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APPENDICES

APPENDIX 1

REAGENT PREPARATIONS

1. 5 % Chelex solution

- 50 g Chelex 100 resin ®

- 100 ml TE buffer 0.1 M

add up to 1 L with MQ H₂O

2. 6% denaturing polyacrylamide gel (gel mixture)

To prepare 80 ml of gel mixture

- 33.6 g urea

- 12 ml acrylamide (19:1
Acryl/bis solution)

- 9.6 ml 5x TBE

make up to 80 ml with MQ H₂O stir until dissolved and filter.

3. Buffer for automated DNA fragment analyser (GS 2000)

0.6 x TBE buffer

4. Gel for automated DNA fragment analyser

- 20 ml of gel mix

- 100 µl APS

- 10 µl TEMED

mix well and pour into gel plates.

APPENDIX 2
GENOTYPRE OF QUEENS AND DRONES

**Putative genotypes of queens and drones in 13 colonies of *A. dorsata*
(four microsatellite loci, length in base pairs).**

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
<u>Colony-Aggregation 1</u>					
Queen allele 1	212	104	139	164	
Queen allele 2	212	104	155	166	
Drone 1	208	100	135	166	5
Drone 2	208	100	141	164	2
Drone 3	208	100	143	242	1
Drone 4	208	104	131	164/166	1
Drone 5	208	104	135	228	1
Drone 6	208	104	137	166	2
Drone 7	208	104	143	166	1
Drone 8	208	106	135	166	1
Drone 9	208	108	145	168	2
Drone 10	210	100	141	170	2
Drone 11	210	100	143	166	1
Drone 12	210	100	149	164	1
Drone 13	210	100	153	164	1
Drone 14	210	100	153	170	3
Drone 15	210	104	137	166	1
Drone 16	210	104	139	242	1
Drone 17	210	104	141	168	1
Drone 18	210	104	143	164	2
Drone 19	210	104	143	166	3
Drone 20	210	104	143	168	2
Drone 21	210	104	145	166	1
Drone 22	210	106	143	164/166	2
Drone 23	210	106	145	164/166	1
Drone 24	212	98	131	164	4
Drone 25	212	98	141	164	2

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 26	212	100	133	166	1
Drone 27	212	100	137	166	1
Drone 28	212	100	143	164	2
Drone 29	212	100	143	166	3
Drone 30	212	100	147	168	1
Drone 31	212	100	149	164	1
Drone 32	212	100	149	168	1
Drone 33	212	100	155	166	3
Drone 34	212	104	135	166	2
Drone 35	212	104	135	168	4
Drone 36	212	104	139	164	1
Drone 37	212	104	139	242	1
Drone 38	212	104	141	164/166	2
Drone 39	212	104	141	168	2
Drone 40	212	104	145	200	1
Drone 41	212	104	153	164	2
Drone 42	212	104	155	242	1
Drone 43	212	106	141	168	4
Drone 44	212	106	145	164	1
Drone 45	212	106	149	164/166	1
Drone 46	214	98	141	166	2
Drone 47	214	100	131	164	2
Drone 48	214	100	131	200	3
Drone 49	214	100	133	166	2
Drone 50	214	100	135	164	2
Drone 51	214	100	135	228	2
Drone 52	214	100	143	162	2
Drone 53	214	100	143	166	4
Drone 54	214	100	139/155	164	1
Drone 55	214	102	137	166	3
Drone 56	214	102	145	164	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 57	214	104	137	164	4
Drone 58	214	104	139	164	1
Drone 59	214	104	141	166	4
Drone 60	214	104	143	166	3
Drone 61	214	104	143	170	4
Drone 62	214	104	145	170	1
Drone 63	214	104	147	166	2
Drone 64	214	106	137	162	2
Drone 65	214	106	137	164	3
Drone 66	214	106	149	164/166	1
Drone 67	214	108	133	164/166	2
Drone 68	214	108	135	164	4
Drone 69	214	108	137	170	5
Drone 70	214	108	137	200	1
Drone 71	214	108	149	166	1
Drone 72	214	108	151	166	3

Colony-Aggregation 2

Queen allele 1	208	100	139	162	
Queen allele 2	210	106	147	166	
Drone 1	204	100/106	143	164	1
Drone 2	206	100	155	162	3
Drone 3	206	106	143	164	2
Drone 4	206	100/106	135	162/166	1
Drone 5	208	100	137	166	4
Drone 6	208	100	139	166	2
Drone 7	208	106	139	166	3
Drone 8	208	106	145	166	4
Drone 9	208	106	149	172	4
Drone 10	208	108	143	166	4

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 11	208	100	155	202	2
Drone 12	210	100	137	166	6
Drone 13	210	100	141	166	4
Drone 14	210	104	145	170	3
Drone 15	210	104	139/147	166	1
Drone 16	210	106	139	166	2
Drone 17	210	106	155	164	2
Drone 18	212	100	133	166	3
Drone 19	212	100	139	162	4
Drone 20	212	100	139	218	1
Drone 21	212	100	145	166	4
Drone 22	212	102	135	168	4
Drone 23	212	104	137	170	2
Drone 24	212	104	141	162	1
Drone 25	212	104	145	170	4
Drone 26	212	106	135	168	4
Drone 27	212	106	137	162	2
Drone 28	212	106	137	166	2
Drone 29	212	106	145	162	2
Drone 30	212	106	145	170	4
Drone 31	212	100/106	133	170	1
Drone 32	214	100	133	162	5
Drone 33	214	100	133	170	6
Drone 34	214	100	133	218	1
Drone 35	214	100	135	170	2
Drone 36	214	100	141	166	1
Drone 37	214	100	145	162/166	2
Drone 38	214	100	139/147	162/166	2
Drone 39	214	102	151	162/166	2
Drone 40	214	104	135	162	2
Drone 41	214	104	139	164	4

