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APPENDICES

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

APPENDIX I

Sequences Alignment

Thirty eight mitochondrial 16S ribosomal DNA sequences obtained from 17 *Amphidromus* species and 3 confamilies outgroup species employed in this study. A dash represents a gap or incomplete sequences, dots indicate nucleotide identity to the first sequence presented (*A. inversus inversus* (28)). The numbers in the parentheses after the taxa indicate the localities of the examined specimens, which is corresponded to Table 3.1 and Fig. 6.1.

	1.....|.....|.....|.....|.....|.....60
<i>A. inversus inversus</i> (28)	GTTAATTATAAC--AAGAAAGATTTGAATACGGAAATAATTT-GAGCTAACTACTTAC-
<i>A. inversus inversus</i> (27)	....CC.....-..T.....-.....T-
<i>A. inversus annamiticus</i> (16)	....C.....-.....A.....-.....-
<i>A. inversus annamiticus</i> (20)	-----
<i>A. givenchy</i> (6)	-----..T.A.A..ACC.....-.....C.C..T-
<i>A. givenchy</i> (7)	.....A...TA-..T.A..ACC.....-.....C..T-
<i>A. givenchy</i> (8)	....CA...TA-..T.A..ACC.....-.....T.C..T-
<i>A. schomburgki</i> (6)	.....A...GA-G.AGC.A..GGATC...A.....-.....T...GT-
<i>A. schomburgki</i> (12)	....TCA...GA-G.AGC.A..GGATC...A.....-.....T...GT-
<i>A. atricallosus leucoxanthus</i> (9)	.....CA.A..GGAT..T.A..AA.C...A.....-.....GA-
<i>A. atricallosus leucoxanthus</i> (10)	.....CA.A..GGAT..T.A..AA.C...A.....-.....GA-
<i>A. atricallosus perakensis</i> (23)	---.CA.A..G-AG..T.A-.A..CCT.A.....-.....GA-
<i>A. atricallosus atricallosus</i> (19)	-----
<i>A. atricallosus atricallosus</i> (17)	---.CA.A..G-..TC..A...-..T.T.A.....-.....G...GG-
<i>A. atricallosus atricallosus</i> (18)	A...CA.A..G-..TT..A...-A.TCT.A.....G...-.....G...GG-
<i>A. atricallosus perakensis</i> (27)	.C..CA.A..G-...T..A..AA.TCT.A.....C..T.....T...GG-
<i>A. perversus natunensis</i> (24)	-----..A.T.T.A.....C..-.....T...GGT
<i>A. palaceus</i> (29)	....CACA..A-G.AG.....AA.TCT.A.....C..-.....T..CGG-
<i>A. martensi</i> (26)	-----G..T.A..AA.T.T.A.....-.....GA-
<i>A. similis</i> (25)	-----
<i>A. adamsii</i> (26)	....CG.G..TA-.CT.TG.T.A.TTTA..A....C..G..-.....TC..T-
<i>A. pictus</i> (26)	----CG.G.GTA-.CT.TG.T.AAITTA..A....C..G..-.....C..T-
<i>Amphidromus</i> sp. (21)	..G.CA.GG.AA-T.T.T..T..ACCTAG.A....C..A..T.....T...T-
<i>A. semitessellatus</i> (10)	A...CG...GT-.GT.T.AT.AAOCCT...A....C.....-.....T-
<i>A. xiengensis</i> (2)	..G.CG...GC-GGIGT..C..ACCT...A....C.GG..-.....G.-
<i>A. xiengensis</i> (3)	---G.CG-T.GC-GG-GT-.C..AOCCT...A....C.GG..-.....G.-
<i>A. flavus</i> (4)	---G.CCGT.AG-TGIGT-.C..AC-T...A....C.GG..-.....G.-
<i>A. areolatus</i> (22)	..G.CG...GC-G-TGT..-..ACTTC..A....C.GG..-.....T...G.-
<i>A. xiengensis</i> (18)	..G.CG..T.GT-GGIGT.AC..ACCT...A....C.GG.G-.....G.-
<i>A. porcellanus</i> (30)	..G.CG...GC-GGIGT.AC..AOCCT...A....C.GG..-.....G.-
<i>A. xiengensis</i> (16)	..G.C-...GT-G-CGT.A-.AOCCT...A....C.GG..-.....G.-
<i>A. semitessellatus</i> (10)	-----C.GG..-.....T..G.-
<i>A. semitessellatus</i> (11)	-G.G..C...GC-GGT.T.AT.AAOCCT...A....C.GG..-.....T..G.-
<i>A. areolatus</i> (19)	---TGAC...GC-GGT-T.AT.AAOCCT...A....C.GG..-.....T..G.-
<i>A. glaucolarynx</i> (15)	-----T.GA..A....G.....-.....T..T.AITG
<i>A. glaucolarynx</i> (17)	-----A....G.....-.....T..T.AITG
<i>A. glaucolarynx</i> (14)	-----CT.TAATG.T..A...AT..-A..A.....-.....T..T.AITG
<i>A. glaucolarynx</i> (13)	-----CT.TAATG.T..A...AT.GA..A....G.....-.....T..T.AITG
<i>Beddomea albizonatus</i> (1)	-----TA...T.GG.A.-.....-TT.A.T-
<i>Chloritis siamensis</i> (13)	--GTT.AC..TACGTCGC...GCIT..TT.....GG.....-.....T.TT.AT-
<i>Camaena illustris</i> (4)	--GTTAAC..CAAAT..GT.A...CT.T.G.A....GIGCAA-.T....--TT.G.T-

61.....|.....|.....|.....|.....|.....|.....120

A. inversus inversus (28) ACATTTTAGATTAAATCAT-----TGCGTGTTCAGAACGAAA-OCTAGATAGGTAGT
 A. inversus inversus (27)C.....-----.....-.....
 A. inversus annamiticus (16)-----.....-.....
 A. inversus annamiticus (20)C.....-----.....A.....-.....A.....
 A. givenchy (6) GGG...-.....GCG.TC-----..T...G...A...AC..-AT..A...A...
 A. givenchy (7) .GG.....GCG.TC-----..T...A...A...AC..-AT..A...A...
 A. givenchy (8) .GT.....GCG.TCA-----..T...A...A...AC..-AT..A.....
 A. schomburgki (6) .G.....-C.TTAA-C-----..T.....A...AC.GG.T.CA.C.A...A.
 A. schomburgki (12) .G.....-TTAA.C-----..T.....A...AC.GG.T.CA.C.A...A.
 A. atricallosus leucoxanthus (9) GG..A.A..CCC..T.T-----AATA.T..A...A...ACT.T.T.G-.CG.....
 A. atricallosus leucoxanthus (10) GG..A.A..CCC..T.T-----AATA.T..A...A...ACT.T.T.G-.CG.....
 A. atricallosus perakensis (23) GGG.A.A..TCC..C.T-----AATA.T.....A...ACTGT.T.G-.C.A....
 A. atricallosus atricallosus (19) -GG.A...CCC-.TCA-----ATA.TA...A...A..TACT.C.T.T-.C.AAC...
 A. atricallosus atricallosus (17) .GG.A..G.CCC-.T.A-----ATA.TA...C...A..TACT.T.T.T-.C.AAC...
 A. atricallosus atricallosus (18) GG..G...CCC-.T.A-----ATA.TAC..C...A.GTACT.C.T.T-.C.A.C...
 A. atricallosus perakensis (27) GG..G..G.TCC..T.AGCITTTAAATA.T.....T.A...ACT.T.T.C-.CG.....
 A. perversus natunensis (24) GG..G..G.TCC..T.A-----ATA.T.....A...ATT.C.T.T-.C.A....
 A. palaceus (29) GG..G...TC.G.T..-----AGTA.TA.....A..TACTGC..CCC.C.A.A...
 A. martensi (26) .G..G...TCG..C.T-----AATA.T.....A..TACT.TT...-C.....
 A. similis (25) -GGCA...TC...T.T-----AATAAT.....A.G.ATT.C.T.T-.C.A.....
 A. adamsii (26) .GG.C...TAGGT..A-----CATA.T...C...A...CT.TTA-.A...A...
 A. pictus (26) .GG.....TAGGCG.A-----CATAATA...C...A..TATT.TAA-.A.....
 Amphidromus sp. (21) TAG.....TA..TG.A.-----TATA.T...C...A..TACT.TTT-.A...A...
 A. semitessellatus (10) .A.....TGA..-G.G-----TACA.TA...C...A..TACIGTTT-.A.....
 A. xiengensis (2) .G..-...TCA...A-----TAA..T...A.....ACTGCGA--.C.....
 A. xiengensis (3) .G..-...TCA...A-----TAA..T...A.....ACTGCGA--.C.....
 A. flavus (4) .G..-...TCA...A-----TAA..T...A.....ACTGCGA--.C.....
 A. areolatus (22) .G..-...TCA...A-----TAA..T...A.....ACTGCGA--.C.....A.
 A. xiengensis (18) .A..-...T.A..G.-----TGA..T...A.....ACTGTGA--.CG.....
 A. porcellanus (30) .G..-...CCA.GG.A-----TGA..T...A.....ACT.CGAG..CG.....
 A. xiengensis (16) .G..-...TCA.GG.A-----CGA..T...G...A..TACT.CGAG...CG.....
 A. semitessellatus (10) GG..G...TCA..TAT-----ACA..T...G...A...ACTGCGA--.C.AA....
 A. semitessellatus (11) GG..G...TCA..TAT-----ACA..T...G...A...ACTGCGA--.C.AA....
 A. areolatus (19) GG..G...TCA..TAT-----ACA..T...G...A...ACTGCGA--.C.AA....
 A. glaucolarynx (15) .AT.A...C..T.GAA-----CAAG.T...A.T.T..TACCTAGAA.A...A..A.
 A. glaucolarynx (17) .GT.A..G.CCCC...A-----TAAG.T...A.T.T..TACCTAGAA.A...A..A.
 A. glaucolarynx (14) GAT.G.AGCTCC..GGG-----CAAG.T...AA..T..TATCTAGGA.A...A..A.
 A. glaucolarynx (13) ..TA..AGCT.C..GAA-----CAAG.T...A...T..TACCTAGAA.A...A..A.
 Beddomea albizonatus (1) T.C.G.AG.GG.TGT.-----ATA...A.T.T..TATTTTGT..AG.TA--AA
 Chloritis siamensis (13) TAC.A...G...CTGA-----A.A...A...A..T.TG.CGAG.ATA.A--G..
 Carneia illustris (4) TA..A..TT.G..TTA-----AG...A...T...TGGTTA..AG.GA--.A.

จุฬาลงกรณ์มหาวิทยาลัย

	121	.....|.....|.....|.....|.....|.....	180
A. inversus inversus (28)		TAGGGTGATAGGCCAAGCAAAAATTAAGATAACTCGATTTTAAAGAGATATATTTAGTA	
A. inversus inversus (27)		.....G.....	
A. inversus annamiticus (16)		.....G.....	
A. inversus annamiticus (20)		.....G.....A.....	
A. givenchy (6)		.....C.....T.....T.....A.C.C.....G	
A. givenchy (7)		.....C.....T.....T.....A.C.C.....G	
A. givenchy (8)		.....G.....T.....T.....A.C.C.....G	
A. schamburgki (6)		.....G.....T.....T.....A.C.C.....G	
A. schamburgki (12)		.....G.....T.....T.....A.C.C.....G	
A. atricallosus leucoxanthus (9)		.....G.....T.....T.....G.A.A..TC.....G	
A. atricallosus leucoxanthus (10)		.....G.....T.....T.....G.A.A..TC.....G	
A. atricallosus perakensis (23)		.....A.....G.....G.....T.....T.....G..A.CTC.....G	
A. atricallosus atricallosus (19)		.....C.....T.....T.....GG..A..TC.....G	
A. atricallosus atricallosus (17)		.....T.....T.....G..A.CTC..C.....G	
A. atricallosus atricallosus (18)		.....T.....T.....GG..A..TC.....G	
A. atricallosus perakensis (27)		.....G.....T.....T.....GG..AG.T..C.....	
A. perversus natunensis (24)		.....G.C.T.....T.....GG..A..T.....	
A. palaceus (29)		.....G.....T.....T.....GG..A..T.....	
A. martensi (26)		.....T.....T.....C.GG..A..TC.....G	
A. similis (25)		.....T.....T.....GG..A..T.....	
A. adamsii (26)		..A.....G..GT.....T.....C..G..A.GG..A.....	
A. pictus (26)		.....GT.....T.....C..G.A.A..G..A.....	
Amphidromus sp. (21)		.....G..GT.....T.....C..G..A..G..A.....	
A. semitessellatus (10)		.....G..GT.....T.....CC..G..A..GC.....G	
A. xiengensis (2)		.....TC.GT.....T.....C.C.G.-A..C.....G	
A. xiengensis (3)		.....TC.GT.....T.....C.C.G.-A..C.....G	
A. flavus (4)		.....TC.GT.....T.....C.C.G.-A..C.....G	
A. areolatus (22)		.....C.....TC.GT.....T.....C.C.G.-A.ATC.C.....G	
A. xiengensis (18)		.....C.....TC.GT.....T.....C.C.G.-A.ATC.....G	
A. porcellanus (30)		.....C.....CC.GT.....T.....C.C.G.-A..GC..C.....G	
A. xiengensis (16)		.....TC.GT.....T.....C.C.G.-A..GC.....G	
A. semitessellatus (10)		.....CC.GT.....T.....C.C.G..A.C.C.....G	
A. semitessellatus (11)		.....CC.GT.....T.....C.C.G..A.C.C.....G	
A. areolatus (19)		.....CC.GT.....T.....C.C.G..A.C.C.....G	
A. glaucolarynx (15)		..A.....T.....T.....C..G..A..TC.....G	
A. glaucolarynx (17)		..A.....T.....T.....C..G..A..TC.....G	
A. glaucolarynx (14)		.....C.....T.....G.....T.....C..G..A..TC.....G	
A. glaucolarynx (13)		.....C.....T.....T.....C..G..A..TC.....G	
Beddonea albizonatus (1)		.....A.....TTTA..GT.CC.G..T..TAT..CC...A.AC...A....	
Chloritis siamensis (13)		.....T.TA.....CC.T.....T..AT..AAT...A.AG...A....	
Camaena illustris (4)		.....TTTT...GIGCACT.....T.....AC.A..A..G...A....	

	241.....|.....|.....|.....|.....|.....300
A. inversus inversus (28)	GTCCTCATAGCT--TTAATCGGOGATGCACCTTGTA---ATTTAATATTTAAGTAAGTAA
A. inversus inversus (27)	.....--..G.A.....---.....
A. inversus annamiticus (16)	.....--.....A.....T.....---.....C.....
A. inversus annamiticus (20)	.....C.....--.....A.....---G.....C.....A...
A. givenchy (6)	A.ATG.....--.....T..TAG.....TC.AC.CAAG..A.T.....G.A...
A. givenchy (7)	A.ATG....A..--.....T..TAG.....TC.AC.CAAG..A.T.....G.A...
A. givenchy (8)	A.ATG.....--.....T..TAG.....TC.AC.CAAG..A.T.....G.A...
A. schamburgki (6)	TCAACT...A..--.....CT..T..ATGTAAG.AT----.A..T.....A.....
A. schamburgki (12)	T.AACT..GA..--.....CT..T..AT.TAAG.AT----.A..T.....A.....
A. atricallosus leucoxanthus (9)	A.AT.T.....-C...C.A..A..--TG.A.C.TT-.AC..CA.C.A..A.GTTC..
A. atricallosus leucoxanthus (10)	A.AT.T.....-C...C.A..A..--TG.A.C.TT-.AC..CA.C.A..A.GTTC..
A. atricallosus perakensis (23)	A.ATCT.....--.....C.A..A..--TA.GA.GCT-.AC..CA.C.A....TTC..
A. atricallosus atricallosus (19)	A.....--C...C...AG.--.A.AAC.TT-.A..CC.....A..TTC.G
A. atricallosus atricallosus (17)	A.ATCT...T.--.....AG.--.TA.AAC.TA-.A..TC...A..A..TTC.G
A. atricallosus atricallosus (18)	A.A.CT.....--.G.C.A.TAG.--.TA.AA..TT-.AG..CC...A..A..TTC.G
A. atricallosus perakensis (27)	A.AA.....--.....C.A..AG.--GTA.AA.GTC-.AA..C...A..G...TTC..
A. perversus natunensis (24)	.....A.....--.....C...AG.--GTA.AA.GTT-GAA..CC...A..A..TT..G
A. palaceus (29)	A.A.C.....--C...C...AG.--.ACAA..TT-.AA..C..C.A..A..TTC.G
A. martensi (26)	A.A.....--.....C...AG.--TG.A..GTT-.AC..CC...A..A..TT..G
A. similis (25)	CGA-.....--.....C...TAG..T.TA.AA..TT-.AC..TC...G..A..TTC..
A. adamsii (26)	TGA..T....C--C...CA..TA..AGCA...AA.T--ACA-.COGCTT.GCTC.C
A. pictus (26)	AAAT.T....C--.....CA.....ATCA.C.AA.T--G.AG-C.CAGCTT.GT..TT
Amphidromus sp. (21)	T.AA.T...T.--.....CA..T...AA.AAAAAAGG---AAA..C.....TT.GCAAGT
A. semitessellatus (10)	TAATCT..G..C--C...CA.....A.TGT.GAAGA---.A.-...A..AATT.A.C
A. xiengensis (2)	.AC-AT...A..--.....CA..T...AT.AG..AA.T--G.A.-...AAT.A..TA.TT
A. xiengensis (3)	.AC-AT...A..--.....CA..T...AT.AG..AA.T--G.A.-...AAT.A..TA.TT
A. flavus (4)	.AT-AT...A..--.....CA..T...AT.AA..AAGT---G.A.-C..AAT.A..TA.TT
A. areolatus (22)	AAC-AT...A..--.....A.....AT.AAG.AAOC---A.A.-C..AAC.A.GTA.TT
A. xiengensis (18)	AAC-AT...A..--C...CA..T...AT.AAG.AA.C---A.A.-...AAT.A..TA.TT
A. porcellanus (30)	.AC-GT.....-C...CA.....AT.AGG.AACT---A.A.-C..AAT.A..TA.TT
A. xiengensis (16)	.GT-AT.....-C...A..A..AT.AGG.AA.C---A.A.-C..GAT.AC.TA.TT
A. semitessellatus (10)	AAITAT.....-C...CA..T...AT.AT.AAATT---.A.-C..GAC.A.GT.CIT
A. semitessellatus (11)	AAITAT.....-C...CA..T...AT.AT.AAATT---.A.-C..GAC.A.GT.CIT
A. areolatus (19)	AAT-AT.....-C...CA..T...AT.AT.AAATT---.A.-C..GAC.A.GT.CIT
A. glaucolarynx (15)	-.TT.TG...G.--.....A.T.AG.AATATC.AA.T---AG...C.A....TTA..
A. glaucolarynx (17)	-.TT.T...A.--.....A.T..G.AATATC.AA.T---AG...C.A....TTA..
A. glaucolarynx (14)	-AIT.TG...A.--.....A.T..GCAACATA.AA.T---AG..C.C.A....TTAG..
A. glaucolarynx (13)	-.TT.T...A.--.....A.T..G.AATA.C.AA.C---AG...C.A....TTA..
Beddomea albizonatus (1)	A.A...C...T.TAA...TA.A.GAA..TTGAA..TAC.A..T..C..A.TAACTTATT
Chloritis siamensis (13)	ACAG.T.C.AGA-GA.....---AA..GT.GA.GTAG.AG.....ATT.CTGIGTT
Camaena illustris (4)	A.TA.TGG.TT.-AACG.....ATTATT.TTA.A..ATC..AC...-AA..A..GTATT

