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付表 6.1～4.　産卵雌のマイクロサテライト領域の遺伝子型

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付表1.1. 孵化幼体の形態

個体番号	産卵巣	採取日	weight(g)	SCL(mm)	SCW(mm)	BD(mm)	HL(mm)	HW(mm)	NSW(mm)	FLL(mm)	FLW(mm)	HLL(mm)	HLW(mm)
0301	0302	–	17.2	44.0	33.2	20.4	19.0	15.3	9.5	30.7	12.1	18.7	12.1
CCKN-130	0303	2003.08.13	18.4	43.7	34.5	17.0	19.5	15.5	9.1	28.0	10.8	20.8	11.5
CCKN-131	0303	2003.08.13	18.9	41.8	31.5	19.2	18.8	15.2	9.0	30.8	12.4	19.3	11.6
CCKN-132	0303	2003.08.13	18.3	42.9	33.3	22.1	20.2	15.5	9.1	31.5	12.9	21.6	12.4
CCKN-134	0305	2003.08.20	17.1	40.2	31.4	22.7	19.4	14.9	10.5	29.5	11.9	20.3	12.8
CCKN-135	0305	2003.08.20	18.0	43.4	35.3	18.7	19.4	14.8	10.1	31.2	11.9	19.1	13.0
CCKN-136	0305	2003.08.20	15.8	40.5	33.0	20.7	18.3	14.4	8.6	29.7	11.9	19.6	12.4
CCKN-137	0305	2003.08.20	18.0	43.9	35.8	19.9	19.2	15.2	9.5	33.4	11.5	19.5	12.0
CCKN-138	0305	2003.08.20	17.8	43.6	35.2	18.7	19.2	15.4	9.6	34.8	12.8	18.3	13.8
CCKN-139	0305	2003.08.21	17.9	44.4	34.6	17.8	19.3	14.9	9.5	33.3	12.0	20.1	13.5
CCKN-140	0305	2003.08.21	15.7	40.4	30.5	18.9	16.9	13.9	8.3	30.8	11.8	17.8	12.8
CCKN-141	0305	2003.08.21	16.7	40.5	32.5	19.6	18.7	14.5	8.8	30.6	11.5	18.1	11.7
CCKN-142	0305	2003.08.21	17.5	43.2	35.2	19.6	19.5	14.8	9.1	31.0	12.1	17.4	13.8
CCKN-143	0305	2003.08.21	17.8	40.9	34.1	19.2	19.0	15.0	9.6	31.3	12.7	19.9	13.5
CCKN-144	0305	2003.08.21	15.9	41.7	32.8	18.2	17.7	14.3	9.3	30.8	12.3	18.6	13.2
CCKN-145	0305	2003.08.21	16.8	42.0	33.2	19.0	19.4	14.7	8.1	33.2	12.4	20.2	13.0
CCKN-146	0305	2003.08.21	17.2	41.8	33.0	19.4	18.7	14.8	11.0	30.3	11.3	19.1	13.0
CCKN-147	0305	2003.08.21	17.2	42.7	35.3	19.6	19.3	14.9	10.9	31.6	12.3	20.5	12.3
CCKN-148	0305	2003.08.21	16.1	39.9	30.1	21.3	18.6	14.2	9.1	30.9	11.7	17.8	11.7
CCKN-149	0305	2003.08.21	17.7	43.1	34.3	18.2	18.5	15.0	9.4	30.9	12.5	18.8	12.1
CCKN-150	0305	2003.08.21	18.2	43.0	33.5	18.7	18.6	15.3	9.2	33.4	12.7	21.0	13.7
CCKN-151	0305	2003.08.21	18.2	44.3	33.4	18.2	19.6	15.4	10.2	33.3	12.1	18.7	13.9
CCKN-152	0305	2003.08.21	16.5	41.7	32.2	18.4	18.9	14.7	8.2	33.0	12.1	18.2	12.3
CCKN-153	0305	2003.08.22	16.5	39.8	32.6	19.5	18.8	14.4	10.3	31.3	11.7	19.0	12.4
CCKN-154	0305	2003.08.22	15.3	40.3	33.3	18.6	18.4	14.8	9.4	30.5	12.3	19.6	12.3
CCKN-168	0306	2003.08.28	16.8	42.1	34.9	17.9	19.7	15.3	10.1	32.2	12.0	17.8	12.5
CCKN-169	0306	2003.08.29	16.6	38.0	34.0	18.1	19.5	15.1	8.6	32.8	11.3	20.3	12.8
CCKN-155	0307	2003.08.23	16.9	41.6	33.3	17.9	18.3	14.1	9.5	32.7	12.2	19.8	13.2
CCKN-156	0307	2003.08.23	19.2	40.8	34.4	19.4	19.6	14.8	9.4	33.9	12.9	20.7	13.9
CCKN-157	0307	2003.08.23	18.7	43.6	35.0	19.3	19.1	15.0	9.7	35.0	12.0	20.2	13.8
CCKN-158	0307	2003.08.23	18.0	42.7	34.7	18.9	19.0	14.8	9.7	33.6	11.7	19.5	13.8
CCKN-159	0307	2003.08.23	18.9	44.2	34.4	19.6	18.9	14.8	9.2	35.4	13.2	19.4	13.1
CCKN-160	0307	2003.08.23	17.8	40.6	34.0	19.0	18.5	15.0	9.5	33.0	11.2	20.0	11.9
CCKN-161	0307	2003.08.23	17.3	42.4	34.1	18.2	19.3	14.7	9.0	33.6	12.5	20.5	14.0
CCKN-162	0307	2003.08.23	18.8	42.7	35.3	19.7	19.3	14.6	9.3	33.4	11.8	20.7	13.5
CCKN-163	0307	2003.08.24	17.2	43.0	33.7	17.1	18.6	14.9	9.7	33.5	11.7	20.5	12.5
CCKN-164	0307	2003.08.24	18.2	41.5	34.8	19.2	18.7	15.0	9.3	32.7	12.3	20.0	15.0
CCKN-165	0307	2003.08.24	18.1	42.6	35.7	18.6	19.2	14.8	9.5	32.7	12.4	19.6	12.8
CCKN-166	0307	2003.08.24	18.5	41.8	34.0	18.9	18.8	14.7	9.0	32.5	12.1	21.5	14.4
CCKN-167	0307	2003.08.25	15.4	40.8	30.6	16.6	17.7	13.6	8.4	30.5	10.9	18.7	11.6
CCKN-170	0310	2003.08.30	21.8	44.1	36.2	20.0	19.9	16.1	9.8	34.6	13.6	21.0	13.5
CCKN-171	0310	2003.08.30	20.8	44.1	35.8	19.8	19.7	15.8	9.7	35.4	13.2	20.7	14.4
CCKN-172	0310	2003.08.30	21.7	46.7	37.1	19.6	21.6	15.9	10.4	37.2	13.2	21.2	12.9
CCKN-173	0310	2003.08.30	18.1	42.0	33.7	19.6	19.7	15.4	9.3	30.4	12.1	20.1	13.5
CCKN-174	0310	2003.08.30	20.0	43.8	35.7	19.8	20.1	16.1	9.2	34.7	12.9	21.5	13.3
CCKN-175	0310	2003.08.30	20.9	43.5	36.4	18.9	19.8	15.7	10.4	34.9	13.1	21.7	13.2
CCKN-176	0310	2003.08.30	20.5	43.6	36.0	19.6	20.1	15.8	9.6	33.8	12.6	20.0	14.1
CCKN-177	0310	2003.08.30	21.2	42.4	35.2	20.1	19.7	16.2	9.9	32.2	13.0	20.4	12.7
CCKN-178	0310	2003.08.30	20.5	44.1	36.9	20.1	20.0	15.9	9.8	35.1	12.4	22.0	13.9
CCKN-179	0310	2003.08.30	20.0	45.1	34.0	20.2	20.0	15.9	9.4	33.5	13.0	20.8	13.3
CCKN-180	0310	2003.08.31	15.9	41.0	34.7	17.0	19.6	15.5	9.4	31.8	12.3	20.3	12.5
CCKN-181	0310	2003.08.31	20.1	45.0	36.4	19.7	20.1	15.7	9.6	34.1	12.1	20.8	13.1
CCKN-182	0310	2003.08.31	18.9	42.9	34.6	18.3	20.0	15.6	9.6	34.7	14.2	20.1	13.3
CCKN-183	0310	2003.08.31	20.7	43.1	36.6	19.2	19.7	15.7	9.3	35.5	12.6	20.7	14.2
CCKN-184	0310	2003.08.31	19.0	45.0	33.7	19.3	19.7	15.7	10.0	32.5	12.7	21.0	13.9
CCKN-241	0310	2003.09.01	21.3	40.8	35.8	21.2	19.1	15.5	9.8	34.9	12.9	19.9	13.0
CCKN-242	0311	2003.09.02	13.9	37.1	30.8	17.6	18.0	13.5	8.4	30.8	11.4	18.7	11.5
CCKN-243	0311	2003.09.02	13.0	38.3	32.2	16.7	18.2	13.8	8.7	31.0	12.0	18.9	11.9
CCKN-244	0311	2003.09.02	14.7	38.7	33.3	18.1	18.7	14.5	8.5	30.4	11.4	19.6	12.4
CCKN-245	0311	2003.09.02	14.5	39.6	34.0	17.2	18.5	14.2	9.0	32.1	12.0	19.8	13.2
CCKN-246	0311	2003.09.02	14.9	39.1	33.8	17.5	18.7	14.3	9.0	30.4	12.0	19.8	12.5
CCKN-247	0311	2003.09.02	14.7	38.9	34.5	16.6	18.2	13.6	8.5	31.6	11.7	19.5	12.2
CCKN-248	0311	2003.09.02	13.8	37.8	32.7	16.7	17.9	13.8	8.2	30.2	11.8	18.7	12.1
CCKN-249	0311	2003.09.02	15.8	40.4	33.9	18.0	18.8	14.4	8.8	32.1	12.1	19.6	12.1
CCKN-250	0311	2003.09.02	14.2	37.0	32.8	17.2	17.6	13.2	8.3	29.4	11.1	18.8	11.2
CCKN-251	0311	2003.09.02	13.4	37.6	32.6	17.3	17.9	13.3	8.6	25.9	11.1	18.4	11.0
CCKN-252	0311	2003.09.02	13.3	38.4	31.8	17.3	18.5	13.9	8.6	26.1	11.5	19.3	12.4
CCKN-253	0311	2003.09.02	13.6	36.8	33.1	16.1	18.5	13.8	8.2	28.2	10.9	18.7	11.5
CCKN-254	0311	2003.09.02	14.8	38.4	34.4	17.6	17.6	13.5	8.8	31.8	11.6	19.1	12.2
CCKN-255	0311	2003.09.03	12.0	35.7	30.2	16.8	17.5	13.3	7.9	25.7	8.8	16.7	9.8
CCKN-256	0311	2003.09.03	14.1	37.1	31.4	17.4	17.4	13.7	8.5	29.2	10.9	17.9	12.6
CCKN-257	0311	2003.09.04	14.4	37.7	33.9	17.1	18.1	13.9	9.7	29.9	12.0	18.2	11.5
CCKN-258	0311	2003.09.04	12.2	34.4	29.7	15.8	16.7	12.5	7.9	26.8	10.1	16.1	10.6
CCKN-259	0311	2003.09.04	13.4	36.8	30.1	16.1	17.5	12.7	7.9	28.7	10.6	18.7	12.0
CCKN-281	0315	2003.09.07	14.8	38.0	30.2	18.2	17.7	13.1	9.0	29.5	11.3	18.1	11.9
CCKN-282	0315	2003.09.07	15.1	38.4	31.2	17.0	17.8	13.4	8.9	30.0	12.0	18.4	12.4
CCKN-283	0315	2003.09.07	14.8	38.1	31.9	16.2	17.7	13.3	8.4	29.6	12.2	18.5	13.2
CCKN-284	0315	2003.09.07	14.6	38.4	30.2	16.2	17.6	13.1	9.0	28.7	11.2	17.9	12.2
CCKN-285	0315	2003.09.07	14.5	37.0	30.6	17.0	17.0	12.9	8.8	28.0	11.2	18.0	12.0
CCKN-286	0315	2003.09.07	15.1	38.3	31.7	16.0	17.0	13.3	8.3	28.8	11.8	18.0	12.0
CCKN-287	0315	2003.09.07	14.8	37.9	31.0	17.1	17.7	13.3	8.7	28.5	11.8	18.1	12.4
CCKN-288	0315	2003.09.07	14.2	37.8	31.1	16.7	17.6	13.5	8.1	29.4	11.3	17.7	11.9
CCKN-289	0315	2003.09.07	13.6	37.0	30.9	16.6	17.4	12.8	7.8	28.3	11.7	17.7	12.0
CCKN-290	0315	2003.09.09	14.2	38.6	32.3	15.9	16.9	13.0	8.5	27.8	11.8	17.7	11.4

