

Annotated Checklist of Marine Fishes from Phuket and Ranong, Thailand

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Abstract.— Fishes of the Andaman Sea, Thailand, was taxonomically researched based on specimens collected at Phuket and Ranong in a joint survey conducted by the National Science Museum, Thailand, Hokkaido University Museum and Faculty of Fisheries Sciences, Hokkaido University on 21 to 23 April 2011. As the result of the joint survey, 144 species belonging to 13 orders, 56 families and 100 genera were recognized. Of them, platycephalid *Gammoplites knappi* Imamura and Amaoka, 1994 and pinguipedids *Parapercis filamentosa* (Steindachner, 1879) were recorded from the Andaman Sea for the first time.

KEY WORDS: Fishes, Phuket, Ranong, Andaman Sea, first record

INTRODUCTION

The Andaman Sea coast of southern Thailand is located in the east end of the Indian Ocean, where is jointed between the eastern Indian and the western Pacific oceans, with a coastline approximately 865 km and area about 116,280 km². There are six provinces along the coast, Ranong, Phang-Nga, Phuket, Krabi, Trang, and Satun. The coast has a narrow continental shelf and deepens offshore, whereas its inshore comprises mangroves and sea grasses. The bottoms are varied with sand, mud and coral reefs. The water current in nearshore is generally influenced by two

monsoon period: southwest monsoon between May to early October and the northeast monsoon from mid October to February (Panjarat, 2008). The region shows high species diversity of the marine fish fauna and high fishery productivity because of its location at the junction of the two oceans and having variable habitats (Kimura and Satapoomin, 2009; Satapoomin, 2011). This abundance of fish resources is very significant in economic growth of local fisheries and social development of southern Thailand.

Very few studies have been made on the taxonomy of marine fishes in the Andaman Sea coast of Thailand. The first marine fish studies were done in the early 20th century.

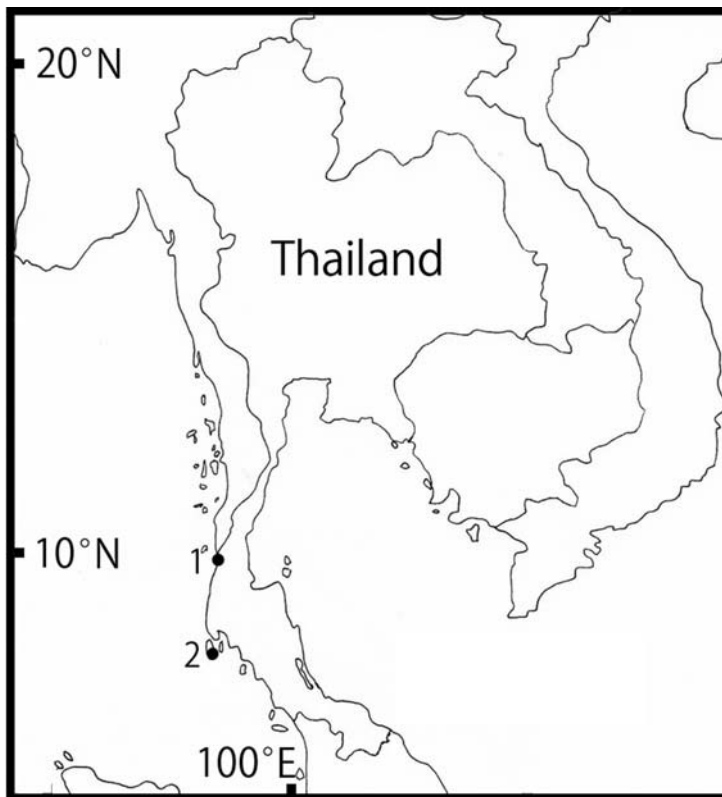


FIGURE1. Sampling localities in Thailand. 1, Ranong; 2, Phuket.

Smith (1931) was first to describe a reef goby, *Pipidonia quinquecincta*, from a tidal area on Ko Phi Phi Don, the largest island of the Phi Phi islands, located south of Phuket. In his later publication "The fresh-water fishes of Siam, or Thailand", he also recorded a gudgeon goby, *Ptereleotris microlepis*, collected from Ko Phi Phi Don (Smith, 1945). Fowler (1939) reported fishes from Krabi based on specimens of Mr. Rodolphe M. de Schauensee's collections, of which there are 63 species of marine fishes in 33 families. Subsequently, Monkolprasit and Sontirat (1980) recorded 184 species of coral reef fishes in 24 families from Phuket. Satapoomin and Poovachiranon (1997) listed 280 species of fish fauna in 75 families from mangroves

and seagrass beds in the Andaman Sea coast of Thailand. Currently, Kimura *et al.* (2009) described 778 species of marine fishes in 106 families and Satapoomin (2011) has updated list of marine fishes to 1,746 species in 198 families known from the region.

On 21 to 23 April 2011, the National Science Museum, Thailand (NSM), Hokkaido University Museum (HUMZ) and Faculty of Fisheries Sciences, Hokkaido University conducted a joint survey at Phuket and Ranong, coast of the Andaman Sea, Thailand (Fig. 1). As the result of our joint survey, 144 species belonging to 13 orders, 56 families and 100 genera were recognized. This study lists these species and provides comments on the platycephalid

Grammoplites knappi Imamura and Amaoka, 1994 and the pinguipedid *Parapercis filamentosa* (Steindachner, 1879) recorded from the Andaman Sea for the first time.

