

Comparison of *Symbiodinium* dinoflagellate flora in sea slug populations of the *Pteraeolidia ianthina* complex

Makiko Yorifuji*, Hirohiko Takeshima, Kohji Mabuchi, Toshiki Watanabe, Mutsumi Nishida

*Corresponding author: makikoyorifuji@gmail.com

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Fig. S1. DGGE band profiles. Details of the co-occurrence pattern of *Symbiodinium* types are shown in Table 4. Colors of band codes correspond to clone sequence names in Fig. 2. The additional bands that are not scored may correspond to symbionts present in low density or those that are minor copies of intragenomic variation in nrITS2. However, we obtained no clones with the same mobility in the DGGE analysis, and no additional types were detected by cp23S and mtCytb markers. Thus, they were considered likely to be fragments caused by PCR errors, heteroduplexes, or folded fragments caused by the GC clamp.

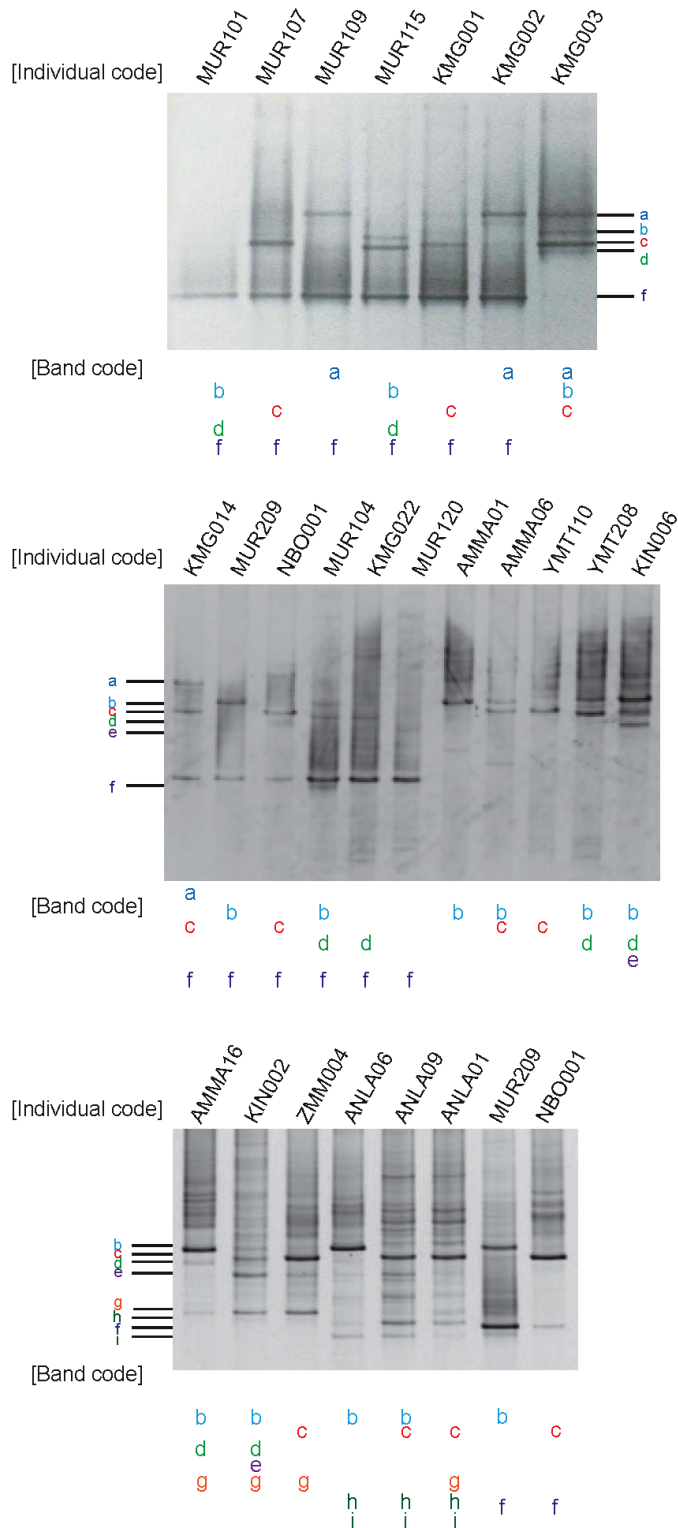


Fig. S2. Cluster dendrogram showing the similarity of detected *Symbiodinium* based on (a) the infection frequency of five *Symbiodinium* types in each population (data from Table 3) and (b) the occurrence of *Symbiodinium* type composition in each population (data from Table 4). To create these dendrograms, distance matrices were calculated by Euclidian distance and dendrograms were constructed using the UPGMA. Shaded colors indicate host species/populations. See Tables 3 and 4 for details of the host species/populations.

