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Presently, Dr Singh is working as Scientist-D in Zoological Survey of India, GPRC, Patna.

About the Book

The book covers the first consolidated work on the taxonomy of family Arctiidae from the Independent India. It deals with a total number of 181 Indian species under 76 genera of two subfamilies, Arctiinae (50 species and 26 genera) and Lithosiinae (131 species and 50 genera). This book is an outcome of extensive and intensive surveys conducted in the North West Himalayas, North East India and Western Ghats. For each of the included species, photographs of adults and external genitalia, first reference, diagnosis, distribution in India and larval host plants (wherever known) is provided. All the scattered information on the taxonomy of Indian Arctiidae is compiled in this work. It will lay a strong and sound foundation for the future workers interested to work on this group.

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Arctiid Moths of India Volume 1

Kirti
&
Singh

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Arctiid Moths of India

Volume 1



Jagbir Singh Kirti
Navneet Singh



Professor Jagbir Singh Kirti, Head, Department of Zoology and Environmental Sciences, Punjabi University, Patiala did his graduation and post graduation from Panjab University, Chandigarh and Ph.D from Punjabi University, Patiala. Professor Kirti is a distinguished entomologist and environmentalist, working in the field of Vector Biology and taxonomy/systematics of Indian Arctiidae, Pyralidae, Noctuidae and Geometridae. He has published 3 books and 220 research papers in National and International journals. He received research funding from University Grants Commission, Department of Science and Technology, Ministry of Environment and Forests, Govt. of India and is an expert member of MoEF, DST and ICMR. He has guided 21 research scholars to Ph.D. degree and an equal number of M. Phil students. His contributions have received International acclaim.

Prof. Kirti is recipient of many National and International awards: young scientist award by DST (1990); International award by Japanese Society of Electron Microscopy and Kochi Medical School (1997); an award from National Academy of Vectors and Vector Borne Diseases (2004); Roll of Honour in Canada from Panjab University Alumni Association (2005); International vegetable centre known as AVRDC, Taiwan sponsored as key resource person for training entomologist in the field of Taxonomy in 2010; Gold Medal by Indian Academy of Environment Sciences (IAES) (2011); an award by Indian Society for the advancement of Insect sciences (2011); Bio-Tech International award-2011; Global Vigyanik Award-2012 by Global Punjab Foundation; Rachel Reuben Medal-2012; Eminent Scientist Award-2014.

Dr Kirti deliberated in numerous National and International scientific gatherings throughout the world.

Arctiid Moths of India
Volume 1



Arctiid Moths of India

Volume 1

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PREFACE

Arctiidae is one of the best compiled moth families of the world but is comparatively less studied in the Indian subcontinent. After a comprehensive study by English Lepidopterists (Cotes & Swinhoe, 1887 and Hampson, 1893-1920) no consolidated publication can be found on Indian Arctiidae, except scattered articles on new taxa descriptions and generic reviews. Furthermore, majority of the earlier works are without illustrations which led to the vague identification. Therefore, the lack of consolidated information on Indian Arctiidae sparked the concept of this monograph. This work is based on the large amount of collections of Indian Arctiidae collected from the far flung localities of this bio diverse country. The collections are mainly done by the first author and his team, Dr Amrit Pal Singh Kaleka, Dr Jagpreet Singh Sodhi, Dr Navneet Singh, Dr Rahul Joshi and Ms Kavita Sharma. In this monograph, a total number of 181 species referable to 76 genera under two subfamilies, Arctiinae (50 species and 26 genera) and Lithosiinae (131 species and 50 genera) of Arctiidae have been included. Two new genera and five new species have been described. Besides this, one genus and thirteen species are reported for the first time from India. This monograph is foremost of its kind in the independent India with such detailed information on any group of moths from this subcontinent. The authors are likely to bring the second volume on family Arctiidae very soon which will cover the remaining fauna of Indian Arctiidae. Publication of this monograph is seen as an opportunity to establish a sound foundation for the complete revision of Indian Arctiidae.

Professor Jagbir Singh Kirti
Dr Navneet Singh

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INTRODUCTION

Family Arctiidae is a well known and diverse group of moths with almost worldwide distribution. The group is known by 10,945 species from the World, out of which 1929 species are reported from the Oriental region (Heppner, 1991) and 525 species from India (Singh *et al.* 2014). The members of Arctiidae are mainly defined by the presence of a tymbal organ on the metepisternum, a prespiracular counter tympanal hood; paired pheromone glands between ovipositor lobes of female genitalia and vein Sc of hindwings tend to be basally swollen.

The taxonomic studies on Indian Arctiidae were mainly initiated in nineteenth century. Review of literature revealed that 'Catalogue of moths of India' by Cotes and Swinhoe (1887) was the first published catalogue on this group of moths from then limits of India (including Sri Lanka and Myanmar) with 204 species under 82 genera from Indian main land. Besides this, Indian Arctiinae has also received a good attention by eminent Lepidopterists like Moore (1865, 1867, 1872), Hampson (1891, 1892, 1894, 1896, 1898, 1900, 1901, 1903, 1907, 1914, 1918, 1919, 1920), Zerny (1912), Seitz (1913), Draudt (1914), Rothschild (1914, 1936), Strand (1919, 1922), Fletcher (1925), Bryk (1937), Daniel (1943, 1954) and Sevastopulo (1944, 1948). The literature from post independent India is also replete with number of scattered publications on this group which either covers a small area of this vast country or provides knowledge about few taxa of this highly diverse group of moths. The important Arctiid publications from independent India are by Bhattcharjee & Gupta (1969), Arora & Singh (1975), Arora (1976, 1980, 1983), Arora & Chaudhury (1982), Gupta (1981), Barlow (1982), Holloway (1982, 1988, 2001), Orhant (1986, 2000, 2000a), Kirti & Singh (1994, 1994a, 1995, 1996, 1996a), Kirti & Kaleka (1999, 2002), Kirti & Sodhi (2002, 2002a, 2003), Kirti *et al.* (2005, 2007, 2010, 2013, 2013a, 2013b, 2013c, 2013d, 2014, 2014a), Kirti & Gill (2008, 2008a, 2008b, 2008c, 2008d, 2008e, 2008f, 2009, 2009a, 2010, 2010a, 2010b, 2010c), Kirti & Joshi (2013, 2013a), Mathew & Rahamathulla (1995), Singh & Singh (1997, 1998, 1998a, 1999), Kaleka & Kirti (1998, 2000, 2001), Kaleka (1999, 1999a, 2000, 2000a, 2001, 2002, 2002a, 2002b, 2003, 2003a, 2003b, 2004, 2005, 2005a, 2005b, 2006, 2007, 2011), Kaleka & Kaur (2000), Kaleka & Rose

(2001, 2002), Kaleka & Sharma (2014), Sood *et al.* (2007), Dubatolov (2010), Dubatolov & Zolotuhin (2011), Dubatolov *et al.* (2012), Singh & Singh (2011, 2011a, 2012, 2012a, 2013, 2013a), Singh, J. *et al.* (2013) and Singh, N. *et al.* (2013). In addition, some more publications regarding the important information on the distribution of Indian Arctiidae are by Chandra and Kumar (1992), Chandra (1993, 1994, 1996, 1996a, 1997, 2008, 2009, 2009a), Chandra and Rajan (1995), Chandra & Nema (2003, 2006, 2007, 2008), Chandra *et al.* (2010, 2010a), Chandra & Sambath (2013), Ghosh & Chaudhury (1997, 1998), Ghosh & Majumdar (2007), Chaudhury (2003, 2004), Gupta & Majumdar (2006), Ramakrishnan *et al.* (2006), Majumdar (2007, 2010) and Singh (2013).

From the review, it is very much clear that for a long time, Indian Arctiidae is devoid of any consolidated information. So, this monograph will provide the updated knowledge about the taxonomy of Indian Arctiidae. The following monograph includes a total number of 181 species under 76 genera of two subfamilies, Arctiinae (50 species and 26 genera) and Lithosiinae (131 species and 50 genera). Of these, two new genera and five new species are described. One genus and thirteen species are reported for the first time from India. For each of the included genus: first reference, type species, diagnosis, remarks and known species from India is given whereas, for each of the included species: first reference, diagnosis, distribution in India and larval host plants (wherever known) are given. As far as the nomenclature and diagnosis of the included genera and subgenera is concerned, the following publications have been consulted: Koda (1987, 1988); Holloway (1988, 2001); Kishida (1993, 1998), Dubatolov (2004, 2006, 2010); Dubatolov & Kishida (2005, 2005a, 2006, 2010); Dubatolov, Haynes & Kishida (2007, 2009); Dubatolov & Holloway (2007); Dubatolov & Zolotuhin (2011); Vos (1995, 2002, 2007); Vos & Černý (1999); Singh & Singh (2011, 2013). For the information about larval host plants, Zhang (1994) and Robinson *et al.* (2001) have been followed. As per the recent developments in the classification of Noctuoidea and its families, Arctiidae is downgraded as a subfamily of Erebidae (Zahiri *et al.*, 2010, 2012). However, following the traditional and long time accepted classification, the family level status of Arctiidae is accepted in this book.

SYSTEMATIC ACCOUNT

Family ARCTIIDAE Leech, 1815

Leech [1815], in Brewster, *Edinburgh Encycl.* **9**:133 (as Arctides)

Subfamily ARCTIINAE

Type genus: *Arctia* Schrank, 1802; *Fauna Boica*, **2**(2):152

Genus *Callindra* Röber

Röber, 1925; *Stettin. Ent. Ztg.*, **86** (1): 172.

Type species: *Callindra gigantea* Röber, 1925

Diagnosis: Forewings with 5-7 transverse rows of light spots, the subcostal and subternal spots of post discal series larger; veins dark. Hindwings white, yellow or reddish with dark veins, at least near the outer margin. Male genitalia with uncus always long and narrow, often with slightly broad base; cucullus always narrowing to a single apex; aedeagus with several fields of cornuti.

Remarks: Genus *Callindra* Röber was erected as a monotypic Genus for its type species, *Callindra gigantea* Röber, 1925, a junior subjective synonym of *Callindra arginalis* Hampson, 1894. The Genus was reviewed by Dubatolov & Kishida (2006) by including a total of seven species from the World. Genus *Callindra* Röber is represented from the Southern slopes of Trans-alai and Pamir ranges (Kyrgyzstan & Tajikistan) to the Himalayan ranges of India, Nepal, Tibet, and up to China, Myanmar, Thailand and Vietnam.

Known species of Genus *Callindra* Röber from India: *Callindra arginalis* (Hampson, 1894); *Callindra equitalis* (Kollar, [1844]); *Callindra nepos* (Leech, 1899); *Callindra nyctemerata* (Moore, 1879); *Callindra principalis* (Kollar, [1844]); *Callindra similis* (Moore, 1879).

***Callindra equitalis* (Kollar, [1844])**

Euprepia equitalis Kollar, [1844]; *Kaschmir*, 4 (2): 465-466.

Forewings fuscous with large white spots, basal and costal spots yellowish. Hindwings pure white with veins fuscous. Male genitalia with cucullus broad; vesica large with a patch of short and robust spines, scobination present. Female genitalia with ductus bursae short, corpus bursae elongated with three lines of sclerotization.

Distribution: North West and North East Himalayas, Meghalaya (Khasi Hills).

Larval host plant: Not Known.



Callindra nyctemerata (Moore, 1879)

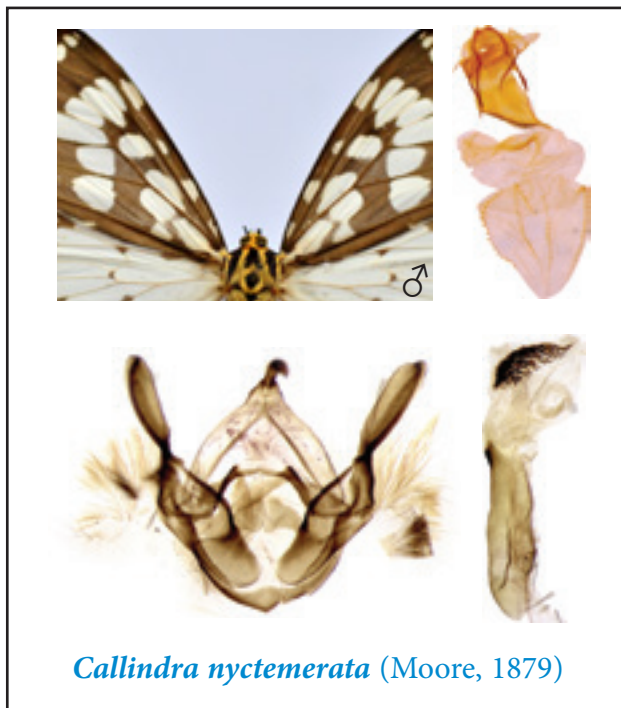
Hypercompa nyctemerata Moore, 1879; *Descr. New Indian lepid. Ins. Atkinson, London, 1879*: 38-39.

Forewings dark grey with green ting and numerous spots. Hindwings dull white, marginal and submarginal area with dark blotches. Abdomen pale yellow with black bands. Male genitalia with cucullus narrow and twisted; vesica with a field of small spines. Female genitalia with ductus bursae short, corpus bursae with four coiled lines of sclerotization.

Distribution: North East India, West Bengal (Darjeeling), Uttarakhand (Rudraprayag).

Larval host plant: Not Known.

Remarks: The vesica spines have one side shorter than the other, so the bases of spines are broader than its nearest representative, *C. similis* (Moore, 1879).



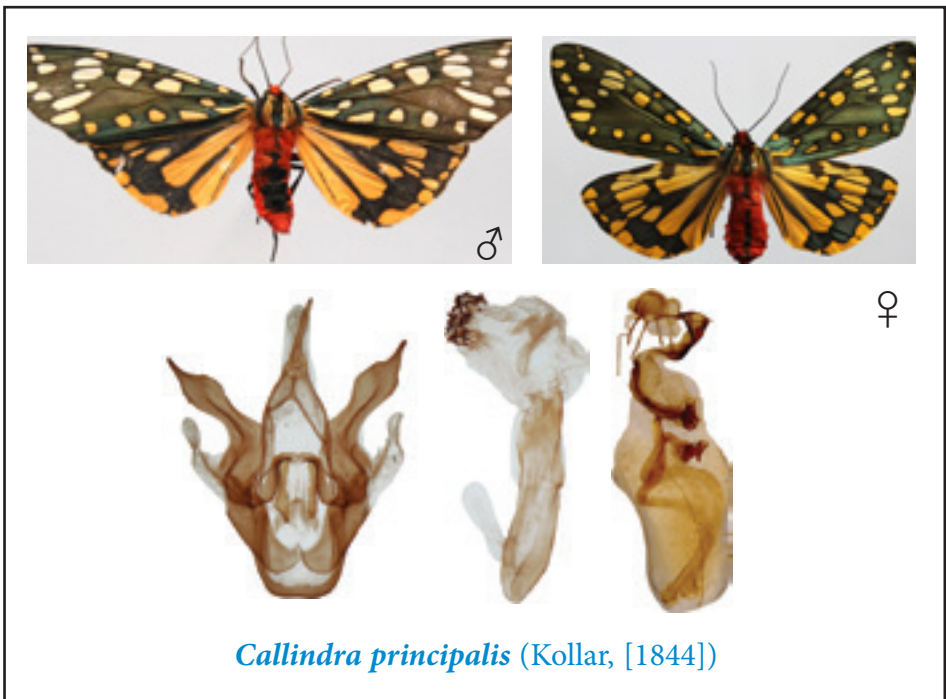
Callindra principalis (Kollar, [1844])

Euprepia principalis Kollar, [1844]; *Kaschmir*, 4 (2): 465.

Forewings metallic green with numerous spots. Hindwings orange, veins streaked with black, marginal and submarginal area with dark blotches. Male genitalia have the cucullus broad and curved near middle; vesica with a patch of robust triangular spines, scobination present. Female genitalia with ductus bursae short and strongly sclerotized, corpus bursae elongate with three lines of coiled sclerotization.

Distribution: Indian Himalayas.

Larval host plants: Polyphagous.

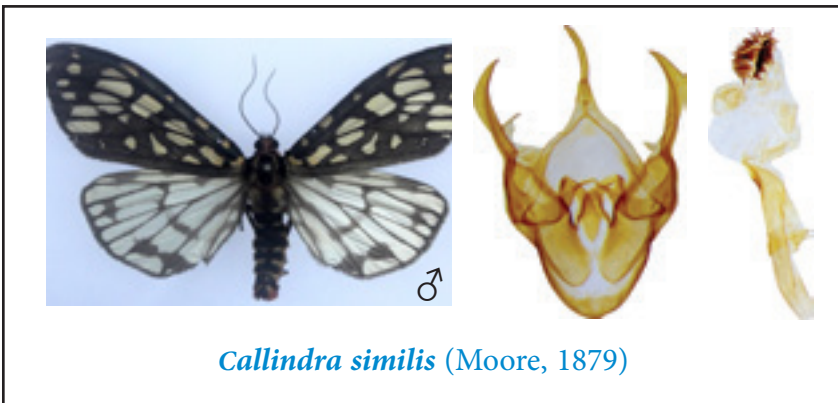


Callindra similis* (Moore, 1879)Hypercompa similis* Moore, 1879; *Proc. Zool. Soc. London*, **1879**: 397-398.

This species is very much similar to *Callindra nyctemerata* (Moore, 1879), but is distinct due to noticeably longer spines of vesica and the tip of valvae is more pointed in *C. similis* (Moore).

Distribution: Himachal Pradesh, Sikkim.

Larval host plant: Not Known.

*Callindra similis* (Moore, 1879)**Genus *Aglaomorpha* Kôda**Kôda, 1987; *Tyô to Ga*, **38** (3): 187

Type species: *Hypercompa histrio* Walker, 1855

Diagnosis: Forewings dark with numerous yellow-white spots; hindwings yellow with black spots. Male genitalia with uncus broad at middle and bearing an apical spine, a very characteristic costa which bears a large and bifurcated process extending from its apical portion, of which the ventral arm is again bifurcated shortly, a small ampullar process present; valvula membranous, basal portion of transtilla well developed.

Remarks: The Genus *Aglaomorpha* Kôda, 1987 was established for the inclusion of two species: *Hypercompa histrio* Walker, 1855 as its type species and *Hypercompa plagiata* Walker, 1855. *Aglaomorpha* Kôda is distributed from Northern Pakistan to North West & North East India and up to China, Korea, Taiwan, Japan, Thailand, Laos and Vietnam.

Known species of Genus *Aglaomorpha* Kôda from India: Sole included species.

Aglaomorpha plagiata (Walker, 1855)

Hypercompa plagiata Walker, 1855; *List Spec. lep. Ins. Colln. Br. Mus.*, 3: 655

Forewings fuscous green, with spots in inter spaces; the spots in interno-median inter space large, the spots beyond cell and the spots of submarginal series elongated. Male genitalia with vesica elongated, three spined sclerotizations present. Female genitalia have the ductus bursae membranous; corpus bursae membranous with a long and narrow patch of sclerotization.

Distribution: Indian Himalayas, Assam, Meghalaya (Khasi Hills).

Larval host plants: Polyphagous.



Genus *Nyctemera* Hübner

Hübner, [1820]1816; Verz. Bekannter Schmett., 1816: 178

Type species: *Phalaena lacticinia* Cramer, 1777 (subsequently designated by Hampson, 1894)

Diagnosis: Forewings with grey or blackish markings on white grounds; hindwings white with grey or blackish borders. Thorax spotted or stripped with black. In male genitalia: uncus often modified into humps, hooks or flanges, valvae tend to have a broad, basal, saccular zone and a robust hook or paddle-like distal zone, usually a process or flap form the base of the valvae costa; vesica is usually small, sometimes scobinate. Female genitalia have the dorsal gland of ovipositor lobes long, slender, sometimes fused at base; corpus bursae large with a single scobinate signum.

Remarks: The Genus *Nyctemera* Hübner is a species rich Genus with very complex taxonomy. The Genus is mainly reviewed by Roepke (1949, 1957), Vos (1995, 2002), Vos & Černý (1999) and Vos & Dubatolov (2010, in Dubatolov, 2010), Kishida (1994a) and Dubatolov (2006). The members of *Nyctemera* are mainly day flying moths and distributed in Asia, Africa and Australian continents with comparatively high diversity in Indo-Australian tropics.

Known species of Genus *Nyctemera* Hübner from India: *Nyctemera* (*Arctata*) *arctata* Walker, 1856; *Nyctemera* (*Deilemera*) *carissima* (Swinhoe, 1891); *Nyctemera* (*Nyctemera*) *baulus* (Boisduval, 1832); *Nyctemera* (*Nyctemera*) *cenis* (Cramer, 1777); *Nyctemera* (*Nyctemera*) *lacticinia* (Cramer, 1779); *Nyctemera* (*Nyctemera*) *latistriga* Walker, 1854; *Nyctemera* (*Orphanos*) *adversata* (Schaller, 1788); *Nyctemera* (*Orphanos*) *tripunctaria* (Linnaeus, 1758).

Subgenus *Nyctemera* Hübner

Hübner, [1820]1816; Verz. Bekannter Schmett., 1816: 178

Type species: *Phalaena lacticinia* Cramer, 1777

Diagnosis: Subgenus is characterized by a broad fascia on forewings and a well defined margin of hindwings. Male genitalia with uncus beak like with more or less developed dorsal keel; valvae with three processes: a small process on sacculus, an extension of sacculus and an extension of cucullus.

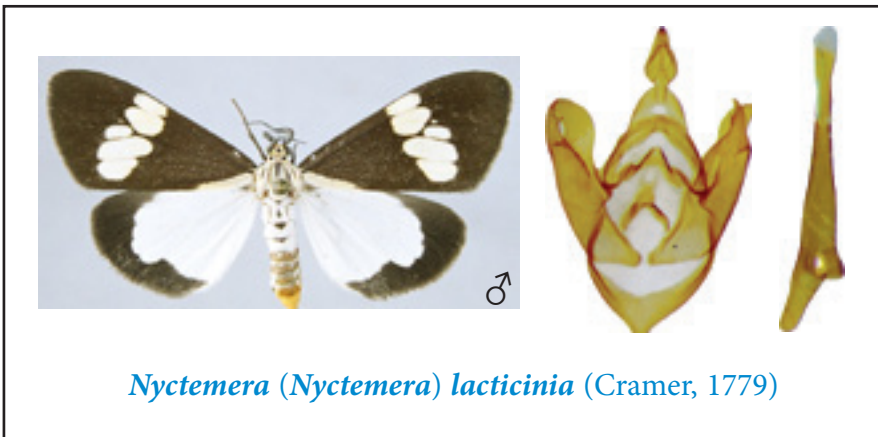
***Nyctemera (Nyctemera) lacticinia* (Cramer, 1779)**

Phalaena (Geometra) lacticinia Cramer, 1779; *Uitlandsche Kapellen* [Pap. Exot]. 2: 47

Adults with black brown forewings, a basal white streak under vein 1A reaching before middle of inner margin, an oblique series of five white spots. Hindwings silver white with a broad marginal band. Male genitalia with uncus somewhat modified, valvae divided into a curved cucullus and bifurcated valvula.

Distribution: West Bengal, Assam, Meghalaya, South India, Andaman, Chhattisgarh (Bastar).

Larval host plants: *Cineraria*, *Crassocephalum*, *Emilia*, *Erechtites*, *Erigeron*, *Gynura*, *Picris*, *Senecio*, *Senecio edgeworthii*, *Vernonia cinerea* on seed heads (Compositae). *Habenaria commelinifolia* on leaves/stems (Orchidaceae). *Citrus aurantifolia* (Rutaceae). *Santalum*, *Santalum album* on leaves (Santalaceae).



Subgenus *Arctata* Roepke

Roepke, 1949; *Trans. Roy. Ent. Soc. London*, 100: 50

Type species: *Nyctemera arctata* Walker, 1856

Diagnosis: The Subgenus is characterized due to usually very large valvae which are longitudinally stretched out with a long extension of the sacculus; cucullus, in most cases, with a small or even rudimentary folded extension; vesica with or without cornuti.

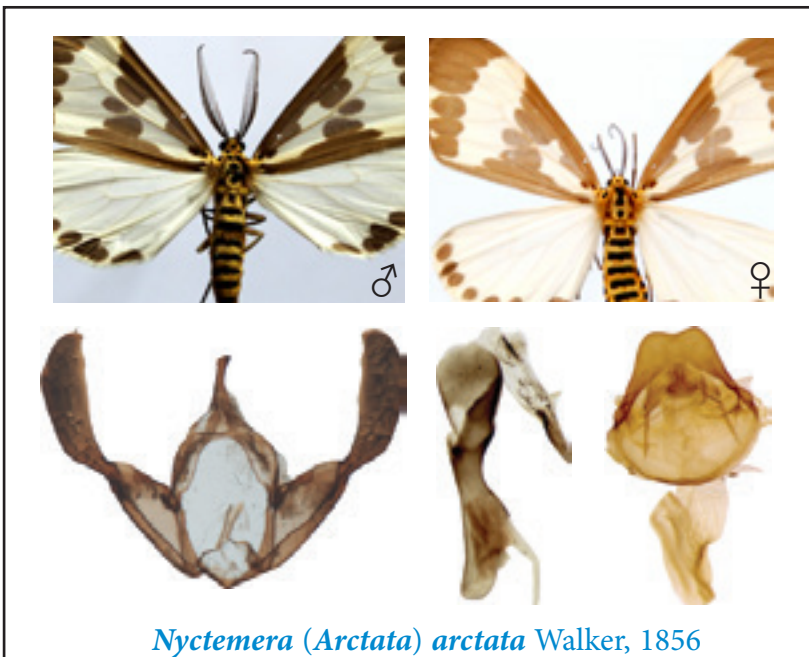
Nyctemera (Arctata) arctata Walker, 1856

Nyctemera arctata Walker, 1856; *List Spec. lep. Ins. Colln. Br. Mus.*, 7: 1664

Forewings dull white, having black spots at base; broad brown streak on costa and inner margin; a medial maculate band; a broad marginal band of conjoined oval brown spots. Hindwings white with marginal series of brown spots, those towards anal angle are somewhat elongated. Male genitalia have the valvae somewhat curved, constricted at middle; vesica small with some sclerotizations. Female genitalia with ductus bursae and corpus bursae membranous, the later with a single scobinate patch.

Distribution: North East and North West India.

Larval host plant: Not Known.



Subgenus *Deilemerna* Hübner

Hübner, [1820] 1816; *Verz. bekannter Schmett.*, 1816: 179

Type species: *Phalaena evergista* Stoll, 1781

Diagnosis: Subgenus *Deilemerna* Hübner is closely allied to Subgenus *Arctata* Roepke but is distinct due to shape of wings and position of pheromone scales on hindwing tornus and dorsum of the males. Differences are also in shape of uncus, aedeagus and ostium.

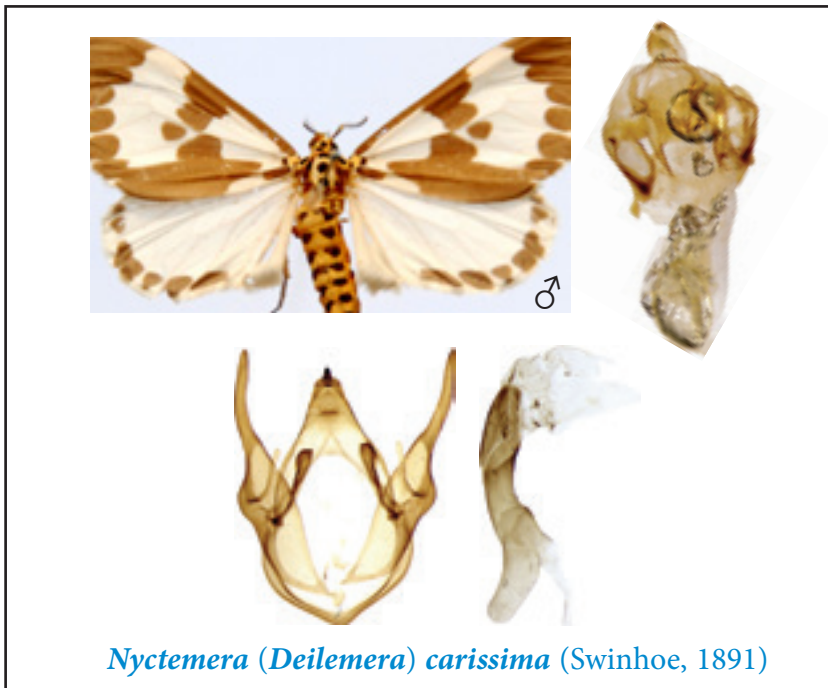
***Nyctemera (Deilemera) carissima* (Swinhoe, 1891)**

Deilemera carissima Swinhoe, 1891; *Trans. Ent. Soc. Lond.*, **1891**:477

Adults distinct from *Nyctemera (Arctata) arctata* Walker due to: forewings having a quadrate submarginal spot below apex, hindwings of males with a very large fold on inner margin and the presence of paired dorsal black spots on abdomen. Male genitalia have the valvae simple; vesica without any well formed cornutus. Female genitalia have the ductus bursae short and membranous; corpus bursae elongated.

Distribution: North East India.

Larval host plant: Not Known.



Subgenus *Orphanos* Hübner

Hübner, [1825] 1816; *Verz. bek. Schmett.*, **1816**: 306

Type species: *Phalaena tripunctaria* Linnaeus, 1758

Diagnosis: Male genitalia with uncus divided into an upper and a lower part, valvae broad and have single process which is an extension of the sacculus.

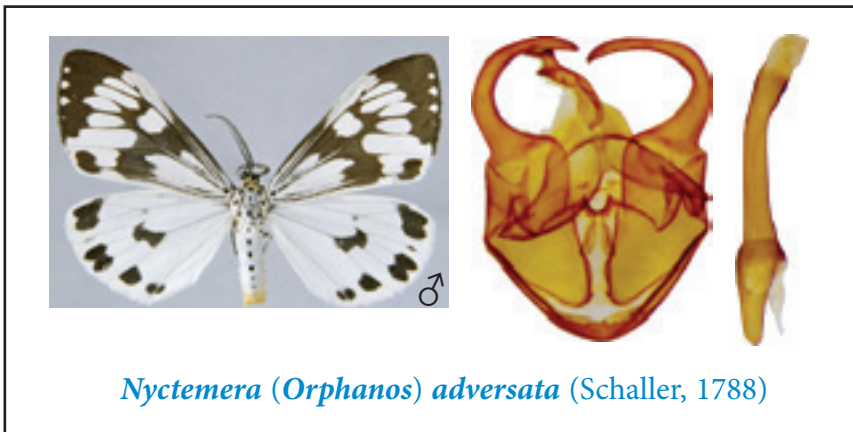
***Nyctemera (Orphanos) adversata* (Schaller, 1788)**

Phalaena adversata Schaller, 1788; *Beytr. Ges. Exot. Pap. Naturf.*, 23:54

Forewings black brown with an elongate white patch below cell, another in cell and at costa; postmedial series of elongate white spots; three marginal spots at middle of termen. Abdomen greyish white with terminal segment orange. Male genitalia with aedeagus long and narrow, vesica without any cornutus.

Distribution: Throughout India.

Larval host plants: *Erechtites*, *Erigeron*, *Gynura*, *Picris*, *Senecio* (Compositae).



Genus *Utetheisa* Hübner

Hübner [1819] 1816; *Verz. Bekannter Schmett.*, 1816: 168

Type species: *Phalaena ornatrix* Linnaeus, 1758

Diagnosis: Generally, the members of *Utetheisa* Hübner have a broad range of possible variations of wing pattern. Forewings with greyish brown to dark brown pattern on a white ground colour (the white in most cases reduced to spots and patches), but pattern with pale brown or even black does exist in some species. In some species the pattern is reversed: extended white ground colour with reduced brown pattern. In male genitalia, uncus long and slender; valvae bear the: costal process, apical process of cucullus, clasper (the curved structure at the rim of the valvula) in the centre of the valvae and corema (the membranous bag shaped tissue attached to the caudal side of the cucullus) (Vos, 2007).

Remarks: Genus *Utetheisa* was erected by Hübner [1819] 1816 and Kirby (1892) designated *Phalaena ornatatrix* Linnaeus, 1893 as its type species. Its taxonomy is mainly reviewed by Holloway (1988) and Vos (2007). Many of the species, which were earlier placed under *Nyctemera* are now the members of subgenera of *Utetheisa* Hübner: *Pitasila* Moore, *Atasca* Swinhoe, and *Raanya* Vos. According to Vos (2007), *Utetheisa* s.str. is distributed worldwide with about 20 species and the remaining three subgenera, *Pitasila* Moore, 1877, with 25 species, *Atasca* Swinhoe, 1892, with 13 species and *Raanya* Vos with one species are restricted to the Indo-Australian area.

Known species of Genus *Utetheisa* Hübner from India: *Utetheisa antennata* (Swinhoe, 1893); *Utetheisa lotrix* (Cramer, 1779); *Utetheisa pulchella* (Linnaeus, 1758); *Utetheisa pulchelloides* Hampson, 1907; *Utetheisa (Pitasila) assamica* De Vos, 2007; *Utetheisa (Pitasila) leucospilota* (Moore, 1877); *Utetheisa (Pitasila) selecta* (Walker, 1854); *Utetheisa (Pitasila) varians* (Walker, 1854); *Utetheisa (Pitasila) variolosa* (Felder & Rogenhofer, [1869]1874).

Subgenus *Pitasila* Moore

Moore, 1877; *Proc. Zoo. Soc. London*, 1877: 599

Type species: *Pitasila leucospilota* Moore, 1877

Diagnosis: Antennae of males bipectinate, in females pectination short or serrate, valvae very complex: cucullus with a conspicuous process at base of costa (costal process), claspers partly curved around membranous valvula (sensu Kôda, 1987), a long apical process of the cucullus and a membranous scent bag, which is called corema (Vos, 2007).

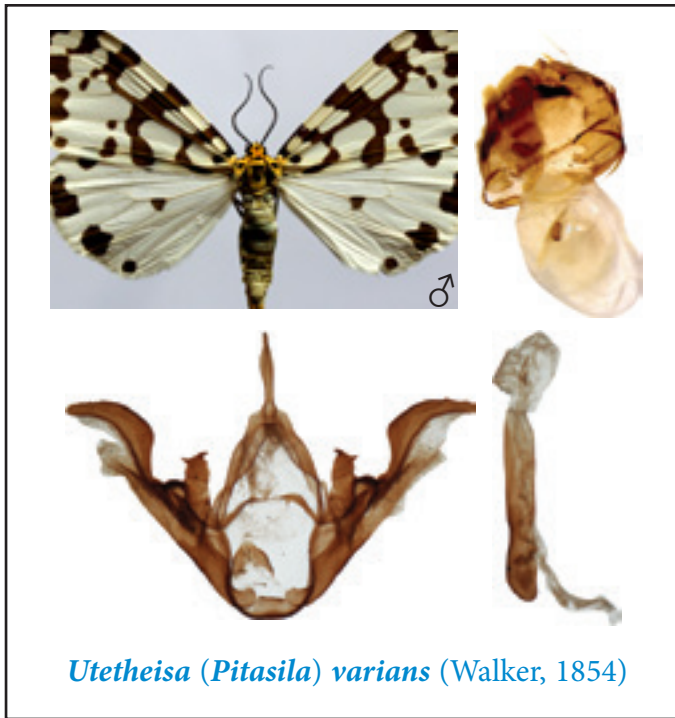
Utetheisa (Pitasila) varians (Walker, 1854)

Nyctemera varians Walker, 1854; *List spec. Lep. Ins. Coll. Br. Mus.* 2: 400-401

Forewings white with irregular dark brown markings. Hindwings white with some black spots. Male genitalia with costal process very typical, having dentate edges and bifurcate tip; vesica with some scobinations. Female genitalia have the ductus bursae very short and sclerotized; corpus bursae large with two prominent signa (one is visible in image).

Distribution: North East and North West Himalayas.

Larval host plant: Not Known.



Genus *Coleta* Roepke

Roepke, 1949; *Trans. Roy. Ent. Soc. Lond.*, **100**: 53

Type Species: *Phalaena coleta* Stoll, 1781

Diagnosis: The distinguishing characters of the Genus are fringe spots on both wings, pheromone scales on fore tibia and uncus divided into pseudo-uncus and main uncus.

Remarks: Subgenus *Coleta* Roepke was upgraded to the generic level by Singh & Singh (2011). It is a monotypic Genus and is represented in Japan, Oriental region to New Guinea.

Known species of Genus *Coleta* Roepke from India: Sole included species.

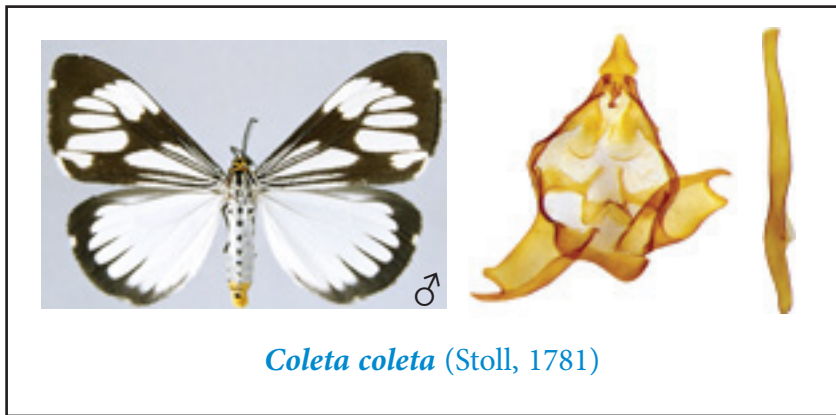
Coleta coleta (Stoll, 1781)

Phalaena coleta Stoll, 1781; *Pap. Exot.* 4: 153

Forewings dark brown with basal area streaked with white, postmedial series of elongated white spots. Hindwings white with costa and marginal area dark, marginal band gives out spurs towards base. Male genitalia with valvae bifurcated at tip, aedeagus long.

Distribution: Assam, South India, Andaman and Nicobar Islands.

Larval host plants: *Gynura*, *Gynura drymophila* on leaves (Compositae).



Genus *Argina* Hübner

Hübner, [1891] 1816; *Verz. bekannter Schmett.* 1819: 167

Type species: *Phalaena cribraria* Clerck, 1764

Diagnosis: Antennae ciliated in both sexes. A definitive feature for the Genus is seen in the males where the hindwing tornus is produced acutely and bears an elongate patch of dark scales. Male genitalia have the vesica with three or four patches of denticles and spines. Female genitalia with corpus bursa large, three rounded signa present; ductus bursae short and broad, well sclerotized.

Remarks: Kirby (1892) designated *Phalaena cribraria* Clerck, [1764] as the type species of Genus *Argina* Hübner [1891], 1816. This Genus and the *Utetheisa* Hübner are very allied genera as both the genera share the common pattern of wings and genitalia. The Genus is widely distributed in Eurasia, Indo-Australian to Pacific, and African tropics.

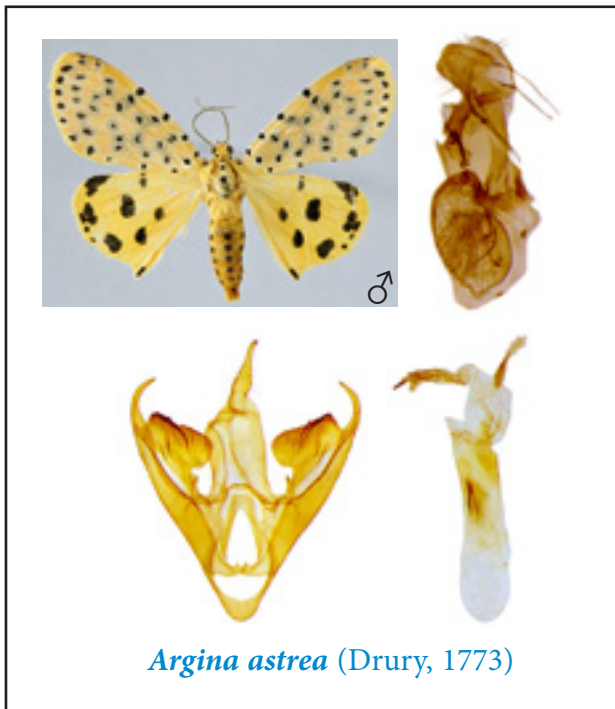
Known species of Genus *Argina* Hübner from India: Sole included species.

Argina astrea* (Drury, 1773)Phalaena (Noctua) astrea* Drury, 1773; *Ill. Nat. Hist. Exot. Insects*, 2:11

Adults orange yellow. Forewings with series of black spots out lined with grey. Hindwings with black spots and blotches. Male genitalia with uncus tower like, dorsal wall of valvae produced to a rectangular lobe with numerous small spines; vesica with elongated patches of small spines. Female genitalia have the ductus bursae long, weakly sclerotized; corpus bursae with two signa present.

Distribution: Throughout India.

Larval host plants: *Crotalaria*, *Crotalaria juncea*, *Crotalaria madurensis*, *Crotalaria retusa*, *Crotalaria saltiana*, *Crotalaria spectabilis*, *Lablab purpureus*, *Melilotus indica* (Leguminosae). *Theobroma cacao* (Steculiaceae).

***Argina astrea* (Drury, 1773)**

Genus *Mangina* Kaleka & Kirti

Kaleka & Kirti, 2001; *J. Bombay Nat. His. Soc.*, **98** (2):251

Type species: *Euprepia argus* Kollar, [1844]

Diagnosis: Antennae simple in both sexes. Male genitalia with uncus long, valvae elongated and costa produced to a plough like structure. Female genitalia with signum present.

Remarks: The Genus *Mangina* Kaleka & Kirti, 2001 was established as a monotypic Genus for its type species *Euprepia argus* Kollar, [1844] (as *Argina argus* Kollar). Presently, the Genus is known by three species, the two discussed in this book and the third one, *M. pulchra* (Swinhoe, 1892) from Philippines. The Genus is mainly distributed in Asia.

Known species of Genus *Mangina* Kaleka & Kirti from India: *Mangina argus* (Kollar, [1844]); *Mangina syringa* (Cramer, 1775).

Mangina argus (Kollar, [1844])

Euprepia argus Kollar, [1844]; *Kaschmir* **4** (2): 467:468

Adults brownish red. Forewings with transverse series (six) of white ringed black spots. Abdomen scarlet with dorsal, ventral and lateral series of black spots. Male genitalia have the vesica without any cornutus, scobination present. Female genitalia with ductus bursae weakly sclerotized; corpus bursae divided into tubular and globular part with patches of sclerotization, one circular and another semicircular signa present.

Distribution: Throughout India.

Larval host plants: *Buddleja* on flowers (Buddlejaceae); in pods (Leguminosae), *Crotalaria* on leaves/pods/seeds, *Crotalaria alata*, *Crotalaria assamica* in seed pods/ on pods / on leaves, *Crotalaria juncea* on pods, in pods, *Crotalaria pallida*, *Crotalaria pallida obovata* on leaves, *Crotalaria saltiana* on leaves, *Crotalaria spectabilis* *Crotalaria cleomifolia* (Leguminosae).



Mangina argus (Kollar, [1844])

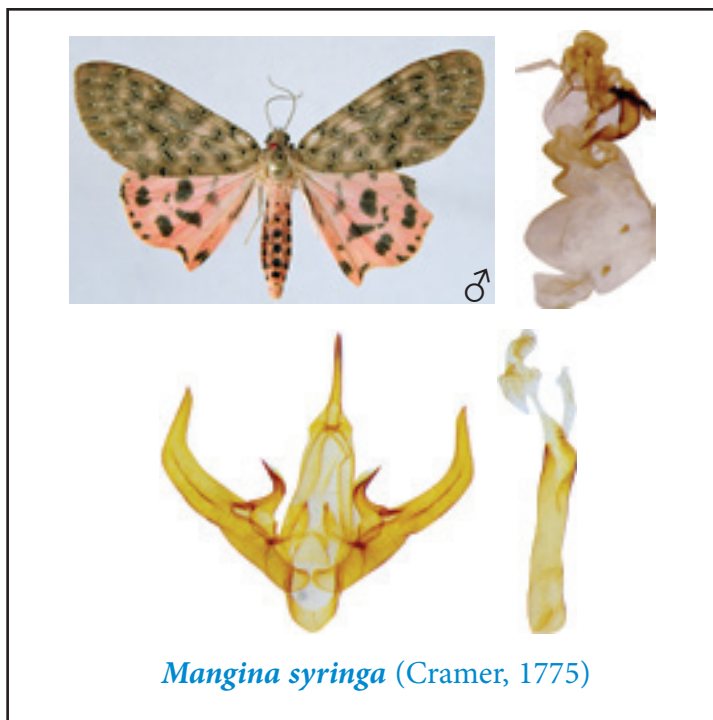
Mangina syringa (Cramer, 1775)

Phalaena syringa Cramer, 1775; *Pap. Exot.*, 1: t.5f. C, D

Adults brown. Forewings with six irregular series of ringed black spots. Hindwings crimson with some black spots and blotches. Male genitalia have the valvae ending to a pointed tip; vesica without any cornutus, scobination present. Female genitalia with ductus bursae short and sclerotized, curved; corpus bursae divided into two lobes, two signa present.

Distribution: Throughout India.

Larval host plants: - *Crotalaria*, *Crotalaria assamica* in seed pods, on leaves/pods, seeds, *Crotalaria juncea*, *Crotalaria longipes*, *Crotalaria saltiana* on leaves (Leguminosae).



Genus *Arctia* Schrank

Schrank, 1802; *Fauna Boica*, 2 (2): 152

Type species: *Phalaena caja* Linnaeus, 1758

Diagnosis: Forewings with white bands on black or brown ground. Hindwings red or yellow with black spots, mainly on postmedial region. Male genitalia with broad valvae having narrow apical process.

Remarks: The type species of Genus *Arctia* Schrank, *Phalaena caja* Linnaeus, 1758 was designated by Westwood (1840). The Genus is widely distributed in Eurasia up to the Southern slopes of Siberia. Dubatolov (2010) catalogued this Genus into two groups, *Arctia* s.str. and *Arctia intercalaris* species group.

Known species of Genus *Arctia* Schrank from India: *Arctia caja* (Linnaeus, 1758); *Arctia intercalaris* (Eversmann, 1843).

