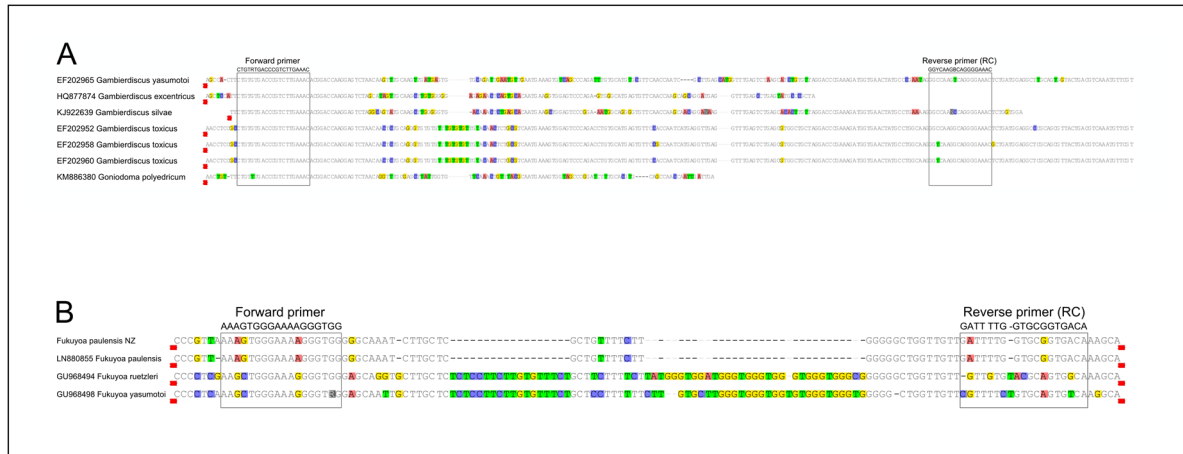


# 1 Molecular identification of *Gambierdiscus* and 2 *Fukuyoa* (Dinophyceae) from environmental samples

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4 Rhodes



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6 **Figure S1:** Alignments of available DNA sequences of *Gambierdiscus* and *Fukuyoa* species not able to  
7 be directly tested, and primers for both the (A) *Gambierdiscus*/*Fukuyoa* and (B) *Fukuyoa paulensis* QPCR  
8 assays.

9 **Table S1.** QPCR assay results for field samples collected in New Zealand and the Kingdom of Tonga.  
10 NT, not tested.

Country: Site	Collection	<i>Gambierdiscus</i> / <i>Fukuyoa</i>	<i>Fukuyoa paulensis</i>
<b>New Zealand</b>			
Oke Bay, Northland	Feb-14	-/-	NT
Site 1, Te Uenga Bay, Northland	Feb-14	-/-	NT
Site 2, Te Uenga Bay, Northland	Feb-14	+/+	+/+ (<1 cell)
Site 3, Te Uenga Bay, Northland	Feb-14	+/+	+/+ (<1 cell)
Site 4, Te Uenga Bay, Northland	Feb-14	-/-	NT
Site 1, Motuarohia Island, Northland	Feb-14	-/-	NT
Site 2, Motuarohia Island, Northland	Feb-14	-/-	NT
Site 1 at 12 m, North Meyer Island, Kermadec Is.	Nov-15	+/+	-/-
Site 2 at 17 m, North Meyer Island, Kermadec Is.	Nov-15	+/+	-/-
Site 3 at 17 m, North Meyer Island, Kermadec Is.	Nov-15	+/+	-/-
Site 4 at 13 m, North Meyer Island, Kermadec Is.	Nov-15	+/+	-/-
Site 5 at 12 m, North Meyer Island, Kermadec Is.	Nov-15	+/+	-/-
Site 6 at 13 m, North Meyer Island, Kermadec Is.	Nov-15	+/+	-/-
<b>Tongatapu, Kingdom of Tonga</b>			
Site 1, Kolonga	Jan-16	-/-	NT
Site 2, Kolonga	Jan-16	-/-	NT
Site 3, Kolonga	Jan-16	-/-	NT
Site 1, Lavengatonga	Jan-16	-/-	NT

Site 2, Lavengatonga	Jan-16	-/-	NT
Site 3, Lavengatonga	Jan-16	-/-	NT
Site 1, Ha'ateiho	Jan-16	+/+	-/-
Site 2, Ha'ateiho	Jan-16	-/-	NT
Site 3, Ha'ateiho	Jan-16	-/-	NT
Site 1, Sopus	Jan-16	+/+	-/-
Site 2, Sopus	Jan-16	+/+	-/-
Site 3, Sopus	Jan-16	-/-	NT
Site 4, Sopus	Jan-16	+/+	-/-
Site 5, Sopus	Jan-16	-/-	NT
Site 6, Sopus	Jan-16	-/-	NT
Site 1, Ha'atafu	Jan-16	+/+	-/-
Site 2, Ha'atafu	Jan-16	+/+	-/-
Site 3, Ha'atafu	Jan-16	-/-	NT

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**Table S2.** Average read number and classification levels at 98% identity for the LSU gene region from each sampling site from North Meyer Island, Kermadec Islands, New Zealand.

<b>Species</b>	<b>Site 2</b>	<b>Site 3</b>	<b>Site 4</b>	<b>Site 5</b>	<b>Site 6</b>
<i>Alexandrium</i> sp.	0	11	5	1	1
<i>Amphidinium massartii</i>	3	12	4	3	2
<i>Azadinium spinosum</i>	4	0	3	1	0
<i>Azadinium concinnum</i>	22	13	13	11	12
<i>Azadinium trinitatum</i>	1	2	3	1	0
<i>Biecheleria cincta</i>	0	2	4	0	0
<i>Dinophysis</i> sp.	8	16	23	10	2
<i>Gambierdiscus australes</i>	12655	8817	7700	8769	8813
<i>Gambierdiscus honu</i>	56	77	111	3	25
<i>Gambierdiscus polynesiensis</i>	335	41	143	229	354
<i>Heterocapsa triquetra</i>	2	5	3	1	1
<i>Lepidodinium</i> sp.	13	39	31	10	4
<i>Lepidodinium chlorophorum</i>	3	2	5	2	1
<i>Ostreopsis</i> sp. 3	46	388	313	121	78
<i>Prorocentrum hoffmannianum</i>	2	38	34	1	2
<i>Prorocentrum sculptile</i>	7	4	6	3	1
<i>Prorocentrum</i> sp.	43	289	237	35	9
<i>Scrippsiella</i> sp.	5	15	22	9	5
<i>Scrippsiella lachrymosa</i>	4	7	8	2	0
<i>Scrippsiella trochoidea</i>	1	10	11	5	2
<i>Symbiodinium</i> sp. B	3	16	20	11	2
<b>Total number of Dinophyceae reads</b>	13210	9799	8693	9223	9309
<b>Number of Dinophyceae species</b>	19	20	21	20	17