361.....|.....|.....|.....|.....|.....420

A. inversus inversus (28)	TAAGTAAAGAAATA--GATTA-ATAAAATGAACIOGGCAATAAAATC-TTTCACCTGTTTA
A. inversus inversus (27)	.....--.....-.....G.....-.....
A. inversus annamiticus (16)--.....-.....-.....
A. inversus annamiticus (20)	.....A..A.A-.....-G.....-.....
A. givenchy (6)	.T...G.A.T...--.....-G.....T.....A..T...-C.....
A. givenchy (7)	.T...G.A.T...--.....-G.G.....T.....A..T...-C.....
A. givenchy (8)	.T...G.A.T...--.....-G.....T.....A..T...-C.....
A. schamburgki (6)	.G...GTAG..G.--.....G..C.....AITTT.TTC.....
A. schamburgki (12)	.G...GTAG..G.--.....G..C.....AITTT.T-C.....
A. atricallosus leucoxanthus (9)	.G...TGTT.GATA-...C.-G..G.....T.....ATCTA.C...G.....
A. atricallosus leucoxanthus (10)	.G...TGTT.GATA-...C.-G..G.....T.....ATCTA.C...G.....
A. atricallosus perakensis (23)	.G...GT-..ATA-A...-G..G.....ATCTA.C...G.....
A. atricallosus atricallosus (19)	.....-T..ATA-.....-T.....ATCTA.CC..G.....
A. atricallosus atricallosus (17)	.....-T..ATA-.G..AT..G.....ATCTA.CC..G.....
A. atricallosus atricallosus (18)	.....-T..ATA-.....-T..G.....ATCTA.CC..G.....
A. atricallosus perakensis (27)	.G...G.T..ATA-.....-G..G.....AITTTA.C...G.....
A. perversus natunensis (24)	.....-T..ATA-.....-G.G.....AITTTA.C...G.....
A. palaceus (29)	.....-T..ATA-.....G-G..T.....AITTTATCC..G.....
A. martensi (26)	.T...G-T..ATA-.....-G..G.....AITTTA.C...G.....
A. similis (25)	.....-T..ATA-.....-CGG.....ACTTA.CC..GG.....
A. adamsii (26)	.G...TT.TA.--..C.GTA.....G..-G.C.C..G.....
A. pictus (26)	.G...TT.T.--..T..GGTAT..-.....G..-A.C.C..G.....
Amphidromus sp. (21)	.....OCT.TA.A-C.C.GCA.....AC..-A.T.C..G.....
A. semitessellatus (10)	.....OCT.T.--..G.C.ACA.....CT.TA.C.C..G.....
A. xiengensis (2)	.....G.CT.TACA-AG...GIG...-.....A..GA.C...G.....
A. xiengensis (3)	.....G.CC.TATA-G...GIG...-.....A..GA.C...G.....
A. flavus (4)	.....G.CC.TACA-G...GGA...-.....A..GA.C...G.....
A. areolatus (22)	.....CT.TATA-G...GIG...-.....AG.GA.C...G.....
A. xiengensis (18)	.....G.TT.TACA-G...GIG...-.....AG.GA.C...G.....
A. porcellanus (30)	.....G.TC.CACA-G...GTA...-.....AGGGA.C..-G.....
A. xiengensis (16)	.....G.TT.CACA-G...GIG...-C.....AGGGA.C...G.....
A. semitessellatus (10)	.T...GGC-.CACA-G.C.ATA...-.....ATG.GIC...G.....
A. semitessellatus (11)	.T...GGC-.CACA-G.C.ATA...-.....ATG.GIC...G.....
A. areolatus (19)	.T...GGC-.CACA-G.C.ATA...-.....ATG.GIC...G.....
A. glaucolarynx (15)	.....T-TTTATA-.C.-T..T.....AT.T.-C.C..G.....
A. glaucolarynx (17)	.G.....-TCTACA-.GC.-..T.....AT.T.TCCC..G.....
A. glaucolarynx (14)	.....C-TTATA-.GC.-G..T.....AITT..TC..G.....
A. glaucolarynx (13)	.G.....-TCTATA-.GC.-..T.....AT..TC.C..G.....
Beddomea albizonatus (1)	.T...CGITTCIG.A--..GC.TT-TT..G.....ATGGAT-G.....
Chloritis siamensis (13)	.G...G.TGT...A--GGCTTTGTT.....GGGT-G.....
Camaena illustris (4)	.T...T.CGC...ATAGGC.TCACT.....CT-.....

	421.....|.....|.....|.....|.....|.....480
A. inversus inversus (28)	CCAAAAACATAACTGOGIGAATTAACTOGTAGGGTTTTCTGCTCAATGAA--TATTAAAT
A. inversus inversus (27)--.....
A. inversus annamiticus (16)--.....
A. inversus annamiticus (20)--.....
A. givenchy (6)	.....A...GC...AT.C...A.C.....CA.....
A. givenchy (7)	.....A...GC...AT.C...A.C.....CA.....
A. givenchy (8)	.....A...C...AT.C...A.C.....CA.....
A. schomburgki (6)	.....T.A...A...T.....--.....
A. schomburgki (12)	.....G.A...G...T.....--.....
A. atricallosus leucoxanthus (9)	.....A...ACC.ATAC...A.....--G.....
A. atricallosus leucoxanthus (10)	.....A...ACC.ATAC...A.....--G.....
A. atricallosus perakensis (23)	.....A...ACC.AT.C...A.....--.....
A. atricallosus atricallosus (19)	.....A...C.TC.AT.C...A.....C.....--.....
A. atricallosus atricallosus (17)	.....A...CACC.AT.C...A.....C.....--C.....
A. atricallosus atricallosus (18)	.....A...ATC.AT.C...A.....C.....--.....
A. atricallosus perakensis (27)	.....A...ACCIAT.C...A.....--C.....
A. perversus natunensis (24)	.....A...TCTAT.C...A.....--.....
A. palaceus (29)	.....A...AICIAT...A.....--C.....
A. martensi (26)	.....A.A...CACCIAT.C...A.....G--.....
A. similis (25)	.....TA...AT.TGT.C...A.....--C.....
A. adamsii (26)	.....G...CA...G.C.TT.....TTT---.....
A. pictus (26)	.....G...TA...G.C.TT.....TTT---.....
Amphidromus sp. (21)	.....G...GTA...TA.C.TT.....TTT.T--.....
A. semitessellatus (10)	.....G...T...TA...A.AC.TT.....GIT.T--.....
A. xiengensis (2)	.....G...AT.C...C...A.A...TT.....GIC.T--.....
A. xiengensis (3)	.....G...AT.C...C...A.A...TT.....GIT.T--.....
A. flavus (4)	.....G...AT...C...A.A...TT.....GIT.T--.....
A. areolatus (22)	.....G...AT...GCA...A.A...TT.....GIT.T--.....
A. xiengensis (18)	.....G...AT...GCA...A.A...TT.....TT.T.....
A. porcellanus (30)	.....G...AT...T.ATC.A.A...TT.....GIT.T--.....
A. xiengensis (16)	.....G...AT...AT.A.A...TT.....GIT.T--.....
A. semitessellatus (10)	.....G...A...TC...A...TT.....TC.T--.....
A. semitessellatus (11)	.....G...A...TC...A...TT.....TC.T--.....
A. areolatus (19)	.....G...A...TC...A...TT.....TC.T--.....
A. glaucolarynx (15)	.....T...TA.T.A.TC.....TAT.T--.....
A. glaucolarynx (17)	.....T...A.T.A.TC...C.....GIAT.T--.....
A. glaucolarynx (14)	.....T...A.T.A.C...C.....TAT.T--.....
A. glaucolarynx (13)	.....T...A.T.AT.C...C.....TAC.T--.....
Beddomea albizonatus (1)	T.....G.CTGT...C.-C.TAAC.G.T.AC.....TA.T--.....
Chloritis siamensis (13)	.....G.A.A...GT.TAT.G.T.....TAA.T--.....
Camena illustris (4)	.....CAGAG.TTA.TTICTT.G..T.C.....GIC-.T--.....

	481.....|.....|.....|.....|.....|.....540
A. inversus inversus (28)	GGCCGAGTACCTGACTGTGCAAAGGTAGCATAATCAGTTGGCTTATAAATTGAAGICTG
A. inversus inversus (27)	.....A
A. inversus annamiticus (16)	.....
A. inversus annamiticus (20)	.....A
A. givenchy (6)	.....T.....
A. givenchy (7)	.....T.....
A. givenchy (8)	.....T.....
A. schomburgki (6)	A.....
A. schomburgki (12)	A.....
A. atricallosus leucoxanthus (9)	A.....T.....A
A. atricallosus leucoxanthus (10)	A.....T.....A
A. atricallosus perakensis (23)	.....T.....A
A. atricallosus atricallosus (19)	.....T.....A
A. atricallosus atricallosus (17)	.....T.....A
A. atricallosus atricallosus (18)	.....T.....A
A. atricallosus perakensis (27)	.....T.....A
A. perversus natunensis (24)	A.....T.....
A. palaceus (29)	.....T.....
A. martensi (26)	A.....T.....A
A. similis (25)	A.....T.....A
A. adamsii (26)	A.....T.....T.....
A. pictus (26)	A.....T.....T.....
Amphidromus sp. (21)	A.....T.....T.....
A. semitessellatus (10)	A.....T.....
A. xiengensis (2)	A.....T.....
A. xiengensis (3)	A.....T.....
A. flavus (4)	A.....T.....
A. areolatus (22)	.....T.....A
A. xiengensis (18)	.....T.....
A. porcellanus (30)	.....T.....A
A. xiengensis (16)	.....T.....
A. semitessellatus (10)	A.....
A. semitessellatus (11)	A.....
A. areolatus (19)	A.....
A. glaucolarynx (15)	A.....T.....A
A. glaucolarynx (17)	A.....T.....A
A. glaucolarynx (14)	A.....T.....A
A. glaucolarynx (13)	A.....T.....A
Beddomea albizonatus (1)	A.....G.....T.....T.....A
Chloritis siamensis (13)	A.....T.....T.....
Caena illustris (4)	A.....T.....A.T.....A

จุฬาลงกรณ์มหาวิทยาลัย

	541.....|.....|.....|.....|.....|.....600
A. inversus inversus (28)	GCATGAATGAATACATGGGGATTACTGTATCTTATTAAACTATTGAAATTATTAAAGTAA
A. inversus inversus (27)	.T.....T.....
A. inversus annamiticus (16)	.....A.....T.....
A. inversus annamiticus (20)	.....C...GT.G.....
A. givenchy (6)	.A....C...GT.....G..A..C...C.C.C.....T....
A. givenchy (7)	.A....C...GT.....G..A..C...C.C.C.....T....
A. givenchy (8)	.A....C...GT.....G..A..C...C.C.....T....
A. schomburgki (6)	.A....C...T....A.....G...G.C..GA.GCC.....T.A...
A. schomburgki (12)	.A....C...T....A.....G...G.C..GA.GCC.....T....
A. atricallosus leucoxanthus (9)	.A..C..C...G..C...G.....G..C..G...GC.C.A....C.T....
A. atricallosus leucoxanthus (10)	.A..C..C...G..C...G.....G..C..G...GC.C.A....C.T....
A. atricallosus perakensis (23)	.A..C..C...G..C..A..G..G.....G..C..A...G..C.A....T....
A. atricallosus atricallosus (19)	.G..C..C...G..C..AA.G.....G..C..G...A.....T....
A. atricallosus atricallosus (17)	.G..C..C...G..C..AA.G.....G..C..GA...A..C.....T....
A. atricallosus atricallosus (18)	.G..C..C...G..C..A..G.....G...A...A..C.....T....
A. atricallosus perakensis (27)	.G..C..C...G..C..A..G.....G..C..A...ACGC.....T....
A. perversus natunensis (24)	.G..C..C...G..C..A..G.....G..A..A...G..C.....T....
A. palaceus (29)	.A..C..C...G..C..A..G.....G..A..A...G..C.....T....
A. martensi (26)	.A..C..C...CG..C..AA.G.....C.....A..C.....T....
A. similis (25)	.A..C..C...C...C...G.....G..C.G..T..G.GC.....T....
A. adamsii (26)	.A.....A.C...GGG..T.....C...TACTA...G..C.....
A. pictus (26)	.A.....A.C...G.G...C.....CC..TA.TAC.....T....
<i>Aphidromus</i> sp. (21)	.A....G....A.C...A.G.G..A.....G..G.GGCTA.....C.T....
A. semitessellatus (10)	.T.....A.C...G.G.....G..GIGA.T.....G.T....
A. xiengensis (2)	.A....A....A.C..A..GAAG..A.G...C.C...ACT.....A...G.
A. xiengensis (3)	.A....A....A.C..A..GAAG..A...CGC...ACT.....A...G.
A. flavus (4)	.A....A....A.C..A..GAAG.....C..C...ACT.....A...G.
A. areolatus (22)	.A....A....A.C...GAAG.....C..C...GA.T...G...A...G.
A. xiengensis (18)	.A....A....A.C.A..GAAG...G.....GACT.....A...G.
A. porcellanus (30)	.A....A....A.C...GAA.....GT.T.....A.T...G.
A. xiengensis (16)	.A....A....A.C...GAAG...G...C...A.T...G...A...G.
A. semitessellatus (10)	.A....A....A.C..A..GAAG...G.....G..GCT.....GAC.G..G.
A. semitessellatus (11)	.A....A....A.C..A..GAAG...G.....G..GCT.....GAC.G..G.
A. areolatus (19)	.A....A....A.C..A..GAAG...G.....G..GCT.....GAC.G..G.
A. glaucolarynx (15)	.A.....T.C...GG.....G..GTAG.....T.A...
A. glaucolarynx (17)	.T.....T.C...GG.....G..GTAA.....G...T.A...
A. glaucolarynx (14)	.T.....T.C..A..GA.....G..A..G..GTAA.....T.A...
A. glaucolarynx (13)	.T.....T.C...GA.....A..G..GTAA.....T.A...
<i>Beddomea albizonatus</i> (1)	.T..C..C...T....CAT.A....C.TAA.G.G.CTAT.CT..T...C.T..A.G
<i>Chloritis siamensis</i> (13)	.T....A...ATTT...ATAOC...A.C..GACAAGGTG..C...G..TC.T...G
<i>Camaena illustris</i> (4)	.T..C.....GT.....AG.A...C...AGTGATGC-AC.A.....C...T..C

601.....|.....|.....|.....|.....|.....660

A. inversus inversus (28)	GTCAAAATACCTTAAGTGTAATAAAAAGACGAGAGACCOCTAGAAATTTTAATTA-----
A. inversus inversus (27)	.....A.....-----
A. inversus annamiticus (16)-----
A. inversus annamiticus (20)	.....C.....G-----
A. givenchy (6)	.....AG.....ACA.....G-----
A. givenchy (7)	.....AG.....ACA.....G-----
A. givenchy (8)	.....AG.....ACA.....G-----
A. schamburgki (6)	.....C.....TA.A..TT..T.....-----
A. schamburgki (12)	.....C.....TA.A..CT..T.....-----
A. atricallosus leucoxanthus (9)	.....T..A.....A...G-----
A. atricallosus leucoxanthus (10)	.....T..A.....A...G-----
A. atricallosus perakensis (23)	.....G.....A.AA.....AG...G-----
A. atricallosus atricallosus (19)	.....T.....G-----
A. atricallosus atricallosus (17)	.....G.....T.....G-----
A. atricallosus atricallosus (18)	.....G.....T.....G-----
A. atricallosus perakensis (27)	.....G.....T.....A...G-----
A. perversus natunensis (24)	.....G.....C.....A...G-----
A. palaceus (29)	.....G.....T.A.....A..C.....-----
A. martensi (26)	.....T.T.....A...G-----
A. similis (25)	.....G.....T..A.....A...G-----
A. adamsii (26)	.....CT.....T.....A..A.G-----
A. pictus (26)	.....ACT.....T.....A..A.G-----
Amphidromus sp. (21)	.....ACT.....T.....A..A.....-----
A. semitessellatus (10)	.....ACT..C..T.....AA..A.G-----
A. xiengensis (2)	.....G..C..ACA.....T.....A.....-----
A. xiengensis (3)	.....G..C..ACA.....T.....A.....-----
A. flavus (4)	.....G..C..AC.....T.....A.....-----
A. areolatus (22)	.....G..C..ACT...C..T.....A.....-----
A. xiengensis (18)	.....G..C..ACT.....T.....A.....-----
A. porcellanus (30)	.....G..C..ACC...C..T.....A.G..G-----
A. xiengensis (16)	.....G..CG..CC...C..T.....A.....-----
A. semitessellatus (10)	.....G..C..A.T.....T.....A.G.A.....-----
A. semitessellatus (11)	.....G..C..A.T.....T.....A.G.A.....-----
A. areolatus (19)	.....G..C..A.T.....T.....A.G.A.....-----
A. glaucolarynx (15)	.....AG.....TACT.....A...G-----
A. glaucolarynx (17)	.....AG.....TACT.....A...G-----
A. glaucolarynx (14)	.....AG.....TA.T.....A...G-----
A. glaucolarynx (13)	.....AG.....TACT.....A.....-----
Beddomea albizonatus (1)	...C.....C.TTAG.A.....T.....T.....T..C.TTGTGA
Chloritis siamensis (13)	...C.....TTGA...C.T.....T..C-----
Camena illustris (4)	...C.....G..AAGT.....T.....T.CA.TICT--