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 42	214	104	145	164	2
Drone 43	214	104	145	166	2
Drone 44	214	104	147	162	2
Drone 45	214	104	139/147	170	2
Drone 46	214	106	137	166	4
Drone 47	214	106	139	164	3
Drone 48	214	106	139	166	2
Drone 49	214	106	139	170	1
Drone 50	214	106	141	166	1
Drone 51	214	106	143	164	2
Drone 52	214	106	143	166	3
Drone 53	214	106	145	162	5
Drone 54	214	106	145	218	1
Drone 55	214	106	147	166	1
Drone 56	214	106	139/147	162	2
Drone 57	214	108	133	170	1
Drone 58	214	108	143	166	5
Drone 59	214	110	135	164	3
Drone 60	214	110	139	166	1
Drone 61	214	110	141	162/166	1
Drone 62	214	112	141	162/166	2
Drone 63	214	100/106	135	166	2
Drone 64	214	100/106	137	166	1
Drone 65	214	100/106	139	166	5
Drone 66	208/210	100	133	162	2
Drone 67	208/210	100	141	162	1
Drone 68	208/210	100	143	164	7
Drone 69	208/210	100	145	166	1
Drone 70	208/210	100	145	168	3
Drone 71	208/210	104	133	162	2
Drone 72	208/210	104	145	168	2

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 73	208/210	104	145	202	1
Drone 74	208/210	106	135	166	3
<u>Colony-Aggregation 3</u>					
Queen allele 1	207	100	134	166	
Queen allele 2	209	104	149	166	
Drone 1	207	100	136	166	1
Drone 2	207	100	144	166	5
Drone 3	207	100	144	168	7
Drone 4	207	100	144	200	4
Drone 5	207	100	146	166	3
Drone 6	207	100	146	200	1
Drone 7	207	100	149	200	7
Drone 8	207	100	134/149	166	4
Drone 9	207	100	149	210	2
Drone 10	207	106	144	166	3
Drone 11	207	106	144	168	1
Drone 12	207	106	144	210	1
Drone 13	207	106	146	166	1
Drone 14	207	100/104	142	166	4
Drone 15	207	100/104	142	178	3
Drone 16	209	100	144	166	3
Drone 17	209	100	134/149	200	2
Drone 18	209	102	161	166	1
Drone 19	209	102	161	168	4
Drone 20	209	100/104	144	166	1
Drone 21	209	100/104	144	210	2
Drone 22	211	100	142	166	2
Drone 23	211	104	138	210	3
Drone 24	211	104	142	166	10

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 25	211	104	142	210	5
Drone 26	211	104	144	166	3
Drone 27	211	106	136	166	1
Drone 28	211	106	138	210	1
Drone 29	211	118	136	210	1
Drone 30	211	100/104	159	166	1
Drone 31	211	100/104	134/149	166	1
Drone 32	213	100	142	176	1
Drone 33	213	106	149	168	2
Drone 34	213	110	142	166	3
Drone 35	213	110	144	172	1
Drone 36	213	100/104	142	166	2
Drone 37	207/209	100	142	168	2
Drone 38	207/209	104	158	166	1
Drone 39	207/209	104	134/149	166	1
Drone 40	207/209	106	142	166	1
Drone 41	207/209	106	144	200	1
Drone 42	207/209	106	134/149	208	1
Drone 43	207/209	106	134/149	210	1
Drone 44	207/209	100/104	134	166	3
Drone 45	207/209	100/104	144	192	1
Drone 46	207/209	100/104	144	208	1
Drone 47	207/209	100/104	149	168	1
<u>Colony-Aggregation 4</u>					
Queen allele 1	206	104	134	168	
Queen allele 2	212	112	135	238	
Drone 1	204	100	144	164	3
Drone 2	204	100	134/135	162	1
Drone 3	204	104	146	164	3

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 4	206	100	133	162	1
Drone 5	206	100	144	162	2
Drone 6	206	100	144	164	9
Drone 7	206	100	144	166	3
Drone 8	206	102	144	164	2
Drone 9	206	104	135	164	7
Drone 10	206	104	146	164	5
Drone 11	208	98	150	166	3
Drone 12	208	100	144	164	32
Drone 13	208	100	144	172	1
Drone 14	208	100	146	164	8
Drone 15	208	100	134/135	164	1
Drone 16	208	104	146	164	1
Drone 17	208	104	134	164	2
Drone 18	208	106	134	164	1
Drone 19	208	106	142	162	3
Drone 20	208	108	150	162	1
Drone 21	208	110	138	164	2
Drone 22	210	98	140	162	2
Drone 23	210	100	135	162	1
Drone 24	210	100	142	162	4
Drone 25	210	100	144	162	3
Drone 26	210	100	144	164	24
Drone 27	210	100	144	238	1
Drone 28	210	100	146	164	6
Drone 29	210	100	150	188	1
Drone 30	210	102	138	162	2
Drone 31	210	102	138	164	1
Drone 32	210	102	140	168	2
Drone 33	210	102	144	164	1
Drone 34	210	104	140	162	2

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 35	210	106	140	168	1
Drone 36	210	106	144	162	4
Drone 37	210	108	138	164	1
Drone 37	210	108	138	164	1
Drone 38	210	108	142	168	1
Drone 39	210	108	142	170	4
Drone 40	210	110	138	164	6
Drone 41	210	110	140	162	3
Drone 42	210	104/112	140	160	1
Drone 43	212	98	140	166	10
Drone 44	212	98	150	166	6
Drone 45	212	100	140	188	1
Drone 46	212	100	144	162	5
Drone 47	212	100	144	164	2
Drone 48	212	100	144	166	2
Drone 49	212	100	144	172	2
Drone 50	212	102	135	162	1
Drone 51	212	104	133	166	3
Drone 52	212	106	138	162	2
Drone 53	212	106	138	166	2
Drone 54	212	106	142	162	5
Drone 55	212	106	144	162	2
Drone 56	212	106	144	166	3
Drone 57	212	110	138	162	4
Drone 58	212	104/112	135	164	2
Drone 59	212	104/112	142	162	2
Drone 60	214	100	138	188	2
Drone 61	214	100	144	164	2
Drone 62	214	104	138	160	1
Drone 63	214	106	144	166	4

