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Nine New Records of Moth from Andaman and Nicobar Islands

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ABSTRACT : The Great Nicobar Biosphere Reserve is the southernmost Island of Andaman and Nicobar archipelago. The tropical rain forests of this Biosphere Reserve represent high level of biological diversity. This study was conducted during 2008 to 2011 and sampling of moths was carryout in different locations using light trap. In this paper we reported nine new records of moths from Andaman and Nicobar Islands.

Keywords : Andaman, Great Nicobar, Lepidoptera, Moths, Nicobar.

INTRODUCTION

Moths are one of the large taxonomic groups and they are assumed as less attractive of their dull coloration and nocturnal habit, but there are crepuscular, diurnal and some brilliantly colored fascinating species. It is estimated that over ten thousand species of moths are to be found in India belongs to 41 families (Beccaloni, 2003). The Andaman and Nicobar Islands is known for rich biodiversity resources. The archipelago comprises 572 islands and extending over 800 km in the Bay of Bengal. The topography of the Andaman and Nicobar Islands are hilly and undulating, the elevation in Andaman is from 0 to 732 m and Saddle Peak is the highest in North Andaman Islands. In the Nicobars the elevation rises from 0 to 568 m, Mt Thuillier being the highest peak on Great Nicobar Island. The habitats represented in the islands include bays, mangroves, moist deciduous forests and evergreen forests. These islands are tropical, that is, warm, moist and equable. The proximity of the sea and the abundant rainfall prevent extremes of heat. The mountainous parts of the southern group of islands get about 300 cm of rain annually whereas the islands of north get less rainfall. Flora and fauna of Andaman bears close biogeographical affinities with Myanmar and Thailand while Nicobar has affinities with Indo-Mayan regions.

STUDY AREA

The Great Nicobar Biosphere Reserve (GNBR) is the southernmost Island of Andaman and Nicobar archipelago. It is situated between 6° 45' and 7° 15' N latitudes and 93° 38' and 93° 55' E longitudes and lies about 482 km south of Port Blair and about 145 km North of Sumatra. The GNBR includes Campbell Bay and Galathea National Park. This island experiences tropical climate with mean annual temperature of 22-32° C, relative humidity of 82 per cent and rainfall of 300-380cm. This reserve is known for its unique biodiversity and houses rich genetic germplasm resources. The Great Nicobar Biosphere Reserve represents the tropical evergreen forests of Indo-Malayan region and the major forest area in this Biosphere Reserve is still in its virgin state.

Review of literature reveals that only few studies have been conducted on the moth fauna Andaman and Nicobar Islands (Bhummanawar *et al*., 1991; Chandra and Kumar, 1992; Chandra, 1993, 1994, 1996, 1997; Chandra and Rajan, 2004; Sivaperuman et al., 2010; Sivaperuman et al., 2011). During the recent faunal surveys conducted in Great Nicobar Biosphere Reserve, we have recorded nine species of moth which are new to Andaman and Nicobar Islands (Plate 1). The species were identified using Hampson, (1892, 1894, 1895 and 1896); Barlow (1982) and Holloway (1988, 1989 and 1993). The species marked with double asterisk (**) are new record from India. The diagnosis, distribution and systematic position of each species are presented in this paper.

SYSTEMATIC ACCOUNT

Order : Lepidopetra

Suborder : Heterocera

Family : Arctiidae

1. Garudinia acornuta Holloway **

Garudinia acornuta Holloway, www.mothsofborneo. com/part 7/pl.

1982. *Garudinia acornuta* Holloway, *An introduction to the Moths of South East Asia*: 70.

Material Examined: 1 ex.

Diagnosis : Thorax white, forewing yellowish white; two dark chocolate brown bands on each of the forewing; sub basal band from the sub costal nervure to inner margin, sub marginal band slightly angled, wider end on the costa and the edges wide at middle, hind wing white with marginal area suffused with fuscous, apex excised.