MATERIALS AND METHODS

Fishes were collected from the Phuket Fish Market (Fig. 2) on 21st and 22nd April 2011 and Ranong Fish Market (Fig. 3) on 23rd April 2011. All specimens are deposited in the Hokkaido University Museum, Hakodate, Japan (HUMZ). Collection data for fishes shows locality followed by date in parentheses.

Systematic arrangements follow Nelson (2006); standard length (SL) follows Hubbs and Lagler (1958) for most fishes; total length (TL) follows Compagno (2001) for Sphyrnidae; Ishiyama and Hubbs (1968) for Rhinobatidae; Compagno and Roberts (1984) for Dasyatidae; and Böhlke (1989) for the Anguilliformes.

SPECIES LIST

Class Chondrichthyes

Subclass Elasmobranchii

Order Carcharhiniformes

Family Sphyrnidae

Sphyrna lewini (Griffith and Smith, 1834) (1 specimen): HUMZ 211422, 472.0 mm TL, Phuket (21).



FIGURE 2. Phuket Fish Market.



FIGURE 3. Ranong Fish Market.

Order Rajiformes

Family Rhinobatidae

Rhinobatos sp. (4 specimens): HUMZ 211449, 136.0 mm TL, HUMZ 211461, 143.0 mm TL, HUMZ 211484, 143.0 mm TL, HUMZ 214854, 460.0 mm TL, Phuket (21).

Order Myliobatiformes

Family Dasyatidae

Himantura walga (Müller and Henle, 1841) (1 specimen): HUMZ 214852, 355.0 mm TL, Phuket (21).

Neotrygon kuhlii (Müller and Henle, 1841) (3 specimens): HUMZ 211450, 335.0 mm TL, HUMZ 214853, 379.0 mm TL, Phuket (21); HUMZ 211532, 308.0 mm TL, Ranong (23).

Class Actinopterygii

Order Anguilliformes

Family Muraenidae

Gymnothorax annulatus Smith and Böhlke, 1997 (1 specimen): HUMZ 211458, 305.0 mm TL, Phuket (21).

Family Congridae

Gnathophis sp. (1 specimen): HUMZ 212477, 172.0 mm TL, Phuket (21).

Family Muraenesocidae

Muraenesox cinereus (Forsskål, 1775) (2 specimens): HUMZ 211427, 610.0 mm TL, Phuket (21); HUMZ 212319, 436.0 mm TL, Ranong (23).

Order Clupeiformes

Family Engraulidae

Stolephorus dubiosus Wongratana, 1983 (1 specimen): HUMZ 211457, 113.0 mm SL, Phuket (21).

Family Chirocentridae

Chirocentrus dorab (Forsskål, 1775) (1 specimen): HUMZ 214851, 326.0 mm SL, Phuket (22).

Order Siluriformes

Family Plotosidae

Plotosus lineatus (Thunberg, 1787) (2 specimens): HUMZ 212335, 103.0 mm SL, Ranong (23); HUMZ 212476, 93.9 mm SL, Phuket (22).

Order Aulopiformes

Family Synodontidae

Saurida macrolepis Tanaka, 1917 (3 specimens): HUMZ 211466, 155.0 mm SL, Ranong (23); HUMZ 211822, 183.5 mm SL, HUMZ 211915, 169.0 mm SL, Phuket (21).

Saurida nebulosa Valenciennes, 1850 (1 specimen): HUMZ 211536, 117.0 mm SL, Ranong (23).

Saurida tumbil (Bloch, 1795) (3 specimens): HUMZ 212332, 141.0 mm SL, HUMZ 212393, 149.0 mm SL, HUMZ 212394, 121.0 mm SL, Ranong (23).

Trachinocephalus myops (Forster, 1801) (3 specimens): HUMZ 211376, 201.0 mm SL, HUMZ 211438, 121.0 mm SL, HUMZ 211483, 144.0 mm SL, Phuket (21).

Order Gadiformes

Family Bregmacerotidae

Bregmaceros maclellandi Thompson, 1840 (1 specimen): HUMZ 214342, 67.5 mm SL, Phuket (22).

Bregmaceros pseudolanceolatus Torii, Javonillo and Ozawa, 2003 (1 specimen): HUMZ 212485, 69.3 mm SL, Phuket (22).

Bregmaceros sp. (6 specimens): HUMZ 211460, 66.0 mm SL, HUMZ 211906, 50.7 mm SL, HUMZ 211907, 48.3 mm SL, Phuket (21); HUMZ 212486, 38.5 mm SL, HUMZ 212487, 34.6 mm SL, HUMZ 212488, 32.3 mm SL, Phuket (22).

Order Gasterosteiformes

Family Fistulariidae

Fistularia petimba Lacepède, 1803 (4 specimens): HUMZ 211451, 269.0 mm SL, HUMZ 211452, 254.0 mm SL, HUMZ 211481, 264.0 mm SL, HUMZ 211917, 137.0 mm SL, Phuket (21).

Order Scorpaeniformes

Family Dactylopteridae

Dactyloptena macracantha (Bleeker, 1854) (3 specimens): HUMZ 211912, 71.7 mm SL, Phuket (21); HUMZ 212483, 77.5 mm SL, HUMZ 212484, 54.7 mm SL, Phuket (22).

Family Scorpaenidae

Pterois russellii Bennet, 1831 (2 specimens): HUMZ 211470, 108.0 mm SL, HUMZ 211836, 116.0 mm SL, Ranong (23).

Family Platycephalidae

Cociella punctata (Cuvier, 1829) (4 specimens): HUMZ 211374, 263.0 mm SL, HUMZ 211420, 290.0 mm SL, HUMZ 211426, 278.0 mm SL, HUMZ 211431, 207.0 mm SL, Phuket (21).