付表1.2. 孵化幼体の形態

個体番号	産卵巣	採取日	weight(g)	SCL(mm)	SCW(mm)	BD(mm)	HL(mm)	HW(mm)	NSW(mm)	FLL(mm)	FLW(mm)	HLL(mm)	HLW(mm)
CCKN-291	0315	2003.09.09	14.2	39.6	31.0	16.6	17.3	13.4	8.5	28.6	11.1	17.7	11.4
CCKN-292	0315	2003.09.09	12.5	36.0	29.9	15.3	17.6	13.1	8.7	28.9	11.0	17.1	11.4
CCKN-293	0315	2003.09.09	13.3	36.8	31.1	17.4	17.7	13.1	8.6	27.0	11.2	17.1	11.0
CCKN-294	0315	2003.09.09	12.7	36.3	30.6	15.1	17.1	13.1	8.3	27.0	11.8	17.0	12.1
CCKN-295	0315	2003.09.09	14.4	37.6	31.9	16.2	17.9	13.4	9.0	28.8	11.1	17.3	12.1
CCKN-296	0315	2003.09.09	12.8	35.0	29.4	15.9	16.9	12.3	8.1	27.7	11.0	16.2	11.3
CCKN-297	0315	2003.09.09	12.7	35.0	29.3	15.3	16.5	12.7	7.9	27.5	11.2	17.1	11.7
CCKN-298	0315	2003.09.09	14.1	37.8	29.8	17.0	17.3	13.2	8.2	28.0	11.1	17.5	12.1
CCKN-299	0315	2003.09.11	12.5	35.3	30.4	16.2	17.0	13.2	8.1	27.6	10.9	17.1	11.7
CCKN-300	0315	2003.09.11	14.5	39.6	32.1	17.9	17.2	13.9	9.4	28.4	12.2	19.5	12.1
CCKN-301	0315	2003.09.11	15.3	39.3	33.3	18.8	17.5	14.0	9.6	30.1	11.0	17.9	12.4
CCKN-302	0315	2003.09.11	12.9	37.9	30.6	16.3	17.5	13.1	8.3	27.5	10.1	18.0	10.4
CCKN-303	0315	2003.09.11	13.5	35.9	29.6	16.5	17.5	13.0	8.4	28.7	10.6	18.2	11.5
CCKN-304	0315	2003.09.11	13.9	38.5	31.4	16.1	18.2	13.5	8.2	27.6	11.0	18.0	11.5
CCKN-305	0317	2003.09.15	16.6	40.3	34.7	19.3	17.3	14.6	10.3	29.4	12.6	18.9	12.5
CCKN-306	0317	2003.09.15	17.5	41.3	32.7	19.6	17.7	14.7	9.7	27.4	11.4	18.4	12.5
CCKN-307	0317	2003.09.15	16.2	41.5	32.8	18.6	18.6	15.2	9.0	28.6	11.9	16.5	12.2
CCKN-308	0317	2003.09.15	16.7	39.3	31.0	19.5	18.0	14.3	8.2	29.1	12.1	18.7	12.8
CCKN-309	0317	2003.09.15	18.3	41.4	34.0	17.8	19.6	14.8	9.4	30.0	12.0	19.3	12.0
CCKN-310	0317	2003.09.15	17.2	40.8	34.1	18.8	18.3	14.6	9.6	28.9	11.8	18.3	12.8
CCKN-311	0317	2003.09.15	17.0	40.7	32.0	19.0	18.4	14.6	8.6	29.7	11.8	18.8	11.4
CCKN-312	0317	2003.09.15	18.4	42.6	34.5	19.5	18.3	15.0	9.6	31.0	12.6	18.8	12.4
CCKN-313	0317	2003.09.15	16.8	40.1	32.5	18.7	17.8	15.2	8.8	29.2	12.1	17.4	11.9
CCKN-314	0317	2003.09.15	18.9	41.4	33.2	20.1	18.8	14.9	9.5	30.9	11.9	20.2	11.9
CCKN-315	0317	2003.09.15	16.7	41.2	31.3	18.3	18.1	14.7	9.4	30.1	12.1	19.0	12.1
CCKN-316	0317	2003.09.15	17.9	40.8	32.8	19.3	18.5	15.0	8.7	29.5	11.5	19.3	12.1
CCKN-317	0317	2003.09.17	15.9	41.5	33.6	17.3	18.7	14.8	9.7	28.6	11.4	18.6	12.4
CCKN-318	0317	2003.09.17	16.4	40.0	34.6	18.7	19.2	14.6	9.6	29.5	11.9	19.0	12.2
CCKN-319	0317	2003.09.18	17.8	41.7	32.9	18.6	18.1	15.3	9.9	29.9	11.9	18.8	13.4
CCKN-320	0317	2003.09.18	17.2	41.8	34.6	17.3	18.3	15.1	11.5	31.4	12.3	20.2	13.5
CCKN-321	0317	2003.09.18	16.9	41.5	35.0	17.3	19.0	15.1	10.4	32.0	12.0	20.7	13.0
CCKN-322	0317	2003.09.18	16.6	41.3	34.7	18.5	18.4	14.8	9.9	32.1	11.6	19.3	13.8
CCKN-323	0317	2003.09.18	18.0	42.6	35.1	19.0	19.8	15.0	9.9	30.2	12.6	19.8	13.4
CCKN-324	0317	2003.09.18	16.5	41.9	34.8	18.4	19.3	15.2	9.0	31.0	12.6	19.3	13.1
CCKN-325	0317	2003.09.18	17.2	41.6	34.3	18.6	19.0	15.0	9.0	29.6	11.8	19.6	13.2
CCKN-326	0317	2003.09.18	15.8	39.9	32.9	17.7	18.6	14.4	9.0	30.7	11.7	19.3	12.9
CCKN-327	0317	2003.09.18	16.8	41.8	34.8	19.1	18.6	15.1	9.2	28.6	12.3	18.9	12.9
CCKN-328	0317	2003.09.18	16.4	42.6	35.3	17.1	19.4	15.0	9.6	32.2	12.1	19.9	12.6
CCKN-329	0317	2003.09.19	17.8	43.0	35.4	18.5	19.6	14.8	9.8	32.6	12.7	19.3	13.5
CCKN-330	0317	2003.09.19	18.0	42.4	34.9	18.5	18.6	15.0	8.8	30.3	12.0	19.2	12.7
CCKN-331	0317	2003.09.19	17.0	42.2	35.2	18.2	19.1	15.0	9.3	29.4	11.5	19.6	12.5
CCKN-332	0317	2003.09.19	17.2	41.0	34.6	17.1	19.1	14.8	8.8	27.2	12.4	18.8	13.5
CCKN-333	0317	2003.09.19	18.2	41.6	36.3	17.2	18.7	14.9	10.1	30.6	11.9	19.3	12.9
CCKN-334	0317	2003.09.19	17.8	42.9	35.2	17.2	19.2	15.4	9.2	30.7	11.9	18.7	11.6
CCKN-335	0317	2003.09.19	17.2	40.4	34.6	19.2	18.7	14.9	9.3	30.6	12.9	18.7	13.2
CCKN-336	0319	2003.09.24	14.2	39.2	32.7	16.7	19.3	13.4	9.1	29.6	12.2	18.8	12.9
CCKN-337	0319	2003.09.24	13.7	38.6	32.5	15.6	17.9	13.7	9.1	30.3	13.0	18.1	14.0
CCKN-338	0319	2003.09.24	12.7	36.7	31.1	16.3	18.0	13.4	9.7	28.5	11.6	18.3	11.8
CCKN-339	0319	2003.09.24	12.6	35.6	31.5	16.2	18.0	13.3	8.8	28.8	12.0	19.1	13.2
CCKN-340	0319	2003.09.24	15.1	40.0	32.0	17.7	18.1	14.1	9.2	31.1	12.4	19.1	13.2
CCKN-341	0319	2003.09.24	13.4	38.0	31.6	16.2	18.1	14.1	9.4	30.6	12.6	19.1	13.5
CCKN-342	0319	2003.09.24	14.1	37.4	31.8	16.8	18.1	13.8	8.9	29.7	12.5	19.8	12.7
CCKN-343	0319	2003.09.24	14.2	37.9	32.2	16.8	18.5	13.7	10.1	30.1	12.1	18.7	13.6
CCKN-344	0319	2003.09.24	13.2	36.4	31.3	16.1	17.7	13.6	9.6	31.5	12.8	18.4	12.9
CCKN-345	0319	2003.09.24	12.1	36.0	31.0	16.0	17.1	13.1	8.9	29.4	11.5	17.8	12.5
CCKN-346	0319	2003.09.24	13.3	37.1	31.5	16.1	17.8	13.4	8.8	29.6	12.5	20.0	13.4
CCKN-347	0319	2003.09.24	14.4	38.3	32.3	16.8	18.5	14.0	9.4	29.7	13.0	18.5	13.8
CCKN-348	0319	2003.09.24	12.8	36.2	31.1	16.5	18.1	13.1	9.3	30.0	13.4	18.7	13.0
CCKN-349	0319	2003.09.24	13.0	35.8	32.2	16.1	17.8	13.3	8.8	31.3	11.7	19.5	13.9
CCKN-350	0319	2003.09.24	12.4	35.2	30.7	15.5	17.7	13.1	8.5	29.3	11.9	17.8	12.7
CCKN-351	0319	2003.09.24	14.2	38.5	31.1	16.6	17.9	13.7	9.5	30.6	12.4	18.6	13.8
CCKN-352	0319	2003.09.24	14.2	38.7	31.8	16.9	18.2	13.3	9.0	31.5	13.0	19.5	13.7
CCKN-353	0319	2003.09.24	12.2	35.1	31.0	15.6	17.5	13.0	8.5	28.9	12.3	17.6	13.1
CCKN-354	0319	2003.09.24	13.2	36.6	31.3	17.0	17.3	13.2	8.6	29.6	11.8	17.7	12.5
CCKN-355	0319	2003.09.24	13.0	35.9	32.0	16.6	17.8	13.4	8.6	28.3	12.0	18.5	12.7
CCKN-356	0319	2003.09.24	12.8	37.3	30.8	15.9	18.3	13.4	8.1	29.3	12.8	18.7	13.5
CCKN-357	0319	2003.09.24	14.8	38.5	32.4	17.4	18.8	13.9	9.9	31.4	12.1	18.3	14.3
CCKN-358	0319	2003.09.24	12.0	34.9	30.5	15.2	17.1	13.1	8.9	30.1	12.4	18.2	13.1
CCKN-359	0319	2003.09.24	14.1	38.7	32.0	16.3	17.9	13.9	9.2	30.4	13.4	19.5	13.2
CCKN-360	0319	2003.09.24	12.2	35.4	30.2	15.1	17.4	12.9	7.7	29.2	12.2	18.2	12.2
CCKN-505	0404	2004.08.13	12.4	38.8	28.7	16.3	–	–	–	–	–	–	–
CCKN-506	0404	2004.08.13	13.1	39.8	30.2	16.7	–	–	–	–	–	–	–
CCKN-507	0404	2004.08.13	15.0	41.2	31.1	18.5	–	–	–	–	–	–	–
CCKN-508	0404	2004.08.13	12.3	35.9	28.7	16.2	–	–	–	–	–	–	–
CCKN-509	0404	2004.08.13	12.2	37.6	29.0	16.6	–	–	–	–	–	–	–
CCKN-510	0404	2004.08.13	12.3	39.6	29.1	16.7	–	–	–	–	–	–	–
CCKN-511	0409	2004.08.22	16.0	42.7	34.4	17.5	–	–	–	–	–	–	–
CCKN-512	0409	2004.08.22	14.9	40.2	31.6	17.3	–	–	–	–	–	–	–
CCKN-513	0409	2004.08.22	14.1	39.5	30.6	16.6	–	–	–	–	–	–	–
CCKN-514	0409	2004.08.22	15.3	40.8	33.1	18.7	–	–	–	–	–	–	–
CCKN-515	0409	2004.08.22	15.1	40.2	31.5	18.2	–	–	–	–	–	–	–
CCKN-516	0411	2004.08.24	15.4	42.1	32.2	17.2	–	–	–	–	–	–	–
CCKN-517	0410	2004.08.24	18.0	43.0	34.2	19.4	–	–	–	–	–	–	–
CCKN-518	0410	2004.08.24	18.3	42.6	33.2	19.3	–	–	–	–	–	–	–

付表1.3. 孵化幼体の形態

個体番号	産卵巣	採取日	weight(g)	SCL(mm)	SCW(mm)	BD(mm)	HL(mm)	HW(mm)	NSW(mm)	FLL(mm)	FLW(mm)	HLL(mm)	HLW(mm)
CCKN-519	0415	2004.09.06	17.1	40.3	32.4	18.4	–	–	–	–	–	–	–
CCKN-520	0415	2004.09.06	15.3	39.7	33.2	16.7	–	–	–	–	–	–	–
CCKN-521	0417	2004.09.15	15.8	41.4	31.5	17.6	–	–	–	–	–	–	–
CCKN-522	0417	2004.09.15	15.9	41.9	34.0	17.0	–	–	–	–	–	–	–
CCKN-523	0417	2004.09.15	16.1	41.3	33.3	18.3	–	–	–	–	–	–	–
CCKN-524	0417	2004.09.15	15.0	40.8	31.6	17.7	–	–	–	–	–	–	–
CCKN-525	0417	2004.09.15	14.0	39.2	31.2	18.0	–	–	–	–	–	–	–
CCKN-526	0417	2004.09.15	14.1	40.0	32.1	17.1	–	–	–	–	–	–	–
CCKN-527	0417	2004.09.15	11.0	37.7	30.0	14.7	–	–	–	–	–	–	–
CCKN-528	0417	2004.09.15	11.5	38.5	29.4	16.5	–	–	–	–	–	–	–
CCKN-529	0417	2004.09.15	13.6	42.5	31.7	17.1	–	–	–	–	–	–	–
CCKN-530	0417	2004.09.15	10.8	38.5	29.3	15.7	–	–	–	–	–	–	–
CCKN-531	0417	2004.09.15	10.7	38.2	31.1	15.3	–	–	–	–	–	–	–
CCKN-532	0417	2004.09.15	12.9	38.7	30.4	16.4	–	–	–	–	–	–	–
CCKN-533	0417	2004.09.15	12.9	42.3	32.6	17.3	–	–	–	–	–	–	–
CCKN-534	0417	2004.09.15	10.5	37.7	29.8	14.5	–	–	–	–	–	–	–
CCKN-535	0417	2004.09.15	12.1	41.5	31.9	15.1	–	–	–	–	–	–	–
CCKN-536	0417	2004.09.15	10.1	38.5	30.2	15.3	–	–	–	–	–	–	–
CCKN-537	0417	2004.09.15	11.5	37.1	28.8	15.0	–	–	–	–	–	–	–
CCKN-538	0417	2004.09.15	9.4	38.9	29.1	15.2	–	–	–	–	–	–	–
CCKN-539	0417	2004.09.15	11.0	38.1	30.7	15.9	–	–	–	–	–	–	–
CCKN-540	0417	2004.09.15	11.6	38.3	30.7	15.7	–	–	–	–	–	–	–
CCKN-541	0417	2004.09.15	11.1	39.1	32.2	15.9	–	–	–	–	–	–	–
CCKN-542	0417	2004.09.15	11.6	38.7	30.6	15.9	–	–	–	–	–	–	–
CCKN-543	0417	2004.09.15	12.2	40.0	33.1	16.2	–	–	–	–	–	–	–
CCKN-544	0417	2004.09.15	10.3	38.5	28.5	16.1	–	–	–	–	–	–	–
CCKN-545	0417	2004.09.15	11.5	39.0	31.2	16.0	–	–	–	–	–	–	–
CCKN-546	0417	2004.09.15	11.5	37.9	30.3	15.9	–	–	–	–	–	–	–
CCKN-547	0417	2004.09.15	14.8	42.3	33.4	15.9	–	–	–	–	–	–	–
CCKN-548	0417	2004.09.15	14.0	42.2	32.9	16.9	–	–	–	–	–	–	–
CCKN-549	0417	2004.09.15	12.7	41.4	32.0	16.6	–	–	–	–	–	–	–
CCKN-550	0417	2004.09.15	13.8	42.3	32.4	17.7	–	–	–	–	–	–	–
CCKN-551	0417	2004.09.15	13.3	41.6	32.9	16.9	–	–	–	–	–	–	–
CCKN-552	0417	2004.09.15	12.7	40.7	32.3	16.7	–	–	–	–	–	–	–
CCKN-553	0417	2004.09.15	13.1	41.7	33.5	15.8	–	–	–	–	–	–	–
CCKN-554	0417	2004.09.15	13.1	41.9	32.0	17.3	–	–	–	–	–	–	–
CCKN-555	0417	2004.09.15	10.8	38.7	31.0	16.0	–	–	–	–	–	–	–
0401	0417	2004.09.17	11.3	35.7	29.8	15.4	–	–	–	–	–	–	–
0402	0418	2004.09.19	14.9	39.9	30.3	17.7	–	–	–	–	–	–	–
0403	0418	2004.09.19	15.4	40.4	32.6	17.1	–	–	–	–	–	–	–
0404	0418	2004.09.19	17.4	42.0	33.3	17.7	–	–	–	–	–	–	–
0405	0418	2004.09.20	17.1	42.5	34.0	18.3	–	–	–	–	–	–	–
0406	0418	2004.09.20	15.7	41.5	33.8	17.6	–	–	–	–	–	–	–
0407	0418	2004.09.20	16.3	42.3	34.4	17.6	–	–	–	–	–	–	–
CCKN-556	0418	2004.09.20	14.9	39.5	32.8	16.7	–	–	–	–	–	–	–
CCKN-557	0418	2004.09.20	15.0	41.1	32.1	17.8	–	–	–	–	–	–	–
0408	0418	2004.09.20	16.2	39.9	32.2	17.3	–	–	–	–	–	–	–
0409	0418	2004.09.20	16.6	41.7	34.5	16.3	–	–	–	–	–	–	–
CCKN-558	0418	2004.09.20	14.4	39.2	30.8	17.3	–	–	–	–	–	–	–
0410	0418	2004.09.20	15.8	41.4	34.3	17.7	–	–	–	–	–	–	–
0411	0418	2004.09.19	16.1	42.1	33.8	15.8	–	–	–	–	–	–	–
CCKN-559	0418	2004.09.19	15.8	41.5	33.5	17.3	–	–	–	–	–	–	–
CCKN-560	0418	2004.09.19	15.4	41.5	34.5	17.4	–	–	–	–	–	–	–
CCKN-561	0418	2004.09.19	14.5	40.1	33.3	16.0	–	–	–	–	–	–	–
CCKN-562	0418	2004.09.19	14.9	41.8	33.2	17.4	–	–	–	–	–	–	–
CCKN-563	0418	2004.09.19	15.5	42.3	34.5	16.7	–	–	–	–	–	–	–
CCKN-564	0418	2004.09.19	15.2	41.1	33.5	16.9	–	–	–	–	–	–	–
CCKN-565	0418	2004.09.19	15.3	40.8	32.9	17.9	–	–	–	–	–	–	–
CCKN-566	0418	2004.09.19	14.8	40.9	32.5	16.6	–	–	–	–	–	–	–
CCKN-567	0418	2004.09.19	16.9	42.4	33.6	18.0	–	–	–	–	–	–	–
CCKN-568	0418	2004.09.19	15.9	41.6	34.1	16.7	–	–	–	–	–	–	–
CCKN-569	0418	2004.09.19	14.2	39.7	30.8	16.6	–	–	–	–	–	–	–
CCKN-570	0418	2004.09.19	14.4	40.3	31.1	17.8	–	–	–	–	–	–	–
CCKN-571	0420	2004.09.22	16.4	41.0	32.6	17.8	–	–	–	–	–	–	–
CCKN-572	0420	2004.09.22	15.4	37.1	29.7	18.8	–	–	–	–	–	–	–
CCKN-573	0420	2004.09.22	14.9	39.8	31.2	17.9	–	–	–	–	–	–	–
CCKN-574	0420	2004.09.22	15.8	39.8	32.7	17.7	–	–	–	–	–	–	–
CCKN-575	0421	2004.09.22	15.3	39.5	33.2	16.6	–	–	–	–	–	–	–
CCKN-576	0421	2004.09.22	15.5	40.5	33.4	16.7	–	–	–	–	–	–	–
CCKN-577	0421	2004.09.22	15.5	40.1	32.7	16.7	–	–	–	–	–	–	–
CCKN-578	0421	2004.09.22	16.1	41.0	33.2	18.9	–	–	–	–	–	–	–
0412	0421	2004.09.22	15.0	39.9	33.2	17.7	–	–	–	–	–	–	–
0413	0421	2004.09.22	15.0	40.3	33.0	17.1	–	–	–	–	–	–	–
CCKN-579	0421	2004.09.22	15.1	41.4	33.2	17.5	–	–	–	–	–	–	–
CCKN-580	0421	2004.09.22	14.7	41.3	33.1	17.4	–	–	–	–	–	–	–
CCKN-581	0421	2004.09.22	14.4	39.4	32.5	17.1	–	–	–	–	–	–	–
CCKN-582	0421	2004.09.22	15.6	42.1	32.1	18.2	–	–	–	–	–	–	–
CCKN-583	0421	2004.09.22	15.8	39.6	33.5	18.2	–	–	–	–	–	–	–
CCKN-584	0421	2004.09.22	15.1	39.5	33.3	18.0	–	–	–	–	–	–	–
CCKN-585	0421	2004.09.22	16.2	41.3	33.6	16.9	–	–	–	–	–	–	–
CCKN-586	0421	2004.09.22	15.0	40.7	32.9	17.8	–	–	–	–	–	–	–
CCKN-587	0421	2004.09.22	14.6	40.5	32.8	15.2	–	–	–	–	–	–	–
CCKN-588	0421	2004.09.22	13.6	39.5	32.9	16.0	–	–	–	–	–	–	–
CCKN-589	0421	2004.09.22	15.0	40.9	34.0	16.0	–	–	–	–	–	–	–

付表1.4. 孵化幼体の形態

個体番号	産卵巣	採取日	weight(g)	SCL(mm)	SCW(mm)	BD(mm)	HL(mm)	HW(mm)	NSW(mm)	FLL(mm)	FLW(mm)	HLL(mm)	HLW(mm)
CCKN-590	0421	2004.09.22	14.9	41.1	34.3	16.5	–	–	–	–	–	–	–
CCKN-591	0421	2004.09.22	14.6	41.0	32.4	16.6	–	–	–	–	–	–	–
CCKN-592	0421	2004.09.22	15.7	42.2	34.8	15.9	–	–	–	–	–	–	–
0414	0421	2004.09.22	16.2	41.3	33.8	17.8	–	–	–	–	–	–	–
0415	0421	2004.09.22	15.4	40.3	33.3	17.3	–	–	–	–	–	–	–
CCKN-593	0421	2004.09.22	14.3	40.9	34.1	17.1	–	–	–	–	–	–	–
CCKN-594	0421	2004.09.22	13.7	40.4	33.6	15.7	–	–	–	–	–	–	–
CCKN-595	0421	2004.09.22	13.2	39.8	32.1	16.8	–	–	–	–	–	–	–
CCKN-596	0421	2004.09.22	12.8	40.1	32.9	16.3	–	–	–	–	–	–	–
CCKN-597	0421	2004.09.22	13.8	41.2	33.3	16.5	–	–	–	–	–	–	–
0416	0421	2004.09.22	13.0	40.2	33.4	16.6	–	–	–	–	–	–	–
CCKN-598	0421	2004.09.22	14.2	41.3	33.4	17.7	–	–	–	–	–	–	–
CCKN-599	0421	2004.09.22	13.4	40.5	33.7	17.0	–	–	–	–	–	–	–
CCKN-600	0421	2004.09.22	13.8	41.7	33.8	16.4	–	–	–	–	–	–	–
CCKN-601	0421	2004.09.22	13.3	40.4	32.9	15.6	–	–	–	–	–	–	–
0417	0421	2004.09.22	15.2	41.3	33.7	17.3	–	–	–	–	–	–	–
0418	0421	2004.09.22	15.0	40.8	33.8	17.4	–	–	–	–	–	–	–
0419	0421	2004.09.22	15.5	41.8	33.6	17.8	–	–	–	–	–	–	–
0420	0421	2004.09.22	16.7	41.8	34.2	17.8	–	–	–	–	–	–	–
0421	0421	2004.09.22	15.0	41.4	32.6	18.1	–	–	–	–	–	–	–
0422	0421	2004.09.22	14.9	39.5	32.7	17.2	–	–	–	–	–	–	–
CCKN-630	0422	2004.10.01	18.3	42.3	31.9	18.8	–	–	–	–	–	–	–
CCKN-631	0422	2004.10.01	17.3	40.6	32.1	18.8	–	–	–	–	–	–	–
CCKN-632	0422	2004.10.01	17.5	40.8	33.7	17.6	–	–	–	–	–	–	–