Distribution : Malaysia and Borneo.

2. Olepa racini (Fabricius)

2008. *Olepa racini* (Fabricius), *Records of Zoological Survey of India* 108(Part-2): 104.

1894. *Arctia racini*, Fabricius, *Fauna of British* India Vol. II: 17.

Material Examined : 1 ex.

Diagnosis : Thorax dark grey brown, forewing fuscous brown with throughout pale ringed numerous blotches, hind wing crimson with ante medial, medial, post medial and marginal bands of conjoined brown spots.

Distribution : India, Sri Lanka and Bangladesh.

Family: Geometridae

3. Petelia delostigma Prout**

1993. *Petelia delostigma* Prout, *The Moths of Borneo*, Part 11: 103.

Material Examined : 1 ex.

Diagnosis : Thorax fawn, forewing brownish fawn with rufous striations, apical dark patches and black discal spots, hind wing similar without any black apical patch, strong discal spots on underside.

Distribution : Borneo, Java and Sumatra.

4. Cleora onycha Fletcher

1993. *Cleora onycha* Fletcher, *The Moths of Borneo, Part* 11: 217

1953. *Carecomotis onycha* Fletcher, *Ann. Mag. Nat. Hist.* (12) 6 (62): 109

Material Examined : 1 ex.

Diagnosis : Thorax dull brown, forewing fuscous brown with undefined discal spots conjoined with costal margin, hind wing with more distinct post medial crenulated fascia.

Distribution : N.E. Himalaya, New Guinea.

Family : Noctuidae

5. Calyptra minuticornis Guenee

1982. *Calyptra minuticornis* Guenee, *An introduction to the Moths of South East Asia*: 110p.

1894. *Calpe minuticornis* Guenee, *Fauna of British India* Vol. II: 565.

Material Examined : 4 exs.

Diagnosis : Thorax red brown, forewing pale red-brown with indistinct sub basal, ante medial and medial oblique