Grammoplites knappi Imamura and Amaoka, 1994 (Fig. 4) (2 specimens): HUMZ 211486, 159.0 mm SL, HUMZ 211824, 171.0 mm SL, Ranong (23).

Remarks. *Grammoplites knappi* has been recorded from Japan, the South China



FIGURE 4. Photograph of *Grammoplits knappi*, HUMZ 211486, 159.0 mm SL, collected from Ranong, Andaman Sea, Thailand.

Sea including Hainan Island, the Gulf of Thailand and Johore Shoals of Malaysia (e.g., Imamura and Amaoka, 1994; Knapp, 1999; Yamakawa and Machida, 2004). This represents the first record of the species from the coast of the Andaman Sea, Thailand.

Inegocia japonica (Cuvier, 1829) (2 specimens): HUMZ 211432, 198.0 mm SL, HUMZ 212348, 160.0 mm SL, Phuket (21).

Kumococius rodericensis (Cuvier, 1829) (1 specimen): HUMZ 212391, 174.0 mm SL, Ranong (23).

Rogadius melanopterus (Knapp and Wongratana, 1987) (12 specimens): HUMZ 211468, 91.8 mm SL, HUMZ 211827, 104.0 mm SL, HUMZ 211828, 110.0 mm SL, HUMZ 211829, 108.0 mm SL, HUMZ 211830, 92.6 mm SL, HUMZ 211839, 94.1 mm SL, HUMZ 211840, 106.0 mm SL, HUMZ 211841, 95.8 mm SL, HUMZ 212329, 93.0 mm SL, HUMZ 212330, 97.2 mm SL, HUMZ 212392, 108.0 mm SL, Ranong (23); HUMZ 211818, 131.0 mm SL, Phuket (21).

Rogadius pristiger (Cuvier, 1829) (26 specimens): HUMZ 211375, 139.0 mm SL, HUMZ 211434, 131.0 mm SL, HUMZ 211435, 153.0 mm SL, HUMZ 211469, 100.0 mm SL, HUMZ 211505, 136.0 mm SL, HUMZ 211506, 132.0 mm SL, HUMZ

211507, 137.0 mm SL, HUMZ 211508, 137.0 mm SL, HUMZ 211509, 151.0 mm SL, HUMZ 211510, 163.0 mm SL, HUMZ 211511, 129.0 mm SL, HUMZ 211512, 146.0 mm SL, HUMZ 211513, 96.6 mm SL, HUMZ 211816, 205.0 mm SL, HUMZ 211817, 138.0 mm SL, HUMZ 211883, 112.0 mm SL, HUMZ 211884, 100.0 mm SL, HUMZ 211885, 127.0 mm SL, HUMZ 211886, 64.3 mm SL, HUMZ 211887, 66.6 mm SL, HUMZ 212349, 134.0 mm SL, HUMZ 212350, 110.0 mm SL, HUMZ 212517, 149.0 mm SL, Phuket (21); HUMZ 211538, 122.0 mm SL, HUMZ 211825, 136.0 mm SL, HUMZ 212328, 103.0 mm SL, Ranong (23).

Rogadius serratus (Cuvier, 1829) (3 specimens): HUMZ 211433, 158.0 mm SL, HUMZ 211814, 149.0 mm SL, HUMZ 212302, 154.0 mm SL, Phuket (21).

Rogadius tuberculatus (Cuvier, 1829) (2 specimens): HUMZ 211539, 94.8 mm SL, Ranong (23); HUMZ 211882, 87.7 mm SL, Phuket (21).

Suggrundus macracanthus (Bleeker, 1869) (7 specimens): HUMZ 211467, 131.0 mm SL, HUMZ 211826, 121.0 mm SL, HUMZ 211842, 110.0 mm SL, HUMZ 211843, 95.5 mm SL, HUMZ 212308, 108.0 mm SL, HUMZ 212327, 131.0 mm

SL, HUMZ 212452, 145.0 mm SL, Ranong (23).

Thysanophrys chiltonae Schultz, 1966 (4 specimens): HUMZ 211453, 170.0 mm SL, HUMZ 211482, 172.0 mm SL, HUMZ 211815, 177.0 mm SL, HUMZ 212347, 172.0 mm SL, Phuket (21).

Order Perciformes

Family Serranidae

Cephalopholis boenak Bloch, 1790 (1 specimen): HUMZ 211533, 115.0 mm SL, Ranong (23).

Epinephelus areolatus (Forsskål, 1775) (2 specimens): HUMZ 211448, 117.0 mm SL, HUMZ 212360, 103.0 mm SL, Phuket (21).

Epinephelus heniochus Fowler, 1904 (1 specimen): HUMZ 212399, 102.0 mm SL, Ranong (23).

Epinephelus quoyanus (Valenciennes, 1830) (1 specimen): HUMZ 212474, 87.8 mm SL, Phuket (22).

Epinephelus sexfasciatus (Valenciennes, 1828) (2 specimens): HUMZ 212344, 136.0 mm SL, HUMZ 212475, 106.0 mm SL, Phuket (22).

Family Priacanthidae

Priacanthus tayenus Richardson, 1846 (4 specimens): HUMZ 211459, 105.0 mm SL, HUMZ 211502, 108.0 mm SL, HUMZ 212523, 106.0 mm SL, HUMZ 212524, 106.0 mm SL, Phuket (21).

Family Apogonidae

Apogonichthyoides umbratilis Fraser and Allen, 2010 (1 specimen): HUMZ 212325, 34.0 mm SL, Ranong (23).

Archamia buruensis (Bleeker, 1856) (1 specimen): HUMZ 211900, 49.2 mm SL, Phuket (21).

