NOTE: These primers are biased toward dinoflagellate/*Symbiodinium*. See cited references for details on the PCR cocktail that was utilized. LAST UPDATED: Aug 30th, 2009 by SRS.

Nuclear ribosomal genes and spacers				
Molecule (Size in bp)	**Primer name**	**Primer Sequence (in 5´-3´ direction)**	**Reference**	**PCR profile**
18S-rDNA (~1800) **(THIS PRIMER COMBO WILL AMPLIFY *SYMBIODINIUM* 18S-rDNA IN THE PRESENCE OF HOST DNA)**	SS5 SS3Z	GGTTGATCCTGCCAGTAGTCATATGCTTG AGCACTGCGTCAGTCCGAATAATTCACCGG	Rowan & Powers (1991)	94°C 2:30 min 56°C 1 min 72°C 2 min 94°C 1 min 56°C 1 min 72°C 2:30 min 29X to step 4 72°C 8 min Hold 4°C
18S-rDNA (~1800) **(THIS PRIMER COMBO WILL AMPLIFY EUKARYOTIC 18S-rDNA IN GENERAL)**	SS5 SS3	GGTTGATCCTGCCAGTAGTCATATGCTTG GATCCTTCCGCAGGTTCACCTACGGAAACC	Rowan & Powers (1991)	94°C 2:30 min 56°C 1 min 72°C 2 min 94°C 1 min 56°C 1 min 72°C 2:30 min 29X to step 4 72°C 8 min Hold 4°C

18S-rDNA (~750)	SS5 SSE21.6	GGTTGATCCTGCCAGTAGTCATATGCTTG CTAGAAACCAACAAAATAGAACTGAGGTC	Santos et al. (2003)	94°C 2:30 min 56°C 1 min 72°C 2 min 94°C 1 min 56°C 1 min 72°C 2:30 min 29X to step 4 72°C 8 min Hold 4°C
28S-rDNA (~900)	ls1.5 ls1.3	CGCTGAAATTAAGCATATAAGTAAG AACGATTTGCACGTCAGTATC	Wilcox (1998)	94°C 2:00 min 94°C 15 sec 52°C 20 sec 72°C 45 sec 29X to step 2 72°C 7 min Hold 4°C
28S-rDNA (~600)	24D15F1 24D23R1	TTAAGCATATAAGTAAGCGGAGGA CTCCTTGGTCCGTGTTTCAAGGACG	Baker et al. (1997)	Contact A.C. Baker for details
18S-ITS-28S (~1600)	S_DINO L_O	CGCTCCTACCGATTGAGTGA GCTATCCTGAG(AG)GAAACTTCG	Pochon et al. (2001)	94°C 30 sec 50°C 30 sec 72°C 120 sec 39X to step 1 72°C 5 min Hold 4°C

ITS (~750)	ZITSUP ZITSDN	CCGGTGAATTATTCGGACTGACGCAGTGCT CTGTTTACCTTTTCCTCCGC	Santos et al. (2001)	94°C 2 min 94°C 30 sec 60°C 30 sec 72°C 45 sec 35X to step 2 72°C 5 min Hold 4°C
ITS1 (~330)	symITSFP symITSRP	CTCAGCTCTGGACGTTGYGTT GCTGCGTTCTTCATCGATGC	van Oppen et al. (2001)	94°C 3 min 95°C 30 sec 59°C 30 sec 72°C 30 sec 29X to step 2 72°C 5 min Hold 4°C
ITS2 (~350)	ITSintfor2 ITS2CLAMP (note: clamp has been removed from the primer seq)	GAATTGCAGAACTCCGTG GGGATCCATATGCTTAAGTTCAGCGGGT	LaJeunesse & Trench (2000)	See reference for ramping profile

Chloroplast genes				
Molecule (Size in bp)	**Primer name**	**Primer Sequence (in 5´-3´ direction)**	**Reference**	**PCR profile**
23S-rDNA (~700)	23S1 23S2	GGCTGTAACTATAACGGTCC CCATCGTATTGAACCCAGC	Zhang et al. (2000)	95°C 1 min 95°C 45 sec 55°C 45 sec 72°C 60 sec 34X to step 2 72°C 7 min Hold 4°C
23S-rDNA Domain V hypervariable region (~175)	23SHYPERUP 23SHYPERDN	TCAGTACAAATAATATGCTG TTATCGCCCCAATTAAACAGT	Santos et al. (2003) Marine Biotechnology	94°C 1 min 94°C 30 sec 50°C 30 sec 72°C 30 sec 34X to step 2 72°C 5 min Hold 4°C
*psb*A (~900)	PSBA2 PSBA3	YTITAYATHGGITGGTTYGG TCRTGCATIACYTCCATICC	Takashita & Uchida (1999)	94°C 60 sec 50°C 60 sec 72°C 120 sec 29X to step 1 72°C 10 min Hold 4°C

*psb*A non-coding region (~880-1200)	7.4-Forw 7.8-Rev	GCATGAAAGAAATGCACACAACTTCCC GGTTCTCTTATTCCATCAATATCTACTG	Moore et al. (2003); see paper for other primers that can be used to amplify the entire *psb*A mini-circle	94°C 2 min 94°C 10 sec 55°C 30 sec 72°C 120 sec 29X to step 2 72°C 10 min Hold 4°C

