

The following supplement accompanies the article

Phylogenetic characterisation of the genus *Idiosepius* (Cephalopoda; Idiosepiidae)

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Supplement. The present supplement material provides further details about the location for all nominal *Idiosepius* species (Table S1), the respective Genbank accession number (Table S2) as well as the detailed cladograms for all four gene loci (12 S; 16S; COIII and COI) (Fig. S1).

Table S1. *Idiosepius* spp. Location and habitat information for all nominal *Idiosepius* species. The samples used for the present phylogenetic analysis are shown in **bold**.

SAM: South African Museum; PMBC: Phuket Marine Biological Station; SAMA: South African Museums Association; MZS: Musées de Strasbourg; MHNG: Muséum d'histoire naturelle de la Ville de Genève; ZMUC: Zoological Museum, University of Copenhagen; NSMT: National Science Museum, Tokyo. See main text for source details

Species	Country	Location	Habitat	Museum collection no.	Source
<i>Idiosepius biserialis</i>	Mozambique	San Jose Mission Station, Morrumbene (Holotype) Inhaca Island (26° 00.215' S, 32° 54.721' E)	Sea grass Sea grass	SAM A6520	Voss (1962) von Byern & Klepal (2010); Cyran et al. (2011)

		Inhambane Bay (23° 51.184' S, 35°22.553' E) Monque (23° 41.331' S, 35° 22.281' E) Linga Linga (23° 42.911' S, 35° 23.684' E)			
	Thailand	Bang Rong, Phuket Island (8° 02.156' N, 98° 25.487' E) Ko Pratong, Ranong Phuket Island	Sea grass Sea grass/sand bottom Seaweed beds/coral and rock reefs	PMBC 7957	von Byern & Klepal (2010) Hylleberg & Nateewathana (1991a) J. Nabhitabhata (pers. comm.)
	Indonesia	Ekas-Bay, Lombok (08° 52.020' S, 116° 27.541' E)	Surface		von Byern et al. (2005)
	Japan	Takasu			
<i>Idiosepius macrocheir</i>	Mozambique	Linga Linga, Morrumbene (Holotype) Inhaca Island Inhambane Bay	Sea grass Sea grass	SAM A6521 SAM 185 SAM 186	Voss (1962) Collector: G. Voss
<i>Idiosepius notoides</i>	Australia	Goolwa, South Australia (Holotype) Port River, Adelaide and Swan Bay, Port Philip Lake Merimbula (36° 53.75' S, 149° 54.85' E) Botany Bay (33° 59' S, 151° 12' E) Pittwater (33° 36.4' S, 151° 17.2' E)	Not mentioned Sea grass	SAMA D17495	Berry (1921a,b) Burn (1959); Adam (1986); Eyster & van Camp (2003); MacPherson (1966)
	Tasmania	Fortescue Bay (43° 08' S, 147° 57' E) Coles Bay (43° 08' S, 148° 17' E) Snug (43° 04.357' S, 147° 15.943' E) Margate (43° 02.969' S, 147° 16.034' E)	Drifting clumps of detached macroalgae above sea grass beds Ascidia colony		Tracey et al. (2003) Collector: J. von Byern
<i>Idiosepius paradoxus</i>	Japan	Kadsiyama, Bay of Tokyo (Holotype) Mizuho Maru, Hakodate Bay Ushimado (34° 35.567' N, 134° 07.340' E) Nagoya (34° 43.021' N, 136° 58.208' E) Okinawa Island	Not mentioned Sea grass Sea grass Sea grass Sea grass	MZS Mol 5809	Ortmann (1888) Shigeno & Yamamoto (2002); Kasugai & Ikeda (2003); Yamamoto et al. (2003) Collector: J. von Byern
	Vietnam	Bay of Nha Trang	Not mentioned		Adam (1986)
	Korea	Pusan	Not mentioned		Yamamoto (1942)
	Russia	Furugelm Island	Sea grass		Nesis et al. (2002a,b)

