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DNA barcoding-based molecular profiling of *Bougainvillea*, *Dianthus*, and *Plumeria* using *matK* locus

Nischay Patel¹, Wesley Ochieng' Otieno², Nilesh D. Gawande³, Sourabh Parmar³, Karthik H. N³, Subramanian Sankaranarayanan³

¹Department of Biological Sciences and Bioengineering, Indian Institute of Technology Kanpur, Kanpur, India.

²Department of Biotechnology, Bharathiar University, Coimbatore, India.

³Department of Biological Sciences and Engineering, Indian Institute of Technology Gandhinagar, Palaj, India.

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SUPPLEMENTARY MATERIAL

Supplementary Figure 1. A) Multiple sequence alignment for *Bougainvillea*, B) *Dianthus*, and C) *Plumeria* species *matK* gene sequences used for DNA barcoding.

A	B. glabra 'R0'	ATCGTAAATGGAAATAGTCTTATTACTTCAAAAAATCCATTTCTATTTTTTCAAAAAGGA	60
	B. spectabilis 'W'	ATCGTAAATGGAAATAGTCTTATTACTTCAAAAAATCCATTTCTATTTTTTCAAAAAGGA	60
	B. spectabilis 'P'	-----AATAGTCTTATTACTTCGAAAAAATCCATTTCTATTTTTTCAAAAAGGA	49

	B. glabra 'R0'	ATCAAAGATTATTCGTGTTCTTATATAATTTCTATGTATGTGAATACGAATCCATTTTTG	120
	B. spectabilis 'W'	ATCAAAGATTATTCGTGTTCTTATATAATTTCTATGTATGTGAATACGAATCCATTTTTG	120
	B. spectabilis 'P'	ATCAAAGATTATTCGTGTTCTTATATAATTTCTATGTATGTGAATACGAATCCATTTTTG	109

	B. glabra 'R0'	TTTTCTCCGCAACCGATCTTCTTATTACGATCAACATCTTTTGGAGCCCTCTTGAAC	180
	B. spectabilis 'W'	TTTTCTCCGCAACCGATCTTCTTATTACGATCAACATCTTTTGGAGCCCTCTTGAAC	180
	B. spectabilis 'P'	TTTTCTCCGCAACCGATCTTCTTATTACGATCAACATCTTTTGGAGCCCTCTTGAAC	169

	B. glabra 'R0'	GAACTATATCCACGGAAGGCTAGAAATATCTAGTAAAAGTTTTAACTAAAAATTTTCGGG	240
	B. spectabilis 'W'	GAACTATTTCCGCGAAAGCTAGAAATATCTAGTAAAAGTTTTAACTAAAAATTTTCGGG	240
	B. spectabilis 'P'	GAACTATTTCCACGGAAGGCTAGAAATATCTAGTAAAAGTTTTAACTAAAAATTTTCGGG	229
		*** **	
	B. glabra 'R0'	GTATCTTATGGCTTTTCAAAGACCCATTCGCGCATTATGTTAGATATCAAGGAAAATCAG	300
	B. spectabilis 'W'	TTATCTTATGGCTTTTCAAAGACCCATTCACGCATTATGTTAGATATCAAGGAAAATCAA	300
	B. spectabilis 'P'	TTATCTTATGGCTTTTCAAAGACCCATTCGCGCATTATGTTAGATATCAAGGAAAATCAA	289

	B. glabra 'R0'	TTCTTTCTTCAAAGGTACATCTTTCTGATGCATAAATGGAAATATTACCTATCAATT	360
	B. spectabilis 'W'	TTCTTTCTTCAAAGGTACATCTTTCTGATGCATAAATGGAAATATTACCTATCAATT	360
	B. spectabilis 'P'	TTCTTTCTTCAAAGGTACATCTTTCTGATGCATAAATGGAAATATTACCTATCAATT	349

	B. glabra 'R0'	TTTGGCAATGTCGTTTTTCCGTGTGGTCTCAATCAAGAAGAATCTATATCAATCGATTAT	420
	B. spectabilis 'W'	TTTGGCAATGTCATTTTTCCGTGTGGTCTCAATCAAGAAGAATCTATATCAATCGATTAT	420
	B. spectabilis 'P'	TTTGGCAATGTCATTTTTCCGTGTGGTCTCAATCAAGAAGAATCTATATCAATCGATTAT	409

