Appendix A: Genotypes frequencies of 10 microsatellite loci in eight populations of *M. rosenbergii*

	THAI	NAPFRE	HatA	HatB	SRWK	TRGN	NSBL	KDH
Mbr-1	252/266	252/252	236/262	252/274	262/290	252/270	244/270	244/244
	258/274	262/284 (2)	236/274	258/290 (2)	262/298	252/284	252/252 (2)	244/262
	258/282	262/290	244/262	262/272 (4)	266/286	258/258 (2)	258/272 (3)	258/258
	258/290	268/268	258/278	268/268	270/270	262/270	258/294	262/270
	258/294 (3)	268/286	262/262	268/290 (4)	280/294	262/274 (2)	262/274	262/272
	262/282 (2)	270/290	262/272 (2)	272/272 (4)	280/296	266/266 (3)	262/288	262/282
	262/292	272/282	262/286	272/298 (2)	282/282	266/278 (2)	266/280	266/304 (2)
	266/266 (3)	274/282 (2)	268/296 (3)	274/274 (2)	284/284 (2)	270/270 (2)	268/284	268/282
	266/294	274/284	272/272 (4)	278/278 (2)	286/286 (3)	272/284	270/286	278/278 (3)
	270/270	274/286	272/286 (2)	278/292 (3)	288/288 (6)	274/274 (2)	272/278	278/284
	270/278	274/288	272/296	278/300	290/290 (4)	278/278	272/280	280/284
	270/282 (2)	274/290	274/274 (2)	280/280	292/292 (3)	284/284 (2)	272/286	284/284 (4)
	270/294 (3)	278/286	278/278 (4)	284/284 (3)	294/294	284/304	274/274 (2)	284/304
	274/274	278/298	282/282		294/300	286/286 (3)	274/280	286/286 (2)
	278/278	280/290	286/286 (4)		298/298 (3)	292/292 (3)	282/292	286/298 (2)
	278/292	280/296	296/296			294/294 (2)	282/298 (2)	292/292
	282/282	280/298				296/296	284/284	
	282/294 (2)	282/282 (2)					286/292	
	284/284	284/292 (2)					294/294	
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**
	292/292	284/304						
	294/294	286/300						
		286/304						
		288/288 (2)						
		292/292						

		294/294						
Mbr-3	216/216 220/220 (3) 220/252 222/222 228/228 228/244 228/264 230/230 (3) 230/240 230/242 (3) 230/248 (2) 230/252 (2) 230/254 236/254 242/254 242/268 244/244 (3)	218/228 220/232 (5) 220/236 220/242 228/228 228/232 (2) 228/244 (3) 228/248 228/264 236/264 238/268 240/252 242/242 244/244 244/252 244/256 252/252	268/268 242/242 (12) 242/260 (3) 254/254 (12) 254/268 260/268	218/218 220/232 (4) 220/240 230/230 230/238 230/240 232/232 (2) 232/244 234/252 238/238 238/244 (2) 238/264 240/254 240/264 (3) 242/244 244/244 244/252 (3)	220/228 220/240 220/242 (13) 220/254 228/228 228/242 (2) 234/234 (2) 234/242 234/254 236/250 240/250 240/270 242/242 242/262 252/252 260/270	226/226 230/230 (8) 230/252 230/258 230/266 230/274 236/236 236/250 236/252 238/240 240/240 240/254 240/260 240/262 (2) 240/272 244/244 244/26	220/242 (2) 222/232 222/234 226/264 228/244 228/254 232/252 232/262 234/246 234/256 (2) 234/276 238/266 242/256 (2) 242/258 244/258 (3) 246/266 256/256 (3)	218/242 220/244 222/222 228/228 (2) 228/248 (2) 232/232 244/244 244/248 244/258 (4) 246/270 248/248 256/256 258/258 (3) 260/260 (2) 274/274 278/278
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**
	254/254 256/256 256/270	256/256 258/258 260/260 260/278 264/278 276/276		248/264 264/264		252/252 (2) 260/272 276/276		
Mbr-4	215/245 215/303	203/219 203/235 (6)	203/203 (6) 203/241	203/237 (2) 203/291	203/203 (4) 203/215 (6)	203/219 (2) 203/223	203/203 (2) 203/237 (2)	203/219 203/275