Cheilodipterus macrodon (Lacepède, 1802) (1 specimen): HUMZ 214343, 148.0 mm SL, Phuket (22).

Ostorhinchus bryx (Fraser, 1998) (1 specimen): HUMZ 211902, 34.5 mm SL, Phuket (21).

Rhabdamia gracilis (Bleeker, 1856) (1 specimen): HUMZ 211899, 52.5 mm SL, Phuket (21).

Siphamia tubifer Weber, 1909 (1 specimen): HUMZ 212509, 34.0 mm SL, Phuket (22).

Family Sillaginidae

Sillago aeolus Jordan and Evermann, 1902 (2 specimens): HUMZ 211819, 180.0 mm SL, HUMZ 212519, 142.0 mm SL, Phuket (21).

Sillago intermedius Wongratana, 1977 (3 specimens): HUMZ 211910, 164.0 mm SL, HUMZ 212355, 163.0 mm SL, Phuket (21); HUMZ 212478, 109.0 mm SL, Phuket (22).

Sillago lutea McKay, 1985 (1 specimen): HUMZ 212356, 137.0 mm SL, Phuket (21).

Sillago sihama (Forsskål, 1775) (1 specimen): HUMZ 212333, 119.0 mm SL, Ranong (23).

Family Rachycentridae

Rachycentron canadum (Linnaeus, 1766) (2 specimens): HUMZ 211480, 217.0 mm SL, HUMZ 212301, 183.0 mm SL, Phuket (21).

Family Carangidae

Alectis ciliaris (Bloch, 1787) (3 specimens): HUMZ 212343, 136.0 mm SL, HUMZ 212492, 126.0 mm SL, HUMZ 214335, 152.0 mm SL, Phuket (22).

Alepes djedaba (Forsskål, 1775) (1 specimen): HUMZ 214336, 158.0 mm SL, Phuket (22).

Atule mate (Cuvier, 1833) (1 specimen): HUMZ 211534, 140.0 mm SL, Ranong (23).

Carangoides caeruleopinnatus (Rüppell, 1830) (3 specimens): HUMZ 211444, 144.0 mm SL, HUMZ 211445, 104.0 mm SL, Phuket (21); HUMZ 211535, 103.0 mm SL, Ranong (23).

Carangoides talamparoides Bleeker, 1852 (1 specimen): HUMZ 211847, 94.5 mm SL, Ranong (23).

Decapterus russelli (Rüppell, 1830) (1 specimen): HUMZ 212306, 138.0 mm SL, Phuket (21).

Megalaspis cordyla (Linnaeus, 1758) (2 specimens): HUMZ 211488, 163.0 mm SL, HUMZ 211831, 164.0 mm SL, Ranong (23).

Parastromateus niger (Bloch, 1795) (1 specimen): HUMZ 212569, 202.0 mm SL, Phuket (21).

Selar crumenophthalmus (Bloch, 1793) (1 specimen): HUMZ 212339, 148.0 mm SL, Ranong (23).

Selaroides leptolepis (Cuvier, 1833) (2 specimens): HUMZ 211456, 109.0 mm SL, Phuket (21). HUMZ 211846, 129.0 mm SL, Ranong (23).

Seriolina nigrofasciata (Rüppell, 1829) (4 specimens): HUMZ 211429, 272.0 mm SL, HUMZ 211485, 116.0 mm SL, HUMZ 212305, 146.0 mm SL, HUMZ 212357, 167.0 mm SL, Phuket (21).

Uraspis uraspis (Günther, 1860) (2 specimens): HUMZ 211832, 107.0 mm SL, HUMZ 214333, 135.0 mm SL, Ranong (23).

Family Leiognathidae

Equulites oblongus (Valenciennes, 1835) (5 specimens): HUMZ 211895, 43.0 mm SL, Phuket (21); HUMZ 212489, 32.2 mm SL, HUMZ 212323, 47.8 mm SL, HUMZ 212510, 26.1 mm SL, HUMZ 214341, 42.5 mm SL, Phuket (22).

Equulites stercorarius (Evermann and Seale, 1907) (2 specimens): HUMZ 212323,

58.9 mm SL, Ranong (23); HUMZ 212508, 54.0 mm SL, Phuket (22).

Gazza minuta (Bloch, 1795) (1 specimen): HUMZ 211894, 110.0 mm SL, Phuket (21).

Karalla daura (Cuvier, 1829) (2 specimens): HUMZ 211493, 77.1 mm SL, HUMZ 214339, 64.2 mm SL, Phuket (22).

Leiognathus equulus (Forssskål, 1775) (1 specimen): HUMZ 211893, 122.0 mm SL, Phuket (21).

Nuchequula blochii (Valenciennes, 1835) (2 specimens): HUMZ 212312, 22.5 mm SL, Ranong (23); HUMZ 212491, 32.8 mm SL, Phuket (22).

Nuchequula gerreoides (Bleeker, 1851) (1 specimen): HUMZ 212307, 28.4 mm SL, Phuket (21).

Family Lutjanidae

Lutjanus lutjanus Bloch, 1790 (10 specimens): HUMZ 211504, 110.0 mm SL, HUMZ 211920, 87.5 mm SL, HUMZ 212364, 111.0 mm SL, HUMZ 212365, 64.4 mm SL, Phuket (21); HUMZ 211499, 106.0 mm SL, HUMZ 212507, 73.3 mm SL, HUMZ 214340, 78.1 mm SL, Phuket (22). HUMZ 211474, 95.4 mm SL, HUMZ 211851, 86.9 mm SL, HUMZ 212324, 80.1 mm SL, Ranong (23).

