

Biogeography and Phylogenetics of the Planktonic Foraminifera

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Supplementary material

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Appendix 9.7 SSU ribosomal DNA sequence alignments

Appendix 9.7.1 DNA sequence alignment of the partial ~1000 bp terminal 3' region of the SSU rRNA gene in the foraminifera

A marker file is included to indicate the 407 unambiguously aligned nucleotide sites (marked m) used in phylogenetic analysis

	1	11	21	31	41	51	61	71	81	91	100
<i>G. siphonifera</i> Ia1	GCACCACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACACACTGA	GGATTGACAG	-----	ACAGT
<i>G. siphonifera</i> Ia2	GCACCACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACACACTGA	GGATTGACAG	-----	ACAGT
<i>G. siphonifera</i> IIa1	GCACCTACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACACACTGA	GGATTGACAG	-----	ACAAAT
<i>G. siphonifera</i> IIa2	GCACCTACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACACACTGA	GGATTGACAG	-----	ACAAAT
<i>G. siphonifera</i> IIa3	GCACCTACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACACACTGA	GGATTGACAG	-----	ACAAAT
<i>G. siphonifera</i> IIa	GCACCACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACACACTGA	GGATTGACAG	-----	ACAAAT
<i>G. siphonifera</i> IIb	GCACCTACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACACACTGA	GGATTGACAG	-----	ACAAAT
<i>G. calida</i>	GCACCACAAG	--A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGGAATCTT	ACCGGGTCCG	GACATACTGA	GGATTGACAG	-----	ACATC
<i>O. universa</i> I	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ATAGT
<i>O. universa</i> III	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACTAGATCAG	GACACTTTGA	GGATTGACAG	-----	ACAGT
<i>G. sacculifer</i>	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ACAGT
<i>G. ruber</i> pink	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ACAGT
<i>G. ruber</i> Ia	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ACAGT
<i>G. ruber</i> Ib1	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ATAGT
<i>G. ruber</i> Ib2	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ATAGT
<i>G. ruber</i> IIa	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ACTGT
<i>G. conglobatus</i>	GCACCACAAG	---C---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ACAGT
<i>G. rubescens</i>	GCACCACAAG	---T---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATCTTGA	GGATTGACAG	-----	ATTGT
<i>G. bulloides</i> Ia	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACGGT
<i>G. bulloides</i> Ib	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACATG
<i>G. bulloides</i> IIa	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACAGT
<i>G. bulloides</i> IIb	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACAGT
<i>G. bulloides</i> IIc	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACAGT
<i>G. bulloides</i> IID	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACAGT
<i>G. bulloides</i> IIe	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACGGT
<i>T. quinqueloba</i> Ia	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	TTTCT
<i>T. quinqueloba</i> Ib	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	TTTCT
<i>T. quinqueloba</i> IIa	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	TTTCT
<i>T. quinqueloba</i> IIb	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	TTTCT
<i>T. quinqueloba</i> IIC	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	TTTCT
<i>T. quinqueloba</i> IID	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	TTTCT
<i>G. faalconsensis</i>	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	ACGGT
<i>H. pelagica</i>	GCACCACAAG	---A---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAAGCTT	ATCTGGTCCG	GACACAGTGA	GGATTGACAG	-----	AGTGG
<i>G. menardii</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GATGACTGA	GGATTGACAG	-----	ACAGG
<i>G. unguolata</i>	GCACCACAAG	---AAT---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GATGACTGA	GGATTGACAG	-----	ACAAAC
<i>G. hirsuta</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAA
<i>G. scitula</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCGAT
<i>G. truncatulinoides</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	ACGGT
<i>N. pachyderma</i> I	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. pachyderma</i> II	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. pachyderma</i> III	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. pachyderma</i> IV	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. pachyderma</i> V	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. pachyderma</i> VI	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTAAAT
<i>N. pachyderma</i> VII	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. dutertrei</i> C	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. dutertrei</i> Ib	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>P. obliquiloculata</i> BR	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>P. obliquiloculata</i> AS	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>G. inflata</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>G. crassaformis</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>N. incompta</i> I	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GAAAT
<i>N. incompta</i> II	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GAAAT
<i>G. glutinata</i> Ia1	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTATT
<i>G. glutinata</i> Ia2	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTATT
<i>G. glutinata</i> Ia3	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTATT
<i>C. nitida</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTATT
<i>G. uvula</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>B. variabilis</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTAAAC
<i>S. globigerus</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTAAAC
<i>B. alata</i>	NNNNNNNNNNNN	---NNN---NNG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTAAAC
<i>G. vivans</i>	NNNNNNNNNNNN	---NNN---NNG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>C. porrectus</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>C. ovoidea</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>G. ovoidalis</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>E. aculeatum</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	ATATA
<i>E. vitrea</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>H. germanica</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	ACAAA
<i>P. mediterraneensis</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>S. fusiformis</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAA-
<i>V. fragilis</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>A. pseudocassius</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>Spiroplectammina</i> sp.	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAA
<i>Textularia</i> sp.	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GTATT
<i>S. limosum</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCTTT
<i>G. antarctica</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>D. aphelis</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACACACTGA	GGATTGACAG	-----	GCAAT
<i>P. peruviana</i>	GCACCACAAG	---AAC---GCG	TGGAGCATGT	GGCTTAATTT	GACTCAACGC	GGGAAATCTT	ACCAGGTCAG	GACATATTGA	GGATTGACAG	-----	GTGAT

M. secans GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCAGGTCCG GACATATTGA GGATTGACAG ----GTGAT
 Quinqueloculina sp. GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCAGGTCCA GACATATTGA GGATTGACAG ----GTGAT
 N. haylinosphaira GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GTGTT
 M. fusca GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GCGAT
 T. alba GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GCAAT
 A. mexicana GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GCAAT
 A. triangularis GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACATACTGA GGATTGACAG ----GTGCA
 A. rara GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACATACTGA GGATTGACAG ----GTGCA
 E. scabrum GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GCCAA
 N. venosus GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GTATT
 A. pseudocassiss GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----ATATA
 B. marginata GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GCAAT
 Trochammina sp. GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACACACTGA GGATTGACAG ----GCAAT
 Peneroplis sp. GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCGGGTCCG GACATATTGA GGATTGACAG ----GCCAT
 S. orbiculus GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACCC GGGAAATCTT ACCAGGTCCA GACATATTGA GGATTGACAG ----GCCAT
 Allogromia sp. GCACCACAAG --AAC--GCG TGGAGCATGT GGCCTTAATTT GACTCAACGC GGGAAATCTT ACCAGGTCCG AACACCTGA GGATTGACAG ----GTITT
 407 BP MARKER mmmmmmmmm -----mmmm mmmmmmmmm mmmmmmmmm mmmmmmmmm mmmmmmmmm mmmmmmmmm mmmmmmmmm mmmmmmmmm

	101	111	121	131	141	151	161	171	181	191	200	
G. siphonifera Ia1	T--GTC	TTT	CCCTCC	C---		TTT	GGG	GTGGGA				
G. siphonifera Ia2	T--GTC	TTT	CCCTCC	C---		TTT	GGG	GTGGGA				
G. siphonifera Ila1	T--GTC	TTT	TTGTCAAAT	TA---								
G. siphonifera Ila2	T--GTC	TTT	TTGTCAAAT	TT---								
G. siphonifera Ila3	T--GTC	TTT	TGGTCAAAT	TT---								
G. siphonifera Ila	T--GTC	TTT	TTGTCAAAT	TT---								
G. siphonifera Iib	T--GTC	TTT	TTGGC-TTA									
G. calida	ACCACGTCTT	TTTGT	CCTTA	AAA								
O. universa I	T-----			ATACCAAAC-	ACGAGCTCGA	ACCAGAGTTC	---	GTATATG	AT-			
O. universa III	T-----			ATACCGAACT	ACGAAATAAG	AATGGTCCAG	GGT-					
G. sacculifer	T-----			AACCAAACG	CAGC-			AGCTAG-T	T-			
G. ruber pink	T-----	ACCATG	---	CCCTTCGA	A---			AGGAGTC	AG-			
G. ruber Ia	T-----	A	TACATG	---	CCCT--ACA	AGT-		AGGAGTC	AG-			
G. ruber Ib1	T-----	A	TACATG	---	CCCT--ACA	AGCAAGT-		AGGAGTC	AG-			
G. ruber Ib2	T-----	A	TACATG	---	CCCT--ACA	AGCAAGT-		AGGAGTC	AG-			
G. ruber Ila	T-----		AAC T GCAAC	ACATG	CTGTCT	AA						
G. conglobatus	T-----				AAC TT G C C C T	ACCTATAGGA	GCTAG-					
G. rubescens	T-----	AACGTGCAC	CAAAGGTGTT	GA								
G. bulloides Ia	C-----	TTATTGG	TGGACTCT-A	AGACGCTC-								
G. bulloides Ib	T-----	CGTATTGG	TGGACTTT-A	TGA---	CAA	A						
G. bulloides Ila	T-----	TCAGGAG	TGGTCTT-G	GTA	AAA-	CAA						
G. bulloides Iib	T-----	AG	A--CAGAAG	TGGTTA--G	GTA	AA--CAA						
G. bulloides IIc	T-----	GGCAGGAG	TGGTCTT-G	GTA	AAAA	CAA						
G. bulloides IID	T-----	AG	A--CAGAAG	TGAGTTTGT	GTA	AA--CAA						
G. bulloides Iie	T-----	TTATTAG	TGGTTTCT-A	AAACACA-								
T. quinqueloba Ia	G-----	GT	ACAATGTGCG	GCTTGTGTT	TACAAC TACG	AATGATTCGA	ATTTGTGTAA	ATATGACTTG	GCCGGCCCTC	GGGTGCTTG	GATCGG-CGT	
T. quinqueloba Ib	G-----	GT	ACAATGTGCG	GCTTGTGTT	TACAAC TACG	AATGACTCGA	TTTGTGTAA	ATATGACTTG	ACCGGCCCTC	GGGTGCTTG	GATGGTCTGT	
T. quinqueloba Ila	G-----	TA	TAGTTCGTAT	ATGAGAGGTC	TTTGTAGTCA	ACGTGTAGGT	AGTTGTA					
T. quinqueloba Iib	G-----	TA	TAGTTCGTAT	ATGGGTGGTA	TTTGTAGTCA	ACGTGTAGGT	AGTTGTA					
T. quinqueloba Iic	G-----	TA	TAGTTCGTAT	ATGGGTGGTA	TTTGTAGTCA	ACGTGTAGGT	AGTTGTA					
T. quinqueloba IID	G-----	TA	TAGTTCGTAT	ATGGGTGGTA	TTTGTAGTCA	ACGTGTAGGT	AGTTGTA					
G. falconensis	T-----		GACG	CCCTTCGGGG	CAAA							
H. pelagica	C-----	TT	AGGCCACAGA	CACGAAATG	GTTTTTTTT	ATACCCCCA	TTTGC-					
G. menardi	C-----	CA	TAGAACAGCT	GTATGTATAC	AATTTGTTAT	ATTTAAAT-A	ATACAATTAG	GA-GCGCCG	TTCTGCGTC-	GT-		
G. unguata	C-----	AT	AGACAGAA	CACATACGAT	TGTATTCCTA	ACTGAAATAG	ATTAGTGTG	GTCTAAGGAT				
G. hirsuta	TAAACGAACT	AATTAGAATC	TTTCTCATTT	TAAATAGTA	TAGATTTCTA	TTT						
G. scitula	A-----	TTATTTT	C	T-TAATAAGA	TATTCGT-							
G. truncatulinoides	T-----	AT	TGACTTATAC	TCCGTTAATG	GCTTTAAGCT	GTTAAACGTT	TAACACCTT-					
N. pachyderma I	A-----	TC	TCA--TGTTT	CAATTAACC--	----	GTT	AAT--	GGTTATTTA	TTTTAATAGCC	ATCGGTTA-T	TAAG--CATC	GA--
N. pachyderma II	A-----	TC	TCA--TGTTT	ATTAACCCG	----	GTT	ATTACATTTT	GTTTAA	----	TCGGTTA-T	TAAG--CATC	GA--
N. pachyderma III	A-----	TC	TCA--TGTTT	ATTAACCCG	----	GTT	ATTACATTTT	GTTTAA	----	TCGGTTA-T	TAAG--CATC	GA--
N. pachyderma IV	A-----	TC	TCA--TGTTT	ATTAACCCG	----	GTT	ATTAACCTTAC	CGC				
N. pachyderma V	A-----	TC	TCA--TGTTT	ATTAACCCG	----	GTT	ATAATAGTTA	TTTTATTAG				
N. pachyderma VI	A-----	TC	TCA--TGTTT	ATTAACCCG	----	GTT	ATTGTGTTAA					
N. pachyderma VII	A-----	TC	TCA--TGTTT	ATTAACCCG	----	GTT	ATTAAACGTAT	CGTGTATTT	AATA-			
N. dutertrei_C	A-----	TC	TAAA									
N. dutertrei_Ib	A-----	TC	TAAA									
P. obliquiloculata_BR	A-----	TC	TATTA AAAA	A-								
P. obliquiloculata_AS	A-----	TC	TATTA AAAA	A-								
G. inflata	A-----	TA	TTAGCATAAA	GATTCTGT	TAGCGCTAA-							
G. crassaformis	A-----	TA	TTAGCATAAA	GACTCTGT	TAGCGCTAA-							
N. incompta I	A-----	TC	GTC--TTTTG	AATCTTTAA	GGACATGTCG	TTTTTAATGA	CA---	TCTT	TTAGATGGAT	GATTC		
N. incompta II	A-----	TC	GTC--TTTTG	AAATCTTTAA	GGACATGTCG	TTTTTAATGA	CA---	TCTT	TTAGATGGAT	GATTC		
G. glutinata Ia1	A-----	TA	TAGCGCGCTT	GCGGCTCTA-								
G. glutinata Ia2	A-----	TA	TAGCATGTAC	TTCCGTTGCT	GTCTA							
G. glutinata Ia3	A-----	TA	TAGCAACTTT	CGGTTGCTT	A							
C. niida	A-----	TA	TGATGCTCT	TCCGAGCTTT	TA-							
G. uvula	A-----	TA	TGTGAC-TCT	TC-GGA-GTT	TG-CA							
B. variabilis	A-----	TC	--TCATACAT	--CGCTTCGG	CATG-T--G	TG--						
S. globigerus	A-----	TC	--TCATACAT	--CGCTTCGG	CATG-T--G	TG--						
B. alata	A-----	TC	TCTTATGGCA	TTTCGGTGCT	GTACAG							
G. vivans	A-----	TT	AGCTACACTC	TCCGAGTGCA	GCT-							
C. porrectus	A-----	TT	ATAAATTTTT	AATGGAATA	AATTTTTATT	AATTTTTTTT	TTTTATTTTT	TAT-				
C. ovoidea	ATCAACTTTTT	TACTTTTTTT	ATCATCTCTC	ATTGATGATT	AAGAGATGT	ATGAGAGTT-						
G. opercularis	A-----	TC	CATATATTTT	ATATATG-								
E. aculeatum	C-----	GT	ATACTATATG	TATA								
E. vitrea	A-----	TT	AATTTCTGCA	GCTTCGGCTC	AGTTATT-							
H. germanica	T-----	AC	ACATACT--	ACGGTGTGT-								
P. mediterraneensis	A-----	TC	TGAGTTGACA	TCTCTGTATG	TTTCTCA-							
S. fusiformis	T-----	AT	TAATTTCTGG	CCTCCGGTCC	GATTTT-							
V. fragilis	ATTAATATTTT	CACAAGTACT	TCCGATCTCT	TGTCGATTTA	TT-							
A. pseudocassiss	A-----	TT	AAAATGCTTT	TCTTCCGGTCC	AAGAGAATAT	TTT-						
Spiroplectammina sp.	T-----	AT	TAAAAGAAAA	ATTTTTAATTT	TC							
Textularia sp.	A-----	TT	ATATTGCAT	CGATTTAATC	GATTTGTCAA	TAT-						
S. limosum	T-----	TA	ACACCTTTTT	TATTTTTTTA	ATCCTATGTT	T						
G. antarctica	ATTTATAAAGT	AAATCTTTGT	GTCATCTCGTG	GCTCAACGCA	TTTTTTTTAT-							
D. aphelis	A-----	TT	AAATCGTTTT	GCTTCCGGTAA	CATCGTATT-							
P. peruviana	CGCATAATAG	AATTTATTTT	ATTA-									

M. secans
 Quinqueloculina sp.
 N. haylinosphaira
 M. fusca
 T. alba
 A. mexicana
 A. triangularis
 A. rara
 E. scabrum
 N. venosus
 A. pseudocassisi
 B. marginata
 Trochammina sp.
 Peneroplis sp.
 S. orbiculus
 Allogromia sp.
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201 211 221 231 241 251 261 271 281 291 300

G. siphonifera Ia1
 G. siphonifera Ia2
 G. siphonifera IIa1
 G. siphonifera IIa2
 G. siphonifera IIa3
 G. siphonifera IIa
 G. siphonifera IIB
 G. calida
 O. univversa I
 O. univversa III
 G. sacculifer
 G. ruber pink
 G. ruber Ia
 G. ruber Ib1
 G. ruber Ib2
 G. ruber IIa
 G. conglobatus
 G. rubescens
 G. bulloides Ia
 G. bulloides Ib
 G. bulloides IIa
 G. bulloides IIB
 G. bulloides IIc
 G. bulloides IID
 G. bulloides IIE
 T. quinqueloba Ia
 T. quinqueloba Ib
 T. quinqueloba IIa
 T. quinqueloba IIB
 T. quinqueloba IIc
 T. quinqueloba IID
 G. falconensis
 H. pelagica
 G. menardii
 G. ungulata
 G. hirsuta
 G. scitula
 G. truncatulinoidea
 N. pachyderma I
 N. pachyderma II
 N. pachyderma III
 N. pachyderma IV
 N. pachyderma V
 N. pachyderma VI
 N. pachyderma VII
 N. dutertrei_C
 N. dutertrei_Ib
 P. obliquiloculata_BR
 P. obliquiloculata_AS
 G. inflata
 G. crassaformis
 N. incompta I
 N. incompta II
 G. glutinata Ia1
 G. glutinata Ia2
 G. glutinata Ia3
 C. niitida
 G. uvula
 B. variabilis
 S. globigerus
 B. alata
 G. vivans
 C. porrectus
 C. ovoidea
 G. opercularis
 E. aculeatum
 E. vitrea
 H. germanica
 P. mediterraneensis
 S. fusiformis
 V. fragilis
 A. pseudocassisi
 Spiroplectammina sp.
 Textularia sp.
 S. limosum
 G. antarctica
 D. aphelis
 P. peruviana

Appendix 9.7.1

M. secans
Quinqueloculina sp.
N. haylinosphaera
M. fusca
T. alba
A. mexicana
A. triangularis
A. rara
E. scabrum
N. venosus
A. pseudocassisi
B. marginata
Trochammina sp.
Peneroplis sp.
S. orbiculatus
Allogromia sp.
407 BP MARKER

Table with 16 columns representing nucleotide positions (301, 311, 321, 331, 341, 351, 361, 371, 381, 391, 400) and rows listing various species (G. siphonifera, G. siphonifera Ia1, etc.) with their corresponding nucleotide sequences.

<i>M. secans</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-AGTAAAA	AATATATAAA	TAAATTTTT	ATATATTTTG	ACGTTCTGCC	TTATTTTAA
<i>Quinqueloculina sp.</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ATATTAT	ATTAAATAAT	ATTATTCAAT	ATAAATATTAT	TAGCGTTCTG	CCTTTTATAG
<i>N. haylinosphaira</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ACATAATG	GCTCGTACGT	GTTTATATGCT	AAATACTGTGA	CCTCATTTGT	CTTTTACAGA
<i>M. fusca</i>	TAGTTAGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-TTATGAA	TAAATACGAG	TTTGTATTTA	GTATTCTTTT	ATAAGTTTTAC	TATTACTTTC
<i>T. alba</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-GCAATGG	ACTTAATAAC	AAGTTCGGCT	CTTCTTTTCT	TTGTGGAGAT	TTTGCCCTGT
<i>A. mexicana</i>	TAGTTNATGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-AATAAGA	ACTCTAATAA	AATCGTATGA	ATTGTTGACT	TTGTATTGAC	CCCCATCTCT
<i>A. triangularis</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ATAATAG	CTCCTTATAG	ACTTTTCTAT	TGATATCAGC	CTTAATACCT	GAGAATGATC
<i>A. rara</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ATAATAG	CTCCAATAAG	ACTTTTCTAT	TGATATCAGC	CTTAWACTT	TGAAATTTAT
<i>E. scabrum</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ACTAAGG	GCTTTTATAA	ATTTAAATGCG	CAGTGTGTGT	TTGTATTTTT	ATACCTCACAC
<i>N. venosus</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ACTAAGG	GCTTATAAAT	TTACGATATG	TGCGGCACCT	TGACCCCTCT	TAAATGAGCG
<i>A. pseudocassisi</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ATAATA	GAGACTTAGT	ATACGCTGCG	ATTT-----C	GCGTGGTAGT	GACCCCTGTG
<i>B. marginata</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ACCAAGG	GCTTATAAAT	TTACGTTGTT	TGCGGCACCT	TGACCCCTCT	TTTTTTAAAG
<i>Trochammina sp.</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ACTAAGG	GCTTATAAAT	TACGTGTGTT	GCATGTACTT	TGACCCCT-A	ATCTGAATAA
<i>Peneroplus sp.</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-AGATATA	TAAATTATATA	ATATATTATA	TAGTAATATA	TAAATTAATA	TTGTCTGCC
<i>S. orbiculus</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-AGTAAA	AAAAATATATG	ATATATTATA	ATATTTAGTT	CTGCCCTTAT	GGATTTAAAG
<i>Allogromia sp.</i>	TAGTTCGTGG	AGTGATCTGT	CTGCCTTAATT	GCGT-----T	TC-ACTATAA	TGAGTATATA	TTGAATACTT	TGTTTGCACA	TAAAGTTGCT	GCATTGTTT
407 BP MARKER	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmm-----						

	401	411	421	431	441	451	461	471	481	491	500
<i>G. siphonifera Ia1</i>	CATTATATGA	TATGCACATT	TGTGTATTTG	ATTATAAATT	GTCTGGAA--G	TCTGG-CTCG	ATTTTTTT--				
<i>G. siphonifera Ia2</i>	CATTATATGA	TATGCACATT	TGTGTATTTG	ATTATAAATT	GTCTGGAA--G	TCTGG-CTCG	ATTTTTTT--				
<i>G. siphonifera IIa1</i>	AGACAATCAT	ATCTTTGAGC	GTCT-----	-GGAATCTAC	TCTATTT--						
<i>G. siphonifera IIa2</i>	AGACAATCAT	ATCTTTGAGC	GTCT-----	-GGAATCTAC	TCTATTT--						
<i>G. siphonifera IIa3</i>	AGACAATCAT	ATCTTTGAGC	GTCT-----	-GGAATCTAC	TCTATTT--						
<i>G. siphonifera IIB</i>	AGACAATTA	TCTTTGTGTT	TTG-AACGTT	TGGAAATGAC	TCTATTT--						
<i>G. calida</i>	CAAGCACTTC	ATTTATGATT	TGT-TTGGAA	TACGACTCTT	TC-----						
<i>O. universa I</i>	AAAATTAAAC	TTATGTTTAC	AATAGTCCA	ACTCGTCCA	GCTC-----						
<i>O. universa III</i>	TGATTTCCAG	AGTAGTCCAA	CTCGGTTCCG	CAGG-----							
<i>G. sacculifer</i>	TACACCCTTAC	AAAGGAATGG	CTGATGAGAA	ACAACCTCGAT	CCGCTCAGC-						
<i>G. ruber pink</i>	ATGACTGTGA	ACTGTCATGT	CTTCGGATGT	GCGACTATCG	GTCTAGGATC	GCATCTCA--					
<i>G. ruber Ia</i>	ATGACTGTGA	ACTGTCATGT	CTTCGGATGT	GCGACTATCG	GTCTAGGATC	ACATGACTTT-					
<i>G. ruber Ib1</i>	ATGACTGTGA	ACTGTCATGT	CTTCGGATGT	ACGACTATCG	GTCTAGGATC	ACATGACTTT-					
<i>G. ruber Ib2</i>	ATGACTGTGA	ACTGTCATGT	CTTCGGATGT	ACGACTATCG	GTCTAGGATC	ACATGACTTT-					
<i>G. ruber IIa</i>	GTGTGAACTA	TAACTCTTTT	GACTTATGAC	CATCACTCTA	GACGTTTTATG	TTTTGGTGTG	G-----				
<i>G. conglobatus</i>	TGAACCTGAT	CTCTTCGGAT	ATGCGACTAT	CACCTCTTAGG	CAACTATGAT	CTGCTTGTAA					
<i>G. rubescens</i>	TTTATGGTTG	ATCCGGGCTG	AACCBGCTGT	GCTTTAGGAC	ATGCCGACCA	TCGTCAGTA	CATTACTCTT	ATAGTTGTTT	ATTTG--		
<i>G. bulloides Ia</i>	GCTCACGTTA	-----GT	AGGCTAGAG								
<i>G. bulloides Ib</i>	TTCCCAA--	-----GTG	AGGCTAGAG								
<i>G. bulloides IIa</i>	TGGCCGAGGC	TCT--GTG	AGGATAGAC								
<i>G. bulloides IIB</i>	TGGCCGAGGC	TCT--GTG	AGGATAGAC								
<i>G. bulloides IIc</i>	TGGCCGAGGC	TCT--GTG	AGGATAGAC								
<i>G. bulloides IID</i>	TGGCCGAGGC	TCT--GTG	AGGATAGAC								
<i>G. bulloides IIE</i>	TGGCCGAGGC	TCT--GTG	AGGATAGAC								
<i>T. quinqueloba Ia</i>	TACAGTCAGA	CCCGGTTGGG	CATGTACGGA	AAGGTACAT	ATAAAGTAGC	GTCTGCTAAA	GATATGAATA				
<i>T. quinqueloba Ib</i>	CTTTTTCGA	GAATG--									
<i>T. quinqueloba IIa</i>	GAATATTGTT	GTCTGCGAGT	CATAATTGCC	ACTACGTCTG	GTCTTTGGG	--CAGAAATAG	TCTTTATGCT	TGTTCT--	--ACACAAA	TTCTCCACAA	
<i>T. quinqueloba IIB</i>	GAATATTGTT	GTCTGCGAGT	CATAATTGCC	ACTACGTCTG	GTCTTTGGG	--CAGAAATAG	TGTTGTATAT	TTTGTCTTGT	CAACACAAA	TTCTTCACAA	
<i>T. quinqueloba IIc</i>	GAATATTGTT	GTCTGCGAGT	CATAATTGCC	ACTACGTCTG	GTCTTTGGG	--CAGAAATAG	TGTTGTATAT	TTTGTCTTGT	CAACACAAA	TTCTTCACAA	
<i>T. quinqueloba IID</i>	GAATATTGTT	GTCTGCGAGT	CATAATTGCC	ACTACGTCTG	GTCTTTGGG	--CAGAAATAG	TGTTGTATAT	TTTGTCTTGT	CAACACAAA	TTCTTCACAA	
<i>G. falconensis</i>											
<i>H. pelagica</i>	AAITTTCCGC	ACGGGCCACC	GTGGGAAACA	AGTCCATTTG	AGCGAT----						
<i>G. menardii</i>	TCATGGAAAG	CAGCCACGCT	TGTTTC-ATA	-----CGTGCA	C-TG-----						
<i>G. unguolata</i>	ACAGTTTCTG	TTGTGCGAAC	CTGTGCTGCC	TCTGAGTTAT	TGTCAATTTG						
<i>G. hirsuta</i>	CTGATAGACC	CCTCGTAAAG				GC	CGTGTCTAT	TGCGTTA-AT	ATATGTAACA	AGTGACACAT	ACTG--
<i>G. scitula</i>	TCTTTGACCC	CCTTTTATT	AAGA----			GG	AGTGTCTAAT	GTCTTATATT	CCTTTATATA	AGATAGTGTG	GATGCTG--
<i>G. truncatulinoides</i>	CTATTTGTAG	TAAAGGCTCA	TACTA----								
<i>N. pachyderma I</i>	CCCTTA-ACT	CCAATTTCT				AAGCG	CGCGTCTTTA	TTTTAA--AG	AGTTTT--AAG	GCATTTGCCG	ATGCTG--
<i>N. pachyderma II</i>	CCCTTA-TTC	ACTGCTTT--	-----AA	TTAGTCTGTT	T-----AAGCG	CGCGTCTTTA	TTTTAA--WG	AGTTTT--AAG	ACACTGCCG	ATGCTG--	
<i>N. pachyderma III</i>	CCCTTA-ACC	CCAATTTCCG	TTTAATTAGC	GTTATTGTTT	TAAAT--AAGCG	CGCGTCTTTA	TTTTAA--AG	AGTTTT--AAG	GACTGTGCCG	ATGCTG--	
<i>N. pachyderma IV</i>	CCCTTA-ACT	CCAATTTCT	TATTGTTT			AAGCG	CGTGTCTTTA	TTTTAA--AG	AGTTTT--AAG	ACACTGCCG	ATGCTG--
<i>N. pachyderma V</i>	CCCTTA-TTC	AAG-----C	TTTATTAG			AAGCG	CGCGTCTTTA	TTTTAA--CG	AGTTTT--AAG	ACACTGCCG	ATGCTG--
<i>N. pachyderma VI</i>	CCCTTA-TTC	ACTGCTTTAA	TTAGT-----	TTTGTT	T-----AAGCG	CGCGTCTTTA	TTTTAA--CG	AGTTTT--AAG	ACACTGCCG	ATGCTG--	
<i>N. pachyderma VII</i>	CCCTTA-ACC	GAGTAAATC	GAGTT-----	TTTGTT	T-----AAGCG	CGCGTCTTTA	TTTTAA--AG	AGTTTT--AAG	ACACTGCCG	ATGCTG--	
<i>N. dutertrei_C</i>	CCCTGTCTTT	CGAT-----				AAGCG	CGTGTCTTTT	TTTTAA--AG	AGTTTT--AA	GCATTTGCCG	ATGCTG--
<i>N. dutertrei_Ib</i>	CCCTGTCTTT	CGAT-----				AAGCG	CGTGTCTTTT	TTTTAA--AG	AGTTTT--AA	GCATTTGCCG	ATGCTG--
<i>P. obliquiloculata_BR</i>	CCCTT-ATT	CTTAT----				AAGCG	CGTGTCTTTT	TTTTAA--ATG	GGTTTT--AA	GCATTTGCCG	ATGCTG--
<i>P. obliquiloculata_AS</i>	CCCTT-ATT	-TAA-----				AAGCG	CGTGTCTTTT	TTTTAA--ATG	GGTTTT--AA	GCATTTGCCG	ATGCTG--
<i>G. inflata</i>	CCCTAAATAGG	CTTAACTGTT	TCT-----			AGCG	CGTGTCTC-A	CG-----AGT	TCTTT--AAA	G-CACGTGCCG	ATGCTG--
<i>G. crassaformis</i>	CCCTAAATAGG	CTTAACTGTT	TCT-----			AGCG	CGTGTCTC-A	CG-----AGT	TCTTT--AAA	G-CACGTGCCG	ATGCTG--
<i>N. incompta I</i>	CCCTCACCTT	TGAGT-----				GG	CGTCTAACT	T-----GT	AGTACATGGT	G-TAAATGGA	TTTGT-----
<i>N. incompta II</i>	CCCTCACCTT	TGAGT-----				GG	CGTCTTAGCT	T-----AG	AGTACATGGT	G-TAAATGGA	CTTGT-----
<i>G. glutinata Ia1</i>	TTCCGGAG--	TCGCTGTCTT	TT-C--GCGC	TCCGACGCTT	TTTACA--						
<i>G. glutinata Ia2</i>	TTCCGGAG--	TGTGTGTCTT	TTTT--GCGC	TCCGAC--	TTTACA--						
<i>G. glutinata Ia3</i>	TTCCGGAG--	TGTGTGTCTT	TTTTTTGGCG	TCCGAC--	TTTACA--						
<i>G. niuida</i>	TTCCGGAAAGC	TGTGTCTTTA	CGCTCACACT	TCA-----	TTTACA--						
<i>G. uvula</i>	CTTGAGTCT	TCCGTTCCG									
<i>B. variabilis</i>	-G-ATTTTAC	-TAT-C-AAT	-----GTGCG	CGTCTTTCCG	TTAGCTCACT	GCGCT-----					
<i>S. globigerus</i>	-G-ATTTTAC	-TAT-C-AAT	-----GC	CGTCTTTCCG	TTAGCTCACT	GCGCT-----					
<i>B. alata</i>	TTCTCACCGA	TATTGA----	-----GTGCG	CGTCTTACCG	TTAGCTCACT	ATACT-----					
<i>G. vivans</i>	CGCGCTTAG	TTTGTCTTAC	TCAACAA--								
<i>C. porrectus</i>	TGTGCGTGT	TTTGTCTCGT	TAACTCATA	CAA-----							
<i>C. ovoidea</i>	CCTCTTTT	ATAAGAGTGT	GCTGTCTGCG	TGCTTTTGTAC	CAACGCTGTT	TGCTTTTTCAT	GTGTT-----				
<i>G. opercularis</i>	TGAGGTCTGG	CGAGTTGTGC	GTCTTTTCAT	CGTTATCACA	TCATACAAC-						
<i>E. aculeatum</i>											
<i>E. vitrea</i>	GAGCGCGTGT	CTTAGTTTGC	TTAGCTCACA	CAA-----							
<i>H. germanica</i>	CATACACACA	TATTATA----									
<i>P. mediterraneanis</i>	TGATTAACGTA	CGGTTGTCT	TTGATTACGT	CTGGCTCGTG	CGA-----						
<i>S. fusiformis</i>	TGCGCCTTAG	CTTGTTAGC	TCAACAA--								
<i>V. fragilis</i>	TGTGCGCGTG	TCTTAGTTTG	CTTAGCTCAC	ACAA-----							
<i>A. pseudocassisi</i>	CTTGTTCAG	TTTCCGCACA	CTT-----								
<i>Spiroplectammina sp.</i>	ATATATATAG	NGCGNGTCTC	GGTTTGCCTT	CACCTCACACA	A-----						
<i>Textularia sp.</i>	TTACTAAAGT	CGGTTCTTA	GTTTGTCTTT	GCTCACACAA							
<i>S. limosum</i>	ATTAACCAAA	TTTGAGATAA	TGATTTGTTT	TTTTAGTTA							
<i>G. antarctica</i>	TGCCGTGTC	TTTGTCCGTT	CGACACATC	AA-----							
<i>D. aphelis</i>	AGAGAGCGCG	TGCTTAGTT	TTCCGCTTTC	TCATACAA--							
<i>P. peruviana</i>	TTTGAACCT	GATTTAATAT	ATAGCTTAC-								

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M. secans          GGATTGTGAA CTCAAATATA TTTAATTTAT ATTA-----
Quinqueloculina sp. GATTGTGAAC CTTTTATATT ATTTGATAAT ATTA-----
N. haylinosphaira GTGGTGACTG CGTCCGGTAT GGTATACCGT GC-----
M. fusca          TCAAA-----
T. alba           TCTTTGCATT TGAGTTGCTT TTAGTGAAGT TTAACGTTTT TAGTTTGTIT TACCCAGTT TCGGCTGCGC GCGTAACTTT CTTTTTAAA CTATTGCCTC
A. mexicana      TACGGGTAAG CGTGTTTGTC CTTATATTGT TCCAACATCA TACAAA-----
A. triangularis  GTGTTATATA TATATATATA TATGANTTAA TTTTCGTATA TTATATTATA TAATTATGTG AATTTTTTGA GCTAAGGATT TGATTCAAAG TAAAAG----
A. rara          AATATATATT TAATCATAAT TTTATTTATA TGTGCCAATA TTATTTTATT TTTTTTAAA GG----- --TAAGGATT TGATTCAAAG TAAAAC----
E. scabrum       ACACACGCGC ATGTAA-----
N. venosus       CGTGTCTTTG ATTGCTTAGC TCATACAA--
A. pseudocassis  TTCACGCAG GC-GTGTGT GCACACGCGT GCCGCGCA--
B. marginata     AGCGCGTGTG TTGGTTTGTG TAGCTCGCAC AATT-----
Trochammina sp.  TG--GTTGGT GCGTGTCTTA GTTTACTTT- GCTCGCACAA
Peneroplis sp.   TTATATATTA TTTATAAGGA TTTTAAGTGA ACATATTTTA TTATACATAT ATTATTATAT ATATTTATTA TA-----
S. orbiculus     TGAACATATT ATATATATTA TTAT-----
Allogromia sp.   TTAACTTTG ACCTTTATTG TTGCACGGTA TTCTTTTAA-
407 BP MARKER

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	501	511	521	531	541	551	561	571	581	591	600
<i>G. siphonifera</i> Ia1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera</i> Ia2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera</i> IIa1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera</i> IIa2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera</i> IIa3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera</i> IIa	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera</i> IIB	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. calida</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>O. universa</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>O. universa</i> III	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber</i> pink	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber</i> Ib1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber</i> Ib2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber</i> IIa	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. conglobatus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. rubescens</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides</i> Ib	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides</i> IIa	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides</i> IIB	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides</i> IIC	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides</i> IID	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides</i> IIE	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba</i> Ib	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba</i> IIa	TGTTGTAGCC ATACTTGATT GTATGCGC-- --TATTAATG TCTATGTGT- ----GACAC ATTCGTGGTT CAAGACCAGT TCGGCTGCTT GCACACATTG										
<i>T. quinqueloba</i> IIB	TATTGTAGCC GTACTTGATT GTATGCGC-- --TATTCATG TATATGTG-G TTAGT- ----CAACACCAGT TCGGCTGCTT GCACACATCG										
<i>T. quinqueloba</i> IIC	TATTGTAGCC GTACTTGATT GTATGCGC-- --TATTCATG TATATGTG-G TTAGT- ----CAACACCAGT TCGGCTGCTT GCACACATCG										
<i>T. quinqueloba</i> IID	TATTGTAGCC GTACTTCATT GTATGCGC-- --TATTCATG TATATGT- ----GACAC ATTTGTGGTT CAAGACCAGT TCGGCTGCTT GTACACATAT										
<i>G. falconensis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. pelagica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. unguolata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. hirsuta</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. truncatulinoides</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> II	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> III	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> IV	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> V	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> VI	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> VII	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i> C	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i> Ib	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i> BR	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i> AS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. crassaformis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> II	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i> Ia1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i> Ia2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i> Ia3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. nitida</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. variabilis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. alata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. vivans</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. porrectus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. ovoidea</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. opercularis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. aculeatum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. vitrea</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. germanica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. mediterraneensis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. fusiformis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>V. fragilis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Spiroplectammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Textularia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. limosum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. antarctica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. apheles</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. peruviana</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	601	611	621	631	641	651	661	671	681	691	700
<i>M. secans</i>											
<i>Quinqueloculina</i> sp.											
<i>N. haylinosphaira</i>											
<i>M. fusca</i>											
<i>T. alba</i>	AAGTTTAAAT	TTATTGTGA	GGGGCTCATG	GTGAAATCT	GCTATTTAAT	GGGAGAGGAT	TAGTGCACA				
<i>A. mexicana</i>											
<i>A. triangularis</i>											
<i>A. rara</i>											
<i>E. scabrum</i>											
<i>N. venosus</i>											
<i>A. pseudocassis</i>											
<i>B. marginata</i>											
<i>Trochammina</i> sp.											
<i>Peneroplis</i> sp.											
<i>S. orbiculus</i>											
<i>Allogromia</i> sp.											
407 BP MARKER											
<i>G. siphonifera</i> Ia1							GAC TCA	ATTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. siphonifera</i> Ia2							GAC TCA	ATTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. siphonifera</i> IIa1							GGC TCA	ATTGA AC	GCA ACGGA	CGTG ATCGCGA	
<i>G. siphonifera</i> IIa2							GGC TCA	ATTGA AC	GCA ACGGA	CGTG ATCGCGA	
<i>G. siphonifera</i> IIa3							GGC TCA	ATTGA AC	GCA ACGGA	CGTG ATCGCGA	
<i>G. siphonifera</i> IIa							GGC TCA	ATTGA AC	GCA ACGGA	CGTG ATCGCGA	
<i>G. siphonifera</i> IIB							GGC TCA	ATTGA AC	GCA ACGGA	CGTG ATCGCGA	
<i>G. calida</i>							GGC TCA	ATTGA AC	GCA ACGGA	CGTG ATCGCGA	
<i>O. universa</i> I							GAT TCT	TTCCA AT	GCA ACGAG	CGTG ATCGCGA	
<i>O. universa</i> III							GTC TCT	TTTGA AC	GCA ACGGA	CGTG ATCGCAA	
<i>G. sacculifer</i>							GTT CTA	TTGGA AT	GCA ACGGA	CGTG ATTGCAA	
<i>G. ruber</i> pink						GC CCCTGG	GAC TCT	TTTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. ruber</i> Ia						GC CCCTGG	GAC TCT	TTTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. ruber</i> Ib1						GC CCCTGG	GAC TCT	TTTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. ruber</i> Ib2						GC CCCTGG	GAC TCT	TTTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. ruber</i> IIa						GC CCTTGA	TGC TCA	TTTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. conglobatus</i>						GC CCCTGG	TAC TCT	TTTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>G. rubescens</i>						GC CCCTGG	C TTT	TTTGA AC	GCA ACGGA	CGTG ACTCAA	
<i>G. bulloides</i> Ia							ATT TGA	ACAGT AC	GCA ACGGA	CGCG ATCGTAA	
<i>G. bulloides</i> Ib							ACT TGA	ACAGT AC	GCA ACGGA	CGTG ATCGTAA	
<i>G. bulloides</i> IIa							CTC TGA	ACAGT AC	GCA ACGAA	CGCG ATCGTAA	
<i>G. bulloides</i> IIB							CTC TGA	ACAGT AC	GCA ACGAA	CGCG ATCGTAA	
<i>G. bulloides</i> IIc							CTC TGA	ACAGT AC	GCA ACGAA	CGCG ATCGTAA	
<i>G. bulloides</i> IID							CTC TGA	ACAGT AC	GCA ACGAA	CGCG ATCGTAA	
<i>G. bulloides</i> IIe							CTC TGA	ACAGT AC	GCA ACGAA	CGCG ATCGTAA	
<i>T. quinqueloba</i> Ia						TCTTGCCCTA	AAGATTGATT	AACACCGTGA	GT	GCA ACGAG	TGAG ATTGCGA
<i>T. quinqueloba</i> Ib						ACTTGCCCTA	AAGATTGATT	AACACCGTGA	GT	GCA ACGAG	TGAG ATTGCGA
<i>T. quinqueloba</i> IIa	CCATCTCAAC	ATGATTGGTC	AGGCTGCTAG	AGACCTTGTG	TCTTGCCCCA	AAGGTTGATT	AACACCGTGA	GT	GCA ACGAG	TGAG ATTGCAA	
<i>T. quinqueloba</i> IIB	CCATCTCAAC	ATGATCAGTC	AGGCTGCTAG	AGACCTTGTG	TCTTGCCCCA	AAGGTTGATT	AACACCGTGA	GT	GCA ACGAG	TGAG ATTGCAA	
<i>T. quinqueloba</i> IIc	CCATCTCAAC	ATGATCAGTC	AGGCTGCTAG	AGACCTTGTG	TCTTGCCCCA	AAGGTTGATT	AACACCGTGA	GT	GCA ACGAG	TGAG ATTGCAA	
<i>T. quinqueloba</i> IID	ACACTCGA-C	ATGATCATTG	AGGCTGCTAG	AGACCTTGTG	TCTTGCCCCA	AAGGTTGATT	AACACCGTGA	GT	GCA ACGAG	TGAG ATTGCAA	
<i>G. falconensis</i>							CTT TTG	TGTGA AC	GCA ACGGA	CGTG ATTGCAA	
<i>H. pelagica</i>							CCT CAA	TTTGA AA	GCA ACGAA	CGTG ACCGCG	
<i>G. menardii</i>							AGA GTA	CGTGA AT	GCA ACGAA	CGTG ACCGTAG	
<i>G. unguolata</i>							AGA GTA	CGTGA AG	GCA ACGAA	CGTG ACCGTAG	
<i>G. hirsuta</i>							TTG GGA	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. scitula</i>							TTG GGA	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. truncatulinoides</i>							TTG GGA	CCGGA AT	GCA ACGAG	CGCG ACTGCAC	
<i>N. pachyderma</i> I							TTG GGC	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. pachyderma</i> II							TTG GGC	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. pachyderma</i> III							TTG GGC	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. pachyderma</i> IV							TTG GGC	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. pachyderma</i> V							TTG GGC	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. pachyderma</i> VI							TTG GGC	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. pachyderma</i> VII							TTG GGC	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. dutertrei</i> C							TTG GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. dutertrei</i> Ib							TTG GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>P. obliquiloculata</i> BR							TTG GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>P. obliquiloculata</i> AS							TTG GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. inflata</i>							TTG GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. crassaformis</i>							TTG GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. incompta</i> I							TTG GGT	ACCAGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>N. incompta</i> II							TTG GGT	ACCAGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. glutinata</i> Ia1							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. glutinata</i> Ia2							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. glutinata</i> Ia3							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>C. nitida</i>							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. uvula</i>							TAT CCT	TTGGA AT	GCA ACGAA	CGTG ACCGCAA	
<i>B. variabilis</i>							TTA GA	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>S. globigerus</i>							TTA GA	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>B. alata</i>							TTA GA	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. vivans</i>							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>C. porrectus</i>							TTA AGC	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>C. ovoidea</i>							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>G. opercularis</i>							GTT GAT	TCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>E. aculeatum</i>							GTA CAC	TTTGA AA	GCA ACGAA	CGTG ACCGTAT	
<i>E. vitrea</i>							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>H. germanica</i>							TTG TGC	TTTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>P. mediterraneensis</i>							TTA GAA	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>S. fusiformis</i>							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>V. fragilis</i>							TTA GAT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>A. pseudocassis</i>							CCG A	GTCCTCA TT	GCA ACGAA	CGTG ACCGCAA	
<i>Spiroplectammina</i> sp.							TTA AGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>Textularia</i> sp.							TTA G	GTCCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>S. limosum</i>							AGG GGG	CCGGA AG	GCA ACGAA	CGTG ACCGCAA	
<i>G. antarctica</i>							TTA AGC	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>D. aphelis</i>							TTA GGT	CCTGA AA	GCA ACGAA	CGTG ACCGCAA	
<i>P. peruviana</i>							TAT ATAAATGTGA	AT	GCA ACGAA	CGTG ACTATAA	

Table listing species names (e.g., M. secans, Quinqueloculina sp., N. haylinosphaira) and their corresponding DNA sequence alignments. The sequences are aligned in columns, with dashes representing gaps.

Main alignment table showing DNA sequence alignments for various species (e.g., G. siphonifera Ia1, G. siphonifera Ia2, G. siphonifera IIa1, etc.) across positions 701 to 900. The sequences are aligned in columns, with dashes representing gaps.

	1001	1011	1021	1031	1041	1051	1061	1071	1081	1091	1100
<i>M. secans</i>											
<i>Quinqueloculina</i> sp.											
<i>N. haylinosphaira</i>	ACACTTTTGT	ATTTTCCTTG	TATGTCCTCC	TGTTGCTTTT	GAGATATATT	TGTTTATGTG	TACATCGAAA	TTATCTGCAG	TGGA		
<i>M. fusca</i>											
<i>T. alba</i>											
<i>A. mexicana</i>											
<i>A. triangularis</i>	TATATTATAT	ATATATGTGT	ATATGTGGTT	TTTATACNG	TTATATGATT	TTNNTTATGT	ATTTAATCAT	TTTGCATAAA	TTG		
<i>A. rara</i>	TATATATATG	TGATTATAGT	GAGTGTTTTG	GTTTATACG	TGTGGTGTAT	TTTATTTATA	TATTTTAAATC	ATTTTATATA	AATTG		
<i>E. scabrum</i>											
<i>N. venosus</i>											
<i>A. pseudocassis</i>											
<i>B. marginata</i>											
<i>Trochammina</i> sp.											
<i>Peneroplis</i> sp.											
<i>S. orbiculus</i>											
<i>Allogromia</i> sp.											
407 BP MARKER											
<i>G. siphonifera</i> Ia1		GGAA	AACTTGG	GCGACCGC	T		GTAAT	ACTTCTCTCT	TAAA	CCA	GAGGAAG
<i>G. siphonifera</i> Ia2		GGAA	AACTTGG	GCGACCGC	T		GTAAT	ACTTCTCTCT	TAAA	CCA	GAGGAAG
<i>G. siphonifera</i> IIa1		GGAA	AACTCGG	GCGACCGC	T		GTAAT	ATTCTCT-T	TAAA	ACA	GAGGAAG
<i>G. siphonifera</i> IIa2		GGAA	AACTCGG	GCGACCGC	T		GTAAT	ATTCTCT-T	TAAA	ACA	GAGGAAG
<i>G. siphonifera</i> IIa3		GGAA	AACTCGG	GCGACCGC	T		GTAAT	ATTCTCT-T	TAAA	ACA	GAGGAAG
<i>G. siphonifera</i> IIa		GGAA	AACTCGG	GCGACCGC	T		GTAAT	ATTCTCT-T	TAAA	ACA	GAGGAAG
<i>G. siphonifera</i> IIB		GGAA	AACTTGG	GCGACCGC	T		GTAAT	ACTTCTCT-T	TAAA	ACA	GAGGCAG
<i>G. calida</i>		GGAA	AACTCGG	GCGACCGC	T		GTAAT	ACTTCTCT-T	TAAA	ACA	GAGGAAG
<i>O. univversa</i> I		GACA	AACTCGG	GCGACCGC	T		TCAA	TCAATTTTCT	CAAA	CGA	GAGGAAG
<i>O. univversa</i> III		GGCA	AACTCAG	GCGACCGC	T		TCAA	CTATTTCTCT	CAAA	CTA	GAGGAAG
<i>G. sacculifer</i>		GATA	AACTTAA	GCGACCGC	T		CCAA	C-ATTGTGTT	TTTT	TAAA	ACT
<i>G. ruber</i> pink		GATA	AACTCGG	GCGACCGC	T		GACTAT	AACCAATTTCT	CAAA	ACA	GAGGAAG
<i>G. ruber</i> Ia		GATA	AACTCGG	GCGACCGC	T		GACTAT	AACCAATTTCT	CAAA	ACA	GAGGAAG
<i>G. ruber</i> Ib1		GATA	AACTCGG	GCGACCGC	T		GACTAT	AACCAATTTCT	CAAA	ACA	GAGGAAG
<i>G. ruber</i> Ib2		GATA	AACTCGG	GCGACCGC	T		GACTAT	AACCAATTTCT	CAAA	ACA	GAGGAAG
<i>G. ruber</i> IIa		GATA	AACTCGG	GCGACCGC	T		GACTAT	AACCAATTTCT	CAAA	CCA	GAGGAAG
<i>G. conglobatus</i>		GATA	AACTCGG	GCGACCGC	T		GACTAT	AACCAATTTCT	CAAA	ACA	AAGGAAG
<i>G. rubescens</i>		GATA	AACTTTG	GCGACCGC	T		TAAGATAA	ATATTTTCT	CAAA	CCA	GAGGAAG
<i>G. bulloides</i> Ia		TTTAA	AACTCGA	GAAACATC	T		GTGACTTTCT	TTCT-T	TAC	GCA	GAGGAAG
<i>G. bulloides</i> Ib	A	TGTCGA	AACTCGG	GAAACATC	T		GTGACTTTCT	TTCT-T	TAC	GCA	GAGGAAG
<i>G. bulloides</i> IIa		TTTTGA	AACTCGG	GAAACATC	T		GTGACTTTCT	TTCT-T	AAC	GCA	GAGGAAG
<i>G. bulloides</i> IIB		TTTTGA	AACTCGG	GAAACATC	T		GTGACTTTCT	TTCT-T	AAC	GCA	GAGGAAG
<i>G. bulloides</i> IIc		TTTTGA	AACTCGG	GAAACATC	T		GTGACTTTCT	TTCT-T	AAC	GCA	GAGGAAG
<i>G. bulloides</i> IID		TTTTGA	AACTCGG	GAAACATC	T		GTGACTTTCT	TTCT-T	AAC	GCA	GAGGAAG
<i>G. bulloides</i> IIE	T	TGTTGA	AACTCGG	GAAACATC	T		GTGACTTTCT	TTCT-T	AAC	GCA	GAGGAAG
<i>T. quinqueloba</i> Ia		AATG	AACTTAG	GCGACTGC	T		AT-ACCTT		T	AAG	ATG
<i>T. quinqueloba</i> Ib		AATG	AACTTAG	GCGACTGC	T		AT-ACCTT		T	AAG	ATG
<i>T. quinqueloba</i> IIa		AATG	AACTCAG	GCGACTGC	T		AT-ACCTT		T	AAG	ATG
<i>T. quinqueloba</i> IIB		AATG	AACTCAG	GCGACTGC	T		AT-ACCTT		T	AAG	ATG
<i>T. quinqueloba</i> IIc		AATG	AACTCAG	GCGACTGC	T		AT-ACCTT		T	AAG	ATG
<i>T. quinqueloba</i> IID		AATG	AACTCAG	GCGACTGC	T		AT-ACCTT		T	AAG	ATG
<i>G. falconensis</i>		TTGT	AACTCGG	GCGACCGC	T		GTGATTTTTCT	TT	C	AAA	COG
<i>H. pelagica</i>		AATA	AACTCAG	GCGACCGC	T		GGTTTAAATGC	GT	T	AAA	CCA
<i>G. menardii</i>		TTGC	AACTATA	C-ATACCAC	T		GCTTTCTTTT	CT	C	TAA	CCA
<i>G. ungulata</i>		TTTC	AACTATA	C-ATACCAC	T		GCTTTTTTTT	CTC	T	A-A	CCA
<i>G. hirsuta</i>		TTTA	AACTAGA	C-GGACCGC	T		GTTTCTCTTT		T	AAA	CCA
<i>G. scitula</i>		TTATAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	CT	T	AAA	CCA
<i>G. truncatulinoides</i>		CTGA	AACTAGC	T-GGACCGC	T		GCTTTCTTTT		T	AAG	CCA
<i>N. pachyderma</i> I		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. pachyderma</i> II		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. pachyderma</i> III		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. pachyderma</i> IV		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. pachyderma</i> V		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. pachyderma</i> VI		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. pachyderma</i> VII		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. dutertrei</i> C		TTAA	AATTAGA	C-GGACCGC	T		GTA-CTTTTCT	T	T	AAA	CCA
<i>N. dutertrei</i> Ib		TTAA	AATTAGA	C-GGACCGC	T		GTA-CTTTTCT	T	T	AAA	CCA
<i>P. obliquiloculata</i> BR		CTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>P. obliquiloculata</i> AS		CTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>G. inflata</i>		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>G. crassaformis</i>		TTAA	AACTAGA	C-GGACCGC	T		GTTTCTTTTCT	T	T	AAA	CCA
<i>N. incompta</i> I		ACCA	AACTAGG	C-GTACCGC	T		GTAATCATTTCT	TT	T	AAA	CCA
<i>N. incompta</i> II		ACCA	AACTAGG	C-GTACCGC	T		GTAATCATTTCT	TT	T	AAA	CCA
<i>G. glutinata</i> Ia1		CCAA	AACTAGA	G-GGACCGC	T		GTCACACTTCT		T	AAA	CCA
<i>G. glutinata</i> Ia2		CCAA	AACTAGA	G-GGACCGC	T		GTCACACTTCT		T	AAA	CCA
<i>G. glutinata</i> Ia3		CCAA	AACTAGA	G-GGACCGC	T		GTCACACTTCT		T	AAA	CCA
<i>C. niida</i>	TTGAGGCTTT	CTTA	AACTAGA	G-GGACCGC	T		GTCACACTTCT		T	AAA	CCA
<i>G. uvula</i>		AGTA	AACTAGA	G-GGACCGC	T		GTCACACTTCT		T	AAA	CCA
<i>B. variabilis</i>		CACA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>S. globigerus</i>		CACA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>B. alata</i>		CACA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>G. vivans</i>		TTTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>C. porrectus</i>		TCTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>C. ovoidea</i>		TTTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>G. opercularis</i>		AATA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>E. aculeatum</i>	G	TATATA	AACCAAAATG	TG-AGACCGC	T		GTTTCTTTTCT	TT	T	AAA	CCA
<i>E. vitrea</i>		TTTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>H. germanica</i>		TATA	AACTAGA	G-GGACCGC	T		GTTACTTTCT	TT	T	AAA	CCA
<i>P. mediterraneensis</i>		TCTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>S. fusiformis</i>		TTTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>V. fragilis</i>		TTTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>A. pseudocassis</i>		TTAA	AACTAGA	G-GGACCGC	T		GTAATCTTTT		T	AAA	CCA
<i>Spiroplectammina</i> sp.		TTTA	AACTAGA	G-GGACCGC	T		GTAATCTTTT		T	AAA	CCA
<i>Textularia</i> sp.		TTTA	AACTAGA	G-GGACCGC	T		GTAATCTTTT		T	AAA	CCA
<i>S. limosum</i>		AGCT	AACTAGA	G-GGACTGTC	T		GATATCTTGT		T	AAA	ACA
<i>G. antarctica</i>		TCTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>D. aphelis</i>		TTTA	AACTAGA	G-GGACCGC	T		GTTACTTTCT		T	AAA	CCA
<i>P. peruviana</i>			AATTAAA	G-GAACCGC	TGTC	TAAAA	TTTAGTCT		T	AAA	ACA

M. secans
Quinqueloculina sp.
N. haylinosphaira
M. fusca
T. alba
A. mexicana
A. triangularis
A. rara
E. scabrum
N. venosus
A. pseudocassisi
B. marginata
Trochammina sp.
Peneroplis sp.
S. orbiculus
Allogromia sp.
407 BP MARKER

Table with 12 columns of sequence positions (1101-1200) and rows of species names (G. siphonifera, G. bulloides, etc.) with corresponding DNA sequence alignments.