661.....|.....|.....|.....|.....|.....720

A. inversus inversus (28) -----CAITTTTGCTGGGGGGGCATAGTAGCATA-GAACCTACAATAA--AGAACATGAG
 A. inversus inversus (27) -----.....-A.....--.....
 A. inversus annamiticus (16) -----.....-A.....--.....
 A. inversus annamiticus (20) -----T.....G.....T-----
 A. givenchy (6) -----.....CGT.....T..T--TG..G....
 A. givenchy (7) -----.....CGT.....T..T--TG..G....
 A. givenchy (8) -----.....CGT.....T..T--CG.....
 A. schamburgki (6) -----T.....A..T-A..T...G..C--CT.....A
 A. schamburgki (12) -----T.....A..T-A..T...C--CT.....A
 A. atricallosus leucoxanthus (9) -----A.....T.....A..G.....TAA-.....G..-...T..G..A
 A. atricallosus leucoxanthus (10) -----A.....T.....A..G.....TAA-.....G..-...T..G..A
 A. atricallosus perakensis (23) -----A.....T.....A.....TAA.....G..-...T..G..A
 A. atricallosus atricallosus (19) -----.....T.....A.....T-A.....G..-...C..GG..A
 A. atricallosus atricallosus (17) -----T.....T.....A.....T.....G..-...C..G..A
 A. atricallosus atricallosus (18) -----T.....T.....A.....T.....G..-...T..G..A
 A. atricallosus perakensis (27) -----G.....T.....A..G.....TGA.....G..-...AC..GG..A
 A. perversus natunensis (24) -----.....T.....A..G.....T-A.....G..-...T..G..A
 A. palaceus (29) -----.....T.....A.....T.....G..T--..T..G..A
 A. martensi (26) -----.....T.....A.....T.....-TAT..G..A
 A. similis (25) -----T.....T.....A..G.....T-A.....G..-GAC.....A
 A. adamsii (26) -----AC.....T.....A.....ACIT.....T.C..-AC..A.T.
 A. pictus (26) -----AC.....T.....A.....AITT.....T.T..-AT..A.T.
 Amphidromus sp. (21) -----AC.....T.....A.....AITT.....T..T--AT..A.T.
 A. semitessellatus (10) -----ACG...T.....A...A...AITT.....TT..T.TTTTAT..TA.T.
 A. xiengensis (2) -----AC.....T.....A...A...ACIT.....TTT..T--..T...G.
 A. xiengensis (3) -----AT.....T.....A...A...ACIT.....TTT..T--..T...G.
 A. flavus (4) -----AC.....T.....A...A...ACIT.....TTT..T--C...C.G.
 A. areolatus (22) -----AC.....T.....A...A...ACIT.....TT..T--..T...C.G.
 A. xiengensis (18) -----AC.....T.....A...A...AITT.....TTT..C--CT...A.G.
 A. porcellanus (30) -----AC.....T.....A...A...AITT.....TTT..T--AC...C.G.
 A. xiengensis (16) -----C.....T.....A...A...ACIT.....TTT..T--..T...C.G.
 A. semitessellatus (10) -----GC.....T.....A...A...GTTA.....TTT..T--..T...T.
 A. semitessellatus (11) -----GC.....T.....A...A...GTTA.....TTT..T--..T...T.
 A. areolatus (19) -----GC.....T.....A...A...GTTA.....TTT..T--..T...T.
 A. glaucolarynx (15) -----T.....T.....AA.....TT.....C-TAT.T...A
 A. glaucolarynx (17) -----T.....T.....AA.....TT..T.....T-CAT.T...A
 A. glaucolarynx (14) -----T.....T.....AA.....GT..T.....TT-TAT.T...A
 A. glaucolarynx (13) -----T.....T.....AA.....C.TT..T.....T-TAT.T...A
 Beddomea albizonatus (1) AAITTCGT...T.....A..G.....AA.....TIA..--AT-T.A..C
 Chloritis siamensis (13) --TOGIGT...T.....A..G.....T.....TT..T--CT.TG...C
 Camaena illustris (4) --ATOCGT.....A...A..A.A...T...TT..T--TA-.....A

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A. inversus inversus (28)	GTGACCTCGATGTTGGACTAGGAA-ATTTAGGCTAGAGGGCGTGAATGTTGCTCTGTT
A. inversus inversus (27)-.....
A. inversus annamiticus (16)-.....
A. inversus annamiticus (20)	.....-.....A.....
A. givenchy (6)	.....-G...A..T.....A.AG...C.....
A. givenchy (7)	.....-G...A..T.....A.AG...C.....
A. givenchy (8)	.....-G...A..T.....A.AG...C.....----
A. schomburgki (6)	.....-G..C.A.T.....A...AG..CA.....
A. schomburgki (12)	.....-G..C.A.T.....A...AG-----
A. atricallosus leucoxanthus (9)	.....T.....-....A.TT.T..C.ATA.AG...A.....
A. atricallosus leucoxanthus (10)	.....T.....-....A.TT...C.ATA.AG...A.....
A. atricallosus perakensis (23)	.....-....A.TT...C.A.A.AG...A.....
A. atricallosus atricallosus (19)	.....-....A.TT...C-----
A. atricallosus atricallosus (17)	.....-....A.TT...C.A..A-..A.....C
A. atricallosus atricallosus (18)	.....-....A.TT...C.A.A.A-..A.....-
A. atricallosus perakensis (27)	.....G..G.-....A.T.C...C.A.A.AG...A.....
A. perversus natunensis (24)	.....-....A.T.C...CAA-----
A. palaceus (29)	.....-....A.T.C...C.A.A.AA...A.....
A. martensi (26)	.....-C...A.TT...C.A..A-G.A.....
A. similis (25)	.....-...A.TT...C.A.TAA-G..A.....
A. adamsii (26)	.....-....A.T.C.A...ATAAG...T.....
A. pictus (26)	.....-...TA.T.C.A...A.AAAG...A.....
Amphidromus sp. (21)	.....T.....-....A.T.C.A...AAA-----
A. semitessellatus (10)	.....-T...A...C.....AAA..GA.....
A. xiengensis (2)	.....-T.C.-..T.C.A-..AT.A.GGT.-...-----
A. xiengensis (3)	.....A.....AT.C..A.T.C.A...AT.A.GG..A.....
A. flavus (4)	.....-T.C..A.T.A.A.-..AT.A.AT.-...C
A. areolatus (22)	.....T.....-C...A.T.C...A..A.GG..A.....
A. xiengensis (18)	.....T-TC...A.T.C.A...A..A.G-T.....C
A. porcellanus (30)	.....-C..A-TOCA...AT.ACGG..A.....
A. xiengensis (16)	.....-C..A.TTC.A...AT.ATGG..A.....
A. semitessellatus (10)	.....C.....-...GA...C.....AAA.T-...C
A. semitessellatus (11)	.....C.....-...GA...C.....AAA.T-...C
A. areolatus (19)	.....C.....-...GA...C.....AAA..A.....
A. glaucolarynx (15)	.....-...TA.TT...A...AA...A.G...C
A. glaucolarynx (17)	.....-...TA.TT...A...AA...A.G...C
A. glaucolarynx (14)	.....-...TA.TT.....-----
A. glaucolarynx (13)	.....-...TA.TT...A...AA...A-----
Beddomea albizonatus (1)T..A.G.-GC.CTAA.T...A.TT-----
Chloritis siamensis (13)T...C-...ACCAATT...A.AG..G..AG.....
Camaena illustris (4)T...T.-T..A.A.TT.....-----

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.....845

A. inversus inversus (28)	CGAGC
A. inversus inversus (27)
A. inversus annamiticus (16)
A. inversus annamiticus (20)	.....
A. givenchy (6)	..GC-
A. givenchy (7)	.....
A. givenchy (8)	.....
A. schomburgki (6)	.....
A. schomburgki (12)	.....
A. atricallosus leucoxanthus (9)	.....
A. atricallosus leucoxanthus (10)	.....
A. atricallosus perakensis (23)	.....
A. atricallosus atricallosus (19)	.....
A. atricallosus atricallosus (17)	G.C--
A. atricallosus atricallosus (18)	.....
A. atricallosus perakensis (27)	.....
A. perversus natunensis (24)	.....
A. palaceus (29)	.....
A. martensi (26)	.....
A. similis (25)	.....
A. adamsii (26)	.....
A. pictus (26)	.....
Amphidromus sp. (21)	.....
A. semitessellatus (10)	.....
A. xiengensis (2)	.....
A. xiengensis (3)	..GC-
A. flavus (4)	G.C--
A. areolatus (22)	.....
A. xiengensis (18)	G.C--
A. porcellanus (30)	.....
A. xiengensis (16)	.....
A. semitessellatus (10)	.....
A. semitessellatus (11)	..GC-
A. areolatus (19)	.....
A. glaucolarynx (15)	GAGC-
A. glaucolarynx (17)	GAGC-
A. glaucolarynx (14)	.....
A. glaucolarynx (13)
Beddomea albizonatus (1)
Chloritis siamensis (13)
Camaena illustris (4)

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APPENDIX II

Genetic Distance

The uncorrected ("p") distance and the Kimura 2 parameters distances were implemented from the PAUP Program (Swofford, 1999).

4.1. Uncorrected Genetic Distance Matrix

	1	2	3	4	5	6
1 <i>A. inversus inversus</i> (28)	-					
2 <i>A. inversus inversus</i> (27)	0.01765	-				
3 <i>A. inversus annamiticus</i> (16)	0.02144	0.02648	-			
4 <i>A. inversus annamiticus</i> (20)	0.04587	0.04982	0.04853	-		
5 <i>A. givenchyi</i> (6)	0.17888	0.18783	0.19054	0.17798	-	
6 <i>A. givenchyi</i> (7)	0.17555	0.18699	0.18827	0.17586	0.00769	-
7 <i>A. givenchyi</i> (8)	0.17420	0.18314	0.18442	0.17211	0.01680	0.01891
8 <i>A. schomburgki</i> (6)	0.20058	0.20566	0.20579	0.20090	0.20188	0.19550
9 <i>A. schomburgki</i> (12)	0.19929	0.20059	0.20201	0.19708	0.19389	0.19155
10 <i>A. atricallosus leucoxanthus</i> (9)	0.23703	0.23448	0.22930	0.22921	0.22717	0.23049
11 <i>A. atricallosus leucoxanthus</i> (10)	0.23575	0.23320	0.22803	0.22792	0.22588	0.22920
12 <i>A. atricallosus perakensis</i> (23)	0.23322	0.22807	0.23055	0.22043	0.21320	0.21638
13 <i>A. atricallosus atricallosus</i> (19)	0.22079	0.22213	0.22631	0.21914	0.20677	0.20740
14 <i>A. atricallosus atricallosus</i> (17)	0.23506	0.23761	0.24011	0.22638	0.21626	0.21804
15 <i>A. atricallosus atricallosus</i> (18)	0.23493	0.23487	0.23485	0.21804	0.22465	0.23007
16 <i>A. atricallosus perakensis</i> (27)	0.22973	0.22967	0.22712	0.22295	0.22633	0.22998
17 <i>A. perversus natunensis</i> (24)	0.21164	0.21565	0.21027	0.21239	0.22746	0.22518
18 <i>A. palaceus</i> (29)	0.23107	0.23484	0.23612	0.22844	0.23431	0.23777
19 <i>A. martensi</i> (26)	0.21626	0.22023	0.21628	0.21885	0.22276	0.22020
20 <i>A. similis</i> (25)	0.22406	0.22552	0.22814	0.23079	0.23891	0.23643
21 <i>A. adamsii</i> (26)	0.26116	0.26495	0.26379	0.25971	0.27646	0.27396
22 <i>A. pictus</i> (26)	0.26987	0.27233	0.27113	0.26706	0.27669	0.27585
23 <i>Amphidromus</i> sp. (21)	0.26353	0.26601	0.26479	0.26067	0.27099	0.27244
24 <i>A. semitessellatus</i> (10)	0.26666	0.26779	0.27047	0.26562	0.27794	0.27791
25 <i>A. xiengensis</i> (2)	0.26605	0.26987	0.26319	0.26342	0.27849	0.27463
26 <i>A. xiengensis</i> (3)	0.26904	0.27433	0.26632	0.25986	0.27291	0.27343
27 <i>A. flavus</i> (4)	0.26622	0.27407	0.26876	0.25822	0.27752	0.27725
28 <i>A. areolatus</i> (22)	0.26409	0.26405	0.26664	0.25775	0.28045	0.27553
29 <i>A. xiengensis</i> (18)	0.27642	0.28155	0.27897	0.27435	0.27538	0.27310
30 <i>A. porcellanus</i> (30)	0.26919	0.26780	0.27300	0.26153	0.27555	0.27294
31 <i>A. xiengensis</i> (16)	0.26767	0.27152	0.27283	0.26755	0.27533	0.27517
32 <i>A. semitessellatus</i> (10)	0.28286	0.28700	0.28824	0.29026	0.27935	0.28161
33 <i>A. semitessellatus</i> (11)	0.28904	0.29419	0.29670	0.28494	0.28165	0.28706
34 <i>A. areolatus</i> (19)	0.29045	0.29300	0.29426	0.28557	0.28380	0.28861
35 <i>A. glaucolarynx</i> (15)	0.25617	0.25906	0.25624	0.24225	0.24982	0.24710
36 <i>A. glaucolarynx</i> (17)	0.26123	0.26020	0.26395	0.25275	0.26348	0.26092
37 <i>A. glaucolarynx</i> (14)	0.27796	0.27821	0.27788	0.26396	0.26166	0.26441
38 <i>A. glaucolarynx</i> (13)	0.25719	0.26005	0.25837	0.24478	0.25670	0.25651
39 <i>Beddomea albizonatus</i> (1)	0.37223	0.36536	0.36978	0.37195	0.36353	0.36387
40 <i>Chloritis siamensis</i> (13)	0.33868	0.34257	0.34128	0.32842	0.33843	0.33820
41 <i>Camaena illustris</i> (4)	0.34020	0.33995	0.34149	0.33212	0.34269	0.34636

	7	8	9	10	11	12
7 <i>A. givenchyi</i> (8)	-					
8 <i>A. schomburgki</i> (6)	0.19817	-				
9 <i>A. schomburgki</i> (12)	0.19020	0.02337	-			
10 <i>A. atricallosus leucoxanthus</i> (9)	0.22428	0.22023	0.22763	-		
11 <i>A. atricallosus leucoxanthus</i> (10)	0.22297	0.21896	0.22631	0.00252	-	
12 <i>A. atricallosus perakensis</i> (23)	0.20998	0.20763	0.21454	0.07112	0.06856	-
13 <i>A. atricallosus atricallosus</i> (19)	0.20741	0.22208	0.22105	0.12372	0.12098	0.12397
14 <i>A. atricallosus atricallosus</i> (17)	0.21051	0.21959	0.21996	0.12413	0.12155	0.11152
15 <i>A. atricallosus atricallosus</i> (18)	0.22053	0.21667	0.21933	0.11568	0.11310	0.10458
16 <i>A. atricallosus perakensis</i> (27)	0.22365	0.21830	0.22664	0.11759	0.11506	0.11194
17 <i>A. perversus natunensis</i> (24)	0.21999	0.21008	0.21295	0.13117	0.12848	0.12495
18 <i>A. palaceus</i> (29)	0.22789	0.22546	0.22262	0.14055	0.13801	0.12977
19 <i>A. martensi</i> (26)	0.21547	0.22373	0.22238	0.12634	0.12375	0.12410
20 <i>A. similis</i> (25)	0.23437	0.20764	0.20701	0.13676	0.13406	0.13456
21 <i>A. adamsii</i> (26)	0.27472	0.27595	0.28153	0.26277	0.26147	0.27098
22 <i>A. pictus</i> (26)	0.27530	0.27034	0.27712	0.27245	0.27113	0.27062
23 <i>Amphidromus</i> sp. (21)	0.27293	0.26485	0.26697	0.26498	0.26367	0.27053
24 <i>A. semitessellatus</i> (10)	0.27603	0.25439	0.25533	0.27057	0.26927	0.26605
25 <i>A. xiengensis</i> (2)	0.27058	0.27974	0.27070	0.27629	0.27497	0.26782
26 <i>A. xiengensis</i> (3)	0.27145	0.28008	0.27469	0.27496	0.27366	0.26304
27 <i>A. flavus</i> (4)	0.27524	0.28400	0.27772	0.27662	0.27531	0.26710
28 <i>A. areolatus</i> (22)	0.27996	0.27371	0.26993	0.27286	0.27156	0.26104
29 <i>A. xiengensis</i> (18)	0.27374	0.27857	0.26943	0.27668	0.27539	0.26876
30 <i>A. porcellanus</i> (30)	0.27217	0.27230	0.27116	0.24854	0.24854	0.25567
31 <i>A. xiengensis</i> (16)	0.27058	0.28391	0.28316	0.26207	0.26078	0.26407
32 <i>A. semitessellatus</i> (10)	0.28055	0.26586	0.26182	0.26683	0.26411	0.25719
33 <i>A. semitessellatus</i> (11)	0.28903	0.26862	0.26775	0.27198	0.26937	0.26293
34 <i>A. areolatus</i> (19)	0.28931	0.26869	0.27007	0.27074	0.26812	0.26216
35 <i>A. glaucolarynx</i> (15)	0.24247	0.25982	0.25087	0.25078	0.25076	0.24575
36 <i>A. glaucolarynx</i> (17)	0.25502	0.25599	0.25123	0.25877	0.25876	0.25132
37 <i>A. glaucolarynx</i> (14)	0.26305	0.28076	0.27996	0.25601	0.25598	0.24221
38 <i>A. glaucolarynx</i> (13)	0.25400	0.26369	0.26139	0.25799	0.25795	0.24666
39 <i>Beddomea albizonatus</i> (1)	0.36003	0.36918	0.36531	0.34644	0.34505	0.35822
40 <i>Chloritis siamensis</i> (13)	0.34070	0.34395	0.34698	0.36108	0.35976	0.34979
41 <i>Camaena illustris</i> (4)	0.33971	0.33165	0.32900	0.34632	0.34497	0.34661

