

Supplementary material. Table S1. Detailed information about deep-sea expeditions during which *Agathotanaïs* specimens were collected; Expeditions: SokhoBio – Sea of Okhotsk Biodiversity Studies; KuramBio – Kuril-Kamchatka Biodiversity Study; JPIO – European Joint Project Initiative Oceans; ABYSS – Sampling the abyss; SLOPE – campaign to continental slope of Bass Strait; MANGAN – expedition to CCZ under the framework of Ecological Aspects of Deep Sea Mining; License Areas: BGR – Bundesanstalt für Geowissenschaften und Rohstoffe, Germany; IOM – Interoceanometal Joint Organisation; GSR – Global Sea Mineral Resources NV, Belgium; APEI3 (Areas of Particular Environmental Interest 3); Gear: EBS – epibenthic sledge; S – supranet, E – epinet; BC – box corer.

Expedition	Station	Gear	Latitude	Longitude	Depth [m]	Number of specimens
ABYSS	9	EBS	41° 37.3' S	149° 33.3' E	4028	2
	33	EBS	38° 31.5' S	150° 12.4' E	4085	1
	42	EBS	36° 23.6' S	150° 51.4' E	4730	2
SLOPE	134	BC	38°51.02' S	141°44.47' E	1021	1
	62	BC	34°53.34' S	151°14.05' E	1011	1
JPIO	20 (BGR)	EBS	11° 49.81' N	117° 00.28' W	4093	2
	24 (BGR)	EBS	11° 51.52' N	117° 01.19' W	4100	3
	50 (BGR)	EBS	11° 49.92' N	117° 29.31' W	4330	2
	51 (BGR)	BC	11° 49.42' N	117° 31.42' W	4347	1
	57 (BGR)	BC	11° 48.45' N	117° 31.46' W	4369	2
	59 (BGR)	EBS	11° 48.55' N	117° 29.03' W	4342	2
	81 (IOM)	EBS	11° 03.97' N	119° 37.67' W	4365	2
	99 (IOM)	EBS	11° 02.61' N	119° 39.52' W	4401	3
	96 (IOM)	EBS	11° 4,41' N	119° 39,35' W	4418	1
	118 (GSR)	EBS	13° 52.38' N	123° 15.09' W	4511	2
	192 (APEI 3)	EBS	18° 44.81' N	128° 21.87' W	4877	4
KuramBIO	1-11	EBS-S	43° 58.10' N	157° 24.06' E	5412-5418	4
	2-10	EBS-S	46° 10.99' N	155° 35.26' E	4859-4863	6

KuramBIO 2	2-9	EBS-S	46° 11.08' N	155° 35.22' E	4830-4863	5
	3-9	EBS-S	47° 11.47' N	154° 38.63' E	4987-4991	1
	5-10	EBS-S	43° 38.62' N	153° 56.97' E	5376-5380	3
	5-9	EBS-S	43° 38.61' N	153° 57.12' E	5376-5380	3
	6-11	EBS-S	42° 32.62' N	154° 1.12' E	5305-5305	3
	6-12	EBS-S	42° 32.68' N	154° 1.27' E	5304-5307	1
	8-12	EBS-E	42° 15.75' N	151° 48.12' E	5127-5124	2
	8-9	EBS-S	42° 15.82' N	151° 48.20' E	5125-5126	3
	9-9	EBS-S	40° 38.79' N	150° 59.97' E	5399-5421	4
	8-1	EBS-E	42° 16.76' N	151° 51.99' E	5026	27
MANGAN		EBS-S	42° 16.76' N	151° 51.99' E	5026	8
	12	EBS	11°18.55' N	119°15.08' W	4304-4370	5
	47	EBS	11°57.27' N	116°58.69' W	4112	1
SokhoBIO	1-8	EBS-E	46°08.8' N	145°59.2' E	3307	6
		EBS-S	46°08.8' N	145°59.2' E	3307	16
	1-9	EBS-E	46°08.8' N	146°00.0' E	3307	12
		EBS-S	46°08.8' N	146°00.0' E	3307	1
	11-6	EBS-E	45°35.3' N	146°24.7' E	3206	91
	2-7	EBS-E	46°40.9' N	147°28.5' E	3352	99
		EBS-S	46°40.9' N	147°28.5' E	3352	42
	2-8	EBS	46°41.1' N	147°24.2' E	3350	7
		EBS-E	46°41.1' N	147°24.2' E	3350	91
		EBS-S	46°41.1' N	147°24.2' E	3350	15
	3-9	EBS-E	46°38.1' N	148°56.5' E	3362	1
		EBS-S	46°38.1' N	148°56.5' E	3362	2
	4-10	EBS-S	47°12.2' N	149°36.7' E	3366	78
	4-9	EBS-E	47°13.6' N	149°39.2' E	3365	9
		EBS-S	47°13.6' N	149°39.2' E	3365	38
	6-6	EBS-E	48°03.3' N	150°00.6' E	3347	1
		EBS-S	48°03.3' N	150°00.6' E	3347	1

7-3	EBS-E	46°54.6' N	151°05.3' E	3296	99
	EBS-S	46°54.6' N	151°05.3' E	3296	4
7-4	EBS-E	46°59.4' N	151°05.4' E	3287	8
	EBS-S	46°59.4' N	151°05.4' E	3287	3
9-7	EBS-E	46°16.2' N	152°03.1' E	3374	2
	EBS-S	46°16.2' N	152°03.1' E	3374	8