<i>M. secans</i>	ATTATGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TAA	-----TT-A	C-TA-TA-CT	TAGTGTCTAC
<i>Quinqueloculina sp.</i>	ATTATGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TAA	-----TT-A	C-TA-TA-AT	AAGTGTCTAA
<i>N. haylinosphaira</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TTAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	GAGCATCTAC
<i>M. fusca</i>	GATGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-AG-CA-GT	GAGCATCTAA
<i>T. alba</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TTAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	AAGCATCTCA
<i>A. mexicana</i>	GATGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TTAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-CT	GAGCATCTCA
<i>A. triangularis</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	GAGCATCTCA
<i>A. rara</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	GAGCATCTCA
<i>E. scabrum</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TTAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	GAGCATCTCA
<i>N. venosus</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TTAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	GAGCATCTCA
<i>A. pseudocassisi</i>	GATACGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-CT	GTGATCTTAA
<i>B. marginata</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TTAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	GAGCATCTCA
<i>Trochammina sp.</i>	GTTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TTAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	GAGCATCTCA
<i>Peneroplis sp.</i>	ATTACGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TAA	-----TT-A	C-AT-TA-AT	AAGTATCTAT
<i>S. orbiculus</i>	ATTACGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TAA	-----TT-A	C-AT-TA-AT	AAGTATCTAT
<i>Allogromia sp.</i>	ATTGCGGCAA	-TAACA-GGT	CTG-TGATGC	CC-TCAG-AT	GTTCCTGGG-C	TGCACACGTG	CTACAA-TGA	-----TT-A	T-TG-CA-GT	AAGCATCTAT
407 BP MARKER	mmmmmmmmmm	-mmmmmm-mm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

	1201	1211	1221	1231	1241	1251	1261	1271	1281	1291	1300
<i>G. siphonifera Ia1</i>	ACA-TAT---	AG-ATCA	TT---G-AT	T---G-G-TTA	TTT---ATAA	CCG-----	-----	-----	-----	-----	---TCAATA
<i>G. siphonifera Ia2</i>	ACA-TAT---	AG-ATCA	TT---G-AT	T---G-G-TTA	TTT---ATAA	CCG-----	-----	-----	-----	-----	---TCAATA
<i>G. siphonifera IIa1</i>	TCAATAT---	GA-TACA	TT---AG-AT	T---G-GATTG	TTCTG---	-----TTGAG	CT-CCAT---	-----	-----	-----	---CTAATA
<i>G. siphonifera IIa2</i>	TCAATAT---	GA-TACA	TT---AG-AT	T---G-GATTG	TTCTG---	-----TTGAG	CT-CCAT---	-----	-----	-----	---CTAATA
<i>G. siphonifera IIa3</i>	TCAATAT---	GA-TACA	TT---AG-AT	T---G-GATTG	TTCTG---	-----TTGAG	CT-CCAT---	-----	-----	-----	---CTAATA
<i>G. siphonifera IIb</i>	TCAATAT---	GA-TACA	TT---GG-AT	T---G-GTGGT	GAATT---	-----GTTGG	CC-CCGT---	-----	-----	-----	---CTAATA
<i>G. calida</i>	TCAATAT---	GA-TACA	TT---GGTTT	T---G-GTAGT	AAGCTATTCA	TCTGATGGAT	ATGCTACTCT	CCATACCAAT	ACT---	-----	-----
<i>O. univversa I</i>	TCC-----	AATG--A	-A-ACA-TC-	-G-G-TCT	G-----G-	CCG--TTTTT	AAC-AGTCCT	GTACG-GTTT	---TGCAATG	GCTACTGATA	-----
<i>O. univversa III</i>	TCG-----	AAAGGAA	ACATCGGTTT	TAAGGTAACG	TCGATTTGCC	G-----G-	CCG--TTTTT	AAC-AGTCCT	GTACG-GTTT	---TGCAATG	GCTACTGATA
<i>G. sacculifer</i>	CA-----	ACCG--A	-A-ACA-TC-	-G-G-T-T	G-----G-	CTG--TTCTG	ATTGACCCT	TCTGG-GTCT	CCTCTGTAACA	-CTACCGATG	-----
<i>G. ruber pink</i>	TTGT-----	AAGGG-A	TA-AGAGTGT	-G-G-TCA	GT-----ATG-	CCG--TCGGG	GATTCCCCCT	G-ACG--TCT	C-CTAGCACA	-CGATT-ATC	-----
<i>G. ruber Ia</i>	TT-----	AAGGG-A	TA-AGAGTGT	-G-G-TCA	GT-----ATG-	CCG--TCGGG	GATTCCCCCT	G-ACG--TCT	C-CCCCGA	-CGATT-ATC	-----
<i>G. ruber Ib1</i>	TT-----	TAAGGG-A	TA-AGCGTGC	-G-G-CCA	GT-----AGA-	ACG--TCGGG	AAATCCCCCT	G--CG--TCG	CC-TGCCGA	-CGATT-ATC	-----
<i>G. ruber Ib2</i>	TT-----	TAAGGG-A	TA-AGCGTGC	-G-G-CCA	GT-----AGA-	ACG--TCGGG	AAATCCCCCT	G-BCG--TCT	CTTACCGCA	-CGATT-ATC	-----
<i>G. ruber IIa</i>	AT-----	AGAGTG-A	TA-GGTTCCG	TGGTTTGTG	ATTTTAAAGGG	CTCGTCTTAA	TAAACAAAGC	TCCACGGGAC	AT---	-----	---ATC
<i>G. conglobatus</i>	T-----	GAAGAGT	GA-TA-GGTG	CTGGGTTGT	ACATTTTAAA	GGGCTCGTCC	TAGTAACCAA	CCGCCCC-A	AGCATCT-	-----	---ATC
<i>G. rubescens</i>	TATTA-----	GACTGAT	GAGTCTTAA	TTTTTACATT	ACGTTAATCT	CATTGACTTT-	-----	-----	-----	-----	---ATC
<i>G. bulloides Ia</i>	GTT--TTCTC	CA-AATAACG	TATACAGTGG	ACTTTGGTGC	GGGTG-C-TGG	CCTCTGGTCA	TGTGCTTTGA	TTAC---	-----	-----	-----
<i>G. bulloides Ib</i>	GTT--TTCTC	CA-AATAACG	TATACAGTGG	ACTTTGGTGC	GGGTG-C-TGG	CCTCTGGTCA	TGTGCTTTGA	TTAC---	-----	-----	-----
<i>G. bulloides IIa</i>	GTT--TTCTC	CA-AATAACG	TATACAGTGG	ACTTTGGTGC	GGGTG-C-TGG	CCTCTGGTCA	TGTGCTTTGA	TTAC---	-----	-----	-----
<i>G. bulloides IIb</i>	GTT--TTCTC	CA-AATAACG	TATACAGTGG	ACTTTGGTGC	GGGTG-C-TGG	CCTCTGGTCA	TGTGCTTTGA	TTAC---	-----	-----	-----
<i>G. bulloides IIc</i>	GTT--TTCTC	CA-AATAACG	TATACAGTGG	ACTTTGGTGC	GGGTG-C-TGG	CCTCTGGTCA	TGTGCTTTGA	TTAC---	-----	-----	-----
<i>G. bulloides IID</i>	GTT--TTCTC	CA-AATAACG	TATACAGTGG	ACTTTGGTGC	GGGTG-C-TGG	CCTCTGGTCA	TGTGCTTTGA	TTAC---	-----	-----	-----
<i>G. bulloides IIE</i>	GTT--TTCTC	CA-AATAACG	TATACAGTGG	ACTTTGGTGC	GGGTG-C-TGG	CCTCTGGTCA	TGTGCTTTGA	TTAC---	-----	-----	-----
<i>T. quinqueloba Ia</i>	GTAACAATA	---ATTTTG	AATGATTATGG	TTAAGCTTTT	-CTTATATTT	TGGTAAGAGG	TTAAT---	-----	-----	-----	-----
<i>T. quinqueloba Ib</i>	GTAACAATA	---ATTTTG	AATGATTATGG	TTAAGCTTTT	-CTTATATTT	TGGTAAGAGG	TTAAT---	-----	-----	-----	-----
<i>T. quinqueloba IIa</i>	GTAACAATTG	---ATTTTG	AATGATTATGG	TTAAGCTTAA	TTGTAATTTT	-GCTAA--CG	TTAAT---	-----	-----	-----	-----
<i>T. quinqueloba IIb</i>	GTAACAATTG	---ATTTTG	AATGATTATGG	TTAAGCTTAA	TTGTAATTTT	-GCTAA--CG	TTAAT---	-----	-----	-----	-----
<i>T. quinqueloba IIc</i>	GTAACAATTG	---ATTTTG	AATGATTATGG	TTAAGCTTAA	TTGTAATTTT	-GCTAA--CG	TTAAT---	-----	-----	-----	-----
<i>T. quinqueloba IID</i>	GTAACAATTG	---ATTTTG	AATGATTATGG	TTAAGCTTAA	TTGTAATTTT	-GCTAA--CG	TTAAT---	-----	-----	-----	-----
<i>G. falconensis</i>	TTTTCTCCA	---ATGAGC	AACCTAGTGG	ACTTTGGTGC	TGTGCGCATC	CGTGTGCTAA	TGACTGTC-	-----	-----	-----	-----
<i>H. pelagica</i>	CTGACCC-	---AATACTG	GAAATTTCTGG	TGTCCAATGG	ACACAGTACA	CACAGTACCC	CCC-----	-----	-----	-----	-----
<i>G. menardii</i>	GTTGTGTCTC	---ATGGTGG	AAATCATTTT	CATTCAACGA	TTATCGAAAG	AA-GGAACGT	ATGACGAGAG	TTTTACGAAA	CCTTTTATTA	ATTTCTTATT	-----
<i>G. unguolata</i>	GTTGTGTCTC	---ATGGTGG	AAATCATTTT	CATTCAACGA	TTATCGAAAG	AA-GGAACGT	ATGACGAGAG	TTTTACGAAA	CCTTTTATTA	ATTTCTTATT	-----
<i>G. hirsuta</i>	ATTTATATC	---TAACA	CCGC---TTT	ATTTAAGCAT	TCAGTGTGTA	GTTGTGTAA	CAGCTGCCCT	-----	-----	-----	-----
<i>G. scitula</i>	ATTTATCTT	---TATAT	AGAA---TTC	ATTTCTATATA	AGAACCGTAT	TTTTCAAGCAT	CTGTCCGTTAT	TACAA---	-----	-----	-----
<i>G. truncatulinoides</i>	TATCTTCTT	---ATACCA	ACCCAAATAG	TTAAACTTAT	TGCGTAAGGG	-TATGTCTT	AACGA---CT	TATCCCGTTT	AGCGCTTTAA	GATTATTGGG	-----
<i>N. pachyderma I</i>	AAT-ATAA-	---T-ACA	CCGT---CTT	TAG-CGCTTA	GA-CGGGTT	AT-TGGCTTT	CTTTTTTTTA	TTAA-CGAGT	-GAGTTTAA	TAAACG---A	-----
<i>N. pachyderma II</i>	AAT-ATAA-	---T-ACA	CCGT---CTT	TAG-CGCTTA	GA-CGGGTT	AT-TGGCTTT	CTTTTTTTTA	TTAA-CGAGT	-GAGTTTAA	TAAACG---A	-----
<i>N. pachyderma III</i>	AAT-ATAA-	---T-ACA	CCGT---CTT	TAG-CGCTTA	GA-CGGGTT	AT-TGGCTTT	CTTTTTTTTA	TTAA-CGAGT	-GAGTTTAA	TAAACG---A	-----
<i>N. pachyderma IV</i>	AAT-ATAA-	---T-ACA	CCGT---CTT	TAG-CGCTTA	GA-CGGGTT	AT-TGGCTTT	CTTTTTTTTA	TTAA-CGAGT	-GAGTTTAA	TAAACG---A	-----
<i>N. pachyderma V</i>	AAT-ATAA-	---T-ACA	CCGT---CTT	TAG-CGCTTA	GA-CGGGTT	AT-TGGCTTT	CTTTTTTTTA	TTAA-CGAGT	-GAGTTTAA	TAAACG---A	-----
<i>N. pachyderma VI</i>	AAT-ATAA-	---T-ACA	CCGT---CTT	TAG-CGCTTA	GA-CGGGTT	AT-TGGCTTT	CTTTTTTTTA	TTAA-CGAGT	-GAGTTTAA	TAAACG---A	-----
<i>N. pachyderma VII</i>	AAT-ATAA-	---T-ACA	CCGT---CTT	TAG-CGCTTA	GA-CGGGTT	AT-TGGCTTT	CTTTTTTTTA	TTAA-CGAGT	-GAGTTTAA	TAAACG---A	-----
<i>N. dutertrei_C</i>	AAT-ATTA-	---T-ACA	CCGT---ATT	AAG-CGCTTA	GT-TGCAGT	AT-TGGCTCA	TTAT-----	---TGGGCTT	TTAAATGTAT	T-----	-----
<i>N. dutertrei_Ib</i>	AAT-ATTA-	---T-ACA	CCGT---ATT	AAG-CGCTTA	GT-TGCAGT	AT-TGGCTCA	TTAT-----	---TGGGCTT	TTAAATGTAT	T-----	-----
<i>P. obliquiloculata_BR</i>	AAATTTATA	---T-ACA	CCGT---ATT	TAG-CGCTAA	GA-TATGAT	AT-TGGCTCT	TTT-----	---AGGGCTT	TTAAATGTAT	T-----	-----
<i>P. obliquiloculata_AS</i>	AAATTTATA	---T-ACA	CCGT---ATT	TAG-CGCTAA	GA-TATGAT	AT-TGGCTCT	TTT-----	---AGGGCTT	TTAAATGTAT	T-----	-----
<i>G. inflata</i>	AAATTTATA	---TAACA	CCGT---ATT	AAG-CGCTTG	GG-TCGTAAT	TG-TTAGGCC	TTTTAGGTTT	TTTCAATTGC	GTTT-C-	-----	-----
<i>G. crassaformis</i>	AAATTTATA	---TAACA	CCGT---ATT	AAG-CGCTTG	GG-TCGTAAT	TG-TTAGGCC	TTTTAGGTTT	TTTCAATTGC	GTTT-C-	-----	-----
<i>N. incompta I</i>	AAATTTATA	---CAACA	CCGT---CAA	CAC-ACGTAG	TGAGCTGCTT	GATCTCTCAT	TCAATGATTC	TGTGCTTCGG	TGCAGTGTGC	AATGTGAGTT	-----
<i>N. incompta II</i>	AAATTTATA	---CAACA	CCGT---CAA	CAC-ACGTAG	TGAGCTGCTT	GATCTCTCAT	TCAATGATTC	TGTGCTTCGG	TGCAGTGTGC	AATGTGAGTT	-----
<i>G. glutinata Ia1</i>	ATTTTTTT	---ACCT-AA	CACCCGACAC	GTGAGT--GC	ATAC--TTGT	ATGTTA-CTT	TACCGACGGG	TAAA---	-----	-----	-----
<i>G. glutinata Ia2</i>	ATTTTTTT	---ACCT-AA	CACCCGACAC	GTGAGT--GC	ATAC--TTGT	ATGTTA-CTT	TACCGACGGG	TAAA---	-----	-----	-----
<i>G. glutinata Ia3</i>	ATTTTTTT	---ACCT-AA	CACCCGACAC	GTGAGT--GC	ATAC--TTGT	ATGTTA-CTT	TACCGACGGG	TAAA---	-----	-----	-----
<i>C. niitida</i>	ATTTCTT	---ACCACAC	CGCACACGCTG	AGTCTTTAAC	TTTTTGTAA	TGCACTTTAC	GCAGCGGTAA	C-----	-----	-----	-----
<i>G. uvula</i>	TTTTGATTTAC	T---TAACAC	GCATACGTGA	GTTCCAACTA	GCTTAGCAAT	AAGTCAAGTA	GATCTCTACG	CAGCGGTAA	A-----	-----	-----
<i>B. variabilis</i>	TTTTTTT-ACT	A---CACC-GC	ATGCGCGAGT	CTATTT--GT	CTGT-TCTGC	TTCCGGTA-A	CTGCTC----	---AAATAC-G	ATCTCTGCGT	CGGGTAAA--	-----
<i>S. globigerus</i>	TTTTTTT-ACT	A---CACC-GC	ATGCGCGAGT	CTATTT--GT	CTGT-TCTGC	TTCCGGTA-A	CTGCTC----	---AAATAC-G	ATCTCTGCGT	CGGGTAAA--	-----
<i>B. alata</i>	TTTTTTTACT	A---CACC-GC	ATGCGCGAGT	CTATTT--GT	CTGT-TCTGC	TTCCGGTA-A	CTGCTC----	---AAATAC-G	ATCTCTGCGT	CGGGTAAA--	-----
<i>G. vivans</i>	TTTTTTTATA	---CACC-GC	ATGCGCGAGT	CTATTT--GT	CTGT-TCTGC	TTCCGGTA-A	CTGCTC----	---AAATAC-G	ATCTCTGCGT	CGGGTAAA--	-----
<i>G. porrectus</i>	TTTTTTTATA	---CACC-GC	ATGCGCGAGT	CTATTT--GT	CTGT-TCTGC	TTCCGGTA-A	CTGCTC----	---AAATAC-G	ATCTCTGCGT	CGGGTAAA--	-----
<i>C. ovoidea</i>	TTTTTTTATA	---CACC-GC	ATGCGCGAGT	CTATTT--GT	CTGT-TCTGC	TTCCGGTA-A	CTGCTC----	---AAATAC-G	ATCTCTGCGT	CGGGTAAA--	-----
<i>G. opercularis</i>	TTTTTTTACT	---TTACATC	ACTTGTCAIG	AGCACCTTAA	CTTTTGTAT	GGCGTCTTAA	TGCGTGATAA	A-----	-----	-----	-----
<i>E. aculeatum</i>	A-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. vitrea</i>	TTTTTTT	---ACACAC	GCATACGCGA	GTCACATTTA	TCACTCTCGG	GTGCTTTAAA	TGTGCATCTC	TGCGAGCGGT	AAA---	-----	-----
<i>H. germanica</i>	TTTTTTTATA	---CACTGCT	TGTCGCTATG	TGAATCCATA	TATTTTATA	TGTGTGTGTA	TGTATTGCAC	GCAGTAA-	-----	-----	-----
<i>P. mediterraneensis</i>	TTTTTATAA	---CATCGCA	AGCCGAGTGC	GCTTTATTTT	ATGATACCTG	CTATGCTTPT	CGTAGCTTAA	AAATGCTGAT	CCTCGCGCG	GATAAAA-	-----
<i>S. fusiformis</i>	TTTTTTT	---CACACG	CATCCACGAG	TCCATTTTAT	CATCTCTCGG	GGTTGCTTCT	AAATGCTGAT	CTCTGTGAGC	GCTGATAA-	-----	-----
<i>V. fragilis</i>	TTTTTTT	---CACACG	CATCCACGAG	TCCATTTTAT	CATCTCTCGG	GGTTGCTTCT	AAATGCTGAT	CTCTGTGAGC	GCTGATAA-	-----	-----
<i>A. pseudocassisi</i>	ATTGATACA	---CCGTTT	TGTTGTGAG	CTATTTTTAA	TAGTTTTTTA	CGACACCGG	TAAA---	-----	-----	-----	-----
<i>Spiroplectammina sp.</i>	TTTTTTT	---ATACAC	CGTAGCTATG	GTCACATTTA	TCACTCTCGG	GTGCTTTAAA	TGTGCATCTC	TGCGAGCGGT	AAA---	-----	-----
<i>Textularia sp.</i>	TTTTTTT	---CAC	CGTTCGCGG	TGTCCGTAAT	ATTTTGTGCT	ATTAATGCTA	TCTTATATTG	CGGTAA-	-----	-----	-----
<i>S. limosum</i>	TTTTTTT	---TAAAGT	AGTATTTTAT	TTTTTGTGTA	TGAAATTTTA	TTTTTTTATA	TTTTTTTATA	TTTTTTTATA	TTTTTTTATA	TTTTTTTATA	-----
<i>G. antarctica</i>	TTTTTTT	---ACACATC	GCATGCGGAG	GTCACATTTA	TCACTCTCGG	GTGCTTTAAA	TGTGCATCTC	TGCGAGCGGT	AAA---	-----	-----
<i>D. apheles</i>	TTTTTTT	---CACACG	CATGCGCGAG	TCCATTTTAT	CACTCTCGG	TGTTTAAA	GTGATCTC-	-----	-----	-----	-----
<i>P. peruviana</i>	TATATAT	---AAATAT	ATATTTTTAA	TACGGTTATT	ATATATATTA						

<i>M. secans</i>	GTGA-----	-----AT-G	GG-TAATCAT	TTGAAAAATCG	TGAT---TA	TTTCAATATA	CTACATTTTT	AAGTTATAAA	TTTTTAATTA	TAGTTTACTA
<i>Quinqueloculina sp.</i>	GTGA-----	-----AT-G	GG-TAATCAT	TTAAAAATCG	TGAT---TA	TTTCATTAT	ACTACATTTTT	ATAGTTATAA	ATTTATTAAT	ATACTTTATT
<i>N. haylinosphaira</i>	GTA-----	-----GT-A	GC-TAATCAA	TTCCGAAGTAA	TGAT-----	CCCTTGCATA	TTTTTATATAT	GTCCGTGATT	TTATGGGTGT	TTTCTCTTTT
<i>M. fusca</i>	GTA-----	-----AT-A	GG-TAATCAA	TTAAAAATCG	TGAT---TT	CCATACAACA	CATTTAAAAA	GGAATTATTG	TTTATAGTTT	AAATTTATTT
<i>T. alba</i>	GTTA-----	-----GC-A	GG-TAATCAC	TTGGGAAGTAA	TGAT-----	CCCTTATATAG	AAAATTTATT	TTTTGGTTT	GCGAGCACAC	AATGTGCTGC
<i>A. mexicana</i>	GTA-----	-----GT-G	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCTTATTTAG	CACAATPATA	TACGGCGTTT	ATGACCCGGT	TATCCTTTGT
<i>A. triangularis</i>	GTC-----	-----GT-A	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCCCTTTTTT	ATTTAAATGT	ATTTCAAA-T	TTATTTTTTT	AATATGTTTA
<i>A. raza</i>	GTC-----	-----GT-A	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCCCTTTTTT	ATTTAAATAT	AAATATAAAT	TTATTTTTTA	TTTGTGTTTA
<i>E. scabrum</i>	GTA-----	-----GT-G	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCCTAAATTT	TTTTTAATAG	CACACATATA	TACGGCATCT	TTACCCGTTA
<i>N. venosus</i>	GTA-----	-----GT-G	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCCTTATATAG	CACACATATA	TACGGCATCT	TTACCCGGCC	TGCCTTGTGT
<i>A. pseudocassisi</i>	GTA-----	-----GT-G	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCCTTATATAG	CACACATATA	TACGGCATCT	TTACCCGGCC	TGCCTTGTGT
<i>B. marginata</i>	GTA-----	-----GT-G	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCCTTATATAG	CACACATATA	TACGGCATCT	TTACCCGGCC	TGCCTTGTGT
<i>Trochammina sp.</i>	GTA-----	-----GT-G	GG-TAATCAA	TTAGAAGTAA	TGAT---TT	CCCTTATATAG	CACACATATA	TACGGCATCT	TTACCCGGCC	TGCCTTGTGT
<i>Peneroplis sp.</i>	GTA-----	-----AT-G	GG-TAATCAT	TTAAAAATCG	TGAT---TA	TTTCATACAT	ATGGTATATT	AAATATTGAT	AAATCTATAC	ATTTTATAGT
<i>S. orbiculus</i>	GTA-----	-----AT-C	GG-TAATCAT	TTAAAAATCG	TGAT---TA	ATTAA-----	-----	-----	-----	-----
<i>Allogromia sp.</i>	GTA-----	-----GT-T	GG-TAATCAA	TTCCGAAGTAA	TGAT---TT	CCTTTT-----	-----	-----GCAATA	AT---AATAT	TTTTTCCGAT

	1501	1511	1521	1531	1541	1551	1561	1571	1581	1591	1600
<i>G. siphonifera Ia1</i>	CTCTACATCC	CTAGCACATG	ATG--TC--	TAGTCCGATT	G--TAGTTG	AGTCTTG--C	CATT-----	-----	-----	-----	-----
<i>G. siphonifera Ia2</i>	CTCTACATCC	CTAGCACATG	ATG--TC--	TAGTCCGATT	G--TAGTTG	AGTCTTG--C	CATT-----	-----	-----	-----	-----
<i>G. siphonifera IIa1</i>	CTCTACATCC	CTAGTA-AT-	ATG--AC--	TAGTCCGATT	G--TAGTTG	AGCCTTG--C	CATT-----	-----	-----	-----	-----
<i>G. siphonifera IIa2</i>	CTCTACATCC	CTAGCA-AT-	ATG--CC--	TAGTCCGATT	G--TAGTTG	AGCCTTG--C	CATT-----	-----	-----	-----	-----
<i>G. siphonifera IIa3</i>	CTCTACATCC	CTAGTA-AT-	ATG--CC--	TAGTCCGATT	G--TAGTTG	AGCCTTG--C	CATT-----	-----	-----	-----	-----
<i>G. siphonifera IIb</i>	CTCTACATCC	CTAGTA-AC-	-----CC-	TAGTCCGATT	G--TAGTTG	AGCCTTG--C	CATT-----	-----	-----	-----	-----
<i>G. calida</i>	CCTCTAGTCC	CTAGTA-T-	AT---TC-	TAGTCCGATT	G--TAGTTG	AGTCT-G-C	CATT-----	-----	-----	-----	-----
<i>O. univversa I</i>	-CGG-----	-TCCAGGGC	TTA--TCCCT	TGGCA-----	-C--TGGTGC	AGCCAATG--	-ACG-----	-----	-----	-----	-----
<i>O. univversa III</i>	ACGG-----	-TTCAAATCT	CATTTGCGAC	TGTTCCGGCC	ATGA-----	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	-CGGGTCCGC	TTCCATCGGA	AAAGATTCTT	CCGGAATAAG	GC--TTATGC	AGGCATT-TC	-ACG-----	-----	-----	-----	-----
<i>G. ruber pink</i>	GGTTCGATAG	-AACCAATAT	CA-CCCAGCT	GCTA-----	CTCGTGCGG	CGTG-T-----	-----	-----	-----	-----	-----
<i>G. ruber Ia</i>	GGTGGTTTGT	TAACCAATAC	CATCCGGCAA	CTGC-----	-TCGGAGTT	TGTGGTT-----	-----	-----	-----	-----	-----
<i>G. ruber Ib1</i>	GGTGGTTTAC	GAACCAATAC	CATCCG-CAA	CTGC-----	-TCGGAGTT	TGTGGTT-----	-----	-----	-----	-----	-----
<i>G. ruber Ib2</i>	GGTGGTTTAC	GAACCAATAC	CATCCG-CAA	CTGC-----	-TCGGAGTT	TGTGGTT-----	-----	-----	-----	-----	-----
<i>G. ruber IIa</i>	CGTAGTGAA	GCTGCAAGT	GATTCCAGTC	TTAGGTTTGC	-----	-----	-----	-----	-----	-----	-----
<i>G. conglobatus</i>	GACATAGTGA	ACATTTGTAGA	CTTTGTCTATA	ATGATTTCCG	TCTTAGGTTT	GCGACGCATG	CTTT-----	-----	-----	-----	-----
<i>G. rubescens</i>	GGTGTCTCT	GTCAGTTTCA	TGTAATTGTG	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides Ia</i>	-----GGC	-----ACTGTTT	-----ACT-	-----CCC	-GTTTACAGA	GGAGAGATAG	AC-----	-----	TAA-CCA	CCTATTCTCG	
<i>G. bulloides Ib</i>	-----ACA	-----CCGTTCT	-----AGAGCA	GTGGTTATTC	-----	-----	-----	-----	TAA-CCA	TATTTCCAAT	
<i>G. bulloides IIa</i>	-----CGC	CTCCCGTGT	AGT-AGGG-	-----CCCC	-----TCGCAT	ATA-----	-----	-----	-----CCA	GTCGAAGTGG	
<i>G. bulloides IIb</i>	-----AGC	-TCCCGTGT	CGT-AGCGA	-----CCCC	-----TCGCAA	ATG-----	-----	-----	-----CCA	GTCGATGTGG	
<i>G. bulloides IIc</i>	-----AGT	CTCCCGTGT	CGT-AGTGG-	-----CCCC	-----GCGCA-	TTG-----	-----	-----	-----CCA	GTCGATGTGG	
<i>G. bulloides IID</i>	-----AGC	-TCCCGTGT	CGT-AGAGA-	-----CCCC	-----TCGCA-	TTG-----	-----	-----	-----CCA	GTCGATGTGG	
<i>G. bulloides IIE</i>	-----ATC	-TCCCGTGT	AGT-AGAGA-	-----CCCC	-----TCGCA-	TTA-----	-----	-----	-----CCA	GTCGATGTGG	
<i>T. quinqueloba Ia</i>	TCATGATT--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba Ib</i>	TCATGATT--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IIa</i>	TTATCATT--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IIb</i>	TTATCATT--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IIc</i>	TTATCATT--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IID</i>	TTATCATT--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. falconensis</i>	AACTTTGAAA	CTCCTGGTAA	CTTTTGGAT	TCTTTTCTTG	TCATCTTTTC	GTGTCACTTT	T-----	-----	-----	-----	-----
<i>H. pelagica</i>	TATTCACCTGA	GTAAGTGCGA	GTCCAAAGG	GGCATT-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	TAAACGCCCA	TCATGCTCG	AGCGTTCTCT	GATCCATTGT	GCAAGTCAGG	CGATCAGGTT	TCG-----	-----	-----	-----	-----
<i>G. unguata</i>	CGCCTATCCT	TTTGGTTAAG	CGATCAGATA	TCG-----	-----	-----	-----	-----	-----	-----	-----
<i>G. hirsuta</i>	TTGTGTACT	TATGTGCGAG	CGTGATGCA	GA-GCTTAAC	TTTTATTATT	CTTTATGCT	AATAGATCTC	TGATTTTACT	G-----	-----	-----
<i>G. scitula</i>	CGCCCTTTGT	AGTGTCTATG	TGCGAATGTA	ATGTTATGGC	TTTTTTATTA	ACGGCTATTCT	CTTAATAGTT	TTGTTATTA	CGGCTATAGT	TATCG-----	-----
<i>G. truncatulinoides</i>	GGATATTACT	ATCTCTCTAA	GGTCTACAGG	GAGGTGTATA	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma I</i>	GACGGCT-AG	TTCCGTCTTT	T-A-GTGCGA	AT-GTAGTG	TTATTCAAAC	G-----	-----	-----	-----	-----	-----
<i>N. pachyderma II</i>	GACGGCT-AG	TTTCGTCTTT	T-A-GTGCGA	AT-GTAGTG	TTATTCAAAC	G-----	-----	-----	-----	-----	-----
<i>N. pachyderma III</i>	GACGGCT-AG	TTTCGTCTTT	T-A-GTGCGA	AT-GTAGTG	TTATTCAAAC	G-----	-----	-----	-----	-----	-----
<i>N. pachyderma IV</i>	GACGGCT-AG	TTTCGTCTTT	T-A-GTGCGA	AT-GTAGTG	TTATTCAAAC	G-----	-----	-----	-----	-----	-----
<i>N. pachyderma V</i>	GACGGCT-AG	TTTCGTCTTT	T-A-GTGCGA	AT-GTAGTG	TTATTCAAAC	G-----	-----	-----	-----	-----	-----
<i>N. pachyderma VI</i>	GACGGCT-AG	TTTCGTCTTT	T-A-GTGCGA	AT-GTAGTG	TTATTCAAAC	G-----	-----	-----	-----	-----	-----
<i>N. pachyderma VII</i>	GACGGCT-AG	TTTCGTCTTT	T-A-GTGCGA	AT-GTAGTG	TTATTCAAAC	G-----	-----	-----	-----	-----	-----
<i>N. dutertrei_C</i>	GACGACT-AG	TTTCGTCTTT	TTT-GTGCGA	AT-GTAATG	-TATTCTTTA	TCCG-----	-----	-----	-----	-----	-----
<i>N. dutertrei_Ib</i>	GACGACT-AG	TTTCGTCTTT	TTT-GTGCGA	AT-GTAATG	-TATTCTTTA	TCCG-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata_BR</i>	GATGACT-AG	TTTCGTCTTT	TTT-GTGCGA	AT-GTAATG	-TATTCTTTA	TCCG-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata_AS</i>	GATGACT-AG	TTTCGTCTTT	TTT-GTGCGA	AT-GTAATG	-TATTCTTTA	TCCG-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	GACGGCTTAG	TTCCGACTTT	-----GTGCGA	AT-GTAATG	-TATT-CTTA	TCCG-----	-----	-----	-----	-----	-----
<i>G. crassaformis</i>	GACGGCTTAG	TTCCGACTTT	-----GTGCGA	AT-GTAATG	-TATT-CTTA	TCCG-----	-----	-----	-----	-----	-----
<i>N. incompta I</i>	GAGGACT-AG	TTCCCTCTTT	-----GTGTGA	GT-GTAATG	-CAAAATGA	ATAGCGACTG	TCGCTGTTTA	CTCA-----	-----	-----	-----
<i>N. incompta II</i>	GAGGACT-AG	TTCCCTCTTT	-----GTGTGA	GT-GCAATG	-CAAAATGT	CGGCGTAAAG	CTTCATTTA-	-----	-----	-----	-----
<i>G. glutinata Ia1</i>	GGTACTTCTG	TGCGTGCAGA	TGTTTTTTTT	-CCG-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata Ia2</i>	GGAACTTTTG	TGCGTGCAGA	TGTTTTTTTT	-CCG-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata Ia3</i>	GGAACTTTTG	TGCGTGCAGA	TGTTTTTTTT	-CCG-----	-----	-----	-----	-----	-----	-----	-----
<i>C. niuida</i>	TGATTCCCTT	GTGCGCTAG	ATGGATTCTT	-CCG-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	TCACGAGT-G	TTTCATTGCA	CGTGTGATG	TGCGGGTTCC	ATTCTTGCCT	TAC-----	-----	-----	-----	-----	-----
<i>B. variabilis</i>	CGG--CATAT	-CTACCCGGC	ATGCCT-TGT	TGCATGTTCT	TT-GTGCCTA	GATGTGTACC	CCTTTTTCCG	-----	-----	-----	-----
<i>S. globigerus</i>	CGG--CACAT	-CTACCCGGC	ATGCCT-TGT	TGCATGTTCT	TT-GTGCCTA	GATGTGTACC	CCTTTTTCCG	-----	-----	-----	-----
<i>B. alata</i>	TGG--CGCAT	-TTACCCGGC	ATGCCT-TGT	TGCATGTTAT	TT-GTGCCTA	GATGTGTACC	-----TTTTCCG	-----	-----	-----	-----
<i>G. vivans</i>	GTTGGTAGCT	TTTGTGTGTA	TAGATGTTTT	TTCCGTA---	-----	-----	-----	-----	-----	-----	-----
<i>C. porrectus</i>	GTTGTACTT	TTGTGCTAT	ACGGATATA	CTTTACCGAT	TATACTACCA	T-----	-----	-----	-----	-----	-----
<i>C. ovoidea</i>	TGCTAGTCTT	TTGTGTGTAG	AGATGAAACA	ACTTGTCTTA	TCATTGACTC	ACACTTTTTT	GGTGTGTTCA	GTGTATGAGT	TTAGTTTGT	TATCTTACC	-----
<i>G. opercularis</i>	TAGTGCCTGT	GTGCGTTCAG	TGGACCTTTT	ACGGTCTCTA	ACCAT-----	-----	-----	-----	-----	-----	-----
<i>E. aculeatum</i>	ACGTA-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. vitrea</i>	TTGTAGCTTT	TGTGCGTATA	GATGTTTTTT	CCG-----	-----	-----	-----	-----	-----	-----	-----
<i>H. germanica</i>	AATTTTATTA	TTTTTGTGTG	TGCATTCGAC	GCTCG-----	-----	-----	-----	-----	-----	-----	-----
<i>P. mediterraneensis</i>	TGTGCCAGAT	TCTTGTGTGT	ATTGACGATT	GCAAACATTA	TGTTTTCAAT	GCCTATTTAC	GGTACCAC-	-----	-----	-----	-----
<i>S. fusiformis</i>	GTTGATAGCT	TTTGTGTGTA	TAGATGTTTT	TTCCG-----	-----	-----	-----	-----	-----	-----	-----
<i>V. fragilis</i>	TTGTCACTT	CTGTGTGTAT	AGATGTATAT	CTCAATTAGA	TTCTTTATGT	CTTTTTTAG	ATTCTG---	-----	-----	-----	-----
<i>A. pseudocassisi</i>	TAGGCTCGG	TACGTAGCAG	TTTTTTTCG-	-----	-----	-----	-----	-----	-----	-----	-----
<i>Spiroplectammina sp.</i>	ATTAAGCTTG	TCTTAAATTT	T---GTGTGT	AAATAATGTT	TTTTCCG---	-----	-----	-----	-----	-----	-----
<i>Textularia sp.</i>	TTAACTTTTG	TGTGATCGA	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. limosum</i>	CATATTTATG	TCAAGTTTTT	TTCAATTAAT	CTTATTGTTT	TAAAAAAT	TTTTTTTTTT	ATATTATTCC	ATAGATATTT	GTTATTTGGCA	CTTTTGACAT	-----
<i>G. antarctica</i>	TTGTACTTCT	TGTGCGTATC	AGTGATACTT	TTGTGTTTAC	CACAATCGTA	TATTACCA-	-----	-----	-----	-----	-----
<i>D. apheles</i>	TTACCTTGTG	GTAGCTTTTT	TGCGTATAGA	TGTTTTTTCC	GTA-----	-----	-----	-----	-----	-----	-----
<i>P. peruviana</i>	ATTGTATTAA	TATCATAC	AA-----	-----	-----	-----	-----	-----	-----	-----	-----

M. secans TTTTATTAT TTATAA----
 Quinqueloculina sp. GTATTATTAA TTATTATATA
 N. haylinosphaira CAGAGTTTAC GTCTCCGTAT TATTTCAGTG-
 M. fusca ATTCTATTAC TTAAATTTCT T-
 T. alba TCTCTGTCTT GCTTGGGTAG CAATFACGTC TACFTTTTAG CTATACGGCA GAGATGTTCC TGACTTTTTT TATAAACAAA AAAACAAGGA ATTTACAGT-
 A. mexicana GGTAGCTTTT GTGTCATGA ATGATATTTT CCG-
 A. triangularis TTTAAAATTG ATGCACACTT TTATGCTAT GTTCTATT- AACATATTA GGATATTAAT ACTATTTATT AATAGTTTAA TTTCTAATTT TGTATAGTGT
 A. rara TTTAAAATTG ATGCACACTT TTATGCTAT GTTCTATT TTACATGTTA GAATATTAAT ACTATTTATT AATAGTTTAA TTTTAAATTT TGTGATAGTGT
 E. scabrum GTTTTTTTTT TTAAATTTCT ATTTTGTGCG TATTCATCGA ATCCCGTA-
 N. venosus CAGGTTTCTT GTGTGATTG ATGTTTTTTC CGT-
 A. pseudocassisi TTTGTGTGAG TGCAGTCCGT AGCTTTTGT TTCGTACGTG
 B. marginata GTAGCTTTTG TCGATATAGA TGTTTTTTCC GT-
 Trochammina sp. CCGG--CTTA AGCTTGCCCT AAG--TTTT GTGCGTAT-- --CGATG TTTTTTCCG-
 Peneroplis sp. ACTATTA--
 S. orbiculus
 Allogromia sp. TAATCTTAGT CTTTTTAGAT TTTGTATTAA AGTTAAAA--
 407 BP MARKER

	1601	1611	1621	1631	1641	1651	1661	1671	1681	1691	1700
G. siphonifera Ia1			TATGC--AA-	-GTGTC	CAAT	T--	CTCA				
G. siphonifera Ia2			TATGC--AA-	-GTGTC	CAAT	T--	CTCA				
G. siphonifera IIa1			TATGC--AA-	-GTGTC	CAAT	T--	CTCA				
G. siphonifera IIa2			TATGC--AA-	-GTGTC	CAAT	T--	CTCA				
G. siphonifera IIa3			TATGC--AA-	-GTGTC	CAAT	T--	CTCA				
G. siphonifera IIb			TATGC--AA-	-GTGTC	CAAT	T--	CTCA				
G. calida			TATGC--AA-	-GTGTC	CAAT	T--	CTCA				
O. univversa I			TATGC--AA-	-TTGT	CAAT	T--	CTAC				
O. univversa III			CG TATGC--AAC	-TTGT	CAAT	T--	CTTC				
G. sacculifer			TATGC--TC	-CTATA	AAAT	T--	CCTG				
G. ruber pink			TATTC--C	-TGG-	TGAC	T--	CATG				
G. ruber Ia				-TGG-	CGAC	T--	CATG				
G. ruber Ib1				-TGG-	TGAC	T--	CATG				
G. ruber Ib2				-TGG-	TGAC	T--	CATG				
G. ruber IIa			GACAC ATGCAAT	TTCC	-TGG	TTGAC	T--	CATC			
G. conglobatus				-TGG	TTGAC	T--	CATC				
G. rubescens			GGCGT-TCTT	-TG	TTGAC	T--	CATC				
G. bulloides Ia	ACTCGC		CCGCC--CAT	-CTTT	CAAT	T--	CTTG				
G. bulloides Ib	GCTC		GGCTC-TCAA	-CTGT	CAAT	T--	CTTG				
G. bulloides IIa	GCCCT		TTGTG--CTT	-TTTT	CAAA	T--	CTTA				
G. bulloides IIb	GTCCT		TTGTG--CTT	-TTTT	CAAA	T--	CTTA				
G. bulloides IIc	GTCCT		TTGTG--CTT	-TTTT	CAAA	T--	CTTA				
G. bulloides IID	GTCCT		TTGTG--CTT	-TTTT	CAAA	T--	CTTA				
G. bulloides IIE	GTCCT		TTGTG--CTT	-TTTT	CAAA	T--	CTTA				
T. quinqueloba Ia			CACTA--GTA	CGCTT	CTAAT	T--	CACA				
T. quinqueloba Ib			CACTA--GTA	CGCTT	CTAAT	T--	CACA				
T. quinqueloba IIa			CGCTA--GTA	-TTGT	TAAAT	T--	CACA				
T. quinqueloba IIb			CTCTA--GTA	-TTGT	TAAAT	T--	CACA				
T. quinqueloba IIc			CTCTA--GTA	-TTGT	TAAAT	T--	CACA				
T. quinqueloba IID			CTCTA--GTA	-TTGT	TAAAT	T--	CACA				
G. falconensis			TGCTG--GCAA	-TCT	CAAT	T--	CACA				
H. pelagica			TCTGC--AA	-TTGT	CAAT	T--	CACA				
G. menardii			CATGT-ACCA	-TTGT	TAAAT	T--	CCGG				
G. ungulata			CATGT-ACCA	-TTGT	TAAAT	T--	CCGG				
G. hirsuta			TATGT-GCAA	-TTGT	CAAT	T--	CATG				
G. scitula			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
G. truncatulinoidea			-TGG-	CGAC	-TTACT	TAT	CACG				
N. pachyderma I			TACGT-GCAA	-TTGT	CAAT	T--	CATG				
N. pachyderma II			TGCGT-GCAA	-TTGT	CAAT	T--	CATG				
N. pachyderma III			TGCGT-GCAA	-TTGT	CAAT	T--	CATG				
N. pachyderma IV			TGCGT-GCAA	-TTGT	CAAT	T--	CATG				
N. pachyderma V			TGCGT-GCAA	-TTGT	CAAT	T--	CATG				
N. pachyderma VI			TGCGT-GCAA	-TTGT	CAAT	T--	CATG				
N. pachyderma VII			TGCGT-GCAA	-TTGT	CAAT	T--	CATG				
N. dutertrei_C			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
N. dutertrei_Ib			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
P. obliquiloculata_BR			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
P. obliquiloculata_AS			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
G. inflata			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
G. crassaformis			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
N. incompta I			TATGT-GCCC	-CTGT	CAAT	T--	CGTG				
N. incompta II			TATGT-GCCC	-CTGT	CAAT	T--	CGTG				
G. glutinata Ia1			CATGT-GCAA	-TTGT	CAAT	T--	CATG				
G. glutinata Ia2			TAAGT-GCAA	-TTGT	CAAT	T--	CATG				
G. glutinata Ia3			TAAGT-GCAA	-TTGT	CAAT	T--	CATG				
C. nitida			TATGT-GCAA	-TTGT	CAAT	T--	CATG				
G. uvula			CT TATGT-GCAA	-TTGT	CAAT	T--	CATG				
B. variabilis			CATGT-GCAA	-TTGT	CAAT	T--	CATG				
S. globigerus			CATGT-GCAA	-TTGT	CAAT	T--	CATG				
B. alata			CATGT-GCAA	-TTGT	CAAT	T--	CATG				
G. vivans			-TGT-GCAA	-TTGT	CAAT	T--	CATG				
C. porrectus			-ATGT-GCAA	-TTGT	CAAT	T--	CATG				
C. ovoidea	GT		-ATGT-GCAA	-TTGT	CAAT	T--	CATG				
G. opercularis			TCGTG-CAA-	-TTGT	CAAT	T--	CATG				
E. aculeatum			TACGC-GTAA	-ATATTA	TAAAT	T--	CATG				
E. vitrea			TATGT-GCGA	-TTGT	CAAT	T--	CATG				
H. germanica			TATGT-GCAA	-TTGT	CAAT	T--	CATG				
P. mediterraneensis			-ATGT-GCAA	-TTGT	CAAT	T--	CATG				
S. fusiformis			TATGT-GCAA	-TTGT	CAAT	T--	CATG				
V. fragilis			TATGT-GCAA	-TTGT	CAAT	T--	CATG				
A. pseudocassisi			TGCGT-GCAA	-TTGT	TAAAT	T--	CATG				
Spiroplectammina sp.			TATGT-GCAA	-TTGT	CAAT	T--	CATG				
Textularia sp.			CATGT-GCAA	-TTGT	CAAT	T--	CATG				
S. limosum	GTGCTCCA		TTTTT-TTA-	-ATG	ACAAT	T--	CGTG				
G. antarctica			TATGT-GCAA	-TTGT	CAAT	T--	CATG				
D. aphelis			-TGT-GCGA	-TTGT	CAAT	T--	CATG				
P. peruviana			TA TGTGT-GAT-	-TAA	TAAAT	T--	TAAAG				

<i>M. secans</i>	-----	CTGTA-GTAT	--TAATTAAT	T-----	TAAG	-----	GTG	-GGGATAGTG	AATTGT--TA	ATTATTTCAC	TTGGCCTTAA	
<i>Quinqueloculina sp.</i>	-----	CTGTA-GTAT	--TAATTAAT	T-----	TAAG	-----	GTG	-GGGATAGTG	AATTGT--TA	ATTATTTCAC	TTGGCCTTAA	
<i>N. haylinosphaera</i>	-----	GCATG-TGCT	--CCATTAAT	T-----	CGTG	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTGTGGTC	TCCGCTCAA	
<i>M. fusca</i>	-----	TGTGT-TATT	--AATTAAT	T-----	CCAAG	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTGTGGTC	TCCGCTCAA	
<i>T. alba</i>	-----	GCGTG-CTTT	--TTGTCAAT	T-----	CATG	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTATTGGTC	TCCGCTCAA	
<i>A. mexicana</i>	-----	TATGT-GCAA	--ATGTCAAT	T-----	CATT	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTGTGGTC	TCCGCTCAA	
<i>A. triangularis</i>	ACTGACATGT	GCTCTCATGT	TTTTT-TAAA	-TGTTCAAT	T-----	CGTG	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTGTGGTC	TCCGCTCAA
<i>A. scabrum</i>	ACTGACATGT	GCT---CTCA	TATTT-TAAA	-TGTTCAAT	T-----	CGTG	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTGTGGTC	TCCGCTCAA
<i>E. rarerum</i>	-----	-----	-----	-----	-----	-----	-----	GTG	-GGGATAGTG	CATTGT--TA	ATTATTTCAC	TCCGCTCAA
<i>N. venosus</i>	-----	-----	ATGTG-CGA-	-TTGTCAAT	T-----	CATG	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTGTGGTC	TCCGCTCAA
<i>A. pseudocassisi</i>	-----	-----	--CCA-CTCC	--TAATTAAT	T-----	CGTA	C-----	GTG	-GGGATAGTG	TATTGT--TA	ATTATTTCAC	TCCGCTCAA
<i>B. marginata</i>	-----	-----	ATGTG-CGA-	-TTGTCAAT	T-----	CATG	-----	GTG	-GGGACAGAC	CATTGT--TA	ATTGTGGTC	TCCGCTCAA
<i>Trochammina sp.</i>	-----	-----	TATGT-GCAA	-TTGTCAAT	T-----	CATG	-----	GTG	-GGGACAGAC	CATTGT--TA	AGTGTGGTC	TCCGCTCAA
<i>Peneroplis sp.</i>	-----	-----	-----	-----	-----	-----	-----	GTG	-GGGATAGTG	TATTGT--TA	ATTATTTCAC	TCCGCTCAA
<i>S. orbiculus</i>	-----	-----	TATAA-ATA-	--TAATTAAT	T-----	TAAG	-----	GTG	-GGGATAGTG	TATTGT--TA	ATTATTTCAC	TCCGCTCAA
<i>Allogromia sp.</i>	-----	-----	TATGT-GCT-	--CCTTTAAT	T-----	CATG	-----	GTG	-GGGACTGAC	CATTGT--TA	ATTGTGGTC	AGC-TCTCAA
407 BP MARKER	-----	-----	-----	-----	-----	-----	-----	mmmmmmmmmm	-----	-----	mmmmmmmmmm	mmmmmmmmmm

	1701	1711	1721	1731	1741	1751	1761	1771	1781	1791	1800
<i>G. siphonifera Ia1</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>G. siphonifera Ia2</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>G. siphonifera IIa1</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>G. siphonifera IIa2</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>G. siphonifera IIa3</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>G. siphonifera IIa</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>G. calida</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>O. universa I</i>	CTAGGAATGC	CTTGTACGGG	CCTT-GGTTT	ATT-ATGCCG	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	ATTG--AACT	
<i>O. universa III</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	ACC-ATACCG	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	ATTG--AACT	
<i>G. sacculifer</i>	CTAGGAATGC	CTTGTACGGG	TG--GGGTAG	CAC-ATTCCA	CCCGGATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCA	ATTG--AACAA	
<i>G. ruber pink</i>	CCGGGAATGC	CTTGTACTGT	CG---ATTTC	ACT-AGTTTA	TGGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GCTT	
<i>G. ruber Ia</i>	CTAGGAATGC	CTTGTACTGT	CG---ATTTC	ACT-AGTTTA	TGGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GCTG	
<i>G. ruber Ib1</i>	CTAGGAATGC	CTTGTACTGT	CG---ATTTC	ACT-AGTTTA	TGGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GCTT	
<i>G. ruber Ib2</i>	CTAGGAATGC	CTTGTACTGT	CG---ATTTC	ACT-AGTTTA	TGGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GCTT	
<i>G. ruber IIa</i>	CTAGGAATGC	CTTGTACGGG	CG---GCTC	ATT-AAACCG	CTGGATATA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--ACTT	
<i>G. conglobatus</i>	CCGGGAATGC	CTTGTACTGT	CG---GCTC	ATT-AAACCG	CTGGATATA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--ACTT	
<i>G. rubescens</i>	CCGGGAATGC	CTTGTACGGG	TTCCCGGTTT	ACC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-CACCA	A-TG--AGCT	
<i>G. bulloides Ia</i>	CCAGGAATGC	CTCGTACAGG	TT---GGTTC	ACC-ATACCA	CCCGGAATTA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--AACT	
<i>G. bulloides Ib</i>	CCAGGAATGC	CTCGTACAGG	TT---GGTTC	ACC-ATACCA	CCCGGAATTA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--AACT	
<i>G. bulloides IIa</i>	CCAGGAATGC	CTCGTACAGG	TT---GGTTC	ACC-ATACCA	CCCGGAATTA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--AACT	
<i>G. bulloides IIb</i>	CCAGGAATGC	CTCGTACAGG	TT---GGTTC	ACC-ATACCA	CCCGGAATTA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--AACT	
<i>G. bulloides IIc</i>	CCAGGAATGC	CTCGTACAGG	TT---GGTTC	ACC-ATACCA	CCCGGAATTA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--AACT	
<i>G. bulloides IID</i>	CCAGGAATGC	CTCGTACAGG	TT---GGTTC	ACC-ATACCA	CCCGGAATTA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--AACT	
<i>G. bulloides IIE</i>	CCAGGAATGC	CTCGTACAGG	TT---GGTTC	ACC-ATACCA	CCCGGAATTA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--AACT	
<i>T. quinqueloba Ia</i>	CTAGGAATGC	CTAGTATTGA	TG---GTTT	ACT-AAACTT	CTGGGAATAA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--GCCC	
<i>T. quinqueloba Ib</i>	CTAGGAATGC	CTAGTATTGA	TG---GTTT	ACT-AAACTT	CTGGGAATAA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--GCCC	
<i>T. quinqueloba IIa</i>	CTAGGAATGC	CTCGTATTTG	TG---GTTT	ATT-ATACT	CGTGAATAA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--GCCC	
<i>T. quinqueloba IIB</i>	CTAGGAATGC	CTCGTATTTG	TG---GTTT	ATT-ATACT	CGTGAATAA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--GCCC	
<i>T. quinqueloba IIc</i>	CTAGGAATGC	CTCGTATTTG	TG---GTTT	ATT-ATACT	CGTGAATAA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--GCCC	
<i>T. quinqueloba IID</i>	CTAGGAATGC	CTCGTATTTG	TG---GTTT	ATT-ATACT	CGTGAATAA	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCA	A-TG--GCCC	
<i>G. falconensis</i>	CTAGGAATGC	CTCGTACAGG	TT---GGTTC	ATC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTTT-TACCG	A-TG--AACT	
<i>H. pelagica</i>	CTAGGAATGC	CTCGTACGGG	TG---AATC	ATT-ATTTCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>G. menardii</i>	CCAGGAATGC	CTCGTACGGG	TTT---GGTTT	AAC-ATACCA	CCCGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TT--GTCT	
<i>G. unguolata</i>	CTAGGAATGC	CTCGTACAGG	T-T---GGTTT	AAC-ATACCA	CCCGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TT--GTCT	
<i>G. hirsuta</i>	CTAGGAATGC	CTCGTACGGG	TCT-TGGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. scitula</i>	CTAGGAATGC	CTCGTACGGG	TCT-TGGTTT	AAC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. truncatulinoides</i>	CTAGGAATGC	CTCGTACGGG	TT---GGTTC	ACC-AAACCA	CCCGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. pachyderma I</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. pachyderma II</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. pachyderma III</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. pachyderma IV</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. pachyderma V</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. pachyderma VI</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. pachyderma VII</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. dutertrei_C</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. dutertrei_Ib</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>P. obliquiloculata_BR</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>P. obliquiloculata_AS</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. inflata</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. crassaformis</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. incompta I</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>N. incompta II</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. glutinata Ia1</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. glutinata Ia2</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. glutinata Ia3</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>C. niitida</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. uvula</i>	CTAGGAATGC	CTTGTATGAG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>B. variabilis</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>S. globigerus</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>B. alata</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. vivans</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. porrectus</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. ovoidea</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>G. opercularis</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>E. aculeatum</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>E. vitrea</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>H. germanica</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>P. mediterraneensis</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>S. fusiformis</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>V. fragilis</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>A. pseudocassisi</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>Spiroplectamina sp.</i>	CTAGGAATGC	CTTGTACGGG	TCTT-GGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>Textularia sp.</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>S. limosum</i>	CTAGGAATGC	CTTGTACTGG	TCTTTGGTTT	AAC-AAACCA	CCAGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GGCT	
<i>G. antarctica</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>D. apelis</i>	CTAGGAATGC	CTTGTACTGG	TCTTTGGTTT	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AACT	
<i>P. peruviana</i>	CTAGGAATGC	CTTGTACTGT	TCTTTGGTTT	ATC-ATACCA	ACAGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	

Species	1801	1811	1821	1831	1841	1851	1861	1871	1881	1891	1900
<i>M. secans</i>	CTAGGAATGC	CTTGTACTGT	TCCTTGGTTC	AAC-ATACCA	ACAGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>Quinqueloculina sp.</i>	CTAGGAATGC	CTTGTACTGT	TCCTTGGTTC	AAC-ATACCA	ACAGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>N. haylinosphaira</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AGACCA	CCCGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>M. fusca</i>	CTAGGAATGC	CTTGTACTGG	TCTTTGGTTC	ATC-AGACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>T. alba</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>A. mexicana</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>A. triangularis</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>A. rara</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>E. scabrum</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>N. venosus</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>A. pseudocassisi</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-ATACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GATT	
<i>B. marginata</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>Trochammina sp.</i>	CTAGGAATGC	CTTGTACGGG	TCTTTGGTTC	AAC-AAACCA	CCCGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
<i>Peneroplis sp.</i>	CTAGGAATGC	CTTGTACTCT	TCTTTGGTTC	AAC-ATACCA	AGAGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>S. orbiculus</i>	CTAGGAATGC	CTTGTACTCT	TCTTTGGTTC	AAC-ATACCA	AGAGGAATAC	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--AATT	
<i>Allogromia sp.</i>	CTAGGAATGC	CTTGTACTGG	TCT-TGGTTC	AAC-AAACCA	CCAGGAATAT	GTCCCTGCC	TTTGTACACA	CCGCCCGTCG	CTCT-TACCG	A-TG--GACT	
407 BP MARKER	mmmmmmmmmm	mmmmmmmm	-----mmmm	mmm-mmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	m-mm-mmmmm
	1801	1811	1821	1831	1841	1851	1861	1871	1881	1891	1900
<i>G. siphonifera Ia1</i>	GTA-CTG-TG	AG----TTT	GCAGGACCGA	----ACCCA	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera Ia2</i>	GTA-CTG-TG	AG----TTT	GCAGGACCGA	----ACCCA	-----	-----	-----	-----	-----	-----	-----
<i>G. siphonifera IIa1</i>	TCC-CTG-TG	AG----TTT	GAAGGACTGA	----TGGTT	GNAAAAATC	-----	-----	-----	-----	-----	-----
<i>G. siphonifera IIa2</i>	TCC-CTG-TG	AG----TTT	GAAGGACTGA	----TGGTT	GCAAAATC	-----	-----	-----	-----	-----	-----
<i>G. siphonifera IIa3</i>	TCC-CTG-TG	AG----TTT	GAAGGACTGA	----TGGTT	G-AAAATC	-----	-----	-----	-----	-----	-----
<i>G. siphonifera IIa</i>	TCC-CTG-TG	AG----TTT	GAAGGACTGG	----TGGTT	GCAAAATC	-----	-----	-----	-----	-----	-----
<i>G. siphonifera IIb</i>	TCC-CTG-TG	AG----TTT	GAAGGACTGG	----TGGTT	GCAATGACT	-----	-----	-----	-----	-----	-----
<i>G. calida</i>	TCA-CTG-TG	AG----TTC	AATGGACCGA	----TTTTT	TCCC	-----	-----	-----	-----	-----	-----
<i>O. universa I</i>	TTA-CTG-TG	AG----TTT	AAAGGACCGA	----TCA	-----	-----	-----	-----	-----	-----	-----
<i>O. universa III</i>	ATA-CTG-CG	AG----TTT	GAAGGACCGA	----GTCTC	TGGCA	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	GCA-CTA-CG	AG----TTT	AAAGGCCCGA	----GAA	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber pink</i>	TGG-CTG-CG	AG----TAA	AAGGGACTTT	----CG	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber Ia</i>	TGT-GTG-TG	AG----TAA	GACGACTGT	----TA	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber Ib1</i>	TGT-GTG-TG	AG----TAA	GACGGACAAT	----TA	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber Ib2</i>	TGT-GTG-TG	AG----TAA	GACGGACAAT	----TA	-----	-----	-----	-----	-----	-----	-----
<i>G. ruber IIa</i>	TGA-CTG-TG	AG----TAG	GACTGACCGT	----TTA	-----	-----	-----	-----	-----	-----	-----
<i>G. conglobatus</i>	TGA-CTG-TG	AG----TAG	GCTGGACTGA	----	-----	-----	-----	-----	-----	-----	-----
<i>G. rubescens</i>	TGA-GTG-TG	AG----TAG	GTGAGACTGA	----GTAAT	TATTTAC	-----	-----	-----	-----	-----	-----
<i>G. bulloides Ia</i>	ACT-TTG-CG	AG----AGT	GTGGGACCTA	----TGAGC	TTTCAAG	-----	-----	-----	-----	-----	-----
<i>G. bulloides Ib</i>	ACT-TTG-CG	AG----ACT	ATGG-ACCT	GA-AGCAT	AGGATTGAAC	TGC	-----	-----	-----	-----	-----
<i>G. bulloides IIa</i>	TCT-TTG-CG	AG----CGT	GAGAGACTAA	----AAT	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides IIb</i>	TCT-TTG-CG	AG----AGT	AAGAGACTTG	----TAATA	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides IIc</i>	TCT-TTG-CG	AG----AGT	GAGAGACTGA	----AATGT	-----	-----	-----	-----	-----	-----	-----
<i>G. bulloides IID</i>	TCT-TTG-CG	AG----AGT	GAGAGACTTA	----AAGAT	A	-----	-----	-----	-----	-----	-----
<i>G. bulloides IIe</i>	TCT-TTG-TG	AG----AGT	GAGGGACTGG	-----	-----	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba Ia</i>	TCG-TTG-TG	AG----TGA	GCTGGACAAG	----TTATT	T	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba Ib</i>	TCG-TTG-TG	AG----TGA	GCTGGACAAG	----TTATT	T	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IIa</i>	TCG-TTG-TG	AG----ATA	GCTGGACAAG	----TATTT	A	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IIb</i>	TCG-TTG-TG	AG----ATA	GCTGGACAAG	----TATTT	A	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IIc</i>	TCG-TTG-TG	AG----ATA	GCTGGACAAG	----TATTT	A	-----	-----	-----	-----	-----	-----
<i>T. quinqueloba IID</i>	TCG-TTG-TG	AG----ATA	GCTGGACAAG	----TATTT	A	-----	-----	-----	-----	-----	-----
<i>G. falconensis</i>	TTT-TTG-CG	AG----TAT	GATGGACTAA	----CTTTG	CGCTCAATTT	GAA	-----	-----	-----	-----	-----
<i>H. pelagica</i>	ACG-CTG-TG	AG----TTT	AAGGGACTGG	----CTGTC	ATTCAATGAT	AAGC	-----	-----	-----	-----	-----
<i>G. menardii</i>	GTG-TTG-TG	AG----TAT	TAGCGATAGA	----TCT	-----	-----	-----	-----	-----	-----	-----
<i>G. unguolata</i>	GTG-TTG-TG	AG----TAT	TCCGATAGA	----ACTAC	TGACTAGACT	ATACGATGTT	GTTG	-----	-----	-----	-----
<i>G. hirsuta</i>	TCT-TTG-TG	AG----TCT	AAGGGACTGG	----GTAAT	GATTCATCT	TTTCTAAAGT	TTGAATTACC	-----	-----	-----	-----
<i>G. scitula</i>	ACC-TTG-TG	AG----CCT	GAGGGACTGG	----ATTTT	TCTATTTCTT	TAATAGATTT	CTAATC	-----	-----	-----	-----
<i>G. truncatulinoidea</i>	CAC-TTG-TG	AG----GCT	GAGGGACTGG	----GTCTA	TTTATACCCG	TGTAATCCTA	ATATCTCACA	TACATTTCCG	TAAAGGCCAT	TTTGCTTTAA	-----
<i>N. pachyderma I</i>	TTT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	ACCACCTCGTT	TA-TT	-----	CGGATGGC	A	-----	-----
<i>N. pachyderma II</i>	TTT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	ACCACCTCGTT	TA-TT	-----	CGGATGGC	A	-----	-----
<i>N. pachyderma III</i>	TTT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	ACCACCTCGTT	TA-TTTAATA	AGCGGATGGC	A	-----	-----	-----
<i>N. pachyderma IV</i>	TTT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	ACCACCTCGTT	C--TT	-----	CGGATGGC	A	-----	-----
<i>N. pachyderma V</i>	TTT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	ACCACCTCGCT	T----	TATTA	AGCGGATGGC	A	-----	-----
<i>N. pachyderma VI</i>	TTT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	ACCACCTCGCT	TAATTTATTA	AGCGGATGGC	A	-----	-----	-----
<i>N. pachyderma VII</i>	TTT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	ACCCTCGCT	TA-TT	-----	CGGATGGC	A	-----	-----
<i>N. dutertrei_C</i>	TCT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	TCTGTAATTC	TATTATAG	AT	-----	-----	-----	-----
<i>N. dutertrei_Ib</i>	TCT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	TCTGTAATTC	TATTATAG	AT	-----	-----	-----	-----
<i>P. obliquiloculata_BR</i>	TCT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	TAGCTATTTT	TA-TAGTT	AT	-----	-----	-----	-----
<i>P. obliquiloculata_AS</i>	TCT-TTG-TG	AG----TCT	AAGGGACTGG	----GTTAA	TATTTATTTT	TAATAGTT	AT	-----	-----	-----	-----
<i>G. inflata</i>	TCT-TTG-TG	AG----TCT	TGGGGACTGG	----GTTAA	GCGATTTCTT	TTAGAATGAG	CTC	-----	-----	-----	-----
<i>G. crassaformis</i>	TCT-TTG-TG	AG----TCT	TGGGGACTGG	----GTTAA	GCGATTTCTT	TTTGAATGAG	CTC	-----	-----	-----	-----
<i>N. incompta I</i>	CGT-TTG-TG	AG----TTT	TAAGGACTGG	----ATTAA	GCTATATGC	-----	-----	-----	-----	-----	-----
<i>N. incompta II</i>	CGT-TTG-TG	AG----TTT	TAAGGACTGG	----ATTAA	GCTATATGC	-----	-----	-----	-----	-----	-----
<i>G. glutinata Ia1</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----ATTTG	ATC-GCTTCG	GCGCATTAAAT	AT	-----	-----	-----	-----
<i>G. glutinata Ia2</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----ATTTG	ATC-GCCTTC	GTGCGCATTA	ACAT	-----	-----	-----	-----
<i>G. glutinata Ia3</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----ATTTG	ATC-GCATT	GTGCGCATTA	ACAT	-----	-----	-----	-----
<i>C. niitida</i>	TCT-CTG-TG	AG----TTT	GAGGGACT-G	GGTAA--CG	CTT-CGGCGT	GAA-C	-----	-----	-----	-----	-----
<i>G. uvula</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----AGCTT	ACTTTACTGT	GAGTCT	-----	-----	-----	-----	-----
<i>B. variabilis</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGT	----C--TT	TGGCTGTT-A	TA---CGT-C	TCG--GCG-T	ATACTACCAT	CT	-----	-----
<i>S. globigerus</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGT	----C--TT	TGGCTGTT-A	TA---CGT-C	TCG--GCG-T	ATACTACCAT	CT	-----	-----
<i>B. alata</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGC	----TGCT	CGGACTAAT	ATTATCTCAC	GATACATATT	TACGCGCAT	-----	-----	-----
<i>G. vivans</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GAACG	CAGTGCTTTT	TTGCTCTGCA	CACC	-----	-----	-----	-----
<i>C. porrectus</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----TAAAT	TAAATAATAT	CATGATTTTA	TACSTGTTTT	ATTTGTAC	-----	-----	-----
<i>C. ovoidea</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GTAAT	CTTTACACC	-----	-----	-----	-----	-----	-----
<i>G. opercularis</i>	TCT-CTG-TG	AG----TTT	GAAGGACTGG	----CCTTC	TGTGC	-----	-----	-----	-----	-----	-----
<i>E. aculeatum</i>	TCG-CTA-TG	AA----TCT	ATTAGACTGC	----GTTAT	ACG	-----	-----	-----	-----	-----	-----
<i>E. vitrea</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GAACG	CAGGTTTTTT	ATTAAATCTG	CACACC	-----	-----	-----	-----
<i>H. germanica</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----ATTTT	ATATC	-----	-----	-----	-----	-----	-----
<i>P. mediterraneensis</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GTTAC	CTTAAATAAC	C	-----	-----	-----	-----	-----
<i>S. fusiformis</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GAACG	CAGTGCTCTT	TACTGAGCTT	ACTGCACACC	-----	-----	-----	-----
<i>V. fragilis</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GTATT	TTTGGC	-----	-----	-----	-----	-----	-----
<i>A. pseudocassisi</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----ATCTT	GCATC	-----	-----	-----	-----	-----	-----
<i>Spiroplectammina sp.</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GTATT	AAGAAAAAT	TTATTTTATC	TTT	-----	-----	-----	-----
<i>Textularia sp.</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GTACT	GCTATAAAT	TATTTACTGC	TATCACC	-----	-----	-----	-----
<i>S. limosum</i>	ACT-CTG-TG	AG----TTT	GAGGGACTGG	----TTTGA	GTAAGTTTTT	ATTAAATTAC	ACAAC	-----	-----	-----	-----
<i>G. antarctica</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----TATAT	GATGCCACAG	TTTTTTTTAT	TCGTAATAAA	AAATGTGATC	CCAC	-----	-----
<i>D. aphelis</i>	TCT-CTG-TG	AG----TTT	GAGGGACTGG	----GAACG	CAGGAATTTA	TTTCTGCACA	CC	-----	-----	-----	-----
<i>P. peruviana</i>	ATA-TTA-TA	AA----TCT	AAGGGACTTA	----AAGAA	TATTTTATAT	ATTT	-----	-----	-----	-----	-----

