ERP 2950	<i>Asaccus griseonutus</i>	Iran, Lorestan province, (Makhmalkuh)	33.5	48.4	MT828120	MT828214	MT828273
ERP 2951	<i>Asaccus griseonutus</i>	Iran, Lorestan province, (Makhmalkuh)	33.5	48.4	MT828121	MT828215	MT828274
ERP 2955	<i>Asaccus kurdistanensis</i>	Iran, Kurdistan province, (Ghalej)	35.21	46.16	MT828084	MT828178	MT828247

ERP 2956	<i>Asaccus kurdistanensis</i>	Iran, Kurdistan province, (Ghalej)	35.21	46.16	MT828085	MT828179	MT828248
ERP 2960	<i>Asaccus zagrosicus</i>	Iran, Kermanshah province, Eslam abad	34.08	46.02	MT828118	MT828212	MT828271
ERP 3599	<i>Asacus zagrosicus</i>	Iran, khozestan province, Masjed solyeman	32.03	49.16	MT828067	MT828161	MT828231
ERP 3600	<i>Asacus zagrosicus</i>	Iran, khozestan province, Masjed solyeman	32.03	49.16	MT828068	MT828162	MT828232
ERP 3601	<i>Asacus tangestanensis</i>	Iran, Boshehr province, Ahram montain	28.57	51.22	MT828098	MT828192	MT828254
ERP 3602	<i>Asacus tangestanensis</i>	Iran, Boshehr province, Ahram montain	28.57	51.22	MT828099	MT828193	MT828255
ERP 3604	<i>Asacus tangestanensis</i>	Iran, Boshehr province, Ahram montain	28.57	51.22	MT828100	MT828194	MT828256
ERP 3609	<i>Asaccus iranicus</i>	Iran, Boshehr province, Asaloyeh, Nayband National Park	27.21	52.38	MT828106	MT828200	MT828261
ERP 3610	<i>Asaccus iranicus</i>	Iran, Boshehr province, Asaloyeh, Nayband National Park	27.21	52.38	MT828107	MT828201	MT828262
ERP 3611	<i>Asaccus tangestanensis</i>	Iran, Boshehr province, Asaloyeh, Nayband National Park	27.21	52.38	MT828108	MT828202	-
ERP 3612	<i>Asaccus iranicus</i>	Iran, Boshehr province, Asaloyeh, Nayband National Park	27.21	52.38	MT828109	MT828203	MT828263
ERP 3613	<i>Asaccus iranicus</i>	Iran, Boshehr province, Asaloyeh, Nayband National Park	27.21	52.38	MT828110	MT828204	MT828264
ERP 3614	<i>Asaccus iranicus</i>	Iran, Boshehr province, Asaloyeh, Nayband National Park	27.21	52.38	MT828111	MT828205	MT828265
ERP 3631	<i>Asaccus tangestanensis</i>	Iran, Boshehr province, Ahram montain, Tange Yakh	28.48	51.36	MT828101	MT828195	MT828257
ERP 3632	<i>Asaccus tangestanensis</i>	Iran, Boshehr province, Ahram montain, Tange Yakh	28.48	51.36	MT828102	MT828196	MT828258
ERP 3633	<i>Asaccus tangestanensis</i>	Iran, Boshehr province, Ahram montain, Tange Yakh	28.48	51.36	MT828103	MT828197	MT828259
ERP 3634	<i>Asaccus tangestanensis</i>	Iran, Boshehr province, Ahram montain, Tange Yakh	28.48	51.36	MT828104	MT828198	-
ERP 3635	<i>Asaccus tangestanensis</i>	Iran, Boshehr province, Ahram montain, Tange Yakh	28.48	51.36	MT828105	MT828199	MT828260
ERP 3658	<i>Asacus nasrullahi</i>	Iran, Ilam province	33.82	47.03	MT828092	MT828186	-