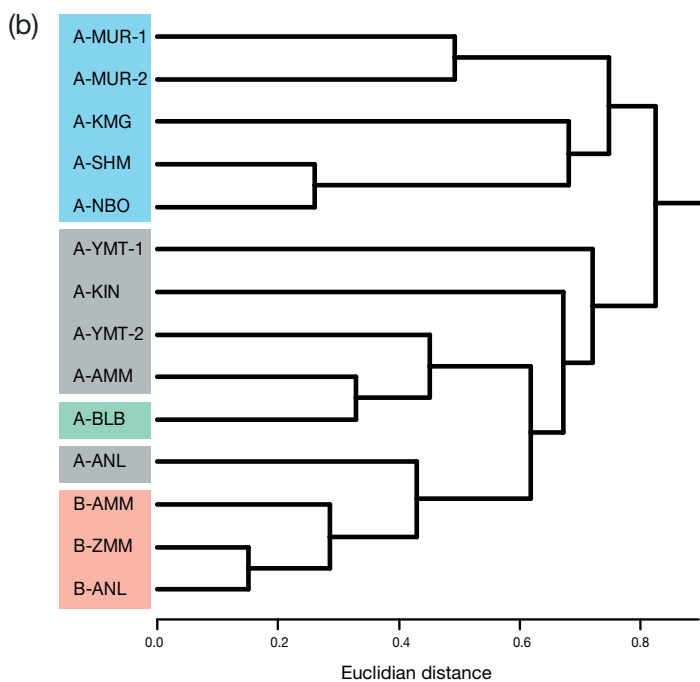
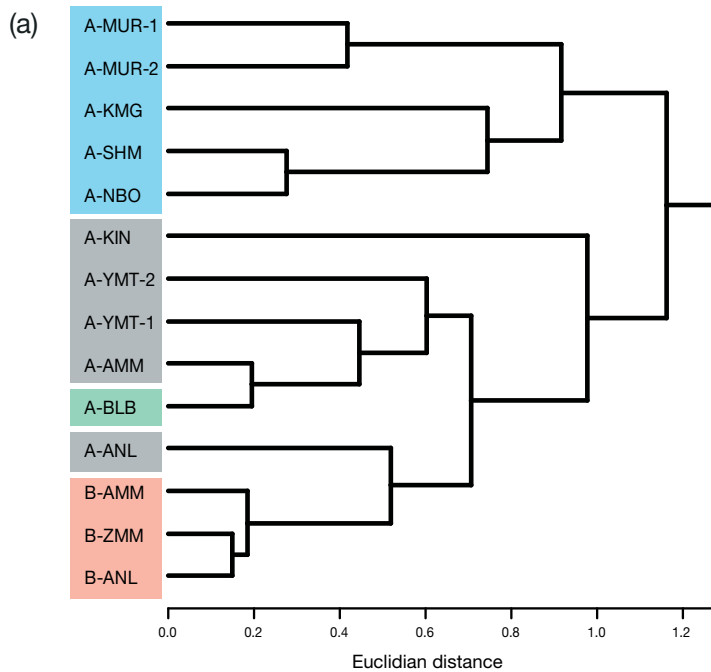


Fig. S3. Cluster dendrogram showing the similarity of detected *Symbiodinium* based on (a) the infection frequency of nrITS2 *Symbiodinium* sequence types in each population (data from Table S2) and (b) the occurrence of nrITS2 *Symbiodinium* sequence type composition in each population (data from Table S1). To create these dendrograms, distance matrices were calculated by Euclidian distance and dendrograms were constructed using the UPGMA. Shaded colors indicate host species/populations. See Tables S1 and S2 for details of the host species/populations.

