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ON THE PYRAUSTINAE (LEPIDOPTERA : PYRALIDAE) FROM THE ANDAMAN, NICOBAR AND GREAT NICOBAR ISLANDS, INDIAN OCEAN

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(With 1 Table and 8 Plates)

INTRODUCTION

The subfamily Pyraustinae is a very wide and primitive group of mainly tropical insect fauna of certain economic importance in the large microlepidopterous family Pyralidae. It has received so far less attention from the Andaman and Nicobar Islands and practically ever the least from as far south as Great Nicobar in the Indian Ocean. In the wake of the modern concept of general taxonomy, it is imperative to collect a fair number of species from the niches of interest. This helps not only to assess the available morpho-variations, but also to scan their mode of distribution.

Keeping in view, the present work is an attempt to provide a comprehensive account of the southern insular Pyraustinae on the decade's collections made by different party-members including the first author in the Department of Zoological Survey of India. The account deals with a brief note on earlier investigations, general distribution and systematics coupled with keys to taxa and also mention of available host plants of the fauna representing a number of new locality records almost half of that hitherto known from these islands. It is also accompanied by a table providing the systematic index of an overall number of genera and species and their mode of distribution in the southern islands, mainland and Minicoy Island in the Arabian Sea of India, and also different zoo-geographical realms of the world.

EARLIER INVESTIGATION

The pioneering work on the results of entomological exploration including the Pyraustinae from the Andaman and Nicobar Islands barring Great Nicobar proper dates back to Moore (1877). He recorded, amongst other members of both micro-and macrolepidoptera, 29 species of the Pyraustinae and considered them under miscellaneous families of the tribe Pyrales. All these moths were collected mainly from South Andamans by Meldola on the-then Venus-Transit Expedition. Later, 37 more species mainly in the Roepstorff's collections

from both Andamans and Nicobars were received by the Indian Museum till about the year 1882. Thus, the total number of species from these islands was raised to 66 including 2 exclusively Andamanese species, viz., *Rehimena villalis* Swinhoe and *Lamprosema hedychroalis* (Swinhoe), having remained as *Incertae sedis*. All these species were subsequently treated mostly along with the exotic material by Cotes *et al.* (1889), Hampson (1896, 1898, 1899), Klima (1939) and Amsel (1957). Recently, 2 more species, namely, *Terastia meticulosalis* Guenee from Car Nicobar and *Xanthomelaena schematias* (Meyrick) from Great Nicobar, were recorded respectively by Bhattacharya *et al.* (1976) and Bhattacharya (1977). Otherwise, there was so far no other augmentation of the insular fauna in question, though Kapur (1966), Karunakaran (1967), Roonwal *et al.* (1970), Thampi (1972) and Maiti *et al.* (1977) published accounts on the climatology and biotic factors other than the concerned group of the islands. Amongst a total of about 450 species in 70 genera from India, 57 species in 30 genera are hitherto known from Andamans, 14 species in 9 genera from Nicobars and only one species from Great Nicobar. Of these, 8 genera and only 4 species are common between the Andamanese and Nicobarese material.

The available insular host plants are mostly identical with those of the mainland where their extent of damage caused by the continental pests including several Pyraustine ones was studied by Hampson (1896), Lefroy (1906), Fletcher (1920, 1934), Meyrick (1912-1937), Caswell (1962), Metcalf *et al.* (1962), Ayyar (1963), Banerjee (1964), Pruthi (1969), Pradhan (1969), Pande (1973) and Nayar *et al.* (1976). About 20% of the present fauna, recognised as pests, are incorporated in the systematic account.

General Distribution

The Pyraustinae shows interesting patterns of both insular and continental distribution throughout the world. It is the largest and most varied of all the other closely allied subfamilies, *viz.*, Scopariinae, Nymphulinae, Odontiinae, Glaphyrinae and Evergestinae, all of which have their wide but definitive spectra of geographical ranges (Munroe, 1975). The fauna represents about 10% of that in the Temperate Eastern Asia (Munroe *et al.*, 1971) and 20% of that in Sumatra (Roesler *et al.*, 1973).

The areas presently surveyed comprise North, Middle and South Andamans, Car Nicobar and Kamorta of Nicobars and Great Nicobar mostly from the Campbell Bay in the central east upto the vicinity of the Pygmalion Point in the extreme south of the Indian jurisdiction. Topographically, these islands depict a stratified canopy with zonations in latitude and limited elevation. The seasonal aspects relating to the day-length, temperature, precipitation and windiness approach the equatorial parameters particularly at Great Nicobar. Obviously, there occurs a continuous stretch of dense forests, near the entrance

of which in many places prevail the almost impenetrable and dark habitats thicketed with prolific undergrowths. The biotic factors represent the overlapping of the Indo-Malayan and Indo-Chinese elements which are subject to the transitional influence of tropical and subtropical climates.

The major impact of overall climate on the fauna leads to an adaptation antagonistic to that of the alpine and desert elements, as observed by Munroe *et al. (loc. cit.)*. The forms under study are mostly non-melanic, nocturnal and slender in habits with smooth vestiture, large eyes and trophies, flat or rounded frons, narrow wings and long legs. All these features are related to the warm and wet habitats with rich plant-covers.

Present findings throw some light on the distribution of the consolidated fauna and its correlation with the various locality-data along with those of 40 unseen insular species (*vide* Table) compiled from the upto-date works for continental and other insular areas both in India and abroad. The additional localities, particularly from the Indian mainland, of several species reported specifically by Roonwal *et al.* (1963) and those of a few species of the National Zoological Collections hitherto remaining unrecorded, are also compiled in the present work so as to provide their further range of distribution.

In all, there are 103 species in 45 genera now known from the southern insular areas of India, of which 63 species in 36 genera occur in the present collections. Of these, one genus and 2 species each from North Andaman and Nicobar, 2 species from Middle Andaman, 7 genera and 21 species from South Andamans and 19 genera and 26 species from Great Nicobar respectively constitute new locality-records. Only one species each from North Andaman and Nicobar is common in Great Nicobar. Besides, one genus and 7 species are also included as new for southern islands, whence specimens of these tagged with locality-labels of the said islands in the old collections of the Department were not recorded earlier. Amongst the known elements showing further intra-southern insular extension, one species from South Andaman and another including its genus from Great Nicobar range respectively in Nicobar and South Andaman, while 5 genera and 8 species from South Andaman, 3 genera and 3 species from Nicobar, and 2 genera and 2 species from both these islands are all common in Great Nicobar. 11 species are restricted to the southern islands of India apart from the exotic habitats in the world for majority of them.

As to the distribution of the fauna in the continental and western insular areas of India, 82 species are known from the extra-peninsular and 58 from the peninsular areas of mainland, and only 2, from Minicoy Island in the Arabian Sea. The overall number of material distributed in the North-Eastern Himalayas and either of Southern Eastern and Western Peninsula is more than double of that in the remaining sectors of the extra-peninsular and peninsular areas respec-

tively. Amongst the peninsular elements, the common distribution is exhibited by 44 species in the North-Eastern, 24 in the North-Western and 18 in both the Himalayan sectors. The distribution of 32 species in the extra-peninsular and 9 species in the peninsular areas hitherto remain locally restricted in the mainland. Only 2 species, of which one each is respectively common with the North-Eastern and North-Western Himalayas, and both, with the peninsula, are known from Minicoy Island. Some species are more or less common throughout India, though a few more exhibit the supposedly cosmopolitan distribution in contrast to the insular confinement of only 8 species in some of the major zoo-geographical realms of the world.

The approximate numerical ratio of the fauna from the different global regions including Neotropical : Palaearctic : Ethiopian : Australian : Oriental is as to 2 : 4 : 4 : 5 : 17. The material common with the Hawaiian, Nearctic and Malagasic regions is highly impoverished as compared to the Papuan elements which constitute about half of the bulk excluding 11 unknown species from Australia. Only 2 Holarctic species are common with the material under study. Amongst 43 endemic species in the Oriental region, 16 are known exclusively from the Indo-Chinese and only one, from the Indo-Malayan subregions. On the contrary, 4 species from the former and 20 from the latter subregions are virtually absent. With the present discovery, 4 Indo-Chinese and only one Ethiopian species are established as new records from the Indo-Malayan subregion and the Oriental region respectively (*vide* Table).

Review on Systematic Position

Ragonot (1890-1891) erected the subfamily Pyraustinae together with Homophysinae. Hampson (1896, 1898, 1899) considered both these subfamilies and also the family Odontiidae (Guenee, 1854) under the sole name Pyraustinae. Klima (1939) adopted the Hampsonian nomenclature of the subfamily together with the recombination of the Glaphyrinae (Forbes, 1920—1924). Later, Munroe, on the basis of male genital studies, segregated from the Pyraustinae the Odontiine members and ranked them to the subfamily Odontiinae (1958, 1961) and revived the subfamily Glaphyrinae (1964) with the Homophysinae as its synonym.

Only 3 known Odontiine genera and their species, *viz.*, *Noorda fessalis* Swinhoe, *Dausara talliusalis* Walker and *Boeotarcha hyalinalis* Hampson and another species, i. e., *B. martinalis* Walker, collected for the first time from Andamans, have been excluded from the present work.

The subfamily Pyraustinae is easily recognised by proboscis well developed, chaetosema absent, forewing with 1A upto tornus and separated from the short 2A, Cu_2 absent, R_2 usually close to the

long stalk of $R_{3,4}$ upto certain distance from origin, R_5 from near antero-discal angle, hindwing with both the anals and Cu_2 upto tornus, normally R_3 anastomosed with $Sc+R_1$ upto certain distance beyond cell, median vein dorsally non-pectinate and M_3 connate or stalked with M_2 arising from near postero-discal angle in both wings.

A key to the genera followed by systematic account particularly of the material at hand with relevant modifications of the Hampsonian system adopted from the authors cited above is given hereunder.

Key to genera

1. Labial palpus upturned with mesial segment hardly triangularly scaled 2

— Labial palpus porrect with mesial segment usualy triangularly scaled 24

2. Apical segment of labial palpus upturned ... 3

— Apical segment of labial palpus porrect ... 20

3. Apical segment of labial palpus naked ... 4

— Apical segment of labial palpus scaled ... 10

4. Apical segment of labial palpus long and acuminate 5

— Apical segment of labial palpus short and blunt 7

5. Mesial segment of labial palpus reaching vertex 6

— Mesial segment of labial palpus not reaching vertext ... ... *Hymenia* Hübner

6. R_5 of forewing curved and approximated to $R_{3,4}$ near origin .. .. *Xanthomelaena* Hampson

— R_5 of forewing straight and separated from $R_{3,4}$ near origin .. .. *Pycnarmon* Lederer

7. Maxillary palpus dilated ... ... *Eurrhyparodes* Snellen

— Maxillary palpus filiform 8

8. Mesial segment of labial palpus angled and bearing only frontal scales; R_5 of forewing straight and well separated from $R_{3,4}$ ... *Goniorhynchus* Hampson

— Mesial segment of labial palpus not angled and bearing scales not limited in front; R_5 of forewing curved and approximated to $R_{3,4}$ 9

9. Mesial segment of labial palpus narrowly and

	evenly scaled	*Sylepta* Hübner
—	Mesial segment of labial palpus broadly and roughly scaled	*Botyodes* Guenee
10.	Labial palpus quadrately scaled	11
—	Labial palpus conically scaled	19
11.	Apical segment of labial palpus with a long tuft of hair	*Pagyda* Walker
—	Apical segment of labial palpus with a short tuft of hair	12
12.	Apical segment of labial palpus short and blunt	13
—	Apical segment of labial palpus long and acuminate	*Nosophora* Lederer
13.	R_8 and $Sc+R_1$ of hindwing anastomosed almost upto apex	14
—	R_8 and $Sc+R_1$ of hindwing anastomosed upto well before apex	15
14.	R_1 and R_2 of forewing stalked	*Cnaphalocrocis* Lederer
—	R_1 and R_2 of forewing free	*Marasmia* Lederer
15.	Antenna annulated	16
—	Antenna not annulated	17
16.	Antenna longer than forewing of which R_5 curved and approximated to $R_{3,4}$ ...	*Rhimphalea* Lederer
—	Antenna shorter than forewing of which R_5 straight and separated from $R_{3,4}$ ...	*Syngamia* Guenee
17.	Cu_1a and M_3 of hindwing approximated to each other	*Aetholix* Lederer
—	Cu_1a and M_3 of hindwing separated from each other	18
18.	Frons flat and oblique; R_5 of forewing curved and approximated to $R_{3\ 4}$ ...	*Samea* Guenee
—	Frons rounded; R_5 of forewing straight and separated from $R_{3,4}$	*Lamprosema* Hübner
19.	R_5 of forewing curved and approximated to $R_{3,4}$	*Phostria* Hübner
—	R_5 of forewing almost straight and well separated from $R_{3,4}$	*Dichocrocis* Lederer
20.	Apical segment of labial palpus terminally not down-curved	21
—	Apical segment of labial palpus terminally down-curved	*Sameodes* Snellen

21. Maxillary palpus filiform; R_5 straight and well separated from $R_{3,4}$ and M_1 from well below antero-discal angle of forewing; legs with outer spurs from about 1/2 to 2/3rd length of inner 22

— Maxillary palpus dilated; R_5 curved and approximated to $R_{3,4}$ and M_1 from antero-discal angle of forewing; legs with outer spurs lass than 1/2 length of inner ... 23

22. Antenna longer then forewing and simple; M_1 and Rs of hindwing stalked ... *Nausinoe* Hübner

— Antenna shorter than forewing and annulated; M_1 and Rs of hindwing free ... *Synclera* Lederer

23. Mesial segment of labial palpus squamous-hirsute; antenna minutely pubescent and anal tuft of abdomen bifid but not plumose in male ... ... *Glyphodes* Guenee

— Mesial segment of labial palpus pilose; antenna naked and anal tuft of abdomen not bifid but plùmose in both sexes ... *Diaphania* Hübner

24. Apical segment of labial palpus long and naked 25

— Apical segment of labial palpus short and concealed by hair 26

25. Antenna non-ciliate, being basally grooved and dentate, with shaft proximally swollen and bearing a short comb-like structure ... *Thliptoceras* Warren

— Antenna througout ciliated and simple ... *Prophantis* Warren

26. Antenna longer than forewing 27

— Antenna shorter than forewing 28

27. Antenna annulated; M_2 and M_3 of forewing mutually approximated ... .. *Maruca* Walker

— Antenna simple; M_2 and M_3 of forewing mutually separated ... ... *Tetridia* Warren

28. Maxillary palpus apically dilated with scales 29

— Maxillary palpus filiform throughout ... 30

29. Legs long and slender ... ... *Antigastra* Lederer

— Legs short and stout ... ... *Pionea* Guenee

30. M_2 and M_3 of hindwing mutually approximated 31

— M_2 and M_3 of hindwing mutually separated 34

31. Rs and $Sc+R_1$ of hindwing anastomosed; forewing short and broad 32

— Rs and $Sc+R_1$ of hindwing not anastomosed; forewing long and narrow ... *Terastia* Guenee

32.	Tibia fringed with hair ; built stout ...	*Polygrammodes* Guenée
—	Tibia smoothly scaled ; built slender ...	33
33.	Frons flat and oblique	*Crocidophora* Lederer
—	Frons rounded	*Psara* Shibuya
34.	Antenna annulated	*Ischnurges* Lederer
—	Antenna ciliated	35
35.	Outer mesial spur as long as the inner one of hind tibia	*Hyalobathra* Meyrick
—	Outer mesial spur not more than 2/3rd length of the inner one of hind tibia ...	*Pyrausta* Schrank

SYSTEMATIC ACCOUNT

Genus **Xanthomelaena** Hampson

1896. *Xanthomelaena* Hampson, *Fauna Br. India*, Moths, **4** : 255. (Type : *Tylostega schematias* Meyrick)

The genus is known from the Oriental and Papuan regions, comprising only one Indian species which shows its distribution locally restricted in the southern islands.