ERP 3659	<i>Asacus nasrullahi</i>	Iran, Ilam province	33.82	47.03	MT828093	MT828187	-
ERP 3661	<i>Asacus nasrullahi</i>	Iran, Ilam province	33.82	47.03	MT828092	MT828188	MT828253
ERP 3976	<i>Assacus andersoni</i>	Iran, Ilam province, livan county	33.76	46.28	MT828062	MT828156	MT828227
ERP 3979	<i>Assacus andersoni</i>	Iran, Ilam province, livan county	33.76	46.28	MT828063	MT828157	MT828228

ERP 4007	<i>Assacus sp4</i>	Iran, Ilam province, Bina va Bijar region	33.39	45.59	MT828069	MT828163	MT828233
ERP 4009	<i>Assacus sp4</i>	Iran, Ilam province, Bina va Bijar region	33.39	45.59	MT828070	MT828164	MT828234
ERP 4010	<i>Assacus sp4</i>	Iran, Ilam province, Bina va Bijar region	33.39	45.59	MT828071	MT828165	MT828235
ERP 5562	<i>Asaccus iranicus</i>	Iran, Fars Province, Mohr County, Varavi District, Narman	27.38	53	MT828081	MT828175	MT828244
ERP 5573	<i>Asaccus iranicus</i>	Iran, Fars Province, Mohr County, Varavi	27.5	53.1	MT828082	MT828176	MT828245
ERP 5574	<i>Asaccus iranicus</i>	Iran, Fars Province, Mohr County, Varavi	27.5	53.1	MT828083	MT828177	MT828246
ERP 6535	<i>Asaccus granularis</i>	Iran, Lorestan province - Poldokhtar - 5 km NW of poldokhtar	33.1977	47.7067	MT828075	MT828169	MT828239
ERP 6536	<i>Asaccus granularis</i>	Iran, Lorestan province - Poldokhtar - 5 km NW of poldokhtar	33.1977	47.7067	MT828076	MT828170	MT828240
ERP 6537	<i>Asaccus granularis</i>	Iran, Lorestan province - Poldokhtar - 5 km NW of poldokhtar	33.1977	47.7067	MT828077	MT828171	-
ERP 6538	<i>Asaccus granularis</i>	Iran, Lorestan province - Poldokhtar - 5 km NW of poldokhtar	33.1977	47.7067	MT828078	MT828172	MT828241
ERP 6539	<i>Asaccus granularis</i>	Iran, Lorestan province - Poldokhtar - 5 km NW of poldokhtar	33.1977	47.7067	MT828079	MT828173	MT828242
ERP 6541	<i>Asaccus granularis</i>	Iran, Lorestan province - Poldokhtar - 5 km NW of poldokhtar	33.1977	47.7067	MT828080	MT828174	MT828243
ERP 6547	<i>Asaccus zagrosicus</i>	Iran, Lorestan province - On the road to Andimeshk - Tang-e Haft	33.03	48.65	MT828127	MT828221	MT828276
ERP 6549	<i>Asaccus zagrosicus</i>	Iran, Lorestan province - On the road to Andimeshk - Tang-e Haft	33.03	48.65	MT828128	MT828222	MT828277
ERP 6555	<i>Asaccus zagrosicus</i>	Iran, Lorestan province - On the road to Andimeshk - Tang-e Haft	33.03	48.65	MT828129	MT828223	MT828278
ERP 7515	<i>Asaccus granularis</i>	Iran, Farhad abad - Darrre shahr - Ilam	33.15	47.37	MT828115	MT828209	MT828269
ERP 7516	<i>Asaccus granularis</i>	Iran, Farhad abad - Darrre shahr - Ilam	33.15	47.37	MT828116	MT828210	MT828270