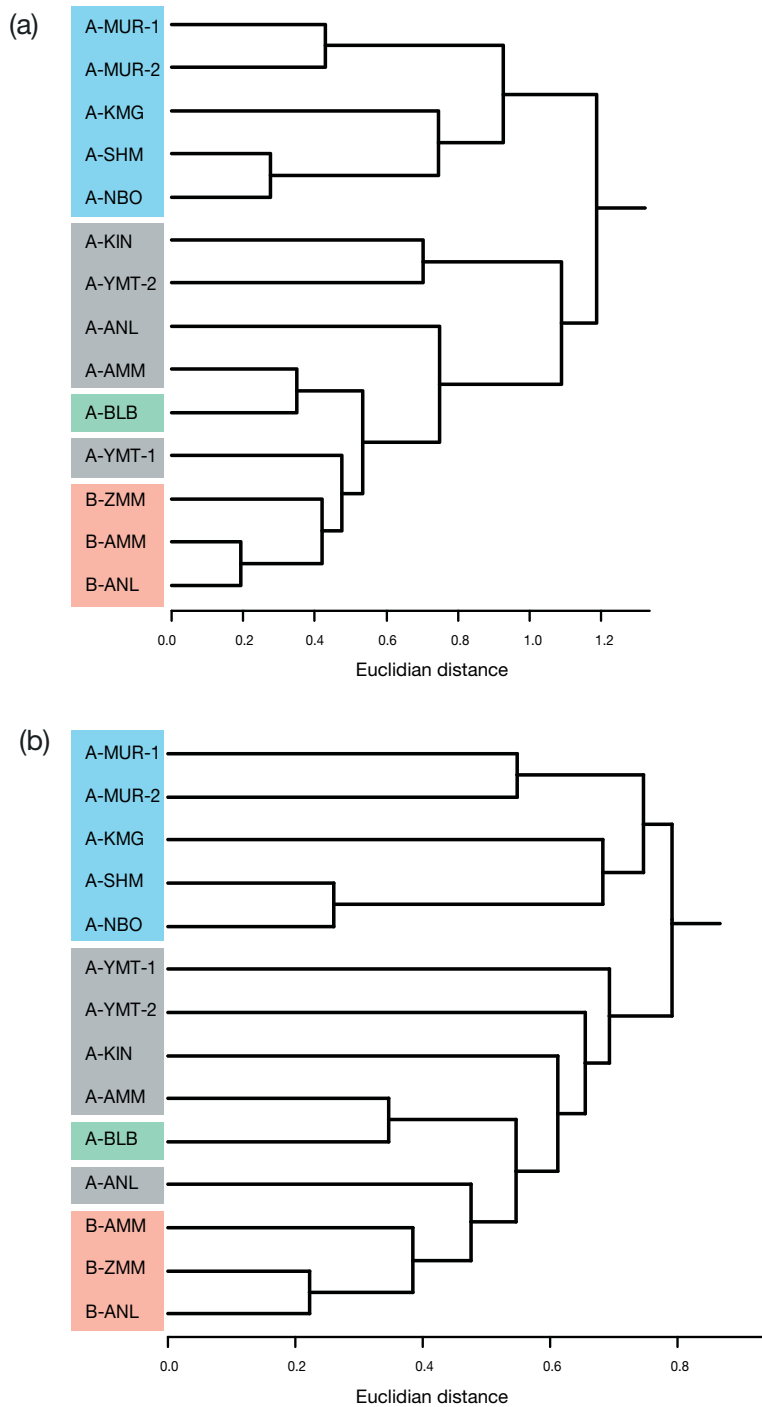


Table S1. Co-occurrence of *Symbiodinium* nrITS2 types in each host individual: their occurrence (%) and number of host individuals (in parentheses).

