

The following supplement accompanies the article

# An experimental approach for understanding the process of wood fragmentation by marine wood borers in shallow temperate waters

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## Supplement.

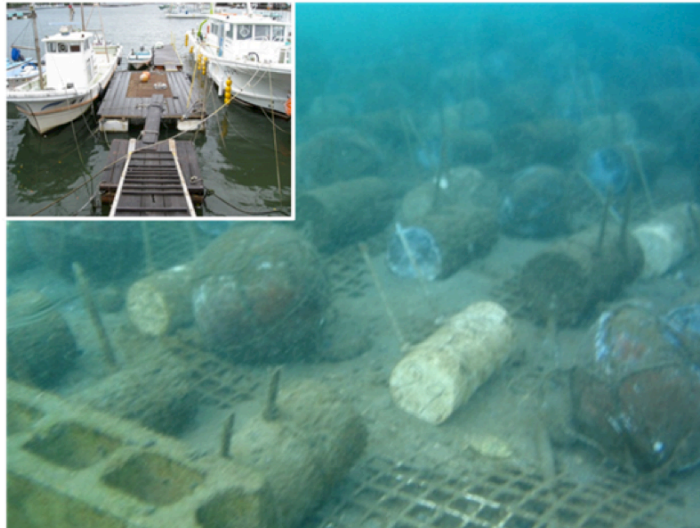


Fig. S1 Experimental design. The net with the logs was anchored beneath the pontoon shown in the inset photograph

In addition to Japanese cedar (*Cryptomeria japonica*), Japanese oak (*Quercus phillyraeoides*), coconut (*Cocos nucifera*), and limestone were also included in the experiment, but are not reported in the results.

Table S1 List of wood samples recovered at each sampling period

Numbers indicate the position of the logs on the polypropylene net (see Fig.S4 in this Supplement). Each sample consisted of a set of three cedar logs, plus an extra sample (+x) collected only between 20 and 40 months. These extra samples were used to identify the associated fauna and were not included in the analyses. Three logs (No. 10, No. 42, and No. 51) were fully degraded in the field during the experiment.

Immersion period (months)	No. of cedar log to be recovered			
	1	2	3	+x
2	1	14	25	
4	5	17	36	
6	24	28	45	
8	49	50	52	
10	2	12	53	
12	20	32	40	
14	34	41	43	
16	35	48	54	
20	18	19	39	44
24	13	16	33	37
28	3	6	7	27
32	4	11	21	31
36	23	29	38	47
40	8	15	26	30
44	22	46	51	
48	9	10	42	

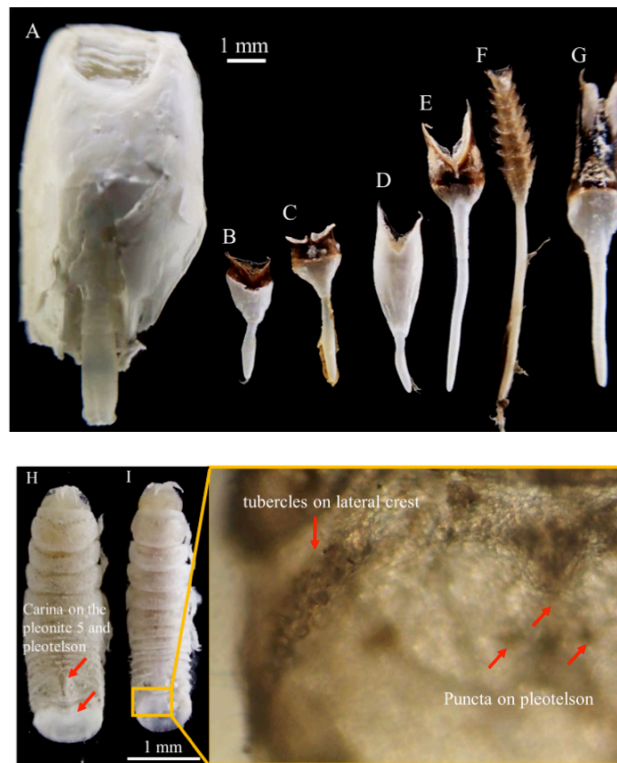


Fig. S2 Images of teredinid's pallet and limnoriids.

