

The first record of the parasite *Peltogaster lineata* (Rhizocephala: Peltogastridae) on the hermit crab *Pagurus middendorffii* (Anomura: Paguridae)

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Table S1. Genbank accession details for all data used in phylogenetic analyses

Species	COI	16S	Host	Cite
<i>Peltogaster boschmai</i>	MN138416			Leray <i>et al.</i> , 2019
<i>Peltogaster lineata</i>	PP439463, PP439464	PP440164, PP440165	<i>Pagurus middendorffii</i>	This study
<i>Peltogaster lineata</i>	AB778055, AB778056	AB778086, AB778087	<i>Pagurus filholi</i>	Yoshida <i>et al.</i> , 2014
<i>Peltogaster lineata</i>		AB778088, AB778089	<i>Pagurus maculosus</i>	Yoshida <i>et al.</i> , 2014
<i>Peltogaster lineata</i>	AB778058 – AB778062	AB778090 – AB778094	<i>Pagurus nigrivittatus</i>	Yoshida <i>et al.</i> , 2014
<i>Peltogaster lineata</i>	MK604142	MK604159	<i>Pagurus brachiomastus</i>	Jung <i>et al.</i> , 2019
<i>Peltogaster lineata</i>	MK604143	MK604160	<i>Pagurus filholi</i>	Jung <i>et al.</i> , 2019
<i>Peltogaster lineata</i>	MZ723909 – MZ723911	MZ723912 – MZ723917	<i>Pagurus brachiomastus</i>	Golubinskaya <i>et al.</i> , 2021
<i>Peltogaster aff. ovalis</i>	AB778063	AB778095	<i>Pagurus japonicus</i>	Yoshida <i>et al.</i> , 2014
<i>Peltogaster aff. ovalis</i>		PP216800 – PP216804		Jung, 2024
<i>Peltogaster paguri</i>		FJ481958	<i>Pagurus bernhardus</i>	Glennner <i>et al.</i> , 2008
<i>Peltogaster paguri</i>	KT208574, KT209076			Raupach <i>et al.</i> , 2015
<i>Peltogaster postica</i>	AB602392 – AB602396		<i>Pagurus minutus</i>	Yoshida <i>et al.</i> , 2011
<i>Peltogaster postica</i>	AB602397		<i>Pagurus nigrivittatus</i>	Yoshida <i>et al.</i> , 2011
<i>Peltogaster postica</i>	AB688770, AB688771	AB778096, AB778097	<i>Pagurus angustus</i>	Yoshida <i>et al.</i> , 2012 Yoshida <i>et al.</i> , 2014
<i>Peltogaster postica</i>	AB688769	AB778098	<i>Pagurus filholi</i>	Yoshida <i>et al.</i> , 2012 Yoshida <i>et al.</i> , 2014
<i>Peltogaster postica</i>	AB778064 – AB778069	AB778099 – AB778104	<i>Pagurus filholi</i>	Yoshida <i>et al.</i> , 2014
<i>Peltogaster postica</i>	AB602392, AB602396	AB778105, AB778106	<i>Pagurus minutus</i>	Yoshida <i>et al.</i> , 2011 Yoshida <i>et al.</i> , 2014
<i>Peltogaster postica</i>	AB602397, AB778070 – AB778072	AB778107 – AB778110	<i>Pagurus nigrivittatus</i>	Yoshida <i>et al.</i> , 2011 Yoshida <i>et al.</i> , 2014
<i>Peltogaster postica</i>	MK604144 – MK604149	MK604161 – MK604165	<i>Pagurus filholi</i>	Jung <i>et al.</i> , 2019
<i>Peltogaster postica</i>	PP204807 – PP204809			Jung, 2024
<i>Peltogaster reticulata</i>	MN193579 – MN193583		<i>Pagurus minutus</i>	Korn <i>et al.</i> , 2020
<i>Peltogasterella gracilis</i>	AB778076	AB778113	<i>Pagurus nigrivittatus</i>	Yoshida <i>et al.</i> , 2014

Table S2. Fragment of triangle matrix of pairwise genetic distances for COI *Peltogaster lineata*