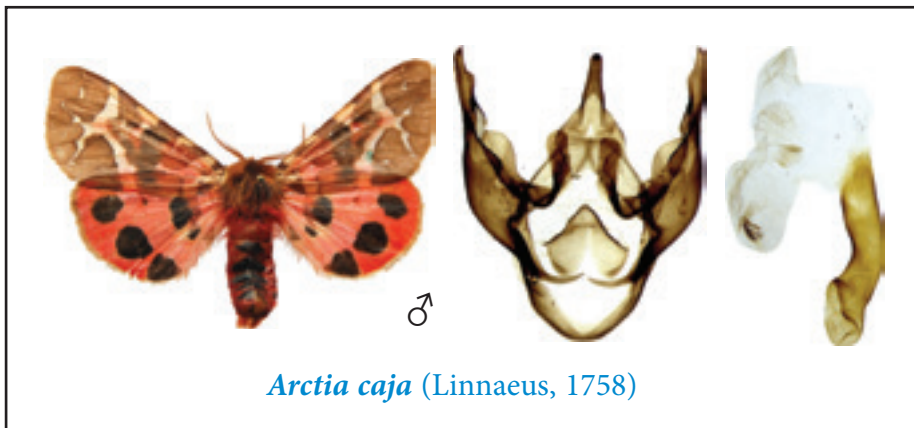
Arctia caja (Linnaeus, 1758)

([*Phalæna Bombyx*] *caja*) Linnaeus, 1758; *Syst. Nat.*, (Edn.10), 1: 500-501

Adults brown. Forewings with subbasal white band, giving spurs towards base and outer margin, leaving basal brown spots on costa and inner margin, antemedial and medial spots on costa, the later reaching up to lower angle of cell; postmedial white band, angled at vein M_3 and M_2 , giving out a bifurcate spur which reaches almost up to termen; submarginal spots on radial veins and below Cu_1 . Hindwings dark orange with a black spot on central disc and three large submarginal spots. Male genitalia have the valvae narrow at apex, costa forming plough like structure; vesica with a small patch of minute spines and fields of scobinations.

Distribution: North West Himalayas (Kashmir, Sonmurg, Dalhousie), Meghalaya (Khasi Hills).

Larval host plants: *Lactuca sativa*, *Taraxacum* (Compositae); *Plantago* (Plantaginaceae); *Rumex* (Polygonaceae); *Urtica* (Urticaceae); *Parthenocissus* (Vitaceae).



Genus *Areas* Walker

Walker, 1855; *List Spec. Lep. Ins. Colln. Br. Mus.*, 3: 658

Type species: *Areas orientalis* Walker, 1855

Diagnosis: In males, eighth sternite has long, out curved lateral sclerites and a central one that terminates in a sclerotized pouch. Male genitalia is characterized by a broad uncus, with a light apical notch and a longitudinal dorsal keel, broad elongate convex-concave (almost scoop-like) valvae with a truncated apex, and an inward projecting

triangular process on the ventral edge. There is a rounded process at the base of costa of valvae, which is connected by a membrane with other part of valvae; aedeagus elongate, with an apical sclerotized plate, covered by small spines; vesica sac-like, with a medial constriction and a thinly sclerotized patch. (Dubatolov et al, 2009).

Remarks: Walker (1855) established the Genus *Areas* for the inclusion of a North Indian species, *A. orientalis* Walker. Genus *Areas* Walker shows a great geographical variability. The taxonomy of the Genus was mainly reviewed through two important publications by Inoue (1984) and Dubatolov, Haynes & Kishida (2009). The Genus is known by only two species from the world and is mainly distributed in mountainous areas of the Oriental Region from the Himalayas to Central China, Philippines and Indonesia.

Known species of Genus *Areas* Walker from India: *Areas galactina* (Hoeven, 1840); *Areas (Melanareas) imperialis* (Kollar, [1844]).

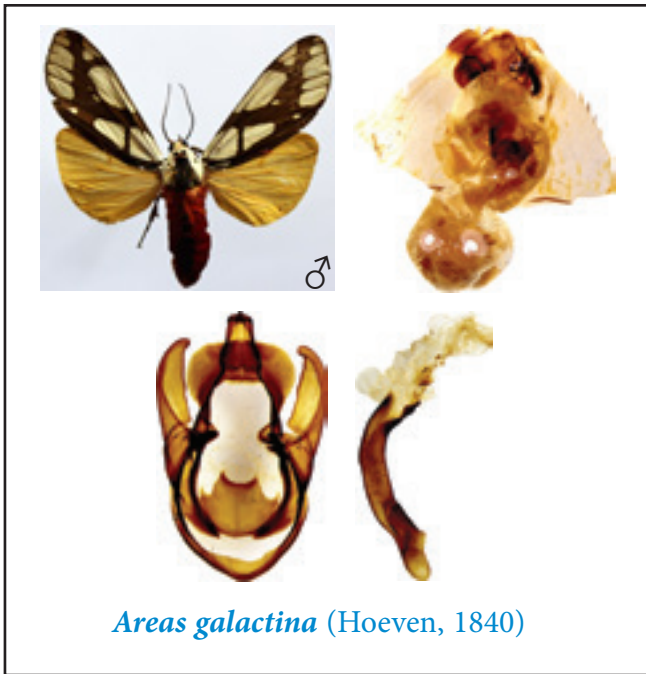
Areas galactina (Hoeven, 1840)

Chelonia galactina Hoeven, 1840; *Tijdschr. Nat. Gesch. Physiol.*, 7: 280

Adults having dark brown forewings with large patches of white in inter spaces. Hindwings yellow with or without some black spots, inner areas pinkish brown. Male genitalia with uncus broad, valvae without any outgrowth, juxta pitcher-shape; vesica opaque with patches of scobinations. Female genitalia with ductus bursae sclerotized, corpus bursae scobinate patches.

Distribution: Indian Himalayas, Meghalaya (Khasi Hills), Andaman Islands, Nagaland

Larval host plant: Not Known.



Subgenus *Melanareas* Butler

Butler, 1889; *Ill. Typ. Spec. Lep. Het. Coll. Br. Mus.*, 7: 4, 29

Type species: *Euprepia imperialis* Kollar [1844] 1848

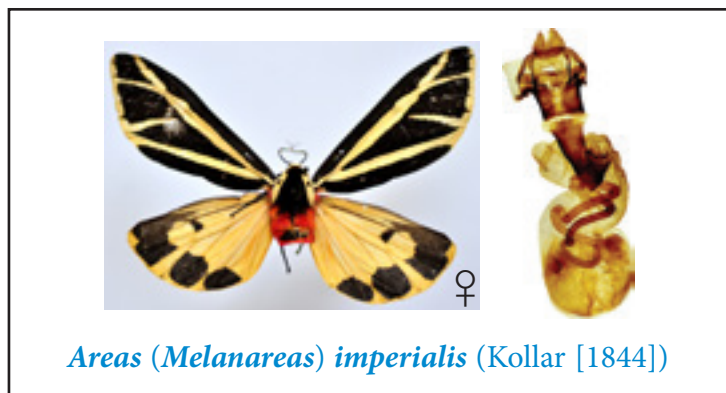
Areas (Melanareas) imperialis (Kollar [1844])

Euprepia imperialis Kollar [1844]; *Kaschmir*, 4 (2): 466

Forewings black with a dull white fascia above median nervure and vein M_2 ; a streak from beyond upper angle of cell to costa before apex and from lower angle to outer margin; a broad fascia above vein 1A; a marginal series of rectangular spots. Hindwings yellow, with a black lunule at end of cell and four large submarginal patches, the upper two conjoined. Female genitalia have the ductus bursae short and sclerotized; corpus bursae divided into two parts: tubular and globular, two signa present.

Distribution: North West Himalayas, Sikkim.

Larval host plant: Not Known.



Genus *Paramsacta* Hulstaert

Hulstaert, 1923; *Ann. Mag. Nat. Hist.* **11** (9): 187

Type species: *Paramsacta pura* Hulstaert, 1923 (a junior synonym of *Phalaena marginata* Donovan, 1805)

Diagnosis: The diagnostic characters of the Genus are: broad and triangular uncus with split apex, valvae elongated with two apical processes, out of which the costal one is large; another prominence on inner side.

Remarks: Genus *Paramsacta* Hulstaert, 1923 was first time reviewed by Dubatolov (2004) with inclusion of two species: *P. marginata* (Donovan, 1805) distributed in Indonesia, Australia, New Guinea, and Tasmania and *P. moorei* (Butler, 1876) from India and Pakistan. Though, the author (Dubatolov, 2004) listed *Aloa collaris* Hampson, 1891 from South India; *A. costalis* Walker, [1865]1864 from North & North-West Australia; *A. corsima* Swinhoe, 1892 from North East Australia; *A. flavimargo* Hampson, 1894 from Burma (Myanmar) and *A. gangara* Swinhoe, 1892 from West Australia under the Genus *Paramsacta* Hulstaert but with doubtful condition. Genus *Paramsacta* Hulstaert is in need of a fresh review.

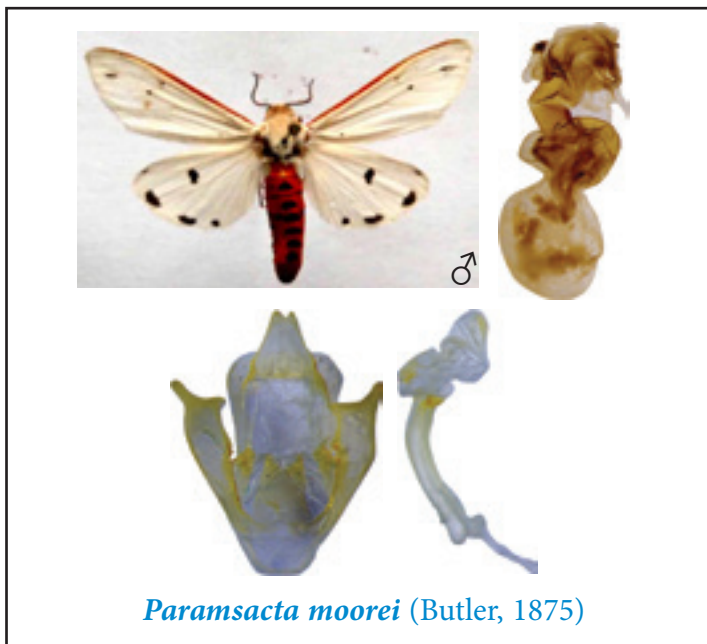
Known species of Genus *Paramsacta* Hulstaert from India: Sole included species.

Paramsacta moorei (Butler, 1875)*Areas moorei* Butler, 1875; *Cist. Ent.* 2: 23

Adults white. Forewings with scarlet costal fascia and black speck on each angle of cell. Hindwings with submarginal series of four black spots. Abdomen scarlet with dorsal series of short bands. Male genitalia have the uncus large and triangular, aedeagus with a patch of spines on tip; vesica with two fields of spines. Female genitalia with ductus bursae short and sclerotized; corpus bursae slightly twisted and divided into two parts, three signa present.

Distribution: North India, North West Himalayas (Almorah), Maharashtra (Bombay), Nilgiri Hills.

Larval host plant: Polyphagous.



Genus *Aloa* Walker

Walker, 1855; *List spec. lipid. Insects colln. Br. Mus.*, 3: 699

Type species: *Phalaena lactinea* Cramer, 1777

Diagnosis: Genus *Aloa* Walker is characterised by a broad triangular uncus with split apex, valvae pointed apically and bilateral asymmetric, juxta short.

Remarks: Walker (1855) erected Genus *Aloa* for the inclusion of four species: *A. simplex* Walker, *A. bifurca* Walker, *A. delineata* Walker, and *A. marginalis* Walker from Africa and eleven species: *A. lactinea* Cramer, *A. candidula* Walker, *A. marginata* Donovan, *A. diminuta* Walker, *A. bifrons* Walker, *A. isabellina* Walker, *A. tripartita* Walker, *A. biguttata* Walker, *A. integra* Walker, *A. dentata* Walker and *A. erosa* Walker from Asia. Subsequently Moore [1883] designated *Phalaena lactinea* Cramer, 1777 as its type species. The later on taxonomic reviews of Genus *Aloa* Walker was mainly done by Kirby (1892), Thomas and Goodger (1992) and Dubatolov (2004). The distributional limits of the Genus are from South East Afghanistan to Indonesia via Pakistan, India, Nepal, Sri Lanka, China, Korea, Japan, Indochina and Philippines.

Known species of Genus *Aloa* Walker from India: *Aloa albistriga* Walker, 1864; *Aloa collaris* Hampson, 1891; *Aloa lactinea* (Cramer, 1777).

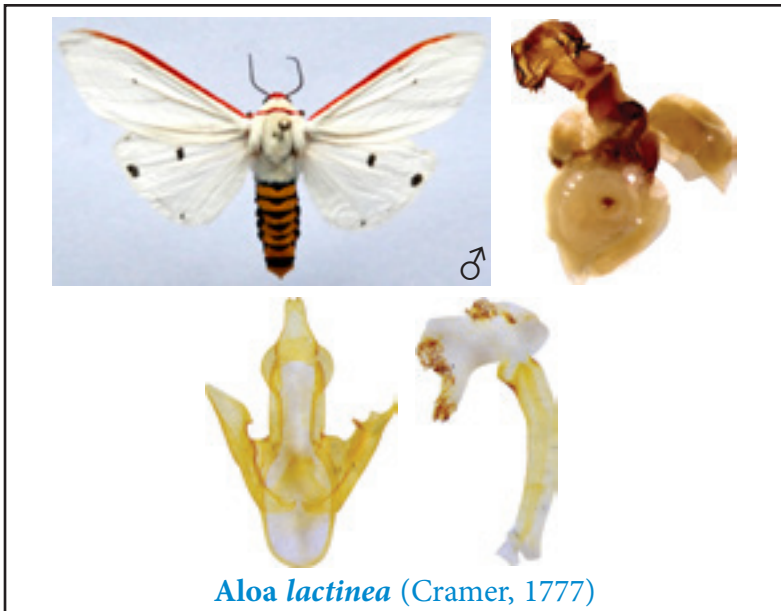
Aloa lactinea (Cramer, 1777)

Phalaena lactinea Cramer, 1777; *Uitlandsche Kapellen (Papillons exot.)* 2: 58

Adults white. Forewings with costal band crimson, spots on both angles of cell. Hindwings with a discocellular spot and some submarginal spots. Abdomen yellow with dorsal bands. Male genitalia have the right valvae with two outgrowths before tip and left valvae flat, vesica with fields of spines. Female genitalia have the ductus bursae strongly sclerotized; corpus bursae with four scobinate spots (one is visible in image)

Distribution: Throughout India.

Larval host plant: Polyphagous.



Genus *Neoaloi* Singh & Kirti gen. nov.

Type species: *Cretonotus flavimargo* Hampson, 1894

Diagnosis: Adults white. Hindwings with a marginal yellow line or band; male genitalia with uncus triangular, tip entire; valvae broad and strongly folded, bilaterally asymmetric, a very long, strong and curved process from almost middle of costa, a small but strong saccular process from inner side of the fold, teeth present on the ventral edge of valvae; Juxta of medium size.

Remarks: Originally, *flavimargo* Hampson, 1894 was described under Genus *Cretonotus* Hübner and Hampson (1901) transferred it to Genus *Amsacta* Walker. Thomas and Goodger (1992) treated *flavimargo* Hampson, 1894 as a member of *Aloi* Walker and Dubatolov (2004, 2010) shifted *flavimargo* Hampson to Genus *Paramsacta* Hulstaert, 1923 and *Aloi* Walker, 1855, respectively. However, the species *flavimargo* Hampson is not congeneric with any of the described Arctiinae genera, therefore a new Genus is erected for the same. Due to the shape of valvae and presence of teeth on its ventral edge, the new Genus is near to Genus *Aloi* Walker but differs strongly because of the tip of uncus not notched, and presence of strong costal and saccular processes.

Etymology: The Genus is named after its nearest relative *Aloi* Walker

Known species of Genus *Neoaloi* Singh & Kirti gen. nov. from India: Sole included species.

Neoaloea pseudoflavimargo Singh, Kirti & Kaleka sp. nov.

Description: Adults white. A scarlet band behind head, another at tip of collar; a black spot on each tegulae. Forewings with a scarlet costal band, narrowing towards apex; black spot on upper angle of cell. Hind wings with a black spot at end of cell, four submarginal spots; a fine marginal yellow line, not reaching apex or anal angle. Abdomen scarlet, with dorsal spots. Male genitalia with tip of uncus entire; tegumen narrow; valvae broad and folded with strong mid costal & saccular process, aedeagus curved, vesica with fields of spines and scobinations.

Material Examined:

Holotype: (Male) Assam: Jatinga, 13.ix.1995. (Coll.: Amritpal Singh Kaleka) (Type deposited in Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab)

Distribution: Assam (Jatinga)

Larval host plant: Not known.

Remarks: Morphologically, *Neoaloea pseudoflavimargo* Singh, Kirti & Kaleka is closely allied to *Neoaloea flavimargo* (Hampson, 1894). However, it is distinct due to a fine marginal yellow line on hindwing, which is represented by a prominent yellow band in *N. flavimargo* (Hampson). Furthermore, the species is also distinct due shape of valvae, tip of mid costal process and longer vinculum.



Neoaloea pseudoflavimargo Singh, Kirti & Kaleka sp. nov.



Neoaloea flavimargo (Hampson, 1894) (Courtesy Dr. Karel Černý)

Etymology: The species is named due to its similar appearance with *N. flavimargo* (Hampson).

Genus *Pangora* Moore

Moore 1879; in Hewitson & Moore *Desc. new Ind. Lep. Ins.* Colln. Late Mr. W. S. Atkinson, 1: 42

Type species: *Pangora distorta* Moore, 1879

Diagnosis: Antennae simple in both sexes. Hind tibia with two pair of spurs. Male genitalia have almost rectangular uncus with small spines on lateral walls, tegumen with a broad flap above uncus and having subunci process, valvae with a small ridge on mid of ventral wall; juxta specific.

Remarks: The Genus is known by four species from the world which are mainly concentrated in South India with *P. distorta* Moore from North-West Himalayas & Nepal and *P. erosa* (Walker, 1855) with additional distribution in Sri Lanka.

Known species of Genus *Pangora* Moore from India: *Pangora coorgensis* (Hampson, 1916); *Pangora distorta* Moore, 1879; *Pangora erosa* (Walker, 1855); *Pangora matherana* Moore, 1879.

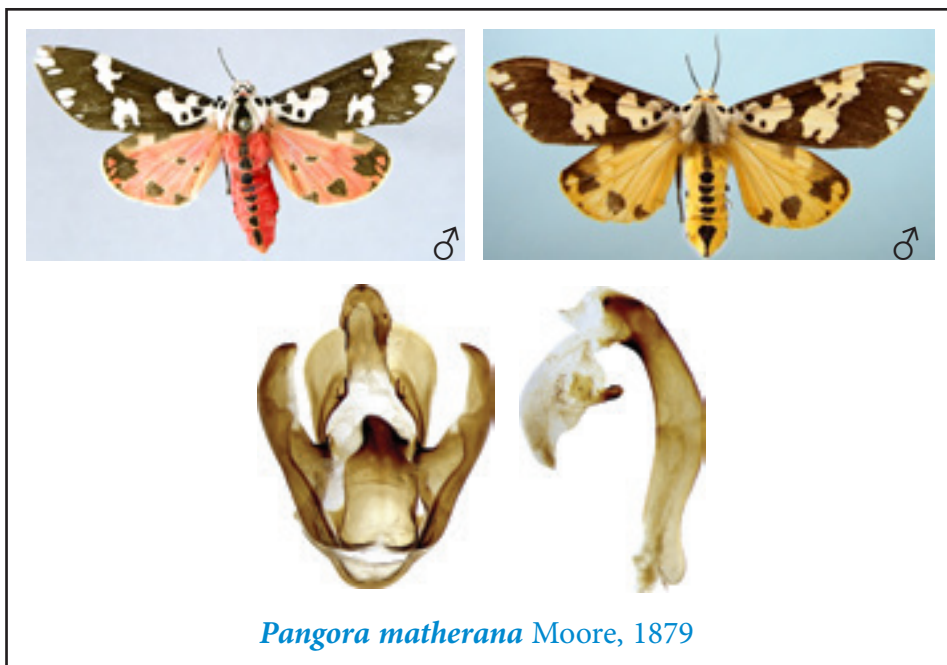
Pangora matherana Moore, 1879

Pangora matherana, Moore, 1879; *Proc. Zool. Soc. Lond.*, 1879: 396

Forewings brown with irregular white fascia from base, two basal spots below median nervure, irregular white median band continuous or broken at middle and six marginal spots. Hindwings crimson or yellow with brown blotches. Abdomen crimson or yellow. Male genitalia with aedeagus bearing apical spine, vesica with a sclerotized lobe, double line of small but well formed spines and full of scobinations.

Distribution: Maharashtra (Matherana Hill, Bombay), Karnatka (North Kanara), Tamil Nadu (Nilgiris).

Larval host plants: Algae on stones/trunks.



Pangora matherana Moore, 1879

Genus *Alphaea* Walker

Walker, 1855; *List. Specimens Lepid. Ins. Colln Br. Mus.*, **3**: 683-684

Type species: *Alphaea fulvohirta* Walker, 1855

Diagnosis: Antennae of males serrate and pectinate on hind side; adults dark with rounded light spots, abdomen yellow or red. According to the male genitalia structure, the Genus is characterized by the sub apical process on valvae located closer to apical than to basal process.

Remarks: The Genus *Alphaea* Walker, 1855 was established for the sole included species, *A. fulvohirta* Walker, 1855. The taxonomic review of this Genus was done by Dubatolov & Kishida (2005) in which the authors included 10 species under three subgenera from the World and a later addition, *A. dellabrunai* was done by Saldaitis & Ivinskis (2008). The Genus is mainly reported from China, India, Nepal, Bhutan, North Pakistan, Tibet, Myanmar, Vietnam and Thailand.

Known species of Genus *Alphaea* Walker from India: *Alphaea fulvohirta* Walker, 1855; *Alphaea (Flavalphaea) impleta* (Walker, 1864); *Alphaea (Flavalphaea) khasiana*

(Rothschild, 1910); *Alphaea (Nayaca) florescens* (Moore, 1879); *Alphaea (Nayaca) imbuta* (Walker, 1855); *Alphaea (Nayaca) rothschildi* Dubatolov & Kishida, 2005.

Subgenus *Flavalphaea* Dubatolov & Kishida

Dubatolov & Kishida, 2005; *Tinea*, **18** (4): 242-243

Type species: *Diacrisia khasiana* Rothschild, 1910

Diagnosis: This Subgenus is defined by yellow hindwings, elongated valvae with a long and narrow apical process along with a secondary small branch on its narrow part, basal process on ventral edge of valvae located closer to valvae base.

Alphaea (Flavalphaea) impleta (Walker, 1864)

Hypercompa impleta Walker, 1864; *List Specimens Lepid. Ins. Colln. Br. Mus.*, **31**: 286

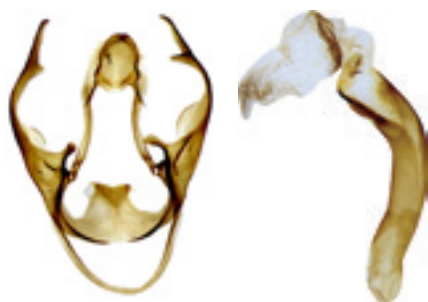
Adults have black forewings with numerous creamy spots. Hindwings pale, outer half blotched with black. Male genitalia have the elongate valvae with a long and narrow apical process; vesica with two patches of small but dense spines along with scobinations.

Distribution: West Bengal (Darjeeling), Sikkim, Assam, Meghalaya, North West Himalayas, Arunachal Pradesh.

Larval host plant: Not Known.



Courtesy Dubatolov & Kishida, 2005



Alphaea (Flavalphaea) impleta (Walker, 1864)

Genus *Nannoarctia* Kôda

Kôda, 1988; *Tyô to Ga*, 39 (1): 4

Type species: *Pericallia takanoi* Sonan, 1934 (= *integra* Matsumura, 1931)

Diagnosis: Male genitalia with uncus triangulated and not narrowing to the base, sub unci short; valvae elongate without any additional process or spine.

Remarks: Genus *Nannoarctia* Kôda was erected for single species, *N. integra* (Walker, 1855) (an incorrect determination of *Pericallia takanoi* Sonan, 1934). The taxonomic review of this Genus was done by Dubatolov, Haynes & Kishida (2007) and Dubatolov & Kishida (2010). The Genus is distributed in India, Nepal, and China to South East Asia.

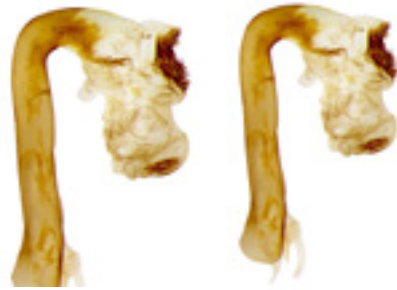
Known species of Genus *Nannoarctia* Kôda from India: *Nannoarctia himalayana* Dubatolov & Kishida, 2010; *Nannoarctia obliquifascia* (Hampson, 1894); *Nannoarctia (Pseudorajendra) dentata* (Walker, 1855).

Nannoarctia obliquifascia* (Hampson, 1894)Alphaea obliquifascia* Hampson, 1894; Fauna of Br. India, Moths, 2: 24

Forewings black brown having two basal spots at interno median space; postmedial oblique band of spots from sub apical part of costa. Tegulae yellow. Abdomen orange. Male genitalia with aedeagus sharply curved at tip; vesica with a large patch along with a small apical patch of spines, scobinations present.

Distribution: North West Himalayas (Dharamshala), Assam, Sikkim.

Larval host plant: Not Known.

***Nannoarctia obliquifascia* (Hampson, 1894)****Subgenus *Pseudorajendra* Dubatolov, Haynes & Kishida**Dubatolov, Haynes & Kishida, 2007; *Tinea*, 20 (1): 75

Type species: *Aloa dentata* Walker, 1855

Diagnosis: Subgenus *Pseudorajendra* Dubatolov, Haynes & Kishida have some mixed characters of Genus *Rajendra* Moore and *Nannoarctia* Kôda, like triangular uncus but narrowing towards base, tegulae centred with a spot. The distinct character of this Subgenus is the presence of teeth on sub unci.

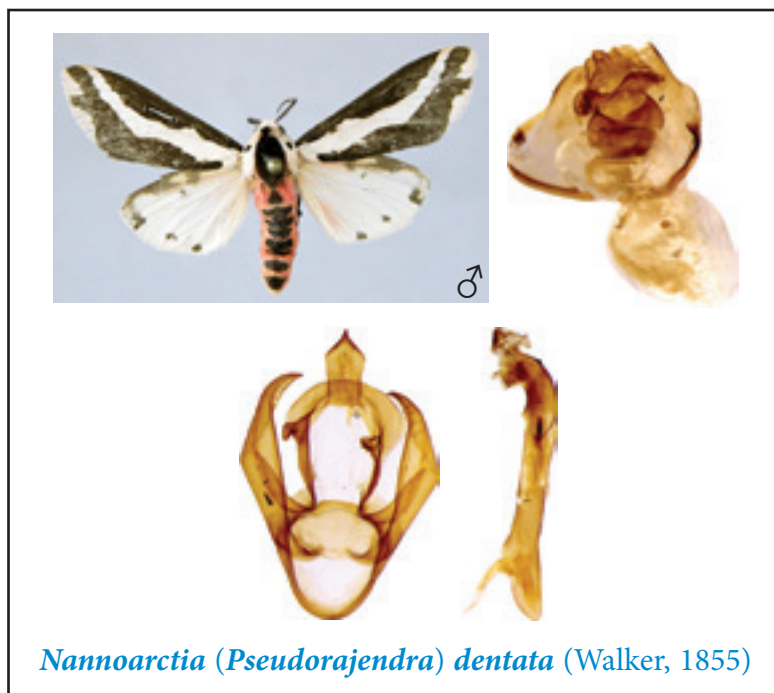
***Nannoarctia (Pseudorajendra) dentata* (Walker, 1855)**

Aloa dentata Walker, 1855; *List spec. lep. Ins. Colln. Br. Mus.*, 3: 708

Forewings brown with a light oblique band from base and below cell to before apex at costa, two elongate white spots on termen. Male genitalia as discussed under the diagnosis of subgenus. Female genitalia have the ductus bursae short and sclerotized; corpus bursae slightly triangular with three signa.

Distribution: Karnataka, Maharashtra, Kerala, Tamil Nadu.

Larval host plant: Not Known.



Genus *Rajendra* Moore

Moore, 1879; In Hewitson & Moore *Descr. New Indian lep. Ins. Colln late Mr. W.S. Atkinson* (1): 43

Type species: *Rajendra lativitta* Moore, 1879

Diagnosis: Patagia and tegulae pale buff, centred with a black spot or band. Male

genitalia with uncus triangular and narrowing toward base; tegumen with finger like process; valvae often with two apical processes and third process on costa may or may not present.

Remarks: Genus *Rajendra* Moore was erected as a monotypic Genus for *R. lativitta* Moore, 1879 and the later authors, Moore (1879a), Cotes and Swinhoe (1887) and Kirby (1892) added many unnatural taxa to this Genus and thus, made it a heterogeneous group. Dubatolov *et al.* (2007) reviewed this Genus for the first time with inclusion of three species: *Rajendra biguttata* (Walker, 1855); *Rajendra cingulata* (Rothschild, 1910); *Rajendra perrottetii* (Guérin-Ménéville, [1844]) and one subspecies *Rajendra biguttata irregularis* Moore, 1882. The Genus is distributed in India, Sri Lanka and Myanmar.

Known species of Genus *Rajendra* Moore from India: *Rajendra biguttata* (Walker, 1855); *Rajendra cingulata* (Rothschild, 1910); *Rajendra perrottetii* (Guérin-Ménéville, [1844]).

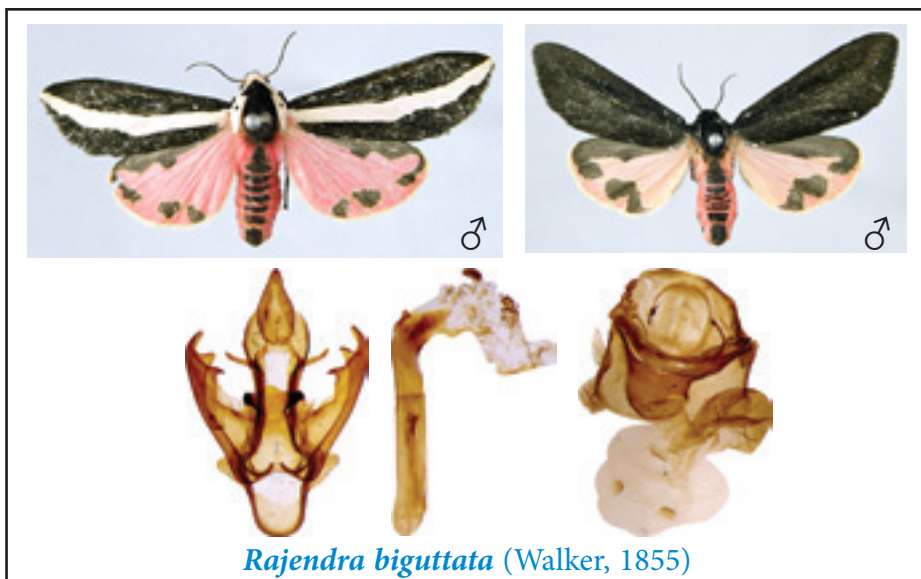
Rajendra biguttata (Walker, 1855)

Aloa biguttata Walker, 1855; *List Spec. lep. Ins. Colln. Br. Mus.*, 3: 707

Adults with a spot at tegula, forewings black brown with yellowish white band from base to apex,肘bowed at vein Cu₁. Male genitalia have the vesica with a patch of densely compact spines at one lobe along with another patch of short but robust spines with some scobinations. Female genitalia with ductus bursae short and corpus bursae twisted, three signa present

Distribution: Karnataka, Maharashtra, Kerala, Tamil Nadu, Madhya Pradesh, Orissa, West Bengal, Sikkim, Bihar (Parasnath), Arunachal Pradesh, Punjab, Himachal.

Larval host plant: *Elettaria cardamomum* (Zingiberaceae).



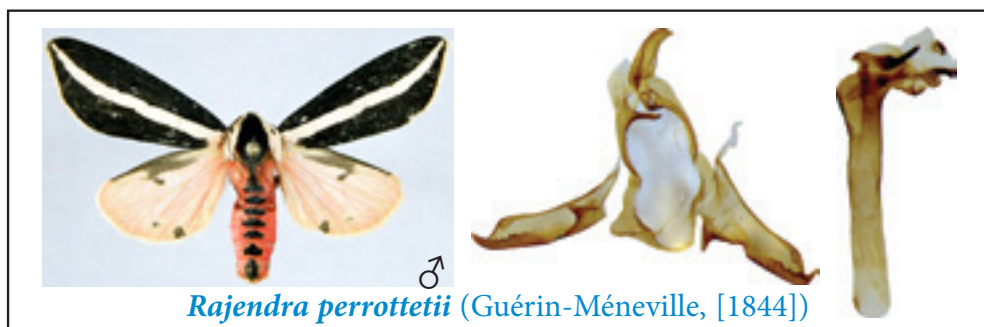
Rajendra perrottetii (Guérin-Méneville, [1844])

Chelonia perrottetii Guérin-Méneville, [1844]; *Icon. règne anim. Cuvier (Insects)*:515

Adults are almost similar to *Rajendra biguttata* (Walker) except the smooth white band of forewings in *perrottetii*. Male genitalia have the valvae with apical processes much apart, costal process absent; aedeagus with a prominent apical spine; vesica with two patches of small spines.

Distribution: Tamil Nadu, Kerala, Madhya Pradesh, Maharashtra, Karntaka, Western Ghats.

Larval host plants: Not known.



Genus *Cretonotos* Hübner

Hübner, [1819] 1816; *Verz. Bekannter Schmett.*: 170

Type species: *Phalaena interrupta* Linnaeus, 1767

Diagnosis: Definitive features of the Genus are in the male abdomen: notably a massive development of a coremata of sternite eight. In the male genitalia, valvae long, slender and tapering with an acute lateral process; Juxta extends as a sclerotized band into the annular tube; vesica has fields of numerous moderate and long spines.

Remarks: The Genus *Cretonotos* Hübner, [1819] 1816 consists of a set of unrevised afro-tropical species (Goodger & Watson, 1995) and seven species from South Asia and neighboring territories (Dubatolov & Holloway, 2007). Both the species reported from India are distributed throughout the Oriental region and probably the most common species of all the Tiger moths of India.

Known species of Genus *Cretonotos* Hübner from India: *Cretonotos interrupta* (Linnaeus, 1767); *Cretonotos (Phissama) transiens* (Walker, 1855).

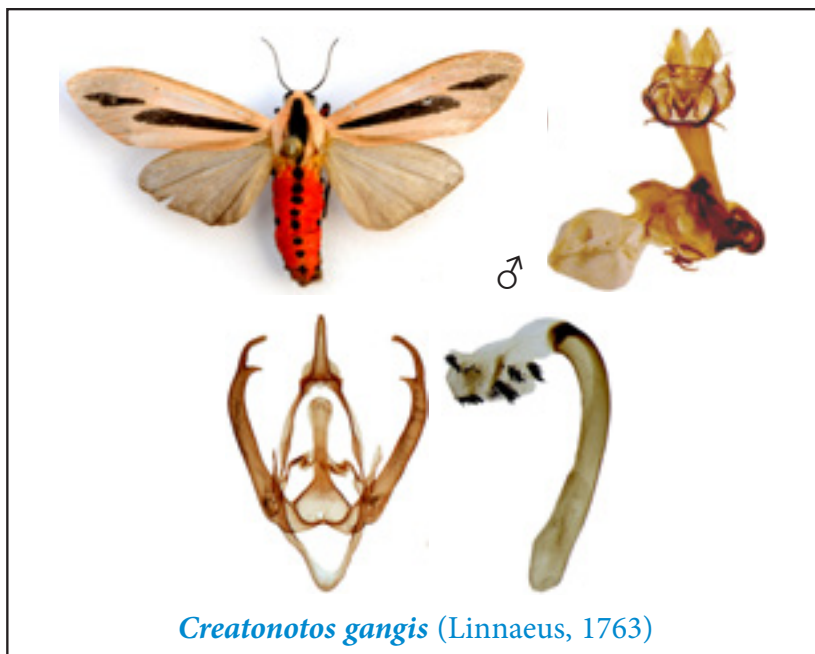
Cretonotos gangis (Linnaeus, 1763)

Phalaena gangis Linnaeus, 1763; *Centuria Insectorum Rariorum*:27: *Amoenitates Acad.* 6: 410-411

Adults dull white. Forewings with a broad fascia below median nervure and a broad streak beyond lower angle. Hindwings slightly suffused with fuscous. Male genitalia with valvae narrow and elongate, unequally bifurcated at tip; aedeagus curved at tip; vesica with patches of well formed spines. Female genitalia with ductus bursae long, straight; corpus bursae divided into two parts, series of spines in posterior region, two scobinate patches in anterior region.

Distribution: Throughout India.

Larval host plant: Not Known.



Cretonotos gangis (Linnaeus, 1763)

Subgenus *Phissama* Moore

Moore [1860]; *Cat. Lep. Ins. Mus. Nat. Hist.*, 23: 362

Type species: *Amphissa vacillans* Walker, 1865

Diagnosis: Forewings without any streak. Male genitalia with vesica have short spines which are sometime fused to bands.

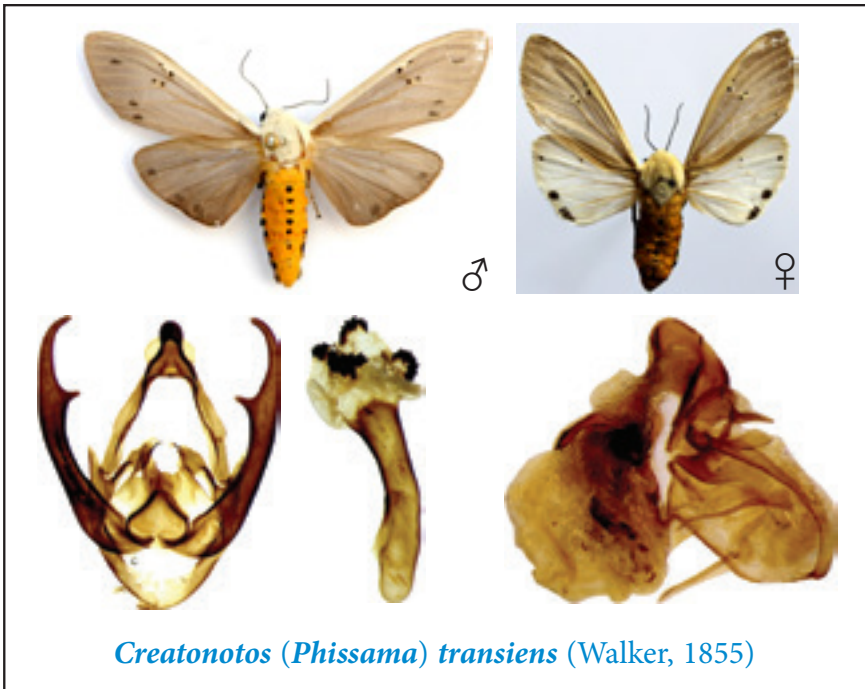
Cretonotos (Phissama) transiens (Walker, 1855)

Spilosoma transiens Walker, 1855; *List Spec. Lepid. Inst. Colln. Br. Mus.*, 3: 675

Forewings light brown, with dull white costal band, black spots at upper and lower angle of cell. Hindwings light brown. Male genitalia with uncus long; valvula narrow, elongate with a mid ventral process; vesica with dented plates. Female genitalia with ductus bursae short and sclerotized, curved; corpus bursae rounded with numerous sclerotizations.

Distribution: Throughout India.

Larval host plant: Polyphagous.



Genus *Cladarctia* Kôda

Kôda, 1988; *Tyô to ga*, **39** (1): 45-47

Type species: *Euprepia quadriramosa* Kollar, [1844]

Diagnosis: Labial palpi porrect, antennae bipectinate. Forewings with streaked veins. Male genitalia have the valvae large, costa produced to a broad flap at middle, a prominent mid ventral and a small sub apical process present.

Remarks: The Genus *Cladarctia* Kôda, 1988 was described for single species, *Euprepia quadriramosa* Kollar, 1844 distributed in Kashmir, Nepal, Sikkim and West China. The Genus shows high level of variations in wing patterns as well as in genital attributes. Kaleka (2005a) added three species: *Cladarctia bharmourensis* Kaleka, 2005; *Cladarctia discocellulatus* Kaleka, 2005; *Cladarctia hansraji* Kaleka, 2005. The Genus is in need of thorough revision.

Known species of Genus *Cladarctia* Kôda from India: *Cladarctia bharmourensis* Kaleka, 2005; *Cladarctia discocellulatus* Kaleka, 2005; *Cladarctia hansraji* Kaleka, 2005; *Cladarctia quadriramosa* (Kollar, [1844]).

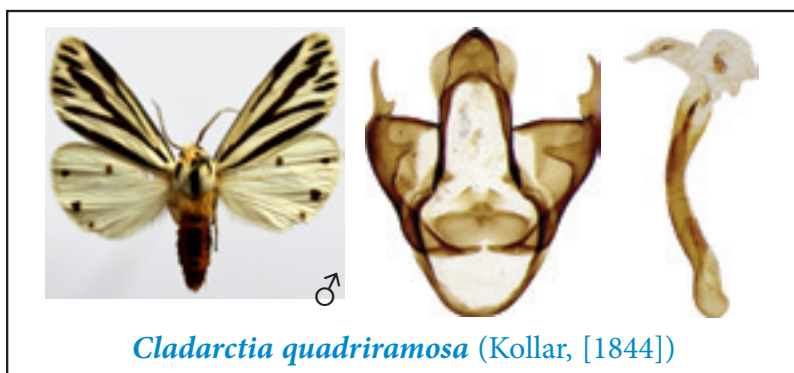
Cladarctia quadriramosa (Kollar, [1844])

Euprepia quadriramosa Kollar, [1844]; *Kaschmir*, 4 (2): 468

Adults white; veins of forewings more or less streaked with black. Male genitalia have the uncus broad; vesica with two patches of small spines along with small sclerotization at tip.

Distribution: Indian Himalayas, Maharashtra (Satara), Meghalaya (Khasi Hills).

Larval host plant: Not Known.



Genus *Olepa* Watson

Watson, 1980, *The Generic Names of Moths of the World*, 2: 133

Type species: *Alope ocellifera* Walker, 1855

Diagnosis: Forewings pale brown to dark brown, with series (six) of dark spots in interspaces. Hindwings yellow to reddish with black spots to blotches. Male genitalia have the valvae with a prominent costal process near its base, aedeagus with one or more spines at the tip.

Remarks: Genus *Olepa* Watson, 1980 got its name as a replacement of *Alope* Walker, 1855 with *Alope ocellifera* Walker, 1855 as its type species, which was subsequently designated by Kirby (1892). The Genus is reviewed by Orhant (1986, 2000), Witt *et al.* (2005) and Singh & Singh (2013). At present the Genus is known by nine species from the World: *O. ocellifera* (Walker, 1855), *O. duboisi* Orhant, 1986; *O. anomia* Orhant, 1986; *O. kakatii* Orhant, 2000; *O. (Ricinia) ricini* (Fabricius, 1775), *O. (Ricinia) schleini* Witt *et al.*, 2005; *O. (Pseudoolepa) clavatus* (Swinhoe, 1885), *O. (Orhanta) koslandana* Orhant, 1986 and *O. (Cornutia) coromandelica* Dubatolov, 2011. The Genus is distributed in India,

Bangladesh, Sri Lanka, Northern Pakistan, Nepal, Thailand and Israel.

Known species of Genus *Olepa* Watson from India: *Olepa duboisi* Orhant, 1986; *Olepa ocellifera* (Walker, 1855); *Olepa kakatii* Orhant, 2000; *Olepa* (*Cornutia*) *coromandelica* Dubatolov, 2011; *Olepa* (*Orhanta*) *koslandana* Orhant, 1986; *Olepa* (*Pseudoolepa*) *clavatus* (Swinhoe, 1885); *Olepa* (*Ricinia*) *ricini* (Fabricius, 1775)

Subgenus *Ricinia* Singh & Singh

Singh & Singh, 2013; *Tinea* **22** (4): 273

Type species: *Bombyx ricini* Fabricius, 1775

Diagnosis: Male genitalia with uncus narrow and elongated, sides almost parallel; valvae curved, without any sub apical process, ending to an acute or rounded tip, aedeagus with single apical spine (exceptionally two); vesica with patches of small spines.

Olepa (*Ricinia*) *ricini* (Fabricius, 1775)

Bombyx ricini Fabricius, 1775; *Syst. Ent.*: 583

Of all the *Olepa* species, *ricini* is the darkest one and the spots of forewings are not ocellated. Hindwings more reddish. Male genitalia as discussed under subgenus.

Distribution: Throughout India.

Larval host plant: Polyphagous.



Olepa (*Ricinia*) *ricini* (Fabricius, 1775)

Subgenus *Pseudoolepa* Singh & Singh

Singh & Singh, 2013; *Tinea* **22** (4): 275

Type species: *Alope clavatus* Swinhoe, 1885

Diagnosis: Male genitalia with uncus broad, triangular; valvae with smooth curve, without any sub apical process; vesica with patches of comparatively large spines.

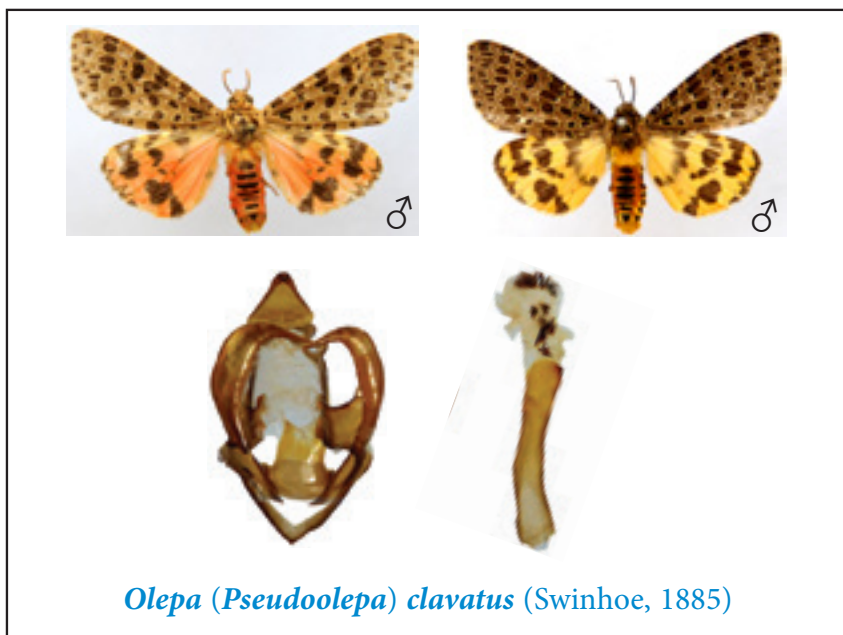
Olepa (Pseudoolepa) clavatus (Swinhoe, 1885)

Alope clavatus Swinhoe, 1885; *Proc. zool. Soc. Lond.*, **1885**: 295

Forewings and their markings are clearer than *O. ricini* Fabricius and the spots of forewings are ocellated with yellow. Hindwings reddish to yellow. Genitalia as discussed under diagnosis of subgenus.