<i>Idiosepius picteti</i>	Indonesia	Amboine Island (Holotype)	Not mentioned	MHNG M 3/75 747/27	Joubin (1894)
<i>Idiosepius pygmaeus</i>	Philippines	Zamboanga (4° 20' N, 107° 20' E) (Syntypes) Jolo Habor	Not mentioned	ZMUC CEP-52	Steenstrup (1887) Adam (1986)
	Indonesia	Ternate	Not mentioned		Appellöf (1898, 1899)
		Balikpapan	Not mentioned		Grimpe (1931)
		Sibolga	Not mentioned		Grimpe (1931)
		Banda-Sea	Not mentioned		Appellöf (1898, 1899)
		Ekas-Bay, Lombok Island (08° 52.020' S, 116° 27.541' E)	Flotsam of garbage		von Byern & Klepal (2007)
		Ekas-Bay, Lombok Island Rinca Island	In tide pools near mangrove Mangrove		Grimpe (1931) von Byern & Marwoto (2009)
	Thailand	Mudong, Phuket Island (7° 48.107' N, 98° 24.472' E)	Mangrove		von Byern et al. (2008); von Byern & Klepal (2010)
		Bang Rong, Phuket Island (8° 02.945' N, 98° 25.030' E) Ao Chalong	Mangrove Mangrove		Suwanmala et al. (2006) Hylleberg & Nateewathana (1991b)
Singapore	Tempenisi	Not mentioned		Adam (1986)	
Australia	Townsville, North Queensland (19° 15' S, 146° 50' E)	Mangrove		Jackson (1988)	
Micronesia	Palau (Belau) Islands	Harbour		Moynihan (1983)	
<i>Idiosepius s thailandicu</i>	Thailand	Donsak Surat-tani Ban Phe, Rayong; Chantaburi River (12° 32.424' N, 102° 02.842' E) Ban Phe Rayong (Paratype)	Not mentioned Mangrove Not mentioned	PMBC 25267+ NSMT-Mo 69624 No. 4	Chotiyaputta et al. (1991) Nabhitabhata et al. (2006); von Byern & Klepal (2010) Chotiyaputta et al. (1991)
		Ban Phe, Rayong; Chantaburi River (12° 32.424' N, 102° 02.842' E)	Seaweed beds/coral and rock reefs		Nabhitabhata (1994)