Xanthomelaena schematias (Meyrick)

1894. *Tylostega schematias* Meyrick, *Trans. ent. Soc. Lond.*, p. 458.

1896. *Xanthomelaena schematias*, Hampson, *Fauna Br. India*, Moths, **4** : 255 fig. 153.

Material examined.—One ♀, Humphreygunj, South Andaman, 4. iii. 1964, (*B. S. Lamba* coll.) ; one ♀, Casuarina Bay, Great Nicobar, 7. iv. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : 18 mm.

Distribution.—India (Great Nicobar Is.) ; Burma ; Indo-Malayan area [Borneo, Pulo Laut, Tambora, Celebes (now, Sulawesi)] ; Papua.

Remarks.—The female specimen from South Andaman shows M_2 and M_3 approximated and not stalked in both pair of wings. The species was recorded by Bhattacharya (1977) from Great Nicobar. Presently, with further record of the species new for south Andaman, it establishes the Indo-Chinese affinities, too.

Genus **Pycnarmon** Lederer

1863. *Pycnarmon* Lederer, *Wien. Ent. Monat.*, **7** : 441.

1863. *Entephria* Lederer, *ibid* : 428.

1939. *Pycnarmon*, Klima, *Lep. Cat.*, **89** : 20.

(Type : *Spilomela jaguaralis* Guenee)

The genus is known throughout the world except the nearctic region. It comprises 11 species in India, of which *Pycnarmon alboflavalis* (Moore) and *P. aeriferalis* (Moore) were earlier known from Andamans. Presently, 2 more species are dealt with.

Key to species

1. Body pure white ; forewing with more than one black costal marking, cellular speck present ; hindwing without apical spot ; both wings with a postdiscal line and no spot ... *meritalis* (Walker)

— Body ochreous ; forewing with a single black costal marking, cellular speck absent ; hindwing with an apical spot ; both wings with a postdiscal spot and no line ... *Pycnarmon* sp.

Pycnarmon meritalis (Walker)

1859. *Zebronia* ? *meritalis* Walker, *List Spec. Lep. Ins. Coll. Brit. Mus.*, **17** 479.

1896. *Pycnarmon* (*Pycnarmon*) *meritalis*, Hampson, *Fauna Br. India*, Moths **4** : 259.

1898. *Entephria meritalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 620.

1939. *Pycnarmon meritalis*, Klima, *Lep. Cat.*, **89** : 23.

Material examined.—One ♀, Galathea Bay, Great Nicobar, 28. iii. 1966 (*A. Daniel* and *H. K. Bhowmik* coll.). *Wing expanse* : 18 mm.

Distribution.—India (West Bengal, Calcutta ; Sikkim ; Assam) ; Sri Lanka ; Burma ; China ; Taiwan ; Molluccus ; Buru ; Indo-Malayan area [Sumatra (now, Andalas) ; Borneo ; Java ; Celebes ; Sambawa, Ceram ; Aru ; Amboina] ; Australia (Queensland) ; South America (Venezuela).

Remarks.—The species is a new record for Great Nicobar. Although the mainland form, over and above its Malayan affinities, is common with the Indo-Chinese elements, the insular form is hitherto not known from Andamans.

Pycnarmon sp.

Material examined.—One ♀, Cowriaghat, South Andaman, 9. iv. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 20 mm.

Remarks.—As recognised by the characters given in the key, the species could not be worked out in details on the basis of a sole female specimen.

Genus **Hymenia** Hübner

1825. *Hymenia*, Hübner, *Verz. bek. Schmett.*, p. 360.
1852. *Zinckenia* Zeller, *Kgl. Vet. Handl. Lep. Micropt. Caffr.*, p. 55.
1939. *Hymenia*, Klima, *Lep. Cat*, **89**: 30.
(Type : *Pyralis perspectalis* Hübner)

The genus with its universal distribution is represented by 2 Indian species of which *Hymenia recurvalis* (Fabr.) was earlier known from the Andaman and Nicobar Islands. Both these species are dealt with hereunder.

Key to species

1. Forewing with prediscal line present, discal spot white ; hindwing with discal band broad below costa and tapering to dorsum ... *perspectalis* (Hübner)

— Forewing with prediscal line absent, discal band white and edged black ; hindwing with discal band uniformly broad from below costa to dorsum ... ... *recurvalis* (Fabricius)

Hymenia perspectalis (Hübner)

1796. *Pyralis perspectalis* Hübner, *Samml. Eur. Schmett., Pyral.*, p. 18, pl. 16, fig. 101.
1826. *Hymenia perspectalis*, Hübner, *Verz. bek. Schmett.*, p. 361.
1896. *Zinckenia perspectalis*, Hampson, *Fauna Br. India*, Moths, **4** : 262.
1939. *Hymenia perspectalis*, Klima, *Lep. Cat.*, **89** : 33.

Material examined.—One ♀, Rangat, Middle Andaman, 7.i.1973, at light (*K. S. Pradhan* coll.). *Wing expanse* : 21 mm.

Distribution.—Northern India ; Sri Lanka ; Burma ; Taiwan ; North Vietnam (Tonkin) ; Philippines ; Buru ; Indo-Malayan area (Malacca ; Sumatra ; Java ; Borneo ; Celebes) ; Australia (Queensland); Central and South America (Mexico ; Guatemala ; Hondurus ; Costa Rico ; Panama ; Columbia ; Venezuela ; Equador ; Brazil : Amazon,

Rio de Janeiro ; Bahama ; Haiti ; Dominica ; Jamaica ; Trinidad) ; Hawaii (Tahiti) ; North America (New York ; Illinois ; Texas) ; South Africa ; Malagasy.

Remarks.—The species is a new record for Middle Andaman.

Hymenia recurvalis (Fabricius)

1775. *Phalaena recurvalis* Fabricius, *Syst. Ent.*, p. 407.

1782. *Phalaena* (*Pyralis*) *fascialis* Cramer, *Pap. Exot.*, **4** : 236, pl. 398, fig. 0.

1896. *Zinckenia fascialis*, Hampson, *Fauna Br. India*, Moths, **4** : 262, fig. 158.

1939. *Hymenia recurvalis*, Klima, *Lep. Cat.*, **89** : 31.

Material examined.—One ♂, Rajendra Nagar, Great Nicobar, 30. xii. 1975 (*P. K. Maiti & D. K. Mandal* coll.). *Wing expanse :* 20 mm.

Distribution.—India (Bihar, Pusa ; Karnataka, Kurg ; U. P., Dehra Dun ; Minicoy ; Andaman ; Nicobar Is.) ; Sri Lanka ; Southern China ; Taiwan ; North Vietnam (Tonkin) ; Cocos ; Keeling ; Philippines ; Buru ; Indo-Malayan area (Sumatra ; Java ; Borneo ; Mysol) ; Papua ; Bismarck Archipelago ; Solomon ; New Hebrides ; Kermadec ; Samoa ; Fiji ; Laysan Island ; Norfolk Island ; New South Wales ; New Zealand ; Bermuda Island ; Honduras ; Jamaica ; Haiti ; St. Domingo ; Virginia ; Bahama Island ; Venezuela ; Chili ; Christmas Island Hawaii ; New York ; Pennsylvania ; U. S. S. R. (Ussuri) ; Andes ; Egypt ; Iraq ; Syria ; Southern Arabia ; Western and Central China ; Korea ; Japan ; Southern Sahara ; Sierra Leone ; Congo ; Kamerun ; Eastern and Southern Africa ; Malagasy ; Coetivy Island ; Chagos Island ; Seychelles ; Amirantes ; Sokotra ; Maldives.

Remarks.—The species, with its almost cosmopolitan distribution in the world, is recorded new for Great Nicobar. It was reported by Roonwal *et al* (1963) from the Indian mainland. It occurs on *Amaranthus viridis*, *Trianthema monogyna*, *Glycine max and Beta vulgaris* as leaf-roller and defoliator.

Genus **Eurrhyparodes** Snellen

1880. *Eurrhyparodes* Snellen, *Tijds. v. Ent.*, **23** : 215.

(Type : *Botys bracteolalis* Zeller)

The genus is known throughout the world except the Hawaiian region. It comprises 3 species in India, none of which is hitherto

reported from the southern insular areas. Presently, only one species is dealt with hereunder.

Eurrhyparodes tricoloralis (Zeller)

1852. *Botys tricoloralis* Zeller, *Kgl. Vet. Akad. Handl. Micropt. Caffr.*, p. 31.

1896. *Eurrhyparodes* (*Molybdantha*) *tricoloralis*, Hampson, *Fauna Br. India*, Moths, **4** : 264.

1939. *Eurrhyparodes tricoloralis*, Klima, *Lep. Cat.*, **89** : 37.

Material examined.—One ♂, Humphreygunj, South Andaman, 4. iii. 1964 (*B. S. Lamba* coll.). *Wing expanse :* 16 mm.

Distribution.—India (Punjab ; U. P., Lucknow ; Tamil Nadu, Nilgiris ; West Bengal, Calcutta) ; Sri Lanka ; Southern China ; Taiwan ; Philippines ; Indo-Malayan area (Sumatra ; Java ; Sula ; Sangir ; Amboina) ; Australia (Queensland ; New South Wales ; Fiji ; Moreton Bay).

Remarks.—The species is a new record for South Andaman.

Genus **Aetholix** Lederer

1863. *Aetholix* Lederer, *Wien. Ent. Monat.*, **7** : 437.

(Type : *Aediodes flavibasalis* Guenee)

Known from the Oriental and Papuan regions, the genus is represented by two Indian species, of which the one, presently dealt with, is already known from Andaman.

Aetholix flavibasalis (Guenee)

1854. *Aediodes flavibasalis* Guenee, *Delt. & Pyral.*, p. 193.

1863. *Aetholix flavibasals*, Lederer, *Wien. Ent. Monat.*, **7** : 438, pl. 17, fig. 6.

Material examined.—One ♀, Wrafter's Creak, Baratang, 17. iii., at light, 1 ♀, Rengachang, South Andaman, 7. iv. 1964 (*B. S. Lamba* coll.) ; 1 ♂, Campbell Bay, Great Nicobar, 3. iii. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : ♂ 18 mm, ♀ 20 mm.

Distribution.—India (Maharastra, Bombay ; Andamans ; W. Bengal, Kalimpong) ; Sri Lanka ; Southern China ; Indo-Malayan area (Sumatra ; Borneo ; Amboina) ; Papua.

Remarks.—The species, of which the locality from West Bengal was reported by Roonwal *et al.* (1963), is a new record for Great Nicobar.

Genus **Pagyda** Walker

1859. *Pagyda* Walker, *List Spec. Lep. Ins. Coll. Brit. Mus.*, **17** : 487.
(Type : *Pagyda salvalis* Walker)

The genus is known throughout the world except the Malagasic and Hawaiian regions. It comprises 10 species in India, none of which, however, is hitherto reported from the southern islands. Two species, of which *Pagyda salvalis* Walker occours amidst the unrecorded material of the National Zoological Collections, are dealt with hereunder.

Key to species

1. Forewing with a curved subterminal band ; both wings with prediscal, discal, postdiscal and terminal lines wider ... ... *salvalis* Walker

— Forewing with a straight subterminal line ; both wings with all the lines narrower ... *discolor* Swinhoe

Pagyda salvalis Walker

1859. *Pagyda salvalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **17** : 487.
1896. *Pagyda* (*Pagyda*) *salvalis* Hampson, *Fauna Br. India*, Moths, **4** : 270, fig. 164.

Material examined.—One ♀, South Andaman, —.—.— (—coll.). *Wing expanse* : 22 mm.

Distribution —India (Western and Southern Peninsula ; Sikkim) ; Sri Lanka ; Burma ; S. China ; Tonkin ; Philippines ; Sumatra ; Borneo ; Celebes ; Pulo Laut ; Sangir ; Bismarck Archipelago ; Papua ; Western and Middle China ; South Africa.

