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EIGHT NEW RECORDS OF CORAL REEF FISHES FROM ANDAMAN AND NICOBAR ISLANDS

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INTRODUCTION

Andaman Nicobar Islands situated in the Bay of Bengal between 6°45´-13°45´N and 92°10´-94°15´E, consist of 352 islands 220 islets and rock and cover a distance of almost 470 km over North South, with a coastline of 1962 km, and bring in for India an Exclusive Economic Zone (EEZ) of 600 thousand sq km. The coast is under the influence of a diverse set of oceanographical and ecological conditions. The shelf topography of these islands show frequent rises supporting coral reefs, which are characterized as fringing reefs on the eastern side and barrier reefs off west coast; the depressions are known as passages and straits. Besides coral reefs, the shore is composed of rocky and sandy areas and vast stretches of Mangrove swamps, also few freshwater rivers and streams. A comprehensive and authoritative account of fishes of the Indian region including Andaman and Nicobar Islands was published by Francis Day (1871). Herre (1941) listed 490 species of fishes. Talwar (1990) prepared a comprehensive list of fishes consisting of 724 species; followed by Rajan *et al*. 2013 listed a total of 1434 species of fish. Recently 28 species of new records of fishes have been published by Rajan, P.T. and C.R. Sreeraj, 2015 and Devi and Kumaralingam, 2015**.**

MATERIALS AND METHODS

The new records of fishes were made by field surveys, underwater observations and photography in the coral reef ecosystem using scuba gears in three locations of Havelock Island by the authors. (1). Slope 12, 03,450N/92, 57,757E, (Havelock Island), southern part of Rosamund shoal, depth range 3 m to 15 m, gradually slopes to 30m on the North-East side, sandy bottom, with ridges of rock. The site mainly has *Porites* coral and strong currents running South-East to North-West direction, which brings sediment, from the channel between Peel and Havelock Islands. The North-West to South-East direction current brings in clears water from the west side of the ridge. Eastern side covered with se wipe coral and gorgonians, 5 m to 20 m. (2). Light House.12, 02,765N/92, 57,923E (Havelock Island), with fringing reef following the contour of the land and the depth from 0 m to 22m, predominately *Porites* sp. of coral forming massive boulder corals all the way to a depth of 15m, site is covered with broken dead *Acropora* damaged during the tsumani, which is covered with macro algae,subject to wave action during the South-West winds and mild current running along the reef, usually around 5 to 15m. (3). Nemo Reef 12, 02,297N/92, 59,260E, (Havelock Island) with fringing reef depth range 0 m to 12m,bottom sandy and silt, predominately boulder *Porites* of corals, 2m to 10m, mild current running along the reef. Reef is subject to heavy siltation due to the tidal effect, covered mainly with macro algae. Taxonomic classification follows Nelson (2006).

RESULTS

The last few years represent a significant increase of knowledge about the fishes of Andaman and Nicobar Islands. During this study 8 new record of fishes were recorded under 2 orders, 6 families and 8 genera as *Synodus dermatogenys* Fowler, 1912, *Archamia bleekeri* (Gunther, 1859), *Neopomacentrus sororius* Randall & Allen, 2005, *Pomacentrus similis* Allen, 1991, *Leptojulis cyanopleura* (Bleeker, 1853), *Oxycheilinus bimaculatus* (Valenciennes, 1840), *Dactylopus kuiteri* Fricke 1992 and *Acanthurus leucocheilus* Herre, 1927 are associated with coral reefs.

SYSTEMATICS

Class TELEOSTEI

Order AULOPIFORMES

Family SYNODONTIDAE Lizardfishes

Synodus dermatogenys Fowler, 1912
Clearfin Lizardfish

1912. *Synodus dermatogenys* Fowler, *Proceedings of the Academy of Natural Sciences of Philadelphia* v: 566, Fig. 3. (Type locality: Hawaiian Islands).

2012. *Synodus dermatogenys* Allen & Erdmann, Reef *fishes of East Indies*: 124.

Greyish saddles across back , 8-9 dark blotches along mid side and cluster of six dark spots on snout tip. Attains 23 cm. Sand or rubble bottoms in coastal and offshore reefs. Red Sea and East Africa to Hawaiian and Tuamotu Islands and Australia to Japan; ranges throughout East Indian region.

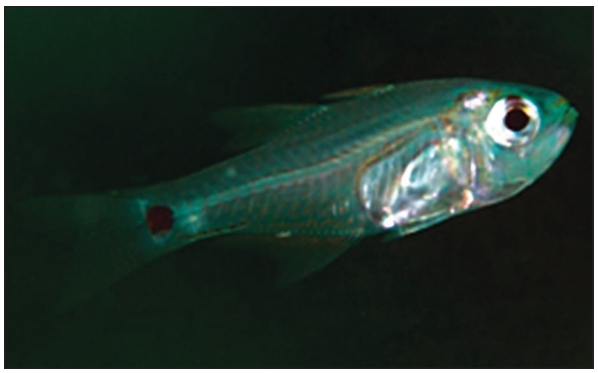
Order PERCIFORMES

Family APOGONIDAE Cardinalfishes

Archamia bleekeri (Gunther, 1859)
Bleeker's Cardinalfish

1859. *Apogon bleekeri* Gunther, *Catalogue of the fishes in the British Museum* v. **1**: 245 (Type locality: Ambon (Moloucca Islands), Jakarta (Java) and Padang (Sumatra), Indonesia.

2012. *Archamia bleekeri* Allen & Erdmann, *Reef fishes of East Indies*: 373.