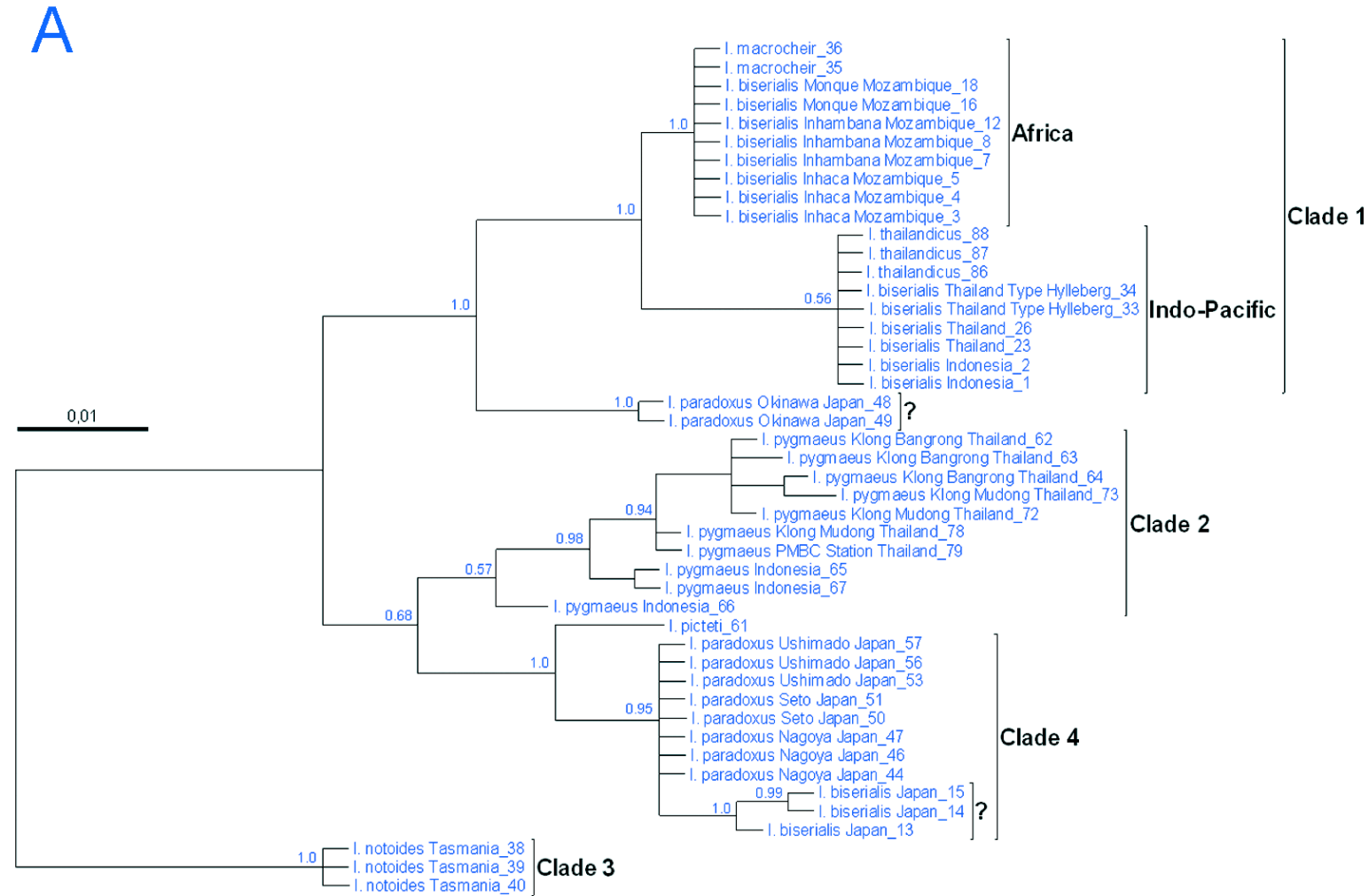
Table S2. *Idiosepius* spp. GenBank accession numbers and locations or sources of samples used in the present study. PMBC: Phuket Marine Biological Station