Distribution: South India.

Larval host plant: Not Known.



Subgenus *Orhanta* Singh & Singh

Singh & Singh, 2013; *Tinea*, **22** (4): 275

Type species: *Olepa koslandana* Orhant, 1986

Diagnosis: Branches of pectination very small (shorter than all the other groups of *Olepa* Watson). Male genitalia have tomb like uncus, which is broad in its first half and sharply narrow in distal half, asymmetrical valvae with long costal arm, running along the tegumen and reaching to base of uncus with spines at tip.

Olepa (Orhanta) koslandana Orhant, 1986

Olepa koslandana Orhant, 1986; *Bull. Science Nat.*, **50**: 12

The species is smaller than all of the other *Olepa* species. The forewing markings are almost same as in *O. ricini* Fabricius. Genitalia discussed under diagnosis of subgenus.

Distribution: Karnataka (Bellary), Tamil Nadu (Coromandel Coast), Orrisa (Ganjam), Bihar, Jharkhand.

Larval host plant: Not Known.



Olepa (Orhanta) koslandana Orhant, 1986

Genus *Spilarctia* Butler

Butler, 1875; *Cistula Ent.*, 2: 39

Type species: *Phalaena lutea* Hufnagel, 1766 (Subsequent designation by Kirby, 1877)

Diagnosis: Male genitalia with uncus broad at base and narrowing towards tip; valvae with several processes, tegumen with a collar. Female genitalia with corpus bursae membranous, signum present or may be absent.

Remarks: The Genus *Spilarctia* Butler is a species rich Genus with wide distribution. Kôda (1988) defined the Genus on the basis of male and female genitalia. Dubatolov (2010) catalogued this Genus under 10 different species groups along with uncertain position for many species. Indian fauna of Genus *Spilarctia* Butler is represented in five species groups: *Spilarctia bisecta* species group, *Spilarctia casigneta* species group, *Spilarctia leopardina-melanostrigma* species group, *Spilarctia obliqua* species group, *Spilarctia punctata* species group and some species with uncertain position. The Indian fauna of the Genus is in need of more reviews and fresh revisions.

Known species of Genus *Spilarctia* Butler from India: *Spilarctia bifascia* Hampson, 1891; *Spilarctia casigneta* (Kollar, [1844]); *Spilarctia castanea* Hampson, 1893; *Spilarctia comma* (Walker, 1856); *Spilarctia coorgensis* Kirti & Gill, 2010; *Spilarctia dalbergiae* Moore, 1888; *Spilarctia eldorado* (Rothschild, 1910); *Spilarctia gopara* (Moore, 1859); *Spilarctia leopardina* (Kollar, [1844]); *Spilarctia melanostigma* (Erschoff, 1872); *Spilarctia mona* (Swinhoe, 1885); *Spilarctia montana* (Guérin-Méneville, 1843); *Spilarctia obliqua* (Walker, 1855); *Spilarctia punctata* (Moore, 1859); *Spilarctia rubilinea* (Moore, 1865); *Spilarctia sagittifera* Moore, 1888; *Spilarctia tamangi* (Thomas, 1994); *Spilarctia tigrina* (Moore, 1879); *Spilarctia todara* (Moore, 1872); *Spilarctia xanthogaster* (Thomas, 1994).

Spilarctia comma (Walker, 1856)

Aloa comma Walker, 1856; *List. spec. Lep. Ins. Colln. Br. Mus.*, 7: 1703

Adults reddish yellow. Forewings with antemedial and postmedial spots on costa; an elongated black streak on centre of inner margin, sending spurs from the extremities. Hindwings pale with inner area reddish. Male genitalia with valvae slightly twisted at tip, aedeagus with a multi spined spur at tip, vesica with fields of minute spines.

Distribution: North West Himalayas (Kulu, Shimla), Sikkim, Arunachal Pradesh.

Larval host plant: Not Known.



Spilarctia comma (Walker, 1856)

Spilarctia mona (Swinhoe, 1885)

Spilosoma mona Swinhoe, 1885; *Proc. Soc. London*, **1885**: 295

Adults creamy white. Forewings with a basal black spot, antemedial series of three spots, a spot at end of cell, more or less complete postmedial series. Hindwings with a black spot at end of cell, in some specimens cell is completely filled with black, postmedial series prominent. Female genitalia with ductus bursae broad, corpus bursae almost globular with three signum present.

Distribution: Maharashtra (Mahabaleshwar, Bombay, Matheran), Meghalaya.

Larval host plant: Not Known.



Spilarctia mona (Swinhoe, 1885)

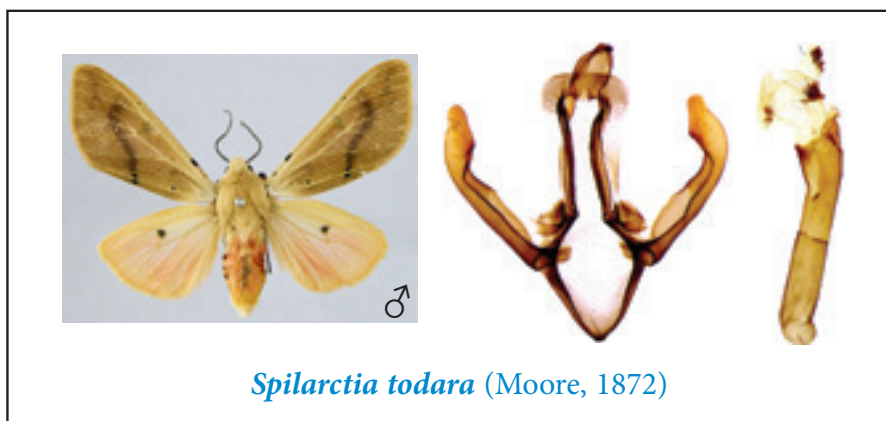
Spilarctia todara (Moore, 1872)

Spilosoma todara Moore, 1872; *Proc. Zool. Soc. London*, **1872**: 574

Adults yellow brown. Forewings with some black spots. Hindwings with crimson scales on inner and outer area, a discocellular spot present. Abdomen crimson. Male genitalia with valvae slightly twisted; aedeagus with a small spine at tip and a patch of minute spines, vesica with three patches of spines and scobinations.

Distribution: Kerala, Tamil Nadu.

Larval host plant: Not Known.



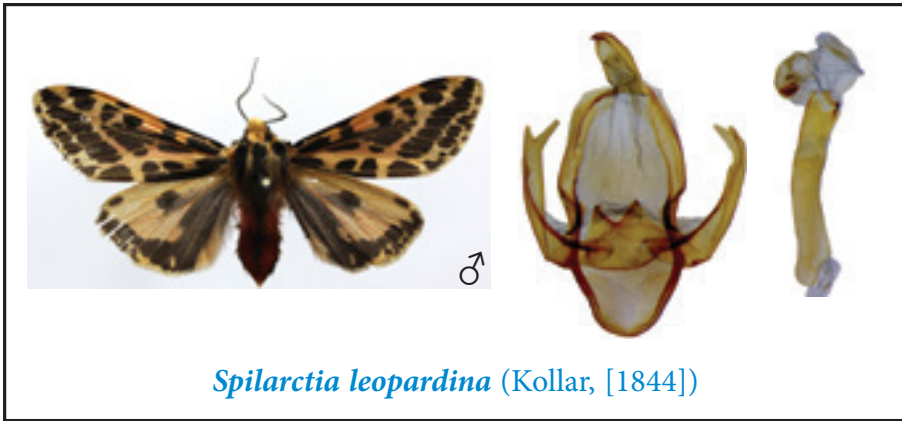
Spilarctia leopardina (Kollar, [1844])

Euprepia leopardina Kollar, 1844; *Kaschmir*, 4 (2): 467

Forewings dull white with black patches covering most of the wing surface. Hindwings blackish with irregular patches of white, black scales may only be restricted to inner and outer area. Male genitalia with valvae shorter and bifurcated at tip; aedeagus with two small spines at tip; vesica with a patch of spines, along with two distinct patches of scobination.

Distribution: North West Himalayas (Himachal Pradesh, Uttarakhand), Sikkim, Assam, Manipur, Meghalaya (Khasi Hills), Arunachal Pradesh.

Larval host plant: Not Known.



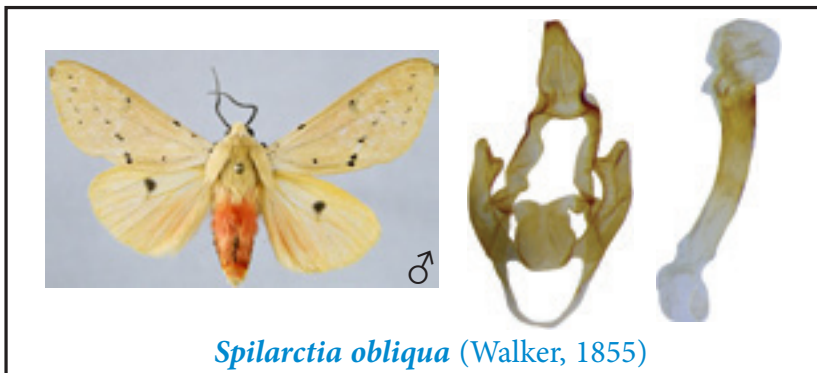
Spilarctia obliqua (Walker, 1855)

Spilosoma obliqua Walker, 1855; *List Spec. lep. Ins. Colln. Br. Mus.*, 3: 679

Adults yellowish brown with some black spots on forewings. Hindwings with a black spot on discocellulars and crimson scales on inner margin. Abdomen crimson. Male genitalia with valvae shorter and notched at tip; vesica unornamented.

Distribution: Throughout India.

Larval host plant: Polyphagous.



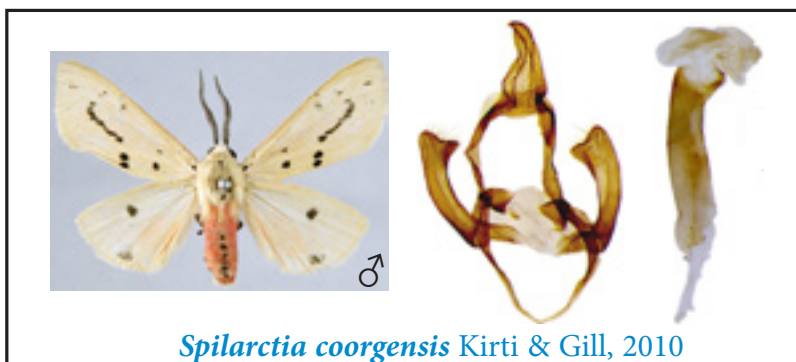
Spilarctia coorgensis Kirti & Gill, 2010

Kirti & Gill, 2010; *J. of threatened taxa*, 2 (6): 951

Adults look like *Spilarctia obliqua* (Walker). However, vesica is with patches of scobination which is absent in *S. obliqua* (Walker).

Distribution: Kerala (Vithura), Karnataka (Coorg, Bhagahamandala).

Larval host plant: Not Known.



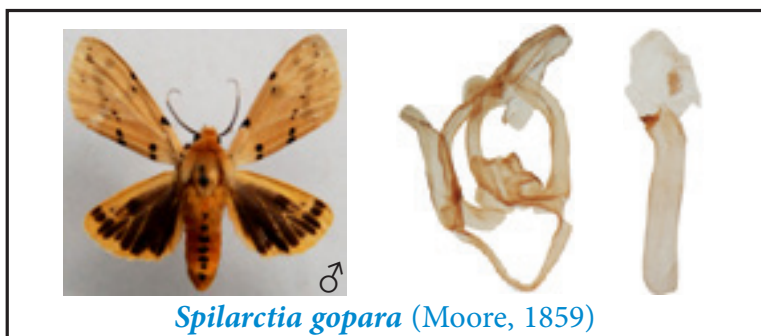
Spilarctia gopara (Moore, 1859)

Spilosoma gopara Moore, 1859; *Cat. Lep. Ins. Mus. Nat. Hist. East Ind. House* 2: 356

Adults reddish brown. Forewings spotted with black. Hindwings filled with black, leaving costal and marginal area. Male genitalia have the aedeagus with a spine at tip, vesica with a patch of small spines.

Distribution: Sikkim, Assam, West Bengal (Darjeeling), Meghalaya.

Larval host plant: Not Known.



Genus *Spilosoma* Curtis

Curtis, 1825; *Br. Ent.*, 2: 92

Type species: *Bombyx menthastri* [Denis & Schiffermüller], 1775

Diagnosis: According to Kôda (1988), the apomorphies for the Genus are: male genitalia with centre of the valvae elongated posteriorly, the female genitalia with large bulla seminalis and a pair of deep concavities developed lateral to the ostium dursae.

Remarks: The Genus *Spilosoma* Curtis, 1825 was described as a monotypic Genus for its type species *Bombyx menthastri* [Denis & Schiffermüller]. Kôda (1988) defined this Genus on the basis of external genital characters. Genus *Spilosoma* Curtis was mainly dealt by Fang (1981), Holloway (1988), Thomas (1992, 1994), Dubatolov & Wu (2008). Dubatolov (2010) catalogued the Eurasian fauna of *Spilosoma* under five species groups.

Known species of Genus *Spilosoma* Curtis from India: *Spilosoma erythrophleps* Hampson, 1894; *Spilosoma erythrozona* (Kollar, 1844); *Spilosoma lubricipedium* (Linnaeus, 1758).

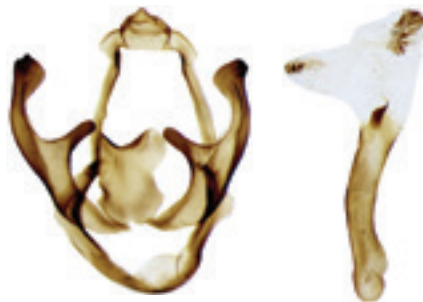
Spilosoma erythrozona (Kollar, 1844)

Euprepia erythrozona Kollar, 1844; *Kashmir* 4 (2): 468-469

Adults white, with some black points on forewings. Hindwings with costa black up to middle, a discocellular spot. Abdomen dark red, with dorsal bands. Male genitalia have the tip of valvae swollen, mid ventral process prominent; vesica with two patches of spines.

Distribution: North West Himalayas, Meghalaya.

Larval host plant: Not known.



Spilosoma erythrozona (Kollar, 1844)

Genus *Lemyra* Walker

Walker, 1856; *List. Spec. Lepid. Ins. Colln. Br. Mus.*, 7: 1690

Type species: *Lemyra extensa* Walker, 1856

Diagnosis: Members of Genus *Lemyra* Walker are relatively less robust than those of *Spilarctia* / *Spilosoma* species, particularly the abdomen which is relatively short. The forewing fasciations are made up of blocks of dark brown or grey in the spaces, rather than the black in *Spilarctia* / *Spilosoma*. The male genitalia with valvae simple, relatively narrow, sometimes with a small lateral lobe; aedeagus vesica small, globular, with an extensive, even array of small spine; aedeagus has no apical ornamentation. Female genitalia have the corpus bursae small, its base sclerotized and contiguous with sclerotized ductus.

Remarks: Genus *Lemyra* Walker was described for single species, *Lemyra extensa* Walker, 1856 from Celebes (Sulawesi). The taxonomic review of the Genus was done by Thomas (1990) and furthermore, by Dubatolov (2010). Most of the *Lemyra* / *Thyrgorina* species of India belong to the sub Genus *Thyrgorina* Walker. The genus is mainly distributed in Oriental region.

Known species of Genus *Lemyra* Walker from India: *Lemyra venosa* (Moore, 1879); *Lemyra* (*Thyrgorina*) *angularis* Strand, 1922; *Lemyra* (*Thyrgorina*) *bimaculata* (Moore, 1879); *Lemyra* (*Thyrgorina*) *biseriata* (Moore, 1877); *Lemyra* (*Thyrgorina*) *costalis* (Singh & Singh, 1998); *Lemyra* (*Thyrgorina*) *excelsa* Thomas, 1990; *Lemyra* (*Thyrgorina*) *eximia* (Swinhoe, 1891); *Lemyra* (*Thyrgorina*) *flavalis* (Moore, 1865); *Lemyra* (*Thyrgorina*) *khasiana* Thomas, 1990; *Lemyra* (*Thyrgorina*) *malshejensis* Kirti & Gill, 2008; *Lemyra* (*Thyrgorina*) *melanochroa* (Hampson, 1918); *Lemyra* (*Thyrgorina*) *melanosoma* (Hampson, 1894); *Lemyra* (*Thyrgorina*) *multivittata* (Moore, 1865); *Lemyra* (*Thyrgorina*) *neglecta* (Rothschild, 1910); *Lemyra* (*Thyrgorina*) *neurica* (Hampson, 1911); *Lemyra* (*Thyrgorina*) *nigrescens* (Rothschild, 1910); *Lemyra* (*Thyrgorina*) *nigrifrons* (Walker, 1865); *Lemyra* (*Thyrgorina*) *obliquivitta* (Moore, 1879); *Lemyra* (*Thyrgorina*) *pilosa* (Rothschild, 1910); *Lemyra* (*Thyrgorina*) *punctilinea* (Moore, 1879); *Lemyra* (*Thyrgorina*) *rhodophila* (Walker, 1864); *Lemyra* (*Thyrgorina*) *rubidorsa* (Moore, 1865); *Lemyra* (*Thyrgorina*) *sikkimensis* (Moore, 1879); *Lemyra* (*Thyrgorina*) *sordidescens* (Hampson, 1901); *Lemyra* (*Thyrgorina*) *spilosomata* (Walker, [1865] 1864); *Lemyra* (*Thyrgorina*) *stigmata* (Moore, 1865).

Subgenus *Thyrgorina* Walker

Walker, [1865] 1864; *List Spec. lep. Ins. Colln. Br. Mus.* **31**: 317

Type species: *Thyrgorina spilosomata* Walker, [1865] 1864

Diagnosis: Dubatolov (2010) kept all the *Lemyra* species with two pairs of spurs on hind tibia under Subgenus *Thyrgorina* Walker, while others with single pair of spurs on hind tibia were treated as *Lemyra* s.str. The same is followed here.

Lemyra (Thyrgorina) multivittata (Moore, 1865)

Spilosoma multivittata Moore, 1865, *Proc. Zool. Soc. Lond.*, **1856**: 808

Adults off white with subbasal band somewhat obsolete, antemedial band and postmedial band angled and the later joined to the apex with an oblique series of spots. Male genitalia have the uncus narrow and elongate; valvae elongated, slightly constricted before tip, mid ventral process present; vesica with a patch of small spines.

Distribution: Himachal Pradesh, Uttar Pradesh, West Bengal (Darjeeling), Sikkim, Assam, Meghalaya (Khasi Hills), Nagaland, Arunachal Pradesh.

Larval host plant: Not Known.



Lemyra (Thyrgorina) multivittata (Moore, 1865)

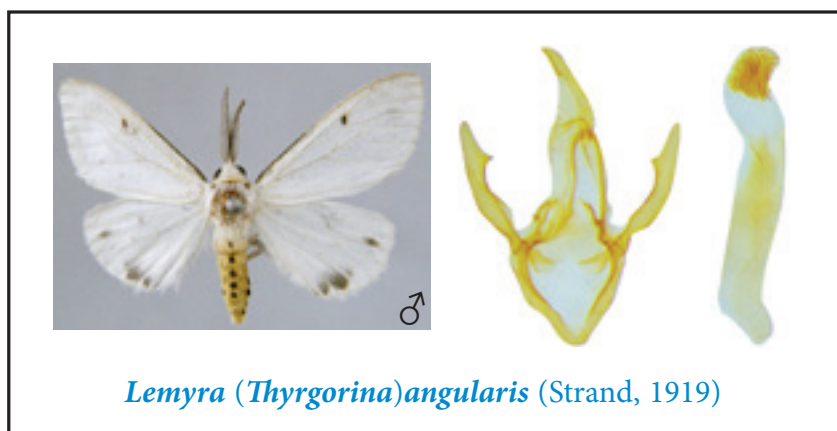
***Lemyra (Thyrgorina)angularis* (Strand, 1919)**

Diacrisia indica Guer ab. *angularis* Strand, 1919; *Lep. Cat.*, **22**: 182

The species is allied to *multivittata* Moore but have the reduced wing markings. Male genitalia have the vesica with a large bunch of spines.

Distribution: Maharashtra (Mumbai, Mahabaleshwar, Malshej Ghat), Tamil Nadu, Gujarat (Ahwa, Saputara), Kerala (Devikulam).

Larval host plant: Not Known.



***Lemyra (Thyrgorina)eximia* (Swinhoe, 1891)**

Alpenus eximia Swinhoe, 1891; *Trans. Ent. Soc. London*, **1891**:137-138

Adults orange red. Forewings with antemedial and postmedial series of black spots, excurved at median nervure. Hindwings with a spot at end of cell. Male genitalia with a small patch of spines in vesica.

Distribution: Karnataka (North Kanara, Ganeshgudi, Jog falls).

Larval host plants: *Randia uliginosa* on leaves (Rubiaceae); *Lantana* on flowers (Verbenaceae).



Lemyra (Thyrgorina) eximia (Swinhoe, 1891)

Lemyra (Thyrgorina) malshejensis (Kirti & Gill, 2008)

Thyrgorina malshejensis Kirti & Gill, 2008; *Entomon*, 33 (1): 59

Adults ochreous. Forewings with ill defined subbasal, antemedial, medial and postmedial series. Hindwings have the area below costa and the outer area with brown blotches. Male genitalia have prominent patch of spines in vesica.

Distribution: Maharashtra (Malshej Ghat)

Larval host plant: Not Known.



Lemyra (Thyrgorina) malshejensis (Kirti & Gill, 2008)

Genus *Satara* Walker

Walker, 1865; *List spec. Lep. Insect coll. Br.*, **31**: 160

Type species: *Satara aequata* Walker [1865], 1864

Diagnosis: Antennae bipectinate in males and ciliated in females. Forewings dark with light median fascia, some time reduced to a spot. Male genitalia with uncus narrow; valvae more or less elongate.

Remarks: Genus *Satara* Walker was mainly restricted to Sulawesian Island of Indonesia and reviewed by Dubatolov & Kishida (2005a). Later on, Kirti & Gill (2008b) extended its distributional range to South India. The Genus is reported by five species from the world with its representation in Sulawesi, neighbouring islands and South India (Ganeshgudi, Karnataka).

Known species of Genus *Satara* Walker from India: Sole included species.

Satara cornutiata Kirti and Gill, 2008

Satara cornutiata Kirti and Gill, 2008; *Tinea*, **20** (3): 159

Forewings black brown with antemedial and postmedial spots on costa. Hindwings yellow with a black spot at end of cell, outer area and inner margin black brown. Male genitalia with a bunch of compactly placed spines in vesica.

Distribution: Karnataka (Ganeshgudi).

Larval host plant: Not Known.



Satara cornutiata Kirti and Gill, 2008

Genus *Amerila* Walker

Walker, 1855; *List spec. Lep. Ins. Colln. Br. Mus.* 3: 725

Type species: *Sphinx astreus* Drury, 1773 (Subsequent designation by Hampson 1900)

Diagnosis: The Genus is distinct due to the shape of forewing marginal zone, reduced hindwings and in males, modified scales along the produced tornus. The general coloration is white, pale pinkish brown or dark brown, with the area of pink on the abdomen and the legs. Males has a broad rounded valvae with central hook-like process interiorly and a massive coremata exteriorly, uncus small, juxta divided into a dorsal plate and a ventral pocket; aedeagus large, vesica with several distal diverticula, one of which is scobinate and bears two large cornuti.

Remarks: Genus *Amerila* Walker, 1855 was described for the inclusion of four species under two groups: *Sphinx astreus* Drury, *Phalaena mauritia* Cramer and *Phalaena melanthus* Cramer in Group I and *Phaegoptera erythronota* Boisduval in Group II. *Amerila* Walker has generally been referred to *Rhodogastria* Hübner, however, Watson *et al.* (1980) specified that the correct type species of *Rhodogastria* Hübner & *Amerila* Walker are *Phalaena amasis* Cramer, and *Sphinx astreus* Drury, respectively. The Genus is distributed in the old world tropics.

Known species of Genus *Amerila* Walker from India: *Amerila astreus* (Drury, 1773); *Amerila eugenia* (Fabricius, 1794); *Amerila omissa* (Rothschild, 1910); *Amerila rhodopa* Walker, 1864.

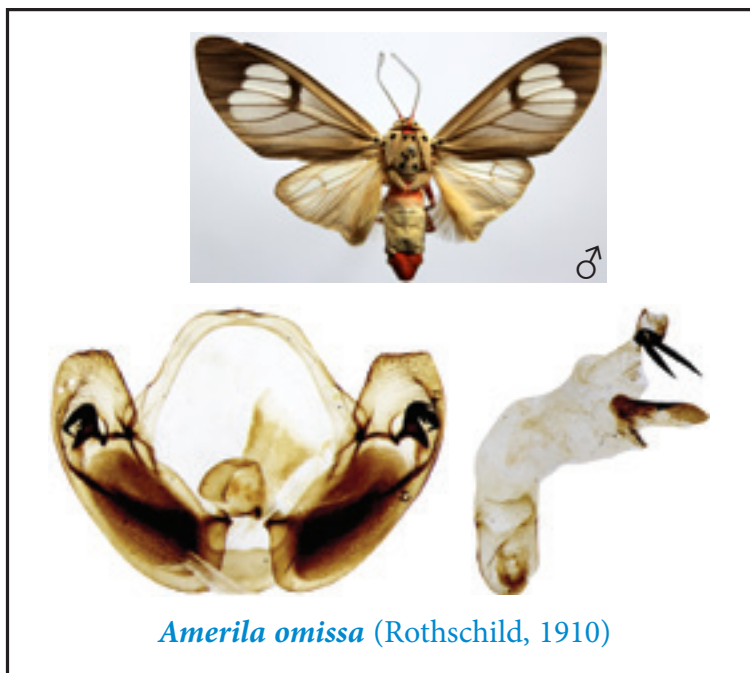
Amerila omissa (Rothschild, 1910)

Rhodogastria omissa Rothschild, 1910; *Novit. Zool.*, 17 (2): 184-185

Forewings whitish opaque with two basal spots, the costal and basal area comparatively dark, discocellulars brown, apical area with broad brown patch, with inner margin irregular and narrowing to anal angle. Hindwings opaque. Abdomen pink with a white medial band. Male genitalia with valvae broad flap like, harpae dentated & strongly curved; aedeagus small, vesica large with two prominent spines.

Distribution: North West Himalayas, Assam, Meghalaya, North East Himalayas.

Larval host plant: Not Known.



Amerila omissa (Rothschild, 1910)

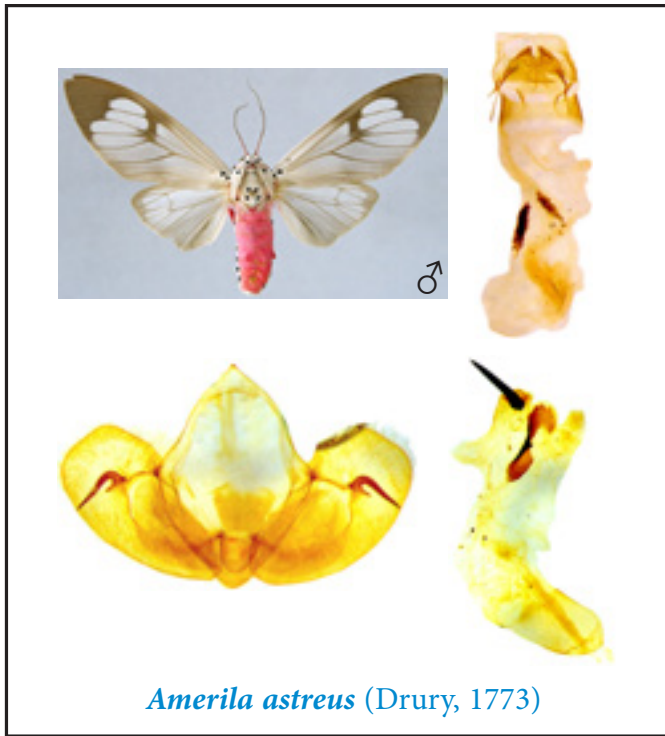
Amerila astreus (Drury, 1773)

Spinx astreus Drury, 1773; III. Nat. Hist. Exot. Insect, 2: 185

Externally, the adults are similar to *Amerila omissa* (Rothschild) except having the abdomen completely pink and inner area of hindwings without long hairs. Male genitalia with valvae broad, harpe curved, without any dentation. Female genitalia with ductus bursae short; corpus bursae elongated with two elongated patches of spines.

Distribution: Throughout India.

Larval host plants: *Beaumontia* (Apocynaceae); *Marsdenia* (Asclepiadaceae); *Dioscorea* (Dioscoreaceae); *Ixora* (Rubiaceae), *Smilax* (Smilacaceae).



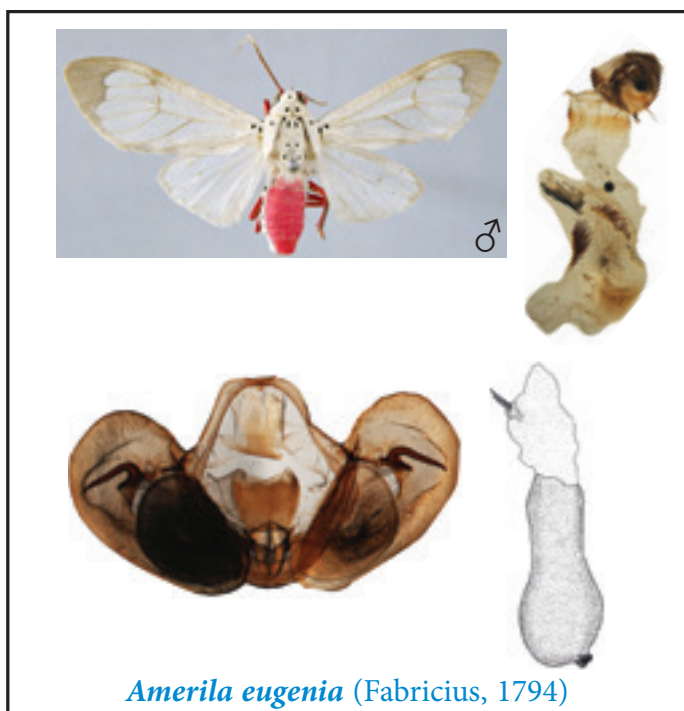
Amerila eugenia (Fabricius, 1794)

Noctua eugenia Fabricius, 1794; *Ent. Syst.* 3 (2): 19-20

Adults smaller than the former two species. The discocellular band of forewing is absent. Abdomen carmine. Male genitalia with juxta divided into two parts, the basal part partially divided and cover by an upper part which is triangular. Female genitalia with corpus bursae membranous, two elongated patches of strong spines present.

Distribution: Central and South India, Punjab.

Larval host plant: Not Known.



Genus *Pareuchaetes* Grote

Grote, 1865; *Proc. ent. Soc. Phil.*, 5: 245

Type species: *Pareuchaetes cadaverosa* Grote, 1865

Diagnosis: The Genus can easily be identified from the unmarked, dull and usually pale yellow wings, male genitalia with a pair of supra-uncal processes arising dorsally from the junction of uncus and tegumen (Rego Barros, 1956; Cock and Holloway, 1982).

Remarks: It is basically a Neo tropical genus, however, *P. pseudoinsulata* Rego Barros, 1956 was introduced to some Asian countries for the control of Neo tropical weed, *Chromolaena odorata* (Compositae). The Genus was reviewed by Cock & Holloway (1982) with five known species from the world. Outside of the Neo tropics, the Genus is known by *P. pseudoinsulata* Rego Barros, 1956 in Sri Lanka, Thailand, Borneo, Philippines, Guam (Holloway, 1988) and India (Singh & Singh, 2013a).

Known species of Genus *Pareuchaetes* Grote from India: Sole included species.

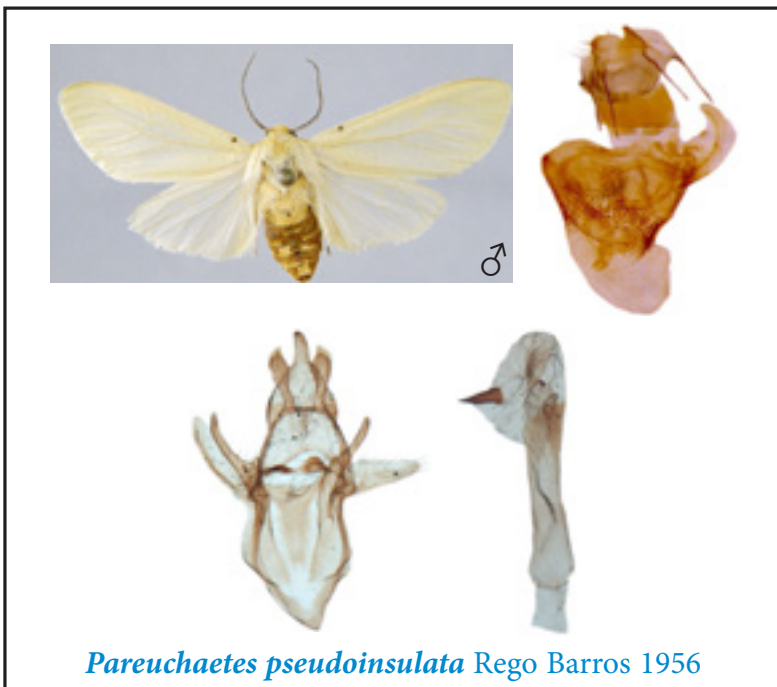
***Pareuchaetes pseudoinsulata* Rego Barros, 1956**

Pareuchaetes pseudoinsulata Rego Barros, 1956; *Revta. Brass. Ent.* 6: 79

Adults pale yellow. Fore tibia and tarsus fuscous, hind legs buff. Abdomen with dorsal series of black spots and the underside of second abdominal segment is with a white patch. Male genitalia have the vesica with a strong spine and scobination. Female genitalia with ductus bursae short and broad, sclerotized; corpus bursae almost triangular, posterior half filled with scobination and spines.

Distribution: Tamil Nadu (Gudalur, Coonoor), Kerala.

Larval host plants: *Chromolaena odorata*, *Euparorium* (Compositae).



Genus *Paraplastis* Hampson

Hampson, 1901; *Cat. Lep. Pha. Br. Mus.*, 3: 507

Type species: *Migoplastis hampsoni* Swinhoe, 1889

Diagnosis: Antennae bipectinate. Male genitalia with uncus long and curved, valvae bilaterally asymmetric, broad up to 2/3 and then sharply narrow with a slight curve, a

knobbed structure present at mid ventral part.

Remarks: It is a monotypic Genus restricted to the South Indian states. The descriptions of *hampsoni* Swinhoe given by Swinhoe (1889) and Hampson (1894, 1901) were somewhat confusing which was corrected by Singh & Singh (2011).

Known species of Genus *Paraplastis* Hampson from India: Sole included species.

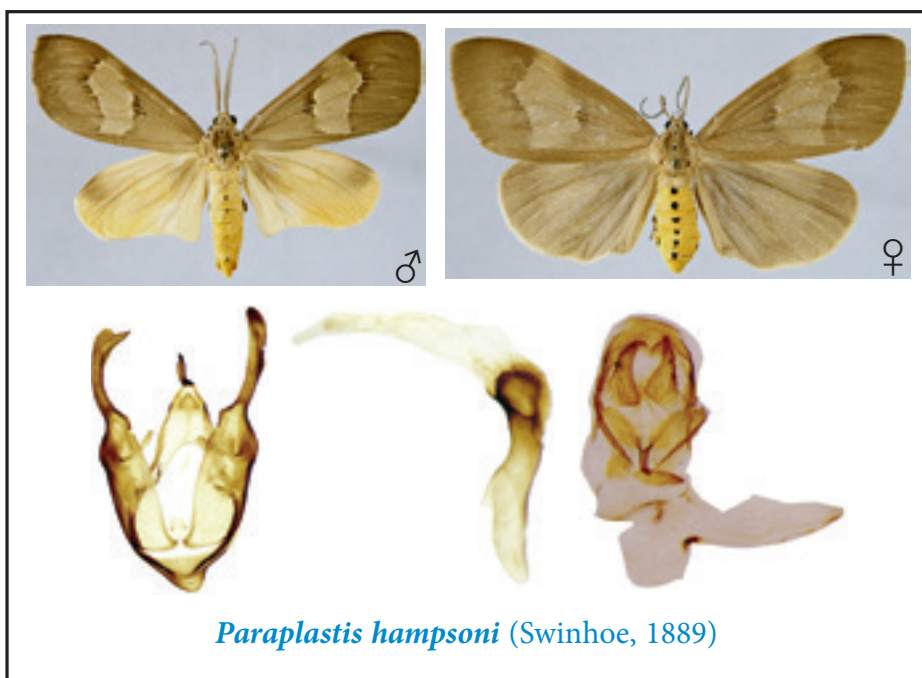
Paraplastis hampsoni (Swinhoe, 1889)

Migoplastis hampsoni Swinhoe, 1889, *Proc. Zoo. Soc. Lond.*, **1889**: 402

Adults brown. Forewings with two black spots at base, a broad medial pale band, under side same with postmedial band obsolete. Male genitalia have the aedeagus small, vesica without any cornutus. Female genitalia have ductus bursae long and narrow; corpus bursae elliptical with two prominent signa and some scobination on one side.

Distribution: Karnataka, Kerala, Tamil Nadu.

Larval host plant: Not known.



Subfamily **Lithosiinae** Stephens, 1829

Stephens, 1829, *Illust. Br. Ent.* (Haustellata) 2:88

Type genus *Lithosia* Fabricius, 1798; *Suppl. Ent. Syst.*:418, 459.

Genus **Cyana** Walker

Walker, 1854; *List Spec. Lepid. Ins. Colln. Br. Mus.*, 2: 528

Type species: *Cyana detrita* Walker, 1854

Diagnosis: Antennae simple in both sexes. Forewings white, with transverse red, orange or yellow fasciations and spotting in discal area; in males, forewings with secondary sexual features between the discal part of cell and the costa. Male genitalia have the valvae strongly divided, saccular process usually ending in a taper and curves to an acute apex; vesica, when ornamented, tends to have scobinate zones or clumps of spines rather than single cornuti. Female genitalia frequently have corrugation in corpus bursae; signa, when present, are scobinate patches.

Remarks: *Cyana* Walker, 1854 was established as the oldest name by Roepke (1946) and followed by Roesler and Küppers (1976). Later on, Holloway (2001), Černý and Pinratana (2009) and Bucsek (2012) followed the same nomenclature. Genus *Cyana* Walker is a very diverse group of Lithosiinae and mainly distributed in the old World tropics. This Genus is mainly revised by Roesler & Küppers (1976) (Oriental species), Holloway (2001) (Borneo species) and Karisch (2013) (African species).

Known species of Genus *Cyana* Walker from India: *Cyana adita* (Moore, 1859); *Cyana alborosea* (Walker, 1864); *Cyana amabilis* (Moore, 1877); *Cyana arama* (Moore, 1859); *Cyana bellissima* (Moore, 1878); *Cyana bhatejai* Singh & Kirti sp. nov. *Cyana bianca* (Walker, 1856); *Cyana candida* Felder & Rogenhofer, 1874; *Cyana catorhoda* Hampson, 1897; *Cyana coccinea* (Moore, 1878); *Cyana detrita* Walker, 1854; *Cyana divakara* (Moore, 1865); *Cyana dohertyi* (Elwes, 1890); *Cyana dudgeoni* Hampson, 1895; *Cyana flavicincta* (Hampson, 1903); *Cyana gazella* (Moore, 1872); *Cyana gelida* (Walker, 1854); *Cyana guttifera* (Walker, 1856); *Cyana hampsoni* (Kaleka, 2003); *Cyana harterti* (Elwes, 1890); *Cyana inconclusa* Walker, 1862; *Cyana intercomma* Černý, 2009; *Cyana javanica* (Butler, 1877); *Cyana khasiana* Hampson, 1897; *Cyana mollereri* (Elwes, 1890); *Cyana obliquilineata* (Hampson, 1900); *Cyana peregrina* (Walker, 1854); *Cyana perornata* (Walker, 1854); *Cyana puella* (Drury, 1773); *Cyana puer* (Elwes, 1890); *Cyana quadrinotata* (Walker, 1869); *Cyana selangorica* (Hampson, 1903); *Cyana signa* (Walker, 1854); *Cyana sikkimensis* (Elwes, 1890); *Cyana subornata* (Walker, 1854); *Cyana tripunctata* (Rothschild, 1936).

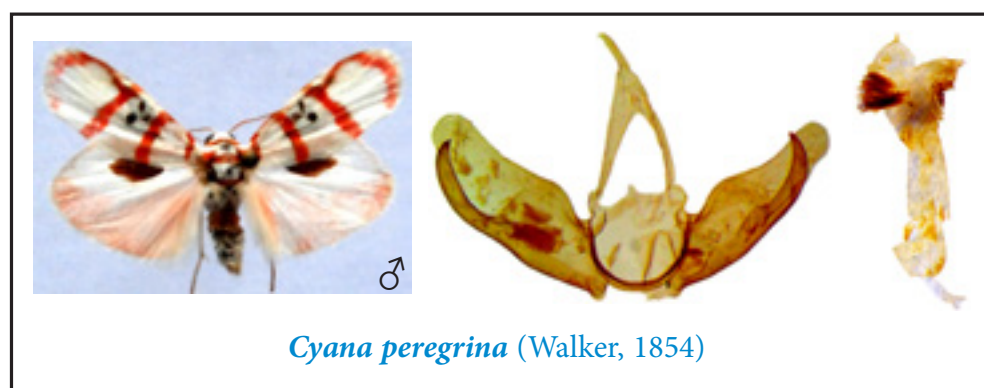
Cyana peregrina (Walker, 1854)

Bizone peregrina Walker, 1854; *Cat. Lep. Het.*, 2 : 551

This and the next two species are distinct from all the other *Cyana* species due to the presence of a large chocolate coloured patch of modified scales on the discal area of underside of forewings and a similar patch on the discal area of upper side of hindwings. In *C. peregrina* (Walker) male genitalia have the vesica with a well formed patch of large spines along with another patch of small spines.

Distribution: Throughout India.

Larval host plant: Not known.



Cyana catorhoda Hampson, 1897

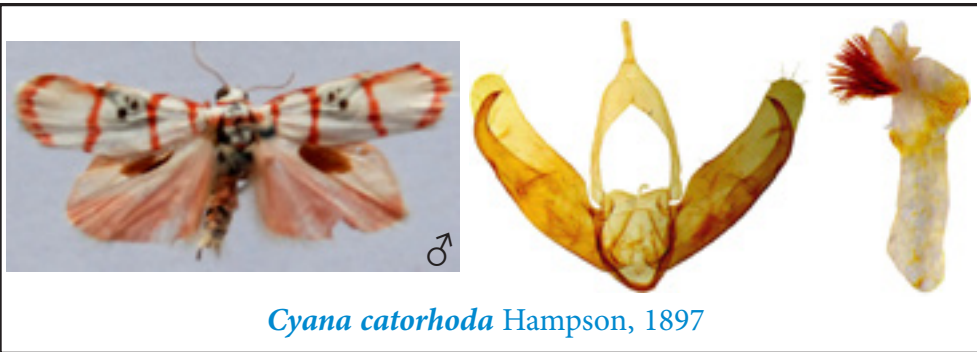
Cyana catorhoda Hampson, 1897; *J. Bombay nat. Hist. Soc.*, 11 (2): 296

This species is different from *C. peregrina* (Walker) due to absence of black borders to the ante and postmedial bands of forewings. Male genitalia have the vesica with a patch of well formed spines and another patch of small spines.

Distribution: Meghalaya (Khasi Hills), West Bengal, Manipur, Assam, Sikkim.

Larval host plant: Not known.

Remarks: The spines of the second patch are comparatively smaller than the spines of the second patch in vesica of *C. peregrina* Walker.



Cyana catorhoda Hampson, 1897

Cyana bhatejai Singh & Kirti sp. nov.

Description: Adults white. Frons crimson; collar, patagia, mesothorax with crimson bands. Forewings with subbasal, antemedial, postmedial and marginal crimson bands; antemedial band inwardly edged with fuscous; postmedial band, broadest at median nervure, outwardly edged with black; marginal band continuous along the costa to the postmedial band; one black spot in cell and two on discocellulars. Hindwings pale crimson. Male genitalia have the vesica with a patch of well formed spines along with another patch of scobination.

Material Examined

Holotype: (Male) Karnataka: Ganeshgudi, 19.vii.2004.

Paratypes: Karnataka: Ganeshgudi, 19.vii.2004, (2 males); Bhaghamandala, 30.vii.2004 (01 male), 31.vii.2004 (03 males) (Coll. Navneet Singh) (Types deposited in Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab)

Distribution: Karnataka (Ganeshgudi, Bhaghamandala).

Larval host plant: Not known.

Remarks: Morphologically, *Cyana bhatejai* Singh & Kirti is closely allied to *Cyana peregrina* (Walker). However, it is distinct due to much prominent bands of forewings, postmedial bands being broadest at median nervure and dark hindwings. Furthermore, the species is also distinct due to articulation of its vesica. The second patch of vesica is only the scobination whereas, in *C. peregrina* (Walker) and *C. catorhoda* Hampson the second patch of vesica is made up of spines.

Etymology: The species is named in respect of Dr. Baldevraj Bhateja, teacher of the second author and a dedicated educator of Entomology.