	235/235 (4)	203/237 (5)	203/243	215/229	203/219	203/229	203/281	229/257
	237/237 (6)	203/245	203/245	215/235	203/223 (2)	203/231 (3)	237/237	229/291
	237/245 (2)	203/259	203/251 (2)	219/241 (2)	203/229	203/237 (11)	237/241	231/245
	245/245 (11)	203/275	203/257	219/243	203/231 (3)	203/251 (4)	237/299	237/263
	245/295 (4)	203/281 (2)	203/259	219/245	203/237 (3)	209/245	241/241	245/245
	259/295	203/287 (4)	205/205 (3)	237/251 (3)	203/243	229/257	241/245 (2)	245/251 (4)
		203/303	205/215 (3)	237/299	203/251	231/231	241/251 (2)	245/275
		219/303	215/215 (2)	241/263	203/257	237/237	241/301 (2)	257/257 (2)
		231/263	223/223	241/299 (3)	203/263	237/245 (4)	241/309	275/275
		235/245	229/229 (2)	243/243 (3)	203/299		245/289	257/301
		237/245	237/237 (2)	243/263	229/235		257/281	237/275
		245/295	237/245	245/245 (2)	229/245		257/289	245/275
		259/289	237/259 (2)	245/301	231/231 (3)		281/287	275/275
		263/303	243/243	259/259			289/289	275/281
		287/303		259/301			289/309	275/291
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**
				291/291 (4)			299/301	299/299
							301/301	301/301 (2)
Mbr-5	258/272	278/296 (2)	284/300	272/286	270/288	262/288	270/284	274/274
	276/306	280/304 (2)	284/302	282/306	272/302	278/292	272/290	274/310
	278/308	280/314	284/306	286/304	274/292	280/304	284/300	278/304
	282/324	286/302 (3)	288/302	292/292	274/310 (2)	284/284 (2)	284/302	280/280
	284/284	296/296 (5)	290/300	292/308 (8)	278/290	284/310	284/306	282/310
	284/300	296/308 (3)	292/292	294/294	282/304	284/290	284/312 (2)	284/284
	284/306	300/300 (4)	292/302 (5)	298/298 (3)	284/284	284/298	288/310 (2)	288/308
	286/312	302/308	292/306 (3)	298/316 (2)	286/286	284/304	290/294 (2)	290/308
	288/302	304/304 (8)	294/306	304/304 (9)	286/302	286/308	292/300	292/316
	288/304	308/308	296/296	310/310	288/310	288/300	294/304 (2)	294/312

	290/290 290/290 292/298 294/294 (2) 294/304 296/304 298/308 300/306 300/324 302/312 (2) 302/314 (3)		300/312 302/302 302/312 (2) 302/330 306/306 (3) 306/310 (2) 306/312 310/310 312/312 (2)	316/316 (2)	294/294 294/302 (3) 294/310 (2) 298/298 298/316 (2) 300/300 302/302 (4) 302/312 302/316 304/304 (2) 304/310	290/302 290/306 (2) 292/316 294/306 294/310 296/306 298/322 300/300 300/314 304/304 306/306 (2)	294/306 298/310 300/300 300/310 300/314 304/304 (4) 306/306	298/298 (2) 298/302 298/310 (5) 300/310 302/310 304/304 (2) 310/310 316/316
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**
	304/304 (2) 304/324 306/312 312/312					306/312 306/314 308/308 314/314 314/326 316/316		
Mbr-7	263/275 (21) 263/305 (2) 269/269 275/275 (3) 275/296 (2) 275/305	263/275 (2) 263/278 266/275 (3) 266/278 (2) 266/296 269/275 269/278 272/275 (14) 275/275 (3) 275/281 (2)	248/275 251/275 (9) 254/266 254/275 254/281 260/275 (2) 263/275 (2) 263/278 266/275 (6) 269/275	251/275 (2) 260/275 263/275 (4) 266/275 (3) 272/275 (10) 275/275 (6) 275/278 (4)	254/275 (2) 257/275 266/293 272/275 (25) 275/278	272/275 (27) 281/281 (3)	257/275 (2) 263/275 (2) 266/275 (3) 266/278 272/272 (2) 272/275 (9) 275/275 (4) 275/278	254/275 (2) 257/275 (2) 260/269 260/275 260/293 266/275 (7) 269/272 272/278 275/275 (4) 275/278 (4)