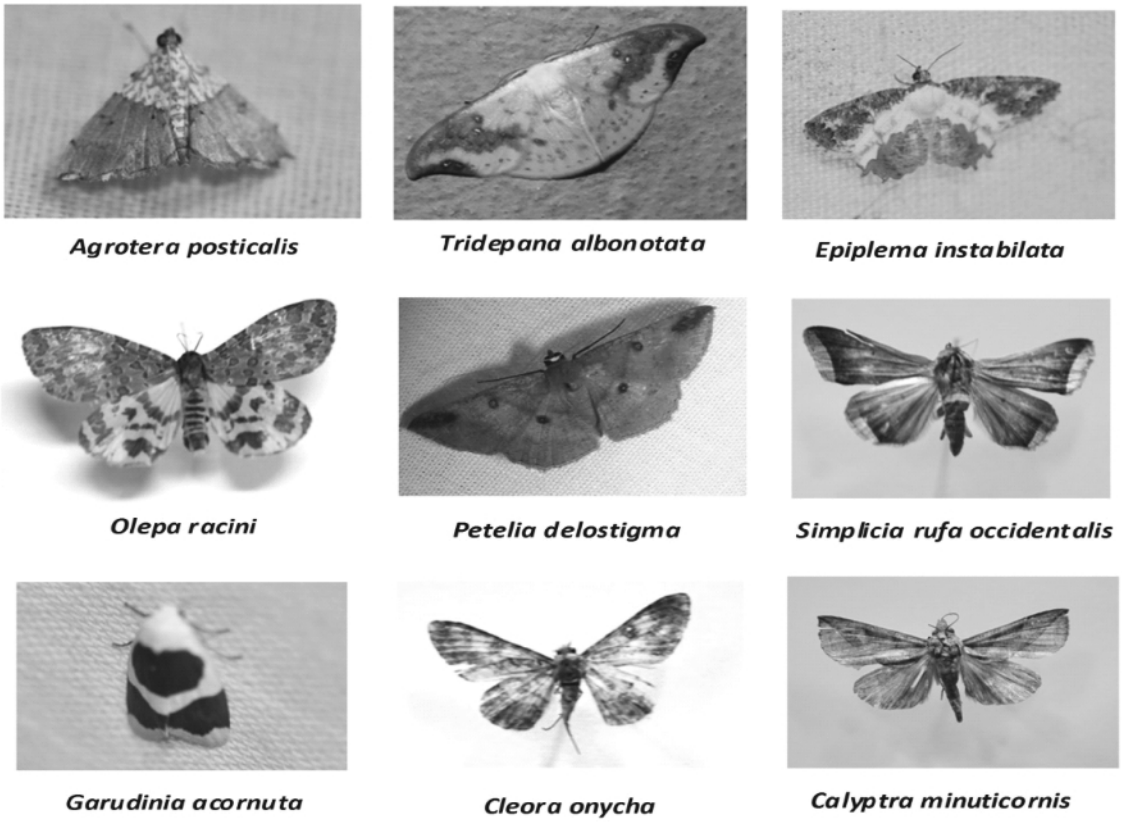

Plate. I: Nine new records of moth from Andaman and Nicobar islands.

lines, a blood red oblique line from apex to dorsum, black specks at sub marginal line, inner margin slightly lobed near base and near tornus, hind wing pale brown, cilia white.

Distribution : India, Sri lanka, Taiwan, Queensland, Java.

6. Simplicia rufa occidentalis Holloway**

1982. *Simplicia rufa occidentalis* Holloway, An *introduction to the Moths of South East Asia*: 113p.

Material Examined : 1 ex.

Dignosis : Thorax fuscous brown, forewing grey brown suffused with dark near slightly oblique and pale sub marginal fascia, costa straight with slightly angled at sub basal , hind wing similar, truncated at anal angle, cilia pale brown.

Distribution : Malay, Sumatra, Sudanland.

Family : Pyralidae

7. Agrotera posticalis Wileman**

Agrotera posticalis Wileman, en.wikipedia.org/wiki/ Agrotera

1896. *Agrotera nemoralis* Scopoli, *Fauna of British India* Vol. IV: 266.

Material Examined : 2 exs.

Dignosis : Thorax fuscous irrorated with orange, forewing basal half pale yellow with orange irroration, the area beyond it purplish, outer area fuscous with post medial black striae from costa, marginal series of fine black specks, hind wing pale fuscous, cilia suffused with fuscous at apex and towards outer angle and on anal half of both wings.

Distribution : Europe, Japan.

Family : Drepanidae

8. Tridrepana albonotata Moore

1998 *Tridrepana albonotata* Moore, www.moths of borneo.com/part 8/pl.

1892 *Drepana albonotata* Moore, *Fauna of British India* Vol. I: 340.

Material Examined : 1ex.

Dignosis : Andaman, Great Nicobar, Lepidoptera, Moths, Nicobar thorax yellow, forewing metallic yellow suffused with fulvous, costa dark, traces of ante medial and post medial waved lines, a dark speck in cell and two silvery specks at end of it one of which on fulvous ground, a dark patch on margin below apex, hind wing of same colour with similar waved lines.

Distribution : N.E. Himalaya, Nilgiris, China.

Family : Epiplemidae

9. Epiplema instabilata Walker

1982. *Epiplema instabilata* Walker, *An introduction to the Moths of South East Asia*: 137p.

1895. *Epiplema instabilata* Walker, *Fauna of British India* Vol. III: 131.

Material Examined : 1 ex.

Diagnosis : thorax white, forewing with some dark and fulvous striations, a white spot on disco cellular, black sub marginal markings, underside fuscous brown with slightly white inner margin, hind wing fulvous with dark striations, costa white, marginal grey line from below apex to anal angle, cilia maculated.

Distribution : N.E. Himalaya, China, Srilanka, Solomons.

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