No.	Species	Location or source	12S	16S	COI	COIII
1	<i>I. biserialis</i>	Lombok Island, Indonesia	EF680111	EF684943	EU008941	EU009023
2	<i>I. biserialis</i>	Lombok Island, Indonesia	EF680112	EF684944	EU008942	EU009024
3	<i>I. biserialis</i>	Inhaca Island, Mozambique	EF680113	EF684945	EU008943	EU009025
4	<i>I. biserialis</i>	Inhaca Island, Mozambique	EF680114	EF684946	EU008944	EU009026
5	<i>I. biserialis</i>	Inhaca Island, Mozambique	EF680115	EF684947	EU008945	EU009027
6	<i>I. biserialis</i>	Inhaca Island, Mozambique	EF680116	EF684948	EU008946	EU009028
7	<i>I. biserialis</i>	Inhambane, Mozambique	EF680117	EF684950	EU008947	EU009029
8	<i>I. biserialis</i>	Inhambane, Mozambique	EF680118	EF684951	EU008948	EU009030
9	<i>I. biserialis</i>	Inhambane, Mozambique	EF680119	EF684952	EU008949	EU009031
10	<i>I. biserialis</i>	Inhambane, Mozambique	EF680120	EF684953	EU008950	EU009032
11	<i>I. biserialis</i>	Inhambane, Mozambique	EF680121	EF684954	EU008951	EU009033
12	<i>I. biserialis</i>	Inhambane, Mozambique	EF680122	EF684955	EU008952	EU009034
13	<i>I. biserialis</i>	Takasu, Japan	EF680124	EF684956	EU008953	EU009035
14	<i>I. biserialis</i>	Takasu, Japan	EF680125	EF684957	EU008954	EU009036
15	<i>I. biserialis</i>	Takasu, Japan	EF680126	EF684958	EU008955	EU009037
16	<i>I. biserialis</i>	Monque, Mozambique	EF680127	EF684959	EU008956	EU009038
17	<i>I. biserialis</i>	Monque, Mozambique	EF680128	EF684960	-	-
18	<i>I. biserialis</i>	Monque, Mozambique	EF680129	EF684961	EU008957	EU009039
19	<i>I. biserialis</i>	Phuket Island, Thailand	EF680130	EF684962	EU008958	EU009040
20	<i>I. biserialis</i>	Phuket Island, Thailand	EF680131	EF684963	-	EU009041
21	<i>I. biserialis</i>	Phuket Island, Thailand	EF680132	EF684964	EU008959	EU009042
22	<i>I. biserialis</i>	Phuket Island, Thailand	EF680133	EF684965	EU008960	EU009043
23	<i>I. biserialis</i>	Phuket Island, Thailand	EF680134	EF684966	EU008961	EU009044
24	<i>I. biserialis</i>	Phuket Island, Thailand	EF680135	EF684967	EU008962	EU009045
25	<i>I. biserialis</i>	Phuket Island, Thailand	EF680136	EF684968	EU008963	EU009046
26	<i>I. biserialis</i>	Phuket Island, Thailand	EF680137	EF684969	EU008964	EU009047
27	<i>I. biserialis</i>	Phuket Island, Thailand	EF680138	EF684970	EU008965	EU009048
28	<i>I. biserialis</i>	Phuket Island, Thailand	EF680139	EF684971	EU008966	EU009049
29	<i>I. biserialis</i>	Phuket Island, Thailand	EF680140	EF684972	EU008967	EU009050
30	<i>I. biserialis</i>	Phuket Island, Thailand	EF680141	EF684973	EU008968	EU009051
31	<i>I. biserialis</i>	Phuket Island, Thailand	EF680142	EF684974	EU008969	EU009052
32	<i>I. biserialis</i>	Phuket Island, Thailand	EF680143	EF684975	EU008970	EU009053
33	<i>I. biserialis</i>	Hylleberg & Nateewathana (1991a)	EF680144	EF684976	EU008971	EU009054
34	<i>I. biserialis</i>	Hylleberg & Nateewathana (1991a)	EF680145	EF684977	EU008972	EU009055
35	<i>I. macrocheir</i>	Voss (1962)	EF680146	EF684978	EU008973	EU009056