Samples	Number of host individuals	Composition of <i>Symbiodinium</i> type																			
		A1	A1	A1	A1	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	C3	
		C1		C1		C1		C1		C1		C1		C1		C1		C1		C1	
								C _{P1-1}	C _{P1-1}				C _{P1-1}	C _{P1-1}				C _{P1-1}	C _{P1-1}		
														C _{P1-2}						C _{P1-2}	
		D _{P1-1}	D _{P1-1}	D _{P1-1}	D _{P1-1}	D _{P1-1}	D _{P1-1}	D _{P1-1}	D _{P1-1}	D _{P1-1}											
																D1	D1	D1	D1	D1	
																				D4	
																				D5	
Host species A																					
Temperate Japan population																					
A-KMG	22	9.1 (2)	-	50.0 (11)	13.6 (3)	-	22.7 (5)	4.5 (1)	-	-	-	-	-	-	-	-	-	-	-	-	-
A-MUR-1	30	-	-	-	10.0 (3)	-	13.3 (4)	-	13.3 (4)	63.3 (19)	-	-	-	-	-	-	-	-	-	-	-
A-MUR-2	26	-	15.4 (4)	7.7 (2)	3.8 (1)	30.8 (8)	11.5 (3)	-	3.8 (1)	23.1 (6)	-	-	-	3.8 (1)	-	-	-	-	-	-	-
A-SHM	29	-	-	10.3 (3)	-	6.9 (2)	55.2 (16)	-	-	3.4 (1)	-	-	-	24.1 (7)	-	-	-	-	-	-	-
A-NBO	30	-	-	-	-	-	53.3 (16)	-	-	-	-	-	-	46.7 (14)	-	-	-	-	-	-	-
Ryukyus+Philippines populations																					
A-AMM	30	-	-	-	-	-	-	-	-	-	3.3 (1)	30.0 (9)	3.3 (1)	-	60.0 (18)	-	-	3.3 (1)	-	-	-
A-KIN	30	-	-	-	-	-	-	-	-	-	-	-	-	40.0 (12)	36.7 (11)	-	-	-	23.3 (7)	-	-
A-YMT-1	30	-	-	-	-	-	-	-	-	-	-	-	-	96.7 (29)	-	-	-	-	3.3 (1)	-	-
A-YMT-2	16	-	-	-	-	-	-	-	-	-	-	18.8 (3)	50.0 (8)	-	31.3 (5)	-	-	-	-	-	-
A-ANL	9	-	-	-	-	-	-	-	-	-	-	-	-	22.2 (2)	11.1 (1)	-	-	-	11.1 (1)	11.1 (1)	11.1 (1)
Guam population																					
A-BLB	5	-	-	-	-	-	-	-	-	-	20.0 (1)	20.0 (1)	-	-	40.0 (2)	-	-	-	-	20.0 (1)	-
Host species B																					
AMM	6	-	-	-	-	-	-	-	-	-	-	-	-	33.3 (2)	-	-	-	-	33.3 (2)	-	33.3 (2)
ZMM	11	-	-	-	-	-	-	-	-	-	-	-	-	54.5 (6)	-	-	-	-	45.5 (5)	-	-
ANL	9	-	-	-	-	-	-	-	-	-	-	-	-	44.4 (4)	-	11.1 (1)	-	-	22.2 (2)	-	22.2 (2)

Table S2. Frequency and number of infected host individuals (in parentheses) by *Symbiodinium* nrITS2 types.

Samples	Number of host individuals	<i>Symbiodinium</i> clade and type								
		A	C				D			
		A1	C3	C1	C _{PI-1}	C _{PI-2}	D _{PI-1}	D1	D4	D5
Host species A										
Temperate Japan population										
A-KMG	22	72.7 (16)	-	81.8 (18)	4.5 (1)	-	90.9 (20)	-	-	-
A-MUR-1	30	10.0 (3)	13.3 (4)	13.3 (4)	13.3 (4)	-	100.0 (30)	-	-	-
A-MUR-2	26	26.9 (7)	50.0 (13)	23.1 (6)	3.8 (1)	-	96.2 (25)	-	-	-
A-SHM	29	10.3 (3)	6.9 (2)	89.7 (26)	-	-	75.7 (22)	-	-	-
A-NBO	30	-	100.0 (30)	-	-	-	53.3 (16)	-	-	-
Ryukyus+Philippines populations										
A-AMM	30	-	40.0 (12)	90.0 (27)	6.7 (2)	-	-	3.3 (1)	-	-
A-KIN	30	-	63.3 (19)	36.7 (11)	63.3 (19)	63.3 (19)	-	23.3 (7)	-	-
A-YMT-1	30	-	100.0 (30)	-	-	-	-	3.3 (1)	-	-
A-YMT-2	16	-	68.8 (11)	50.0 (8)	50.0 (8)	-	-	-	-	-
A-ANL	9	-	44.4 (4)	77.8 (7)	-	-	-	33.3 (3)	55.6 (5)	55.6 (5)
Guam population										
A-BLB	5	-	40.0 (2)	80.0 (4)	-	-	-	20.0 (1)	20.0 (1)	20.0 (1)
Host species B										
B-AMM	6	-	-	100.0 (6)	-	-	-	33.3 (2)	33.3 (2)	33.3 (2)
B-ZMM	11	-	-	100.0 (11)	-	-	-	45.5 (5)	-	-
B-ANL	9	-	11.1 (1)	100.0 (9)	-	-	-	33.3 (3)	22.2 (2)	22.2 (2)