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 64	214	106	146	166	1
Drone 65	214	106	146	168	1
Drone 66	206/212	100	135	166	2
Drone 67	206/212	100	140	164	4
Drone 68	206/212	100	142	162	1
Drone 69	206/212	100	142	166	1
Drone 70	206/212	102	138	238	1
Drone 71	206/212	102	140	164	2
Drone 72	206/212	102	144	172	1
Drone 73	206/212	104	134	162	1
Drone 74	206/212	104	134	238	1
Drone 75	206/212	104	144	166	3
Drone 76	206/212	106	136	162	2
Drone 77	206/212	106	142	166	1
Drone 78	206/212	104/112	138	162	1

Colony-Aggregation 5

Queen allele 1	207	100	132	166	
Queen allele 2	214	102	150	166	
Drone 1	205	104	144	160	4
Drone 2	205	104	132/150	196	1
Drone 3	207	100	132	164	10
Drone 4	207	100	134	160	5
Drone 5	207	100	136	160	3
Drone 6	207	100	144	168	4
Drone 7	207	100	132/150	160	1
Drone 8	207	102	136	164	4
Drone 9	207	104	132	160	4
Drone 10	207	104	132	164	5
Drone 11	207	104	136	160	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 12	207	104	138	212	2
Drone 13	207	104	140	164	1
Drone 14	207	104	144	160	2
Drone 15	207	104	132/150	198	2
Drone 16	207	106	134	232	2
Drone 17	207	106	144	160	10
Drone 18	207	106	132/150	160	1
Drone 19	207	110	146	164	2
Drone 20	207	112	138	160	4
Drone 21	210	100	134	220	1
Drone 22	210	100	138	160	1
Drone 23	210	100	138	196	1
Drone 24	210	102	144	160	1
Drone 25	210	104	134	164	5
Drone 26	210	104	144	208	1
Drone 27	210	104	146	204	1
Drone 28	210	104	146	208	4
Drone 29	210	104	132/150	208	1
Drone 30	210	106	146	160	2
Drone 31	210	110	138	160	3
Drone 32	210	100/102	144	208	1
Drone 33	212	98	146	220	1
Drone 34	212	100	134	232	5
Drone 35	212	100	144	204	1
Drone 36	212	102	138	160	2
Drone 37	212	102	138	232	3
Drone 38	212	102	146	226	2
Drone 39	212	104	138	164	2
Drone 40	212	104	154	160	2
Drone 41	212	106	138	160	1
Drone 42	212	110	132/150	160	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 43	212	120	154	160	3
Drone 44	212	100/102	134	220	1
Drone 45	212	100/102	138	164	2
Drone 46	212	100/102	140	220	1
Drone 47	212	100/102	142	168	1
Drone 48	212	100/102	146	160	1
Drone 49	212	100/102	146	164	2
Drone 50	214	98	136	160	2
Drone 51	214	98	136	232	3
Drone 52	214	98	136	240	3
Drone 53	214	100	136	162	1
Drone 54	214	100	146	208	4
Drone 55	214	102	132	168	2
Drone 56	214	102	136	164	3
Drone 57	214	104	140	162	4
Drone 58	214	106	138	162	1
Drone 59	214	106	140	164	4
Drone 60	214	106	148	160	1
Drone 61	214	110	138	160	4
Drone 62	214	112	144	160	1
Drone 63	214	112	146	164	1
Drone 64	214	120	154	160	2
Drone 65	214	100/102	136	160	1
Drone 66	214	100/102	138	220	1
Drone 67	214	100/102	144	160	1
Drone 68	214	100/102	144	168	1
Drone 69	214	100/102	144	232	1
Drone 70	214	100/102	150	160	1
Drone 71	216	102	132	168	6
Drone 72	216	112	140	160	1
Drone 73	216	100/102	142	160	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 74	218	100/102	146	160	1
Drone 75	207/214	98	136	220	1
Drone 76	207/214	100	132	160	3
Drone 77	207/214	100	132	208	1
Drone 78	207/214	100	144	164	3
Drone 79	207/214	100	146	198	1
Drone 80	207/214	102	134	160	2
Drone 81	207/214	102	142	160	2
Drone 82	207/214	104	138	162	6
Drone 83	207/214	104	144	164	1
Drone 84	207/214	104	150	164	1
Drone 85	207/214	104	132/150	204	1
Drone 86	207/214	106	136	168	1
Drone 87	207/214	106	142	232	1
Drone 88	207/214	106	144	212	2
Drone 89	207/214	106	144	226	1
Drone 90	207/214	108	138	160	1
Drone 91	207/214	100/102	136	168	2
Drone 92	207/214	100/102	136	232	2

Colony-Aggregation 6

Queen allele 1	214	100	139	164	
Queen allele 2	216	106	139	166	
Drone 1	208	100	133	166	5
Drone 2	208	100	135	170	6
Drone 3	208	100	139	166	3
Drone 4	208	100	145	164	3
Drone 5	208	100	160	166	1
Drone 6	208	102	133	166	12
Drone 7	208	102	139	166	2