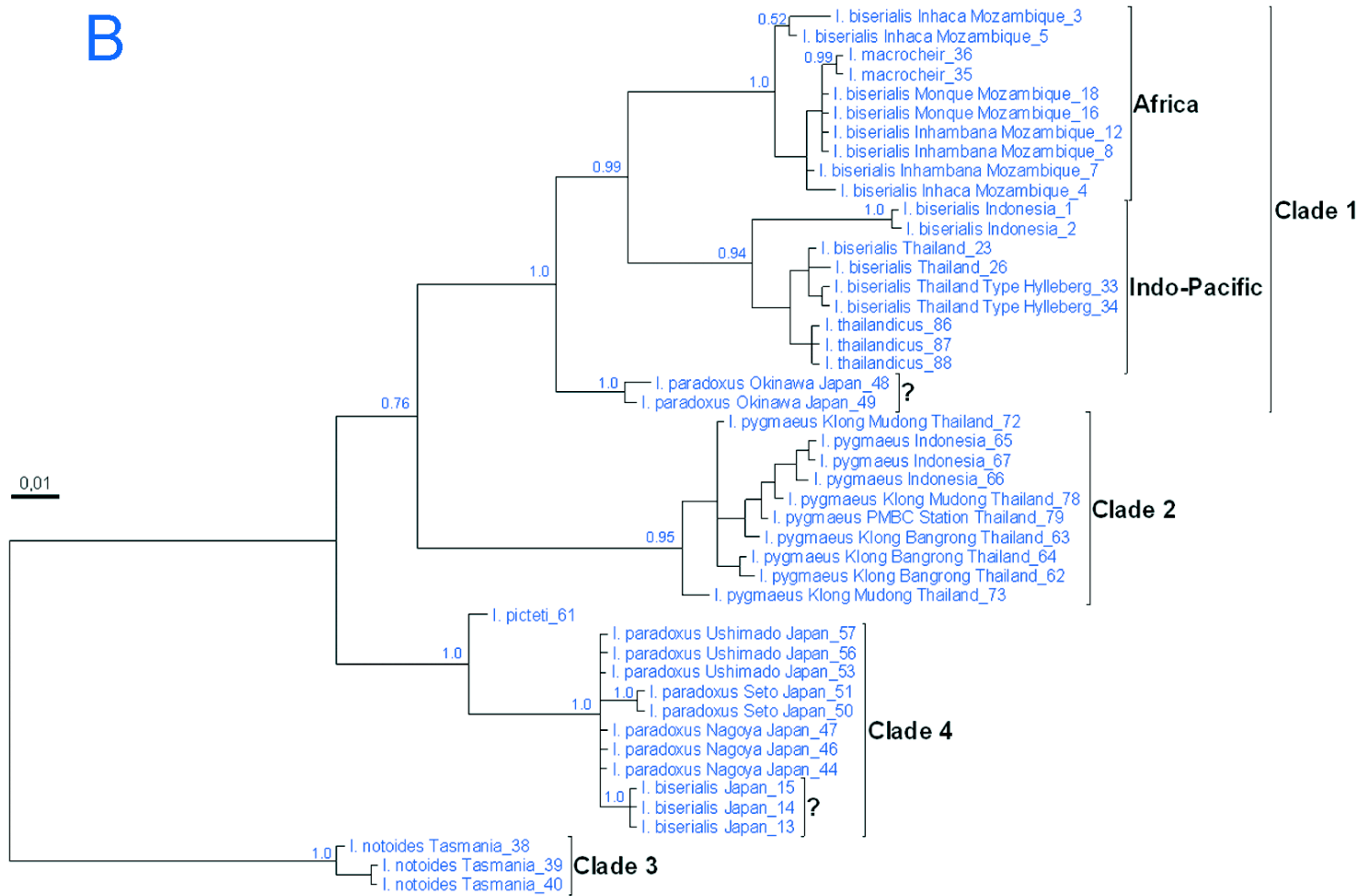
36	<i>I. macrocheir</i>	Voss (1962)	EF680147	EF684979	EU008974	EU009057
37	<i>I. notooides</i>	Tasmania, Australia	EF680148	EF684980	EU008975	EU009058
38	<i>I. notooides</i>	Tasmania, Australia	EF680149	EF684981	EU008976	EU009059
39	<i>I. notooides</i>	Tasmania, Australia	EF680150	EF684982	EU008977	EU009061
40	<i>I. notooides</i>	Tasmania, Australia	EF680151	EF684984	EU008978	EU009063
41	<i>I. paradoxus</i>	Nagoya, Japan	EF680152	EF684985	EU008979	EU009064
42	<i>I. paradoxus</i>	Nagoya, Japan	EF680153	EF684986	EU008980	EU009065
43	<i>I. paradoxus</i>	Nagoya, Japan	EF680154	EF684987	EU008981	EU009066
44	<i>I. paradoxus</i>	Nagoya, Japan	EF680155	EF684988	EU008982	EU009067
45	<i>I. paradoxus</i>	Nagoya, Japan	EF680156	EF684989	EU008983	EU009068
46	<i>I. paradoxus</i>	Nagoya, Japan	EF680157	EF684990	EU008984	EU009069
47	<i>I. paradoxus</i>	Nagoya, Japan	EF680158	EF684991	EU008985	EU009070
48	<i>I. paradoxus</i>	Okinawa Island, Japan	EF680160	EF684993	EU008986	EU009072
49	<i>I. paradoxus</i>	Okinawa Island, Japan	EF680161	EF684994	EU008987	EU009073
50	<i>I. paradoxus</i>	Seto Inland Sea, Japan	EF680162	EF684995	EU008988	EU009074
51	<i>I. paradoxus</i>	Seto Inland Sea, Japan	EF680163	EF684996	EU008989	EU009075
52	<i>I. paradoxus</i>	Ushimado, Japan	EF680164	EF684998	EU008990	EU009076
53	<i>I. paradoxus</i>	Ushimado, Japan	EF680165	EF684999	EU008991	EU009077
54	<i>I. paradoxus</i>	Ushimado, Japan	EF680166	EF685000	EU008992	EU009078
55	<i>I. paradoxus</i>	Ushimado, Japan	EF680167	EF685001	EU008993	EU009079
56	<i>I. paradoxus</i>	Ushimado, Japan	EF680168	EF685002	EU008994	EU009080
57	<i>I. paradoxus</i>	Ushimado, Japan	EF680169	EF685003	EU008995	EU009081
58	<i>I. paradoxus</i>	Ushimado, Japan	EF680170	EF685004	EU008996	EU009082
59	<i>I. paradoxus</i>	Ushimado, Japan	EF680171	EF684997	EU008997	EU009083
60	<i>I. paradoxus</i>	Okinawa Island, Japan	-	EF684992	-	EU009071
61	<i>I. picteti</i>	Joubin (1894)	EF680172	EF685011	EU008998	EU009084
62	<i>I. pygmaeus</i>	Klong Bangrong, Phuket Island, Thailand	EF680173	EF685012	EU008999	EU009085
63	<i>I. pygmaeus</i>	Klong Bangrong, Phuket Island, Thailand	EF680174	EF685013	EU009000	EU009086
64	<i>I. pygmaeus</i>	Klong Bangrong, Phuket Island, Thailand	EF680175	EF685014	EU009001	EU009087
65	<i>I. pygmaeus</i>	Lombok Island, Indonesia	EF680176	EF685016	EU009002	EU009089
66	<i>I. pygmaeus</i>	Lombok Island, Indonesia	EF680177	EF685017	EU009003	EU009090
67	<i>I. pygmaeus</i>	Lombok Island, Indonesia	EF680178	EF685018	EU009004	EU009091
68	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680179	EF685019	EU009005	EU009092
69	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680180	EF685020	EU009006	EU009093
70	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680181	EF685021	-	EU009095
71	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680182	EF685006	EU009007	EU009096
72	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680183	EF685007	EU009008	EU009097
73	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680184	EF685008	EU009009	EU009098
74	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680185	EF685022	EU009010	EU009099