	B. glabra 'R0'	CAAAGCATTCCCTCGACTTTATGGGTTTTCTTTACGTTGCGACTCAATTCTTCAGTGG	480
	B. spectabilis 'W'	CAAAGCATTCCCTCGACTTTATGGGTTTTCTTTCAAGTGTGCGACTCAATTCTTCAGTGG	480
	B. spectabilis 'P'	CAAAGCATTCCCTCGACTTTATGGGTTTTCTTTCAAGTGTGCGACTCAATTCTTCAGTGG	469

	B. glabra 'R0'	TACGTAGTCAGATGTTAGAAAATTCCTTTCTAATAGAAAATACTAGTAAGAAGTTCGATA	540
	B. spectabilis 'W'	TACGTAGTCAAAATGTTAGAAAATTCATTTCTAATAGAAAATACTATTAAGAAGTTCGATA	540
	B. spectabilis 'P'	TACGTAGTCAGATGTTAGAAAATTCATTTCTAATAGAAAATACTATTAAGAAGTTCGATA	529

	B. glabra 'R0'	CCATAGTTCCAATTATTCCTCTGGTTGGATCGTTGGCTAAAGCAAATTTTGTAAAGTAT	600
	B. spectabilis 'W'	CCATAGTTCTATTATTCCTCTGGTTGGATCGTTGGCTAAAGCAAATTTTGTAAAGTAT	600
	B. spectabilis 'P'	CCATAGTTCCAATTATTCCTCTGGTTGGATCGTTGGCTAAAGCAAATTTTGTAAAGTAT	589

	B. glabra 'R0'	TAGGCCATCCCATTAGTAAGTCGG	624
	B. spectabilis 'W'	TAGGCCATCCCATTAGTAAGTCGG	624
	B. spectabilis 'P'	TAGGCCATCCCATTAGTAAGTCGG	613
		** *****	

B	D.chinensis 'WP'	-----TCCATTTCTATTT	13
	D.chinensis 'PDP'	TTCTTTATGAGTATCGTAATTGGAATAGTCTTTTTATTTTAAAAAATCCATTTCTATTT	60
	D.chinensis 'W'	TTCTTTATGAGTATCGTAATTGGAATAGTCTTTTTATTTTAAAAAATCCATTTCTATTT	60

	D.chinensis 'WP'	TTCTAAAAAGAAATCAAAGATTATTATTGTTCTTATATAATTTCCATATATGTGAATACG	73
	D.chinensis 'PDP'	TTCTAAAAAGAAATCAAAGATTATTATTGTTCTTATATAATTTCCATATATGTGAATACG	120
	D.chinensis 'W'	TTCTAAAAAGAAATCAAAGATTATTATTGTTCTTATATAATTTCCATATATGTGAATACG	120

	D.chinensis 'WP'	AATCCATTTTCGTTTTCTTTGCAACCAATCCTCTCATTTACGATCAACATCTTATAGAG	133
	D.chinensis 'PDP'	AATCCATTTTCGTTTTCTTTGCAACCAATCCTCTCATTTACGATCAACATCTTATAGAG	180
	D.chinensis 'W'	AATCCATTTTCGTTTTCTTTGCAACCAATCCTCTCATTTACGATCAACATCTTATAGAG	180

	D.chinensis 'WP'	TGTTTCTTGAAAGCATTTATTTCTACGTAAAAATTTGACTATTTAGTCAAACCTTTTTATA	193
	D.chinensis 'PDP'	TGTTTCTTGAAAGCATTTATTTCTACGTAAAAATTTGACTATTTAGTCAAACCTTTTTATA	240
	D.chinensis 'W'	TGTTTCTTGAAAGCATTTATTTCTACGTAAAAATTTGACTATTTAGTCAAACCTTTTTATA	240
		***** *****	
	D.chinensis 'WP'	AGGATTTTGGCGTTATCTTATGGCTTTTCAAGGACCCCTCCCGCACTCTGCTAGGTATA	253
	D.chinensis 'PDP'	AGGATTTTGGCGTTATCTTATGGCTTTTCAAGGACCCCTCCCGCACTCTGCTAGGTATA	300
	D.chinensis 'W'	AGGATTTTGGCGTTATCTTATGGCTTTTCAAGGACCCCTCCCGCACTCTGCTAGGTATA	300