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 8	208	102	160	166	3
Drone 9	208	104	133	166	5
Drone 10	208	104	139	164	6
Drone 11	208	104	141	164	2
Drone 12	208	104	143	164	2
Drone 13	208	104	143	166	2
Drone 14	208	104	160	164/166	1
Drone 15	208	106	133	164	3
Drone 16	208	106	133	166	6
Drone 17	208	106	139	164	2
Drone 18	208	106	141	166	2
Drone 19	208	106	145	164	3
Drone 20	208	110	139	164	3
Drone 21	208	100/106	135	164/166	1
Drone 22	208	100/106	143	164/166	2
Drone 23	208	100/106	145	166	1
Drone 24	210	98	139	170	1
Drone 25	210	100	133	166	4
Drone 26	210	100	143	164	1
Drone 27	210	100	145	162	1
Drone 28	210	100	145	166	3
Drone 29	210	102	133	166	5
Drone 30	210	102	139	166	2
Drone 31	210	102	160	166	9
Drone 32	210	104	133	164/166	1
Drone 33	210	104	137	170	2
Drone 34	210	104	139	164/166	3
Drone 35	210	104	143	166	1
Drone 36	210	106	133	166	3
Drone 37	210	106	143	164/166	1
Drone 38	210	108	133	166	2

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 39	210	108	145	166	2
Drone 40	210	100/106	135	170	1
Drone 41	210	100/106	139	166	1
Drone 42	210	100/106	141	164/166	1
Drone 43	212	98	160	170	1
Drone 44	212	100	133	168	3
Drone 45	212	100	139	164	2
Drone 46	212	100	141	164/166	1
Drone 47	212	100	143	166	1
Drone 48	212	104	135	166	2
Drone 49	212	104	143	164	6
Drone 50	212	104	143	170	4
Drone 51	212	104	145	164	1
Drone 52	212	104	145	166	1
Drone 53	212	104	145	170	1
Drone 54	212	106	137	164	2
Drone 55	212	106	139	166	2
Drone 56	212	106	143	170	4
Drone 57	212	106	145	164/166	1
Drone 58	212	108	141	164	1
Drone 59	212	108	143	164	1
Drone 60	212	108	143	170	1
Drone 61	212	100/106	143	164	1
Drone 62	212	100/106	151	164/166	1
Drone 63	212	100/106	153	170	1
Drone 64	214	98	139	170	1
Drone 65	214	100	141	164/166	2
Drone 66	214	100	145	164	1
Drone 67	214	102	139	166	1
Drone 68	214	104	137	164	1
Drone 69	214	104	143	166	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 70	214	104	143	170	2
Drone 71	214	104	145	164	1
Drone 72	214	100/106	153	170	1
Drone 73	216	100	133	168	1
Drone 74	216	100	139	166	1
Drone 75	216	102	141	164/166	1
Drone 76	216	102	153	164/166	1
Drone 77	216	104	145	164	1
Drone 78	216	112	143	166	1
Drone 79	218	106	145	164	9
Drone 80	218	100/106	153	170	1
Drone 81	214/216	98	160	170	2
Drone 82	214/216	100	141	164	2
Drone 83	214/216	100	145	164	2
Drone 84	214/216	100	153	170	2
Drone 85	214/216	104	143	164	8
Drone 86	214/216	106	145	164	2
Drone 87	214/216	106	145	166	1
Drone 88	214/216	112	143	164	2

Colony-Aggregation 7

Queen allele 1	206	100	139	164	
Queen allele 2	214	104	139	174	
Drone 1	202	100	145	164	2
Drone 2	202	108	147	164/174	3
Drone 3	204	100	145	164	5
Drone 4	204	100	151	164	2
Drone 5	204	106	139	166	2
Drone 6	204	108	133	164	1
Drone 7	204	100/104	141	166	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 8	204	100/104	147	174	1
Drone 9	206	104	135	164/174	1
Drone 10	206	104	145	164	7
Drone 11	206	106	139	166	10
Drone 12	206	106	143	164	3
Drone 13	206	106	145	164	1
Drone 14	206	100	147	164	3
Drone 15	206	100/104	151	164	3
Drone 16	208	100	145	162	1
Drone 17	208	104	137	172	1
Drone 18	208	104	145	164	2
Drone 19	208	104	145	174	4
Drone 20	208	104	147	164	1
Drone 21	208	106	139	174	1
Drone 22	208	108	135	172	1
Drone 23	208	108	137	172	1
Drone 24	208	108	145	164/174	1
Drone 25	208	100/104	135	164/174	1
Drone 26	210	100	139	164	8
Drone 27	210	100	139	172	2
Drone 28	210	100	139	174	3
Drone 29	210	100	141	168	1
Drone 30	210	100	141	164/174	2
Drone 31	210	100	143	166	5
Drone 32	210	102	151	166	2
Drone 33	210	104	133	166	3
Drone 34	210	104	139	166	2
Drone 35	210	104	139	172	2
Drone 36	210	104	139	174	9
Drone 37	210	104	139	182	4
Drone 38	210	104	141	166	4

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 39	210	106	143	182	2
Drone 40	210	106	139	164	3
Drone 41	210	106	139	174	3
Drone 42	210	106	139	182	7
Drone 43	210	106	141	164	2
Drone 44	210	106	143	166	1
Drone 45	210	106	143	174	2
Drone 46	210	106	143	182	1
Drone 47	210	106	145	182	2
Drone 48	210	108	133	166	1
Drone 49	210	108	139	164	2
Drone 50	210	108	139	166	2
Drone 51	210	108	141	164	11
Drone 52	210	108	143	172	3
Drone 53	212	100	139	164	12
Drone 54	212	100	139	172	1
Drone 55	212	100	143	166	6
Drone 56	212	100	143	174	2
Drone 57	212	102	147	162	2
Drone 58	212	102	151	162	1
Drone 59	212	102	151	166	5
Drone 60	212	104	139	174	6
Drone 61	212	104	141	166	6
Drone 62	212	104	151	166	2
Drone 63	212	106	135	164	2
Drone 64	212	106	139	164	3
Drone 65	212	106	143	164	1
Drone 66	212	106	143	166	3
Drone 67	212	106	145	182	1
Drone 68	212	108	133	162	1
Drone 69	212	108	141	164	4