M. secans ATA-TTA-TA AA----TCT AAGGGACTTA ----AAATA TAATTTATTA TAT-----
 Quinqueloculina sp. ATA-TTA-TA AA----TCT AAGGGACTTA ----AAATA TAATTTATAT AT-----
 N. haylinosphaira TCT-CTG-TG AG----TTT GAGGGACTGG ----GAAAC TCCTTTTC-----
 M. fusca TCT-TTG-TG AG----TTT GAGGGACTGG ----AATAT TTCGGTATC-----
 T. alba TCT-CTG-TG AG----TTT GAGGGACTGG ----GTACC TTAGCTTTGT CGGTTAGGCG GTTTTTATTA ACTGCTTCG ACACATATAA CACT-----
 A. mexicana TCT-CTG-TG AG----TTT GAGGGACTGG ----GAAAA TATAACGAAT TTATTCGTTG TATCACC-----
 A. triangularis ACT-CTG-TG AG----TTT GAGGGACTGG ----TTTGA ATTTTAAAGT ATATGTATAT TTATTTATAT ATATTACTTT TTATATAATT CAGGC-----
 A. rara ACT-CTG-TG AG----TTT AAGGGACTGG ----TTTGA ATTAATATAA TTTTTTATAG AAATTTATTT TTTATTATTA TATTATATA TATTCAGGC-----
 E. scabrum TCT-CTG-TG AG----TTT GAGGGACTGA ----CTGCG TATCGC-----
 N. venosus TCT-CTG-TG AG----TTT GAGGGACTGG ----GAACG CATATCTCTA TATGCACACC-----
 A. pseudocassiss ATG-CTA-TG AA----TCT ATAGGACTGC ----CAAGG TTGCCCTCGC TGCTT-----
 B. marginata TCT-CTG-TG AG----TTT GAGGGACTGG ----GAACG CGAAGTTAT TTATAAACA ACGCACCTGC C-----
 Trochammina sp. TCT-CTG-TG AG----TTT GAGGGACTGG ----ATAT -TGTAAATTT CGGTTACTAC CATC-----
 Peneroplis sp. ATA-TTA-TA AA----TCT AAGGGACATA ----CATAT TCTGAAATTT AATA-----
 S. orbiculus ATA-TTA-TA AA----TCT AAGGGATTTA ----TTATA ATTTAAAA-----
 Allogromia sp. AAT-CTG-TG AG----TAT ACAGGACGGG ----AACTC TATCTTCTGA TTGAGTTC-----
 407 BP MARKER mmm-mmm-mm mm-----

	1901	1911	1921	1931	1941	1951	1961	1971	
G. siphonifera Ia1	-----	-----	TTT	TTGGG-TTTG	GAAAT-GCAG	-TCAAA----	--CAGTA-CG	ATTTAA-AGG	AAAGAGAA
G. siphonifera Ia2	-----	-----	TTT	TTGGG-TTTG	GAAAT-GCAG	-TCAAA----	--CAGTA-CG	ATTTAA-AGG	AAAGAGAA
G. siphonifera Ila1	-----	-----	-----	ATTG	GAAAT-TCTG	-TCAAA----	--CAGCG-AG	ATTTAA-AGG	AAAGAGAA
G. siphonifera Ila2	-----	-----	-----	ATTG	GAAAT-TCTG	-TCAAA----	--CAGCG-AG	ATTTAA-AGG	AAAGAGAA
G. siphonifera Ila3	-----	-----	-----	ATTG	GAAAT-TCTG	-TCAAA----	--CAGCG-AG	ATTTAA-AGG	AAAGAGAA
G. siphonifera Iib	-----	-----	-----	ATTG	GAAAT-TCTG	-TCAAA----	--CAGCG-AG	ATTTAA-AGG	AAAGAGAA
G. calida	-----	-----	-----	TTTG	GAAAT-TTGG	-TCAAA----	--CAGTG-AG	ATTTAA-AGG	AAAGAGAA
O. universa I	-----	-----	-----	TTTG	GAAAT-TTAG	-TCAAA----	--CAGAG-TT	GTTTAA-AGG	AAAGAGAA
O. universa III	-----	-----	-----	CTTG	GAAAT-TTAG	-TCAAA----	--CAGAG-TT	GTTTAA-AGG	AAAGAGAA
G. sacculifer	-----	-----	-----	ATTG	GAAAT-TTAG	-TCAAA----	--CAGTG-CT	GTTTAA-AGG	AAAGAGAA
G. ruber pink	-----	-----	-----	TTTTG	GAAC-T-TTG	-TCGAA----	--CAGAT-GG	GGCTAA-AGG	AAAGAGAA
G. ruber Ia	-----	-----	-----	AGAG	GAAAT-TTG	-TCGAA----	--TGCAT-TT	GGCTAA-AGG	AAAGAGAA
G. ruber Ib1	-----	-----	-----	AGCTG	GAAAT-TTG	-TCGAA----	--TGCAT-TG	GGCTAA-AGG	AAAGAGAA
G. ruber Ib2	-----	-----	-----	AGCTG	GAAAT-TTG	-TCGAA----	--TGCAT-TG	GGCTAA-AGG	AAAGAGAA
G. ruber Ila	-----	-----	-----	TCGG	GAAAT-CCG	-TCGAA----	--CAGTT-AG	AGTTAA-AGG	AAAGAGAA
G. conglobatus	-----	-----	-----	AAITGG	GAAG-CTG	-TCAAA----	--CAGTT-AG	AGTTAA-AGG	AAAGAGAA
G. rubescens	-----	-----	-----	TTGG	G-AAA-TCTG	-TCAAA----	--CACT-AA	ATTTAA-AGG	AGAGAGAA
G. bulloides Ia	-----	-----	-----	TACAGG	G-AAC-CCAT	-TCGAC----	--CAACG-GA	GTTTAA-AGG	AAAAAGAA
G. bulloides Ib	-----	-----	-----	GAT-GG	A-AAT-GTAT	-TCGAT----	--CAACG-GA	GTTTAA-AGG	AAAAAGAA
G. bulloides Ila	-----	-----	-----	ATCGCG	G-AAC-TCAC	-TCGAC----	--CGACG-GG	ACTTAA-AGG	AAAAAGAA
G. bulloides Iib	-----	-----	-----	ATCGTG	G-AAC-TCAC	-TCGAC----	--CGACG-GG	ATTTAA-AGG	AAAAAGAA
G. bulloides Iic	-----	-----	-----	GTGTG	G-AAC-TCAC	-TCGAC----	--CGACG-GG	ACTTAA-AGG	AAAAAGAA
G. bulloides IID	-----	-----	-----	ATCGCG	G-AAC-TCAC	-TCGAC----	--CGACG-GG	ATTTAA-AGG	AAAAAGAA
G. bulloides Iie	-----	-----	-----	TGAACGAG	G-AAC-TCAC	-TCGAC----	--CAACG-GA	ATTTAA-AGG	AAAAAGAA
T. quinqueloba Ia	-----	-----	-----	TAACTTGA	AAAGT-TC-	-TCAAT----	--CAAGG-TT	TGCTAA-AGG	AAAAAGAA
T. quinqueloba Ib	-----	-----	-----	TAACTTGA	AAAGT-TC-	-TCAAT----	--CAAGG-TT	TGCTAA-AGG	AAAAAGAA
T. quinqueloba Ila	-----	-----	-----	CTACTTCA	AAAGT-TC-	-TCAAT----	--CAAGG-TT	TGCTAA-AGG	AAAAAGAA
T. quinqueloba Iib	-----	-----	-----	CTACTTCA	AAAGT-TC-	-TCAAT----	--CAAGG-TT	TGCTAA-AGG	AAAAAGAA
T. quinqueloba Iic	-----	-----	-----	CTACTTCA	AAAGT-TC-	-TCAAT----	--CAAGG-TT	TGCTAA-AGG	AAAAAGAA
T. quinqueloba IID	-----	-----	-----	CTACTTCA	AAAGT-TC-	-TCAAT----	--CAAGG-TT	TGCTAA-AGG	AAAAAGAA
G. falconensis	-----	-----	-----	TCTGTTGTG	GAAAT-TCAC	-TCGAA----	--CAACG-GG	ATTTAA-AGG	AAAAAGAA
H. pelagica	-----	-----	-----	TATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	CTTTAA-AGG	AAAGAGAA
G. menardii	-----	-----	-----	TATC	TAAAC-CTTC	TACGAA----	--CAATG-TG	G-CTAAGAGG	AAAGAGAA
G. unguolata	-----	-----	-----	TAGTCT	AAAA-GT-C	TACGAA----	--CAATG-TG	G-CTAAGAGG	AAAGAGAA
G. hirsuta	-----	-----	-----	TATA	GAAC-TTAG	-CCGAA----	--CAAGG-TG	GTTTAA-AGG	AAAGAGAA
G. scitula	-----	-----	-----	TATG	GAAC-TTAG	-TCGAA----	--CAAGG-TG	GTCTAA-AGG	AAAGAGAA
G. truncatulinoides	GGATTTACAC	GACCTTA	-----	CGCA	CAAC-TTAT	-TCGAC----	--CAAGT-GG	GTTTAA-AGG	AAAGAGAA
N. pachyderma I	-----	-----	-----	GTAACCTATG	GAAC-TTAT	-GCGAA----	--CAAAG-TG	GTCTAA-AGG	AAAGAGAA
N. pachyderma II	-----	-----	-----	GT-ACCTATG	GAAC-TTAT	-GCGAA----	--CAAAG-TG	GTCTAA-AGG	AAAGAGAA
N. pachyderma III	-----	-----	-----	GT-ACCTATG	GAAC-TTAT	-GCGAA----	--CAAAG-TG	GTCTAA-AGG	AAAGAGAA
N. pachyderma IV	-----	-----	-----	GT-ACCTATG	GAAC-TTAT	-GCGAA----	--CAAAG-TG	GTCTAA-AGG	AAAGAGAA
N. pachyderma V	-----	-----	-----	GT-ACCTATG	GAAC-TTAT	-GCGAA----	--CAAAG-TG	GTCTAA-AGG	AAAGAGAA
N. pachyderma VI	-----	-----	-----	GT-ACCTATG	GAAC-TTAT	-GCGAA----	--CAAAG-TG	GTCTAA-AGG	AAAGAGAA
N. pachyderma VII	-----	-----	-----	GT-ACCTATG	GAAC-TTAT	-GCGAA----	--CAAAG-TG	GTCTAA-AGG	AAAGAGAA
N. dutertrei_C	-----	-----	-----	AT-ACCTATG	GAAC-TTAT	-ACGAA----	--CAATG-TG	GTTTAA-AGG	AAAGAGAA
N. dutertrei_Ib	-----	-----	-----	AT-ACCTATG	GAAC-TTAT	-ACGAA----	--CAATG-TG	GTTTAA-AGG	AAAGAGAA
P. obliquiloculata_BR	-----	-----	-----	AT-ACCTATG	GAAC-TTAT	-ACGAA----	--CAATG-TG	GTTTAA-AGG	AAAGAGAA
P. obliquiloculata_AS	-----	-----	-----	AT-ACCTATG	GAAC-TTAT	-ACGAA----	--CAATG-TG	GTTTAA-AGG	AAAGAGAA
G. inflata	-----	-----	-----	T-ACCTATG	GAAC-CAAT	-ACGAA----	--CAATG-TG	GTCTAA-AGG	AAAGAGAA
G. crassaformis	-----	-----	-----	T-ACCTATG	GAAC-CAAT	-ACGAA----	--CAATG-TG	GTCTAA-AGG	AAAGAGAA
N. incompta I	-----	-----	-----	GTAACCTATG	GAAT-TCAT	-GCGA----	--TGAAC-TG	GTTTAA-AGG	AAAGAGAA
N. incompta II	-----	-----	-----	GTAACCTATG	GAAT-TCAT	-GCGA----	--TGAAC-TG	GTTTAA-AGG	AAAGAGAA
G. glutinata Ia1	-----	-----	-----	CTATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
G. glutinata Ia2	-----	-----	-----	CTATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
G. glutinata Ia3	-----	-----	-----	CTATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
C. nitida	-----	-----	-----	CTATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
G. uvula	-----	-----	-----	CTATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
B. variabilis	-----	-----	-----	TAG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
S. globigerus	-----	-----	-----	TAG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
B. alata	-----	-----	-----	TAG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGN	NNNNNNNN
G. vivans	-----	-----	-----	TATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
C. porrectus	-----	-----	-----	TATA	GAAC-TTAA	-ACGAA----	--CAGTG-GG	GTCTAA-AGG	AAAGAGAA
C. ovoidea	-----	-----	-----	TATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
G. opercularis	-----	-----	-----	TATG	GAAN-TCAA	-ACGAA----	--CAGTG-TG	ATCTAA-AGG	AAAGAGAA
E. aculeatum	-----	-----	-----	CGCG	GAAG-ATAT	-ATGAA----	--TAGTG-TG	GTTTAA-AGG	AAAGAGAA
E. vitrea	-----	-----	-----	TATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
H. germanica	-----	-----	-----	TATG	GAAC-TCAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
P. mediterraneensis	-----	-----	-----	TATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
S. fusiformis	-----	-----	-----	CATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
V. fragilis	-----	-----	-----	TATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
A. pseudocassiss	-----	-----	-----	TATG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
Spiroplectammina sp.	-----	-----	-----	ACCACCTATG	GGAACTTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
Textularia sp.	-----	-----	-----	TACG	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
S. limosum	-----	-----	-----	TATA	GAAC-TTAA	-ACGAA----	--CAGTG-TG	GTCTAA-AGG	AAAGAGAA
G. antarctica	-----	-----	-----	TATA	GAAC-TTAA	-ACGAA----	--CAGTG-GG	GTCTAA-AGG	AAAGAGAA
D. aphelis	-----	-----	-----	TATG	GAAC-TTAA	-ACRAA----	--CAGTG-TG	GTCTAA-AGG	AAARARAA
P. peruviana	-----	-----	-----	TTCC	GAAC-TTAT	-ATGCA----	--TAATG-TG	ATTTAA-AGG	AAAGAGAA

<i>M. secans</i>	-----	-----	-----	TTCG	GAAAC	TTAT	-ATGCA	----	--	TAATG	TG	ATTTAA	-AGG	AAAGAGAA
<i>Quinqueloculina sp.</i>	-----	-----	-----	TTCG	GAAAC	TTAT	-ATGCA	----	--	TAATG	TG	ATTTAA	-AGG	AAAGAGAA
<i>N. haylinosphaira</i>	-----	-----	-----	TATG	GAAAC	TTAA	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>M. fusca</i>	-----	-----	-----	TATG	GAAAC	TTAA	-ACGAA	----	--	CAATG	TG	GTCTAA	-AGG	AAAGAGAA
<i>T. alba</i>	-----	-----	-----	TATG	GAAAC	TTAA	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>A. mexicana</i>	-----	-----	-----	TATG	GAAAC	TTAA	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>A. triangularis</i>	-----	-----	-----	TATG	GAAAC	TCAT	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>A. rara</i>	-----	-----	-----	TATG	GAAAC	TTAT	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>E. scabrum</i>	-----	-----	-----	AATG	GAAAC	TTAA	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>N. venosus</i>	-----	-----	-----	TATG	GAAAC	TTAA	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>A. pseudocassis</i>	-----	-----	-----	AGTG	GAAT	ATAT	-ATGAA	----	--	TAGCG	TG	ATCTAA	-AGG	AAAGAGAA
<i>B. marginata</i>	-----	-----	-----	TATG	GAAAC	TTAA	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>Trochammina sp.</i>	-----	-----	-----	TATG	GAAAC	TTAA	-ACGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
<i>Peneroplis sp.</i>	-----	-----	-----	TATT	GAAAC	TTAT	-ATACA	----	--	TAATG	TG	ATTTAA	-AGG	AAAGAGAA
<i>S. orbiculus</i>	-----	-----	-----	ATAA	AAAAC	TTAT	-ATACA	----	--	TAATG	TG	ATTTAA	-AGG	AAAGAGAA
<i>Allogromia sp.</i>	-----	-----	-----	TATA	AGAAT	GTAC	-GCGAA	----	--	CAGTG	TG	GTCTAA	-AGG	AAAGAGAA
407 BP MARKER	-----	-----	-----	-----	-----	-----	-----	----	--	mmmmmm	-mm	mmmmmm	-mmm	mmmmmmmm

Appendix 9.7.2 DNA sequence alignment of the partial ~1000 bp terminal 3' region of the SSU rRNA gene in *Globigerinella siphonifera* and *Globigerinella calida*

A marker file indicates the 668 unambiguously aligned nucleotide sites (marked m) used in phylogenetic analysis

	111	21	31	41	51	61	71	81	91	100	
<i>G. siphonifera</i> Ia1	GCACCACAAG	AGCGTGGAGC	ATGTGGCTTA	ATTTGACTCA	ACGCGGGGAA	TCTTACC	TCCGGACACA	CTGAGGATTG	ACAGACA---	--GTT--GTC	
<i>G. siphonifera</i> Ia2	GCACCACAAG	AGCGTGGAGC	ATGTGGCTTA	ATTTGACTCA	ACGCGGGGAA	TCTTACC	TCCGGACACA	CTGAGGATTG	ACAGACA---	--GTT--GTC	
<i>G. siphonifera</i> IIa1	GCACCTACAAG	AGCGTGGAGC	ATGTGGCTTA	ATTTGACTCA	ACGCGGGGAA	TCTTACC	TCCGGACACA	CTGAGGATTG	ACAGACA---	--ATT--GTC	
<i>G. siphonifera</i> IIa2	GCACCTACAAG	AGCGTGGAGC	ATGTGGCTTA	ATTTGACTCA	ACGCGGGGAA	TCTTACC	TCCGGACACA	CTGAGGATTG	ACAGACA---	--ATT--GTC	
<i>G. siphonifera</i> IIa3	GCACCACAAG	AGCGTGGAGC	ATGTGGCTTA	ATTTGACTCA	ACGCGGGGAA	TCTTACC	TCCGGACACA	CTGAGGATTG	ACAGACA---	--ATT--GTC	
<i>G. siphonifera</i> IIb	GCACCTACAAG	AGCGTGGAGC	ATGTGGCTTA	ATTTGACTCA	ACGCGGGGAA	TCTTACC	TCCGGACACA	CTGAGGATTG	ACAGACA---	--ATT--GTC	
<i>G. calida</i>	GCACCACAAG	AGCGTGGAGC	ATGTGGCTTA	ATTTGACTCA	ACGCGGGGAA	TCTTACC	TCCGGACATA	CTGAGGATTG	ACAGACA---	--TCACCACG	
Gsip/cal 668 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	101	111	121	131	141	151	161	171	181	191	200
<i>G. siphonifera</i> Ia1	TTT----CC	CTCCC---TT	CGGGGTGGGA	TT----ACA	AAAGATAACA	GATCTTTCAT	GATCATGTGA	TGGGTGGTGC	ATGGCCGTTT	TTAGTTCGTG	
<i>G. siphonifera</i> Ia2	TTT----CC	CTCCC---TT	CGGGGTGGGA	TT----ACA	AAAGATAACA	GATCTTTCAT	GATCATGTGA	TGGGTGGTGC	ATGGCCGTTT	TTAGTTCGTG	
<i>G. siphonifera</i> IIa1	TTT--TTGTC	AAATTTAAA--	-----AG	----ACA	AAAGATAACA	GATCTTTCAT	GATTATGTGA	TGGGTGGTGC	ATGGCCGTTT	TTAGTTCGTG	
<i>G. siphonifera</i> IIa2	TTT--TTGTC	AAATTTAAA--	-----AG	----ACA	AAAGATAACA	GATCTTTCAT	GATTATGTGA	TGGGTGGTGC	ATGGCCGTTT	TTAGTTCGTG	
<i>G. siphonifera</i> IIa3	TTT--TTGTC	AAATTTAAA--	-----AG	----ACA	AAAGATAACA	GATCTTTCAT	GATTATGTGA	TGGGTGGTGC	ATGGCCGTTT	TTAGTTCGTG	
<i>G. siphonifera</i> IIb	CTT--TTGGC	-TTAAA----	-----AG	----ACA	AAAGATAACA	GATCTTTCAT	GATTATGTGA	TGGGTGGTGC	ATGGCCGTTT	TTAGTTCGTG	
<i>G. calida</i>	TCTTTTTGTC	CTTAAAA---	-----AG	----ACA	AAAGATAACA	GATCTTTCAT	GATTATGTGG	TGGGTGGTGC	ATGGCCGTTT	TTAGTTCGTG	
Gsip/cal 668 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	201	211	221	231	241	251	261	271	281	291	300
<i>G. siphonifera</i> Ia1	GAGTGATCTG	TCTGCTTAAT	TGCGTTTCAA	AT----TTTA	TATTTGTAA	CATGCGAGTC	TTCAATGACG	GCCCTCCAC	CTTATAGACA	TTATATGATA	
<i>G. siphonifera</i> Ia2	GAGTGATCTG	TCTGCTTAAT	TGCGTTTCAA	AT----TTTA	TATTTGTAA	CATGCGAGTC	TTCAATGACG	GCCACTCCAC	CTTATAGACA	TTATATGATA	
<i>G. siphonifera</i> IIa1	GAGTGATCTG	TCTGCTTAAT	TGCGTTTCAA	AT----ATAT	TTTATTATAT	A-CGAGTCTA	CAAAA----G	GAGTGGTTCA	TTAACAGACA	ATCATATCTT	
<i>G. siphonifera</i> IIa2	GAGTGATCTG	TCTGCTTAAT	TGCGTTTCAA	AT----ATAT	TTTATTATAT	AACGAGTCTA	CAAAA----G	GAGTGGTTCA	TTAACAGACA	ATCATATCTT	
<i>G. siphonifera</i> IIa3	GAGTGATCTG	TCTGCTTAAT	TGCGTTTCAA	AT----ATAT	TTTATTATAT	AACGAGTCTA	CAAAA----G	GAGTGGTTCA	TTAACAGACA	ATCATATCTT	
<i>G. siphonifera</i> IIb	GAGTGATCTG	TCTGCTTAAT	TGCGTTTCAA	AT----ATAC	TTTTTTTATA	A-CGAGTCTA	CAAAA----G	GAGTGGTTCA	TTTACAAACAG	ACAATTAATT	
<i>G. calida</i>	GAGTGATCTG	TCTGCTTAAT	TGCGTTTCAA	AT----GTAT	TTTTGATTTT	T-CAAACGAG	TCTA----C	GAAGATGTCT	ATTTCATAACA	AGCACTTCAT	
Gsip/cal 668 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	301	311	321	331	341	351	361	371	381	391	400
<i>G. siphonifera</i> Ia1	TGCACATTTG	TGTATTTGAT	TATAACTTGT	CTGGAGTCTG	GCTCGATTTT	TTTGA----	CTCAATTGAA	CGCAACGGAC	GTGATTCGAA	GTCCCTGTTG	
<i>G. siphonifera</i> Ia2	TGCACATTTG	TGTATTTGAT	TATAACTTGT	CTGGAGTCTG	GCTCGATTTT	TTTGA----	CTCAATTGAA	CGCAACGGAC	GTGATTCGAA	GTCCCTGTTG	
<i>G. siphonifera</i> IIa1	TGAGCGTCTG	G-AATCTACT	CTATTT-----	-----	-----	-----GG-	CTCAATTGAA	CGCAACGGAC	GTGATTCGCA	GTCCCTGTTG	
<i>G. siphonifera</i> IIa2	TGAGCGTCTG	G-AATCTACT	CTATTT-----	-----	-----	-----GG-	CTCAATTGAA	CGCAACGGAC	GTGATTCGCA	GTCCCTGTTG	
<i>G. siphonifera</i> IIa3	TGAGCGTCTG	G-AATCTACT	CTATTT-----	-----	-----	-----GG-	CTCAATTGAA	CGCAACGGAC	GTGATTCGCA	GTCCCTGTTG	
<i>G. siphonifera</i> IIb	CTTGTTTGT	G-AACGTTTG	GAATGTACTC	TATTT-----	-----	-----GG-	CTCAATTGAA	CGCAACGGAC	GTGATTCGCA	GTCCCTGTTG	
<i>G. calida</i>	TTATGATTTG	T-TTGGAAATA	CGACTCTTTC	-----	-----	-----GG-	CTCAATTGAA	CGCAACGGAC	GTGATTCGAA	GTCCCTGTTG	
Gsip/cal 668 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	401	411	421	431	441	451	461	471	481	491	500
<i>G. siphonifera</i> Ia1	AACAAATTAT	ATATAT----	-A-CTACTT	CATCATTAA--	-GTATATAT	AG--TTC--	GCTTCTC--	-ATGTCGTAG	--CAGTCAAA	CGGGCGGGCG	
<i>G. siphonifera</i> Ia2	AACAAATTAT	ATATAT----	-A-CTACTT	CATCATTAA--	-GTATATAT	AG--TTC--	GCTTCTC--	-ATGTCGTAG	--CAGTCAAA	CGGGCGGGCG	
<i>G. siphonifera</i> IIa1	AACCTCAG-T	ATATAT----	-TGACTTTCC	CCGTAGGAAG	GGATTGGCAA	TAATTGAATG	TTTCG--CTTT	CTATTAGGTT	TGTATGTT--	A-TCTCAAAA	
<i>G. siphonifera</i> IIa2	AACCTCAG-T	ATATAT----	-TGACTTTCC	CCGTAGGAAG	GGATTGGCAA	TAATTGAATG	TTTCG--CTTT	CTATTAGGTT	TGTATATATA	G-TCTCAAAA	
<i>G. siphonifera</i> IIa3	AACCTCAG-T	ATATAT----	-TGACTTTCC	CCGTAGGAAG	GGATTGGCAA	TAATTGAATG	TTTCG--CTTT	CTATT-AGGTT	TGTATGTTA	A-TCTCAAAA	
<i>G. siphonifera</i> IIb	AACCTCAG-T	ATATAT----	-TGACTTTCC	CCGTAGGAAG	GGATTGGCAA	TAATTGAATG	TTTCG--CTTT	CTATT-GGTG	TGT-----	GATCTCAAAA	
<i>G. calida</i>	AACCTCATA-T	ACATAT----	-CATTTACAT	TCTTAACTGA	GTGTATCTAA	GATAATAGAG	TTTCG--CTTT	CTATT-GGTG	ACGGGATCTC	CAATCACATTT	
Gsip/cal 668 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	501	511	521	531	541	551	561	571	581	591	600
<i>G. siphonifera</i> Ia1	TCTTAAATTGG	CGCGGTACAG	AGG---CTTA	ATATGCTGCG	GCAG-----	GGAAAACCTTG	GGCGACCCT	GTAAATCTTC	TCTCTTAAAC	CAGAGGAAGA	
<i>G. siphonifera</i> Ia2	TCTTAAATTGG	CGCGGTACAG	AGG---CTTA	ATATGCTGCG	GCAG-----	GGAAAACCTTG	GGCGACCCT	GTAAATCTTC	TCTCTTAAAC	CAGAGGAAGA	
<i>G. siphonifera</i> IIa1	TACATGTATT	TGTAATGGCG	AGTGAT---C	A--C--A-CC	TATA-----	GGAAAACCTCG	GGCGACCCT	GTAAATCTTC	TCT-TTAAAA	CAGAGGAAGA	
<i>G. siphonifera</i> IIa2	TTACATGTAT	TGTAAATGGC	GAGTAAATATA	TT-ACT-ATC	CTGTA-----	GGAAAACCTCG	GGCGACCCT	GTAAATCTTC	TCT-TTAAAA	CAGAGGAAGA	
<i>G. siphonifera</i> IIa3	TTACATGTAT	TGTAGTGGC	GAGTAAATATA	T-A-CT-ATC	CTATA-----	GGAAAACCTCG	GGCGACCCT	GTAAATCTTC	TCT-TTAAAA	CAGAGGAAGA	
<i>G. siphonifera</i> IIb	TTGCATGTAT	TTGTAGTGGC	GAGTAAATATA	ATCCCTTA--	-----	GGAAAACCTTG	GGCGACCCT	GTAAATCTTC	TCT-TTAAAA	CAGAGGACAG	
<i>G. calida</i>	CGAGTGAGAG	T--GAGTGAT	CTAATCTTTT	A-----	-----	GGAAAACCTCG	GGCGACCCT	GTAAATCTTC	CTTTTAAAAA	CAGAGGAAGA	
Gsip/cal 668 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	601	611	621	631	641	651	661	671	681	691	700
<i>G. siphonifera</i> Ia1	TTGCGGCAAT	AACAGGTCTG	TGATGCCCTC	AGATGTCCCC	GGCCGCACAC	GTGCTACATT	GATTAGCGCA	GTGCGCATA	TTACA-TATA	GATCATT---	
<i>G. siphonifera</i> Ia2	TTGCGGCAAT	AACAGGTCTG	TGATGCCCTC	AGATGTCCCC	GGCCGCACAC	GTGCTACATT	GATTAGCGCA	GTGCGCATA	TTACA-TATA	GATCATT---	
<i>G. siphonifera</i> IIa1	TTGCGGCAAT	AACAGGTCTG	TGATGCCCTC	AGATGTCCCC	GGCCGCACAC	GTGCTACATT	GATTAGCGCA	GTGCGCATA	TTTCAATATG	ATACATT---	
<i>G. siphonifera</i> IIa2	TTGCGGCAAT	AACAGGTCTG	TGATGCCCTC	AGATGTCCCC	GGCCGCACAC	GTGCTACATT	GATTAGCGCA	GTGCGCATA	TTTCAATATG	ATACATT---	
<i>G. siphonifera</i> IIa3	TTGCGGCAAT	AACAGGTCTG	TGATGCCCTC	AGATGTCCCC	GGCCGCACAC	GTGCTACATT	GATTAGCGCA	GTGCGCATA	TTTCAATATG	ATACATT---	
<i>G. siphonifera</i> IIb	TTGCGGCAAT	AACAGGTCTG	TGATGCCCTC	AGATGTCCCC	GGCCGCACAC	GTGCTACATT	GATTAGCGCA	GTGCGCATA	TTTCAATATG	ATACATT---	
<i>G. calida</i>	TTGCGGCAAT	AACAGGTCTG	TGATGCCCTC	AGATGTCCCC	GGCCGCACAC	GTGCTACATT	GATTAGCGCA	GTGCGCATA	TTTCAATATG	ATACATT---	
Gsip/cal 668 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	

	701	711	721	731	741	751	761	771	781	791	800
<i>G. siphonifera</i> Ia1	---G-ATTGG	-TTATTT---	ATAACCG---	-----	-----	-----	TCA ATATCGCCTT	GTCTGAAAAG	A-----CTAG	GTAATCTATT	
<i>G. siphonifera</i> Ia2	---G-ATTGG	-TTATTT---	ATAACCG---	-----	-----	-----	TCA ATATCGCCTT	GTCTGAAAAG	A-----CTAG	GTAATCTATT	
<i>G. siphonifera</i> IIa1	--AG-ATTGG	ATAGCTT---	-----T	T--GCTTCCA	T-----	-----	CTA ATACTATCCG	GCTTGAGAAG	G-----CTGG	GTAATCAATT	
<i>G. siphonifera</i> IIa2	--AG-ATTGG	ATTGTTCTG-	-----T	TGAGCT-CCA	T-----	-----	CTA ATACTATCCG	GCTTGAGAAG	G-----CTGG	GTAATCAATT	
<i>G. siphonifera</i> IIa3	--AG-ATTGG	ATTGTTTTA-	-----T	TAAGCT-CCA	T-----	-----	CTA ATACTATCCG	GCTTGAGAAG	G-----CTGG	GTAATCAATT	
<i>G. siphonifera</i> IIb	--GG-ATTGG	TGGTGAATTG	TTGGCCCCGT	CTAATACT--	-----	-----	GTCTT	GTCTGAGAAG	G-----CTGG	GTAATCAATT	
<i>G. calida</i>	--GGTTTGG	TAGTAAGCTA	TTCACTCTGAT	GGATATGCTA	CTCTCCATAC	CAATACT---	-----ATCTA	GTCTGAAAAG	A-----CTGG	GTAATCTATT	
Gsip/cal 668 bp marker	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	801	811	821	831	841	851	861	871	881	891	900
<i>G. siphonifera</i> Ia1	GTAAGTGCTG	GTTCCCTCCTC	CCGTTGAGCA	TTTTAATAAT	GGTCTCTCTA	CATCCCTAGC	A---CATGAT	GTC---TAGT	GCGATTGTAG	TTGAGTCTTG	
<i>G. siphonifera</i> Ia2	GTAAGTGCTG	GTTCCCTCCTC	CCGTTGAGCA	TTTTAATAAT	GGTCTCTCTA	CATCCCTAGC	A---CATGAT	GTC---TAGT	GCGATTGTAG	TTGAGTCTTG	
<i>G. siphonifera</i> IIa1	GTAAGTGCTG	GTTCCCTCCTC	CCGTTGAGCA	TTTTAATAAT	GGCCTCTCTA	CATCCCTAGT	A---AT-AT	GAC---TAGT	GCGATTGTAG	TTGAGCCTTG	
<i>G. siphonifera</i> IIa2	GTAAGTGCTG	GTTCCCTCCTC	CCGTTGAGCA	TTTTAATAAT	GGCCTCTCTA	CATCCCTAGC	A---AT-AT	GCC---TAGT	GCGATTGTAG	TTGAGCCTTG	
<i>G. siphonifera</i> IIa3	GTAAGTGCTG	GTTCCCTCCTC	CCGTTGAGCA	TTTTAATAAT	GGCCTCTCTA	CATCCCTAGT	A---AT-AT	GCC---TAGT	GCGATTGTAG	TTGAGCCTTG	
<i>G. siphonifera</i> IIb	GTAAGTGCTG	GTTCCCTACTC	CCGTTGAGCA	TTTTAATAAT	GGCCTCTCTA	CATCCCTAGT	A---AC---	CC---TAGT	GCGATTGTAG	TTGAGCCTTG	
<i>G. calida</i>	GTAAGTGCTG	GTTCCCTCTTC	CCGTTGAGCA	TTTTAATAAT	GGTCTCTCTA	CGTCCCTAGT	A-----T-AT	-TC---TAGT	GCGATTGTAG	TTGAGTCT-G	
Gsip/cal 668 bp marker	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	901	911	921	931	941	951	961	971	981	991	1000
<i>G. siphonifera</i> Ia1	CCATTTATGC	AAGTGTCAAAT	TCTCAGTGGG	GACAGCCATT	TGATAAATCT	TTGGCTCGGC	CTCAACTAGG	AATGCCTTGT	ACGGGTCTTG	GTTCAACAGA	
<i>G. siphonifera</i> Ia2	CCATTTATGC	AAGTGTCAAAT	TCTCAGTGGG	GACAGCCATT	TGATAAATCT	TTGGCTCGGC	CTCAACTAGG	AATGCCTTGT	ACGGGTCTTG	GTTCAACAGA	
<i>G. siphonifera</i> IIa1	CCATTTATGC	AAGTGTCAAAT	TCTCAGTGGG	GACAGACATT	TGATAAATCT	TTGTCTCGTT	CCTAACTAGG	AATGCCTTGT	ACGGGTCTTG	GTTCAACAGA	
<i>G. siphonifera</i> IIa2	CCATTTATGC	AAGTGTCAAAT	TCTCAGTGGG	GACAGACATT	TGATAAATCT	TTGTCTCGTT	CCTAACTAGG	AATGCCTTGT	ACGGGTCTTG	GTTCAACAGA	
<i>G. siphonifera</i> IIa3	CCATTTATGC	AAGTGTCAAAT	TCTCAGTGGG	GACAGACATT	TGATAAATCT	TTGTCTCGTT	CCTAACTAGG	AATGCCTTGT	ACGGGTCTTG	GTTCAACAGA	
<i>G. siphonifera</i> IIb	CCATTTATGC	AAGTGTCAAAT	TCTCAGTGGG	GACAGACATT	TGATAAATCT	TTGTCTCGTT	CCTAACTAGG	AATGCCTTGT	ACGGGTCTTG	GTTCAACAGA	
<i>G. calida</i>	CCATTTATGC	AAGTGTCAAAT	TCTCAGTGGG	GACAGACATT	TGATAAATCT	TTGTCTCGTT	CCTAACTAGG	AATGCCTTGT	ACGGGTCTTG	GTTCAACAGA	
Gsip/cal 668 bp marker	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1001	1011	1021	1031	1041	1051	1061	1071	1081	1091	1100
<i>G. siphonifera</i> Ia1	CCACCCGGAA	TACGTCCCTG	CCCTTTGTAC	ACACCGCCCC	TCGCTCTTAC	CGATGAATTG	TACTGTGAGT	T----TGAG	GACCGAATCC	A-----T	
<i>G. siphonifera</i> Ia2	CCACCCGGAA	TACGTCCCTG	CCCTTTGTAC	ACACCGCCCC	TCGCTCTTAC	CGATGAATTG	TACTGTGAGT	T----TGAG	GACCGAATCC	A-----T	
<i>G. siphonifera</i> IIa1	CCACCCGGAA	TACGTCCCTG	CCCTTTGTAC	ACACCGCCCC	TCGCTCTTAC	CGATGAATTG	TACTGTGAGT	T----TGAG	GACTGATGGT	TGNAAAAATC-	
<i>G. siphonifera</i> IIa2	CCACCCGGAA	TACGTCCCTG	CCCTTTGTAC	ACACCGCCCC	TCGCTCTTAC	CGATGAATTG	TACTGTGAGT	T----TGAG	GACTGATGGT	TGCAAAAATC-	
<i>G. siphonifera</i> IIa3	CCACCCGGAA	TACGTCCCTG	CCCTTTGTAC	ACACCGCCCC	TCGCTCTTAC	CGATGAATTG	TACTGTGAGT	T----TGAG	GACTGATGGT	TGCAAAAATC-	
<i>G. siphonifera</i> IIb	CCACCCGGAA	TACGTCCCTG	CCCTTTGTAC	ACACCGCCCC	TCGCTCTTAC	CGATGAATTG	TACTGTGAGT	T----TGAG	GACTGATGGT	TGCAAAAATC-	
<i>G. calida</i>	CCACCCGGAA	TACGTCCCTG	CCCTTTGTAC	ACACCGCCCC	TCGCTCTTAC	CGATGAATTG	TACTGTGAGT	T----TGAG	GACTGATGGT	TGCAAAAATC-	
Gsip/cal 668 bp marker	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1101	1111	1121	1131	1141	1151					
<i>G. siphonifera</i> Ia1	TTTTGGGT--	--TTGAAAT	GCACTCAAAAC	AGTACGATTT	AAAGGAAAGA	GAA					
<i>G. siphonifera</i> Ia2	TTTTGGGT--	--TTGAAAT	GCACTCAAAAC	AGTACGATTT	AAAGGAAAGA	GAA					
<i>G. siphonifera</i> IIa1	-----A--	--TTGAAAT	TCTGTCAAAAC	AGCGAGATTT	AAAGGAAAGA	GAA					
<i>G. siphonifera</i> IIa2	-----A--	--TTGAAAT	TCTGTCAAAAC	AGCGAGATTT	AAAGGAAAGA	GAA					
<i>G. siphonifera</i> IIa3	-----A--	--TTGAAAT	TCTGTCAAAAC	AGCGAGATTT	AAAGGAAAGA	GAA					
<i>G. siphonifera</i> IIb	-----A--	--TTGAAAT	TCTGTCAAAAC	AGCGAGATTT	AAAGGAAAGA	GAA					
<i>G. calida</i>	-----T--	--TTGAAAT	TTGGTCAAAAC	AGTACGATTT	AAAGGAAAGA	GAA					
Gsip/cal 668 bp marker	-----	-----	-----	-----	-----	-----					

Appendix 9.7.3 DNA sequence alignment of the partial ~1000 bp terminal 3' region of the SSU rRNA gene in *Globigerinoides ruber* and *Globigerinoides conglobatus*

A marker file indicates the 589 unambiguously aligned nucleotide sites (marked m) used in phylogenetic analysis

	1	11	21	31	41	51	61	71	81	91	100
<i>G. ruber pink</i>	G	C	A	C	C	C	A	A	A	G	C
<i>G. ruber Ia</i>	G	C	A	C	C	C	A	A	A	G	C
<i>G. ruber Ib1</i>	G	C	A	C	C	C	A	A	A	G	C
<i>G. ruber Ib2</i>	G	C	A	C	C	C	A	A	A	G	C
<i>G. ruber IIa</i>	G	C	A	C	C	C	A	A	A	G	C
<i>G. conglobatus</i>	G	C	A	C	C	C	A	A	A	G	C
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	101	111	121	131	141	151	161	171	181	191	200
<i>G. ruber pink</i>	T	G	C	C	C	T	T	T	C	A	T
<i>G. ruber Ia</i>	T	G	C	C	C	T	T	T	C	A	T
<i>G. ruber Ib1</i>	T	G	C	C	C	T	T	T	C	A	T
<i>G. ruber Ib2</i>	T	G	C	C	C	T	T	T	C	A	T
<i>G. ruber IIa</i>	T	G	C	C	C	T	T	T	C	A	T
<i>G. conglobatus</i>	T	G	C	C	C	T	T	T	C	A	T
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	201	211	221	231	241	251	261	271	281	291	300
<i>G. ruber pink</i>	C	G	T	G	A	G	A	G	T	G	A
<i>G. ruber Ia</i>	C	G	T	G	A	G	A	G	T	G	A
<i>G. ruber Ib1</i>	C	G	T	G	A	G	A	G	T	G	A
<i>G. ruber Ib2</i>	C	G	T	G	A	G	A	G	T	G	A
<i>G. ruber IIa</i>	C	G	T	G	A	G	A	G	T	G	A
<i>G. conglobatus</i>	C	G	T	G	A	G	A	G	T	G	A
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	301	311	321	331	341	351	361	371	381	391	400
<i>G. ruber pink</i>	G	T	G	A	A	C	T	G	T	C	T
<i>G. ruber Ia</i>	G	T	G	A	A	C	T	G	T	C	T
<i>G. ruber Ib1</i>	G	T	G	A	A	C	T	G	T	C	T
<i>G. ruber Ib2</i>	G	T	G	A	A	C	T	G	T	C	T
<i>G. ruber IIa</i>	G	T	G	A	A	C	T	G	T	C	T
<i>G. conglobatus</i>	G	T	G	A	A	C	T	G	T	C	T
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	401	411	421	431	441	451	461	471	481	491	500
<i>G. ruber pink</i>	C	C	C	T	T	G	T	T	G	A	G
<i>G. ruber Ia</i>	C	C	C	T	T	G	T	T	G	A	G
<i>G. ruber Ib1</i>	C	C	C	T	T	G	T	T	G	A	G
<i>G. ruber Ib2</i>	C	C	C	T	T	G	T	T	G	A	G
<i>G. ruber IIa</i>	C	C	C	T	T	G	T	T	G	A	G
<i>G. conglobatus</i>	C	C	C	T	T	G	T	T	G	A	G
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	501	511	521	531	541	551	561	571	581	591	600
<i>G. ruber pink</i>	G	A	A	A	C	T	G	A	A	A	C
<i>G. ruber Ia</i>	G	A	A	A	C	T	G	A	A	A	C
<i>G. ruber Ib1</i>	G	A	A	A	C	T	G	A	A	A	C
<i>G. ruber Ib2</i>	G	A	A	A	C	T	G	A	A	A	C
<i>G. ruber IIa</i>	G	A	A	A	C	T	G	A	A	A	C
<i>G. conglobatus</i>	G	A	A	A	C	T	G	A	A	A	C
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	601	611	621	631	641	651	661	671	681	691	700
<i>G. ruber pink</i>	C	T	G	C	A	C	A	C	G	T	G
<i>G. ruber Ia</i>	C	T	G	C	A	C	A	C	G	T	G
<i>G. ruber Ib1</i>	C	T	G	C	A	C	A	C	G	T	G
<i>G. ruber Ib2</i>	C	T	G	C	A	C	A	C	G	T	G
<i>G. ruber IIa</i>	C	T	G	C	A	C	A	C	G	T	G
<i>G. conglobatus</i>	C	T	G	C	A	C	A	C	G	T	G
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	701	711	721	731	741	751	761	771	781	791	800
<i>G. ruber pink</i>	T	T	C	C	C	T	G	A	C	C	T
<i>G. ruber Ia</i>	T	T	C	C	C	T	G	A	C	C	T
<i>G. ruber Ib1</i>	T	T	C	C	C	T	G	A	C	C	T
<i>G. ruber Ib2</i>	T	T	C	C	C	T	G	A	C	C	T
<i>G. ruber IIa</i>	T	T	C	C	C	T	G	A	C	C	T
<i>G. conglobatus</i>	T	T	C	C	C	T	G	A	C	C	T
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m
	801	811	821	831	841	851	861	871	881	891	900
<i>G. ruber pink</i>	A	A	A	A	G	C	A	A	T	A	C
<i>G. ruber Ia</i>	A	A	A	A	G	C	A	A	T	A	C
<i>G. ruber Ib1</i>	A	A	A	A	G	C	A	A	T	A	C
<i>G. ruber Ib2</i>	A	A	A	A	G	C	A	A	T	A	C
<i>G. ruber IIa</i>	A	A	A	A	G	C	A	A	T	A	C
<i>G. conglobatus</i>	A	A	A	A	G	C	A	A	T	A	C
Grub/con 589 bp marker	m	m	m	m	m	m	m	m	m	m	m

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G. ruber IIa      GTTTTGGCAT TTGAATCCCTT GTCGCAGCAG CCCTGAGACG TAGTGAACGC TGCAAAAGTGA TTCCAGTCTT AGGTTTGC--
G. conglobatus AGTGTTTGTC ATAATAATCC TCGTCGCACC TACTCTAGGA CATAGTGAAC ATTGTAGACT TTGTCATAAT GATTCCCGTC TTAGGTTTGC GACGCATGCT
Grub/con 589 bp marker -----

          901          911          921          931          941          951          961          971          981          991          1000
G. ruber pink      |-----TAT TC-----|CTGG-TGAC TCATGGTGGG GACCGACATT TGTAATTGTC TGTCCGG-TG TTAACCGGGA ATGCCCTGTA CTGTCGATTC
G. ruber Ia       |-----|-----|CTGG-CGAC TCATGGTGGG GACCGACGTT TGTAATTTT TGTCCGG-TG TTAAC TAGGA ATGCCCTGTA CTGTCGATTC
G. ruber Ib1      |-----|-----|CTGG-TGAC TCATGGTGGG GACCGATGTT TGTAATTGTT TGTCCGG-TG TCAACTAGGA ATGCCCTGTA CTGTCGATTC
G. ruber Ib2      |-----|-----|CTGG-TGAC TCATGGTGGG GACCGATGTT TGTAATTGTT TGTCCGG-TG TCAACTAGGA ATGCCCTGTA CTGTCGATTC
G. ruber IIa      --GACACATG CAATTC----|CTGGTTGAC TCATCGTGGG GACTGATTCT TGTAATTATT TTTCACGG-T TCAACCAGGA ATGCCCTGTA CCGCGGCTC
G. conglobatus   TT-----|-----|CTGGTTGAC TCATCGTGGG AACTGATTCT TGTAATTATT TGTACCGG-T TCAACCAGGA ATGCCCTGTA CTGCGGCTC
Grub/con 589 bp marker -----mmmm-mmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmm-- mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

          1001         1011         1021         1031         1041         1051         1061         1071         1081         1091         1100
G. ruber pink      ACTAAGTTAT GGGGAATACG TCCCTGCCCT TTGTACACAC CGCCCGTCGC TCTTACCGAT GGCTTTGGCT GCGAGTAA-- ---AAGGGAC TTTTCG-TTTT
G. ruber Ia       ACTAAGTTAC TGGGAATACG TCCCTGCCCT TTGTACACAC CGCCCGTCGC TCTTACCGAT GGCTGTGTGT GTGAGTAA-- ---GAGCGAC TGTTA-AGAG
G. ruber Ib1      ACTAAGTTAT TGGGAATACG TCCCTGCCCT TTGTACACAC CGCCCGTCGC TCTTACCGAT GGCTTTGTGT GTGAGTAA-- ---GACGGAC AATTA-AGCT
G. ruber Ib2      ACTAAGTTAT TGGGAATACG TCCCTGCCCT TTGTACACAC CGCCCGTCGC TCTTACCGAT GGCTTTGTGT GTGAGTAA-- ---GACGGAC AATTA-AGCT
G. ruber IIa      ATTAACCGC TGGGAATACG TCCCTGCCCT TTGTACACAC CGCCCGTCGC TCTTACCGAT GACTTTGACT GTGAGTAG-- ---GACTGAC CGTTTA-TCG
G. conglobatus   ATTAACCGC TCGGTATACG TCCCTGCCCT TTGTACACAC CGCCCGTCGC TCTTACCGAT GACTTTGACT GTGAGTAG-- ---GCTGGAT CGA-- -AATG
Grub/con 589 bp marker mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmm-- -----

          1101         1111         1121         1131
G. ruber pink      GGAAC TTT-- ---GTCGAAC AGATGGGGCT AAAG
G. ruber Ia       GGA AATTT-- ---GTCGAAT GCATTTGGCT AAAG
G. ruber Ib1      GGA AATTT-- ---GTCGAAT GCATTTGGCT AAAG
G. ruber Ib2      GGA AATTT-- ---GTCGAAT GCATTTGGCT AAAG
G. ruber IIa      GGA AATCC-- ---GTCGAAC AGTTAGAGTT AAAG
G. conglobatus   GGA AAGCT-- ---GTC A A C AGTTAGAGTT AAAG
Grub/con 589 bp marker -----mmmmmmmm mmmmmmmmmmm mmmmm

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Appendix 9.7.4 DNA sequence alignment of the partial ~1000 bp terminal 3' region of the SSU rRNA gene in *Globigerina bulloides*

A marker file indicates the 669 unambiguously aligned nucleotide sites (marked m) used in phylogenetic analysis

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1      11      21      31      41      51      61      71      81      91      100
G. bulloides IIa  GCACCACAAG AGCGTGGAGT ATGTGGCTTA ATTTGACTCA ACGCGGAAAA GCTTATCTGG TCCGGACACA GTGAGGATTG ACAGAC---- -GGTC---T
G. bulloides Ib  GCACCACAAG AGCGTGGAGT ATGTGGCTTA ATTTGACTCA ACGCGGAAAA GCCTATTTGG TCCGGACACA GTGAGGATTG ACAGAC---- -ATGT---CG
G. bulloides IIa  GCACCACAAG AGCGTGGAGT ATGTGGCTTA ATTTGACTCA ACGCGGAAAA GCTTATCTGG TCCGGACACA GTGAGGATTG ACAGAC---- -AGTT---T
G. bulloides IIb  GCACCACAAG AGCGTGGAGT ATGTGGCTTA ATTTGACTCA ACGCGGAAAA GCTTATCTGG TCCGGACACA GTGAGGATTG ACAGAC---- -AGTTAGA--
G. bulloides IIc  GCACCACAAG AGCGTGGAGT ATGTGGCTTA ATTTGACTCA ACGCGGAAAA GCTTATCTGG TCCGGACACA GTGAGGATTG ACAGAC---- -AGTT---GG
G. bulloides IID  GCACCACAAG AGCGTGGAGT ATGTGGCTTA ATTTGACTCA ACGCGGAAAA GCTTATCTGG TCCGGACACA GTGAGGATTG ACAGAC---- -AGTTAGA--
G. bulloides IIE  GCACCACAAG AGCGTGGAGT ATGTGGCTTA ATTTGACTCA ACGCGGAAAA GCTTATCTGG TCCGGACACA GTGAGGATTG ACAGAC---- -GGTT---T
G. bull 669 bp marker  mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

101     111     121     131     141     151     161     171     181     191     200
G. bulloides IIa  TATTGGTGGG CTCT-AAGAC GTC----ATG GTAA-----A GTTGAAGTTC TTTCATGATC TTGTGGCAGG TGTGTCATGG CCGTTCCTAG TTCGTGTAGT
G. bulloides Ib  TATTGGTGGG CTCT-ATGA- ---CAAATG GTAA-----A GTTGAAGTTC TTTCATGATC TTGTGGTAGG TGTGTCATGG CCGTTCCTAG TTCGTGTAGT
G. bulloides IIa  CAGGAGTGGT TCTT-GGTAA A--CAA-TTG AGAG-----A GTTGAAGTTC TTTCATGATC TTGTGAGAGG TGTGTCATGG CCGTTCCTAG TTCGTGTAGT
G. bulloides IIb  CAGAAGTGGT TTA--GGTAA --CAA-TTG AGAG-----A GTTGAAGTTC TTTCATGATC TTGTGAGAGG TGTGTCATGG CCGTTCCTAG TTCGTGTAGT
G. bulloides IIc  CAGGAGTGGT TCTT-GGTAA AAACA--ATG AGAG-----A GTTGAAGTTC TTTCATGATC TTGTGAGAGG TGTGTCATGG CCGTTCCTAG TTCGTGTAGT
G. bulloides IID  CAGAAGTGGT GTTTTGGTAA --CAA-TTG AGAG-----A GTTGAAGTTC TTTCATGATC TTGTGAGAGG TGTGTCATGG CCGTTCCTAG TTCGTGTAGT
G. bulloides IIE  TATTAGTGGT TTCT-AAAAC ACA-----TTG AGAA-----A GTTGAAGTTC TTTCATGATC TTGTGAGAGG TGTGTCATGG CCGTTCCTAG TTCGTGTAGT
G. bull 669 bp marker  mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

201     211     221     231     241     251     261     271     281     291     300
G. bulloides IIa  GATACGCTCG CCTAATCGCG TCACGATAAC CTATTTCTCG ACAATCCAA- ---AGATCT TCG-TGCAGT ATCTATTGGT ACGGTGCTCA CGTTA-----
G. bulloides Ib  GATACGCTCG CCTAATCGCG TCACGATAAG CTATTTCTCG ACAATCCAA- ---AAATCA CCGCGGAGG TTCTACTGGT ACGGGTCCCA AAA-----GT
G. bulloides IIa  GATATGCTCG CCTAATCGCG TCACGATAAC CTATTTCTCG ACAATCCAA- ---TTATCA CAACTGCAGC ATAACCTCCC TTGGGTGGGC GAGGCTCTGT
G. bulloides IIb  GATATGCTCG CCTAATCGCG TCACGATAAC CTATTTCTCG ACAATCCAA- ---TTATCA CAACTGCAGC ATAACCTCCC TTGGGTGGGC GAGGCTCTGT
G. bulloides IIc  GATATGCTCG CCTAATCGCG TCACGATAAC CTATTTCTCG ACAATCCAA- ---TTATCA CAACTGCAGC ATAACCTCCC TTGGGTGGGC GAGGCTCTGT
G. bulloides IID  GATATGCTCG CTAATCGCG TCACGATAAC CTATTTCTCG ACAATCCAA- ---TTATCA CAACTGCAGC ATAACCTCCC TTGGGTGGGC GAGGCTCTGT
G. bulloides IIE  GATATGCTCG CCTAATCGCG TCACGATAAC CTATTTCTCG ACAATCCAA- ---TTATCA CAACTGCAGC ATAACCTCCC TTGGATGGGC GAGGCTCTGT
G. bull 669 bp marker  mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