Cyana bhatejai Singh & Kirti sp. nov.

Cyana puella (Drury, 1773)

Phalaena puella Drury, 1773; Ill. Exot. Ins., 2: Pl. 2., f.2

Forewings with scarlet bands, antemedial band excurved below costa and postmedial band incurved. Hindwings pale crimson. Male genitalia have the vesica ornamented with a well formed semicircular patch of strong spines, along with some scobinations. Female genitalia with ductus bursae short; corpus bursae irregular with corrugation on one side, two scobinate patches present.

Distribution: North West Himalayas, Maharashtra (Mumbai), Tamil Nadu (Nilgiris), Madhya Pradesh (Seoni, Umari), South India, Chattisgarh (Kanger Valley), Sikkim.

Larval host plant: Not known.



Cyana puella (Drury, 1773)

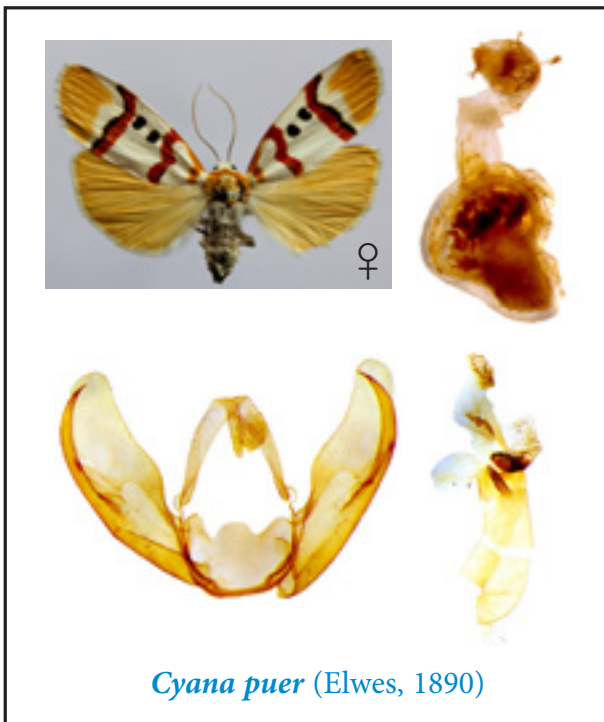
Cyana puer (Elwes, 1890)

Bizone puer Elwes, 1890; *Proc. Zool. Soc. Lond.*, 1890: 392

Forewings with basal band buff, ante and postmedial bands crimson, outer area buff, males with three black spots and females with two; male genitalia with vesica having four distinct patches of large and small spines. Female genitalia have the ductus bursae membranous; corpus bursae almost triangular without any well formed cornutus.

Distribution: Sikkim, Meghalaya (Khasi Hills), Nagaland (Nagas), Manipur, Arunachal Pradesh, Assam, West Bengal (Darjeeling).

Larval host plant: Not known.



Cyana intercomma Černý, 2009

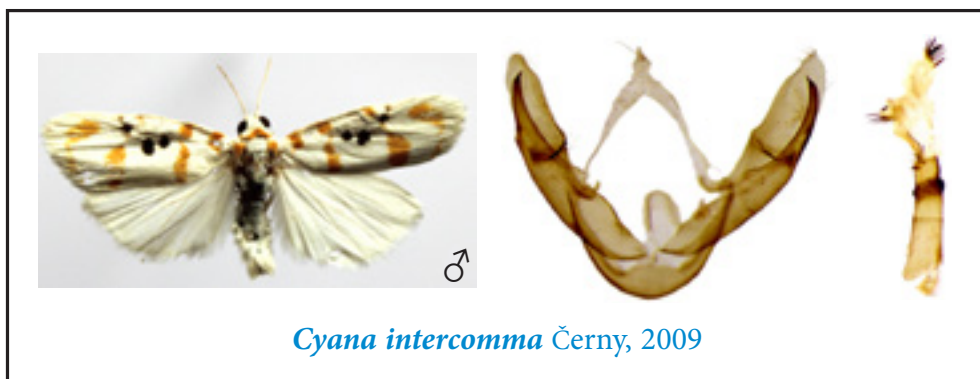
Cyana intercomma Černý, 2009; *Moths of Thailand*, 6: 51-52

Forewings with yellow bands; two spots on lower angle of cell, the later somewhat elongated; one spot beyond the cell. Hindwings pale yellow in males, pure white in females. Male genitalia have the bilobed vesica with a patch of well formed spines on tip of each lobe, third patch on the origin of vesica, a multilayered ring of small spines before the tip of aedeagus.

Distribution: Assam (Jatinga), Sikkim (Gangtok), Kashmir (Uri)

Larval host plant: Not known.

Remarks: The species is reported for the first time from India.



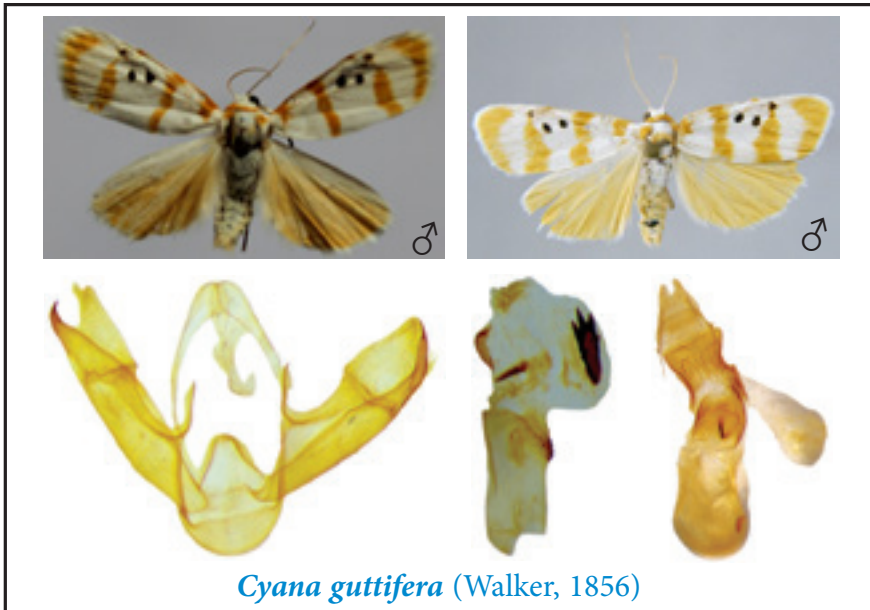
Cyana guttifera (Walker, 1856)

Bizone guttifera Walker, 1856; *List Specimens Lepid. Insect. Coll. Br. Mus.*, 7: 1779

Forewings with orange bands. Hindwings yellow. Terminal segments of abdomen ochreous. Male genitalia with cucullus narrowing towards apex and costal out growth forming a plough like structure towards tegumen; aedeagus with a spined disc at tip, vesica with a large foot like plate and a spined sclerotization along with some scobinations. Female genitalia have the ductus bursae short and broad with corrugation; corpus bursae with single signum.

Distribution: North West Himalayas (Landoor, Kangra), Sikkim, Assam, Maharashtra (Mumbai, Khandala), Kerala (Travancore), Andamans, Nagaland, Bihar (Valmiki Tiger Reserve), West Bengal (Darjeeling).

Larval host plant: Not known.



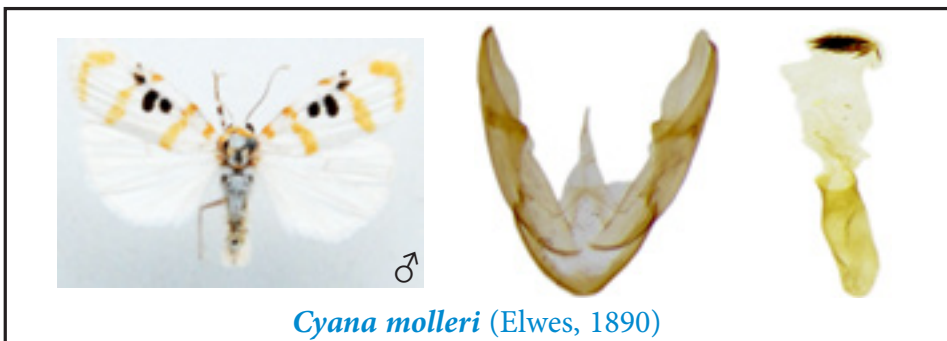
Cyana mölleri (Elwes, 1890)

Bizone mölleri Elwes, 1890; *Proc. Zool. Soc.*, **1890**: 395

Forewings banded with orange yellow, two black spots in cell, outer one somewhat elongated; a pair of costal black spots beyond the postmedial band. Hindwings pure white. Male genitalia have the aedeagus with multiringed patch of spines at tip, vesica with a prominent patch of spines.

Distribution: Sikkim, Meghalaya (Khasi Hills).

Larval host plant: Not known.



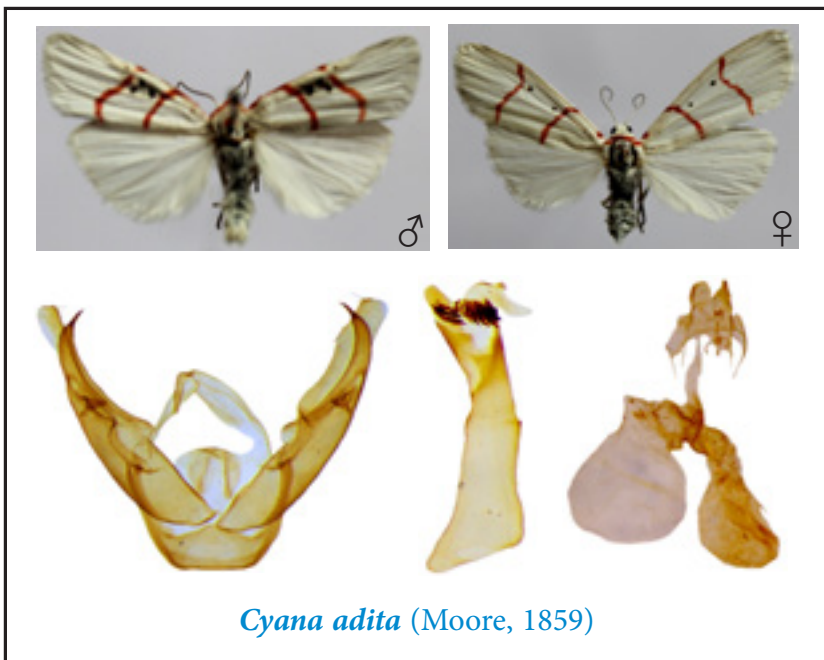
Cyana adita (Moore, 1859)

Bizone adita Moore 1859; *Cat. Lep. Ins. Mus. Nat. Hist. East. Ind.*, 2: 306

Forewings with a scarlet spot near the base of costa; antemedial and postmedial curved lines, a black spot in cell and two on the discocellulars. Male genitalia with valvae having a triangular process on the mid of inner wall, saccular process ending to a strong spine; vesica with two bunches of spines. Female genitalia with ductus bursae short and membranous; corpus bursae divided into tubular and globular portion, small signum present.

Distribution: Sikkim, North West Himalayas (Kangra, Dalhousie, Shimla), West Bengal (Darjeeling), Meghalaya, Arunachal Pradesh, Assam.

Larval host plant: Not known.

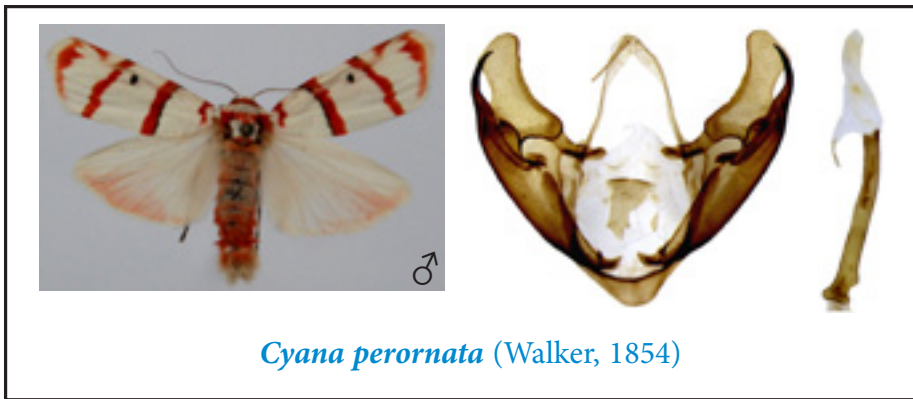


Cyana perornata* (Walker, 1854)Bizone perornata* Walker, 1854; *List Specimens Lepid. Insect .Coll. Br. Mus.*, 2:548

Forewings with some scarlet between postmedial band and apex. Hindwings with outer area more or less pinkish. Male genitalia have the cucullus forming a dumbbell like structure; aedeagus long and narrow, vesica with a small sclerotization.

Distribution: North India, Sikkim, Assam, Mizoram, Meghalaya, North East Himalayas.

Larval host plant: Lichens.

***Cyana detrita* Walker, 1854***Cyana detrita* Walker, 1854; *List Specimens Lepid. Insect .Coll. Br. Mus.*, 2: 529

Forewings with ill-defined subbasal, antemedial, postmedial and submarginal fuscous band; in cell three white-filled and fuscous ringed spots. Male genitalia have a patch of spines on the tip of aedeagus, vesica unornamented.

Distribution: North West Himalayas, Sikkim, Meghalaya (Khasi Hills), Nagaland (Nagas), South India, West Bengal (Darjeeling).

Larval host plant: Not known.



Cyana detrita Walker, 1854

Cyana signa (Walker, 1854)

Bizone signa Walker, 1854; *List Specimens Lepid. Insect .Coll. Br. Mus.*, 2: 550

Forewings have the basal, antemedial and postmedial crimson lines; a crimson costal streak from base to antemedial band. Females lack this streak. Male genitalia with cucullus narrow, prominent spine at tip of valvula; vesica with a large semicircular patch and another small patch of well formed spines.

Distribution: Meghalaya (Khasi Hills), Himalayas from Kulu to Sikkim, Manipur, Arunachal Pradesh.

Larval host plant: Not known.



Cyana signa (Walker, 1854)

Cyana arama* (Moore, 1859)Bizone arama* Moore, 1859; *Cat. Lep. Ins. Mus. E. I. C.*, 2: 306

Forewings with orange bands. Hindwings yellowish with pinkish tinge, leaving costal area white. In females, the black spots are large. Male genitalia have the vesia with a large patch of spines.

Distribution: Nagaland (Naga Hills), Meghalaya, West Bengal (Darjeeling), Mizoram, Uttrakhand, North East Himalayas.

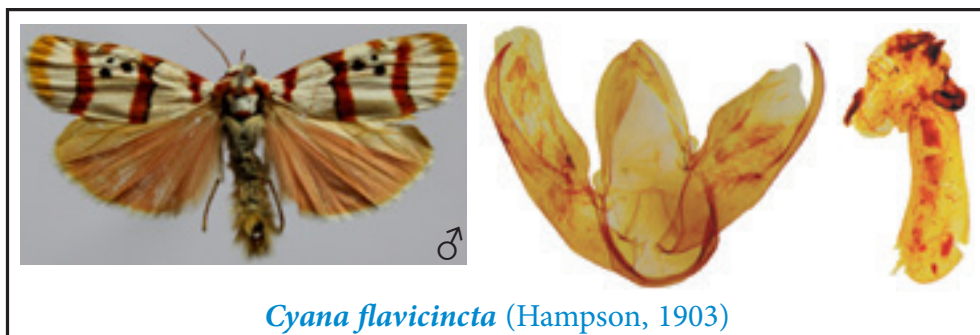
Larval host plant: Not known.

***Cyana arama* (Moore, 1859)*****Cyana flavicincta* (Hampson, 1903)***Chionaema flavicincta* Hampson, 1903; *A. M. N. H.*, 11 (7): 345

Distinguished fringe of long hairs on costa and the underside of forewing cell. Male genitalia have the cucullus broad; vesica with a spined patch and an elongated patch of small spines along with some scobinations.

Distribution: Meghalaya (Khasi hills).

Larval host plant: Not known.



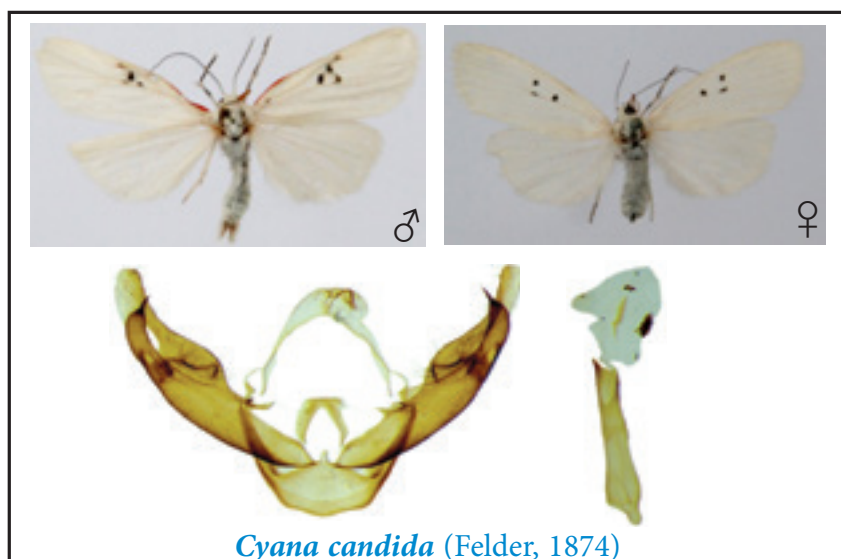
Cyana candida (Felder, 1874)

Chioneama candida Felder, 1874; *Reise Novara*, Bd. 2: 103

Forewings with basal half of costa crimson, a black spot in cell, two on discocellulars; a postmedial spot beyond upper angle of cell, under side of forewings with fuscous scales up to mid of costa; in females, the postmedial spot absent. Male genitalia have the vesica with a large and some small fields of well formed spines.

Distribution: North West Himalayas (Shimla, Dalhousie), Sikkim, Arunachal Pradesh, West Bengal, Meghalaya.

Larval host plant: Not known.



Cyana gazella* (Moore, 1872)Bizone gazella* Moore, 1872; *Proc. Zool. Soc. Lond.*, **1872** (2): 572

Forewings with irregular orange bands to give reticulate appearance. Hindwings white. Male genitalia have the valvae with cucullus long; vesica with three bunches of spines and a patch of scobination.

Distribution: North West Himalayas (Kangra), Sikkim, West Bengal (Darjeeling).

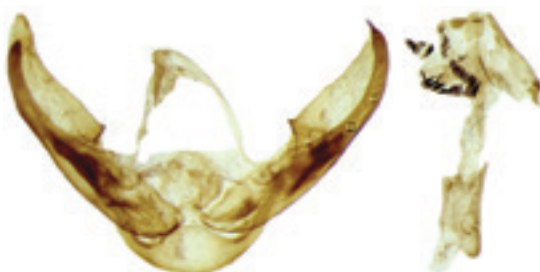
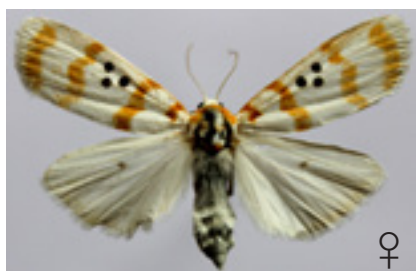
Larval host plant: Not known.

***Cyana gazella* (Moore, 1872)*****Cyana dohertyi* (Elwes, 1890)***Bizone dohertyi* Elwes, 1890; *Proc. Zool. Soc. Lond.* **1890**: 394

Forewings banded with orange yellow, three black spots in cell, submarginal band not touching costal and marginal area. Male genitalia have the vesica with a series of well formed spines along with two other patches and scobinations.

Distribution: North West Himalayas, Sikkim, Meghalaya (Khasi Hills), Nagaland, Assam.

Larval host plant: Not known.



Cyana dohertyi (Elwes, 1890)

Cyana dudgeoni Hampson, 1895

Cyana dudgeoni Hampson, 1895; *Trans. Ent. Soc. Lond.* **1895** (2): 293

Forewings with scarlet bands. Hindwings crimson with costal area white. Male genitalia have the vesica with a very large patch of prominent spines, covering almost full area of vesica.

Distribution: Sikkim, Meghalaya (Khasi Hills & West Garo Hills), Arunachal Pradesh, Manipur, Nagaland, Mizoram, Assam.

Larval host plant: Not known.



Cyana dudgeoni Hampson, 1895

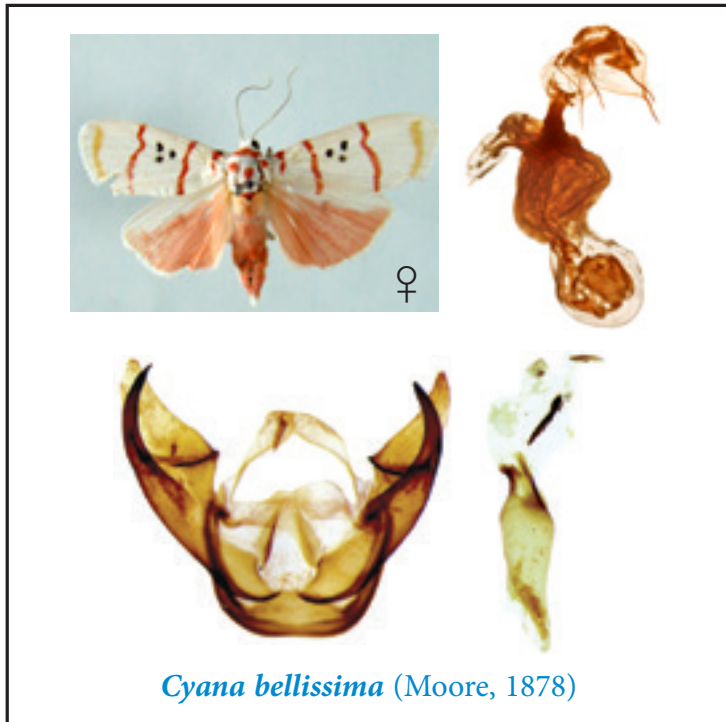
Cyana bellissima (Moore, 1878)

Bizone bellissima Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 27

Forewings with scarlet bands, the terminal band yellow; a black spot in end of cell and two on discocellulars, a short black streak beyond postmedial. Hindwings crimson, leaving costal area white. Male genitalia with aedeagus forming a bottle neck like structure at tip, vesica ornamented with series of compactly placed small spines. Female genitalia have the ductus bursae short, corpus bursae divided into broad and globular portions.

Distribution: North West Himalayas, Sikkim, Manipur, Assam, Meghalaya, West Bengal.

Larval host plant: Not known.



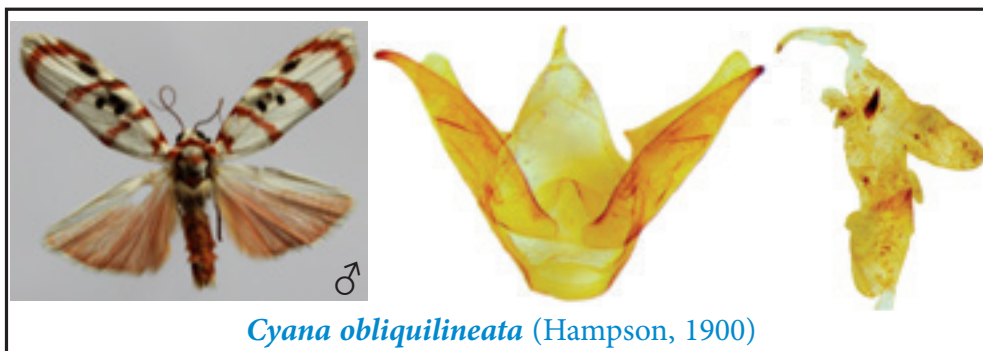
Cyana obliquilineata (Hampson, 1900)

Chionaema obliquilineata Hampson, 1900; *Cat. Lep. Phal. In Br. Mus.*, 2: 299

Forewings with antemedial and postmedial lines very oblique. Hindwings pale crimson. Male genitalia have the aedeagus short and broad; vesica large with full of scobination, a small patch of well formed spines.

Distribution: Sikkim, Arunachal Pradesh, Assam.

Larval host plant: Not known.



Cyana obliquilineata (Hampson, 1900)

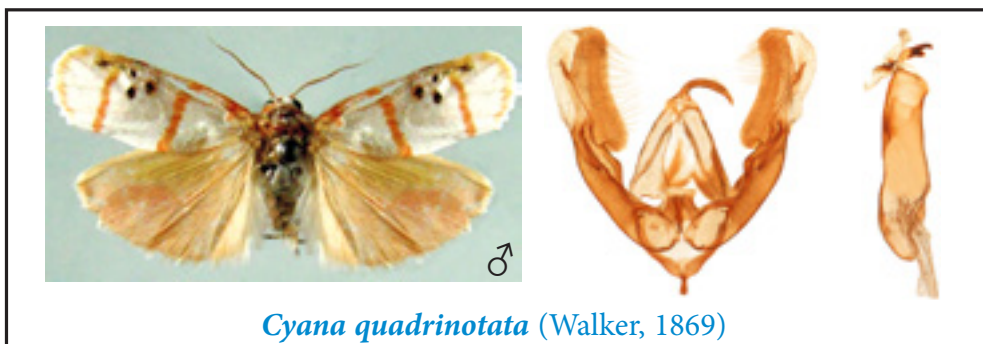
Cyana quadrinotata (Walker, 1869)

Bizone quadrinotata Walker, 1869; *Cat. Lep. Het.*, 1869: 90

Forewings with scarlet bands. Hindwings yellowish, with a reddish terminal patch. Male genitalia with cucullus rectangular flap like with a spine at middle and another at apex; vesica with a pair of hooked cornuti, one is prominent.

Distribution: Sikkim, Assam (Jatinga), Mizoram (Aizwal, Thingsul).

Larval host plant: Not known.



Cyana quadrinotata (Walker, 1869)

Cyana harterti* (Elwes, 1890)Bizone harterti* Elwes, 1890; *Proc. Zoo. Soc. Lond.*, **1890**: 398

Forewings have yellow lines. Male genitalia with uncus weak, aedeagus short, vesica with three or four patches of spines.

Distribution: Assam, Mizoram (Serchip).

Larval host plant: Not known.

***Cyana harterti* (Elwes, 1890)*****Cyana subornata* (Walker, 1854)***Bizone subornata* Walker, 1854; *List Specimens Lepid. Insect .Coll. Br. Mus.*, **2**: 550

Forewings with scarlet lines; the postmedial line angled inwards at vein M_2 and bent outwards towards costa. Hindwings pale crimson with costal area and cilia white. Female genitalia have the ductus bursae short; corpus bursae divide into two parts, broad & elongated and globular; no scobinated patch is present.

Distribution: Maharashtra (Bombay, Khandala, Matheran), Karnataka (N. Kanara), Andamans, Rajasthan.

Larval host plant: Not known.



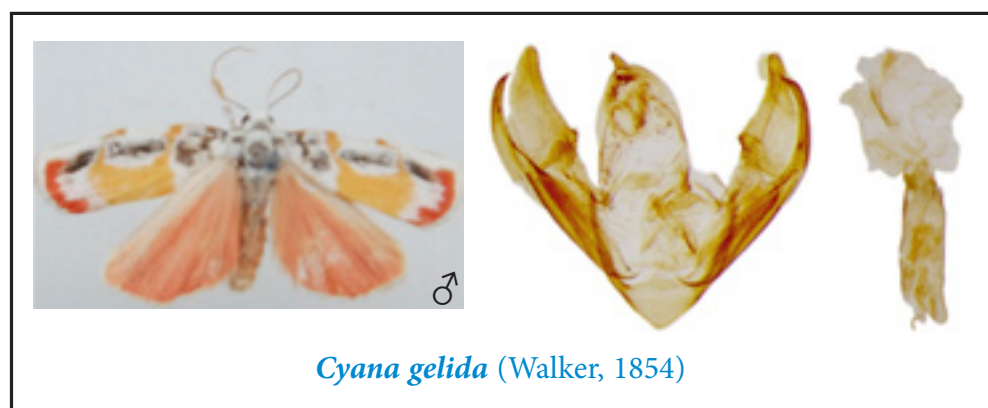
Cyana gelida (Walker, 1854)

Doliche gelida Walker, 1854; *List Spec. Lepid. Ins. Colln. Br. Mus.*, 2: 259

Forewings with a subbasal yellow band with some fuscous suffusion before and beyond it, antemedial and postmedial curved yellow bands, conjoined to each other below cell, covering whole of the inner area; a fuscous patch in cell which extends beyond postmedial band, an irregular marginal vinous-red band, not reaching the apex. Hindwings pink with a vinous tinge. Male genitalia with cucullus narrowing towards tip; vesica opaque without any cornutus.

Distribution: North West Himalayas (Kangra), Sikkim, Meghalaya (Khasi Hills), Arunachal Pradesh (Tamen).

Larval host plant: Not known.



Genus *Kailasha* Singh & Kirti, gen. nov.

Type species: *Barsine effracta* Walker, 1854

Diagnosis: The new Genus is diagnosed by following characters: double pad of scales on the forewing costa of males, male genitalia have the undivided valvae with two angular processes towards the apex of ventral margin, female genitalia with prominent fields of long spines and a distinguished signum in corpus bursae.

Remarks: Originally, *effracta* Walker was described under Genus *Barsine* Walker. Hampson (1894) shifted this species to Genus *Cyana* Walker and in 1900 the same author transferred *effracta* Walker to *Chionaema* Herrich-Schäffer. Once again, the species was shifted to *Cyana* Walker by Kishida 1993, and the same nomenclature was followed by Fang (2000), Holloway (2001) and Černý and Pinratana (2009). However, the external male genitalia of *effracta* Walker do not conform to the characterization of *Barsine* Walker, *Cyana* Walker and *Chionaema* Herrich-Schäffer. The undivided valvae with two angular process towards the apex of ventral margin makes *effracta* Walker non congeneric with any of the Lithosiin genera. So, a new Genus is erected for the proper placement of *effracta* Walker and its allied species.

Etymology: The Genus is named after an eminent entomologist of India, Dr Kailash Chandra, Scientist-G, Zoological Survey of India, Kolkata.

Known species of Genus *Kailasha* Singh & Kirti, gen. nov. from India: *Kailasha effracta* (Walker, 1854); *Kailasha pseudoeffracta* Kirti, Joshi & Singh, 2013; *Kailasha gulmargensis* Singh, Kirti & Singh sp. nov.

Kailasha effracta (Walker, 1854)

Barsine effracta Walker, 1854; List Specimens Lepid. Insect Coll. Br. Mus., 2: 546

Adults dull white. Forewings with pale red basal patch, concolorous antemedial, medial and postmedial bands with spots in between them, submarginal series of three spots with some marginal flecks. Hindwings with grey suffusion. Male genitalia have the uncus long, tegumen broad; vesica with a patch of small & robust spines.

Distribution: North East Himalayas, Assam, Meghalaya (Jowai).

Larval host plant: *Elettaria cardamomum* (Zingiberaceae).



Kailasha effracta (Walker, 1854)

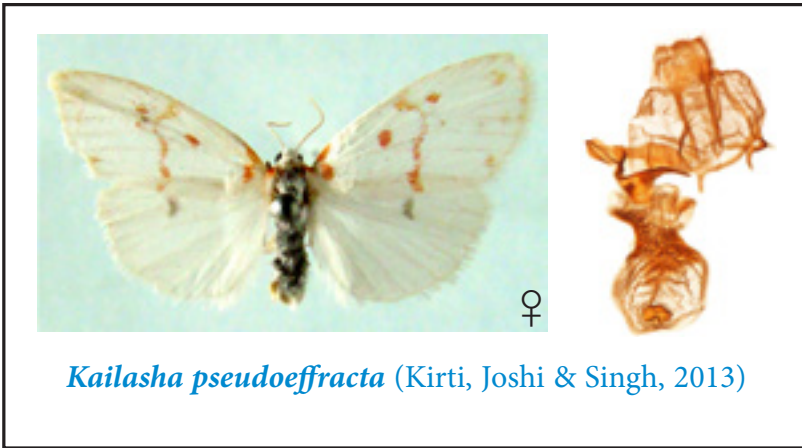
Kailasha pseudoeffracta (Kirti, Joshi & Singh, 2013)

Cyana pseudoeffracta, Kirti, Joshi & Singh, 2013; J. Chem. Bio. Phy. Sci. Sec. B, 3 (2): 1302

Morphologically, the species resembles *C. effracta* (Walker) but differs in having whitish ground colour of wings, single transverse bands on forewings and lunule in hindwings. Female genitalia with corpus bursae irregular, a prominent signum present.

Distribution: Meghalaya (Jowai, Shillong).

Larval host plant: Not known.



***Kailasha gulmargensis* Singh, Kirti & Singh sp. nov.**

Description: Head white, tegulae orange; forewings whitish with orange bands, subbasal & medial bands outcurved from costa and incurved to meet inner margin; postmedial curved series of elongated spots, submarginal series of rounded spots. Hindwings yellowish, with a black discoidal spot. Abdomen with extremity yellowish. Male genitalia have uncus long; tegumen broad; valvae undivided, central area membranous; aedeagus have a bifurcated spine at tip, vesica with patches of well formed spines.

Material Examined

Holotype: (Male) Kashmir: Gulmarg, 13.v.2013

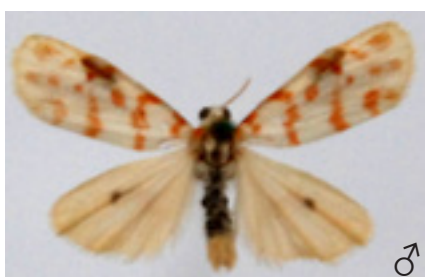
Paratype: Kashmir: Gulmarg, 13.v.2013 (One male) (Coll.: Devinder Pal Singh) (Types deposited in Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab)

Distribution: Kashmir (Gulmarg)

Larval host plant: Not known.

Remarks: Morphologically, the species is closely allied to *K. effracta* (Walker) but distinct due to the forewings with postmedial band reduced to elongated spots, marginal spots absent, hindwings paler; male genitalia have the valvae with rudimentary ventral process.

Etymology: The species is named after its type locality, Gulmarg (Jammu & Kashmir).



Kailasha gulmargensis Singh, Kirti & Singh sp. nov.

Genus *Lyclene* Moore

Moore, [1860] 1858-9; *Cat. Lep. Ins. Mus. Nat. hist.* 2: 300

Type species: *Cyllene humilis* Walker, 1854 (by subsequent designation by Hampson, 1900)

Diagnosis: Genus *Lyclene* Moore is distinct from the related genera because of its genital attributes: Valvae are with distal costal and saccular process, vesica with one or two strong cornuti.

Remarks: Genus *Lyclene* Moore, 1859 was established as the objective replacement name for *Cyllene* Walker, 1854. For many years, the Genus remained as synonym of *Asura* Walker and was revised by Nielsen *et al.* (1996) and Holloway (2001). It is a species rich group and very diverse in oriental tropics. The larvae of this Genus feed on Lichen and Mosses (Sevastpulo 1940).

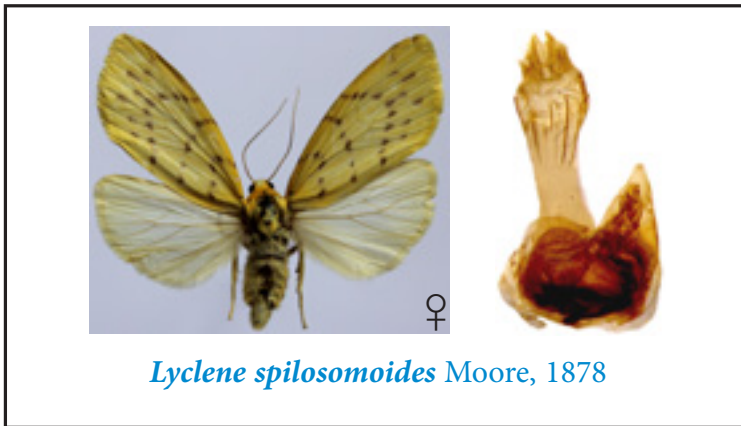
Known species of Genus *Lyclene* Moore from India: *Lyclene arcuata* Moore, 1882; *Lyclene calamaria* (Moore, 1888); *Lyclene congerens* (Felder, 1874); *Lyclene conjunctana* (Walker, 1866); *Lyclene dasara* (Moore, 1859); *Lyclene dharma* (Moore, 1879); *Lyclene goaensis* Kirti & Gill, 2009; *Lyclene hollowai* Kirti & Gill, 2009; *Lyclene humilis* (Walker, 1854); *Lyclene kishidai* Kirti & Gill, 2009; *Lyclene lutara* (Moore, 1859); *Lyclene metamelas* (Hampson, 1893); *Lyclene nebulosa* (Moore, 1878); *Lyclene nubilalis* (Hampson, 1894); *Lyclene obsoleta* Moore, 1878; *Lyclene pudibunda* (Snellen, 1880); *Lyclene reticulata* (C. Felder, 1878); *Lyclene rosalia* (Hampson, 1914); *Lyclene rubricosa* Moore, 1878; *Lyclene semifascia* (Walker, 1854); *Lyclene spilosomoides* Moore, 1878; *Lyclene strigipennis* (Herrich-Schäffer, 1855); *Lyclene terminospota* Singh, Kirti & Joshi sp. nov. *Lyclene toxodes* Hampson, 1907; *Lyclene uncalis* Kirti & Gill, 2009; *Lyclene undulosa* (Walker, 1854).

Lyclene spilosomoides Moore, 1878*Lyclene spilosomoides* Moore, 1878; *Pro. Zoo. Soc. Lond.*, **1878**: 33

Adults yellowish. Forewings have a black spot at base, antemedial, medial, postmedial and submarginal series of black specks. Female genitalia have the ductus bursae long and broad; corpus bursae with dotted patch.

Distribution: North West and North East Himalayas (N.W. India, Sikkim, Khasi Hills, Darjeeling), Assam (Jatinga), Mizoram (Champhai).

Larval host plant: Not known.

*Lyclene spilosomoides* Moore, 1878*Lyclene calamaria* (Moore, 1888)*Setina calamaria* Moore, 1888; *Proc. Zool. Soc. Lond.*, **1888**: 392

Adults pale ochreous. Forewings with subbasal and discoidal black spots. Male genitalia have the uncus with two small out growths near base; vesica bearing a large cornutus with bulbous base along with two small spines and a patch of scobinations.

Distribution: North West Himalayas, Meghalaya (Khasi Hills), North East Himalayas, Assam, Punjab, Tamil Nadu (Nilgiris), Bihar (Valmiki Tiger Reserve).

Larval host plant: *Abelmoschus esculentus* (Malvaceae), *Oryza sativa* (Graminae); *Acacia farnesiana* (Leguminosae); Bougainvillea on leaves (Hyctaginaceae).



Lyclene calamaria (Moore, 1888)

Lyclene conjunctana (Walker, 1866)

Conchylis conjunctana Walker, 1866; *List Het. Br. Mus.*, 35: 1788

Adults yellowish. Forewings with a basal spot, antemedial M shape, medial excurved in cell and postmedial excurved from costa and then incurved to meet medial line, it gives out spurs, a terminal line. Male genitalia with valvae distinctly divided into distal saccular and costal process, uncus swollen towards tip; vesica bearing prominent spines. Female genitalia with corpus bursae full of scobinations.

Distribution: Sikkim, Meghalaya, Nagaland, Assam (Cachar), Arunachal Pradesh, West Bengal (Darjeeling), Mizoram, Karnataka, Tamil Nadu, Kerala.

Larval host plant: Not known.



Lyclene conjunctana (Walker, 1866)

Lyclene terminospota Singh, Kirti & Joshi sp. nov.

Description: Adults yellowish. Mesothorax with two black spots. Forewings with basal spot, costa black towards base, antemedial line M shape, medial excurved in cell and postmedial excurved from costa and then incurved to meet medial line, it gives out spurs, series of terminal spots. Male genitalia with uncus long, valvae divided apically, cucullus broad; vesica with three cornuti.

Material Examined

Holotype: (Male) Karnataka: Dandeli, 28.x.09.

Paratypes: Karnataka : Mudikeri, 18.ix.09 (4 males); Kulgi, 26.xi.09 (2 males); Dandeli, 28.x.09 (1 male) (Coll.: Rahul Joshi) (Types deposited in Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab)

Distribution: Karnataka, Tamil Nadu, Kerala, Sikkim, Assam, Meghalaya.

Larval host plant: Not known.

Remarks: Morphologically, *L. terminospota* Singh, Kirti & Joshi is distinct from *L. conjunctana* (Walker) due to the presence of a series of terminal spots in the forewings of the former and a terminal line in forewings of the later. The detailed description of this species was published by Kirti and Gill (2010b) as *Lyclene conjunctana* (Walker).

Etymology: The name of the species is due to the terminal series of spots in forewings instead of continuous line in *L. conjunctana* (Walker).



Lyclene terminospota Singh, Kirti & Joshi sp. nov.

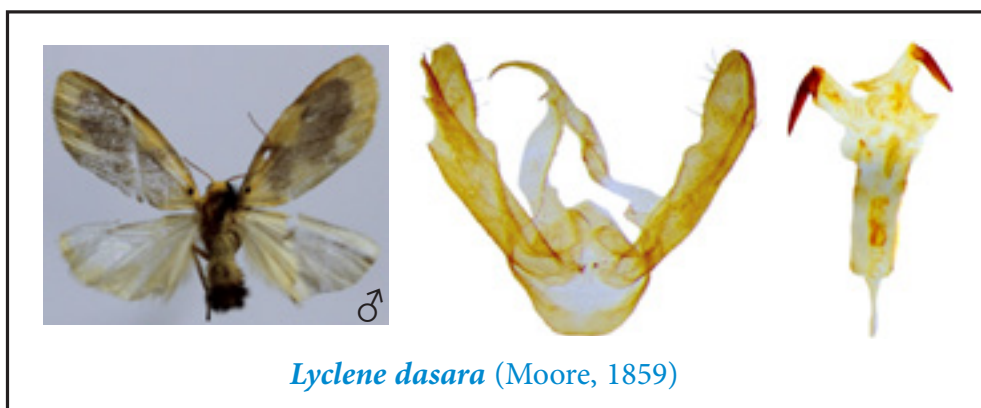
Lyclene dasara (Moore, 1859)

Setina dasara Moore, 1859; *Cat. Lep. Ins. Mus. Nat. East Ind. House* 2: 303

Adults yellow. Forewings with subbasal black point, costal edge black towards base, antemedial fuscous band, postmedial curved band joined to antemedial at interno median space. Male genitalia with long uncus, tip of valvae divided into distal costal and saccular process with membranous part between them; vesica with two prominent spines.

Distribution: North West Himalayas, Sikkim, Meghalaya (Khasi Hills), Nilgiris, Manipur, Mizoram, Assam, Western Ghats.

Larval host plant: Not known.



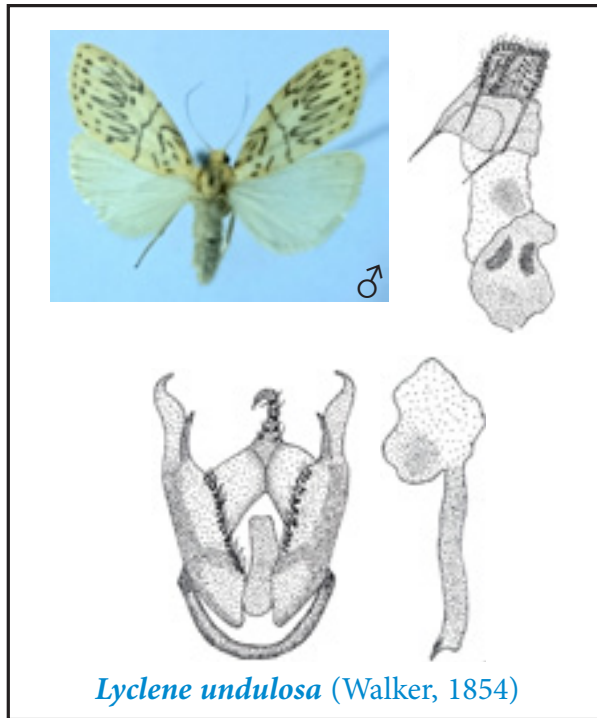
Lyclene undulosa (Walker, 1854)

Cyllene undulosa Walker 1854; *List. Het. Br. Mus.*, 2: 545

Adults pale yellow. Forewings with two basal black spots, subbasal series of black spots, a waved antemedial line, almost straight medial line, highly dentate postmedial line, marginal and sub marginal series of spots. Male genitalia with uncus sickle like, valvae having saccular process with a hook; vesica with scobination. Female genitalia with corpus bursae irregular, two patches of sclerotization present.

Distribution: North West and North East Himalayas, Meghalaya, Manipur.

Larval host plant: Not known.



Lyclene uncalis Kirti & Gill, 2009

Lyclene uncalis Kirti & Gill, 2009; *Acta Zoo. Crac.*, **52B** (1-2): 111

Adult having forewings reddish orange, a basal spot and base of costa black, subbasal & medial bands present, the later bifurcated towards costa; marginal series of spots. Male genitalia have the uncus, when viewed from ventral side, look like hood of cobra, valvae trifurcate at tip; vesica with two prominent spines. Female genitalia with corpus bursae obliquely rounded with one lobe full of spines and a conical signum present.

Distribution: Karnataka, Tamil Nadu, Kerala.

Larval host plant: Not known.