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 70	212	108	141	174	1
Drone 71	212	108	143	172	2
Drone 72	212	108	145	164/174	2
Drone 73	212	100/104	145	164	1
Drone 74	212	100/104	157	164	1
Drone 75	214	100	139	166	5
Drone 76	214	100	141	166	1
Drone 77	214	106	147	164	1
Drone 78	206/214	100	145	164	4
Drone 79	206/214	100	151	174	2
Drone 80	206/214	102	139	164	1
Drone 81	206/214	102	145	174	1
Drone 82	206/214	102	147	164	1
Drone 83	206/214	104	141	166	1
Drone 84	206/214	104	145	174	2
Drone 85	206/214	108	135	172	1
Drone 86	206/214	108	139	170	1
Drone 87	206/214	108	145	164	1
 <u>Colony-Aggregation 8</u>					
Queen allele 1	207	104	133	166	
Queen allele 2	212	104	135	166	
Drone 1	205	100	151	166	2
Drone 2	205	104	151	164	1
Drone 3	207	100	133	166	2
Drone 4	207	100	137	164	2
Drone 5	207	100	141	166	2
Drone 6	207	100	143	166	2
Drone 7	207	100	151	166	1
Drone 8	207	104	149	166	3

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 9	207	106	139	166	3
Drone 10	207	106	143	164	1
Drone 11	207	106	151	166	2
Drone 12	207	108	137	166	2
Drone 13	207	108	143	166	3
Drone 14	207	112	136	168	1
Drone 15	210	100	145	166	2
Drone 16	210	100	147	162	1
Drone 17	210	100	151	164	1
Drone 18	210	100	133/135	166	1
Drone 19	210	104	131	162	1
Drone 20	210	104	135	168	4
Drone 21	210	104	143	168	1
Drone 22	210	104	147	164	2
Drone 23	210	104	151	164	3
Drone 24	210	104	133/135	170	1
Drone 25	210	106	137	166	2
Drone 26	210	106	145	166	3
Drone 27	210	108	143	164	2
Drone 28	212	100	133	166	2
Drone 29	212	100	135	164	7
Drone 30	212	100	139	164	2
Drone 31	212	100	139	166	5
Drone 32	212	100	141	166	2
Drone 33	212	100	143	162	2
Drone 34	212	100	143	164	7
Drone 35	212	100	143	166	3
Drone 36	212	100	145	164	2
Drone 37	212	100	145	166	6
Drone 38	212	100	149	166	1
Drone 39	212	102	147	166	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 40	212	104	133	166	2
Drone 41	212	104	141	166	3
Drone 42	212	104	145	162	5
Drone 43	212	104	145	170	1
Drone 44	212	106	133	166	4
Drone 45	212	106	139	166	3
Drone 46	212	106	145	166	2
Drone 47	212	108	141	168	2
Drone 48	212	110	133/135	166	2
Drone 49	214	100	135	164	1
Drone 50	214	100	135	166	2
Drone 51	214	100	139	166	5
Drone 52	214	100	145	166	3
Drone 53	214	104	133	168	1
Drone 54	214	104	137	166	1
Drone 55	214	104	137	170	1
Drone 56	214	104	143	168	2
Drone 57	214	104	145	164	1
Drone 58	214	104	147	162	2
Drone 59	214	104	147	166	1
Drone 60	214	104	151	166	2
Drone 61	214	106	145	166	2
Drone 62	214	106	145	168	1
Drone 63	214	108	137	166	3
Drone 64	207/212	100	137	166	1
Drone 65	207/212	100	147	166	3
Drone 66	207/212	100	149	164	1
Drone 67	207/212	100	153	164	1
Drone 68	207/212	104	135	166	4
Drone 69	207/212	104	149	170	1
Drone 70	207/212	108	141	170	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 71	207/212	110	141	166	1
<u>Colony-Single 1</u>					
Queen allele 1	206	106	135	168	
Queen allele 2	212	108	145	192	
Drone 1	202	100	139	164	1
Drone 2	202	108	135/145	166	1
Drone 3	204	98	135	202	2
Drone 4	206	98	145	202	3
Drone 5	206	100	145	164	3
Drone 6	206	100	145	166	3
Drone 7	206	102	135	166	2
Drone 8	206	102	143	168/192	1
Drone 9	206	102	145	202	1
Drone 10	206	104	143	166	7
Drone 11	206	108	135	166	2
Drone 12	206	108	145	166	2
Drone 13	206	112	135	166	3
Drone 14	208	98	145	202	1
Drone 15	208	100	135	164	1
Drone 16	208	100	139	166	3
Drone 17	208	102	145	166	3
Drone 18	208	104	143	172	1
Drone 19	208	104	145	166	1
Drone 20	208	106	145	164	3
Drone 21	208	108	135	166	3
Drone 22	208	108	147	166	2
Drone 23	208	110	135	168/192	1
Drone 24	208	112	143	166	3
Drone 25	208	112	145	166	2

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 26	208	116	135/145	168/192	1
Drone 27	210	100	135	202	1
Drone 28	210	100	139	164	2
Drone 29	210	100	143	164	1
Drone 30	210	100	145	164	7
Drone 31	210	102	139	168	1
Drone 32	210	102	145	168	4
Drone 33	210	104	143	166	4
Drone 34	210	104	145	164	4
Drone 35	210	106	139	166	4
Drone 36	210	106	145	172	2
Drone 37	210	108	135/145	164	2
Drone 38	210	110	145	168	3
Drone 39	210	112	145	166	3
Drone 40	210	116	143	212	2
Drone 41	210	116	135/145	208	1
Drone 42	210	106/108	145	166	2
Drone 43	212	100	137	166	5
Drone 44	212	100	143	202	1
Drone 45	212	100	145	164	2
Drone 46	212	104	135	164	1
Drone 47	212	104	137	166	1
Drone 48	212	104	143	172	1
Drone 49	212	104	145	162	3
Drone 50	212	106	147	166	1
Drone 51	212	106	135/145	172	1
Drone 52	212	108	139	166	5
Drone 53	212	108	145	164	2
Drone 54	212	108	135/145	168	1
Drone 55	212	106/108	143	166	1
Drone 56	212	106/108	145	166	5