301     311     321     331     341     351     361     371     381     391     400
G. bulloides IIa  ----GTAGG CTAGAGATTG GAACAGTACG CAACGGACGC GATCGTAATC TCTTGTAAAG TGGCCATCCT GTGAGC---- -CCCTGATTT AATGG--CAG
G. bulloides Ib  ----GTAGG CTAGAGATTG GAACAGTACG CAACGGACGC GATCGTAATC TCTTGTAAAG TGGTTATCCT GTGAGC---- -CAACCGTGA CTGATTACAG
G. bulloides IIa  ----GTAGG ATAGACCTCT GAACAGTACG CAACGAACGC GATCGTAATC CCTTGTAGG TGGCCATCCT GTAAGC---- -TGCTGGATT AGGAACCCAG
G. bulloides IIb  ----GTAGG ATAGACCTCT GAACAGTACG CAACGAACGC GATCGTAATC CCTTGTAGG TGGCCATCCT GTAAGC---- -TGCTGGATT AGGAACCCAG
G. bulloides IIc  ----GTAGG ATAGACCTCT GAACAGTACG CAACGAACGC GATCGTAATC CCTTGTAGG TGGCCATCCT GTAAGC---- -TGCTGGATT AGGAACCCAG
G. bulloides IID  ----GTAGG ATAGACCTCT GAACAGTACG CAACGAACGC GATCGTAATC CCTTGTAGG TGGCCATCCT GTAAGC---- -TGCTGGATT AGGAACCCAG
G. bulloides IIE  ----GTAGG ATAGACCTCT GAACAGTACG CAACGAACGC GATCGTAATC CCTTGTAGG TGGCCATCCT GTAAGC---- -C-CTGGAGT CGTC--CAG
G. bull 669 bp marker  ----m mmmmmmm---m mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

401     411     421     431     441     451     461     471     481     491     500
G. bulloides IIa  G----CGGT ATCATC---T CAGCCACATT TCTTCTGGTA GTAGT---GG GCCAG---A TTTA---AAA CTGGAGAAAC ATCTGTGACT TTCTTTCTTT
G. bulloides Ib  CACACCTGGT ATCATC---T CAGCCACATT TGGTTTGTAGT GGGTC---GG GCTAG---AT GTCG---AAA CTGGGAAAC ATCTGTGACT TTCTTTCTTT
G. bulloides IIa  ----TGGT ATTATC---T CAGCCACAGA TTTTCTGGTT GTAAAT---GG CCGAG---T TTTG---AAA CTGGGGAAC ATCTGTGACT TTCTTTCTTT
G. bulloides IIb  ----TGGT ATTATC---T CAGCCACAGA TTTTCTGGTT GTAGT---GG GCCAG---T TTTG---AAA CTGGGGAAC ATCTGTGACT TTCTTTCTTT
G. bulloides IIc  ----TGGT ATTATC---T CAGCCACAGA TTTTCTGGTT GTAAAT---GG GCCAG---T TTTG---AAA CTGGGGAAC ATCTGTGACT TTCTTTCTTT
G. bulloides IID  ----TGGT ATTATC---T CAGCCACAGA TTTTCTGGTT GTAGT---GG GCCAG---T TTTG---AAA CTGGGGAAC ATCTGTGACT TTCTTTCTTT
G. bulloides IIE  ----TGGT ATTATC---T CAGCCACAGA TTTTCTGGTT GTAGT---GG TCCAG---TT GTTG---AAA CTGGGGAAC ATCTGTGACT TTCTTTCTTT
G. bull 669 bp marker  ----m mmmmmmm---m mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

501     511     521     531     541     551     561     571     581     591     600
G. bulloides IIa  ACGCAGAGGA AGGTTATGGC AATAACAGGT CTGTGATGCC CTAGATGTC CAGAGCTGCA CACGTACTAC AGTGATC--- -GACTCACT AAGTGTCTGT
G. bulloides Ib  ACGCAGAGGA AGGTTATGGC AATAACAGGT CTGTGATGCC CTAGATGTC CAAAGCTGCA CACGTACTAC AGTGATC--- -GATAACACT T-GCGTTGGT
G. bulloides IIa  ACGCAGAGGA AGGTTATGGC AATAACAGGT CTGTGATGCC CTAGATGTC CAGGGCTGCA CACGTACTAC ATTGATC--- -AACTCAGT AGGCGTCTGT
G. bulloides IIb  ACGCAGAGGA AGGTTATGGC AATAACAGGT CTGTGATGCC CTAGATGTC CAGGGCTGCA CACGTACTAC ATTGATC--- -AACTCAGT AGGCGTCTGT
G. bulloides IIc  ACGCAGAGGA AGGTTATGGC AATAACAGGT CTGTGATGCC CTAGATGTC TAGGGCTGCA CACGTACTAC ATTGATC--- -AACTCAGT AGGCGTCTGT
G. bulloides IID  ACGCAGAGGA AGGTTATGGC AATAACAGGT CTGTGATGCC CTAGATGTC CAGGGCTGCA CACGTACTAC ATTGATC--- -AACTCAGT AGGCGTCTGT
G. bulloides IIE  ACGCAGAGGA AGGTTATGGC AATAACAGGT CTGTGATGCC CTAGATGTC CTAGATGTC CAGGGCTGCA CACGTACTAC ATTGATC--- -AACTCAGT AGGCGTCTGT
G. bull 669 bp marker  mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

601     611     621     631     641     651     661     671     681     691     700
G. bulloides IIa  GTT--TT--- --CTCCAAAT AACGTATACA GTGGACTTGG TGTCCGGTGC -TGGCCTCTG GTCATGTGCT TTGATTACTG T-CACTTTAA ACATGGTCCG
G. bulloides Ib  GTTAG----- -CTCC-ATT AACGTATTGA GTGGACTTGG TGTCCGGT-C -TGGCCTCTG GTCATGTGCT TTGATTACTG AACACTTTAA ACATGGTCCG
G. bulloides IIa  GTT--TT--- --CTCC- AAT AACGTATCTA GTGGACTTGG TGTCCGGTGC GTGGCCT-C GTCGTGTACT TTGATTACTG T-CACTTTAA ACATGGTCCG
G. bulloides IIb  GTTAGTT--- --CTCC- AAT AACGTATCTA GTGGACTTGG TGTCCGGTGC GTGGCCT-C GTCATGTACT TTGATTACTG T-CACTTTAA ACATGGTCCG
G. bulloides IIc  GCT--TT--- --CTCC- AAT AACGTATCTA GTGGACTTGG TGTCCGGTGC GTGGCCT-C GTCGTGTACT TTGATTACTG T-CACTTTAA ACATGGTCCG
G. bulloides IID  GTTAGTT--- --CTCC- AAT AACGTATCTA GTGGACTTGG TGTCCGGTGC GTGGCCTCTG GTCATGCCT TTGATTACTG T-CACTTTAA ACATGGTCCG
G. bulloides IIE  GTT--TT--- --CTCC- AAT AACGTATCTA GTGGACTTGG TGTCCGGTGC -TGACCTCTG GTCGTGTACT TTGATTACTG T-CACTTTAA ACATGGTCCG
G. bull 669 bp marker  -----m mmmmmmm---m mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm mmmmmmmmmmm

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	701	711	721	731	741	751	761	771	781	791	800	
<i>G. bulloides</i> IIa	TTAGAC	TCGTGCAA	GCAATTC	-G-AGC-AAC	GAATTG	AAAC-ACTCT	TTG-GGC	-A	CTGTTT	-ACT	-CC	C-----GTTT
<i>G. bulloides</i> Ib	TTAGAC	-TTTTAGT	GCAATCCATT	TGCAGC-ATC	GAATCGCGAA	AATGAGCATT	GTTTACA	-C	CCGTTCT	AGAGCAGTGG	TTATTC	-----
<i>G. bulloides</i> IIa	TTAGAC	TCGTGCAAT	CCAATAG	-A AG-AGGTGAC	TAAGTTTCCC	A--GTACCGT	GTT-CGCCTC	CCGTGTCAGT	AGGG	-CCC	C-----T	-----
<i>G. bulloides</i> IIb	TTAGAC	TCGTGCAAT	CCAATAG	-A AG-AGGTGAA	TAAGTTTCCC	AAAGTACCGT	GTTTAGC-TC	CCGTGTTCCG	AGCGA	-CCC	C-----T	-----
<i>G. bulloides</i> IIc	TTAGAC	TCGTGCAAT	CCAATAG	-A AG-AGGTGAC	TCAGTATCCC	A--GTACCGT	GTT-AGTCTC	CCGTGTTCCG	AGTGG	-CCC	C-----G	-----
<i>G. bulloides</i> IID	TTAGAC	TCGTGCAAT	CCAATAG	-A AG-AGGTGAA	TAAGTTTCCC	AAAGTACCGT	GTTTAGC-TC	CCGTGTTCCG	AGAGA	-CCC	C-----T	-----
<i>G. bulloides</i> IIe	TTAGAC	TCGTGCAAT	CCAATTG	-A AG-AGGTGAC	TCGTGTTTTC	TAGT-ACCGT	GTTGATC-TC	CCGTTGTAGT	AGAGA	-CCC	C-----T	-----
<i>G.bull</i> 669 bp marker	mmmmmm	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	801	811	821	831	841	851	861	871	881	891	900	
<i>G. bulloides</i> IIa	ACAGAGGAGA	GATAGACTAA	CCACCTATTC	TCGACTCGCC	CGCC-CATCT	T-----TCAA	TTCTTGGTGG	GGACAGTAGG	TTGTTAACTT	TCTTACTCGG	-----	
<i>G. bulloides</i> Ib	-----	-----TAA	CCATATTTCC	ACTGCTC-G	CCTCTCAACT	G-----TCAA	TTCTTGGTGG	GGACAGTCAG	TTGTTAACTT	TCTGACTCG-		
<i>G. bulloides</i> IIa	CGCATATA	-----	CCAGTCGAAG	TGGGCCCT-T	TGTG-CTTTT	T-----TCAA	ATCTTAGTGG	GGACAGACAT	CTGTTAACTT	TTTGTCTCGG		
<i>G. bulloides</i> IIb	CGCAAAATG	-----	CCAGTCGATG	TGGGTCCT-T	TGTG-CTTTT	T-----TCAA	ATCTTAGTGG	GGACAGACAT	CTGTTAACTT	TTTGTCTCGG		
<i>G. bulloides</i> IIc	CGCA-TTG	-----	CCAGTCGATG	TGGGTCCT-T	TGTG-CTTTT	T-----TCAA	ATCTTAGTGG	GGACAGACAT	CTGTTAACTT	TTTGTCTCGG		
<i>G. bulloides</i> IID	CGCA-TTG	-----	CCAGTCGATG	TGGGTCCT-T	TGTG-CTTTT	T-----TCAA	ATCTTAGTGG	GGACAGACAT	CTGTTAACTT	TTTGTCTCGG		
<i>G. bulloides</i> IIe	CGCA-TTA	-----	CCAGTCGATG	TGGGTCCT-T	TGTG-CTTTT	T-----TCAA	ATCTTAGTGG	GGACAGACAT	CTGTTAACTT	TTTGTCTCGG		
<i>G.bull</i> 669 bp marker	mmmmmm	-----	-----	-----	-----	-----	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	901	911	921	931	941	951	961	971	981	991	1000	
<i>G. bulloides</i> IIa	TCCTAACCCAG	GAATGCCTCG	TACAGGTTGG	TTTACCATAC	CACCTGGAAT	TAGTCCCTGC	CCTTTGTACA	CACCGCCCCG	CGCTTTTACC	AATGAACTAC	-----	
<i>G. bulloides</i> Ib	TCTGAACCCAG	GAATGCCTCG	TACAGGTTGG	TTTACCATAC	CACCTGGAAT	-AGTCCCTGC	CCTTTGTACA	CACCGCCCCG	CGCTTTTACC	AATGAACTAC	-----	
<i>G. bulloides</i> IIa	TCCCAACCCAG	GAATGCCTCG	TACAGGTTGG	TTTACCATAC	CACCTGGAAT	TAGTCCCTGC	CCTTTGTACA	CACCGCCCCG	CGCTTTTACC	AATGAACTTC	-----	
<i>G. bulloides</i> IIb	TCCCAACCCAG	GAATGCCTCG	TACAGGTTGG	TTTACCATAC	CACCTGGAAT	TAGTCCCTGC	CCTTTGTACA	CACCGCCCCG	CGCTTTTACC	AATGAACTTC	-----	
<i>G. bulloides</i> IIc	TCCCAACCCAG	GAATGCCTCG	TACAGGTTGG	TTTACCATAC	CACCTGGAAT	TAGTCCCTGC	CCTTTGTACA	CACCGCCCCG	CGCTTTTACC	AATGAACTTC	-----	
<i>G. bulloides</i> IID	TCCCAACCCAG	GAATGCCTCG	TACAGGTTGG	TTTACCATAC	CACCTGGAAT	TAGTCCCTGC	CCTTTGTACA	CACCGCCCCG	CGCTTTTACC	AATGAACTTC	-----	
<i>G. bulloides</i> IIe	TCCTAACCCAG	GAATGCCTCG	TACAGGTTGG	TTTACCACAC	CACCTGGAAT	TAGTCCCTGC	CCTTTGTACA	CACCGCCCCG	CGCTTTTACC	AATGAACTTC	-----	
<i>G.bull</i> 669 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	1001	1011	1021	1031	1041	1051	1061	1071	1081	1091	1100	
<i>G. bulloides</i> IIa	TTTGCGAG	AGTGTGG	GACCTA--TG	AGCTTTCAAG	-----TA	CAGGGAACCC	AT-----TCG	ACCAACGGGAG	TTTAAAGGAA	AAAGAAGTCG	-----	
<i>G. bulloides</i> Ib	TTTGCGAG	ACTATGG	-ACTT-GAAG	CATAGGATTG	AACTGC--GA	T-GGAAATGT	AT-----TCG	ATCAACGGGAG	TTTAAAGGAA	AAAGAAGTCG	-----	
<i>G. bulloides</i> IIa	TTTGCGAG	CGTGAGA	GACTAA--AA	T-----	-----AT	CGCGGAACCTC	AC-----TCG	ACCGACGGGA	CTTAAAGGAA	AAAGAAGTCG	-----	
<i>G. bulloides</i> IIb	TTTGCGAG	AGTAAGA	GACTTG--TA	ATA-----	-----AT	CGTGGAACTC	AC-----TCG	ACCGACGGGA	TTTAAAGGAA	AAAGAAGTCG	-----	
<i>G. bulloides</i> IIc	TTTGCGAG	AGTGAGA	GACTGA--AA	TGT-----	-----G	TGTGGAACTC	AC-----TCG	ACCGACGGGA	CTTAAAGGAA	AAAGAAGTCG	-----	
<i>G. bulloides</i> IID	TTTGCGAG	AGTGAGA	GACTTA--AA	GATA-----	-----AT	CGCGGAACCTC	AC-----TCG	ACCGACGGGA	TTTAAAGGAA	AAAGAAGTCG	-----	
<i>G. bulloides</i> IIe	TTTGTGAG	AGTGAGG	GACTGG-----	-----	-----TGAA	CCAGGAACCTC	AC-----TCG	ACCAACGGGAA	TTTAAAGGAA	AAAGAAGTcg	-----	
<i>G.bull</i> 669 bp marker	mmmmmmmm	-----	-----	-----	-----	-----	-----	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	1	101										
<i>G. bulloides</i> IIa	TAAC											
<i>G. bulloides</i> Ib	TAAC											
<i>G. bulloides</i> IIa	TAAC											
<i>G. bulloides</i> IIb	TAAC											
<i>G. bulloides</i> IIc	TAAC											
<i>G. bulloides</i> IID	TAAC											
<i>G. bulloides</i> IIe	taac											
<i>G.bull</i> 669 bp marker	mmmm											

Appendix 9.7.5 DNA sequence alignment of the partial ~1000 bp terminal 3' region of the SSU rRNA gene in *Turborotalita quinqueloba*

A marker file indicates the 669 unambiguously aligned nucleotide sites (marked m) used in phylogenetic analysis

	1	11	21	31	41	51	61	71	81	91	100
<i>T. quinqueloba</i> Ia		G	A	A	T	A	A	A	T	T	T
<i>T. quinqueloba</i> Ib		G	A	A	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IIa		G	A	A	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IIb		G	A	A	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IIc		G	A	A	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IID		G	A	A	T	A	A	A	T	T	T
<i>T. quinqueloba</i> 784 bp marker		m	m	m	m	m	m	m	m	m	m

	101	111	121	131	141	151	161	171	181	191	200
<i>T. quinqueloba</i> Ia	A	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> Ib	A	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> IIa	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IIb	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IIc	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IID	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> 784 bp marker	m	m	m	m	m	m	m	m	m	m	m

	201	211	221	231	241	251	261	271	281	291	300
<i>T. quinqueloba</i> Ia	T	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> Ib	T	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> IIa	T	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> IIb	T	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> IIc	T	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> IID	T	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> 784 bp marker	m	m	m	m	m	m	m	m	m	m	m

	301	311	321	331	341	351	361	371	381	391	400
<i>T. quinqueloba</i> Ia	G	A	A	A	T	T	A	A	A	T	T
<i>T. quinqueloba</i> Ib	G	A	A	A	T	T	A	A	A	T	T
<i>T. quinqueloba</i> IIa	G	A	A	A	T	T	A	A	A	T	T
<i>T. quinqueloba</i> IIb	G	A	A	A	T	T	A	A	A	T	T
<i>T. quinqueloba</i> IIc	G	A	A	A	T	T	A	A	A	T	T
<i>T. quinqueloba</i> IID	G	A	A	A	T	T	A	A	A	T	T
<i>T. quinqueloba</i> 784 bp marker	m	m	m	m	m	m	m	m	m	m	m

	401	411	421	431	441	451	461	471	481	491	500
<i>T. quinqueloba</i> Ia	A	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> Ib	A	T	A	A	A	T	A	A	A	T	T
<i>T. quinqueloba</i> IIa	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IIb	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IIc	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IID	T	T	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> 784 bp marker	m	m	m	m	m	m	m	m	m	m	m

	501	511	521	531	541	551	561	571	581	591	600
<i>T. quinqueloba</i> Ia											T
<i>T. quinqueloba</i> Ib											A
<i>T. quinqueloba</i> IIa	T	A	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IIb	T	A	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IIc	T	A	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> IID	T	A	T	T	T	T	T	T	T	T	T
<i>T. quinqueloba</i> 784 bp marker	m	m	m	m	m	m	m	m	m	m	m

	601	611	621	631	641	651	661	671	681	691	700
<i>T. quinqueloba</i> Ia	T	G	C	C	T	A	A	A	T	T	T
<i>T. quinqueloba</i> Ib	T	G	C	C	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IIa	T	G	C	C	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IIb	T	G	C	C	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IIc	T	G	C	C	T	A	A	A	T	T	T
<i>T. quinqueloba</i> IID	T	G	C	C	T	A	A	A	T	T	T
<i>T. quinqueloba</i> 784 bp marker	m	m	m	m	m	m	m	m	m	m	m

	701	711	721	731	741	751	761	771	781	791	800
<i>T. quinqueloba</i> Ia	T	G	T	G	C	A	G	T	A	T	T
<i>T. quinqueloba</i> Ib	T	G	T	G	C	A	G	T	A	T	T
<i>T. quinqueloba</i> IIa	T	G	T	G	C	A	G	T	A	T	T
<i>T. quinqueloba</i> IIb	T	G	T	G	C	A	G	T	A	T	T
<i>T. quinqueloba</i> IIc	T	G	T	G	C	A	G	T	A	T	T
<i>T. quinqueloba</i> IID	T	G	T	G	C	A	G	T	A	T	T
<i>T. quinqueloba</i> 784 bp marker	m	m	m	m	m	m	m	m	m	m	m

	801	811	821	831	841	851	861	871	881	891	900	
<i>T. quinqueloba Ia</i>	GTTGTGGCAA	TGACAGGCTCT	GTGATGCCCC-	TTAGATGTTT	AGGGCTGCAC	ACGTACTACA	TTGATCTAGT	CAATAAGTAT	GTGTGTAAACA	-----ATA-A		
<i>T. quinqueloba Ib</i>	GTTGTGGCAA	TGACAGGCTCT	GTGATGCCCC-	TTAGATGTTT	AGGGCTGCAC	ACGTACTACA	TTGATCTAGT	CAATAAGTAT	GTGTGTAAACA	-----ATA-A		
<i>T. quinqueloba IIa</i>	GTTGTGGCAA	TGACAGGCTCT	GTGATGCCCT	TTAGATGTTT	AAGGCTGCAC	ACGTACTACA	TTGATCTAGT	CAACGAGTAT	GTATGTAAACA	-----TTG-A		
<i>T. quinqueloba IIb</i>	GTTGTGGCAA	TGACAGGCTCT	GTGATGCCCT	TTAGATGTTT	AAGGCTGCAC	ACGTACTACA	TTGATCTAGT	CAACGAGTAT	GTATGTAAACA	-----TTG-A		
<i>T. quinqueloba IIc</i>	GTTGTGGCAA	TGACAGGCTCT	GTGATGCCCT	TTAGATGTTT	AAGGCTGCAC	ACGTACTACA	TTGATCTAGT	CAACGAGTAT	GTATGTAAACA	-----TTG-A		
<i>T. quinqueloba IID</i>	GTTGTGGCAA	TGACAGGCTCT	GTGATGCCCT	TTAGATGTTT	AAGGCTGCAC	ACGTACTACA	TTGATCTAGT	CAACGAGTAT	GTATGTAAACA	-----TTG-A		
<i>T. quinq 784 bp marker</i>	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	901	911	921	931	941	951	961	971	981	991	1000	
<i>T. quinqueloba Ia</i>	TTTT--GAA	TGTATTGGTT	AAGC---TTT	T-CTTATATT	TTGGTAAGAG	-----GTTAA	TACAGAACTT	CGAGAGAGTT	CCGACAACAG	TCAATCTAGT		
<i>T. quinqueloba Ib</i>	TTTT--GAA	TGTATTGGTT	AAGC---TTT	T-CTTATATT	TTGGTAAGAG	-----GTTAA	TACAGAACTT	CGAGAGAGTT	CCGACAACAG	TCAATCTAGT		
<i>T. quinqueloba IIa</i>	TAAT--GAA	TGTATTGGTT	AAGC---TAT	ATTGTATTTT	--GCTAA--C	-----GTTAA	TTCAGAACTT	CGAGAAAGTT	CCGACAACAG	TCAATCTAGT		
<i>T. quinqueloba IIb</i>	TTTT--GCA	TCTATTGGTT	AAGC---TAT	AATGTATTTT	--GGTAA--C	-----GTTAA	TTCAGAACTT	CGAGAAAGTT	CCGACAACAG	TCAATCTAGT		
<i>T. quinqueloba IIc</i>	TTAT--GCA	TCTATTGGTT	AAGC---TAT	AATGTATTTT	--GGTAA--C	-----GTTAA	TTCAGAACTT	CGAGAAAGTT	CCGACAACAG	TCAATCTAGT		
<i>T. quinqueloba IID</i>	TTAT--GCA	TCTATTGGTT	AAGC---TAT	AATGTATTTT	--GGTAA--C	-----GTTAA	TTCAGAACTT	CGAGAAAGTT	CCGACAACAG	TCAATCTAGT		
<i>T. quinq 784 bp marker</i>	-----mmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	1001	1011	1021	1031	1041	1051	1061	1071	1081	1091	1100	
<i>T. quinqueloba Ia</i>	TATTGCTTGT	AGTCG-----	--ATCT----	CATGATTGTT	TAGTTTTATG	CAAC----TT	CGGGTCATGA	TTCACTAGTA	CGCTTC---T	AATTACAGT		
<i>T. quinqueloba Ib</i>	TATTGCTTGT	AGTCG-----	--ATCT----	CATGATTGTT	TAGTTTTATG	CAAC----TT	CGGGTCATGA	TTCACTAGTA	CGCTTC---T	AATTACAGT		
<i>T. quinqueloba IIa</i>	TATTGCTTGT	AGTCG-----	--ATTG----	CATAATTGTA	CAGTT--CACG	CAAC--GCT	CGG-TTATCA	TTCCGCTAGTA	--TTGT---T	AATTACAGT		
<i>T. quinqueloba IIb</i>	TATTGCTTGT	AGTTG-----T	TAATTG----	TATAATTGTC	TAGTT--CACG	CAAC--GTT	CGT-TTATCA	TTCTCTAGTA	--TTGT---T	AATTACAGT		
<i>T. quinqueloba IIc</i>	TATTGCTTGT	AGTTG-----T	TAATTG----	TATAATTGTC	TAGTT--CACG	CAAC--GTT	CGT-TTATCA	TTCTCTAGTA	--TTGT---T	AATTACAGT		
<i>T. quinqueloba IID</i>	TATTGCTTGT	AGTTG-----T	TAATTG----	TATAATTGTC	TAGTT--CACG	CAAC--GTT	CGT-TTATCA	TTCTCTAGTA	--TTGT---T	AATTACAGT		
<i>T. quinq 784 bp marker</i>	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	1	101	1111	1121	1131	1141	1151	1161	1171	1181	1191	1200
<i>T. quinqueloba Ia</i>	GGGGACAGTC	GTTTGTAAAT	CTGAGACTCG	GTTCAACTAG	GAATGCCTAG	TATTGATGGT	TCACTAAACT	TTCTGGAATA	AGTCCCTGCC	CTTTGTACAC		
<i>T. quinqueloba Ib</i>	GGGGACAGTC	GTTTGTAAAT	CTGAGACTCG	GTTCAACTAG	GAATGCCTAG	TATTGATGGT	TCACTAAACT	TTCTGGAATA	AGTCCCTGCC	CTTTGTACAC		
<i>T. quinqueloba IIa</i>	GGGGACAGTC	GTTTGTAAAT	CTGAGACTCG	GTTCAACCAG	GAATGCCTCG	TATTGTGGT	TCATTAACT	CCGTGGAATA	AGTCCCTGTC	CTTTGTACAC		
<i>T. quinqueloba IIb</i>	GGGGACAGTC	GTTTGTAAAT	CTGAGACTCG	GTTCAACCAG	GAATGCCTCG	TATTGTGGT	TCATTAACT	CCGTGGAATA	AGTCCCTGTC	CTTTGTACAC		
<i>T. quinqueloba IIc</i>	GGGGACAGTC	GTTTGTAAAT	CTGAGACTCG	GTTCAACCAG	GAATGCCTCG	TATTGTGGT	TCATTAACT	CCGTGGAATA	AGTCCCTGTC	CTTTGTACAC		
<i>T. quinqueloba IID</i>	GGGGACAGTC	GTTTGTAAAT	CTGAGACTCG	GTTCAACCAG	GAATGCCTCG	TATTGTGGT	TCATTAACT	CCGTGGAATA	AGTCCCTGTC	CTTTGTACAC		
<i>T. quinq 784 bp marker</i>	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	1	201	1211	1221	1231	1241	1251	1261	1271	1281	1291	1300
<i>T. quinqueloba Ia</i>	ACCGCCCGTC	GCTTTTACCA	ATGGCCCTCG	TTGTGAGTGA	GCTGGACAAG	-----TTATT	TTA-----AC	TTGAAAAGTT	CTCAATCAAG	GTTTGCTAAA		
<i>T. quinqueloba Ib</i>	ACCGCCCGTC	GCTTTTACCA	ATGGCCCTCG	TTGTGAGTGA	GCTGGACAAG	-----TTATT	TTA-----AC	TTGAAAAGTT	CTCAATCAAG	GTTTGCTAAA		
<i>T. quinqueloba IIa</i>	ACCGCCCGTC	GCTTTTACCA	ATGGCCCTCG	TTGTGAGATA	GCTGGACAAG	-----TATTT	ACT-----AC	TTCAAAAAGTT	CTCAATCAAG	GTTTGCTAAA		
<i>T. quinqueloba IIb</i>	ACCGCCCGTC	GCTTTTACCA	ATGGCCCTCG	TTGTGAGATA	GCTGGACAAG	-----TATTT	ACT-----AC	TTCAAAAAGTT	CTCAATCAAG	GTTTGCTAAA		
<i>T. quinqueloba IIc</i>	ACCGCCCGTC	GCTTTTACCA	ATGGCCCTCG	TTGTGAGATA	GCTGGACAAG	-----TATTT	ACT-----AC	TTCAAAAAGTT	CTCAATCAAG	GTTTGCTAAA		
<i>T. quinqueloba IID</i>	ACCGCCCGTC	GCTTTTACCA	ATGGCCCTCG	TTGTGAGATA	GCTGGACAAG	-----TATTT	ACT-----AC	TTCAAAAAGTT	CTCAATCAAG	GTTTGCTAAA		
<i>T. quinq 784 bp marker</i>	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	
	1	301	1311									
<i>T. quinqueloba Ia</i>	GGAAAAAGAA	GTCTGTAAC										
<i>T. quinqueloba Ib</i>	GGAAAAAGAA	GTCTGTAAC										
<i>T. quinqueloba IIa</i>	GGAAAAAGAA	GTCTGTAAC										
<i>T. quinqueloba IIb</i>	GGAAAAAGAA	GTCTGTAAC										
<i>T. quinqueloba IIc</i>	GGAAAAAGAA	GTCTGTAAC										
<i>T. quinqueloba IID</i>	ggaaaaagaa	gtctgtaac										
<i>T. quinq 784 bp marker</i>	mmmmmmmmmm	mmmmmmmmmm										

	501	511	521	531	541	551	561	571	581	591	600
<i>N. pachyderma</i> I	TTAAATGGTA	TTTGATTACA		----ATTTAA		----CCGCT	TACCGAGGCT	A--TTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. pachyderma</i> II	TTAAATACGA	-----	--ATTTCGTAT	TCGTATTTTAA	A	----CCGCT	TACAGAGGCT	A--TTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. pachyderma</i> III	TTTAATACAA	TTTCCGGAAT	TCGTATTTTAA	A	-----	----CCGCT	TACAGAGGCT	A--TTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. pachyderma</i> IV	TTGCAATTTA	TTGYAATA	-----	-----	-----	----CCGCT	TACAGAGGCT	A--TTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. pachyderma</i> V	TTAAATACGA	AA-----TT	CGT-----	----ATTTAA	A	----CCGCT	TACAGAGGCT	A--TTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. pachyderma</i> VI	TTAAATACGA	-----	-----AAT	TCGTATTTTAA	A	----CCGCT	TACAGAGGCT	A--TTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. pachyderma</i> VII	TAATAGCAAT	ATTAA	-----	-----	-----	----CCGCT	TACAAAGGCT	A--TTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. dutertrei</i> C	TTCTAATTTA	ATTAGAAA	-----	-----	-----	-----TAGCT	AACAGAGGCT	A-ATTTA--	--AAATTAGA	CGGACCGCT	--GTA--CTTT
<i>N. dutertrei</i> Ib	TTCTAATTTA	ATTAGAAA	-----	-----	-----	-----TAACT	AACAGAGGCT	A-ATTTA--	--AAATTAGA	CGGACCGCT	--GTA--CTTT
<i>P. obliquiloculata</i> AS	TCTATTTATT	TT-AT-AATA	GAA	-----	-----	-----TAACT	AACAGAGGCT	A-ATTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
<i>N. incompta</i> I	ATGGGTATC	CCAGTCATGT	GTTTATACTT	TTATGTGTAA	ATACGTACGA	CACAGAGACT	AGATAACC	-----	--AAACTAGG	CGTACCGCT	--GTATCATT
<i>N. incompta</i> II	ATGGGTATC	CCAGTCATGT	GTTTATGCTT	TTATGTGTAA	ATACGTACGA	CACAGAGACT	AGATAACC	-----	--AAACTAGG	CGTACCGCT	--GTATCATT
<i>G. inflata</i>	CTTATTTTTA	ATAAGAG	-----	-----	-----	-----TATTT	ACCTGAGGCT	A-TTTTA--	--AAACTAGA	CGGACCGCT	--GTTTCCTT
Neo 666 bp marker									--mmmmmmmm		
	601	611	621	631	641	651	661	671	681	691	700
<i>N. pachyderma</i> I	TCT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTCC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. pachyderma</i> II	TCT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. pachyderma</i> III	TCT---TAA	ACCAGAGGAA	GGttgCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. pachyderma</i> IV	-CT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. pachyderma</i> V	TCT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. pachyderma</i> VI	TCT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. pachyderma</i> VII	TCT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. dutertrei</i> C	TCT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. dutertrei</i> Ib	TCT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>P. obliquiloculata</i> AS	-CT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
<i>N. incompta</i> I	TCTT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTAAGCAT	
<i>N. incompta</i> II	TCTT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTAAGCAT	
<i>G. inflata</i>	-CT---TAA	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTTC	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	
Neo 666 bp marker	-----mmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	
	701	711	721	731	741	751	761	771	781	791	800
<i>N. pachyderma</i> I	CTCAAT-ATA	AT-ACACCGT	-----CTTTA	GCGCTTAGA-	CGCGATTAA-	TGGCTTACTT	TTTTTTATTA	A-CGAGT-GA	GTTTAAATTA	CCG--ATGA	
<i>N. pachyderma</i> II	CTCAAT-ATA	AT-ATACCGT	-----CTTTA	GCGCTTAGA-	CGCGATTAA-	TGGATTCG--	TTTTTTATTA	AGCGAGT-C	GTTTAAAT--	-CG--ATGT	
<i>N. pachyderma</i> III	CTCAAT-ATA	AT-ACACCGT	-----CTTTA	GCGCTTAGA-	CGCGATTAA-	TGGATTCG--	TTTTTTATTA	AGCGAGT-C	GTTTAAAT--	-CG--ATGT	
<i>N. pachyderma</i> IV	CTCAAT-ATA	AT-ACACCGT	-----CTTTA	GCGCTTAGA-	CGCGATTAA-	TGGCTTTT--	TTTTTTATTA	AGAAAGT-C	TATTAAT--	-CG--TGT	
<i>N. pachyderma</i> V	CTCAAT-ATA	AT-ACACCGT	-----CTTTA	GCGCTTAGA-	CGCGATTAA-	TGGattCG--	-TTCTTATTA	AGCGAGT-C	GTTTAAAT--	-CG--ATGT	
<i>N. pachyderma</i> VI	CTCAAT-ATA	AT-ACACCGT	-----CTTTA	GCGCTTAGA-	CGCGATTAA-	TGGATTGC--	-TTTTTATTA	AGCGAGT-C	GTTTAAAT--	-CG--ATGT	
<i>N. pachyderma</i> VII	CTCAAT-ATA	AT-ACACCGT	-----CTTTA	GCGCTTAGA-	CGCGATTAA-	CGGCTTAC-	-TTTTTATTA	AGGAGGT-CT	GTTTAAAT--	-CG--ATGT	
<i>N. dutertrei</i> C	CTCAAT-ATT	AT-ACACCGT	-----ATTTA	GCGCTTAGT-	TGCGATTAT-	TGGCTCAATTA	T-----T	GGTCTTTTA	ATTGTATT--	-----	
<i>N. dutertrei</i> Ib	CTCAAT-ATT	AT-ACACCGT	-----ATTTA	GCGCTTAGT-	TGCGATTAT-	TGGCTCAATTA	T-----T	GGTCTTTTA	ATTGTATT--	-----	
<i>P. obliquiloculata</i> AS	CTCAATTTTT	AT-ACACCGT	-----ATTTA	GCGCTTAGA-	TGCGATTAT-	TGGCTTTT--	-----A	GAGTCTTTTA	ATTGTATT--	-----	
<i>N. incompta</i> I	CTCAATTTTT	ACAACACCGT	-----TAACA	CACGTAGTGA	GCCTTTGAT	CTCTCATTTCA	TGCATTCTGT	CTTTCGGTGC	AGTGTGCAAT	GTGAGTTG--	
<i>N. incompta</i> II	CTCAATTTTT	ACAACACCGT	-----TAACA	CACGTAGTGA	GCCTTTGAT	ATCTCATCTG	CATATGCATA	TTTCGGTATG	GATT-GCAAT	GTGAGTTA--	
<i>G. inflata</i>	CTCAATTTTT	-TAACACCGT	-----ATTTA	GCGCTTGGG-	TCGTAATTG-	TTAGGCCTTT	TAGGTTTTTT	CAATTGCGTT	TC-----	-----	
Neo 666 bp marker	mmmmmmmmmm	-----mmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	
	801	811	821	831	841	851	861	871	881	891	900
<i>N. pachyderma</i> I	TTTCT---A	ATGTGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GC-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TATATCTAGT	-----GC	
<i>N. pachyderma</i> II	TTTCT---A	ATGTGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GC-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TATATCTAGT	-----GC	
<i>N. pachyderma</i> III	TTTCT---A	ATGTGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GC-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TATATCTAGT	-----GC	
<i>N. pachyderma</i> IV	TTTCT---A	ATGTGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GC-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TATATCTAGT	-----GC	
<i>N. pachyderma</i> V	TTTCT---A	ATGTGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GC-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TATATCTAGT	-----GC	
<i>N. pachyderma</i> VI	TTTCT---A	ATGTGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GC-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TATATCTAGT	-----GC	
<i>N. pachyderma</i> VII	TTTCT---A	ATGTGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GC-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TATATCTAGT	-----GC	
<i>N. dutertrei</i> C	--TCT---A	ATGCGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GT-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TTTTTATA--	-----GC	
<i>N. dutertrei</i> Ib	--TCT---A	ATGCGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GT-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TTTTTATA--	-----GC	
<i>P. obliquiloculata</i> AS	--TCT---A	ATGCGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GT-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTC-	TTT-ATTATA	-----GC	
<i>N. incompta</i> I	--TCT---A	ATGCGCGCGG	TTATGCCCTGT	ACCGAGAGGT	GACGTGGGT	AA---CCAT	TCTCTAATGC	TGACCTATTT	TTCTGAAATA	T-----GC	
<i>N. incompta</i> II	--TCT---A	ATGCGCGCGG	TTATGCCCTGT	ACCGAGAGGT	GACGTGGGT	AA---CCAT	TCTCTAATGC	TGACCTATTT	TTCTGAAATA	T-----GC	
<i>G. inflata</i>	--TCC---A	ATGCGCGCGG	TAAAGCCTCG	TTTCGAGAGTA	A--GT-GGGT	AA---TCCA	TTGGAAGTAA	TGATTTCTCT	ATTTTTATAA	ACA-----GC	
Neo 666 bp marker	-----mm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	-----mmmm	mm	mmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmm	
	901	911	921	931	941	951	961	971	981	991	1000
<i>N. pachyderma</i> I	ACAAC---TA	TGTACGG--	-CATTCATT	CCGAGACGGC	T-AGTTCCGT	CTTTT-A-GT	GCGAAT----	-GTAGTG-TT	ATTCAAACG-	-----	
<i>N. pachyderma</i> II	ACAAC---TA	TGCACGG--	-CACTCATTC	CCGAGACGGC	T-AGTTCCGT	CTTTT-A-GT	GTGAAT----	-GTAGTG-TT	ATTCAAACG-	-----	
<i>N. pachyderma</i> III	ACAAC---TA	TGCACGG--	-CACTCATTC	CCGAGACGGC	T-AGTTCCGT	CTTTT-A-GT	GTGAAT----	-GTAGTG-TT	ATTCAAACG-	-----	
<i>N. pachyderma</i> IV	ACAAC---TA	TGCACGG--	-CACTCATTC	CCGAGACGGC	T-AGTTTCGT	CTTTT-A-GT	GTGAAT----	-GTATGTGTT	ATTCAAACG-	-----	
<i>N. pachyderma</i> V	ACAAC---TA	TGCACGG--	-CACTCATTC	CCGAGACGGC	T-AGTTTCGT	CTTTT-A-GT	GTGAAT----	-GTAGTG-TT	ATTCAAACG-	-----	
<i>N. pachyderma</i> VI	ACAAC---TA	TGCACGG--	-CACTCATTC	CCGAGACGGC	T-AGTTTCGT	CTTTT-A-GT	GTGAAT----	-GTAGTG-TT	ATTCAAACG-	-----	
<i>N. pachyderma</i> VII	ACAAC---TA	TGCACGG--	-CACTCATTC	CCGAGACGGC	T-AGTTTCGT	CTTTT-A-GT	GTGAAT----	-GTAGTG-TT	ATTCAAACG-	-----	
<i>N. dutertrei</i> C	ACACC---TA	TATACGG--	-CATTCATT	CCGGAGCAGC	T-AGTTTCGT	CTTTT-TTGT	GCGAAT----	-GTAATG--T	ATTCTTTATC	CG-----	
<i>N. dutertrei</i> Ib	ACACC---TA	TATACGG--	-CATTCATT	CCGGAGCAGC	T-AGTTTCGT	CTTTT-TTGT	GCGAAT----	-GTAATG--T	ATTCTTTATC	CG-----	
<i>P. obliquiloculata</i> AS	ACACC---TA	TATACGG--	-CATTCATT	CCGGAGTGC	T-AGTTTCGT	CTTTT-TTGT	GCGAAT----	-GTAATG--T	ATTCTTTATC	CG-----	
<i>N. incompta</i> I	ACAAC---TC	TAATATGA-	-CATTCATT	CCGGAGCAGC	T-AGTTTCGT	CTTTT--GT	GTGAGT----	-GTAATG--T	AAACATGAAT	AGCGACTGTC	
<i>N. incompta</i> II	ACAAC---TC	TAATATGA-	-CATTCATT	CCGGAGCAGC	T-AGTTTCGT	CTTTT--GT	GTGAGT----	-GCAATG--C	AAACATGTCG	CGGTAAGACT	
<i>G. inflata</i>	ACACC---TA	TATACGG--	-CATTCATT	CCGAGACGGC	TTAGTCCGCA	CTTTT--GT	GCGAAT----	-GTAATG--T	ATT-CTTATC	CG-----	
Neo 666 bp marker	mmmmmmmmmm	-----mmmmmmmm	mmmmmmmmmmmm	mmmmmmmmmmmm	m-----mmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	

	1001	1011	1021	1031	1041	1051	1061	1071	1081	1091	1100
<i>N. pachyderma I</i>	-----	--TAC----	GTGCAATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	CTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. pachyderma II</i>	-----	--TGC----	GTGCAATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	CTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. pachyderma III</i>	-----	--TGC----	GTGCAATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	CTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. pachyderma IV</i>	-----	--TGC----	GTGCAATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	CTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. pachyderma V</i>	-----	--TGC----	GTGCAATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	CTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. pachyderma VI</i>	-----	--TGC----	GTGCAATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	CTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. pachyderma VII</i>	-----	--TGC----	GTGCAATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	CTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. dutertrei C</i>	-----	--TAT----	GTGCGATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	TTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. dutertrei Ib</i>	-----	--TAT----	GTGCGATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	TTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>P. obliquiloculata_AS</i>	-----	--TAT----	GTGCGATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	TTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. incompta I</i>	GCTGTTTACT	CATAT----	GTGCCCCGTG	CAATTCATGG	TGGGGACAGA	CCATTGCTAA	TTGTTGGTCT	CGCTTATAAC	TAGGAATGCC	TTGTACGGGT	
<i>N. incompta II</i>	TCATTCA--	--TAT----	GTGCCCCGTG	CAATTCATGG	TGGGGACAGA	CCATTGCTAA	TTGTTGGTCT	CGCTTATAAC	TAGGAATGCC	TTGTACGGGT	
<i>G. inflata</i>	-----	--TAT----	GTGCGATTGT	CAATTCATGG	TGGGGACAGA	CCATTGTTAA	TTGTTGGTCT	CGGTCTTAAC	TAGGAATGCC	TTGTACGGGT	
Neo 666 bp marker	-----	-----	mmmmmmmmmm	mmmmmmmmmm	m-mmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	

	1101	1111	1121	1131	1141	1151	1161	1171	1181	1191	1200
<i>N. pachyderma I</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTTTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. pachyderma II</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTTTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. pachyderma III</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTTTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. pachyderma IV</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTTTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. pachyderma V</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTTTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. pachyderma VI</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTTTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. pachyderma VII</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTTTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. dutertrei C</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	AACTTCTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. dutertrei Ib</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	AACTTCTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>P. obliquiloculata_AS</i>	CTTTGGTTCA	ACAAACyACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	AACTTCTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. incompta I</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	AACTTCTTTG	TGAGTCTAAG	GGACTGGGTT	
<i>N. incompta II</i>	CTTTGGTTCA	TCAAACCACC	GGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	AACTCGTTTG	TGAGTTTTAA	GGACTGGATT	
<i>G. inflata</i>	CTTTGGTTCA	ACAAACCACC	CGGAATACGT	CCCTGCCCTT	TGTACACACC	GCCCGTCGCT	CTTACCGATG	GACTTCTTTG	TGAGTCTTGG	GGACTGGGTT	
Neo 666 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	

	1201	1211	1221	1231	1241	1251	1261	1271	1281	1291
<i>N. pachyderma I</i>	AA-----ACC	ACTCGTTTA-	TT-----C	GGATGGCAGT	A-----ACCT	ATGGAACCTT	ATGCGAACAA	AGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. pachyderma II</i>	AA-----ACC	ACTCGTTTA-	TT-----C	GGATGGCAGT	-----ACCT	ATGGAACCTT	ATGCGAACAA	AGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. pachyderma III</i>	AA-----ACC	ACTCGTTTA-	TTAATAAGC	GGATGGCAGT	-----ACCT	ATGGAACCTT	ATGCGAACAA	AGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. pachyderma IV</i>	AA-----ACC	ATTCGTTTC--	TT-----C	GGATGGCAGT	-----ACCT	ATGGAACCTT	ATGCGAACAA	AGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. pachyderma V</i>	AA-----ACC	ACTCGCTT--	--TATTAAAGC	GGATGGCAGT	-----ACCT	ATGGAACCTT	ATGCGAACAA	AGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. pachyderma VI</i>	AA-----ACC	ACTCGCTTAA	TTTATTAAAGC	GGATGGCAGT	-----ACCT	ATGGAACCTT	ATGCGAACAA	AGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. pachyderma VII</i>	AA-----ACC	GCTCGTTTA-	TT-----C	GGATGGCAGT	-----ACCT	ATGGAACCTT	ATGCGAACAA	AGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. dutertrei C</i>	AA-----TCT	GTAATCTAT	TATAG--AT-	-----AT	-----ACCT	ATGGAACCTT	ATGCGAACAA	TGTGGTTTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. dutertrei Ib</i>	AA-----TCT	GTAATCTAT	TATGG--AT-	-----AT	-----ACCT	ATGGAACCTT	ATGCGAACAA	TGTGGTTTAA	AGGAAAGAGA	AGTCGTAAAC
<i>P. obliquiloculata_AS</i>	AA-----Tat	TTATTTTAA	TAGGT--AT-	-----AT	-----ACCT	ATGGAACCTT	ATGCGAACAA	TGTGGTTTAA	AGGAAAGAGA	A
<i>N. incompta I</i>	AA-----GCT	ATATGC----	-----GT	-----GT	A-----ACCT	ATGGAATTC	ATGCGA-TGA	ACTGGTTTAA	AGGAAAGAGA	AGTCGTAAAC
<i>N. incompta II</i>	AA-----GCT	ATATGC----	-----GT	-----GT	A-----ACCT	ATGGAATTC	ATGCGAATGA	ACTGGTTTAA	AGGAAAGAGA	AGTCGTAAAC
<i>G. inflata</i>	AA-----GCG	ATTTCTTTTA	GAATGAGCTC	-----T	-----ACCT	ATGGAACCA	ATGCGAACAA	TGTGGTCTAA	AGGAAAGAGA	AGTCGTAAAC
Neo 666 bp marker	mm-----	-----	-----	-----	-----mmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

Appendix 9.7.7 DNA sequence alignment of the partial ~1000 bp terminal 3' region of the SSU rRNA gene in the *Neogloboquadrina pachyderma* (and other Neogloboquadriniids)

A marker file indicates the 811 unambiguously aligned nucleotide sites (marked m) used in phylogenetic analysis

	1	11	21	31	41	51	61	71	81	91	100
<i>N. pachyderma</i> I	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. pachyderma</i> II	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. pachyderma</i> III	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. pachyderma</i> IV	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. pachyderma</i> V	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. pachyderma</i> VI	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. pachyderma</i> VII	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. dutertrei</i> C	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>N. dutertrei</i> Ib	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>P. obliquiloculata</i> _BR	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TCT
<i>G. inflata</i>	GCACCACAAG	AACGCGTGGA	GCATGTGGCT	TAATTTGACT	CAACGCGGGA	AATCTTACCG	GGTCCGGACA	CACTGAGGAT	TGACAGGCAA	TA-----	TAT
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	101	111	121	131	141	151	161	171	181	191	200
<i>N. pachyderma</i> I	CA--TGTTTC	ATTAAACC---	-----GTT-A	TTAACGTATC	GGTTATTTCC	-----	-----TT	AA-CATCGAG	-----TGTTA	AATATGCTAG	
<i>N. pachyderma</i> II	CA--TGTTTC	ATTAAACC-G-	-----GTT-A	AT-----	GGTTATTTAT	TTAATAGCCA	TCCGGTTA-TT	AAGCATCGAG	-----TGTTA	AATATGCTAG	
<i>N. pachyderma</i> III	CA--TGTTTC	ATTAAACCCG-	-----GTT-A	TTACATTTTG	TTTAA-----	-----	TCCGGTTA-TT	AAGCATCGAG	-----TGTTA	AATATGCTAG	
<i>N. pachyderma</i> IV	CA--TG-TT-	---AAC-G-	-----GTAAG	TTTACTTACC	GC-----	-----	-----TT	AA-CATCGAG	-----TGTTA	AATATGCTAG	
<i>N. pachyderma</i> V	CA--TGTTTC	ATTAAACC-G-	-----GTTAA	ATAGATTTAT	TTATTTAG--	-----	GCGGTTAAAT	AAGCATCGAG	-----TGTTA	AATATGCTAG	
<i>N. pachyderma</i> VI	CA--TGTTTC	ATTAAACCCG-	-----GTT-A	TTTGTTTAA-	-----	-----	TCAGTTA-TT	AAGCATCGAG	-----TGTTA	AATATGCTAG	
<i>N. pachyderma</i> VII	CA--TGTTTC	ATTAAACC---	-----GTT-A	TTAACGTATC	GTGTTATTTA	ATA-----	-----	CATCGAG	-----TGTTA	AATATGCTAG	
<i>N. dutertrei</i> C	AAA-----	-----	---TCGTTT	ATAA-----	CTATTATAAT	ACGC-ATTTA	-----	-----G	-----TGTTA	AATATGCTAG	
<i>N. dutertrei</i> Ib	AAA-----	-----	---TCGTTT	ATAA-----	CTATTATAAT	ACGC-ATTTA	-----	-----G	-----TGTTA	AATATGCTAG	
<i>P. obliquiloculata</i> _BR	ATTAAAAGAA	-----	---TCGTTT	ATTATAACAT	TCCTTTTTT-	-AATA-	-----	-----G	-----TGTTA	AATATGCTAG	
<i>G. inflata</i>	TAGCATAAAG	ATTTCGTCTTT	AGCGCTAA--	-----	-----	-----	-----	-----	-----	-----	
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	201	211	221	231	241	251	261	271	281	291	300
<i>N. pachyderma</i> I	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. pachyderma</i> II	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. pachyderma</i> III	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. pachyderma</i> IV	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. pachyderma</i> V	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. pachyderma</i> VI	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. pachyderma</i> VII	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. dutertrei</i> C	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>N. dutertrei</i> Ib	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>P. obliquiloculata</i> _BR	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGGCCCAT	AAATTCAAAG	
<i>G. inflata</i>	TCCTTTTCATG	ATTATGTGAT	AGGTGGTGCA	TGGCCGTTCT	TAGTTCGTGG	AGTGATCTGT	CTGCTTAAAT	CGCTTTTCACT	AAGGG-CCAT	AAATTCAAAG	
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	301	311	321	331	341	351	361	371	381	391	400
<i>N. pachyderma</i> I	TATGTTAGCT	ATC-GCCGCT	CTATGGACCC	CT-----TA-	ACTTAAACGGT	T-----	-----	-----A-	---AGCGCGC	GTCTT---	T
<i>N. pachyderma</i> II	TATGTTAGCT	ATC-GTCGCT	CTATGGACCC	CT-----TA-	TTCACTGCTTT	T-----	---AATTAGTCT	GTTT---	---AGCGCGC	GTCTT---	T
<i>N. pachyderma</i> III	TATGTTAGCT	ATC-GTCGCT	CTATGGACCC	CT-----TA-	TACTCGATTT	CGCTTTAATT	AGCGTTAATT	GTTTAAATA--	---AGCGCGC	GTCTT---	T
<i>N. pachyderma</i> IV	TATGTTAGCT	ATC-GTCGCT	CTATGGACCC	CT-----TA-	ACTCCAATAT	TCTTATTGTG	TT-----	-----A-	---AGCGCGT	GTCTT---	T
<i>N. pachyderma</i> V	TATGTTAGCT	ATC-GTCGCT	CTATGGACCC	CT-----TA-	TTCAAG----	---CTTTTATT	AG-----	TTT	GTTT---	A-	---AGCGCGC
<i>N. pachyderma</i> VI	TATGTTAGCT	ATC-GTCGCT	CTATGGACCC	CT-----TA-	TTCACTGCCT	TAATTAGT--	-----	TTT	GTTT---	A-	---AGCGCGC
<i>N. pachyderma</i> VII	TATGTTAGCT	ATC-GTCGCT	CTATGGACCC	CT-----TA-	ACCGAGTTAA	ATCGAGTT--	-----	TTT	GTTT---	A-	---AGCGCGC
<i>N. dutertrei</i> C	TATGTTAGCT	ATC-GTTTCT	CAATTGACCC	CT-----TGT	CTTCGAT--	-----	-----	-----	-----	A-	---AGCGCGT
<i>N. dutertrei</i> Ib	TATGTTAGCT	ATC-GTTTCT	CAATTGACCC	CT-----TGT	CTTCGAT--	-----	-----	-----	-----	A-	---AGCGCGT
<i>P. obliquiloculata</i> _BR	TATGTTAGCT	ATT-GTTTCC	CTATTGACCC	CT-----T-	ATTCCTAT--	-----	-----	-----	-----	A-	---AGCGCGT
<i>G. inflata</i>	TATGTTAGCA	AAT-GCTGCT	CTATTGACCC	CT-----AAT	AGGCTTAACT	GTCTTTT---	-----	-----	-----	A-	---AGCGCGT
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	401	411	421	431	441	451	461	471	481	491	500
<i>N. pachyderma</i> I	ATTTAA-AGA	GTTT-AAG-G	C-----ATTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----TA	ATTAAGTCGT	
<i>N. pachyderma</i> II	ATTTAA-WGA	GTTT-AAG-A	C-----ACTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----TA	ATAAAGTTTG	
<i>N. pachyderma</i> III	ATTTAA-AGA	GTTT-AAGGA	C-----ACTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----TA	ATAAAGTTTG	
<i>N. pachyderma</i> IV	ATTTTA-AGA	GTTTAAAG-A	C-----ACTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----TA	AACTAGCGTA	
<i>N. pachyderma</i> V	ATTTAA-AGA	GTTT-AAG-A	C-----ACTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----TA	ATAAAGTTTG	
<i>N. pachyderma</i> VI	AATTTA-CGA	GTTT-AAG-A	C-----ATTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----TA	ACACAGTTTG	
<i>N. pachyderma</i> VII	ATTTAA-AGA	GTTT-AAG-A	C-----ATTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----TA	ATAAAGTTTG	
<i>N. dutertrei</i> C	T-----AGA	GTTT-AA-A	C-----ATTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----T-	TATCTTGCTA	
<i>N. dutertrei</i> Ib	T-----AGA	GTTT-AA-A	C-----ATTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----T-	TATCTTGCTA	
<i>P. obliquiloculata</i> _BR	-----ATGG	GTTT-AA-A	C-----ATTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----T-	TATCTTGCTA	
<i>G. inflata</i>	ACG---AGTT	CTTT-AAAG-	C-----ACTGC	GCATGCTGTT	GGGCTCTGAA	AGCAACGAAC	GTGACCGCAA	CGTCTTGTG	CCT-----CT	CTATAATACC	
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