付表2.　蒲生田における孵化状況

年	産卵巣	脱出失敗			孵化	孵化失敗												
		①死亡	②生存	計	③孵化卵殻	計	④ピップ後死亡	⑤胚>卵黄	⑥胚=卵黄	⑦胚<卵黄カメ型	⑧胚<卵黄カメ型でない	⑨胚なし	⑪異常卵	全卵数	孵化率	脱出率	脱出成功率	備考
2001	0101	–	–	1	67	2	–	–	–	–	–	–	–	69	97.1	95.7	98.5	
	0102	–	–	3	77	60	–	–	–	–	–	–	–	137	56.2	54.0	96.1	
	0103	–	–	5	5	145	–	–	–	–	–	–	–	150	3.3	0.0	0.0	
	0104	–	–	0	119	2	–	–	–	–	–	–	–	121	98.3	98.3	100.0	
	0106	–	–	5	64	72	–	–	–	–	–	–	–	136	47.1	43.4	92.2	
	0111	–	–	0	62	36	–	–	–	–	–	–	–	98	63.3	63.3	100.0	
	0113	–	–	0	65	92	–	–	–	–	–	–	–	157	41.4	41.4	100.0	
	0115	–	–	13	32	90	–	–	–	–	–	–	–	122	26.2	15.6	59.4	
	0121	–	–	3	82	50	–	–	–	–	–	–	–	132	62.1	59.8	96.3	
	0128	–	–	0	3	64	–	–	–	–	–	–	–	67	4.5	4.5	100.0	
	0129	–	–	0	50	87	–	–	–	–	–	–	–	137	36.5	36.5	100.0	
	0131	–	–	0	44	92	–	–	–	–	–	–	–	136	32.4	32.4	100.0	
	0136	–	–	0	0	98	–	–	–	–	–	–	–	98	0.0	0.0	—	
	0137	–	–	0	76	62	–	–	–	–	–	–	–	138	55.1	55.1	100.0	
	0139	–	–	0	5	24	–	–	–	–	–	–	–	29	17.2	17.2	100.0	
	0140	–	–	4	89	48	–	–	–	–	–	–	–	137	65.0	62.0	95.5	
	0141	–	–	9	70	81	–	–	–	–	–	–	–	151	46.4	40.4	87.1	
	0142	–	–	3	83	54	–	–	–	–	–	–	–	137	60.6	58.4	96.4	
	0144	–	–	3	64	37	–	–	–	–	–	–	–	101	63.4	60.4	95.3	
	0145	–	–	0	98	20	–	–	–	–	–	–	–	118	83.1	83.1	100.0	
	Total	–	–	49	1155	1216	–	–	–	–	–	–	–	2371	48.7	46.6	95.8	
2002	0201	3	2	5	117	25	9	–	–	–	–	–	–	142	82.4	78.9	95.7	
	0203	0	2	2	17	114	35	–	–	–	–	–	–	131	13.0	11.5	88.2	
	0206	0	0	0	27	11	10	–	–	–	–	–	–	38	71.1	71.1	100.0	
	0208	0	0	0	33	32	27	–	–	–	–	–	–	65	50.8	50.8	100.0	
	0210	0	1	1	58	78	12	–	–	–	–	–	–	136	42.6	41.9	98.3	
	0214	0	0	0	21	117	34	–	–	–	–	–	–	138	15.2	15.2	100.0	
	0215	0	0	0	25	10	9	–	–	–	–	–	–	35	71.4	71.4	100.0	
	0217	0	0	0	10	30	10	–	–	–	–	–	–	40	25.0	25.0	100.0	
	0218	0	0	0	107	22	5	–	–	–	–	–	–	129	82.9	82.9	100.0	
	0220	0	0	0	102	36	16	–	–	–	–	–	–	138	73.9	73.9	100.0	
	0221	0	0	0	83	50	17	–	–	–	–	–	–	133	62.4	62.4	100.0	
	0222	0	0	0	48	85	32	–	–	–	–	–	–	133	36.1	36.1	100.0	
	0223	0	0	0	88	51	28	–	–	–	–	–	–	139	63.3	63.3	100.0	
	Total	3	5	8	736	661	244	–	–	–	–	–	–	1397	52.7	52.1	98.9	
2003	0302	0	2	2	87	7	5	0	0	0	0	2	小卵1	94	92.6	90.4	97.7	
	0303	0	0	0	74	61	20	16	0	6	0	19	0	135	54.8	54.8	100.0	
	0304	0	0	0	51	15	4	0	0	0	0	11	0	66	77.3	77.3	100.0	姫路水族館採取
	0305	0	0	0	107	25	16	3	0	0	0	6	0	132	81.1	81.1	100.0	
	0306	0	1	1	84	33	3	0	0	1	0	29	0	117	71.8	70.9	98.8	
	0307	0	0	0	75	21	8	0	2	0	1	10	0	96	78.1	78.1	100.0	
	0310	0	0	0	113	34	3	0	0	0	0	31	0	147	76.9	76.9	100.0	
	0312	0	1	1	95	29	3	2	0	0	0	24	0	124	76.6	75.8	98.9	
	0314	0	0	0	0	148	0	0	0	0	0	148	小卵1	148	0.0	0.0	—	
	0317	0	0	0	131	12	3	1	0	0	1	7	0	143	91.6	91.6	100.0	
	0319	0	0	0	97	14	1	0	0	1	0	12	0	111	87.4	87.4	100.0	
	0321	0	0	0	127	16	1	0	0	0	0	15	0	143	88.8	88.8	100.0	
	0322	0	0	0	54	19	2	2	0	2	4	9	0	73	74.0	74.0	100.0	
	0323	0	0	0	65	35	13	0	0	0	2	20	小卵1	100	65.0	65.0	100.0	
	Total	0	4	4	1160	469	82	24	2	10	8	343	3	1629	71.2	71.0	99.7	
2004	0403	0	0	0	34	69	45	8	0	6	0	10	0	103	33.0	33.0	100.0	
	0405	0	0	0	19	108	64	27	0	6	5	6	0	127	15.0	15.0	100.0	
	0406	0	0	0	34	33	19	5	0	2	7	0	0	67	50.7	50.7	100.0	
	0407	1	0	1	9	104	13	1	0	2	18	70	0	113	8.0	7.1	88.9	
	0408	0	0	0	7	98	12	0	0	0	0	86	0	105	6.7	6.7	100.0	
	0409	0	0	0	18	76	7	0	0	2	2	65	0	94	19.1	19.1	100.0	姫路水族館採取
	0410	0	0	0	68	45	19	12	0	12	2	–	0	113	60.2	60.2	100.0	
	0411	0	0	0	96	12	6	0	0	0	0	6	0	108	88.9	88.9	100.0	
	0413	0	0	0	79	32	15	2	0	0	6	9	0	111	71.2	71.2	100.0	
	0415	0	0	0	82	12	7	1	0	0	1	3	0	94	87.2	87.2	100.0	
	0416	0	0	0	100	20	4	0	0	0	4	12	0	120	83.3	83.3	100.0	
	0417	0	0	0	56	58	24	8	13	4	5	4	0	114	49.1	49.1	100.0	
	0418	0	0	0	41	66	12	5	0	2	13	34	0	107	38.3	38.3	100.0	
	0420	0	0	0	74	20	4	0	0	0	2	14	0	94	78.7	78.7	100.0	
	0421	0	3	3	102	4	2	0	0	0	0	2	0	106	96.2	93.4	97.1	
	0424	0	0	0	91	14	6	0	0	0	0	8	小卵1	105	86.7	86.7	100.0	
	Total	1	3	4	910	771	259	69	13	36	65	329	1	1681	54.1	53.9	99.6	

付表 3.1.　産卵雌・孵化幼体の mtDNA 部分塩基配列

CCKN-001
·····AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAMCATGTAAATTTACCTATATTMTCTGCCGTGCCCAACAGA
ATAATATCCATAATRCCTATCTATGTATTATTGTACATCAACTYATTTMCCACTAGCATAYGATCAGTAATGTTGTCGATTAATTYGGCTTTAAACATA
AAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATRCAGGTAATAATAATGAAATGATATAGGACATAAAATTAAMCCATTATTCTCA
ACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTANCAGTTTCAG
GCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCATTCGT-CCTCTTTAAAAGG
CCTCTGGT-AAATGAGT-CTA-ACAT-A

CCKN-002
·····AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAATCSTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAMCATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGA
ATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTYGGCTTTAAACATAA
AAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATARTGAAATGATATAGGACATAAAATTAAACCATTATTCTCAAC
CATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCC
CATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCATTCGT-CCTCTTTAAAAGGCCT
CTGGT-AAATGAGT-CTA-ACAT-AA-T

CCKN-044
·····AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAA
TAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAA
AATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACC
ATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCCC
ATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACAT

CCKN-068
·····AAGCATTGGTCTTGTAAACCAAANANTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTC
CGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGA
ATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAA
AAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAAC
CATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCC
CATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAG

CCKN-069
·····AAGCATTGGTCTTGTAAACCAAANANTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTC
CGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGA
ATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAA
AAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAAC
CATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCC
CATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCA

CCKN-071
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-086
·····TGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCCGGTCCCCAAAACC
GGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAATAATATCCATAAT
ACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGGAATGTTGTCGATTAATTTGGCTTTAAACATAAAAANTATTAATTTT
ACNTAAACTGTTTTAGCTACATGACTATTATACCGGCANTA

CCKN-089
·····TATTCTAGTAGCTTAACCCCAAANNATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAA
ACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCG
TGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGG
CTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACC
ATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTAC
CAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCATTCGTTCCT
CTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-095
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-122
·····TGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCCGGTCCCCAAAACC
GGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAATAATATCCATAAT
ACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAAAATTATTAATTTT
ACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGGAATGATATAGGACATAAAATTAAACCATTATTCTCAACCATGAATATCGTC
ACAGNAATAGGTTATTTCTTAGNTCAGCTCATCACGAGAAATANGCAANCCTTGTTAGNA

付表 3.2.　産卵雌・孵化幼体の mtDNA 部分塩基配列

CCKN-123
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-126
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-127
·····AAGCATGGGTCTTGTAAACCAAAGATTCAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAA
TAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAA
AATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACC
ATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCCC
ATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCATTCGTTCCTCTTTAAAAGGCCT
CTGGTTAAATGAGTTCTATACATTAA-TTTATAACTGGGNATACGGNAGTAAA

CCKN-128
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-129
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-130
·····AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAA
TAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAA
AATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACC
ATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCNACCCTTGTTAGNAAGATACAACATTAC

CCKN-132
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-133
·····AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAA
TAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAA
AATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACC
ATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCGCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGNTTCAGGCC
CATTAAGTCATATCGNACATAACTGATCTATTCTGGCCTCTGGT

CCKN-134
·····AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAA
TAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAA
AATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACC
ATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGNA

付表 3.3.　産卵雌・孵化幼体の mtDNA 部分塩基配列

CCKN-136
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-155
----------AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAA
TAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAA
AATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACC
ATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCCC
ATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTG

CCKN-168
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACGTTTAAGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-170
----------TTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCCGGTCCCCAAAACC
GGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAATAATATCCATAAT
ACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAAAATTATTAATTTT
ACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACCATGAATATCGNC
ACAGGAATAGGTTATTTCTTAGGTCNGCTCATCACGAGAAAGAAGCAACCCTTGTTAGGAAGATANGNCATTACCNGNTTCAGGCCCNTTTA

CCKN-172
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-242
----------AAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCC
GGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAA
TAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAA
AATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACC
ATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATA

CCKN-388
----------ATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCNAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCCGG
TCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTCTCTGCCGTGCCCAACAGAATA
ATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATTAATTTGGCTTTAAACATAAAAA
TTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACCAT
GAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCCCAT
TAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCATTCGTTCCTCTTTAAAAGGCCTCT
GGTTAAATGAGTTCTATACATTAAATTTATAACCTGGCATACGGTAGTTTTA

CCKN-389
----------ATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAGGGTTCAAACCTTCATCTCCGG
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TTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACCAT
GAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCCCAT
TAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCATTCGTTCCTCTTTAAAAGGCCTCT
GGTTAAATGAGTTCTATACATTAAATTTATAACCTGGCATACGGTAGTTTTA

CCKN-390
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
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ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
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TCGTTCCTCTCTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

付表 3.4.　産卵雌・孵化幼体の mtDNA 部分塩基配列

CCKN-391
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TTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAAATTAAACCATTATTCTCAACCAT
GAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACNNGAAATAAGCAACCCTTGTTAGTAAGATACAACATTACCAGTTTCAGGCCCA
TTAAGTCATATCGTACATNNNNNATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACNNNNNNNTAGTAAAGTTCATTCGTTCCTCTTTAAAAGGCCT
C

CCKN-392
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GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
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TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-396
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TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
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ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAGCTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACACTAAATTTATAACCT

CCKN-422
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATTTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
AATTTGGCTTTAAACATAAAAATTATTAATTTTACATAAACTGTTTTAGCTACATGACTATTATACAGGTAATAATAATGAAATGATATAGGACATAAA
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AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-448
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ATTAAACCATTATTCTCAACCATGAATATCGTCACAGTAATAGGTTATTTCTTAGTTCAACTCATCACGAGAAATAAGCAACCCTTGTTAGTAAGATAC
AACATTACCAGTTTCAAGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTCCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTATATTTATAACCT

CCKN-505
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
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TCTGCCGTGCCCAACAGAATAATATCCATAATACCTATCTATGTATTATTGTACATCAACTTATTTACCACTAGCATATGATCAGTAATGTTGTCGATT
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AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-507
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AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

CCKN-630
ACTAAAACTAAAATATTCTAGTAGCTTAACCCCAAAGCATTGGTCTTGTAAACCAAAGATTGAAAACTACAACTTTCCTAGAATAATCAAAAGAGAAG
GGTTCAAACCTTCATCTCCGGTCCCCAAAACCGGAAT-CTTCCAATTAAACTACCCTTTGACGCAAAAGAAGCGCCAACATGTAAATTTACCTATATTC
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AACATTACCAGTTTCAGGCCCATTAAGTCATATCGTACATAACTGATCTATTCTGGCCTCTGGTTGTTTTTTCAGGCACATTAAGGTAGTAAAGTTCAT
TCGTTCCTCTTTAAAAGGCCTCTGGTTAAATGAGTTCTATACATTAAATTTATAACCT

付表4.　蒲生田産卵雌のマイクロサテライト領域の遺伝子型(生データ)

個体番号	標識番号	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8	
CCKN-001	29701	181.42	181.42	236.93	237.87	192.43	205.40	–	–	316.94	324.96	176.24	176.24
CCKN-126	29702	181.47	183.26	237.79	247.50	199.71	201.57	–	–	315.08	326.92	176.27	202.64
CCKN-127	29713	175.74	179.46	–	–	192.45	203.46	–	–	311.81	334.74	176.13	178.06
CCKN-128	29715	181.41	181.41	237.79	241.61	192.35	199.60	–	–	311.87	315.08	176.16	193.25
CCKN-129	29706	179.47	179.47	237.87	253.18	201.41	203.32	–	–	315.01	324.78	176.15	202.60
CCKN-388	29703	179.53	183.26	238.06	238.06	192.16	201.33	237	247	325.12	325.12	176.17	198.94
CCKN-389	29704	179.44	181.39	238.15	247.72	196.86	196.86	223	247	311.79	314.01	176.07	176.07
CCKN-390	29705	181.2	183.12	–	–	191.35	191.35	–	–	–	–	176.04	176.04
CCKN-391	29707	181.48	181.48	238.22	245.80	194.92	204.23	–	–	312.14	315.38	176.19	178.06
CCKN-392	29708	181.38	181.38	238.21	238.21	–	–	–	–	314.14	334.86	176.20	176.20

付表5.1.　孵化幼体のマイクロサテライト領域の遺伝子型(生データ)