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 57	214	100	139	166	2
Drone 58	214	100	135/145	168/192	1
Drone 59	214	102	135	164	1
Drone 60	214	102	137	166	1
Drone 61	214	102	143	166	2
Drone 62	214	104	143	164	5
Drone 63	214	104	145	166	2
Drone 64	214	104	147	164	2
Drone 65	214	106	145	164	1
Drone 66	214	108	145	168/192	1
Drone 67	214	110	135/145	168	2
Drone 68	214	112	143	166	3
Drone 69	214	106/108	143	166	2
Drone 70	216	100	137	164	1
Drone 71	216	102	145	166	2
Drone 72	216	104	133	164	1
Drone 73	216	104	137	166	1
Drone 74	216	110	135/145	166	1
Drone 75	216	112	137	164	1
Drone 76	216	116	147	208	1
Drone 77	206/212	100	143	164	3
Drone 78	206/212	102	139	164	2
Drone 79	206/212	102	145	164	2
Drone 80	206/212	104	135/145	166	1
Drone 81	206/212	106	137	164	3
Drone 82	206/212	110	143	166	2
Drone 83	206/212	110	135/145	168	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
<u>Colony-Single 2</u>					
Queen allele 1	206	104	137	164	
Queen allele 2	212	108	145	166	
Drone 1	200	102	145	162	1
Drone 2	200	104	145	168	2
Drone 3	202	100	141	196	3
Drone 4	202	100	145	164/166	2
Drone 5	202	102	137/145	164/166	1
Drone 6	202	104	137	172	1
Drone 7	202	104	139	164	2
Drone 8	202	104	141	168	1
Drone 9	202	108	145	164	2
Drone 10	202	104/108	141	164	2
Drone 11	204	104/108	137	168	1
Drone 12	204	104/108	143	164	1
Drone 13	206	98	135	162	2
Drone 14	206	98	137	168	2
Drone 15	206	100	139	164	2
Drone 16	206	100	137/145	162	1
Drone 17	206	102	139	170	4
Drone 18	206	102	145	172	2
Drone 19	206	104	137	164/166	3
Drone 20	206	104	139	164	8
Drone 21	206	106	141	172	2
Drone 22	206	106	145	168	2
Drone 23	206	104	141	164	11
Drone 24	206	104/108	145	172	5
Drone 25	208	98	137/145	164/166	1
Drone 26	208	100	137	162	3
Drone 27	208	100	143	168	1
Drone 28	208	102	137	164	5

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 29	208	104	139	164/166	2
Drone 30	208	104	137/145	168	1
Drone 31	208	104	145	170	6
Drone 32	208	104	137/145	164	3
Drone 33	208	106	139	164/166	1
Drone 34	208	108	137/145	170	1
Drone 35	208	104/108	137	172	2
Drone 36	208	104/108	141	162	1
Drone 37	208	104/108	141	168	3
Drone 38	208	104/108	141	164/166	3
Drone 39	208	104/108	137/145	162	1
Drone 40	208	104/108	137/145	166	2
Drone 41	210	98	135	162	1
Drone 42	210	98	137	164	2
Drone 43	210	98	137	168	2
Drone 44	210	100	145	164	5
Drone 45	210	102	135	168	1
Drone 46	210	102	139	164/166	1
Drone 47	210	102	145	164/166	4
Drone 48	210	104	135	164	3
Drone 49	210	104	139	164/166	2
Drone 50	210	104	145	166	9
Drone 51	210	104	137	168	7
Drone 52	210	106	137	162	1
Drone 53	210	106	137	168	4
Drone 54	210	106	143	196	1
Drone 55	210	106	149	164/166	1
Drone 56	210	106	137/145	172	1
Drone 57	210	108	141	170	1
Drone 58	210	104/108	141	164	2
Drone 59	210	104/108	141	168	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 60	210	104/108	145	172	4
Drone 61	210	104/108	137/145	162	1
Drone 62	212	98	135	162	4
Drone 63	212	100	137	164	4
Drone 64	212	102	137	172	1
Drone 65	212	102	137	164	9
Drone 66	212	102	139	170	3
Drone 67	212	102	137/145	170	1
Drone 68	212	104	137	164/166	4
Drone 69	212	106	137	168	9
Drone 70	212	106	143	196	1
Drone 71	212	106	149	196	1
Drone 72	212	104	137	162	3
Drone 73	212	108	137	164	4
Drone 74	212	104/108	139	164/166	1
Drone 75	212	104	145	170	3
Drone 76	212	104/108	149	164/166	1
Drone 77	212	104/108	137	168	10
Drone 78	214	106	149	172	1
Drone 79	214	106	149	196	1
Drone 80	214	106	137/145	162	1
Drone 81	214	106	137/145	170	2
Drone 82	214	106	137/145	172	2
Drone 83	214	108	139	172	1
Drone 84	214	108	143	164/166	2
Drone 85	214	108	145	164	4
Drone 86	214	104/108	137	170	1
Drone 87	214	104/108	139	164/166	1
Drone 88	214	104/108	141	168	1
Drone 89	214	104/108	137/145	172	1
Drone 90	214	104/108	137/145	196	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 91	206/212	98	145	162	1
Drone 92	206/212	100	137	196	2
Drone 93	206/212	100	145	164	8
Drone 94	206/212	104	137	168	5
Drone 95	206/212	104	141	168	3
Drone 96	206/212	104	145	164	14
Drone 97	206/212	104	149	164/166	1
Drone 98	206/212	106	139	196	1
Drone 99	206/212	104/108	135	164/166	1
Drone 100	206/212	104/108	137	170	2
Drone 101	206/212	104/108	141	168	1
Drone 102	206/212	104/108	145	196	1