	D.chinensis 'WP'	AAGTAAAATTCCTTTATGCATCAAAAGGGATGCCCTTTTTGATGCATAAATGGAAATTTT	313
	D.chinensis 'PDP'	AAGTAAAATTCCTTTATGCATCAAAAGGGATGCCCTTTTTGATGCATAAATGGAAATTTT	360
	D.chinensis 'W'	AAGTAAAATTCCTTTATGCATCAAAAGGGATGCCCTTTTTGATGCATAAATGGAAATTTT	360

	D.chinensis 'WP'	ACTTTATAAATTTTTGGCGATGTCAATTTTTCGGTGTGGTCTCAACCAAGAAGAATCTATA	373
	D.chinensis 'PDP'	ACTTTATAAATTTTTGGCAATGTCAATTTTTCGGTGTGGTCTCAACCAAGAAGAATCTATA	420
	D.chinensis 'W'	ACTTTATAAATTTTTGGCAATGTCAATTTTTCGGTGTGGTCTCAACCAAGAAGAATCTATA	420
		***** *****	
	D.chinensis 'WP'	TTAATAGATTAACAACCCATTTTTTTGACTTTTATGGGTTTTTGTAAAGTGTACAACTCA	433
	D.chinensis 'PDP'	TTAATAGATTAACAACCCATTTTTTTGACTTTTATGGGTTTTTGTAAAGTGTACAACTCA	480
	D.chinensis 'W'	TTAATAGATTAACAACCCATTTTTTTGACTTTTATGGGTTTTTGTAAAGTGTACAACTCA	480
		***** *****	
	D.chinensis 'WP'	CTTCTCCATGGTACGGAGTCAAATGTTAGAAAATGCATTTACAATAGATAATACGAATA	493
	D.chinensis 'PDP'	CTTCTCCATGGGGCGGAGTCAAATGTTAGAAAATGCATTTAAAATAGATAATACGATTA	540
	D.chinensis 'W'	CTTCTCCATGGTACGGAGTCAAATGTTAGAAAATGCATTTAGAATAGATAATACGATTA	540
		***** ***** **	
	D.chinensis 'WP'	AAAAGTTGTATCCGAAAATTCGAATAGTCTCTGATTGGATCGTTGGGTGT	545
	D.chinensis 'PDP'	AAAAATTGTATCCGAAAATTCGAATAGTCTCTGATTGGATCGTTGGGTGT	592
	D.chinensis 'W'	AGAAGTTGTATCCGAAAATTCGAATAGTCTCTGATTGGATCGTTGGGTGT	592
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C	P. obtusa	GAATTCTTCCAAAAATTCCGAACCTAATCTTTTCAAAAAAACCGTACAGTACTTTTGTG	60
	P. rubra. cv. 'Acutifolia'	-----AGATTCCGAACCTAATCTTTTCAAAAAAACCGTACAGTACTTTTGTG	48
	P. rubra	-----AAATTCCGAACCTAATCTTTTCAAAAAAACCGTACAGTACTTTTGTG	48
		* ****	
	P. obtusa	TTTCCGAGCTAAAGTTTTAGCACAAGAAAGTCGAAGTATATACTTTAGTCGATACAACT	120
	P. rubra. cv. 'Acutifolia'	TTTCCGAGATAAAGTTTTAGCACAAGAAAGTCGAAGTATATACTTTAGTCGATACAACT	108
	P. rubra	TTTCCGAGATAAAGTTTTAGCACAAGAAAGTCGAAGTATATACTTTAGTCGATACAACT	108

	P. obtusa	CTTTTTTTTCGAGGATCCACTATGATAATGAGAAAGGTTTCTGCATATACGCCAAATCT	180
	P. rubra. cv. 'Acutifolia'	CTTTTTTTTCGAGGATCCACTATGATAATGAGAAAGGTTTCTGCATATACGCCAAATCT	168
	P. rubra	CTTTTTTTTCGAGGATCCACTATGATAATGAGAAAGGTTTCTGCATATACGCCAAATCT	168

