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RESEARCH PAPER

The checklist of Indian Galleriinae (Lepidoptera: Pyraloidea: Pyralidae)

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Abstract: The Galleriinae was established by Zeller in 1848 with type genus *Galleria* Fabricius, 1798. It is one of the economically important groups of Pyraloidea, represents 258 described species under 68 genera all over the world. In the current paper, a checklist is prepared for the species of Galleriinae occurring in India in a systematic sequence. As per the current checklist prepared, 27 species under 13 genera are documented. The report accounted for 10.46 per cent of species and 19.12 per cent of genera from India when compared to the global record.The genera and species are listed alphabetically. Further, the valid name, type genus, type species, type locality, synonyms, distribution and host range of each species under each genus are provided. The study provides a base for further taxonomic research on this economically important group.

Key words: Checklist, Galleriinae, Lepidoptera, Pyraloidea, Synonyms, Type genus

Introduction

The Galleriinae was erected by Zeller in 1848 with type genus *Galleria* Fabricius, 1798. It can be easily differentiated from other subfamilies of Pyraloidea by lack of gnathos (Whalley, 1964 and Munroe, 1972). It is one of the largest subfamilies of Pyraloidea which comprises about 258 described species placed under 68 genera from all over the world (www.pyraloidea.org). Galleriinae is the most economically important group of Pyraloidea, comprises of pest on combs of honey bee nests (*Galleria mellonella* and *Achroia grisella*), stored grains and their products (*Aphomia cephalonica*), areca and other palms (*Tirathaba mundella* and *T. rufivena*) and occasionally on root and bark of the tree.

Checklist is a skeletal classification of groups listed by the taxa for a quick reference. It provides a synopsis for the species occurring in certain region and also gives the current status of that particular species. In India, no concerted efforts have been made to prepare a checklist for Indian Galleriinae. Shankaramurthy *et al.*, (2015) prepared a preliminary checklist of agriculturally important Pyraloidea of India which included five species of Galleriinae under five genera. In this context, an effort was made to provide the comprehensive synaptic checklist for the species of Galleriinae occurring in India which provides base for further taxonomic research on this economically important group.

Material and methods

The information for checklist of Galleriinae was collected from various primary and secondary sources of publications. The present study mainly referred the historic works of Hampson (1896); Cashatt (1968); Munroe and Solis (1999); Arora (2000); Mathew (2006) and online web source (www.pyraloidea.org).

The present paper included all the species of Galleriinae occurring in India till date with comprehensive information on valid name, synonyms, type genus, type species, type locality, distribution and host range.

Results and discussion

The checklist prepared in the present paper for the Indian Galleriinae, included 27 species classified under 13 genera under the family Pyralidae. The synoptic checklist for Indian Galleriinae is provided here.

Subfamily: Galleriinae Zeller, 1848

= *Macrotheciinae* Barnes and Mc Dunnough, 1912

Tribe: *Galleriini* Zeller, 1848; type genus: *Galleria* Fabricius, 1798

Genus: *Achroia* Hubner, 1819; type species: *Bombyx cinereola* Hubner, 1803

= *Achroea* Agassiz, 1847

= *Acroia* Dufrane, 1930

= *Meliphora* Guenee, 1845; type species: *Galleria aluearia* Fabricius, 1798

= *Vobrix* Walker, 1864; type species: *Vobrix innotata* Walker, 1864

Achroia grisella (Fabricius, 1794); type locality: France, Paris

= *Achroia grisella* var. *ifranella* Lucas, 1956; type locality: Morocco

= *Achroia obscurevittella* Ragonot and Hampson, 1901; type locality: Japan

= *Acroia grisella* Dufrane, 1930; type locality: Belgium

= *Bombyx cinereola* Hubner, 1802; type locality: Europe Haworth 1811

= *Cinerana* Fabricius,1781; type locality: Germania Werneburg 1864

= *Galleria alvearia* Fabricius, 1798

= *alvea* (Haworth, 1811)

= *alveariella* (Guenee, 1845) (Meliphora)

= *Tinea anticella* Walker, 1863; type locality: Australia Whalley 1964

Distribution: Bihar, Himachal Pradesh, Karnataka, Punjab, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal

Host range: Comb of honey bees, dried fruits and dead insects

Achroia innotata (Walker, 1864); type locality: Malaysia (Sarawak)

= *Achroia innotata lankella* Corbet and Tams, 1943; type locality: Sri Lanka

= *Achroia innotata sakaiella* Corbet and Tams, 1943; type locality: Malaysia

Distribution: South India

Host range:Comb of honey bee

Genus: *Galleria* Fabricius, 1798; type species: *Phalaena cereana* Blom, 1764,

= *Adeona* Rafinesque, 1815

= *Cerioclepta* Sodoffsky, 1837; type species: *Galleria mellonella* Linnaeus, 1758

= *Vindana* Walker, 1866; type species: *Vindana obliquella* Walker, 1866

Galleria mellonella (Linnaeus, 1758) (*Phalaena* (*Tinea*)); type locality: Not available

= *Galleria austrinia* C. Felder, R. Felder and Rogenhofer, 1875; type locality: South Africa

= *Galleria mellonella* ab. crombruggheella Dufrane, 1930; type locality: Belgium

= *mellomella* (Linnaeus, 1761)

= *Phalaena cereana* Blom, 1764; type locality: Sweden (Stockholm)

= *Cerella* (Fabricius, 1775)

