

Supplementary information 1

List of ponds sampled. Genetic samples sometime included juveniles or unsexed adults not listed under males or females. H_E = expected heterozygosity.

Pond	Country	Latitude	Longitude	Males > 55mm (LL>50)					n_m	Females > 55mm (LL>50)					n_f	Genetic samples			
				LL	LLR	LR	LRR	RRR		LL	LLR	LR	LRR	RRR		n_L	H_{EL}	n_R	H_{ER}
All-hybrid populations																			
1a	Denmark, Jutland	56°02'54"	09°40'29"	0	2	1	0	0	3	0	3	8	5	0	16	24	0.085	24	0.102
1b	Denmark, Jutland	56°02'48"	09°39'28"	0	7	8	0	0	15	0	2	8	5	0	15	39	0.132	35	0.100
2a	Denmark, Jutland	56°09'03"	10°31'57"	0	3	12	0	0	15	0	2	12	1	0	15	35	0.003	31	0.028
2b	Denmark, Jutland	56°07'34"	10°32'28"	0	11	4	0	0	15	0	3	7	5	0	15	44	0.000	35	0.022
3a	Denmark, Jutland	54°56'45"	08°50'47"	0	4	4	7	0	15	0	1	9	5	0	15	35	0.051	42	0.028
3b	Denmark, Jutland	54°57'46"	08°49'27"	0	5	7	1	0	13	0	2	15	1	0	18	38	0.101	33	0.087
4a	Denmark, Jutland	54°55'42"	09°35'06"	0	13	7	1	0	21	0	4	6	4	0	14	52	0.087	40	0.016
4b	Denmark, Jutland	54°55'38"	09°33'60"	0	9	7	0	0	16	0	4	8	2	0	14	43	0.105	32	0.028
4z	Denmark, Jutland	54°51'54"	09°23'42"	0	12	2	0	0	14	0	4	5	0	0	9	39	0.090	23	0.000
5a	Denmark, Romsø	55°30'56"	10°47'08"	0	8	0	0	0	8	0	6	13	3	0	22	44	0.161	33	0.254
5b	Denmark, Romsø	55°30'38"	10°47'44"	0	8	2	0	0	10	0	3	6	11	0	20	41	0.160	41	0.189
6	Denmark, Funen	55°22'41"	09°55'59"	0	0	2	0	0	2	0	0	3	20	0	23	25	0.083	45	0.131
7a	Denmark, Funen	55°06'10"	10°30'04"	0	10	8	0	0	18	0	7	5	0	0	12	47	0.124	30	0.230
7b	Denmark, Funen	55°07'09"	10°30'30"	0	6	13	0	0	19	0	3	3	4	0	10	38	0.161	33	0.182
8a	Denmark, Lyø	55°02'50"	10°09'15"	0	0	7	4	0	11	0	0	3	16	0	19	30	0.175	50	0.173
8b	Denmark, Lyø	55°02'38"	10°09'25"	0	0	14	0	0	14	0	0	6	10	0	16	30	0.139	40	0.164
9a	Denmark, Avernakø	55°01'26"	10°15'09"	0	10	4	0	0	14	0	3	14	0	0	17	44	0.241	31	0.148
9b	Denmark, Avernakø	55°00'44"	10°19'56"	0	3	1	0	0	4	0	3	5	4	0	12	22	0.176	20	0.168
10a	Denmark, Hjortø	54°57'52"	10°29'30"	0	9	2	0	0	11	0	2	12	4	0	18	40	0.099	33	0.092
10b	Denmark, Hjortø	54°57'43"	10°29'09"	0	4	7	0	0	11	0	1	13	5	0	19	35	0.083	35	0.128
11a	Denmark, Ærø	54°52'18"	10°20'14"	0	7	3	1	0	11	0	4	13	2	0	19	41	0.218	33	0.275
11b	Denmark, Ærø	54°51'29"	10°23'33"	0	2	6	0	0	8	0	1	15	6	0	22	33	0.230	36	0.268
12a	Denmark, Langeland	54°50'33"	10°44'60"	0	9	3	3	0	15	0	2	6	7	0	15	41	0.161	40	0.247
12b	Denmark, Langeland	54°50'46"	10°45'05"	0	14	2	0	0	16	0	1	12	1	0	14	45	0.161	31	0.269
13	Denmark, Sealand	56°05'21"	12°08'38"	0	15	2	0	0	17	0	0	1	0	0	1	33	0.159	18	0.000
14a	Denmark, Sealand	55°58'53"	12°12'15"	0	5	2	2	0	9	0	0	2	3	0	5	19	0.154	19	0.115
14b	Denmark, Sealand	55°58'09"	12°13'42"	0	0	1	5	0	6	0	0	4	2	0	6	12	0.077	19	0.188