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	13	14	15	16	17	18
13 A. atricallosus atricallosus (19)	-					
14 A. atricallosus atricallosus (17)	0.05464	-				
15 A. atricallosus atricallosus (18)	0.05303	0.05145	-			
16 A. atricallosus perakensis (27)	0.11249	0.10645	0.09905	-		
17 A. perversus natunensis (24)	0.08890	0.10445	0.08787	0.08163	-	
18 A. palaceus (29)	0.10956	0.12121	0.10260	0.10499	0.09079	-
19 A. martensi (26)	0.10968	0.11864	0.10661	0.11615	0.10050	0.12454
20 A. similis (25)	0.11652	0.11623	0.10650	0.11501	0.10202	0.12711
21 A. adamsii (26)	0.26069	0.27490	0.27452	0.26920	0.26144	0.27538
22 A. pictus (26)	0.26260	0.27195	0.27137	0.27530	0.25532	0.27111
23 Amphidromus sp. (21)	0.26183	0.26783	0.27241	0.25827	0.24876	0.25863
24 A. semitessellatus (10)	0.25245	0.25941	0.25642	0.27482	0.25487	0.27716
25 A. xiengensis (2)	0.24974	0.26314	0.26378	0.28075	0.24206	0.27167
26 A. xiengensis (3)	0.24948	0.26368	0.26056	0.27581	0.24460	0.26763
27 A. flavus (4)	0.24027	0.25567	0.26043	0.27445	0.23048	0.27186
28 A. areolatus (22)	0.24934	0.25748	0.25901	0.26837	0.24917	0.26680
29 A. xiengensis (18)	0.25618	0.26372	0.26574	0.27575	0.25820	0.27292
30 A. porcellanus (30)	0.23623	0.25269	0.25244	0.26310	0.24282	0.26127
31 A. xiengensis (16)	0.24966	0.26191	0.25584	0.27443	0.24944	0.26074
32 A. semitessellatus (10)	0.25727	0.26099	0.26326	0.27641	0.24976	0.24898
33 A. semitessellatus (11)	0.25450	0.26829	0.26957	0.28302	0.25139	0.25807
34 A. areolatus (19)	0.25590	0.27075	0.26868	0.27918	0.25138	0.25549
35 A. glaucolarynx (15)	0.22194	0.22743	0.22879	0.25642	0.23766	0.25249
36 A. glaucolarynx (17)	0.22892	0.22349	0.23022	0.25101	0.23733	0.25659
37 A. glaucolarynx (14)	0.22528	0.23860	0.23832	0.24811	0.22267	0.25598
38 A. glaucolarynx (13)	0.22899	0.23865	0.24504	0.25804	0.23846	0.25654
39 Beddomea albizonatus (1)	0.35040	0.35552	0.35236	0.36531	0.34860	0.36323
40 Chloritis siamensis (13)	0.32973	0.34487	0.33270	0.35106	0.32778	0.33997
41 Camaena illustris (4)	0.34571	0.35150	0.35333	0.35292	0.32582	0.34554

	19	20	21	22	23	24
19 A. martensi (26)	-					
20 A. similis (25)	0.11351	-				
21 A. adamsii (26)	0.26357	0.25791	-			
22 A. pictus (26)	0.25514	0.25434	0.09798	-		
23 Amphidromus sp. (21)	0.24899	0.24964	0.15125	0.14856	-	
24 A. semitessellatus (10)	0.23951	0.26795	0.18987	0.17038	0.16330	-
25 A. xiengensis (2)	0.24915	0.26289	0.24176	0.23537	0.22648	0.22247
26 A. xiengensis (3)	0.24642	0.25742	0.24872	0.24282	0.22688	0.22186
27 A. flavus (4)	0.24281	0.25336	0.24357	0.23612	0.22585	0.22057
28 A. areolatus (22)	0.24460	0.25854	0.24066	0.22763	0.21765	0.21892
29 A. xiengensis (18)	0.24883	0.26539	0.25337	0.24392	0.23047	0.21475
30 A. porcellanus (30)	0.23686	0.24571	0.25064	0.23168	0.22662	0.21147
31 A. xiengensis (16)	0.24454	0.25456	0.24364	0.24087	0.23494	0.22354
32 A. semitessellatus (10)	0.24785	0.26264	0.25111	0.24471	0.23018	0.22475
33 A. semitessellatus (11)	0.25027	0.25829	0.25949	0.25472	0.24086	0.22513
34 A. areolatus (19)	0.24692	0.25694	0.25692	0.24748	0.23681	0.22260
35 A. glaucolarynx (15)	0.22909	0.25274	0.25316	0.25925	0.25998	0.25333
36 A. glaucolarynx (17)	0.23381	0.25916	0.25939	0.26692	0.27083	0.25618
37 A. glaucolarynx (14)	0.22482	0.25191	0.28911	0.27936	0.27315	0.27212
38 A. glaucolarynx (13)	0.23181	0.25648	0.27634	0.27170	0.27116	0.26332
39 Beddomea albizonatus (1)	0.35544	0.36625	0.37334	0.36320	0.34527	0.35800
40 Chloritis siamensis (13)	0.33813	0.33589	0.36204	0.36037	0.35565	0.37315
41 Camaena illustris (4)	0.34280	0.33852	0.36773	0.36865	0.33662	0.35996

	25	26	27	28	29	30
25 <i>A. xiengensis</i> (2)	-					
26 <i>A. xiengensis</i> (3)	0.02622	-				
27 <i>A. flavus</i> (4)	0.04713	0.05069	-			
28 <i>A. areolatus</i> (22)	0.08960	0.08645	0.09696	-		
29 <i>A. xiengensis</i> (18)	0.08328	0.09030	0.08922	0.07836	-	
30 <i>A. porcellanus</i> (30)	0.10001	0.09938	0.10622	0.10614	0.10289	-
31 <i>A. xiengensis</i> (16)	0.09627	0.09790	0.11131	0.10451	0.10285	0.07934
32 <i>A. semitessellatus</i> (10)	0.14586	0.15722	0.14206	0.17116	0.16072	0.16814
33 <i>A. semitessellatus</i> (11)	0.15193	0.16276	0.15783	0.17807	0.16945	0.17331
34 <i>A. areolatus</i> (19)	0.15480	0.16375	0.15644	0.17513	0.17319	0.16938
35 <i>A. glaucolarynx</i> (15)	0.26674	0.26246	0.25735	0.25941	0.26710	0.26972
36 <i>A. glaucolarynx</i> (17)	0.25864	0.25730	0.24890	0.25412	0.26597	0.26593
37 <i>A. glaucolarynx</i> (14)	0.26853	0.26333	0.25154	0.26054	0.27089	0.27191
38 <i>A. glaucolarynx</i> (13)	0.27485	0.26821	0.26296	0.26338	0.27307	0.27976
39 <i>Beddomea albizonatus</i> (1)	0.38264	0.38180	0.38106	0.37614	0.36974	0.36597
40 <i>Chloritis siamensis</i> (13)	0.36163	0.35948	0.36334	0.35827	0.37626	0.35915
41 <i>Camaena illustris</i> (4)	0.36094	0.36136	0.35048	0.37035	0.36584	0.36301
	31	32	33	34	35	36
31 <i>A. xiengensis</i> (16)	-					
32 <i>A. semitessellatus</i> (10)	0.16702	-				
33 <i>A. semitessellatus</i> (11)	0.17195	0.00664	-			
34 <i>A. areolatus</i> (19)	0.16900	0.00400	0.01405	-		
35 <i>A. glaucolarynx</i> (15)	0.26614	0.28325	0.28979	0.29058	-	
36 <i>A. glaucolarynx</i> (17)	0.26640	0.28858	0.29155	0.29230	0.05217	-
37 <i>A. glaucolarynx</i> (14)	0.26886	0.27538	0.28625	0.28527	0.08879	0.08660
38 <i>A. glaucolarynx</i> (13)	0.27172	0.28344	0.29459	0.29216	0.06348	0.05609
39 <i>Beddomea albizonatus</i> (1)	0.37295	0.35835	0.36200	0.35959	0.35166	0.34881
40 <i>Chloritis siamensis</i> (13)	0.35094	0.35005	0.36608	0.35787	0.33824	0.33738
41 <i>Camaena illustris</i> (4)	0.37512	0.35232	0.36424	0.35965	0.33569	0.33783
	37	38	39	40	41	
37 <i>A. glaucolarynx</i> (14)	-					
38 <i>A. glaucolarynx</i> (13)	0.07226	-				
39 <i>Beddomea albizonatus</i> (1)	0.34927	0.35038	-			
40 <i>Chloritis siamensis</i> (13)	0.33790	0.35053	0.28132	-		
41 <i>Camaena illustris</i> (4)	0.34024	0.33929	0.29384	0.30866	-	

4.2 Kimura 2-parameter Distance Matrix

	1	2	3	4	5	6
1 <i>A. inversus inversus</i> (28)	-					
2 <i>A. inversus inversus</i> (27)	0.01793	-				
3 <i>A. inversus annamiticus</i> (16)	0.02188	0.02711	-			
4 <i>A. inversus annamiticus</i> (20)	0.04793	0.05228	0.05079	-		
5 <i>A. givenchyi</i> (6)	0.20827	0.22094	0.22529	0.20754	-	
6 <i>A. givenchyi</i> (7)	0.20387	0.21985	0.22232	0.20470	0.00774	-
7 <i>A. givenchyi</i> (8)	0.20175	0.21406	0.21646	0.19920	0.01705	0.01922
8 <i>A. schomburgki</i> (6)	0.23707	0.24423	0.24499	0.23864	0.23971	0.23064
9 <i>A. schomburgki</i> (12)	0.23513	0.23704	0.23932	0.23319	0.22830	0.22490
10 <i>A. atricallosus leucoxanthus</i> (9)	0.28860	0.28423	0.27674	0.27710	0.27328	0.27841
11 <i>A. atricallosus leucoxanthus</i> (10)	0.28678	0.28242	0.27495	0.27528	0.27147	0.27660
12 <i>A. atricallosus perakensis</i> (23)	0.28292	0.27459	0.27895	0.26400	0.25261	0.25730
13 <i>A. atricallosus atricallosus</i> (19)	0.26425	0.26627	0.27283	0.26211	0.24409	0.24515
14 <i>A. atricallosus atricallosus</i> (17)	0.28595	0.28998	0.29417	0.27390	0.25739	0.26017
15 <i>A. atricallosus atricallosus</i> (18)	0.28550	0.28540	0.28556	0.26067	0.26994	0.27833
16 <i>A. atricallosus perakensis</i> (27)	0.27727	0.27687	0.27344	0.26790	0.27221	0.27766
17 <i>A. perversus natunensis</i> (24)	0.25072	0.25665	0.24884	0.25225	0.27437	0.27067
18 <i>A. palaceus</i> (29)	0.27903	0.28454	0.28706	0.27619	0.28515	0.29024
19 <i>A. martensi</i> (26)	0.25752	0.26333	0.25771	0.26210	0.26684	0.26326
20 <i>A. similis</i> (25)	0.26932	0.27156	0.27580	0.28009	0.29146	0.28787
21 <i>A. adamsii</i> (26)	0.32221	0.32830	0.32654	0.32090	0.34684	0.34311
22 <i>A. pictus</i> (26)	0.33546	0.33958	0.33762	0.33178	0.34723	0.34611
23 <i>Amphidromus</i> sp. (21)	0.32548	0.32944	0.32759	0.32222	0.33731	0.33988
24 <i>A. semitessellatus</i> (10)	0.33066	0.33250	0.33698	0.32938	0.34868	0.34890
25 <i>A. xiengensis</i> (2)	0.33099	0.33733	0.32649	0.32764	0.35331	0.34680
26 <i>A. xiengensis</i> (3)	0.33577	0.34440	0.33145	0.32198	0.34394	0.34453
27 <i>A. flavus</i> (4)	0.33053	0.34349	0.33485	0.31908	0.35109	0.35040
28 <i>A. areolatus</i> (22)	0.32786	0.32780	0.33221	0.31845	0.35520	0.34708
29 <i>A. xiengensis</i> (18)	0.34648	0.35511	0.35092	0.34436	0.34631	0.34257
30 <i>A. porcellanus</i> (30)	0.33579	0.33350	0.34231	0.32422	0.34749	0.34335
31 <i>A. xiengensis</i> (16)	0.33369	0.34010	0.34249	0.33437	0.34707	0.34707
32 <i>A. semitessellatus</i> (10)	0.35943	0.36670	0.36913	0.37281	0.35527	0.35948
33 <i>A. semitessellatus</i> (11)	0.36904	0.37817	0.38293	0.36343	0.35823	0.36741
34 <i>A. areolatus</i> (19)	0.37174	0.37627	0.37878	0.36490	0.36204	0.37009
35 <i>A. glaucolarynx</i> (15)	0.31506	0.31969	0.31532	0.29368	0.30610	0.30195
36 <i>A. glaucolarynx</i> (17)	0.32390	0.32221	0.32855	0.31050	0.32829	0.32424
37 <i>A. glaucolarynx</i> (14)	0.35033	0.35059	0.35044	0.32809	0.32485	0.32934
38 <i>A. glaucolarynx</i> (13)	0.31691	0.32138	0.31897	0.29786	0.31745	0.31713
39 <i>Beddomea albizonatus</i> (1)	0.51649	0.50232	0.51159	0.51624	0.50008	0.50026
40 <i>Chloritis siamensis</i> (13)	0.45219	0.46004	0.45734	0.43465	0.45441	0.45272
41 <i>Camaena illustris</i> (4)	0.45346	0.45298	0.45592	0.43889	0.45829	0.46483

	7	8	9	10	11	12
7 <i>A. givenchyi</i> (8)	-					
8 <i>A. schamburgki</i> (6)	0.23429	-				
9 <i>A. schamburgki</i> (12)	0.22277	0.02385	-			
10 <i>A. atricallosus leucoxanthus</i> (9)	0.26870	0.26475	0.27605	-		
11 <i>A. atricallosus leucoxanthus</i> (10)	0.26687	0.26299	0.27420	0.00252	-	
12 <i>A. atricallosus perakensis</i> (23)	0.24772	0.24606	0.25626	0.07587	0.07302	-
13 <i>A. atricallosus atricallosus</i> (19)	0.24501	0.26937	0.26797	0.13832	0.13496	0.13818
14 <i>A. atricallosus atricallosus</i> (17)	0.24894	0.26427	0.26513	0.13850	0.13535	0.12253
15 <i>A. atricallosus atricallosus</i> (18)	0.26354	0.26037	0.26438	0.12818	0.12507	0.11430
16 <i>A. atricallosus perakensis</i> (27)	0.26792	0.26348	0.27639	0.13077	0.12770	0.12353
17 <i>A. perversus natunensis</i> (24)	0.26297	0.25081	0.25555	0.14805	0.14471	0.13966
18 <i>A. palaceus</i> (29)	0.27487	0.27330	0.26873	0.15998	0.15677	0.14564
19 <i>A. martensi</i> (26)	0.25597	0.27031	0.26825	0.14145	0.13827	0.13842
20 <i>A. similis</i> (25)	0.28433	0.24681	0.24595	0.15485	0.15146	0.15145
21 <i>A. adamsii</i> (26)	0.34377	0.34842	0.35765	0.32524	0.32329	0.33924
22 <i>A. pictus</i> (26)	0.34460	0.33796	0.34900	0.34053	0.33851	0.33806
23 <i>Amphidromus</i> sp. (21)	0.34046	0.33157	0.33462	0.32929	0.32731	0.33872
24 <i>A. semitessellatus</i> (10)	0.34551	0.31384	0.31507	0.33768	0.33570	0.33085
25 <i>A. xiengensis</i> (2)	0.33966	0.35446	0.33949	0.34883	0.34680	0.33542
26 <i>A. xiengensis</i> (3)	0.34098	0.35484	0.34568	0.34662	0.34462	0.32759
27 <i>A. flavus</i> (4)	0.34679	0.36075	0.35051	0.34943	0.34741	0.33372
28 <i>A. areolatus</i> (22)	0.35431	0.34472	0.33820	0.34312	0.34114	0.32410
29 <i>A. xiengensis</i> (18)	0.34351	0.35133	0.33644	0.34895	0.34696	0.33648
30 <i>A. porcellanus</i> (30)	0.34169	0.34237	0.33986	0.30388	0.30373	0.31565
31 <i>A. xiengensis</i> (16)	0.33893	0.36184	0.36031	0.32508	0.32315	0.32905
32 <i>A. semitessellatus</i> (10)	0.35717	0.33125	0.32464	0.33290	0.32860	0.31765
33 <i>A. semitessellatus</i> (11)	0.37045	0.33556	0.33405	0.34013	0.33598	0.32613
34 <i>A. areolatus</i> (19)	0.37087	0.33603	0.33781	0.33839	0.33423	0.32507
35 <i>A. glaucolarynx</i> (15)	0.29459	0.32125	0.30747	0.30773	0.30788	0.29976
36 <i>A. glaucolarynx</i> (17)	0.31448	0.31509	0.30805	0.32175	0.32195	0.30974
37 <i>A. glaucolarynx</i> (14)	0.32690	0.35547	0.35474	0.31702	0.31719	0.29472
38 <i>A. glaucolarynx</i> (13)	0.31289	0.32661	0.32322	0.31966	0.31979	0.30123
39 <i>Beddomea albizonatus</i> (1)	0.49262	0.50866	0.50113	0.46638	0.46386	0.49035
40 <i>Chloritis siamensis</i> (13)	0.45761	0.46147	0.46750	0.49588	0.49341	0.47327
41 <i>Camaena illustris</i> (4)	0.45241	0.43782	0.43310	0.46459	0.46208	0.46512