Remarks.—Klima (1939) did not include the Japanese locality for the species from which was segregated *Pagyda arbiter* (Butler) having been known from localities including Japan. The latter species was considered as synonym of the former by Hampson (1896, 1898).

Pagyda discolor Swinhoe

1894. *Pagyda discolor* Swinhoe, *Ann. Mag. nat. Hist.*, (6) **14** : 197.
1896. *Pagyda (Pagyda) discolor*, Hampson, *Fauna Br. India*, Moths, **4** : 271.
1939. *Pagyda discolor*, Klima, *Lep. Cat.*, **89** : 55.

Material examined.—One ♀, Galathea Bay, Great Nicobar, 22. iii. 1966 (*A. Daniel & H. K. Bhowmik* coll.) ; 1 ♀, Aberdean Bay,

South Andaman, 13. xii. 1972 (*K. S. Pradhan* coll.). *Wing expanse* : 19 mm.

Distribution.—India (Assam, Cherra Punji ; Meghalaya, Khasis ; Nagaland) ; Burma (Eastern Pegu).

Remarks.—The species is a new record for both the South Andaman and Great Nicobar Islands. Remaining hitherto confined in the north-eastern extrapeninsular sector of India, it shows in the insular form certain morpho-variations being distinguished from those in the mainland form by maxillary palpus stouter, thorax without orange stripe, abdomen with only the anal tuft fulvous, forewing with prediscal and discal lines almost straight from black sub-costal specks, hindwing with prediscal line ending near the middle of dorsum and postdiscal line, at tornus. The present females are much smaller than male having wing expanse of 26 mm., as observed by Hampson (1896).

Genus **Cnaphalocrocis** Lederer

1863. *Cnaphalocrocis* Lederer, *Wien. Ent. Monat.*, **7** : 384.

(Type : *Cnaphalocrocis jolinalis* Lederer = *Salbia medinalis* Guenee)

The genus is known to occur in the Holarctic, Malagasic, Oriental, Australian and Papuan regions. The single Indian species, which is not hitherto reported from any of the southern islands, is dealt with hereunder.

Cnaphalocrocis medinalis (Guenee)

1854. *Salbia medinalis* Guenee, *Delt. & Pyral.*, p. 201.

1896. *Cnaphalocrocis medinalis*, Hampson, *Fauna Br. India*, Moths, **4** : 275, fig. 166.

Material examined.—One ♀, Haddo Rest House, Port Blair, South Andaman, 12. iv. 1972 (*G. S. Arora* coll.) ; 1 ♀, Maya Bandar, North Andaman, 9. i., 4 ♂♂, 1 ♀, Herbertabad, 18. i. 1973 (*K. S. Pradhan* coll.) ; 1 ♂, Monglutan, South Andaman, 18. xii., 1 ♀, Campbell Bay, Great Nicobar, 25. xii. 1975 (*P. K. Maiti & D. K. Mandal* coll.). *Wing expanse* : ♂ 16-17 mm., ♀ 17-18 mm.

Distribution.—India (Maharastra : Khandala, Bombay, Poona, Alibagh ; Southern Tamil Nadu ; West Bengal, Calcutta ; Sikkim ; Assam, Gauhati ; Meghalaya, Khasis) ; Sri Lanka ; Burma ; Southern China ; Taiwan ; North Vietnam (Tonkin) ; Philippines ; Indo-Malayan area (Malacca ; Sumatra ; Java ; Borneo ; Celebes ; Mysol ; Amboina) ; Papua ; Australia (New Hebrides ; New Caledonia ; Samoa ; Bismarck Archipelago) ; North America (Texas) ; U. S. S. R.

(Amur ; Ussuri ; Tjutjuje) ; Northern and Central China ; Korea ; Japan ; Malagasy.

Remarks.—The species is a new record for North and South Andamans and also Great Nicobar. It occurs on *Oryza sativa* as a sporadic pest.

Genus **Marasmia** Lederer

1863. *Marasmia* Lederer, *Wien. Ent. Monat*, 7 : 385.

(Type : *Marasmia venilialis* Walker = *Asopia cicatricosa* Lederer = *Asopia venilialis* Walker)

The genus is distributed throughout the world except the Malagasic and Hawaiian regions. It comprises six Indian species, none of which is hitherto known to occur in any of the southern islands. Only one species is dealt with hereunder.

Marasmia bilinealis Hampson

1891. *Marasmia bilinealis* Hampson, *Ill. Typ. Spec. Het. Brit. Mus.*, **8** : 139, pl. 155, fig. 25.

1896. *Marasmia (Epimima) bilinialis* Hampson, *Fauna Br. India*, Moths, **4** : 277.

1939. *Marasmia bilinealis*, Klima, *Lep. Cat.*, **89** : 64.

Material examined.—One ♂, Campbell Bay, Great Nicobar, 29. xii. 1975 (*P. K. Maiti & D. K. Mandal* coll.). *Wing expanse* : 18 mm.

Distribution.—India (Assam ; Tamil Nadu, Nilgiris) ; Sri Lanka ; Indo-Malayan area (Malacca ; Sumatra ; Java ; Borneo ; Celebes) ; Western China.

Remarks.—The species is a new record for Great Nicobar.

Genus **Rhimphalea** Lederer

1863. *Rhimphalea* Lederer, *Wien. ent. Monat*, 7 : 410.

(Type : *Rhimphalea scelatalis* Lederer)

The genus is distributed in the Oriental and Australo-Papuan regions. It is not known to occur in Peninsular India. Of the two Indian Species, *Rhimphalea trogusalis* (Walker) is reported from Andamans. The other species is dealt with hereunder.

Rhimphalea ochalis (Walker)

1859. *Botys ochalis* Walker, *List Spec. Lep. Ins. Coll. Brit. Mus.*, **18** : 711.

1896. *Rhimphalea ochalis*, Hampson, *Fauna Br. India*, Moths, **4** : 278.

Material examined.—3 ♂ ♂, Mannarghat, Mt. Harriet Range, South Andaman, 26. iii. 1964 (*B. S. Lamba* coll.) ; 1 ♂, South Kaighat, North Andaman, 28. iii. 1969 (*T D. Soota* coll.). *Wing expanse* : 26-28 mm.

Distribution.—India (Assam ; Meghalaya, Khasis) ; Java ; Celebes.

Remarks.—The species, which is hitherto locally restricted in the North-eastern Himalayas of India, is a new record for North and South Andamans.

Genus **Syngamia** Guenee

1854. *Syngamia* Guenee, *Delt. & Pyral.*, p. 187.

(Type : *Syngamia florellalis* Guenee = *Phalaena Pyralis florella* Cramer).

The genus is distributed throughout the world except the Hawaiian region. It comprises 7 Indian species, of which *Syngamia abruptalis* (Walker) is reported from Andamans. This and another species are dealt with hereunder.

Key to species

1. Foreleg and abdomen white and without band and ring respectively, latter with anal tuft bright fulvous and without line ; hindwing without anal spot ; both wings without purplish-fuscous tinge ... ... *abruptalis* (Walker)

— Foreleg and abdomen with black bands and rings respectively, latter having anal tuft with paired white lines intervened by black ; hindwing with a black anal spot ; both wings with distal half purplish-fuscous ... ... *latimarginalis* (Walker)

Syngamia abruptalis (Walker)

1859. *Asopia ? abruptalis* Walker, *List Spec. Lep. Ins. Coll. Brit. Mus.*, **17** : 371.

1896. *Syngamia abruptalis*, Hampson, *Fauna Br. India*, Moths, **4** : 279.

1898. *Syngamia* (*Syngamia*) *abruptalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 645.

1939. *Syngamia abruptalis*, Klima, *Lep. Cat.*, **89** : 73.

Material examined.—One ♂, 2 ♀♀, Marine Hill, Port Blair, 15. xii. 1972 (*K. S. Pradhan* coll.) ; 2 ♂ ♂, Bamboo Flat, South Andaman, 19. xii., 3 ♂ ♂, 1 ♀, Campbell Bay, 25-26, 29. xii., at

light, 1 ♀, Rajendra Nagar, Great Nicobar, 30. xii. 1975 (*P. K. Maiti & D. K. Mandal* coll.). *Wing expanse* : ♂ 16-18 mm., ♀ 17-18 mm.

Distribution.—India (H. P. : Kulu, Solan ; U. P., Dehra Dun ; Maharastra : Khandala, Bombay, Poona ; West Bengal, Calcutta ; Bihar, Pusa ; Andamans) ; Sri Lanka ; Burma ; Taiwan ; Java ; Papua ; Australia (Moreton Bay ; Fiji) ; Southern and Eastern Africa (Gold Coast ; Sierra Leone ; North-western Nigeria ; Congo ; Rhodesia : Mashonaland ; Mauritius ; Seychelles ; Sokotra).

Remarks.—The species is a new record for Great Nicobar. It occours on *Mentha arvensis* and *Oscimum sanctum.*

Syngamia latimarginalis (Walker)

1859. *Asopia latimarginalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **17**: 370.

1896. *Syngamia latimarginalis*, Hampson, *Fauna Br. India*, Moths, **4** : 279.

1898. *Syngamia (Syngamia) latimarginalis*, Hampson, *Proc. zool. Soc. Lond.* 1898 : 645.

1939. *Syngamia latimarginalis*, Klima, *Lep. Cat.*, **89** : 73.

Material examined.—One ♂, Humphreygunj, South Andaman, 4. iii. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 16 mm.

Distribution.—India (Maharastra : Khandala, Bombay ; Tamil Nadu, Nilgiris ; Bihar, Pusa ; West Bengal, Calcutta ; Meghalaya, Khasis) ; Sri Lanka ; Burma ; Tonkin ; Taiwan ; Java ; Western and Eastern Africa (Kamerun).

Remarks.—The species is a new record from South Andaman. Unlike the preceding species, it is found in the North-eastern but not in the North-western Himalayan sector of India. It occurs on *Barleria cristata* as leaf-folder.

Genus **Samea** Guenee

1854. *Samea* Guenee, *Delt. & Pyral*, p. 193.
(Type : *Samea ecclesialis* Guenee)

The genus is widely distributed in the world except the Palaearctic, Malagasic and Hawaiian regions. The single Indian species *castoralis* (Walker) was transferred by *Klima* (1939) from *Pionea* Guenee to *Samea* Guenee. The latter genus was confused by Hampson (1896, 1898) as being exclusively American in distribution. The species is dealt with hereunder.

Samea castoralis (Walker)

1859. *Botys castoralis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **18** : 693.
1877. *Samea purpurascens* Moore, *Proc. zool. Soc. Lond.*, 1877 : 615.
1896. *Pionea castoralis*, Hampson, *Fauna Br. India*, Moths, **4** : 426.
1899. *Pionea castoralis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 247.
1939. *Samea castoralis*, Klima, *Lep. Cat.*, **89** : 79.

Material examined.—2 ♂♂, 1 ♀, Humphreygunj, 4. iii., 4 ♂♂, 1 ♀, Wrafter's Creak. Baratang, 17-18. iii., 1 ♂, Wright Myo, 3. iii., 7 ♂♂, 1 ♀, Mannarghat, Mt. Harriet Range, 1-2. iv., 2 ♂♂, Rengachang, 7. iv., 6 ♂♂, Cowriaghat, South Andaman, 8-9. iv. 1964 (*B. S. Lamba* coll.) ; 2 ♀♀ Maya Bandar, North Andaman, 9. i. 1973 (*K. S. Pradhan* coll.). *Wing expanse* : ♂ 20-22 mm, ♀ 18-21 mm.

Distribution.—India (Tamil Nadu, Nilgiris ; Andamans) ; Tonkin ; Sumatra ; Borneo ; Morty ; Papua (Dinan Island) ; Australia.

Remarks.—The species is already known from Andamans and locally restricted in the Southern Peninsular India. The insular form is presently observed to differ from the Indian mainland form by the abdominal white terminal segment not ringed and anal tuft completely fulvous, and subterminal line of both fore- and hindwings, being retracted along Cu_{1b} and reaching a little beyond the middle of dorsum.

Genus **Nosophora** Lederer

1863. *Nosophora* Lederer, *Wien. ent. Monat.*, **7** : 407.
(Type : *Nosophora chironalis* Lederer = *Nosophora conjunctalis* Walker)

The genus is distributed throughout the Old World except the Malagasic region. Munroe (1974) observed it to be highly allied with *Goliathodes* described by him from Papua. Amongst 7 Indian species, only *Nosophora althealis* (Walker) is hitherto reported from Andamans. The other species is dealt with hereunder.

Nosophora incomitata (Swinhoe)

1894. *Nagia incomitata* Swinhoe, *Ann. Mag. nat. Hist.*, (6) **14** : 205.
1896. *Nosophora triguttalis* Warren, ibid., **18** : 173.
1896. *Nosophora chironalis*, Hampson, *Fauna Br. India*, Moths, **4** : 289.
1898. *Nosophora chironalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 662.
1939. *Nosophora incomitata*, Klima, *Lep. Cat.*, **89** : 103.

Material examined.—One ♀, Mannarghat, Wright Myo, South Andaman, 1. iv. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 22 mm.

Distribution.—India (Meghalaya, Khasis) ; Burma (Tenasserim) ; North Vietnam (Tonkin) ; Indo-Malayan area (Sumatra ; Java).

Remarks.—The species, which is hitherto locally restricted in the North-eastern Himalayas of India, is a new record for South Andaman. The wing expanse of the present female is much smaller than that (30 mm.) recorded by Hampson (1896).

Genus **Phostria** Hübner

1819. *Phostria* Hübner, *Verz. bek. Schmett.*, p. 819.
1854. *Phryganodes* Guenee, *Delt. & Pyral.*, p. 353.
1939. *Phostria*, Klima, *Lep. Cat.*, **89** : 122.
(Type : *Phalaena Pyralis ? temira* Cramer)

The genus is known to occur throughout the world except the Nearctic region. Amongst 21 species, *Phostria unitalis* (Guenee), *P. schediusalis* (Walker), *P. longipennis* (Warren), *P. crithonalis* (Walker), *P. eradicalis* (Hampson), *P. radicalis* (Walker), and *P. opalinalis* (Moore) were earlier reported from Andamans, and *P. origoalis* (Walker), from Nicobar. Presently, 3 species are dealt with.