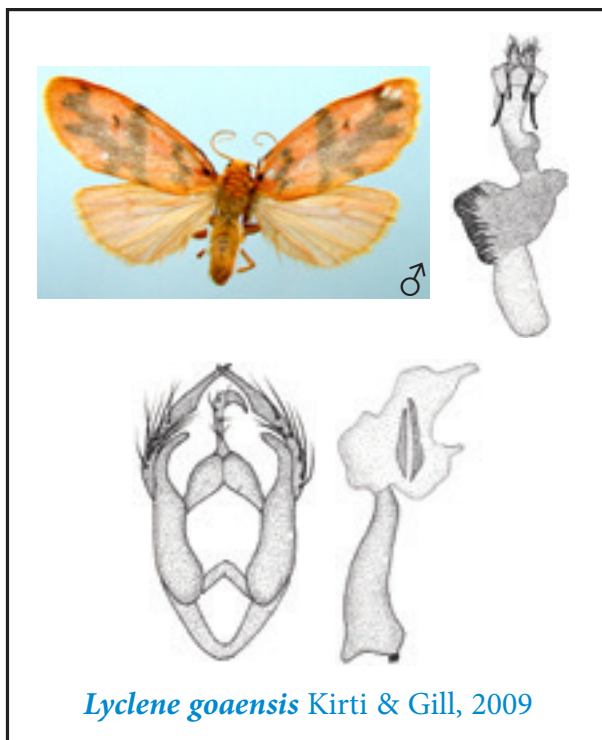
***Lyclene goaensis* Kirti & Gill, 2009**

Lyclene goaensis Kirti & Gill, 2009; *Acta Zoo. Crac.* 52 B (1-2): 117

Forewings pinkish red, a basal black spot, antemedial band not reaching costa, medial band and postmedial band forming K. Hindwings paler. Male genitalia with saccular process and cucullus narrow and curved; vesica with two prominent spines. Female genitalia with ductus bursae moderate, corpus bursae with two distinctly divided regions, one is broad and globular, another elongated; the first region is with a series of compactly placed spines.

Distribution: Goa.

Larval host plant: Not Known.



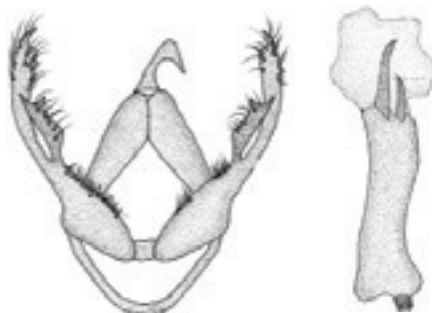
***Lyclene hollowai* Kirti & Gill, 2009**

Lyclene hollowai Kirti & Gill, 2009; *Acta Zoo. Crac.* **52** B (1-2): 112

Morphologically, the species is allied to *L. goaensis* Kirti & Gill, but distinct due to its genital attributes. In *hollowai*, saccular process is leaf like and the cucullus is broad.

Distribution: Gujarat.

Larval host plant: Not Known.



Lyclene hollowai Kirti & Gill, 2009

Lyclene dharma (Moore, 1879)

Setina dharma Moore, 1879; *Proc. Zool. Soc. Lond.*, 1879: 394

Adults yellow. Forewings with basal and discoidal spots; antemedial & submarginal series of spots present. Male genitalia with vesica having three cornuti, scobinations present.

Distribution: Indian Himalayas, Bihar (Valmiki Tiger Reserve).

Larval host plant: Not Known.



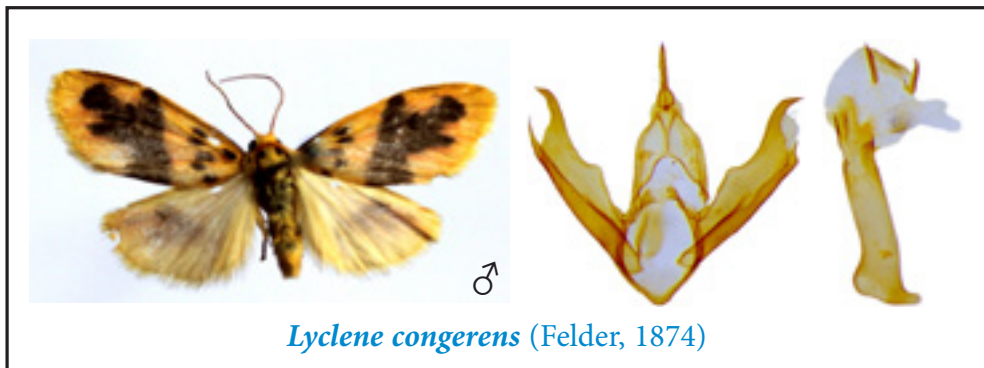
Lyclene dharma (Moore, 1879)

Lyclene congerens (Felder, 1874)*Cymella congerens* Felder, 1874; *Reise fregatte Novara*, 2: 106

Adults orange-yellow. Forewings slightly suffused with red, a basal spot; antemedial series of spots; postmedial band bifurcated towards costa. Male genitalia with distal costal process slightly curved, valvula bilateral asymmetric; vesica with two spines and patch of sclerotizations.

Distribution: North West Himalayas, Sikkim, West Bengal (Kolkata, Darjeeling), Karnataka, Tamil Nadu.

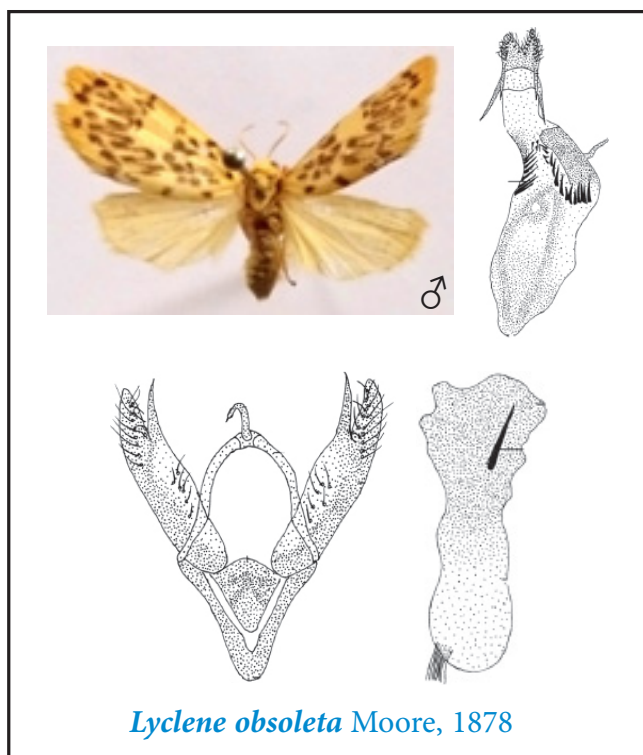
Larval host plant: Not Known.

*Lyclene congerens* (Felder, 1874)*Lyclene obsoleta* Moore, 1878*Lyclene obsoleta*, Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 32

Adults Yellow. Forewings with some black points at basal area, antemedial series of spots, postmedial line highly dentate. Male genitalia have vesica with single spine. Female genitalia have the ductus bursae short, corpus bursae elongated with two series of spines.

Distribution: South India, North East Himalayas, Meghalaya (Garo Hills), Bihar (Valmiki Tiger Reserve), Assam.

Larval host plant: Not known.



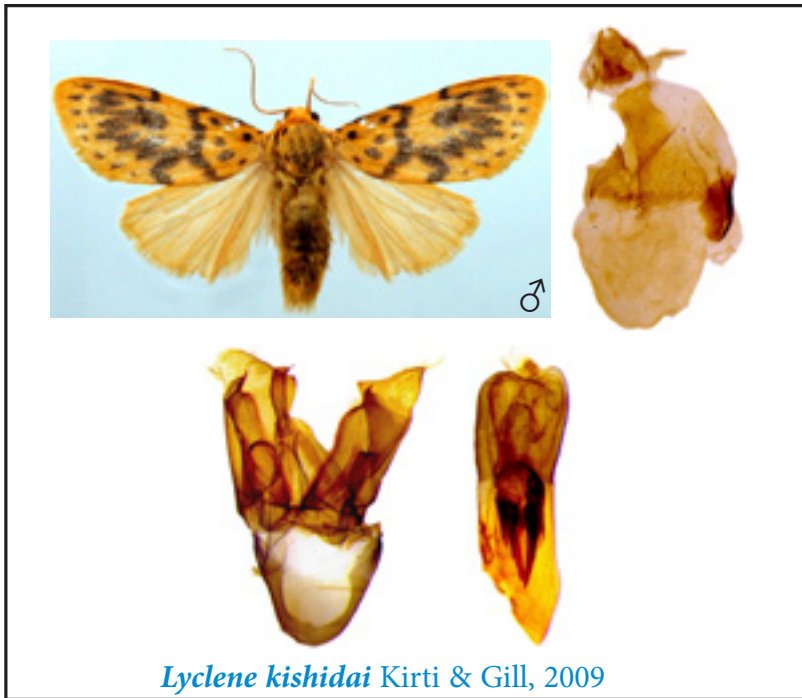
***Lyclene kishidai* Kirti & Gill, 2009**

Lyclene kishidai Kirti & Gill, 2009; *Acta Zoo. Crac.* **52** B (1-2): 110

Adults ochreous. Forewings with two subbasal and four antemedial spots followed by a black band and a highly dentate postmedial band, a submarginal series of spots. Male genitalia with uncus sickle like, valvae with short saccular process, mid ventral process present, vesica with two spines. Female genitalia have the ductus bursae broad weakly sclerotized; corpus bursae with anterior portion membranous and full of scobination, a multilayered series of sclerotized spots crossing corpus bursae.

Distribution: Kerala.

Larval host plant: Not known.



Genus *Barsine* Walker

Walker, 1854; *List Spec. Lep. Ins. Coll. Br. Mus.*, 2: 546

Type species: *Barsine defecta* Walker, 1854

Diagnosis: Valvae have the distal costal and saccular processes along with a spur from the center; aedeagus vesica ornamented with a field or fields of large/asymmetrical/irregular spines.

Remarks: Genus *Barsine* Walker, 1854 was described for the inclusion of two species from Nepal: *Barsine defecta* Walker, 1854 and *Barsine effrecta* Walker, 1854. Kirby (1892) subsequently designated the type species of the genus. The Genus was resurrected from the synonymy of *Miltochrista* Hübner and revised by Holloway (2001).

Known species of Genus *Barsine* Walker from India: *Barsine cardinalis* (Hampson, 1900); *Barsine cruciata* (Walker, 1862); *Barsine cuneonotata* (Walker, 1855); *Barsine delicia* (Swinhoe, 1891); *Barsine euprepoides* (Walker, 1862); *Barsine exclusa* Butler, 1877; *Barsine fasciata* (Leech, 1899); *Barsine flammealis* Moore, 1878; *Barsine flavivenosa* (Moore, 1878); *Barsine gratiosa* (Guérin-Ménéville, 1843); *Barsine linga* Moore, 1859; *Barsine mactans*

Butler, 1877; *Barsine pretiosa* Moore, 1879; *Barsine punicea* Moore, 1878; *Barsine radians* (Moore, 1878); *Barsine roseata* (Walker, 1864); *Barsine thomasi* Kaleka, 2003; *Barsine valvalis* Kaleka, 2003; *Barsine yuennanensis* Daniel, 1952.

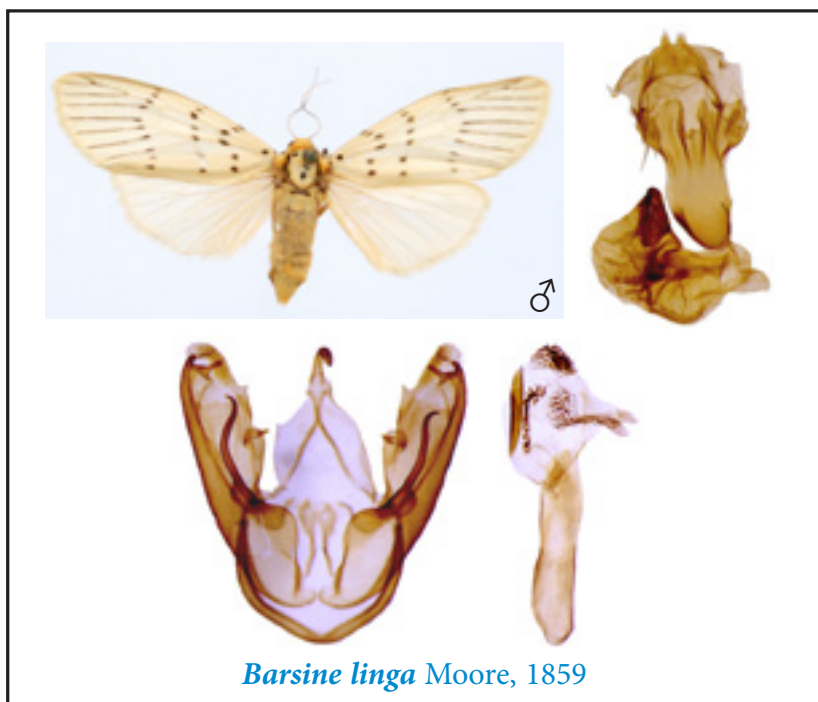
Barsine linga Moore, 1859

Barsine linga Moore, 1859; *Lepid. East Ind. Comp.*, 1859: 301

Adults pale yellow. Forewings with antemedial and medial series, the veins of outer area streaked with black. Male genitalia with valvae have a thick mid ventral process, saccular process strong, cucullus having small projection at dorso proximal end, valvula with tip bifurcated; vesica with a long spine like sclerotization, fields of strongly sclerotized small spines present. Female genitalia have the ductus bursae broad, weakly sclerotized; corpus bursae irregular and sclerotization with scobination.

Distribution: North West Himalayas, Sikkim, Meghalaya, Assam (Jatinga, Silchar), Arunachal Pradesh, Mizoram (Champhai).

Larval host plant: Not known.



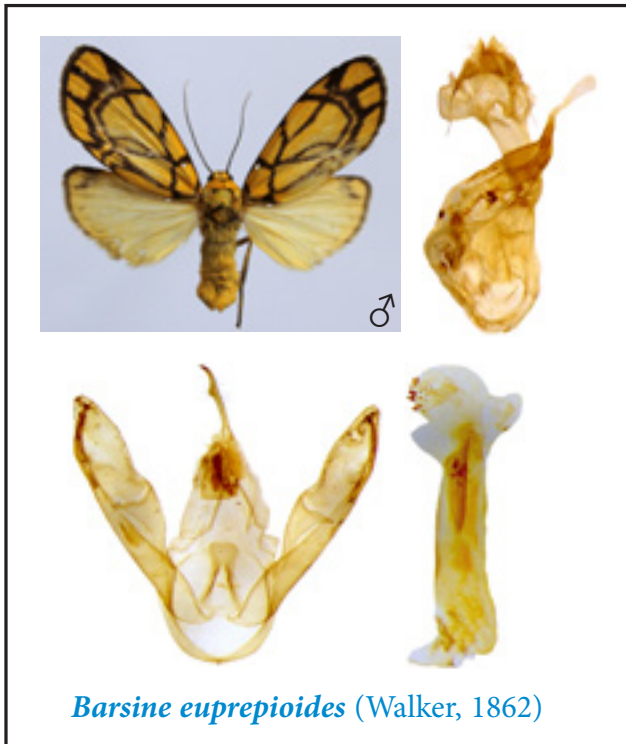
Barsine euprepioides (Walker, 1862)

Hypoprepia euprepioides Walker, 1862; *Journ. Proc. Linn. Soc. (Zool)*, 6: 102

Adults yellow. Forewings with black lines, giving the reticulate appearance. Male genitalia with uncus produced at centre, valvae divided into distal coastal and saccular process, a prominent central spur; vesica with a group of small spines along with various scobinations and a long knife like plate. Female genitalia have the ductus bursae weakly sclerotized; corpus bursae with two signum present.

Distribution: Sikkim, Nagaland, North India to Burma, Meghalaya (West Garo Hills), Arunachal Pradesh, Mizoram, Assam (Jatinga).

Larval host plant: Not known.



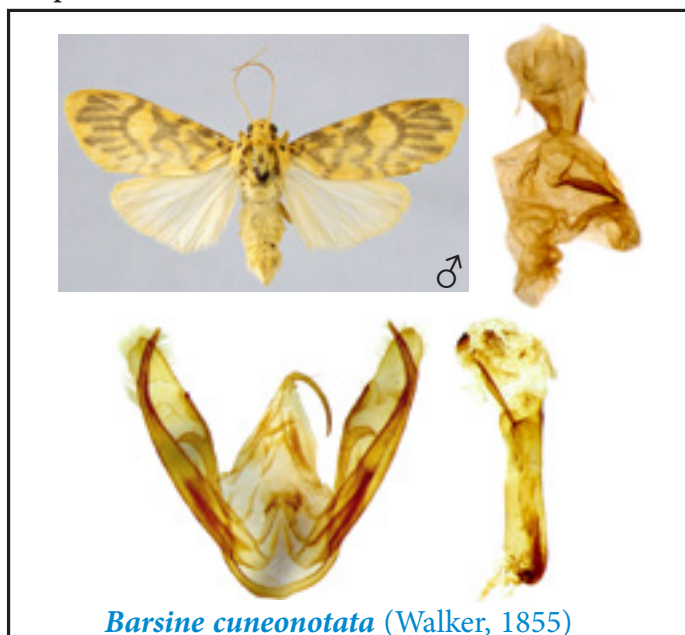
Barsine cuneonotata (Walker, 1855)

Ammatho cuneonotatus Walker, 1855; *List Spec. Lep. Ins. Coll. Br. Mus.*, 3: 759

Adults ochreous to reddish. Forewings with some spots and streaks in basal area, curved and angulated antemedial, medial and postmedial lines, beyond which the veins are streaked. Male genitalia with valvula much elongated surpassing the cucullus; vesica with fields of small spines, out of which one spine is much bigger, patches of scobinations are also present along with blade like sclerotisation. Female genitalia have the ductus bursae narrowing to scobinated corpus bursae, the later irregular with sclerotized plate.

Distribution: Sikkim, Nagaland, West Bengal (Darjeeling, Tukdah), Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Assam, Karnataka, Tamil Nadu, Kerala.

Larval host plant: Not known.



Barsine radians (Moore, 1878)

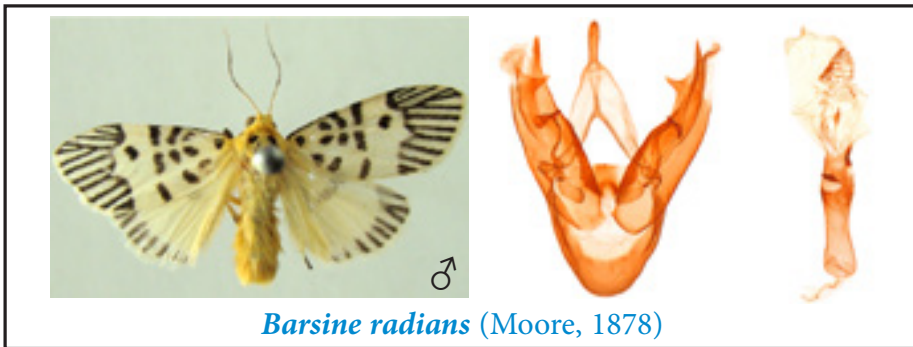
Lyclene radians Moore, 1878; *Proc. Zool. Soc. London*, 1878: 30

Adults pale yellow. Forewings with a basal black spot, black streak on first half of costa, curved subbasal and antemedial series of black spots, a nearly straight medial series of three black spots, a black spot on discocellulars, series of black streaks arising

from post medial band which is excurved at vein R_5 to Cu_1 . Hindwings have the marginal series of elongated spots. Male genitalia have the aedeagus with prominent plate on its tip surrounded by numerous spines, leaving a semicircular patch along its lower edge; vesica with field of short but robust spines.

Distribution: Sikkim, West Bengal (Kolkata), Meghalaya (East & West Garo Hills), Arunachal Pradesh.

Larval host plant: Not known.



Barsine radians (Moore, 1878)

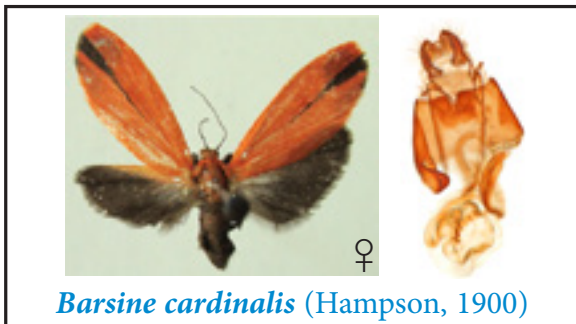
Barsine cardinalis (Hampson, 1900)

Mitochrista cardinalis Hampson, 1900; *Cat. Lep. Phal. Br. Mus.*, 2: 480

Forewings brilliant scarlet, with a black streak on median nervure from origin of vein Cu_1 and widening gradually to termen. Hindwings black. Underside of fore wing with the terminal area suffused with black from below costa to above inner margin, interrupted by a crimson streak on vein M_1 . Female genitalia have broad genital plate, ductus bursae short, corpus bursae almost globular with an elongate patch of sclerotization.

Distribution: Sikkim, Meghalaya (Khasi Hills), Arunachal Pradesh, Assam.

Larval host plant: Not known.



Barsine cardinalis (Hampson, 1900)

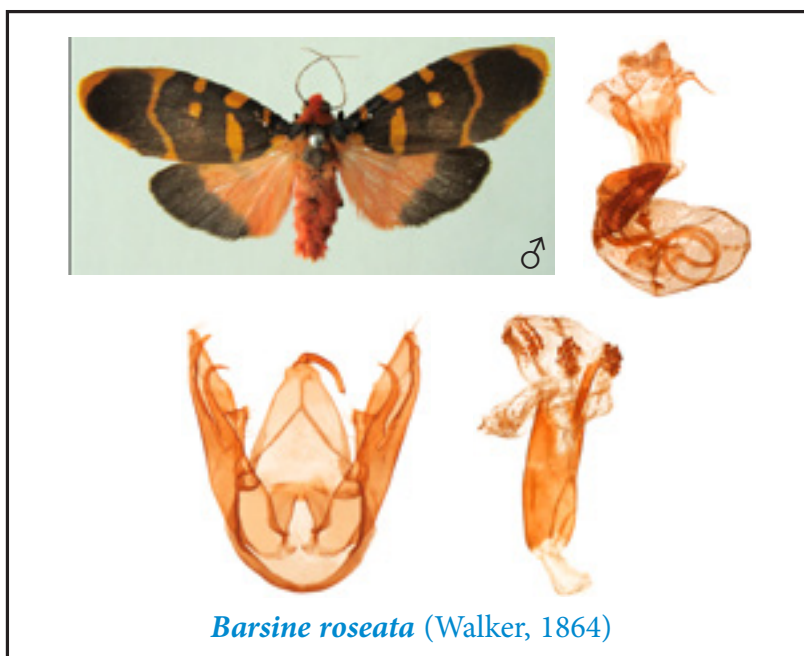
Barsine roseata (Walker, 1864)

Castabala roseata Walker, 1864; *List Het. Br. Mus.*, 31: 271

Forewings dark brown, a basal yellow patch on inner margin; a subbasal yellow spot on the costa; an antemedial yellow band interrupted at cell; a medial spot on costa and another in cell; a postmedial curved band and marginal band widest at apex. Hindwings crimson, with a broad marginal dark brown band not reaching anal angle. Male genitalia with valvae having all the structures like saccular process, valvula, cucullus and mid ventral process; vesica with three patches of short and robust spines along with fields of scobination. Female genitalia with corpus bursae somewhat elongated with weak sclerotisation.

Distribution: Sikkim, West Bengal (Kolkata), Assam (Jatinga).

Larval host plant: Not known.



Genus *Miltochrista* Hübner

Hübner, [1819] 1816; Verz. bekannter Schmett. 1819: 166

Type species: *Noctua rubicunda* [Denis and Schiffermüller] (= *Phalaena miniata* Forster).

Diagnosis: The Genus is mainly diagnosed by its male genitalia where the vesica has large, well separated cornuti, valvae lacks the central costal process. Female genitalia with extensive fields of long spines.

Remarks: Genus *Miltochrista* Hübner was described as a monotypic Genus for *Noctua rubicunda* (Denis & Schiffermüller), 1775 (= *miniata* Forster, 1771). Hampson, 1900 treated *Miltochrista* in a very broader concept with nine synonymised genera. This Genus was mainly dealt by Fang (1991, 2000), Holloway (2001), Černý & Pinratana (2009) and Dubatolov *et al.* (2012) from different regions of the World.

Known species of Genus *Miltochrista* Hübner from India: *Miltochrista andamana* (Moore, 1877); *Miltochrista coccinea* (Moore, 1886); *Miltochrista danieli* Arora, 1983; *Miltochrista delicata* (Moore, 1878); *Miltochrista delineata* (Walker, 1854); *Miltochrista dentifascia* Hampson, 1894; *Miltochrista eccentropis* Meyrick, 1894; *Miltochrista flavicollis* (Moore, 1878); *Miltochrista germana* Rothschild, 1913; *Miltochrista ila* (Moore, 1859); *Miltochrista indica* (Moore, 1879); *Miltochrista inflexa* (Moore, 1878); *Miltochrista magna* Hampson, 1894; *Miltochrista mesortha* Hampson, 1898; *Miltochrista multistriata* Hampson, 1894; *Miltochrista nubifascia* (Walker, 1864); *Miltochrista phaeodonta* Hampson, 1911; *Miltochrista phaeoxanthia* Hampson, 1900; *Miltochrista postnigra* Hampson, 1894; *Miltochrista proleuca* (Hampson, 1900); *Miltochrista prominens* (Moore, 1878); *Miltochrista strigivenata* Hampson, 1894; *Miltochrista zebrina* (Moore, 1878).

Miltochrista strigivenata Hampson, 1894

Miltochrista strigivenata Hampson, 1894, *Fauna Br. Ind. Moths*, 2: 107

Forewings crimson, basal half of costal edge black, an oblique medial black line; veins of terminal area finely streaked with black. Hindwings slightly paler. Male genitalia with valvae broad and thick, cucullus ending to an apical spine, valvula membranous; vesica with a series of well formed spines, another field of irregularly directed cornuti near proximal end along with small fields of scobination.

Distribution: Assam, Nagaland (Naga Hills), Meghalaya (East Khasi Hills and Jaintia Hills).

Larval host plant: Not known.



Miltochrista strigivenata Hampson, 1894

Genus *Arctelene* Kirti & Gill

Kirti & Gill, 2008; *Oriental Insects*, **42**: 359-365

Type species: *Arctelene uncodens* Kirti & Gill, 2008

Diagnosis: The Genus is distinct due to undivided flap like valvae which are narrow and curved in distal half with some spines on the tip of ventral edge.

Remarks: The Genus *Arctelene* Kirti and Gill, 2008 was described for the inclusion of two species: *Arctelene uncodens* Kirti and Gill, 2008 as its type species and *Arctelene rufescens* Kirti and Gill, 2008. The Genus is reported from South India.

Known species of Genus *Arctelene* Kirti and Gill from India: *Arctelene rufescens* Kirti & Gill, 2008; *Arctelene uncodens* Kirti & Gill, 2008.

Arctelene uncodens Kirti & Gill, 2008

Arctelene uncodens Kirti & Gill, 2008; *Oriental Insects*, **42**: 360

Forewings pinkish red, antemedial band present, medial band conjoined with postmedial leaving costa & inner margin, a small postmedial streak on costa, marginal series of specks. Hindwings reddish ochreous. Male genitalia with uncus having broad flap like structure at the base, vesica with a prominent cornutus.

Distribution: Maharashtra, Karnataka.

Larval host plant: Not known.



Arctelene uncodes Kirti & Gill, 2008

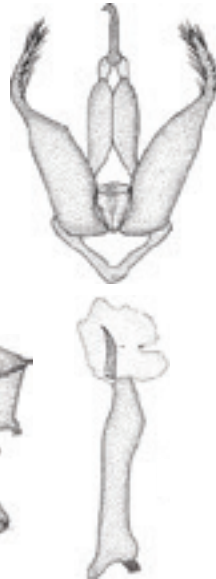
Arctelene rufescens Kirti & Gill, 2008

Arctelene rufescens Kirti & Gill, 2008; *Oriental Insects*, 42: 361

Adults are smaller than *A. uncodes* Kirti & Gill, 2008. Male genitalia with uncus centrally constricted, valvae bilaterally asymmetric; vesica with a prominent cornutus.

Distribution: Karnataka, Tamil Nadu.

Larval host plant: Not known.



Arctelene rufescens Kirti & Gill, 2008

Genus *Indiania* Kirti, Joshi & Singh

Kirti, Joshi & Singh, 2014; *Tinea* **23** (1): 41-46

Type species: *Miltochrista eccentricis* Meyrick, 1894

Diagnosis: Forewings with orange yellow and curved medial band. Male genitalia have the valvae with apex pointed, not divided into distal costal and saccular process, bilateral asymmetric. Female genitalia with ductus bursae short, corpus bursae covered with small spines.

Remarks: The Genus *Indiania* Kirti, Joshi and Singh, 2014 was erected for its type species *Miltochrista eccentricis* Meyrick, 1894 from upper Assam, Malaysia, Burma and Thailand, along with inclusion of two more species: *Barsine auriflucta* Černý, 2009 and *Barsine arcane* Bucsek, 2012. The Genus is represented in North East India, Myanmar, Malaysia and Thailand.

Known species of Genus *Indiania* Kirti, Joshi and Singh from India: Sole included species.

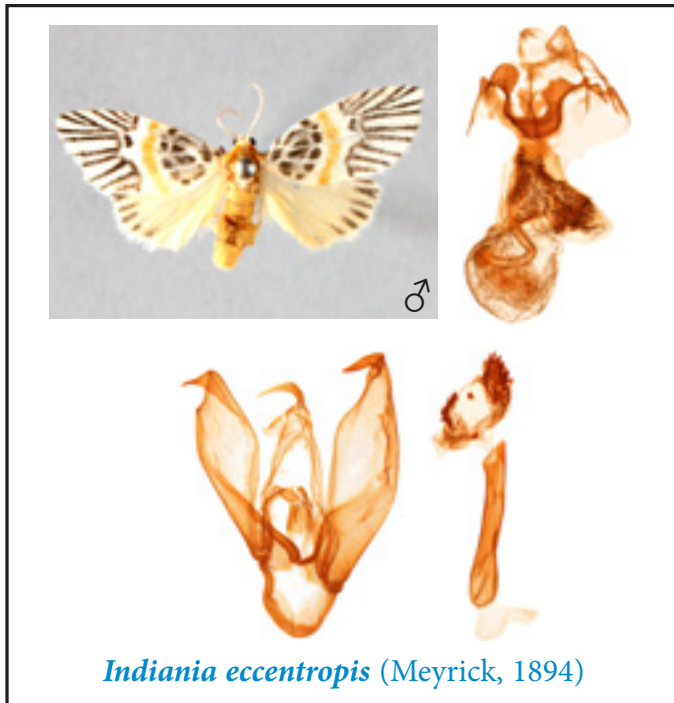
Indiania eccentricis (Meyrick, 1894)

Miltochrista eccentricis Meyrick, 1894; *Trans. Ent. Soc.*, **1894** (1): 3

Forewings white with a basal spot, double series of antemedial spots, a curved medial yellow band and the veins of postmedial area streaked with fuscous. Hindwings yellowish with some streaks on terminal area. Male genitalia with vesica having two patches of spines at each edge and a small patch in between both the large patches, scobination present. Female genitalia with ductus bursae full of spines, scobination present in corpus bursae.

Distribution: Meghalaya (East Khasi Hills), Sikkim.

Larval host plant: Not known.



Genus *Disasuridia* Fang

Fang, 1991; *Acta Entom. Sin.*, **34** (3): 356

Type species: *Disasuridia rubida* Fang, 1991

Diagnosis: The Genus is distinct due to broad uncus which is concave terminally and have a ridge on dorsal portion, valvae broad and long with a membranous and oblong lamella on the apical area; aedeagus short and stout with two strong and big horn shape cornuti in vesica.

Remarks: The Genus *Disasuridia* Fang, 1991 was established for its type species *Disasuridia rubida* Fang, 1991 from Yunan (China) along with four new species, *flava* Fang, *conferta* Fang, *confusa* Fang and *birgula* Fang from China. In 2013a, Kirti *et al.* added the sixth species *Disasuridia fangae* Kirti, Joshi and Singh, 2013 from Mizoram. This Genus is distributed from mountainous area of Yunan (China) to the mountains of Mizoram (North East India).

Known species of Genus *Disasuridia* Fang from India: Sole included species.

Disasuridia fangae Kirti, Joshi & Singh, 2013

Disasuridia fangae Kirti, Joshi & Singh, 2013; *Tinea* **22** (4): 270

Disasuridia fangae Kirti, Joshi & Singh, 2013 is allied to *D. flava* Fang and *D. rubida* Fang. However, its distinct characters like forewings with antemedial line not conjoined with medial line, hindwings yellow with terminal fuscous band, shape of saccus and cornuti separates it from *flava* Fang. Furthermore, its yellow forewings separates it from *rubida* Fang with crimson forewings.

Distribution: Mizoram (Thingsul).

Larval host plant: Not known.



Disasuridia fangae Kirti, Joshi & Singh, 2013

Genus *Nepita* Moore

Moore, 1860; *Cat. lep. Ins. Mus. Nat. Hist.*, **2**: 302

Type species: *Pitane conferta* Walker, 1854 (by subsequent designation by Hampson, 1900)

Diagnosis: Male genitalia with ovate valvae, having a robust central costal process. Female genitalia have corpus bursae with a patch of scobination.

Remarks: Genus *Nepita* Moore, 1860 was established as the objective replacement name for *Pitane* Walker, 1854. The Hampson's view kept this Genus synonymised and was later on treated as a distinct Genus by Holloway (2001) and Kirti & Gill (2010). Genus *Nepita* Moore is represented in India, Sri Lanka, Myanmar and Borneo.

Known species of Genus *Nepita* Moore from India: Sole included species.

Nepita conferta (Walker, 1854)*Pitane conferta* Walker, 1854; *Cat. Lep. Het.*, 2: 533

Forewings orange yellow; two or three subbasal spots, antemedial and medial wavy black bands, conjoined to each other at median nervure; black spots at end of cell; a postmedial wavy band, excurved at discocellulars; a wavy submarginal band with two spurs approaching the margin. Hindwings orange yellow, marginal band broad. Genitalia as discussed under genus.

Distribution: Throughout India (North and South India).

Larval host plant: *Eleusine coracana*, *Sorghum* (Gramineae); *Morus* (Moraceae); *Solanum melongena* (Solanaceae); Lichens; Musci.

*Nepita conferta* (Walker, 1854)Genus *Schistophleps* HampsonHampson, 1891; *Ill. Typ. Spec. Lep. Het. Coll. Br. Mus.*, 8: 53

Type species: *Schistophleps bipuncta* Hampson, 1891

Diagnosis: Forewings and hindwings diaphanous with buff markings and some black points; forewings with small veinlets between vein sc and costa. Male genitalia have the uncus short & diversely modified; Juxta prominent; aedeagus slender, vesica without any well defined cornutus.

Remarks: Genus *Schistophleps* Hampson, 1891 was described for the sole included species, *Schistophleps bipuncta* Hampson, 1891. Later on, the Genus was mainly treated by Holloway (1979, 2001), Kirti & Gill (2008c) and Bucsek (2012). Genus *Schistophleps* Hampson ranges throughout Indo-Australian tropic east to New Caledonia (Holloway 1979).

Known species of Genus *Schistophleps* Hampson from India: *Schistophleps bipuncta* (Hampson, 1891); *Schistophleps hyalinata* Kirti & Gill, 2008; *Schistophleps pentoveinlata* Kirti & Gill, 2008.

Schistophleps pentoveinlata Kirti & Gill, 2008

Schistophleps pentoveinlata Kirti & Gill, 2008; *Oriental Insects*, 42: 380

Forewings with five veinlets between vein sc & costa. Male genitalia with uncus bilobed, valvae bifurcate at tip, juxta elongated; aedeagus curved at tip, vesica unornamented. Female genitalia have the ductus bursae short, narrow and corpus bursae membranous, obliquely globular.

Distribution: Karnataka, Tamil Nadu, Kerala.

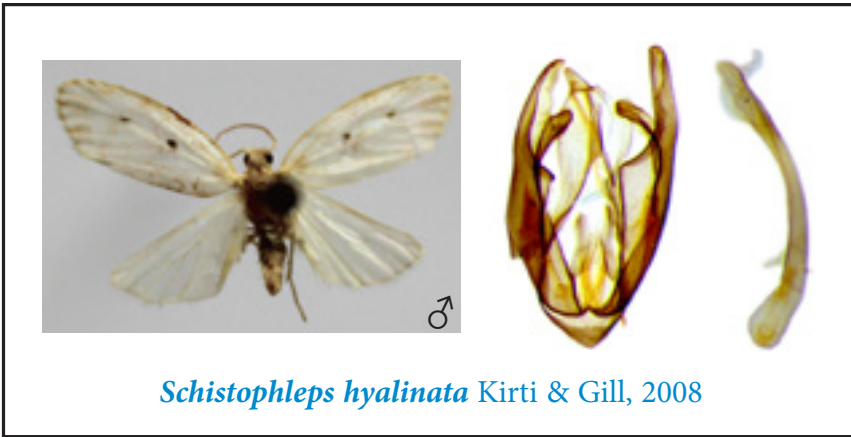
Larval host plant: Not known.



Schistophleps hyalinata Kirti & Gill, 2008

Schistophleps hyalinata Kirti & Gill, 2008; *Oriental Insects*, 42: 381

Forewings with obsolete markings, three veinlets between vein sc & costa. Male genitalia with uncus short and somewhat triangular; aedeagus evenly curved.



Distribution: Karnataka.

Larval host plant: Not known.

Genus *Chamaita* Walker

Walker, 1862; *Journ. Proc. Linn. Soc. (Zool.)* 6: 121

Type species: *Chamaita trichopteroides* Walker, 1862

Diagnosis: The members of this Genus have translucent appearance, with elongate hairy scape in male antennae. Male genitalia diverse in structure and generally, have the bilateral asymmetry.

Remarks: The Genus *Chamaita* Walker, 1862 was described for *Chamaita trichopteroides* Walker, 1862. In appearance, the Genus is very much similar to *Schistophleps* Hampson, 1891. Genus *Chamaita* Walker was reviewed by Holloway (2001) and later on dealt by Černý & Pinratana (2009), Bucsek (2012) and Dubatolov & Bucsek (2013). The Genus is distributed throughout Indo-Australian region.

Known species of Genus *Chamaita* Walker from India: *Chamaita neuropteroides* Hampson, 1894; *Chamaita nympha* (Moore, 1887)

***Chamaita nympa* (Moore, [1887])**

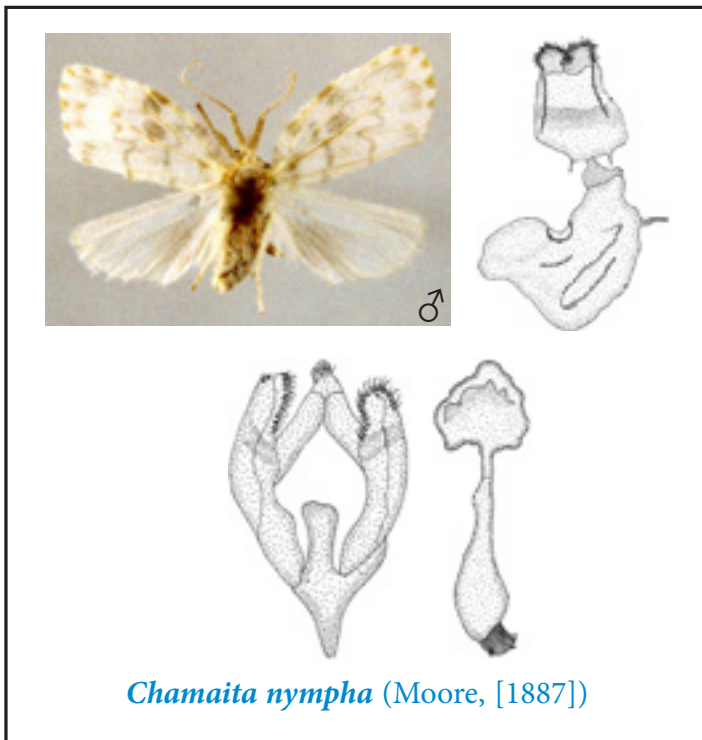
Homopsyche nympa Moore, [1887]; *Lepid. Cey.*, 3: 536

Forewings hyaline, basal markings buff; antemedial and postmedial wavy bands; fulvous spot in cell; submarginal spots; yellow buff spots on margin. Hindwings hyaline, have buff patch towards dorsum. Male genitalia have cucullus broad flap like and narrow valvula, a small ridge at center of inner side of valvae; vesica with some scobinations. Female genitalia with ductus bursae short, corpus bursae irregular with four series of small spines.

Distribution: Karnataka.

Larval host plant: Not known.

Remarks: The present species is reported for the first time from India.



Genus *Cyclomilta* Hampson

Hampson, 1900; *Cat. Lep. Phal. Br. Mus.*, 2: 512

Type species: *Miltochrista melanolepia* Hampson in Dudgeon, 1899

Diagnosis: Yellow forewings, with a large grey brown patch on central disc and some black spots. Hindwings unmarked.

Remarks: The Genus *Cyclomilta* Hampson, 1900 was described as a monotypic Genus for its type species *Miltochrista melanolepia* Hampson in Dudgeon, 1899 from Sikkim. Bucsek (2012), Dubatolov *et al.* (2012) and Dubatolov & Bucsek (2013) added further species: *Cyclomilta rabus* Bucsek, 2012 with type locality Endau Rompin state park (Phang district, Malaysia), *Cyclomilta fangchenglaiae* Dubatolov, Kishida & Wang, 2012 with type locality Nanling (Guangdong, China) and *Cyclomilta cambodiaca* Dubatolov & Bucsek, 2013 with type locality Tatai village (Koh Kong prov., Cambodia). The Genus is distributed from North East India to South East corner of China, Thailand, Cambodia, Malaysia and Indonesia.

Known species of Genus *Cyclomilta* Hampson from India: Sole included species.

Cyclomilta melanolepia (Hampson in Dudgeon, 1899)

Miltochrista melanolepia Hampson in Dudgeon, 1899; *J. Bomb. Nat. Hist. Soc.*, 13: 85

Forewings ochreous, an antemedial brown spot in cell, a broad brown patch leaving basal, costal and marginal area ochreous. Hindwings pale ochreous. Male genitalia with saccular process very long, cucullus membranous; vesica unornamented.

Distribution: Sikkim, Karnataka (Ganeshgudi, Kulagi, Bhagamandala) Assam (Jatinga).

Larval host plant: Not known.



Cyclomilta melanolepia (Hampson in Dudgeon, 1899)

Genus *Macotasa* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 24

Type species: *Teulisna biplagella* Butler, 1877

Diagnosis: Forewings with folded cell and a prominent ridge on dorsal surface, the basal half of this is covered by a rectangular area of coarse scales extending from the costa to just posterior to the ridge, costa centrally bowed with a black triangular or rectangular spot. Male genitalia have the uncus entire or bifid; valvae bifid or trifid. Female genitalia with pyriform corpus bursae, which bears scobinate signum.

Remarks: Genus *Macotasa* Moore, 1878 was established for its type species, *Teulisna biplagella* Butler, 1877 from Borneo. The taxonomic review of the Genus was mainly done by Birket and Smith (1965), Holloway (1982, 2001), Černý & Pinratana (2009), Bucsek (2012), Dubatolov (2012) and Singh *et al.* (2013). Genus *Macotasa* Moore is known by a total of nine species distributed in Oriental region.

Known species of Genus *Macotasa* Moore from India: *Macotasa nubecula* (Moore, 1879); *Macotasa orientalis* (Hampson, 1905); *Macotasa tortricoides* (Walker, 1862).

Macotasa tortricoides (Walker, 1862)

Lithosia tortricoides Walker, 1862; *J. Proc. Linn. Soc. (Zool.)*, 6: 107

Macotasa tortricoides (Walker) is known by single female representative from India. The female genitalia with broad ductus bursae and a semicircular signum in corpus bursae.

Distribution: Goa.

Larval host plant: Not known.



Macotasa tortricoides (Walker, 1862)

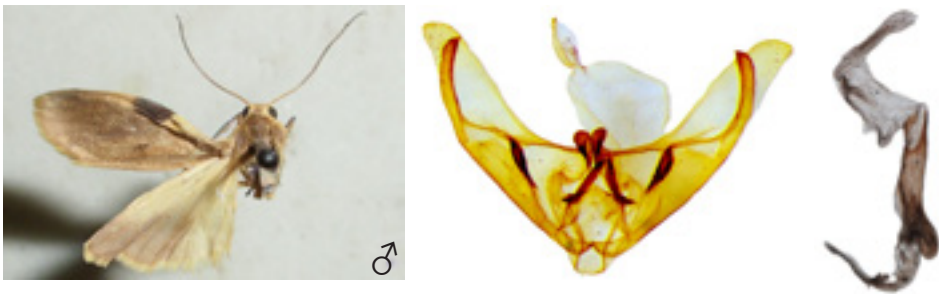
***Macotasa nubecula* (Moore, 1879)**

Cossa nubecula Moore, 1879; *Proc. Zoo. Soc. London*, **1879**: 394

Externally, the males are almost same as *Macotasa tortricoides* (Walker). Male genitalia with ventral process of valvae reduced to densely setosed angle on sacculus.

Distribution: Andamans, Himalayas, South India.

Larval host plant: Not known.

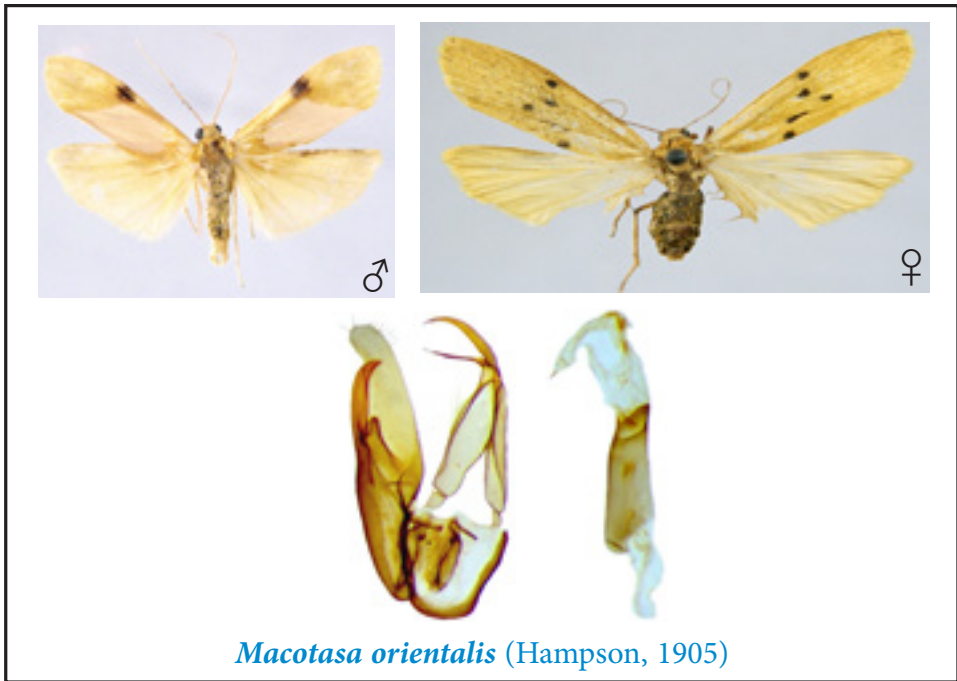
***Macotasa nubecula* (Moore, 1879)*****Macotasa orientalis* (Hampson, 1905)**

Phaeosia orientalis Hampson, 1905; *Ann. Mag. nat. Hist.*, **15** (7): 433

Males of *M. orientalis* (Hampson) are fulvous yellow with a rectangular costal spot. In male genitalia, the valvae with central projection produced to short and triangular lobe; vesica with a short spine at tip. Females have an oblique medial series of black spots on the orange yellow forewing. The medial spot displaced.