75	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680186	EF685023	EU009012	EU009101
76	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680187	EF685024	EU009013	EU009102
77	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680188	EF685010	EU009014	EU009103
78	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	EF680189	EF685025	EU009015	EU009104
79	<i>I. pygmaeus</i>	PMBC, Phuket Island, Thailand	EF680190	EF685026	EU009016	EU009105
80	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	-	EF685005	-	EU009094
81	<i>I. pygmaeus</i>	Klong Mudong, Phuket Island, Thailand	-	EF685009	EU009011	EU009100
82	<i>I. pygmaeus</i>	Lombok Island, Indonesia	-	EF685015	-	EU009088
83	<i>I. thailandicus</i>	Rayong, Thailand	EF680191	EF685027	EU009017	EU009106
84	<i>I. thailandicus</i>	Rayong, Thailand	EF680192	EF685028	EU009018	EU009107
85	<i>I. thailandicus</i>	Rayong, Thailand	EF680193	EF685029	EU009019	EU009108
86	<i>I. thailandicus</i>	Rayong, Thailand	EF680194	EF685030	EU009020	EU009109
87	<i>I. thailandicus</i>	Rayong, Thailand	EF680195	EF685031	EU009021	EU009110
88	<i>I. thailandicus</i>	Rayong, Thailand	EF680196	EF685032	EU009022	EU009111