Lutjanus madras (Valenciennes, 1831) (1 specimen): HUMZ 212342, 127.0 mm SL, Phuket (22).

Lutjanus malabaricus (Bloch and Schneider, 1801) (3 specimens): HUMZ 211473, 134.0 mm SL, HUMZ 212318, 122.0 mm SL, HUMZ 212400, 108.0 mm SL, Ranong (23).

Lutjanus quinquelineatus (Bloch, 1790) (3 specimens): HUMZ 212402, 91.3 mm SL, Ranong (23); HUMZ 214844, 113.0 mm SL, HUMZ 214849, 128.0 mm SL, Phuket (22).

Lutjanus sebae (Cuvier, 1816) (2 specimens): HUMZ 211838, 94.6 mm SL, HUMZ 214332, 168.0 mm SL, Ranong (23).

Pristipomoides multidens (Day, 1871) (1 specimen): HUMZ 211823, 139.0 mm SL, Phuket (21).

Pristipomoides typus Bleeker, 1852 (1 specimen): HUMZ 211850, 119.0 mm SL, Ranong (23).

Family Caesionidae

Dipterygonotus balteatus (Valenciennes, 1830) (11 specimens): HUMZ 211384, 81.2 mm SL, HUMZ 211888, 81.5 mm SL, HUMZ 211889, 75.2 mm SL, HUMZ 211890, 73.5 mm SL, HUMZ 211892, 63.7 mm SL, HUMZ 211921, 63.7 mm SL, HUMZ 212366, 83.4 mm SL, HUMZ 212367, 92.8 mm SL, HUMZ 212368, 76.1 mm SL, Phuket (21); HUMZ 212499, 69.9 mm SL, HUMZ 212500, 68.8 mm SL, Phuket (22).

Pterocaesio chrysozona (Cuvier, 1830) (3 specimens): HUMZ 212496, 99.1 mm SL, HUMZ 212497, 102.0 mm SL, HUMZ 212498, 92.9 mm SL, Phuket (22).

Family Gerreidae

Gerres filamentosus Cuvier, 1829 (1 specimen): HUMZ 211837, 147.0 mm SL, Ranong (23).

Gerres oblongus Cuvier, 1830 (1 specimen): HUMZ 212401, 97.9 mm SL, Ranong (23).

Family Haemulidae

Diagramma pictum pictum (Thunberg, 1792) (1 specimen): HUMZ 212522, 142.0 mm SL, Phuket (21).

Pomadasys maculatus (Bloch, 1793) (3 specimens): HUMZ 212320, 99.0 mm SL, HUMZ 212321, 92.9 mm SL, HUMZ 212396, 135.0 mm SL, Ranong (23).

Family Lethrinidae

Gymnocranius elongatus Senta, 1973 (2 specimens): HUMZ 211492, 114.0 mm SL, Ranong (23); HUMZ 212363, 102.0 mm SL, Phuket (21).

Lethrinus obsoletus (Forsskal, 1775) (1 specimen): HUMZ 214845, 136.0 mm SL, Phuket (22).

Lethrinus olivaceus Valenciennes, 1830 (1 specimen): HUMZ 212362, 117.0 mm SL, Phuket (21).

Family Nemipteridae

Nemipterus balinensoides (Popta, 1918) (2 specimens): HUMZ 212504, 64.8 mm SL, HUMZ 212505, 55.5 mm SL, Phuket (22).

Nemipterus peronii (Valenciennes, 1830) (1 specimen): HUMZ 212303, 153.0 mm SL, Phuket (21).

Nemipterus zysron (Bleeker, 1856) (1 specimen): HUMZ 211381, 101.0 mm SL, Phuket (21).

Parascolopsis aspinosa (Rao and Rao, 1981) (1 specimen): HUMZ 212495, 147.0 mm SL, Phuket (22).

Scolopsis aurata (Park, 1797) (1 specimen): HUMZ 212525, 177.0 mm SL, Phuket (21).

Family Sciaenidae

Johnius amblycephalus (Bleeker, 1855) (1 specimen): HUMZ 211911, 163.0 mm SL, Phuket (21).

Johnius borneensis (Bleeker, 1851) (1 specimen): HUMZ 211849, 133.0 mm SL, Ranong (23).

Johnius carouna (Cuvier, 1830) (1 specimen): HUMZ 211447, 150.0 mm SL, Phuket (21).

Johnius carutta Bloch, 1793 (1 specimen): HUMZ 211436, 186.0 mm SL, Phuket (21).

Johnius plagiosoma (Bleeker, 1849) (2 specimens): HUMZ 212336, 106.0 mm SL, HUMZ 212337, 95.6 mm SL, Ranong (23).

Family Mullidae

Parupeneus heptacanthus (Lacepède, 1802) (3 specimens): HUMZ 211377, 170.0 mm SL, HUMZ 211503, 111.0 mm SL, Phuket (21); HUMZ 211442, 87.3 mm SL, Ranong (23).

Upeneus moluccensis (Bleeker, 1855) (4 specimens): HUMZ 211443, 113.0 mm SL, HUMZ 211820, 124.0 mm SL, HUMZ 212351, 106.0 mm SL, HUMZ 212352, 109.0 mm SL, Phuket (21).

Upeneus tragula Richardson, 1846 (7 specimens): HUMZ 211378, 179.0 mm SL, HUMZ 211821, 128.0 mm SL, HUMZ 211913, 70.0 mm SL, HUMZ 212304, 106.0 mm SL, HUMZ 212353, 93.9 mm SL, HUMZ 212354, 68.2 mm SL, Phuket (21); HUMZ 214337, 148.0 mm SL, Phuket (22).