ศูนย์วิทยทรัพยากร
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	13	14	15	16	17	18
13 A. atricallosus atricallosus (19)	-					
14 A. atricallosus atricallosus (17)	0.05734	-				
15 A. atricallosus atricallosus (18)	0.05575	0.05396	-			
16 A. atricallosus perakensis (27)	0.12544	0.11797	0.10920	-		
17 A. perversus natunensis (24)	0.09680	0.11601	0.09583	0.08863	-	
18 A. palaceus (29)	0.12131	0.13594	0.11293	0.11645	0.09923	-
19 A. martensi (26)	0.12092	0.13218	0.11735	0.12946	0.10991	0.13989
20 A. similis (25)	0.12927	0.12887	0.11687	0.12775	0.11182	0.14291
21 A. adamsii (26)	0.32403	0.34600	0.34596	0.33608	0.32432	0.34572
22 A. pictus (26)	0.32615	0.34022	0.33965	0.34541	0.31337	0.33803
23 Amphidromus sp. (21)	0.32647	0.33469	0.34325	0.31920	0.30398	0.31915
24 A. semitessellatus (10)	0.31043	0.32047	0.31608	0.34544	0.31316	0.34850
25 A. xiengensis (2)	0.30797	0.32885	0.32975	0.35804	0.29474	0.34120
26 A. xiengensis (3)	0.30732	0.32943	0.32432	0.34947	0.29853	0.33468
27 A. flavus (4)	0.29238	0.31594	0.32347	0.34635	0.27698	0.34136
28 A. areolatus (22)	0.30626	0.31913	0.32177	0.33678	0.30526	0.33315
29 A. xiengensis (18)	0.31719	0.32905	0.33213	0.34796	0.31946	0.34238
30 A. porcellanus (30)	0.28592	0.31133	0.31106	0.32798	0.29539	0.32406
31 A. xiengensis (16)	0.30713	0.32664	0.31670	0.34685	0.30599	0.32327
32 A. semitessellatus (10)	0.31890	0.32433	0.32820	0.34974	0.30607	0.30440
33 A. semitessellatus (11)	0.31438	0.33521	0.33768	0.35964	0.30813	0.31790
34 A. areolatus (19)	0.31665	0.33935	0.33634	0.35365	0.30811	0.31392
35 A. glaucolarynx (15)	0.26504	0.27269	0.27511	0.31760	0.28845	0.31108
36 A. glaucolarynx (17)	0.27610	0.26762	0.27836	0.31058	0.28956	0.31963
37 A. glaucolarynx (14)	0.26979	0.28907	0.28893	0.30437	0.26582	0.31723
38 A. glaucolarynx (13)	0.27498	0.28884	0.29906	0.31985	0.28935	0.31729
39 Beddomea albizonatus (1)	0.47479	0.48520	0.47860	0.50464	0.47086	0.50078
40 Chloritis siamensis (13)	0.43656	0.46518	0.44192	0.47791	0.43284	0.45561
41 Camaena illustris (4)	0.46352	0.47428	0.47773	0.47699	0.42749	0.46315

	19	20	21	22	23	24
19 A. martensi (26)	-					
20 A. similis (25)	0.12573	-				
21 A. adamsii (26)	0.32731	0.31892	-			
22 A. pictus (26)	0.31315	0.31222	0.10663	-		
23 Amphidromus sp. (21)	0.30365	0.30587	0.17097	0.16738	-	
24 A. semitessellatus (10)	0.28949	0.33483	0.22300	0.19606	0.18602	-
25 A. xiengensis (2)	0.30538	0.32918	0.29788	0.28816	0.27386	0.26781
26 A. xiengensis (3)	0.30122	0.32019	0.30886	0.30009	0.27431	0.26649
27 A. flavus (4)	0.29518	0.31312	0.29969	0.28835	0.27233	0.26343
28 A. areolatus (22)	0.29860	0.32204	0.29618	0.27619	0.26110	0.26207
29 A. xiengensis (18)	0.30463	0.33224	0.31598	0.30076	0.27902	0.25501
30 A. porcellanus (30)	0.28669	0.30048	0.31209	0.28257	0.27430	0.25094
31 A. xiengensis (16)	0.29882	0.31567	0.30074	0.29706	0.28734	0.26889
32 A. semitessellatus (10)	0.30436	0.32815	0.31292	0.30288	0.27855	0.26997
33 A. semitessellatus (11)	0.30723	0.32074	0.32530	0.31818	0.29428	0.27050
34 A. areolatus (19)	0.30245	0.31911	0.32093	0.30643	0.28826	0.26664
35 A. glaucolarynx (15)	0.27446	0.31061	0.31159	0.32009	0.32175	0.30957
36 A. glaucolarynx (17)	0.28279	0.32200	0.32138	0.33264	0.33897	0.31420
37 A. glaucolarynx (14)	0.26839	0.31008	0.36954	0.35153	0.34199	0.33878
38 A. glaucolarynx (13)	0.27857	0.31661	0.34734	0.33883	0.33808	0.32444
39 Beddomea albizonatus (1)	0.48319	0.50576	0.51890	0.49888	0.46490	0.48837
40 Chloritis siamensis (13)	0.45136	0.44812	0.49547	0.49366	0.48423	0.51870
41 Camaena illustris (4)	0.45813	0.45026	0.50573	0.50776	0.44684	0.49039

	25	26	27	28	29	30
25 <i>A. xiengensis</i> (2)	-					
26 <i>A. xiengensis</i> (3)	0.02683	-				
27 <i>A. flavus</i> (4)	0.04900	0.05295	-			
28 <i>A. areolatus</i> (22)	0.09747	0.09350	0.10537	-		
29 <i>A. xiengensis</i> (18)	0.08975	0.09779	0.09640	0.08400	-	
30 <i>A. porcellanus</i> (30)	0.10938	0.10840	0.11600	0.11719	0.11227	-
31 <i>A. xiengensis</i> (16)	0.10540	0.10715	0.12282	0.11556	0.11275	0.08515
32 <i>A. semitessellatus</i> (10)	0.16596	0.18103	0.16030	0.20040	0.18508	0.19484
33 <i>A. semitessellatus</i> (11)	0.17366	0.18814	0.18008	0.20954	0.19642	0.20152
34 <i>A. areolatus</i> (19)	0.17703	0.18899	0.17805	0.20531	0.20097	0.19618
35 <i>A. glaucolarynx</i> (15)	0.33342	0.32666	0.31790	0.32099	0.33280	0.33821
36 <i>A. glaucolarynx</i> (17)	0.32110	0.31931	0.30543	0.31339	0.33192	0.33308
37 <i>A. glaucolarynx</i> (14)	0.33571	0.32751	0.30866	0.32267	0.33924	0.34178
38 <i>A. glaucolarynx</i> (13)	0.34569	0.33516	0.32638	0.32662	0.34174	0.35363
39 <i>Beddomea albizonatus</i> (1)	0.54133	0.54060	0.53742	0.52701	0.51334	0.50490
40 <i>Chloritis siamensis</i> (13)	0.49622	0.49228	0.49930	0.48955	0.52696	0.49115
41 <i>Camaena illustris</i> (4)	0.49272	0.49369	0.47263	0.51143	0.50236	0.49684
	31	32	33	34	35	36
31 <i>A. xiengensis</i> (16)	-					
32 <i>A. semitessellatus</i> (10)	0.19409	-				
33 <i>A. semitessellatus</i> (11)	0.20074	0.00668	-			
34 <i>A. areolatus</i> (19)	0.19660	0.00401	0.01419	-		
35 <i>A. glaucolarynx</i> (15)	0.33267	0.35996	0.37054	0.37202	-	
36 <i>A. glaucolarynx</i> (17)	0.33440	0.36907	0.37421	0.37564	0.05463	-
37 <i>A. glaucolarynx</i> (14)	0.33731	0.34618	0.36305	0.36152	0.09558	0.09306
38 <i>A. glaucolarynx</i> (13)	0.34101	0.35926	0.37685	0.37294	0.06673	0.05865
39 <i>Beddomea albizonatus</i> (1)	0.52036	0.48972	0.49735	0.49235	0.47686	0.47136
40 <i>Chloritis siamensis</i> (13)	0.47519	0.47441	0.50561	0.48958	0.45223	0.45118
41 <i>Camaena illustris</i> (4)	0.52175	0.47731	0.49975	0.49089	0.44519	0.44905
	37	38	39	40	41	
37 <i>A. glaucolarynx</i> (14)	-					
38 <i>A. glaucolarynx</i> (13)	0.07678	-				
39 <i>Beddomea albizonatus</i> (1)	0.47165	0.47372	-			
40 <i>Chloritis siamensis</i> (13)	0.45081	0.47630	0.35290	-		
41 <i>Camaena illustris</i> (4)	0.45343	0.45186	0.37292	0.39891	-	

APPENDIX III

The studies specimens deposited in the Chulalongkorn University, Museum of Zoology (CUMZ)

CUMZ	Species	Date	Locality	Specimens		Remark
				D	S	
2001	<i>A. schomburgki</i>	12-13/08/2000	Khao Kiew, Chonburi	3		wet
2002	<i>A. schomburgki</i>	20-26/10/2000	Koh Kud, Trat	8		wet
2003	<i>A. givenchy</i>	12-13/10/2000	Patam National Park, Ubonratchathani	3		wet
2004	<i>A. schomburgki</i>	20-26/10/2000	Koh Kud, Trat	13		wet
2005	<i>A. schomburgki</i>	20-26/10/2001	Koh Kud, Trat	17		wet
2006	<i>A. atricallosus leucoxanthus</i>	28/05/2001	Khao Ang Rue Nai Wildlife Sanctuary, Chacheongsao	1		wet, laidlawi
2007	<i>A. atricallosus leucoxanthus</i>	18/09/2001	Plieu National Park, Chanthaburi	2		wet
2008	<i>A. atricallosus leucoxanthus</i>	19/09/2001	Plieu National Park, Chanthaburi	1	1	wet
2009	<i>A. atricallosus leucoxanthus</i>	11/09/2002	Pulau Tulai, Northwest of Pulau Tioman, MALAYSIA	1		wet, T.M. Leong coll.
2010	<i>A. atricallosus leucoxanthus</i>	11/05/2003	Plieu National Park, Chanthaburi	5	4	wet
2011	<i>A. atricallosus classarius</i>	04/04/1999	Koh Tachai, Pang Nga	12	2	10 wet, PARATYPE
2012	<i>A. similis</i>	26/04/1998	Fairly Cave, Sarawak, MALAYSIA			wet
2013	<i>A. atricallosus classarius</i>	14/05/2000	Koh Tachai, Pang Nga		19	wet
2014	<i>A. atricallosus classarius</i>	14/05/2000	Koh Tachai, Pang Nga		45	wet
2015	<i>A. atricallosus atricallosus</i>	15/05/2000	Ban Takun, Suratthani	4	4	wet
2016	<i>A. givenchy</i>	9-14/06/1997	Dong Phu Wieng, Sawanakhet, Laos	2		wet
2017	<i>A. schomburgki</i>	12/09/2002	Phu Lom Klau, Naku, Karasin	19		wet
2018	<i>A. atricallosus leucoxanthus</i>	29/05/2001	Plieu National Park, Chanthaburi	16	5	wet
2019	<i>A. atricallosus atricallosus</i>	05/05/2000	Ban Takun, Suratthani	13	20	wet
2020	<i>A. atricallosus atricallosus</i>	9-12/09/2003	Ban Takun, Suratthani	12	4	wet
2021	<i>A. atricallosus atricallosus</i>	13/09/2003	Khao Sok National Park, Suratthani	1	4	shell
2022	<i>A. atricallosus atricallosus</i>	13/09/2003	Wat Tam Wararam, Suratthani	14	24	shell
2023	<i>A. atricallosus atricallosus</i>	12/09/2003	Wat Tam Sok Panturat, Suratthani	19	2	shell, white callus
2024	<i>A. atricallosus atricallosus</i>	9-12/09/2003	Ban Takun, Suratthani	26	27	shell
2025	<i>A. atricallosus atricallosus</i>	15/09/2003	Khao Sok National Park, Cabin North, Suratthani			shell
2026	<i>A. atricallosus atricallosus</i>	15/09/2003	Khao Sok National Park, Cabin South, Suratthani	57	102	shell

2027	<i>A. atricallosus atricallosus</i>	30/06/2002	Ban Takun, Pomaeolo plantation, Suratthani	21	53	shell
2028	<i>A. atricallosus atricallosus</i>	17/08/2002	Ban Takun, Pomaeolo plantation, Suratthani	11	47	shell
2029	<i>A. atricallosus atricallosus</i>	30/06/2002	Ban Takun, Pomaeolo plantation, Suratthani	33	67	shell
2030	<i>A. atricallosus atricallosus</i>	17/08/2002	Ban Takun, Pomaeolo plantation, Suratthani	29	66	shell
2031	<i>A. schomburgki</i>	8-9/07/2000	Khao Kiew, Chonburi	65	25	shell
2032	<i>A. schomburgki</i>	11-12/08/2000	Khao Kiew, Chonburi	31	10	shell
2033	<i>A. inversus annamiticus</i>	19/11/2000	Koh Kharm, Chomburi	43		shell
2034	<i>A. inversus annamiticus</i>	17/11/2000	Koh Pai, Chomburi	39		shell
2035	<i>A. inversus annamiticus</i>	16/11/2000	Koh Jarn, Chonburi	59		shell
2036	<i>A. schomburgki</i>	21-25/10/2000	Koh Kud, Trat	43		shell
2037	<i>A. inversus annamiticus</i>	26-27/08/2000	Koh Pai, Chomburi	49		shell
2038	<i>A. inversus annamiticus</i>	22-23/07/2000	Koh Marn Vihai, Chonburi	193		shell
2039	<i>A. atricallosus leucoxanthus</i>	19/10/1996	Plieu National Park, Chanthaburi			shell
2040	<i>A. schomburgki</i>	00/10/1999	Khao Look Chang, Nakhornratchasima	7		shell
2041	<i>A. atricallosus leucoxanthus</i>	8-9/07/2000	Khao Kiew, Chonburi	121	62	shell
2042	<i>A. atricallosus leucoxanthus</i>	04/04/1996	Plieu National Park, Chanthaburi	51	39	shell
2043	<i>A. atricallosus leucoxanthus</i>	11-12/08/2000	Khao Kiew, Chonburi	40	25	shell
2044	<i>A. inversus annamiticus</i>	16/11/2000	Koh Jueng, Chonburi			shell
2045	<i>Camaena illustris</i>		Pahom, Wangwieng, LAOS	11		shell
2046	<i>Camaena illustris</i>		Pahom, Wangwieng, LAOS	8		shell
2047	<i>Camaena illustris</i>	10/01/1999	Pahom, Wangwieng, LAOS	1		shell
2048	<i>Camaena illustris</i>	13/03/1999	Pahom, Wangwieng, LAOS	6		shell
2049	<i>A. givenchy</i>		Luang Prabang, LAOS	1		shell, Chanard T. coll.
2050	<i>A. givenchy</i>		Patam National Park, Ubonratchathani	1		shell, Lohachit C. coll.
2051	<i>A. schomburgki</i>	18/10/1998	Khao Look Chang, Nakhornratchasima	20		shell
2052	<i>A. schomburgki</i>	30/11/1998	Khao Look Chang, Nakhornratchasima	9		shell
2053	<i>A. schomburgki</i>	16/03/1989	Phung Chang Cave, Pang Nga		1	shell
2054	<i>A. schomburgki</i>	29/07/2000	Korn Buri District, Nakhornratchasima	1		shell
2055	<i>A. schomburgki</i>	10/10/1997	Phu Lom Klau, Naku, Karasin	1		shell
2056	<i>A. givenchy</i>	13/10/2000	Patam National Park, Ubonratchathani	43		shell
2057	<i>A. atricallosus atricallosus</i>	17/08/2002	Ban Takun, Pomaeolo plantation, Suratthani	35	52	shell
2058	<i>A. atricallosus atricallosus</i>	06/10/2002	Ban Takun, Pomaeolo plantation, Suratthani		13	shell
2059	<i>A. atricallosus leucoxanthus</i>	19/08/2002	Makok Waterfall, (E1-9), Plieu, Chanthaburi	201	172	shell