Key to species

1. Body smoky-black, tinged with purple ; abdomen with a paired proximo-lateral tufts ; forewing costa with a post-discal white spot ; both wings with termen excurved at middle and excised towards apex and tornus ... *maculicostalis* (Hampson)

— Body fuscous ; abdomen without proximo-lateral tuft ; forewing costa without post-discal spot ; both wings with termen neither excurved nor excised, but uniform throughout 2

2. Wings distally with a prominent purple shot ; discal spot of forewing small ; abdomen with corneous stigmatic valves ... ... *schediusalis* (Walker)

— Wings distally with slight purple tinge ; discal spot of forewing large ; abdomen without corneous stigmatic valves ... *imbecilis* (Moore)

Phostria schediusalis (Walker)

1859. *Botys schediusalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **18** : 683.
1896. *Phryganodes (Omiodes) schediusalis*, Hampson, *Fauna Br. India*, Moths, **4** : 301.
1898. *Phryganodes (Eporidia) schediusalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 686.
1939. *Phostria schediusalis*, Klima, *Lep. Cat.*, **89** : 128.

Material examined.—One ♀, Campbell Bay, Great Nicobar, 29. xii. 1975, at light (*P. K. Maiti* and *D. K. Mandal* coll.). *Wing expanse* : 26 mm.

Distribution.—India (Sikkim ; Assam ; Meghalaya, Khasis ; Andaman Island) ; Indo-Malayan area (Sumatra ; Borneo).

Remarks.—The species is a new record for Great Nicobar.

Phostria imbecilis (Moore)

1887. *Charema imbecilis* Moore, *Descr. N. Ind. Lep. Ins. Atkinson*, p. 219, pl. 7, fig. 23.

1896. *Phryganodes (Omiodes) imbecilis*, Hampson, *Fauna Br. India*, Moths, **4** : 302.

1939. *Phostria imbecilis*, Klima, *Lep. Cat.*, **89** : 128.

Material examined.—One ♀, South Andaman, —.—.— (—coll.). *Wing expanse* : 36 mm.

Distribution.—India (W. B., Darjeeling ; Sikkim ; Assam, Sibsagar ; Meghalaya, Khasis) ; South China ; Sumatra.

Remarks.—The species, which is hitherto lying amidst the old named collections of the Department, is a new record for South Andaman.

Phostria maculicostalis (Hampson)

1893. *Coenostola maculicostalis* Hampson, *Ill. Typ. Spec. Het. Br. Mus.*, **9** : 171, pl. 172, fig. 12.

1896. *Phryganodes (Omiodes) maculicostalis*, Hampson, *Fauna Br. India*, Moths, **4** : 302.

1898. *Phryganodes (Eporidia) maculicostalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 685.

1939. *Phostria maculicostalis*, Klima, *Lep. Cat.*, **89** : 127.

Material examined.—One ♂, Humphreygunj, South Andaman, 4. iii. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 26 mm.

Distribution.—India (Nagas) ; Sri Lanka ; Tonkin ; Sumatra ; Papua.

Remarks.—The species, which is hitherto locally restricted in the North-eastern Himalayas of India, is a new record for South Andaman.

Genus **Dichocrocis** Lederer

1863. *Dichocrocis* Lederer, *Wien. ent. Monat.*, **7** : 447.
(Type : *Botys pandamalis* Walker)

The genus has the range of distribution like that of its preceding counterpart. Amongst 26 Indian species, *Dichocrocis plutusalis* (Walker), *D. nilusalis* (Walker) and *D. atrisectalis* Hampson were earlier reported from Andamans and *D. pandamalis* (Walker), from Nicobar. Only the last species is dealt with hereunder.

Dichocrocis pandamalis (Walker)

1859. *Botys pandamalis* Walker, *List Lep. Ins. Coll. Br. Mus.*, **19** : 999.
1863. *Dichocrocis frenatalis* Lederer, *Wien. ent. Monat.*, **7** : 448, pl. 17, fig. 15.
1896. *Dichocrocis* (*Dichocrocis*) *pandamalis*, Hampson, *Fauna Br. India*, Moths, **4** : 306.
1939. *Dichocrocis pandamalis*, Klima, *Lep. Cat.*, **89** : 144.

Material examined.—One ♀, Galathea Bay, Great Nicobar, 4. i. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : 25 mm.

Distribution.—India (Meghalaya, Khasis ; Nicobar Island) ; Buru ; Indo-Malayan area (Java ; Borneo ; Sambawa ; Pulo Laut).

Remarks.—The species is a new record for Great Nicobar.

Lamprosema Hübner

1823. *Lamprosema* Hübner, *Zutr. z. Sammlg. exot. Schmett.*, **2** : 21.
1859. *Nacoleia* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **19** : 934.
1896. *Nacoleia*, Hampson, *Fauna Br. India*, Moths, **4** : 312.
1939. *Lamprosema*, Klima, *Lep. Cat.*, **89** : 152.
(Type : *Lamprosema lunulalis* Hübner)

The genus is distributed throughout the world. It comprises 42 Indian species, of which *Lamprosema cuprealis* (Moore) was earlier known from Andaman, *L. niphealis* (Walker) and *L. insolitalis* (Walker), from Nicobar and *L. diemenalis* (Guenee), from both these islands. Presently, 3 species are dealt with, in all the specimens of which it has been observed that Rs and M_1 on hind wing are stalked with each other and do not arise freely from the cell, as mentioned by Hampson (1896, 1898).

Key to species

1. Patagial tuft of scales short ; hind tibia with outer mesial spur as minute as the inner ; forewing with cellular annulus, discal spot reniform, postdiscal line not from a costal spot ; hindwing with terminal line crenulate ... ... *charesalis* (Walker)

— Patagial tuft of scales long ; hind tibia with outer mesial spur half as long as the inner ; forewing without cellular annulus, discal

spot not reniform, postdiscal line from a costal spot ; hindwing with terminal line, when present, not crenulate 2

2. Body purplish fuscous ; abdomen orange ; forewing with prediscal line not preceded by band, terminal series of specks present ; hind wing without discal spot ... ... *cuprealis* (Moore)

— Body fulvous ; abdomen fuscous-white ; forewing with prediscal line preceded by two bands, terminal series of specks absent ; hindwing with a discal spot ... ... *diemenalis* (Guenee)

Lamprosema cuprealis (Moore)

1877. *Coptobasis cuprealis* Moore, *Proc. zool. Soc. Lond.*, 1877 : 616, pl. 60, fig. 13.

1896. *Nacoleia* (*Hedylepta*) *cuprealis*, Hampson, *Fauna Br. India*, Moths, **4** : 315.

1939. *Lamprosema cuprealis*, Klima, *Lep. Cat.*, **89** : 163.

Material examined.—One ♂, Pitcher Nullah, Middle Andaman, 4. ii. 1972, at light (*A. K. Mukherjee & B. Dutt* coll.). *Wing expanse* : 25 mm.

Distribution.—India (Assam ; Meghalaya, Khasis ; Nagaland ; Andaman) ; Northern Burma ; Buru ; Philippines, Luzon.

Lamprosema diemenalis (Guenee)

1854. *Asopia diemenalis* Guenee, *Delt. & Pyral.*, p. 203.

1896. *Nacoleia* (*Hedylepta*) *diemenalis*, Hampson, *Fauna Br. India*, Moths, **4** : 316.

1939. *Lamprosema diemenalis*, Klima, *Lep. Cat.*, **89** : 162.

Material examined.—One ♀, Dogma River, Great Nicobar, 18. iv. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : 18 mm.

Distribution.—India (U. P. : Dehra Dun, Gorakhpur ; Bihar, Pusa ; Andaman and Nicobar Islands,) ; Sri Lanka ; Burma ; Southern China ; North Vietnam (Tonkin) ; Taiwan ; Singapore ; Indo-Malayan area (Malacca ; Sumatra ; Java ; Borneo ; Celebes ; Ceram) ; Papua ; Australia (Queensland ; Tasmania) ; New Hebrides ; Fiji ; Solomon ; Samoa ; Bismarck Archipelago ; Western China ; Southern Africa ; Maldives.

Remarks.—The species, of which the localities from the Indian mainland were reported by Roonwal *et al* (1963), is a new record for Great Nicobar. It occurs on *Phaseolus mungo* as leaf-roller.

Lamprosema charesalis (Walker)

1859. *Botys charesalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **18** : 709.
1896. *Nacoleia* (*Blepharomastix*) *charesalis*, Hampson, *Fauna Br. India*, Moths, **4** : 319.
1939. *Lamprosema charesalis*, Klima, *Lep. Cat.*, **89** : 166.

Material examined.—One ♂, Wrafter's Creak, Baratang, South Andaman, 19. iii. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 19 mm.

Distribution.—India (M. P., Mhow) ; Sri Lanka ; Southern China ; Taiwan ; Tonkin ; Singapore ; Philippines ; Borneo ; Sambawa ; Papua.

Remarks.—The species, which is hitherto locally restricted in Northern India, is a new record for South Andaman.

Genus **Goniorhynchus** Hampson

1896. *Goniorhynchus* Hampson, *Fauna Br. India*, Moths, **4** : 322.
(Type : *Botys ? gratalis* Lederer)

The genus is distributed throughout the Old World except Malagasic and Australian regions. None of the four Indian species was hitherto known from the Southern islands. Presently, one species is dealt with hereunder.

Goniorhynchus plumbeizonalis Hampson

1896. *Goniorhynchus plumbeizonalis* Hampson, *Fauna Br. India*, Moths, **4** : 323, fig. 183.

Material examined.—One ♀, Andaman, —.—.— (—coll.). *Wing expanse* : 18 mm.

Distribution.—India (Meghalaya, Khasis) ; Burma (Tenasserim) ; Philippines (Luzon).

Remarks.—The species is a new record for Andamans. The single specimen was amidst the old named collections of the Department.

Genus **Botyodes** Guenee

1854. *Botyodes* Guenee, *Delt. & Pyral*, p. 320.
(Type : *Botyodes asialis* Guenee)

The genus is distributed throughout the Old World except Malagasic region. Amongst 6 Indian species, not a single one is hitherto represented from any of the southern islands. Presently, one species is dealt with hereunder.

Botyodes flavibasalis Moore

1867. *Botyodes flavibasalis* Moore, *Proc. zool. Soc. Lond.*, **1867** : 96.

1896. *Botyodes* (*Endocrossis*) *flavibasalis*, Hampson, *Fauna Br. India*, Moths, **4** : 326.

Material examined.—One ♀, Casuarina Bay, Great Nicobar, 16. iv. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : 33 mm.

Distribution.—India (U. P., Dehra Dun ; West Bengal, Calcutta ; Sikkim ; Assam ; Naga Hills) ; Burma ; Tonkin ; Philippines ; Malacca ; Sumatra : Nias ; Papua ; Bismarck Archipelago.

Remarks.—The species, of which the North-western extra peninsular locality was reported by Roonwal *et al* (1963), is a new record for Great Nicobar.

Genus **Sylepta** Hübner

1825. *Sylepta* Hübner, *Verz. bek. Schmett.*, p. 356.

(Type : *Sylepta amandalis* Hübner = *Phalaena Noctua amando* Cramer)

The genus is distributed throughout the world. Amongst 55 Indian species, *Sylepta scinisalis* (Walker), *S. sellalis* (Guenee), *S. derogata* (Fabr.), *S. iopasalis* (Walker), *S. lunalis* (Guenee) and *S. luctuosalis* (Guenee) were earlier known from Andamans. Presently, 5 species are dealt with hereunder.

Key to species

1.	Antenna neither excised nor with a tooth of scales at base ; forewing with two cellular annulii	*derogata* (Fabricius)
—	Antenna excised and with a tooth of scales at base ; forewing never with 2 cellular annulii	2
2.	Abdomen ringed ; both wings with cilia black-spotted	*denticulata* (Moore)
—	Abdomen not ringed ; both wings with cilia not black-spotted	3
3.	Abdomen with white postero-dorsal bands ...	*lunalis* (Guenee)
—	Abdomen without such bands	4
4.	Forewing with a cellular annulus ...	*crotonalis* (Walker)
—	Forewing with a cellular speck	*fraterna* (Moore)

Sylepta derogata (Fabr.)

1775. *Phalaena derogata* Fabricius, *Syst. Ent.*, p. 641.

1854. *Sylepta multilinealis* Guenee, *Delt. & Pyral.*, p. 337, pl. 8, fig. 11.

1896. *Sylepta (Sylepta) multilinealis*, Hampson, *Fauna Br. India*, Moths, **4** 334.

1898. *Sylepta (Sylepta) multilinealis*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 722.

1939. *Sylepta derogata*, Klima, *Lep. Cat.*, **89** : 193.

Material examined.– One ♀, Rangat, Middle Andaman, 7. viii. 1973, at light (*K. S. Pradhan* coll.). *Wing expanse* : 30 mm.

Distribution.—India (U. P. : Dehra Dun, Kanpur ; Maharastra : Khandala, Bombay, Poona ; Karnataka, Kurg ; Orissa, Puri ; Bengal ; Sikkim ; Assam, Sibsagar ; Meghalaya, Khasis ; Andaman) ; Sri Lanka ; Burma ; Thailand ; Southern China ; Taiwan ; Singapore ; Philippines ; Molluccus ; Buru ; Indo-Malayan area (Malacca ; Sumatra ; Borneo ; Celebes ; Sambawa ; Flores ; Sula ; Ceram ; Key Islands ; Ambonia) ; Papua ; Australia ; Solomon ; New Hebrides ; Palau ; Viti ; Samoa ; Fiji ; Bismarck Archipelago ; South America ; U. S. S. R. (Eastern Siberia ; Amur ; Ussuri) ; Egypt ; Northern, Western and Middle China ; Korea ; Japan ; Southern and Eastern Africa (Sierra Leone ; Gold Coast ; Nigeria ; Sudan ; Belgium Congo ; Uganda ; Eastern Zanzibar ; Tanganyika ; Rhodesia ; Nyassaland ; Seychelles ; Maldives).

