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Short Communication

Survey for Coastal Fishes in near Shore Habitat of Samui Island, Thailand

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ABSTRACT: The Hokkaido University Museum, Japan and National Science Museum, Thailand operated joint survey around Samui Island, Gulf of Thailand in April, 2013. A hundred and seventy one specimens were collected by this survey, of which there were 22 species and 2 unidentified species groups in 21 genera and 14 families reported in this study. Two specimens of clupeid *Spratelloides atrofasciatus* Schultz, 1943 and 4 specimens of gobiid *Favonigobius melanobranchus* (Fowler, 1934) were the first records from the Gulf of Thailand, respectively.

KEY WORDS: *Spratelloides atrofasciatus*, *Favonigobius melanobranchus*, Gulf of Thailand.

INTRODUCTION

Samui Island, Surat Thani Province of Thailand, is the third largest island with area about 240 km^2, lies at the middle-west of the Gulf of Thailand and is separated from the peninsula coast by 17 km. This island is surrounded by more 100 large and small islands. Its general topography is geologically composed of granite mountains which were formed by the continuous Nakhon Si Thammarat Range from the western side (Brown *et al.*, 1951). The interior area is predominantly vegetated by mixed deciduous plants and coconut trees. The coast of the island is characterized by diverse marine habitats such as rocky shores, mangroves, coral reefs and sandy beaches that influence the regional biodiversity and are utilized by local people in various ways such as fishery and commercial tourism activities. The climate in the area is usually controlled by two monsoons, the south-west monsoon between May and September and the north-east monsoon between November and February. Particularly during the south-west monsoon in the rainy season, the strong west and southwest winds from Indian Ocean

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drive surface currents surrounded the island which mix and exchange the water mass as well as dispersion of organic and inorganic substances in the water body (Sojisuporn *et al.*, 2010). In addition, the island is influenced by sediments from the mouth of Tapi River to the west and the mouth of Pakpanang River to the south. These factors mainly enhance productiveness of phytoplankton and the high diversity of macroalgae which serve as a food supply and secure habitat for marine fish larvae (Mayakun and Prathep, 2005). Prior and recent comprehensive studies had indicated importance of Samui Island in its abundance of fish larvae. Boonprakob (1962) investigated spawning grounds of marine fishes in the Gulf of Thailand and noted the very high abundance of planktonic fish eggs of Scrombridae, Clupeidae, Engraulidae and *Parastromateus niger* around Samui Island and adjacent areas. Songkaew *et al.* (2011) reported fish larvae collected from the region with 41 families, including dominant groups such as Clupeidae, Gobiidae, Apogonidae, Engraulidae, Namipteridae, Bothidae, and Carangidae.

The present study documented the results of a joint survey of coastal fishes around Samui Island undertaken by the Hokkaido University Museum, Japan and the National Science Museum, Thailand in April 2013. The list of species provided below contains fishes collected during the survey, including 22 species and 2 unidentified species groups in 21 genera and 14 families. Among them, the clupeid species *Spratelloides atrofasciatus* Schultz, 1943 and the gobiid species *Favonigobius melanobranchus* (Fowler, 1934) were recognized to be the first records from the Gulf of Thailand.

MATERIALS AND METHODS

On 16 and 17 April 2013, Hokkaido University Museum and National Science Museum, Thailand conducted joint surveys at Samui Island, Surat Thani Province, Thailand (Fig. 1). A hundred and seventy one fish specimens were collected by a small seine net (Fig. 2), and were deposited at the Natural History Museum, National Science Museum, Thailand (THNHM). Standard length (SL) follows Hubbs and Lagler (1958). Systematic arrangement follows Nelson (2006).

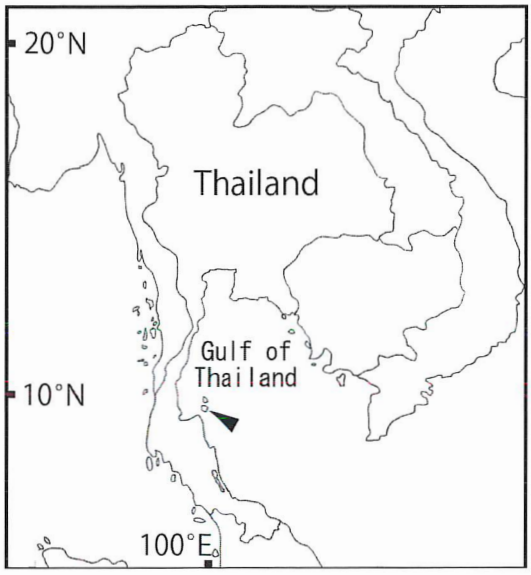


Figure 1. Map showing sampling locality. Arrow indicating Samui Island.