			272/275 (2) 272/278 275/275 (2)					
Mbr-8	239/260 239/263 242/263 (2)	233/254 236/254 (2) 242/254 (12)	236/254 (4) 236/257 236/263	230/230 236/242 (2) 236/263	233/251 233/254 239/263	236/245 242/263 (3) 245/257	230/242 230/254 236/254	233/242 239/239 (2) 239/248
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**
	245/263 (3) 251/257 251/263 (3) 254/263 (3) 257/263 (4) 257/284 260/260 260/263 263/263 (7) 263/272 269/269	245/254 (2) 245/260 254/257 (9) 254/260 254/263 (2)	239/257 (3) 251/257 251/263 254/257 (5) 254/263 (3) 257/257 257/260 (2) 257/263 (8)	242/254 242/263 245/263 (2) 248/257 248/263 251/263 254/257 (3) 254/263 (5) 257/257 (3) 257/263 (7) 263/263	242/248 242/254 (3) 245/254 245/260 (2) 248/254 251/251 251/263 (2) 254/254 (8) 257/257 257/263 (2) 263/263 (3) 263/269 (2)	245/263 (2) 248/263 251/266 (2) 251/269 254/260 254/263 (2) 257/260 (3) 257/263 (8) 260/263 260/266 263/263 (3)	242/254 (3) 245/257 248/263 (2) 254/257 (5) 254/263 (5) 257/263 (5)	239/254 242/242 (2) 242/254 245/245 245/254 248/248 248/263 251/251 251/263 (3) 254/254 (5) 254/263 (3)
Mbr-10a	243/243 243/246 243/252 (3) 246/246 (7) 246/249 246/255 (4) 249/249 249/252 (2)	228/249 (2) 234/249 237/249 240/240 240/249 240/255 243/243 (2) 243/249	228/237 231/240 231/243 (7) 231/255 237/255 240/243 240/246 240/255	222/228 222/237 225/234 234/240 237/252 237/255 (4) 240/243 (2) 240/255 (2)	228/249 228/252 231/240 234/234 234/252 240/243 (2) 240/258 243/243	222/234 225/240 225/243 231/243 (3) 231/249 (2) 237/243 237/246 (2) 237/249	228/243 (3) 231/240 234/243 237/237 237/249 240/249 240/252 243/246	222/243 222/246 231/249 240/249 (2) 243/243 243/249 (2) 243/252 (2) 243/258 (2)