産卵巣	個体番号	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8	
0201	CCKN-002	174	182	232	238	192	204	245.44	247.46	312.25	315.55	174	188
0201	CCKN-003	–	–	234.12	237.84	204.46	210.07	247.39	247.39	312.24	333.30	–	–
0201	CCKN-004	–	–	238.14	238.14	201.62	210.94	247.36	247.36	312.25	333.30	–	–
0201	CCKN-005	–	–	234.29	238.05	201.55	210.96	234.83	245.52	312.17	315.42	–	–
0201	CCKN-006	–	–	–	–	191.48	204.42	234.81	247.43	311.70	332.69	–	–
0201	CCKN-007	–	–	–	–	204.35	209.86	234.72	245.48	311.55	311.55	–	–
0201	CCKN-008	–	–	234.30	238.07	204.38	209.83	247.37	247.37	311.39	332.38	–	–
0201	CCKN-009	–	–	238.10	240.03	201.47	210.79	247.45	247.45	311.23	332.19	–	–
0201	CCKN-010	–	–	–	–	194.38	201.66	234.56	245.44	311.16	311.16	–	–
0201	CCKN-011	–	–	234.27	239.99	192.5	205.47	234.84	247.43	312.17	315.42	–	–
0201	CCKN-013	–	–	234.23	240.01	205.42	210.94	234.79	245.44	311.90	315.16	–	–
0201	CCKN-014	–	–	234.14	239.95	205.36	210.92	234.71	247.39	311.77	315.00	–	–
0201	CCKN-016	–	–	234.09	239.85	192.31	201.40	247.41	247.41	311.75	332.73	–	–
0203	CCKN-044	178	182	236	236	192	192	239.96	256.70	310	314	176	198
0203	CCKN-045	–	–	237.68	247.22	192.34	210.87	234.60	238.81	311.56	311.56	–	–
0203	CCKN-046	–	–	237.90	237.90	191.10	192.12	234.55	238.72	–	–	–	–
0203	CCKN-047	–	–	237.94	247.48	192.31	194.20	247.28	255.28	311.55	324.59	–	–
0203	CCKN-048	–	–	237.92	237.92	191.45	191.45	234.48	238.69	–	–	–	–
0203	CCKN-049	–	–	237.91	237.91	192.33	210.85	247.42	255.26	315.17	325.16	–	–
0203	CCKN-050	–	–	–	–	194.12	201.42	–	–	–	–	–	–
0203	CCKN-051	–	–	–	–	–	–	234.84	247.45	311.91	311.91	–	–
0203	CCKN-052	–	–	–	–	–	–	–	–	315.21	325.02	–	–
0210	CCKN-070	–	–	242	254	194.30	203.47	234.70	234.70	311.61	324.56	–	–
0210	CCKN-071	–	–	230.34	247.25	192.40	194.29	247.40	247.40	312.32	325.46	–	–
0210	CCKN-072	–	–	229.29	246.43	193.27	202.45	234.60	234.60	311.05	311.05	–	–
0210	CCKN-073	–	–	238.85	250.31	193.30	202.48	234.67	247.42	311.96	324.96	–	–
0210	CCKN-074	–	–	–	–	191.3	193.26	234.66	234.66	311.84	324.91	–	–
0210	CCKN-075	–	–	239.64	251.11	192.25	194.19	234.59	247.37	312.18	325.26	–	–
0210	CCKN-076	–	–	230.09	247.28	191.19	193.1	234.55	247.33	312.13	325.23	–	–
0210	CCKN-078	–	–	230.33	247.49	193.03	202.21	234.55	234.55	311.79	324.94	–	–
0210	CCKN-079	–	–	239.92	251.38	191.1	193.03	234.58	234.58	312	325.1	–	–
0210	CCKN-080	–	–	239.81	251.25	194.32	203.45	234.52	247.31	311.85	324.95	–	–
0210	CCKN-081	–	–	239.76	251.23	194.32	203.45	247.44	247.44	311.71	324.74	–	–
0210	CCKN-082	–	–	240.05	251.5	191.25	193.21	234.46	247.35	311.54	324.53	–	–
0210	CCKN-083	–	–	–	–	193.2	202.45	247.31	247.31	311.47	324.49	–	–
0214	CCKN-028	–	–	236	236	194.03	194.03	246.38	246.38	–	–	–	–
0214	CCKN-029	–	–	236.88	246.46	196.67	200.4	247.23	276.31	311.59	311.59	–	–
0214	CCKN-030	–	–	–	–	193.24	193.24	–	–	–	–	–	–
0214	CCKN-031	–	–	–	–	194.38	201.72	–	–	–	–	–	–
0214	CCKN-032	–	–	–	–	200.41	200.41	–	–	–	–	–	–
0214	CCKN-033	–	–	237.65	237.65	–	–	–	–	–	–	–	–
0214	CCKN-034	–	–	238.08	247.66	197.57	199.39	245.36	245.36	315.06	324.95	–	–
0214	CCKN-035	–	–	–	–	193.33	199.9	235.56	248.39	–	–	–	–
0214	CCKN-036	–	–	–	–	193.28	200.7	–	–	–	–	–	–
0214	CCKN-037	–	–	236.96	246.54	191.48	200.60	–	–	314.28	314.28	–	–
0214	CCKN-038	–	–	237.03	240.76	200.48	201.45	–	–	315.45	315.45	–	–
0214	CCKN-039	–	–	–	–	194.29	201.75	–	–	–	–	–	–
0214	CCKN-040	–	–	–	–	196.86	196.86	–	–	–	–	–	–
0215	CCKN-069	–	–	–	–	193.38	202.61	247.44	247.44	–	–	–	–
0220	CCKN-017	–	–	236	238	191.40	200.58	247.46	247.46	311.67	332.62	–	–
0220	CCKN-018	–	–	–	–	191.33	196.81	–	–	311.66	311.66	–	–
0220	CCKN-019	–	–	233.15	238.92	201.38	210.72	245.52	247.49	311.42	311.42	–	–
0220	CCKN-020	–	–	–	–	205.19	210.78	–	–	311.30	311.30	–	–
0220	CCKN-021	–	–	237.85	237.85	201.45	210.83	234.55	245.40	312.02	315.28	–	–
0220	CCKN-022	–	–	233.02	238.67	191.42	200.48	234.60	245.49	311.80	315.09	–	–
0220	CCKN-023	–	–	237.86	237.86	192.31	205.27	234.55	245.32	311.64	332.54	–	–
0220	CCKN-024	–	–	–	–	–	–	244.29	246.39	–	–	–	–
0220	CCKN-025	–	–	–	–	–	–	246.36	246.36	–	–	–	–
0220	CCKN-026	–	–	214.13	237.94	193.38	200.60	244.32	246.38	–	–	–	–
0221	CCKN-086	178.33	182.15	241.59	247.41	199.60	201.50	243.38	245.48	312.34	312.34	176.17	176.17
0221	CCKN-087	178.27	180.14	237.76	237.76	197.68	199.50	276.15	278.27	312.16	312.16	174.15	195.19
0221	CCKN-088	178.35	180.20	236.76	237.77	199.60	201.41	243.42	245.44	310.29	323.59	174.29	174.29
0221	CCKN-089	183.32	183.32	241.86	247.60	200.68	201.65	243.41	245.55	310.52	323.95	174.24	195.29
0221	CCKN-090	–	–	–	–	196.57	198.39	–	–	311.85	325.05	–	–
0221	CCKN-091	–	–	238.07	247.63	197.75	199.59	243.35	243.35	311.76	324.89	–	–
0222	CCKN-092	178.33	182.06	236	250	197.80	205.26	224.38	247.44	326.82	334.74	–	–
0222	CCKN-094	180.17	182.13	237.00	237.98	200.59	204.41	224.33	234.74	314.96	324.83	202.62	202.62
0222	CCKN-095	–	–	236.79	250.15	196.92	204.36	224.37	224.37	–	–	–	–

付表5.2. 孵化幼体のマイクロサテライト領域の遺伝子型(生データ)

産卵巣	個体番号	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8	
0222	CCKN-096	178.37	180.21	241.63	251.33	197.79	205.28	238.83	247.43	323.52	333.64	170.45	200.89
0222	CCKN-097	–	–	237.69	251.11	197.73	201.45	224.28	247.33	324.45	326.51	–	–
0222	CCKN-098	–	–	–	–	196.68	200.45	–	–	–	–	–	–
0222	CCKN-099	–	–	–	–	196.72	204.30	224.25	247.37	314.54	324.42	–	–
0222	CCKN-100	–	–	–	–	192.23	205.23	224.13	247.25	324.18	324.18	–	–
0223	CCKN-122	–	–	232	238	201.28	210.68	235.39	246.35	–	–	–	–
0223	CCKN-123	–	–	234.12	237.99	205.14	210.67	235.67	248.36	–	–	–	–
0223	CCKN-125	–	–	232.96	236.79	192.14	205.14	247.48	247.48	311.98	315.23	–	–
0302	CCKN-133	–	–	236	246	–	–	235	247	310	310	–	–
0303	CCKN-130	–	–	238	246	–	–	233	247	310	324	–	–
0303	CCKN-131	–	–	236	238	–	–	233	247	310	324	–	–
0303	CCKN-132	–	–	238	246	–	–	233	247	310	314	–	–
0303	CCKN-218	–	–	236	238	191	205	233	247	310	314	–	–
0303	CCKN-219	–	–	236	238	–	–	235	247	310	324	–	–
0303	CCKN-220	–	–	238	246	–	–	–	–	–	–	–	–
0303	CCKN-221	–	–	238	246	–	–	233	247	310	324	–	–
0303	CCKN-222	–	–	238	246	–	–	247	247	310	314	–	–
0303	CCKN-223	–	–	236	238	–	–	233	247	310	324	–	–
0303	CCKN-224	–	–	238	246	–	–	247	247	310	324	–	–
0303	CCKN-225	–	–	–	–	201	201	233	247	310	310	–	–
0303	CCKN-226	–	–	238	246	201	203	247	247	310	322	–	–
0303	CCKN-228	–	–	236	238	–	–	247	247	310	314	–	–
0303	CCKN-229	–	–	236	238	–	–	247	247	310	324	–	–
0303	CCKN-230	–	–	238	246	–	–	247	247	310	314	–	–
0303	CCKN-231	–	–	236	238	–	–	247	247	310	324	–	–
0303	CCKN-232	–	–	238	246	–	–	247	247	310	324	–	–
0303	CCKN-233	–	–	236	238	–	–	247	247	310	314	–	–
0303	CCKN-234	–	–	238	246	201	203	247	247	310	314	–	–
0303	CCKN-235	–	–	236	238	–	–	–	–	–	–	–	–
0303	CCKN-237	–	–	238	246	–	–	235	247	310	324	–	–
0304	CCKN-238	–	–	238	244	–	–	247	247	314	324	–	–
0305	CCKN-134	–	–	238	244	–	–	247	247	314	324	–	–
0305	CCKN-135	–	–	236	244	–	–	247	247	314	324	–	–
0305	CCKN-136	–	–	238	244	–	–	239	247	324	324	–	–
0305	CCKN-138	–	–	236	238	–	–	247	247	324	324	–	–
0305	CCKN-139	–	–	236	236	–	–	247	247	324	324	–	–
0305	CCKN-140	–	–	236	238	–	–	247	247	324	324	–	–
0305	CCKN-141	–	–	236	238	–	–	239	247	314	324	–	–
0305	CCKN-142	–	–	236	238	–	–	239	247	314	324	–	–
0305	CCKN-143	–	–	–	–	–	–	239	247	314	324	–	–
0305	CCKN-144	–	–	236	238	–	–	239	247	314	324	–	–
0305	CCKN-145	–	–	236	238	–	–	239	247	324	324	–	–
0305	CCKN-146	–	–	236	236	–	–	239	247	314	324	–	–
0305	CCKN-147	–	–	236	238	–	–	239	247	314	324	–	–
0305	CCKN-148	–	–	236	244	–	–	247	247	324	324	–	–
0305	CCKN-149	–	–	236	244	–	–	247	247	314	324	–	–
0305	CCKN-150	–	–	236	238	–	–	239	247	324	324	–	–
0305	CCKN-151	–	–	236	244	–	–	247	247	314	324	–	–
0305	CCKN-152	–	–	236	238	–	–	239	247	324	324	–	–
0305	CCKN-153	–	–	236	236	–	–	247	247	324	324	–	–
0305	CCKN-154	–	–	238	244	–	–	247	247	314	324	–	–
0306	CCKN-168	–	–	236	250	–	–	247	247	324	326	–	–
0306	CCKN-169	–	–	236	236	–	–	235	247	324	326	–	–
0307	CCKN-155	–	–	244	246	–	–	247	247	310	310	–	–
0307	CCKN-156	–	–	244	246	–	–	235	247	326	328	–	–
0307	CCKN-157	–	–	236	246	–	–	235	247	316	326	–	–
0307	CCKN-158	–	–	244	246	–	–	247	247	310	310	–	–
0307	CCKN-159	–	–	244	246	–	–	235	247	310	328	–	–
0307	CCKN-160	–	–	244	246	–	–	235	247	310	310	–	–
0307	CCKN-161	–	–	236	244	–	–	247	247	326	328	–	–
0307	CCKN-162	–	–	236	236	–	–	235	247	326	328	–	–
0307	CCKN-163	–	–	244	246	–	–	235	247	326	328	–	–
0307	CCKN-164	–	–	236	246	–	–	235	241	326	328	–	–
0307	CCKN-165	–	–	236	244	–	–	235	247	310	326	–	–
0307	CCKN-166	–	–	236	236	–	–	235	247	310	310	–	–
0307	CCKN-167	–	–	236	236	–	–	241	247	310	326	–	–
0307	CCKN-276	–	–	236	244	191	203	–	–	–	–	–	–
0310	CCKN-170	–	–	240	244	–	–	225	245	314	336	–	–
0310	CCKN-171	–	–	244	246	–	–	225	245	324	334	–	–
0310	CCKN-172	–	–	244	246	–	–	225	245	314	324	–	–
0310	CCKN-173	–	–	244	246	–	–	243	245	314	324	–	–
0310	CCKN-174	–	–	244	246	–	–	225	245	324	334	–	–
0310	CCKN-175	–	–	240	246	–	–	225	245	324	334	–	–
0310	CCKN-176	–	–	244	246	–	–	225	245	314	336	–	–
0310	CCKN-177	–	–	240	246	–	–	225	245	314	336	–	–
0310	CCKN-178	–	–	240	244	–	–	243	245	314	336	–	–
0310	CCKN-179	–	–	240	246	–	–	225	245	314	324	–	–
0310	CCKN-180	–	–	244	246	–	–	243	245	314	336	–	–
0310	CCKN-181	–	–	244	246	–	–	243	245	314	336	–	–
0310	CCKN-182	–	–	240	244	–	–	225	245	314	336	–	–
0310	CCKN-183	–	–	240	244	–	–	225	245	334	336	–	–
0310	CCKN-184	–	–	244	246	–	–	243	245	314	324	–	–
0310	CCKN-240	–	–	240	240	205	209	223	245	314	322	–	–

付表5.3. 孵化幼体のマイクロサテライト領域の遺伝子型(生データ)

産卵巣	個体番号	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8	
0310	CCKN-241	–	–	244	246	–	–	243	245	314	336	–	–
0311	CCKN-185	–	–	242	252	199	203	239	247	314	322	–	–
0311	CCKN-186	–	–	242	252	–	–	247	255	324	324	–	–
0311	CCKN-188	–	–	236	242	–	–	237	247	314	324	–	–
0311	CCKN-189	–	–	–	–	199	201	247	255	–	–	–	–
0311	CCKN-190	–	–	236	236	203	209	247	255	322	322	–	–
0311	CCKN-191	–	–	236	242	199	203	239	247	314	322	–	–
0311	CCKN-192	–	–	236	252	–	–	247	255	314	324	–	–
0311	CCKN-193	–	–	236	252	–	–	247	255	314	324	–	–
0311	CCKN-194	–	–	242	252	–	–	247	255	324	324	–	–
0311	CCKN-195	–	–	242	252	–	–	237	247	314	324	–	–
0311	CCKN-196	–	–	236	236	–	–	247	255	324	324	–	–
0311	CCKN-197	–	–	236	252	199	203	247	255	314	322	–	–
0311	CCKN-198	–	–	236	242	199	203	247	255	322	322	–	–
0311	CCKN-199	–	–	236	236	–	–	247	255	314	324	–	–
0311	CCKN-200	–	–	236	236	–	–	239	247	314	324	–	–
0311	CCKN-201	–	–	236	236	199	201	239	247	322	322	–	–
0311	CCKN-202	–	–	236	236	201	209	247	255	314	322	–	–
0311	CCKN-203	–	–	236	252	199	201	247	255	322	322	–	–
0311	CCKN-204	–	–	242	252	–	–	237	247	314	324	–	–
0311	CCKN-205	–	–	236	236	–	–	239	247	324	324	–	–
0311	CCKN-207	–	–	242	252	199	201	247	255	314	322	–	–
0311	CCKN-208	–	–	236	240	–	–	247	255	314	324	–	–
0311	CCKN-209	–	–	242	252	199	203	239	247	312	322	–	–
0311	CCKN-210	–	–	236	236	201	209	247	255	322	322	–	–
0311	CCKN-211	–	–	236	252	199	203	239	247	322	322	–	–
0311	CCKN-212	–	–	236	252	–	–	247	255	324	324	–	–
0311	CCKN-213	–	–	236	236	–	–	237	247	324	324	–	–
0311	CCKN-214	–	–	236	252	203	209	239	247	312	322	–	–
0311	CCKN-242	–	–	236	236	–	–	247	255	324	324	–	–
0311	CCKN-243	–	–	236	252	–	–	239	247	314	324	–	–
0311	CCKN-244	–	–	236	236	–	–	239	247	324	324	–	–
0311	CCKN-245	–	–	236	236	–	–	247	255	324	324	–	–
0311	CCKN-246	–	–	236	252	–	–	247	255	314	324	–	–
0311	CCKN-247	–	–	236	236	–	–	239	247	324	324	–	–
0311	CCKN-248	–	–	242	252	–	–	239	247	324	324	–	–
0311	CCKN-249	–	–	236	242	–	–	239	247	314	324	–	–
0311	CCKN-250	–	–	242	252	–	–	247	255	324	324	–	–
0311	CCKN-251	–	–	236	236	–	–	239	247	324	324	–	–
0311	CCKN-252	–	–	236	236	–	–	239	247	312	322	–	–
0311	CCKN-253	–	–	242	252	–	–	239	247	314	324	–	–
0311	CCKN-254	–	–	236	242	–	–	239	247	314	324	–	–
0311	CCKN-255	–	–	236	252	199	203	239	247	312	322	–	–
0311	CCKN-256	–	–	236	240	–	–	247	255	314	324	–	–
0311	CCKN-257	–	–	236	252	–	–	239	247	314	324	–	–
0311	CCKN-258	–	–	242	252	–	–	239	247	314	324	–	–
0311	CCKN-259	–	–	236	254	–	–	239	247	314	324	–	–
0312	CCKN-279	–	–	236	246	–	–	239	247	314	326	–	–
0313	CCKN-362	–	–	236	236	–	–	235	247	324	324	–	–
0313	CCKN-363	–	–	236	250	–	–	235	247	316	324	–	–
0313	CCKN-364	–	–	236	236	–	–	235	247	324	324	–	–
0313	CCKN-365	–	–	236	250	–	–	247	247	316	324	–	–
0313	CCKN-366	–	–	236	236	–	–	235	247	324	324	–	–
0313	CCKN-367	–	–	236	236	–	–	235	247	324	326	–	–
0313	CCKN-368	–	–	236	250	–	–	247	247	324	326	–	–
0313	CCKN-369	–	–	236	250	–	–	247	247	316	326	–	–
0313	CCKN-370	–	–	236	236	–	–	247	247	316	326	–	–
0313	CCKN-371	–	–	236	250	–	–	235	247	324	326	–	–
0313	CCKN-372	–	–	236	236	–	–	235	247	316	326	–	–
0313	CCKN-373	–	–	236	236	205	205	247	247	316	324	–	–
0313	CCKN-374	–	–	236	236	191	205	235	247	324	326	–	–
0313	CCKN-375	–	–	236	236	205	205	235	247	324	326	–	–
0313	CCKN-376	–	–	236	250	205	205	247	247	316	326	–	–
0313	CCKN-377	–	–	236	250	191	205	235	247	324	326	–	–
0313	CCKN-378	–	–	236	236	197	205	247	247	–	–	–	–
0313	CCKN-379	–	–	236	250	191	197	235	247	316	326	–	–
0313	CCKN-380	–	–	236	236	–	–	235	247	324	326	–	–
0313	CCKN-381	–	–	236	236	–	–	235	247	316	326	–	–
0315	CCKN-215	–	–	236	252	199	201	247	255	314	324	–	–
0315	CCKN-216	–	–	242	252	201	209	239	247	322	322	–	–
0315	CCKN-260	–	–	236	242	199	201	239	247	324	324	–	–
0315	CCKN-261	–	–	–	–	201	209	239	247	314	324	–	–
0315	CCKN-262	–	–	236	242	199	201	247	255	314	324	–	–
0315	CCKN-263	–	–	242	252	201	209	239	247	324	324	–	–
0315	CCKN-264	–	–	236	242	201	209	239	247	314	322	–	–
0315	CCKN-265	–	–	236	236	199	201	239	247	322	322	–	–
0315	CCKN-266	–	–	236	236	201	209	247	255	324	324	–	–
0315	CCKN-267	–	–	234	234	203	209	247	255	322	322	–	–
0315	CCKN-268	–	–	242	252	199	201	247	255	324	324	–	–
0315	CCKN-269	–	–	236	242	203	209	247	255	312	322	–	–
0315	CCKN-270	–	–	236	242	199	203	247	255	312	322	–	–
0315	CCKN-271	–	–	236	252	201	209	247	255	322	322	–	–
0315	CCKN-272	–	–	236	236	199	201	247	255	324	324	–	–

