

Supplementary materials for:

**Fungal community analysis in the seawater of the Mariana Trench as  
estimated by Illumina HiSeq**

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**Supplementary Table S1. Read counts of OTUs in different sampled sites.**

<b>OTUs</b>	<b>M1.1</b>	<b>M1.2</b>	<b>M1.3</b>	<b>M1.4</b>	<b>M3.1</b>	<b>M3.2</b>	<b>M3.4</b>	<b>M4.2</b>	<b>M4.3</b>	<b>M4.4</b>	<b>M7.1</b>	<b>M7.2</b>	<b>M7.3</b>	<b>Total number</b>
<b>OTU1</b>	13714	398	5405	671	11604	3286	3452	349	3560	2537	383	2629	3203	51204
<b>OTU2</b>	6477	2203	2188	1048	2225	1722	235	1270	2564	5258	7149	7131	3606	43089
<b>OTU3</b>	165	39	13084	37	81	7	11	11	2	176	289	4	2102	16021
<b>OTU4</b>	642	4347	439	514	638	191	170	179	0	1969	570	678	0	10348
<b>OTU5</b>	28	13	4806	7	44	151	10	620	3	193	38	9	55	5990
<b>OTU6</b>	75	1745	42	322	196	19	22	24	12	543	48	132	1	3194
<b>OTU7</b>	38	34	991	12	660	12	170	11	1051	42	49	23	42	3148
<b>OTU8</b>	2	52	1	3	12	2	0	0	10	1	5	2848	10	2957
<b>OTU9</b>	35	67	12	15	22	10	6	5	27	894	264	974	23	2367
<b>OTU10</b>	404	124	982	116	1488	217	28	91	259	487	378	41	25	4653
<b>OTU11</b>	95	27	11	67	148	42	5	260	1384	328	79	921	30	3410
<b>OTU12</b>	84	8	834	3	45	3	4	317	47	101	31	2	24	1516
<b>OTU13</b>	587	5	7	7	9	5	3	2	0	9	7	0	0	651
<b>OTU14</b>	42	9	4	22	179	4	7	5	5	331	187	0	0	806
<b>OTU15</b>	46	9	5	5	154	4	4	4	4	192	142	0	0	580
<b>OTU16</b>	82	5	45	5	33	5	0	2	1	322	14	0	1	526
<b>OTU17</b>	32	4	5	5	96	3	4	3	1	210	86	0	0	460
<b>OTU18</b>	28	1	4	2	2	1	2	0	1	0	2	1	238	293
<b>OTU19</b>	7	32	56	57	6	2	2	3	0	247	8	9	0	440
<b>OTU20</b>	3	2	2	2	1	0	0	244	0	1	9	0	0	272
<b>OTU21</b>	1	1	1	0	2	0	4	231	0	0	1	0	0	249
<b>OTU22</b>	17	9	5	1	60	15	0	1	1	111	76	2	2	312
<b>OTU23</b>	0	4	0	0	0	0	0	0	2	0	0	209	1	220
<b>OTU24</b>	1	5	6	1	8	1	3	0	1	179	18	1	0	235
<b>OTU25</b>	3	1	1	1	2	194	1	1	0	0	5	0	0	218
<b>OTU26</b>	10	2	137	0	4	2	1	0	1	35	29	1	5	238
<b>OTU27</b>	36	20	95	4	18	3	2	7	0	9	18	0	41	261
<b>OTU28</b>	3	3	2	1	2	1	2	0	0	157	5	0	0	186
<b>OTU29</b>	0	0	0	0	49	0	0	0	79	0	0	27	33	192
<b>OTU30</b>	164	5	0	1	0	1	0	0	0	2	6	0	0	185
<b>OTU31</b>	17	16	68	11	21	7	9	3	0	8	7	0	22	200
<b>OTU32</b>	44	6	33	6	18	2	8	4	1	4	16	0	4	158
<b>OTU33</b>	50	34	654	5	67	64	5	2	9	511	99	812	20	2345
<b>OTU34</b>	25	182	113	21	102	5	5	11	71	350	43	35	2	978
<b>OTU35</b>	3	4	5	1	126	2	0	1	8	2	3	0	0	165
<b>OTU36</b>	5	3	58	0	16	0	3	2	1	7	9	0	14	128
<b>OTU37</b>	19	3	1	0	26	3	0	0	0	10	33	2	1	107
<b>OTU38</b>	16	15	11	30	29	1	4	4	0	38	44	1	0	204
<b>OTU39</b>	74	1	1	1	3	0	0	0	0	3	1	0	0	91
<b>OTU40</b>	0	0	0	0	0	0	0	0	14	0	0	40	12	69