14c	Denmark, Sealand	55°58'03"	12°13'47"	0	2	2	17	0	21	0	0	0	6	0	6	29	0.066	50	0.193
15a	Denmark, Sealand	55°50'22"	12°14'26"	0	4	3	0	0	7	0	0	6	7	0	13	24	0.094	27	0.104
15b	Denmark, Sealand	55°50'11"	12°12'44"	0	9	3	0	0	12	0	0	17	2	0	19	40	0.040	33	0.065
16a	Denmark, Sealand	55°47'60"	12°32'55"	0	9	2	0	0	11	0	0	8	1	0	9	29	0.086	21	0.104
16b	Denmark, Sealand	55°48'04"	12°34'42"	0	19	0	0	0	19	0	0	0	0	0	0	38	0.095	19	0.053
17a	Denmark, Sealand	55°37'05"	12°27'17"	0	0	1	0	0	1	0	0	4	16	0	20	21	0.171	37	0.040
17b	Denmark, Sealand	55°37'00"	12°29'32"	0	20	1	2	0	23	0	1	2	4	0	7	51	0.109	36	0.038
18a	Denmark, Sealand	55°33'13"	11°53'47"	0	9	5	1	0	15	0	2	12	0	0	14	40	0.088	30	0.196
18b	Denmark, Sealand	55°33'14"	11°53'06"	0	5	2	0	0	7	0	2	6	1	0	9	23	0.076	17	0.209
18c	Denmark, Sealand	55°33'19"	11°52'50"	0	5	6	0	0	11	0	0	5	0	0	5	21	0.096	16	0.195
19a	Denmark, Sealand	55°17'23"	11°50'18"	0	9	1	0	0	10	0	4	4	9	0	17	40	0.146	36	0.309
19b	Denmark, Sealand	55°18'53"	11°41'31"	0	0	3	12	0	15	0	0	7	8	0	15	30	0.095	50	0.256
20a	Denmark, Sealand	55°00'31"	12°00'17"	0	4	1	1	0	6	0	1	14	6	0	21	32	0.073	34	0.182
20b	Denmark, Sealand	55°00'15"	12°01'12"	0	6	7	2	0	15	0	0	14	1	0	15	36	0.102	33	0.212
21a	Denmark, Agersø	55°13'29"	11°11'12"	0	4	6	0	0	10	0	0	5	3	0	8	22	0.214	21	0.344
21b	Denmark, Agersø	55°13'34"	11°10'46"	0	16	3	0	0	19	0	5	9	4	0	18	58	0.202	41	0.314
22a	Denmark, Enø	55°10'06"	11°40'06"	0	12	1	0	0	13	0	1	5	6	0	12	38	0.152	31	0.147
22b	Denmark, Enø	55°09'55"	11°40'01"	0	12	1	0	0	13	0	1	10	1	0	12	38	0.174	26	0.106
23a	Denmark, Knudsh. Odde	55°04'37"	11°39'15"	0	16	0	0	0	16	0	6	4	0	0	10	48	0.179	26	0.027
23b	Denmark, Knudsh. Odde	55°04'38"	11°39'14"	0	14	1	0	0	15	0	12	1	2	0	15	56	0.177	32	0.044
24a	Denmark, Møn	55°03'01"	12°16'03"	0	5	9	1	0	15	0	1	9	7	0	17	38	0.098	40	0.239
24b	Denmark, Møn	55°02'05"	12°16'58"	0	7	8	0	0	15	0	1	6	8	0	15	38	0.111	38	0.251
25a	Denmark, Lolland	54°47'30"	11°00'11"	0	7	1	2	0	10	0	11	3	4	0	18	46	0.199	34	0.196
25b	Denmark, Lolland	54°46'36"	11°00'34"	0	8	6	1	0	15	0	1	7	7	0	15	39	0.202	38	0.203
25c	Denmark, Lolland	54°45'17"	11°02'45"	0	12	3	0	0	15	0	6	10	9	0	25	58	0.189	49	0.213
26a	Denmark, Lolland	54°42'47"	11°41'43"	0	19	0	0	0	19	0	1	9	1	0	11	50	0.189	31	0.127
26b	Denmark, Lolland	54°42'55"	11°39'56"	0	2	8	2	0	12	0	0	16	3	0	19	33	0.192	36	0.075
138	Sweden, Scania	55°31'32"	12°55'45"	0	1	8	1	0	10	0	1	20	25	0	46	35	0.146	42	0.081
001	Sweden, Scania	55°35'17"	13°21'15"	2	23	4	1	0	30	1	8	10	10	0	29	54	0.150	39	0.119
011	Sweden, Scania	55°34'06"	13°19'47"	0	7	22	0	0	29	0	2	27	7	0	36	42	0.186	38	0.101
014	Sweden, Scania	55°34'08"	13°19'01"	0	16	11	0	0	27	0	9	15	5	0	29	49	0.177	33	0.192