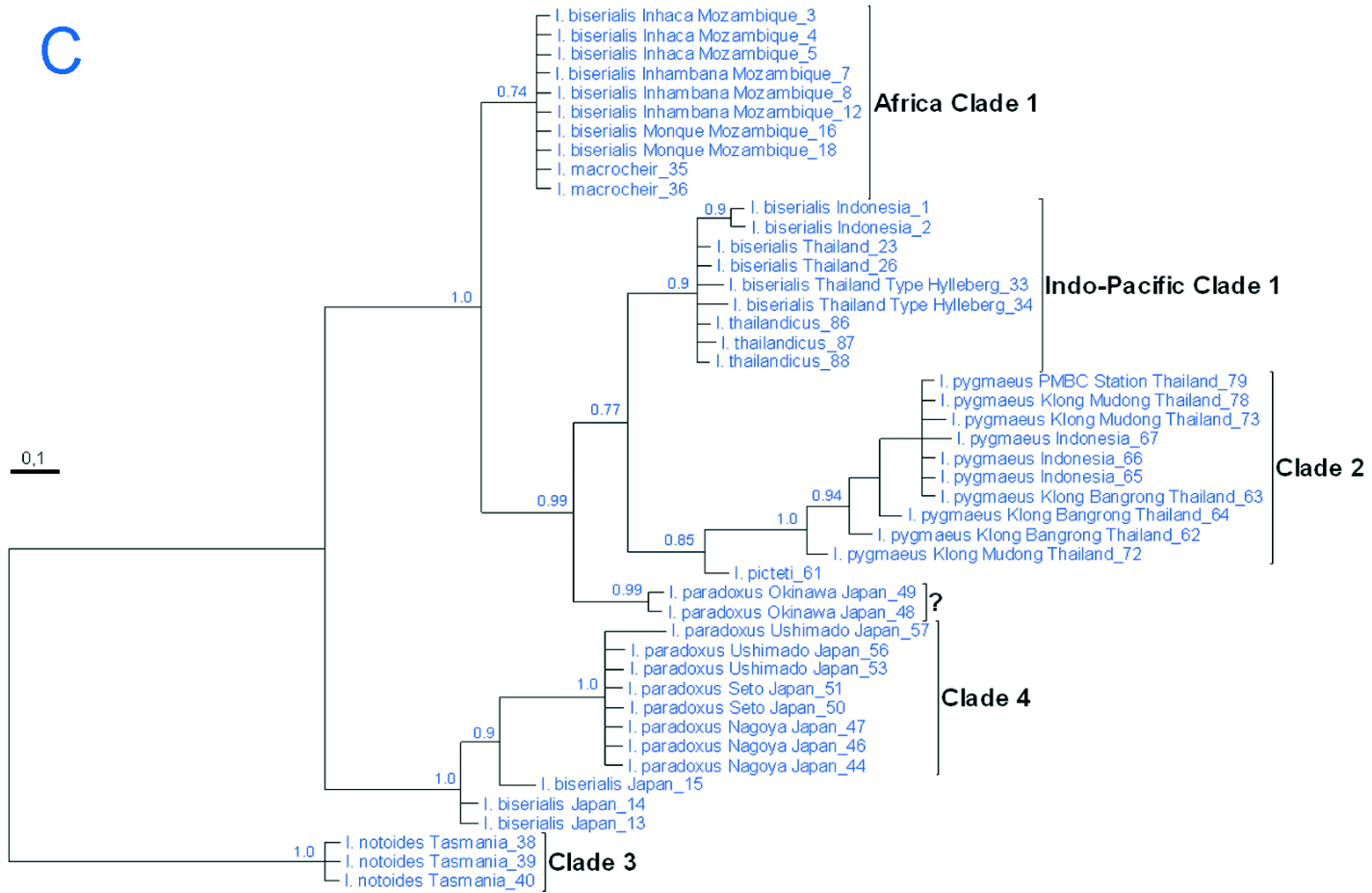
Fig. S1. *Idiosepius* spp. Bayesian analysis of the individual genes: (A) 16S; (B) COIII; (C) 12S and (D) COI. While with the 16S and COIII analysis the 4 clades are well separated by species, the 12S and COI analysis divides the genus geographically (Africa, Indo-Pacific, Japan, Tasmania). Scale bar: average number of substitutions per site



B



C



D