	P. obtusa	GTCCATAATATCAGAATCTGATAAATCAGTCCGAGCCGGCTTACTAATGGGATGTCCTAA	240
	P. rubra. cv. 'Acutifolia'	GTCCATAATATCAGAATCTGATAAATCAGTCCGAGCCGGCTTACTAATGGGATGTCCTAA	228
	P. rubra	GTCCATAATATCAGAATCTGATAAATCAGTCCGAGCCGGCTTACTAATGGGATGTCCTAA	228

	P. obtusa	TAGGTTACAAAATTTTTCTTTAGCTAATGATCCAACCAGAGGAATAATTGGAACAAGGGT	300
	P. rubra. cv. 'Acutifolia'	TAGGTTACAAAATTTTTCTTTAGCTAATGATCCAACCAGAGGAATAATTGGAACAAGGGT	288
	P. rubra	TAGGTTACAAAATTTTTGCTTTAGCTAATGATCCAACCAGAGGAATAATTGGAACAAGGGT	288

	P. obtusa	ATCGAATTTCTTAATAGGATTCTTGATTAGAAATGCATTTTCTAGCATTTGACTCCGTAC	360
	P. rubra. cv. 'Acutifolia'	ATCGAATTTCTTAATAGGATTCTTGATTAGAAATGCATTTTCTAGCATTTGACTCCGTAT	348
	P. rubra	ATCGAATTTCTTAATAGGATTCTTGATTAGAAATGCATTTTCTAGCATTTGACTCCGTAT	348

	P. obtusa	CATTGAAGGGTTTAGTCGCACAATTGAAAGATAACCCATAAAGTCAAGGGAAATGATTGGA	420
	P. rubra. cv. 'Acutifolia'	CATTGAAGGGTTTAGTCGCACAATTGAAAGATAACCCATAAAGTCAAGGGAAATGATTGGA	408
	P. rubra	CATTGAAGGGTTTAGTCGCACAATTGAAAGATAACCCATAAAGTCAAGGGAAATGATTGGA	408

	P. obtusa	TAATTGCTTTATATAGACCCTTTCCGAGTGAACCACAAGTCAAAAATACATTGCCGAAA	480
	P. rubra. cv. 'Acutifolia'	TAATTGCTTTATATAGACCCTTTCCGAGTGAACCACAAGTCAAAAATACATTGCCGAAA	468
	P. rubra	TAATTGCTTTATATAGACCCTTTCCGAGTGAACCACAAGTCAAAAATACATTGCCGAAA	468

	P. obtusa	ATTGACAAGGTAAGATTTCCATTTATTCATCAAAGGAGCCGTCCCTTTGAAACCGAAG	540
	P. rubra. cv. 'Acutifolia'	ATTGACAAGGTAAGATTTCCATTTATTCATCAAAGGAGCCGTCCCTTTGAAACCGAAG	528
	P. rubra	ATTCACAAAGTAAGATTTCCATTTATTCATCAAAGGAGCCGTCCCTTTGAAACCGAAG	528
		*** **	
	P. obtusa	CATAGCTGTTCCCTGGAAGGAAA	562
	P. rubra. cv. 'Acutifolia'	CATAGCTGTTCCCTGGAAGGAAA	550
	P. rubra	CATACCTGTTCCCTGGAAGGAAA	550
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Supplementary Table 1. Morphological characteristics of species used in this study

Species Name	Genus	Flower/Petal Characteristics
<i>B. glabra</i> 'RO'	<i>Bougainvillea</i>	Reddish orange bracts
<i>B. spectabilis</i> 'W'	<i>Bougainvillea</i>	White bracts
<i>B. spectabilis</i> 'P'	<i>Bougainvillea</i>	Pinkish Purple bracts
<i>D. chinensis</i> 'WP'	<i>Dianthus</i>	Off-white serrated petals with dark pinkish red around the centre
<i>D. chinensis</i> 'PDP'	<i>Dianthus</i>	Pink serrated petals with a dark pink shade around the centre
<i>D. chinensis</i> 'W'	<i>Dianthus</i>	Pure white serrated petals
<i>P. rubra</i> cv <i>Acutifolia</i>	<i>Plumeria</i>	Twisted, overlapping white petals with a yellow-spread center.
<i>P. rubra</i>	<i>Plumeria</i>	Narrow, pointed, and elliptical non-overlapping reddish-purple petals with a yellow-spread center.
<i>P. obtusa</i>	<i>Plumeria</i>	Open, oval white petals with yellow at the center.