Remarks.—The species, of which the north-western extra-peninsular, and Southern and Eastern peninsular localities were reported by Roonwal *et al.* (1963), is not, however, known from Nicobar and Great Nicobar Islands, though the representative elements occur in the Indo-Malayan subregion of the Oriental region. The specimen examined shows R_5 and $Sc+R_1$ of hindwing mutually stalked at origin from the discoidal cell and the upper cellular annulus of forewing quite smaller than the lower. The wing expanse is quite variable between 28 and 40 mm., as mentioned by Hampson (1896). The species occurs on *Gossypium* as leaf-roller, and also on *Abelmoschus esculentus* and *Althaea rosea*.

Sylepta denticulata (Moore)

1887. *Pramadea denticulata* Moore, *Descr. N. Ind. Lep. Ins. Atkinson*, p. 211.

1896. *Sylepta (Pramadea) denticulata*, Hampson, *Fauna Br. India*, Moths, **4** : 338.

1939. *Sylepta denticulata*, Klima, *Lep. Cat.*, **89** : 198.

Material examined.—One ♂, Andaman, .—.—.— (—coll.). *Wing expanse* : 28 mm.

Distribution.—India (Sikkim ; Assam, Cherra Punji ; Meghalaya : Khasis ; Nagas).

Remarks.—The species, which has hitherto been endemic in the

north-eastern extrapeninsular belt of the Indian mainland, is a new record for the Andaman Island. The expanse of the present specimen is quite smaller than that (34 mm.) recorded by Hampson (1896).

Sylepta lunalis (Guenée)

1854. *Botys lunalis* Guenée, *Delt. & Pyral.*, p. 352.
1896. *Sylepta (Pramadea) lunalis*, Hampson, *Fauna Br. India*, Moths, **4** : 339.
1939. *Sylepta lunalis*, Klima, *Lep. Cat.*, **89** : 199.

Material examined.—One ♂, Rangat, Middle Andaman, 7. viii. 1973, at light *(K. S. Pradhan* coll.*)*. *Wing expanse* : 29 mm.

Distribution.—India (U. P. : Dehra Dun, Mussoorie ; Maharastra : Bombay, Poona ; Tamil Nadu, Nilgiris ; Karnataka, Kurg ; West Bengal : Calcutta, Darjeeling ; Meghalaya, Khasis ; Andaman); Sri Lanka ; Burma ; Thailand ; Vietnam ; Cambodia ; Laos ; Taiwan ; Philippines ; Malacca ; Sumatra, Nias ; Java ; Borneo ; Celebes ; Lombok ; Sambawa ; Papua ; Hawaii (Christmas Island) ; South America (Venezuela).

Remarks.—The north-western extra-peninsular localities of the species were reported by Roonwal *et al.* (1963). The species shows certain variations including abdomen mesially excised, ventro-laterally swollen with slight tufts of scales and distally tapering, and both wings with postdiscal line reaching the mid-dorsum. It occurs on *Vitis vinifera.*

Sylepta fraterna (Moore)

1885. *Coptobasis fraterna* Moore, *Lep. Ceylon*, **3** : 292, pl. 181, fig. 8.
1896. *Sylepta (Pramadea) fraterna*, Hampson, *Fauna Br. India*, Moths, **4** : 339.
1939. *Sylepta fraterna*, Klima, *Lep. Cat.*, **89** : 199.

Material examined.—One ♀, Great Nicobar, —.—.— (—coll.). *Wing expanse* : 34 mm.

Distribution.—India (Tamil Nadu, Nilgiris ; Sikkim) ; Sri Lanka ; Philippines ; Sumatra ; Java ; Celebes.

Remarks.—The species, of which one specimen amidst the old collections of the Department from Sikkim was not noted in the earlier literature, is a new record for Great Nicobar. The expanse of the present specimen is fairly bigger than that (28 mm) recorded by Hampson (1896).

Sylepta crotonalis (Walker)

1859. *Botys crotonalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **19** : 997.

1896. *Sylepta* (*Pramadea*) *crotonalis*, Hampson, *Faunua Br. India*, Moths, **4** : 339.

1939. *Sylepta crotonalis*, Klima, *Lep. Cat.*, **89** : 199.

Material examined.—2 ♀ ♀, Mannarghat, Wright Myo, South Andaman, 1. iv. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 34 mm.

Distribution.—India (Tamil Nadu ; Karnataka, Kurg ; Sikkim ; Meghalaya, Khasis) ; Sri Lanka ; Taiwan ; Borneo ; Pulo Laut ; Sangir.

Remarks.—The species, of which the southern peninsular localities were reported by Roonwall *et al.* (1963), is a new record for South Andaman.

Genus **Diaphania** Hübner

1818. *Diaphania* Hübner, *Zutr. Samml. Exot. Schmett.*, **1** : 51.

1896. *Glyphodes*, Hampson, *Fauna Br. India*, Moths, **4** : 345.

1898. *Glyphodes*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 731.

1939. *Diaphania*, Klima, *Lep. Cat*, **94**.

(Type : *Diaphania vitralis* Hübner)

The genus is distributed throughout the world. Amongst 13 Indian species, all of which were treated in *Glyphodes* Guenée by Hampson (1896. 1898). *Diaphania pfeifferae* (Lederer), *D. laticostalis* (Guenée), *D. marinata* (Fabr.), *D. bivitralis* (Guenée), *D. bicolor* (Swainson), *D. actorionalis* (Walker) and *D. indica* (Saunders) were earlier known from Andamans, *D. marginata* (Hampson), from Nicobar and *D. vertumnalis* (Guenée) from both these islands. Presently, 10 species are dealt with hereunder.

Key to species

1. Base of antenna normal 3

— Base of antenna not normal 2

2. Base of antenna excised and thickened with a tuft of hairs ; forewing with a ventro-proximal fringe of costal hairs and black discal spot, latter also present on hindwing ; both wings without terminal band ; body bright yellow-green ... ... *marinata* (Fabr.)

— Base of antenna contorted, not thickened and without tuft of hairs ; forewing without ventro-proximal fringe of costal hairs and with a white discal lunule ; no discal mark on hindwing ; both wings with a silvery-fuscous terminal band ; body pure white ... *pfeifferae* (Lederer)

3. Hindwing dorsum with ventral tufts of yellow hairs ; both wings with discal specks ; body

yellow-green 4

— Hindwing dorsum without ventral tufts of hairs; both wings without discal speck; body-colour variable 5

4. Hind tibia with outer mesial and terminal tufts of hairs; both wings without a terminal series of dark specks and with cilia fuscous ... *vertumnalis* (Guenée)

— Hind tibia without tuft of hairs; both wings with a terminal series of dark specks and cilia fulvous ... ... *marginata* (Hampson)

5. Abdomen with a terminal brush of spatulate scales; forewing with costa and dorsum broadly black, leaving a triangular pearly-white hyaline patch; body black-brown ... *indica* (Saunders)

— Abdomen without terminal brush of spatulate scales; forewing with costa and dorsum not broadly black so as to leave a triangular patch; body may or may not be black-brown 6

6. Forewing costa with a fulvous proximal fascia; body glaucous-green ... ... *glauculalis* (Guenée)

— Forewing costa without fascia; body never green 7

7. Forewing with two cellular triangular, one discal reniform and one sub-median oval marks; hindwing with a black cellular speck and a discal oval mark; both wings with a series of black terminal specks; body pure white ... ... *annulata* (Fabricius)

— Forewing with single cellular and discal marks which are neither triangular nor reniform; sub-median mark absent; hindwing without cellular speck and discal mark; both wings without terminal specks; body never white .. 8

8. Forewing with a white proximal fascia on dorsum, discal speck and postdiscal cornucopia-shaped patch; hindwing wholly hyaline white with a terminal chestnut band; both wings with iridescent tinge; body chestnut-brown ... ... *bivitralis* (Guenée)

— Forewing without fascia on dorsum, with a discal semi-hyaline band and postdiscal oval-shaped patch; hindwing basally hyaline white with a terminal black-brown band; both wings without iridescent tinge; body black-brown 9

9. Forewing with discal band reaching dorsum, costal spot not continued to subterminal line which is absent; hindwing with terminal band broad and of uniform width ... *bicolor* (Swainson)

— Forewing with discal band not reaching

dorsum, costal spot continued to a subterminal line which is present ; hindwing with terminal band narrow and tapering posteriorly ... ... *actorionalis* (Walker)

Diaphania pfeifferae (Lederer)

1863. *Sisyrophora pfeifferae* Lederer, *Wien. Ent. Monat.*, 7 : 399, pl. 13, fig. 13.

1896. *Glyphodes* (*Sisyrophora*) *pfeifferae*, Hampson, *Fauna Br. India*, Moths, 4 : 346.

1898. *Glyphodes* (*Sisyrophora*) *pfeifferae*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 732.

1939. *Diaphania pfeifferae*, Klima, *Lep. Cat.*, 94.

Material examined.—2 ♀ ♀, Campbell Bay, 3, 13-iii., 1 ♂, Galathea Bay, 24. xii., 1 ♂, Alexander River, 13. iv., 1 ♂, Casuarina Bay, 16. iv 1966 (*A. Daniel & H. K. Bhowmik* coll.) ; 1 ♀, Campbell Bay, Great Nicobar, 31. xii. 1975, at light (*P. K. Maiti & D. K. Mandal* coll.). *Wing expanse* : ♂ 26 mm, ♀ 27-32 mm.

Distribution.—India (West Bengal, Darjeeling ; Sikkim ; Meghalaya, Khasis ; Andamans) ; Burma (Karen Hills) ; Singapore ; Sumatra.

Remarks.—The species is a new record for Great Nicobar. The present males are quite smaller than those having the maximum expanse of 36 mm., as recorded by Hampson (1896).

Diaphania marinata (Fabr.)

1775. *Phalaena marinata* Fabricius, *Syst. Ent.*, 3 : 209.

1896. *Glyphodes* (*Pachyarches*) *psittacalis*, Hampson, *Fauna Br. India*, Moths, 4 : 347.

1898. *Glyphodes* (*Pachyarches*) *marinata*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 733.

1939. *Diaphania marinata*, Klima, *Lep. Cat.*, 94.

Material examined.—One ♂, Humphreygunj, 4. iii. 1964 (*B. S. Lamba* coll.) ; 1 ♂, 1 ♀, Chidyiatapu, South Andaman, 18. i., 6. ii. 1972, at light (*A. K. Mukherjee* and *B. Dutt* coll.). *Wing expanse* : ♂ 26-28 mm, ♀ 32 mm.

Distribution.—India (Maharastra, Bombay ; Tamil Nadu, Nilgiris ; West Bengal, Calcutta ; Sikkim ; Assam, Sibsagar ; Andamans) ; Sri Lanka ; Burma ; Malaya ; Borneo ; Celebes ; Fiji.

Diaphania marginata (Hampson)

1893. *Cenocnemis marginata* Hampson, *Ill. Typ. Spec. Lep. Het. Br. Mus.*, 9 : 169, pl. 173, fig. 23.

1896. *Glyphodes* (*Cenocnemis*) *marginata*, Hampson, *Fauna Br. India*, Moths. **4** : 348.

1898. *Glyphodes* (*Cenocnemis*) *marginata*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 735.

1939. *Diaphania marginata*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♂, Humphreygunj, 4. iii., 1 ♂, Mannarghat, 26. iii., 1 ♀, Wright Myo, Mt. Harriet Range, South Andaman, 1. iv. 1964 (*B. S. Lamba* coll.). *Wing expanse* : ♂ 34-36 mm, ♀ 30 mm.

Distribution.—India (U. P., Dehra Dun ; Kerala, Travancore ; Orissa, Ganjam ; West Bengal, Calcutta ; Sikkim ; Assam, Cachar ; Nicobar Island) ; Sri Lanka ; Solomons.

Remarks.—The species, of which the north-western extra-peninsular locality was reported by Roonwal *et al.* (1963), is a new record for South Andaman. The present specimens, particularly the female, are quite smaller as compared to the wing expanse (40 mm) given by Hampson (1896).

Diaphania vertumnalis (Guenée)

1854. *Margarodes vertumnalis* Guenée, *Delt. & Pyral.*, p. 309.

1896. *Glyphodes* (*Enchocnemidia*) *vertumnalis*, Hampson, *Fauna Br. India*, Moths, **4** : 349.

1898. *Glyphodes* (*Enchocnemidia*) *vertumnalis*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 735.

1939. *Diaphania vertumnalis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♂, 1 ♀, Campbell Bay, Great Nicobar, 26. xii. 1975 (*P. K. Maiti* and *D. K. Mandal* coll.). *Wing expanse* : ♂ 33 mm, ♀ 40 mm.

Distribution.—India (U. P., Dehra Dun ; M. P. ; Maharastra, Bombay ; Tamil Nudu ; West Bengal, Calcutta ; Sikkim ; Andamans ; Nicobars) ; Sri Lanka ; Burma (Tenasserim) ; Philippines ; Malaya ; Borneo ; Java ; Ceram ; Australia.

Remarks.—The species, of which the north-western extra-peninsular and southern peninsular localities were reported by Roonwal *et al.* (1963), is a new record for Great Nicobar. The expanse of present specimens is smaller than that as mentioned by Hampson (1896). The size-criterion is possibly related to sexual and not individual variations, as categorised by Hampson *(loc. cit)* into two "forms", viz., "small" *vertumnalis* (36 mm.) and "large" *phryneusalis* (40-44mm), which "occur irrespective of locality" The species occurs on *Tabernoemontana coronaria*.

