

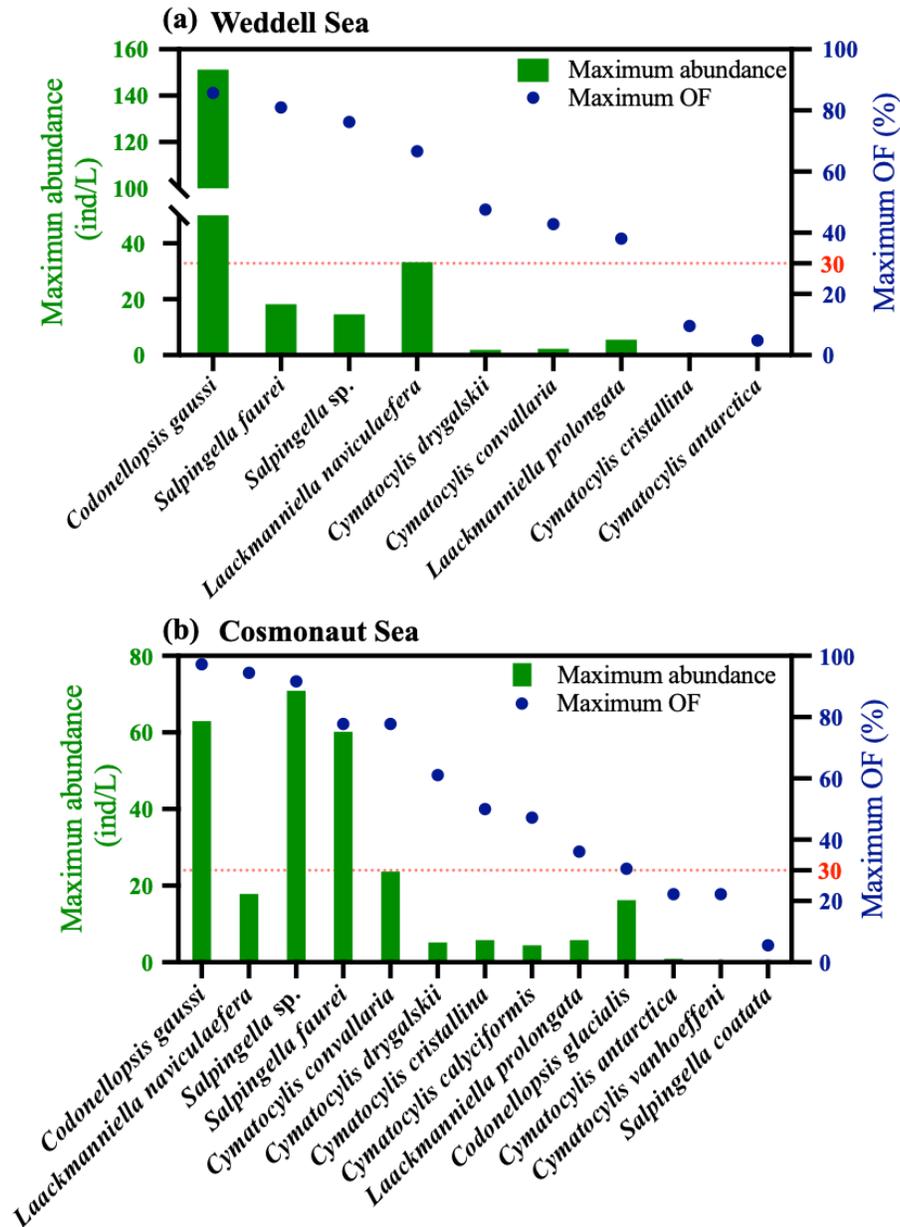
**Supplementary material for:** Jingyuan Li, Haibo Li, Chaofeng Wang, Yuan Zhao, Li Zhao, Yi Dong & Wuchang Zhang 2023. Summertime tintinnids in surface water of the Weddell and Cosmonaut seas: community structure and relationships with different water masses. *Polar Research* 42. Correspondence: Wuchang Zhang, CAS Key Laboratory of Marine Ecology and Environmental Sciences, Institute of Oceanology, Chinese Academy of Sciences, Qingdao 266071, China. E-mail: wuchangzhang@qdio.ac.cn

**Supplementary Table S1.** Sampling date and time (in the year 2022), temperature and salinity of each station at a depth of 5 m.