Family Pempheridae

Parapriacanthus ransonneti Steindachner, 1870 (6 specimens): HUMZ 211896, 54.8 mm SL, HUMZ 211897, 55.9 mm SL, HUMZ 211898, 40.3 mm SL, HUMZ 211901, 44.8 mm SL, Phuket (21); HUMZ 212505, 48.0 mm SL, HUMZ 212506, 56.4 mm SL, Phuket (22).

Family Pomacanthidae

Pomacanthus imperator (Bloch, 1787) (1 specimen): HUMZ 212568, 221.0 mm SL, Phuket (21).

Family Teraponidae

Terapon jarbua (Forsskal, 1775) (2 specimens): HUMZ 211495, 138.0 mm SL, Phuket (22); HUMZ 211833, 115.0 mm SL, Ranong (23).

Family Pomacentridae

Chromis alpha Randall, 1988 (1 specimen): HUMZ 211489, 116.0 mm SL, Ranong (23).

Family Champsodontidae

Champsodon vorax Günther, 1867 (3 specimens): HUMZ 211903, 55.2 mm SL, HUMZ 211904, 42.1 mm SL, HUMZ 211905, 37.1 mm SL, Phuket (21).

Family Pinguipedidae

Parapercis alboguttata (Günther, 1872) (8 specimens): HUMZ 211437, 155.0 mm SL, HUMZ 211441, 198.0 mm SL, HUMZ 211454, 138.0 mm SL, HUMZ 211501, 167.0 mm SL, Phuket (21); HUMZ 211471, 148.0 mm SL, HUMZ 211472, 133.0 mm SL, HUMZ 211835, 159.0 mm SL, HUMZ 212315, 128.0 mm SL, Ranong (23).

Parapercis maculata (Bloch and Schneider, 1801) (1 specimen): HUMZ 211834, 110.0 mm SL, Ranong (23).

Parapercis filamentosa (Steindachner, 1878) (Fig. 5) (1 specimen): HUMZ 212331, 81.5 mm SL, Ranong (23).

Remarks. *Parapercis filamentosa* was formerly regarded to be distinguishable from other pinguipedid species by having remarkably elongated soft dorsal fin rays (e.g., Cantwell, 1964; Randall, 2001). Although the dorsal soft fin rays on this specimen are not elongate, this specimen has the following characters common with *P. filamentosa*: palatine teeth absent; the third dorsal fin spine longest; the membrane from the fifth dorsal fin spine connected to the first soft dorsal fin ray near its base; V-shaped dark markings present on the dorsal side of body; the pelvic fin and posteroventral margin of the caudal fin blackish (Kyushin et al., 1982; Randall, 2001). Thus, we identified the specimen as



FIGURE 5. Photograph of *Parapercis filamentosa*, HUMZ 212331, 81.5 mm SL, collected from Ranong, Andaman Sea, Thailand.

P. filamentosa and inferred that the elongation of the dorsal soft fin rays occurs with the growth.

Parapercis filamentosa has been recorded from off Hainan Island, China, off Nha Trang, Vietnam and off Terengganu, Malaysia, and Java, Indonesia (e.g., Randall, 2001; Prokofiev, 2008; Imamura, 2011). The present specimen represents the first record of this species from the Andaman coast of Thailand.

Family Uranoscopidae

Uranoscopus oligolepis Bleeker, 1878 (7 specimens): HUMZ 211465, 130.0 mm SL, HUMZ 212309, 133.0 mm SL, HUMZ 212310, 103.0 mm SL, HUMZ 212564, 98.4 mm SL, HUMZ 212565, 119.0 mm SL, HUMZ 212566, 165.0 mm SL, HUMZ 212567, 167.0 mm SL, Ranong (23).

Family Blenniidae

Xiphasia setifer Swainson, 1839 (2 specimens): HUMZ 211439, 307.0 mm SL, HUMZ 211455, 365.0 mm SL, Phuket (21).

Family Callionymidae

Callionymus enneactis Bleeker, 1879 (2 specimens): HUMZ 211909, 29.1 mm SL, Phuket (21); HUMZ 212480, 38.4 mm SL, Phuket (22).

Callionymus filamentosus Valenciennes, 1837 (4 specimens): HUMZ 211908, 54.6 mm SL, Phuket (21); HUMZ 212479, 84.4 mm SL, HUMZ 212481, 45.4 mm SL, HUMZ 212482, 55.0 mm SL, Phuket (22).

Dactylopus dactylopus (Valenciennes, 1837) (1 specimen): HUMZ 214338, 59.3 mm SL, Phuket (22).

Family Xenisthmidae

Xenisthmus polyzonatus (Klunzinger, 1871) (2 specimens): HUMZ 211891, 52.6 mm SL, HUMZ 212494, 53.5 mm SL, Phuket (21).

Family Ehippidae

Ehippus orbis (Bloch, 1787) (1 specimen): HUMZ 212322, 97.0 mm SL, Ranong (23).

Family Siganidae

Siganus canaliculatus (Park, 1797) (2 specimens): HUMZ 211446, 137.0 mm SL, Phuket (21); HUMZ 214848, 135.0 mm SL, Phuket (22).

Siganus javus (Linnaeus, 1766) (1 specimen): HUMZ 212454, 162.0 mm SL, Ranong (23).

Family Acanthuridae

Acanthurus dussumieri Valenciennes, 1835 (1 specimen): HUMZ 212453, 167.0 mm SL, Ranong (23).