Semitransparent grey or silvery reflections on head and body region, yellowish snout and a pupil sized black spot on middle of caudal fin base. Attains 8.5 cm. Sheltered reefs and silty areas. Singapore, Malaysia, Thailand, Vietnam, Brunei, Indonesia, Philippines and Taiwan

Family POMACENTRIDAE Damselfishes

Neopomacentrus sororius Randall & Allen, 2005 Twin Demoiselle

2005. *Neopomacentrus sororius* Randall & Allen, Aqua, Journal of Ichthyology and Aquatic Biology v. **10** (no. 2): 77, Figs. 5-7. (Type locality: Trincomalee, Sri Lanka).

2012. *Neopomacentrus sororius* Allen & Erdmann, *Reef fishes of East Indies*: 607.

Diagnostic characters: A distinctive, relatively large, wedge-shaped dark mark on pectoral fin base, and mainly yellow anal fin without small blue spots. Attains 8.5 cm. This species is similar to *Neopomacentrus azysron* (Bleeker) in general morphology and colouration. But the later species, distributed in Western Pacific, lacks the

pronounced wedge-shaped mark on pectoral fin base.

Habitat: Outer reef areas.

Distribution: Widespread Indian Ocean including Kenya, Tanzania, northern Madagascar, Maldives, Andaman Sea and Indonesia.

Pomacentrus similis Allen, 1991
Similar Damselfish

1991. *Pomacentrus similis* Allen, *Damselfishes of the world*: 157, 232. (Type locality: Trincomalee, Sri Lanka).

2012. *Pomacentrus similis* Allen & Erdmann *Reef fishes of East Indies*: 623.

Diagnostic characters: Bright blue with yellow caudal fin and dusky grey pelvic fins. Attains 6 cm. Ramakrishna *et al.* (2010) misapplied the name *Chromis flavicauda* (an Atlantic fish) to this species.

Habitat: Rubble, sand or silty bottoms. Solitary or groups around rock outcrop.

Distribution: Sri Lanka, Andaman Sea and Indonesia.

Family LABRIDAE Wrasses

Leptojulis cyanopleura (Bleeker, 1853)
Shoulderspot Wrasse

1853. *Julis (Halichoeres) cyanopleura* Bleeker, *Natuurkundig Tijdschrift voor Nederlandsch Indie,* 4: 489. (Type locality: Jakarta, Java, Indonesia).

2012. *Leptojulis cyanopleura* Allen & Erdmann *Reef fishes of East Indies*: 698.

Diagnostic characters: Male overall blue with brown mid-lateral stripe, pair of orange stripes on head, orange patch on upper side behind pectoral fin, and orange and blue bands on caudal fin. Female overall whitish with pair of yellowish brown stripes. Attains 13 cm.

Habitat: Sand rubble bottoms near reefs.

Distribution: Persian Gulf to Solomon Islands and Australia; throughout East Indian region.

Oxycheilinus bimaculatus (Valenciennes, 1840)
Double spot Wrasse

1840. *Cheilinus bimaculatus* Valenciennes, *Histoire naturelle des poissons* v. **14**: 96. (Type Locality: Hawaiian Islands).

2012. *Oxycheilinus bimaculatus* Allen & Erdmann *Reef fishes of East Indies*: 703.

Diagnostic characters: This is a female body generally brown to reddish brown, blotched and finely flecked with white and dark brown. Attains 15 cm.

Habitat: Rubble-weed areas around rocky outcrops.

Distribution: Red Sea and East Africa to Hawaiian and Marquesas islands, and Australia to Japan; ranges throughout East Indian region.

Family CALLIONYMIDAE Dragonets

Dactylopus kuiteri (Fricke 1992)
Orange and black dragonet

1992. *Synchiropus kuiteri* Fricke, *Revue francaise d Aquariologie Herpetologie* v. **19** (no. 3): 82, Figs. 1-2. (Type locality: Maumere Bay, Flores, Indonesia).

2012. *Dactylopus kuiteri* Allen & Erdmann, *Reef fishes of East Indies*: 849.

Diagnostic characters: Spotted in shades of brown; very long first dorsal fin with large ocellated spot near rear base, bright blue spots on anal fin; lips orange. Attains 15 cm.

Habitat: Solitary or in pairs on sandy bottoms, coastal reefs and estuaries.

Distribution: Bali to Flores and North Sulawesi in Indonesia. New record to the Indian Ocean.

Family ACANTHURIDAE Surgeonfishes

Acanthurus leucocheilus Herre, 1927
Pale-Lipped Surgeonfish

1927. *Acanthurus leucocheilus* Herre, *Philippine Journal of Science* v. **34** (no. 4): 419, Pl. 12 (fig. 3). (Type locality: Bantayan, Cebu and Agutaya, Philippines).

2012. *Acanthurus leucocheilus* Allen & Erdmann, *Reef fishes of East Indies*: 887.

Diagnostic characters: Overall dark brown, nearly black with contrasting white lips, white band across throat, white caudal spine and white bar usually evident across base of caudal fin. Attains 48 cm.

Habitat: Clear waters of seaward reefs.

Distribution: East Africa to Tuvalu and Line Islands, Micronesia; ranges throughout East Indian Region, including Christmas Island.

CONCLUSIONS

This finding shows that Andaman and Nicobar Islands coast has connectivity with the south-eastern coast of Indonesia and north-eastern coast of Burma as the fish diversity in these waters also receives special interest in terms of marine zoo-geography because of the confluence of Andaman Sea fishes with Western Pacific and the Eastern Indian Ocean. Long-term monitoring studies will allow a better understanding of connectivity patterns along the coast of Andaman and Nicobar Islands as well as the possible establishment of new populations of species. Much more scientific studies are advised for the gobies mainly gobies that form commensal relationships with alpheiid shrimps. Despite their abundance on Indo-Pacific reefs, some of the genera such as *Amblyeleotris*, *Cryptocentrus* and *Vanderhorstia* remain poorly studied and comprehensive revisions are required.

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