2060	<i>A. atricallosus leucoxanthus</i>	19/08/2003	Makok Waterfall, (W1-7), Plieue, Chanthaburi	68	43	shell
2061	<i>A. atricallosus atricallosus</i>	09/09/2003	Ban Takun, Pomaelo plantation, Suratthani	88	207	shell
2062	<i>A. inversus annamiticus</i>	26/12/1998	Koh Jueng, Chonburi	32		shell
2063	<i>A. inversus inversus</i>	19/02/2000	Botanical Garden, SINGAPORE	3		shell
2064	<i>A. inversus annamiticus</i>	20-27/03/2000	Koh Rin, Chonburi	8		shell
2065	<i>A. inversus annamiticus</i>	15/11/2000	Koh Samaesan, Chonburi	7		shell
2066	<i>A. inversus annamiticus</i>	17/12/1998	Koh Jarn, Chonburi	8		shell
2067	<i>A. atricallosus perakensis</i>	19/02/2000	Upper Reservore, Nee Soon, SINGAPORE	2		shell, with Ms. Lauu
2068	<i>A. atricallosus atricallosus</i>	28/03/2001	Wat Tam Sok Panturat, Suratthani	7	1	shell
2069	<i>A. atricallosus atricallosus</i>	28/03/2001	Ban Takun, Pomaelo plantation, Suratthani	8	9	shell
2070	<i>A. atricallosus atricallosus</i>	29/03/2001	Khao Kriap, Lamae, Chumporn	24	9	shell
2071	<i>A. atricallosus atricallosus</i>	29/03/2001	Sawee district, Chumporn	6	2	shell
2072	<i>A. atricallosus atricallosus</i>	07/01/2001	Tarn Mayom and Klong Phu waterfall, Koh Chang, Trat	4		shell, Pongrat D. coll.
2073	<i>A. atricallosus leucoxanthus</i>	26-27/07/200	Plieue National Park, Chanthaburi	7	3	shell
2074	<i>A. atricallosus leucoxanthus</i>	10/12/1998	Plieue National Park, Chanthaburi		1	shell
2075	<i>A. atricallosus leucoxanthus</i>	09/09/2000	Khao Soi Dao Wildlife Scantuary, Chanthaburi	2		shell, Thongchai, N. coll.
2076	<i>A. atricallosus leucoxanthus</i>	18/07/2000	Khao Soi Dao Wildlife Scantuary, Chanthaburi	2		shell
2077	<i>A. schomburgki</i>	12/09/2002	Phu Lom Klau, Naku, Karasin	9		shell
2078	<i>A. atricallosus atricallosus</i>	11/10/2002	Wat Tam Lord, Lansaka, Nakornsrithammarat	16	10	shell, 1 shell white callus
2079	<i>A. atricallosus atricallosus</i>	11/10/2002	Krung Ching, Khao Luang N. P., Nakornsrithammarat	3	1	shell
2080	<i>A. atricallosus atricallosus</i>	16/09/2003	Hot Spring, Ranong	18	1	shell
2081	<i>A. atricallosus atricallosus</i>	18/01/2003	Tam Nam Pud, Pang Nga	41	49	shell, parietal callus
2082	<i>A. atricallosus atricallosus</i>	18/02/2003	Aou Jae, Klong Morn, Klong Saeng, Suratthani	6	6	shell
2083	<i>A. inversus annamiticus</i>	19/08/1998	Koh Samaesan, Chonburi	27		shell
2084	<i>A. inversus annamiticus</i>	20/05/2001	Koh Leaom, Chonburi	316		shell
2085	<i>A. inversus annamiticus</i>	23/11/2001	Koh Elar, Chonburi	193		shell
2086	<i>A. inversus annamiticus</i>		Koh Samet, Rayong	12		shell
2087	<i>A. inversus annamiticus</i>	21/05/2001	Koh Rin, Chonburi	84		shell
2088	<i>A. inversus annamiticus</i>	25-26/10/2002	Koh Elar, Chonburi	40		shell, marked snails
2089	<i>A. inversus annamiticus</i>	22/05/2001	Koh Kharm, Chomburi	34		shell
2090	<i>A. atricallosus leucoxanthus</i>	09/02/1996	Plieue National Park, Chanthaburi	19	8	shell

2091	<i>A. atricallosus leucoxanthus</i>	11/04/1995		Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	6	4	shell, 1 laidlawi
2092	<i>A. atricallosus leucoxanthus</i>	04/07/1998		Plieu National Park, Chanthaburi	3	4	shell
2093	<i>A. atricallosus atricallosus</i>	03/06/1995		Ban Takun, Pomaelo plantation, Suratthani	4	7	shell
2094	<i>A. atricallosus atricallosus</i>	28/08/1995		Ban Takun, Pomaelo plantation, Suratthani	3	10	shell
2095	<i>A. atricallosus atricallosus</i>	18/02/1995		Ban Takun, Pomaelo plantation, Suratthani	10	11	shell
2096	<i>A. atricallosus leucoxanthus</i>	20/12/1993		Khao Soi Dao Wildlife Scantuary, Chanthaburi	18	6	shell
2097	<i>A. atricallosus atricallosus</i>	25/08/1994		Krung Ching, Khao Luang N. P., Nakornrithammarat	3	1	shell
2098	<i>A. atricallosus atricallosus</i>	08/01/1995			7	3	shell
2099	<i>A. atricallosus leucoxanthus</i>	24/10/1993		Trong Nong Waterfall, Plieu, Chanthaburi	3	4	shell
2100	<i>A. atricallosus leucoxanthus</i>	09/02/1995		Plieu National Park, Chanthaburi	38	8	shell, 1 laidlawi
2101	<i>A. atricallosus leucoxanthus</i>	29/10/1996		Plieu National Park, Chanthaburi	24	12	shell
2102	<i>A. atricallosus leucoxanthus</i>	26/04/1994		Plieu National Park, Chanthaburi	17	7	shell
2103	<i>A. atricallosus leucoxanthus</i>	26/04/1997		Plieu National Park, Chanthaburi	5	8	shell
2104	<i>A. atricallosus leucoxanthus</i>	15/08/1998		Plieu National Park, Chanthaburi	22	16	shell
2105	<i>A. atricallosus leucoxanthus</i>	04/04/1996		Plieu National Park, Chanthaburi	26	12	shell
2106	<i>A. atricallosus atricallosus</i>	12/03/1998		Wat Tam Sok Panturat, Suratthani	60	9	shell
2107	<i>A. atricallosus atricallosus</i>	19/01/1997		Khao Chong, Trang	3		shell, parietal callus
2108	<i>A. atricallosus atricallosus</i>	19-21/11/1997		Kaeng Kra Jarn National Park, Petchaburi	1	1	shell
2109	<i>A. atricallosus leucoxanthus</i>	19-21/11/1997		Plieu National Park, Chanthaburi	2		shell
2110	<i>A. atricallosus leucoxanthus</i>	19-21/11/1998		Plieu National Park, Chanthaburi	1	2	shell
2111	<i>A. atricallosus leucoxanthus</i>	28-3/07/1994		Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1	2	shell
2112	<i>A. atricallosus atricallosus</i>	24/03/1995		Khao Sok National Park, Suratthani		2	shell
2113	<i>A. atricallosus atricallosus</i>			Phuket	1		shell, white callus
2114	<i>A. atricallosus atricallosus</i>	08/01/1995		Ban Takun, Klong Seng Wildlife Reserve, Suratthani	1	2	shell
2115	<i>A. atricallosus leucoxanthus</i>	23/12/1995		Plieu National Park, Chanthaburi	5	1	shell
2116	<i>A. atricallosus leucoxanthus</i>	23/12/1995		Khao Soi Dao Wildlife Scantuary, Chanthaburi	2	1	shell
2117	<i>A. atricallosus leucoxanthus</i>	30/10/1996		Plieu National Park, Chanthaburi	6	2	shell
2118	<i>A. atricallosus atricallosus</i>	13/11/1996		Khao Chong, Trang	3		shell
2119	<i>A. atricallosus leucoxanthus</i>	29/10/1996		Plieu National Park, Chanthaburi	4	2	shell, laidlawi
2120	<i>A. atricallosus leucoxanthus</i>	16/08/1994		Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1	2	shell
2121	<i>A. atricallosus leucoxanthus</i>	24-25/06/1996		Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1		shell, laidlawi
2122	<i>A. atricallosus leucoxanthus</i>	01/04/1995		Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1	3	shell
2123	<i>A. atricallosus leucoxanthus</i>	00/05/1997		Plieu National Park, Chanthaburi	3	2	shell

2124	<i>A. atricallosus atricallosus</i>	00/06/1995	Ban Takun, Pomaeolo plantation, Suratthani	3	3	shell
2125	<i>A. atricallosus leucoxanthus</i>	02/05/1995	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao		1	shell
2126	<i>A. atricallosus atricallosus</i>	00/05/1996	Chumporn	4	1	shell
2127	<i>A. atricallosus leucoxanthus</i>	22/01/1995	Plieu National Park, Chanthaburi	2	1	shell
2128	<i>A. atricallosus atricallosus</i>	16/03/1995	Phung Chang Cave, Pang Nga		2	shell, white callus
2129	<i>A. atricallosus leucoxanthus</i>	28/08/1995	Ban Takun, Pomaeolo plantation, Suratthani	1	4	shell
2130	<i>A. atricallosus perakensis</i>	19/01/1997	Botanical Garden, SINGAPORE	1		shell
2131	<i>A. atricallosus atricallosus</i>	20/02/1995	Wat Suan Mok, Chaiya, Suratthani	2	1	shell
2132	<i>A. atricallosus atricallosus</i>	22/08/1997	Ban Takun, Pomaeolo plantation, Suratthani	2	2	shell
2133	<i>A. atricallosus perakensis</i>	29/06/1998	Upper Reservore, Nee Soon, SINGAPORE	1		shell
2134	<i>A. atricallosus atricallosus</i>	17/02/1995	Ban Takun, Suratthani	2	4	shell, Longlap S. coll.
2135	<i>A. atricallosus leucoxanthus</i>	24-25/06/1995	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	3	3	shell
2136	<i>A. atricallosus atricallosus</i>	08/01/1995		2	4	shell
2137	<i>A. inversus annamiticus</i>	26/10/1995	Na Muang Waterfall, Koh Samui, Suratthani	2		shell
2138	<i>A. inversus annamiticus</i>	07/11/1998	Na Muang Waterfall, Koh Samui, Suratthani	3		shell
2139	<i>A. inversus annamiticus</i>	25/08/1995	Hin Lad Waterfall, Koh Samui, Suratthani	4		shell
2140	<i>A. inversus annamiticus</i>	11-13/05/1995	Koh Tan, Koh Samui, Suratthani	4		shell
2141	<i>A. inversus annamiticus</i>	00/10/1997	Na Muang Waterfall, Koh Samui, Suratthani	3		shell
2142	<i>A. atricallosus atricallosus</i>	24/07/1961	Prachubkirkhan	2	1	shell
2143	<i>A. inversus annamiticus</i>	10/07/1998	Koh Samaesan, Chonburi	9		shell
2144	<i>A. inversus annamiticus</i>	00/00/1999	Koh Samaesan, Chonburi	183		shell
2145	<i>A. atricallosus leucoxanthus</i>	20/09/2001	Makok Waterfall, Pliueu, Chanthaburi	38	20	shell
2146	<i>A. atricallosus leucoxanthus</i>	10/06/2001	Khao Cha Ag Oone, Bor Thong, Chonburi	1	1	shell
2147	<i>A. inversus annamiticus</i>	02/08/2001	Koh Srichang, Chonuri	4		shell
2148	<i>A. atricallosus leucoxanthus</i>	1-2/07/2001	Khao Kiew, Chonburi	2	2	shell
2149	<i>A. inversus annamiticus</i>	21/05/2001	Koh Marr Vihai, Chonburi	31		shell
2150	<i>A. inversus annamiticus</i>	19/05/2001	Koh Jarn, Chonburi	31		shell
2151	<i>A. inversus annamiticus</i>	19/05/2002	Koh Jueng, Chonburi	17		shell
2152	<i>A. inversus annamiticus</i>	20/05/2001	Koh Pai, Chomburi	6		shell
2153	<i>A. atricallosus atricallosus</i>	15/01/2001	Ban Takun, Pomaeolo plantation, Suratthani	32	55	shell, with marked snails
2154	<i>A. atricallosus leucoxanthus</i>	09/08/1998	Plieu National Park, Chanthaburi	55	33	shell
2155	<i>A. atricallosus leucoxanthus</i>	09/02/1995	Plieu National Park, Chanthaburi	81	44	shell

2156	<i>A. inversus annamiticus</i>	07/11/2001	Na Muang Waterfall, Koh Samui, Suratthani	48	shell
2157	<i>A. atricallosus leucoxanthus</i>	00/11/1997	Plieu National Park, Chanthaburi	32	shell
2158	<i>A. givenchyi</i>	23/08/2002	Phu Lom Klau, Naku, Karasin	1	wet
2159	<i>A. atricallosus atricallosus</i>	11-13/07/2001	Ban Takun, Pomaelo plantation, Suratthani	3	2 wet
2160	<i>A. atricallosus atricallosus</i>	21/08/2002	Ban Takun, Pomaelo plantation, Suratthani	7	7 wet
2161	<i>A. atricallosus atricallosus</i>	28/03/2001	Ban Takun, Pomaelo plantation, Suratthani	9	14 wet
2162	<i>A. atricallosus leucoxanthus</i>	31/08/2002	Makok Waterfall, (Rambutan) Plieu, Chanthaburi	38	25 wet
2163	<i>A. inversus annamiticus</i>	21/05/2001	Koh Rin, Chonburi	4	wet
2164	<i>A. atricallosus atricallosus</i>	18/01/2003	Hot Spring, Ranong	7	wet
2165	<i>A. atricallosus leucoxanthus</i>	20/05/2000	Khao Takrup, Chacheongsao	18	1 wet
2166	<i>A. inversus annamiticus</i>	25/0/2002	Koh Samaesan, Chonburi	1	wet
2167	<i>A. inversus annamiticus</i>	26-27/08/2000	Koh Pai, Chomburi	12	wet
2168	<i>A. inversus annamiticus</i>	19/05/2001	Koh Jueng, Chonburi	22	wet
2169	<i>A. inversus annamiticus</i>	23/08/2002	Hin Lad Waterfall, Koh Samui, Suratthani	7	wet
2170	<i>A. inversus annamiticus</i>	20/05/2001	Koh Leaom, Chonburi	3	wet
2171	<i>A. inversus inversus</i>	18/02/2001	Botanical Garden, SINGAPORE	3	wet
2172	<i>A. inversus annamiticus</i>	18/11/2000	Koh Rin, Chonburi	7	wet
2173	<i>A. inversus annamiticus</i>	23-24/12/2000	Koh Kharm, Chomburi	1	wet
2174	<i>A. perversus</i>	28/06/1998	Bali, INDONESIA	1	wet, Yan C.S. coll.
2175	<i>A. inversus annamiticus</i>	19/11/2000	Koh Samaesan, Chonburi	3	wet
2176	<i>A. inversus annamiticus</i>	00/00/2001	Koh Pai, Chomburi	5	wet
2177	<i>A. perversus natunensis</i>		Natuna Island, INDONESIA	4	wet
2178	<i>A. inversus annamiticus</i>	20/05/2001	Koh Pai, Chomburi	19	wet
2179	<i>A. inversus annamiticus</i>	19/05/2001	Koh Jueng, Chonburi	8	wet
2180	<i>A. inversus annamiticus</i>	16/11/2000	Koh Jarn, Chonburi	31	wet
2181	<i>A. inversus annamiticus</i>	3-5/05/2002	Koh Elar, Chonburi	15	wet
2182	<i>A. inversus annamiticus</i>	19/05/2001	Koh Jarn, Chonburi	29	wet
2183	<i>A. inversus inversus</i>	03/12/2001	Botanical Garden, SINGAPORE	6	wet
2184	<i>A. inversus annamiticus</i>	04/08/2002	Koh Tan, Koh Samui, Suratthani	46	wet
2185	<i>A. inversus annamiticus</i>	17/11/2000	Koh Pai, Chomburi	29	wet
2186	<i>A. inversus annamiticus</i>	10-11/02/200	Na Muang Waterfall, Koh Samui, Suratthani	11	wet
2187	<i>A. inversus annamiticus</i>	23/11/2001	Koh Elar, Chonburi	10	wet
2188	<i>A. inversus annamiticus</i>	16/11/2000	Koh Jueng, Locality I, Chonburi	17	wet

2189	<i>A. inversus annamiticus</i>	16/11/2001	Koh Jueng, Locality II, Chonburi	28		wet
2190	<i>A. inversus annamiticus</i>	20/05/2001	Koh Leaom, Chonburi	28		wet
2191	<i>A. atricallosus atricallosus</i>	09/04/1999	Ban Takun, Pomaeo plantation, Suratthani	13	33	wet, j. with spiral band
2192	<i>A. atricallosus leucoxanthus</i>	00/10/1996	Plieu National Park, Chanthaburi	16	2	wet, laidlawi
2193	<i>A. atricallosus leucoxanthus</i>	00/05/1994	Plieu National Park, Chanthaburi	3	4	wet, laidlawi
2194	<i>A. atricallosus leucoxanthus</i>	10/02/1996	Makok Waterfall, Plieu, Chanthaburi	12	5	wet
2195	<i>A. atricallosus leucoxanthus</i>	00/05/1994	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	20	14	wet
2196	<i>A. atricallosus leucoxanthus</i>	12/03/1999	Plieu National Park, Chanthaburi	36	9	wet
2197	<i>A. atricallosus atricallosus</i>	24-26/09/2001	Ban Takun, Pomaeo plantation, Suratthani	12	16	wet
2198	<i>A. atricallosus perakensis</i>	19/02/2001	Upper Reservore, Nee Soon, SINGAPORE	10		wet
2199	<i>A. schomburgki</i>	25/12/2001	Naku, Karasin	3		wet
2200	<i>A. inversus annamiticus</i>	22/05/2001	Koh Kharm, Chomburi	2		wet
2201	<i>A. atricallosus leucoxanthus</i>	25/07/2000	Plieu National Park, Chanthaburi	2		wet
2202	<i>A. atricallosus leucoxanthus</i>	04/04/1996	Plieu National Park, Chanthaburi	9	7	shell
2203	<i>A. atricallosus leucoxanthus</i>	19-20/06/1997	Plieu National Park, Chanthaburi	50	31	shell
2204	<i>A. perversus</i>	30/01/1998	Ulu Watu, South of Bali, INDONESIA	18	32	shell, Yan C.S. coll.
2205	<i>A. perversus</i>	30/06/1998	Bantimurang, Southwest of Sulawesi, INDONESIA	24	26	shell
2206	<i>A. inversus annamiticus</i>	18/11/2000	Koh Rin, Chonburi	107		shell
2207	<i>A. martensi</i>			2	1	shell
2208	<i>A. metabletus</i>			1		shell
2209	<i>A. perversus</i>			4	3	shell
2210	<i>A. perversus</i>				2	shell
2211	<i>A. perversus</i>				1	shell
2212	<i>A. perversus</i>			2		shell
2213	<i>A. perversus</i>	30/06/1998	Bantimurang, Southwest of Sulawesi, INDONESIA	47	10	shell, Yan C.S. coll.
2214	<i>A. atricallosus leucoxanthus</i>	16/09/2003	Makharm District, Chanthaburi	5	1	wet, laidlawi
2215	<i>A. atricallosus classarius</i>	04/04/1999	Koh Tachai, Pang Nga		1	Shell, HOLOTYPE
2216	<i>A. inversus annamiticus</i>	20/12/2003	Chaia District, Suratthani	28		frozen
2217	<i>A. schomburgki</i>	20/10/1961	Sriracha District, Chonburi	1		shell
2218	<i>A. givenchy</i>		Phu Lom Klau, Naku, Karasin	4		shell
2219	<i>A. schomburgki</i>	28/10/2003	Tao Ngoy District, Karasin	20		shell
2220	<i>A. atricallosus atricallosus</i>	20/12/2003	Wat Tam Suwankuha, Pangnga	2	18	frozen
2221	<i>A. inversus annamiticus</i>	26/02/2003	Koh Leaom, Chonburi	13		shell