№	Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	<i>Peltogaster lineata</i> AB778055		0.006	0.000	0.000	0.004	0.004	0.005	0.003	0.005	0.005	0.005	0.005	0.005	0.007
2	<i>Peltogaster lineata</i> AB778056	0.012		0.006	0.006	0.007	0.006	0.007	0.006	0.008	0.008	0.008	0.008	0.008	0.009
3	<i>Peltogaster lineata</i> AB778058	0.000	0.012		0.000	0.004	0.004	0.005	0.003	0.005	0.005	0.005	0.005	0.005	0.007
4	<i>Peltogaster lineata</i> AB778059	0.000	0.012	0.000		0.004	0.004	0.005	0.003	0.005	0.005	0.005	0.005	0.005	0.007
5	<i>Peltogaster lineata</i> AB778060	0.006	0.018	0.006	0.006		0.004	0.006	0.005	0.006	0.006	0.006	0.006	0.006	0.008
6	<i>Peltogaster lineata</i> AB778061	0.006	0.012	0.006	0.006	0.006		0.005	0.005	0.007	0.007	0.007	0.007	0.007	0.008
7	<i>Peltogaster lineata</i> AB778062	0.009	0.017	0.009	0.009	0.015	0.012		0.006	0.007	0.007	0.007	0.007	0.007	0.008
8	<i>Peltogaster lineata</i> MK604143	0.003	0.015	0.003	0.003	0.009	0.009	0.012		0.004	0.004	0.004	0.004	0.004	0.006
9	<i>Peltogaster lineata</i> PP439463	0.009	0.020	0.009	0.009	0.015	0.015	0.017	0.006		0.000	0.000	0.000	0.000	0.004
10	<i>Peltogaster lineata</i> PP439464	0.009	0.020	0.009	0.009	0.015	0.015	0.017	0.006	0.000		0.000	0.000	0.000	0.004
11	<i>Peltogaster lineata</i> MK604142	0.009	0.020	0.009	0.009	0.015	0.015	0.017	0.006	0.000	0.000		0.000	0.000	0.004
12	<i>Peltogaster lineata</i> MZ723909	0.009	0.020	0.009	0.009	0.015	0.015	0.017	0.006	0.000	0.000	0.000		0.000	0.004
13	<i>Peltogaster lineata</i> MZ723910	0.009	0.020	0.009	0.009	0.015	0.015	0.017	0.006	0.000	0.000	0.000	0.000		0.004
14	<i>Peltogaster lineata</i> MZ723911	0.015	0.026	0.015	0.015	0.020	0.020	0.023	0.012	0.006	0.006	0.006	0.006	0.006	

Table S3. Fragment of triangle matrix of uncorrected pairwise genetic distances for 16S rDNA of *Peltogaster lineata*

№	Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	<i>Peltogaster lineata</i> PP440164		0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.005	0.006	0.000	0.000	0.004
2	<i>Peltogaster lineata</i> PP440165	0.004		0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.006	0.006	0.004	0.004	0.004	0.004	0.006
3	<i>Peltogaster lineata</i> MK604159	0.000	0.004		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
4	<i>Peltogaster lineata</i> MK604160	0.000	0.004	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
5	<i>Peltogaster lineata</i> MZ723912	0.000	0.004	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
6	<i>Peltogaster lineata</i> MZ723913	0.000	0.004	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
7	<i>Peltogaster lineata</i> MZ723914	0.000	0.004	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
8	<i>Peltogaster lineata</i> MZ723915	0.000	0.004	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
9	<i>Peltogaster lineata</i> MZ723916	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
10	<i>Peltogaster lineata</i> MZ723917	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
11	<i>Peltogaster lineata</i> AB778087	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.004
12	<i>Peltogaster lineata</i> AB778086	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.004	0.004	0.000	0.000	0.000	0.000	0.004
13	<i>Peltogaster lineata</i> AB778088	0.004	0.009	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004		0.000	0.004	0.004	0.004	0.004	0.000
14	<i>Peltogaster lineata</i> AB778089	0.004	0.009	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.000		0.004	0.004	0.004	0.004	0.000
15	<i>Peltogaster lineata</i> AB778090	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004		0.000	0.000	0.000	0.004
16	<i>Peltogaster lineata</i> AB778091	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000		0.000	0.000	0.004
17	<i>Peltogaster lineata</i> AB778092	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000		0.000	0.004
18	<i>Peltogaster lineata</i> AB778093	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000		0.004
19	<i>Peltogaster lineata</i> AB778094	0.004	0.009	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.000	0.000	0.004	0.004	0.004	0.004	