Colony-Single 3

Queen allele 1	211	100	139	162	
Queen allele 2	213	104	141	166	
Drone 1	203	100	135	166	1
Drone 2	203	106	133	164	1
Drone 3	203	106	143	164	4
Drone 4	205	100	141	166	3
Drone 5	205	100	143	164	20
Drone 6	205	104	139	164	3
Drone 7	205	104	143	164	3
Drone 8	205	104	145	170	2
Drone 9	205	106	141	164	3
Drone 10	205	106	145	168	3
Drone 11	205	110	137	166	1
Drone 12	207	100	133	166	6
Drone 13	207	100	139	166	7
Drone 14	207	100	141	162	7

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 15	207	100	145	168	2
Drone 16	207	104	133	162	5
Drone 17	207	104	137	166	2
Drone 18	207	104	139	166	5
Drone 19	207	104	141	162	3
Drone 20	207	104	141	166	6
Drone 21	207	104	145	162	3
Drone 22	207	108	145	162/166	1
Drone 23	207	110	143	164	1
Drone 24	207	100/104	137	164	4
Drone 25	207	100/104	141	164	2
Drone 26	207	100/104	145	166	6
Drone 27	209	100	137	168	3
Drone 28	209	100	139	164	14
Drone 29	209	100	143	164	5
Drone 30	209	100	145	168	2
Drone 31	209	100	155	164	3
Drone 32	209	102	143	162/166	3
Drone 33	209	104	133	168	3
Drone 34	209	104	135	162	5
Drone 35	209	104	137	164	3
Drone 36	209	104	139	162	5
Drone 37	209	104	145	166	5
Drone 38	209	104	141	166	5
Drone 39	209	106	135	162/166	1
Drone 40	209	110	137	166	1
Drone 41	209	100/104	145	164	1
Drone 42	211	100	137	166	5
Drone 43	211	100	143	162	2
Drone 44	211	100	143	166	4
Drone 45	211	104	135	166	4

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 46	211	104	141	166	9
Drone 47	211	104	143	164	13
Drone 48	211	104	145	164	5
Drone 49	211	104	145	166	2
Drone 50	211	104	155	164	3
Drone 51	211	106	143	162	2
Drone 52	211	108	145	166	6
Drone 53	211	110	137	164	1
Drone 54	211	100/104	141	164	3
Drone 55	211	100/104	139	164	5
Drone 56	213	100	137	162	2
Drone 57	213	100	137	166	3
Drone 58	213	100	143	164	6
Drone 59	213	100	139	162	3
Drone 60	213	104	143	164	5
Drone 61	213	104	143	162	4
Drone 62	213	104	145	170	1
Drone 63	213	104	155	164	1
Drone 64	213	110	137	166	2
Drone 65	213	100/104	155	166	1
Drone 66	213	100/104	139/141	166	2
Drone 67	215	100	137	166	3
Drone 68	215	106	133	162	2
Drone 69	215	110	143	164	1
Drone 70	215	110	145	162/166	1
Drone 71	215	100/104	145	162/166	1
Drone 72	211/213	100	135	170	1
Drone 73	211/213	102	141	162	1
Drone 74	211/213	104	137	166	2
Drone 75	211/213	104	139/141	162	2
Drone 76	211/213	106	133	164	6