	501	511	521	531	541	551	561	571	581	591	600
<i>N. pachyderma</i> I	GTTTAAATGG	TATTTGATTA	CA-----	-----ATTT	AA-CCGCTTA	C-----CGAG	GCTA-TTTAA	AACTAGACGG	ACCGCTGTTT	CTTTTCTTAA	
<i>N. pachyderma</i> II	CTTTAAATAC	GA-----	-----ATTCGT	ATTTCGTATTT	AAACCCTTA	C-----AGAG	GCTA-TTTAA	AACTAGACGG	ACCGCTGTTT	CTTTTCTTAA	
<i>N. pachyderma</i> III	CTTTTAAATAC	AAATCCCGA	ATTCGTATTT	AAA-----	---CCGCTTA	C-----AGAG	GCTA-TTTAA	AACTAGACGG	ACCGCTGTTT	CTTTTCTTAA	
<i>N. pachyderma</i> IV	TATTCGAAT	TATTYAATA	-----	-----	---TCGCTTA	C-----AGAG	GCTA-TTTAA	AACTAGACGG	ACCGCTGTTT	CTTT-CTTAA	
<i>N. pachyderma</i> V	CTTTAAATAC	GA---A	TTCGT-----	-----ATTT	AAACCCTTA	C-----AGAG	GCTA-TTTAA	AACTAGACGG	ACCGCTGTTT	CTTTTCTTAA	
<i>N. pachyderma</i> VI	CTTTAAATAC	GA-----	-----A	ATTTCGTATTT	AAACCCTTA	C-----AGAG	GCTA-TTTAA	AACTAGACGG	ACCGCTGTTT	CTTTTCTTAA	
<i>N. pachyderma</i> VII	GTTAAATGCA	AATTTAA	-----	-----	---CCGCTTA	C-----AAG	GCTA-TTTAA	AACTAGACGG	ACCGCTGTTT	CTTTTCTTAA	
<i>N. dutertrei</i> C	TATTCATAT	TAATTAGAA	-----	-----	---TAGCTAA	C-----AGAG	GCTAATTTAA	AATTAGACGG	ACCGCTGTA-	CTTTTCTTAA	
<i>N. dutertrei</i> Ib	TATTCATAT	TAATTAGAA	-----	-----	---TAAGTAA	C-----AGAG	GCTAATTTAA	AATTAGACGG	ACCGCTGTA-	CTTTTCTTAA	
<i>P. obliquiloculata</i> BR	TATTCATTA	TAT-AT-AT	TAGAA-----	-----	---TAAGTAA	C-----AGAG	GCTAATTTAA	AATTAGACGG	ACCGCTGTTT	CTTT-CTTAA	
<i>G. inflata</i>	TTCTTATTTT	TAATAAGAG-	-----	-----	---TATTTAC	C-----TGAG	GCTATTTTAA	AACTAGACGG	ACCGCTGTTT	CTTT-CTTAA	
<i>N.pach</i> 811 bp marker							-----mnm	-----mnm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	601	611	621	631	641	651	661	671	681	691	700
<i>N. pachyderma</i> I	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATA	
<i>N. pachyderma</i> II	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATA	
<i>N. pachyderma</i> III	ACCAGAGGAA	GgTtGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATA	
<i>N. pachyderma</i> IV	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATA	
<i>N. pachyderma</i> V	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATA	
<i>N. pachyderma</i> VI	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATA	
<i>N. pachyderma</i> VII	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATA	
<i>N. dutertrei</i> C	ACCACAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATT	
<i>N. dutertrei</i> Ib	ACCACAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAAT-ATT	
<i>P. obliquiloculata</i> BR	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAATTTAT	
<i>G. inflata</i>	ACCAGAGGAA	GGTTGCGGCA	ATAACAGGTC	TGTGATGCC	TTAGATGTTT	CGGGCTGCAC	ACGTGCTACA	ATGATCAGTA	CAGTGAGCAT	CTCAATTTTA	
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	701	711	721	731	741	751	761	771	781	791	800
<i>N. pachyderma</i> I	AT-ACACCGT	CTTTAGCGCT	-----TAGAC	CGGTTATTG	GCTTACTTTT	TTTTATTAA-	CGAGT-GAGT	TTAATTAACC	GATGATTTCT	-----AATGT	
<i>N. pachyderma</i> II	AT-ATACCGT	CTTTAGCGCT	-----TAGAC	CGGTTAATG	GATCG---TT	TTTTATTAA	CGAGT-C-GT	TTAAT---C	GATGTTTTCT	-----AATGT	
<i>N. pachyderma</i> III	AT-ACACCGT	CTTTAGCGCT	-----TAGAC	CGGTTAATG	GATCG---TT	TTTTATTAA	CGAGT-C-GT	TTAAT---C	GATGTTTTCT	-----AATGT	
<i>N. pachyderma</i> IV	AT-ACACCGT	CTTTAGCGCT	-----TAGAC	CGGTTAATG	GCTTTT---T	TTTTATTAA	AAAGT-C-TA	TTAAT---C	G-TGTTTTCT	-----AATGT	
<i>N. pachyderma</i> V	AT-ACACCGT	CTTTAGCGCT	-----TAGAC	CGGTTAATG	GattGC---T	TCTTATTAA	CGAGT-C-GT	TTAAT---C	GATGTTTTCT	-----AATGT	
<i>N. pachyderma</i> VI	AT-ACACCGT	CTTTAGCGCT	-----TAGAC	CGGTTAATG	GATTGC---T	TTTTATTAA	CGAGT-C-GT	TTAAT---C	GATGTTTTCT	-----AATGT	
<i>N. pachyderma</i> VII	AT-ACACCGT	CTTTAGCGCT	-----TAGAC	CGGTTAATG	GCTTAC---T	TTTTATTAA	GAGGT-CGT	TTAAT---C	GATGTTTTCT	-----AATGT	
<i>N. dutertrei</i> C	AT-ACACCGT	ATTAAGCGCT	-----TAGTT	CGGTTAATG	GCTCATTT	-----TGG	GTCTTTTAAT	TGTATT---	-----TC	-----AATGC	
<i>N. dutertrei</i> Ib	AT-ACACCGT	ATTAAGCGCT	-----TAGTT	CGGTTAATG	GCTCATTT	-----TGG	GTCTTTTAAT	TGTATT---	-----TC	-----AATGC	
<i>P. obliquiloculata</i> BR	AT-ACACCGT	ATTAAGCGCT	-----AAGAT	ATGATTATG	GCTCATTT	-----AGG	GTCTTTTAAT	TGTATT---	-----TC	-----TATGC	
<i>G. inflata</i>	-TAACACCGT	ATTAAGCGCT	-----TGGGT	CGTAAATGTT	AGGCCTTTA	GGTTTTTTCA	ATTGCGTTTC	-----	-----TCC	-----AATGC	
<i>N.pach</i> 811 bp marker	-m-mmmmmmm	--mmmmmmmm	-----	-----	-----	-----	-----	-----	-----	-----	mmmmmmmm
	801	811	821	831	841	851	861	871	881	891	900
<i>N. pachyderma</i> I	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGCG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TATATC	TAGT-----	--GCACAAT	ATGTACGGCA	
<i>N. pachyderma</i> II	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGCG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TATATC	TAGT-----	--GCACAAT	ATGCACGGCA	
<i>N. pachyderma</i> III	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGCG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TATATC	TAGT-----	--GCACAAT	ATGCACGGCA	
<i>N. pachyderma</i> IV	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGCG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TATATC	TAGT-----	--GCACAAT	ATGCACGGCA	
<i>N. pachyderma</i> V	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGCG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TATATC	TAGT-----	--GCACAAT	ATGCACGGCA	
<i>N. pachyderma</i> VI	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGCG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TATATC	TAGT-----	--GCACAAT	ATGCACGGCA	
<i>N. pachyderma</i> VII	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGCG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TATATC	TAGT-----	--GCACAAT	ATGCACGGCA	
<i>N. dutertrei</i> C	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGTG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TTTTTA	TA-----	--GCACACT	ATATACGGCA	
<i>N. dutertrei</i> Ib	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGTG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TTTTTA	ATA-----	--GCACACT	ATATACGGCA	
<i>P. obliquiloculata</i> BR	GCGCGGTAAA	GCCGTCTTCG	AGAGTAAGTG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-TC-TTTTTA	TATA-----	--GCACACT	ATATACGGCA	
<i>G. inflata</i>	GCAACGGTAAA	GCCGTCTTCG	AGAGTAAGTG	GGTAATCCAT	TGGAAGTAAT	GATTTT---	-CTTATTTTT	ATAAACA---	--GCACCCA	ATATACGGCA	
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	901	911	921	931	941	951	961	971	981	991	1000
<i>N. pachyderma</i> I	TTTCAATCCC	AGACGGCT-A	GTTCCGTCTT	TT-A-GTGG	AATGTAGTG-	-----TTATT	CAAACG---T	ACG---TG	CAATTGTCAA	TTTATGGTGG	
<i>N. pachyderma</i> II	CTCATTTCCC	AGACGGCT-A	GTTTCGTCTT	TT-A-GTGTG	AATGTAGTG-	-----TTATT	CAAACG---T	GCG---TG	CAATTGTCAA	TTTATGGTGG	
<i>N. pachyderma</i> III	CTCATTTCCC	AGACGGCT-A	GTTTCGTCTT	TT-A-GTGTG	AATGTAGTG-	-----TTATT	CAAACG---T	GCG---TG	CAATTGTCAA	TTTATGGTGG	
<i>N. pachyderma</i> IV	TTTCAATCCC	AGACGGCT-A	GTTTCGTCTT	TT-A-GTGG	AATGTAAATG-	-----TTATT	CAAACG---T	GCG---TG	CAATTGTCAA	TTTATGGTGG	
<i>N. pachyderma</i> V	CTCATTTCCC	AGACGGCT-A	GTTTCGTCTT	TT-A-GTGTG	AATGTATGT-	-----GTTATT	CAAACG---T	GCG---TG	CAATTGTCAA	TTTATGGTGG	
<i>N. pachyderma</i> VI	CTCATTTCCC	AGACGGCT-A	GTTTCGTCTT	TT-A-GTGTG	AATGTAGTG-	-----TTATT	CAAACG---T	GCG---TG	CAATTGTCAA	TTTATGGTGG	
<i>N. pachyderma</i> VII	CTCATTTCCC	AGACGGCT-A	GTTTCGTCTT	TT-A-GTGTG	AATGTAGTG-	-----TTATT	CAAACG---T	GCG---TG	CAATTGTCAA	TTTATGGTGG	
<i>N. dutertrei</i> C	TTTCAATCCC	GGACGACT-A	GTTTCGTCTT	TTTT-GTGG	AATGTAAATG-	-----TATT	CTTTATCCGT	ATG---TG	CGATTGTCAA	TTTATGGTGG	
<i>N. dutertrei</i> Ib	TTTCAATCCC	GGACGACT-A	GTTTCGTCTT	TTTTGTGG	AATGTAAATG-	-----TATT	CTTTATCCGT	ATG---TG	CGATTGTCAA	TTTATGGTGG	
<i>P. obliquiloculata</i> BR	TTTCAATCCC	GGATGACT-A	GTTTCGTCTT	TTTT-GTGG	AATGTAAATG-	-----TATT	TCTTATCCGT	ATG---TG	CGATTGTCAA	TTTATGGTGG	
<i>G. inflata</i>	TTTCAATCCC	AGACGGCTTA	GTTCCGACTT	T---GTGG	AATGTAAATG-	-----TATT	-CTTATCCGT	ATG---TG	CGATTGTCAA	TTTATGGT-G	
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm-m	mmmmmmmmmm	m-----mmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm
	1001	1011	1021	1031	1041	1051	1061	1071	1081	1091	1100
<i>N. pachyderma</i> I	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. pachyderma</i> II	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. pachyderma</i> III	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. pachyderma</i> IV	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. pachyderma</i> V	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. pachyderma</i> VI	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. pachyderma</i> VII	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. dutertrei</i> C	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N. dutertrei</i> Ib	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>P. obliquiloculata</i> BR	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>G. inflata</i>	GGACAGACCA	TTGTTAACTG	TTGGTCTCGG	TCTTAACTAG	GAATGCCTTG	TACGGGTCTT	TGGTTCAACA	AACCACCCGG	AATACGTCCC	TGCCCTTTGT	
<i>N.pach</i> 811 bp marker	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

	1101	1111	1121	1131	1141	1151	1161	1171	1181	1191	1200
<i>N. pachyderma I</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTTTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---ACCACT	CGTTTA-TT-	-----CGGA	TGGCAGTA--	
<i>N. pachyderma II</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTTTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---ACCACT	CGTTTA-TT-	-----CGGA	TGGCAGT---	
<i>N. pachyderma III</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTTTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---ACCACT	CGTTTA-TTT	AATAAGCGGA	TGGCAGT---	
<i>N. pachyderma IV</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTTTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---ACCATT	CGTTC--TT-	-----CGGA	TGGCAGT---	
<i>N. pachyderma V</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTTTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---ACCACT	CGCTT---T	ATTAAGCGGA	TGGCAGT---	
<i>N. pachyderma VI</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTTTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---ACCACT	CGCTTAATTT	ATTAAGCGGA	TGGCAGT---	
<i>N. pachyderma VII</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTTTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---ACCGCT	CGTTTA-TT-	-----CGGA	TGGCAGT---	
<i>N. dutertrei C</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGAAC	TTCTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---TCTGTA	ATTCTATTAT	AG--AT----	-----AT----	
<i>N. dutertrei Ib</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGAAC	TTCTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---TCTGTA	ATTCTATTAT	GG--AT----	-----AT----	
<i>P. obliquiloculata_BR</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGAAC	TTCTTTGTGA	GTCTAAGGGA	CTGGGTTAA-	---TAGCTA	TTTTTA-TAG	TT--AT----	-----AT----	
<i>G. inflata</i>	ACACACCGCC	CGTCGCTCTT	ACCGATGGAC	TTCTTTGTGA	GTCTTGGGGA	CTGGGTTAA-	---GCGATT	TCTTTTAGAA	TGAGCTC--	-----T----	
<i>N.pach 811 bp marker</i>	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

	1201	1211	1221	1231	1241	1251
<i>N. pachyderma I</i>	---ACCTATG	GAAACTTATG	CGAACAAAGT	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. pachyderma II</i>	---ACCTATG	GAAACTTATG	CGAACAAAGT	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. pachyderma III</i>	---ACCTATG	GAAACTTATG	CGAACAAAGT	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. pachyderma IV</i>	---ACCTATG	GAAACTTATG	CGAACAAAGT	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. pachyderma V</i>	---ACCTATG	GAAACTTATG	CGAACAAAGT	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. pachyderma VI</i>	---ACCTATG	GAAACTTATG	CGAACAAAGT	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. pachyderma VII</i>	---ACCTATG	GAAACTTATG	CGAACAAAGT	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. dutertrei C</i>	---ACCTATG	GAAACTTATA	CGAACAAATG	GGTTTAAAGG	AAAGAGAAGT	CGTAAC
<i>N. dutertrei Ib</i>	---ACCTATG	GAAACTTATA	CGAACAAATG	GGTTTAAAGG	AAAGAGAAGT	CGTAAC
<i>P. obliquiloculata_BR</i>	---ACCTATG	GAAACTTATA	CGAACAAATG	GGTTTAAAGG	AAAGAGAAGT	CGTAAC
<i>G. inflata</i>	---ACCTATG	GAAACCAATA	CGAACAAATG	GGTCTAAAGG	AAAGAGAAGT	CGTAAC
<i>N.pach 811 bp marker</i>	---mmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

Appendix 9.7.8 DNA sequence alignment of the almost complete ~3000 bp SSU rRNA gene in the foraminifera

A marker file indicates the 1002 unambiguously aligned nucleotide sites (marked m) used in phylogenetic analysis

	1	11	21	31	41	51	61	71	81	91	100
<i>G. bulloides</i> Ia	GTTACACTTG	TCT---TGTC	ACTA-CCTTA	CTTGGTACAG	AGTAATGCCT	CTCTGGGGCA	TTGAACAAAC	CACCACACAC	TCTGTTACTA	AAACTGACCA	
<i>G. sacculifer</i>	GTTACACTTG	TCT---GAT	CCCAGGTGCG	CCATGCCAAT	ACACAGCCAA	GATACACACT	ACTGACGCTT	TGTTCCGCGG	CACCACAGAG	AGTATACCCA	
<i>G. glutinata</i>	GTCACACTTG	TCT---TGAC	TTGG-CAATT	CATTTGTCGG	CTACATTATA	TATTCACACG	GTGTTTTTTG	ATAATCACTT	ACACACATGC	CTAATATCTT	
<i>N. dutertrei</i>	GTCACACTTG	TCT---TGAC	TTGG-CGCTA	TTCTTTTAGCA	TTTAAAGAAC	CTCTGGTCTT	ACTTGTCTAAA	TGATTTTCATC	TGTTATAATA	TATTCCTTAA	
<i>P. obliquiloculata</i>	GTCACACTTG	TCT---TGAC	TTGG-CGCTA	TTTCTTTTAT	CGTATTAaC	GATATTAGAT	TTCATCTGTT	ATTCTAgTAT	TAGAAATAAC	AGAATGACTC	
<i>S. globigerus</i>	GTCACACTTG	TCT---TGAC	TTGG-CACAT	CTCGACACAC	CGACACTCCA	ACCCACATAC	GCATACGGTG	TATTACGATT	GATTTCTCTG	TTACGCTATA	
<i>G. scitula</i>	GTCACACTTG	TCT---TGAC	TTGG-CGCTA	TTAACAGATG	ATTACATAGA	ACTGTATATC	ACTCTACCAC	TGACCATTAT	CCT-----		
<i>G. inflata</i>	GTCACACTTG	TCT---TGAC	TTGG-CGCTA	TTACCACACG	ATTTCAAGCT	TGTTTATACA	CTGAGCCTTA	TGGCTCTATT	TAAACAATGC	TCTGACTAAC	
<i>N. incompta</i> I	GTCACACTTG	TCT---TGAC	TTGG-TACTG	CTAATGTATG	CCATCTCTGT	TCAATGTGTG	CTATCTCTGC	TAAGACATGA	CGTCGCAAGC	ATGTGGCTCA	
<i>G. uvula</i>	GTCACACTTG	TCT---TGAC	TTGA-CGAT	CTGATTCGCA	TTAATCAATT	ACACGATATG	ACGCTCTGCT	TTGTGCACTT	GCTCTTCACT	GAGTGACGGG	
<i>N. pachyderma</i> I	GTCACACTTG	TCT---TGAC	TTGG-CGCTA	TTGCTGTATT	GTTATTGCCT	TTACTTTAGCT	ACGCAGACCT	TAAACGTA	CGCGGTAATT	TGCTATTTAT	
<i>G. ungulata</i>	GTCACACTTG	TCT---TGAC	TTGG-CGCTA	AGTTTTTATA	CAGACCATCG	T-----					
<i>G. menardii</i>	GTCACACTTG	TCT---TGAC	CTCTGACACT	ACATATATCA	CAATATTTCAA	GTTATCATGA	CTTTTGT--				
<i>Allogromia</i> sp.	GTCACACTTG	TCT---TGAC	TTTG-CAATT	ATTTATATAA	TTATTTTATAT	TTATATTTAT	ATAGATATAA	ATTTTTTATAT	AATATATTTA	TAATTTTATA	
<i>A. triangularis</i>	GTCACACTTG	TCT---TGAC	TTTG-CACTG	TAAATGTTTA	TGAAATGGGG	TTATATATAT	ATTTATATAT	ATATAATTTT	AATTTATGAA	CAAAATTTGT	
<i>A. rara</i>	GTCACACTTG	TCT---TGAC	TTTG-CACTG	TAAATGTTT	ATATTTTAAAG	TGTTTTTATA	TATATATTTA	TATATATTTA	AATGCAATTT	AATATATAAA	
<i>E. scabrum</i>	GTCACACTTG	TCT---TGAC	TTGG-CGCAA	TAAATAAATA	AAAAAATAT	GATATATTACG	CACAAATTTT	ATACACACAC	ACATTATATA	TTTTTGTGCA	
<i>N. venosus</i>	GTCACACTTG	TCT---TGAC	TTGG-CTCAT	ATGATTTACGC	ATACTCTGTA	TCGTATCATA	TATTATACAC	ACATACATGG	ATTTCTCTGT	ATCGCTTGTG	
<i>P. nipponica</i>	GTCACACTTG	TCT---TGAC	TTGG-CACTG	TGTTGTTATC	ATATTATGAT	ACACACACAC	ACACACACAC	ATGTGTATTT	CTCTGTATCG	YTTATCTTAT	
<i>H. depressa</i>	GTCACACTTG	TCT---TGAC	TTGG-CTCAT	ATATTATATG	ATATTCGCGT	ATCATATATA	TATACTGTAC	ACACATACAT	TGATTTCTCT	GATTCGCTTG	
<i>B. spathulata</i>											
<i>A. pseudocassis</i>	GTCACACTTG	TCT---TGAC	TTGG-TGAAT	ATACATAACA	CCCCCTGAGA	AATAAAAATA	TCT-----				
<i>B. marginata</i>	GTCACACTTG	TCT---TGAC	TTGG-CGTC	TTTCAAACAG	GAGAGAGAA	TTATTTTTTC	CCGCCTGCTT	TGAATTTGCAT	ACTATCACAC	ATGCTGATTTG	
<i>E. williamsoni</i>	GTCACACTTG	TCT---TGAC	TTGG-CACAA	CCCATTTACA	CTGTGACCGT	TTGTCTTCGG	GCAGCACACA	GATGTAAAA	GATACACGCA	CCCCAAATGC	
<i>Trochammina</i> sp.	GTCACACTTG	TCT---TGAC	TTGG-CGCTA	TAAAAATATT	TATTAATAAT	ATTTTTTATTA	AAAATTTTATG	CTAATTTACAC	GCATTAATAA	TACTGATTTT	
<i>Peneroplis</i> sp.	GTCGCAATTG	TAT---TGAC	TTAG-CAATTA	TTATAGATAT	ATAGTTAGTT	ATAT-----					
<i>Parasorites</i> sp.	GTCGCAATTG	TAT---TGAC	TTAG-CATAT	ATGATGTAAA	TAAATTTATT	AATTTATT--					
<i>S. orbiculus</i>	GTCGCAATTG	TAT---TGAC	TTAT-ATAAA	TATTTGATAG	TTATTTTAT--						
<i>M. vertebralis</i>	GTCGTAATTG	TAT---TGAC	TTAG-TATAA	TGTTAAATAAT	AGTTATTTTA-						
<i>Broeckina</i> sp.	GTCGTAATTG	TAT---TGAC	TTAG-CATAG	TTATAGAGAT	ATAGTTTATG	T-----					
<i>C. compressa</i>	GTCGCAATTG	TAT---TGAC	TTAG-CATAG	ATAGTATCTA	TAAATATATA	ATATT-----					
<i>A. hemprichii</i>	GTCGCAATTG	TAT---TGAC	TTTG-TAAAA	TGTTATTTTA	TTTTTA----						
<i>Laevipeneroplis</i> sp.	GTCGCAATTG	TAT---TGAC	TTTG-TAATA	TATATAAATA	AATGTTTATCT						
<i>D. zhengae</i>	GTCGCAATTG	TAT---TGAC	GTTA-TTTCA	AATAATATAT	TATATATAT-						
<i>B. schlumbergeri</i>	GTCGCAATTG	TCT---TGAC	TTAG-CATAA	AATASATGTT	TAATTTACATT	YATAGCAAAA	TCCATTAATA	TATATTTAAT	ATATT-----		
1002 BP MARKER	mmmmmmmmmm	mmm-----									
	101	111	121	131	141	151	161	171	181	191	200
<i>G. bulloides</i> Ia	ACGATTGCTT	GAAGAGTCTG	TTGACC-----								
<i>G. sacculifer</i>	CGAGAAGTTC	CCACGAAGTT	GCCC-----								
<i>G. glutinata</i>	CAATGCCACG	TGTTTTACTAT	TCTATACGTG	CACATGAAAG	TAGACGCTTA	TGTGTCACAT	GACATACCAT	AATGCTTTCA	CTACACTATT	CATCAC-----	
<i>N. dutertrei</i>	TGGAATCTTA	TAACCAAGATT	GACTCACCCA	CATCCTCTTT							
<i>P. obliquiloculata</i>	ACCCATATCC	TATTA-----									
<i>S. globigerus</i>	TTTGATTTATT	CTGCGTTACA	CAGTGACACT	TATATTCTTT	T-----						
<i>G. scitula</i>											
<i>G. inflata</i>	CCTATCCCTT										
<i>N. incompta</i> I	TCTGACATTG	ATATTTGTTA	TTCCACTGTA	TATATCTCGG	TGTGCTAAC	TCTGACTTGA	AGGACTGTCT	CTCGAACAAT	GCTATTCTGT	TT-----	
<i>G. uvula</i>	CGCATCAATG	AGTAGATTTG	AACGTGTGTG	TGCTATGTGC	ATTCGGAGTA	GAATCGCTTG	GTATGATATG	TCTTTGCTTA	ATTGCAATGC	GCATTCATGC	
<i>N. pachyderma</i> I	TGTGTTAATA	CAATACCCGA	TTTCAACTGG	TTATGACAGT	AATAATACAT	TACACTGTG	TAACTTGATT	GACTCACCC	ATCCCT---		
<i>G. ungulata</i>											
<i>G. menardii</i>											
<i>Allogromia</i> sp.	TATATATAAA	ATTATATAAA	TATTTCCCAA	TATTTATATC	AATAATAAAA	TTTATAAAAT	TTTTTTA--				
<i>A. triangularis</i>	ACTTTAAAAG	ATAATAATAT	ATTTTAAATAT	GTTGTTGTTT	T-----						
<i>A. rara</i>	CAAAATATGT	TACTTTAAAG	AGCAATAATA	TTTTATATAT	TGTTGTTTTT	T-----					
<i>E. scabrum</i>	TACATTTTTT	TTTATATATT	TTAATTAATT	GATTTCTCTG	TAACAATAAA	GATTTTAAAT	ATTTTACGTT	ACACCGTGAA	AATATCTCTT	T-----	
<i>N. venosus</i>	TTATAAGGAG	ATGCGTTACA	CCGTGACAA	TTTCTTT--							
<i>P. nipponica</i>	AAGGCATGCG	TTACACCGTG	ACAAATTTCT	TT-----							
<i>H. depressa</i>	TCTTTAAGG	AGATGCGTTA	CACCGTGACA	ATTTTCTTT							
<i>B. spathulata</i>											
<i>A. pseudocassis</i>											
<i>B. marginata</i>	TTGCAATCAT	TCGATTTCTC	TGTATCGCTT	ATTCTCAAAG	GACATGCGTT	ACACCGTGAC	AATTTTCTTT	T-----			
<i>E. williamsoni</i>	TAAAAAACAA	AATTA-----									
<i>Trochammina</i> sp.	TCTGTAACGA	TTATTCATTA	AGATTATACT	TCGTTACACA	ATGAAATTGCC	TTT-----					
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	201	211	221	231	241	251	261	271	281	291	300
<i>G. bulloides</i> Ia	-----	-----	-----	-----	ACGG	ACATCCTAAG	GAAAGTTTGG	CTAATAC	---GACTCCT	-----TACTA	CCTTATGGAC
<i>G. sacculifer</i>	-----	-----	-----	-----	ACGG	ATAACCCAAG	GAAAGTTTGG	CTAATAC	---GTACAAC	-----CCAAG	CTCCCTCCC
<i>G. glutinata</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----TCCAC	ACTCACTTT
<i>N. dutertrei</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATACGAG	-----AA	---TTAAGTAT
<i>P. obliquiloculata</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATACGAG	-----AA	---TTACCATA
<i>S. globigerus</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----ACACA	GATACACAG
<i>G. scitula</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATACGAG	-----ATCTC	TTATCTCTCT
<i>G. inflata</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATACGAG	-----ATTAT	ACAATACACA
<i>N. incompta</i> I	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATACGAG	-----AATGT	TGCATATAC
<i>G. uvula</i>	TATACAGCT	TTCAATACTA	TACCTTTTCAT	TT	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----TTAAC	AATTTAACAC
<i>N. pachyderma</i> I	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATACGAG	-----AATTC	TCCACTCTAA
<i>G. ungulata</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATTTGCG	-----AC	---ATTACTTC
<i>G. menardii</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---ATTTGCG	-----AC	---ATTACTTC
<i>Allogromia</i> sp.	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----GTTTTTTT	ATTTTATTT
<i>A. triangularis</i>	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----TTAATTTGAA	ATGTTTATAAT
<i>A. rara</i>	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----TTAATTTAGA	ATTTATTTAA
<i>E. scabrum</i>	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----CAAA	-----TA-TAA
<i>N. venosus</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----	-----T-A
<i>P. nipponica</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----	-----TATT-T-T
<i>H. depressa</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----	-----TAATAA
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassisi</i>	-----	-----	-----	-----	ACGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----	-----TAAT--
<i>B. marginata</i>	-----	-----	-----	-----	ATGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	ACGAG-TATC	ACACACACAC
<i>E. williamsoni</i>	-----	-----	-----	-----	ACGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	ACGAACTA	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACGAG	-----	-----TTAATT
<i>Peneroplis</i> sp.	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----TTA	-----TA-T-
<i>Parasorites</i> sp.	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----TTAATTTTT	AAATA-TGT
<i>S. orbiculus</i>	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----ATAAAA	-----TA-TAA
<i>M. vertebralis</i>	-----	-----	-----	-----	TAGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----TTTTAA-CAG-	TATTATAAT
<i>Broeckina</i> sp.	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----TTTTAAAAATG-	-----TT-AT
<i>C. compressa</i>	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----	-----TATT-TAA-
<i>A. hemprichii</i>	-----	-----	-----	-----	TAGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----	-----TTAATTT
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GT	-----TTAAT-T-G-	-----TATT-AA-
<i>D. zhengae</i>	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---AT	-----	-----ATGT CT
<i>B. schlumbergeri</i>	-----	-----	-----	-----	TTGG	ATAAATCAGG	GAAAGTTTGG	CTAATAC	---GTACAA	---TACATAT	A-TATTAATT
1002 BP MARKER	-----	-----	-----	-----	mm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmm	-----	-----	-----

	301	311	321	331	341	351	361	371	381	391	400
<i>G. bulloides</i> Ia	ACTGCTTACT	GTACCAAGAG	AGATAATCGA	CCATTTGATC	TCTGCGTTAC	AGAGAGGGAA	GACTCGACCG	TCTGACCTCT	GGGTGATAGA	TTGACCGTCT	-----
<i>G. sacculifer</i>	AAGGAGAAC	GATCGCGAAC	AGACACACCA	CAGGTAGCAA	GCCCCAATTT	GACATCGCCT	GTCAAAAGAC	CCATATGAAG	AGCAGCGAGA	AAAGCGAAC	-----
<i>G. glutinata</i>	TTTT-CATTT	GTGATTTGATA	CACCTCGTTAA	TTGTATTACG	TACTGAAAGA	GTTTGAAATACA	CGATTTACGG	CATTTACGTG	CTGACGTA	TACATGGTTT	-----
<i>N. dutertrei</i>	AATACCCAC	ACACACAATA	CCCACACAAT	TCTCTGCAC	CAATGGTTAA	TCTTTGGTTA	TTACATTTTT	GTAAATCCTT	CTAATAAGAT	TACAAGCAAC	-----
<i>P. obliquiloculata</i>	CACACACGgG	TTATtTggtT	AaTAcTtATT	ATTGCAATAA	GGCCTATTGA	CTCTAAGCGG	GGGAGATATT	ACGCTTGCCT	ATGCTCTAT	ACAGACATGC	-----
<i>S. globigerus</i>	TTACACACAC	ACATACACCT	ATGTAATCAG	CAATCAATGG	TAAGCTTTGA	TAAGATGCTT	GCATCATATT	AGTACAAGTT	TAACTGCATG	ATAAAGACA	-----
<i>G. scitula</i>	ATACATTTACC	ACCTCGTATT	AATAGCGTAT	TAAGTAGATA	TAATACGTGA	TAATACTCAC	ACTCATTTCTC	TCTCTCTCTC	TCT--GCAT	CAATGGATGA	-----
<i>G. inflata</i>	CACCTTTGTTT	GGGATGTATT	TCCCATTTAT	TTTGTACTAA	TCTACACTTC	TCTGCACCTA	ATGGTTGAGC	TATGGTGTCA	ATTTCTTGACA	TCAGTCACTA	-----
<i>N. incompta</i> I	GAATTTCTGGC	ACTCAATGGT	TGATCATTAG	TGTATATCGG	GTTTTCCGTTT	ATATCGGTGTG	AGTTATCAAA	CGCAACATGA	GAAACATGA	GCAACCAAC	-----
<i>G. uvula</i>	ACGCAATTTA	CATACCTGAGT	GCAGGTCTCT	TTACTTAACC	AAACACAGCT	ATACCCCTCG	CGGGCATTTGA	GATTTCTGCC	TCTTTTATTT	GTGACTCGC	-----
<i>N. pachyderma</i> I	CCTACAATAC	CTGTATTTTA	CCCATCCTCT	GCACCTCAATG	GTTGATTTT	GATGTCCCTTA	TTACCGCTTA	AGCAGTTTCT	GTTTTAACCG	TTAAGGCATC	-----
<i>G. ungulata</i>	TCT--TATGT	--ACATACA	AACGCACCT	GTGAGAATTG	CTCGATTCCA	AAGATACATG	GTACATCCCC	GTACGTATCT	--G-C-G-C--	---TTT--GAG	-----
<i>G. menardii</i>	TCAAAATACT	TCACATTTGA	TGGCATTCTG	TGGTGAATTC	TCGCTATCAA	AGATATATAT	AATCATATCT	ATAGATTGAG	AGTGAATTC	ACAGAGGACG	-----
<i>Allogromia</i> sp.	ATATTTATAT	AATAAAAAAT	ATTTCTCAT	TT	-----	-----	-----	-----	--GCA-CIT	ACTG--GAG	-----
<i>A. triangularis</i>	ATAATTTATAT	CTTTTAAATTA	TATTATATTA	TTTTTTTTTTA	CTTTTT	-----	-----	-----	--GCA-CAT	ATTG--GAG	-----
<i>A. rara</i>	ATTTAAAATG	ATATATATAT	ATTTATTTA	TATATTGTTT	TATTTTTATT	ATTATTTTAT	TATTACTTTT	T	--GCA-CAT	ATTG--GAG	-----
<i>E. scabrum</i>	ATTT-TACG-	-CACACACAC	ACACT	-----	-----	TAT--GCATA	-AAATCAAA	ATATA	--CACAGT	GTATATATAT	-----
<i>N. venosus</i>	ATAACCTCAT	TCACACACAT	ACACATACAT	TCAATGTATA	TGTAAGACAC	TACT-CAGCA	-CTCAATG-	-GTAAACTTT	GGCTTCGTT	GCGTCGCCAG	-----
<i>P. nipponica</i>	ATA---CAT	ACACACACAC	ATCACATCAT	TACTCAG-CA	CT-CAA-TGG	-TAAACTTTG	GCTT-TC-GT	TCGCGATCGC	---CAGTTTA	AAGTTTAACT	-----
<i>H. depressa</i>	CCT---CAT	-CACACACAT	ACAC	-----	-----	ATA--CACAT	-ACACCAATG	TATAT--GTA	AGACACACAC	TACTCAGCAC	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassisi</i>	ATAA-T-CAA	-CACACACAC	ACATTACTCA	GCATCTGATA	GGACGTTCCG	GGGCACTCAA	TATGAACAAA	TATCGAGCAC	GCACGGGCGG	CTGCTTTGCG	-----
<i>B. marginata</i>	ACACACTCGC	ACACATTTTA	TGATTCGCTC	TCACGTGGCG	ACGTACTTTT	TTCTCTCACA	CACACTACAC	CCGGAATCGA	TTACRTACCG	CGAGAGATCA	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	TAT--GATGA	-ATTCTACAC	ACACACACAC	CCCATTTCAAT	CATATTTCA	-----
<i>Trochammina</i> sp.	TTATTA----	-CACACACTT	T-	-----	-----	ATA--CAACC	-TCATACACA	CTACTCA---	--GCA-CAT	ATTG--GTA	-----
<i>Peneroplis</i> sp.	--AA-TACGT	AAATATAATA	TTT	-----	-----	ATA--GCATA	-TTATGATAT	CATT	--GCAACAT	GATT-GACAT	-----
<i>Parasorites</i> sp.	TTAATTTACA	-----	-----	-----	-----	TAT--ACATA	-TAATAAAAA	TCATTTTTTTT	ATTGCAACAT	GATA--GAT	-----
<i>S. orbiculus</i>	-TAA-TACAT	-----	-----	-----	-----	TAT--GCATA	-TAATAA-TA	TTTATATAT-	-----	GATA--AAT	-----
<i>M. vertebralis</i>	T--CTTA	A	-----	-----	-----	TAC--GCATA	-TAATAA-TA	TTAATAATAT-	-----	GATA--AAT	-----
<i>Broeckina</i> sp.	TAA-TACACA	TT	-----	-----	-----	TAT--GCATA	-TAATAA-TA	TTAATT-	--GCAACAT	GATA--GAT	-----
<i>C. compressa</i>	TAA-TACA--	-----	-----	-----	-----	TAT--GCATA	-TAATAA-TA	TT	--GCAACAT	GATA--GAT	-----
<i>A. hemprichii</i>	-----	-TACACA	T--GTAAA	-----	-----	TAT--GCATA	-TAATAA-TA	TT	--GCAACAT	GATA--GAT	-----
<i>Laevipeneroplis</i> sp.	TAA-TACAC-	-----	-----	-----	-----	ATT--CATA	-TAATAA-TA	AT	-----	ACAACAT	GATT--GAT
<i>D. zhengae</i>	-----	-----	-----	-----	-----	TATT-GCATA	-TAATGG-TT	-----	-----	AAATAT	GATT--AAC
<i>B. schlumbergeri</i>	TAA---CATT	--GGTAATTA	ATATATATAA	TAC	-----	---ATAC-	-----	-----	-----	GCAACAT	GATT--GAC
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	401	411	421	431	441	451	461	471	481	491	500
<i>G. bulloides</i> Ia	AGCTACCCGG	GTGATAGATT	GACCGTCTAG	CTACCCGGTT	CTTGAGGGCGC	TCGGTGGTTC	ACTCTGATTG	GCTTTCGGGC	TGCTTTCATT	AGCACCTGGC	
<i>G. sacculifer</i>	ACCAAGCGG	AGTCGACTTC	GAGAGTAACC	ACT							
<i>G. glutinata</i>	TGTGTTTCAC	TTTTTTTGAT	GTGCGTTTAT	ATATGCAATG	GTGTTGTCTAT	ACTATTGTGC	TTTTACAACGC	GTGTGTAAT	TATATCATCC	ACACACTCAC	
<i>N. dutertrei</i>	ATGAGAGACA	TTGAGCAGC	ATCGTATATT	AAATCTATTA	CTTGTAAATAG	ATTATATACT	TTTTACGCTG	AGCAGACTTT	ACGAAGTTCA	CTT	
<i>P. obliquiloculata</i>	GGATGCCTCT	TTATTGACGG	TATTTCACTT	GTCTCTATTA	GTTTATTATA	GCCTATAAGA	CAATGCTGTG	ATTACTTTTT	AACCCATAATA	CAATACCCCT	
<i>S. globigerus</i>	TTGATCACGC	AGTATCACTT	TCGGGAGTGA	TACACACGCT	GAGCAGACTT	TGCGAATCCT	ACATT				
<i>G. scitula</i>	ACCTGTGTTA	CATTAAGCAA	AATAGATTCT	ATTGCGTAT	TAACACGCTA	TTCTAATATA	GGTTCCATG	CAACATGATA	GACATTGAGC	ACGCAATGCG	
<i>G. inflata</i>	GTTCACACGC	AACATGAGAG	ACATTGAGCA	CGCTTCGTAC	TAGCTTCTTA	TTTAATAAGA	GCTTTTACAT	TAAACGCTGA	GACAGACTTTA	CGAAGATTTC	
<i>N. incompta</i> I	GTATCACAAT	TTCTTTGGGA	TGTTTTTACA	CTTGTGCTGT	AGCTGATTTT						
<i>G. uvula</i>	GCTTTTTAAA	CATCGACTAC	TCGGCCTACA	ATGGCTTGTG	GACCTCACGG	TTCCITGGCTC	TTTTAGAGTC	ATTTCATGAGA	GACATTGAGC	ACGCATTGGA	
<i>N. pachyderma</i> I	GCTTTATAAA	TCAAAACGAA	CATGAGAGAC	ATTGAGCAGC	CATCGTATGC	TGTTTGTGCT	TTATTACTTG	TAATAAGCGG	CAGGCATACA	CTTTCCGCT	
<i>G. ungulata</i>	-AGT-G---	AATTCACAGA	GCACGCGTGT	GTATTCATCT	GTCTTATGGA	CAGACGAATA	TTACGCCAAG	CAGACTTGAT	ACTTGAATCA	TTTG----	
<i>G. menardii</i>	CGTGTGTGTA	TTTCTTGTG	TTATGACGGA	TGTACATTAT	GCCAAGCTGA	CTTGACACTT	GATTCAATTG				
<i>Allogromia</i> sp.	TAAT-A-TTT	TTTAAATACT	ACACTTA								
<i>A. triangularis</i>	CAGT-G---	AGTATTATAT	ATACATTTTA	TATTTGTATT	TATATTAAAT	TGTGTTTTAC	ATGATTTATA	TATATATGAA	TTTTCATGAA	ATAATATTTA	
<i>A. rara</i>	CAGT-G---	AGTATTATAT	ATATATTAT	TATATTGTTA	TATGTATTAT	ACATATAAT	GTTATCCTTT	TAACATAAGT	AAAAATGTA	TTGTATATAT	
<i>E. scabrum</i>	AAATACGCTCA	CCATAAAAAT	TTTAATTTCTA	TATATACATA	CACACACACA	CAGAAAAATG	CATTTTGTGG	CATTTTGTGA	TACAGTACAC	GGTTCTTAAT	
<i>N. venosus</i>	TTTGAAAGTTT	AACTGCAACA	TGAGAGACAT	TGAGCAGCA	CGTGTGCTAC	CTTCGGGTGC	TTCCACTTTA	CGCTGAGCAG	ACTTTGCGAA	GTTTACTTT--	
<i>P. nipponica</i>	GCACAT--G	AGAGACATTG	AGCAGCATG	TGATTTTGCC	TTCCGGCGAT	TTCCACTTTT	TACGCTGAGC	AGACTTTGCG	AAGTTTACTT		
<i>H. depressa</i>	TCATATGGTAA	ACTTTGGCTT	CGTTGCGCTC	ACCAAGTTTAA	AGTTTAACTG	CAACATGAGA	GACATTGAGC	ACGCACGCTG	CGCGCTTCG	GGTGCCCTCAC	
<i>B. spathulata</i>											
<i>A. pseudocassisi</i>	GGCAGGCGCC	CATTTT---	ACGCTGAGCA	AAT-ATTGTT	T-CAAT-TTA	A-----CT	GA-----				
<i>B. marginata</i>	CACAGTGTGTT	CATTTTTTAT	GTGTCGTCAA	CACATCAACT	ACTCARGACT	CAATGGTAAA	CTTTGGCCGC	GTTCCGGCAG	TCAGTTTAAA	GTTTAACTGC	
<i>E. williamsoni</i>	TTCAAGTGGTT	GGTTTTATCC	ATGCCCAACA	TGAGAGACAC	TGAACACGCA	GTATGTGTAC	GACTTCGGTC	TACGCATACA	TACGCTGAGT	TGATATGATA	
<i>Trochammina</i> sp.	AATTTTGATA	CATTCATGTT	ATCAGTTCAA	AAITTTAACT	GCAACATGAG	AGACAATATG	C-ACGCAAGT	AAGATTGCTT	CGG-CAATTC	TTACATTACG	
<i>Peneroplis</i> sp.	AAATATAAATA	TATAATA--C	ATTTATTTGT	ATTAAATTTT	T						
<i>Parasorites</i> sp.	A-TT-ATATA	AATTAATAAT	ATATATTTAT	TTATATATTT	TAAA-----						
<i>S. orbiculus</i>	A-TT-ATATA	AATGAAGTAA	TTTTTTTACT	TTAA-----							
<i>M. vertebralis</i>	A-TT-ATATA	AATATTTTAA	TA-CATTTAT	TGTATTAAAT	ATA-----						
<i>Broeckina</i> sp.	A-TT-ATATA	AATATTTTAT	T--CATTTAT	TTGAATATAA	TA-----						
<i>C. compressa</i>	A-TT-ATATA	AATTAATAATA	--CTTTAAT	ATGATTTTTT	AA-----						
<i>A. hemprichii</i>	A-TT-ATATA	AATATAAATA	TAAATTTTTT	ATTTATATTA	ATA-----						
<i>Laevipeneroplis</i> sp.	A-TT-ATATA	AATATAAATA	A--CATTTAT	TGTATTTTAA	A-----						
<i>D. zhengae</i>	A-TT-ATATA	AATATTATGT	A--CTTTTGT	ACAAATTTA							
<i>B. schlumbergeri</i>	A-AT-ATATA	AGTATTTTATA	TTACTTCGGT	AAATATAAAC							
1002 BP MARKER											
	501	511	521	531	541	551	561	571	581	591	600
<i>G. bulloides</i> Ia	GGCATTATAC	AATCACTGAG	TTTGATCAAT	GAGATACACT	GAGTACGTGG	CTTTGACCTT	CGGGTTGATT	CTCACGGTGC	CGTCTTTAAC	GTGTCTCTCTG	
<i>G. sacculifer</i>											
<i>G. glutinata</i>	ACGCTTAAAG	TATTTTTTTT	ACGCGCAACG	TTTTTGTGAT	GAACACACTT	GAGAGAAATC	ACGCATTAGG	TTGTGTGATC	TACTCAGCAC	TCAATGGTTT	
<i>N. dutertrei</i>											
<i>P. obliquiloculata</i>	TATCTCTGTC	ACTCAATGGT	TAACTTTTGG	GTGTTAACGA	TATAATCGTT	ATACCTTTCC	TTATAAGATT	ACAAGCAACA	TGAGAGACAT	TGAGCAGCGCA	
<i>S. globigerus</i>											
<i>G. scitula</i>	TCTCGCTATT	ACTAGTAATA	GCTTTACGCT	TAAGCGCTGA	GCAGACATTA	CGAAGTTTAA	CACTT				
<i>G. inflata</i>	TT-----										
<i>N. incompta</i> I											
<i>G. uvula</i>	GCTCCTCACG	GGGTTTCATT	ACTATGCTGA	GCAGACTTTG	CGAAGTTTGC	GCTT-----					
<i>N. pachyderma</i> I	GAGCAGACTT	TATGAAGTTT	ACTT-----								
<i>G. ungulata</i>											
<i>G. menardii</i>											
<i>Allogromia</i> sp.	CTGA--GCAG	ACTT-----		-GCGAGGAAT	TTAC-----						
<i>A. triangularis</i>	ATGCTTTATA	ACTTAAATGT	TAAGCTGCAT	TCATGCAACA	TGAGAGACAA	TATGTACGCG	AACATACCTT	TGTTTTAAT	ATTATATTA	TAATTAATAT	
<i>A. rara</i>	ATATTTCAATA	TTAAGTATAA	TGTTTTAATC	TTTTATAACT	AAATGTTAAG	CTGCATTAT	GCAACATGAG	AGACAATATG	TACCGGAACA	TACCTTTGTT	
<i>E. scabrum</i>	AGGTGCGGCC	ATCGCAAGA	CCGTACTTTA	TAGTGCAG	CAGGAAGTAA	TACTACCGAA	CGGACAGAGG	GGTACTAATG	ACAATATTTA	GCCAGTATA	
<i>N. venosus</i>											
<i>P. nipponica</i>											
<i>H. depressa</i>	ATCTACGCTG	AGCAGACTTT	GCGAAGTTTA	CTT-----							
<i>B. spathulata</i>											
<i>A. pseudocassisi</i>											
<i>B. marginata</i>	AACATGAGAG	ACATTGAGCA	GCACGCTGC	GTGACTTCGG	TCACTTCACA	TCACGCTGAG	CAGACTTTGC	GAAGTTTACT	T-----		
<i>E. williamsoni</i>	CGATTTTCTC	G-----									
<i>Trochammina</i> sp.	CTGA--GCAG	ACTTT-----		-GCGAAG--T	TTACTT---						
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	601	611	621	631	641	651	661	671	681	691	700
<i>G. bulloides</i> Ia	AGTTTCAGAG	CA-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i>	GATTCTCTTT	ATACATTCGT	GTGTAAGAGT	TTCGCTACTT	ATGCAACATG	AGAGACATTG	AGCACGCATC	GATCTTTTAC	ATTCGTGTGA	GGGATCTTTA	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	TCGTAATATG	ATTCTATTAC	cTGTAAATAG	ATCTATTACA	TTTTTACGCT	GAGCAGACTT	TACGAAGTTC	ACTT-----	-----	-----	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	ATATCATGAC	TTTATGTGTA	TGTTTATATT	TTTATTTTTA	TATATATTTA	TTACATGCTA	ATGGTATATG	CTGAGCAGAC	TTGCCGAGGAA	TCATACT---	-----
<i>A. rara</i>	TTAAAATGTA	ATTATTATTA	ATATATAAAT	TAATTATTAT	ATATTGTATT	TTTATTATTT	TAAAGCATGC	TTTATGGTAT	ATGCTGAGCA	GACTTGGCAG	-----
<i>E. scabrum</i>	CACACACACA	CACACACACG	GCATTTTTAA	TTGTTGTATA	TATAGTATAA	ATTTTAAAAAT	GCAGCGTAAT	ATTATTATTA	CACACACACA	CACACACACA	-----
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassisi</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	701	711	721	731	741	751	761	771	781	791	800
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i>	CGCTGAGCAG	ACCT-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. rara</i>	GAAATCATACT	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. scabrum</i>	CACGTGTATA	TTTTAACCTA	ATATTACTAC	TCAGCACATA	TTGGTAAAT	TTGGCTCAT	TCGTGAGTCA	GTTTTAAAAAT	TTTACACGCA	ACATGAGAGA	-----
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassisi</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	801	811	821	831	841	851	861	871	881	891	900
<i>G. bulloides</i> Ia										-CGT	GAAGCAAGCG
<i>G. sacculifer</i>										-CTT	GAAGCTGGT-
<i>G. glutinata</i>		--TGCGAAGT	TTACTT							-TGC	GAAGCATGT-
<i>N. dutertrei</i>										-TGT	GAAGCATGT-
<i>P. obliquiloculata</i>										-TGT	GAAGCATGT-
<i>S. globigerus</i>										-TGC	GAAGCATGT-
<i>G. scitula</i>										-TGT	GATGCATGT-
<i>G. inflata</i>										-TGT	GAAGCATGT-
<i>N. incompta</i> I										-TGT	GAAGCATGT-
<i>G. uvula</i>										-TGC	GAAGCATGT-
<i>N. pachyderma</i> I										-TAT	GAAGCATGT-
<i>G. ungulata</i>										-TGT	CAAGCGTGT-
<i>G. menardii</i>										-TGT	TAAGCCGGT-
<i>Allogromia</i> sp.										-TTG	CAAGCATGT-
<i>A. triangularis</i>										-TGC	-AAGCAGGT-
<i>A. rara</i>										-TGC	-AAGCAGGT-
<i>E. scabrum</i>	CAATATGTAC	GCACAAAAAT	GATATATTTA	TTTATACATT	TTTATAAATAC	GCTGAGCAGA	CTTTGCGAAG	TTTACTT		-TGC	GAAGCAGGT-
<i>N. venosus</i>										-TGC	GAAGCATGT-
<i>P. nipponica</i>										-TGC	GAAGCATGT-
<i>H. depressa</i>										-TGC	GAAGCATGT-
<i>B. spathulata</i>											--AGCATGT-
<i>A. pseudocassisi</i>										-GAC	GATATATGT-
<i>B. marginata</i>										-TGC	GAAGCATGT-
<i>E. williamsoni</i>										-TAT	TATACATGT-
<i>Trochammina</i> sp.										-TGC	GAAGCATGT-
<i>Peneroplis</i> sp.										-TAT	AAAGCATGT-
<i>Parasorites</i> sp.										-TAT	AAAGCATGT-
<i>S. orbiculus</i>										-TAT	AAAGCATGT-
<i>M. vertebralis</i>										-TAT	AAAGCATGT-
<i>Broeckina</i> sp.										-TAT	AAAGCATGT-
<i>C. compressa</i>										-TAT	AAAGCATGT-
<i>A. hemprichii</i>										-TAT	AAAGCATGT-
<i>Laevipeneroplis</i> sp.										-TAT	AAAGCATGT-
<i>D. zhengae</i>										-TAT	AAAGCATGT-
<i>B. schlumbergeri</i>										-AAT	TAAGCATGT-
1002 BP MARKER											

	901	911	921	931	941	951	961	971	981	991	1000
<i>G. bulloides</i> Ia	CATACAAGCA	TCTTCAG--C	ATCA-AGTCA	CAAGGTTGGC	GA-GTGTACT	TTTGAACCTT	CAAAGCAG-T	AACG-CAT--	ACGGAGGAG-	TAGTTTCT-G	
<i>G. sacculifer</i>	TTAACCAAGCA	TCTGTAG--T	ATCT-AGTGT	T---GTTGGC	AG-GTGCACC	ATGGAACTTT	CAAAGCAG-T	AACG-CAT--	CCGGAGGAG-	TAGTTTCT-G	
<i>G. glutinata</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>N. dutertrei</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>P. obliquiloculata</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAAGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>S. globigerus</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	AACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>G. scitula</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	ATTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>G. inflata</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>N. incompta</i> I	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>G. uvula</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>N. pachyderma</i> I	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>G. ungulata</i>	CATACAAGAT	TCTATGG--C	ATCA-AGTCA	CCTAGTTGGT	GA-GTGTCTC	TTTGAACCAT	CAAAGCAG-T	CACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>G. menardii</i>	CATACAGGAT	TCTACGG--C	ATCA-AGTCA	CCTAGTTGGT	GA-GTGTCTC	TTTGTACCAT	CAAAGCAG-T	CACG-CAT--	ACGGAGGAG-	TAGTTTCT-G	
<i>Allogromia</i> sp.	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	ATTGAACCTT	CAAAGCAG-T	CACG-CAT--	TCGGAGGAG-	GAGTTTCT-G	
<i>A. triangularis</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTCGGC	AA-GTGTATT	ATTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>A. rara</i>	CATACAAGCA	TCTACGG--C	ATCA-AGTCA	CAGGGTCGGC	AA-GTGTATT	ATTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>E. scabrum</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>N. venosus</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>P. nipponica</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>H. depressa</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>B. spathulata</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	AACGGCAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>A. pseudocassisi</i>	TATACAAGTA	TCTATAG--C	ATCA-GGTCA	TAGGGTTGGC	AC-GTGTATT	ATTGAACCTT	CAAAGCAG-T	AACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>B. marginata</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>E. williamsoni</i>	CATACAAGCA	TCTACAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	ATTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>Trochammina</i> sp.	CATACAAGCA	TCTTCAG--C	ATCA-AGTCA	CAGGGTTGGC	AA-GTGTATT	TTTGAACCTT	CAAAGCAG-T	CACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
<i>Peneroplis</i> sp.	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>Parasorites</i> sp.	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>M. vertebralis</i>	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>Broeckina</i> sp.	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>C. compressa</i>	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>A. hemprichii</i>	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>Laevipeneroplis</i> sp.	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>D. zhengae</i>	CAAACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAT-T	TACG-CAT--	TCGGAGGAG-	TAGTTTCT-G	
<i>B. schlumbergeri</i>	CATACAAGCA	TCTATAG--C	ATCA-AGTCA	CAATGTTGGC	AT-GTGTATT	ATTGAACCTT	CAAAGCAA-T	AACG-CAT--	ACGGAAGAG-	TAGTTTCT-G	
1002 BP MARKER	--mmmmmm	mmmmmmmm--m	mmmm--mm--	---mmmmmm	mm--mmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmm--m	mmmm--mm--	mmmmmmmmmm	mmmmmmmm--m

	1001	1011	1021	1031	1041	1051	1061	1071	1081	1091	1100
<i>G. bulloides</i> Ia	ATC-CCATAG	AAGG-AGCAC	TGT-----	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CATTG----	-CT-AGACAC	
<i>G. sacculifer</i>	ACC-CCATAG	AAGG-AGCAC	GGCTCTAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CATTG----	-CT-AAAACA	
<i>G. glutinata</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-CT-AGTACC	
<i>N. dutertrei</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>P. obliquiloculata</i>	ATC-CCATAG	AAGG-AGCAC	CgTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>S. globigerus</i>	ATC-CCATAG	AAGG-AGCAC	AGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-TT-AGTACC	
<i>G. scitula</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>G. inflata</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>N. incompta</i> I	ATC-CCATAG	AAGG-AGCAT	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>G. uvula</i>	ATC-CCATAG	AAGG-AGCAC	CGGACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-CT-AGTACC	
<i>N. pachyderma</i> I	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>G. ungulata</i>	ATC-CCGTAG	AAGG-AGCAC	GGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>G. menardii</i>	ATC-CCGTAG	AAGG-AGCAC	GGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>Allogromia</i> sp.	ATC-CCGTAG	AAGG-AGCAT	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>A. triangularis</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>A. rara</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>E. scabrum</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>N. venosus</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>P. nipponica</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>H. depressa</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>B. spathulata</i>	ATC-CCATAG	AAGG-AGTAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>A. pseudocassisi</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>B. marginata</i>	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>E. williamsoni</i>	ATC-CCATAG	AAGG-AGCAC	AGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>Trochammina</i> sp.	ATC-CCATAG	AAGG-AGCAC	CGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>Peneroplis</i> sp.	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>Parasorites</i> sp.	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>S. orbiculus</i>	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>M. vertebralis</i>	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>Broeckina</i> sp.	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>C. compressa</i>	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>A. hemprichii</i>	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>Laevipeneroplis</i> sp.	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>D. zhengae</i>	ATC-CCGTAG	AAGG-TGC-C	T-----	-GAGAGACC	GCACTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AC-AGTACC	
<i>B. schlumbergeri</i>	ATC-CCATAG	AAGG-AGCAC	TGTACAAT--	-GAGAGACC	GCTCTTAGTT	CTAAGGAAACG	CAGCAGGCCG	GTAATTTGCC	CAATG----	-AT-AGTACC	
1002 BP MARKER	mmmm-mmmmmmm	mmmm-----	-----	-mmmmmmmmmm	mmmmmmmmmmmm	mm-mmmmm-mm	mmmmmmmmmmmm	mmmmmmmmmmmm	mmmmmm-----	-----	

	1101	1111	1121	1131	1141	1151	1161	1171	1181	1191	1200
<i>G. bulloides</i> Ia	TACGGCGCGG	CCATCGATTG	TCTTATGATG	AAAGTACAAG	TACTAGTACA	AGTAGCGTCT	CTTCTGAGAT	CGTGAAGGA	ACGGAAAGGA	ACTCTATGGA	
<i>G. sacculifer</i>	CTACGATGCG	GCCGTCGTGA	CTTTTCGTCTG	CCCTATCCCG	TACAAAGTGA	GTAATGTCACA	TGTTGCGGAGA	AGACCAGGAG	AAGCTGCACG	GAGATGTCGA	
<i>G. glutinata</i>	CTACATCTCT	AATTGAGTGA	TACTTATTAC	GCATACGCCA	ATTTACAAT	CAACACAAAC	ATTAACACAC	ACCTTTTTTT	TCTGTCACCG	ATAGTTTTATA	
<i>N. dutertrei</i>	CTACAATCTT	TGTAATTAGA	ATTCATAATAT	TCTTATTATT	AAGAAGATTG	ATATCTATTG	AATCATTGCA	ATTAGATACG	CAATT---AA	ACAAAAACAA	
<i>P. obliquiloculata</i>	CTACAATCTC	TTATAATctT	aTTATAAGAG	TAAFTTAGAT	CTATTGAACT	ATTGCAAACT	AATACGCAAT	TAACAaCGTA	TTAATATCGT	GTACTCGTTT	
<i>S. globigerus</i>	CTAACGACAT	ACCGGAATAT	TATACAACAC	TTCAGACAGA	TGTGCGAC--	---ACACAC	ATATACATCC	TGTGTACACA	TTCGAGTAT	TCAATTT---	
<i>G. scitula</i>	CTACGATTAA	GCTAGATATT	AGCCGCTAAT	TGCTTTATGC	TCTTAATACC	TAAAGAGACT	ACTAGTTACC	GCTTTATACG	TTAAATGAT	ACTATTGTTA	
<i>G. inflata</i>	CTACGATCTC	TAACTTTTGT	TAAAGAACTG	ATACATATTG	AATCATTGCA	ATTGAAATAG	CAACACACAC	ACACACGAGA	ATGGTATCTG	TGTTATTGTA	
<i>N. incompta</i> I	CTACATACGT	TGTCATTGAA	TTTTCTTTAA	CGAGCATGGT	ACAATGAAT	ATCCTTTGTT	GCTGTAATC	AATGACACTC	ACATATACAG	ACATAGCTAT	
<i>G. uvula</i>	CTACGGCTTT	CTACAGCTGA	TATCTATTAC	GCATACAGGC	TACATTTACC	AACATACATA	ACGAACACAC	GCTTTTACGG	CAAAATAGTT	TTTAACTGAT	
<i>N. pachyderma</i> I	CTACAATGTT	TGTTTAAATAG	CCTTCCGGTT	AAATAGCCGG	TGGCTATTAC	CTTACAATGA	TACTTTTGAA	TCATTGCAAT	TAAATACGTT	ATTTACCCAA	
<i>G. ungulata</i>	T-----GATT	TGAAAATCA	AGGAAGGAT	ACTGTTTCTT	TGTGGCTTGA	TTAAAATTTAA	C-GATTTCC	TTGTCAACCT	CT-----	-----	
<i>G. menardii</i>	T-----GATA	CGAAAATCA	AGGTATATTG	TTCTTTTGTG	CTCGATTTAT	TCAAATGATA	CTGATTATCC	TTGTCACTCT	CT-----	-----	
<i>Allogromia</i> sp.	--CTAGTCCC	CITTTATTTAT	GTTTTATATA	TTTTATATAT	ATAAAATATA	AAGGTTGATT	AAAACCTTAT	TTAKATCGAT	CAAACTGTA	TTTTTTTTTT	
<i>A. triangularis</i>	--TTAGTCCC	C-----TTTT	TATATATTAA	TTATATTAAA	AGTTTTAAAC	TTGTGTAGTT	TTGCATCTTT	TTTTTTTATA	TTATATAAAA	AAACAAATATA	
<i>A. rara</i>	--TTAGTCCC	C-----TTTT	ATTATATATA	TTTAATTATG	TGATATAAAC	TTGTGTGATA	TTTGCATATT	TAATTTTATA	ATTATATATA	TATATTATAT	
<i>E. scabrum</i>	--CTAGTACC	C-----TATA	TATACATATG	ATTTACACAA	TTTACACTAA	AAAAAATATT	AATTTAATTT	TATGCCATTA	CACACTTTTT	TATAAATGTT	
<i>N. venosus</i>	--CTAGTACC	C-----TACA	ATCATAATAC	TGATTGATAT	TATTACGCGT	TAAACAATTTA	CTTATAATAT	ACTTTTACGTA	TATATAAGCA	TTATATAACA	
<i>P. nipponica</i>	--CTAGTACC	C-----TACA	ATCATAATAC	CGATTGATAT	TATTACGCGT	TAAACAATTTA	CTGACAACAC	ACACACATAC	ACTGTGTGCA	GCATATATAA	
<i>H. depressa</i>	--TTAGTACC	C-----TACA	CTAATACATA	TAATATATAT	TTTTTTCTGT	CACACACGAC	AACACACATA	CATCTTTGTT	ATATATCTCA	TGTATTTATT	
<i>A. pseudocassisi</i>	--TAATAACA	CATACATATA	TATNCAATAT	GTGCGCATAG	CTATACACAC	ACACTATTTN	AACATAAAT	AACTTTGTTG	CACACACCAC	GTATATTANT	
<i>B. marginata</i>	--CTAGTACC	CTACAATTTA	TTATCATTTT	GTATFACAT	TGCGTTATAC	AACAATTTAC	AACACACACA	CACAGATATG	GATGTAATAT	ATATAGCACT	
<i>E. williamsoni</i>	--ATAGTACC	ATTTATTTTT	TTACTACTGA	ATTTACCACA	CGCAAATTTA	ATACTGTACG	AAAAAAAATA	ATTT-----	-----	-----	
<i>Trochammina</i> sp.	--CTAGTACC	CTACAANAAT	ATTATGCATT	AAATTTATAC	AATTTACAAT	TATTTAAAAT	ATATTTAAAW	TTTAGCTATC	ATAATTTATA	CACCTTAAN	
<i>Peneroplis</i> sp.	AAACATG----	---TAAT	TAATATATAT	AAATATATACC	TTGTATACTG	T-----	-----	-----	-----	-----	
<i>Parasorites</i> sp.	AAACATG----	---ATAT	TTATACCTTG	TATTTACTATA	CTCAATATAT	ATATATTA--	-----	-----	-----	-----	
<i>S. orbiculus</i>	AAACATG----	---TTTT	AAAAACTCAA	TATATAATAT	TTTT-----	-----	-----	-----	-----	-----	
<i>M. vertebralis</i>	AAACATG----	---TTAT	ATAAAATAT	ATAATGTATA	TATATTGAAT	ACTCAATATT	TAT-----	-----	-----	-----	
<i>Broeckina</i> sp.	AAACATG----	---TATAT	-----	-----	-----	-----	-----	-----	-----	-----	
<i>C. compressa</i>	AAACATG----	---TATTT	TT-----	-----	-----	-----	-----	-----	-----	-----	
<i>A. hemprichii</i>	AAACATA----	---TA	-----	-----	-----	-----	-----	-----	-----	-----	
<i>Laevipeneroplis</i> sp.	AAACATG----	---TTAATAT	ATAATATAAA	AAATATACACT	CAATTTTA--	-----	-----	-----	-----	-----	
<i>D. zhengae</i>	AAACATG----	---ATAT	ATATTTACCTT	GTATACTTTC	TCAATATGTA	T-----	-----	-----	-----	-----	
<i>B. schlumbergeri</i>	AAACATG----	---CTAA	TATATAATTA	ATATAATTTAA	TATAAATTTA	ATTAATACAT	ATATTTAAAC	AATACAACCT	TGTTTTAACTA	TCTCTCT---	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