Acanthurus mata (Cuvier, 1829) (4 specimens): HUMZ 211440, 155.0 mm SL, Phuket (21); HUMZ 211498, 144.0 mm SL, HUMZ 214334, 127.0 mm SL, Phuket (22); HUMZ 211441, 163.0 mm SL, Ranong (23).

Acanthurus nigricauda Duncker and Mohr, 1929 (1 specimen): HUMZ 212369, 208.0 mm SL, Ranong (23).

Naso lopezi Herre, 1927 (1 specimen): HUMZ 211428, 326.0 mm SL, Phuket (21).

Naso thynnoides (Cuvier, 1829) (1 specimen): HUMZ 212518, 171.0 mm SL, Phuket (21).

Naso unicornis (Forsskål, 1775) (1 specimen): HUMZ 214850, 238.0 mm SL, Ranong (23).

Family Sphyracidae

Sphyracis pinguis Günther, 1874 (1 specimen): HUMZ 212395, 140.0 mm SL, Ranong (23).

Sphyracis putnamae Jordan and Seale, 1905 (1 specimen): HUMZ 212340, 200.0 mm SL, Ranong (23).

Family Gempylidae

Thyracoides marleyi Fowler, 1929 (1 specimen): HUMZ 211421, 462.0 mm SL, Phuket (21).

Family Scombridae

Euthynnus affinis (Cantor, 1849) (1 specimen): HUMZ 211430, 322.0 mm SL, Phuket (21).

Gymnosarda unicolor (Rüppell, 1836) (2 specimens): HUMZ 211382, 52.7 mm SL, HUMZ 211383, 58.3 mm SL, Phuket (21).

Rastrelliger faughni Matsui, 1967 (3 specimens): HUMZ 211494, 135.0 mm SL, Phuket (22); HUMZ 211844, 148.0 mm SL, HUMZ 211845, 149.0 mm SL, Ranong (23).

Scomberomorus commerson (Lacepède, 1800) (1 specimen): HUMZ 211914, 54.7 mm SL, Phuket (21).

Scomberomorus guttatus (Bloch and Schneider, 1801) (2 specimens): HUMZ 211500, 227.0 mm SL, HUMZ 212520, 201.0 mm SL, Phuket (21).

Order Pleuronectiformes

Family Psettodidae

Psettodes erumei (Bloch and Schneider, 1801) (2 specimens): HUMZ 211916, 213.0 mm SL, Phuket (21); HUMZ 212341, 158.0 mm SL, Ranong (23).

Family Citharidae

Brachypleura novaezeelandiae Günther, 1862 (1 specimen): HUMZ 212493, 79.7 mm SL, Phuket (22).

Family Paralichthyidae

Pseudorhombus argus Weber, 1913 (1 specimen): HUMZ 212398, 136.0 mm SL, Ranong (23).

Pseudorhombus arsius (Hamilton, 1822) (2 specimens): HUMZ 214843, 180.0 mm SL, HUMZ 214847, 236.0 mm SL, Phuket (22).

Family Bothidae

Engyprosopon grandisquama (Temminck and Schlegel, 1846) (2 specimens): HUMZ 211463, 60.6 mm SL, Phuket (21); HUMZ 211537, 59.4 mm SL, Ranong (23).

Engyprosopon maldivensis (Regan, 1908) (5 specimens): HUMZ 211379, 77.3 mm SL, HUMZ 211497, 80.0 mm SL, HUMZ 211918, 42.2 mm SL, HUMZ

212358, 47.2 mm SL, Phuket (21); HUMZ 212359, 68.8 mm SL, Phuket (22).

Engyprosopon mozambiquensis Hensley, 2003 (1 specimen): HUMZ 211462, 46.1 mm SL, Phuket (21).

Family Samaridae

Samaris cristatus Gray, 1831 (2 specimens): HUMZ 211919, 41.1 mm SL, Phuket (21); HUMZ 214846, 129.0 mm SL, Phuket (22).

Family Soleidae

Aseraggodes satapoomini Randall and Desoutter-Meniger, 2007 (1 specimen): HUMZ 212334, 66.3 mm SL, Ranong (23).

Heteromycteris oculus (Alcock, 1889) (1 specimen): HUMZ 211380, 84.4 mm SL, Phuket (21).

Pardachirus pavoninus (Lacepède, 1802) (1 specimen): HUMZ 212361, 87.2 mm SL, Phuket (21).

Family Cynoglossidae

Cynoglossus cynoglossus (Hamilton, 1822) (5 specimens): HUMZ 211487, 262.0 mm SL, HUMZ 211848, 178.0 mm SL, HUMZ 212314, 173.0 mm SL, HUMZ 212338, 180.0 mm SL, HUMZ 212397, 193.0 mm SL, Ranong (23).

Cynoglossus kopsii (Bleeker, 1851) (1 specimen): HUMZ 212313, 91.5 mm SL, Ranong (23).

Order Tetraodontiformes

Family Balistidae

Abalistes stellaris (Bloch and Schneider, 1801) (3 specimens): HUMZ 211464, 202.0 mm SL, HUMZ 212521, 179.0 mm SL, Phuket (21); HUMZ 211490, 156.0 mm SL, Ranong (23).

Odonus niger (Rüppell, 1836) (1 specimen): HUMZ 211479, 207.0 mm SL, Phuket (21).

Family Monacanthidae

Acreichthys tomentosus (Linnaeus, 1758) (2 specimens): HUMZ 212346, 171.0 mm SL, HUMZ 212317, 20.9 mm SL, Ranong (23).

Aluterus monoceros (Linnaeus, 1758) (2 specimens): HUMZ 211496, 197.0 mm SL, HUMZ 212346, 171.0 mm SL, Phuket (22).