2222	<i>A. inversus annamiticus</i>	28/02/2003	Koh Jarn, Chonburi	1	shell
2223	<i>A. inversus annamiticus</i>	27/02/2003	Koh Kharm Noi, Chomburi	15	shell
2224	<i>A. inversus annamiticus</i>	27/02/2004	Koh Rin, Chonburi	15	shell
2225	<i>A. inversus annamiticus</i>	28/02/2003	Koh Jueng, Chonburi	9	shell
2226	<i>A. inversus annamiticus</i>	26/02/2003	Koh Pai, Chomburi	2	shell
2227	<i>A. atricallosus leucoxanthus</i>	25/09/2003	Khao Soi Dao Wildlife Sanctuary, Chanthaburi	2	5 shell
2228	<i>A. atricallosus leucoxanthus</i>	25/09/2003	Khao Takrup, Chacheongsao	12	shell, laidlawi
2229	<i>A. inversus annamiticus</i>	27/09/2003	Koh Elar, Chonburi	150	shell
2230	<i>A. atricallosus leucoxanthus</i>	25/09/2003	Makok Waterfall, Pliueu, Chanthaburi	22	18 shell
2231	<i>A. atricallosus leucoxanthus</i>	26/09/2003	Makharm District, Chanthaburi	147	23 shell
2232	<i>A. atricallosus classarius</i>	3-5/04/1999	Koh Tachai, Pang Nga	5	5 shell, PARATYPE
2233	<i>A. atricallosus classarius</i>	14/05/2000	Koh Tachai, Pang Nga	12	shell
2234	<i>A. inversus inversus</i>	01/06/1995	Botanical Garden, SINGAPORE	1	shell
2235	<i>A. inversus inversus</i>		Comdong is., Campung, South of Sumatra, INDONESIA	1	2 shell
2236	<i>A. inversus inversus</i>		Biha, Lampung, South of Sumatra, INDONESIA	3	shell
2237	<i>A. atricallosus perakensis</i>	23/08/2003	Pulau Tulai, Northwest of Pulau Tioman, MALAYSIA	1	2 wet
2238	<i>A. glaucolarynx</i>	09/12/1995	Huay Kok, Kaeng Kra Jarn, Petchaburi	1	1 shell
2239	<i>A. glaucolarynx</i>	22/10/1997	Tam Vore, Mae Sod, Tak	1	shell
2240	<i>A. glaucolarynx</i>	00/11/1994	Tubsathorn, Kanchanaburi	2	10 shell
2241	<i>A. glaucolarynx</i>	09/12/1995	Kaeng Kra Jarn National Park, Petchaburi	3	3 shell
2242	<i>A. glaucolarynx</i>	08/12/1994	Pa La Ue Waterfall, Petchaburi	1	1 shell
2243	<i>A. glaucolarynx</i>	20/10/1997	Lod Cave, Paye District, MAehongsorn	2	shell
2244	<i>A. glaucolarynx</i>	17/12/1995	Erawan Wterfall, Kanchanaburi	1	1 shell
2245	<i>A. glaucolarynx</i>	26/05/1996	Erawan Wterfall, Kanchanaburi	2	4 shell
2246	<i>A. glaucolarynx</i>		Prakayang Cave, Kra Buri, Ranong	2	shell
2247	<i>A. glaucolarynx</i>	12/09/1995	Pa Charoen Wterfall, Tak	1	shell
2248	<i>A. glaucolarynx</i>	00/05/1994	Tubsathorn, Kanchanaburi	14	12 shell
2249	<i>A. glaucolarynx</i>	14/08/1997	Tubsathorn, Kanchanaburi	5	8 shell
2250	<i>A. glaucolarynx</i>	10/09/1994	Tubsathorn, Kanchanaburi	1	1 shell
2251	<i>A. glaucolarynx</i>	21/11/1996	Tubsathorn, Kanchanaburi	16	8 shell
2252	<i>A. glaucolarynx</i>	09/06/1996	Tubsathorn, Kanchanaburi	10	8 shell
2253	<i>A. glaucolarynx</i>	26/05/1996	Erawan Wterfall, Kanchanaburi	1	1 shell
2254	<i>A. glaucolarynx</i>	00/02/1995	Thee Lor Zoo Waterfall, Umpang, Tak	1	3 shell

2255	<i>A. glaucolarynx</i>	00/05/1995	Tubsathorn, Kanchanaburi	2	2	shell
2256	<i>A. glaucolarynx</i>	07/09/1994	Sai Yok Noi Waterfall, Sai yok, Kanchanaburi		1	shell
2257	<i>A. glaucolarynx</i>	00/09/1997	Tubsathorn, Kanchanaburi	1	3	shell
2258	<i>A. glaucolarynx</i>	24/11/1997	Tubsathorn, Kanchanaburi	17	17	shell
2259	<i>A. glaucolarynx</i>	19/09/2003	Ban Krang, Kaeng Kra Jarn National Park, Petchaburi	6	4	shell
2260	<i>A. glaucolarynx</i>	05/01/2003	Prakayang Cave, Kra Buri, Ranong	18		shell
2261	<i>A. glaucolarynx</i>	21/11/2003	Pong Pu Ron, Thong Phapoom, Kanchanaburi	2	3	shell
2262	<i>A. glaucolarynx</i>	25/12/2002	Pong Pu Ron, Thong Phapoom, Kanchanaburi	4	2	shell
2263	<i>A. glaucolarynx</i>	26/12/2002	Pong Pu Ron, Thong Phapoom, Kanchanaburi	5	1	shell
2264	<i>A. glaucolarynx</i>	09/09/2001	Pong Pu Ron, Thong Phapoom, Kanchanaburi	6	4	shell
2265	<i>A. glaucolarynx</i>	02/12/2000	Nam Naou National Park, Petchaboon		3	shell
2266	<i>A. glaucolarynx</i>	09/12/1995	Kaeng Kra Jarn National Park, Petchaburi	1	2	shell
2267	<i>A. glaucolarynx</i>	5-7/05/2000	Hin Tok Station, Chong Khao Kad, Kanchanaburi	2	2	shell
2268	<i>A. glaucolarynx</i>	22-23/07/2000	Kanchanaburi	4	4	shell
2269	<i>A. glaucolarynx</i>	5-7/05/2000	Tubsathorn, Kanchanaburi	7	7	shell
2270	<i>A. glaucolarynx</i>	16/07/1995	Tubsathorn, Kanchanaburi	10	10	shell
2271	<i>A. givenchy</i>	26/11/2003	Patam National Park, Ubonratchathani	9		frozen
2272	<i>A. glaucolarynx</i>		Kanchanaburi		1	shell, Thonglongya
2273	<i>A. givenchy</i>	26/11/2003	Patam National Park, Ubonratchathani	4		shell
2274	<i>A. (S.) xiengensis</i>	28/05/1997	Chieng Dao Cave, Chieng Dao, Chieng Mai		14	shell
2275	<i>A. (S.) xiengensis</i>	18/10/1997	Chieng Dao Cave, Chieng Dao, Chieng Mai		16	shell
2276	<i>A. (S.) xiengensis</i>	18/03/2000	Chieng Dao Cave, Chieng Dao, Chieng Mai		7	shell
2277	<i>A. atricallosus classarius</i>	23/12/2003	Koh Tachai, Pang Nga		5	shell
2278	<i>A. atricallosus atricallosus</i>	26/12/2003	Wat Suan Mok, Chaiya, Suratthani	7	4	shell
2279	<i>A. atricallosus atricallosus</i>	22/12/2003	Phung Chang Cave, Pang Nga	25	17	shell
2280	<i>A. atricallosus atricallosus</i>	11/09/2003	Rambutan plantation near Pomaeo site, Suratthani	10	2	shell
2281	<i>A. atricallosus perakensis</i>	17/09/2002	Botanical Garden, SINGAPORE	7		shell
2282	<i>A. atricallosus perakensis</i>	14/03/2004	Upper Reservoir, Nee Soon, SINGAPORE	8	2	frozen
2283	<i>A. atricallosus atricallosus</i>	15/05/2003	Wat Tam Suwankuha, Pangnga		2	shell, M. Suchinda
2284	<i>A. atricallosus atricallosus</i>	09/04/1999	Takun Village, Suratthani	1		shell
2285	<i>A. atricallosus atricallosus</i>	14/05/1999	Takun Village, Suratthani		4	shell
2286	<i>A. atricallosus leucoxanthus</i>	10/06/1998	Plieu National Park, Chanthaburi		3	shell
2287	<i>A. atricallosus leucoxanthus</i>	27/07/1994	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	2		shell, laidlawi

2288	<i>A. atricallosus perakensis</i>	19/02/2001	Upper Reservoir, Nee Soon, SINGAPORE	1	shell
2289	<i>A. atricallosus leucoxanthus</i>	28/06/1994	Khao Ang Rue Nai Wildlife Sanctuary, Chacheongsao	1	shell, laidlawi
2290	<i>A. atricallosus leucoxanthus</i>	10/06/1998	Plieu National Park, Chanthaburi	4	shell
2291	<i>A. atricallosus atricallosus</i>		Ban Takun, Suratthani	7	shell
2292	<i>A. atricallosus atricallosus</i>	13/01/1997	Hala Bala National Park, Narathivat	2	shell
2293	<i>A. atricallosus atricallosus</i>	29/02/1997	Kanchanaburi (BURMA)	1	shell
2294	<i>A. atricallosus atricallosus</i>	08/06/1999	Prayathonzu, BURMA	1	shell
2295	<i>A. atricallosus leucoxanthus</i>	29/10/1996	Plieu National Park, Chanthaburi	10	shell, laidlawi
2296	<i>A. schomburgki</i>			1	wet, HOLOTYPE
2297	<i>A. schomburgki</i>	18/06/2004	Huai Kra Cher Reserviore, Nam Oun, Sakonnakhorn	1	frozen
2298	<i>A. givenchy</i>	18/06/2005	Phu Pha Yon National Park, Tao Ngoy, Sakonnakhorn	2	1 wet, 1 frozen
2299	<i>A. inversus</i>	07/03/2004	Pulau Kapas, Marang, Terengganu, MALAYSIA	3	8 shell
2300	<i>A. inversus</i>	07/03/2004	Pulau Kapas, Marang, Terengganu, MALAYSIA	5	17 wet, 6S+4D no shells
2301	<i>Camaena illustris</i>	02/07/1999	Pha Hom, LAOS	6	wet
2302	<i>Camaena illustris</i>	13/02/1999	Wang Weing, LAOS	3	wet
2303	<i>Camaena illustris</i>	13/02/2000	Wang Weing, LAOS	4	shell
2304	<i>Camaena hahni</i>	18-21/05/1999	Hulien, VIETNAM		3 wet, 2 snails dissected
2305	<i>Camaena cicatricosa</i>	15/05/1999	Kuk Phung, VIETNAM	5	shell
2306	<i>Camaena cicatricosa</i>	18/05/1999	Hulien, VIETNAM	19	shell
2307	<i>A. semitessellatus</i>	21/08/2004	Ban Krang, Kaeng Kra Jarn National Park, Petchaburi	1	frozen
2308	<i>Chloritis</i> sp.	24/08/2004	Khao Wong, Chanthaburi	4	frozen;succenid;eggs
2309	<i>A. atricallosus leucoxanthus</i>	22/08/2004	Trong Nong Waterfall, Plieu, Chanthaburi	10	frozen
2310	<i>Dyakia</i> sp.	23/08/2004	Khao Soi Dao Breeding Center, Chanthaburi	5	frozen
2311	<i>A. atricallosus leucoxanthus</i>	23/08/2004	Khao Soi Dao Breeding Center, Chanthaburi	3	1 frozen, laidlawi
2312	<i>A. (Syndromus) sp.</i>	24/08/2004	Wat Khao Sukim, Chanthaburi	1	frozen
2313	<i>A. atricallosus atricallosus</i>	19/08/2004	Khao Kriap, Lamae, Chumporn	1	frozen
2314	<i>A. (Syndromus) sp.</i>	19/08/2004	Khao Kriap, Lamae, Chumporn	4	frozen
2315	<i>A. (Syndromus) sp.</i>	23/08/2004	Khao Soi Dao Breeding Center, Chanthaburi	11	frozen
2316	<i>A. atricallosus classarius</i>		Koh Tachai, Pang Nga	2	frozen
2317	<i>A. (Syndromus) sp.</i>	22/08/2004	Makok Waterfall, Plieu, Chanthaburi	4	frozen
2318	<i>A. atricallosus leucoxanthus</i>	24/08/2004	Wat Khao Sukim, Chanthaburi	3	frozen
2319	<i>A. glaucolarynx</i>	24/01/2004	Ban Hui Hin Fon, Mae Sod, Tak	1	frozen
2320	<i>A. inversus inversus</i>	14/03/2004	Botanical Garden, SINGAPORE	1	frozen

2321	<i>A. atricallosus perakensis</i>	14/03/2004	Upper Reservoir, Nee Soon, SINGAPORE	1	1	frozen
2322	<i>A. (Syndromus) sp.</i>	22/08/2004	Trong Nong Waterfall, Plieu, Chanthaburi		16	frozen
2323	<i>A. inversus</i>	07/03/2004	Kapas Island, Marang, Terengganu, MALAYSIA		1	wet, HOLOTYPE
2324	<i>A. inversus</i>	07/03/2004	Kapas Island, Marang, Terengganu, MALAYSIA	6	3	wet, PARATYPE
2325	<i>Camaena illustris</i>	13/06/1999	Pahom, Wangwieng, LAOS	3		wet
2326	<i>Camaena illustris</i>	27/07/1999	Pahom, Wangwieng, LAOS	2		
2327	<i>A. inversus</i>	07/03/2004	Kapas Island, Marang, Terengganu, MALAYSIA	14	20	frozen
2328	<i>A. glaucolarynx</i>	11/11/2003	Pong Pu Ron, Thong Phapoom, Kanchanaburi		1	frozen
2329	<i>Camaena illustris</i>	11/09/1994	Phu Luang Wildlife Sanctuary, Loei	1		shell
2330	<i>Camaena sp.</i>		Phu Kiew Wildlife Sanctuary, Chaiyapoom	4		shell
2331	<i>Camaena illustris</i>		Phu Luang Wildlife Sanctuary, Loei	2		shell
2332	<i>A. givenchy</i>		Sakonnakorn	31		shell
2333	<i>A. atricallosus atricallosus</i>	24/07/2004	Wat Tam Lord, Lansaka, Nakornsrithammarat	22	10	shell
2334	<i>A. (Syndromus) sp.</i>	24/07/2004	Wat Tam Lord, Lansaka, Nakornsrithammarat		2	shell
2335	<i>A. schomburgki</i>		Sakonnakorn	10		shell
2336	<i>A. atricallosus atricallosus</i>	24/07/2004	Sa Morakot, Khao Prabangkarm, Krabi	2	4	shell, parietal callus
2337	<i>A. atricallosus atricallosus</i>	24/07/2004	Sa Morakot, Khao Prabangkarm, Krabi		1	shell, parietal callus
2338	<i>A. atricallosus atricallosus</i>	18/08/2004	Klong Phanom National Park, Suratthani	32	32	shell
2339	<i>A. atricallosus atricallosus</i>	16/08/2004	Tam Pung Chang, Pang Nga	67	42	shell
2340	<i>A. atricallosus atricallosus</i>	18/08/2004	Rambutan plantation near Pomaeo site, Suratthani	3		shell
2341	<i>A. atricallosus atricallosus</i>	17/08/2004	Khao Sok, Cabin South, Suratthani	4	5	shell
2342	<i>A. atricallosus atricallosus</i>	15/08/2004	Pomaeo Plantation, Suratthani	40	26	shell
2343	<i>A. (Syndromus) sp.</i>	24/08/2003	Wat Khao Sukim, Chanthaburi		25	shell
2344	<i>A. (Syndromus) sp.</i>	23/08/2004	Trong Nong Waterfall, Plieu, Chanthaburi		11	shell
2345	<i>A. atricallosus atricallosus</i>	23/08/2004	Trong Nong Waterfall, Plieu, Chanthaburi	3		shell
2346	<i>A. (Syndromus) sp.</i>	24/07/2004	Sa Morakot, Khao Prabangkarm, Krabi		6	shell
2347	<i>A. (Syndromus) sp.</i>	23/08/2004	Soi Dao Wildlife Breeding centre, Chanthaburi		4	shell, 1 Chloritis
2348	<i>A. (Syndromus) sp.</i>	24/08/2004	Wat Tam Klontip, Chanthaburi		7	shell, 1 Rhlostoma
2349	<i>A. atricallosus leucoxanthus</i>	24/08/2004	Khao Wong, Chanthaburi	7	5	shell
2350	<i>A. (Syndromus) sp.</i>	22/08/2004	Makok Waterfall, Plieu, Chanthaburi		1	shell
2351	<i>A. givenchy</i>			10		
2352	<i>Camaena illustris</i>	05/10/2004	Kun Korn Waterfall, Namkok National Park, Chiengrai	5		frozen
2353	<i>Camaena illustris</i>	05/10/2004	Kun Korn Waterfall, Namkok National Park, Chiengrai	1		wet, juvenile