Distribution: Karnataka (Bhagamandala, Kulagi).

Larval host plant: *Albizia falcataria* (Leguminosae)



Genus *Teulisna* Walker

Walker, 1862; *J. Proc. Linn. Soc. (Zool.)*, 6: 109

Type species: *Teulisna plagiata* Walker, 1862

Diagnosis: The distinctive feature of this Genus are in the male genitalia: vinculum developed into a squarish frame, indented slightly at the distal margin that supports the membrane with setosed patches or scent pencils; the saccular process of valvae with dense setae or spines apically.

Remarks: Genus *Teulisna* Walker, 1862 was described for its type species, *Teulisna plagiata* Walker, 1862. The Genus is mainly reviewed by Holloway 2001. Genus *Teulisna* Walker shows high diversity in oriental region.

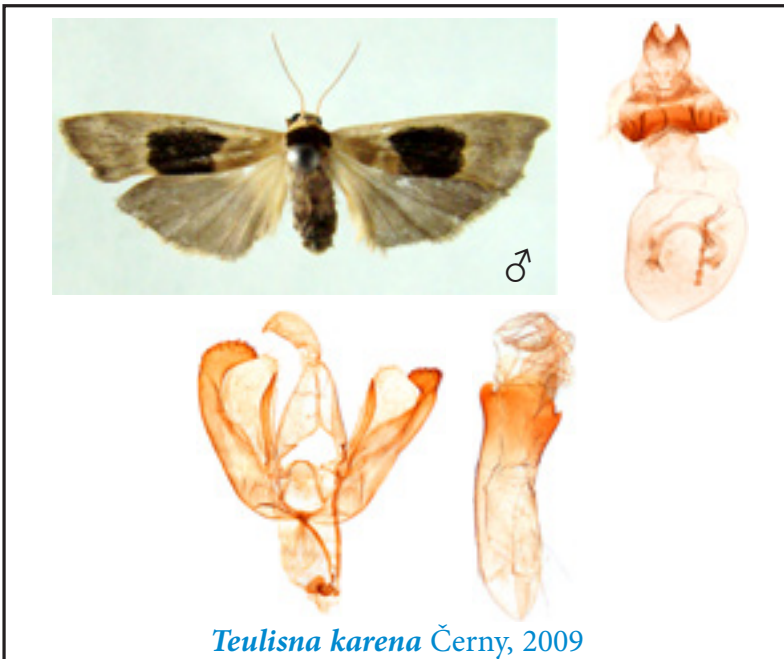
Known species of Genus *Teulisna* Walker from India: *Teulisna basigera* (Walker, 1864); *Teulisna inducta* (Walker, 1864); *Teulisna karena* Černý, *Teulisna nebulosa* (Walker, 1862); *Teulisna obliquistria* Hampson, 1894; *Teulisna plagiata* Walker, 1862; *Teulisna protuberans* (Moore, 1878); *Teulisna tumida* (Walker, 1862); *Teulisna unicornuta* Kirti, Joshi & Singh, 2014; *Teulisna uniplaga* Hampson, 1894.

Teulisna karena Černý, 2009*Teulisna karena* Černý, 2009; in Černý & Pinratana, *Moths of Thailand*, 6: 132

Forewings with a large squarish patch on fuscous grey ground. Male genitalia with broad and short uncus, valvae distinctly divided into cucullus and valvula; aedeagus with spines on the both sides of the tip, vesica without any scobination. Female genitalia with corpus bursae somewhat elongated, a series of round signum present.

Distribution: Arunachal Pradesh, Assam, Mizoram.

Larval host plant: Not known.

*Teulisna tumida* (Walker, 1862)*Tegulata tumida* Walker, 1862; *Journ. Linn. Soc, Zool.* 6: 110

Forewings with costa black towards base. Hindwings fuscous towards termen. Only female representatives are studied. Female genitalia with ductus bursae short, corpus bursae almost rounded.

Distribution: Indian sub region.

Larval host plant: Musci.



Teulisna tumida (Walker, 1862)

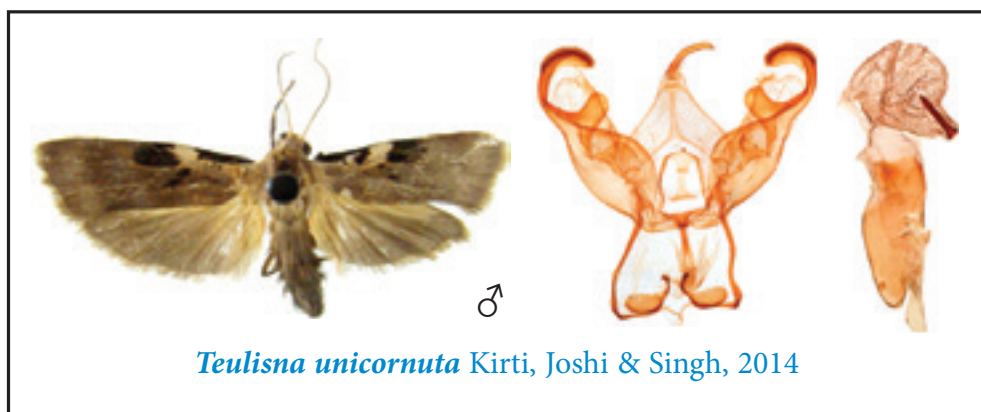
Teulisna unicornuta Kirti, Joshi & Singh, 2014

Teulisna unicornuta Kirti, Joshi & Singh, 2014; *Acta Zoo. Crac.*, 57 (1-2): 12

The species is distinct in having a unique wing pattern and spots. Forewings smooth and lack a broad black medial patch and the postmedial line. Male genitalia with valvula strongly curved over the cucullus; vesica with a strong cornutus and full of scobinations.

Distribution: Karnataka.

Larval host plant: Not known.



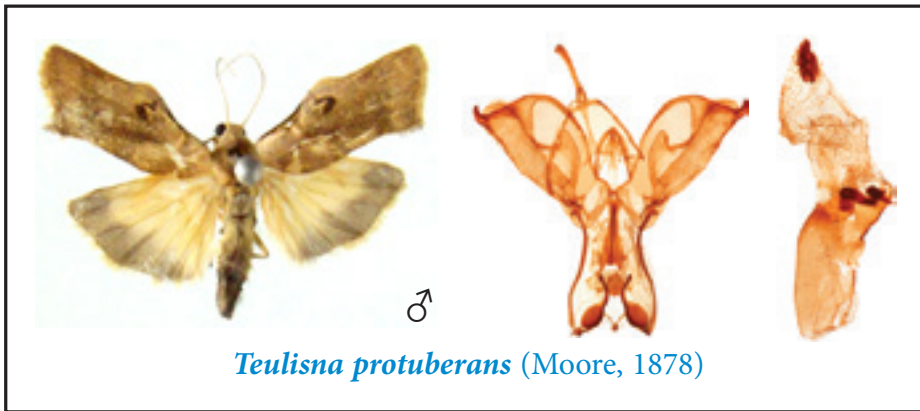
Teulisna unicornuta Kirti, Joshi & Singh, 2014

Teulisna protuberans (Moore, 1878)*Tegulata protuberans* Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 23

Forewings with a black lunule at extremity of grey fringe. Hindwings pale yellow with marginal fuscous band. Male genitalia have the broad valvae with small valvula; vesica with two strong spines along with an apical patch of short & robust spines and dense scobinations.

Distribution: Sikkim, Arunachal Pradesh, West Bengal (Darjeeling).

Larval host plant: Not known.

*Teulisna obliquistria* Hampson, 1894*Teulisna obliquistria*, Hampson, 1894; *Fauna of Br. Ind. Moths* 2: 87

Forewings with an elongate fuscous mark on costa; a black point at lower angle of cell which is joined by an oblique striga from costa. Hindwings uniform. Male genitalia with valvula and cucullus almost of same length; aedeagus short and broad, vesica multilobed with three strong spines and dense scobinations.

Distribution: Sikkim.

Larval host plant: Not known.



Teulisna obliquistria Hampson, 1894

Teulisna inducta (Walker, 1864)

Lithosia inducta Walker, 1864; *List Het. Br. Mus.*, 31: 232

Forewings without costal fold. Hindwings pale yellow. Male genitalia with valvula in form of a straight rod like structure; cucullus tapering towards tip; vesica with two strong spines along with a patch of scobinations.

Distribution: Tamil Nadu (Nilgiris).

Larval host plant: Not known.



Teulisna inducta (Walker, 1864)

Genus *Brunia* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 15

Type species: *Lithosia antica* Walker, 1854

Diagnosis: Most of the *Brunia* species have sexual dimorphism in the forewing pattern. The Genus is better defined on the external genital attributes: Male genitalia have the uncus short, with a dorsal ridge and slightly expanded at base; valvae with rounded apex, saccular process robust and shorter; apex of aedeagus is extensively spined. Female genitalia with elongate corpus bursae, the basal half sclerotized and the distal half with two signa.

Remarks: The Genus *Brunia* Moore, 1878 was described for the inclusion of three species: *Lithosia antica* Walker from Sri Lanka, *Lithosia natara* Moore from Java and *Lithosia sarawaca* Butler from Borneo. In the recent years, the Genus is reviewed by Holloway (2001) with inclusion of eight species: *antica* (Walker), *sarawaca* (Butler), *cucullata* Moore, *dorsalis* Walker, *ekeikei* Bethune-Baker, *testacea* Rothschild, *apicalis* Walker and *nebulifera* Hampson and Dubatolov and Zolotuhin (2011) shifted further species, *Lithosia fumidisca* Hampson to *Brunia*. *Eilema gibonica* Černý, 2009 is being shifted here to Genus *Brunia* Moore. The Genus is distributed from Africa, Indian subregion, China and Ryukyu Islands to Chagos Islands and Australia.

Known species of Genus *Brunia* Moore from India: *Brunia antica* (Walker, 1854); *Brunia cucullata* (Moore, 1878); *Brunia sarawaca* (Butler, 1877); *Brunia gibonica* (Černý, 2009).

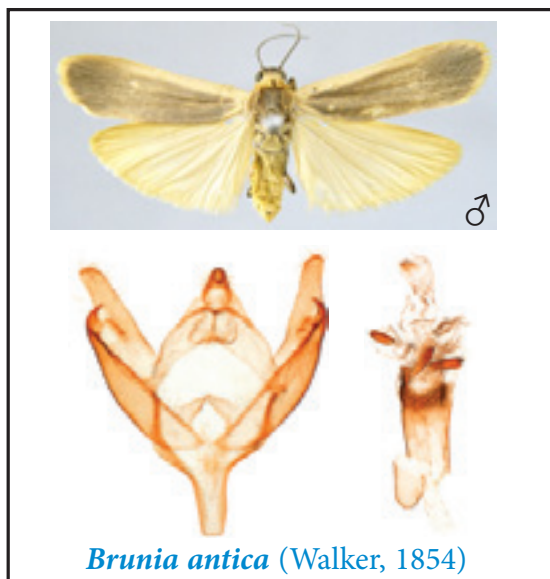
Brunia antica (Walker, 1854)

Lithosia antica Walker, 1854; *List Spec. Lepid. Ins. Colln. Br. Mus.*, 2: 505

In males, forewings uniformly fawn, may be with paler costa and females with grey forewings with costa yellow. Hindwings yellow. Male genitalia have the aedeagus with rings of spines on tip, vesica having two large and a small spine with a dentated plate.

Distribution: Throughout India.

Larval host plant: Not known.



Brunia gibonica (Černý, 2009)

Eilema gibonica Černý, 2009, in Černý & Pinratana, *Moths of Thailand*, 6: 148

Forewings pale yellow with an irregular black patch toward tornus. Hindwings slightly more yellow. Male genitalia have the saccular process robust and bifid; vesica with single robust spine along with scobinations.

Distribution: Arunachal Pradesh (Deomali).

Larval host plant: Not known.

Remarks: Following the proper placement, a new combination is provided for *E. gibonica* (Černý, 2009). Reporting of the species is its new record from India.



Genus *Poliosia* Hampson

Hampson, 1900; *Cat. Lepid. Phal. Br. Mus.*, 2: 106

Type species: *Lithosia muricolor* Walker, 1862

Diagnosis: Hampson (1900) divided Genus *Poliosia* into two different groups, *muricolor* and *marginata* group. However, Holloway (2001) characterized both these groups of Genus *Poliosia* Hampson. The *muricolor* group consists of small grey colour species in which the male genitalia have a rectangular uncus with a short apical spur. The juxta is bifid to quadrid. The valvae have the dorsal part ovate with a strong curved or apically angled process from sacculus, vesica with the cornutus ranging from small to very large. The *marginata* group has deeper and more ovate forewings. Male genitalia with a tapering uncus and a prominent saccus. Juxta weak, saccular process of valvae are prominent but not extending as in *muricolor* group, vesica is large with two or three cornuti.

Remarks: Genus *Poliosia* Hampson, 1900 was erected for its type species *Lithosia muricolor* Walker, 1862 along with inclusion of eight more species: *Poliosia marginata* Hampson, *Poliosia pulveria* Hampson, *Gampola punctivena* Hampson, *Prabhasa binotata* Hampson, *Dolgoma brunnea* Moore, *Lithosia cubitifera* Hampson, *Poliosia nigrifrons* Hampson and *Brunia fragilis* Lucas. The Genus was mainly dealt by Holloway (2001), Černý & Pinratana (2009), and Bucsek (2012) with description of many new species. The distribution of the Genus ranges from African to Oriental and Australian region. The Genus is in need of proper review.

Known species of Genus *Poliosia* Hampson from India: *Poliosia brunnea* (Moore, 1878); *Poliosia concolora* Holloway, 2001; *Poliosia cubitifera* (Hampson, 1894); *Poliosia muricolor* (Walker, 1862); *Poliosia punctivena* (Hampson, 1898).

Poliosia concolora Holloway, 2001

Poliosia concolora Holloway, 2001; *The Moths of Borneo*, 7: 297

Androconial patch concolorous with the wings. Male genitalia with valvula smoothly curved at tip and shorter than cucullus, saccus deep U-shaped; vesica with two spiny blades along with a patch of scobinations.

Distribution: North East Himalayas.

Larval host plant: Not known.



Poliosia concolora Holloway, 2001

Poliosia cubitifera (Hampson, 1894)

Lithosia cubitifera Hampson, 1894; *Fauna Br. Ind. Moths*, 2: 82

Adults pale brown, irrorated with fuscous; postmedial band doubly curved. Female genitalia have the ductus bursae small, somewhat globular; corpus bursae pot shaped with scobination in rounded fashion, a prominent signum at center.

Distribution: Sikkim, Nagaland (Naga Hills).

Larval host plant: Not known.



Poliosia cubitifera (Hampson, 1894)

Genus *Veslema* Bucsek

Bucsek, 2012; *Erebidae, Arctiinae (Lithosiini, Arctiini) of Malay Peninsula-Malaysia*: 134

Type species: *Prabhasa binotata* Hampson, 1893

Diagnosis: Filiform antennae in both sexes. Forewings narrow, male genitalia have reduced uncus, narrow valvae & distinctive sacculus.

Remarks: Genus *Veslema* Bucsek, 2012 was erected for the proper placement of *Prabhasa binotata* Hampson, 1893 along with two new species from Malaysia: *Veslema flavifrons* Bucsek, 2012 and *Veslema bipunctulata* Bucsek, 2012. The Genus is distributed in India, Sri Lanka, China, Thailand and Malaysia.

Known species of Genus *Veslema* Bucsek from India: Sole included species

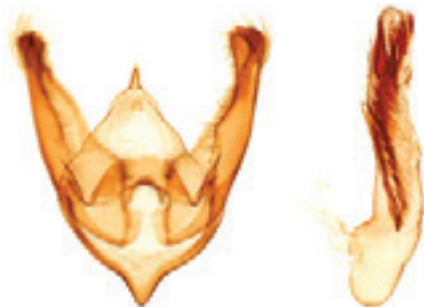
Veslema binotata (Hampson, 1893)

Prabhasa binotata Hampson, 1893; *Illus. typ. Spec. Lep. Het. Colln. Br. Mus.*, **9**: 81

Forewings grey-brown, irrorated with fuscous; black points in end of cell and below end of cell in sub-median inter space. Hindwings pale. Male genitalia with uncus short, valvae with costal margin humped, apex broad, valvula beak like; vesica with a large spiny plate having long, sclerotized spines.

Distribution: Karnataka (Kulagi).

Larval host plant: Not known.



Veslema binotata (Hampson, 1893)

Genus *Pseudoscaptia* Hampson

Hampson, 1914; *Cat. Lepid. Phalaenae Br. Mus.*, **Suppl. 1**: 477

Type species: *Scaptosyle bicolor* Rothschild, 1912 (= *rothschildi* Draudt)

Diagnosis: Male genitalia with squarish saccus which is slight concave distally, valvae with well developed saccular section that shows bilateral asymmetry, two characteristic interiorly directed spiny lobes, larger on the right valvae; vesica with fields of small spines.

Remarks: Genus *Pseudoscaptia* Hampson, 1914 was described as a monotypic Genus for *Scaptosyle bicolor* Rothschild, 1912 (= *rothschildi* Draudt). The Genus is distributed in North East Himalayas, Vietnam, Thailand, Malacca, Sumatra, Java and Borneo.

Known species of Genus *Pseudoscaptia* Hampson from India: Sole included species.

Pseudoscaptia rothschildi (Draudt, 1914)

Scaptosyle rothschildi Draudt, 1914; *Gross-Schmett. Erde*, **10**: 181

Adults orange yellow. Forewings have the postmedial region filled with black brown. Hindwings with marginal black brown band, broadest at apex and sharply narrowing to before anal angle. Male genitalia as discussed under genus.

Distribution: Assam, North India, North East Himalayas.

Larval host plant: Not known.



Pseudoscaptia rothschildi (Draudt, 1914)

Genus *Nishada* Moore

Moore, 1878; *Proc. Zoo. Soc. Lond.*, 1878: 23

Type species: *Nishada flabrifera* Moore, 1878

Diagnosis: Adults unmarked yellow to brownish. They have short hindwings which are more developed in males. Males having a paired pouch like structure on third abdominal tergite. Male genitalia with valvae have a spine like process arising from costa. Female genitalia with corpus bursae spherical but may have a neck continuing from the long and narrow ductus bursae, two signa present.

Remarks: Genus *Nishada* Moore, 1878 was described for the inclusion of *Nishada flabrifera* Moore, 1878 from Calcutta (Kolkata), *Lithosia rotundipennis* Walker from Borneo and *Lithosia chilomorpha* Snellen from Sumatra. The Genus is distributed throughout Indo-Australian tropics.

Known species of Genus *Nishada* Moore from India: *Nishada chilomorpha* (Snellen, 1877); *Nishada flabrifera* Moore, 1878; *Nishada rotundipennis* (Walker, 1862).

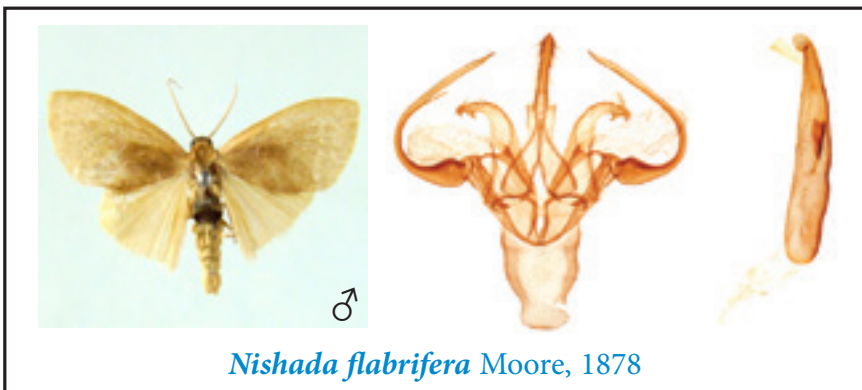
Nishada flabrifera Moore, 1878

Nishada flabrifera Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 23

Forewings yellowish brown. Hindwings paler. Male genitalia with valvae differentiated into long sickle shaped costal process which is swallowed at base, saccular process curved and bifid at apex.

Distribution: West Bengal (Kolkata), Tamil Nadu (Nilgiris), Kerala (Travancore).

Larval host plant: Not known.



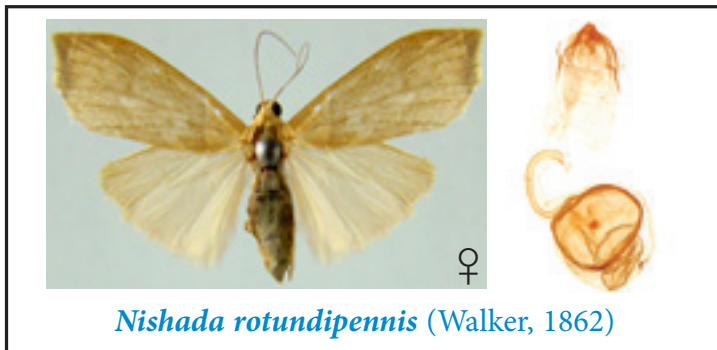
***Nishada rotundipennis* (Walker, 1862)**

Lithosia rotundipennis Walker, 1862; *Journ. Proc. Linn. Soc. Zool.*, **6**: 104

Adults brownish. Forewings with black on underside of terminal area from apex to vein CU_1 . Female genitalia have corpus bursae globular with a pair of signum.

Distribution: North East Himalayas.

Larval host plant: Not known.



Genus *Dolgoma* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, **1878**: 20

Type species: *Lithosia reticulata* Moore, 1865.

Diagnosis: Genus *Dolgoma* Moore is distinct due to male genitalia with valvae having rounded apical costa and saccular process, the saccular process deflected at tip and covered with small spines; vesica without any cornutus, however some fields of small spines are present.

Remarks: Genus *Dolgoma* Moore, 1878 and its allied genera: *Katha* Moore, 1878; *Tarika* Moore, 1878; *Zadadra* Moore, 1878; *Prabhasa* Moore, 1878; *Gandhara* Moore, 1878; *Capissa* Moore, 1878 were treated for many years as the members of Genus *Lithosia* Fabricius, 1798 or *Eilema* Hübner, 1819. Recently, Dubatolov and Zolotuhin, 2011 compared the type species of all the above set of genera and resurrected them to be treated as good genera. Genus *Dolgoma* is known by a total of twelve species distributed from India to China, Thailand and Eastern Asia.

Known species of Genus *Dolgoma* Moore from India: *Dolgoma angulifera* (Felder, 1868); *Dolgoma oblitterans* (Felder, 1868); *Dolgoma recta* Černý, 2009; *Dolgoma reticulata* (Moore, 1865); *Dolgoma xanthocraspis* (Hampson, 1900).

Dolgoma reticulata (Moore, 1865)*Lithosia reticulata* Moore, 1865, *Proc. Zool. Soc. Lond.*, **1865**: 798

Grey brown. Forewings irrorated with black scales; a dark spot beyond middle of costa with an indistinct line from it. Hindwings paler. Male genitalia have the vesica with a patch of elongated spines and field of scobination.

Distribution: North West Himalayas (Dalhousie), Sikkim.

Larval host plant: Not known.

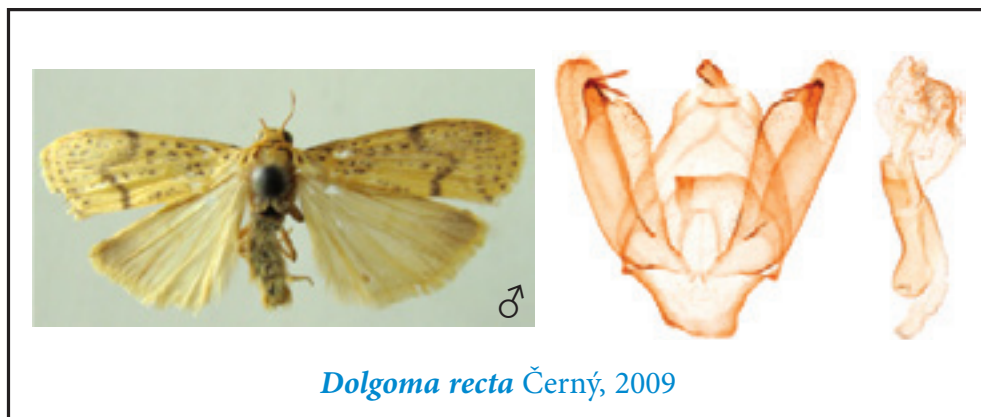
*Dolgoma reticulata* (Moore, 1865)*Dolgoma recta* Černý, 2009*Dolgoma recta* Černý, 2009, *Moths of Thailand*, **6**: 143-144

Adults yellow with fuscous scales; in forewings, fuscous medial fascia from costa to hind margin, angled outwards at lower angle of cell. Hindwings paler, with fuscous at apex. In male genitalia, saccular process has two spines at apex; vesica membranous with a small zone of sclerotizations.

Distribution: Arunachal Pradesh (Ziro, Hunli).

Larval host plant: Not known.

Remarks: Reporting of the species from Arunachal Pradesh is its first record from India.



Genus *Katha* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 16

Type species: *Bombyx helvola* Hübner, [1803] 1796

Diagnosis: Forewings with nearly straight costal margin in males and slightly convex in females. Male genitalia with valvae having ovoid costal process and a hook like ventral process; vesica long with some lateral lobes, two or three stout cornuti present, dentate sclerotised plate may be present or absent.

Remarks: Genus *Katha* Moore, 1878 was established for the placement of *nigrifrons* Moore, *terminalis* Moore, *cucullata* Moore, *intermixta* Walker, *brevipennis* Walker from India; *apicalis* Walker from Borneo and *Lithosia helvola* Hübner from Europe. Hampson (1900) designated *helvola* Hübner (cited as *Noctua depressa* Esper, 1787) as its type species. Taxonomic review of this Genus was done by Dubatolov and Zolotuhin (2011) and Dubatolov *et al.* (2012). The Genus is represented in India, South China, to South East Asia.

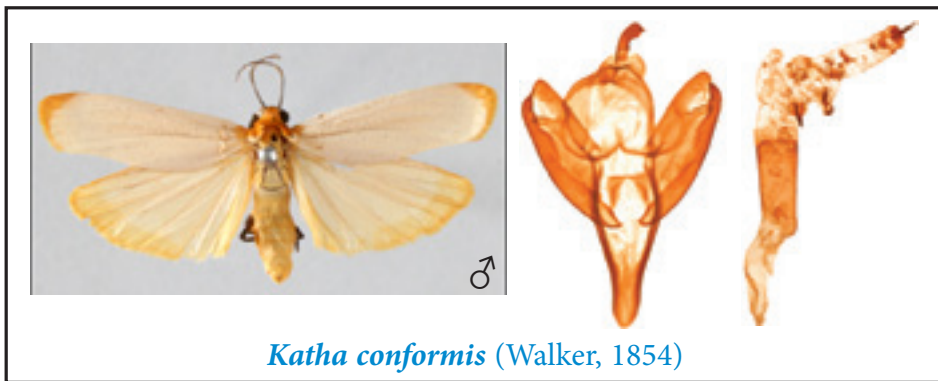
Known species of Genus *Katha* Moore from India: *Katha conformis* (Walker, 1854), *Katha montana* Bucsek, 2012.

Katha conformis* (Walker, 1854)Lithosia conformis* Walker, 1854; *List. Spec. Lepid. Ins. Colln Br. Mus.*, 2: 509

Forewings dull white, costa towards apex and termen is yellowish. Hindwings paler with its terminal area yellow. Male genitalia have the vesica with two prominent spines and a spined plate.

Distribution: North West Himalayas (Kangra, Dharmasala), Meghalaya (Khasi Hills), Sikkim.

Larval host plant: Not known.

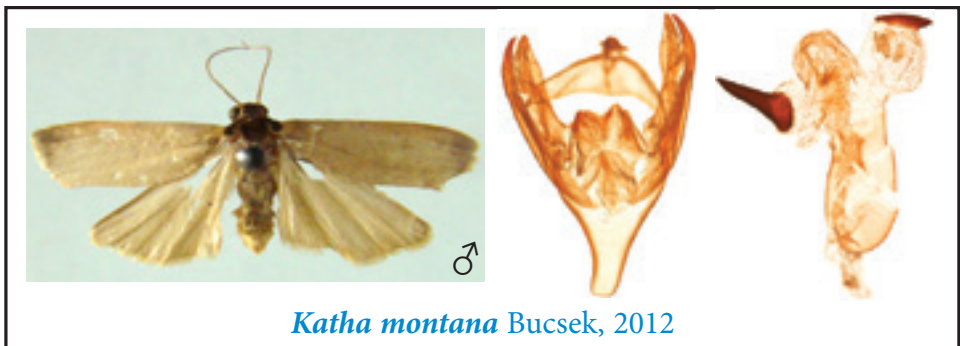
***Katha montana* Bucsek, 2012***Katha montana* Bucsek, 2012; *Ereb. Arct. (Lith.: Arct.) of Malay Penin.-Malay*: 123

Forewings ochreous brown with some dark on apex. Hindwings paler. Male genitalia have the vesica with a strong spine and a sclerotized plate with fields of scobination.

Distribution: Arunachal Pradesh (Deomali).

Larval host plant: Not known.

Remarks: *Katha montana* Bucsek, 2012 is reported for the first time from India. The tip of male genitalia is slightly different from Bucsek 2012, so this species may be a new. However, before the further studies on its population variation, we are keeping it as *K. montana* Bucsek.



Genus *Tarika* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 14

Type species: *Lithosia varana* Moore, 1865

Diagnosis: Adults uni-coloured, pale and pattern less. Male genitalia with valvae have an ovoid costal process, hook like ventral process which is apically curved and a wide triangular harpae; vesica tubular with a ring of numerous spine at base. Female genitalia with ductus bursae moderate and corpus bursae obliquely elongate with some scobination.

Remarks: Genus *Tarika* Moore, 1878 was established for the placement of two species: *Lithosia varana* Moore and *Lithosia nivea* Walker from Darjeeling. Kirby (1892) designated *varana* Moore as its type. Daniel (1954) and Fang (2000) treated *Tarika* Moore as a distinct Genus whereas, Holloway (2001) studied it under *Eilema* Hübner. Černý and Pinratana (2009) and Dubatolov and Zolotuhin (2011) accepted its generic status. The Genus is known by sole included species and distributed in India, China and Thailand.

Known species of Genus *Tarika* Moore from India: Sole included species.

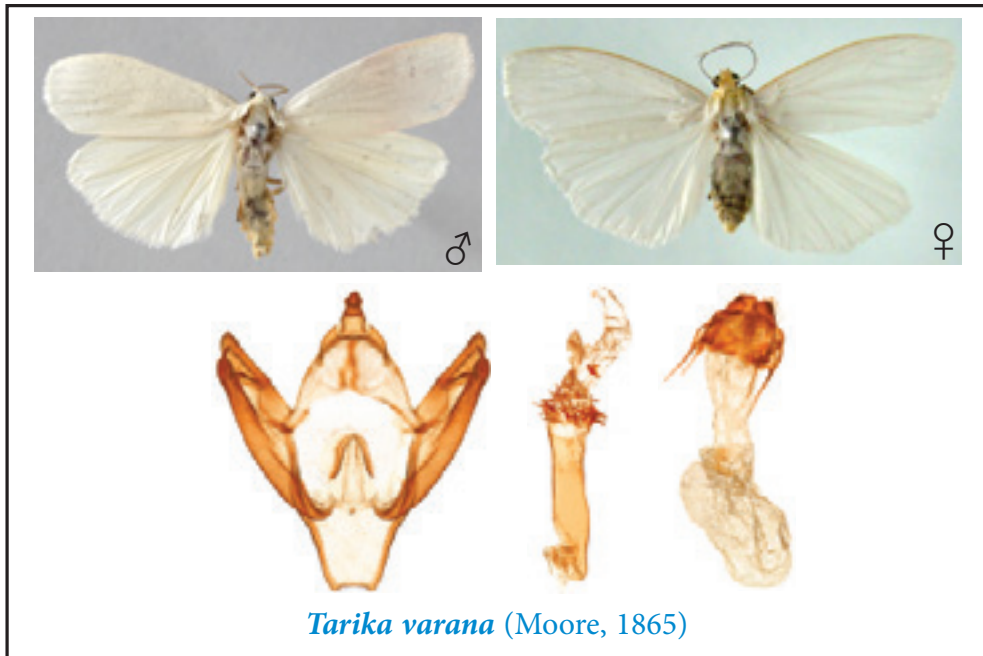
Tarika varana (Moore, 1865)

Lithosia varana Moore, 1865; *Proc. Zool. Soc. Lond.*, 1865: 797

Males dull white, underside of forewings suffused with fuscous. Females sharp white, have the forewings with costa yellow. Genitalia discussed under genus.

Distribution: Sikkim, West Bengal (Darjeeling), Arunachal Pradesh, Uttarakhand, Nagaland.

Larval host plant: Not known.



Tarika varana (Moore, 1865)

Genus *Zadadra* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 25

Type species: *Zadadra distorta* Moore, 1872 (by monotypy)

Diagnosis: Genus *Zadadra* Moore is closely allied to Genus *Prabhasa* Moore. The main synapomorphic characters for both the genera are reduced juxta and transtilla forming an arch above aedeagus. But are distinct due to uncus long and narrow and sacculus and cucullus wide in *Zadadra* Moore, whereas, uncus slightly S-curved; sacculus almost fused by their ventral edges, their apices upturned; cucullus noticeably shorter than sacculus in *Prabhasa* Moore (Dubatolov & Zolotuhin, 2011).

Remarks: Moore (1878) erected the monotypic Genus *Zadadra* to accommodate *Lithosia distorta* Moore, 1872 from Darjeeling (India). In recent years, the Genus is reviewed by Dubatolov & Zolotuhin (2011) and Joshi *et al.* (2015). *Zadadra* Moore is known by five species distributed in India, China, Thailand, Vietnam and Nepal.

Known species of Genus *Zadadra* Moore from India: *Zadadra distorta* (Moore, 1872); *Zadadra fuscistriga* (Hampson, 1894); *Zadadra neodistorta* Joshi, Kirti & Singh, 2015; *Zadadra cucullata* Joshi, Kirti & Singh, 2015.

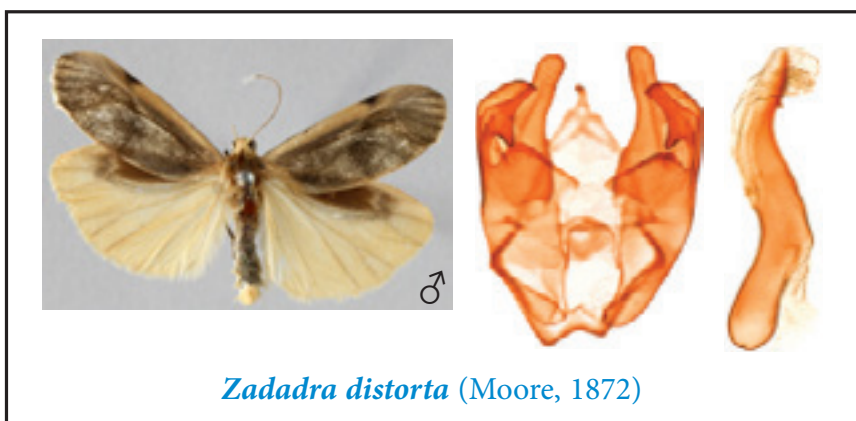
Zadadra distorta (Moore, 1872)

Lithosia distorta Moore, 1872; *Proc. Zool. Soc. Lond.*, 1872: 572

Forewings highly arched at inner margin, elongated cell with a fringe of long scales, a postmedial costal spot present from which an obscure obliquely curved fuscous band arises. Hindwings with androconial patch, not reaching beyond discal cell. Male genitalia with cucullus uniformly thick, valvula thick with projection on inner side; aedeagus slightly S- shaped with a spine at tip; vesica without any cornutus.

Distribution: Nagaland (Naga Hills), Meghalaya (East Khasi Hills), Sikkim, West Bengal (Darjeeling), Arunachal Pradesh, North West Himalayas.

Larval host plant: Not known.



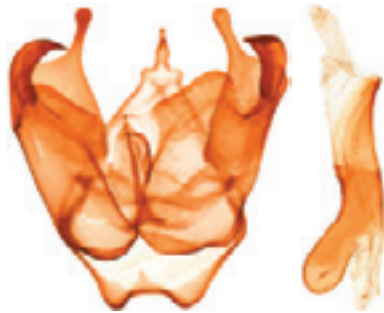
Zadadra neodistorta Joshi, Kirti & Singh, 2015

Zadadra neodistorta Joshi, Kirti & Singh, 2015; *Florida Entomologist*, 98 (2): 538

Morphologically, *Z. neodistorta* Joshi, Kirti & Singh resembles *Z. distorta* (Moore) but can be differentiated by the presence of a narrow costal fascia on the forewings, and a smaller androconial patch on the hindwings of the males. The distinct male genital features of *neodistorta* are: cucullus halter like, the saccular process sickle shaped, without any projection on the inner side.

Distribution: Sikkim.

Larval host plant: Not known.



Zadadra neodistorta Joshi, Kirti & Singh, 2015

Zadadra cucullata Joshi, Kirti & Singh, 2015

Zadadra cucullata Joshi, Kirti & Singh, 2015; *Florida Entomologist*, **98** (2): 537

Morphologically, *Zadadra cucullata* Joshi, Kirti & Singh differs from *Z. distorta* (Moore) and *Z. neodistorta* Joshi, Kirti & Singh in the absence of a postmedial spot and a yellow fascia on the forewing costa. The male genital features are: broad and lamellate cucullus, harpe present.

Distribution: Nagaland, Sikkim.

Larval host plant: Not known.



Zadadra cucullata Joshi, Kirti & Singh, 2015

Genus *Prabhasa* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 25

Type species: *Prabhasa venosa* Moore, 1878 (by subsequent designation by Hampson, 1894)

Diagnosis: As discussed under the diagnosis of Genus *Zadadra* Moore.

Remarks: Genus *Prabhasa* Moore, 1878 was described for three new species: *Prabhasa venosa* Moore, 1878 from Darjeeling; *Prabhasa flavicosta* Moore, 1878 from Cheerapunji and *Prabhasa costalis* Moore, 1878 from China. The Genus was latest reviewed by Dubatolov & Zolotuhin (2011) with its type species, *P. venosa* Moore, 1878. However, its relation with *Zadadra* Moore needs further investigations.

Known species of Genus *Prabhasa* Moore from India: *Prabhasa costalis* Moore, 1878; *Prabhasa flavicosta* (Moore, 1878); *Prabhasa khasiana* (Rothschild, 1912); *Prabhasa plumbeomicans* (Hampson, 1894); *Prabhasa venosa* Moore, 1878.

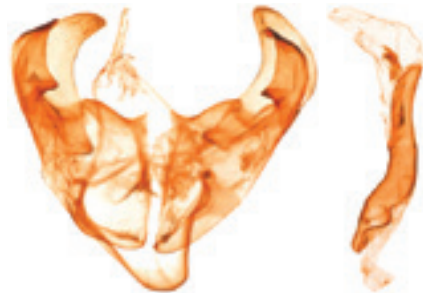
Prabhasa plumbeomicans Hampson, 1894

Prabhasa plumbeomicans Hampson, 1894; *The Fauna Br. Ind. Moths*, 2: 77

Fusca brown. Forewings with costa ochreous to near apex; postmedial costal spot and traces of an oblique line. Hindwings ochreous white, suffused with fuscous brown at apex. Male genitalia with cucullus and sacculus are almost of same shape; however sacculus has a projection on its inner wall.

Distribution: North East Himalayas, Nagaland (Naga Hills)

Larval host plant: Not known.



Prabhasa plumbeomicans Hampson, 1894

Genus *Gandhara* Moore

Moore, 1878; *Proc. Zool. Soc. London*, 1878: 15

Type species: *Lithosia serva* Walker, 1854 (by monotypy)

Diagnosis: Forewings broad with convex costal margin. Males have tuft of androconial scales in the beginning of radial veins on the upper side of forewings. Male genitalia with an ovoid costal process and a hook like ventral process, juxta with apical processes presented as spinules, brush fused with apical parts of the aedeagus.

Remarks: Genus *Gandhara* Moore, 1878 was erected as a monotypic Genus for its type species *Lithosia serva* Walker collected from Darjeeling (India). For a long time the Genus remained as a synonym of Genus *Lithosia* Fabricius or *Eilema* Hübner. The taxonomic review of *Gandhara* Moore was done by Dubatolov and Zolotuhin (2011) and Dubatolov (2012). The Genus is known by its type species *G. serva* (Walker, 1854) from India, Nepal and *Gandhara vietnamica* Dubatolov, 2012 from Vietnam.

Known species of Genus *Gandhara* Moore from India: Sole included species.

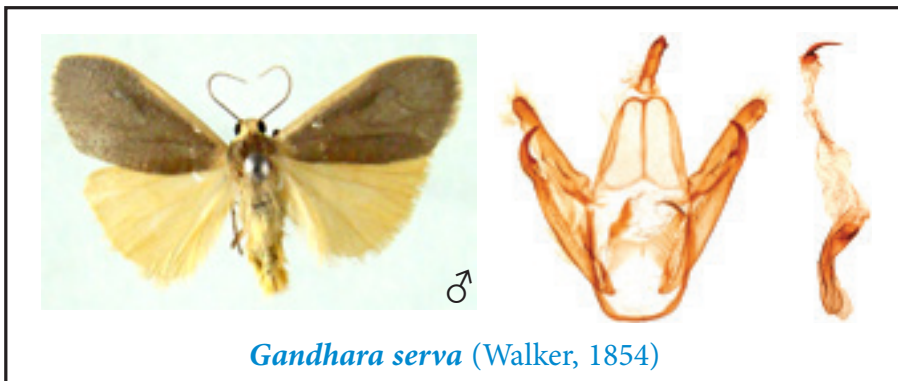
Gandhara serva (Walker, 1854)

Lithosia serva Walker, 1854; *List Spec. Lepid. Ins. Colln. Br. Mus.*, 2: 506

Forewings grey, the costal yellow fascia narrow towards apex. Hindwings pale yellow. Male genitalia have the vesica with single apical spine.

Distribution: Uttrakhand.

Larval host plant: Not known.



Genus *Capissa* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 19

Type species: *Lithosia vagesa* Moore, [1860] 1858–1859 (by subsequent designation by Hampson, 1900)

Diagnosis: Forewings narrow with almost straight costal margin, males with a fold and streak of modified scales along cubital vein. Hindwings with a central patch of androconial scales. Male genitalia have the valvae ovoid with distinct ventral process, harpae short and membranous.

Remarks: Moore (1878) erected the Genus *Capissa* to include *Lithosia innotata* Butler, 1877 from North West Himalayas, *Lithosia vagesa* Moore, 1859 from Khasi Hills (Meghalaya), *Lithosia nigripars* Walker, 1856 from North India, *Lithosia insolita* Walker, 1854 from China, *Lithosia sambara* Moore, 1859 from Java, and four of his newly described species, *L. fasciata* from Sri Lanka, *L. flavens* from Saidabad, *L. pallens* from Darjeeling (India) and *L. auriflava* from Kathmandu (Nepal). For a long time the Genus *Capissa* Moore remained synonymized till its review by Dubatolov and Zolotuhin (2011) and Kirti *et al.* (2014a). The Genus is known by its type species and *C. alba* Kirti, Singh & Joshi, 2014 and distributed in India, Sri Lanka, Nepal & Burma (Myanmar).

Known species of Genus *Capissa* Moore from India: *Capissa alba* Kirti, Singh & Joshi, 2014; *Capissa vagesa* (Moore, [1860] 1858-59).

Capissa vagesa (Moore, [1860] 1858-59)

Lithosia vagesa Moore, [1860] 1858-59; *Lepid. East Ind. Comp.* 2: 304

Ground colour yellow-Brown, androconial patch present on hindwings. Male genitalia with costal margin of valvae rounded; aedeagus with a hooked spine at tip, vesica with two spines.

Distribution: Kashmir, North West Himalayas (Mussoorie, Kangra), Sikkim, Meghalaya (Khasis), West Bengal, Meghalaya (East Khasi Hills & Jaintia Hills).

Larval host plant: Not known.



Capissa vagesa (Moore, [1860] 1858-59)

Capissa alba Kirti, Singh & Joshi, 2014

Capissa alba Kirti, Singh & Joshi, 2014; *Annals Zoologici*, **64** (1): 46

Capissa alba Kirti, Singh & Joshi is allied to *C. vagesa* but differs due to creamish wings and lack of androconial patch on hindwings. Male genitalia have the terminal part of costal margin triangular, vesica with three spines.

Distribution: Jammu and Kashmir (Patnitop).

Larval host plant: Not known.



Capissa alba Kirti, Singh & Joshi, 2014

Genus *Thysanoptyx* Hampson

Hampson, 1894; *Fauna Br. India Moths*, 2: 74

Type species: *Lithosia tetragona* Walker, 1854

Diagnosis: Forewings with very long discal cell. Male genitalia with uncus weakly developed, valvae bifid with costal process long and round at tip; vesica multilobed having spined plates.

Remarks: Genus *Thysanoptyx* was proposed by Hampson (1894) for inclusion of *Lithosia tetragona*, Walker as its type species. The later on studies by Hampson (1900), Daniel (1954), Birket & Smith (1965), Arora & Chaudhury (1982) treated this Genus as a synonym of *Lithosia* Fabricius or *Elima* Hübner. Kishida (1993), Fang (2000), Holloway (2001) studied it as a distinct genus. The Genus is mainly distributed in oriental region.