	249/255 252/252 (5) 252/258	243/252 243/255 249/249 (7)	243/243 (7) 243/255 (8) 252/255	243/243 243/246 (3) 243/249 (4)	243/246 243/252 (8) 246/249 (3)	240/243 (4) 240/249 240/255 (3)	243/252 (4) 243/255 249/252 (6)	246/252 (2) 249/249 (7) 249/252 (2)
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**
	252/261 255/255 258/258	249/252 (7) 249/258 (3) 252/252		243/252 (4) 243/255 (5)	246/252 246/261 249/249 (4) 249/252 (3)	243/243 (2) 243/255 (4) 243/258 243/261 249/255 252/261	249/258 (2) 243/252	249/255
Mbr-10b	142/151 (2) 148/151 148/160 (2) 151/151 (5) 151/157 151/160 (3) 151/163 (4) 154/163 157/160 (2) 160/160 (5) 160/163 (2) 160/166 160/169	133/157 (2) 139/148 148/148 148/157 (6) 148/160 (2) 157/157 (10) 157/160 (6) 157/163 160/160	142/151 151/151 (8) 151/154 151/160 151/163 (16) 160/163 (2) 163/163	142/151 (3) 151/151 (2) 151/154 (3) 151/160 (6) 151/163 (12) 157/157 160/160 163/163 (2)	136/157 136/160 142/151 (4) 142/160 151/151 (7) 151/160 (10) 154/163 160/160 (3) 160/163 (2)	133/151 136/163 142/151 (8) 148/151 148/160 151/151 (3) 151/154 (2) 151/160 (2) 151/163 (5) 154/163 (2) 154/169 163/163 (3)	142/151 (2) 145/157 148/160 148/163 151/151 (2) 151/160 (2) 151/163 (5) 160/160 (4) 160/163 (4) 160/169 163/163	142/151 (3) 148/160 (3) 151/151 (3) 151/160 (8) 151/163 151/169 154/154 154/163 157/163 160/160 (2)
UVC-807	164/182 164/184 164/188 (3)	164/184 166/190 166/194	164/188 (3) 164/194 166/204	160/170 166/166 166/180	164/194 166/166 174/174 (2)	162/176 162/182 162/186	160/170 164/180 164/186	164/184 164/190 (3) 164/192 (3)
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**

	164/202	168/192	166/212	170/190	182/182 (3)	162/188	164/190	164/194
	166/180	168/194	174/174 (3)	180/180 (5)	182/194	162/190	164/194	164/196
	166/196	168/196 (2)	174/188 (2)	180/204	188/188 (6)	162/194 (2)	164/200	170/182
	168/168 (3)	170/196	174/194	184/184	190/190 (2)	164/174	168/168	174/188
	168/186	176/176	174/196	184/194	190/200	164/188	170/170 (2)	180/180 (3)
	174/174	176/184	186/186 (3)	188/188 (3)	194/194 (8)	164/190	172/172	182/182
	174/184	180/200 (2)	188/188 (9)	188/210	196/196 (2)	164/194 (2)	174/174	184/184
	174/188	182/194	188/198	190/190 (5)	198/198 (2)	164/200	174/190	186/190
	176/186	184/184	194/194	194/194 (9)	204/204	166/190	176/176	188/200
	178/178	184/194	200/200 (3)			168/176	180/180	190/200
	178/192	188/188				168/200	180/190	192/192 (2)
	180/180	188/200				170/170 (2)	180/192	196/196
	182/182	190/190				170/196	180/194	200/200 (2)
	184/184 (2)	192/200				174/174	184/192	
	184/200	194/202				178/188	186/200 (2)	
	186/186	196/196 (3)				180/200	192/192	
	188/188	196/206				188/188	194/194 (3)	
	190/190 (3)	198/198				190/190 (3)		
	192/192	200/200 (2)				190/220		
	194/204	202/202 (2)				192/192		
		204/204				194/194		
						204/204		
UVC-817	152/166	166/174	152/174	166/182	160/168	172/186	154/164	152/166
	THAI	**NAPFRE**	**HatA**	**HatB**	**SRWK**	**TRGN**	**NSBL**	**KDH**
	152/180	168/198	152/188	168/202 (7)	164/178	180/180	156/166 (3)	154/164
	152/182	174/196 (2)	164/180 (2)	170/180	164/190	182/182 (12)	162/174	156/180
	166/180	178/178	174/174	180/180 (4)	166/166	182/210	164/174 (2)	158/168
	166/182	182/182 (3)	174/184 (2)	180/196 (4)	166/190	186/186 (8)	164/180	158/170