付表5.4. 孵化幼体のマイクロサテライト領域の遺伝子型(生データ)

産卵巣	個体番号	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8	
0315	CCKN-275	-	-	236	236	-	-	239	247	314	324	-	-
0315	CCKN-281	-	-	236	236	201	209	239	247	314	324	-	-
0315	CCKN-282	-	-	236	242	201	209	239	247	314	324	-	-
0315	CCKN-283	-	-	242	252	199	201	247	255	324	324	-	-
0315	CCKN-284	-	-	236	236	201	209	247	255	324	324	-	-
0315	CCKN-285	-	-	236	252	201	209	239	247	324	324	-	-
0315	CCKN-286	-	-	236	252	-	-	-	-	314	324	-	-
0315	CCKN-287	-	-	242	252	-	-	239	247	324	324	-	-
0315	CCKN-288	-	-	236	252	-	-	-	-	314	324	-	-
0315	CCKN-289	-	-	236	236	-	-	-	-	314	324	-	-
0315	CCKN-290	-	-	242	252	199	201	247	255	314	324	-	-
0315	CCKN-291	-	-	236	252	-	-	-	-	324	324	-	-
0315	CCKN-292	-	-	236	242	199	199	247	247	-	-	-	-
0315	CCKN-293	-	-	236	252	-	-	239	247	314	324	-	-
0315	CCKN-294	-	-	242	252	-	-	239	247	324	324	-	-
0315	CCKN-295	-	-	242	252	-	-	-	-	324	324	-	-
0315	CCKN-296	-	-	236	242	199	201	239	247	324	324	-	-
0315	CCKN-297	-	-	236	252	-	-	239	247	314	324	-	-
0315	CCKN-298	-	-	236	252	-	-	-	-	324	324	-	-
0315	CCKN-299	-	-	242	252	199	201	239	247	324	324	-	-
0315	CCKN-300	-	-	236	236	201	209	239	247	324	324	-	-
0315	CCKN-301	-	-	242	252	199	201	247	255	324	324	-	-
0315	CCKN-302	-	-	236	242	199	201	239	247	324	324	-	-
0315	CCKN-303	-	-	242	252	199	201	239	247	324	324	-	-
0315	CCKN-304	-	-	236	242	-	-	247	255	324	324	-	-
0317	CCKN-305	-	-	246	246	191	199	239	255	314	314	-	-
0317	CCKN-306	-	-	236	246	-	-	239	239	314	326	-	-
0317	CCKN-307	-	-	236	236	191	199	239	239	314	314	-	-
0317	CCKN-308	-	-	236	246	199	199	247	255	324	326	-	-
0317	CCKN-309	-	-	236	246	199	199	239	255	314	326	-	-
0317	CCKN-310	-	-	246	246	191	199	239	247	314	314	-	-
0317	CCKN-311	-	-	246	246	191	199	247	255	324	326	-	-
0317	CCKN-312	-	-	236	236	191	199	247	255	314	326	-	-
0317	CCKN-313	-	-	246	246	199	199	239	239	324	326	-	-
0317	CCKN-314	-	-	246	246	191	199	239	239	314	314	-	-
0317	CCKN-315	-	-	236	246	199	199	239	239	324	326	-	-
0317	CCKN-316	-	-	236	240	-	-	-	-	-	-	-	-
0317	CCKN-317	-	-	236	246	199	201	239	247	314	326	-	-
0317	CCKN-318	-	-	236	246	199	199	239	247	314	326	-	-
0317	CCKN-320	-	-	248	248	-	-	-	-	-	-	-	-
0317	CCKN-321	-	-	246	246	191	199	239	255	314	314	-	-
0317	CCKN-322	-	-	236	236	199	199	239	247	314	314	-	-
0317	CCKN-323	-	-	240	240	-	-	-	-	-	-	-	-
0317	CCKN-324	-	-	246	246	191	199	239	247	314	314	-	-
0317	CCKN-325	-	-	236	246	199	199	239	255	314	326	-	-
0317	CCKN-326	-	-	246	246	199	199	239	247	314	326	-	-
0317	CCKN-327	-	-	236	246	191	199	239	255	324	326	-	-
0317	CCKN-328	-	-	236	246	191	199	239	239	314	326	-	-
0317	CCKN-329	-	-	236	236	191	201	247	255	314	326	-	-
0317	CCKN-331	-	-	236	246	199	199	239	239	324	326	-	-
0317	CCKN-335	-	-	246	246	191	199	239	239	314	314	-	-
0319	CCKN-336	-	-	236	236	201	209	239	247	324	324	-	-
0319	CCKN-337	-	-	242	252	199	203	247	255	324	324	-	-
0319	CCKN-338	-	-	236	236	203	209	247	255	314	324	-	-
0319	CCKN-339	-	-	242	252	201	209	239	247	324	324	-	-
0319	CCKN-340	-	-	242	252	203	209	247	255	314	324	-	-
0319	CCKN-341	-	-	236	252	201	209	239	247	324	324	-	-
0319	CCKN-342	-	-	238	248	-	-	247	255	-	-	-	-
0319	CCKN-343	-	-	236	236	201	209	239	247	324	324	-	-
0319	CCKN-344	-	-	236	236	201	209	247	255	314	324	-	-
0319	CCKN-345	-	-	236	242	199	201	239	247	314	324	-	-
0319	CCKN-346	-	-	236	236	199	201	247	255	324	324	-	-
0319	CCKN-347	-	-	242	252	201	209	239	247	314	324	-	-
0319	CCKN-348	-	-	236	242	199	201	239	247	314	324	-	-
0319	CCKN-349	-	-	236	252	201	209	247	255	314	324	-	-
0319	CCKN-350	-	-	242	252	199	201	247	255	324	324	-	-
0319	CCKN-351	-	-	242	252	199	201	247	255	314	324	-	-
0319	CCKN-352	-	-	236	252	201	209	247	255	324	324	-	-
0319	CCKN-353	-	-	236	252	199	201	239	247	314	324	-	-
0319	CCKN-354	-	-	236	236	203	209	247	255	314	324	-	-
0319	CCKN-355	-	-	236	252	199	201	247	255	324	324	-	-
0319	CCKN-356	-	-	236	252	201	209	239	247	324	324	-	-
0319	CCKN-357	-	-	242	252	199	203	239	247	314	324	-	-
0319	CCKN-358	-	-	236	242	199	201	247	255	314	324	-	-
0319	CCKN-359	-	-	236	252	199	209	239	247	314	324	-	-
0319	CCKN-360	-	-	236	242	199	201	239	247	324	324	-	-
0319	CCKN-361	-	-	236	252	201	209	239	247	314	322	-	-
0322	CCKN-383	-	-	236	242	199	203	239	247	314	322	-	-
0322	CCKN-384	-	-	236	236	201	209	239	247	322	322	-	-
0323	CCKN-387	-	-	236	236	191	201	241	247	310	310	-	-
0403	CCKN-448	-	-	230.33	247.52	191.41	204.33	251.29	276.38	-	-	-	-
0403	CCKN-449	-	-	237.97	247.48	191.32	202.51	247.39	251.37	311.82	315.1	-	-
0403	CCKN-450	-	-	229.25	236.88	202.43	204.28	247.44	276.38	314.91	324.73	-	-

付表5.5. 孵化幼体のマイクロサテライト領域の遺伝子型(生データ)

産卵巣	個体番号	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8	
0403	CCKN-451	–	–	237.09	237.09	191.26	191.26	247.37	251.19	315.20	315.20	–	–
0403	CCKN-452	–	–	229.1	247.35	202.27	204.15	247.45	247.45	314.75	314.75	–	–
0403	CCKN-453	–	–	230.07	247.21	191.06	204.15	251.07	276.16	–	–	–	–
0403	CCKN-454	–	–	229.18	237.76	192.43	205.33	247.44	276.22	–	–	–	–
0403	CCKN-455	–	–	236.78	247.19	202.46	204.35	247.19	276.23	315.01	324.91	–	–
0404	CCKN-505	–	–	237.84	247.42	195.01	198.73	238.72	247.42	314.86	324.66	–	–
0404	CCKN-506	–	–	237.84	241.69	193.17	198.62	247.42	247.42	314.64	324.38	–	–
0404	CCKN-507	–	–	236.78	246.29	193.12	198.61	247.38	247.38	315.48	325.31	–	–
0404	CCKN-508	–	–	241.65	247.38	190.49	194.19	–	–	315.24	325.08	–	–
0404	CCKN-509	–	–	237.73	241.57	190.39	194.02	–	–	–	–	–	–
0404	CCKN-510	–	–	237.77	253.03	190.53	195.9	–	–	314.96	324.83	–	–
0405	CCKN-393	–	–	–	–	–	–	–	–	311.75	311.75	–	–
0405	CCKN-394	–	–	–	–	198.93	204.47	–	–	310.73	310.73	–	–
0405	CCKN-395	–	–	238.11	245.61	–	–	245.52	247.49	–	–	–	–
0405	CCKN-396	–	–	230.39	238.06	199.80	201.57	245.65	276.5	311.52	313.70	174.06	200.9
0405	CCKN-397	179.57	179.57	229.44	233.19	198.81	204.33	245.62	245.62	310.6	335.98	187.69	200.93
0405	CCKN-405	–	–	229.10	236.71	198.64	200.39	–	–	312.23	337.13	–	–
0406	CCKN-419	–	–	–	–	198.86	200.76	234.92	234.92	311.50	311.50	–	–
0406	CCKN-420	–	–	–	–	193.42	200.79	–	–	–	–	–	–
0406	CCKN-421	178.4	180.4	–	–	191.45	191.45	–	–	310.80	324.20	170.26	174.08
0406	CCKN-422	178.5	180.3	–	–	191.35	200.49	–	–	–	–	170.31	174.20
0407	CCKN-425	180.2	180.2	237.99	241.74	194	200	238.78	247.56	314.00	314.00	174.20	174.20
0407	CCKN-427	–	–	–	–	185.05	195.22	–	–	–	–	–	–
0409	CCKN-513	–	–	247.92	247.92	–	–	–	–	–	–	–	–
0409	CCKN-515	–	–	–	–	210.82	210.82	–	–	315.32	315.32	–	–
0410	CCKN-441	–	–	229.31	237.91	198.74	200.48	245.36	247.3	311.95	314.11	–	–
0410	CCKN-442	–	–	229.35	233.14	198.74	204.35	245.39	247.34	311.58	336.54	–	–
0410	CCKN-443	–	–	237.83	245.56	192.39	205.31	245.46	276.36	311.36	336.25	–	–
0410	CCKN-444	–	–	230.02	237.69	193.15	198.61	247.49	247.49	–	–	–	–
0410	CCKN-445	–	–	230.07	233.94	198.51	200.3	245.44	276.16	311.97	336.99	–	–
0410	CCKN-446	–	–	229.19	233.02	198.71	200.49	247.5	247.5	311.51	313.58	–	–
0410	CCKN-447	–	–	237.92	247.44	198.75	200.57	–	–	–	–	–	–
0411	CCKN-516	–	–	237.66	237.66	195.93	197.76	–	–	311.97	311.97	–	–
0413	CCKN-456	–	–	237.9	237.9	191.39	198.74	234.68	247.37	312.05	325.16	–	–
0413	CCKN-457	–	–	236.78	237.77	191.19	198.61	239.8	248.4	311.93	325.1	–	–
0413	CCKN-458	–	–	–	–	193.22	198.73	247.34	247.34	–	–	–	–
0413	CCKN-459	–	–	237.62	237.62	191.52	198.81	247.39	247.39	–	–	–	–
0413	CCKN-460	–	–	236.92	236.92	193.05	200.4	247.46	247.46	–	–	–	–
0414	CCKN-602	–	–	228.42	246.19	193.07	196.73	223	247	312.36	312.36	–	–
0414	CCKN-603	–	–	228	236	193	197	223	247	–	–	–	–
0414	CCKN-604	–	–	237.81	245.76	191.00	196.68	247	247	311.72	322.61	–	–
0414	CCKN-605	–	–	236	238	192.99	196.5	225	247	–	–	–	–
0414	CCKN-606	–	–	238	246	193.09	196.66	223	247	309.74	322.82	–	–
0414	CCKN-607	–	–	–	–	192.09	197.54	–	–	–	–	–	–
0414	CCKN-608	–	–	214.1	221.2	191.01	196.61	224.26	247.41	–	–	–	–
0414	CCKN-609	–	–	228	246	192.85	196.62	223	247	312.24	322.98	–	–
0414	CCKN-610	–	–	235.91	246.04	193.13	196.64	247	247	309.75	322.86	–	–
0414	CCKN-611	–	–	228	246	191	197	225	247	–	–	–	–
0414	CCKN-612	–	–	–	–	191.2	196.44	247.43	247.43	312.37	325.39	–	–
0414	CCKN-613	–	–	228	246	191.18	196.81	225	247	311.64	322.6	–	–
0414	CCKN-614	–	–	228	236	191	197	247	247	313.63	314.73	–	–
0414	CCKN-615	–	–	238	246	190.99	196.7	247	247	312.22	312.22	–	–
0414	CCKN-616	–	–	–	–	194.23	197.92	248.37	248.37	309.93	322.72	–	–
0414	CCKN-617	–	–	–	–	191.35	196.83	247	247	312	312	–	–
0414	CCKN-618	–	–	228	236	193	197	247	247	310	324	–	–
0414	CCKN-619	–	–	238	246	193	197	247	247	310	312	–	–
0414	CCKN-620	–	–	236	238	191	197	225	247	310	324	–	–
0414	CCKN-621	–	–	–	–	194.13	197.72	247.51	247.51	312	324	–	–
0414	CCKN-622	–	–	–	–	193.24	196.88	225.35	248.40	310	310	–	–
0414	CCKN-623	–	–	230.1	237.74	192.09	197.68	248.40	248.40	–	–	–	–
0414	CCKN-624	–	–	–	–	194.04	197.64	248.38	248.38	312	324	–	–
0414	CCKN-625	–	–	213.95	221.08	192.16	197.74	224.24	247.48	–	–	–	–
0414	CCKN-626	–	–	–	–	192.38	197.93	–	–	–	–	–	–
0414	CCKN-627	–	–	–	–	192.3	197.74	247.35		310	324	–	–
0414	CCKN-628	–	–	228	246	193	197	223	247	312	324	–	–
0414	CCKN-629	–	–	228	236	191	197	247	247	312	312	–	–
0415	CCKN-477	–	–	–	–	193.03	198.49	247.45	247.45	–	–	–	–
0416	CCKN-478	–	–	237.73	247.27	195.83	197.68	238.62	247.47	–	–	–	–
0416	CCKN-479	–	–	237.91	245.47	195.85	197.68	238.69	247.32	–	–	–	–
0416	CCKN-480	–	–	245.5	247.45	192.36	196.1	234.6	238.78	–	–	–	–
0417	CCKN-521	–	–	236	236	191.38	200.4	–	–	310	310	–	–
0417	CCKN-522	–	–	236	236	191	201	235	239	310	324	–	–
0417	CCKN-523	–	–	236.24	236.24	191.31	200.52	233	237	323.48	323.48	–	–
0417	CCKN-524	–	–	235.87	245.72	191.58	198.82	–	–	309.97	311.79	–	–
0417	CCKN-525	–	–	–	–	192.38	192.38	–	–	–	–	–	–
0417	CCKN-526	–	–	–	–	191.72	191.72	248.41	248.41	–	–	–	–
0417	CCKN-527	–	–	236.27	236.27	191.42	198.72	–	–	310.06	323.53	–	–
0417	CCKN-528	–	–	228.4	245.79	192.55	198.7	–	–	312.74	312.74	–	–
0417	CCKN-529	–	–	228.46	236.22	193.36	196.86	–	–	310.25	313.35	–	–
0417	CCKN-530	–	–	236.13	239.86	198.47	200.40	–	–	310.32	313.45	–	–
0417	CCKN-531	–	–	236.02	236.02	191.16	198.57	–	–	323.61	323.61	–	–
0417	CCKN-532	–	–	236.03	245.58	–	–	–	–	309.92	311.97	–	–
0417	CCKN-533	–	–	–	–	198.72	200.59	–	–	–	–	–	–

付表5.6. 孵化幼体のマイクロサテライト領域の遺伝子型(生データ)