032	Sweden, Scania	55°34'03"	13°12'53"	0	14	23	0	0	37	0	10	23	13	0	46	89	0.161	76	0.334
032A	Sweden, Scania	55°34'27"	13°13'03"	0	5	9	0	0	14	0	11	17	10	0	38	33	0.172	28	0.319
089	Sweden, Scania	55°36'34"	13°23'19"	0	4	5	9	0	18	0	2	10	33	0	45	39	0.173	61	0.101
102	Sweden, Scania	55°32'51"	13°17'13"	0	17	7	0	0	24	0	5	22	5	0	32	49	0.214	34	0.296
108	Sweden, Scania	55°33'09"	13°16'08"	0	8	12	1	0	21	0	4	18	7	0	29	28	0.167	25	0.248
111	Sweden, Scania	55°32'06"	13°12'33"	1	10	34	1	0	46	0	4	22	6	0	32	72	0.163	63	0.336
126	Sweden, Scania	55°33'59"	13°14'12"	0	6	10	0	0	16	0	6	13	22	0	41	36	0.178	40	0.299
134	Sweden, Scania	55°33'03"	13°21'22"	0	3	16	0	0	19	0	5	29	1	0	35	40	0.172	36	0.157

Pond	Country	Latitude	Longitude	Males > 55mm (LL>50)					Females > 55mm (LL>50)					Genetic samples					
				LL	LLR	LR	LRR	RR	n _m	LL	LLR	LR	LRR	RR	n _f	n _L	H _E L	n _R	H _E R
Pr	Germany Coast, continent	54°14'50"	10°11'25"	0	2	5	0	0	7	0	0	3	0	0	3	-	-	-	-
Fe11	Germany Coast, Fehmarn	54°31'16"	11°03'12"	0	8	0	0	0	8	0	2	14	0	0	16	-	-	-	-
Fe15	Germany Coast, Fehmarn	54°29'46"	11°08'37"	0	15	1	0	0	16	0	1	7	0	0	8	-	-	-	-
Fe16	Germany Coast, Fehmarn	54°29'45"	11°08'51"	0	14	0	0	0	14	0	1	8	0	0	9	-	-	-	-
Fe21	Germany Coast, Fehmarn	54°29'52"	11°08'45"	0	14	1	1	0	16	0	2	4	0	0	6	-	-	-	-
Fe70	Germany Coast, Fehmarn	54°25'35"	11°06'38"	0	13	2	0	0	15	0	7	8	0	0	15	-	-	-	-
Kl	Germany Coast, continent	53°59'29"	11°00'47"	0	7	2	2	0	11	0	1	9	6	0	16	-	-	-	-
Han7	Germany Coast, continent	54°02'27"	11°54'41"	0	13	0	0	0	13	0	3	1	0	0	4	-	-	-	-
Han10	Germany Coast, continent	54°02'44"	11°53'58"	0	9	2	0	0	11	0	5	2	0	0	7	-	-	-	-
Gr1	Germany Coast, continent	53°45'40"	12°55'49"	0	3	3	0	0	6	0	5	6	0	0	11	-	-	-	-
Gr11	Germany Coast, continent	53°41'36"	12°51'11"	0	7	0	3	0	10	0	1	0	3	0	4	-	-	-	-
Ru11	Germany Coast, Rügen	54°25'02"	13°23'49"	0	17	0	0	0	17	1*	1	2	0	0	4	-	-	-	-
Ru20	Germany Coast, Rügen	54°22'48"	13°24'52"	0	5	0	0	0	5	0	1	9	0	0	10	-	-	-	-
Ru43	Germany Coast, Rügen	54°21'25"	13°26'01"	0	3	2	7	0	12	0	0	6	6	0	12	-	-	-	-
Ru54	Germany Coast, Rügen	54°37'15"	13°22'21"	0	9	3	1	0	13	0	4	6	3	0	13	-	-	-	-
Ru74	Germany Coast, Rügen	54°16'33"	13°42'49"	0	27	0	0	0	27	0	6	2	0	0	8	-	-	-	-
UsZ	Germany Coast, Usedom	53°52'45"	14°07'48"	0	10	1	0	0	11	0	0	0	0	0	0	-	-	-	-
Us1	Germany Coast, Usedom	53°53'51"	14°03'55"	0	6	0	0	0	6	0	0	2	2	0	4	-	-	-	-
Ro4	Germany Coast, continent	53°34'26"	13°46'04"	1	5	0	0	0	6	0	8	3	3	0	14	-	-	-	-
Ro5	Germany Coast, continent	53°34'19"	13°45'38"	0	9	5	0	0	14	0	2	7	1	0	10	-	-	-	-
Do3	Germany Inland, continent	52°49'44"	09°16'18"	0	11	8	0	0	19	0	10	6	1	0	17	57	0.271	37	0.276
Do18	Germany Inland, continent	52°53'47"	09°16'26"	0	0	4	2	0	6	0	0	9	2	0	11	17	0.223	21	0.399