SPECIES LIST

Order Clupeiformes
Family Engraulidae
Thryssa sp.
THNHM-F0015201, 1 specimen, 20.1 mm SL, 16 April.
Remarks. This specimen is thought to be *Thryssa hamiltonii* (Gray, 1835) or *T. mystax* (Bloch and Schneider, 1801).

Family Clupeidae
Spratelloides atrofasciatus Schultz, 1943 (Fig. 3)
THNHM-F0015202, 0015203, 2 specimens, 22.2–23.0 mm SL, 17 April.



Figure 2. Seining at Samui Island.

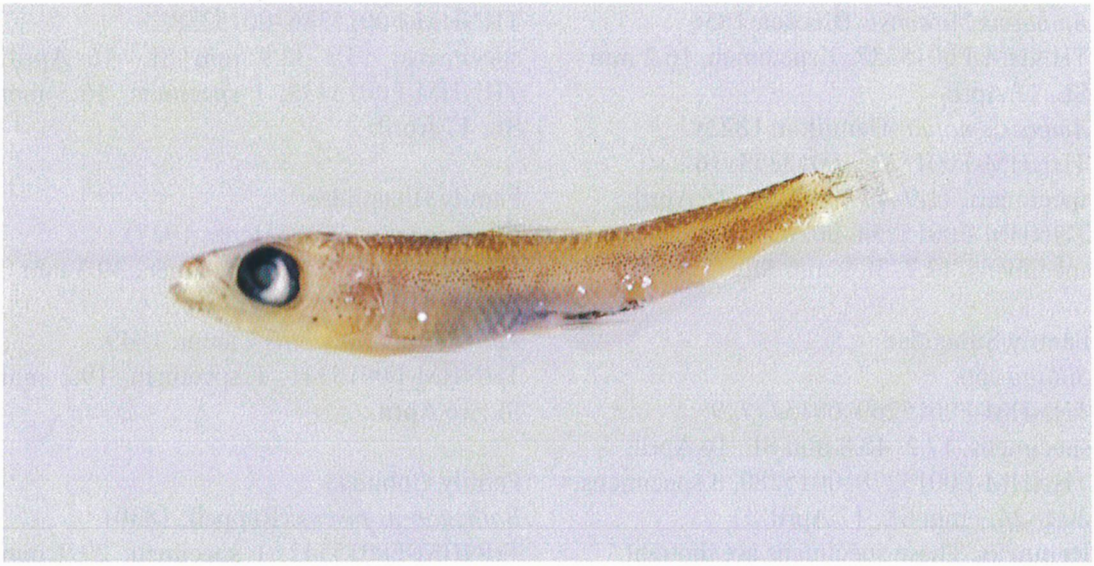


Figure 3. *Spratelloides atrofasciatus*, THNHM-F0015203, 22.2 mm SL.

Remarks. *Spratelloides atrofasciatus* has been known from Amami, Okinawa, Samoa and Marshall (Ueno and Sato, 1984; Aonuma and Yagishita, 2013). Therefore, this report is the first record of this species from the Gulf of Thailand.

Order Mugiliformes
Family Mugilidae
Ellochelon vaigiensis (Quoy and Gaimard, 1825)
THNHM-F0015204–0015209, 6 specimens, 8.9–15.8 mm SL, 16 April;
THNHM-F0015210, 0015211, 2 specimens, 18.2–19.1 mm SL, 17 April.

Moolgarda seheli (Forsskål, 1775)
THNHM-F0015212, 0015213, 2 specimens, 31.1–37.1 mm SL, 16 April.

Order Atheriniformes
Family Atherinidae
Atherina valenciennei Bleeker, 1853
THNHM-F0015214–0015236, 23 specimens, 18.4–35.2 mm SL, 17 April.

Order Perciformes
Family Ambassidae
Ambassis buruensis Bleeker, 1856
THNHM-F0015237, 1 specimen, 16.2 mm SL, 17 April.
Ambassis nalua (Hamilton, 1822)
THNHM-F0015238–0015253, 16 specimens, 11.9–47.1 mm SL, 16 April;
THNHM-F0015254–0015268, 15 specimens, 12.7–38.9 mm SL, 17 April.