2354	<i>Camaena illustris</i>	05/10/2004	Kun Korn Waterfall, Namkok National Park, Chiengrai	4	shell
2355	<i>Camaena illustris</i>	27/07/2999	Pha Hom, LAOS	4	shell
2356	<i>A. (S.) xiengensis</i>	28/08/1995	Pomaelo Plantation, Suratthani	6	shell
2357	<i>A. (S.) xiengensis</i>	19-21/07/2004	Plieu National Park, Chanthaburi	1	shell
2358	<i>A. (S.) xiengensis</i>	26/03/2004	Plieu National Park, Chanthaburi	15	shell
2359	<i>A. (S.) xiengensis</i>	02/06/1996	Wat Sanhkat Rattanakrir, Uthaithani	1	shell
2360	<i>A. (S.) xiengensis</i>	06/06/1997	Plieu National Park, Chanthaburi	4	shell
2361	<i>A. (S.) xiengensis</i>	19/07/1996	Mae Yom, Phare	2	shell
2362	<i>A. (S.) xiengensis</i>	19-21/07/1997	Plieu National Park, Chanthaburi	1	shell
2363	<i>A. (S.) xiengensis</i>	12/01/1998	Doi Phu Nang Nang National Park, Prayao	6	shell
2364	<i>A. (S.) xiengensis</i>	19-20/07/1997	Plieu National Park, Chanthaburi	9	shell
2365	<i>A. (S.) xiengensis</i>	14/09/1996	Mae Yom, Phare	2	shell
2366	<i>A. (S.) xiengensis</i>	20/10/1996	Kun Mae Yak, Doi Phu Nang National Park, Prayao	1	shell
2367	<i>A. (S.) xiengensis</i>	29/10/1996	Plieu National Park, Chanthaburi	35	shell
2368	<i>A. (S.) xiengensis</i>	19/07/1996	Mae Yom, Phare	4	shell
2369	<i>A. (S.) xiengensis</i>	30/10/1996	Plieu National Park, Chanthaburi	20	shell
2370	<i>A. (S.) xiengensis</i>	24/12/1993	Trong Nong Waterfall, Plieu, Chanthaburi	4	shell
2371	<i>A. (S.) xiengensis</i>	22/10/1995	Plieu National Park, Chanthaburi	2	shell
2372	<i>A. (S.) xiengensis</i>	23/12/1995	Plieu National Park, Chanthaburi	6	shell
2373	<i>A. (S.) xiengensis</i>	09/02/1996	Plieu National Park, Chanthaburi	7	shell
2374	<i>A. (S.) xiengensis</i>	15/08/1998	Plieu National Park, Chanthaburi	15	shell
2375	<i>A. (S.) semitesellatus</i>	14/10/1994	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1	shell
2376	<i>A. (S.) semitesellatus</i>	01/04/1995	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	4	shell
2377	<i>A. (S.) semitesellatus</i>	14/10/1994	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	3	shell
2378	<i>A. (S.) semitesellatus</i>	03/09/1995	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1	shell
2379	<i>A. (S.) semitesellatus</i>	09/05/1994	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	2	shell
2380	<i>A. (S.) semitesellatus</i>	24-25/06/1997	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1	shell
2381	<i>A. (S.) xiengensis</i>	18/12/1995	Koh Chang, Trat	1	shell
2382	<i>A. (S.) xiengensis</i>	24/12/1995	Plieu National Park, Chanthaburi	7	shell
2383	<i>A. (S.) xiengensis</i>	04/04/1996	Plieu National Park, Chanthaburi	2	shell
2384	<i>A. (S.) semitesellatus</i>	24-25/06/1995	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	2	shell
2385	<i>A. (S.) xiengensis</i>	00/11/1997	Makok Waterfall, Plieu, Chanthaburi	1	shell
2386	<i>A. (S.) principalis</i>	22-26/04/2000	Koh Kra, Nakhorn Srithammarat	19	shell

2387	<i>A. (S.) principalis</i>	22-26/04/2000	Koh Kra, Nakhorn Srithammarat		18	shell
2388	<i>A. (S.) porcellanus</i>		Kotabumi, Campung, South of Sumatra, INDONESIA		6	shell
2389	<i>A. (S.) xiengensis</i>	10/01/21998	Doi Phu Nang Nang National Park, Prayao		1	shell
2390	<i>A. (S.) semitessellatus</i>		Ban Pae, Rayong		1	shell
2391	<i>A. (S.) areolatus</i>	02/12/2000	Nam Naou National Park, Petchaboon		1	shell
2392	<i>A. (S.) xiengensis</i>	02/04/2001	Huy Ja Karn, Chieng Dao, Chieng Mai		2	shell
2393	<i>A. (S.) xiengensis</i>	17/04/2004	Kwae Noi Dam, Phitsanuloke		2	shell
2394	<i>A. (S.) principalis</i>	22-26/04/2004	Koh Kra, Nakhorn Srithammarat		3	shell
2395	<i>A. glaucolarynx</i>	07/05/2000	Tubsathorn, Kanchanaburi	2	14	shell
2396	<i>A. glaucolarynx</i>	00/05/1995	Tubsathorn, Kanchanaburi	1		shell
2397	<i>A. (S.) celebensis maculatus</i>		Tongelama North of Sulawesi, INDONESIA		3	shell
2398	<i>A. glaucolarynx</i>	08/11/1998	Tubsathorn, Kanchanaburi		6	shell
2399	<i>A. glaucolarynx</i>	09/02/1997	Tam Sing Nang Non, Umphang, Tak		1	shell
2400	<i>A. (S.) sp.</i>	10/12/1998	Pang Nga Bay, Pangnga (Limestone forest)		23	shell
2401	<i>A. (S.) principalis</i>	22-26/04/2000	Koh Kra, Nakhorn Srithammarat		10	shell
2402	<i>A. (S.) xiengensis</i>	03/10/1999	Huy Kon Kom, Maelaos, Chiengrai		16	shell
2403	<i>A. (S.) xiengensis</i>	15/05/2000	Piueu National Park, Chanthaburi		5	shell
2404	<i>A. (S.) xiengensis</i>	00/11/1998	Koh Chang, Trat		1	shell
2405	<i>A. (S.) semitessellatus</i>	00/06/1996	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao		1	shell
2406	<i>A. (S.) sp.</i>	02/01/1999	Khao Phanom Wang, Kanchanadit, Suratthani		1	shell
2407	<i>A. (S.) porcellanus</i>		Cibadak, West Java, INDONESIA		3	shell
2408	<i>A. (S.) sp.</i>	15/01/1998	Khao Poo Khao Ya National Park, Pattalung		14	shell
2409	<i>A. (S.) furcellatus</i>		Kalipare, East of Java, INDONESIA		3	shell
2410	<i>A. (S.) semitessellatus</i>	29/05/2994	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao		1	shell
2411	<i>A. (S.) xiengensis</i>	19/07/1996	Phalad, Mae Yom, Phare		4	shell
2412	<i>A. (S.) semitessellatus</i>	01/04/1995	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao		5	shell
2413	<i>A. (S.) xiengensis</i>	00/05/1997	Chieng Dao Cave, Chieng Dao, Chieng Mai		1	shell
2414	<i>A. (S.) xiengensis</i>	13/02/1999	Piueu National Park, Chanthaburi		4	shell
2415	<i>A. (S.) xiengensis</i>	29/03/2001	Wat Tam Khao Kriap, Chumporn		22	shell
2416	<i>A. (S.) xiengensis</i>	23/11/2001	Koh Elar, Chonburi		24	shell
2417	<i>A. (S.) sp.</i>	08/09/2001	Tam Sumano, Srinakharin, Pattalung		2	shell
2418	<i>A. (S.) semitessellatus</i>	16/10/2001	Koh Weing, Pra Tieu, Chumporn		6	shell
2419	<i>A. (S.) sp.</i>	14/04/2000	Khao Phanom Wang, Kanchanadit, Suratthani		4	shell

2420	<i>A. (S.) xiengensis</i>			Pomaeo Plantation, Suratthani			3	shell
2421	<i>A. (S.) xiengensis</i>	26/09/2001		Kirirathihom, Suratthani			5	shell
2422	<i>A. (S.) principalis</i>	21-27/04/2000		Koh Kra, Nakhorn Srihammarat			29	shell
2423	<i>A. (S.) sp.</i>	27/12/2000		Khao Auktaru, Pattalung			11	shell
2424	<i>A. (S.) semitessellatus</i>	29/12/2000		Khao Phanom Wang, Kanchanadit, Suratthani			7	shell
2425	<i>A. (S.) sp.</i>	12/10/2002		Khao Poo Khao Ya National Park, Pattalung			18	shell
2426	<i>A. (S.) semitessellatus</i>	8-9/07/2000		Khao Kiew, Chonburi			8	shell
2427	<i>A. (S.) xiengensis</i>	20-26/10/2000		Koh Kud, Trat			2	shell
2428	<i>A. (S.) xiengensis</i>	06/09/1975		Khao Kloy, Rayong			1	shell, K.P. collected
2429	<i>A. (S.) sp.</i>	12/10/2002		Khao Auktaru, Pattalung			24	shell
2430	<i>A. (S.) xiengensis</i>	18/06/1995		Klong Saeng, Suratthani			3	shell
2431	<i>A. (S.) xiengensis</i>			Pang Nga Bay, Pangnga (Limestone forest)			3	shell
2432	<i>A. (S.) xiengensis</i>	30/05/2001		Makok Waterfall, Plieu, Chanthaburi			5	shell
2433	<i>A. (S.) xiengensis</i>			Plieu National Park, Chanthaburi			6	shell
2434	<i>A. (S.) xiengensis</i>	20/09/2001		Makok Waterfall, Plieu, Chanthaburi			2	shell
2435	<i>A. (S.) xiengensis</i>	19/09/2001		Makok Waterfall, Plieu, Chanthaburi			18	shell
2436	<i>A. (S.) semitessellatus</i>	26-28/05/2001		Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao			2	shell
2437	<i>A. (S.) xiengensis</i>	04/09/1999		Wat Tam Chieng Dao, Chieng Dao, Chiengmai			4	shell
2438	<i>A. (S.) xiengensis</i>	22/09/2004		Ka Thing Waterfall, Chanthaburi			1	shell
2439	<i>A. (S.) sp.</i>	19/10/2004		Sa Morakot, Khao Prabangkarm, Krabi			1	shell
2440	<i>A. (S.) xiengensis</i>	05/10/2004		Huy Kon Kom, MaeLaos, Chiengrai			17	shell
2441	<i>A. atricallosus atricallosus</i>	19/10/2004	2	Sa Morakot, Khao Prabangkarm, Krabi			2	shell, parietal callus
2442	<i>A. atricallosus leucoxanthus</i>		4	Plieu National Park, Chanthaburi			3	shell
2443	<i>A. atricallosus</i>	17/10/2004	9	Bor Sean Waterfall, Tub Pud, Pangnga			15	shell
2444	<i>A. atricallosus</i>	17/10/2004	27	Tam Nam Pud, Pangnga			16	shell
2445	<i>A. (S.) semitessellatus</i>	20/05/2000		Khao Takrup, Chacheongsao			50	wet
2446	<i>A. (S.) semitessellatus</i>	27/05/2001		Khao Takrup, Chacheongsao			27	wet
2447	<i>A. (S.) semitessellatus</i>	03/06/2000		Khao Takrup, Chacheongsao			28	wet
2448	<i>A. (S.) xiengensis</i>	24/20/1996		Mae Yom, Phare			9	wet
2449	<i>A. (S.) xiengensis</i>	12-13/07/2001		Ban Takun, Suratthani			5	wet, with Chloritis
2450	<i>A. (S.) xiengensis</i>			Koh Elar, Chonburi			12	wet
2451	<i>A. (S.) sp.</i>	11/10/2002		Khao Auktaru, Pattalung			2	wet
2452	<i>A. (S.) sp.</i>	11/10/2003		Khao Poo Khao Ya National Park, Pattalung			2	wet

2453	<i>A. glaucolarynx</i>	19/09/2003	Ban Krang, Kaeng Kra Jarn National Park, Petchaburi	4	3	wet
2454	<i>A. (S.) xiengensis</i>	19/09/2001	Makok Waterfall, Plieou, Chanthaburi		5	wet
2455	<i>A. (S.) xiengensis</i>	01/09/2002	Makok Waterfall, Plieou, Chanthaburi		19	wet
2456	<i>A. (S.) xiengensis</i>	24-26/09/2001	Ban Takun, Suratthani		20	wet
2457	<i>A. (S.) xiengensis</i>	18/09/2001	Trong Nong Waterfall, Plieou, Chanthaburi		26	wet
2458	<i>A. (S.) xiengensis</i>	11/12/1998	Limestone hill, Pangnga		4	wet
2459	<i>Chloritis siamensis</i>	16/08/2002	Pong Pu Ron, Thong Phapoom, Kanchanaburi	34		wet
2460	<i>A. glaucolarynx</i>	20/07/2002	Pong Pu Ron, Thong Phapoom, Kanchanaburi		24	wet
2461	<i>Chloritis siamensis</i>	20/07/2003	Pong Pu Ron, Thong Phapoom, Kanchanaburi	18		wet, with Atopos
2462	<i>Chloritis siamensis</i>	5-7/05/2004	Sai Yok District, Kanchanaburi	10		wet
2463	<i>A. glaucolarynx</i>	20/07/2002	Huy Kayang, Thong Pha Phum, Kanchanaburi	8	6	wet
2464	<i>A. (S.) xiengensis</i>	10-16/10/1996	Mae Yom, Phare		3	wet
2465	<i>A. (S.) xiengensis</i>	05/04/2001	Wat Tam Chieng Dao, Chieng Dao, Chiengmai		2	wet
2466	<i>A. (S.) xiengensis</i>	26/09/2001	Khiritat Nikhom, Suratthani		3	wet
2467	<i>A. glaucolarynx</i>	09/09/2001	Pong Pu Ron, Thong Phapoom, Kanchanaburi	4		wet, with coll. 2468
2468	<i>Chloritis siamensis</i>	08/09/2001	Thong Pha Phum National Park, Kanchanaburi	11		wet, with coll. 2467
2469	<i>A. glaucolarynx</i>		Kaeng Kra Jarn National Park, Petchaburi	2		wet
2470	<i>A. (S.) xiengensis</i>	28/03/2001	Ban Takun, Suratthani		7	wet
2471	<i>A. (S.) xiengensis</i>	26/09/2001	Ban Takun, Suratthani		4	wet
2472	<i>A. flavus</i>		Luang Prabang, LAOS		3	wet
2473	<i>A. (S.) xiengensis</i>	3-5/06/2002	Koh Elar, Chonburi		12	wet
2474	<i>A. (S.) xiengensis</i>	15/05/2000	Ban Takun, Suratthani		27	wet
2475	<i>A. (S.) principalis</i>	21-27/04/2000	Koh Kra, Nakhorn Srihammarat		30	wet
2476	<i>A. glaucolarynx</i>	16/09/2002	Pong Pu Ron, Thong Phapoom, Kanchanaburi	5	8	wet
2477	<i>A. (S.) principalis</i>	21-27/04/2000	Koh Kra, Nakhorn Srihammarat		82	wet
2478	<i>A. (S.) principalis</i>	21-27/04/2001	Koh Kra, Nakhorn Srihammarat		43	wet, soft Holotype
2479	<i>A. atricallosus</i>	18/01/2003	Tam Nam Pud, Pangnga	3	1	wet
2480	<i>A. atricallosus</i>	15/01/2003	Botanical Garden, Trang		1	wet
2481	<i>A. schomburgki</i>	13/01/2003	Koh Kud, Trat	1		wet
2482	<i>A. glaucolarynx</i>	19/01/2002	Pra Kra Yang Cave, Ranong	1		wet
2483	<i>A. (S.) xiengensis</i>	3-5/05/2002	Koh Elar, Chonburi		2	wet
2484	<i>A. (S.) xiengensis</i>	25/09/2003	Makok Waterfall, Plieou, Chanthaburi		5	wet, with Dyakia
2485	<i>A. glaucolarynx</i>	27/09/2000	Hyu Ya, Tak	1	1	wet

2519	<i>A. (S.) semitesellatus</i>	11-12/08/2000	Khao Kiew, Chonburi		1	wet, broken shell
2520	<i>A. (S.) semitesellatus</i>	29/06/1994	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao		5	wet
2521	<i>Chloritis siamensis</i>	14/05/2000	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1		wet, with coll. 2522
2522	<i>Chloritis siamensis</i>	03/06/2000	Khao Ang Rue Nai Wildlife Scantuary, Chacheongsao	1		wet, with coll. 2521
2523	<i>A. (S.) xiengensis</i>	12/03/1999	Plieu National Park, Chanthaburi		5	wet
2524	<i>A. (S.) xiengensis</i>	14/05/1999	Plieu National Park, Chanthaburi		1	wet
2525	<i>A. (S.) xiengensis</i>	-/10/1996	Plieu National Park, Chanthaburi		3	wet
2526	<i>A. (S.) xiengensis</i>		Huy Kon Kom, Maelaos, Chiengrai		3	wet
2527	<i>A. (S.) xiengensis</i>	12/03/1999	Plieu National Park, Chanthaburi		6	wet
2528	<i>A. (S.) xiengensis</i>		Huy Kon Kom, Maelaos, Chiengrai		18	wet
2529	<i>A. schomburgki</i>	20-26/10/2000	Koh Kud, Trat	1		wet
2530	<i>A. inveesus annamiticus</i>	11/02/2000	Na Muang Waterfall, Koh Samui, Suratthani	16		wet
2531	<i>A. givenchyi</i>	12/09/2002	Phu Lom Klau, Naku, Karasin	3		wet



Biography

Mr. Chirasak Sutcharit was born on the 30th of August 1976. He graduated his Bachelor's Degree of Science from Department of Biology, Faculty of Science, Chulalongkorn University in 1998. In 1999, he was awarded the scholarship by the Royal Golden Jubilee (Ph.D. Program) of the Thailand Research Fund for his Ph.D. study in Biological Science Program at Faculty of Science Chulalongkorn University.



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