St	Germany Inland, continent	52°49'44"	09°21'27"	0	1	3	1	0	5	0	0	3	4	0	7	13	0.289	17	0.521
Hee	Germany Inland, continent	52°43'39"	09°17'02"	1	7	3	0	0	11	0	1	0	0	0	1	21	0.305	11	0.409
Ei	Germany Inland, continent	52°43'54"	09°36'45"	0	15	3	0	0	18	0	9	7	2	0	18	60	0.339	38	0.491
Sc	Germany Inland, continent	52°31'60"	09°19'47"	0	1	13	0	0	14	0	0	6	3	0	9	24	0.306	26	0.206
Eb	Germany Inland, continent	53°03'20"	10°27'14"	0	1	7	1	0	9	0	0	11	7	0	18	28	0.351	35	0.307
Da	Germany Inland, continent	53°29'17"	11°51'44"	0	1	2	11	0	14	0	0	1	6	0	7	22	0.281	38	0.303
Sh	Germany Inland, continent	52°54'05"	12°19'21"	0	4	4	2	0	10	0	2	4	4	0	10	26	0.314	26	0.393
Other breeding systems																			
Po	Germany Inland, continent	52°28'24"	09°28'28"	1	1	3	0	3	8	1	0	0	0	5	6	9	0.186	20	0.514
Ha2	Germany Inland, continent	52°15'23"	11°13'04"	0	0	3	2	0	5	0	0	0	3	1*	3	8	0.269	15	0.460
Ha6	Germany Inland, continent	52°16'40"	11°15'15"	4	2	3	0	0	9	1	1	3	1	0	6	23	0.313	11	0.468
Her	Germany Inland, continent	51°37'38"	10°21'14"	2	0	7	0	15	24	0	0	3	0	0	3	14	0.492	40	0.370
Bo3+4	Bornholm (Denmark)	55°08'39"	15°03'42"	0	0	10	3	3	16	0	0	0	0	6	6	-	-	-	-
Bo11	Bornholm (Denmark)	55°01'15"	15°01'15"	0	6	3	25	0	34	0	1	0	10	0	11	-	-	-	-
Bo12	Bornholm (Denmark)	55°03'25"	15°00'15"	0	3	0	14	2	19	0	0	0	0	0	0	-	-	-	-
Bo14	Bornholm (Denmark)	55°07'23"	15°09'10"	0	6	24	5	0	35	0	0	4	2	0	6	-	-	-	-
EE-NE	Baltic states, Estonia	59°05'14"	23°31'60"	19*	0	0	0	0	19	Sex and length not recorded for Baltic frogs.					38	0.037	0	-	
EE-L	Baltic states, Estonia	58°25'42"	26°19'08"	27*	0	0	0	0	27						-	-	-	-	
EE-P	Baltic states, Estonia	58°21'50"	24°32'41"	35*	0	3*	0	0	38						-	-	-	-	
EE-T	Baltic states, Estonia	58°08'09"	24°31'21"	41*	0	0	0	0	41						82	0.322	0	-	
EE-H	Baltic states, Estonia	58°05'16"	24°29'39"	31*	0	5*	0	0	36						67	0.233	5	-	
LV-P	Baltic states, Latvia	57°33'13"	24°44'52"	13*	0	9*	0	0	22						-	-	-	-	
LV-A	Baltic states, Latvia	57°31'05"	24°56'38"	38*	0	0	0	0	38						76	0.364	0	-	
LV-S	Baltic states, Latvia	57°19'41"	22°15'22"	27*	0	6*	0	0	33						-	-	-	-	
LV-R	Baltic states, Latvia	57°00'33"	23°10'54"	36*	0	4*	0	0	40						76	0.380	4	-	
LV-J	Baltic states, Latvia	56°59'37"	23°55'22"	1*	0	0	0	14*	15						-	-	-	-	
LV-B	Baltic states, Latvia	56°22'52"	24°10'06"	36*	0	5*	0	0	41	77	0.288	5	-						
LT-G	Baltic states, Lithuania	55°19'04"	26°00'53"	16*	0	4*	0	0	20	-	-	-	-						
LT-K	Baltic states, Lithuania	54°47'49"	24°15'05"	4*	0	3*	0	20*	27	11	0.374	43	0.615						
LT-D	Baltic states, Lithuania	54°42'49"	24°05'54"	0	0	19*	0	10*	29	-	-	-	-						
LT-BV	Baltic states, Lithuania	54°28'44"	25°07'59"	16*	0	16*	0	1*	33	-	-	-	-						

* Sex unknown