OTU41	9	3	0	0	2	2	0	0	0	0	66	0	0	87
OTU42	50	8	2	2	20	15	1	0	0	27	23	1	0	159
OTU43	58	3	0	0	1	0	2	1	0	48	1	1	0	123
OTU44	48	0	0	0	50	1	0	1	1	0	1	0	0	108
OTU45	3	1	61	0	0	0	1	0	0	3	1	0	0	76
OTU46	1	1	0	14	3	0	1	0	0	23	5	0	0	55
OTU47	4	1	1	0	3	1	0	0	0	2	32	0	1	53
OTU48	1	0	0	2	0	0	0	0	0	31	4	0	0	42
OTU49	1	0	0	0	0	0	0	0	0	38	0	0	0	41
OTU50	3	4	0	2	1	1	2	5	0	8	6	0	0	41
OTU51	13	2	0	0	8	0	0	0	3	0	0	2	0	33
OTU52	13	7	8	2	44	61	5	70	4	67	116	0	0	408
OTU53	2	2	6	3	11	1	0	2	0	12	33	0	0	81
OTU54	6	1	1	0	15	0	0	1	1	23	1	3	0	61
OTU55	9	0	0	0	0	0	0	0	2	0	0	2	6	23
OTU56	0	0	0	0	0	1	1	0	0	0	13	0	0	18
OTU57	277	539	2297	120	8768	303	2022	4085	4589	3558	550	115	56	27292
OTU58	1	0	0	19	0	0	0	1	0	0	0	1	0	26
OTU59	2	0	1	0	5	0	0	2	1	0	1	0	0	18
OTU60	1	1	0	0	0	0	0	0	0	1	14	0	0	21
OTU61	0	0	0	0	2	0	0	0	0	4	16	0	0	25
OTU62	0	0	1	0	12	0	0	0	0	0	1	0	0	17
OTU63	1	0	0	0	0	0	0	0	1	0	15	0	1	22
OTU64	0	1	1	0	1	0	0	0	0	1	10	0	0	19
OTU65	0	1	0	0	7	0	0	0	0	0	0	0	0	10
OTU66	0	1	0	12	4	0	0	0	0	0	0	0	0	20
OTU67	0	2	1	0	0	1	0	0	0	0	13	0	0	21
OTU68	1913	224	256	192	1701	1154	47	57	135	3246	4277	1472	4275	18962
OTU69	0	0	4	0	4	0	0	0	0	0	5	0	0	16
OTU70	0	1	0	1	1	1	0	0	0	0	2	0	0	11
OTU71	0	1	0	1	0	0	0	0	0	0	5	0	0	10
OTU72	0	0	0	0	1	0	0	0	0	0	4	0	0	7
OTU73	1	0	0	0	3	0	1	2	1	2	1	0	0	18
OTU74	0	0	0	0	3	0	0	0	0	0	0	0	0	5
OTU75	0	3	0	0	0	0	0	0	0	0	0	0	0	4
OTU76	0	0	1	0	1	0	0	0	0	2	1	0	0	9
OTU77	0	1	0	0	0	1	0	0	0	1	0	0	0	6
OTU78	1	0	0	1	0	0	0	0	0	1	3	0	0	9
OTU79	0	0	0	0	1	0	0	0	2	1	1	0	0	9
OTU80	0	0	0	0	0	0	0	0	0	0	1	0	0	2
OTU81	0	0	0	0	0	0	0	0	0	1	1	0	0	4
OTU82	0	0	0	0	1	0	0	0	2	0	0	0	1	7
OTU83	0	1	0	0	0	0	0	0	0	0	1	0	0	4

<b>OTU84</b>	18	31	9	11	16	4	5	2	0	20	20	1	0	148
<b>OTU85</b>	15	0	1	0	17	0	0	1	9	304	15	17	3	391
<b>OTU86</b>	0	0	0	0	1	0	0	0	0	0	0	0	0	2
<b>OTU87</b>	0	0	0	0	3	0	0	0	1	0	0	0	0	6
<b>OTU88</b>	20	11	469	50	44	3	4	1	3	379	72	1	4	1074
<b>OTU89</b>	1	0	0	0	0	0	0	0	0	0	1	0	0	4
<b>OTU90</b>	0	0	0	1	0	0	0	0	0	0	0	0	0	2
<b>OTU91</b>	140	38	117	32	183	151	8	13	574	181	130	16	8	1604
<b>Total number</b>	25686	10327	33351	3469	29133	7688	6282	7911	14448	23251	15613	18164	13872	209880