Diaphania glauculalis (Guenée)

1854. *Margarodes glauculalis* Guenée, *Delt. & Pyral.*, p. 306.

1896. *Glyphodes (Glyphodes) glauculalis*, Hampson, *Fauna Br. India*, Moths, **4** : 350.

1898. *Glyphodes (Glyphodes) glauculalis*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 741.

1939. *Diaphania glauculalis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♂, Alexander River, Great Nicobar, 13. iv. 1966 (*A. Daniel* and *H. K. Bhowmik* coll.). *Wing expanse* : 40 mm.

Distribution.—India (Maharastra : Bombay, Poona ; Karnataka : Kurg, Belgaum ; Kerala, Travancore ; Tamil Nadu ; West Bengal, Calcutta ; Sikkim ; Assam : Sibsagar, Dansiri ; Meghalaya, Northern Khasis ; Nagaland) ; Sri Lanka ; Burma ; Malaya ; Sumatra ; Java ; Borneo ; Ternate.

Remarks.—The species is a new record for Great Nicobar. The present specimen differs from the other Malaysian representatives belonging to the form *glauculalis*, Hampson (1896) by the body-colour more blue-green and size lesser by 6-10 mm., from the Indo-Chinese forms *marthesiusalis*, Hampson *(loc. cit.)* and *nereis*, Hampson *(loc. cit.)* by shoulders and collar both greenish blue, fascia fulvous along the entire costal margin and expanse more by 6 mm. Besides, it shows certain minor anomalies in wing venation, too, viz., forewing with M_2 and M_3 a little above the postero-discal angle, R_5 not much closely approximated to $R_{3,4}$ and hindwing with Cu_{1a} a little before postero-discal angle, M_2 and M_3 rather abruptly separated from origin and discocellulars angled mesially.

Diaphania annulata (Fabr.)

1794. *Phalaena annulata* Fabricius, *Ent. Syst.*, 3 (2) : 212.

1896. *Glyphodes (Glyphodes) celsalis*, Hampson, *Fauna Br. India*, Moths, **4** : 352.

1898. *Glyphodes (Glyphodes) annulata*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 740.

1939. *Diaphania annulata*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♂, Dogma River, Great Nicobar, 11. iv. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : 26 mm.

Distribution.—India (Maharastra, Poona ; Tamil Nadu, Nilgiris ; Karnataka, Kurg ; Bihar, Ranchi ; Meghalaya, Khasis) ; Sri Lanka ; Burma (Rangoon) ; Borneo.

Remarks.—The species is a new record for Great Nicobar. It occurs on *Jasminum sambac*.

Diaphania bivitralis (Guenée)

1854. *Glyphodes bivitralis* Guenée, *Delt. & Pyral*, p. 293.

1896. *Glyphodes (Glyphodes) bivitralis*, Hampson, *Fauna Br. India*, Moths, **4** : 355, fig. 191.

1898. *Glyphodes (Glyphodes) bivitralis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 743, fig. 74.

1939. *Diaphania bivitralis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♀, Campbell Bay, Great Nicobar, 29. xii. 1975 *(P. K. Maiti & D. K. Mandal* coll.) *Wing expanse* : 34 mm.

Distribution.—India (Maharastra : Bombay, Alibagh ; Tamil Nadu ; Karnataka, Kurg ; West Bengal, Darjeeling ; Sikkim ; Assam, Sibsagar ; Andaman) ; Sri Lanka ; Burma ; Taiwan ; Borneo ; U. S. A.

Remarks.—The species is a new record for Great Nicobar. It occurs on *Cajanus cajan*, *Artocarpus heterophyllus* and *Ficus oppositifolia*.

Diaphania bicolor (Swainson)

1821. *Botys bicolor* Swainson, *Zool. Illustr.*, (1) 2 : 77, fig. 2.

1896. *Glyphodes (Glyphodes) bicolor*, Hampson, *Fauna Br. India*, Moths, **4** : 358.

1898. *Glyphodes (Glyphodes) bicolor*, Hampson, *Proc. zool. Soc. Lond*, 1898 : 742.

1939. *Diaphania bicolor*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♀, Malaoea Village, Car Nicobar, 3. iii. 1970 *(B. K. Tikadar* coll.*)*. *Wing expanse* : 26 mm.

Distribution.—India (U. P. : Dehra Dun, Chakrata Range, Haldawani ; Maharastra : Bombay, Poona ; Kerala, Travancore ; Tamil Nadu ; Bihar, Pusa ; West Bengal, Calcutta ; Sikkim ; Andaman) ; Sri Lanka ; Burma (Mergui, Rangoon) ; Celebes Java ; Australia.

Remarks.—The species, of which north-western extra-peninsular localities were reported by Roonwal *et al.* (1963), is a new record for Car Nicobar.

Diaphania actorionalis (Walker)

1859. *Glyphodes actorionalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **17** : 498.

1896. *Glyphodes (Glyphodes) actorionalis*, Hampson, *Fauna Br. India*, Moths, **4** : 359.

1898. *Glyphodes (Glyphodes) actorionalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 742.

1939. *Diaphania actorionalis*, Klima, *Lep. Cat.*, **94**.

Material examined.—2 ♂♂, 1 ♀, Wrafter's Creak, Baratang, 18. iii., 2 ♂♂, Mannarghat, 31. iii., 2 ♂♂, Wright Myo, Mt. Harriet Range, South Andaman, 2. iv. 1964 *(B. S. Lamba* coll.*)* ; 1 ♀, Campbell Bay, 3. iii., 1 ♀, Alexander River, 13. iv., 1 ♀, Appiah Bay, Great Nicobar, 14. iv. 1966 *(A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : ♂ ♀ 30-32 mm.

Distribution.—India (U. P., Dehra Dun ; Maharastra, Bombay ; Karnataka, Kurg ; Sikkim ; Meghalaya, Khasis ; Andamans) ; Sri Lanka ; Malaya ; Celebes.

Remarks.—The species, which was reported from the north-western extra-peninsular India by Roonwal *et al.* (1963), is a new record for Great Nicobar.

Diaphania indica (Saunders)

1851. *Eudioptes india* Saunders, *Trans. ent. Soc. Lond.*, (2) **1** : 163, pl. 12, figs. 5-7.

1896. *Glyphodes (Phacellura) indica*, Hampson, *Fauna Br. India*, Moths, **4** : 360.

1898. *Glyphodes (Phacellura) indica*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 738.

1939. *Diaphania indica*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♂, 1 ♀, Campbell Bay, Great Nicobar, 3. iii. 1966 *(A. Daniel & H. K. Bhowmik* coll*)*. *Wing expanse* : ♂ 20 mm., ♀ 25 mm.

Distribution.—India (U. P., Dehra Dun ; Haryana, Ambala ; M. P., Mhow ; Maharastra : Bombay, Poona ; Tamil Nadu, Nilgiris ; Bihar : Ranchi, Pusa ; West Bengal, Calcutta ; Sikkim ; Andamans) ; Sri Lanka ; Burma (Rangoon) ; China ; Taiwan ; Celebes ; Java Australia ; Ethiopian region ; Pakistan (Karachi).

Remarks.– The species, which was reported from the north-western extra-peninsular India by Roonwal *et al.* (1963), is a new record for Great Nicobar. The wing expanse of the present specimens, particularly the male, is rather smaller than that (24-28 mm.) recorded by Hampson (1896). The species occurs on Cucurbitaceous and *Corchorous* species.

Genus **Glyphodes** Guenée

1854. *Glyphodes* Guenée, *Delt. & Pyral.*, p. 292.
(Type : *Glyphodes stolalis* Guenée)

The genus is distributed throughout the world. It is represented by 28 Indian species, of which *Glyphodes caesalis* Walker, *G. canthusalis* Walker and *G. picticostalis* Hampson were earlier known from

Andamans, *G. suralis* Lederer, from Nicobar and *G. itysalis* Walker, from both these islands. Presently, 3 species are dealt with.

Key to species

1.	Body emerald green ; both wings with discal mark reduced to speck, termen angled at middle and with a series of fulvous spots ...	*suralis* Lederer
—	Body never green ; both wings with discal mark, when present, not reduced to speck, termen evenly curved and without fulvous spots	2
2,	Body pure white ; forewing with a brown fascia on costa and without discal metallic blue line ; both wings without subterminal band and with a series of terminal black specks	*nigropunctalis* Bremer
—	Body fuscous grey ; forewing with a proximal and mesially interrupted white fascia on dorsum and a discal metallic blue line : both wings with a subterminal lilacine-grey band and a faint terminal line	*itysalis* Walker

Glyphodes suralis Lederer

1863. *Glyphodes suralis* Lederer, *Wien Ent. Monat.*, p. 405, pl. 14, fig. 9.

1896. *Glyphodes (Chloauges) suralis*, Hampson, *Fauna Br. India*, Moths, **4** : 349.

1898. *Glyphodes* (*Chloauges*) *suralis*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 738.

1939. *Glyphodes suralis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♀ Alexander River, Great Nicobar, 13. iv. 1966 (*A Daniel & H. K. Bhowmik* coll.). *Wing expanse* : 24 mm.

Distribution.—India (Nicobars) ; Amboina ; Solomons ; Gilbert ; Ellice ; Marshall Island.

Remarks.—The species, which is typically insular in origin. is a new record for Great Nicobar. The present specimen is too small as compared to the expanse (30-40 mm.) given by Hampson (1896).

Glyphodes nigropunctalis Bremer

1864. *Glyphodes nigropunctalis* Bremer, *Lep. Ost. - Sib.*, p. 67, pl. 6, fig. 5.

1896. *Glyphodes* (*Glyphodes*) *nigropunctalis*, Hampson, *Fauna Br. India*, Moths, **4** : 352.

1898. *Glyphodes* (*Glyphodes*) *nigropunctalis*, Hampson, *Proc. zool. Soc. Lond.*, **1898** : 739.

Material examined.—One ♀, Wrafter's Creak, Baratang, South

Andaman, 17. iii. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 28 mm.

Distribution.—India (H. P., Simla ; Maharastra, Bombay ; Tamil Nadu, Nilgiris ; Sikkim ; Assam, Sibsagar ; Nagaland) ; Sri Lanka ; Pakistan ; Siberia ; Japan.

Remarks.—The species is a new record for South Andaman. The present specimen is quite smaller as compared to the wing expanse (32-36 mm.) given by Hampson (1896).

Glyphodes itysalis Walker

1859. *Glyphodes itysalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **17** : 501

1896. *Glyphodes* (*Glyphodes*) *itysalis*, Hampson, *Fauna Br. India*, Moths, **4** : 354.

1898. *Glyphodes* (*Glyphodes*) *itysalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 743.

1939. *Glyphodes itysalis*, Klima, *Lep. Cat.*, **94.**

Material examined.—One ♂, Humphreygunj, South Andaman, 3. iii. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 30 mm.

Distribution.—India (Maharastra : Khandala, Bombay ; Tamil Nadu, Nilgiris ; Assam, Sibsagar ; Andamans ; Nicobars) ; Sri Lanka ; Burma ; Taiwan ; Sumatra ; Borneo ; Java.

Remarks.—The expanse of the present specimen is larger than that (24-26 mm.) given by Hampson (1896).

Genus **Synclera** Lederer

1863. *Synclera Lederer, Wien. ent. Monat.*, **7** : 444 (nec syn. of *Pagyda*, Hampson, 1896, 1898 ; Klima, 1939).
(Type : *Eudioptis traducalis* Zeller)

The genus is distributed throughout the world except the Malagasy and Hawaiian regions. Amongst 3 Indian species, none is hitherto known from the southern islands. According to Munroe (1956), it is close to *Glyphodes* Guenée and allies and bears no relation with *Pagyda* Walker with which it was erroneously synonymised by Hampson (1896, 1898). The similar confusion was also followed by Klima (1939). One species is dealt with hereunder.

Synclera traducalis (Zeller)

1852. *Eudioptis traducalis* Zeller, *Kgl. Vet. Akad. Handl. Lep. Micropt. Caffr.*, p. 54.

1863. *Synclera traducalis*, Lederer, *Wien, ent. Monat.*, **7** : 444.

1896. *Pagyda* (*Synclera*) *traducalis*, Hampson, *Fauna Br. India*, Moths, **4** : 272.

1898. *Paygda* (*Synclera*) *traducalis*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 636.

1939. *Pagyda traducalis*, Klima, *Lep. Cat.*, **89** : 33.

1956. *Synclera traducalis*, Munroe, *Rev. Fr. Ent.*, **23** (2) : 122.

Material examined.—One ♀, Campbell Bay, 9. iii., 1 ♀, Galathea Bay, Great Nicobar, 24. iii. 1966 (*A. Daniel & H. K. Bhowmik* coll.) ; 1 ♂, Kamorta, Nicobar, 22. iii. 1970 (*B. K. Tikadar* coll.) ; 1 ♀, Car Nicobar, 14. ii. 1972, at light (*A. K. Mukherjee & B. Dutt* coll.). *Wing expanse* : ♂ 26 mm., ♀ 20-24 mm.

Distribution.—India (Delhi Cant. ; Maharastra, Bombay ; Bihar, Pusa ; West Bengal, Calcutta ; Assam ; Sikkim) ; Sri Lanka ; Burma ; Philippines ; Sumatra ; Java ; Celebes ; Amboina ; Papua ; Bismarck Archipelago ; Central and South America (Haiti ; Bahama ; Mexico ; Guatemala ; Costarica ; Panama ; Equador) ; North America (Florida) ; Syria ; Palestine (Cyrenica) ; U. A. R. (Aden) ; Eastern and Southern Africa (Congo ; Kilimanjaro ; Kaffernland).

Remarks.—The species, of which the northern peninsular locality was recorded by Roonwal *et al.* (1963), is a new record for both Car and Great Nicobar Islands.

Genus **Nausinoe** Hübner

1825. *Nausinoe* Hübner, *Verz. bek. Schmett.*, p. 362 (non descr.).

1896. *Lepyrodes*, Hampson, *Fauna Br. India*, Moths, **4** : 367.