Known species of Genus *Thysanoptyx* Hampson from India: *Thysanoptyx sordida* (Butler, 1881); *Thysanoptyx tetragona* (Walker, 1854); *Thysanoptyx incurvata* Wileman and West, 1928; *Thysanoptyx pseudotetragona* Joshi, Singh & Kirti sp. nov.

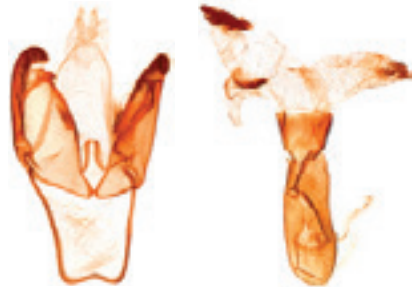
Thysanoptyx tetragona (Walker, 1854)

Lithosia tetragona Walker, 1854; *List. Spec. Lepid. Ins. Colln. Br. Mus.*, 2: 510

Adults yellow. Forewings with a large quadrate patch leaving basal, costal & terminal area yellow, a postmedial costal spot. Male genitalia have the vesica with three spined plates and some dense scobinations.

Distribution: Sikkim, North India, West Bengal (Darjeeling), Assam, Arunachal Pradesh, Nagaland, Kerala, Meghalaya (East Garo Hills), Manipur, Tamil Nadu.

Larval host plant: Not known.



Thysanoptyx tetragona (Walker, 1854)

Thysanoptyx pseudotetragona Joshi, Singh & Kirti sp. nov.

Description: (Male 34 mm) Antennae simple, pedicel and shaft black. Labial palpi porrect. Forewings ochreous, a subbasal androconial patch of modified yellow scales present, cell extraordinary long and narrow with long tuft of hairs at base, a large quadrate black patch below cell, postmedial black spot on costa and beyond this spot costa black, margin fuscous. Hindwings ochreous, submarginal & marginal area suffused with fuscous, costa black from end of cell to apex. Abdomen brown; tuft orange yellow. Male genitalia with uncus short and narrow, bifid; valvae with sacculus well defined, cucullus membranous and laiden with series of small spines; valvula irrorated with small spines; saccular margin with a terminal short hook; juxta rectangular; aedeagus short and broad; vesica membranous with irroration of small spines, cornuti represented by three large and serrate plates.

Material examined

Holotype: Kerala : Kumily, 23.xi.08 - 1 Male.

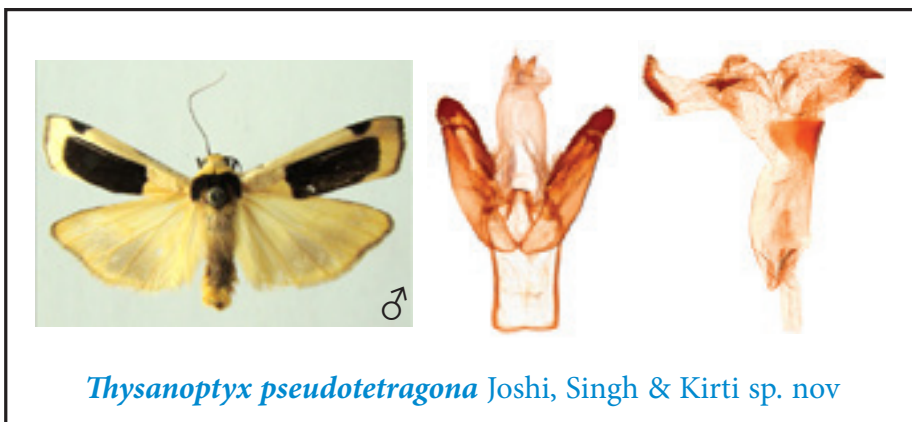
Paratype: Kerala : Kumily, 23.xi.08 - 3 Males. (Coll.: Rahul Joshi) (Types deposited in Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab)

Distribution: Kerala.

Larval host plant: Not known.

Remarks: This species is quite distinct from *T. tetragona* (Walker) due to longer and larger quadrate patch, areole missing in forewing venation and hindwings with black suffusion. Male genitalia with distinct shape, size and position of cornuti in vesica and different shape of saccus and juxta further discriminate it from other allied species.

Etymology: The name of the new species pertains to the name of its closely allied species, *T. tetragona* (Walker).



***Thysanoptyx incurvata* Wileman & West, 1928**

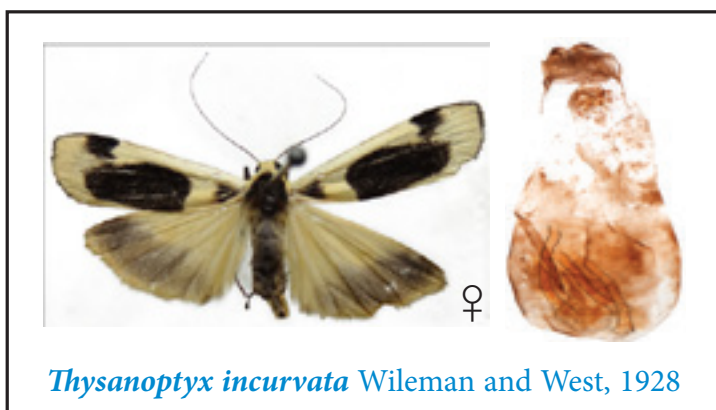
Thysanoptyx incurvata Wileman and West, 1928; *Ann. Mag. Nat. Hist.* 2 (10): 215

The species is distinct from *T. tetragona* (Walker, 1854) in having a basal triangular patch in forewings with the distal-apical corner of large quadrate patch oblique. Hindwings suffused with fuscous. Female genitalia with ductus bursae short, corpus bursae flask like.

Distribution: Sikkim (Mangan), Mizoram (Lunglei).

Larval host plant: Not known.

Remarks: The reporting of species, *T. incurvata* Wileman and West from Mizoram and Sikkim is its first record from India.



Genus *Dubatolova* Kirti, Singh & Joshi

Kirti, Singh & Joshi, 2014; *Tinea* 23 (1): 42

Type species: *Lithosia prabana* Moore, 1859

Diagnosis: Forewings narrow and dark with pale costa. Male genitalia with uncus hooked, valvae broad with mid ventral and mid dorsal processes.

Remarks: Genus *Dubatolova* Kirti, Singh and Joshi (2014b) was erected as a monotypic for its type species, *Lithosia prabana* Moore, 1859. The Genus is mainly distributed from North India to South East Asia.

Known species of Genus *Dubatolova* Kirti, Singh and Joshi from India: Sole included species.

Dubatolova prabana (Moore, 1859)

Lithosia prabana Moore, 1859; *Cat. Lepid. Insects Mus. Nat. E. Ind. House* 2: 304

D. prabana Moore is a dark grey coloured species with yellow costa of forewings. Male genitalia have vesica with a large patch of spines near the tip of aedeagus, another patch before tip of the vesica.

Distribution: Arunachal Pradesh.

Larval host plant: Not known.



Dubatolova prabana (Moore, 1859)

Genus *Gampola* Moore

Moore, 1878; *Proc. Zoo. Soc. Lond.*, **1878**: 26

Type species: *Gampola fasciata* Moore, 1878 (by monotypy)

Diagnosis: Forewings, in males, short and broad, a costal fringe of scales present, inner margin distorted and fringed with long scales towards outer angle, cell elongated with discocellulars short. In females, forewings elongated, without any costal fringe. Male genitalia with valvae having two long costal process, juxta long; vesica without cornuti.

Remarks: Genus *Gampola* Moore, 1878 was erected as a monotypic Genus to include a new species, *G. fasciata* Moore, 1878 from Sri Lanka. In recent years the taxonomy of the Genus was dealt by Fang (2000), Kendrick (2003), Černý and Pinratana (2009) and Dubatolov *et al.* (2012). Apart from its type species, the Genus includes *Gampola sinica* Dubatolov, Kishida & Wang (2012) from Guangdong (China). *Gampola* Moore is distributed in India, Sri Lanka, Hong Kong, and Thailand. Reporting of *Gampola* species from South India and Assam is the rediscovery of the Genus from India.

Known species of Genus *Gampola* Moore from India: *Gampola fasciata* Moore, 1878, *Gampola sinica* Dubatolov, Kishida & Wang, 2012.

Gampola fasciata Moore, 1878

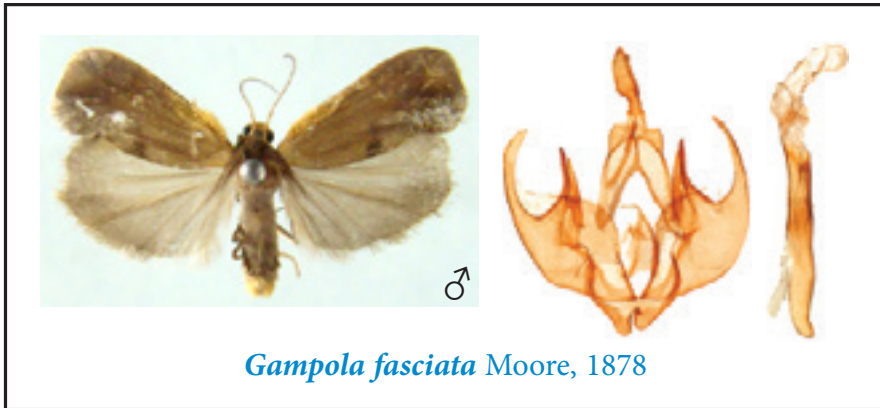
Gampola fasciata Moore, 1878; *Proc. Zoo. Soc. Lond.*, **1878**: 27

Forewings have a funnel like curved and diffused fuscous shade from termen to middle of inner margin. Male genitalia with two unequal osculate processes from costa, saccular edge evenly curved to an acute apex; vesica without any cornutus.

Distribution: Karnataka, Tamil Nadu.

Larval host plant: Not known.

Remarks: The present species is reported for the first time from India.



***Gampola sinica* Dubatolov, Kishida & Wang, 2012**

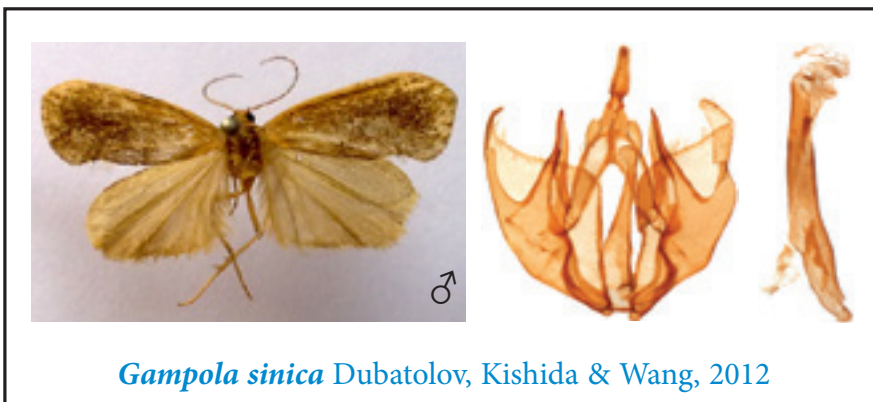
Gampola sinica Dubatolov, Kishida & Wang, 2012; *Tinea*, **22** (1): 35

Gampola sinica Dubatolov, Kishida & Wang is differ from *G. fasciata* in having the costal fold longer. Male genitalia with uncus S shape, distal tip of saccular edge short; juxta knobbed apically; vesica without any cornutus, scobination present.

Distribution: Assam (Jatinga).

Larval host plant: Not known.

Remarks: The present species is reported for the first time from India.



Genus *Conilepia* Hampson

Hampson, 1900; *Cat. Lep. Phal. Br. Mus.*, 2: 219

Type species: *Oeonistis nigrigosta* Leech, 1889

Diagnosis: Forewings long and narrow. Male genitalia with uncus curved towards tip, a spine on sub-apical region; valvae divided into a broad flap-like costal region and a small, sclerotised, curved saccular process; vinculum long; vesica longer than aedeagus; female genitalia with corpus bursae long; signum present.

Remarks: The Genus *Conilepia* Hampson (1900) was erected for the sole included and type species, *C. nigrigosta* (Leech) from Japan. Later on, Kishida and Yazaki (1991) added subspecies, *C. nigrigosta paiwan* Kishida from Taiwan. Fang (2000) studied *C. nigrigosta* from China. Kirti *et al.* (2013) added second species to this genus, *Conilepia hunliensis* from Hunli (Arunachal Pradesh, India). The Genus is distributed in India (Arunachal Pradesh), Japan, China and Taiwan.

Known species of Genus *Conilepia* Hampson from India: Sole included species.

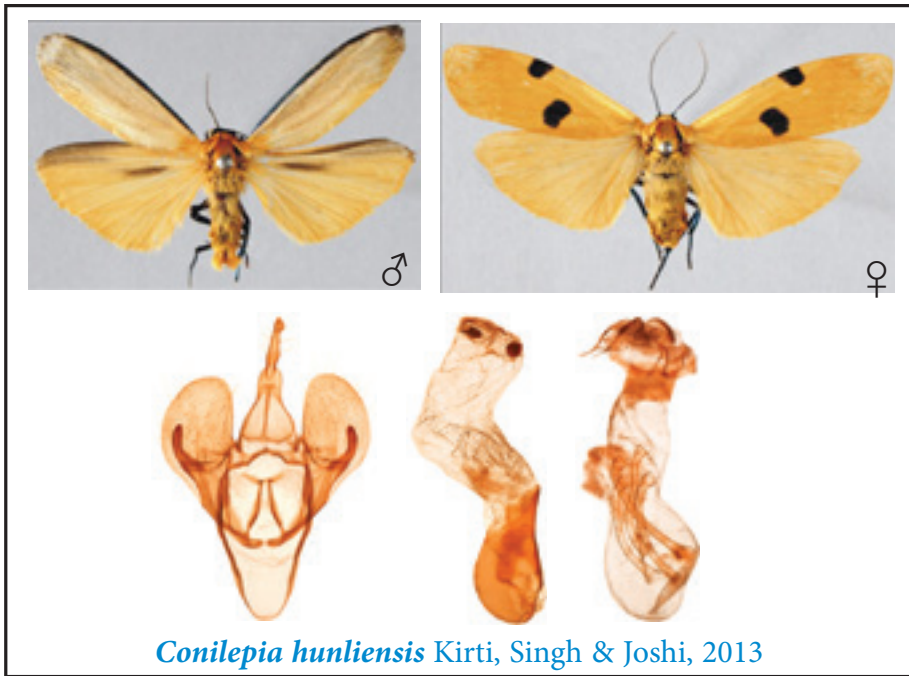
Conilepia hunliensis Kirti, Singh & Joshi, 2013

Conilepia hunliensis Kirti, Singh & Joshi, 2013; *Dtsch. Entomol. Z.* **60** (2): 232

Morphologically, *Conilepia hunliensis* Kirti, Singh & Joshi is allied to *C. nigrigosta* but differs significantly in several distinguishing characters. The yellow band of the forewings in the male is more distinct and broader in *nigrigosta*. In the female, the antemedial spot is almost rounded, whereas, it is reniform in *hunliensis*. The costa of the hindwings of male is less marked than in *nigrigosta*. Furthermore, in the male genitalia the saccular process of *C. hunliensis* is evenly curved whereas, in *nigrigosta* the saccular process is strongly angled.

Distribution: Arunachal Pradesh (Hunli).

Larval host plant: Not known.



Genus *Neoduma* Hampson

Hampson, 1918; *Novit. Zool.*, 25: 101

Type species: *Neoduma ectozona* Hampson, 1918

Diagnosis: Forewing cell extends beyond $\frac{4}{5}$ of the length of wing. Male genitalia with valvae narrow and having one or two apical processes; vinculum twisted on each side where it meets tegumen. Female genitalia with corpus bursae heavily setosed.

Remarks: The Genus *Neoduma* Hampson (1918) was established as a monotypic Genus for its type species, *ectozona* Hampson from Philippines. Černý and Pinratana (2009) shifted the second species, *Siccia kuangtungensis* Daniel (from China & Thailand) to Genus *Neoduma* Hampson. Bucsek (2012) described the third species, *Neoduma nigra* Bucsek from Malaysia and in 2013, Dubatolov & Bucsek added one more species, *Neoduma alexeikorshunovi* Dubatolov & Bucsek from Thailand followed by *Neoduma valvata* Kirti, Joshi & Singh, 2014 from East India. *Neoduma* Hampson is distributed in Philippines, Thailand, Borneo, Peninsular Malaysia and India.

Known species of Genus *Neoduma* Hampson from India: *Neoduma valvata* Kirti, Joshi & Singh, 2014; *Neoduma kuangtungensis* (Daniel, 1951).

Neoduma valvata Kirti, Joshi & Singh, 2014

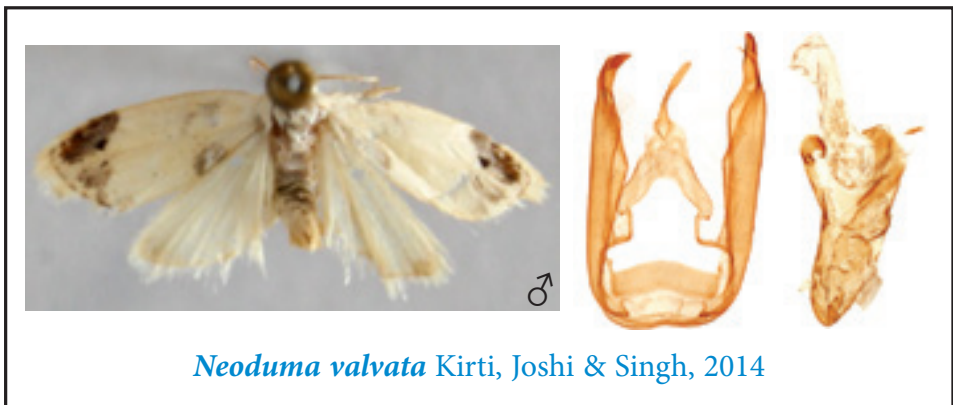
Neoduma valvata Kirti, Joshi & Singh, 2014; *J. of Threatened Taxa*, **6** (12): 6569

Neoduma valvata Kirti, Joshi & Singh is allied to *N. ectozona* Hampson and *N. kuangtungensis* (Daniel) but differs due to the forewings with sharply narrowing postmedial band, ending to a point at anal angle. Hindwings white with slight suffusion of grey on apex and hind margin. Male genitalia have valvae with two apical processes, juxta broad and flat.

Distribution: Assam, Mizoram.

Larval host plant: Not known.

Remarks: *N. valvata* Kirti, Joshi & Singh, 2014 is the only species in the Genus with two apical processes of valvae (in all the other *Neoduma* species such process is single).



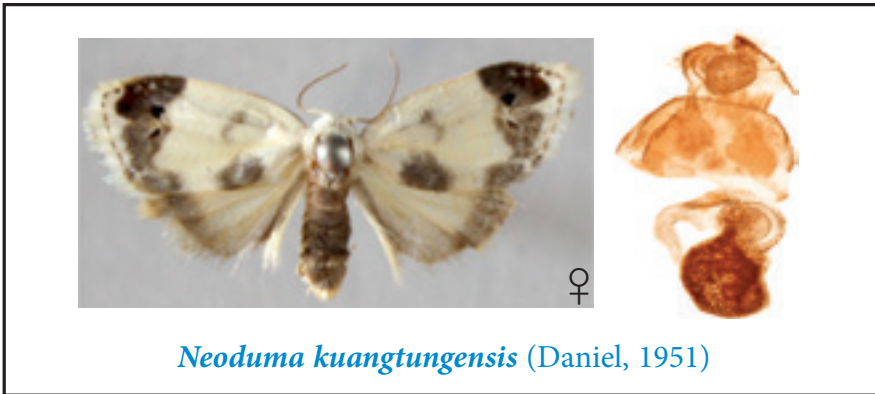
Neoduma kuangtungensis (Daniel, 1951)

Siccia kuangtungensis Daniel, 1951; *Bonn. Zool. Beitr.* **2**:303

Forewing band broader (comparative to *N. valvata*) at anal angle. Hindwings with distinct grey band on termen. Female genitalia with corpus bursae globular, covered with small spicules; signum absent; ductus bursae narrow.

Distribution: Mizoram.

Larval host plant: Not known.



Genus *Chrysorabdia* Butler

Butler, 1877; *Trans. Ent. Soc.*, 1877: 357

Type Species: *Lithosia viridata* Walker, [1865] 1864

Diagnosis: Genus is characterized by yellow ground colour and metallic blue black markings consisting of costal and transversal bands. The males have apparently broad hindwings.

Remarks: The Genus *Chrysorabdia* Butler (1877) was described for its type species, *Lithosia viridata* Walker from Darjeeling along with inclusion of another species, *Lithosia strigata* Moeschler, 1872 from Sikkim. At present the Genus is known by six species: *Chrysorabdia alpine* Hampson, 1900; *Chrysorabdia aurantiaca* Hampson, 1897; *Chrysorabdia bivitta* (Walker, 1856); *Chrysorabdia bilemani* Hampson, 1911; *Chrysorabdia viridata* (Walker, 1865) and *Chrysorabdia pinratani* Orhant, 2008 with its distribution in Oriental region.

Known species of Genus *Chrysorabdia* Butler from India: *Chrysorabdia aurantiaca* Hampson, 1898; *Chrysorabdia bivitta* (Walker, 1856); *Chrysorabdia viridata* (Walker, 1864).

Chrysorabdia viridata (Walker, [1865] 1864)

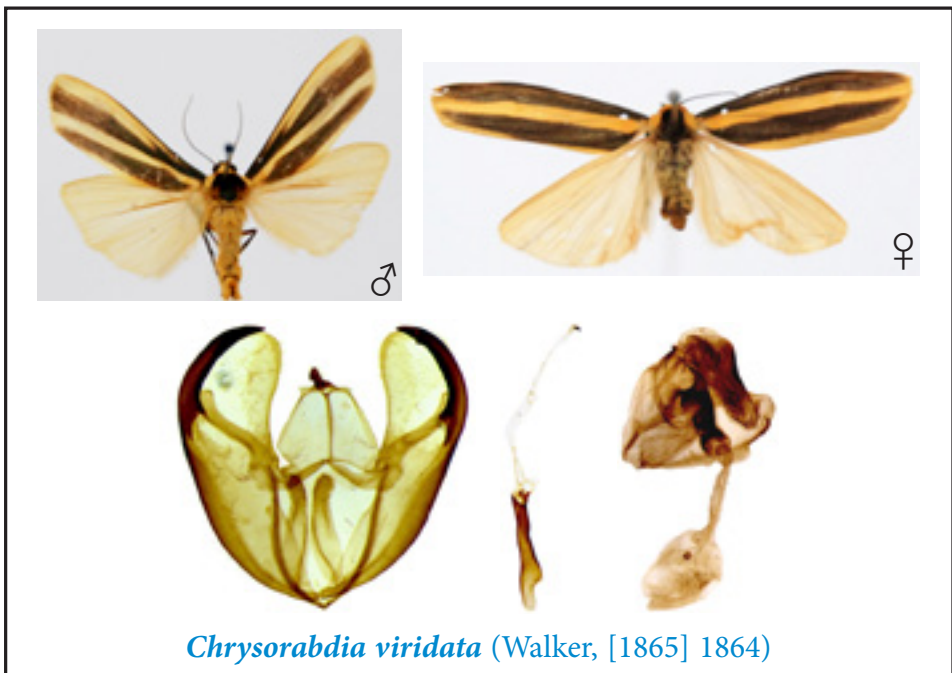
Lithosia viridata Walker, [1865] 1864; *List Specimens lepid. Ins. Colln Br. Mus.*, 31: 225

Forewings yellow with costa blue black, broad bands on subcosta & near inner margin. Hindwings pale yellow. In females, costal band is much broader and subcostal

band absent. Male genitalia with tegumen very broad; valvae broad, differentiated into a semi sclerotized flap like costal region and a sclerotized horn like saccular process, which bears a small spine before a sharp tip; vesica long with a small spine at tip. Female genitalia with ductus bursae membranous and narrow, sclerotized near ostium; corpus bursae membranous, globular with a prominent signum.

Distribution: Sikkim, Assam, West Bengal (Darjeeling), Arunachal Pradesh, Himachal Pradesh, (Shimla, Dalhousie), Meghalaya, Uttrakhand (Almorah).

Larval host plant: Not known.



Chrysorabdia bivitta (Walker, 1856)

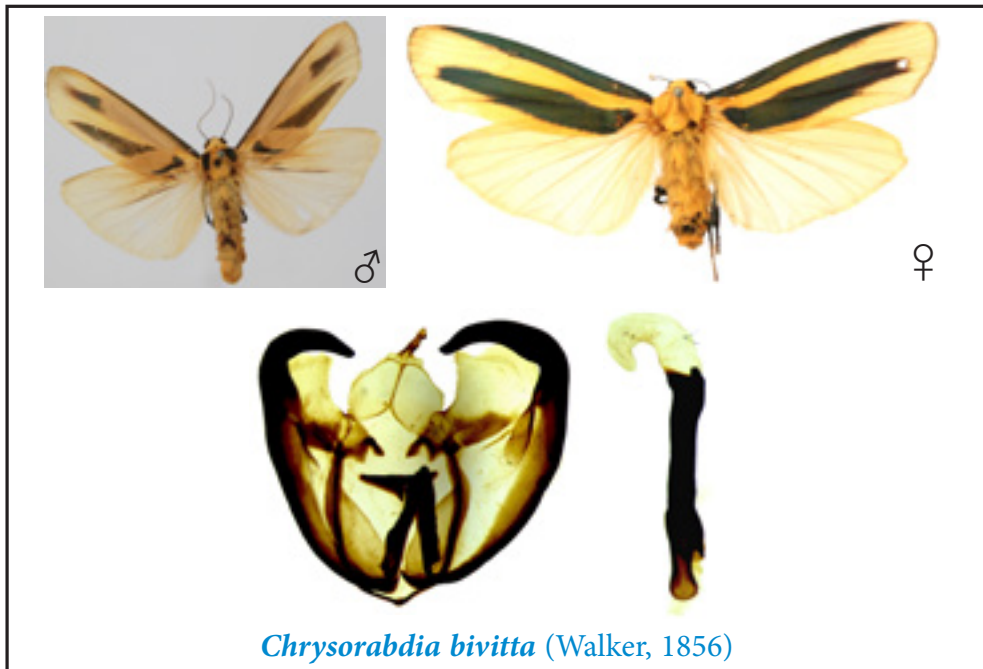
Lithosia bivitta Walker, 1856; *List Het. Br. Mus.*, 7: 1682

Forewings greyish yellow; a narrow costal blue streak, not reaching apex; a broad blue fascia in interno-median interspace, interrupted by a patch of greyish yellow scales; an elongate blue patch to near outer margin. Females have the forewings with costal fascia broad, the medial fascia continuous. Hindwings paler. Male genitalia robust than *Chrysorabdia viridata* (Walker), saccular process strongly sclerotized; juxta sclerotized,

aedeagus with a prominent out growth at tip; vesica unornamented.

Distribution: North West Himalayas, Sikkim, Meghalaya (Khasi Hills), Manipur, West Bengal (Darjeeling), Arunachal Pradesh (Tawang).

Larval host plant: Not known.



Genus *Lobobasis* Hampson, 1896

Hampson, 1896; *The Fauna of Br. India, Moths*, 4 : 498

Type species: *Lobobasis niveimaculata* Hampson, 1896

Diagnosis: Forewings dark brown, with some white patches on the base of costa and at the center of inner margin, apical area yellow. Male genitalia with valvae distinctly divided into cucullus and valvula; tip of aedeagus with numerous spines given out from plates.

Remarks: Genus *Lobobasis* Hampson, 1896 was established as a monotypic Genus for its type species, *Lobobasis niveimaculata* Hampson, 1896. The Genus shows sexual dimorphism and widely distributed from North East Himalayas to Queensland and Solomon Island.

Known species of Genus *Lobobasis* Hampson from India: Sole included species.

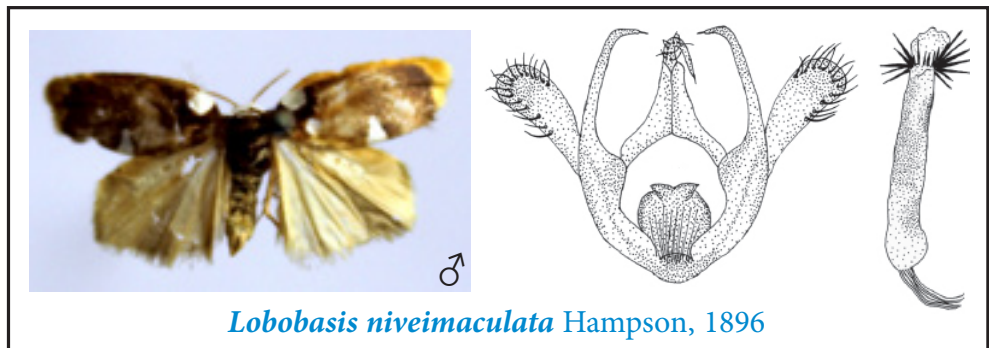
Lobobasis niveimaculata Hampson, 1896

Lobobasis niveimaculata Hampson, 1896; *The Fauna of Br. India, Moths*, 4: 498

Forewings have the costa and margin yellow, a white spot at the base of costa, another on base of innermargin; a postmedial triangular white patch on inner margin. Hindwings light yellow with fuscous suffusion. Male genitalia have uncus long & curved; valvae with distally curved saccular projection; aedeagus have plates on both sides of tip with long spines.

Distribution: North East Himalayas.

Larval host plant: Not known.



Genus *Padenia* Moore

Moore, 1882; *Lepid. Ceylon*, 2 (1): 58

Type species: *Cyllene transversa* Walker, 1854 (by monotypy)

Diagnosis: Adults dull white with black brown bands. Male genitalia distinguished by reduction of the saccular part of the valvae and presence of a long, slender process from the base of the valvae costa. This is very variable in form, but usually unequally bifurcate or trifurcate. Ventral to it is a much narrower and shorter rod-like process, arising from the center of the base of the valvae. Female genitalia have ductus bursae short, weakly sclerotized, filled with spines; corpus bursae globular membranous with series of small spines.

Remarks: Genus *Padenia* Moore, 1882 was established for its type species, *Cyllene transversa* Walker, 1854 from Sri Lanka. The Genus is distributed from the Indian mainland to Bismarck Island in the East.

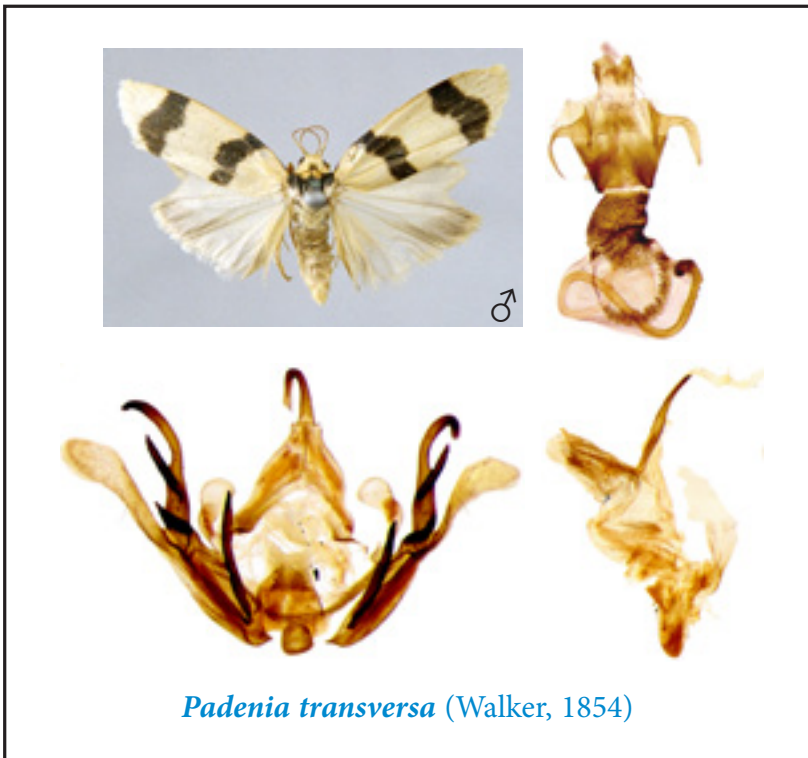
Known species of Genus *Padenia* Moore from India: *Padenia transversa* (Walker, 1854), *Padenia duplicana* (Walker, 1863).

Padenia transversa (Walker, 1854)*Cyllene transversa* Walker, 1854; *Cat. Lep. Het. Br. Mus.*, 2: 544

Forewings yellowish white, an oblique antemedial black band, postmedial band from costa to vein M_2 and excurved at vein Cu_1 , again bent inwards to meet tornus. Hindwings pale with the marginal area fuscous; in males, apex notched, long tuft of hair like scales on costa. Male genitalia have the vesica membranous with a single large spine and sclerotization.

Distribution: Andaman, Tamil Nadu (Nilgiris), Orissa (Ganjam), Manipur.

Larval host plant: Not known.



***Padenia duplicana* (Walker, 1863)**

Tospitis duplicana Walker, 1863; *List Spec. Lepid. Ins. Colln. Br. Mus.*, 28: 429

In comparison to *P. transversa* Walker, the forewing bands are narrower and farther from each other. Male genitalia have trifurcate costal process; vesica with field of scobination.

Distribution: Arunachal Pradesh.

Larval host plant: Not known.

Remarks: The present species is reported for the first time from India.



***Padenia duplicana* (Walker, 1863)**

Genus *Garudinia* Moore

Moore, 1882; *Lepid. Cey.*, 2 (1): 59

Type species: *Tospitis latana* Walker, 1863 (by monotypy)

Diagnosis: Forewings white, with dark brown bars and androconial patch, hindwings have the apical area strongly excised in males. Male genitalia with apically narrowed and often curved cucullus and a membranous flap like valvula.

Remarks: Genus *Garudinia* Moore was proposed for its type species, *Tospitis latana* Walker, 1863 from Sri Lanka. The Genus was reviewed by Holloway (1982, 2001), Černý (1995) and Kirti & Gill (2009a). Genus *Garudinia* Moore is known by fourteen species reported from the Oriental region.

Known species of Genus *Garudinia* Moore from India: *Garudinia biguttata* Rothschild, 1914; *Garudinia biplagiata* Hampson, 1896; *Garudinia conjuncta* Kirti & Gill, 2009; *Garudinia pseudosimulana* Kirti & Gill, 2009; *Garudinia simulana* (Walker, 1863).

Garudinia biplagiata* Hampson, 1896Garudinia biplagiata* Hampson, 1896; *The fauna Br. India Moths*, 4: 498

Forewings have subbasal and postmedial bands not conjoined to each other and not reaching the costa. Male genitalia have valvae broad, tip bifurcate; vesica with spined plates, sclerotizations and a field of scobonation.

Distribution: Arunachal Pradesh.

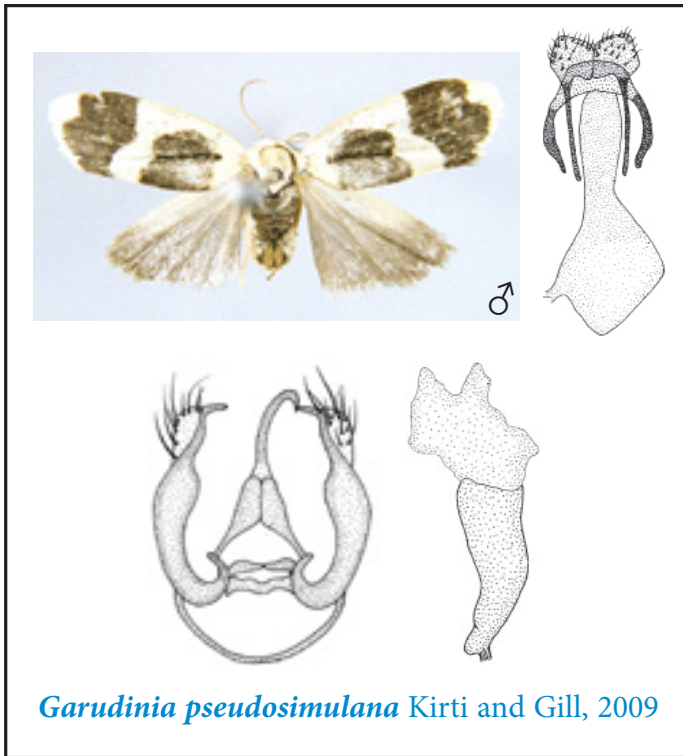
Larval host plant: Not known.

***Garudinia pseudosimulana* Kirti and Gill, 2009***Garudinia pseudosimulana* Kirti and Gill, 2009; *J. of Asia Pac. Entomology*, 12: 9

Forewings with a broad antemedial patch from inner margin to cell, postmedial band complete. Male genitalia with aedeagus short, vesica without any cornutus. Female genitalia with ductus bursae short, corpus bursae slightly rhomboidal, signum absent.

Distribution: Karnataka, Kerala.

Larval host plant: Not known.



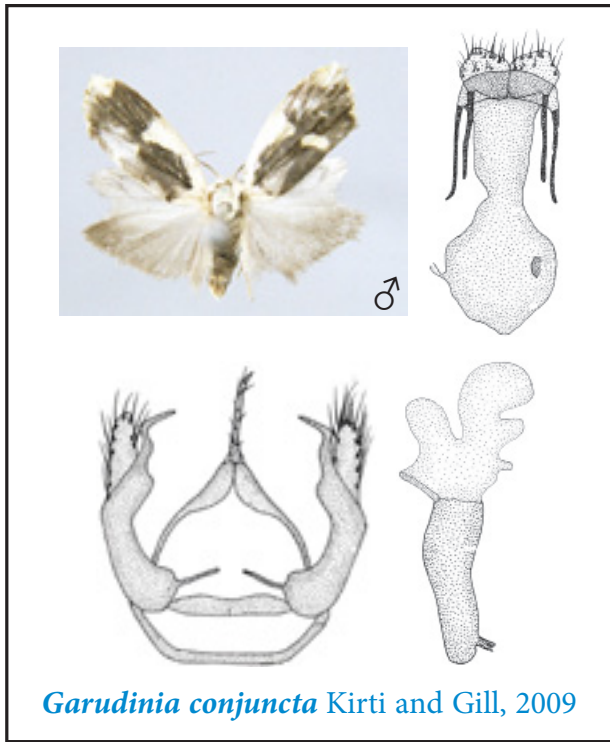
***Garudinia conjuncta* Kirti and Gill, 2009**

Garudinia conjuncta Kirti and Gill, 2009; *J. of Asia Pac. Entomology*, **12**: 11

The species is distinct as the antemedial and postmedial bands of forewings are conjoined to each other. Male genitalia have the vesica with a stick like sclerotization. Female genitalia with corpus bursae globular; signum present.

Distribution: Karnataka, Kerala.

Larval host plant: Not known.



Garudinia conjuncta Kirti and Gill, 2009

Genus *Pseudoblabe* Zeller

Zeller, 1853; *Bull. Soc. Imp. Nat. Mosc.*, **26** (4): 512

Type species: *Pseudoblabe oophora* Zeller, 1853 (by monotypy)

Diagnosis: Antennae of male ciliated. Forewings creamy white and filled with kidney shaped dark brown patch, costa highly arched; in males, a large costal fold is present which is smaller in females. In male, hindwings bilobed with reduced venation, a sub apical androconial patch present.

Remarks: Genus *Pseudoblabe* Zeller, 1853 was described as a monotypic Genus for *Pseudoblabe oophora* Zeller from Java. The taxonomic review of the Genus was done by Holloway 2001. Genus *Pseudoblabe* Zeller is known by two species distributed in Oriental region.

Known species of Genus *Pseudoblabe* Zeller from India: Sole included species.

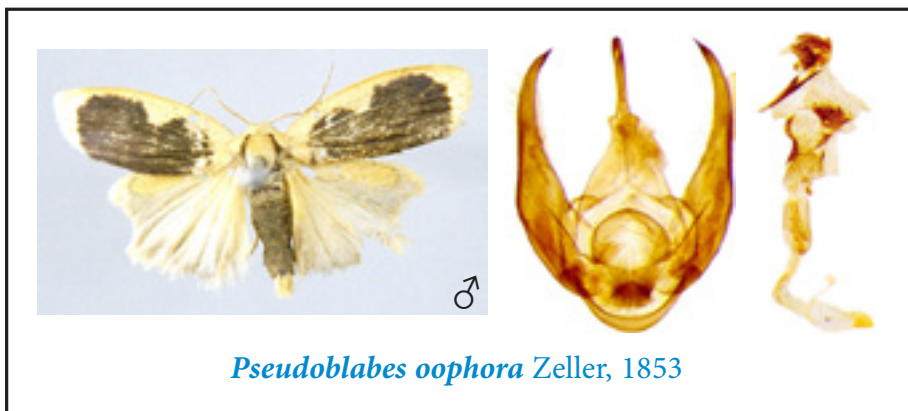
***Pseudoblabe oophora* Zeller, 1853**

Pseudoblabe oophora Zeller, 1853; *Bull.Soc. Nat. Mos.*, **26** (4): 514

Adults pale yellow. Forewings with a large dark brown patch covering almost complete disc and leaving basal, costal and marginal area of the wing. Hindwings, in males, have an elliptic patch of modified scales. Male genitalia with very long uncus; valvae simple and elongated, valvula reaching beyond the cucullus; vesica with scobinations.

Distribution: Central India, Assam, Meghalaya, Karnataka, Kerala.

Larval host plant: *Theobroma cacao* (Sterculiaceae); Musci.



Genus *Trischalis* Hampson

Hampson, 1894; *The fauna of Br. India, Moths* **2**: 101

Type species: *Hemonia flava* Hampson, 1893

Diagnosis: Forewings short and generally yellow, with some ovate markings. Male genitalia with valvae simple without any process; vesica unornamented.

Remarks: Genus *Trischalis* Hampson, 1894 was erected for its type species, *Hemonia flava* Hampson, 1893, a junior subjective synonym of *absconditana* Walker. In the recent years, the Genus is mainly dealt by Holloway (2001), Vos and Mastrigt (2007), Černý and Pinratana (2009), and Bucsek (2012). Genus *Trischalis* Hampson is known by thirteen species distributed throughout Indo-Australian tropics.

Known species of Genus *Trischalis* Hampson from India: *Trischalis absconditana* (Walker, 1863); *Trischalis subaurana* (Walker, 1863).

***Trischalis subaurana* (Walker, 1863)**

Tospitis subaurana Walker, 1863; *List Spec. Lepid. Isn. Coll. Br. Mus.* **28**: 432

Forewings yellow with a fuscous spiral band, discontinued at upper angle of cell. Male genitalia have the valvae simple and smoothly curved.

Distribution: Andaman, North East Himalayas.

Larval host plant: Not known.



***Trischalis subaurana* (Walker, 1863)**

Genus *Stigmatophora* Staudinger

Staudinger, 1881; *Stett. Ent. Ztg.*, **42**: 399

Type species: *Setina micans* Bremer & Grey, 1853 (by monotypy)

Diagnosis: Males with ciliated antennae. Forewings yellow with dark and transverse series of spots or streaks or without drawing.

Remarks: Genus *Stigmatophora* Staudinger, 1881 was described for its type species *Satina micans* Bremer & Grey, 1853. In the recent years, Genus has been dealt by Fang (1991b, 2000); Černý & Pinratana (2009), Dubatolov *et al.* (2012). The Genus is mainly distributed in East Palearctic and Oriental region.

Known species of Genus *Stigmatophora* Staudinger from India: Sole included species.

***Stigmatophora palmata* (Moore, 1878)**

Lyclene palmata Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 31

Forewings with three subbasal and three antemedial metallic blue black spots, outer half streaked with black, streaks not reaching the outer margin. Hindwings with submarginal fuscous streaks. Male genitalia have the uncus with a small spine at apex; valvula smaller than cucullus; vesica with numerous small but robust spines along with some scobinations. Female genitalia with ductus bursae very long; corpus bursae flask shape with minute scobination

Distribution: North West Himalayas, Bengal, Assam, Meghalaya (West Garo Hills), Sikkim.

Larval host plant: Not known.



Genus *Diduga* Moore

Moore, 1887; *Lep. Cey.*, 3: 535

Type species: *Diduga costata* Moore, [1887]

Diagnosis: Forewings medium brown and have darker fasciae and stigmata, or uniform black brown with white or yellowish margins along the costa and distal region. Male genitalia have the valvae with diverse structures but are usually simple, long & slender, tapering, or short with several distinct processes, sometimes with bilateral asymmetry.

Remarks: Genus *Diduga* Moore, 1885 was described for its type species *costata* Moore from Sri Lanka. The Genus was mainly reviewed by Holloway (2001) and is distributed from Indian sub region to New Guinea in the East.

Known species of Genus *Diduga* Moore from India: *Diduga albicosta* Hampson, 1891; *Diduga costata* Moore, 1887; *Diduga flavicostata* (Snellen, 1879); *Diduga fumipennis* (Hampson, 1891); *Diduga rufidisca* Hampson, 1897.

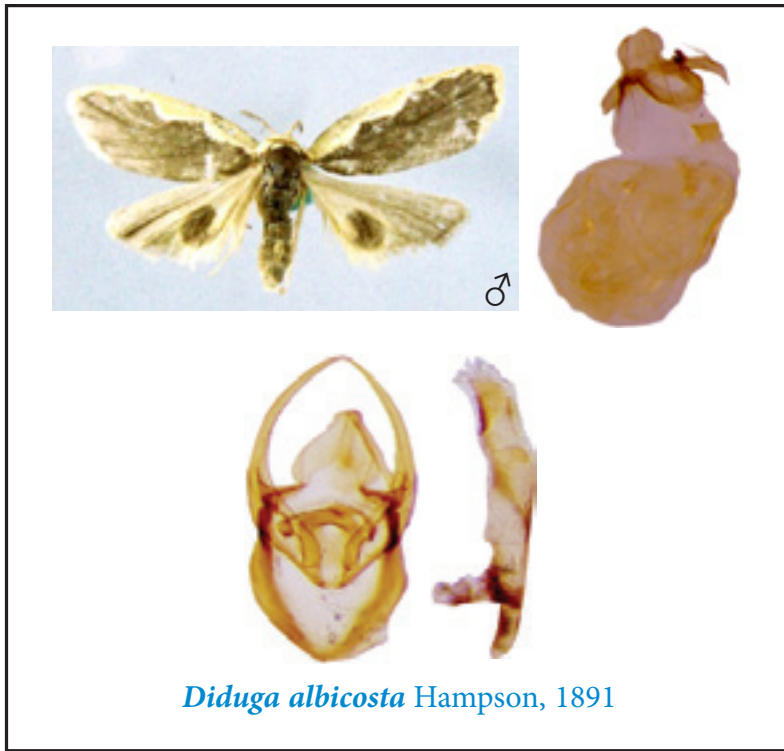
Diduga albicosta Hampson, 1891

Diduga albicosta Hampson, 1891; *III. Het.*, 8: 53

Forewings brown with dull white costal band with wavy inner edge. Hindwings dull white with fuscous scales and a large brown spot near anal area. Male genitalia have the valvae simple with pointed tip, vesica without cornutus. Female genitalia with ductus bursae short and membranous with a central sclerotized patch; corpus bursae obliquely globular, weakly opaque, small scobinate patch present.