Supplementary Table 2. Sequences for the *matK* gene used for the generation of DNA barcodes in this study are given below.

>*B. glabra* 'RO'

ATCGTAATTGGAATAGTCTTATTACTTCAAAAAATTCCATTTCTATTTTTTCAAAA
 AGGAATCAAAGATTATTCGTGTTCTTATATAATTTCTATGTATGTGAATACGAAT
 CCATTTTTGTTTTTCTCCGCAACCGATCTTCTTATTTACGATCAACATCTTTTGGAG
 CCCTTCTTGAACGAACCTATATCCACGGAAGGCTAGAATATCTAGTAAAAGTTTT
 AACTAAAAATTTTCGGGGTATCTTATGGCTTTTCAAAGACCCATTTCGCGCATTAT
 GTTAGATATCAAGGAAAATCAGTTCTTTCTTCAAAGGTACATCTTTTCTGATGC
 ATAAATGGAAATATTACCTTATCAATTTTTGGCAATGTCGTTTTTCCGTGTGGTCT
 CAATCAAGAAGAATCTATATCAATCGATTATCAAAGCATTCCCTCGACTTTATGG
 GTTTTCTTTCACGTGTGCGACTCAATTCTTCAGTGGTACGTAGTCAGATGTTAGAA
 AATTCCTTTCTAATAGAAAATACTAGTAAGAAGTTCGATACCATAGTTCCAATTA

TTCCTCTGGTTGGATCGTTGGCTAAAGCAAATTTTGTAACGTATTAGGCCATCC
CATTAGTAAGTCGG

>*B. spectabilis* 'W'

ATCGTAAGTGGAAATAGTCTTATTACTTCAAAAAATTCCATTTCTATTTTTTCAAAA
AGGAATCAAAGATTATTCTTGTTCTTATATAATTTCTATGTATGTGAATACGAATC
CATTTTTGTTTTTCTCCGCAACCGATCTTCTTATTTACGATCAACATCTTTTGGAGC
CCTTCTGAACGAATCTATTTCCGCGGAAAGCTAGAATATCTAGTAAAAGTTTTA
ACTAAAAATTTTCGGGTTATCTTATGGCTTTTCAAAGACCCATTCACGCATTATGT
TAGATATCAAGGAAAATCAATTCTTTCTTCAAAGGTACATCTTTTCTGATGCAT
AAATGGAAATATTACCTTATCAATTTTTGGCAATGTCATTTTTCCGTGTGGTCTCA
ATCAAGAAGAATCTATATCAATCGATTATCAAAGCATTCCTCGACTTTATGGGT
TTTCTTTCAAGTGTGCGACTCAATTCTTCAGTGGTACGTAGTCAAATGTTAGAAA
ATTCATTTCTAATAGAAAATACTATTAAGAAGTTCGATACCATAGTTCCTATTATT
CCTCTGGTTGGATCGTTGGCTAAAGCGAAATTTTGTAACGTATTACGCCATCCCA
TTAGTAAGTCGG

>*B. spectabilis* 'P'

AATAGTCTTATTACTTCGAAAAATTCCATTTCTATTTTTTCAAAAAGGAATCAA
GATTATTCTTGTTCTTATATAATTTCTATGTATGTGAATACGAATCCATTTTTGTTT
TTCTCCGCAACCGATCTTCTTATTTACGATCAACATCTTTTGGAGCCCTTCTTGAA
CGAACCTATTTCCACGGAAAGCTAGAATATCTAGTAAAAGTTTTAACTAAAAATT
TTCGGGTTATCTTATGGCTTTTCAAAGACCCATTCGCGCATTATGTTAGATATCAA
GGAAAATCAATTCTTTCTTCAAAGGTACATCTTTTCTGATGCATAAATGGAAAT
ATTACCTTATCAATTTTTGGCAATGTCATTTTTCCGTGTGGTCTCAATCAAGAAGA
ATCTATATCAATCGATTATCAAAGCATTCCTCGACTTTATGGGTTTTCTTTCAAG
TGTGCGACTCAATTCTTCAGTGGTACGTAGTCAGATGTTAGAAAATTCATTTCTA
ATAGAAAATACTATTAAGAAGTTCGATACCATAGTTCCAATTATTCCTCTGGTTG
GATCGTTGGCTAAAGCGAAATTTTGTAACGTATTAGGCCATCCCATTAGTAAGTC
GG