	1201	1211	1221	1231	1241	1251	1261	1271	1281	1291	1300
<i>G. bulloides</i> Ia	GTCTGCTGAT	ACCGGTGTTT	GATATTCATG	TATATGGTGC	ATTTTTACCA	CCCAGAGTGT	GAGGCCTGAT	TCCCTCCCT	TCTGGTCAA	CTATGGGGGA	
<i>G. sacculifer</i>	TACCAATCG	ATATTTTTAC	AATGGGTAA	TTGAGGGAGG	CATCTTACA	AACAACCTT	TGGTCACCAT	CGGACCGAAC	CCACGCGCAA	CATTACCTTG	
<i>G. glutinata</i>	TCATGCAGTA	CATCCTTGT	CGTGTAGTA	AGTATTGCGA	AMATGACTCA	TTCAATTTGAT	GATATTTTTT	ATTT-----			
<i>N. dutertrei</i>	CAATTCCTTT	AAGAGATTTC	GTTTTGACCT	CGTGTACTCG	TTTTACTATT	AAACGATTCT	AAATATAACA	TAICCTTGTA	CACTGTTTAA	GAGATTGCTC	
<i>P. obliquiloculata</i>	TATTACATTC	TTATAACGac	TATAAGAATA	tTATCCTTGT	CCGCTGTTAA	TACCACGTAT	AAT-----cta	aTaTAcTaaT	ATATTAgTTT	T---AATAC-	
<i>S. globigerus</i>											
<i>G. scitula</i>	TAATGACAA	GTCCGAATAC	ATAACACACA	CACACACAC-	---TCTTTAT	TCTGTATAAC	GAGTCTATTT	TATTAATAAA	ATAGATCTCG	GATCCTTGTT	
<i>G. inflata</i>	ACGTATTTAG	ACATTTAAAC	CTGTCTTTAT	ACTAATATCC	TTGTCTTACC	TGTTCTCTTT	ATAATTATTA	ACGTATTCAG	TTCATCTTAT	CTAAGATTTC	
<i>N. incompta</i> I	GTTFGTATCG	TTTGTFTT---									
<i>G. uvula</i>	CATGCATTAA	TTAATCTGAA	CATCTATTAA	CATCCTTGCC	ATCTATGTAG	TAAGTGTGTA	CTGATTGACG	CTGCTCTTCA	CTGAGTAGTC	TGATATTTCA	
<i>N. pachyderma</i> I	TAACCTTAAA	AGATGTGTGT	TATTAATATA	ACACACGCTT	TTTTAACTGT	CCAACAAGAA	ATATCCTTGT	CTGAACGTGT	CTAATCATA	GTATTATTAA	
<i>G. ungulata</i>											
<i>G. menardii</i>											
<i>Allogromia</i> sp.	TATACTTTTT	TTAATTTATA	TATAAAAAT	TTAAAAAGCA	TTTTATATNC	CCTTGTACAA	CACTGACAAG	ATGTGAATTT	TTTTATTAAT	TTATATTTAT	
<i>A. triangularis</i>	AAATTTAAAT	GTAAAATACAA	ACACTTAGGT	TTTCAAACAA	GATTATATAA	TGTTATAATA	ATATTACATT	CCTTGTATTA	TTGTTTCTCA	ATTAATAATT	
<i>A. rara</i>	ATAATTTAAT	TAAATTTGTA	ATACGAACAC	TTGGTTTTCA	AACTCAAAA	AAATAAAAAT	AAAGAACAAT	TTATTTACAT	TCCTTGTAT	ATTGTTTCTC	
<i>E. scabrum</i>	CTAAAAATTA	TCCTTGTFTT	ACTGTGTATT	AATCATATT	TATTTACT--						
<i>N. venosus</i>	TTATATTTAT	TCTGTCAACC	GACAGAACAC	ACACATCCTT	GTTCACTGTA	ATATCCTCGC	TATATGTAAT	TAATTTTT---			
<i>P. nipponica</i>	CACATATTTAT	TTATTCTGTG	CACACACACA	CATACTTGT	MACKGATATC	NTCATTATA	TGKAWTTACA	TTT-----			
<i>H. depressa</i>	CACATATAT	TTATTCTGTC	ACCCGACAGA	ACACACACAC	ATCCTTGTTC	ACGTAATAAT	CCTCGCTATA	TGTAATTAAT	TTT-----		
<i>B. spathulata</i>	T-----										
<i>A. pseudocassisi</i>											
<i>B. marginata</i>	ATATTTTTAAT	TCTGTCACTT	ACACACAGAA	ATACATCCTT	GTTCTGTGTT	TTTTTTTACG	TAACGCAAAA	AGTCAATTTT	TTGATTTTAT	GTTTTT-----	
<i>E. williamsoni</i>											
<i>Trochammina</i> sp.	TTTCTCTGTT	NAAAWTTTTA	NCCNTGTTTA	TTGTTTACTC	ATTTATATAA	TATTATTTTA	TTT-----				
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	1301	1311	1321	1331	1341	1351	1361	1371	1381	1391	1400
<i>G. bulloides</i> Ia	GTCCCTTAT	CTCACTATCA	CTTCGACCGA	CTTACACTTT	CTGACAACGA	CTGGGACAGG	TGACT-----	-----GCAAT	CTGCCCTTGT	CACATACCTC	
<i>G. sacculifer</i>	TATGCTGCAC	ACAGCCTTTG	TCATACAA--								
<i>G. glutinata</i>											
<i>N. dutertrei</i>	TCTTTTTAAT	AACGTATCTA	AGATAAGAGC	ATTGGTTTTT	TAAACCGATT	ATATCTTTCT	TATTATAT--				
<i>P. obliquiloculata</i>											
<i>S. globigerus</i>											
<i>G. scitula</i>	ACCAATCTC	TTTGTATTAA	TA---ATAC								
<i>G. inflata</i>	TAATAC---										
<i>N. incompta</i> I											
<i>G. uvula</i>	ATAC-----										
<i>N. pachyderma</i> I	TAGCAATATT	CGCTATTAA	TTTAAATAGC	AATATTCAAT	TGACCATATA	C-----					
<i>G. ungulata</i>											
<i>G. menardii</i>											
<i>Allogromia</i> sp.	ATATAAATTT	TC-----									
<i>A. triangularis</i>	AAATTCATTAT	TTAATTAATA	TATTCTTTTT	T-----							
<i>A. rara</i>	TTTTATTTTT	AATATAGATA	TATTATATAT	ATATATTAAT	TTT-----						
<i>E. scabrum</i>											
<i>N. venosus</i>											
<i>P. nipponica</i>											
<i>H. depressa</i>											
<i>B. spathulata</i>											
<i>A. pseudocassisi</i>											
<i>B. marginata</i>											
<i>E. williamsoni</i>											
<i>Trochammina</i> sp.											
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	1401	1411	1421	1431	1441	1451	1461	1471	1481	1491	1500
<i>G. bulloides</i> Ia	CGTCTGACCT	ATCC-AGCGA	GGCAGTGACA	AGCTGTAACA	GT--GCGC-T	ATCAC---TT	ACTTTACGAC	GGGAGTTTGC	CCTGCGCGTC	TGCTTCGG--	
<i>G. sacculifer</i>	-----	---AGCGA	GGCAGTAAACA	AGCAGTAAACA	AT--AGCG-C	AAACA---TA	AACGACGGGT	TGTCATGGCA	CTACCCCTAG	CTTTGAGTTG	
<i>G. glutinata</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	AT-AAAAAATG	ACGAGTGTCT	GGCATTGCCC	CTCAATTTCCG	TGAGCTTGCC	
<i>N. dutertrei</i>	-----	---GTTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATTTTAAATG	ACGAGTGTCT	GGCATTGCCC	CTC-TTTCCG	-GAGCTTGCC	
<i>P. obliquiloculata</i>	-----	---GTTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATTTTAAATG	ACGAGTGTCT	GGCATTGCCC	CTC-TTTCCG	-GAGCTTGCC	
<i>S. globigerus</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	AT-AAAAAATG	ACGAGTGTCT	GGCATTGCCC	CTC-TTTCCG	-GAGCTTGCC	
<i>G. scitula</i>	-----	---GTTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATTTTAAATG	ACGAGTGTCT	GGCATTGCCC	CTC-TTTCCG	-GAGCTTGCC	
<i>G. inflata</i>	-----	---GTTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATTTTAAATG	ACGAGTGTCT	GGCATTGCCC	CTC-TTTCCG	-GAGCTTGCC	
<i>N. incompta</i> I	-----	---GTTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATTTTAAATG	ACGAGTGTCT	GGCATTGCCC	CTC-TTTCCG	-GAGCTTGCC	
<i>G. uvula</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATTTTAAATG	ACAAGTGTCT	GGCATTGCCC	CTCGCTTCGG	TGAGCTTGCC	
<i>N. pachyderma</i> I	-----	---GTTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATTTTAAATG	ACGAGTGTCT	GGCATTGCCC	CTCTTTCCGG	AGCTTGGCAA	
<i>G. ungulata</i>	-----	---GTTGA	GGCAGTGACA	AGTCTGTAATG	AC--TGAG-T	ATTATACTCT	TTC-GACCAA	TGTCAGG-CA	TTATAACAAC	TTTATGATCA	
<i>G. menardii</i>	-----	---GTCGA	GGCAGTGACA	AGTCTGTAATG	AA--TGAG-T	ATTATACTCT	TTC-GACCAA	TGTCAGG-CA	TTATAACAAC	T-TGGCCTAAG	
<i>Allogromia</i> sp.	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATCTAAAATC	---TGAAGGG	T--CGTAT--	-TAATC--TG	CTTTCCGG-CG	
<i>A. triangularis</i>	-----	---ACTGA	GGCAGTGACA	AGTGTGTAACA	GT--TGTA-G	CTTTAAAATC	-----AA	TGTAAGGGCC	TTGGATTTGT	CACCTCTTCT	
<i>A. rara</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGTA-G	CTTTAAAATC	-----AA	TGTAAGGGCC	TTGGATTTGT	CACCTCTT-T	
<i>E. scabrum</i>	-----	---TGTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATA--AA--A	A--TGACGAG	TGCTGG-CA	TAGCCGTCTA	ATCTTCGGTT	
<i>N. venosus</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATAAAAAA	---TGACGAG	T---GTCTGG	CATTGCCGCT	CCTTCCGGAG	
<i>P. nipponica</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATA--AA--A	A--TGACGAG	TGCTGG-CA	TTGCCGCTCC	TTCGGGAGCT	
<i>H. depressa</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATA--AA--A	A--TGACGAG	TGCTGG-CA	TTGCCGCTCC	TTCGGGAGCT	
<i>B. spathulata</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATA--AA--A	A--TGACGAG	TGCTGG-CA	TTGCCGCTCC	TTCGGGAGCT	
<i>A. pseudocassisi</i>	-----	---TACGC	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATATAAATTA	---TGACGAG	T---GTT--A	GCG-TTGCCG	CGTGCTCTCG	
<i>B. marginata</i>	-----	---ACTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATAAAAAATGA	CGAGTGTCTG	GCATTGCCG	TCTTTCCGGA	GCTTGGCAA	
<i>E. williamsoni</i>	-----	---ATTGA	GACAGTGACA	AGCTGTAAACG	GT--TGAG-T	ATATAAATTA	TGACGAGTGT	CTGACTTCTG	CCGCTACTTC	GGTAGCTTGG	
<i>Trochammina</i> sp.	-----	---AGTGA	GGCAGTGACA	AGCTGTAAACG	GT--TGAG-T	AT--AAAAA	---TGACGAG	T---GTCT-G	GCA-TTGCCG	TCTGCT-TCG	
<i>Peneroplis</i> sp.	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TCAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	GCTTTGATA	ATTTATTATA	
<i>Parasorites</i> sp.	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TCAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	GCTTTGATA	ATTTT--A	
<i>S. orbiculus</i>	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TGAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	GTTTTATAAT	ATTTTT--A	
<i>M. vertebralis</i>	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TGAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	GTTTTATAAT	ATTTTT--A	
<i>Broeckina</i> sp.	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TTAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	CCTTAATAAT	ATTT--	
<i>C. compressa</i>	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TCAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	CCTTTATAAT	ATTTT--	
<i>A. hemprichii</i>	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TGAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	GCTTTGATA	ATTTT--A	
<i>Laevipeneroplis</i> sp.	-----	---ATTGA	GGCAGTGACA	AGCTGTAAAG	AT--TCAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	GCTTTATAAT	ATTT--	
<i>D. zhengae</i>	-----	---TTTGA	GGCAGTGACA	AGCTGTAAAG	AT--TCAA-T	ATATTAATTA	AGATAACATT	TGGAATTGTC	GCTTTGATA	ATTT--	
<i>B. schlumbergeri</i>	-----	---TTTGA	GGCAGTGACA	AGCTGTAAAG	AT--TCAA-T	ATTATCTT-A	AGACTTCATT	TGGAATTGTC	GCTATAATAT	ATTTTT--	
1002 BP MARKER	-----	---mm	mmmmmmmmmm	mmmmmmmm	-----	-----	-----	-----	-----	-----	-----
	1501	1511	1521	1531	1541	1551	1561	1571	1581	1591	1600
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	T GGGCTTGCCA	TGTG-TGCTT	ACATCTCAGT	GTGCGCAATT	
<i>G. sacculifer</i>	GGATGGATAG	CTTGCCGACA	CTCGGTATG	-----	-----	-----	C GCATTTGGAC	TGTTG-----	-----	-----	
<i>G. glutinata</i>	AAG-TTGCCG	ACGCTTAGTG	TG-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>N. dutertrei</i>	AAG-TTGCCG	ACGCTTTGTG	TG-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>P. obliquiloculata</i>	AAG-TTGCCG	ACGCTTTGTG	TG-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>S. globigerus</i>	AAATTTTGCCG	ACGCTTTGTG	TG-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>G. scitula</i>	AAGTT-GCCG	ACGCTTTGTG	TG-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>G. inflata</i>	AAGTT-GCCG	ACGCTTTGTG	TG-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>N. incompta</i> I	--GATCGCTG	ATGCTTTGTG	TA-----	-----	-----	-----	C TCGTTGGAA	TGCG-----	-----	-----	
<i>G. uvula</i>	AAGTT-GCCG	ACGCTTTGTG	TG-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>N. pachyderma</i> I	GTTGCGGACG	CTTTGTGTG	-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>G. ungulata</i>	ATCAAGCGCT	TTGTAATGAG	AGCCGACATT	GATGTGTG--	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>G. menardii</i>	TCGAGTGCTT	TTGTAATGAG	AGCCGACATT	GATGTGTG--	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>Allogromia</i> sp.	G--TA-TTT	AGCGGCTT	--T-TACACT	CTTA-----G	TGTA-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>A. triangularis</i>	GAAGTGTTAC	AGAGCCGGCT	TTT-----	-----	ACCTG--	-----	C TCACTGGAA	TGCG-----	-----	-----	
<i>A. rara</i>	GAAGTGTTAC	AGAGCCGGCT	TTT-----	-----	ACCTG--	-----	C TCACTGGAA	TGCG-----	-----	-----	
<i>E. scabrum</i>	AGGCTTGCCG	GTTCCGCGAC	GCTTT-----	--GTGTG--	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>N. venosus</i>	CTTGGCAAGT	TGCCGACGCT	TTGTGTG--	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>P. nipponica</i>	TGGCAAGTTG	CCGACGCTTT	-----	--GTGTG--	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>H. depressa</i>	TGGCAAGTTG	CCGACGCTTT	-----	--GTGTG--	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>B. spathulata</i>	TGGCAATTTT	GCCGACGCTT	T-----	--GTGTG--	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>A. pseudocassisi</i>	GGCGCGCTA-	-----T-	GGCATCTGCG	CAACACTTTG	TGTTG--	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>B. marginata</i>	TTGCCGACGC	TTTGTGTG--	-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>E. williamsoni</i>	CGAGTGTGCA	CACCTTTGTG	G-----	-----	-----	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>Trochammina</i> sp.	G--TAGGCT	-----T-	GGCAGTTGCG	CGACGCTTTG	TGTTG--	-----	C TCAATTTGGAA	TGCG-----	-----	-----	
<i>Peneroplis</i> sp.	-CATTG-CTT	GAT---AAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>Parasorites</i> sp.	ATATTATATT	GCTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>S. orbiculus</i>	ATATTACATT	ACTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>M. vertebralis</i>	ATATTATATT	ACTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>Broeckina</i> sp.	ATATTATTTT	GTTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>C. compressa</i>	ATATTATTTT	GTTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>A. hemprichii</i>	ATATTATATT	GCTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>Laevipeneroplis</i> sp.	ATATTATATT	GCTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>D. zhengae</i>	ATTATACATT	GCTTGATAAT	ATACCAATGT	TATAAAAATA	-----	-----	T TGAATTTGAA	TGCG-----	-----	-----	
<i>B. schlumbergeri</i>	ATATATTATA	GCTTGATAAT	ATACCAATGA	AGTAATATA	-----	-----	A TGAATTTGAA	TGCG-----	-----	-----	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	1601	1611	1621	1631	1641	1651	1661	1671	1681	1691	1700
<i>G. bulloides</i> Ia	GTACTGTG	----	GGGAG	-TT-CAAT	----	-TACTCGGGTT	ATGCCGATGTG	GCTTTTGGTG	GAGAGGCCAAG	GGATTCGTTC	AAGTGTTTTA
<i>G. sacculifer</i>	-----	GTGAG	-TC-CAGA	-----	-TAAATTCAGAAC	GCTTTGACTA	CTGAACACTA	AAGCCTACTG	GCAGAACGTC	GACCCGAAGG	-----
<i>G. glutinata</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTGGACGG	TGTTAGCTTT	ACGCTTTCAC	TTTTTCAT	----	-GTATCTGAA
<i>N. dutertrei</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTTATTGG	TATTTTAAAT	CATTTACTAA	TAAC	----	-GTATCTGAA
<i>P. obliquiloculata</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTTATTGG	TGTTTTAAAT	CACTCATAA	TAAC	----	-GTATCTGAA
<i>S. globigerus</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTATTTTG	GTGCTCCCC	GATTCACCAG	GATATGTATC	TGAATTT	----
<i>G. scitula</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTATTAATGG	TTTTTTTTTA	TAATAGACTG	TTACTGTATC	TGAATTT	----
<i>G. inflata</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTAACTCG	TGTTTTATAA	TACATTCAT	ATTGACGAT	CTGAATTT	----
<i>N. incompta</i> I	-----	GTGAG	-TA-TAAG	-----	-ACGCTCAGAA	CTTAACTCTG	TTATTTGTAAT	ATTTGACAGA	GAGTATATCT	GAAATTT	----
<i>G. uvula</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTGGATGG	TGTTTTATTTA	TTTAGGCACT	GTTTCAGTAT	CTGAATTT	----
<i>N. pachyderma</i> I	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTTATTGG	TATTTGTGTT	ACACTATACT	GATGACGTAT	CTGAATTT	----
<i>G. ungulata</i>	-----	GTGA	-TTCTATT	-----	-ATAACTCAGGA	-TTTCA	CG	TTCTTTG	AATGTGGAAT	T	----
<i>G. menardii</i>	-----	GTGA	-TTCTATT	-----	-CTAACTCAGGA	-TTTCA	CG	TTCTTTG	AATGTGGAAT	T	----
<i>Allogromia</i> sp.	-----	GTGAG	-TC-TAAG	-----	-CAATTCAGAAC	CTTTGACC	GT	GT	TATTTCTCG	GAAATAACTA	T
<i>A. triangularis</i>	-----	GTGAG	-TC-TAAG	-----	-CAATTCAGAAC	AGTTGGTGTG	TCTTCGGACA	TAACA	-----	-----	ATAATCCGAA
<i>A. rara</i>	-----	GTGAG	-TC-TAAG	-----	-CAATTCAGAAC	AGTTGGTGTG	TCTTTACGGA	CATAACAAT	-----	-----	AAATCCGAA
<i>E. scabrum</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTTGTAT	GCTGTAATTT	ATTTTGCACT	TATACATGT	----	-ATCTGAA
<i>N. venosus</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTGGACGG	TGTTTGTAAAT	ATTTCACTGT	TCAC	----	-GTATCTGAA
<i>P. nipponica</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTGACC	TGTTATGAAT	TAATTTCACT	GTT	-CATGT	----
<i>H. depressa</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTGACC	TGTTTGTAAAT	ATTTCACTGT	T	-CATGT	----
<i>B. spathulata</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTGGCTTC	GGTGTCTCTC	TACGATTCAC	CATGTCAT	----	-GTATCTGAA
<i>A. pseudocassisi</i>	-----	GTGAG	-TT-TAAG	-----	-TATCTCAGAA	CT	GTATAA	CAT	GTACG	CCTCAGCTG	CATGTTGTGC
<i>B. marginata</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTTTGGACGG	TGTTAGTAAA	ATTTCACTGT	TCACGTATCT	GAAATTT	----
<i>E. williamsoni</i>	-----	GTGAG	-TT-TAAG	-----	-CAACTCAGAAC	CTGGCCATTTG	GTGTTTCGCT	AATGCTTTCA	TCATTTGGGT	GTATCTGAAT	----
<i>Trochammina</i> sp.	-----	GTGAG	-TT-TAAG	-----	-TAACTCAGAAC	CTTTGTATGG	TGTTT	---	AAAAATTCAC	TATACAT	----
<i>Peneroplis</i> sp.	-----	GTGAT	-TT-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>Parasorites</i> sp.	-----	GTGAA	-TA-TAATAA	TAT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>S. orbiculus</i>	-----	GTGAA	-TC-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>M. vertebralis</i>	-----	GTGAA	-TG-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>Broeckina</i> sp.	-----	GTGAA	-TA-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>C. compressa</i>	-----	GTGAA	-TT-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>A. hemprichii</i>	-----	GTGAA	-TA-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>Laevipeneroplis</i> sp.	-----	GTGAA	-TG-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>D. zhengae</i>	-----	GTGAT	-TC-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
<i>B. schlumbergeri</i>	-----	GTGAT	-TG-TAATAA	TTT	---	-CAAGT	---	-AAC	A	-TGTATAA	AATATTAAAT
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	1701	1711	1721	1731	1741	1751	1761	1771	1781	1791	1800
<i>G. bulloides</i> Ia	AARTTGAGGT	CGGCATTCTA	TCTAAAGT	----	-TCAAGT	GGAGGGAAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCGCTAGCT	TATTCATTCA
<i>G. sacculifer</i>	AGAGTGATAT	CTGAATTT	-----	-----	-TCAAGT	AGAGGGAAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCTACTAGCC	TATACAGGAT
<i>G. glutinata</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACAGGCC	TATACAATCA
<i>N. dutertrei</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>P. obliquiloculata</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>S. globigerus</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>G. scitula</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>G. inflata</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>N. incompta</i> I	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>G. uvula</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>N. pachyderma</i> I	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>G. ungulata</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>G. menardii</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>Allogromia</i> sp.	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>A. triangularis</i>	C	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>A. rara</i>	C	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>E. scabrum</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>N. venosus</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>P. nipponica</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>H. depressa</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>B. spathulata</i>	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>A. pseudocassisi</i>	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>B. marginata</i>	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>E. williamsoni</i>	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>Trochammina</i> sp.	TT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>Peneroplis</i> sp.	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>Parasorites</i> sp.	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>S. orbiculus</i>	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>M. vertebralis</i>	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>Broeckina</i> sp.	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>C. compressa</i>	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>A. hemprichii</i>	TAT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>Laevipeneroplis</i> sp.	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>D. zhengae</i>	TAT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
<i>B. schlumbergeri</i>	TTT	-----	-----	-----	-TCAAGT	GGAGGGCAAG	TCTGGTGCCA	GCAGCCGCGG	TAATACCAGC	TCCACTGGCC	TATACAATCA
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	1801	1811	1821	1831	1841	1851	1861	1871	1881	1891	1900
<i>G. bulloides</i> Ia	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GGA	CTGCTTTTAA	ATTTCTCACC	TGAGACCTCT	ACGCGCACAC	AGATAGAGTG	TCACATACTG	
<i>G. sacculifer</i>	TTGTTGCGGT	TAAGATGCTC	GAAGTGGAT	A-----GCC	TCGACCGTGG	AATCTCCAAT	TCCCAGTCCG	AATTTTTGAG	TAACGATGGC	GCTCATAATT	
<i>G. glutinata</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTAATCATTT	GTTGAATAAC	TAACTATAC	ATTGGCGATG	CTCTCT-GTG	TTCATATCAC	
<i>N. dutertrei</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTACATTTAA	AGATTATAAT	CATTCCTATA	GTGGTTATTA	TCTAAATTA	CAATGTGGTA	
<i>P. obliquiloculata</i>	TTGTTGCGGT	TAAGAGGCTC	GTAAGTTGGAT	T-----GAA	CTACTATAAT	GcTATTGTTA	TTCAAATAGC	AATTACTTAT	TATACGTGGT	ATTATTAGCA	
<i>S. globigerus</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTAACAG---	AAAGVCCCTG	ACTCTCCGAG	TCGCGGTTAT	AATGTTATTC	TCGCATATC	
<i>G. scitula</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTATATTAAC	GAATAACTTA	TATAT--ATT	TCCTCTAAG	GAGAATAACA	GTTACTCGAT	
<i>G. inflata</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTACTATAAT	TTCTATATAC	GTAGTGTATC	ATTTCTCTCG	TAAGAGAGTT	ATGTTCCGACA	
<i>N. incompta</i> I	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CGACTCGGAA	TATACAGCAC	AGCTTAGTCT	GACTGACTGA	CTGACTGTGA	CCTACACCGA	
<i>G. uvula</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTAATCGATA	CGTTGAATTG	GCAGCTTTAG	CTATACACGA	GGCGATCAAT	TCTAATGCAT	
<i>N. pachyderma</i> I	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CGACTTAAAT	TGTGATTTAA	ACACGGATAG	CTTAATTTAA	CGTAATATAT	TAAAAGTAAAT	
<i>G. ungulata</i>	CTGATGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTGACATTAC	TGTAACAATG	CTCAGTATTG	CATCAATTTT	ATTGAAATAC	TACATGATTG	
<i>G. menardii</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTAACCTAAA	CATGTCAGAA	TTTACAGTTC	TGCAATATGCT	GAGAAATCGCA	TCTCGTTTCG	
<i>Allogromia</i> sp.	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTAACCAATC	TTTATATATT	TAAAATTTAA	TTTTAAAAAT	TTTTTATTTT	ATATATAATA	
<i>A. triangularis</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CACTTTTATT	TTTTTATTATT	TTTTTTTATT	ATAATTTATAT	ATTTTATATAT	GATTAATTTTA	
<i>A. rara</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CACTTTTTTT	TATTAATTTT	TGATATAATT	ATGTATAATT	ATTTTATATAT	GATTAATTTTA	
<i>E. scabrum</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TTAGTCTGAT	ATGTTTATAG	CGAAGTTTAC	CGTAATATA	TTTTTATAT	CGGTTCCGCG	
<i>N. venosus</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTGCAAAAC	AATATATGAA	TGAATTCTAT	TCATTCTGCG	TTTGATAGTT	TCTACGGCTC	
<i>N. nipponica</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTAACATCAC	TYAGAKAAAT	AMTKTATTAT	TCTCTCTGCG	TTTGTTAGTT	ATATATACTT	
<i>H. depressa</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTGCAAAAC	TACATGAATG	AATTCTATTC	GTTCTGCGTT	TGATAGTTTT	ACGTTGTCAG	
<i>B. spathulata</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CAAAACATATC	ATATGATAGT	TTAGTTATTA	TCTCGACAG	ATATATATAC	ACACCCACAC	
<i>A. pseudocassisi</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CAAAAAAAT	AAACCTCGAC	ACACACACAC	ACTCAGCGTC	GAACCCACAT	ATTCAA----	
<i>B. marginata</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTGCAAAACT	TGAGTGAATT	CTATTTTATC	TCGATTTTGT	GAGTAACTTA	CGGTAACCTT	
<i>E. williamsoni</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TAACTTTTTAC	GACGTTGTAA	GAAAACTTTT	AGAATTTTCT	ACACACACAC	ACACCCACTT	
<i>Trochammina</i> sp.	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	CTGCTAATAT	TAATTTATAA	AAAATAAATT	TCGGTTTTAAT	ATTTATTTAT	CATATATATT	
<i>Peneroplis</i> sp.	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TAATTTATAA	TATTATATAC	AA-----	-----	-----	-----	
<i>Parasorites</i> sp.	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TATATATATA	ATTTATTTTT	ATACAA----	-----	-----	-----	
<i>S. orbiculus</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TACATTTTTT	ACAA-----	-----	-----	-----	-----	
<i>M. vertebralis</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TAAAAACATAT	ATACCAA----	-----	-----	-----	-----	
<i>Broeckina</i> sp.	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	AAATAAATAT	ATAATAATAT	CAA-----	-----	-----	-----	
<i>C. compressa</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TTATATTTAAC	CAA-----	-----	-----	-----	-----	
<i>A. hemprichii</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TTATATTTTAT	CATTACTTTT	GTAATGTTAA	-----	-----	-----	
<i>Laevipeneroplis</i> sp.	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TAAAAATATA	ACACAAA----	-----	-----	-----	-----	
<i>D. zhengae</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	TAATGAATAT	ACATACATAA	-----	-----	-----	-----	
<i>B. schlumbergeri</i>	TTGTTGCGGT	TAAGAGGCTC	GTAGTTGGAT	T-----GAA	AATCAATTGG	AAAAATATATA	TATTAACACA	ATATACTTAA	TATATATATT	ATTTCAA----	
1002 BP MARKER	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2000
<i>G. bulloides</i> Ia	GGAGAGTCAT	TTCTAAGCGG	ATGTGGTGTG	ACCAAGTACT	GATCTGAGGT	GCTGTACTGG	CCTCT-ATGT	GATTGGGAAG	GGATCACTGC	ATATATGCGC	
<i>G. sacculifer</i>	CGCCATTGCC	ACACCCACGG	TGGATAGGAT	AGCACAGCAC	AACAAGTGGG	TTTATGACTT	ACCGCATATA	GCAGCTAGTG	GACCCTAATG	CAGCCTGCAT	
<i>G. glutinata</i>	----TCACAC	ACA--TGCTT	ACGTGGATAC	GTTACGAGAG	TAGATGTGTT	TTGTTACTTT	AGCATTGTGT	ACGTTGCGTG	TGAGGAGCAT	TCACGCTGCTC	
<i>N. dutertrei</i>	TTTTATTAGC	CTAAAAGGAA	TATATATTTT	TTTTAGTCTG	TAATTGACT	CTATTGTGTT	AGAGCTAATA	ACATGTGATA	ACCAATCT-A	TATTGTTGTA	
<i>P. obliquiloculata</i>	GCTAATAAAT	CTTTTATTAG	CTGTTAAATC	GACTCTTTTG	TTTAAAAGAG	CTAATAACAT	GTTATACACA	CACACAcaca	aTCCCTATTC	TATAAGGTAA	
<i>S. globigerus</i>	ACGTATTTAA	CATACGCTAC	ACACATACGC	ATACATCACR	CATATGCGCG	AGTTTGATAT	ACCTATCAG	TATGCGGAT	CGGCTCCAT	T-----	
<i>G. scitula</i>	CGTTATTTCTA	TTAATAATAG	CGCCGTATAC	ACACTCACAC	GTTATACTGT	TGTTGTTATA	TTATTTATTA	CGGTTATTCG	TTTTATTATC	-----	
<i>G. inflata</i>	TTAGAACTCT	TTTAAACAATA	TAAAGCTAAC	AGCATTGTTA	AAATACAAAC	GCTCTATCTC	TATTGACGGT	ATTACTACGT	ATTCCTTAGA	ATACCAT----	
<i>N. incompta</i> I	ACAACAACAC	ACTGATGAAG	AAACGACTTC	TGAGTTGTTG	TTATGTTAAT	CTGCATATTC	T-----	-----	-----	-----	
<i>G. uvula</i>	GTAACACTATA	CACGCATATAC	CTCCTCTCAT	GTTGCTGAA	TTGACGTGTG	CTATCGCTGC	GATTCAGCAA	TCGTGCGGTT	ACTGCTTTTG	TCAAATCTTA	
<i>N. pachyderma</i> I	AGCTGTATAA	CACGAAATTC	GCTATTACTT	GTTAAAATAAG	CTTAAATTAAC	CGTGTGTATT	GCAITTTATT-	-----	-----	-----	
<i>G. ungulata</i>	AATACAA----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>G. menardii</i>	TTAAGAGATA	TATACTCAAC	TCACTCCAAT	TGCATTACTC	AAATTAACGAG	TATTGCAAGC	GGACACATAC	CCAAATGAAA	TATCATTACA	TGTATTGGTT	
<i>Allogromia</i> sp.	TTTTATATTT	NNTTTTTAAA	TATATATTTA	AACAA----	-----	-----	-----	-----	-----	-----	
<i>A. triangularis</i>	AATAAAATTA	AGCTGATATT	TAAATTTCAA	TATTTATATA	TAATATTAGT	TGATTTAAAA	TTGAAAGTTT	TAATTTATAAT	ATGATTAAT	AATTTATTTA	
<i>A. rara</i>	AAAAAATTAAG	CTGAGATTTT	TAAAATAATAT	ATTTATATTT	ATATTTAATA	TATTGTTTGA	AAAAATTTCA	AGTTGAATTT	GTGTTATTTCA	AATTCATATT	
<i>E. scabrum</i>	TCTGTTAAAT	TTTTTATATG	CGCGCATATT	AAATACACAC	ACACAACCCA	CTATGCGTGT	CGTATAACA	TATTTACTGC	GTAAAAAAT	TTACATTTAT	
<i>N. nipponica</i>	ACTATATATT	ATATAGTCTC	ACTACATGAC	GCTACCTAAA	TGAAAATTAAT	ACCACTATATA	CGGTTTACCG	TGTTACAGTG	ATATTTCTAC	AACATGACACA	
<i>H. depressa</i>	TACGTATATA	TCTCGACGCT	AAACCAATTTA	TTACATGCAC	AACGGTTTAT	CCGTCGCATA	CGTAATAATT	TCTACACACA	CATACGCTCT	TATCGACGCA	
<i>B. spathulata</i>	TATTTTATAC	GTTTCGCGTA	TCGACGCTAC	CTAACATGAA	ATTTATTACCA	CGTATACGGT	TTACCGTGT	ACAGTGATAT	TTCTTATFAT	ACTAGCACAC	
<i>A. pseudocassisi</i>	CACACATATA	CTTTTCGATA	CACACTAATA	TTATCATATT	TTCAA----	-----	-----	-----	-----	-----	
<i>B. marginata</i>	TTTTTTTATA	GATTCGCACC	TCGCGTCTCT	TTAGATTTTT	AATTTTATGC	GTTTCGACGT	GTTTTAGAACA	CACGCTAAAT	TTTTTTACAG	GCATCACCTC	
<i>E. williamsoni</i>	TTTCAA----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>Trochammina</i> sp.	TATAGCAAGT	TTTACGCATA	TAGCATAAAA	TATCTATTTT	TTATGTCTCG	CGTTCGACAC	TGTTAAATAT	TTAC-----	-----TAC	ACACCCGTT	
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

	2001	2011	2021	2031	2041	2051	2061	2071	2081	2091	2100
<i>G. bulloides</i> Ia	GCAGTAAGTA	CGACTACGGT	CAGGAACCTG	AGAATCTGTG	CCCAAGTGGC	TTGTCTCACA	CTGTCGGGAA	AATGTC-ATC	TACCATTACG	GTGGTGTGAC	
<i>G. sacculifer</i>	AACGGATAGG	ACAGGAGGGA	GGTGTCTGGG	CCGCAAATC	ACAAAGGATA	GGTGTCTGGC	GTGGTTGCAT	TGGGGAAAT	CCGCAAGCTC	TATTGGTCAT	
<i>G. glutinata</i>	TGAATCACGT	ACTCGACACT	GTTTAGGTAC	TGTGATAATT	T-ACACATTG	TTAACTGTAT	CGCCGCTGA	TACGATCTAC	ACGTGTATTT	TT-GACCGGT	
<i>N. dutertrei</i>	ATCATTCT										
<i>P. obliquiloculata</i>	TTGCTGTTGT	-AATacaAta	ctTCTC								
<i>S. globigerus</i>											
<i>G. scitula</i>											
<i>G. inflata</i>											
<i>N. incompta</i> I											
<i>G. uvula</i>	TAGATGCTTT	GCGCTTGGCT	CTTCTCTCAC	GAGTTGAGTT	TTGCAATGAG	TTGAAGCTTG	AATCGATGCG	TTCTATCGCT	CTGTGTTTAC	AATGACACAT	
<i>N. pachyderma</i> I											
<i>G. ungulata</i>											
<i>G. menardii</i>	CCAA										
<i>Allogromia</i> sp.											
<i>A. triangularis</i>	AAACACGTTT	TCAA									
<i>A. rara</i>	TTTATTTTAA	TAATTGTTGT	TTTTTCAA								
<i>E. scabrum</i>	TTTCAA										
<i>N. venosus</i>	CTCGCTCGCT	GTATCATACC	ACACATACAC	AATCTCTGCA	GCAGCTGAGT	GATACAATAT	ACCATACGTC	ATCGTATGAT	ACACGCAGAG	AATTGAATAC	
<i>P. nipponica</i>	TCGATACACT	GCATCGCAGA	GAATTTATTC	TCTCTGATCA	CTTTCAA						
<i>H. depressa</i>	TCGCTCTGCT	GTATCGCAAC	ACACACATAC	ACACCCACAC	TGCAGCAACT	GAGTGATCAG	TATATACCAT	TTACGTCATG	GTATGATACA	CGCAGAGAA	
<i>B. spathulata</i>											
<i>A. pseudocassisi</i>											
<i>B. marginata</i>	GCCTTTAGAA	TTTATTCTCA	TTTCAA								
<i>E. williamsoni</i>											
<i>Trochammina</i> sp.	TATATATAAA	TAATACACCA	AAAAATGAAA	TTATTTTCA	AAATTTTTTT	CAA					
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	2101	2111	2121	2131	2141	2151	2161	2171	2181	2191	2200
<i>G. bulloides</i> Ia	AAGTACTGCG	TGAGCTAAAC	AGTAGAGAGT	GTTAAACCCCT	GTGCGTGCTG	TAATACAGGT	GGCTCTCGTC	TCTGTGTGTG	CTTCGATATA	TGGACGTTTG	
<i>G. sacculifer</i>	GCAATCTGAA	AACAAAGTCA	AGGGCACATG	CTCGGCGGCC	TGCTCGTTTA	GGGGTAAGTC	GGCGCTTTGG	CACTGGATAG	ACACAGCTAT	CCAGTGTAGA	
<i>G. glutinata</i>	ACGCTCACAG	TTTAGATCAC	GCTCGCTTAC	ATTATTCTA	CAATT						
<i>N. dutertrei</i>											
<i>P. obliquiloculata</i>											
<i>S. globigerus</i>											
<i>G. scitula</i>											
<i>G. inflata</i>											
<i>N. incompta</i> I											
<i>G. uvula</i>	TAAGGAGCTT	TAGCTCTTCG	TATCACGACA	TTAGCGTTTC	GACACTGCTT	ATTGTGATGC	GTACAGTTGC	ATTGAAAGCA	TCATGAATTG	CCTTGATGCG	
<i>N. pachyderma</i> I											
<i>G. ungulata</i>											
<i>G. menardii</i>											
<i>Allogromia</i> sp.											
<i>A. triangularis</i>											
<i>A. rara</i>											
<i>E. scabrum</i>											
<i>N. venosus</i>	ATTCTCTTAT	TTCAA									
<i>P. nipponica</i>											
<i>H. depressa</i>	TGAATACATT	CTCTTATTTC	AA								
<i>B. spathulata</i>											
<i>A. pseudocassisi</i>											
<i>B. marginata</i>											
<i>E. williamsoni</i>											
<i>Trochammina</i> sp.											
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	2201	2211	2221	2231	2241	2251	2261	2271	2281	2291	2300
<i>G. bulloides</i> Ia	CAAGGTAACC	CGTAGGGGGT	CAC TTT TTCAC	ATTAACAACC	GACAGGTCTC	TCTTGACAGA	GTGAGGAGTG	TTCGCT---	-----	-----	-----
<i>G. sacculifer</i>	GGAGAGATCA	TATGTGTAGG	AGGTGGCATA	TGGTTTCGCG	CATGCCCGGT	ACTTTGTAGA	TCTACGATGA	GCACGTGGCA	TTGTTCAAAA	TCGGAATAGG	-----
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	CTACTTCTCT	GCTCATACTG	GAGTACATAC	TCTCATTATA	TGTGAGATTC	ACACCCCAAA	TCTGATTCAA	CGCAACGTCT	T-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. rara</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	2301	2311	2321	2331	2341	2351	2361	2371	2381	2391	2400
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	AGTGAACTGT	GGACAGGAAG	ACGTCGACCG	GATAGGGTAG	TAGGTAGGAG	CTATCCGGTC	GTGCGCAAGT	CGGCCTCTAA	GCTATGCCGG	CATCGACCTA	-----
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. rara</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	2401	2411	2421	2431	2441	2451	2461	2471	2481	2491	2500
<i>G. bulloides</i> Ia											
<i>G. sacculifer</i>	GTCATGACAC	AAGTATCGCG	ACATGGCATT	TGGTTGTGTC	GTGGTCATGG	AGTCTGTGGG	AAACCTTGTG	CGGTACCTGG	ACGCTTGACA	TGGCCACATC	
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. rara</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	2501	2511	2521	2531	2541	2551	2561	2571	2581	2591	2600
<i>G. bulloides</i> Ia											
<i>G. sacculifer</i>	GCGACGTCAT	TACACACAGA	CGGAGATTCT	CCGCGGGTAT	TATACCCACA	GGTCGAGTCG	AAAATCTAGC	TGCAGTCAAT	TGGCTCTCTA	GATAGTTGTC	
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. rara</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	2801	2811	2821	2831	2841	2851	2861	2871	2881	2891	2900
<i>G. bulloides</i> Ia	GGTATACTTT	ATACAGCGAA	AGCCAATGAC	ACGGGGGTTA	CGTAATCTCG	TTATGTGAGA	GACTGCTTAC	TGAAAT----	-----	-----	-----
<i>G. sacculifer</i>	AGTGCTAGGC	GAACACGACA	TTCAACTCTC	TTGCAGAGGT	TCAGATGGCC	ACGATCCCAC	TACTTTTGAT	TTGTACAACC	ATGGA----	-----	-----
<i>G. glutinata</i>	CGTGTATATC	ACCTTTTACA	CACATGCTTA	ATFACACGTA	CACACCGTFT	TCTTCTCTCT	CACGTTCTAA	TCTCGCGTGT	ATATCACATA	CACACATGCC	-----
<i>N. dutertrei</i>	AAAAATAAAA	CATATTATGC	CTAATAGATT	TTAGAGCTAA	ATTACAAAA-	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	ctaTtAAAGA	TTAatcTCTT	ATA-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	CACACGCATA	TTACACGTGC	AGATTTTACAT	GTGCAACTGT	GATATTTTTA	CGCCGACGCG	TAAATTTGTCG	CATTTGTGATA	TTTTTTTATGC	AGACGCGGTA	-----
<i>G. scitula</i>	TGGGGTGGCT	TTATTTCTAT	TAAAGAAA-T	A-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	AATGTTAGCT	TTCTAATCTT	TATTAGAAAA	A-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	ACAACGCTAT	TCTAGTTTGT	TAACAAAACA	CACGGGA----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	GAGTGACCAT	TCTTTGAAATC	TCACCTGATA	CACACGCTAT	ACCCCCCTCA	TGCTCTCTGC	CCAATTGACC	TCGACGCTTT	AACCAGCTGA	ATGGTCTCTA	-----
<i>N. pachyderma</i> I	TCGTTTAAACC	CCAAACTTTA	CTGTTAAACG	CGGTTATTGC	TATTTAATTA	ACAATGCTGG	CTTAAATAAAA	CTAATA----	-----	-----	-----
<i>G. ungulata</i>	CGTGTG-ACT	CGATTAAACAA	GAGACAAAGA	CGAGAGACCN	GATTAATTGGT	A-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	CATTTGTTACT	CGAATGACAA	ATGACAAAAC	AACGAGATGA	TAACGAAAAC	ACCAGATCAT	ACACGTCAAT	GATTTTGGTA	-----	-----	-----
<i>Allogromia</i> sp.	--TTAAGTA	TACAATTATT	ATATTATNT	ATATTTNATA	AAATATATA	TAATAATTG	ANTTTNATAT	CACTT-----	-----	-----	-----
<i>A. triangularis</i>	--TCAAATAA	TATATGTATT	TATATGTATA	CTACTTTTAT	TAAATTAAT	TAAATTTAAT	TATATATGTA	TTCTTTTGA	TTTTTTTAAAT	ATAATAATAC	-----
<i>A. rara</i>	--TCGAATAT	ATTATATATA	TGTATATGAT	ACAATCTTAA	TTGAAAATAA	AAATATGTAT	TTTTATATTA	TGAATGAATA	CTTTTTTGT	TTAAAAAAT	-----
<i>E. scabrum</i>	--TTGCTTTT	TAAAAAATAA	TTCAATGCTTT	TTATTTACACA	CACACATATT	TTAACGCGCG	AGTAAATTTT	TTTTTTTTTA	ACAGCTAAA	AA-----	-----
<i>N. venosus</i>	--TTGAGCCT	GTTAAGAAAT	ATTACGTACA	TATGCTCGCG	TTAACACACA	TACACACCCG	CTGCAGCAGC	TGGTAAGCTT	ATTATTTATAC	GCTATGTATA	-----
<i>P. nipponica</i>	--TTGAGCCT	GTTAAGAAAT	ATTACGTACA	AACGCACACA	CATAAACCTG	CCGCATACAC	ATAATAATTT	TAACGGTTAA	AAA-----	-----	-----
<i>H. depressa</i>	--TTGAGCCT	GTTAAGAAAT	ATTACGTACA	TACGCTCGCG	ATAATATTCA	CACACATACA	CACCCGATGC	AGCAGTGGTA	AGCTTACTAT	ACGCTATGTA	-----
<i>B. spathulata</i>	--ATTCATAT	ATTAACTCTG	GTTAAAGATT	ACGACACACA	TATATATCGT	ATATTATAAT	CTTTAACGGT	TATAAAA----	-----	-----	-----
<i>A. pseudocassisi</i>	--TATAGAGT	CTATACACAC	ACATATTATA	TATACACACT	ATG-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	--TTGAGCCT	TAGGAAGAAA	TTCCACTGCA	TACGTTCTCG	CACACACACA	CACACACCGC	AGCTCATATG	CAGGCAGCGC	ACATGTTAAT	ACCCCGCGT	-----
<i>E. williamsoni</i>	--TGTAATA	TTTTGACATG	TACACTCACT	CTAAAATTTT	TATTTA----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	--CGTTACTA	TTAAAAATTA	CTGTATAATA	TTTTTCCTAA	CACACAATTG	TCAAATAT-T	GATATGCAGA	GACATGTATA	TATATAAATG	CTGTAAAGTTT	-----
<i>Peneroplis</i> sp.	--ATAATTAT	AAATAATTAT	GTTAGTTAGT	TA-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	--ATAAATAA	AAATATTTTAT	AT-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	--TTAATATA	A-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	--AATGAATA	TTAA-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	--TATA-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	--AATA-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	--TAATATAT	AAATATAATAT	AAACATGTTA	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	--AATA-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	--CATAATAT	AATAAATAAT	ATATTACATA	TAATTTATAT	ACAATTG----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	2901	2911	2921	2931	2941	2951	2961	2971	2981	2991	3000
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i>	TAATTTATACG	TGAAACCTGA	ATATT-GA-A	--TTGAAAAC	ACACCCACAC	GTATGAACGA	TGTGAGTTCT	CAAAACAGTT	TAAA-----	-----	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	ACTTGATACA	CAGCCCCGCT	GTGTGTCTCG	TGTGCAGACG	CCTAGATCTG	TCGCAG-TGT	GATATCTTAT	GCAGACGCGC	AATTTTGTCA	CATGCGCATG	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	ATGAGTAGTT	GAGCTTTCTC	TCGTGAGTGC	AATAGAATGT	AGAAAGTCTC	CTTCGGAACG	ATT--TGATT	TTATGAGTCT	TAAAGCAGTT	TAAA-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	TGTATTAATT	AATTATTTTA	ATATGTATAT	TTTATTTTAA	A-----	-----	-----	-----	-----	-----	-----
<i>A. rara</i>	ATTTATATGT	ATATATATAT	GTTTTGAAA-	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. venosus</i>	AATTCATAAC	GGTTATAAA-	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	AAAAATTCAT	AACGGTTATA	AA-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassisi</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	AGATTTTAT	TTCTTCTTAA	CGGTTAAAAA	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	TAACGGTTAT	TAAA-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	3001	3011	3021	3031	3041	3051	3061	3071	3081	3091	3100
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGGTAGT	TGGAGTCGGC	AGTATTACTT	GGCGAGCCGT	GAAATGTGTT
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-TTTTCGA	TGGGGATAGT	CGGAGTAGGG	GGTACTGGCA	GGGGAGGGGT	GAAATCCAAT
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-AGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCC	GGCGAGCCGT	GAAATGCATT
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGCCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGCCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>S. globigerus</i>	TGTATTCTC	ACATACGCTA	ACTGCTATAT	ACAAA	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>G. scitula</i>	-----	-----	-----	-----	-----	-CGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>G. inflata</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGCCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGTATG	TGGTGGTAA	AGTACTGTTG	GGCGAGCCGT	GAAATGCATT
<i>G. uvula</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGCCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGGTAGT	TGGAGTCAAC	ANTACTACTG	GGCGAGCCGT	GAAATGTATT
<i>G. menardii</i>	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGGTAGT	TGGAGTCAAC	ANTACTACTG	GGCGAGCCGT	GAAATGTATT
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTTAAG	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>A. triangularis</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAG	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>A. rara</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAG	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAG	AGTACTGTTG	GGCGAGCCGT	GAAATGCATT
<i>N. venosus</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	G-CGAGAGGT	GAAATGCATT
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>H. depressa</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>A. pseudocassisi</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGC	TGGAGTCAAC	AGTACTACTG	GGCGAGCCGT	GAAATGCATT
<i>B. marginata</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAC	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-CGTCTGA	TGGAGATAGT	TGGAGTCAAC	AGTACTACTG	GGCGAGCCGT	GAAATGCATT
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-TGTCTGA	TGGGGATAGT	TGGAGTCAAG	AGTACTGTCT	GGCGAGCCGT	GAAATGCATT
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-TATCTGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-TATCTGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-TATCTGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>C. compressa</i>	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-TGTCTGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-TTTTCGA	TGGAGATAGT	TGGAGTTAAG	AGTACTGATA	GGCGAGCCGT	GAAATGCATT
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-TGTCTGA	TGGAGATAGT	TGGAGTTAAG	GGTACTGATA	AGCGAGCCGT	GAAATGCATT
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	3101	3111	3121	3131	3141	3151	3161	3171	3181	3191	3200
<i>G. bulloides</i> Ia	GACCCCTGTA	AGACTACCAG	AGGCGAAAAGC	GGCTGACTAG	GCTACACTCC	TGGTG--ATT	GTGTGATGCA	CTCTATTGAT	CGTGTGGTCC	TCTATACCAC	-----
<i>G. sacculifer</i>	GAGCCTGCCA	AGACCACCAG	TGGCGAAAAGC	GCCCTACTAG	GCTATACTCC	TTGTG--ATT	GTTGGGCAGC	CCCTCGTATG	ACGCAACTAT	GTAGAGCTCT	-----
<i>G. glutinata</i>	GACCCCTGGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TGATTCACAT	AA CGCCTTTA	CCAGTGTTTT	ACTGTATTG	-----
<i>N. dutertrei</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TATTAGGCTT	ATTATTAATT	AATAGTAATT	AAAAACAATA	-----
<i>P. obliquiloculata</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TATATTGTTT	ATATTAAGCT	TAAAACAAAT	AAAAA-GTAA	-----
<i>S. globigerus</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TACGCCAAGT	ATATTTTACG	GACACCCCTA	CACACCGCA	-----
<i>G. scitula</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	AATAGAGTAT	ATTTCTATATA	TTCAAATAAC	CTTAATAACA	-----
<i>G. inflata</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TATTCACCTC	TTTTATAAAG	CTCTTAAACT	CTTCTCTTTA	-----
<i>N. incompta</i> I	GACCCCTAACCA	AGACTCCCTG	AAGCGAAAAGC	GGTTGCCAAG	GCTATCCTCT	TTGTG--ATT	TACGATGTA	TATCGACTTC	AATGAATATC	AATCAGTTCT	-----
<i>G. uvula</i>	GACCCCTGGCA	AGACTACCAA	AAGCGAAAAGC	GGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TAGCATCAGC	CCTTTACTTT	GGGACTACTC	GCATGTATTG	-----
<i>N. pachyderma</i> I	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TATATATCAG	ACTGATATGA	ACGGCTGCTC	TTATTTATTA	-----
<i>G. ungulata</i>	GACCCCTGGTA	AGACTTCCAA	TAGCGAAAAGC	ANTTTGGCTAG	ANTATGCTCT	TTAAA--TTT	-GGANNAG	TTGTTGTTG	TGTTGTTATT	GTTCACAC	-----
<i>G. menardii</i>	GACCCCTGGTA	AGACTTCCAA	TAGCGAAAAGC	AGTTGGCTAG	ACTATGCTCT	TTAA--CTC	TGGGATTGAG	TCAATACACA	TACAACACCA	CAAAATACAA	-----
<i>Allogromia</i> sp.	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	ACTTAGCTAG	GCTACCTCT	TTGTG--ATT	NCNTTTTTTT	TT-TATATTT	ATATATATAA	TATATATCCC	-----
<i>A. triangularis</i>	GACCCCTGGCA	AGACTACCAA	AAGCGAAAAGC	ACTTAGCTAG	GCTATCCTCT	TTGTG--ATT	TTGATTTAT	AAATATAAAG	ATTTGTATAT	ATATATATTT	-----
<i>A. rara</i>	GACCCCTGGCA	AGACTACCAA	AAGCGAAAAGC	ACTTAGCTAG	GCTATCCTCT	TTGTG--ATT	TATATGTATA	TATTTATATA	TATATATAT	ATTTTGTTTA	-----
<i>E. scabrum</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	ACTTAGCTAG	GCTATACTCT	TTGTG--ATT	ATATTAATAT	ATATATTTGT	ATGCGTAAAC	CACACACACA	-----
<i>N. venosus</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	GCGCGCTGTA	TATAAATACT	CTCGTGTCT	ATACACACAT	-----
<i>P. nipponica</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AAATTGGCTAG	GCTATACTCT	TTGTG--CTG	AGCGCGATAA	ATTACATATT	ATTCACACAC	ACACATTATA	-----
<i>H. depressa</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--CTT	GCGCAGGTGA	TTAATCATT	TATGCACATG	CAGTCACACA	-----
<i>B. spathulata</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	TATACACAGC	TATACGTATA	TACCCACAC	ACATAACCCA	-----
<i>A. pseudocassisi</i>	GACCCCTAGTA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--	-----CCGC	GTG-ACAT-	ACACTCTACA	GGCACACACC	-----
<i>B. marginata</i>	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--ATT	ATATTTTTTT	TATGCACACA	GCACACAGCA	TACACACACA	-----
<i>E. williamsoni</i>	GACCCCTAGTA	CGACTACCAA	AAGCGAAAAGC	AGTTGGCTAG	GCTATACTCT	TTGTG--GAT	GCATGTTTTC	GTGACTTAT	GATTTGCTAA	GATTTTACAC	-----
<i>Trochammina</i> sp.	GACCCCTAGCA	AGACTACCAA	AAGCGAAAAGC	ACTTAGCTAG	GCTATACTCT	TTGTG--ATT	AGTATATAAA	CTGCATATTA	TTTTTTTTAA	CACACATTA	-----
<i>Peneroplis</i> sp.	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TAT	AT--	-----	-----	-----	-----
<i>Parasorites</i> sp.	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TT	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TT	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TTA	T--	-----	-----	-----	-----
<i>Broeckina</i> sp.	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--CT	-----	-----	-----	-----	-----
<i>C. compressa</i>	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TT	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TAT	T--	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TT	-----	-----	-----	-----	-----
<i>D. zhengae</i>	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTA--TAT	TCC	-----	-----	-----	-----
<i>B. schlumbergeri</i>	GACCCCTATTA	AGACTAACAA	AAGCGAAAAGC	ACTTAACTAG	ATTATACTCT	TTGTG--TTA	TATATACATG	CAATATATAA	ACACGTATTA	TATATTGGCA	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	3201	3211	3221	3231	3241	3251	3261	3271	3281	3291	3300
<i>G. bulloides</i> Ia	GTGTCCCTCG	AGCTCTCTCA	AGACATCTGA	TCTTTATTGA	GATACCGCAC	TCTAACA					
<i>G. sacculifer</i>	CACGTTGTGC	AAATTTTGCT	ACCTGATTGG	CCCAAGACTT	TACCCACCGT	TGAGAGTTTG	CAGGTAGTTC	ATGATTGAAA	AAATGCCCTG	CAAGGTAACA	
<i>G. glutinata</i>	ACAAGCACCT	TGAGTTAAGG	GTGATGCCTT	TTCTCGTAAG	TGGACGCGTA	AGATAGCATT	TTCTTCGCCG	GATTAAGTAA	TTCACTGTGC	ATTAGATTAT	
<i>N. dutertrei</i>	TGCAATTCTC	TTAAGAGAA	TATAACTA	TTACTATTGC	TATTATAATC	TGCCTTAATA	TCTAACAC				
<i>P. obliquiloculata</i>	TAAGCTATTA	TAACCTTATT	TATCATCAC								
<i>S. globigerus</i>	GCACGTGAAA	TATATTACG	CGTATCTAAC	AC							
<i>G. scitula</i>	CACACACACA	CACACTCTTT	ATTAACGGGT	AATACTTATA	TAGAAGAATG	CAATATACAC	AT				
<i>G. inflata</i>	ACAACACACA	CACGCTTTAA	AAGAGATGAA	ATTTAAGACG	TTATTAAGAA	TCTATAGAA	ATCAC				
<i>N. incompta</i> I	TCAATCCTGA	TTGAATCAAT	GCGAACATGG	CAATTGCAC							
<i>G. uvula</i>	TGCGCTGAGT	CTCTTCCCTC	ACTTACAACA	CACCTTACC	ATCGTGGGT	CGA-ATCCCA	TATTGAGCGG	TGCTATTCTCG	CACACGGCAA	TTTACGTACT	
<i>N. pachyderma</i> I	TACATTCTCG	CTTAAACACG	TAAATACCTT	CTTGTTTAAA	TAAACGATAT	GTTTAAATTA	ACACGGGTAT	GCTATATATG	TGTTGTAATA	AGCAATCTAT	
<i>G. ungulata</i>	ACACACACAC	ACACATACAC	ATACGACTCA	CCCACG							
<i>G. menardii</i>	CTCACCCACG	AT									
<i>Allogromia</i> sp.	CATATATTTA	CTATAAAAA	TAAAAA	ACAT							
<i>A. triangularis</i>	ATATTTTATA	ATATAAATTT	AATATATTA	TAAATAAAA	ACAC						
<i>A. rara</i>	TAAATATCT	TTATTTAAT	AGTATAAATG	TATATATAT	TATATATATA	TATTAACA	C				
<i>E. scabrum</i>	CATACGCGCG	CGTAAAAT	ATATATAT	ACAC							
<i>N. venosus</i>	ACACACTCTG	CGGCAGAGAT	AATACATTAT	ATATGCAGCG	CATTACAC						
<i>P. nipponica</i>	CTGTATTATA	TCGACGCTCT	TACAC								
<i>H. depressa</i>	CATACACGCA	CACCTCTGCA	GTAGTGACAT	ATAATATATA	TTACATTACC	ACACAGCGCA	TTACAC				
<i>B. spathulata</i>	CACATATATA	TATATACGCA	GTATATCTAA	CAC							
<i>A. pseudocassis</i>	CAC	AGAGAA	TATGCACGC	CCAC							
<i>B. marginata</i>	CACACACATA	CTGTGTCGCC	CCGTGTCTCA	AAAAATATAT	ACAC						
<i>E. williamsoni</i>	GCACACTGAC	AAAAAAGCA	AATTTCAATG	ATCGCACATG	CAATACAC						
<i>Trochammina</i> sp.	TAAAATAACA	ACATATGCTC	TATTACTAT	ACAC							
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>	ATAGTATATA	TTCAAT									
1002 BP MARKER											