Distribution: Tamil Nadu (Nilgiris), Andaman.

Larval host plant: Not known.



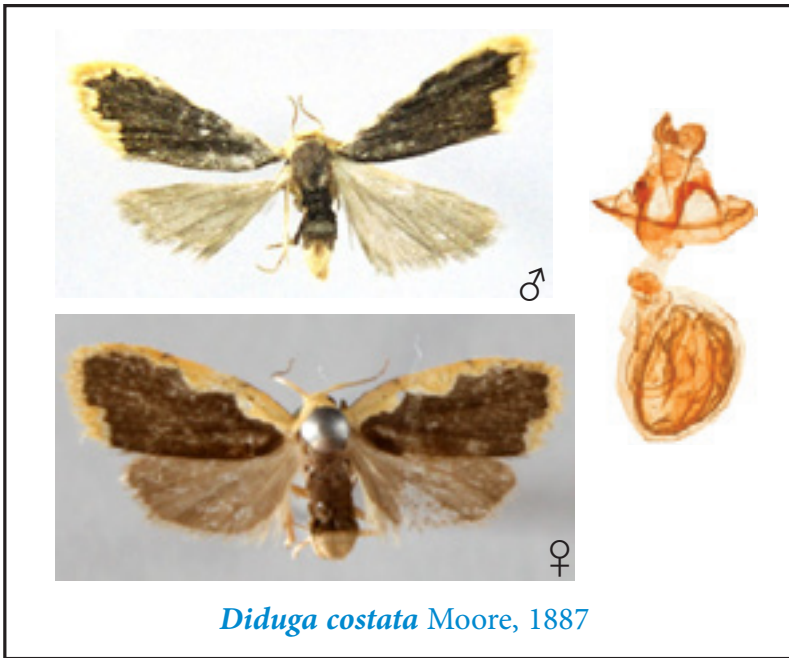
***Diduga costata* Moore, 1887**

Diduga costata Moore, 1887; *Lep. Ceyl.*, 3: 535

Hindwings without any patch of modified scales. Female genitalia have the ductus bursae short, corpus bursae almost globular, without any distinct signum.

Distribution: Tamil Nadu (Nilgiris).

Larval host plant: Not known.



Genus *Stictane* Hampson

Hampson, 1900; *Cat. Lep. Phal. Br. Mus.*, 2: 258

Type species: *Pitane fractilinea* Snellen, 1880

Diagnosis: Forewings grey white and have a darker grey medial band with blackish spots at the end of cell, submarginal and subbasal rows angled. Male genitalia have the vesica consisting of cornuti which may be long or short.

Remarks: Hampson (1900) erected the Genus *Stictane* for its type species, *Pitane fractilinea* Snellen, 1880 from Sumatra. Strand (1922) and Fang (2000) treated *Stictane* as a synonym of *Manoba* Walker and later on, was restored to a good Genus by Holloway (2001). The Genus is mainly treated by Holloway (2001), Bucsek (2012), Kirti *et al.* (2013b) and Bayarsaikhan & Bae (2015). Genus *Stictane* Hampson is mainly distributed in Oriental region.

Known species of Genus *Stictane* Hampson from India: *Stictane fractilinea* (Snellen, 1880); *Stictane rectilinea* (Snellen, 1879).

Stictane fractilinea (Snellen, 1880)

Pitane fractilinea Snellen, 1880; *Midden Lepido. Sumatra*, 4 (2): 38

Forewings whitish, more or less tinged with brown, a curved antemedial series of three black spots; a medial line with fuscous band on its outer edge; two discoidal black spots; a curved postmedial series of black points from below costa to above inner margin, with fuscous marks on costa beyond it; a terminal series of black points. Hindwings pale, terminal half suffused with fuscous. Male genitalia with valvae differentiated into a long cucullus and a shorter saccus ending to a curved spine; vesica has one large cornutus along with a bunch of needle like spines.

Distribution: Sikkim.

Larval host plant: Not known.



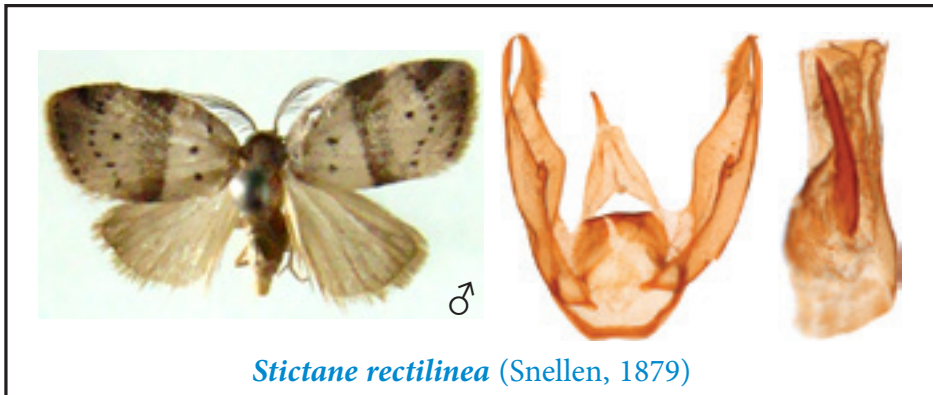
Stictane rectilinea (Snellen, 1879)

Pitane rectilinea Snellen, 1879; *Tijd. V. Ent.*, 22: 91

Forewings with a continuous and slightly oblique medial band; postmedial & marginal series of spots, the former is excurved at middle. Male genitalia with cucullus and valvula are of same length, saccular process with a strong spine at center, vesica with long and robust spine.

Distribution: Mizoram, Meghalaya.

Larval host plant: Not known.



Genus *Oeonistis* Hübner

Hübner, [1819] 1816; Verz. bek. Schmett., **1819** (11) : 165

Type species: *Phalaena entella* Cramer, 1779

Diagnosis: The Genus is characterized by blue black markings on the yellow forewings. The male genitalia have reduced saccus, but very elongate valvae, valvula very robust and apically setosed.

Remarks: Genus *Oeonistis* Hübner, [1819] 1816, was established to include two species, *O. entelliola* Hübner (= *entella* Cramer) and *Lithosia quadra* Linnaeus. Later on, Moore (1878) designated *Phalaena entella* Cramer as its type. In 1892, another genus, *Philagria* Kirby was also proposed for the same type species i.e., *P. entella* Cramer. However, in 1900 Hampson accepted the seniority of *Oeonistis* Hübner with *entella* Cramer as its type and synonymised *Philagria* Kirby under it. The Genus is mainly dealt by Mikkola and Honey (1993), Orhant (2000), Holloway (2001), Černý and Pinratana (2009) and Singh & Kirti, 2014. Presently, *Oeonistis* Hübner is known by a total of seven species: *O. bicolora* Bethune-Baker, *O. bistrigata* Rothschild, *O. entella* (Cramer) and *O. lifuensis* (Rothschild), *O. altica* (Linnaeus), *O. delia* (Fabricius) and *O. vithurensis* Singh & Kirti. The Genus is distributed from Indian sub region to Samoa, Tonga, Queensland (Holloway, 2001), New Guinea and China.

Known species of Genus *Oeonistis* Hübner from India: *Oeonistis altica* (Linnaeus, 1768); *Oeonistis entella* (Cramer, 1779); *Oeonistis vithurensis* Singh & Kirti, 2014.

Oeonistis entella (Cramer, 1779)

Phalaena entella Cramer, [1779]; *Pap. Exot.* 3: 27

Forewings with medial band from costa to inner margin, expanding into a large quadrate patch below the cell; another apical patch from costa to Cu_1 , leaving elliptic patch on apex. Hindwings pale ochreous. Male genitalia with uncus broad towards tip and with a prominent groove at tip, vinculum squarish. Female genitalia with ductus bursae short and well sclerotized; corpus bursae clear, elongate with small signum.

Distribution: Throughout India.

Larval host plants: *Hevea* on bark, *Hevea brasiliensis* on bark (Euphorbiaceae); *Flacourtia* (Flacourtiaceae); *Ficus heterophylla* (Moraceae); Lichenes; on mosses (Musci).

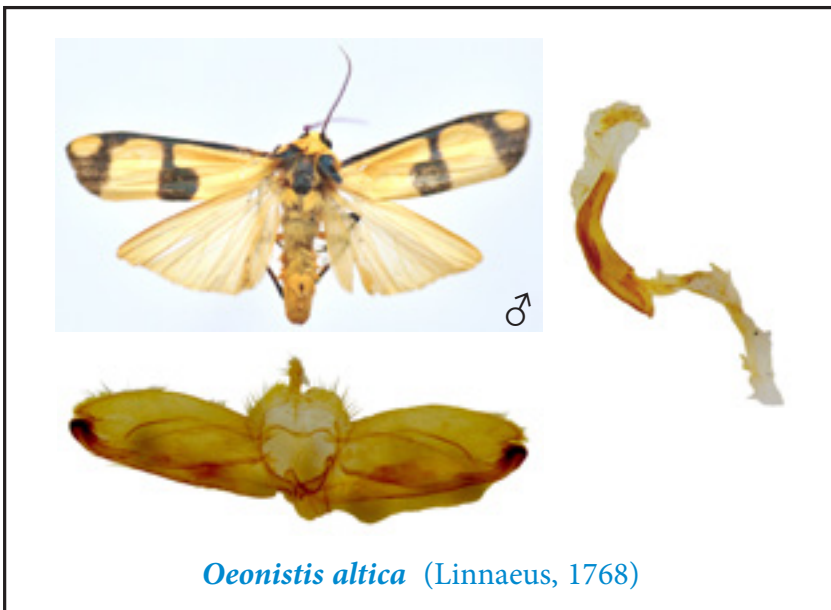


Oeonistis altica* (Linnaeus, 1768)Phalaena (Noctua) altica* Linnaeus, 1768; *Iter in Chinam*: 10-11

The species is different from *O. entella* as its apical patch of forewings touches the anal angle. Male genitalia with valvula slightly bulbous; furca absent.

Distribution: North East India (as *O. imitaria* Orhant by Orhant, 2000), Madhya Pradesh.

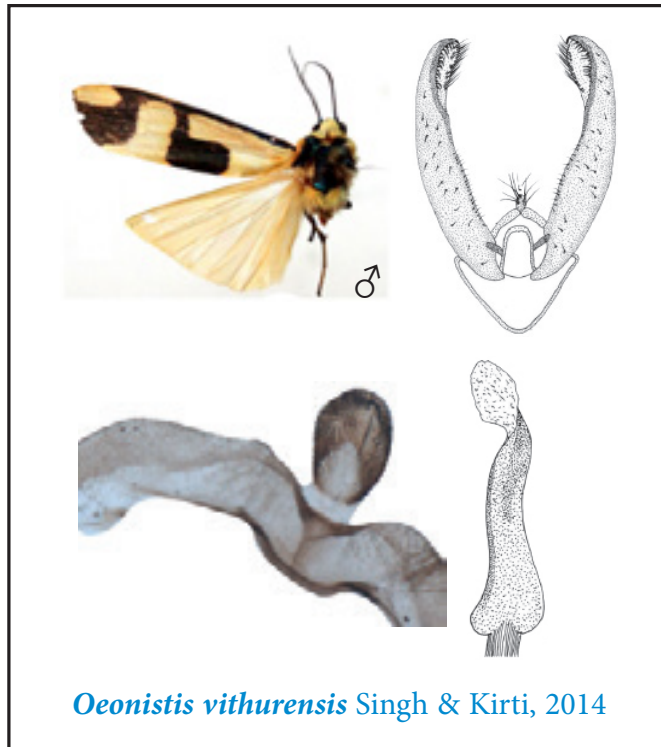
Larval host plant: Not known.

***Oeonistis vithurensis* Singh & Kirti, 2014***Oeonistis vithurensis* Singh & Kirti, 2014; *J. Ent. Res.*, **38** (3): 228

Oeonistis vithurensis Singh & Kirti, 2014 is allied to *O. entella* (Cramer) but differs because of male genital characters: uncus narrowing & ending to a blunt tip, without any notch; vinculum rounded, broad v shaped and costa of valvae slightly bulged at centre which is linear in *entella*.

Distribution: Kerala, Maharashtra.

Larval host plant: Not known.



Genus *Vamuna* Moore

Moore, 1878; *Proc. Zoo. Soc. Lond.*, **1878**: 10

Type species: *Lithosia remelana* Moore, 1865

Diagnosis: Wings with white or pallid ground colour and black banding or spotting; distal margin of forewing is rather quadrate. Male genitalia have strong saccular processes; vesica large, with several widely spaced, robust but short cornuti as well as some fields of light scobination. Female genitalia have sclerotized ductus with an appendix bursae arising between it and a more completely sclerotized neck to the corpus bursa, distal part of the corpus bursae ovate, with a weak and scobinated signum.

Remarks: Genus *Vamuna* Moore, 1878 was described for its type species, *Lithosia remelana* Moore, 1865 from Darjeeling along with inclusion of two more species from Darjeeling (India): *Vamuna maculata* Moore, 1878 and *Vamuna bipars* Moore, 1878. The taxonomic review of the Genus was done by Kishida (1993), Holloway (2001) and further dealt by Černý & Pinratana (2009) and Bucsek (2012). The Genus is distributed

from Indian Himalayas and South East China to South East Asia.

Known species of Genus *Vamuna* Moore from India: *Vamuna alboluteola* Rothschild, 1912; *Vamuna bipars* Moore, 1878; *Vamuna maculata* Moore, 1878; *Vamuna remelana* (Moore, 1865); *Vamuna virilis* (Rothschild, 1913).

Vamuna remelana (Moore, 1865)

Lithosia remelana Moore, 1865; *Proc. Zoo. Soc. Lond.*, 1865: 798

Adults white, margins of forewing apex finely black and wings often has black band which is weakly expressed on underside; hindwings white with a black spot. Male genitalia have the aedeagus with a spine at tip, vesica with three prominent spines and a well formed patch of scobination.

Distribution: Sikkim, Meghalaya, Arunachal Pradesh, West Bengal (Darjeeling, Kolkata), Mizoram, Uttarakhand.

Larval host plant: Not known.



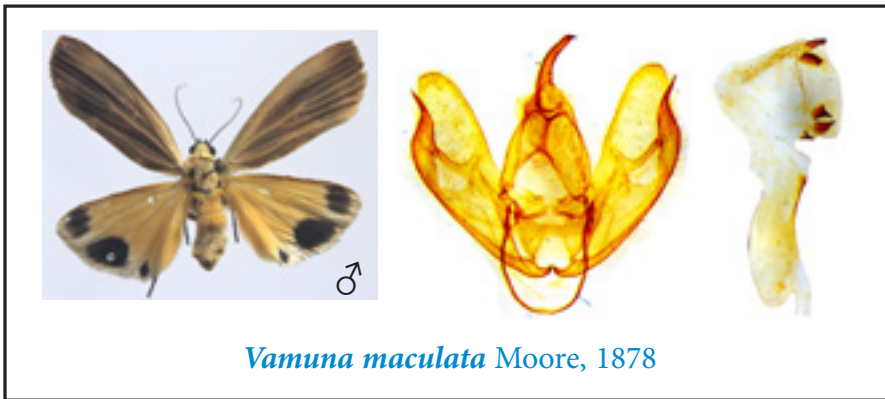
Vamuna remelana (Moore, 1865)

Vamuna maculata Moore, 1878*Vamuna maculata* Moore, 1878; *Proc. Zool. Soc. Lond.*, **1878**: 10

Yellow brown. Hindwings paler with three marginal spots, the anal one is very small. Male genitalia with uncus ending to a small spine; a small ridge like structure present at the center of inner wall of valvae, valvula curved at tip; vesica with short and robust spines, along with some scobinations.

Distribution: North India to East India.

Larval host plant: Not known.

*Vamuna maculata* Moore, 1878*Vamuna alboluteola* (Rothschild, 1912)*Agylla alboluteola* Rothschild, 1912; *Novit. Zool.*, **19** (2): 226

Forewings dull white, costa black-brown with a bluish gloss; a black-brown postmedial band. Hindwings orange-yellow and have a rounded dark brown, subterminal spot at M_2 . Male genitalia have the cucullus broad flap like; valvula with a spine before its tip; transtilla ornamented with small spine; aedeagus with a spine at tip, vesica with four robust spines.

Distribution: Meghalaya (Khasi Hills), Arunachal Pradesh, Sikkim, Manipur, Mizoram, Assam.

Larval host plant: Not known.



Vamuna alboluteola (Rothschild, 1912)

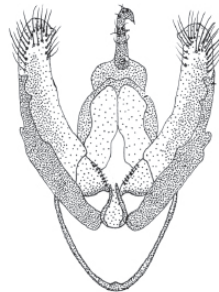
Vamuna bipars Moore, 1878

Vamuna bipars Moore, 1878; *Proc. Zool. Soc. London*, 1878: 10

Forewings white; costa and second half black. Hindwings white with light yellow tinge, submarginal area fuscous with a marked black spot. Male genitalia have the cucullus broad flap like, saccular process shorter; vesica with numerous short and robust spines.

Distribution: Sikkim, Assam.

Larval host plant: Not known.



Vamuna bipars Moore, 1878

Genus *Hesudra* Moore

Moore, 1878; *Proc. Zool. Soc. London*, 1878: 12

Type species: *Hesudra divisa* Moore, 1878 (by monotypy)

Diagnosis: Forewings divided into obliquely costal pale and darker inner region. Male genitalia with valvae having bunch of spines on the costal margin or on produced lobe

of it; vesica has one or two dense group of spines.

Remarks: Genus *Hesudra* Moore was described as a monotypic Genus for the inclusion of *Hesudra divisa* Moore, 1878 from Darjeeling. For a long time, the Genus remained a synonym of Genus *Agylla* Walker and was resurrected by Holloway (2001) with inclusion of three species distributed from Himalayas to Taiwan, Borneo, Sulawesi and Saran.

Known species of Genus *Hesudra* Moore from India: Sole included species.

Hesudra divisa Moore, 1878

Hesudra divisa Moore, 1878; *Proc. Zool. Soc. London*, 1878: 12

Forewings with costal half pale. Male genitalia with valvae having bunch of spines on produced lobe of costa. Female genitalia with ductus bursae short; corpus bursae elongated, full of scobination, a bilobed scobinated patch present.

Distribution: Sikkim, West Bengal (Darjeeling), Arunachal Pradesh, Manipur, Nagaland (Tuensang), Assam.

Larval host plant: Not known.



Genus *Ghoria* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 12

Type species: *Ghoria albocinerea* Moore, 1878

Diagnosis: Genus *Ghoria* Moore has somewhat similar facies to Genus *Hesudra* Moore as the costal region of forewings is lighter than rest of the wing. Male genitalia have valvae with a broad flap like dorsal part and a sclerotized rod like saccular process; vesica with a bunch of robust spines. The female genitalia have corpus bursae full of spines, a distinct signum present.

Remarks: The Genus *Ghoria* Moore, 1878 was erected for two new species: *Ghoria albocinerea* Moore, 1878 and *Ghoria sericeipennis* Moore, 1878 from Darjeeling. Kirby (1892) subsequently designated the *albocinerea* Moore as its type species. The Genus was mainly reviewed by Kishida (1994) and Holloway (2001).

Known species of Genus *Ghoria* Moore from India: *Ghoria albocinerea* Moore, 1878; *Ghoria nigripars* (Walker, 1856); *Ghoria postfusca* (Hampson, 1894).

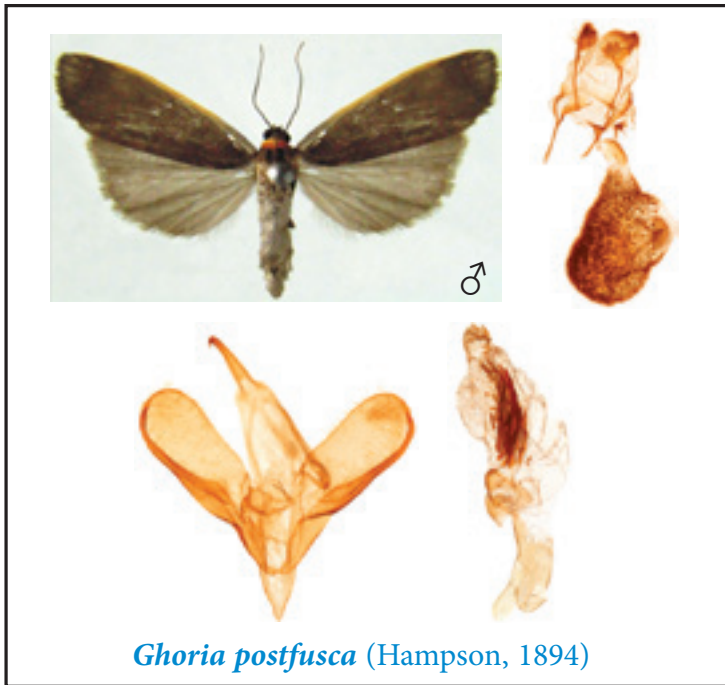
Ghoria postfusca (Hampson, 1894)

Gnophria postfusca Hampson, 1894; *Fauna Br. Ind. Moths*, 2: 70

Adults fuscous-brown. Forewings have the costal fascia narrow and yellow from near base to near apex. Hindwings pale fuscous. Genitalia discussed under genus.

Distribution: North West Himalayas.

Larval host plant: Not known.



Genus *Churinga* Moore

Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878: 9

Type species: *Churinga rufifrons* Moore, 1878

Diagnosis: Forewings dark with costa pale; hindwings pale. In male genitalia the cucullus is broad flap like, valvula shorter than cucullus and slightly curved at tip; vesica ornamented with numerous spines along with a sclerotized plate.

Remarks: Genus *Churinga* Moore, 1878 was described for its type species, *Churinga rufifrons* Moore, 1878 from Darjeeling along with the inclusion of *Lithosia beema* Moore, 1865. For the long time (Since Hampson, 1900) *Churinga* Moore was placed under a large Genus *Agylla* Walker and was resurrected & reviewed by Kishida (1993, 1998).

Known species of Genus *Churinga* Moore from India: *Churinga beema* (Moore, 1865); *Churinga rufifrons* (Moore, 1878); *Churinga metaxantha* (Hampson, 1895).

Churinga rufifrons Moore, 1878*Churinga rufifrons* Moore, 1878; *Proc. Zool. Soc. Lond.*, 1878:10

Forewings brownish with costa yellow up to 2/3 length. Hindwings yellow. Male genitalia with most of the upper half of vesica filled with small and much smaller spines along with an oval disc.

Distribution: Sikkim, North West Himalayas, West Bengal (Darjeeling).

Larval host plant: Not known.

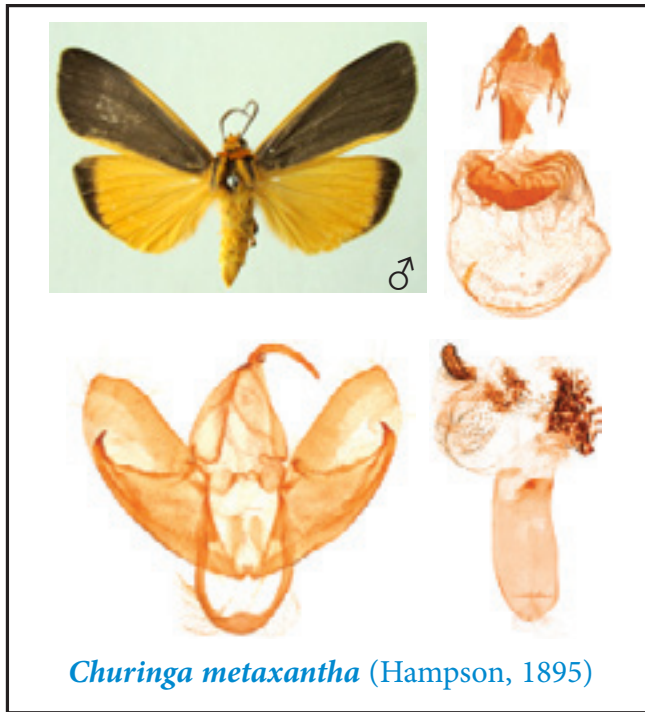
*Churinga rufifrons* Moore, 1878*Churinga metaxantha* (Hampson, 1895)*Macrobrochis metaxantha* Hampson, 1895; *Trans. En. Soc. London.*, 1895: 292

Fuscous brown. Forewings with costal edge and medial part of inner margin yellow. Hindwings orange-yellow with a fuscous terminal band, which is broadest at costa and narrowing towards tornus. Male genitalia with vesica having a well formed patch of small but robust spines along with another small patch and scattered spines, a sclerotized disc present. Female genitalia with ductus bursae short; corpus bursae globular, with sclerotized patch near the junction of corpus and ductus bursae.

Distribution: Uttarakhand.

Larval host plant: Not known.

Remarks: Reporting of *C. metaxantha* (Hampson) from Uttarakhand is its first record from India. The Indian population of *metaxantha* (Hampson) differs from Bhutan population with respect to its forewings having costal edge yellow up to beyond middle and underside with inner margin yellow.



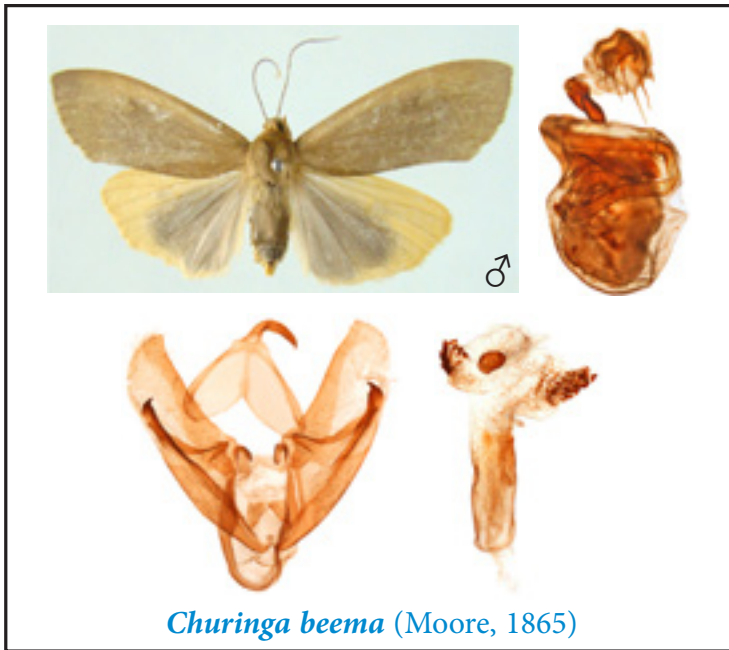
Churinga beema (Moore, 1865)

Lithosia beema Moore, 1865; *Proc. Zool. Soc. Lond.*, **1865** (3): 798

Forewings brown, with slight purplish gloss. Hindwings orange-yellow, with a pale brown patch on inner area, not touching the termen. Male genitalia with vesica having two well formed patches of spines along with a sclerotized disc. Female genitalia with ductus bursae short and narrow, corpus bursae with fine scobination at margins.

Distribution: Sikkim.

Larval host plant: Not known.



Genus *Macrobrochis* Herrich-Schäffer

Herrich-Schäffer, 1855; Syst. Bearbeitung Schmett. Eur., 6: 95

Type species: *Macrobrochis interstitialis* Herrich-Schäffer, [1856] (= *gigas* Walker)

Diagnosis: The species of Genus *Macrobrochis* Herrich-Schäffer are strikingly marked. Male genitalia large with saccus enclosing a mass of hairs, valvae divided into broad flap like cucullus and narrow valvula, vesica large with irregular band of short spines. There may also be an additional single row of closely packed spines. Female genitalia with large corpus bursae.

Remarks: The Genus *Macrobrochis* Herrich-Schäffer, 1855 is based on its type species *Macrobrochis interstitialis* Herrich-Schäffer (a junior subjective synonym of *gigas* Walker) from India. The Genus is mainly dealt by Fang (1982, 1990) Kishida (1993, 1997), Holloway (2001) and Černý & Pinratana (2009). The members of *Macrobrochis* Herrich-Schäffer are rather big Lithosiinae distributed from Himalayas and Japan to Sundaland, Philippines and Sulawesi.

Known species of Genus *Macrobrochis* Herrich-Schäffer from India: *Macrobrochis gigas* (Walker, 1854); *Macrobrochis pallens* (Hampson, 1894); *Macrobrochis prasena* (Moore, 1859); *Macrobrochis splendens* (Butler, 1877); *Macrobrochis tibetensis* (Fang, 1990); *Macrobrochis albifascia* (Fang, 1982).

Macrobrochis gigas (Walker, 1854)

Lithosia gigas Walker, 1854; *List spec. Lepid. Insects. Colln Br. Mus.*, 2: 494

Adults black. Forewings have the white spots on basal half and an irregular postmedial series. Hindwings with basal half white. Male genitalia with saccular process hooked at tip; vesica with a pectinated sclerotization and a patch of different sized spines, scobination present. Female genitalia with ductus bursae short and broad; corpus bursae have two lobes with sclerotized plates and lines.

Distribution: Meghalaya (East Khasi Hills), Sikkim.

Larval host plant: Not known.

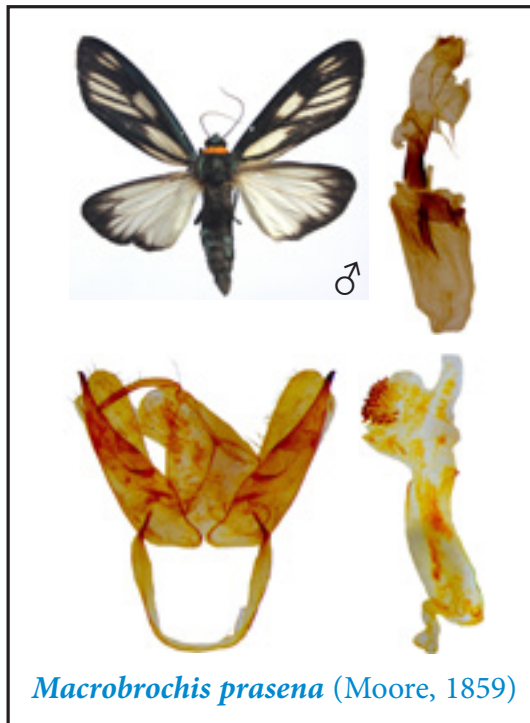


Macrobrochis prasena (Moore, 1859)*Tripura prasena* Moore, 1859; *Cat. Lep. Ins. Mus. Nat. Hist. East. Ind.*, 1859: 299

Forewings blue black with streaks and patches of white in interno median interspaces. Hindwings white with the termen black, more or less expanding into a patch and streaks on the veins towards apex. Male genitalia differ from *M. gigas* (Walker) by the absence of pectinated sclerotization in vesica. Female genitalia have the ductus bursae sclerotized; corpus bursae almost rectangular with scobination, the posterior region more sclerotized with one plates.

Distribution: North West Himalayas (Dalhousie, Kangra), Sikkim, Nagaland, Arunachal Pradesh, Meghalaya, Assam.

Larval host plant: Not known.



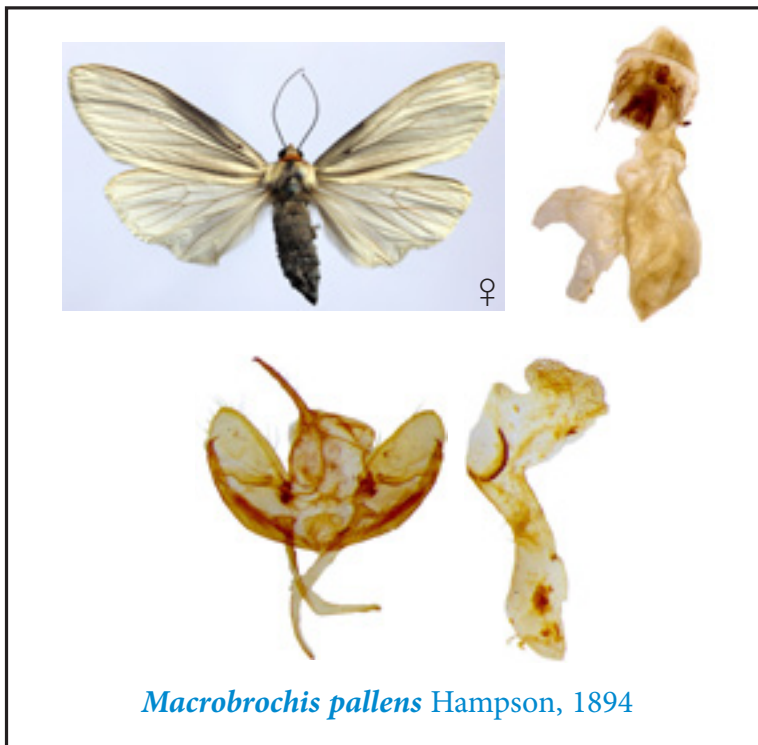
***Macrobrochis pallens* Hampson, 1894**

Macrobrochis pallens Hampson, 1894; *The fauna of Br. India Moths*, 2: 66

Wings grey white; forewings with basal half of costa blue grey. Hindwings have the fuscous suffusions. Male genitalia with spines of vesica are much shorter than in *M. gigas* (Walker) and *M. prasena* (Moore). Female genitalia with ductus bursae short; corpus bursae elongated with an elyptical scobinate pattern.

Distribution: North West Himalayas (Shimla, Dalhousie).

Larval host plant: Not known.



***Macrobrochis tibetensis* (Fang, 1990)**

Agylla tibetensis Fang, 1990; *Sinozoologia*, 7: 163-165

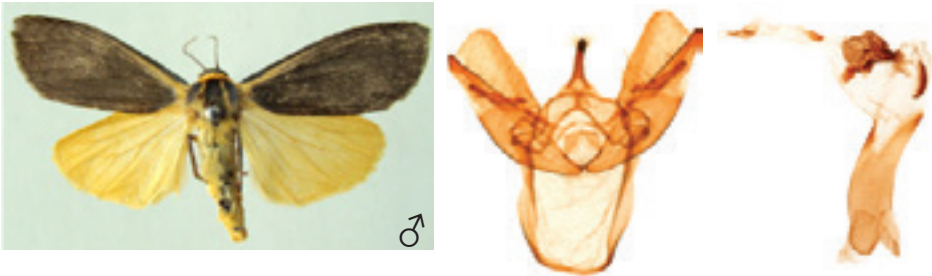
Forewings fuscous, costal margin with a bluish black streak from base to middle, below it, an orange yellow fascia of same length; base of inner margin tinged with orange

yellow. Male genitalia have the saccular process almost straight, a triangular ridge in the middle of inner wall of valvae; vesica with a comb like plate and another patch of compactly placed small but robust spines.

Distribution: Arunachal Pradesh (Ziro).

Larval host plant: Not known.

Remarks: Reporting of the species from Ziro (Arunachal Pradesh) is its first record from India.



Macrobrochis tibetensis (Fang, 1900)

Macrobrochis albifascia (Fang, 1982)

Atolmis albifascia Fang, 1982; *Insects of Xixang*, 2: 58

Forewings black brown with an oblique yellowish-white band from middle of costa to tornus. Hindwings black brown. Male genitalia with aedeagus having a small spine on the tip and vesica with series of small and robust spines, scobinations present. Female genitalia have the corpus bursae trilobed, signum absent.

Distribution: Uttarakhand.

Larval host plant: Not known.

Remarks: The present species under reference is recorded for the first time from India.



Genus *Hemonia* Walker

Walker, 1863; *List. Spec. Lepid. Ins. Coll. Br. Mus.*, **28**: 425

Type species: *Hemonia orbiferana* Walker, 1863 (by monotypy)

Diagnosis: Forewings greyish purple except for a rufous discal dot, and there is a narrow costal to marginal darker zone that is more iridescent, and bounded by evenly curved inner edge where the colour is darkest. Male genitalia have the slender uncus, undivided valvae with an interior field of fine and dorsally directed setae; vesica globular, with several cornuti.

Remarks: Genus *Hemonia* Walker, 1863 was erected as a monotypic Genus for *Hemonia orbiferana* Walker, 1863 from Sri Lanka. The Genus is mainly dealt by Holloway (2001), Černý & Pinratana (2009), and Bucsek (2012). Genus *Hemonia* Walker is mainly distributed in Indo Australian tropics.

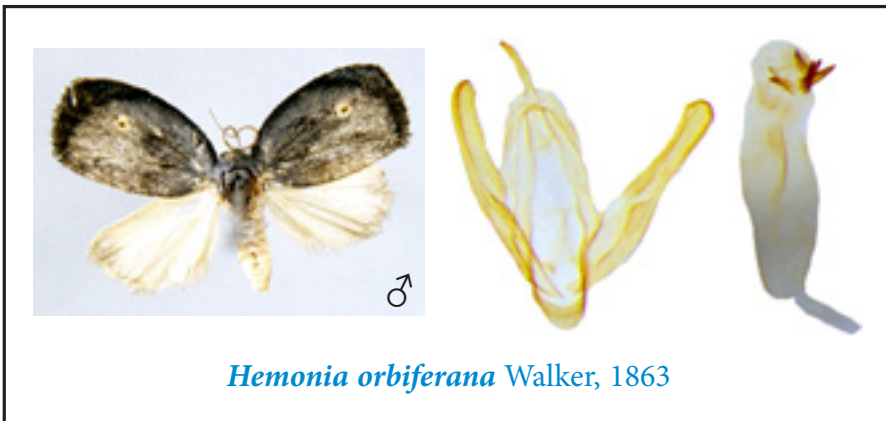
Known species of Genus *Hemonia* Walker from India: *Hemonia orbiferana* Walker, 1863; *Hemonia rotundata* (Snellen, 1879).

Hemonia orbiferana Walker, 1863*Hemonia orbiferana* Walker, 1863; *List Specimens Lepid. Insects Colln Br. Mus.*, 28: 426

Males have ciliated antennae. Forewings fuscous grey with a rufous spot at end of cell, a curved dark line from middle of costa to anal angle. Hindwings opaque. Male genitalia have the uncus long; valvae simple, with ciliated tip; vesica with prominent five spines, the sixth one small.

Distribution: Sikkim, Arunachal Pradesh, Andaman, Mizoram (Thingsul).

Larval host plant: Not known.

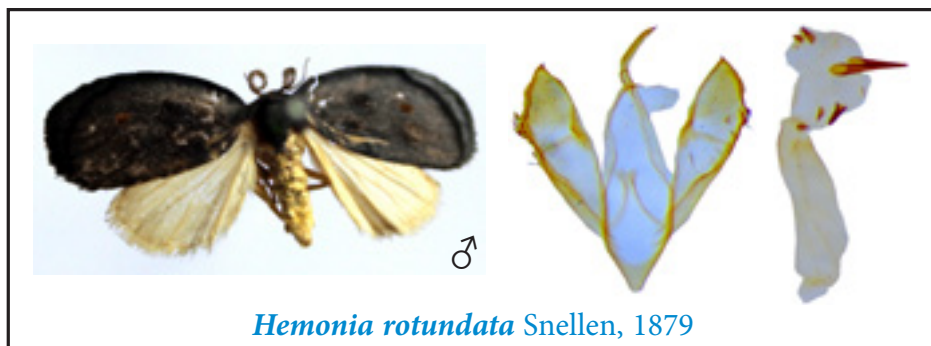
*Hemonia rotundata* (Snellen, 1879)*Pitane rotundata* Snellen, 1879; *Tijdschr. Ent.*, 22: 90

Males have bipectinate antennae. Forewings slightly darker than *H. orbiferana* Walker. Male genitalia have the valvae broad ending to a small spine, another spine on distal half of ventral edge of valvae; vesica with two long spines along with short spines, scobination present.

Distribution: Mizoram (Lengpui).

Larval host plant: Not known.

Remarks: The present species is reported for the first time from India.



Genus *Chrysaeglia* Butler

Butler, 1877; *Trans. Ent. Soc. Lond.*, 1877: 356

Type species: *Lithosia magnifica* Walker, 1862

Diagnosis: The Genus is distinct due to a straight medial bar on yellow forewings. Male genitalia with robust uncus which is swollen at centre, valvae ovate with strong & curved saccular process, vesica large. Female genitalia have the globular corpus bursae with single signum.

Remarks: The Genus *Chrysaeglia* Butler was described as a monotypic Genus with its type species, *Lithosia magnifica* Walker, 1862 from Borneo. The Genus is mainly dealt by Černý (1995) and Kishida (1996, 1996a) and is known by three species: *C. magnifica* (Walker, 1862) from Himalayas to Borneo, Taiwan and Japan; *C. perpendicularis* Černý, 1995 from Philippines and *C. xantha* Kishida, 1996 from Sulawesi.

Known species of Genus *Chrysaeglia* Butler from India: Sole included species

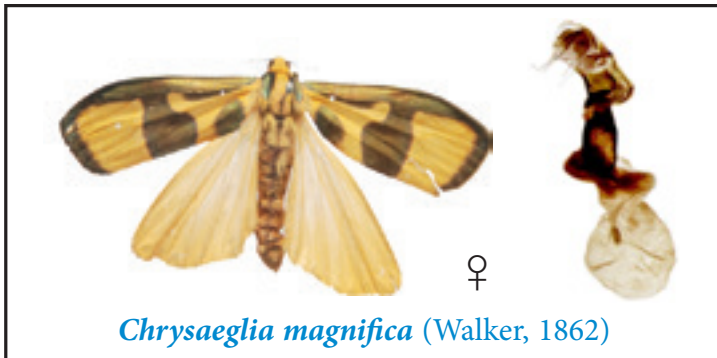
Chrysaeglia magnifica (Walker, 1862)

Lithosia magnifica Walker, 1862; *J. Proc. Linn. Soc. (Zool)*, 6: 103

Adults yellow. Forewings with costa & margin blue-green, a concolourous basal spot, a medial bar slightly expanded below cell. Hindwings yellow. Female genitalia have the ductus bursae sclerotized, corpus bursae globular with a prominent signum and scobination.

Distribution: Sikkim, Assam (Sibsagar), Nagaland (Naga Hills), Meghalaya (Khasi Hills), Shimla, North East Himalaya.

Larval host plant: Not known.



Genus *Agrisius* Walker

Walker, 1855; *List Specimens Lepid. Insects Colln Br. Mus.*, 3: 723

Type species: *Agrisius guttivitta* Walker, 1855

Diagnosis: Adults white, grey or pale fuscous. Forewings have the spots on basal half and streaked veins on distal half. Male genitalia with uncus strongly sclerotized and variously modified (bifurcated in *Guttivitta* species group, double bulbous with both of its parts terminating into small spines or processes in *Fuliginosus* species group, or consisting of naked crest and a broad apical process covered with two rows of spines in *Japonicus* species group), valvae membranous with a bifurcated saccular process in *Guttivitta* species group and without any sclerotization in *Fuliginosus* and *Japonicus* species groups and aedeagus with a small or large prick in *Fuliginosus* species group and without any prick in *Guttivitta* and *Japonicus* species group.

Remarks: Genus *Agrisius* Walker was described as a monotypic for the inclusion of *Agrisius guttivitta* Walker, 1855 from North India. Later on, the Genus was mainly dealt by Fang (1991c), Orhant (1997, 2012), Dubatolov *et al.* (2012) and Dubatolov & Kishida (2013). Genus *Agrisius* Walker includes ten species: *A. guttivitta* Walker, 1855 distributed in Indian Himalayas and Nepal; *A. similis* Fang, 1991 from Yunan (China) and North Vietnam; *A. aestivalis* Dubatolov, Kishida & Wang, 2012 from Guangdong (China); *A. vernalis* Dubatolov, Kishida & Wang, 2012 from Guangdong (China); *A. fuliginosus* Moore, 1872 widespread from North East India to Nepal, China, Korea and Japan; *A. albula* Orhant, 1997 from Myanmar; *A. boloven* Orhant, 2012 from Boloven (Tad Fane, Laos); *A. japonicas* Leech, 1888 from Japan; *A. dubatolovi* Orhant, 2012 from Song Toh Mine (Kanchanaburi, Thailand) and *A. excellens* Dubatolov & Kishida, 2013 from Sam Neua Phu Pan (Laos).

Known species of Genus *Agrisius* Walker from India: *Agrisius guttivitta* Walker, 1855; *Agrisius fuliginosus* Moore, 1872.

Agrisius guttivitta Walker, 1855

Agrisius guttivitta Walker, 1855; *List Specimens Lepid. Insects Colln Br. Mus.*, 3: 723

Adults white. Forewings with basal half spotted, distal area streaked with black. Hindwings slightly suffused with fuscous. Male genitalia have the aedeagus with a strong spine in vesica. Female genitalia with ductus bursae long and narrow; corpus bursae membranous elongated with a pair of conical patches.

Distribution: North India, Sikkim, Arunachal Pradesh, Assam (Jatinga).

Larval host plant: Not known.



Genus *Costarcha* Hampson

Hampson, 1891; *Ill. Lepid. Het. Colln. Br. Mus.* 8 : 53

Type species: *Costarcha indistincta* Hampson, 1891

Diagnosis: Members of this Genus are grey brown moths with some dark spots on forewings, antennae bipectinate in males. Male genitalia have the valvae undivided and asymmetrical with some out growth on the inner margin; vesica with large cornutus

along with small spines and a narrow plate.

Remarks: Genus *Costarcha* Hampson was described for a South Indian species, *Costarcha indistincta* Hampson. The morphology of the species is reviewed by Kirti & Gill (2008e). The Genus is restricted to South India.

Known species of Genus *Costarcha* Hampson from India: Sole included species.

Costarcha indistincta Hampson, 1891

Costarcha indistincta Hampson, 1891; *Ill. Lepid. Het.*, **8** : 53

See the diagnosis of genus.

Distribution: Tamil Nadu (Nilgiris).

Larval host plant: Not known.



Costarcha indistincta Hampson, 1891

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