産卵巣	個体番号	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8	
0417	CCKN-534	-	-	236.03	236.03	198.71	200.59	-	-	310.33	323.57	-	-
0417	CCKN-535	-	-	236.2	236.2	191.39		-	-	310.13	323.43	-	-
0417	CCKN-536	-	-	228.33	245.72	191.30		-	-	312.50	312.50	-	-
0417	CCKN-537	-	-	228.5	236.14	-	-	-	-	310.12	313.47	-	-
0417	CCKN-538	-	-	-	-	191.39	200.51	239	247	309.76	323.37	-	-
0417	CCKN-539	-	-	238	245.57	-	-	238.7	247.52	-	-	-	-
0417	CCKN-540	-	-	236	236	201.58	201.58	-	-	309.69	322.90	-	-
0417	CCKN-542	-	-	-	-	198.71	200.5	-	-	-	-	-	-
0417	CCKN-543	-	-	-	-	191.29	200.49	-	-	-	-	-	-
0417	CCKN-546	-	-	-	-	189.15	192.37	-	-	-	-	-	-
0417	CCKN-547	-	-	236.07	236.07	192.09	192.09	233	247	309.66	323.26	-	-
0417	CCKN-548	-	-	-	-	191.13	200.41	-	-	-	-	-	-
0417	CCKN-549	-	-	-	-	192.33	199.61	-	-	-	-	-	-
0417	CCKN-550	-	-	-	-	191.45	198.72	-	-	-	-	-	-
0417	CCKN-552	-	-	-	-	198.7	200.5	-	-	-	-	-	-
0417	CCKN-553	-	-	-	-	191.25	198.58	-	-	-	-	-	-
0417	CCKN-554	-	-	-	-	198.57	200.41	-	-	-	-	-	-
0417	CCKN-555	-	-	-	-	191.13	198.46	-	-	-	-	-	-
0418	CCKN-463	-	-	239.82	247.49	-	-	-	-	-	-	-	-
0418	CCKN-464	-	-	230.32	247.45	194.24	197.86	-	-	313.9	313.9	-	-
0418	CCKN-466	-	-	238.64	246.3	191.21	196.65	-	-	313.49	324.36	-	-
0418	CCKN-467	-	-	239.68	247.33	191.21	196.65	-	-	313.52	324.39	-	-
0418	CCKN-472	-	-	229.32	236.93	-	-	-	-	313.9	324.81	-	-
0418	CCKN-473	-	-	229.09	246.25	191.17	196.67	-	-	-	-	-	-
0418	CCKN-474	-	-	-	-	-	-	-	-	313.56	313.56	-	-
0418	CCKN-475	-	-	229.03	229.03	-	-	-	-	-	-	-	-
0418	CCKN-566	-	-	-	-	-	-	233.46	248.29	-	-	-	-
0418	CCKN-569	-	-	261.8	261.8	191.26	196.85	241.17	241.17	-	-	-	-
0420	CCKN-497	-	-	237.95	245.61	192.43	201.57	-	-	312.06	312.06	-	-
0420	CCKN-501	-	-	237.78	247.31	192.25	192.25	-	-	-	-	-	-
0420	CCKN-503	-	-	-	-	194.02	194.02	-	-	-	-	-	-
0420	CCKN-573	-	-	-	-	191.44	191.44	-	-	-	-	-	-
0421	CCKN-575	-	-	-	-	197.69	205.18	-	-	-	-	-	-
0421	CCKN-577	-	-	-	-	191.09	194.85	-	-	315.01	326.81	-	-
0421	CCKN-578	-	-	-	-	-	-	234.63	241.31	-	-	-	-
0421	CCKN-579	-	-	-	-	-	-	238.82	247.36	-	-	-	-
0421	CCKN-580	-	-	-	-	191.08	194.74	-	-	-	-	-	-
0421	CCKN-581	-	-	-	-	197.59	205.07	224.22	247.32	-	-	-	-
0421	CCKN-582	-	-	248.08	248.08	-	-	246.40	257.34	-	-	-	-
0421	CCKN-583	-	-	-	-	-	-	238.63	247.33	-	-	-	-
0421	CCKN-585	-	-	-	-	195.98	197.72	247.39	247.39	-	-	-	-
0421	CCKN-586	-	-	-	-	191.27	194.95	247.38	247.38	-	-	-	-
0421	CCKN-587	-	-	-	-	-	-	247.44	270.16	-	-	-	-
0421	CCKN-588	-	-	238.26	245.87	196.25	197.94	-	-	315.74	327.62	-	-
0421	CCKN-589	-	-	238.25	245.90	-	-	-	-	315.71	327.64	-	-
0421	CCKN-590	-	-	245.81	247.72	197.82	205.42	-	-	312.38	312.38	-	-
0421	CCKN-591	-	-	238.14	245.75	192.5	205.4	-	-	312.4	312.4	-	-
0421	CCKN-592	-	-	245.67	247.6	192.38	205.37	-	-	-	-	-	-
0421	CCKN-593	-	-	245.73	245.73	-	-	-	-	-	-	-	-
0421	CCKN-594	-	-	-	-	197.75	197.75	-	-	-	-	-	-
0421	CCKN-595	-	-	237.86	237.86	-	-	-	-	-	-	-	-
0421	CCKN-596	-	-	245.85	245.85	192.57	196.25	-	-	315.8	327.55	-	-
0421	CCKN-597	-	-	-	-	-	-	-	-	-	-	-	-
0421	CCKN-598	-	-	245.76	247.75	197.91	205.4	-	-	-	-	-	-
0421	CCKN-600	-	-	237.98	245.65	197.8	205.35	-	-	312.05	312.05	-	-
0421	CCKN-601	-	-	237.91	247.53	196.11	197.67	-	-	315.1	326.94	-	-
0422	CCKN-630	178.54	182.39	238.36	240.35	192.60	199.83	235.06	247.72	310.7	314.04	174.31	176.39
0422	CCKN-631	180.38	182.31	-	-	192.26	199.48	-	-	310.8	314.05	174.35	176.22
0422	CCKN-632	180.30	182.24	238.17	240.00	192.56	199.58	234.82	238.92	310.7	314.05	174.24	191.57

下線: ABI3100 下線なし: ABI3130xl

付表6.1. 産卵雌のマイクロサテライト領域の遺伝子型(生データ)

個体番号	産卵浜	採取年	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8		mtDNA ハプロタイプ
m9402	南部	1994	180.03	181.97	240.1	243.95	191.59	194.82	238.87	247.41	309.96	313.2	176.38	199.02	B
m9403	南部	1994	180.10	180.10	238.03	240.02	192.55	203.47	240.31	254.7	325.37	325.37	176.26	176.26	B
m9404	南部	1994	179.49	181.34	238.03	245.72	197.91	203.48	239.82	248.41	315.29	327.17	176.19	178.15	B
m9405	南部	1994	181.19	183.06	236.14	238.11	192.27	192.27	234.54	247.41	314	324	193.27	200.81	B
m9406	南部	1994	181.34	183.29	247.61	251.48	192.39	201.59	247.34	247.34	312.09	312.09	176.31	176.31	C
m9407	南部	1994	181.46	181.46	238.03	238.03	192.42	196.17	234.71	238.83	311.93	327.14	176.37	193.34	B
m9408	南部	1994	181.24	181.24	237.87	237.87	192.34	210.83	234.54	247.34	311.86	315.05	178.13	200.81	B
m9409	南部	1994	–	–	236.25	245.94	197.78	197.78	–	–	310.05	323.3	174.17	176.11	B
m9410	南部	1994	180.27	187.86	237.89	239.72	192.37	194.21	247.34	247.34	310.47	313.69	197.04	202.65	B
m9411	南部	1994	180.18	180.18	239.97	241.96	194.23	197.78	245.37	247.29	314.83	314.83	176.14	200.81	B
m9412	南部	1994	–	–	236.2	236.2	191.53	191.53	–	–	310.4	313.69	174.08	189.41	B
m9413	南部	1994	179.6	179.6	238.13	240	200	211.12	246.75	248.79	315.48	325.29	176.34	176.34	B
m9414	南部	1994	181.41	183.34	238.06	247.7	199.8	201.68	234.78	238.95	312.18	312.18	176.3	202.67	B
m9415	南部	1994	179.66	181.5	242.01	243.93	198.62	204.38	238.18	246.71	323.73	327.86	176.38	200.89	B
m9416	南部	1994	181.38	181.38	238.05	245.65	191.44	200.6	247.46	247.46	312.65	325.78	176.38	176.38	B
m9417	南部	1994	181.27	183.13	230.37	238	196.08	199.8	238.8	245.54	311.92	315.21	176.34	176.34	B
m9418	南部	1994	179.31	181.19	237.94	245.53	192.37	199.7	247.35	247.35	311.8	315.01	176.3	176.3	B
m9419	南部	1994	181.07	181.07	237.8	237.8	190.53	201.41	234.56	247.32	311.49	314.68	176.23	176.23	B
m9420	南部	1994	181.17	181.17	237.79	237.79	192.21	210.85	238.6	240.74	311.57	314.78	176.35	197.03	B
m9421	南部	1994	179.25	184.87	237.62	237.62	192.11	192.11	238.64	247.47	323.17	334	176.1	189.43	B
m9422	南部	1994	–	–	208.35	215.14	189.45	209.84	–	–	315.09	326.98	176.25	195.2	B
m9423	南部	1994	183.29	185.22	236.32	244.07	191.38	204.53	234.21	246.79	310.39	333.73	176.01	198.84	B
m9424	南部	1994	181.44	188.97	241.71	247.43	192.37	194.29	238.7	247.33	313.73	325.95	178.18	198.9	B
m9425	南部	1994	180.28	187.9	237.91	247.49	196.11	201.49	240.9	241.8	311.84	324.9	178.26	193.3	B
m9426	南部	1994	–	–	236.01	236.01	196.83	200.51	–	–	310	334	200.78	200.78	B
m9427	南部	1994	179.49	181.44	237.85	237.85	203.4	205.3	239.76	239.76	311.82	315.11	176.3	193.3	B
m9428	南部	1994	179.28	181.08	236	236	191.37	191.37	–	–	315.08	324.93	174.19	191.29	B
m9429	南部	1994	179.19	181.01	240	248	198.67	198.67	246.44	250.5	324.74	326.76	174.12	198.86	B
m9430	南部	1994	180	182	236.3	246.02	198.74	204.52	–	–	314	314	176.29	200.85	B
m9431	南部	1994	181.41	181.41	237.92	245.53	199.59	201.42	238.72	240.83	314.87	328.73	176.32	193.31	B
m9432	南部	1994	181.25	181.25	230.15	247.29	192.29	196.06	247.29	247.29	311.53	314.73	176.25	178.13	B
m9433	南部	1994	179.21	183.03	237.78	239.71	192.27	201.41	234.55	247.4	311.42	328.37	176.21	200.8	B
m9434	南部	1994	179.24	181.09	237.8	251.1	197.65	201.42	235.46	243.79	314.68	328.48	176.15	202.69	B
m9435	南部	1994	181.5	181.5	237.92	247.43	192.37	201.58	256.36	277.35	317.06	325.12	176.35	193.34	B
m9436	南部	1994	179.62	185.31	238.01	241.76	192.4	194.28	238.8	239.79	315.25	325.01	193.35	198.91	B
m9437	南部	1994	181.45	181.45	234.12	237.99	192.35	197.82	234.62	238.78	311.83	315.06	178.08	200.79	B
m9438	南部	1994	180.19	180.19	237.94	237.94	191.34	196.79	–	–	313.68	313.68	174.11	191.37	B
m9439	南部	1994	174.53	182.11	236.04	245.66	191.35	198.64	233.96	238.03	313.92	313.92	174.04	174.04	B
m9440	南部	1994	182	182	238.32	238.32	192.09	201.29	–	–	311.67	324.67	193.27	200.76	B
m9441	南部	1994	181.37	181.37	236.01	245.78	192.34	205.27	–	–	310.54	313.72	176.29	189.57	B
m9442	南部	1994	179.42	181.19	237.77	241.60	192.19	201.4	234.55	243.31	313.67	313.67	178.17	189.57	B
m9443	南部	1994	175.47	183.00	239.68	247.28	199.59	205.12	247.39	253.55	311.37	326.32	176.32	176.32	B
m9444	南部	1994	181.03	182.91	237.73	251.05	197.75	197.75	247.39	248.31	314.48	326.32	176.38	178.31	B
m9445	南部	1994	180.2	180.2	222.21	222.21	191.09	196.61	–	–	313.43	323.57	174.18	193.19	–
m9446	南部	1994	181.47	183.4	241.73	247.48	192.45	192.45	247.28	247.28	311.83	317.28	176.32	193.35	C
m9447	南部	1994	181.45	185.31	230.39	237.96	199.8	203.57	240.84	241.84	311.84	326.96	195.24	204.55	B
m9448	南部	1994	178.27	182.09	243.72	245.67	192.45	197.91	–	–	313.29	323.43	174.13	200.77	B
m9449	南部	1994	180.17	183.97	241.70	247.49	192.37	201.59	247.39	247.39	311.77	332.78	176.26	193.28	B
m9450	南部	1994	179.59	185.21	239.78	247.49	194.21	196.11	238.79	247.29	315.01	315.01	176.31	176.31	B
m9451	南部	1994	180.14	180.14	237.78	248.43	195.04	200.54	–	–	323.59	323.59	174.09	191.27	–
m9452	南部	1994	181.36	185.07	236.16	249.81	192.35	201.5	238.68	251.14	314.86	314.86	176.29	178.16	B
m9453	南部	1994	181.25	183.21	237.76	251.12	199.7	205.24	247.38	247.38	314.68	324.50	176.27	195.23	B
m9454	南部	1994	180	180	237.83	251.18	192.19	195.9	238.75	247.41	311.36	311.36	176.3	176.3	B
m9455	南部	1994	178	178	222.05	237.81	196	202	–	–	314	314	174	198	–
m9456	南部	1994	181.13	181.13	237.82	247.41	201.4	201.4	238.72	249.6	314.55	324.27	176.26	193.26	–
m9457	南部	1994	181.48	181.48	238.02	247.57	197.94	205.39	240.87	247.37	315.22	327.15	193.39	197.05	–
m9458	南部	1994	181.47	183.3	237.93	247.43	192.35	201.58	234.66	247.33	311.89	315.24	176.22	176.22	–
m9459	南部	1994	–	–	235.87	245.56	–	–	–	–	–	–	–	–	–
m9460	南部	1994	–	–	235.85	245.57	–	–	–	–	–	–	–	–	–
m9461	南部	1994	179.62	183.39	239.81	251.32	192.33	210.88	238.72	247.35	315.00	315.00	176.15	176.15	–
m9462	南部	1994	179.53	181.38	236.32	236.32	203.38	210.85	247.36	247.36	313.46	323.69	176.23	176.23	–
m9463	南部	1994	179.36	185.03	237.77	241.60	192.32	194.15	238.68	238.68	314.87	324.74	193.21	198.89	–
m9501	南部	1995	179.5	179.5	236.05	245.71	200	202	244.61	244.61	312.35	314.47	176.46	195.22	B
m9502	南部	1995	181.34	181.34	235.65	235.65	192	196	236.04	244.68	313.52	333.72	193.4	195.21	B
m9503	南部	1995	178.3	180.11	239.92	243.84	192	200	234.02	238.08	315.45	325.34	189.48	200.79	B
m9504	南部	1995	178.28	182.08	236.12	238.03	191.3	200.47	238.19	246.72	312.07	312.07	178.23	178.23	B
m9505	南部	1995	180.23	187.8	236.09	236.09	204	204	246.7	246.7	315.27	327.14	176.32	204.57	B
m9506	南部	1995	183.24	183.24	237.98	237.98	191.32	198.54	244.72	246.66	324.99	324.99	176.55	176.55	B
m9507	南部	1995	179.98	181.9	236.04	236.07	200.47	208.12	238.9	249.84	310.15	313.43	174.00	174.00	B
m9508	南部	1995	180.16	180.16	238.03	245.7	198.55	204.29	246.67	246.67	310.33	310.33	176.18	189.53	B
m9509	南部	1995	178.31	182.16	236.05	249.63	202.45	210.06	244.69	246.52	323.74	323.74	176.3	200.78	B
m9510	南部	1995	178.34	182.06	236.05	249.59	196.69	200.47	246.64	246.64	310.31	310.31	174.16	174.16	B
m9511	南部	1995	181.26	183.23	236.1	238.04	200.47	209.99	238.12	238.12	314.17	325.1	176.55	176.55	B
m9512	南部	1995	178.33	180.21	236.03	236.03	192	196	238.04	246.6	–	–	176.19	193.28	B
m9513	南部	1995	178.35	178.35	235.89	235.89	192	192	236.13	238.13	324	328	189.68	195.21	B
m9514	南部	1995	180.3	182.17	236.07	249.8	198	198	238.08	244.91	311.99	314.05	176.36	195.24	B
m9515	南部	1995	182.04	182.04	236.04	237.97	191.23	196.73	246.7	246.7	313.46	323.55	174.15	191.42	B
m9516	南部	1995	179.99	179.99	236.04	237.98	192	198	233.95	240.08	313.4	313.4	176.1	178.47	B
m9517	南部	1995	180.00	180.00	239.31	247.54	189.47	191.24	250.42	250.42	309.99	325.4	174.13	176.14	B
m9518	南部	1995	180.05	180.05	236.01	245.68	191.2	196.68	238.06	254.46	310.16	323.55	176.2	191.39	B
m9519	南部	1995	–	–	228.34	245.77	–	–	247.4	247.4	315.06	324.93	176.24	176.24	
m9520	南部	1995	181.99	181.99	237.98	239.96	193.54	198.77	238.14	246.65	310.08	315.26	200.77	202.69	B
m9521	南部	1995	178.18	180.04	249.61	249.61	195.08	200.47	250.42	250.42	313.48	323.53	174.22	174.22	B

付表6.2. 産卵雌のマイクロサテライト領域の遺伝子型(生データ)