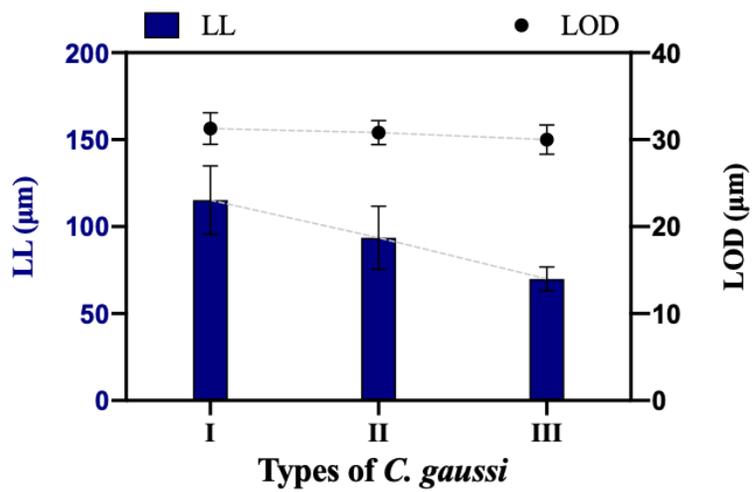
Station	Sampling date (day/month)	Sampling time (UTC+8)	Temperature (°C)	Salinity
Weddell Sea				
1	9/1	1:00	1.1	34.3
2	21/1	5:10	0.4	34.4
3	21/1	10:10	0.7	34.3
4	21/1	17:35	-0.3	33.2
5	21/1	23:00	0.3	33.4
6	22/1	5:00	-0.5	33.7
7	22/1	10:00	-1.0	33.6
8	22/1	15:35	-1.2	33.4
9	23/1	1:00	-0.5	33.9
10	23/1	9:00	-0.5	33.8
11	23/1	18:00	-0.3	33.8
12	24/1	6:00	0.2	33.9
13	24/1	17:45	-0.2	34.1
14	24/1	23:55	-0.2	34.1
15	25/1	6:00	-0.1	33.7
16	25/1	17:00	0.4	34.1
17	25/1	23:40	0.8	34.0
18	26/1	5:30	0.5	34.1
19	26/1	15:00	0.4	33.8
20	26/1	23:00	0.4	34.0
21	27/1	5:00	0.1	34.0

Station	Sampling date (day/month)	Sampling time (UTC+8)	Temperature (°C)	Salinity
Cosmonaut Sea				
22	7/2	14:56	-0.3	33.6
23	7/2	23:00	0.4	33.8
24	8/2	4:38	0.4	33.7
25	8/2	10:46	0.2	33.9
26	11/2	5:09	0.8	33.9
27	11/2	11:48	0.9	33.9
28	11/2	18:05	0.9	33.8
29	12/2	00:21	0.6	33.7
30	22/2	13:44	-0.8	33.8
31	26/2	19:13	-0.6	33.7
32	21/2	23:54	-0.8	33.7
33	21/2	15:31	-0.7	33.8
34	21/2	1:00	-0.6	33.9
35	17/2	6:25	0.5	33.9
36	20/2	17:50	0.2	33.9
37	16/2	19:30	0.9	33.8
38	16/2	11:35	1.1	33.7
39	15/2	23:45	0.9	33.7
40	26/2	4:26	-0.7	33.9
41	3/3	5:30	-0.8	33.9
42	3/3	9:30	-0.5	34.0
43	24/2	22:14	-1.2	33.7
44	25/2	5:05	-1.3	33.6
45	4/3	4:10	-0.7	34.0
46	4/3	–	-1.3	33.6
47	4/3	–	-0.5	33.9
48	9/3	17:11	0.2	33.9
49	5/3	4:54	-1.2	33.6
50	10/3	00:14	0.0	34.0
51	8/3	2:00	-1.0	33.8
52	5/3	23:36	-0.1	33.8
53	10/3	9:48	-0.1	33.9