Mitochondrial genes				
Molecule (Size in bp)	**Primer name**	**Primer Sequence (in 5´-3´ direction)**	**Reference**	**PCR profile**
COI (~600) Takabayashi et al. (2004); **NOTE**: USE BOTH COI PRIMER SETS TO OBTAIN 1000 bp	Forward Reverse	TTATTTTGRTTTTTTGGTCATCCTGARGT TCTGGGTAGTCTGGTATTCKTCKTGGCA	Norman & Gray (1997)	94°C 4 min 94°C 30 sec 55°C 60 sec 72°C 60 sec 29X to step 2 72°C 7 min Hold 4°C
COI (~600) Takabayashi et al. (2004); **NOTE**: USE BOTH COI PRIMER SETS TO OBTAIN 1000 bp	Forward Reverse	AAAAATTGTAATCATAAACGCTTAGG TGTTGAGCCACCTATAGTAAACATTA	Dr. S. Lin (University of Connecticut)	94°C 4 min 94°C 30 sec 55°C 60 sec 72°C 60 sec 29X to step 2 72°C 7 min Hold 4°C
COB (~900)	Dinocob1F Dinocob1R	ATGAAATCTCATTTACAWWCATATCCTTGT CC TCTCTTGAGGKAATTGWKMACCTATCCA	Zhang et al. (2005)	94°C 1 min 94°C 20 sec 55°C 30 sec 72°C 40 sec 39X to step 2 Hold 4°C

***Symbiodinium* Clade B microsatellite loci**				
Molecule (Size in bp)	**Primer name**	**Primer Sequence (in 5´-3´ direction)**	**Reference**	**PCR profile**
GA2.8: ITS type B1 microsatellite – *P. kuna* (~155)	GA2.8UP GA2.8DN	TCGACTCTTGGCGCAAAATG GGGATGAAACACTGGGATAATCCAG	Santos et al. (2001)	94°C 3 min 94°C 45 sec 60°C 45 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
GA4.84: ITS type B1 microsatellite – *P. kuna* (~170)	GA4.84UP GA4.84DN	GATCAAACTCTTGTGATGAC GTCAGATTGTCATCAAAGACTGC	Santos et al. (2001)	94°C 3 min 94°C 45 sec 60°C 45 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
CA6.10: ITS type B1 microsatellite – *P. kuna* (~119)	CA6.10UP CA6.10DN	GGTCCAAGCTGGAAGCAGC CCTACAATAGACAGCAACCTAGGAC	Santos et al. (2001)	94°C 3 min 94°C 45 sec 60°C 45 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C

CA1´.7: ITS type B1 microsatellite – *P. kuna* (~345)	CA1´.7UP CA1´.7DN	GCAGTGTGTTACCTTAAAGTGCGG GTTTAGTTGAGCAACTTCCGAG	Santos & Coffroth (2003)	94°C 3 min 94°C 30 sec 60°C 30 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
CA4.86: ITS type B1 microsatellite – *P. elisabethae* (~193)	CA4.86R CA4.86L	GCCTTCAATGCAATCACCTT GGAATTGGCCATCCCTCTAT	Santos & Coffroth (2003)	94°C 3 min 94°C 30 sec 50°C 30 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
CA6.38: ITS type B1 microsatellite – *P. elisabethae* (~112)	CA6.38R CA6.38L	CAAAGAATATTCGGGGGTCA AGTTGATACGCCGGATGTGT	Santos & Coffroth (2003)	94°C 3 min 94°C 30 sec 50°C 30 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C

***Symbiodinium* Clade C microsatellite loci**				
Molecule (Size in bp)	**Primer name**	**Primer Sequence (in 5´-3´ direction)**	**Reference**	**PCR profile**
PV1: ITS type C2 microsatellite – *P. verrucosa* (~159)	PV1F PV1R	TGATTCAGGAAGATGGTAAGTCC ATGCACATAGGCTTCTTGTCC	Magalon et al. (2004)	94°C 10 min 94°C 45 sec 54°C 45 sec 72°C 45 sec 29X to step 2 72°C 8 min Hold 4°C
PV4: ITS type C2 microsatellite – *P. verrucosa* (~122)	PV4F PV4R	CGTGTTTGAAAAGGGTTCTTC CAAACCCAGCCAAAAGTGAC	Magalon et al. (2004)	94°C 10 min 94°C 45 sec 54°C 45 sec 72°C 45 sec 29X to step 2 72°C 8 min Hold 4°C
PV1bis: ITS type C2 microsatellite – *P. verrucosa* (~159) **NOTE**: redesigned from PV1 owing to null alleles	PV1bis-for PV1bis-rev	GGACCAAGCTGAATAATTTG ACCAAGGTACTGTAGTTGTTATG	Magalon et al. (2005); Magalon pers. comm.	94°C 10 min 94°C 45 sec 54°C 45 sec 72°C 45 sec 29X to step 2 72°C 8 min Hold 4°C