個体番号	産卵浜	採取年	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8		mtDNA ハプロタイプ
m9522	南部	1995	175.66	175.66	236.1	238.02	212	212	234.11	246.52	314.25	333.11	176.31	178.12	-
m9523	南部	1995	180.13	180.13	236.09	245.78	189.5	196.79	238.08	246.58	315.27	325.17	176.47	197.14	B
m9524	南部	1995	180.09	180.09	245.83	245.83	200.49	201.47	238.07	246.67	314.86	324.75	176.11	178.06	B
m9525	南部	1995	180.05	183.84	236.03	243.8	198.76	210.02	223.71	246.66	313.35	323.44	174.06	191.3	B
m9526	南部	1995	178.11	180.02	236.12	236.12	191.32	191.32	233.92	238.1	313.3	323.41	174.06	191.29	B
m9527	南部	1995	174.41	178.25	237.76	245.33	191.28	191.28	234.62	238.75	-	-	199.02	199.02	B
m9528	南部	1995	180.14	180.14	236.16	240.02	192.17	201.38	255.39	276.26	314.7	324.53	198.95	200.85	B
m9529	南部	1995	178.21	180.06	228.14	241.86	192	200	249.74	282.55	313.42	335.46	197.09	197.09	B
m9530	南部	1995	178.25	180.16	236.22	238.07	191.32	195.03	233.99	238.07	323.55	323.55	180.88	195.46	B
m9531	南部	1995	178	184	236.05	236.05	191.23	191.23	246.64	246.64	312.22	337.13	175.97	175.97	B
m9532	南部	1995	180.14	180.14	236.13	243.83	191.26	195.02	246.65	246.65	313.34	323.52	174.18	198.93	B
m9533	南部	1995	180	184	238.04	249.6	191.24	210.14	246.68	254.51	325.06	329.08	175.86	200.78	C
m9534	南部	1995	178.2	180.12	236.08	237.98	198.77	202.42	234.03	238.14	325.07	327.04	197.04	202.66	B
m9535	南部	1995	-	-	-	-	-	-	-	-	-	-	-	-	B
m9536	南部	1995	-	-	238.05	245.77	-	-	248.31	248.31	311.87	325.08	176.19	204.57	B
m9537	南部	1995	178.26	178.26	236.14	243.84	191.28	191.28	246.68	246.68	313.97	324.9	176.11	193.28	B
m9538	南部	1995	180.17	182.1	236.04	239.87	191.23	191.23	246.54	246.54	310.03	315.36	174.28	191.5	B
m9539	南部	1995	182	184	239.27	241.25	200.47	202.36	238.74	247.29	314.94	334.78	178.00	195.32	B
m9540	南部	1995	178.28	180.08	236.21	249.72	196.68	200.39	245.4	247.33	313.47	323.44	174.2	176.17	B
m9541	南部	1995	178.11	178.11	232.29	243.85	191.16	191.16	233.98	240.07	314.64	334.39	193.39	193.39	B
m9542	南部	1995	180.13	187.74	236.06	239.89	189.41	191.28	238.02	244.6	325.5	333.47	176.08	198.87	B
m9543	南部	1995	180.1	180.1	235.95	245.7	191.31	200.47	246.6	254.47	313.33	323.47	174.25	174.25	B
m9544	南部	1995	178.18	180.11	236.11	238.04	190	192	240.13	244.74	-	-	176.24	176.24	B
m9545	南部	1995	180.14	180.14	235.71	235.71	191.23	191.23	233.96	240.03	323.58	331.65	176.2	187.69	B
m9546	南部	1995	178.29	180.2	236.1	236.1	196.71	204.35	247.34	282.7	323.61	323.61	174.31	199.02	B
m9547	南部	1995	180.08	182.02	236.19	236.19	191.22	191.22	233.96	246.71	313.36	323.41	193.31	193.31	B
m9548	南部	1995	178.13	178.13	235.99	249.56	192	192	246.59	246.59	311.44	324.36	178.13	178.13	B
m9549	南部	1995	178.07	180.01	236.09	236.09	191.27	191.27	244.63	246.6	310.00	313.2	195.33	198.93	B
m9550	南部	1995	178.13	180.06	236.01	237.91	198.61	200.55	246.55	246.55	313.25	313.25	174.17	176.11	B
m9551	南部	1995	178.18	178.18	235.88	235.88	191.31	198.63	233.89	236.03	313.33	323.27	189.49	195.21	B
m9552	南部	1995	-	-	236.05	236.05	191.36	191.36	246.61	246.61	311.98	325.15	195.09	198.82	B
m9553	南部	1995	180.03	181.97	236.06	249.67	189.52	193.23	246.66	246.66	313.26	323.35	174.18	176.13	B
my9501	宮崎	1995	-	-	-	-	-	-	245.38	247.37	-	-	176.2	176.2	B
my9502	宮崎	1995	178.28	180.12	236.08	236.08	198.72	200.53	238.82	247.37	314.82	314.82	176.2	200.79	B
my9503	宮崎	1995	179.26	181.15	228.36	235.99	191.31	198.72	195.38	247.38	314.54	324.37	176.16	176.16	B
my9504	宮崎	1995	-	-	-	-	193.2	193.2	247.43	247.43	324.23	324.23	176.15	176.15	B
my9505	宮崎	1995	-	-	239.91	239.91	193.39	198.86	234.65	247.37	311.32	313.51	176.08	189.48	C
my9506	宮崎	1995	181.53	181.53	236.12	245.80	193.37	193.37	245.44	247.4	311.9	315.13	176.29	195.28	B
my9507	宮崎	1995	179.74	207.23	236.15	245.77	193.38	196.89	247.47	247.47	314.02	314.02	176.28	197.02	C
my9508	宮崎	1995	181.42	181.42	237.92	243.60	-	-	247.66	247.66	311.69	324.78	176.31	189.59	B
my9509	宮崎	1995	180	184	236.02	237.95	195.09	210.9	234.00	246.52	311.53	314.83	176.58	200.77	C
my9510	宮崎	1995	181.14	181.14	239.91	243.76	191.1	200.3	245.55	247.54	311.61	324.57	174	174	B
my9511	宮崎	1995	178.14	183.91	239.93	245.74	191.16	191.16	247.33	255.44	310.03	323.43	173.89	175.79	B
my9512	宮崎	1995	-	-	-	-	201.68	203.56	-	-	311.32	311.32	-	-	B
my9513	宮崎	1995	178.32	180.23	235.05	244.72	191.31	200.48	238.8	247.44	314.31	324.13	176.2	178.13	B
my9515	宮崎	1995	-	-	228.44	236.06	190.34	191.26	-	-	324.09	324.09	176.26	176.26	B
my9516	宮崎	1995	179.54	181.32	236.18	236.18	-	-	-	-	315.00	324.88	-	-	B
my9517	宮崎	1995	181.1	181.1	239.96	243.86	192.22	199.60	246.67	246.67	324.85	326.85	174	174	B
my9518	宮崎	1995	181.56	181.56	236.4	239.9	197.89	210.93	236.17	240.06	313.29	323.52	174.01	174.01	B
my9519	宮崎	1995	-	-	-	-	-	-	-	-	-	-	-	-	B
my9520	宮崎	1995	-	-	236.2	236.2	191.31	196.81	233.98	240.26	311.63	324.69	176.39	178.26	C
my9901	宮崎	1999	180.19	180.19	249.72	249.72	194	210	240.2	240.2	310.14	333.66	174.1	193.25	B
my9902	宮崎	1999	178.36	180.17	236.22	243.91	191.23	204.27	246.7	246.7	313.41	323.63	174.12	174.12	B
my9903	宮崎	1999	174.43	180.15	236.18	243.96	191.21	196.72	234.21	246.79	313.47	325.64	174.13	176.09	B
my9904	宮崎	1999	180	180	232.32	245.93	189.41	198.54	238.76	245.39	324	326	174	198	B
my9905	宮崎	1999	180.09	180.09	236.18	238.00	191.34	191.34	234.53	253.42	313.46	313.46	176.05	195.1	B
my9906	宮崎	1999	178.42	182.19	236.21	238.11	191.26	195.02	244.76	244.76	312.97	324.26	174.13	191.27	B
my9907	宮崎	1999	180.06	182.02	232.33	236.07	192.41	203.43	238.67	247.33	313.56	324.34	174.01	195.00	B
my9908	宮崎	1999	178.31	182.06	232.35	236.19	191.25	204.3	234.12	234.12	313.32	323.46	174.16	174.16	B
my9909	宮崎	1999	174.29	178.18	236.16	245.97	191.3	209.98	234.61	247.36	313.42	325.54	174.06	200.7	B
my9910	宮崎	1999	181.96	183.88	236.51	236.51	196.67	209.97	240.64	240.64	310.07	323.4	170.25	174.03	C
my9911	宮崎	1999	178.16	180.15	236.2	243.96	191.29	196.72	234.1	244.72	313.35	313.35	174.1	176.01	B
my9912	宮崎	1999	180	182	228.25	239.9	190	192	228.47	240.13	312	324	174	174	C
my9913	宮崎	1999	180.14	180.14	245.35	249.73	189.75	198.7	245.67	245.67	327.54	331.57	187.51	196.98	C
my9914	宮崎	1999	179.16	179.16	236.03	236.03	195.08	200.52	234.52	247.33	310.23	323.65	198.9	198.9	C
my9915	宮崎	1999	178.17	180.04	243.74	245.64	191.34	200.47	237.97	237.97	313.3	327.55	174.05	176.00	C
my9916	宮崎	1999	181.39	181.39	236.17	239.93	191.32	198.62	233.98	246.61	324.23	326.25	174	174	B
my9917	宮崎	1999	182.03	183.94	235.99	243.7	198.77	202.34	237.99	246.64	323.46	323.46	174.09	193.2	B
my9918	宮崎	1999	178.24	180.14	228.26	237.86	191.24	204.43	244.63	246.57	313.39	313.39	193.23	197.0	B
my9919	宮崎	1999	180.21	180.21	237.92	245.69	191.52	191.52	246.65	246.65	310.2	313.43	174.09	174.09	C
my9920	宮崎	1999	180.1	182.02	243.8	249.63	191.19	200.39	246.67	246.67	324.03	324.03	175.89	193.15	C
my9921	宮崎	1999	178.29	180.12	235.7	243.5	191.55	195.16	236	246.62	313.35	333.5	174.17	198.88	C
my9922	宮崎	1999	178.18	181.98	236.07	236.07	196	202	246.56	252.75	313.32	313.32	174.08	198.8	B
my9923	宮崎	1999	181.43	181.43	228.24	239.83	192	192	246.59	246.59	324.37	326.53	174	176	B
my9924	宮崎	1999	180.03	183.87	228.23	235.9	192	198	233.98	246.42	310.19	313.3	193.15	198.74	B
my9925	宮崎	1999	180	182	235.83	245.71	191.23	196.75	223.71	244.69	315.21	315.21	176.42	195.27	B
my9926	宮崎	1999	178.15	180.07	236	236	189.45	191.21	238.72	238.72	327.01	334.92	174.05	175.98	C
my9927	宮崎	1999	181.32	181.32	241.85	243.74	191.34	196.94	238.07	238.07	314.96	332.7	174	174	B
kg9701	吹上浜	1997	178	180	235.85	240.05	196	200	236.08	236.08	324	324	176	198	B
kg9702	吹上浜	1997	180.08	182.05	235	235	200	204	235.96	235.96	-	-	174.14	174.14	B
kg9703	吹上浜	1997	178.21	181.98	239.86	243.81	191.62	191.62	-	-	310.12	325.6	174.06	196.94	B
kg9704	吹上浜	1997	178.2	180.07	235.98	235.98	191.31	202.44	234.66	247.32	325.11	335.02	174.07	195.05	B
kg9705	吹上浜	1997	178.14	182.01	239.73	243.73	191.69	191.69	234.76	245.52	310.09	325.43	174.11	197.01	B

付表6.3. 産卵雌のマイクロサテライト領域の遺伝子型(生データ)

個体番号	産卵浜	採取年	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8		mtDNA ハプロタイプ
kg9706	吹上浜	1997	180.08	183.89	239.97	238.89	192	192	274	274	314	324	174	176	B
kg9708	吹上浜	1997	179.31	188.68	–	–	191.17	191.17	234.68	245.39	315.1	324.93	178.14	200.77	B
kg9709	吹上浜	1997	180	180	239.55	239.55	191.22	191.22	250.51	252.55	310	314	174	174	B
kg9710	吹上浜	1997	180	182	249.84	249.84	193.19	196.75	–	–	313.49	337.58	174.07	176.01	C
kg9711	吹上浜	1997	181.23	183.13	235.68	235.68	190	192	235.99	235.99	314	324	174	176	B
kg9712	吹上浜	1997	–	–	–	–	–	–	–	–	–	–	–	–	B
kg9713	吹上浜	1997	178	178	235.99	235.99	196.8	200.52	234.6	238.74	314	338	174	176	B
kg9714	吹上浜	1997	179.66	183.46	239.53	239.53	191.51	209.97	243.3	247.26	–	–	176.29	178.19	B
kg9715	吹上浜	1997	178	180	235.96	249.55	191.22	196.69	–	–	310	336	174	174	B
F9901	吹上浜	1999	180.1	182.02	–	–	193.11	198.59	247.36	247.36	–	–	176.2	176.2	B
F9902	吹上浜	1999	178.09	178.09	235.95	245.74	191.2	196.77	–	–	313.4	313.4	176.06	176.06	B
F9903	吹上浜	1999	178.46	180.42	239.44	239.44	190.25	191.23	234.56	238.74	311.59	324.69	176.21	200.68	B
F9904	吹上浜	1999	178	178	236.24	236.24	190.44	191.40	236	236	312	322	194	196	B
F9905	吹上浜	1999	181.64	181.64	241.52	247.77	196.93	209.97	247.42	255.33	311.5	334.44	176.14	176.14	B
F9906	吹上浜	1999	181.55	181.55	239.56	243.61	191.45	204.44	234.44	286.64	314.5	328.29	176.06	198.82	B
F9907	吹上浜	1999	178.09	181.88	235.86	237.86	204.41	210.15	247.44	247.44	313.05	323.17	173.99	202.58	B
F9908	吹上浜	1999	178.1	179.93	239.41	241.5	191.23	200.45	–	–	310.21	313.5	174.05	195.03	B
y9502	屋久島	1995	179.54	181.4	241.91	245.67	192.57	192.57	238.58	247.42	324.22	324.22	176.24	176.24	B
y9503	屋久島	1995	181.29	183.18	236.28	249.75	198.6	209.8	238.65	245.5	314.43	314.43	198.92	200.78	B
y9504	屋久島	1995	179.51	181.3	247.49	251.3	176.47	176.47	247.31	255.46	311.81	324.94	–	–	B
y9505	屋久島	1995	–	–	236.2	251.72	193.35	198.66	247.39	247.39	311.22	314.45	197.04	197.04	B
y9506	屋久島	1995	181.23	183.13	–	–	–	–	–	–	–	–	178.17	199.01	B
y9507	屋久島	1995	–	–	236.03	245.84	191.52	191.52	–	–	311.88	315.14	176.12	200.8	C
y9508	屋久島	1995	181.23	181.23	245.42	245.42	193.18	198.6	247.4	247.4	–	–	176.15	200.79	B
y9509	屋久島	1995	179.17	181	236.22	236.22	193.01	193.01	234.15	238.22	311.54	314.83	176.5	178.28	B
y9510	屋久島	1995	181.54	181.54	–	–	–	–	247.49	247.49	–	–	–	–	B
y9511	屋久島	1995	179.09	181.01	237.77	237.77	192.12	201.4	247.28	247.28	–	–	–	–	B
y9512	屋久島	1995	181.37	183.25	228.43	236.21	194.39	211.05	246.71	246.71	314.49	324.35	176.51	176.51	B
y9513	屋久島	1995	181.42	183.27	–	–	–	–	–	–	–	–	–	–	–
y9514	屋久島	1995	179.48	181.38	230.25	239.77	193.19	198.72	234.75	247.36	311.88	324.91	178.2	193.27	C
y9515	屋久島	1995	–	–	–	–	–	–	–	–	–	–	–	–	A
y9516	屋久島	1995	179.45	179.45	–	–	198.74	202.52	247.46	249.48	–	–	176.08	176.08	B
y9517	屋久島	1995	181.34	181.34	240.68	244.46	191.66	191.66	247.44	247.44	–	–	195.19	199	C
y9518	屋久島	1995	188.77	188.77	–	–	–	–	–	–	–	–	–	–	B
y9519	屋久島	1995	–	–	236.11	245.83	191.33	196.75	247.4	247.4	311.31	311.31	–	–	B
y9520	屋久島	1995	181.41	183.34	222.29	222.29	193.08	198.6	247.36	247.36	311.31	311.31	–	–	B
y9521	屋久島	1995	175.6	179.32	237.93	247.44	193.12	193.12	238.86	247.38	311.26	314.47	176.21	193.24	B
y9522	屋久島	1995	201.21	201.21	–	–	191.28	196.75	–	–	–	–	–	–	–
y9523	屋久島	1995	181.11	181.11	236.02	237.88	193.13	198.59	238.86	245.48	–	–	176.19	176.19	B
y9524	屋久島	1995	181.05	184.88	239.25	239.25	191.09	196.61	240.85	240.85	311.76	324.72	176.12	195.07	B
y9525	屋久島	1995	181.52	181.52	–	–	–	–	247.36	247.36	–	–	203.66	203.66	B
y9526	屋久島	1995	–	–	236.03	238.02	191.4	198.76	245.31	247.3	311.54	311.54	193.3	198.95	B
y9527	屋久島	1995	188.88	188.88	236.15	236.15	191.33	200.53	247.42	247.42	311.43	311.43	176.39	193.39	B
y9528	屋久島	1995	179.58	181.43	237.97	237.97	191.37	191.37	245.45	245.45	–	–	176.04	176.04	B
y9529	屋久島	1995	181.4	183.36	238.01	238.01	189.53	198.65	234.69	238.91	–	–	176.04	176.04	B
y9530	屋久島	1995	198	198	228.36	245.79	–	–	236.23	236.23	314.38	314.38	176.2	176.2	C
y9901	屋久島	1999	178.15	180.09	241.55	249.84	191.18	198.53	237.09	250.57	323.43	323.43	174.12	202.64	B
y9902	屋久島	1999	168.53	174.4	241.78	241.78	191.66	193.52	239.77	246.57	310.07	323.4	174.16	174.16	B
y9903	屋久島	1999	181.26	181.26	235.99	235.99	191.35	198.54	234.49	247.37	324.4	334.29	200.69	202.58	C
y9904	屋久島	1999	178.22	180.22	239.99	247.64	189.45	189.45	245.37	247.37	325.11	329.12	198.91	200.79	C
y9905	屋久島	1999	178.27	180.16	239.84	245.68	191.02	191.02	240.92	255.5	315.18	336.86	191.32	191.32	B
y9906	屋久島	1999	178.13	182.03	250	252	191.05	204.28	242	242	310.17	323.52	174.06	187.46	B
y9907	屋久島	1999	178.22	182.03	235.93	235.93	194.88	196.59	238.12	246.66	313.32	313.32	170.2	174.1	B
y9908	屋久島	1999	181.11	181.11	235.91	245.7	191.17	202.28	234.65	234.65	311.88	336.84	176.25	195.19	B
y9909	屋久島	1999	178.16	180.06	235.99	235.99	191.21	204.34	237.98	244.61	–	–	198.8	198.8	B
y9910	屋久島	1999	179.67	181.54	231.28	239.52	196.9	200.58	238.73	270.01	311.71	324.81	–	–	B
y9911	屋久島	1999	181.46	181.46	236.02	236.02	191.48	192.45	234.55	284.63	311.59	314.87	–	–	C
y9912	屋久島	1999	181.42	181.42	237.99	247.49	191.4	200.58	247.39	247.39	311.5	316.78	–	–	B
y9913	屋久島	1999	179.52	179.52	236.07	241.88	193.14	198.63	238.58	247.34	311.24	314.42	174.01	174.01	B
y9914	屋久島	1999	181.3	181.3	236.15	236.15	191.25	204.24	224.13	238.65	324.29	334.12	–	–	B
y9915	屋久島	1999	183.07	183.07	235.99	239.86	198.61	209.81	234.66	247.28	311.91	315.22	174.12	198.81	B
y9916	屋久島	1999	180.24	180.24	228.33	236.06	191.18	196.6	247.33	255.44	–	–	174.14	195.17	B
y9917	屋久島	1999	182.32	182.32	239.18	253.25	–	–	247.38	247.38	315.13	334.9	–	–	B
y9918	屋久島	1999	181.09	181.09	232.5	236.19	194.97	205.19	238.72	245.35	311.7	324.87	176.05	195.02	B
y9919	屋久島	1999	178.29	180.11	236.06	238.02	191.25	210.00	–	–	310	314	174.16	174.16	B
y9920	屋久島	1999	179.19	181.11	232.23	236.02	191.16	200.39	238.72	247.45	310	312	174	176	B
y9921	屋久島	1999	178.24	180.14	235.99	235.99	191.17	200.39	240.87	253.51	311.86	315.09	176.05	176.05	B
y9922	屋久島	1999	178.21	180.13	239.27	247.54	195.04	202.29	238.74	238.74	314.92	324.72	176.24	200.78	B
y9923	屋久島	1999	180.23	182.1	239.28	239.28	193.03	198.59	238.64	247.34	314.74	324.49	176.14	176.14	B
y9924	屋久島	1999	179.26	179.26	236.03	236.03	191.2	194.91	238.75	242.91	315.04	325.01	176.37	178.1	B
y9925	屋久島	1999	180.06	182.04	235.99	237.91	191.25	194.97	247.33	255.29	328.16	328.16	174.12	174.12	B
y9926	屋久島	1999	181.54	181.54	236.08	245.73	191.16	200.4	234.45	238.57	313.4	324.36	176.14	200.78	B
y9927	屋久島	1999	179.57	181.54	236.09	236.09	191.42	200.58	–	–	–	–	193.26	200.68	C
y9928	屋久島	1999	179.54	181.39	236.12	236.12	202.36	202.36	237.81	237.81	–	–	176.11	178.03	B
y9929	屋久島	1999	180.99	184.83	237.97	247.54	191.04	194.82	234.68	247.34	325	325	176.1	176.1	B
y9930	屋久島	1999	178	180	236.01	236.01	192	196	224.1	247.35	322	326	176	194	B
y9931	屋久島	1999	178.12	179.98	236.05	237.99	200.46	204.33	–	–	313.22	333.26	174.1	200.7	B
y9932	屋久島	1999	181.46	181.46	236.14	243.78	191.22	200.39	238.79	247.38	313.11	325.2	170.18	174.05	B
y9933	屋久島	1999	179.98	181.88	236.05	245.77	189.34	193.13	240.85	247.46	313.14	323.16	174.03	174.03	B
y9934	屋久島	1999	180.12	187.82	236.01	236.01	192	204	234.74	284.81	314.09	325.01	176.05	200.69	C
y9935	屋久島	1999	180.04	182.07	228.3	235.92	192	192	247.36	247.36	324.95	334.8	176.15	204.39	B
y9936	屋久島	1999	178	184	243.81	245.77	191.18	204.33	247.42	247.42	312	326	174	200	B
y9937	屋久島	1999	180.01	181.95	236.08	249.65	198	200	237.76	245.35	313.52	313.52	174.04	174.04	B