ERP 7523	<i>Asaccus granularis</i>	Iran, Farhad abad - Darrre shahr - Ilam	33.15	47.37	MT828117	MT828211	-
ERP 8345	<i>Asaccus kurdestanensis A</i>	Iran, Sarv abad- Qaleji village - Kurdistan Province	-	-	MT828089	MT828183	MT828252
ERP 8346	<i>Asaccus kurdestanensis A</i>	Iran, Sarv abad- Qaleji village - Kurdistan Province	35.13	46.25	MT828086	MT828180	MT828249
ERP 8347	<i>Asaccus kurdestanensis A</i>	Iran, Sarv abad- Qaleji village - Kurdistan Province	35.13	46.25	MT828087	MT828181	MT828250
ERP 8348	<i>Asaccus kurdestanensis A</i>	Iran, Sarv abad- Qaleji village - Kurdistan Province	35.13	46.25	MT828088	MT828182	MT828251
ERP 8665	<i>Asaccus kurdestanensis</i>	Iran, Kurdistan province, Marivan, Sarvabad	-	-	MT828090	MT828184	-

ERP 8669	<i>Asaccus sp5</i>	Iran, Kermanshah province, Sarpol Zahab, Patagh	-	-	MT828057	-	MT828226
ERP 8428	<i>Assacus sp7</i>	Iran, Hormozgan province - 25 km N from Jask	25.82	57.78	MT828095	MT828189	-
ERP 8429	<i>Assacus sp7</i>	Iran, Hormozgan province - 25 km N from Jask	25.82	57.78	MT828096	MT828190	-
ERP 8430	<i>Assacus sp7</i>	Iran, Hormozgan province - 25 km N from Jask	25.82	57.78	MT828097	MT828191	-
MVZ234330	<i>Asaccus nasrullahi</i>	Iran	-	-	KX550529*	KX550536*	KX550797*
MVZ234326	<i>Asaccus granularis</i>	Iran, Lorestan Province, 99km SW (by road) Khorram Abad	-	-	KX550528*	KX550535*	KX550796*
4bEi700r	<i>Asaccus zagrosicus</i>	Kermanshah province, between Eslam Abad and Sar-e Pol	-	-	MT828061	MT828155	-
UAE27	<i>Asaccus caudivolvulus</i>	UAE	-	-	KX550495*	KX550588*	KX550848*
S8088	<i>Asaccus caudivolvulus</i>	UAE	-	-	KX550493*	KX550586*	KX550846*
UAE26	<i>Asaccus caudivolvulus</i>	UAE	-	-	KX550494*	KX550587*	KX550847*
S7445	<i>Asaccus caudivolvulus</i>	UAE	-	-	KX550491*	KX550584*	KX550844*
S7866	<i>Asaccus caudivolvulus</i>	UAE	-	-	KX550492*	KX550585*	KX550845*
CN3901	<i>Asaccus gardneri</i>	Oman	-	-	KX550487*	KX550580*	KX550840*
CN763	<i>Asaccus gardneri</i>	Oman	-	-	KX550454*	KX550550*	KX550811*
CN8673	<i>Asaccus gardneri</i>	Oman	-	-	KX550470*	KX550563*	KX550824*
CN842	<i>Asaccus gardneri</i>	Oman	-	-	KX550488*	KX550581*	KX550841*
CN797	<i>Asaccus gardneri</i>	Oman	-	-	KX550486*	KX550579*	KX550839*
CN8191	<i>Asaccus margaritae</i>	Oman	-	-	KX550499*	KX550592*	KX550852*
CN3419	<i>Asaccus margaritae</i>	Oman	-	-	KX550497*	KX550590*	KX550850*
CN3592	<i>Asaccus margaritae</i>	Oman	-	-	KX550498*	KX550591*	KX550851*

CN4310	<i>Asaccus gallagheri</i>	Oman	-	-	KX550526*	KX550534*	KX550794*
S1751	<i>Asaccus platyrhynchus</i>	Oman	-	-	KX550525*	KX550533*	KX550793*
S5011	<i>Haemodracon riebeckii</i>	Yemen (Socotra)	-	-	KX550532*	KX550539*	KX550800*