	166/196 (2)	182/196 (8)	174/192	182/182 (2)	166/202	186/208 (2)	164/182	160/168
	166/198 (2)	188/188 (6)	174/194	182/194	168/180 (3)	186/210 (2)	164/194	164/180
	166/200	188/200	174/208 (2)	182/202	168/186	196/196	166/198	164/182
	166/204	188/204	180/180 (6)	194/194	172/172	202/202	168/182	166/174
	170/196	190/198	184/184 (3)	196/196 (4)	172/188	208/208	168/184	166/194
	174/182 (2)	192/192 (3)	184/194	202/202 (4)	172/192		168/194	168/168
	174/184	194/202	188/188 (6)		174/174		172/186	168/180
	174/190	196/196	194/194 (3)		174/188		172/202	172/188
	176/194				174/190		174/190	174/174
	176/196				174/192		174/198 (3)	176/188
	176/204				182/182 (3)		174/200	176/196 (2)
	178/202				182/198		180/196	176/200
	180/198				184/184 (3)		198/198 (2)	178/194
	182/194 (2)				184/202			184/184 (2)
	184/184				186/186 (2)			190/204
	184/196				186/210			194/204
	184/198 (2)				190/190 (2)			198/198
	188/208							
	194/194							
	202/202							

Appendix B: False Discovery Rate procedure for level of significance of HWE

Locus	THAI	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0007	0.0007	A1	0.0000	A2	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A3	2	0.0100	TRUE
Mbr-4	0.0000	0.0000	A3	0.0000	A4	3	0.0150	TRUE
Mbr-5	0.0000	0.0000	A4	0.0000	A5	4	0.0200	TRUE
Mbr-7	0.0000	0.0000	A5	0.0000	A7	5	0.0250	TRUE
Mbr-8	0.5131	0.5131	A6	0.0000	A9	6	0.0300	TRUE
Mbr-10a	0.0000	0.0000	A7	0.0007	A1	7	0.0350	TRUE
Mbr-10b	0.5873	0.5873	A8	0.1927	A10	8	0.0400	FALSE
UVC- 807	0.0000	0.0000	A9	0.5131	A6	9	0.0450	FALSE
UVC-817	0.1927	0.1927	A10	0.5873	A8	10	0.0500	FALSE

Locus	NAPFRE	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0000	0.0000	A1	0.0000	A1	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A2	2	0.0100	TRUE
Mbr-4	0.1259	0.1259	A3	0.0000	A4	3	0.0150	TRUE
Mbr-5	0.0000	0.0000	A4	0.0000	A6	4	0.0200	TRUE
Mbr-7	0.0060	0.0060	A5	0.0000	A9	5	0.0250	TRUE
Mbr-8	0.0000	0.0000	A6	0.0000	A10	6	0.0300	TRUE
Mbr-10a	0.1357	0.1357	A7	0.0060	A5	7	0.0350	TRUE
Mbr-10b	0.8720	0.8720	A8	0.1259	A3	8	0.0400	FALSE
UVC- 807	0.0000	0.0000	A9	0.1357	A7	9	0.0450	FALSE
UVC-817	0.0000	0.0000	A10	0.8720	A8	10	0.0500	FALSE

Locus	HatA	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0000	0.0000	A1	0.0000	A1	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A2	2	0.0100	TRUE
Mbr-4	0.0000	0.0000	A3	0.0000	A3	3	0.0150	TRUE
Mbr-5	0.0037	0.0037	A4	0.0000	A9	4	0.0200	TRUE
Mbr-7	0.1555	0.1555	A5	0.0000	A10	5	0.0250	TRUE
Mbr-8	0.1574	0.1574	A6	0.0037	A4	6	0.0300	TRUE
Mbr-10a	0.0264	0.0264	A7	0.0264	A7	7	0.0350	TRUE
Mbr-10b	0.2855	0.2855	A8	0.1555	A5	8	0.0400	FALSE
UVC- 807	0.0000	0.0000	A9	0.1574	A6	9	0.0450	FALSE
UVC-817	0.0000	0.0000	A10	0.2855	A8	10	0.0500	FALSE