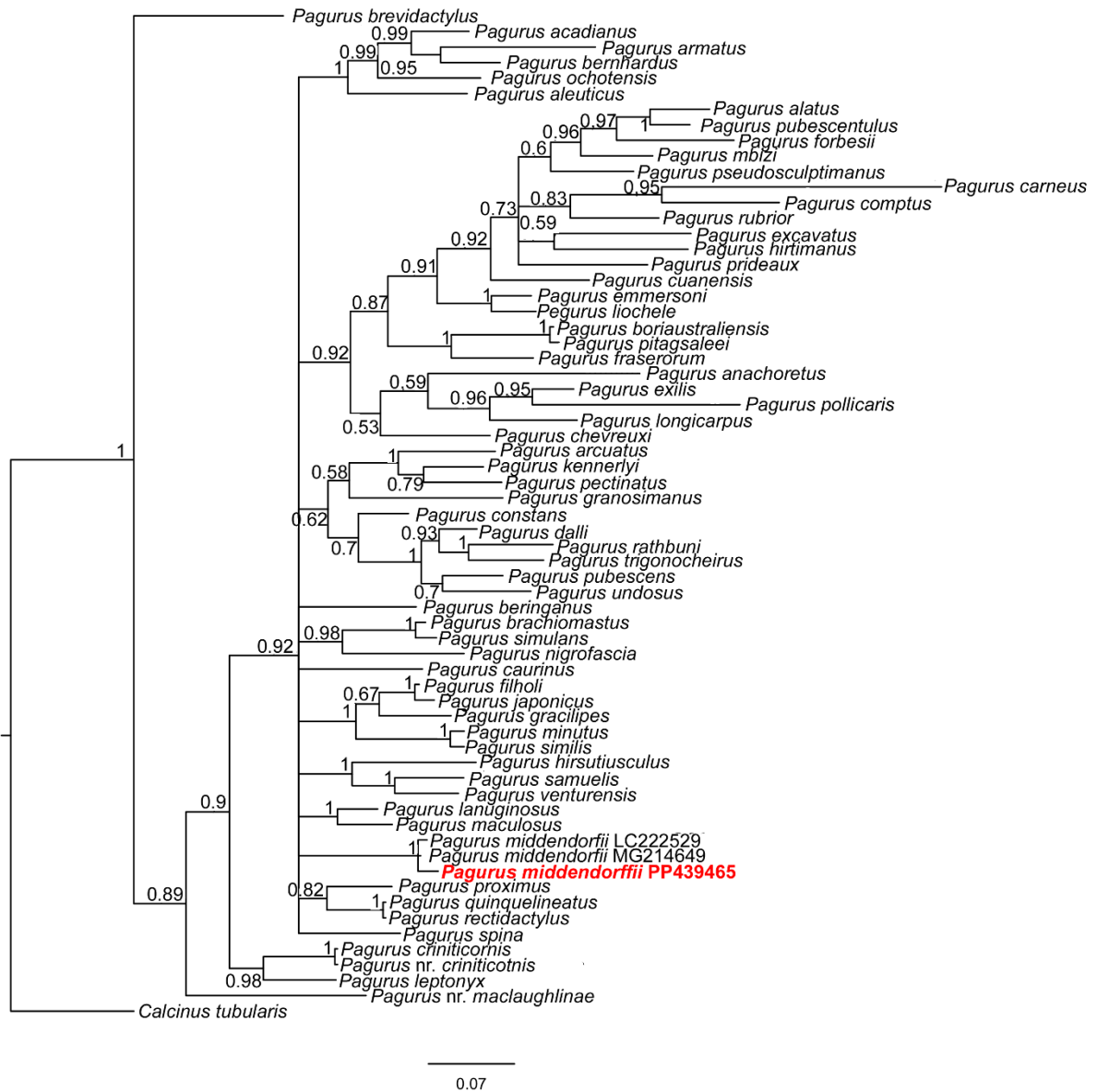


Figure S1. Bayesian phylogenetic tree for the COI gene of genus *Pagurus*. Nodal support is indicated in the form of Bayesian posterior probabilities (pp).

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