**Supplementary Table S2. Information of OTUs annotation.**

OTUs	Kindom	Phylum	Class	Order	Family	Genus	Length (bp)	Similarity (%)
OTU1	Fungi	Ascomycota	Sordariomycetes	Hypocreales	Cordycipitaceae	Unidentified	306	91
OTU2	Fungi	Basidiomycota	Malasseziomycete	Malasseziales	Malasseziaceae	<i>Malassezia</i>	297	100
OTU3	Fungi	Ascomycota	Dothideomycetes	Pleosporales	Pleosporaceae	<i>Cochliobolus</i>	305	64
OTU4	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Saccharomycetaceae	<i>Yamadazyma</i>	300	69
OTU5	Fungi	Ascomycota	Unidentified	Unidentified	Unidentified	Unidentified	306	100
OTU6	Fungi	Ascomycota	Sordariomycetes	Hypocreales	incertae	<i>Emericellopsis</i>	306	88
OTU7	Fungi	Ascomycota	Eurotiomycetes	Chaetothyriales	Unidentified	Unidentified	305	82
OTU8	Fungi	Basidiomycota	Exobasidiomycetes	Entylomatales	incertae	<i>Tilletiopsis</i>	306	100
OTU9	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Wickerhamomyceteae	<i>Wickerhamomyces</i>	298	100
OTU10	Fungi	Ascomycota	Eurotiomycetes	Eurotiales	Trichocomaceae	<i>Aspergillus</i>	305	99
OTU11	Fungi	Ascomycota	Dothideomycetes	Capnodiales	Davidiellaceae	<i>Cladosporium</i>	306	97
OTU12	Fungi	Ascomycota	Eurotiomycetes	Eurotiales	Trichocomaceae	<i>Talaromyces</i>	306	100
OTU13	Fungi	Basidiomycota	Microbotryomycetes	Sporidiobolales	Sporidiobolaceae	<i>Sporidiobolus</i>	308	97
OTU14	Fungi	Basidiomycota	Microbotryomycetes	Sporidiobolales	Sporidiobolaceae	<i>Rhodotorula</i>	308	69
OTU15	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Debaryomycetaceae	<i>Candida</i>	293	100
OTU16	Fungi	Ascomycota	Unidentified	Unidentified	Unidentified	Unidentified	305	100
OTU17	Fungi	Basidiomycota	Cystobasidiomycetes	Cystobasidiales	Cystobasidiaceae	<i>Cystobasidium</i>	309	100
OTU18	Fungi	Basidiomycota	Ustilaginomycetes	Ustilaginales	Unidentified	Unidentified	300	99
OTU19	Fungi	Ascomycota	Unidentified	Unidentified	Unidentified	Unidentified	308	98
OTU20	Fungi	Basidiomycota	Agaricomycetes	Unidentified	Unidentified	Unidentified	307	96
OTU21	Fungi	Basidiomycota	Agaricomycetes	Unidentified	Unidentified	Unidentified	306	98