Locus	HatB	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0000	0.0000	A1	0.0000	A1	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A2	2	0.0100	TRUE
Mbr-4	0.0000	0.0000	A3	0.0000	A3	3	0.0150	TRUE
Mbr-5	0.0000	0.0000	A4	0.0000	A4	4	0.0200	TRUE
Mbr-7	0.6970	0.6970	A5	0.0000	A9	5	0.0250	TRUE
Mbr-8	0.1730	0.1730	A6	0.0000	A10	6	0.0300	TRUE
Mbr-10a	0.0171	0.0171	A7	0.0084	A8	7	0.0350	TRUE
Mbr-10b	0.0084	0.0084	A8	0.0171	A7	8	0.0400	TRUE
UVC- 807	0.0000	0.0000	A9	0.1730	A6	9	0.0450	FALSE
UVC-817	0.0000	0.0000	A10	0.6970	A5	10	0.0500	FALSE

Locus	SRWK	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0000	0.0000	A1	0.0000	A1	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A2	2	0.0100	TRUE
Mbr-4	0.5940	0.5940	A3	0.0000	A4	3	0.0150	TRUE
Mbr-5	0.0000	0.0000	A4	0.0000	A5	4	0.0200	TRUE
Mbr-7	0.0000	0.0000	A5	0.0000	A9	5	0.0250	TRUE
Mbr-8	0.0002	0.0002	A6	0.0000	A10	6	0.0300	TRUE
Mbr-10a	0.0003	0.0003	A7	0.0002	A6	7	0.0350	TRUE
Mbr-10b	0.0729	0.0729	A8	0.0003	A7	8	0.0400	TRUE
UVC- 807	0.0000	0.0000	A9	0.0729	A8	9	0.0450	FALSE
UVC-817	0.0000	0.0000	A10	0.5940	A3	10	0.0500	FALSE

Locus	TRGN	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0000	0.0000	A1	0.0000	A1	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A2	2	0.0100	TRUE
Mbr-4	0.0125	0.0125	A3	0.0000	A5	3	0.0150	TRUE
Mbr-5	0.0010	0.0010	A4	0.0000	A9	4	0.0200	TRUE
Mbr-7	0.0000	0.0000	A5	0.0000	A10	5	0.0250	TRUE
Mbr-8	0.0489	0.0489	A6	0.0010	A4	6	0.0300	TRUE
Mbr-10a	0.2599	0.2599	A7	0.0125	A3	7	0.0350	TRUE
Mbr-10b	0.1370	0.1370	A8	0.0489	A6	8	0.0400	FALSE
UVC- 807	0.0000	0.0000	A9	0.1370	A8	9	0.0450	FALSE
UVC-817	0.0000	0.0000	A10	0.2599	A7	10	0.0500	FALSE

Locus	NSBL	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0000	0.0000	A1	0.0000	A1	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A2	2	0.0100	TRUE
Mbr-4	0.0268	0.0268	A3	0.0000	A4	3	0.0150	TRUE
Mbr-5	0.0000	0.0000	A4	0.0000	A9	4	0.0200	TRUE
Mbr-7	0.5449	0.5449	A5	0.0021	A10	5	0.0250	TRUE
Mbr-8	0.0536	0.0536	A6	0.0044	A7	6	0.0300	TRUE
Mbr-10a	0.0044	0.0044	A7	0.0268	A3	7	0.0350	TRUE
Mbr-10b	0.1909	0.1909	A8	0.0536	A6	8	0.0400	FALSE
UVC- 807	0.0000	0.0000	A9	0.1909	A8	9	0.0450	FALSE
UVC-817	0.0021	0.0021	A10	0.5449	A5	10	0.0500	FALSE