A; *Psiloteredo megotara*, B; *Teredo clappi*, C; *Teredothyra matocotana*, D; *Teredo navalis*, E; *Teredo bartschi*, F; *Bankia carinata*, G; *Lyrodus pedicellatus*, H; *Limnoria saseboensis*, I; *Limnoria tuberculata*



Fig. S3 State of fragmentation of some of the cedar logs after 2, 12, 24, 36 and 48 months.

Table S2 Raw species abundance data of wood-boring organisms collected from this study.

		Nov. 2008 2 months			Jan. 2009 4 months			Mar. 2009 6 months			May. 2009 8 months		
		2-1 No.1	2-2 No.14	2-3 No.25	4-1 No.5	4-2 No.17	4-3 No.36	6-1 No.24	6-2 No.28	6-3 No.45	8-1 No.49	8-2 No.50	8-3 No.52
Teredinidae	<i>Teredo navalis</i>	0	0	0	0	0	0	97	0	17	23	2	86
	<i>Teredo bartschi</i>	10	1	2	3	1	44	21	0	25	26	6	24
	<i>Lyrodus pedicellatus</i>	1	0	0	0	0	40	42	1	20	12	2	12
	<i>Teredo clappi</i>	0	1	0	0	0	26	4	4	39	20	13	42
	<i>Teredothyra matocotana</i>	0	0	0	0	0	1	0	0	1	1	0	2
	<i>Bankia carinata</i>	0	0	0	0	0	0	0	0	0	2	0	0
	<i>Psiloteredo megotara</i>	0	0	0	0	0	0	0	0	0	0	0	0
	unidentified	20	6	46	0	0	70	6	0	55	5	1	22
	a pair of empty shells	0	0	0	0	0	28	21	0	18	2	6	23
Pholadidae	<i>Martesia striata</i>	18	8	14	7	6	26	18	2	64	34	30	25
Limnoriidae	<i>Limnoria</i> spp.	0	1	3	0	0	4	24	62	87	249	140	234

		Jul. 2009 10 months			Sep. 2009 12 months			Nov. 2009 14 months			Jan. 2010 16 months		
		10-1 No.2	10-2 No.12	10-3 No.53	12-1 No.20	12-2 No.32	12-3 No.40	14-1 No.34	14-2 No.41	14-3 No.43	16-1 No.35	16-2 No.48	16-3 No.54
Teredinidae	<i>Teredo navalis</i>	96	33	14	8	10	9	0	2	8	0	2	0
	<i>Teredo bartschi</i>	6	32	3	9	4	7	0	0	3	0	1	0
	<i>Lyrodus pedicellatus</i>	2	18	4	8	3	8	1	0	7	0	2	0
	<i>Teredo clappi</i>	17	20	4	5	6	2	0	0	3	1	4	0
	<i>Teredothyra matocotana</i>	0	2	0	0	0	0	0	0	0	0	1	0
	<i>Bankia carinata</i>	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Psiloteredo megotara</i>	0	0	0	0	1	0	0	0	0	0	0	0
	unidentified	12	11	2	6	3	1	2	5	2	3	2	5
	a pair of empty shells	39	15	474	11	39	17	196	86	29	238	36	475
Pholadidae	<i>Martesia striata</i>	15	15	37	9	12	6	28	25	17	12	0	55
Limnoriidae	<i>Limnoria</i> spp.	56	322	1536	1467	2004	2324	1969	6134	880	2563	1296	3408