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 77	211/213	106	141	162	2
Drone 78	211/213	106	143	164	3
Drone 79	211/213	106	139/141	166	2
Drone 80	211/213	108	143	164	4
<u>Colony-Single 5</u>					
Queen allele 1	208	100	138	166	
Queen allele 2	214	100	142	170	
Drone 1	204	100	132	166	1
Drone 2	204	100	136	166/170	1
Drone 3	204	100	142	168	1
Drone 4	204	100	142	166/170	1
Drone 5	204	100	150	166/170	2
Drone 6	204	104	144	168	1
Drone 7	204	106	144	174	1
Drone 8	206	100	134	166	1
Drone 9	206	100	136	166/170	1
Drone 10	208	100	138	166/170	1
Drone 11	210	100	138	172	1
Drone 12	210	100	142	166	5
Drone 13	210	100	142	172	1
Drone 14	210	100	144	166	3
Drone 15	210	100	144	168	1
Drone 16	210	100	150	166	8
Drone 17	210	100	150	168	2
Drone 18	210	100	150	172	3
Drone 19	210	100	152	166	2
Drone 20	210	104	144	166	2
Drone 21	210	104	144	172	2
Drone 22	210	104	146	172	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 23	210	104	152	168	1
Drone 24	210	106	144	174	2
Drone 25	210	106	152	174	1
Drone 26	212	100	130	166/170	1
Drone 27	212	100	132	166	2
Drone 28	212	100	138	168	2
Drone 29	212	100	138	166	3
Drone 30	212	100	140	166/170	1
Drone 31	212	100	142	166	33
Drone 32	212	100	142	168	6
Drone 33	212	100	142	170	2
Drone 34	212	100	144	166	2
Drone 35	212	100	144	168	1
Drone 36	212	100	144	174	2
Drone 37	212	100	150	166	5
Drone 38	212	100	150	168	2
Drone 39	212	100	150	170	2
Drone 40	212	100	152	166	3
Drone 41	212	100	152	168	6
Drone 42	212	104	142	166	2
Drone 43	212	104	144	164	1
Drone 44	212	104	144	168	5
Drone 45	212	104	144	170	2
Drone 46	212	104	144	174	2
Drone 47	212	104	146	166	2
Drone 48	212	106	138	168	1
Drone 49	212	106	140	174	1
Drone 50	212	106	144	170	1
Drone 51	212	106	144	174	29
Drone 52	212	106	146	174	1
Drone 53	212	106	138/142	174	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 54	214	100	132	168	1
Drone 55	214	100	132	166	4
Drone 56	214	100	138	166	3
Drone 57	214	100	138	168	2
Drone 58	214	100	142	166	9
Drone 59	214	100	142	168	14
Drone 60	214	100	144	168	2
Drone 61	214	100	150	166	8
Drone 62	214	100	152	166	10
Drone 63	214	100	152	168	11
Drone 64	214	104	136	166/170	1
Drone 65	214	104	144	168	12
Drone 66	214	104	144	174	2
Drone 67	214	104	144	166	4
Drone 68	214	104	138/142	166/170	1
Drone 69	214	106	144	174	1
Drone 70	214	106	152	168	1
Drone 71	216	100	142	168	1
Drone 72	216	106	144	174	1
Drone 73	208/214	100	134	166	1
Drone 74	208/214	100	142	172	2
Drone 75	208/214	100	146	166	1
Drone 76	208/214	100	150	168	5
Drone 77	208/214	100	150	172	2
Drone 78	208/214	104	144	166	5
Drone 79	208/214	104	146	168	1
Drone 80	208/214	104	148	166	1
Drone 81	208/214	104	152	174	1
Drone 82	208/214	106	142	168	1
Drone 83	208/214	106	144	168	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
<u>Colony-Single 6</u>					
Queen allele 1	208	100	135	164	
Queen allele 2	212	100	139	166	
Drone 1	202	110	141	190	1
Drone 2	204	100	137	164/166	1
Drone 3	204	100	143	168	2
Drone 4	204	108	143	166	1
Drone 5	204	110	137	190	2
Drone 6	206	104	143	168	1
Drone 7	206	106	135	168	1
Drone 8	208	98	141	168	4
Drone 9	208	100	137	168	3
Drone 10	208	100	141	168	12
Drone 11	208	100	141	204	2
Drone 12	208	100	143	168	8
Drone 13	208	100	149	168	1
Drone 14	208	104	133	168	1
Drone 15	208	104	135	166	2
Drone 16	208	104	137	164	6
Drone 17	208	104	141	168	4
Drone 18	208	106	137	170	3
Drone 19	208	106	141	166	3
Drone 20	208	108	141	172	6
Drone 21	208	110	135	190	2
Drone 22	208	110	137	168	1
Drone 23	208	110	141	186	2
Drone 24	210	98	141	168	5
Drone 25	210	100	131	164	1
Drone 26	210	100	133	166	3
Drone 27	210	108	141	166	3
Drone 28	212	100	137	168	1

	Microsatellite locus				Observed no.workers
	A14	A24	A88	Ad3	
Drone 29	212	100	141	166	3
Drone 30	212	100	143	168	4
Drone 31	212	104	133	168	1
Drone 32	212	104	141	166	2
Drone 33	212	104	143	168	4
Drone 34	212	104	135/139	170	1
Drone 35	212	106	133	166	4
Drone 36	212	106	143	168	1
Drone 37	212	106	143	170	1
Drone 38	212	108	141	170	6
Drone 39	212	112	135	204	2
Drone 40	214	100	131	166	2
Drone 41	214	100	137	168	4
Drone 42	214	100	139	166	1
Drone 43	214	100	143	164	7
Drone 44	214	100	143	168	3
Drone 45	214	100	143	210	2
Drone 46	214	102	137	204	1
Drone 47	214	104	133	170	1
Drone 48	214	104	137	166	1
Drone 49	214	104	137	170	1
Drone 50	214	104	137	200	2
Drone 51	214	104	143	168	1
Drone 52	214	104	135/139	170	1
Drone 53	214	106	133	168	1
Drone 54	214	106	133	170	1
Drone 55	214	106	137	166	5
Drone 56	214	106	143	168	2
Drone 57	214	108	133	204	1
Drone 58	214	108	133	164/166	1
Drone 59	214	108	143	164	1

	Microsatellite locus				Observed
	A14	A24	A88	Ad3	no.workers
Drone 60	214	108	143	168	1
Drone 61	214	112	133	164	3
Drone 62	214	112	133	204	1
Drone 63	216	100	133	166	3
Drone 64	216	100	139	164/166	1
Drone 65	216	100	143	168	2
Drone 66	216	104	133	168	1
Drone 67	216	104	137	166	2
Drone 68	216	104	143	186	2
Drone 69	220	100	139	168	2
Drone 70	220	100	143	168	1
Drone 71	208/212	100	137	166	2
Drone 72	208/212	100	137	190	1
Drone 73	208/212	100	143	164/166	1
Drone 74	208/212	100	151	168	1
Drone 75	208/212	100	135/139	164/166	1
Drone 76	208/212	104	143	170	3
Drone 77	208/212	104	147	168	1
Drone 78	208/212	106	137	168	2
Drone 79	208/212	106	139	166	1
Drone 80	208/212	106	141	210	2
Drone 81	208/212	108	143	166	1
Drone 82	208/212	110	141	190	1
Drone 83	208/212	110	143	168	1
Drone 84	208/212	112	133	168	4
Drone 85	208/212	112	143	164/166	1

Biography

Mrs. Wandee Wattanachaiyingcharoen was born on the 26th of October 1962. She graduated her Bachelor's Degree of Science in Agriculture (Entomology and Plant Pathology) from Khon Kaen University in 1984. In 1988, she was awarded the scholarship by the Australian Cooperative on National Agriculture Research Project (ACNARP) of the Columbo plan to study Master's degree in Western Australia. She received her Master's Degree of Science in Agriculture (Entomology) from the University of Western Australia, Australia in 1992. Her Ph.D. study in Biological Sciences programme at the Faculty of Science, Chulalongkorn University was funded by the Royal Golden Jubilee Project of the Thailand Research Fund in 1998. At present, she is a lecturer at the Department of Biology, Faculty of Science, Naresuan University, Phitsanulok, Thailand.