Locus	KDH	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	0.0000	0.0000	A1	0.0000	A1	1	0.0050	TRUE
Mbr-3	0.0000	0.0000	A2	0.0000	A2	2	0.0100	TRUE
Mbr-4	0.0000	0.0000	A3	0.0000	A3	3	0.0150	TRUE
Mbr-5	0.0000	0.0000	A4	0.0000	A4	4	0.0200	TRUE
Mbr-7	0.1628	0.1628	A5	0.0000	A6	5	0.0250	TRUE
Mbr-8	0.0000	0.0000	A6	0.0000	A9	6	0.0300	TRUE
Mbr-10a	0.1417	0.1417	A7	0.0000	A10	7	0.0350	TRUE
Mbr-10b	0.0232	0.0232	A8	0.0232	A8	8	0.0400	TRUE
UVC- 807	0.0000	0.0000	A9	0.1417	A7	9	0.0450	FALSE
UVC-817	0.0000	0.0000	A10	0.1628	A5	10	0.0500	FALSE

**Blue column denote the significance before FDR correction. Before FDR procedure was applied, there were 60 significant p-values ($p<0.05$) out of the 80 tested. After FDR correction, only 59 p-values remained significant (denote by pink column), indicating that the significance level have been adjusted.*

Appendix C: False Discovery Rate procedure for level of significance of genetic linkages of microsatellite loci

Locus pair		Chi2	df	P-value	P-value	No.	P-value	No.	Rank	FDR Cut-Off	Significant
Mbr-1	*Mbr-3*	∞	16	0.0000	0.0000	A1	0.0000	A1	1	0.0002	TRUE
Mbr-1	*Mbr-4*	∞	16	0.0000	0.0000	A2	0.0000	A2	2	0.0005	TRUE
Mbr-3	*Mbr-4*	31.62854	16	0.0112	0.0112	A3	0.0000	A6	3	0.0007	TRUE
Mbr-1	*Mbr-5*	17.83483	16	0.3337	0.3337	A4	0.0000	A13	4	0.0010	TRUE
Mbr-3	*Mbr-5*	19.17948	16	0.2595	0.2595	A5	0.0000	A17	5	0.0012	TRUE
Mbr-4	*Mbr-5*	∞	16	0.0000	0.0000	A6	0.0000	A19	6	0.0014	TRUE
Mbr-1	*Mbr-7*	14.27894	16	0.5779	0.5779	A7	0.0000	A22	7	0.0017	TRUE
Mbr-3	*Mbr-7*	20.13485	16	0.2142	0.2142	A8	0.0000	A23	8	0.0019	TRUE
Mbr-4	*Mbr-7*	15.31679	16	0.5016	0.5016	A9	0.0000	A28	9	0.0021	TRUE
Mbr-5	*Mbr-7*	24.87629	16	0.0720	0.0720	A10	0.0000	A38	10	0.0024	TRUE
Mbr-1	*Mbr-8*	22.42361	16	0.1300	0.1300	A11	0.0000	A39	11	0.0026	TRUE
Mbr-3	*Mbr-8*	17.72993	16	0.3399	0.3399	A12	0.0013	A18	12	0.0029	TRUE
Mbr-4	*Mbr-8*	∞	16	0.0000	0.0000	A13	0.0038	A16	13	0.0031	FALSE
Mbr-5	*Mbr-8*	11.73126	16	0.7623	0.7623	A14	0.0039	A42	14	0.0033	FALSE
Mbr-7	*Mbr-8*	21.50769	16	0.1598	0.1598	A15	0.0065	A37	15	0.0036	FALSE
Mbr-1	*Mbr-10a*	35.10362	16	0.0038	0.0038	A16	0.0069	A27	16	0.0038	FALSE
Mbr-3	*Mbr-10a*	∞	16	0.0000	0.0000	A17	0.0112	A3	17	0.0040	FALSE
Mbr-4	*Mbr-10a*	38.48977	16	0.0013	0.0013	A18	0.0160	A34	18	0.0043	FALSE
Mbr-5	*Mbr-10a*	∞	16	0.0000	0.0000	A19	0.0412	A30	19	0.0045	FALSE
Mbr-7	*Mbr-10a*	9.93806	16	0.8698	0.8698	A20	0.0720	A10	20	0.0048	FALSE
Mbr-8	*Mbr-10a*	21.60342	16	0.1565	0.1565	A21	0.0969	A25	21	0.0050	FALSE