		May. 2010 20 months			Sep. 2010 24 months			Jan. 2011 28 months			May. 2011 32 months		
		20-1 No.18	20-2 No.19	20-3 No.39	24-1 No.13	24-2 No.16	24-3 No.33	28-1 No.3	28-2 No.6	28-3 No.7	32-1 No.4	32-2 No.11	32-3 No.21
Teredinidae	<i>Teredo navalis</i>	0	11	1	0	0	0	0	8	0	12	3	9
	<i>Teredo bartschi</i>	0	36	0	0	0	0	0	0	1	0	0	0
	<i>Lyrodus pedicellatus</i>	1	8	1	0	0	1	1	5	1	2	0	0
	<i>Teredo clappi</i>	0	17	0	0	2	0	0	1	0	5	1	8
	<i>Teredothyra matocotana</i>	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Bankia carinata</i>	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Psiloteredo megotara</i>	0	0	0	0	0	0	0	0	1	0	1	1
	unidentified	1	6	5	2	4	7	1	12	7	2	1	7
	a pair of empty shells	270	47	129	218	134	93	167	199	81	158	186	300
Pholadidae	<i>Martesia striata</i>	8	2	0	36	144	75	3	26	4	0	4	6
Limnoriidae	<i>Limnoria</i> spp.	2568	1581	3999	794	3949	7014	5909	5725	4901	5866	4148	3451

		Sep. 2011 36 months			Jan. 2012 40 months			May. 2012 44 months			Sep. 2012 48 months		
		36-1 No.23	36-2 No.29	36-3 No.38	40-1 No.8	40-2 No.15	40-3 No.30	44-1 No.22	44-2 No.46	44-3 No.51	48-1 No.9	48-2 No.10	48-3 No.42
Teredinidae	<i>Teredo navalis</i>	3	1	2	1	0	5	15	6	-	0	-	-
	<i>Teredo bartschi</i>	0	0	1	0	0	0	0	1	-	0	-	-
	<i>Lyrodus pedicellatus</i>	0	0	2	1	0	1	3	0	-	0	-	-
	<i>Teredo clappi</i>	1	0	0	0	0	1	2	0	-	0	-	-
	<i>Teredothyra matocotana</i>	0	0	0	0	0	0	0	0	-	0	-	-
	<i>Bankia carinata</i>	0	0	0	0	0	0	0	0	-	0	-	-
	<i>Psiloteredo megotara</i>	0	0	0	0	0	0	0	0	-	0	-	-
	unidentified	4	1	7	3	1	7	0	1	-	0	-	-
	a pair of empty shells	77	25	70	216	4	51	164	32	-	81	-	-
Pholadidae	<i>Martesia striata</i>	3	1	4	0	0	0	0	0	-	0	-	-
Limnoriidae	<i>Limnoria</i> spp.	3820	6649	7594	773	15	2375	1038	1593	-	89	-	-

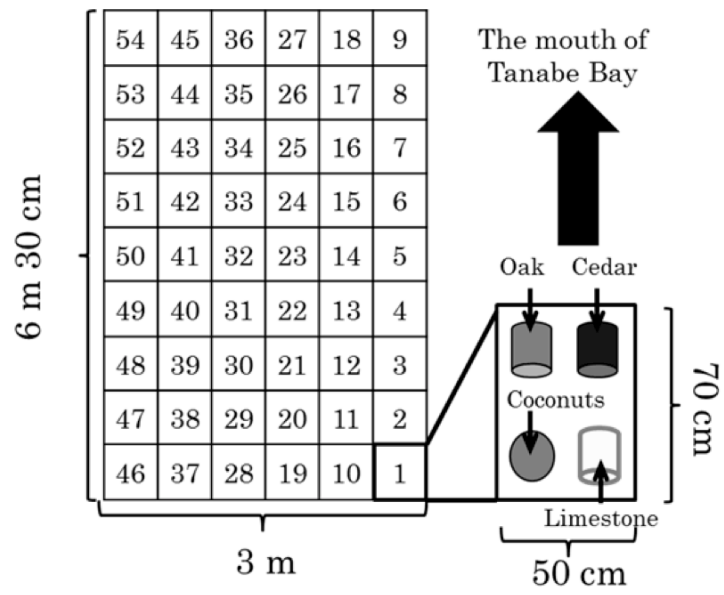


Fig. S4 Arrangement of the cedar logs on the polypropylene net.