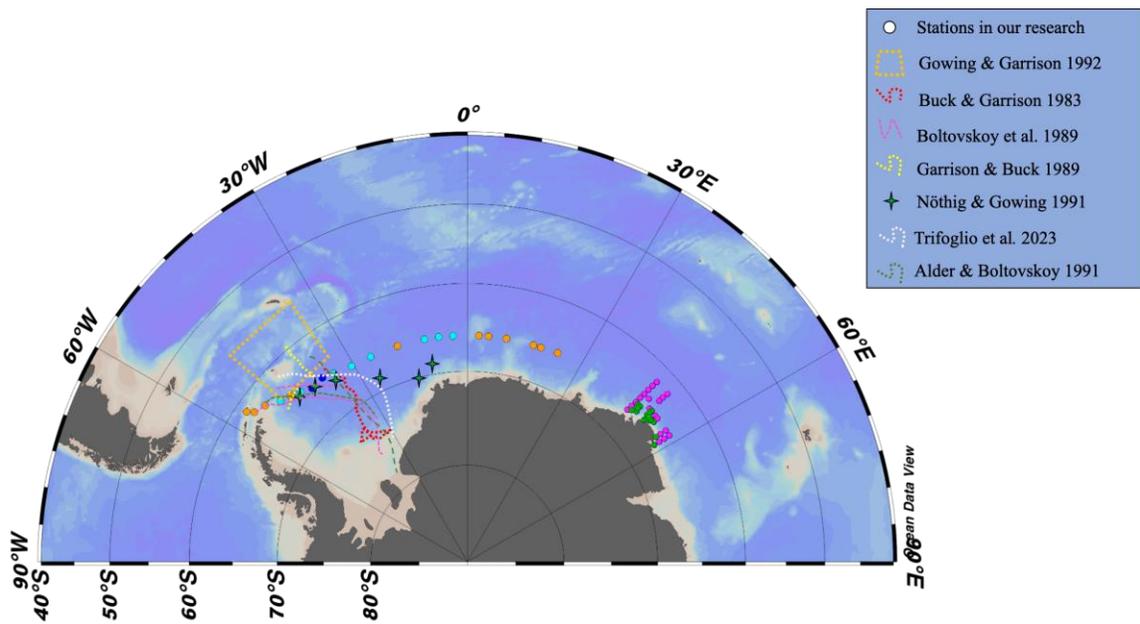
Station	Sampling date (day/month)	Sampling time (UTC+8)	Temperature (°C)	Salinity
54	6/3	22:33	-1.2	33.7
55	7/3	6:58	-0.2	33.8
56	7/3	15:33	-0.0	33.8
57	11/3	7:00	0.4	33.8



**Supplementary Fig. S1.** Maximum abundance and OF of tintinnid species in (a) the Weddell Sea and (b) the Cosmonaut Sea.



**Supplementary Fig. S2.** The lorica oral diameter (LOD) and lorica length (LL) ( $n = 20$ ) of different types of *Codonellopsis gaussi*.



**Supplementary Fig. S3.** Tintinnid survey stations and transections in the Weddell Sea in previous research.

**Supplementary Table S1.** Sampling date and time (in the year 2022), temperature and salinity of each station at a depth of 5 m.

Station	Sampling date (day/month)	Sampling time (UTC+8)	Temperature (°C)	Salinity
Weddell Sea				
1	9/1	1:00	1.1	34.3
2	21/1	5:10	0.4	34.4
3	21/1	10:10	0.7	34.3
4	21/1	17:35	-0.3	33.2
5	21/1	23:00	0.3	33.4
6	22/1	5:00	-0.5	33.7
7	22/1	10:00	-1.0	33.6
8	22/1	15:35	-1.2	33.4
9	23/1	1:00	-0.5	33.9
10	23/1	9:00	-0.5	33.8
11	23/1	18:00	-0.3	33.8
12	24/1	6:00	0.2	33.9
13	24/1	17:45	-0.2	34.1
14	24/1	23:55	-0.2	34.1
15	25/1	6:00	-0.1	33.7
16	25/1	17:00	0.4	34.1
17	25/1	23:40	0.8	34.0
18	26/1	5:30	0.5	34.1
19	26/1	15:00	0.4	33.8
20	26/1	23:00	0.4	34.0
21	27/1	5:00	0.1	34.0
Cosmonaut Sea				
22	7/2	14:56	-0.3	33.6
23	7/2	23:00	0.4	33.8
24	8/2	4:38	0.4	33.7
25	8/2	10:46	0.2	33.9
26	11/2	5:09	0.8	33.9
27	11/2	11:48	0.9	33.9
28	11/2	18:05	0.9	33.8
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Station	Sampling date (day/month)	Sampling time (UTC+8)	Temperature (°C)	Salinity
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31	26/2	19:13	-0.6	33.7
32	21/2	23:54	-0.8	33.7
33	21/2	15:31	-0.7	33.8
34	21/2	1:00	-0.6	33.9
35	17/2	6:25	0.5	33.9
36	20/2	17:50	0.2	33.9
37	16/2	19:30	0.9	33.8
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