1898. *Lepyrodes*, Hampson, *Proc. zool. Soc. Lond.*, 1898 : 753.

1939. *Nausinoe*, Klima, *Lep. Cat.*, **94**.

(Type : *Nausinoe neptalis* Hübner)

The genus is distributed in the Ethiopian, Oriental and Australian regions. Of the 2 Indian species, none is hitherto known from any of the southern insular groups of India. Presently, one species is dealt with hereunder.

Nausinoe geometralis (Guenée)

1854. *Lepyrodes geometralis* Guenée, *Delt. & Pyral*, p. 278, pl 8, fig. 6.

1896. *Lepyrodes* (*Lepyrodes*) *geometralis*, Hampson, *Fauna Br. India*, Moths, **4** : 368.

1898. *Lepyrodes* (*Lepyrodes*) *geometralis*, *Proc. zool. Soc. Lond*, 1898 : 754.

1939. *Nausinoe geometralis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♂, Aberdean Bay, South Andaman, 13. xii. 1972 (*K. S. Pradhan* coll.). *Wing expanse* : 22 mm.

Distribution.—India (U. P., Dehra Dun ; Maharastra : Bombay, Poona ; Kerala, Vellyani ; Tamil Nadu : Nilgiris, Assirghar ; Bihar : Pusa, Barakar ; West Bengal, Calcutta ; Assam, Sibsagar) ; Sri

Lanka ; Burma ; China ; Taiwan ; Java ; Australia ; Western Africa ; **Pakistan** (Karachi).

Remarks.—The species is a new record for South Andaman. It occurs on *Jasminum sambac.*

Genus **Sameodes** Snellen

1880. *Sameodes* Snellen, *Tijd. v. Ent.*, 23 : 217.
(Type : *Botys cancellalis* Zeller)

The genus is distributed throughout the world except Hawaiian region. Amongst 5 Indian species, none is hitherto reported from any of the southern insular groups of India. Presently, one species is dealt with hereunder.

Sameodes cancellalis (Zeller)

1852. *Botys cancellalis* Zeller, *K. Vet. -A. K. Handl.*, p. 34.
1896. *Sameodes* (*Sameodes*) *cancellalis*, Hampson, *Fauna Br. India*, Moths, 4 : 375.
1899. *Sameodes* (*Sameodes*) *cancellalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 174.

Material examined.—One ♂, 2 ♀ ♀, Wright Myo, Mt. Harriet Range, South Andaman, 29. iii., 2. iv. 1964 (*B. S. Lamba* coll.). *Wing expanse* : ♂ ♀ 20-21 mm.

Distribution.— India (North-eastern extra-peninsular area ; Tamil Nadu ; Bihar, Pusa) ; Sri Lanka ; Burma ; Java ; Australia ; Africa.

Remarks.—The species is a new record for South Andaman. The southern and eastern peninsular localities were reported by Roonwal *et al.* (1963).

Genus **Thliptoceras** Warren

1890. *Thliptoceras* Warren (in Swinhoe), *Trans. ent. Soc. Lond.*, p. 274.
[Type : *Thliptoceras variabilis* Warren = *Hapalia cascalis* (now *cascale*) Swinhoe]

The genus is distributed throughout the Old World except Malagasic and Papuan regions. Amongst the 5 Indian species, none is hitherto known from the southern islands. Presently, one species is dealt with hereunder.

Thliptoceras cascale (Swinhoe)

1890. *Hapalia cascalis* Swinhoe, *Trans. ent. Soc. Lond.*, p. 271, pl. 8, fig. 18.

1896. *Thliptoceras* (*Thliptoceras*) *cascale*, Hampson, *Fauna Br. India*, **Moths**, **4** : 377.

1899. *Thliptoceras* (*Thliptoceras*) *cascale*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 179. fig. 22.

1967. *Thliptoceras cascale*, Munroe, *Can. Ent.*, **99** : 722. [Lectotype, ♂, designated in B. M. (N. H.)].

Material examined.—One ♀, Cowriaghat, South Andaman, 9. iv. 1964 (*B. S. Lamba* coll.). *Wing expanse* : 20 mm.

Distribution.—India (H. P., Dharmsala ; Maharastra, Bombay ; Tamil Nadu, Nilgiris ; Sikkim) ; Sri Lanka Burma (Rangoon) ; Japan.

Remarks.—The species is a new record for South Andaman.

Genus **Prophantis** Warren

1896. *Prophantis* Warren, *Ann. Mag. nat. Hist.*, (6) **18** : 113, (Type : *Botys octoguttalis* Felder)

The genus was originally erected as "nom. nov." by Warren (1896) to incorporate some species earlier belonging to *Archernis* Meyrick. Subsequently, it was treated by Hampson (1896, 1899) as one of the subgenera of the genus *Thliptoceras* Warren. Later, it was synonymised with *Ischnurges* Lederer by Shibuya (1928) and finally, has been considered as a valid genus by Munroe (1967). None of the foregoing workers could, however hint at any particular external character for its ready recognition. The antennal feature in male, as mentioned by Hampson *(loc. cit.)* at the subgeneric level, seems to be a salient one in the genus *Prophantis* Warren, which occurs mainly in the Oriental and occasionally also in a few other regions including Australian and Ethiopian. Amongst several described and many undescribed species (*vide* Munroe, *loc. cit.*), only one is dealt with hereunder.

Prophantis octoguttale (Felder)

1874. *Botys octoguttalis* Felder, *Reis. Nov. Lep.*, **4** : pl. 135, fig. 38.

1896. *Thliptoceras* (*Prophantis*) *octoguttale*, Hampson, *Fauna Br. India*, **Moths**, **4** : 378.

1967. *Prophantis octoguttale*, Munroe, *Can. Ent.*, **99** (7) : 722.

Material examined.—One ♂, Andaman, (—coll.). *Wing expanse* : 20 mm.

Distribution.—India (Tamil Nadu, Nilgiris ; Sikkim ; Assam, Sibsagar) ; Sri Lanka ; Borneo ; Amboina ; Australia ; Southern Africa (Natal.).

Remarks.—The species, lying hitherto unrecorded amidst the old

collections of the Department, is recorded new for the Andaman Island.

Genus **Terastia** Guenée

1854. *Terastia* Guenée, *Delt. & Pyral.*, p. 211.
(Type : *Terastia meticulosalis* Guenée)

The genus is distributed in the Ethiopian, Oriental and Neotropical regions. Of the two Indian species, *Terastia meticulosalis* Guenee, coupled with the distribution, locality-data and morphological annotation, was already recorded from Car Nicobar by Bhattacharya *et al.* (1976). The species occurs on *Erythrina* sp. as stem-borer.

Genus **Ischnurges** Lederer

1863. *Ischnurges* Lederer, *Wien. ent. Monat.*, p. 418.
(Type : *Ischnurges illustralis* Lederer)

The genus is distributed in the Ethiopian, Oriental, Papuan, Australian and Neotropical regions. Of the three Indian species, none is hitherto reported from any of the southern insular groups of India. Presently, one species is dealt with hereunder.

Ischnurges gratiosalis (Walker)

1859. *Samea gratiosalis* Walker, *List Lep. Ins. Coll. Br. Mus.*, **17** : 357.
1896. *Ischnurges gratiosalis*, Hampson, *Fauna Br. India*, Moths, **4** : 383, fig. 208.

Material examined.—One ♀, Dogma River, Great Nicobar, 11. iv. 1966 *(A. Daniel & H. K. Bhowmik* coll.*)*. *Wing expanse* : 24 mm.

Distribution.—India (Kerala, Travancore ; Tamil Nadu, Nilgiris : West Bengal, Darjeeling ; Sikkim) ; Sri Lanka ; Borneo ; Pulo Laut ; Northern China.

Remarks.—The species is a new record for Great Nicobar.

Genus **Hyalobathra** Meyrick

1885. *Hyalobathra* Meyrick, *Trans. ent. Soc. Lond.*, p. 445.
1896. *Isocentris*, Hampson, *Fauna Br. India*, Moths, **4** : 385.
1899. *Hyalobathra*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 189.
(Type : *Hyalobathra archeleuca* Meyrick)

The genus is distributed in the Palaearctic, Ethiopian, Oriental, Australian and Neotropical regions. Of the eight Indian species, none

is hitherto reported from the southern islands. Presently, one species is dealt with hereunder.

Hyalobathra filalis (Guenée)

1854. *Asopia filalis* Guenée, *Delt. & Pyral.*, p. 204.
1896. *Isocentris filalis*, Hampson, *Fauna Br. India*, Moths, **4** : 385, fig. 209.
1899. *Hyalobathra* (*Isocentris*) *filalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 189.

Material examined.—4 ♀ ♀, Campbell Bay, 3, 13, 16-iii., 1. v., 2 ♀ ♀, Galathea Bay, Great Nicobar, 22, 24-iii. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse* : 19-22 mm.

Distribution.—India (Maharastra, Bombay ; Karnataka, Karwar ; Tamil Nadu, Coimbatore ; Bihar, Pusa ; Assam, Sibsagar) ; Bangladesh (Sylhet) ; Sri Lanka ; Burma ; Taiwan ; Java ; Celebes ; Australia ; Neotropical region ; Mauritius.

Remarks.—The species is a new record for Great Nicobar.

Genus **Crocidophora** Lederer

1863. *Crocidophora* Lederer, *Wien. ent. Monat.*, 386.
(Type : *Crocidophora tuberculalis* Lederer)

The genus is distributed in the Holarctic, Ethiopian, Oriental and Australian regions. Out of 21 Indian species, only *Crocidophora limbolalis* Moore was earlier known from Andamans. Presently, one more species is added from the insular area.

Crocidophora ptyophora Hampson

1896. *Crocidophora* (*Crocidophora*) *ptyophora* Hampson, *Fauna Br. India*, Moths, **4** : 389, fig. 210.

Material examined.—One ♀, South Andaman, —.—.—. (—coll.). *Wing expanse* : 30 mm.

Distribution.—India (West Bengal, Darjeeling ; Sikkim) ; Burma (Tenasserim).

Remarks.—The species, which remained hitherto endemic in the north-eastern extra-peninsular belt of the Indian mainland, is a new record for South Andaman.

Genus **Maruca** Walker

1859. *Maruca* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **18** : 540.
(Type : *Hydrocampa aquatilis* Boisduval = *Crochiphora testulalis* Hübner)

The genus is distributed throughout the world except Nearctic region. Of the two Indian species, *Maruca testulalis* (Geyer) was earlier known from Andamans. The same species is dealt with hereunder.

Maruca testulalis (Geyer)

1832. *Crochiphora testulalis* Geyer, *Hubn. Samml. Exot. Schmett.*, 4 (4) : 12 (non descr.).

1896. *Maruca testulalis*, Hampson *Fauna Br. India*, Moths, 4 : 393, fig. 211.

1899. *Maruca testulalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 194, fig. 104.

Material examined.—One ♂, Wrafter's creak, South Andaman, 11 iii. 1964 (*B. S. Lamba* coll.) ; 1 ♂, Rangat, Middle Andaman, 5. i. 1973, at light (*K. S. Pradhan* coll.). *Wing expanse* : 22-24 mm.

Distribution.—India (H. P., Kulu ; U. P. : Dehra Dun, Mussoorie ; Haryana, Ambala ; Maharastra : Khandala, Poona ; Karnataka, Kurg ; Tamil Nadu, Nilgiris ; Orissa, Sambalpure ; Bihar, Pusa ; West Bengal, Calcutta. Darjeeling ; Sikkim ; Assam : Sibsagar, Cinnomara, Dansiri ; Meghalaya, Khasis ; Andamans) ; Sri Lanka ; Burma (Rangoon) ; Celebes ; Borneo ; Australia ; South America ; Japan ; Southern Africa.

Remarks.—The present specimens are fairly smaller in expanse than that (26-30 mm.) recorded by Hampson (1896). The species occurs on *Vigna unguiculata* and developing seeds of *Phaseolus aureus* and *P. mungo*.

Genus Tetridia Warren

1890. *Tetridia* Warren, *Ann. Mag. Nat. Hist.*, (6) 6 : 477.
(Type : *Botys caletoralis* Walker)

The genus is hitherto known to be endemic in the Oriental region. The single Indian species is dealt with hereunder.

Tetridia caletoralis (Walker)

1859. *Botys caletoralis*, Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, 18 : 651.

1896. *Tetridia caletoralis*, Hampson, *Fauna Br. India*, Moths, 4 : 395, fig. 213.

Material examined.—2 ♀ ♀, Humphreygunj, 4. iii., 1 ♀, Wrafter's Creak, Baratang, South Andaman, 17. iii. 1964 (*B. S. Lamba* coll.). *Wing expanse :* 32-34 mm.

Distribution.—India (Bihar, Pusa ; Sikkim ; Assam, Sibsagar ; Meghalaya, Khasis ; Andamans) ; Bangladesh (Sylhet) ; Sri Lanka ; Burma (Tenasserim) ; Indo-Malayan area (Borneo ; Celebes).

Remarks.—The eastern peninsular locality of the species from

India was reported by Roonwal *et al* (1963).

Genus **Polygrammodes** Guenée

1854. *Polygrammodes* Guenée, *Delt. & Pyral.*, p. 318.
1896. *Pachynoa*, Hampson, *Fauna Br. India*, Moths, **4** : 396.
1899. *Polygrammodes*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 196.
(Type : *Polygrammodes runicalis* Guénee)

The genus is distributed throughout the world except Palaearctic, Papuan and Hawaiian regions. Amongst 6 Indian species, *Polygrammodes thoosalis* (Walker), *P. sabelialis* (Guenée) and *P. pectinicornalis* (Guenée) were earlier known from Andamans. Presently, the last species is dealt with hereunder.

Polygrammodes pectinicornalis (Guenée)

1854. *Botys pectinicornalis* Guenée, *Delt. & Pyral.*, p. 326.
1896. *Pachynoa* (*Pitacanda*) *pectinicornalis*, Hampson, *Fauna Br. India*, Moths, **4** : 398.
1899. *Polygrammodes* (*Pachynoa*) *pectinicornalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 197.