<b>OTU22</b>	Fungi	Basidiomycota	Malasseziomycetes	Malasseziales	Malasseziaceae	<i>Malassezia</i>	301	100
<b>OTU23</b>	Fungi	Ascomycota	Leotiomycetes	Thelebolales	Unidentified	Unidentified	306	99
<b>OTU24</b>	Fungi	Ascomycota	Dothideomycetes	Venturiales	Symptoventuriaceae	<i>Ochroconis</i>	306	86
<b>OTU25</b>	Fungi	Basidiomycota	Agaricomycetes	Agaricales	Schizophyllaceae	<i>Schizophyllum</i>	306	88
<b>OTU26</b>	Fungi	Basidiomycota	Tremellomycetes	Tremellales	Tremellaceae	<i>Cryptococcus</i>	306	94
<b>OTU27</b>	Fungi	Basidiomycota	Tremellomycetes	Tremellales	Tremellaceae	<i>Cryptococcus</i>	306	69
<b>OTU28</b>	Fungi	Basidiomycota	Cystobasidiomycetes	Erythrobasidiales	Erythrobasidiaceae	<i>Erythrobasidium</i>	309	96
<b>OTU29</b>	Fungi	Unidentified	Unidentified	Unidentified	Unidentified	Unidentified	306	100
<b>OTU30</b>	Fungi	Basidiomycota	Agaricostilbomycetes	Agaricostilbales	Kondoaceae	<i>Kondoa</i>	314	65
<b>OTU31</b>	Fungi	Glomeromycota	Glomeromycetes	Glomerales	Unidentified	Unidentified	307	97
<b>OTU32</b>	Fungi	Basidiomycota	Wallemiomycetes	Wallemiales	Wallemiaceae	<i>Wallemia</i>	302	100
<b>OTU33</b>	Fungi	Ascomycota	Dothideomycetes	Capnodiales	Teratosphaeriaceae	<i>Hortaea</i>	307	83
<b>OTU34</b>	Fungi	Ascomycota	Sordariomycetes	Hypocreales	incertae	<i>Sarocladium</i>	306	96
<b>OTU35</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Unidentified	Unidentified	303	100
<b>OTU36</b>	Fungi	Ascomycota	Eurotiomycetes	Chaetothyriales	Chaetothyriaceae	<i>Cyphellophora</i>	305	93
<b>OTU37</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Dipodascaceae	<i>Yarrowia</i>	241	100
<b>OTU38</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Debaryomycetaceae	<i>Candida</i>	292	100
<b>OTU39</b>	Fungi	Ascomycota	Dothideomycetes	Pleosporales	Lophiostomataceae	<i>Lophiostoma</i>	306	85
<b>OTU40</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Saccharomycetaceae	<i>Pichia</i>	286	100
<b>OTU41</b>	Fungi	Basidiomycota	Microbotryomycetes	Sporidiobolales	Unidentified	Unidentified	308	100
<b>OTU42</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Debaryomycetaceae	<i>Candida</i>	304	68
<b>OTU43</b>	Fungi	Basidiomycota	Microbotryomycetes	Sporidiobolales	Sporidiobolaceae	<i>Rhodotorula</i>	308	94
<b>OTU44</b>	Fungi	Basidiomycota	Agaricomycetes	Polyporales	Meruliaceae	<i>Ceriporia</i>	306	100
<b>OTU45</b>	Fungi	Cryptomycota	Unidentified	Unidentified	Unidentified	Unidentified	292	100
<b>OTU46</b>	Fungi	Ascomycota	Sordariomycetes	Sordariales	Sordariaceae	<i>Neurospora</i>	306	96

<b>OTU47</b>	Fungi	Basidiomycota	Malasseziomycetes	Malasseziales	Malasseziaceae	<i>Malassezia</i>	297	99
<b>OTU48</b>	Fungi	Basidiomycota	Microbotryomycetes	Sporidiobolales	Sporidiobolaceae	<i>Sporobolomyces</i>	310	67
<b>OTU49</b>	Fungi	Basidiomycota	Moniliellomycetes	Moniliellales	Moniliellaceae	<i>Moniliella</i>	313	100
<b>OTU50</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Debaryomycetaceae	<i>Candida</i>	305	87
<b>OTU51</b>	Fungi	Unidentified	Unidentified	Unidentified	Unidentified	Unidentified	302	83
<b>OTU52</b>	Fungi	Ascomycota	Eurotiomycetes	Eurotiales	Unidentified	Unidentified	304	100
<b>OTU53</b>	Fungi	Ascomycota	Dothideomycetes	Pleosporales	Unidentified	Unidentified	304	96
<b>OTU54</b>	Fungi	Basidiomycota	Microbotryomycetes	Sporidiobolaceae	Sakaguchiaceae	<i>Sakaguchia</i>	309	100
<b>OTU55</b>	Fungi	Basidiomycota	Exobasidiomycetes	Exobasidiales	Unidentified	Unidentified	315	100
<b>OTU56</b>	Fungi	Ascomycota	Sordariomycetes	Sordariales	Unidentified	Unidentified	306	79
<b>OTU57</b>	Fungi	Ascomycota	Unidentified	Unidentified	Unidentified	Unidentified	306	100
<b>OTU58</b>	Fungi	Basidiomycota	Exobasidiomycetes	Exobasidiales	Exobasidiaceae	<i>Exobasidium</i>	315	99
<b>OTU59</b>	Fungi	Chytridiomycota	Chytridiomycetes	Unidentified	Unidentified	Unidentified	307	88
<b>OTU60</b>	Fungi	Ascomycota	Sordariomycetes	Hypocreomycetidae	Glomerellales	<i>Sodiomyces</i>	308	83
<b>OTU61</b>	Fungi	Basidiomycota	Agaricostilbomycetes	Agaricostilbales	Agaricostilbaceae	<i>Agaricostilbum</i>	311	95
<b>OTU62</b>	Fungi	Ascomycota	Pezizomycetes	Pezizales	Unidentified	Unidentified	306	97
<b>OTU63</b>	Fungi	Basidiomycota	Exobasidiomycetes	Entylomatales	incertae	<i>Tilletiopsis</i>	306	93
<b>OTU64</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Saccharomycetaceae	<i>Saccharomyces</i>	305	100
<b>OTU65</b>	Fungi	Basidiomycota	Tremellomycetes	Tremellales	Unidentified	Unidentified	306	100
<b>OTU66</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Debaryomycetaceae	<i>Candida</i>	304	100
<b>OTU67</b>	Fungi	Basidiomycota	Microbotryomycetes	Sporidiobolales	Sporidiobolaceae	<i>Sporidiobolus</i>	308	84
<b>OTU68</b>	Fungi	Basidiomycota	Malasseziomycetes	Malasseziales	Malasseziaceae	<i>Malassezia</i>	297	79
<b>OTU69</b>	Fungi	Basidiomycota	Tremellomycetes	Tremellales	Tremellaceae	<i>Cryptococcus</i>	306	85
<b>OTU70</b>	Fungi	Basidiomycota	Wallemiomycetes	Wallemiales	Wallemiaceae	<i>Wallemia</i>	303	70