Family Sillagidae
Sillago spp.
THNHM-F0015269–0015277, 9 specimens, 17.2–40.8 mm SL, 16 April;
THNHM-F0015278–0015280, 3 specimens, 20.1–24.7 mm SL, 17 April.
Remarks. These specimens are thought to be *Sillago lutea* McKay, 1985 and/or *S. sihama* (Forsskål, 1775).

Family Leiognathidae
Photopectoralis bindus (Valenciennes, 1835)
THNHM-F0015281, 0015282, 2 specimens, 45.3–52.1 mm SL, 17 April;
THNHM-F0015283, 1 specimen, 23.2 mm SL, 16 April.

Family Lutjanidae
Lutjanus russellii (Bleeker, 1849)
THNHM-F0015284–0015287, 4 specimens, 15.8–41.9 mm SL, 16 April;
THNHM-F0015288, 0015289, 2 specimens, 16.6–27.7 mm SL, 17 April.

Family Gerreidae
Gerres oyena (Forsskål, 1775)
THNHM-F0015290–0015311, 22 specimens, 14.2–52.8 mm SL, 16 April;
THNHM-F0015312–0015333, 22 specimens, 12.9–31.7 mm SL, 17 April.

Family Lethrinidae
Lethrinus lentjan (Lacepède, 1802)
THNHM-F0015334, 0015335, 2 specimens, 25.6–28.7 mm SL, 16 April.

Family Teraponidae
Pelates quadrilineatus (Bloch, 1790)
THNHM-F0015336–0015338, 3 specimens, 13.3–32.9 mm SL, 16 April;
THNHM-F0015339, 1 specimen, 16.5 mm SL, 17 April.

Family Blenniidae
Omobranchus ferox (Herre, 1927)
THNHM-F0015340, 1 specimen, 39.3 mm SL, 16 April.
Petroscirtes variabilis Cantor, 1849
THNHM-F0015341, 1 specimen, 19.2 mm SL, 16 April.

Family Gobiidae
Bathygobius fuscus (Rüppell, 1830)
THNHM-F0015342, 1 specimen, 29.9 mm SL, 17 April.
Cryptocentroides insignis (Seale, 1910)

THNHM-F0015343, 1 specimen, 50.2 mm SL, 17 April.

Drombus triangularis (Weber, 1909)

THNHM-F0015344, 1 specimen, 27.6 mm SL, 17 April.

Favonigobius melanobranchus (Fowler, 1934) (Fig. 4)

THNHM-F0015345, 0015346, 2 specimens, 21.1–22.4 mm SL, 16 April;

THNHM-F0015347, 0015348, 2 specimens, 20.9–24.2 mm SL, 17 April.

Remarks. *Favonigobius melanobranchus* has been widely reported from Indo-western Pacific, i.e. Natal, Red Sea, Arabian Sea, Andaman Sea, Singapore, Indonesia, northern Australia, Philippines, Iriomote, Ishigaki, Okinawa and Amami (Bogorodsky *et al.*, 2011; Allen and Erdman, 2012; Akihito *et al.*, 2013). Therefore, this report is the first record of this species from the Gulf of Thailand.

Istigobius ornatus (Rüppell, 1830)

THNHM-F0015349, 1 specimen, 30.6 mm SL, 17 April.

Yongeichthys nebulosus (Forsskål, 1775)

THNHM-F0015350–0015353, 4 specimens, 16.2–35.9 mm SL, 17 April.

Family Siganidae

Siganus argenteus (Quoy and Gaimard, 1825)

THNHM-F0015354, 1 specimen, 26.2 mm SL, 16 April; THNHM-F0015355, 1 specimen, 29.0 mm SL, 17 April.

Siganus javus (Linnaeus, 1766)

THNHM-F0015356, 1 specimen, 35.1 mm SL, 16 April.

Siganus spp.

THNHM-F0015357–0015362, 6 specimens, 17.4–24.6 mm SL, 16 April;

THNHM-F0015363–0015371, 9 specimens, 18.9–24.4 mm SL, 17 April.

Remarks. These specimens are thought to be *Siganus canaliculatus* (Park, 1797), *S. fuscensens* (Houttuyn, 1782) and/or *S. javus* (Linnaeus, 1766).



Figure 4. *Favonigobius melanobranchus*, THNHM-F0015347, 24.2 mm SL.

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