>*D. chinensis* 'WP'

TCCATTTCTATTTTTCTAAAAAGAAATCAAAGATTATTATTGTTCTTATATAATTT
CCATATATGTGAATACGAATCCATTTTCGTTTTTCTTTGCAACCAATCCTCTCATT
TACGATCAACATCTTATAGAGTGTTTCTTGAACGCATTTATTTCTACGTAAAATTT
GACTATTTAGTCAAACCTTTTTATAAGGATTTTGGCGTTATCTTATGGCTTTTCAA
GGACCCTTCCCCGCACTCTGCTAGGTATAAAGTAAAATTCCTTTATGCATCAAAA
GGGATGCCCTTTTTGATGCATAAATGGAAATTTTACTTTATAAATTTTTGGCGATG
TCATTTTTCGGTGTGGTCTCAACCAAGAAGAATCTATATTAATAGATTAACAACC
CATTTTTTTGACTTTATGGGTTTTTGTTTAAGTGTACAACCTACTTCTTCCATGGTA
CGGAGTCAAATGTTAGAAAATGCATTTACAATAGATAAATACGAATAAAAAGTTG
TATCCGAAAATCCAATTAGTCCTCTGATTGGATCGTTGGGTGT

>*D. chinensis* 'PDP'

TTCTTTATGAGTATCGTAATTGGAATAGTCTTTTTATTTTAAAAAAATCCATTTCT
ATTTTTCTAAAAAGAAATCAAAGATTATTATTGTTCTTATATAATTTCCATATATG
TGAATACGAATCCATTTTCGTTTTTCTTTGCAACCAATCCTCTCATTTACGATCAA
CATCTTATAGAGTGTTTCTTGAACGCATTTATTTCTACGTAAAAAATTGACTATTTA
GTCAAACCTTTTTATAAGGATTTTGGCGTTATCTTATGGCTTTTCAAGGACCCTTC
CCCGCACTCTGCTAGGTATAAAGTAAAATTCCTTTATGCATCAAAGGGATGCCC
TTTTTGATGCATAAAATGGAAATTTACTTTATAAAATTTTTGGCAATGTCATTTTTC
GGTGTGGTCTCAACCAAGAAGAATCTATATTAATAGATTAACAACCCATTTTTTT
GACTTTTTGGGTTTTTTGTTTAAGTGTACAACCTCACTTCTTCCATGGGGCGGAGTCA
AATGTTAGAAAATGCATTTAAAATAGATAATACGATTAAAAAATTGTATCCGAA
AGTTCCGATTAGTCCTCTGATTGGATCGTTGGCTGT

>*D. chinensis* 'W'

TTCTTTATGAGTATCGTAATTGGAATAGTCTTTTTATTTTAAAAAAATCCATTTCT
ATTTTTCTAAAAAGAAATCAAAGATTATTATTGTTCTTATATAATTTCCATATATG
TGAATACGAATCCATTTTCGTTTTTCTTTGCAACCAATCCTCTCATTTACGATCAA
CATCTTATAGAGTGTTTCTTGAACGCATTTATTTCTACGTAAAAAATTGACTATTTA
GTCAAACCTTTTTATAAGGATTTTGGCGTTATCTTATGGCTTTTCAAGGACCCTTC
CCCGCACTCTGCTAGGTATAAAGTAAAATTCCTTTATGCATCAAAGGGATGCCC
TTTTTGATGCATAAAATGGAAATTTACTTTATAAAATTTTTGGCAATGTCATTTTTC
GGTGTGGTCTCAACCAAGAAGAATCTATATTAATAGATTAACAACCCATTTTTTT
GACTTTTTGGGTTTTTTGTTTAAGTGTACAACCTCACTTCTTCCATGGTACGGAGTCA
AATGTTAGAAAATGCATTTAGAATAGATAATACGATTAAGAAGTTGTATCCGAA
AATTCGATTAGTCCTCTGATTGGATCGTTGGCTGT