<b>OTU71</b>	Fungi	Ascomycota	Dothideomycetes	Pleosporales	Trematosphaeriaceae	<i>Trematosphaeria</i>	305	100
<b>OTU72</b>	Fungi	Basidiomycota	Malasseziomycetes	Malasseziales	Malasseziaceae	<i>Malassezia</i>	297	77
<b>OTU73</b>	Fungi	Ascomycota	Sordariomycetes	Hypocreales	incertae	<i>Acremonium</i>	306	88
<b>OTU74</b>	Fungi	Ascomycota	Sordariomycetes	Hypocreales	Unidentified	Unidentified	302	87
<b>OTU75</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Saccharomycopsidaceae	<i>Saccharomycopsis</i>	311	100
<b>OTU76</b>	Fungi	Basidiomycota	Agaricomycetes	Agaricales	Omphalotaceae	<i>Gymnopus</i>	306	89
<b>OTU77</b>	Fungi	incertae	Mucoromycetes	Mucorales	Mucorineae	<i>Mucor</i>	314	100
<b>OTU78</b>	Fungi	Basidiomycota	Tremellomycetes	Tremellales	Trichosporonaceae	<i>Trichosporon</i>	306	100
<b>OTU79</b>	Fungi	Chytridiomycota	Chytridiomycetes	Unidentified	Unidentified	Unidentified	306	1000
<b>OTU80</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Debaryomycetaceae	<i>Candida</i>	274	99
<b>OTU81</b>	Fungi	Chytridiomycota	Chytridiomycetes	Unidentified	Unidentified	Unidentified	307	88
<b>OTU82</b>	Fungi	Ascomycota	Pezizomycetes	Pezizales	Pezizaceae	<i>Peziza</i>	306	79
<b>OTU83</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Unidentified	Unidentified	302	100
<b>OTU84</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Unidentified	Unidentified	300	69
<b>OTU85</b>	Fungi	Unidentified	Unidentified	Unidentified	Unidentified	Unidentified	293	71
<b>OTU86</b>	Fungi	Basidiomycota	Malasseziomycetes	Malasseziales	Malasseziaceae	<i>Malassezia</i>	301	92
<b>OTU87</b>	Fungi	Ascomycota	Saccharomycetes	Saccharomycetales	Saccharomycetaceae	<i>Kodamaea</i>	277	100
<b>OTU88</b>	Fungi	Ascomycota	Sordariomycetes	Hypocreales	Unidentified	Unidentified	306	83
<b>OTU89</b>	Fungi	Basidiomycota	Tremellomycetes	Filobasidiales	Filobasidiaceae	Unidentified	306	81
<b>OTU90</b>	Fungi	Basidiomycota	Exobasidiomycetes	Exobasidiales	unclassified Exobasidiales	Unidentified Exobasidiales	315	100
<b>OTU91</b>	Fungi	Ascomycota	Eurotiomycetes	Eurotiales	Trichocomaceae	<i>Aspergillus</i>	305	88