Material examined.—One ♂, 1 ♀, South Andaman, —.—.— (—coll.). *Wing expanse :* ♂ 26 mm., ♀ 31 mm.

Distribution.– India (Gujarat, Cutch ; Maharastra : Bombay, Poona ; West Bengal ; Andamans).

Remarks.—The expanse of the specimens is smaller than that (34 mm.) given by Hampson (1896).

Genus **Psara** Snellen

1875. *Psara* Snellen, *Sijdschr. Ent.*, **18** : 239.
1884. *Pachyzancla* Meyrick, *Trans. Ent. Soc. Lond.*, p. 315.
1929. *Psara*, Shibuya, *J. Fac. Kgr. Hokkaido Imp. Univ. Tapporo*, **25** : 205.
(Type : *Psara pallicaudalis* Snellen)

The genus is distributed throughout the world. Of the twelve Indian species, *Psara licarsisalis* (Walker), *P. phaeopteralis* (Guenée) and *P. stultalis* (Walker) were know from Andamans. Presently, all these three species are dealt with.

Key to species

1. Mesial femur dilated with ventral scales ; patagium without long tuft of scaly hairs ; 3rd abdominal segment without black spot ; forewing without dorso-basal speck ; hind-

wing without discal spot ; both wings without lines 2

— Mesial femur not dilated with scales ; patagium with long tuft of scaly hairs extending beyond metathorax ; 3rd abdominal segment with paired black spots ; forewing with a dorso-basal speck ; hind wing with a large discal spot ; both wings with lines ... *stultalis* (Walker)

2. Body not purple ; foreleg with tibio-femoral joint roughly hairy ; forewing ventro-proximally fringed with black costal hairs and with discal lunule ... ... *licarsisalis* (Walker)

— Body tinged with purple ; foreleg without hairs ; forewing without costal fringe of hairs and with discal spot ... ... *phaeopteralis* (Guenée)

Psara licarsisalis (Walker)

1859. *Botys licarsisalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **18** : 686.

1896. *Pachyzancla licarsisalis*, Hampson, *Fauna. Br. India*, Moths, **4** : 402, fig. 218.

1899. *Pachyzancla licarsisalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 202, fig. 111.

1939. *Psara licarsisalis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♀, Wright Myo, Mt. Harriet Range, 2. iv. 1964 (*B. S. Lamba* coll.) ; 1 ♂, 1 ♀, Aberdean Bay, South Andaman, 13. xii. 1972, 2 ♀ ♀, Rangat, Middle Andaman, 8. i. 1973, at light (*K. S. Pradhan* coll.). *Wing expanse :* ♂ 24 mm, ♀ 24-26 mm.

Distributian.—India (H. P., Solan ; U. P. : Dehra Dun, Mussorie, Mirzapur ; M. P., Mhow ; Maharastra : Mahabaleswar, Bombay, Poona ; Tamil Nadu, Nilgiris ; Bihar, Ranchi ; West Bengal : Calcutta, Kurseong ; Sikkim ; Andamans) ; Sri Lanka ; Malacca : Borneo ; Java ; Australia ; Syria ; Japan ; China ; Pakistan (Chitral ; Karachi).

Remarks.—The species occurs on *Anisomeles ovata* as leaf-roller.

Psara phaeopteralis (Guenée)

1854. *Botys phaeopteralis* Guenée, *Delt. & Pyral.*, p. 349.

1896. *Pachyzancla* (*Acharana*) *phaeopteralis*, Hampson, *Fauna Br. India*, Moths, **4** : 402.

1899. *Pachyzancla* (*Acharana*) *phaeopteralis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 202.

1939. *Psara phaeopteralis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♂, Manpur, South Andaman, 18. i. 1973, at light (*K. S. Pradhan* coll.). *Wing expanse :* 24 mm.

Distribution.—India (H. P., Solan ; U. P. : Dehra Dun, Mirzapur ; M. P., Mhow ; Maharastra : Mahabaleswar, Bombay, Poona ; Tamil Nadu, Nilgiris ; Bihar, Pusa ; West Bengal, Calcutta ; Sikkim ; Andamans) ; Sri Lanka ; Burma (Rangoon ; Mergui) ; Java ; Solomons ; America (Raio-de-Janeiro) ; U.A.R. (Southern Yemen : Aden); Africa (Mauritius) ; Pakistan (Chitral ; Karachi).

Remarks.—The present specimen is on the dwarf side of the range of wing expanse (22-30 mm.) as given by Hampson (1896). The species occurs on *Anisomeles ovata* as leaf-roller and also several alternate hosts including *Panicum miliaceum, Oryza sativa, Triticum vulgare* and *Saccharum officinarum.*

Psara stultalis (Walker)

1859. *Botys stultalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **18** : 669.

1896. *Pachyzancla* (*Pachyzancla*) *stultalis*, Hampson, *Fauna Br. India*, Moths, **4** : 405.

1899. *Pachyzancla* (*Rhectocraspeda*) *stultalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 204.

1939. *Psara stultalis*, Klima, *Lep. Cat.*, **94**.

Material examined.—One ♀, Campbell Bay, Great Nicobar, 25. xii. 1975 (*P. K. Maiti & D. K. Mandal* coll.). *Wing expanse* : 26 mm.

Distribution.—India (H. P., Kulu ; U. P., Dehra Dun ; M. P., Mhow ; Maharastra : Bombay, Poona ; Karnataka, Coorg ; Tamil Nadu ; West Bengal : Calcutta, Kurseong ; Andamans) ; Sri Lanka ; Burma (Rangoon) ; Sumatra ; Java ; Borneo ; Celebes ; Australia ; Pakistan (Karachi).

Remarks.—The species, of which the southern peninsular locality in India was reported by Roonwal *et al* (1963), is a new record for Great Nicobar. The present specimen shows inclination to the giant size of range of wing expanse (22-28 mm.) as given by Hampson (1896).

Genus **Antigastra** Lederer

1863. *Antigastra* Lederer, *Wien. ent. Monat.*, p. 419.
(Type : *Botys catalaunalis* Duponchel)

The genus is distributed in the Palaearctic, Ethiopian, Malagasic, Oriental and Neotropical regions. The single Indian species is presently dealt with.

Antigastra catalaunalis (Duponchel)

1830. *Botys catalaunalis* Duponchel, *Hist. Nat. Lep. Fr.*, **8** : 330, pl. 232, fig. 8.

1896. *Antigastra catalaunalis*, Hampson, *Fauna Br. India*, Moths, **4** : 412, fig. 224.

Material examined.—One ♀, Chidyiatapu, South Andaman, 15. i. 1972, at light (*A. K. Mukherjee & B. Dutt* coll.). *Wing expanse* : 20 mm.

Distribution.—India (U.P., Dehra Dun ; M. P. : Mhow, Gwalior ; Maharastra : Khandala, Bombay, Poona ; West Bengal) ; Sri Lanka ; Burma ; Mexico ; Europe ; Syria ; Aden ; Eastern and Westerm Africa ; Pakistan (Karachi).

Remarks.—The species is a new record for South Andaman. It is a serious pest of oilseeds, occring specifically on *Sesamum indicum* as leaf- and pod-borers.

Genus **Pionea** Guenée

1954. *Pionea* Guenée, *Delt. & Pyral.*, p. 367.
(Type : *Phalaena forficalis* Linn.)

The genus is distributed throughout the world except the Papuan region. Amongst 20 Indian species, only *Pionea aureolalis* (Lederer) was earlier known from the Andamans. Presently, 2 species are dealt with.

Key to species

1. Body bright straw-yellow ; frons with lateral white lines ; abdomen ringed with white ; forewing with costa white, discal lunule obsolete, subterminal line without tooth on Cu_{1b} ; hindwing with indistinct lines ... *albicostalis* Swinhoe

— Body orange-yellow ; frons without lateral lines ; abdomen not ringed ; forewing with costa of body colour, discal line distinct, subterminal line with an internal tooth on Cu_{1b} ; hind wing with distinct lines ... *aureolalis* (Lederer)

Pionea albicostalis Swinhoe

1890. *Pionea albicostalis* Swinhoe, *Trans. ent. Soc. Lond.*, p. 271.
1896. *Pionea* (*Udea*) *albicostalis*, Hampson, *Fauna Br. India*, Moths, **4** : 424.
1899. *Pionea* (*Pionea*) *albicostalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 246.

Material examined.—One ♂, Magar Nullah, Campbell Bay, Great Nicobar, 27. xii. 1975 (*P. K. Maiti & D. K. Mandal* coll). *Wing expanse :* 21 mm.

Distribution.—India (Punjab ; Kerala, Vellyani ; Tamil Nadu, Nilgiris) ; Burma (Rangoon).

Remarks.—The species is a new record for Great Nicobar.

Pionea aureolalis (Lederer)

1863. *Botys aureolalis* Lederer, *Wien. ent. Monat.*, **7** : 473.
1896. *Pionea* (*Udea*) *aureolalis*, Hampson, *Fauna Br. India*, Moths, **4** : 424.
1899. *Pionea* (*Pionea*) *aureolalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 246.

Material examined.—One ♀, Alexander River, Great Nicobar, 13. iv. 1966 (*A. Daniel & H. K. Bhowmik* coll.). *Wing expanse :* 29 mm.

Distribution.—India (H. P., Dharmsala ; Maharastra : Bombay, Palghar Range ; Karnataka, Kurg ; West Bengal : Kurseon, Bagdogra ; Sikkim ; Assam, Sibsagar Meghalaya, Khasis ; Andamans); Sri Lanka ; Burma.

Remarks.—The species, of which the Indian peninsular localities were reported by Roonwal *et al* (1963), is a new record for Great Nicobar.

Genus **Pyrausta** Schrank

1802. *Pyrausta* Schrank, *Fauna Boica.*, **2** (2) : 163.
(Type : *Phalaena Geometra cingulata* Linn.)

The genus is distributed throughout the world. Amongst 44 Indian species, only *Pyrausta sikkima* (Moore) was known earlier from Andamans. Presently, 2 species are dealt with hereunder.

Key to species

1. Body not tinged with orange ; forewing with costal fuscous streaks, cellular spot and discal lunule ; both wings with lines ... *damoalis* (Walker)

— Body tinged with orange ; forewing without costal streaks, cellular spot and discal lunule ; both wings with bands ... ... *tetraplagalis* Hampson

Pyrausta damoalis (Walker)

1859. *Botys damoalis* Walker, *List Spec. Lep. Ins. Coll. Br. Mus.*, **18** : 656.
1896. *Pyrausta* (*Pyrausta*) *damoalis*, Hampson, *Fauna Br. India*, Moths, **4** : 436.
1899. *Pyrausta damoalis*, Hampson, *Proc. zool. Soc. Lond.*, 1899 : 259.

Material examined.—One ♀, Pitcher Nullah, Middle Andaman, 4. ii. 1972 (*A. K. Mukherjee & B. Dutt* coll.). *Wing expanse* : 26 mm.

Distribution.—India (H. P., Dharmsala ; West Bengal, Darjeeling; Sikkim) ; Burma (Rangoon) ; China ; Japan.

Remarks.—The species is a new record for Middle Andaman.

Pyrausta tetraplagalis Hampson

1899. *Pyrausta tetraplagalis* Hampson, *Proc. zool. Soc. Lond.*, 1899 : 268. pl. 50, fig. 25.

Material examined.—One ♂, 14. iii. 1966 (*A. Daniel & H. K. Bhowmik* coll.) ; 1 ♂, 1 ♀, Campbell Bay, Great Nicobar, 28. xii. 1975, at light (*P. K. Maiti & D. K. Mandal* coll.). *Wing expanse* : ♂ ♀ 13 mm.

Distribution.—South Africa (Salisbury : Mashonaland).

Remarks.—The species is a new record for Great Nicobar and also for the whole of Oriental region.

SUMMARY

The paper incorporates a systematic account coupled with a review on earlier investigation and general distribution of the Pyraustinae from the Andaman, Nicobar and Great Nicobar Islands of the Indian Ocean. 103 indexed species, including 40 unseen ones compiled from the literature, are appended in one table of distribution showing their intra-southern insular, other Indian and global ranges. Sixty-three species in thirty-five genera are actually dealt with in the given account along with their keys and available host plants. Fifty-one species constitute new locality records either exclusively or partly for all these islands together, of which 4 Andamanese and a single Great Nicobarese species are also recorded new for the Indo-Malayan subregion and whole of the Oriental region respectively. The study is based on different collections from recent surveys including the one made by the first author at these islands and also on some earlier insular material lying hitherto unrecorded amidst the National Zoological Collections of the Department.

RESUME

L'article s'agit à un compte systématique accouplé d'une revue de l'investigation précédente et de la bio-géographie des Pyraustinae des îles d'Andaman, de Nicobar et de Grand Nicobar de l'Océan Indien. Les 103 espèces rangées à l'index, y compris les 40 unes invues mais amassees de la litérature, sont inclues dans un tableau montrant leur spectre de répartition dans ces îles du sud, les autres parts de l'Inde et du monde. A présent, les 63 espèces comprises en 35 genres se concernent du compte rendu accompagné de leurs cléfs et de leurs plantes-hotes procurables. Les 51 espèces forment soit exclusivement soit partiellement de nouveaux dossiers de localités de ces îles tout ensemble ; parmi celles-ci, les 4 espèces des îles d'Andaman et l'une seule de Grand Nicobar représentent aussi de nouvelles récoltes pour la subrégion Indo-Malayenne et pour toute la région Orientale respectivement. Le problème est opéré sur les diverses collections des surveillances récentes, de l'une desquelles le premier

auteur s'est melangé aux îles surmentionnées, et aussi sur de vieux matériaux dans les collections Nationales de Zoologie du Département, la répartition insulaire desquels n'a pas été encore signalée dans une publication quelconque.

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