Mbr-1	*Mbr-10b*	∞	16	0.0000	0.0000	A22	0.0972	A29	22	0.0052	FALSE
Mbr-3	*Mbr-10b*	∞	16	0.0000	0.0000	A23	0.1294	A24	23	0.0055	FALSE
Mbr-4	*Mbr-10b*	22.44488	16	0.1294	0.1294	A24	0.1300	A11	24	0.0057	FALSE
Mbr-5	*Mbr-10b*	23.67275	16	0.0969	0.0969	A25	0.1565	A21	25	0.0060	FALSE
Mbr-7	*Mbr-10b*	18.07705	16	0.3194	0.3194	A26	0.1598	A15	26	0.0062	FALSE
Mbr-8	*Mbr-10b*	33.22062	16	0.0069	0.0069	A27	0.1688	A36	27	0.0064	FALSE
Mbr-10a	*Mbr-10b*	∞	16	0.0000	0.0000	A28	0.2142	A8	28	0.0067	FALSE
Mbr-1	*UVC-807*	23.65814	16	0.0972	0.0972	A29	0.2595	A5	29	0.0069	FALSE
Mbr-3	*UVC-807*	27.0211	16	0.0412	0.0412	A30	0.2890	A35	30	0.0071	FALSE
Mbr-4	*UVC-807*	15.98205	16	0.4542	0.4542	A31	0.3194	A26	31	0.0074	FALSE
Mbr-5	*UVC-807*	13.75233	16	0.6172	0.6172	A32	0.3337	A4	32	0.0076	FALSE
Mbr-7	*UVC-807*	7.275896	16	0.9676	0.9676	A33	0.3399	A12	33	0.0079	FALSE
Mbr-8	*UVC-807*	30.41123	16	0.0160	0.0160	A34	0.4542	A31	34	0.0081	FALSE
Mbr-10a	*UVC-807*	18.6175	16	0.2890	0.2890	A35	0.5016	A9	35	0.0083	FALSE
Mbr-10b	*UVC-807*	21.25832	16	0.1688	0.1688	A36	0.5779	A7	36	0.0086	FALSE
Mbr-1	*UVC-817*	33.42397	16	0.0065	0.0065	A37	0.6172	A32	37	0.0088	FALSE
Mbr-3	*UVC-817*	∞	16	0.0000	0.0000	A38	0.7623	A14	38	0.0090	FALSE
Mbr-4	*UVC-817*	∞	16	0.0000	0.0000	A39	0.8698	A20	39	0.0093	FALSE
Mbr-5	*UVC-817*	9.269611	16	0.9019	0.9019	A40	0.9019	A40	40	0.0095	FALSE
Mbr-7	*UVC-817*	6.716254	16	0.9784	0.9784	A41	0.9676	A33	41	0.0098	FALSE
Mbr-8	*UVC-817*	35.0622	16	0.0039	0.0039	A42	0.9784	A41	42	0.0100	FALSE

**Blue column denote the significance before FDR correction. Before FDR procedure was applied, there were 11highly significant p-values ($p<0.01$) out of the 42 tested. After FDR correction, 12 p-values showed highly significant (denote by pink column), indicating that the significance level have been adjusted.*