

**Mixotrophy in *Pyrophacus horologium* (thecate dinoflagellate):
Predation on toxic and harmful dinoflagellates and molecular
phylogenetics**

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14 Table S1. Comparison of the sequences of the small subunit (SSU), internal transcribed spacer (ITS), and large subunit (LSU) rDNA of *Pyrophacus* spp. The numbers in parentheses represent
15 dissimilarity (%)

SSU genus of Pyrophacus							
Species	Strain	Accession No.	Collection site	Date	Full-length	Base Differences	Reference
<i>P. steinii</i>	LIMS-PS-2141, NIES 321	PQ142316, AY443024	Korea, -	Aug 06, 2013, -	1781, 1740	250-251 (14.12-14.17)	This study, Saldarriaga et al. (2004)
<i>P. horologium</i>	GNMS23	PQ142317	Korea	Jun 12, 2023	1776		This study
<i>P. sp.</i>	Denovo267	MH914774	North Atlantic Ocean	Sep 21, 2014	375	58(PH)-87(PS) (14.83-21.59)	Balzano et al. (2018)
ITS genus of Pyrophacus							
Species	Strain	Accession No.	Collection site	Date	Full-length	Base Differences	Reference
<i>P. steinii</i>	LIMS-PS-2141	PQ142316	Korea	Aug 06, 2013	478	233 (40.66)	This study
<i>P. horologium</i>	GNMS23	PQ142317	Korea	Jun 12, 2023	481		This study
LSU genus of Pyrophacus							
Species	Strain	Accession No.	Collection site	Date	Full-length	Base Differences	Reference
<i>P. steinii</i>	LIMS-PS-2141, YT-1, JZB-1, JHW0007-3	PQ142316, ON392227, ON392228,	Korea, China, China, Korea	Aug 06, 2013, Mar 17, 2016, -, Jul -, 2000	1386, 1524, 1524, 990	300-352 (23.44-27.32)	This study, Liu et al. (2023), Liu et al. (2023),

		EF613363				Kim et al. (2007)
<i>P. horologium</i>	GNMS23	PQ142317	Korea	Jun 12, 2023	1385	This study

17 Table S2. Information of sampling station

Sampling station	Latitude	Longitude
Jayumuyeok 1-gil	35°12'42.0"	128°35'16.0"
Pier 4	35°12'15.4"	128°35'35.4"
Samgwi	35°10'19.0"	128°35'38.0"
Gapo Newport	35°10'29.1"	128°35'00.4"

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19 Table S3. *P. horologium* isolated station (Samgwi) water quality meter

Isolated station	pH	Temperature (°C)	Salinity (‰)	Turbidity	DO (mg L ⁻¹)	Electrical conductivity (S m ⁻¹)
Samgwi	8.33	23.7	30.7	2.5	22	4.9

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Reference

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