	3301	3311	3321	3331	3341	3351	3361	3371	3381	3391	3400
<i>G. bulloides</i> Ia											
<i>G. sacculifer</i>	TTACATCAAT	CAGAGGGAAG	CCCAACTCTA	ACA							
<i>G. glutinata</i>	CTTTTTTTAC	GTATGAAGAG	ATACATCACA	CACACACACA	CACGCTTAAG	TATTTACAC	GCGTATRCAT	AAAAAGATAC	GGGCAACTGA	TGCATTGCGC	
<i>N. dutertrei</i>											
<i>P. obliquiloculata</i>											
<i>S. globigerus</i>											
<i>G. scitula</i>											
<i>G. inflata</i>											
<i>N. incompta</i> I											
<i>G. uvula</i>	CAGTTTAACT	TTACTGTCA	ATGATGTGCA	CAATTGTCTA	TTAGGGGTGA	TGCCTTTTTA	GTTTATGAGC	GTGTACTGAT	GCGTCAGTTT	GCCTCGCCGC	
<i>N. pachyderma</i> I	AAAGAGCAGT	CTGTATGTGT	CTGTCTGTAT	ATATTAC							
<i>G. ungulata</i>											
<i>G. menardii</i>											
<i>Allogromia</i> sp.											
<i>A. triangularis</i>											
<i>A. rara</i>											
<i>E. scabrum</i>											
<i>N. venosus</i>											
<i>P. nipponica</i>											
<i>H. depressa</i>											
<i>B. spathulata</i>											
<i>A. pseudocassis</i>											
<i>B. marginata</i>											
<i>E. williamsoni</i>											
<i>Trochammina</i> sp.											
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	3401	3411	3421	3431	3441	3451	3461	3471	3481	3491	3500
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	CTCACA	CGAAGA	AGG-TTAGGG
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	-----	CAAACGC	CGGAGA	AGG-TTGGGG
<i>G. glutinata</i>	GTAGTGATCA	TCTAACAC	-----	-----	-----	-----	-----	-----	ATTACAA	TGAAGA	AGG-TTGGGG
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTACAA	TGAAGA	AGG-TTGGGG
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTACAA	TGAAGA	AGG-TTGGGG
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTACAA	TGAAGA	AGG-TTGGGG
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTACAA	TGAAGA	AGG-TTGGGG
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTACAA	TGAAGA	AGG-TTGGGG
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	ATTACAA	TGAAGA	AGG-TTGGGG
<i>G. uvula</i>	AATTAAGTAG	AGCGCTTTGC	ATTGAGCCTA	GGCACTTGGT	GCATTGGCGT	CGATTTGCTA	TCTAACAC	-----	ATTACAA	TGAAGA	AGG-TTGGGG
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	TATACAA	TGAAGA	AGG-TTGGGG
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTT---CAA	TGAAGA	AGG-TTGGGG
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	GTTA---CAA	TGAAGA	AGG-TTGGGG
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>A. triangularis</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>A. rara</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	CTTA---CAA	TGAAGA	AGG-TTGGGG
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>A. pseudocassisi</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-CTGGGG
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGGGTTGGGA
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	CGAAGA	AGG-TTGGGG
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	ATAA---CAA	TGAAGA	AGG-TTGGGG
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	ATTA---CAA	TGAAGA	AGG-TTGGGG
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	ATTA---CAA	TGAAGA	AGG-TTGGGG
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	ATTA---CAA	TGAAGA	AGG-TTGGGG
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	ATTA---CAA	TGAAGA	AGG-TTGGGG
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	ATTA---CAA	TGAAGA	AGG-TTGGGG
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	ATTA---CAA	TGAAGA	AGG-TTGGGG
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	ATAG---CAA	TGAAGA	AGG-TTGGGG
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA---CAA	TGAAGA	AGG-TTGGGG
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	3501	3511	3521	3531	3541	3551	3561	3571	3581	3591	3600
<i>G. bulloides</i> Ia	GATCTAAGTG	GATCAGATAC	CC-ACG-TCG	TCCATTTCGT	CACAGCAAC	GATGGGCTCT	C-----ATT	CAAATTTACC	CGATGGTGGC	CTCTGAGGTG	
<i>G. sacculifer</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCCATTTTT	TACTATAAAC	TATGGGCCCT	C-----GAT	TGCACTTTTA	CTCGATTTCA	ATCGGCGTAA	
<i>G. glutinata</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C-----AAT	TGCATTTTAA	CTCGTTAAT	TGCAATAAAA	
<i>N. dutertrei</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACATCAAA	GATGGGCTCT	C-----AAT	TGCAATTTCT	ATTATTAGAA	TGCTAAATG	
<i>P. obliquiloculata</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACATCAAA	GATGGGCTCT	C-----AAT	TGCAATTTCT	ATTATTAGAA	TGCTAAATG	
<i>S. globigerus</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACATCAAA	GATGGGCTCT	C-----AAT	TGCAATTTCT	ACGAGATATG	CTAATATCC	
<i>G. scitula</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACTACAA	GATGGGCTCT	C-----ACT	TGCAATTTCT	TATTCTATAT	AAGACTGTAA	
<i>G. inflata</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACATCAAA	GATGGGCTCT	C-----AAT	TGCAATTTCT	GTTATTTCAG	TGCTAAATG	
<i>N. incompta</i> I	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACATCAAA	GATGGGCTCT	C-----AAT	TGCAATTTCT	TTACTTAAAA	TCACTTAATA	
<i>G. uvula</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C-----ACT	TGCAATTTCT	TCAATTTTTT	GTTACTATAA	
<i>N. pachyderma</i> I	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACATCAAA	GATGGGCTCT	C-----AAT	TGCAATTTCT	ATTACTTTAA	TGCTTTAAT	
<i>G. ungulata</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTTT	TACTACAA	GCTGGACTCC	T---GATTG	TAATGCATTC	TCGATATGAA	AGTATCATGA	
<i>G. menardii</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	CACTACAA	GCTGGACTCC	T---CATTG	TANTGCAATC	TCGATATGAA	AGTATCTGGA	
<i>Allogromia</i> sp.	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAT	CACATCAAA	GATGGGACTC	C---AATTG	CA-TTCAATTT	T---ATA---	-----	
<i>A. triangularis</i>	GATCAAAGAG	GATCAGATAC	CG-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGACTC	C---AATTG	CATATTT---	-----	-----	GAGATAT
<i>A. rara</i>	GATCAAAGAG	GATCAGATAC	CG-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGACTC	C---AATTG	CATATTT---	-----	-----	GAGATAT
<i>E. scabrum</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C---AATTG	CATTTTTATTA	TTTTTATAT	AAAATGTGTA	
<i>N. venosus</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C---AATTG	CATTTTTCTTT	TAAATTCGAA	ATCTCTCAG	
<i>P. nipponica</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C---AATTG	CATTTTT---	-----	-----	CTATA
<i>H. depressa</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C---AATTG	CATTTTT---	-----	-----	CTTTA
<i>B. spathulata</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTGT	TACATCAAA	GATGGGCTCT	C---AATTG	CATTTT---	-----	-----	CTCGTCAGAG
<i>A. pseudocassisi</i>	GATCAAAGAG	GATCAGATAC	CCTTCTGTTCC	TCCCATTTAGT	TACATCAAA	TATGGGCTCT	C---AATTG	CTCTCAGTTT	AACCTGTGCA	GTAATATTTAT	
<i>B. marginata</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C---AATTG	CATTTTTCTCG	TAAATTCGAA	ATTTCTCAG	
<i>E. williamsoni</i>	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTTT	-ACATCAAA	GATGGGCTCT	C---AATTG	CACACTTTTC	CGTGTTAGT	TGTTTTATTA	
<i>Trochammina</i> sp.	GATCAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCCATTTAA	TACATCAAA	GATGGGCTCT	C---AATTG	CATTTTATTT	ATTTAAAT-	GTAIA-----	
<i>Peneroplis</i> sp.	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	-ACATCAAA	TATGGGATTT	C---AATTG	AAATATGIGAT	ACATATAATA	TAATATTTCC	
<i>Parasorites</i> sp.	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	TACATCAAA	TATGGGATTT	C---AATTG	AAATATATTTA	TTATATATTT	AATTTATAT	
<i>S. orbiculus</i>	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	-ACATCAAA	TATGGGATTT	C---AATTG	CTGTACACCT	CTATATTTAA	TTATTTATTA	
<i>M. vertebralis</i>	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	-ACATCAAA	TATGGGATTT	C---AATTG	ACACTAAAC	CTAAACATTA	TAATTTAAT	
<i>Broeckina</i> sp.	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	-ACATCAAA	TATGGGATTT	C---AATTG	AAATATATATA	ATATTCATTC	TAACTAATA	
<i>C. compressa</i>	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	TACATCAAA	TATGGGATTT	C---AATTG	TATATTTAAC	CATATTTAAA	T-----	
<i>A. hemprichii</i>	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	TACATCAAA	TATGGGATTT	C---AATTG	AAATATATAT	TATTTCTAAT	ACCCATAACA	
<i>Laevipeneroplis</i> sp.	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	-ACATCAAA	TATGGGATTT	C---AATTG	AAATATAGATA	TATACCTCA	ACTTAAATAT	
<i>D. zhengae</i>	GAACAAAGAG	GATCAGATAC	CC-TCG-TAG	TCCATTTTT	-ACATCAAA	TATGGGATTT	C---AATTG	AAATAACATG	AATGTTTATA	ATCTTCAAT	
<i>B. schlumbergeri</i>	GAACAAAGAG	GATCAGATAC	CC-TCG-TCG	TCCATTTTT	-ACATCAAA	GATGGGATTT	C---AATTG	AAATTTTTTA	TATACTTAT	AATTAAGTAT	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	3601	3611	3621	3631	3641	3651	3661	3671	3681	3691	3700
<i>G. bulloides</i> Ia	TAAATTGGAT	GTAGAATTTT	AGACTCTAGC	ATGACACTAA	CGTTTGAAGG	TTGAGCGCGG	TCTTTTGACT	GCTGCTCCCT	CGCGGTCTGC	TGGCGTCATC	
<i>G. sacculifer</i>	CTGGACATGA	TAGGAACGAA	ACATCTGATT	ACTCGCTTGC	CCCCGCTGC	AACCGCGAGT	TGAGCTTAAT	TGCTCCTTGC	AAAGCATACA	CCCCACGAGG	
<i>G. glutinata</i>	CATCCTCAAC	CTGCAAAATG	ACTTGGCTTG	AGCTTGTACT	TGATTC--GT	CTTGTACCCT	CGCCTAACTA	TTTTCCGAA	TGGTCTCGAT	GGACGTTTTA	
<i>N. dutertrei</i>	CACCTCAACC	TGCAAAATAT	AACCTGGCTC	GAGCTCGTAT	TCTAACTCTG	TATTAGATAC	GCTCGCCTAA	CTTTAAATTT	CGTACGGTCT	CGATGGACAT	
<i>P. obliquiloculata</i>	CACCTCAGCC	TGCAAAATAT	AACCTGGCTC	GAGCTTATAC	CTAAATTTCC	TATTAGATAT	GCTCGCaTaa	CTTTAACTTt	CGTACGGTCT	CGATGGAC--	
<i>S. globigerus</i>	TCAGCCTGCA	AATATTTATT	TAGCTTGAGC	TTGTGATCTT	CGGAYTACCG	TCGCTTTTTAT	ACATATTACA	CTGTATGGCT	TCGACGGACG	TTTCATATTC	
<i>G. scitula</i>	TAAAGTACCT	CAACCTGCTA	AAGCTAAATA	CCTTGGCTCG	AGCTCGTATC	TTTGTATTTT	ATAT--AAAG	ACATACGCTC	GCCATATCTA	TTCACAAATTA	
<i>G. inflata</i>	CACCTCAACC	TGCAAAATAT	TACTTGGCTC	GAGCTCGTAT	CTTTATCTCG	TATAAAGTAC	GCTCGCCTAA	CTTTAAATTT	CGTACGGTCT	CGATGGACAT	
<i>N. incompta</i> I	ATCCTCAACC	TACAACTAA	TATCTGGTTA	GAGATCTGTT	GTTTAACTTC	TTGTGAGTTC	GATGCCGCTC	GCCAATCTAT	CGCAATCTAT	CGGTCATATG	
<i>G. uvula</i>	TCTTGAGAA	ACCTCCTCAA	CCTGCAACA	AATGACCTGG	CTCGAGCTTG	CTTTGTTACT	CACGTTTCAT	TGCGCTCGCC	AAACCAATTA	CTACGCAATT	
<i>N. pachyderma</i> I	GCACCTCAAC	CTGCAAAAT-	-ATAACCTGG	TTTGAGCTCG	TATTC TAATC	TCGTATTAGA	TACGCTCGCC	TAATTTTAAA	TTTTCGTACGG	TCTCGATTGA	
<i>G. ungulata</i>	GATTTACAAT	TGACCCCTAC	CTGCAACTAT	--GTTGAAC	AA--TGTTTT	GTAATCATTT	---ACAGAT	C-ATTTGTAC	TATATATGCA	AGTATCATTA	
<i>G. menardii</i>	GATTTACAAT	TGACCCCTAC	CTGCAAAAT	ATGTTTAGCA	ATACTGGTTT	GTAATCATTTG	GTT-ACAGAA	CCATTCGTAT	CAGCTATAAA	CATATGCACG	
<i>Allogromia</i> sp.	-----	TGCTCTCAAC	CTACAAAT-	-----	-----	-----	-----	-----	-----	-----	
<i>A. triangularis</i>	TGTTTGATAA	TGCCCCAAC	CTGCAAAAT	-CAG-----	-----	-----	-----	-----	-----	-----	
<i>A. rara</i>	TGTTTGATAA	TGCCCCAAC	CTGCAAAAT	-CAG-----	-----	-----	-----	-----	-----	-----	
<i>E. scabrum</i>	AAATGGCCCT	AGCCTACAAA	AAAACAAATCT	-----	-----	-----	-----	-----	-----	-----	
<i>N. venosus</i>	CCTACAAAAT	GACTTGGCTT	GAGCTCGTAA	CTCTGTTTACG	CTCGCCTGAC	TATTTTTCGTA	CGGTCTCGAT	GGACGGTTCA	TTTTACTATC	TTTTCGGTGA	
<i>N. nipponica</i>	AAATTGCAAA	TCTCCTCAGC	CTACAAAATG	ACTT-----	-----	-----	-----	-----	-----	-----	
<i>H. depressa</i>	AA--TTGCAAA	TCTCCTCAGC	CTACAAAATG	ACTT-----	-----	-----	-----	-----	-----	-----	
<i>B. spathulata</i>	ATATGTAATA	CATCCTCAGC	CTACAAAATA	TTCa-----	-----	-----	-----	-----	-----	-----	
<i>A. pseudocassisi</i>	GATCTCATAC	CCT-GACCTG	CAAACCTGTA	TGGCTTG-AG	C---CTCCCC	-----	-----	-----	-----	-----	
<i>B. marginata</i>	CTACAAAATG	AATTTGGCTT	AGCTCGTATT	ATTCGTAATA	CGCTCGCCTC	ACTATTTTTCG	TACGGTCTCG	ATGGAAGTTT	CATTTATATT	TTTTTGGGTG	
<i>E. williamsoni</i>	TATTTCCCAAC	TGCAACATTT	TTTAGCTGAC	TTGAGCTTAC	GCTCGCTCGT	TTAAATTCAT	TGCTAACTCA	GGAGTTAAAT	TTTTCCGCAC	ATACTTCTTA	
<i>Trochammina</i> sp.	-----	TGCCCTCAGC	CTACAAAATTA	AACTGGCTTG	-AGCTCGTAA	TTTAAATATT	ACGCTCGCCT	AACTCGAT-TT	TAGTACGGTC	TGCA-TGGAC	
<i>Peneroplis</i> sp.	TTCAACTTAT	ATTAATACATG	T-----	-----	-ATAGTTG-	AGTACTTAAT	TT-GT-----	--ACT--CT-	ATATATATTA	TAAATTT--GA	
<i>Parasorites</i> sp.	TCTTCTCAAC	ATAATTTATAT	-----	-----	-ATGATTTG-	AGCGTATTTAT	ATAI-----	--ACT--CTC	ATATTTTAAAT	ATTAATGTTA	
<i>S. orbiculus</i>	TAAAT-----	-----	-----	-----	-ATAATTTG-	AGTACTTAAT	TGTTT-----	--ACT--CTT	ATATTTTAAAT	TATATTTATT	
<i>M. vertebralis</i>	TAT-----	-----	-----	-----	-ATGATTTG-	AGTATATGTC	AAAATATTT-	--ACT--CTC	ATATTTAAATA	ATTAATTTAT	
<i>Broeckina</i> sp.	ATTAAT-----	-----	-----	-----	-ATGATTTG-	AGTTTATATTA	TT-----	--ACT--CTC	ATATAAAATA	ATGTTGTTTT	
<i>C. compressa</i>	-----	-----	-----	-----	-ATGATTTG-	AGTTTATATTA	ATTATATATA	T-ACT--CTC	ATATAAAATA	ATTA-----	
<i>A. hemprichii</i>	TATTTAATAT	TT-----	-----	-----	-ATGATTTG-	AGTAAATTTAA	TATATTTA--	--TCT--CTC	ATAAAAATTA	AAAATTTAATA	
<i>Laevipeneroplis</i> sp.	TAAAT-----	-----	-----	-----	-ATGATTTG-	AGTATAATTTA	TAT-----	--ACT--CTC	ATATATATAT	TAAATTTGAT	
<i>D. zhengae</i>	ATATATTATA	CATTT-----	-----	-----	-ATAGTTT-	AGTTATAAGT	TATA-----	--ACT--CTT	ATAATATATA	TTATTAATAT	
<i>B. schlumbergeri</i>	ATATAATATG	TTTATTTGTT	CCTTTAACAA	TTAATTTATT	ATATGGTTG-	AGTTTAAATTT	GAACTCCTAT	ATATTAATTA	ATGTTAATTT	AAAATTTTCT	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

	3701	3711	3721	3731	3741	3751	3761	3771	3781	3791	3800	
<i>G. bulloides</i> Ia	GATGGACTCT	ATGAGTTTAC	GGTTTAAAGT	CGTATCTTGG	TTTCAACAAG	GCGGCTGTGG	TTACTTATAG	TATTGTGTGG	TTTAGCAAAG	CATGCTCGAG		
<i>G. sacculifer</i>	GTTTTGACGG	AGCATTTTTA	CGATGGTAAA	TTCCGATTGAA	GGTCCAAACAT	CTACGAAAGA	AAGCACTATA	ACGGAGACGT	GGGCTGTAAC	AGCTACTCAA		
<i>G. glutinata</i>	ACGATTTTAT	TAAACAAATCT	TTTGCGTGA	AGCTTTAACCA	CAATATGTTTC	TTCCGAGCAT	TGTCGTGTGC	GTGCACTAGA	TTTTCCGGAC	TTTTCCGCCTCA		
<i>N. dutertrei</i>	TTTTGATCTA	TAACTTTTAT	TCTGCGTGA	GGCTATACAT	GTTTAACTCTT	TAGCATTTAT	TCTTAAATFAA	TAGCTGGATT	TGCTAGGCGT	GCACTTGATT		
<i>P. obliquiloculata</i>	ATTTTGATTC	TATAATCTTT	ATTCGCGTG	TgAGCTgTAC	AACTTTAACT	TTTAAAGCAAT	CTATTTTATT	AAATGAATAT	GCTGGAATTA	CACTGCGTGC		
<i>S. globigerus</i>	TTTACAATAT	TTTTGGTGTGA	AGCTTTATGT	CATCTGTCTG	AAACATAGCG	ATACATAGCG	TGCCTGTGAT	TTTTCCGAGCT	TTTCCGCTCAA	ATTTCTGTGG		
<i>G. scitula</i>	TAGTACGGTC	TCGATGGACA	TTATAAACGA	TCTAAAGAAT	CTTATTTCTGC	GTGTAAGCTA	TAACATGTTA	CTATCATTAC	CTTTTATAAG	GCTTAAATGA		
<i>G. inflata</i>	TTTGATTTGA	TATCTTTTAT	TCTGCGTGA	GGCTATACAT	GTTTAAATGG	CTTCTCTATC	TTTTAAACCA	GATTTAGAACC	GTTTACATGG	CGTGCCTTTC		
<i>N. incompta</i> I	GACATTTTCT	GATTTAGTAA	TCTATTTCTG	TGFTGTAGCT	TAAACATGCA	AGTTGCTTGA	CCTTGTGTGA	TCGTTATTTGA	CATTCAGGTT	AGATTTGTCAT		
<i>G. uvula</i>	GGTCTCGATG	GACTTTTTCAT	GGATTTTATTC	ATAACAAATC	TTTTTGGCTG	TAAGCTTTAG	CACCTGACTAG	TGTGGTCTTT	ATTGAGCTAA	TTCTACGACG		
<i>N. pachyderma</i> I	CATTTATAGAT	TAAATTAATCT	TTATTTCTCG	TGTAAGCTTA	CATGTTTTAAA	TCGTTTTAAG	GGACTGATAT	ATTTATTTTAT	TTTAGATAAG	CTGGATTTTC		
<i>G. ungulata</i>	GCGGACATTT	TAAAGTGAAT	CTTTTGATAT	AGAGATTCAA	TTTA-----	-----	GAAAT	ATGCGTGTCA	CGTATTGGAC	CAG--TTGC	AAACGCAAAAT	
<i>G. menardii</i>	TATCTCAGTG	GACATTTGTA	GCTGAATCTT	TTGATGCAAC	AAGA---TT	CAATTTGAAC	CTGCGTGTAT	CGTATTGGAC	CAA---TTGC	TCATATGCAA		
<i>Allogromia</i> sp.	TCTTACTAAA	C-GT-GCATA	TTTTTTTTTA	AAT-----	-----	-----	-----	-----	-----	-----	TAT	
<i>A. triangularis</i>	AATATTTTAT	ATTTGTATTT	TTTAAATCAA	TTTTAAATTA	ATTTTTTAAAT	GTTCAATTTG	TCGCCTGTAT	TTGTATATGG	A---CTTGA	AGGCATTTTT		
<i>A. rara</i>	ATAAATATTT	TGTTTAAATAT	TGTTAGATTG	TTCa-----	-----	-----	TTGC	TCGCCTGTAT	TTGTATACGG	A---CTTGA	AGGCATTTTT	
<i>E. scabrum</i>	AAATATTTTC	GTACGGTCTC	GATGGACGTT	TCAAT-----	-----	-----	TTTTTTTA	AACTTTTTTT	TTGCGTGTAA	GCAATATTTT	TTTAAATGTA	ATTAATTTTT
<i>N. nipponica</i>	AGCATTTGAC	TAACTTTTGA	AACACAAG-A	TTGTACTGCG	TGCACTTGAT	TTTTCCGAGCT	TTTTCCGACT	TTCTGTGTAA	TTCTGTGTAG	ATGTAAGCAG	TATGTTATAT	
<i>H. depressa</i>	TTTTCGTACG	GTCTCGATGG	ACGTTTTCAT	TAATTTAT--	-----	-----	-----	-----	-----	-----	-----	
<i>B. spathulata</i>	CGATTTATTT	TCGTATGGTC	TCGACGGACG	TTTCATAT--	-----	-----	-----	-----	-----	-----	-----	
<i>A. pseudocassisi</i>	---ATCGGT	TCAGTATAGA	CATATCTACT	CACCATATAA	ATAAA-GTCA	TGTCAGCACT	CTATCAATGT	AAACAGTTAT	TTCCGAG-AC	ATAAGATTTT		
<i>B. marginata</i>	TAAACATPAT	GTTATTTCTT	GAAACATAAG	AAATGCATTGC	GTGCCTTGA	TTTTCCGAGC	TTTTCCGCTCA	ATTCCTGGTA	GATGTAAGCA	CTAATGTATA		
<i>E. williamsoni</i>	TACGGTAGTT	ATTAATGCGA	TGTATTTATG	TTTTTAAATG	GTTTCTTCTG	TGACTACTCT	GATTTTCCGA	GCTTTGCGCT	CAATTTTATT	GGTGAATGTT		
<i>Trochammina</i> sp.	-GTTTCATTT	AAACTTTTTT	TTGCGTGTAA	GCAATTTTTG	TTATTTCTTT	AAATATAAGA	AT-----	--TAACA-TT	G-----CGTG	CACTT--GAT		
<i>Peneroplis</i> sp.	ATATTTATTA	ATTATAATCA	TA-----	-----	-AATGATT	ATATGACTTT	TGCCCTCATA	TTAT-T-T-A	AAGGTGAGAT	GTAAGCATTTA	TAGGAGGATA	
<i>Parasorites</i> sp.	TAAAAAAATA	TAAATTTAAAT	TAAAAAACT-	-----	-ATTGATT	ATATGACTTT	TGAGCTCATA	TAAT-TAT-A	TAGGTGAGAT	GTAAGCATTTA	TAGGAGATCA	
<i>S. orbiculus</i>	TTTATA-----	-----	-----	-----	-ATTGATT	ATATGACTTT	TGAGCTCATA	TAAT-TAT-A	TAGGTGAGAT	GTAAGCATTTA	TAGGTGAGTA	
<i>M. vertebralis</i>	A-----	-----	-----	-----	-TATGATT	ATATGACTTT	TGAGCTCATA	TAAT-TAT-A	TAGGTGAGAT	GTAAGCATTTA	TAAAGTGAAT	
<i>Broeckina</i> sp.	TGTTAATAAAA	ACATGT-----	-----	-----	-ATTGATT	ATATGACTTT	TGCCCTCATA	TAAT-TAT-A	TAGGTGAGAT	GTAAGCATTTA	TTGATGATTA	
<i>C. compressa</i>	-----	-----	-----	-----	-TAAATAT	ATATGACTTT	TGCCCTCATA	TAA--TAATA	TAGGTGAGAT	GTAAGCATTTA	TTGGTTTACA	
<i>A. hemprichii</i>	GTGGTACAAT	-----	-----	-----	-ATTTAT	ATATGACTTT	TGAGCTCATA	TAAT-TAATA	TAGGTGAGAT	GTAAGCATTTA	TAGGTGAACA	
<i>Laevipeneroplis</i> sp.	AAATA-----	-----	-----	-----	-TTTGATT	ATATGACTTT	TGCCCTCATA	TAAT-TAT-A	TAGGTGAGAT	GTAAGCATTTA	TTAATGATTA	
<i>D. zhengae</i>	TGAATTTTTA	AATATTTTCA	TAAATATA--	-----	-TATGATT	ATATGACTTT	TGCCCTCATA	-TATTTATT-	CCGGTGAAT	GTAAGCATTTA	TAGGAGAGTA	
<i>B. schlumbergeri</i>	ATTAATTTTC	ATCTTAATTA	ATTAATTAAT	ATTAATATAT	TATGCCCCTTG	TGTAATTTAT	TTAATTTGAT	ATATGACTTT	TGCCCTCAAT	TTATAGGTGA		
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		

	3801	3811	3821	3831	3841	3851	3861	3871	3881	3891	3900
<i>G. bulloides</i> Ia	AGAGTGTGTG	GATACAAGCG	TGCACTGGAT	TTTCAGAGTT	TTGCGCTCAA	ATTGACGGTG	AGATGTAAGC	ACAAGGGTAT	TGTGGACGGT	GTCTTTTCAC	
<i>G. sacculifer</i>	GTTACATACT	GGCACAAAAC	ACTGACATCC	GAGATGATTG	GAGCTCCGTG	CTCCAAGTTT	CATCTCGGTA	AGATGTAAGT	ACAAATTGTAA	CTGAGTAGTG	
<i>G. glutinata</i>	AAAAAATCTG	GTAAGATGTA	AGCACTATGT	CATATTGCAC	CGCAGCATAT	ACTTTCCGGT	ATTTTT--GC	TTGTCGTGTT	GCAGTTAGAC	AAACTT----	
<i>N. dutertrei</i>	TTCCGAGCTT	TGCGCTCAAT	TCTGGTGAGA	TGTAAGCACT	CTGTTTAACT	ACCCGTGCTG	CATACTTCTT	TTTAACCGAA	GGGTATTAGC	AGTATCGTGT	
<i>P. obliquiloculata</i>	ACTTTGATTTT	CGGAGCTTTG	CGCTCAATTC	TGGTGAGATG	TAAGCACTCT	GTTTAACTAC	CCGTACTATA	TACTTTCCCT	AACCCGAGAG	TATTAATAGT	
<i>S. globigerus</i>	GAGATGTAAAG	CATCATGTTA	TTACGCCCGC	TCATATATAC	TTCCGGTATTT	TATGCACTCG	CGTTTGGCTC	TTAAACAATTA	TTATCG----		
<i>G. scitula</i>	TTTTACATGG	CGTGCACTTG	ATTTTCTGAG	CTTTGGCCTC	AAATCTGGTG	AGATGTAAGC	ACTGTGTAA	GCCATTCCAC	TGATCTATGC	CTTTCTTAAAG	
<i>G. inflata</i>	ATTTTCTGAG	CTTTGGCCTC	AATTTCTGGT	AGATGTAAGC	ACTCTGTTTA	GCCT--CCCG	CGCTGTGTGT	CTTCTTAATA	CGAGGGCACT	AACAGTTGTC	
<i>N. incompta</i> I	GGCCTACACG	TGCACTAGGA	GCTTTGCCTC	CAATAATAT	GGTGAGTTT	AAGCAGCTG	TTTCATAATC	CGTGCTGCAT	CTATCTTCTT	GAGTGAAGGA	
<i>G. uvula</i>	TGTGCGTGCA	CTTGACTTTT	GGAGCTTTGC	GCTCAATGAA	TTTCTGGTGA	GATGTAAGCA	CCGAGTGACT	TATCATGAGA	GCTCTTTGCG	CCTTCGGGTG	
<i>N. pachyderma</i> I	ATGGCGTGCA	CTTGATTTTC	GGAGCTTTGC	GCTCAATTTCT	GGTGAGATGT	AAGCACTCTG	TTTAAATTGCC	CGTGCTATAT	ATCACTTTCT	CTTAAACGAG	
<i>G. ungulata</i>	TGTTCT--G	ATAACAACGT	GCACTCGACT	GTTAGAGCTT	TGTGCTCAGA	T----AGGT	GAGATGTATG	TATAACTACC	GTTTCAATTTG	TTCTTTGCTG	
<i>G. menardii</i>	CTTGTTNTGA	TGACTAACGT	ACACTCGACT	GATAGAGCTC	TGTGCTCAGA	T----AGGT	GAGATGTATG	TATATTTTGG	TTCTCGCTCG	TTTGATCAAG	
<i>Allogromia</i> sp.	GTACTT--GA	TTTTCTGAGC	TTTCCGGCTC	AA-----T	GGTAAGAAAT	AAGCAGTA-A	ATTTGCTATA	ACATTTCCCT	GT--GT-AAT	CTTCTGATTC	
<i>A. triangularis</i>	TGCAA-----	-----CGGT	CGAGCATTCT	TTGAAA-TGT	TTATATAATA	TTTAATTTAT	TTATATAATA	TAATTTCTTT	ATATCGTTTT	ATATTTATGT	
<i>A. rara</i>	TGCAA-----	-----CGGT	CGAGCATTCT	TTTAAAATGT	TATTTTATAA	TATTTATAAT	TTTATTATAA	TATATTTATT	ATACCTTTTT	ATATTTATAG	
<i>E. scabrum</i>	ACATAT--A	AAATTTGCGT	GCACCTTAT	TTCCGAGCTT	TCCGCTCAAT	ATTTCTGGT	GAGATGTAAG	CACCTATTGTT	AT-----	---TACAGCC	
<i>N. venosus</i>	TACCCGCAGT	GTATGTTCTT	GGGCATTTCA	TCTGTCCGCT	TGTAATTAAC	ACCAAT--					
<i>P. nipponica</i>	TGTAC-----	-----TGCGT	GCACCTGATT	TTCCGAGCTT	TCCGCTCAAT	T----CTGGT	GAGATGTAAG	CACATGTTTA	A-----	-CTGTTACCC	
<i>H. depressa</i>	TGTAC-----	-----TGCGT	GCACCTGATT	TTCCGAGCTT	TCCGCTCAAT	T----CTGGT	GAGATGTAAG	CACATGTTTA	TA-----	---TTACCC	
<i>B. spathulata</i>	ATACA-----	-----TAGCGT	GCACCTGATT	TTCCGAGCTT	TCCGCTCAAA	TATTCTGGT	GAGATGTAAG	CATCATGTTT	T-----	---GATACCC	
<i>A. pseudocassisi</i>	ATGAACTTTG	CGCTCAGTTA	ATATACGGTG	AGATGTAAGC	ATCGTAA---	GC-ATAA---	-----TGT--	GTTAGTGCCG	ATCCGCTCTC	GGGCGCGATC	
<i>B. marginata</i>	CTGCCCCGAG	CGTATGCCTT	CGGGCAATTC	GTTCTGTGCT	GTGTAGTTGA	CAATT--					
<i>E. williamsoni</i>	AAGCACGCCG	GATTGTATTA	TGCTACGTCG	TTGCCCTCCG	GTGACACTAC	TCAATTTTTA	CATTCAAAA	T-----			
<i>Trochammina</i> sp.	TTTCCGAGCT	TTGCCCTCAA	TTC-----TG	CGGAGATGTA	AGCACTATCT	CTTTCT---	-----G	TCCGT-A-CC	TTTTATTTTC	GAATAATTA	
<i>Peneroplis</i> sp.	ATATACCTAT	ATCATATTAT	ATGFGTATAA	TGTATTATTA	TAATCCTTAA	TTAATAAACG					
<i>Parasorites</i> sp.	ATATATATTA	TGTAATAAAT	ATATATTATG	AATCCTTAAT	TATAAAAAAT	G-----					
<i>S. orbiculus</i>	ATTATAAGTA	ATATTATATA	TTATGATCCT	TAATAAAATG							
<i>M. vertebralis</i>	AAATATAAAG	TAATATTGTA	TTATATTGAT	CTTTAAAATA	AAAAATG---						
<i>Broeckina</i> sp.	ATATACCTACA	TATATAATAT	GTAAGTATTA	TTATAATTTCA	AAATATAAAA	TG-----					
<i>C. compressa</i>	ATATACCTAT	ATATTATTTA	ATTAATATAT	AATGATTTAT	TGTAATCCCTA	AATTATAAAT	A-----				
<i>A. hemprichii</i>	ATATATTATAT	ATTTATAAAT	TTATTTGAAAT	CCTTATAAAT	AAATG-----						
<i>Laevipeneroplis</i> sp.	ATATACCTAT	AAATTTAAT	AATTATAATG	TATTTATTATG	ATTTAAATAT	AAAAATG---					
<i>D. zhengae</i>	ATATTACACA	TCTGTAATTA	TTATAATCCT	AAATTTAAAA	CG-----						
<i>B. schlumbergeri</i>	GATGTAAGCA	TTATTATATT	GTATTAGTTT	TTATATAATC	TTTATTGTAT	TATTATAATA	ACTTAATATA	ATATATATCA	CAAAATG---		
1002 BP MARKER											

	3901	3911	3921	3931	3941	3951	3961	3971	3981	3991	4000
<i>G. bulloides</i> Ia	CTGAACCGTA	CTTGAC----									
<i>G. sacculifer</i>	CAAGGGTCCG	GTCTACTGGT	CCTGCTGTTT	TCCGCTCAAG	AACATGTTGA	AC-----					
<i>G. glutinata</i>											
<i>N. dutertrei</i>	TGTATGTTAT	TCAATCTTTT	GT-----								
<i>P. obliquiloculata</i>	ATCGTGTGTT	ATGTTATTCA	ATCTTTTT--								
<i>S. globigerus</i>											
<i>G. scitula</i>	GTTATAGAAT	AGTGTGTAAT	CGGCTATTAA	CAAAATTTTA-							
<i>G. inflata</i>	GTGTGTGTGC	TATTAACAAT	TTTT-----								
<i>N. incompta</i> I	GGTGTTAGTT	TGCGCAATTC	TAACATACTT	T-----							
<i>G. uvula</i>	TCAATTGCTTT	GCTCGATTGG	TCTGACACAT	ATCTAATTG-							
<i>N. pachyderma</i> I	AAGGTATATT	TATAGTGTGC	TGTTGTATAT	TATTCATCTT	TTT-----						
<i>G. ungulata</i>	TCATGCGAGA	CGCATGTAC	AAGATGCCTA	AGCTTTTGGC	TGGGTTGAAC	AACACCAATC	ATTTCTAAT--				
<i>G. menardii</i>	CTGTATATTC	GGTAACGGAT	ATTGGTTTGG	GAGATGGTTT	GAACACCTAC	AAAAAT--					
<i>Allogromia</i> sp.	CAAGATTGTA	AATAGTAGAT	ACTATTT--								
<i>A. triangularis</i>	AATGCAAGCA	CTTGATTTTC	GGAGCTTTGC	GCTCTTTTGG	TGAGATGTA	GCGACAAAAG	TGCTTATAA	CTTGTGCTTA	ATTATTGAT	TTTAAATGTT	
<i>A. rara</i>	TAAATGCAAGC	ACTTGATTTT	CGGAGCTTTG	CGCTCTTTTG	GTGAGATGTA	AGCGACAAAAG	ACGCTTATA	GTTTGATTA	TTTTTGATAT	ATATGATTTT	
<i>E. scabrum</i>	GCGTAAATTA	TTTTACTGCG	TGCAGTTAAG	ACATATTTT-							
<i>N. venosus</i>											
<i>P. nipponica</i>	GC-AGTATAT	AACTTCGGTT	ATTTTACTTTG	TGCTGTTTGT	AACTTAAACA	TTT-----					
<i>H. depressa</i>	GC-AGTATAT	AACTTCGGTT	ATTTTACTTTG	TGCTGTTTGT	AACTTAAACA	TTT-----					
<i>B. spathulata</i>	GCTCACATAT	GCTTCGGGT	ATTTTGTCTG	ATGCGCTGCG	TATCTTAAAC	ATTTAT--					
<i>A. pseudocassisi</i>	CATCTGCATT	TTTGTCTAAT	ATA-----								
<i>B. marginata</i>											
<i>E. williamsoni</i>											
<i>Trochammina</i> sp.	GTTGTACGTG	TACAGTTGAG	AAATTTTTT-								
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	4001	4011	4021	4031	4041	4051	4061	4071	4081	4091	4100	
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----T	GGGC	GAAGCA	CGCGTTAGGC	ACGCGCTAAC
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	CCC	GTGCAACGCA	CGTGTTAGGC	GCGGCGCTCC	
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-----	-----	CG	GTGTGAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	GT	----GAAGCA	CGCGTTAGGC	ACGCGCTTAC	
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	GT	GT--GAAGCA	CGCGTTAGGC	ACGCGCTTAC	
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	AT	GT--GAAGCA	CGCATTTAGGC	ACGCGCTTAC	
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	GT	GT--GAAGCA	CGTGTTAGGC	ACGCGCTTAC	
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	GT	GT--GAAGCA	CGCGTTAGGC	ACGCGCTTAC	
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	T	GTGCAAGCA	CGCGTTAGGC	ACGTGTTTAC	
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	GT	GT--GAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	GT	GT--GAAGCA	CGCGTTAGGC	ACGCGCTTAC	
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	TA	-TACGAAGCA	CGCGTAGGC	ATGCGCTTAC	
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	TA	-TACGAAGCA	CGTGTAGGC	ATGCGCTTAC	
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----T	GTGTGATGCT	CGCTTTAGGC	ACGCGCTTAC	
<i>A. triangularis</i>	TCTTCATAGT	AATATTTTAA	TTGATTTAAG	CGTAAGTTAG	CTTAAACGGA	CTCTTTAC--	-----	TG	TTGTGAGGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>A. rara</i>	TCTTCATAGT	AATATTAATA	TTGAATATAA	TTTATCAAAAC	TAACCTAAAC	GGACTCTTTA	C----	TG	TTGTGAGGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	TG	GTGTGAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	TA	CTGTGAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	CG	GTGTGAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	TA	CTGTGAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	CG	ATGTGAAGCA	CGCATTTAGGC	ACGCGCTTAC	
<i>A. pseudocassisi</i>	-----	-----	-----	-----	-----	-----	-----	TG	GTGTGAAGCA	CGTGTTAGGT	ACGCGCTTAC	
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	TTG	GTGTGAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	TTT	GTGTGACGCA	CGTGTTAGGC	ACGGGCTTAC	
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	TG	GTGTGAAGCA	CGCTTTAGGC	ACGCGCTTAC	
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	TA	ATGTGATGCA	CGTTTTAGGT	ACGAGCTTAC	
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	TA	ATGYGATGCA	CGTTYTAGGT	ACAAGCTTAC	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

	4101	4111	4121	4131	4141	4151	4161	4171	4181	4191	4200
<i>G. bulloides</i> Ia	TGCAGAAATG	TCTGAGATT	TCCCTCCGG	GGGTAGTATA	CATGCACATG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGA--G	CGTGGAGTAT	
<i>G. sacculifer</i>	TGTAGAAATG	CTCAAGTCAT	TACCCCTCCAG	GGGTAGTATG	CTCTCACAAAG	TGAAACTTAA	AGGAATTGAC	GGAAAGGGCAC	CACAAG--CG	CGTGGAGCAT	
<i>G. glutinata</i>	TGCAGAAATG	TCTGAGACAT	TCCCTCCGG	GGGAAGTATG	TACGCAAGTG	TGAAACTTGA	AGGAATCGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>N. dutertrei</i>	TGCAGAAATG	TCTGAGACAT	TCTCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>P. obliquiloculata</i>	TGCAGAAATG	TCTGAGACAT	TCTCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>S. globigerus</i>	TGCAGAAATG	TCTGAGACAT	TCTCCTCCGG	GGGAAGTATG	TACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>G. scitula</i>	TGCAGAAATG	TCTGAGACAT	TCTCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>G. inflata</i>	TGCAGAAATG	TCTGAGACAT	TCTCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>N. incompta</i> I	TGCAGAAATG	TCTAAGACAT	TCTCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>G. uvula</i>	TGCAGAAATG	TCTGAGACAT	TCTCCTCCGG	GGGAAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>N. pachyderma</i> I	TGCAGAAATG	TCTGAGACAT	TCTCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>G. ungulata</i>	TGCAGAAATG	TCTGAGACTT	TCTCCTCCGG	GGGTAGTATA	CTCGCAAGAG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAAATG	CGTGGAGCAT	
<i>G. menardii</i>	TGCAGAAATG	TCTGAGACTT	TCTCCTCCGG	GGGTAGTATA	CTCGCAAGAG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAAATG	CGTGGAGCAT	
<i>Allogromia</i> sp.	TGCAGAAATG	TCTGAGTTAT	TCT-CTCC-G	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>A. triangularis</i>	TGCAGAAATG	TCTGAGTCAT	TCCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>A. rara</i>	TGCAGAAATG	TCTGAGTCAT	TCCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>E. scabrum</i>	TGCAGAAATG	TCTGAGACAT	TCCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>N. venosus</i>	TGCAGAAATG	TCTGAGATAT	TGTTCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>P. nipponica</i>	TGCAGAAATG	TCTGAGACAT	TGCTTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>H. depressa</i>	TGCAGAAATG	TCTGAGATCT	TCTCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>B. spathulata</i>	TGCAGAAATG	TCTGAGACAC	TCTCCTCCCTG	GGGTAGTATG	CACGCAAGTG	TAAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>A. pseudocassisi</i>	TGCAGAAATG	TCTGAGACAC	-TCCCTCCCTG	GGGTAGTATG	CACGCAAGTG	TGaaacttga	aggaattgac	ggAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>B. marginata</i>	TGCAGAAATG	TCTGAGACAT	TCCCTCCGG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>E. williamsoni</i>	TGCAGAAATG	TCTGAGACAC	TCTCCTCCCTG	GGGTAGTATG	CATGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGATCAT	
<i>Trochammina</i> sp.	TGCAGAAATG	TCTGAGACA-	--T-CTCC-G	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>Peneroplis</i> sp.	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>Parasorites</i> sp.	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>S. orbiculus</i>	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>M. vertebralis</i>	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>Broeckina</i> sp.	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGNNNNNNN	NNAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>C. compressa</i>	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>A. hemprichii</i>	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>Laevipeneroplis</i> sp.	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>D. zhengae</i>	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGTAGTATG	CACGCAAGTG	TGAAACTNNN	NNNNNNNNNN	NNAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
<i>B. schlumbergeri</i>	TATAGAAATA	TTTAAATATA	TACCTTCCCTG	GGGAAGTATG	CACGCAAGTG	TGAAACTTGA	AGGAATTGAC	GGAAAGGGCAC	CACAAGAACG	CGTGGAGCAT	
1002 BP MARKER	mmmmmmmmmm	mmmmmmmm	-----m	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

	4201	4211	4221	4231	4241	4251	4261	4271	4281	4291	4300		
<i>G. bulloides</i> Ia	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACTCTGGTC	CGGACACAGT	GAGGATTGAC	AGACGGTTC	-----	TTATTGGTGG	ACTCT	-AAGA		
<i>G. sacculifer</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CAGACATATG	GAGGATTGAC	AGACAGTT	-----	-----	-----	-AAC		
<i>G. glutinata</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTATTA	-----	-TATAG	CATGTACTTC	GGTGGGTGTC		
<i>N. dutertrei</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAATA	-----	-TCTAA	A	-----		
<i>P. obliquiloculata</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAGTA	-----	-TCTAT	TAAAAAGA	-----		
<i>S. globigerus</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTAACT	-----	-TC	-T	CACATATA	-C	
<i>G. scitula</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAGTATA	-----	-TATTT	-CT	-T	AATAAGATAT	
<i>G. inflata</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAATA	-----	-TATTA	GCATAAAGAT	TCTGCTTTAG		
<i>N. incompta</i> I	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGAAGTA	-----	-TCGTC	-----	TCTTTAAGGA		
<i>G. uvula</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAATA	-----	-TATGT	GAC	-TCTTC	GGG	-GTTTG-
<i>N. pachyderma</i> I	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAATA	-----	-TCTCA	-----	TGTTTTCAT	TAACC	-----
<i>G. ungulata</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGCAAACT	-----	-ATAGA	CAGAATACAC	ATACGATTGT	-----	-----
<i>G. menardii</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGCAGGTC	-----	-CATAG	AACAGCTGTA	TGTATACAAT	-----	-----
<i>Allogromia</i> sp.	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTTTTT	-----	-ATAAG	ACTATATATA	TTTTTTTTTA	-----	-----
<i>A. triangularis</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACATACT	GAGGATTGAC	AGGTGCAA	-----	-AAATG	TAATTTATTA	TATTCATTTA	-----	-----
<i>A. rara</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACATACT	GAGGATTGAC	AGGTGCAA	-----	-AAATG	TATTTATWAT	TATAATTTTA	-----	-----
<i>E. scabrum</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAAACT	-----	-ATATA	T	-----	-----	-----
<i>N. venosus</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTATTA	-----	-TTGTA	TAACACTWTT	TAYGTGTTAT	-----	-----
<i>P. nipponica</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTATTA	-----	-TTACG	CATCAGTAAA	TTTTTTTTAT	-----	-----
<i>H. depressa</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTATTA	-----	-TTGTA	TGATCACCAT	TTTTATGTGT	-----	-----
<i>B. spathulata</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTAACA	-----	-TCGAA	TACACGCCCT	CTTGTGFACT	-----	-----
<i>A. pseudocassisi</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGATATAC	-----	-G	-CTC	ATTGCATGTG	CTTCGGCGCT	-----
<i>B. marginata</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAATA	-----	-TTAGC	ACTTAGCTTC	GGCGACGTGT	-----	-----
<i>E. williamsoni</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGTCCG	-----	-AGAGT	TTTT	-GCTTC	GGCAATGCT	-----
<i>Trochammina</i> sp.	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACACACT	GAGGATTGAC	AGGCAATA	-----	-TAAAT	GCTAATCATA	ATGCACATTT	-----	-----
<i>Peneroplis</i> sp.	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACATACT	GAGGATTGAC	AGGCGATA	-----	-GTAAT	ATTATATATA	AAT	-----	-----
<i>Parasorites</i> sp.	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	AGGCGATA	-----	-GTATA	TATATTTAT	ATATA	-----	-----
<i>S. orbiculus</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	AGGCGATA	-----	-GTATA	TAAAAATATA	TATTTTTATA	-----	-----
<i>M. vertebralis</i>	GTGGCTTAAT	TTGACTCAAC	CCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	AGGCGATA	-----	-GTATA	TAAATTTAT	ATA	-----	-----
<i>Broeckina</i> sp.	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	TGGCGATA	-----	-GTTTA	TTATTCCTTA	GTTAATAATA	-----	-----
<i>C. compressa</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	AGGCGATA	-----	-GTTTA	TTATACCTAG	TGTATAGTA	-----	-----
<i>A. hemprichii</i>	GTGGCTTAAT	TTGACTCAAC	CCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	AGGCGATA	-----	-ATCAA	CAAAATATC	ATATGTATGT	-----	-----
<i>Laevipeneroplis</i> sp.	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	AGGCGATA	-----	-GTATT	ATTATATATA	ATATATATA	-----	-----
<i>D. zhengae</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CGGACATATT	GAGGATTGAC	AGGCGATA	-----	-GGATT	ATTATATTTA	TAATAA	-----	-----
<i>B. schlumbergeri</i>	GTGGCTTAAT	TTGACTCAAC	GCGGAAAATC	TTACCAGGTC	CAGACATATT	GAGGATTGAC	AGGCGATA	-----	-ACATA	TAATATATAT	TAAATATATA	-----	-----
1002 BP MARKER	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm	mmmmmmmmmm

	4301	4311	4321	4331	4341	4351	4361	4371	4381	4391	4400		
<i>G. bulloides</i> Ia	CGTC	-----	-----	-----	-----	-----	-----	-ATG-	GTAAGTGA	A-GT	-----		
<i>G. sacculifer</i>	CAAAAACGCAG	C	-----	A	GCTAG	-TT	-----	-TAA	CAAAAATAAC	A-GC	-----		
<i>G. glutinata</i>	TA	-----	-----	-----	-----	-----	-----	-TTGT	TAAATATGCT	A-GT	-----		
<i>N. dutertrei</i>	--TCGTTTAT	AA	-----	TTCT	ATATATATAAT	ACG	-TATTTA	-----	-GTGT	TAAATATGCT	A-GT	-----	
<i>P. obliquiloculata</i>	--TTATATTT	TTAATATAAT	-----	TCTTTTTTTA	ATA	-----	-----	-----	-GTGT	TAAATATGCT	A-GT	-----	
<i>S. globigerus</i>	ATT	-----	-GTG-	-----	-----	-----	-----	-----	-GGTA	TAAATATGCT	A-GT	-----	
<i>G. scitula</i>	TCGT	-----	-----	-----	-----	-----	-----	-----	-TATT	CAAAATATGCT	A-GT	-----	
<i>G. inflata</i>	CGCTAA	-----	-----	-----	-----	-----	-----	-----	-TTGT	TAAATATGCT	A-GT	-----	
<i>N. incompta</i> I	CATGTCGTTT	TTAATGACA	-----	TCTTTTTA	GATGGATGAT	TC	-----	-----	-GTG	TAAATATGCT	A-GT	-----	
<i>G. uvula</i>	CA	-----	-----	-----	-----	-----	-----	-----	-TTGT	TAAATATGCT	A-GT	-----	
<i>N. pachyderma</i> I	---GTT-ATT	AACGTATCGG	TTATTTA	-----	-----	TTAA	-----	-CATCGA	-----	-GTGT	TAAATATGCT	A-GT	-----
<i>G. ungulata</i>	ATTCCCTAACT	GAATACGATT	AGTGTGTGGTC	TAAGGAT	-----	-----	-----	-TT	-ACA	CACAGGCTA	A	-----	
<i>G. menardii</i>	TGTTATTATT	TAAAT-AATA	CAATTAGGA	GCGCCGCTTC	TGCGTC	-GT	-----	-GTGT	AAACTGTTCT	A	-AGGCTTCA	TACACAGGCA	-----
<i>Allogromia</i> sp.	AAATTATATA	TAGCAATTCT	T	-----	-----	-----	-----	-ATAT	CAAAATATGCT	A-GT	-----	-----	
<i>A. triangularis</i>	TAACATATT	-----	-----	-----	-----	-----	-----	-ACATTAT	CAAAATATGCT	A-GT	-----	-----	
<i>A. rara</i>	TTATTATATT	TTATTAAT	-----	-----	-----	-----	-----	-ACGTTAT	CAAAATATGCT	A-GT	-----	-----	
<i>E. scabrum</i>	AC	-----	-----	-----	-----	-----	-----	-ATAT	TAAATATGCT	A-GT	-----	-----	
<i>N. venosus</i>	AC	-----	-----	-----	-----	-----	-----	-ATGT	TAAATATGCT	A-GT	-----	-----	
<i>P. nipponica</i>	GTGCGT	-----	-----	-----	-----	-----	-----	-ATGT	TAAATATGCT	A-GT	-----	-----	
<i>H. depressa</i>	GTATCATAC	-----	-----	-----	-----	-----	-----	-ATGT	TAAATATGCT	A-GT	-----	-----	
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-CGTA	TAAATATGCT	A-GT	-----	-----	
<i>A. pseudocassisi</i>	GCTTTG	-----	-----	-----	-----	-----	-----	-AGCT	GAAAGATGCT	A-GT	-----	-----	
<i>B. marginata</i>	T	-----	-----	-----	-----	-----	-----	-ATGT	TAAATATGCT	A-GT	-----	-----	
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-CTCT	TAAATATGCT	A-GT	-----	-----	
<i>Trochammina</i> sp.	GTGTATTATT	GATTTAGTAT	T	-----	-----	-----	-----	-ATGT	TGAATATGCT	A-GT	-----	-----	
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-ATTGCA	TAAAAATGAT	A-GT	-----	-----	
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-TGCA	TAAAAATGAT	A-GT	-----	-----	
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-TGCA	TAAAAATGAT	A-GT	-----	-----	
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-TGCA	TAAAAATGAT	A-GT	-----	-----	
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-AGCA	TAAAAATGAT	A-GT	-----	-----	
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-AGCA	TAAAAATGAT	A-GT	-----	-----	
<i>A. hemprichii</i>	T	-----	-----	-----	-----	-----	-----	-GGTA	TAAAAATGAT	A-GT	-----	-----	
<i>Laevipeneroplis</i> sp.	TAA	-----	-----	-----	-----	-----	-----	-TGCA	TAAAAATGAT	A-GT	-----	-----	
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-TTCA	TAAAAATGAT	A-GT	-----	-----	
<i>B. schlumbergeri</i>	TTATA	-----	-----	-----	-----	-----	-----	-TGTA	TAAACATGAT	A-GT	-----	-----	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

	4401	4411	4421	4431	4441	4451	4461	4471	4481	4491	4500	
<i>G. bulloides</i> Ia	---	TCTTTCA	TGATCTTGTG	GCAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GTAGTGATAC	GTCTGCCTAA	TCGCGTCC-	-----	GATA	ACCTATTCT
<i>G. sacculifer</i>	---	TCTTTCA	AGATTATGTG	GTAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GAAGTGATTC	GTTGCCCCAA	TCGCATTT-	-----	CAAA-	CAAGTAAACA
<i>G. glutinata</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGAT	AAGGATCTAT
<i>N. dutertrei</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGG-CCCAT
<i>P. obliquiloculata</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGG-CCCAT
<i>S. globigerus</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	TTGG-ATCTA
<i>G. scitula</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGG--TCCCA
<i>G. inflata</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGG-CCCAT
<i>N. incompta</i> I	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGG-CCCCAA
<i>G. uvula</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AAAT	TACTTATAAG
<i>N. pachyderma</i> I	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGG-CCCAT
<i>G. ungulata</i>	---	TCTCTCA	TGATTATGTT	GTAGGTGGTG	CATGGCCGTT	GTTAGTTCGT	GGAGTAACT	GTCTGCCTAA	TTGCGTTTC-	-----	GTAC	AAAGTACTCA
<i>G. menardii</i>	CTATCTCTCA	TGATTATGTT	GCAGGTGGTG	CATGGCCGTT	GTTAGTTCGT	GGAGTAACT	GTCTGCCTAA	TTGCGTTTC-	-----	GTAC	AA-GTACTCA	
<i>Allogromia</i> sp.	---	CCTTTCA	TGATTGCGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	TAATGAGTAT
<i>A. triangularis</i>	---	CCTTTCA	TGATTGCGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ATAA	TAGTCCCTTA
<i>A. rara</i>	---	CCTTTCA	TGATTGCGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ATAA	TAGTCCCAA
<i>E. scabrum</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGGCTTTTA
<i>N. venosus</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGGCTTATA
<i>P. nipponica</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AAGGTCTATA
<i>H. depressa</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGGCTTATA
<i>B. spathulata</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	TTGGTTFAT
<i>A. pseudocassisi</i>	---	TCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTATC-	-----	AATA	ATAGAGCCT
<i>B. marginata</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACCA	AGGGCTTATA
<i>E. williamsoni</i>	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AAGGCCTCAT
<i>Trochammina</i> sp.	---	CCTTTCA	TGATTATGTG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	ACTA	AGGGCTTATA
<i>Peneroplis</i> sp.	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGAT	ATATAAATAT
<i>Parasorites</i> sp.	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGTT	AAATAAAAATA
<i>S. orbiculus</i>	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGTA	ATAAAAATAT
<i>M. vertebralis</i>	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGTA	ATAAAAATAT
<i>Broeckina</i> sp.	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGTA	ATAAAAATAT
<i>C. compressa</i>	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGTT	AAATAAAAATA
<i>A. hemprichii</i>	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGTA	ATAAAAATAT
<i>Laevipeneroplis</i> sp.	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGTA	ATAAAAATAT
<i>D. zhengae</i>	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGAT	ATATAAATAT
<i>B. schlumbergeri</i>	---	CCTTTCA	TGATTATATG	ATAGGTGGTG	CATGGCCGTT	CTTAGTTCGT	GGAGTGATCT	GTCTGCCTAA	TTGCGTTTC-	-----	AGAT	TATATTAACA
1002 BP MARKER	---	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	---	mmmmmm	mmmmmm