>*P. rubra* cv. 'Acutifolia'

AGATTCCGAACCTAATCTTTTTCAAAAAAACCCTGACAGTACTTTTGTGTTTCCGA
GATAAAGTTTTAGCACAAGAAAGTCGAAGTATATACTTTAGTCGATACAAACTCT
TTTTTTTCGAGGATCCACTATGATAATGAGAAAGGTTTCTGCATATACGCCAAA
TCTGTCCATAATATCAGAATCTGATAAATCAGTCCGAGCCGGCTTACTAATGGGA
TGTCCCTAATAGGTTACAAAATTTTTCTTTAGCTAATGATCCAACCAGAGGAATAA
TTGGAACAAGGGTATCGAATTTCTTAATAGGATTCTTGATTAGAAATGCATTTTC
TAGCATTGACTCCGTATCATTGAAGGGTTAGTCGCACAATTGAAAGATAACCC
ATAAAGTCAAGGGAATGATTGGATAATTGCTTTATATAGACCCTTCCGAGTGAA
ACCACAAGTCAAATTACATTGCCGAAAATTGACAAAGTAAGATTTCCATTTATT
CATCAAAGGAGCCGTCCCCTTTGAAACCAGAAGCATAGCTGTTCCCTGGAAAAAA
A

>*P. rubra*

AAATTCGAACCTAATCTTTTTCAAAAAAACCCTGACAGTACTTTTGTGTTTCCGA
GATAAAGTTTTAGCACAAGAAAGTCGAAGTATATACTTTAGTCGATACAAACTCT
TTTTTTTCGAGGATCCACTATGATAATGAGAAAGGTTTCTGCATATACGCCAAA
TCTGTCCATAATATCAGAATCTGATAAATCAGTCCGAGCCGGCTTACTAATGGGA
TGTCCCTAATAGGTTACAAAATTTTGCTTTAGCTAATGATCCAACCAGAGGAATAA
TTGGAACAAGGGTATCGAATTTCTTAATAGGATTCTTGATTAGAAATGCATTTTC
TAGCATTGACTCCGTATCATTGAAGGGTTAGTCGCACAATTGAAAGATAACCC

ATAAAGTCAAGGGAATGATTGGATAATTGCTTTATATAGACCCTTTCCGAGTGAA
ACCACAAGTCAAAAATTACATTGCCGAAAATTCACAAAGTAAGATTTCCATTTATT
CATCAAAGGAGCCGTCCCCTTTGAAACCAGAAGCATACCTGTTCTGGAAAGAA
A

>*P. obtusa*

GAATTCTTCCAAAAATTCCGAACCTAATCTTTTCAAAAAAACCAGTACTT
TTGTGTTTCCGAGCTAAAGTTTTAGCACAAAGAAAGTCGAAGTATATACTTTAGTC
GATACAAACTCTTTTTTTTCGAGGATCCACTATGATAATGAGAAAGGTTTCTGCA
TATACGCCAAAATCTGTCCATAATATCAGAATCTGATAAATCAGTCCGAGCCGGC
TTACTAATGGGATGTCCTAATAGGTTACAAAATTTTTCTTTAGCTAATGATCCAAC
CAGAGGAATAATTGGAACAAGGGTATCGAATTTCTTAATAGGATTCTTGATTAGA
AATGCATTTTCTAGCATTTGACTCCGTACCATTGAAGGGTTTAGTCGCACAATTG
AAAGATAACCCATAAAGTCAAGGGAATGATTGGATAATTGCTTTATATAGACCCT
TTCCGAGTGAAACCACAAGTCAAAAATTACATTGCCGAAAATTGACAAGGTAAGA
TTTCCATTTATTCATCAAAGGAGCCGTCCCCTTTGAAACCAGAAGCATAGCTGTT
CCTGGAAGGAAA