Family Diodontidae

Cyclichthys orbicularis (Bloch, 1785) (1 specimen): HUMZ 212345, 52.5 mm SL, Phuket (22).

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LITERATURE CITED

- Böhlke, E.B. 1989. Methods and terminology. Pages 1–7 in Böhlke, E. B., ed. Fishes of the western North Atlantic. Part 9, vol. 1. Anguilliformes and Saccopharyngiformes. Mem. I. Sears Foundation for Marine Research Publications, Allen Press, Kansas.
- Cantwell, G.E. 1964. A revision of the genus *Parapercis*, family Mugiloididae. Pacific Science, 18: 239–280.
- Compagno, L.J.V. 2001. FAO species catalogue for fishery purposes. No. 1, vol. 2. Sharks of the world. An annotated and illustrated catalogue of shark species known to date. Vol. 2, bullhead,

- mackerel, and carpet sharks (Heterodontiformes, Lamniformes and Orectolobiformes). FAO, Rome. viii + 269 pp.
- Compagno, L.J.V. and Roberts, T. R. 1984. Marine and freshwater stingrays (Dasyatidae) of West Africa, with description of a new species. *Proceedings of the California Academy of Sciences*, 43: 283–300.
- Fowler, H.W. 1939. Zoological results of the Third de Schauensee Siamese Expedition, part IX. — Additional fishes obtained in 1936. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 91: 39–76.
- Hubbs, C.L. and Lagler, K.F. 1958. Fishes of the Great Lakes region. *Bulletin of the Cranbrook Institution of Science*, No. 26. xi + 213 + 44 pp.
- Ishiyama, R. and Hubbs, C.L. 1968. *Bathyraja*, a genus of Pacific skates (Rajidae) regarded as phylogenetically distinct from the Atlantic genus *Breviraja*. *Copeia*, 1968: 407–410.
- Imamura, H. 2011. Family Pinguipedidae. Page 180 in Matsunuma, M., Motomura, H., Matsuura, K., Shazili, N. A. M. and Ambak, M. A., eds. *Fishes of Terengganu—east coast of Malay Peninsula, Malaysia*. National Museum of Nature and Science, Universiti Malaysia Terengganu and Kagoshima University Museum. ix + 251 pp.
- Imamura, H. and Amaoka, K. 1994. A new species of flathead, *Grammoplites knappi* (Scorpaeniformes: Platycephalidae) from the South China Sea. *Japanese Journal of Ichthyology*, 41: 173–179.
- Kimura, S., Satapoomin, U., and Matsuura, K. (eds.) 2009. *Fishes of the Andaman Sea—west coast of southern Thailand*. National Museum of Nature and Science, Tokyo, 346 pp.
- Kimura, S. and Satapoomin, U. 2009. Introduction. Pages 1–6 in Kimura, S., Satapoomin, U., and Matsuura, K., eds. *Fishes of the Andaman Sea—west coast of southern Thailand*. National Museum of Nature and Science, Tokyo, 346 pp.
- Knapp, L.W. 1999. Platycephalidae. Pages 2385–2421 in Carpenter, K. E. and Niem V. H., eds. *FAO species identification guide for fishery purposes. The living marine resources of western Central Pacific, vol. 4. Bony fishes part 2 (Mugilidae to Carangidae)*. FAO, Rome.
- Kyushin, K., Amaoka, K., Nakaya, K., Ida, H., Tanino, Y. and Senta, T. 1982. *Fishes of the South China Sea*. Japan Marine Fishery Resource Research Center, Tokyo. 333 pp.
- Monkolprasit, S. and Sontirat, S. 1980. Systematic studies of coral reef fishes from the Indian Ocean Phuket (Thailand). *Kasetsart University Fisheries Research Bulletin*, 11:1–15.
- Nelson, J. S. 2006. *Fishes of the world*. Fourth edition. John Wiley and Sons, Inc. vii + 601 pp.
- Panjarat, S. 2008. *Sustainable fisheries in the Andaman Sea coast of Thailand*. Division for Ocean Affairs and the Laws of the Sea Office of Legal Affairs, United Nation, New York. xi + 107 pp.
- Prokofiev, A.M. 2008. Sandperches (Mugiloididae: *Parapercis*) of Nha Trang Bay, South China Sea, Vietnam. *Journal of Ichthyology*, 48: 876–890.
- Randall, J.E. 2001. Pinguipedidae. Pages 3501–3510 in Carpenter, K. E. and Niem, V. H., eds. *FAO species identification guide for fishery purposes. The living marine resources of the western Central Pacific. Vol. 6. Bony fish part 4 (Labridae to Latimeriidae)*. FAO, Rome.
- Satapoomin, U. 2011. The fishes of southwestern Thailand, the Andaman Sea—a review of research and a provisional checklist of species. *Phuket Marine Biological Center Research Bulletin*, 70: 29–77.
- Satapoomin, U. and Poovachiranon S. 1997. Fish fauna of mangroves and seagrass beds in the coast of Thailand, the Andaman Sea. *Phuket Marine Biological Center, Technical Paper no. 2/1997*. 63 pp.
- Smith, H.M. 1931. Description of new genera and species of Siamese fishes. *Proceedings of the United States National Museum*, 79: 1–48, 1 pl.
- Smith, H.M. 1945. The fresh-water fishes of Siam, or Thailand. *Bulletin of the United States National Museum*, 188: i–xi + 1–622, pls. 1–9.
- Yamakawa, T. and Machida, Y. 2004. First record of the flathead *Grammoplites knappi* (Osteichthyes: Platycephalidae) from Japan. *Species Diversity*, 9: 383–388.