	4501	4511	4521	4531	4541	4551	4561	4571	4581	4591	4600
<i>G. bulloides</i> Ia	CGACAATCCA	AAGATC-TTC	G-TGCAGTAT	CTATTGGTAC	GGTGCTCAGC	TTA-----	-GTAGGCTAG	AG-----	-----	-----	-----
<i>G. sacculifer</i>	CTCA---GA	ATGCTGGGCA	ATAGGACGTT	TAAAGTGGCT	CCTTACACCT	TACAAAGGAA	TGGCTGATGA	GAACAACCTC	GATCCGCTCA	GC-----	-----
<i>G. glutinata</i>	ATTCTTTACA	-----GTGTC	GTAGTGTTTT	AAATGACCCC	TCTTTGCAGA	G--TGTGTGT	CTTTTTT-T-G	CGTCCGCAC-	-----TTTACA-	-----	-----
<i>N. dutertrei</i>	AAATTT--CAA	GGTATGTTAG	CTAT-C-GTT	TCTCAATT--	GACCCCTTGT	CTTCGAT--	-----	-----	-----AA	GCGCGTGTCT	-----
<i>P. obliquiloculata</i>	AAATTT--CAA	GGTATGTTAG	cTAT-T-GTT	TCCCTAAT--	GACCCCTT--	ATT-TAAT--	-----	-----	-----AA	GCGCGTGTCT	-----
<i>S. globigerus</i>	TATACCGTGC	ATGTTGTGCG	GCATTT--	-GACCCC-A	T-T-G-ATTT	CAC-TAT-C	AAT-----GT	GCGCGTCTTT	CGCTAGCTC	CGCGTCTC	-----
<i>G. scitula</i>	TATAC--TAA	AGGCATGTGC	ACCTCTCTTT	AGGCTTAATT	AAGTCTTGGG	CCCCCTTTT	ATTAAGA--	-----	-----	-----	GCGAGTGTCT
<i>G. inflata</i>	AAATTT--CAA	GGTATGTTAG	CAAA-T-GCT	GCTCTATT--	GACCCCTAAT	AGGCTTAACT	GTCTTT--	-----	-----A	GCGCGTGTCT	-----
<i>N. incompta</i> I	AGTTAG--CAA	ATTTATCAATC	GTTACAGAGT	C-----	GACCCCTCAC	CTTTGAGT--	-----	-----	-----	-----	GCGCGTCTCA
<i>G. uvula</i>	GTAGCAATAC	GCGATGAAGC	TTTCAATAGT	CCTCACGGAT	TCATCTGAGT	CTCTCGTTC	GC-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	AAATTT--CAA	GGTATGTTAG	CTAT-C-GCC	GCTCTATG--	GACCCCTTA-	ACCTCGGTT--	-----	-----	-----AA	GCGCGTGTCT	-----
<i>G. ungulata</i>	CTCAATCCTA	GCCATAGTTC	AATTATATGT	GGCGGCATCT	AAACAAGTIT	CGTTTGTGCG	AACCTGTGTC	GCCTCTGAGT	TATTGTCAAT	TGG-----	-----
<i>G. menardii</i>	CTCAATCCTG	CACGTATCTC	AATTATATGT	GGCGGTG-T	CTGTCAATGA	AAGCAGCCTA	CGTTGTTTC	ATA---CGTG	CAGC-TG---	-----TG	-----
<i>Allogromia</i> sp.	ATATTGAATA	CTTTGTTTGC	ACATAAAGTT	GCTGCATTGT	TTTTTAACIT	TGCACCTTTA	TTGTTGACGC	GTATTCTTTT	AA-----	-----	-----
<i>A. triangularis</i>	TAGACTTTTC	TATTGATATC	AGCCTTAATA	CTTGAGAANT	ATCGTGTAT	ATATATATAT	ATATATGANT	TAATTTTTCGT	ATATTATAT	ATATAAATAT	-----
<i>A. rara</i>	TAGACTTTTC	TATTGATATC	AGCCTTAWYA	CTTTTGAATT	TATAATATAT	ATTTAATCAT	AAATTTTATTA	TTATGTGCCA	ATATTATTTT	ATTTTPTTTT	-----
<i>E. scabrum</i>	TAAATTTAAT	GCGCAGTGTG	TTGTTGTAT	TTTATACTCA	CACACACACG	CGCATGTAA-	-----	-----	-----	-----	-----
<i>N. venosus</i>	AAATTTACGTA	TGTTGCGGCA	CTTTGACCCC	TCTTAATTGA	GCGCGTGTCT	TTGATTGCTT	AGCTCATACA	A-----	-----	-----	-----
<i>P. nipponica</i>	ATTTAACGTA	TGTTGCTGGC	GCTTTGACCC	CTCAATTAAT	TGAGCGCGTG	TCTTAGTTAT	GCTTAGCTCA	TACAT--	-----	-----	-----
<i>H. depressa</i>	ATTTACGTAT	GTTGCGGCGC	TTTGACCCCT	CTTAATTGAG	CGCGTGTAT	TGTTTGCTTA	GCACATACAA	-----	-----	-----	-----
<i>B. spathulata</i>	ATTACATATA	TCTGTATATC	GCTTTGACCC	TGCTCTTCA	CTGAGATACA	GCGTGTCTCA	CAAGCATACA	CAATATATA-	-----	-----	-----
<i>A. pseudocassisi</i>	AGTATACGCG	TGGATTT---	-CGCGTGGT	AGTGACCCCC	TGTTTCAACG	CAGG-GTGT	GTCGCACACG	CGTCCCGCGC	A-----	-----	-----
<i>B. marginata</i>	ATTTTACGTTG	TGTTGCGGCA	CTTTGACCCC	TCTTTTTTTA	AAGAGCGCGT	GTCTTGGTTT	GCTTAGCTCG	CACAATTT-	-----	-----	-----
<i>E. williamsoni</i>	ATCTGTTTTG	TGCGTGTGTTG	ACCCCTCTTC	GGAGCGCGTG	TCTTACGCA	CAATTACTTT-	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	AAATACGTTG	GTTGCATGTA	CTTTGACCCC	T-AATCTGAA	ATATG--GTT	GGTGCCTGTC	TTAGTTTACT	TT-GCTCGCA	CAA-----	-----	-----
<i>Peneroplis</i> sp.	ATAATATATT	ATATAGTAAT	ATATAAATTTA	ATATTGTGCT	GCCTTATATA	TTATTTATAA	GGATTTTAAAG	TGAACATATT	TTATTATACA	TATATTATTA	-----
<i>Parasorites</i> sp.	TATAATATAT	ATAAATATTTA	GTTCTGCTTT	AAATGGAATTA	AAGTGAACAT	ATTAATATCAT	ATTAATTTAT--	-----	-----	-----	-----
<i>S. orbiculus</i>	ATGATATATT	ATAAATATTTA	GTTCTGCTTT	TATGGATTTA	AAGTGAACAT	ATTAATATATA	TTATTAT--	-----	-----	-----	-----
<i>M. vertebralis</i>	ATAATATATT	ATAAATATTTA	GTTCTGCTTT	GAATATTTAT	CAAGGATTTA	AAGTGAACAT	ATTAATATATA	TTATTAT--	-----	-----	-----
<i>Broeckina</i> sp.	ATAATATACA	TTAATATTTA	GTTCTGCTTT	AAATTTATTT	TGGAATTTAA	AGTGAACATA	TTATTGTTAT	TAATAT--	-----	-----	-----
<i>C. compressa</i>	TAATAATATA	CATTAATATT	TTAGTCTGTC	CAATATTTATA	TTGGATTTAA	AGTGAACATA	TTATTGTTAT	TAATAT--	-----	-----	-----
<i>A. hemprichii</i>	ATATAATGTA	TTAATATTTT	AGTCTGCGCA	TTTTTAATGG	ATTTAAAGTG	AACAATATTA	TACATATATA	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	ATAAATATTAC	ATTAATATTTT	AGTCTGCGCA	TTTTATGATT	AAAGTGAAC	TATTATGTTA	ATATAATTTAT	-----	-----	-----	-----
<i>D. zhengae</i>	ATAAATAGTAT	TATATATTTG	TACTAACATA	ATATTGTGCA	TCTTATATAT	ATTAATATAGG	ATTTTAAAGTG	AACATATTTAT	ATTAATGATT	ACATATATAT	-----
<i>B. schlumbergeri</i>	ATATTATATA	TTAATATATT	TTTATATAGT	TCTGCTCTTT	TTGTGAGATT	GTGAACATAT	ATTTTATTTAT	ATATATAAAA	T-----	-----	-----
1002 BP MARKER	---	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	mmmmmmmm	---	mmmmmm

	4601	4611	4621	4631	4641	4651	4661	4671	4681	4691	4700	
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	ATTT	GA--ACAGTA	CGCAACGGAC	GCGATCGTAA	---TCTCTTG	T--TAAGTGG	
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	GTTC	TA--TTGGAA	TGCAACGGAC	GTGATTGCAA	---GCTTTTG	TTTTGAGTT-	
<i>G. glutinata</i>	-----	-----	-----	-----	-----	TTAG	GT--CCTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTCA	
<i>N. dutertrei</i>	TTT-----	-AGAGTTT-	AA--ACATTG	CGCATGCTG-	-----	TTGG	GT--CCTGAA	AGCAACGAAC	GTGACCGCAA	---CGTCTTA	T--TGCCCTT-	
<i>P. obliquiloculata</i>	TT-----	ATGGGTTT-	AA--ACATTG	CGCATGCTG-	-----	TtGG	GT--CCTGAA	AGCAACGAaC	GTGACCGCAA	---CGTCTTG	T--TGCCCTT-	
<i>S. globigerus</i>	-----	-----	-----	-----	-----	TTAG	A--TCCTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCTTTTC	
<i>G. scitula</i>	AATGTCCTAT	TATCCTTTAT	ATAAGATAGT	GTCGTATGCT	G----	TTGG	GA--TCTGAA	AGCAACGAAC	GTGACCGCAA	---CGTCTTG	T--TGCCCTTA	
<i>G. inflata</i>	CTACG-----	AGTTCCTT-	AAAG-CACTG	CGCATGCTG-	-----	TTGG	GT--CCTGAA	AGCAACGAAC	GTGACCGCAA	---CGTCTTG	T--TGCTCTCT	
<i>N. incompta</i> I	ACTT-----	-GTAGTACAT	GGTG-TAAAT	GGATTTGTT-	-----	TTGG	GT--ACCCGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCTCTCT	
<i>G. uvula</i>	-----	-----	-----	-----	-----	TATC	CT--TTCGAA	TGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTTC	
<i>N. pachyderma</i> I	TTATTTTAA-	-AGAGTTT-	AAG-GCATTG	CGCATGCTG-	-----	TTGG	GC--TCTGAA	AGCAACGAAC	GTGACCGCAA	---CGTCTTG	T--TGCCCTTA	
<i>G. ungulata</i>	-----	-----	-----	-----	-----	AGAG	TA--CGTGAA	GGCAACGAAC	GTGACCGTAG	---TGTTTTA	G--TTTGAT	
<i>G. menardii</i>	TCGCCTCT-G	AGTTATTGTC	ATTTTGG----	-----	-----	AGAG	TA--CGTGAA	TGCAACGAAC	GTGACCGTAG	---TGTTTTA	GTTTGCAATT	
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	ATAT	AC--TCTGAA	GGCAACGAAC	GTGACCGCAA	---CATCTTG	T--TGCCATAA	
<i>A. triangularis</i>	GTGAATTTTT	TGAGCTAAGG	ATTTGATTCA	AAGTAAAAG-	-----	CTGG	--AGCCTGAA	GGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTCA	
<i>A. rara</i>	AAAGG-----	---TAAGG	ATTTGATTCA	AAGTAAAAC-	-----	GTGG	--AGCCTGAA	GGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTCA	
<i>E. scabrum</i>	-----	-----	-----	-----	-----	TTAA	GT--CCTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTTT	
<i>N. venosus</i>	-----	-----	-----	-----	-----	TTAG	GT--CCTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TACCTTT	
<i>P. nipponica</i>	-----	-----	-----	-----	-----	TTAG	AC--CTTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTTA	
<i>H. depressa</i>	-----	-----	-----	-----	-----	TTAG	GA--CCAGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCTCTCT	
<i>B. spathulata</i>	-----	-----	-----	-----	-----	TTAG	--ACCCTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCTTTTC	
<i>A. pseudocassisi</i>	-----	-----	-----	-----	-----	CTGG	TC--TCAGAT	AGCAACGAAC	GTGACCGTAG	---TCTATTG	T--TGCCAGTG	
<i>B. marginata</i>	-----	-----	-----	-----	-----	AGGT	-----	CCTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTTT
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	TGGC	G----	TCTGAA	AGCAACGAAC	GTGACCGTAG	---CCTCTTG	T--TGCCCTTC
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	TTAA	GT--CCTGAA	AGCAACGAAC	GTGACCGCAA	---CCTCTTG	T--TGCCCTTT	
<i>Peneroplis</i> sp.	TATATATTTA	TTATA-----	-----	-----	-----	TATT	--AAAATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATA	
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	ATAA	TA--AATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATA	
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	ATAA	TA--AATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATT	
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	ATAA	TA--AATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTACT	
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	ATAA	TA--AATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATA	
<i>C. compressa</i>	-----	-----	-----	-----	-----	ATAA	TA--AATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATA	
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	TTAA	TA--TATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATT	
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	ATAA	TA--AATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATA	
<i>D. zhengae</i>	ATATATTTATA	-----	-----	-----	-----	TATT	AA--AATGAA	TGCAACGAAC	GTGACCGTAA	---CCTTTTA	T--TGCTATA	
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	TTAT	TA--AATGAA	TGCAACGAAC	GTGACTATAA	---CCTTTTA	T--TGCTATA	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

	4701	4711	4721	4731	4741	4751	4761	4771	4781	4791	4800
<i>G. bulloides</i> Ia	CCATCCTGTG	AGC--CCCTG	ATTTAATGG-	-----CAGG	----CGGTA	TCATCTCAGC	CACATT----	TCCTCTGGTA	GTAGT-GGGC	CAG-----	
<i>G. sacculifer</i>	GCGG---TTT	TACTGAAAGA	CTCTACAATC	CGCAAACTTC	AATGATCTGA	AGTAG---AA	AACCTAC---	--ATGCT-AC	AGTGAGATAT	TGTG-----	
<i>G. glutinata</i>	TCTCCCAACA	TTCTTTTTC	CTTCGG--GT	TAAAGA-TA-	TTTC-ATTGA	GGCTTT---	-----	-----	-----	-----	
<i>N. dutertrei</i>	TATCTTGCTA	TATTTTAAAT	TAATTAATAA	-----	-----	-----	-----	TA	---GCT-A-	--ACAGAGGC	TA-AT----
<i>P. obliquiloculata</i>	TATCTTGCTA	TATCTATTAT	TTTT-AT-AA	TAGAA-----	-----	-----	-----	TA	---ACT-A-	--ACAGAGGC	TA-AT----
<i>S. globigerus</i>	AT-ACCCAAT	GC--GCG---	A-TATATA-	--CTCGTATA	--TTTCA--	-----CG	CATAAGAAAG	CATTAT--ACA	T-GTATTGCT	ACGGCA-TTA	
<i>G. scitula</i>	CCTATACTGG	TATTTACTT	-AATACCCTA	TAACTCAAGG	CTTTAC----	-----	-----	-----	-----	-----	
<i>G. inflata</i>	CTATAATACC	TTCTTATTTT	TAATAAGAG-	-----	-----	-----	-----	TA	---TTT-A-	--CCTGAGGC	TA-TT----
<i>N. incompta</i> I	CTTT-GACAG	TTATGGGTTA	TCCCAGTCAT	GTGTTTATAC	TTTTATGTTG	AAATACG---	-----TA	---CGA-C-	--ACAGAGAC	TAGAT-----	
<i>G. uvula</i>	GTTTAAACATC	CTGCAGCTCG	CTGTGGGTAC	TGAGGGCTTC	ACTCGGTGAC	TTTGGGCTGA	GCAATCGGCT	TCTTTTGATC	TG-----	-----	
<i>N. pachyderma</i> I	ATTAAGTCGT	GTTTAAATGG	TATTTGATTA	CA-----	-----	-----	-----	CC	---GCT-T-	--ACCAGGC	TA-----
<i>G. ungulata</i>	TTCAGACAAG	TGTTATTAAC	TGACACGGT	CTGAGTTTGT	TCATGTGTAC	GCGCGCAACA	CACAGGATGT	GTCCCTAACG	TCTTTTGACG	TGAGTGTACT	
<i>G. menardii</i>	CAAAACAAGT	ACATTCATTT	GACACGGTTT	GTATTCGGC	TACGTATCAT	CCCAGTGCAT	AACCATAAACC	A-----	-----	-----	
<i>Allogromia</i> sp.	TCTTATTTA-	-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>A. triangularis</i>	TTCTTAATAT	GAATGATATA	TTTATTTGTT	TTATTACATT	TAAATGTATT	ATTTATATGT	GTTATGTATT	TGATAGTATA	TGAATGTTAT	GTGACATGTG	
<i>A. rara</i>	TTCTTAATAT	GAATGATATA	ATTTAAAATG	ATTTTATATT	TGTTTTATTT	ATTCCTTATTT	ATATGTGTTA	TGTTTTGAT	TGTATGTGAA	TGTATGTTAC	
<i>E. scabrum</i>	ATATATATTT	TTATGCGCTC	GCGCGTAAAA	TAAAAAAAG	GCTTTTTT--	-----	-----	-----	-----	-----	
<i>N. venosus</i>	ATAACCAAC	ACGTGCAGTA	ATAATTCCTTA	TTATCTCGCT	TCGTGCAAAA	AGGCCTT---	-----	-----	-----	-----	
<i>P. nipponica</i>	ATACCAAATG	CGTCATACGA	TTTTTATCGC	AATGTCGCAC	AAAAAGGCCT	T-----	-----	-----	-----	-----	
<i>H. depressa</i>	ATACCAAACA	CATAGTTGTA	TCTTTATGAT	TACGTTTGTG	CAAAAGAGCC	TT-----	-----	-----	-----	-----	
<i>B. spathulata</i>	ATACCCAAT	ATATGTGTAT	ACTCGTATAC	TCTGTATATTA	AGAAAGCCTC	GTATATATCA	TAAATCGATT	TTCTCTCACG	AGTATTTTTG	TAAATATGGT	
<i>A. pseudocassisi</i>	AATATGTGTG	CCTTCGGGCG	-TACGACCCA	CTGCTTAGTA	TATGCACGCC	TGCGGAGCA	ATATAC---	-----	-----	-----	
<i>B. marginata</i>	ATACCAACG	TGCATATGTA	ATTTTTTTAA	ATTGCTTTGC	GCGCAAAAG	GCT---T-	-----	-----	-----	-----	
<i>E. williamsoni</i>	TCTTCTCCTC	GGAGAAATGCT	GTTTGTTTTT	CGAGGCAGTA	TATGGAGGCT	TTTTTACT--	-----	-----	-----	-----	
<i>Trochammina</i> sp.	AGATTTAACA	CTGTTTAGTC	ATATTTATTA	TGCATCTATC	AGT-----	-AAAAAAGG	CT-----	-----	-----	-----	
<i>Peneroplis</i> sp.	AATAATATAT	ATTATTTATA	TTATAATAG-	-----	-----	-----	-----	-----	-----	-----	
<i>Parasorites</i> sp.	ATTTTATAT	TTTAAATATA	TAAATATAGCA	TAA-----	-----	-----	-----	-----	-----	-----	
<i>S. orbiculus</i>	ATTATTTAAT	TATAGCATAA	-----	-----	-----	-----	-----	-----	-----	-----	
<i>M. vertebralis</i>	ATACATTTGA	GCATAA----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>Broeckina</i> sp.	AATAATATTT	AATTTATATAT	ATAGCATAA-	-----	-----	-----	-----	-----	-----	-----	
<i>C. compressa</i>	ATAAATATAG	CATAA-----	-----	-----	-----	-----	-----	-----	-----	-----	
<i>A. hemprichii</i>	ATAAATATAT	ATAGCATAA-	-----	-----	-----	-----	-----	-----	-----	-----	
<i>Laevipeneroplis</i> sp.	ATAAATTTTA	TAAATATATTA	ATATATAGCA	TAA-----	-----	-----	-----	-----	-----	-----	
<i>D. zhengae</i>	ACGTATAGTA	TAGCATAA--	-----	-----	-----	-----	-----	-----	-----	-----	
<i>B. schlumbergeri</i>	TATTTATTTA	AATAAATTA	TTACTTTGGT	ATTAATATAT	AAACAGCTTT	AA-----	-----	-----	-----	-----	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

	4801	4811	4821	4831	4841	4851	4861	4871	4881	4891	4900
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. globigerus</i>	CAT-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. ungulata</i>	AACATTTCCA	GTAACCA	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. triangularis</i>	TATAATATTA	TATATATATA	TATATATAT	ATGANATGAT	TTGTATTGTT	AGAATTTATT	TTAATGATAT	TAAATTATAT	TATATATATA	TGTGTATATG	-----
<i>A. rara</i>	ATGTATTTAA	TCTGATGCAT	TCATTGTGGT	TATATATATA	TATGTATTTA	TACATGAATT	TATTCGTGTA	TTTTATATAT	ATATGTGATT	ATAGTGAGTG	-----
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. spathulata</i>	AT-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. pseudocassis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	4901	4911	4921	4931	4941	4951	4961	4971	4981	4991	5000	
<i>G. bulloides</i> Ia	-----	-----	-----	-----	-----	-----	-----	-----	ATTTAA	AACTCGAGAA	ACATCT	-----
<i>G. sacculifer</i>	-----	-----	-----	-----	-----	-----	-----	-----	GATA	AACTTAAGCG	ACCGCT	-----
<i>G. glutinata</i>	-----	-----	-----	-----	-----	-----	-----	-----	CCAA	AACTAGAGGG	ACCGCT	-----
<i>N. dutertrei</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTAA	AATTAGACGG	ACCGCT	-----
<i>P. obliquiloculata</i>	-----	-----	-----	-----	-----	-----	-----	-----	CTAA	AACTAGACGG	ACCGCT	-----
<i>S. globigerus</i>	-----	-----	-----	-----	-----	-----	-----	-----	CACA	AACTAGAGGG	ACCGCT	-----
<i>G. scitula</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTATAA	AACTAGACGG	ACCGCT	-----
<i>G. inflata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTAA	AACTAGACGG	ACCGCT	-----
<i>N. incompta</i> I	-----	-----	-----	-----	-----	-----	-----	-----	ACCA	AACTAGGCGT	ACCGCT	-----
<i>G. uvula</i>	-----	-----	-----	-----	-----	-----	-----	-----	AGTA	AACTAGAGGG	ACCGCT	-----
<i>N. pachyderma</i> I	-----	-----	-----	-----	-----	-----	-----	-----	TTAA	AACTAGACGG	ACCGCT	-----
<i>G. ungulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTC	AACTATACAT	ACCACT	-----
<i>G. menardii</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTGC	AACTATACAT	ACCACT	-----
<i>Allogromia</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	TGCT	AACTAGATGG	ACCGCT	-----
<i>A. triangularis</i>	TGGTTTTTAT	ACGNGTTATA	TGATTTTNTT	TATGTATTTA	ATCATTITTC	ATAAAATTG	-----	-----	AGGNA	AACGAGAGGG	ACCGCT	-----
<i>A. rara</i>	TTTTGGTTTT	ATACGTGTGG	TGTATTTTAT	TTATATATTT	TAATCATTIT	ATATAAATTG	-----	-----	AGGCT	AACTAGAGGG	ACCGCT	-----
<i>E. scabrum</i>	-----	-----	-----	-----	-----	-----	-----	-----	ATA	AACTAGAGGG	ACCGCT	G--
<i>N. venosus</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTA	AACTAGAGGG	ACCGCT	G--
<i>P. nipponica</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTA	AACTAGAGGG	ACCGCT	G--
<i>H. depressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTA	AACTAGAGGG	ACCGCT	G--
<i>B. spathulata</i>	-----	-----	-----	-----	-----	-----	-----	-----	ATAA	AACTAGAGGG	ACCGCT	-----
<i>A. pseudocassis</i>	-----	-----	-----	-----	-----	-----	-----	-----	ATTA	AACTATAGAG	ACCGCT	-----
<i>B. marginata</i>	-----	-----	-----	-----	-----	-----	-----	-----	TTTA	AACTAGAGGG	ACCGCT	-----
<i>E. williamsoni</i>	-----	-----	-----	-----	-----	-----	-----	-----	CAAC	AACTAGAGGG	ACCGCT	-----
<i>Trochammina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	TTTA	AACTAGAGGG	ACCGCT	-----
<i>Peneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	CATAA	AATTTAAAGGG	ACCGCT	GTC
<i>Parasorites</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGG	ACCGCT	GTC
<i>S. orbiculus</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGG	ACCGCT	GTC
<i>M. vertebralis</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGA	ACCGCT	GTC
<i>Broeckina</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGA	ACCGCT	GTC
<i>C. compressa</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGA	ACCGCT	GTC
<i>A. hemprichii</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGA	ACCGCT	GTC
<i>Laevipeneroplis</i> sp.	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGA	ACCGCT	GTC
<i>D. zhengae</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGA	ACCGCT	GTC
<i>B. schlumbergeri</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	AATTTAAAGGA	ACCGCT	GTC
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	mmmmmmmmmm	mmmmmm	-----

	5001	5011	5021	5031	5041	5051	5061	5071	5081	5091	5100
<i>G. bulloides</i> Ia	-----	--GTGACTTT	CTTTCT--T	TA-CGCA--	-GAGGAAGGT	TATGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTCCAGA	GCTGCACAG	
<i>G. sacculifer</i>	-----	C-C AAC-ATGTG	TTTTTT--T	AA-AACT--	-GATGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTC	GATGTCCCTGG	GCTGCACAG	
<i>G. glutinata</i>	-----	-GTCAACTT	CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>N. dutertrei</i>	-----	-GTA-CTTT	TCT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>P. obliquiloculata</i>	-----	-GTTTCTTT	-CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>S. globigerus</i>	-----	-GTTACTTT	CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>G. scitula</i>	-----	-GTTTCTTT	TCTT-----	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>G. inflata</i>	-----	-GTTTCTTT	-CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>N. incompta</i> I	-----	-GTATCATT	TCTT-----	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>G. uvula</i>	-----	-GTCAACTT	CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>N. pachyderma</i> I	-----	-GTTTCTTT	TCT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>G. ungulata</i>	-----	-GCTTTTTT	TTCTC--T	A--ACCA--	-GGGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCCGG	GCTGCACAG	
<i>G. menardii</i>	-----	-GCTTTCTT	TTCT--C	TA-ACCA--	-GGGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCCGG	GCTGCACAG	
<i>Allogromia</i> sp.	-----	-G-GATCTT	TTT-----T	A--AAC--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCCGG	GCTGCACAG	
<i>A. triangularis</i>	-----	AGGCTAGCTT	TT-----T	AA-AAAC--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCCGG	GCTGCACAG	
<i>A. rara</i>	-----	AGGCTAGCTT	TT-----T	AA-AAAC--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCCGG	GCTGCACAG	
<i>E. scabrum</i>	-----	-TAACTTTT	T-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>N. venosus</i>	-----	-TTACTTTT	T-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>P. nipponica</i>	-----	-TTACTTTT	T-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>H. depressa</i>	-----	-TTACTTTT	T-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>B. spathulata</i>	-----	-GTTTCTTT	CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>A. pseudocassisi</i>	-----	-GTTTCTTT	CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>B. marginata</i>	-----	-GTTACTTT	CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>E. williamsoni</i>	-----	-GTTTCTTT	CT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>Trochammina</i> sp.	-----	-GTAATCTT	TT-----T	AA-ACCA--	-GAGGAAGGT	TGCGGCAATA	ACAGGTCTGT	GATGCCCTTA	GATGTTCCGG	GCTGCACAG	
<i>Peneroplis</i> sp.	TAAAT----	-TTTAGTG	T-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>Parasorites</i> sp.	TAAAT----	-TTTAGTG	T-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>S. orbiculus</i>	ATTAC----	-TAAATATG	TGT-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>M. vertebralis</i>	ATTAC----	-TAAATATG	GT-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>Broeckina</i> sp.	ATTAT----	-TATATGTG	T-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>C. compressa</i>	ATAAA----	-TTATATGT	GT-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>A. hemprichii</i>	ATTAT----	-TATATGTG	T-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>Laevipeneroplis</i> sp.	ATTAT----	-TATATGTG	T-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>D. zhengae</i>	TAAAT----	-TTTAGTG	T-----T	AA-AAATA--	-GAGTAAGAT	TACGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
<i>B. schlumbergeri</i>	TATTT----	-TAAGTGC-	-----T	TA-AAACA--	-GTGTAAAGT	TATGGCAATA	ACAGGTCTGT	GATGCCCTCA	GATGTTCTGG	GCTGCACAG	
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	5101	5111	5121	5131	5141	5151	5161	5171	5181	5191	5200
<i>G. bulloides</i> Ia	TACTACAGTG	A-TC-GA-CT	-CA-CTAAGT	GTCGT-GTT-	-TTCTCCA--	-----	AATA	ACGTATACAG	TGGACTTGGT	GTCCGGTGC-	TGGCCTCTGG
<i>G. sacculifer</i>	TGCTACAATG	G-CT-AG-CG	-CA-GTGAGC	ATATTTCA--	-----	-----	ACCG	-A-A-ACA-	TC-----G-G-	T-TG-----	-G-CTG--TT
<i>G. glutinata</i>	TGCTACAATG	A-TT-GT-TG	-CA-GTGAGC	ATCTCAATTT	TTT-----	-----	ACCT	TAAACCCGCA	CAGGTGAGTT	TACATAC--T	TGTATGTCA-
<i>N. dutertrei</i>	TGCTACAATG	A-TC-AG-TA	-CA-GTGAGC	ATCTC-AAT-	ATTA-----	-----	T-AC	A--CCGT--	ATTAAG-CGC	TTAGT-TGCG	ATTAT-TGGC
<i>P. obliquiloculata</i>	TGCTACAATG	A-TC-AG-TA	-CA-GTGAGC	ATCTC-AATT	TTTA-----	-----	T-AC	A--CCGT--	ATTAG-CGC	TTAGA-TGCG	ATTAT-TGGC
<i>S. globigerus</i>	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCATTTT	TT-ACTA-----	-----	CACC	-GCATGCGCG	AGTCTATTT-	-GTCFGC-TT	TGCTTCCGCT
<i>G. scitula</i>	TGCTACAATG	A-TC-AG-TA	-CA-GTGAGC	ATCTCAATTT	ATCTT-----	-----	TATA	T--AGAA--	TTTCTTTAT	ATAAGAACC	TATTTTCAAG
<i>G. inflata</i>	TGCTACAATG	A-TC-AG-TA	-CA-GTGAGC	ATCTC-AATT	TTA-----	-----	TAA	A--CCGT--	ATTAAG-CGC	TTGGG-TCGT	AATTG-TTAG
<i>N. incompta</i> I	TGCTACAATG	A-TC-AG-CA	-CA-GTAAGC	ATCTC-AATT	TTTA-----	-----	CAAC	A--CCGT--	CAACAC-ACG	TAGTAGCTG	CTTGATCTCT
<i>G. uvula</i>	TGCTACAATG	A-TC-GT-AG	-CA-GTGAGC	ATCTTATTTG	ATTTACT--	-----	TAA	ACCGCATACG	TGAGTACCAA	CTAGCTTAGC	AATAAGTCAA
<i>N. pachyderma</i> I	TGCTACAATG	A-TC-AG-TA	-CA-GTGAGC	ATCTC-AAT-	ATAA-----	-----	T-AC	A--CCGT--	CTTTAG-CGC	TTAGA-CGCG	GTTAT-TGGC
<i>G. ungulata</i>	TGCTACAATG	A-TG-AG-CA	-CA-GTGAGT	GCCTTTGTTG	TGTTCC--	-----	ATGG	TGGAATCAT	TTTCATTCAA	CGATTTATCGA	AAGAA-GGAA
<i>G. menardii</i>	TGCTACAATG	A-TG-AG-CA	-TA-GTGAGT	GCCTTTGTTG	TGTTCC--	-----	TTGA	ATGAATAAT	TTTCTTAAAG	GAATATCGAA	TAAAAGGAAC
<i>Allogromia</i> sp.	TGCTACAATG	A-TT-AT-TG	-CA-GTAAGC	ATCTATATAG	GAT-----	-----	TTTT	ATAATCCGCA	GGAAATTTAAA	TAAATATATA	ATTTTTTATA
<i>A. triangularis</i>	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCAACAT	TGTGA-----	-----	TTTT	AGTTTATAT	GATATATAT	TTATATATA	TAAATGATTT
<i>A. rara</i>	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCAACAT	TGTGA-----	-----	TTTT	AGATTATTA	AAATAATATA	TTATGAAAAG	TGATTTTTATT
<i>E. scabrum</i>	TGCTACAATG	A-TC-AT-TG	-CA-GTAAGC	ATCTCATTTT	AAT-----	-----	TTTT	CACCGCATTC	CGCCGCGCT	TGTATATAT	TTTTTATATA
<i>N. pachyderma</i> I	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCATTTT	TAC-----	-----	ACAC	CGCATGCGCG	AGTCTATTT-	TTCACCATCT	TGTGTGTTTT
<i>P. nipponica</i>	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCATTTT	ATT-----	-----	ACAC	ACCCGATGCG	CGAGTCCATT	TATTCACCTC	GGTGCTTTAA
<i>H. depressa</i>	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCATTTT	TAC-----	-----	ACAC	CGCATGCGCG	AGTCTATTT-	TTCACCTTTA	GTGTGCTTTA
<i>B. spathulata</i>	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCATTTT	TTTTA-----	-----	CTAC	ATCGCATGCG	CGAGACTACA	ATTTTACACT	CTCGAGTGTA
<i>A. pseudocassisi</i>	TGCTACAATG	A-TC-AT-TG	-CA-CTGTGC	ATCTAAACCA	ATG-----	-----	TGCG	TGGACGCGCG	ATGTTTGTGC	CTTCCGGTAC	AC-GC---A
<i>B. marginata</i>	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCATTTT	TTAC-----	-----	ACAC	CGCATACGCG	AGACCATTTA	CACCTTCCG	GGTGCTTTAA
<i>E. williamsoni</i>	TGATACATTT	A-TT-AC-TT	-CA-GTGAGT	ATCTACGTTT	TACT-----	-----	GCGT	GGCATTGCAA	TCCATATTT	TTCCGAAGTG	TGTTTT----
<i>Trochammina</i> sp.	TGCTACAATG	A-TT-AT-TG	-CA-GTGAGC	ATCTCATTTT	ATT-----	-----	ACAC	ACAGCCT-GC	GCGTGTCCAA	TTATATACAA	TTTTATGTTG
<i>Peneroplis</i> sp.	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATCTATATA	ATACA-----	-----	TAA	ATGTTTACAT	ATTAATAATA	-----	-----
<i>Parasorites</i> sp.	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATATATAATA	CAA-----	-----	TAT	ATATTTTAT	ATATATTTAT	AAA-----	-----
<i>S. orbiculus</i>	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATATATAACT	TAT-----	-----	TATA	TATAATATTA	TATTACA--	-----	-----
<i>M. vertebralis</i>	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATATATAATA	TAA-----	-----	TATA	TATTTATAT	AAATATATTT	ATAAAA--	-----
<i>Broeckina</i> sp.	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATATAAATA	ATA-----	-----	TTTT	AATATATTA	TAAATAATA	-----	-----
<i>C. compressa</i>	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATATATTACA	TTA-----	-----	ATAA	TTATATTAAT	ACA-----	-----	-----
<i>A. hemprichii</i>	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATATATAATA	AAT-----	-----	TTTT	ATATACATTT	AATGTATAAT	AATAATGTA	A-----
<i>Laevipeneroplis</i> sp.	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATATATTTGA	CAC-----	-----	TATA	TGATATATA	TATCATATA	ATAA--	-----
<i>D. zhengae</i>	TGCTACAATA	A-TT-AC-AT	-TA-ATAAGT	ATTTATATAT	ATA-----	-----	TTAA	TTCTAAATATA	TTAA-----	-----	-----
<i>B. schlumbergeri</i>	TGCTACAATG	A-TC-AC-AC	-TA-ATAAGT	GTCAAATTA	ACA-----	-----	AATA	GTATTTATTT	TAAATATAT	TATAATTTTT	ATAATATATA
1002 BP MARKER	mmmmmmmmmm	m-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	5201	5211	5221	5231	5241	5251	5261	5271	5281	5291	5300	
<i>G. bulloides</i> Ia	TCATGTGCTT	TGATTAC										
<i>G. sacculifer</i>	CTGATTGACC	CCTTCTGG-G	TCTCTCTGTA	ACA-CTACCG	ATGAT							
<i>G. glutinata</i>	CCTTACGCAG	CGGTAAA										
<i>N. dutertrei</i>	TCATTAT		TGGGT	CTTTTAATTG	TATT			TCTA	ATGCGCGCGG	TAAA		
<i>P. obliquiloculata</i>	TCTTTT		AGAGT	CTTTTAATTG	TATT			TCTA	ATGCGCGCGG	TAAA		
<i>S. globigerus</i>	A-GCTGCTC		AAATA	C-GATCTCTG	CGGCGGTAA	A						
<i>G. scitula</i>	CATCTGCTGT	TATTACAA						TGATCAG	TATGCGC	-G	GTAAAC	
<i>G. inflata</i>	GCCTTTTAGG	TTTTTCAAT	TGCGTTTC					TCCA	ATGCGCACGG	TAAA		
<i>N. incompta</i> I	CATTCAATGCA	TTCTGTGCTT	CGGTGCAGTG	TGCAATGTGA	GTTG			TCTA	ATGCGCGCGG	TTAT		
<i>G. uvula</i>	GTAGTTCTCT	ACGCAGCGGT	AACA									
<i>N. pachyderma</i> I	TTAC	TTT	TTATTAA		GT-GAGTTT	AAATTAATCG		ATGATT		TCTA	ATGTGCGCGG	TAAA
<i>G. ungulata</i>	CGTATGACGA	GAGTTTACG	AAAGCCTTTG	TAAATTTCT	TATTCCAAGTG	AACATGACTG	ATTGAATATC	TTTT		G	ATCTTTGAAT	GTTGTGGTA
<i>G. menardii</i>	GTTTGACGAG	AGTTACACGA	AAGCCTTTAT	TAAATTTCTT	ATFCCAGTGA	ACTTGAACGA	TTCGATCTTT	GATGA				
<i>Allogromia</i> sp.	TATTTATCCT	GTTTA										
<i>A. triangularis</i>	ATTTATGTTA	TTTTATATTA	TATTAATTTG	TTATTCTAAA	AAATTTAATCA	CATA						
<i>A. rara</i>	TATATTTTGA	TTTTTATATT	ATTTATAATT	TAAAAATTTA	ATCACATA							
<i>E. scabrum</i>	CATTTGCTGT	GCTGCAAAA	CGGTAAAAA									
<i>N. venosus</i>	AAATATGTAT	CTCTGCGCGC	GGTAAA									
<i>P. nipponica</i>	ATGTGTATCT	CTGCGCGCGG	TAAA									
<i>H. depressa</i>	AAATATGTATC	CTGCGCGCGC	GTA									
<i>B. spathulata</i>	TAACTGCATC	TCTGCGCGC	ATTA									
<i>A. pseudocassisi</i>	T-TGCTGAGC	GACCAACGCC	A									
<i>B. marginata</i>	ATGTGTTTTC	TCTGCGAGCG	GTA									
<i>E. williamsoni</i>		TGTTTTCCG	CCTCA									
<i>Trochammina</i> sp.	ATTAATAATT	G	TGT-G	C		ATTGCGC	GCTGTA					
<i>Peneroplis</i> sp.												
<i>Parasorites</i> sp.												
<i>S. orbiculus</i>												
<i>M. vertebralis</i>												
<i>Broeckina</i> sp.												
<i>C. compressa</i>												
<i>A. hemprichii</i>												
<i>Laevipeneroplis</i> sp.												
<i>D. zhengae</i>												
<i>B. schlumbergeri</i>	TTATTTATAA	ATCTATATAA	AA									
1002 BP MARKER												
	5301	5311	5321	5331	5341	5351	5361	5371	5381	5391	5400	
<i>G. bulloides</i> Ia				TGTCAC	TTAAACACTG		GT-CGT-TA	GACTCGTGCA	A-GCAATTCA	-G-AGC-AAC	GAATTG---C	
<i>G. sacculifer</i>				CCCTCCT	CTGAAAAGAG		A-GGG-TA	AGCCGTTCTGA	AACTCTGGTA	AC-GATT--C	CCCAGTATTA	
<i>G. glutinata</i>				GCTTCT	TCGAGAGCAA		GT-GGG-TA	ATCAATTAGA	AGTAACGATT	TCCCAAATTA	GCACACTTAT	
<i>N. dutertrei</i>				GCTTCT	TCGAGAGTAA		GT-GGG-TA	ATCCATTGGA	AGTAATGATT	TCTC-TTTTT	ATA	
<i>P. obliquiloculata</i>				GCTTCT	TCGAGAGTAA		GT-GGG-TA	ATCCATTGGA	AGTAATGATT	TCTC-TTT-A	TTATA	
<i>S. globigerus</i>				GCTTCT	TCGAAAAGTAA		GC-GGG-TA	ATCAATTAGA	AGTAATGATT	TCTC-ATTTT	--CTCT	
<i>G. scitula</i>				GCTTCT	TCGAGAGTAA		AT-GGG-TA	ATCCATTGGA	AGTAATGATT	TCTCTATTTT	ATAATAAAAT	
<i>G. inflata</i>				GCTTCT	TCGAGAGTAA		GT-GGG-TA	ATCCATTGGA	AGTAATGATT	TCTCTATTTT	TATAACA	
<i>N. incompta</i> I				GCTTCT	TCGAAAAGTAA		A	CGTCGGG-TA	AACATTCTCT	AACTGCTGACC	TATTTTCTG	
<i>G. uvula</i>				GCTTCT	TCGAGAGCAA		GT-GGG-TA	ATCAATTAGA	AGTAACGATT	TCTTCGCATT	AGCACACTTA	
<i>N. pachyderma</i> I				GCTTCT	TCGAGAGTAA		GC-GGG-TA	ATCCATTGGA	AGTAATGATT	TCTC-TATAT	CTAGT	
<i>G. ungulata</i>	CACATTTTGC	GACATTAC									TCCCTATTGA	-TCTCTGGAT
<i>G. menardii</i>				TTGAGTC	TTTGATAGTT		GT-TGG-TA	CACATCTTGT	GACATTGCTT	CC-CTAT--	-CGCTATCCT	
<i>Allogromia</i> sp.				ACCAACT	TTGAAAAGTAA		GT-TGG-TA	ATCAATTCGA	AGTAATGATT	TCCTTTT		
<i>A. triangularis</i>				GCTTCT	TCGCGAGTCA		GT-AGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTTTTTT	TATTTAAATG	
<i>A. rara</i>				GCTTCT	TCGCGAGTCA		GT-AGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTTTTTT	TATTTAAATA	
<i>E. scabrum</i>				GCTTCT	TCGAAAAGTAA		GT-GGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTAAAT	TTTTTTAATA	
<i>N. venosus</i>				GCTTCT	TCGAAAAGTAA		GT-GGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTATATA	GCACACATAT	
<i>P. nipponica</i>				GCTTCT	TCGAAAAGTAA		GT-GGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTTTTTT	ATTCGCACAC	
<i>H. depressa</i>				GCTTCT	TCGAAAAGTAA		GT-GGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTATATA	GCACACATAT	
<i>B. spathulata</i>				GCTTCT	TCGAAAAGTAA		GC-GGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTTTTTT	CCTGCACAAAT	
<i>A. pseudocassisi</i>				ACCTACT	TCGAAAAGTAA	AAATTTCTCT	GT-GGG-TA	ATCCATTAGA	AGTAATGACT	CGCATAGACC	ATGGCACACC	
<i>B. marginata</i>				GCTTCT	TCGAAAAGTAA		GT-GGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTTTTTT	AGCACACATA	
<i>E. williamsoni</i>				ACCTGCT	TCGAAAAGTAA		GC-GGG-TA	ACCAATTAGA	AGTAGTGATT	TCCCTTTTTT	TAAAGCACACT	
<i>Trochammina</i> sp.				GCTTCT	TCGAAAAGTAA		GT-GGG-TA	ATCAATTAGA	AGTAATGATT	TCCCTTATTA	ATTTATTTAGT	
<i>Peneroplis</i> sp.				ACCTATT	TCGAAAAGTAA		AT-GGG-TA	ATCATTAAAA	AACTCGTGATT	ATTTTATATA	TATGGTATAT	
<i>Parasorites</i> sp.				ACCTATT	TCGAAAAGTAA		AT-TGG-TA	ATCATTAAAA	AACTCGTGATT	AAATAAAAT	ATATACATAA	
<i>S. orbiculus</i>				ACCTATT	TCGAAAAGTAA		AT-CGG-TA	ATCATTAAAA	AACTCGTGATT	AATTTA		
<i>M. vertebralis</i>				ACCTATT	TCGAAAAGTAA		AT-CGG-TA	ATCATTAAAA	AACTCGTGATT	AATA		
<i>Broeckina</i> sp.				ACCTATT	TCGAAAAGTAA		AT-GGG-TA	ATCATTAAAA	AACTCGTGATT	TTTTAA		
<i>C. compressa</i>				ACCTATT	TCGAAAAGTAA		AT-GGG-TA	ATCATTAAAA	AACTCGTGATT	AT		
<i>A. hemprichii</i>				ACCTATT	TCGAAAAGTAA		AT-CGG-TA	ATCATTAAAA	AACTCGTAATA	AAATAAATA	TATATACATA	
<i>Laevipeneroplis</i> sp.				ACCTATT	TCGAAAAGTAA		AT-GGG-TA	ATCATTAAAA	AACTCGTGATT	AAATAAATA	CTACATTAAT	
<i>D. zhengae</i>				ACCTATT	TCGAAAAGTAA		AT-GGG-TA	ATCATTAAAA	AACTCGTGATT	ACTTATATA	CTACATTTTC	
<i>B. schlumbergeri</i>				ACCTATT	TCGAAAAGTAA		AT-GGG-TA	ATCATCTAAA	AACTCGTGACA	AATTATATTT	ATACATCATT	
1002 BP MARKER												

	5401	5411	5421	5431	5441	5451	5461	5471	5481	5491	5500
<i>G. bulloides</i> Ia	AAAC-----	ACTCTTTG--	-----GG	C--ACTGTTT	-----ACT-	---CCC----	--GTTTACAG	AGGAGAGATA	GAC-----		
<i>G. sacculifer</i>	--AGCAAAC	TAAACCATAG	TGGTGTCA-A	A-CGGGTCCG	CTTCCATCGG	AAAAGATTCC	TCCGGAAAAA	GGC--TTATG	CAGGCATT-T	C-ACG----	
<i>G. glutinata</i>	TTACGGCGTT	TGTGCCCGGG	TTTCACTTGT	TGGAACTTTT	GTGCGTGCAG	ATGTTTTTPT	T-CCG----				
<i>N. dutertrei</i>	GCACACCTAT	ATACGG--CA	TTTCATTCCC	GGACGACT-A	GTTTCGCTTT	TTTT-GTGG	AAT-GTAATG	--TATTCTTT	ATCCG----		
<i>P. obliquiloculata</i>	GCACACCTAT	ATACGG--CA	TTTCATTCCC	GGATGACT-A	GTTTCGCTTT	TTTT-GTGG	AAT-GTAATG	--TATTCTTT	ATCCG----		
<i>S. globigerus</i>	-----GC	ACACATATAT	CGCG--CATA	T-CTACCCGG	CATGCCT-TG	TTGCATGTC	TTT-GTGCGT	AGATATGTAC	CCT-TTTTCC		
<i>G. scitula</i>	GCACGGTTTA	TATACGGCAT	TCATCCCAG	GGCGCTTTG	TAGTGTCTAT	GTGCGAATGT	AATGTTATGG	CTTTGTTAT	AACGGCTATT	CCTTAATAGT	
<i>G. inflata</i>	GCACACCAAT	ATACGG--CA	TTTCATTCCC	AGACGGCTA	GTTCCGACTT	T---GTGG	AAT-GTAATG	--TATT-CTT	ATCCG----		
<i>N. incompta</i> I	GCACACCTAT	AATATGA-CA	TTTCATTCCC	GGAGGACT-A	GTTCCCTCTT	T---GTGG	AGT-GTAATG	--CAAACATG	AATAGCGACT	GTCGCTGTTT	
<i>G. uvula</i>	ATATAAGCG	TTGACGCTCA	TGATTCGGCT	CTCACGAGTT	GTTTCATTGC	ACGTTGTGAT	GTGCGGGTTC	GATTCCTGCT	TTAC-----		
<i>N. pachyderma</i> I	GCACAACTAT	GTACGG--CA	TTTCATTCCC	AGACGGCT-A	GTTCCGCTTT	TT-A-GTGG	AAT-GTAGTG	-TTATTCAAA	CG-----		
<i>G. ungulata</i>	TGTAGTCCGT	TTGTAATGCT	GATACCTTAA	ACGCCATCC	TTTTTGGTAA	GCGATCAGAT	ATCG-----				
<i>G. menardii</i>	ATGCTGTAGT	GGGTTTGCAA	TGCTGATGTT	TAAACGCCCC	CTCATGTCTC	GAGCGTTCCT	CGATCCATTG	TGCAAGTCAG	GCGATCAGGT	TTCC-----	
<i>Allogromia</i> sp.	---GCACAA	AAT---AATA	TTTTATTGCA	TTAATCTTAG	TCFTTTTAGA	TTTTGTATTA	AAGTTAAAA-				
<i>A. triangularis</i>	TATTTCAAA-	TTTTTTTTTT	TAAATGTGTT	ATTTAAAAAT	GATGCACACT	TTTATGTCTA	TGTTTCTATT	--AACATATT	AGGATATTAA	TACTATTTAT	
<i>A. rara</i>	TAAATAAAA	TTTTTTTTTT	ATTTGTGTTT	ATTTAAAAAT	GATGCACACT	TTTATGTCTA	TGTTTCTATT	TTTACATATT	AGGATATTAA	TACTATTTAT	
<i>E. scabrum</i>	GCACACATAT	ATACGGCATC	TTTACCCTGT	AGTTTTTTTT	TTTAAAAAT	TTTTTTGTGC	GATTCGATCG	AAATCCCGTA-			
<i>N. venosus</i>	ATACGGCATC	TTTACCCTGT	CTGCCCTGTT	GCAGGTTTCT	TGTGTGATTT	GATGTTTTTT	CCGT-----				
<i>P. nipponica</i>	ATATATACGG	CAACTTTACC	CGGCCGTGCT	TGTGCAAGTG	TCCTGTGTG	TATTGTTGTT	TTTTTCCGT-				
<i>H. depressa</i>	ATACGGCATC	TTTACCCTGT	TTACCTTGTG	GTAAGTTTCT	TGTGTGATTT	GATGTTTTTT	CCGT-----				
<i>B. spathulata</i>	TATATATGGC	GTATATACCC	GGCGTACCTT	GTGTGACGTT	CTTTGTGCTT	ATGTATGACT	TTTTTTCCA-				
<i>A. pseudocassis</i>	AAATGTACCG	GCAGG-TCTA	CCCGCTCGC	CTTTGTGTTA	GTGCAAGTGG	TAGCTTGTG	TTTTCGTACG	G-----			
<i>B. marginata</i>	TATACGGCGT	CTATGCCCGG	GTTACCTTGT	TGTAGCTTTT	GTGCGTATAG	ATGTTTTTTC	CGT-----				
<i>E. williamsoni</i>	AAATATGGGG	ATCATCACCC	GGCATGCCCT	GTTGTATGTT	TTGTGTGTGG	TGTTTTGCTTT	TCC-----				
<i>Trochammina</i> sp.	---GCACAA	TAT---ATAC	GGCATCTTTA	CCCGG--CTT	AAGCTTGCC	TAAG---TTT	TGTGCGTAT-	-----CGAT	GTTTTTCCG		
<i>Peneroplis</i> sp.	TAAATATGTA	TAATACTATA	CATTTTATAG	TACTATTA--							
<i>Parasorites</i> sp.	T-----										
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>	AT-----										
<i>Laevipeneroplis</i> sp.	AAATACATAAT	ATTATATATT	ATATATAATA	TATGT-----							
<i>D. zhengae</i>	TT-----										
<i>B. schlumbergeri</i>	ATATAAATAT	TATTATATTA	ATAGAAATAT	TATATTTCAAT	TATCTTTAT	TAATTAATAA	TATT-----				
1002 BP MARKER											

	5501	5511	5521	5531	5541	5551	5561	5571	5581	5591	5600
<i>G. bulloides</i> Ia			-TAA-CC	ACCTATTCTC	GACTCGC-						
<i>G. sacculifer</i>											
<i>G. glutinata</i>											
<i>N. dutertrei</i>											
<i>P. obliquiloculata</i>											
<i>S. globigerus</i>	G-----										
<i>G. scitula</i>	TTTGTATTTA	ACGGCTATAG	TTATCG--								
<i>G. inflata</i>											
<i>N. incompta</i> I	ACTCA-----										
<i>G. uvula</i>											
<i>N. pachyderma</i> I											
<i>G. ungulata</i>											
<i>G. menardii</i>											
<i>Allogromia</i> sp.											
<i>A. triangularis</i>	TAAATAGTTTA	ATTTCTAATT	TGTATTATAGT	TACTGCATG	TGCT-----	CTCATATGTTT	TATTAAATGT	TCAATTCGTG	--GTGGGGAC	AGTAGTTTGT	
<i>A. rara</i>	TAAATAGTTTA	ATTTTAAATT	TGTGATAGT	TACTGCATG	TGCT-----	CTCATATA	TTTTAAATGT	TCAATTCGTG	--GTGGGGAC	AGACCATTTG	
<i>E. scabrum</i>											
<i>N. venosus</i>											
<i>P. nipponica</i>											
<i>H. depressa</i>											
<i>B. spathulata</i>											
<i>A. pseudocassis</i>											
<i>B. marginata</i>											
<i>E. williamsoni</i>											
<i>Trochammina</i> sp.											
<i>Peneroplis</i> sp.											
<i>Parasorites</i> sp.											
<i>S. orbiculus</i>											
<i>M. vertebralis</i>											
<i>Broeckina</i> sp.											
<i>C. compressa</i>											
<i>A. hemprichii</i>											
<i>Laevipeneroplis</i> sp.											
<i>D. zhengae</i>											
<i>B. schlumbergeri</i>											
1002 BP MARKER											

	5601	5611	5621	5631	5641	5651	5661	5671	5681	5691	5700
<i>G. bulloides</i> Ia	--TAAC	TTACT	CTAAC	ATGCT	CAGGT	GTTCA	CCACT	TTAGT	CCCTT	ACA	HCGCC
<i>G. sacculifer</i>	--TAAC	AGACT	TCAAC	ATGCT	CGGGT	GTTAG	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>G. glutinata</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>N. dutertrei</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>P. obliquiloculata</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>S. globigerus</i>	TTCA	AAAT	TTAA	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>G. scitula</i>	--TAAC	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>G. inflata</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>N. incompta</i> I	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>G. uvula</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>N. pachyderma</i> I	--TAAC	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>G. ungulata</i>	--AAAT	GGTCT	TAACT	ATGCT	CGAGT	GTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>G. menardii</i>	--AAAT	GGTCT	TCAAC	ATGCT	CGGAT	GTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>Allogromia</i> sp.	--TAAT	GGTCT	TCAAC	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>A. triangularis</i>	--TAAT	GGTCT	TCAAC	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>A. rara</i>	--TAAT	GGTCT	TCAAC	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>E. scabrum</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>N. venosus</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>P. nipponica</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>H. depressa</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>B. spathulata</i>	TTTAA	TTTAA	TTTAA	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>A. pseudocassisi</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>B. marginata</i>	--TAAT	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>E. williamsoni</i>	--TAAT	GGTCT	TAACT	ATGCT	CGAGT	GTTCA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>Trochammina</i> sp.	--TAAG	GGTCT	TAACT	ATGCT	CGGGT	GTTCA	CCACC	TACGT	CCCTT	ACA	HCGCC
<i>Peneroplis</i> sp.	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>Parasorites</i> sp.	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>S. orbiculus</i>	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>M. vertebralis</i>	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>Broeckina</i> sp.	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>C. compressa</i>	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>A. hemprichii</i>	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>Laevipeneroplis</i> sp.	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>D. zhengae</i>	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
<i>B. schlumbergeri</i>	--TAAT	ACACT	TAACT	ATGCT	CTCTT	GTTTAA	CCA	TACGT	CCCTT	ACA	HCGCC
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	5701	5711	5721	5731	5741	5751	5761	5771	5781	5791	5800
<i>G. bulloides</i> Ia	TCGCT	CAA-	ACTTT	AGT-	CCTAT	TTTCA	-----	-----	-----	-----	-----
<i>G. sacculifer</i>	TCGCT	CAAT	GCACT	TTT-AA	CCGA-	-----	-----	-----	-----	-----	-----
<i>G. glutinata</i>	TCGCT	CGA-	TCTCT	TTT-G	ATC-	GTCGC	ACAT-	-----	-----	-----	-----
<i>N. dutertrei</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TATTAT	AT-	-----	-----
<i>P. obliquiloculata</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TaTTAT	TAA	AT-	-----	-----
<i>S. globigerus</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>G. scitula</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>G. inflata</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>N. incompta</i> I	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>G. uvula</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>N. pachyderma</i> I	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>G. ungulata</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>G. menardii</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>Allogromia</i> sp.	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>A. triangularis</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>A. rara</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>E. scabrum</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>P. nipponica</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>H. depressa</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>B. spathulata</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>A. pseudocassisi</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>B. marginata</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>E. williamsoni</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>Trochammina</i> sp.	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>Peneroplis</i> sp.	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>Parasorites</i> sp.	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>S. orbiculus</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>M. vertebralis</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>Broeckina</i> sp.	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>C. compressa</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>A. hemprichii</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>Laevipeneroplis</i> sp.	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>D. zhengae</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
<i>B. schlumbergeri</i>	TCGCT	CGA-	TCTCT	TCT-	CTGG-	GTTAA	TCTGT	TAA	AT-	-----	-----
1002 BP MARKER	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	5801	5811	5821	5831	5841	5851
<i>G. bulloides</i> Ia	-----	---TACAGGG	-AACCCAT-T	CGAC-CAACG	GAGTTTAA-A	GGAAAAGAA
<i>G. sacculifer</i>	-----	---ATTGG	AAATTTAG-T	CAAA-CAGTG	CTGTTTAA-A	GGAAAAGAA
<i>G. glutinata</i>	-----	---CTATGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>N. dutertrei</i>	-----	-A T-ACCTATGG	AAACTTAT-A	CGAA-CAATG	TGGTTTAA-A	GGAAAAGAA
<i>P. obliquiloculata</i>	-----	-A T-ACCTATGG	AAACTTAT-A	CGAA-CAATG	TGGTTTAA-A	GGAAAAGAA
<i>S. globigerus</i>	-----	---TAGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>G. scitula</i>	-----	---TATGG	AAACTTAG-T	CGAA-CAAGG	TGGTCTAA-A	GGAAAAGAA
<i>G. inflata</i>	-----	T-ACCTATGG	AAACCAAT-A	CGAA-CAATG	TGGTCTAA-A	GGAAAAGAA
<i>N. incompta</i> I	-----	-G TAACCTATGG	AAATTCAT-G	CGAA-TGAAC	TGGTTTAA-A	GGAAAAGAA
<i>G. uvula</i>	-----	---CTATGTG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>N. pachyderma</i> I	-----	-G T-ACCTATGG	AAACTTAT-G	CGAA-CAAAG	TGGTCTAA-A	GGAAAAGAA
<i>G. ungulata</i>	-----	---TAGTCTA	AAACGT-CTA	CGAA-CAATG	TGG-CTAAGA	GGAAAAGAA
<i>G. menardii</i>	-----	---TATCT	AAACCTTCTA	CGAA-CAATG	TGG-CTAAGA	GGAAAAGAA
<i>Allogromia</i> sp.	-----	---TATAA	GAATGTAC-G	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>A. triangularis</i>	CAGGC-----	---TATGG	AAATTCAT-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>A. rara</i>	TATTCAGGC-----	---TATGG	AAACTTAT-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>E. scabrum</i>	-----	---AATGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>N. venosus</i>	-----	---TATGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>P. nipponica</i>	-----	---TATGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>H. depressa</i>	-----	---TATGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>B. spathulata</i>	-----	---TTAGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>A. pseudocassis</i>	-----	---AGTGG	AAATATAT-A	TGAA-TAGCC	TGATCTAA-A	GGAAAAGAA
<i>B. marginata</i>	-----	---TATGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>Trochammina</i> sp.	-----	---TATGG	AAACTTAA-A	CGAA-CAGTG	TGGTCTAA-A	GGAAAAGAA
<i>Peneroplis</i> sp.	-----	---TATTG	AAACTTAT-A	TACA-TAATG	TGATTTAA-A	GGAAAAGAA
<i>Parasorites</i> sp.	-----	---TATAG	AAACTTAT-A	TACA-TAATG	TGATTTAA-A	GGAAAAGAA
<i>S. orbiculus</i>	-----	---ATAAA	AAACTTAT-A	TACA-TAATG	TGATTTAA-A	GGAAAAGAA
<i>M. vertebralis</i>	-----	---TATAC	AAACTTAT-A	TACA-TAATG	TGATTTAA-A	GGAAAAGAA
<i>Broeckina</i> sp.	-----	---ATGAC	AAACTTAT-A	TACA-TAATA	TGATTTAA-A	GGAAAAGAA
<i>C. compressa</i>	-----	---ATTAA	AAACTTAT-A	TACA-TAATG	TGATTTAA-A	GGAAAAGAA
<i>A. hemprichii</i>	-----	---TTAGG	AAACTTAT-A	TACA-TAATA	TGATTTAA-A	GGAAAAGAA
<i>Laevipeneroplis</i> sp.	-----	---ATAGG	AAACTTAT-A	TACA-TAATG	TGATTTAA-A	GGAAAAGAA
<i>D. zhengae</i>	-----	---TATTG	AAACTTAC-A	TACA-TAATG	TGATTTAA-A	GGAAAAGAA
<i>B. schlumbergeri</i>	-----	---TCAGG	AAACTTAT-A	CGCA-TAATG	TGATTTAA-A	GGAAAAGAA
1002 BP MARKER	-----	-----	-----	-----m	mmmmmmmm - m	mmmmmmmmmm