付表6.4.　産卵雌のマイクロサテライト領域の遺伝子型(生データ)

個体番号	産卵浜	採取年	Cc7		Cc117		Cc141		Cm72		Cm84		Ei8		mtDNA ハプロタイプ
y9938	屋久島	1999	178.09	179.91	236.00	243.79	194	198	238.77	238.77	313.85	313.85	174.04	200.61	B
y9939	屋久島	1999	178.05	179.97	236.05	236.05	192	200	240.75	253.52	324.55	336.44	173.96	195.05	C
y9940	屋久島	1999	182.18	187.88	236.04	243.76	198	200	247.41	247.41	311.47	314.64	193.26	193.26	B
y9941	屋久島	1999	181.37	181.37	228.32	243.78	196	202	238.66	247.52	314.47	324.23	174.05	193.12	B
y9942	屋久島	1999	178.02	179.96	236	236	194	200	238.72	247.29	313.1	325.28	198.77	198.77	B
y9943	屋久島	1999	181.2	181.2	236.07	243.91	191.18	194.93	240.66	247.43	314.51	326.28	176.29	198.94	B
y9944	屋久島	1999	178.35	180.28	236.08	236.08	192	202	245.29	247.38	315.17	315.17	176.22	195.14	B
y9945	屋久島	1999	179.9	187.47	236.04	236.04	194	200	240.85	247.32	324.98	327.04	173.98	173.98	B
y9946	屋久島	1999	178	180	236.02	243.77	196.69	196.69	245.53	247.42	322	330	174	174	B
y9947	屋久島	1999	178.09	179.92	232.15	236.08	191.19	193.03	234.7	234.7	311.76	324.86	176.07	193.2	B
y9948	屋久島	1999	181.22	181.22	235.99	245.77	192	200	238.77	238.77	311.84	323.08	174.03	198.82	B
y9949	屋久島	1999	178.33	180.16	236.19	238.18	192	204	247.26	247.26	311.76	314.99	176.07	189.42	B
y9950	屋久島	1999	179.86	181.79	236.1	245.71	192	210	234.65	234.65	311.62	324.65	173.98	173.98	C
y9951	屋久島	1999	183.02	188.65	237.78	237.78	192	196	234.59	247.47	311.53	314.7	176.1	198.81	B
y9952	屋久島	1999	181.01	181.01	236.01	236.01	200	200	238.62	243.33	311.24	314.51	174.05	175.99	B
y9953	屋久島	1999	181.11	181.11	236.08	236.08	190.46	191.43	234.53	247.4	311.34	324.29	176.13	204.47	B
y9954	屋久島	1999	179.24	179.24	236.02	249.62	191.17	199.5	238.86	247.34	314.42	314.42	191.23	193.17	B
y9955	屋久島	1999	178	180	236.05	236.05	190.62	191.75	234.61	247.33	310	312	192	200	B
y9956	屋久島	1999	181.46	181.46	239.3	249.6	189.66	191.42	238.84	255.47	315.18	325	176.04	176.04	B
y9957	屋久島	1999	181.39	181.39	243.77	245.7	200.48	200.48	247.36	247.36	322.99	322.99	174.00	187.44	B
y9958	屋久島	1999	177.95	181.78	236.06	245.76	192.02	210.65	238.79	242.98	311.88	324.99	174.04	200.8	B
y9959	屋久島	1999	181.41	181.41	245.75	249.72	198.73	198.73	247.43	247.43	314.92	314.92	173.97	204.63	B
y9960	屋久島	1999	179.45	179.45	238.03	243.76	205.27	210.83	247.31	255.38	314.82	314.82	176.08	193.18	B
y9961	屋久島	1999	179.53	179.53	236.06	237.97	201.48	210.77	244.7	244.7	312.99	323.09	174.09	174.09	B
y9962	屋久島	1999	181.17	181.17	228.35	236.06	194.97	205.17	238.55	238.55	312.94	312.94	174.02	175.98	B

下線:ABI3100, 下線なし:ABI3130xl

付表 7.1. 母性解析用エクセルマクロ for VBA6.0

```
'*********************************************************************
'母親の遺伝子型推定マクロ　　Sub 母アリル検討()
'*********************************************************************
Sub 母アリル検討()
Dim i As Byte, j As Byte
' i, j が内部探索用動変数
Dim k As Byte, a1 As Integer, a2 As Integer
Dim genotypef(21) As String, n As Byte, m As Byte
' n は genotype カウント用, m : アリル出現数カウント用
Dim allele(10) As Integer, h As Byte, l As Byte, t As Byte
Dim allenm(10) As Byte
' allenm は各アリルの出現数
' とりあえず存在するアリルは 10 つまでに設定
' h は子ガメの個体数, l は locus 数
'''アリルの抜き出し'''
h = Cells(1, 2).Value
For l = 1 To Cells(2, 2).Value
' 最終的な k がアリルの種数になる
    k = 0
    For i = 1 To h
    a1 = Cells(i + 3, 2 * l).Value
    ' セルからアリルを取得
    ' 既に取得したアリルかどうかを判定
    j = 0
    Do Until allele(j) = a1
        If j = k Then
    '    全ての配列を探査終了
        k = k + 1
        allele(k) = a1
    '    配列を 1 つ増やし，アリルを収納
        End If
        j = j + 1
    '    無限ループ回避
        If j > 30 Then
            MsgBox "30 回処理したので処理を中止します"
            Exit Do
        End If
    Loop
    Next i
    ' 2 つ目のアリルについても同様に処理
    For i = 1 To h
    a2 = Cells(i + 3, 2 * l + 1).Value
    ' セルからアリルを取得
    ' 既に取得したアリルかどうかを判定
    j = 0
    Do Until allele(j) = a2
        If j = k Then
    '    全ての配列を探査終了
        k = k + 1
        allele(k) = a2
    '    配列を 1 つ増やし，アリルを収納
        End If
        j = j + 1
    '    無限ループ回避
        If j > 30 Then
            MsgBox "30 回処理したので処理を中止します"
            Exit Do
        End If
    Loop
    Next i
'    各アリルの出現数をカウント
    For i = 1 To k
        m = 0
        For j = 1 To h
            If Cells(j + 3, 2 * l).Value = allele(i) Then
                m = m + 1
            End If
            If Cells(j + 3, 2 * l + 1).Value = allele(i) Then
                m = m + 1
            End If
        Next j
        allenm(i) = m
    Next i
    ' 取得したアリルを確認のために表示
    Cells(h + 4, 2 * l).Value = "alleles"
    Cells(h + 4, 2 * l + 1).Value = "n"
    For i = 1 To k
        Cells(i + h + 4, 2 * l).Value = allele(i)
        Cells(i + h + 4, 2 * l + 1).Value = allenm(i)
    Next i
    '''母親遺伝子型の検討'''
    n = 1
    For i = 1 To k
        For t = 1 To k
            If allele(i) <= allele(t) Then
                For j = 1 To h
    '            子ガメの第 allele データを取得
                    a1 = Cells(j + 3, 2 * l).Value
                    a2 = Cells(j + 3, 2 * l + 1).Value
    '                欠損データがあっても処理続行できるように
                    If a1 <> 0 Then
                        If a1 <> allele(i) And a2 <> allele(i) And a1 <>
allele(t) And a2 <> allele(t) Then
                            Exit For
                        End If
                    End If
                    If j = h And allele(i) <> 0 Then
                    ' なぜか 0 がアリルとして使われることがあったので
                        genotypef(n) = allele(i) & "/" & allele(t)
    '                検査をパスした遺伝子型を格納
                        n = n + 1
                    End If
                Next j
            End If
        Next t
    Next i
    ' パスした遺伝子型を確認のために表示
    Cells(16 + h, 2 * l).Value = "Mother Genotype is" & n - 1
    For i = 1 To n - 1
        Cells(16 + h + i, 2 * l).Value = genotypef(i)
    Next i
Next l
End Sub
```

付表 7.2. 母性解析用エクセルマクロ for VBA6.0

```
'*********************************************************************
母親判別マクロ　　Sub genotype_match()
'*********************************************************************
Sub genotype_match()
Dim i As Byte, d As Byte, j As Byte, h As Byte, l As Byte
'i, j, h, d, g, l は探索用変数
Dim k As Byte, e As Byte, m As Byte, s As Byte, g As Byte
'k, e, m, s, g　は固定される変数
Dim iden As Single
' 複数の genotype 候補間で結果が一致するかどうかの判定用
Dim gnm As Byte
'gnm:候補となっている genotype の数
Dim genotype As String, genoc As String, cltmp As String
Dim clname() As String, cld() As String
'cld() : 完全排除クラッチ
' ここ以降は Matrix 書き込み時に使用する変数
Dim matrix As String, data As String
Dim mr As Integer, mc As Integer, mrs As Integer, mcs As Integer
'mr:マトリクスの行変数　mc : マトリクスの列変数
'mrs:マトリクスの探索開始行、mcs:マトリクスの探索開始列
' とりあえず一致するクラッチは 15 までに指定
Dim dr As Integer, n As Byte
'n: 各巣について推定された genotype の種数
e = Cells(1, 1).Value
' データの個数を指定
ReDim clname(e)
m = 0
' クラッチの名前の重複を確認して、異なる名前のみを格納
For i = 1 To e
    cltmp = Cells(i + 2, 1).Text
    j = 1
    Do While cltmp <> clname(j)
        If j = m + 1 Then
            m = m + 1
            clname(m) = cltmp
        Else
            j = j + 1
        End If
    Loop
Next i
' 格納したクラッチ名とクラッチ数を表示
Cells(e + 4, 1).Value = "Clutch namber=" & m
Cells(e + 4 + 1, 1).Value = "Clutch ID"
Cells(e + 4 + 1, 2).Value = "候補 genotype 数"
Cells(e + 4 + 1, 3).Value = "一致 Clutch"
Cells(e + 4 + 1, 27).Value = "完全排除 Clutch 数"
Cells(e + 4 + 1, 28).Value = "完全排除 Clutch"
' 各クラッチが何種の genotype をもっているかをカウント
For i = 1 To m
    n = 0
    For j = 1 To e
        If Cells(j + 2, 1).Text = clname(i) Then
            n = n + 1
        End If
    Next j
    Cells(2 * i + e + 4, 1).Value = clname(i)
    Cells(2 * i + e + 4, 2).Value = n
Next i
For i = 1 To e
' セル(A1)で指定した数のデータまで処理をおこなう
Dim cl() As String
ReDim cl(e)
k = 0
genotype = Cells(i + 2, 2).Text
' 他と比較する遺伝子型を取得
' 自分以外の全てと比較するアルゴリズム
    For j = 1 To e
        genoc = Cells(j + 2, 2).Text
        cltmp = Cells(j + 2, 1).Text
'         比較対照の遺伝子型を取得し genoc へ
'         比較対照のクラッチ名を取得し cltmp へ
        If genoc = genotype Then
            k = k + 1
            cl(k) = Cells(j + 2, 1).Text
        End If
    Next j
'    ここまでで一致したクラッチを全て見つけ出し、配列に収納
' この時点で k は一致したクラッチの数
    Cells(i + 2, 3).Value = k
'    各 genotype について一致したクラッチの書き出し
    For j = 1 To k
        Cells(i + 2, 3 + j).Value = cl(j)
    Next j
Next i
' ここから複数 genotype の結果の統合
For i = 1 To m
    Dim cli() As String
    ReDim cli(e)
    cli(1) = 0
    'cli(e):一致しているクラッチ名
    ReDim cld(m)
    s = 0
'    s : 一致したクラッチの総数
    For j = 1 To e
        If Cells(j + 2, 1).Text = clname(i) Then
            For h = 1 To Cells(j + 2, 3).Value
                cltmp = Cells(j + 2, 3 + h).Text
                d = 0
                For l = 0 To s
                    If cli(l) = cltmp Then
                        d = 1
                    End If
                Next l
                If d = 0 Then
                    s = s + 1
                    cli(s) = cltmp
                End If
            Next h
        End If
    Next j
'    完全排除クラッチのリストアップ
    g = 0
    For j = 1 To m
        d = 0
        For h = 1 To s
            If cli(h) = clname(j) Then
                d = 1
            End If
        Next h
        If d = 0 Then
            g = g + 1
            cld(g) = clname(j)
    ' ciname(j)が cli()のリストになければ、排除クラッチとして cld(g)へ
' 最終的な g が排除クラッチの数になる
        End If
    Next j
'    各巣について一致クラッチの書き出し
    For j = 1 To s
        Cells(2 * i + e + 4, 2 + j).Value = cli(j)
    Next j
    ' 完全排除クラッチ数の書き出し
    Cells(2 * i + e + 4, 27).Value = g
    '    排除クラッチの書き出し
    For j = 1 To g
        Cells(2 * i + e + 4, 27 + j).Value = cld(j)
    Next j
Next i
End Sub
```

付表 7.3. 母性解析用エクセルマクロ for VBA6.0

```
**********************************************************************
母親同一性判別行列作成マクロ　　Sub draw_matrix()
**********************************************************************
Sub draw_matrix()
Dim i As Byte, j As Byte
Dim m As Byte, k As Byte
# k：排除されるクラッチ数
Dim cltmp As String
Dim clname() As String
Dim matrix As String, data As String
Dim mr As Integer, mc As Integer, mrs As Integer, mcs As Integer
# mr:マトリクスの行変数　mc：マトリクスの列変数
# mrs:マトリクスの探索開始行、mcs:マトリクスの探索開始列
Dim dr As Integer, drs As Integer, dcs As Integer
# drs:データの開始行、dcs:データの開始列
data = "Cc141"
# データ読み込み元シートの指定
matrix = "Cc141_matrix"
# マトリックス書き込み先シートの指定
drs = 57
dcs = 27
# データの開始行と列を指定
mrs = 3
mcs = 2
# マトリクスの探索開始行と列を指定
m = 26
# クラッチの数を指定(データがあるクラッチ)
ReDim clname(m)
For i = 1 To m
    dr = drs + 2 * (i - 1)
    k = Cells(dr, dcs).Value
    cltmp = Cells(dr, 1).Text
    For j = 1 To k
        clname(j) = Cells(dr, dcs + j).Text
    Next j
            Worksheets(matrix).Activate
                mr = mrs
                Do Until Cells(mr, 1).Text = cltmp
                    mr = mr + 1
    #                           次に無限ループ回避ルーチン
                    If mr > 50 Then
                    MsgBox "探索が50行を超えたので処理を中止します"
                        Exit Do
                    End If
                Loop
 #ループを抜け出したときの mr を保持。これがデータを書き込む行。
                For j = 1 To k
                    mc = mcs
                    Do Until Cells(2, mc).Value = clname(j)
                        mc = mc + 1
        #                           次に無限ループ回避ルーチン
                        If mc > 50 Then
                    MsgBox "探索が50列を超えたので処理を中止します"
                            Exit Do
                        End If
                    Loop
  # ループを抜け出したときの mc を保持。これがデータを書き込む列
                    Cells(mr, mc).Value = 0
                Next j
            Worksheets(data).Activate
Next i
End Sub
```