= *Galleria* cerealis Hubner, 1825

= *Tinea cerea* Haworth, 1811

= *Vindana obliquella* Walker1864; type locality: Dominican Republic (Santo Domingo)

Distribution: Throughout India

Host range: Honeycombs in beehive or stored wax of Apis indica, Apisfloreaand pods of Cassia fistlila

Tribe: *Megarthridiini* Whalley, 1964; type genus: *Megarthridia* Martin, 1956

Genus: *Cataprosopus* Butler, 1881; type species:

Cataprosopus monstrosus, Butler, 1881

= *Lophopalpia* Warren, 1896; type species: *Lophopalpia* chalybopicta Warren, 1896

= *Omphalobasis* Hampson, 1896 December; type species: *Lophopalpia chalybopicta* Warren, 1896

Cataprosopus chalybopicta (Warren, 1896) (*Lophopalpia*); type locality: India (Meghalaya

(Khasi hills)) Whalley, 1964 (*Cataprosopus*)

Distribution: Assam and Meghalaya

Host range: Unknown

Tribe: Tirathabini Whalley, 1964; type genus: *Tirathaba* Walker, 1864

Genus: *Aphomia* Hubner, 1825; type species: *Phalaena sociella* Linnaeus, 1758

= *Aphomoea* Agassiz, 1847

= *Arenipses* Hampson in Ragonot and Hampson, 1901; type species: *Arenipses sabella* Hampson, 1901

= *Arenipses* Rebel, 1901

= *Corcyra* Ragonot, 1885; type species: *Melissoblapte scephalonica* Stainton, 1866

= *Ilithyia* Berthold, 1827 type species: *Phalaena colonella* Linnaeus, 1758

= *Ilythia* Stephens, 1829

= *Melia* J. Curtis, 1865; type species: *Phalaena sociella* Linnaeus, 1758

= *Melissoblaptes* Zeller, 1839; type species: *Tinea sociella* Hubnersensu Curtis, 1828

= *Paralipsa* Butler, 1879; type species: *Paralipsa modesta* Butler, 1879

= *Paralispa* Rebel, 1910

= *Tineopsis* Dyar, 1913; type species: *Tineopsis theobromane* Dyar, 1913

Aphomia cephalonica (Stainton, 1866) (Melissoblaptes); type locality: Great Britain Leraut 2014 (Aphomia)

= *Corcyra translineella* Hampson and Joannis in Ragonot and Hampson, 1901; typelocality: Reunion Corbet and Tams 1943

= *Melissoblaptes Oeconomellus* Mann, 1872; type locality: Bulgaria Hampson, 1917

= *Tineopsis theobromae* Dyar, 1913; type locality: USA (Pennsylvania, Pittsburgh) W. T. M, Forbes, 1923

Distribution: Throughout India

Host range: Dried fruits, cashew, groundnut, spices, rice and cereals in stores, lac, cork and bark of tree

Aphomia gularis (Zeller, 1877) (Melissoblaptes); type locality: Japan Hampson, 1917

= *Melissoblapte stenebrosus* Butler, 1879; type locality: Japan (Yokohama) Ragonot and Hampson 1901

= *Paralipsa modesta* Butler, 1879; type locality: Japan Hampson, 1917

Distribution: Bihar, Himachal Pradesh, Punjab, Sikkim, Uttar Pradesh and West Bengal

Host range: Stored almond, walnut, sunflower, groundnut and grains

Aphomia monochroa (Hampson, 1912) (*Melissoblaptes*); type locality: Sri Lanka (Ambalangoda)

Distribution: Bihar, Himachal Pradesh, Punjab, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal

Host range:Parasite of bumble bees

Aphomia odontella (Hampson, 1898)(Melissoblaptes); type locality: Sri Lanka (Maskeliya)

Distribution: Himachal Pradesh, Punjab, Sikkim and West Bengal

Host range: Dried vegetable products

Aphomia vinotincta (Hampson, 1908)(Melissoblaptes); type locality: Sri Lanka (Maskeliya)

Host range:Nests of Anthophila (bees and bumblebees)

Distribution: Bihar, Himachal Pradesh, Punjab, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal

Genus: *Doloessa* Zeller, 1848; type species: *Doloessa viridis* Zeller, 1848

= *Carcinoptera* Ragonot, 1893; type species: *Carcinoptera ochrociliella* Ragonot, 1893

= *Thagora* Walker, 1863; type species: *Thagora figurana* Walker, 1863

Doloessa constellata Hampson, 1898; type locality: India (Assam)

Distribution: Assam and Meghalaya

Host range: Unknown

Doloessa ochrociliella (Ragonot, 1893) (Carcinoptera); type locality: Japan

= *Doloessa plumbolineella* Ragonot and Hampson, 1901; type locality: Australia (Queensland, Cooktown, Cedar Bay) Whalley, 1964

= *Doloessa plumbolinella* Hampson, 1917

= *Thagora castanella* Hampson, 1964; type locality: Sri Lanka (Colombo) Whalley, 1964

Distribution: Assam, Meghalaya and Sikkim

Host range: Unknown

Genus: *Ertzica* Walker, 1866; type species: *Ertzica maximella* Walker, 1866

= *Acara* Walker, 1863; type species: *Acara morosella* Walker, 1863

Ertzica morosella (Walker, 1863) (Acara); type locality: Bangladesh (Sylhet)

= *Acara impunctella* Semper, 1902; type locality: Philippines Hampson, 1917

= *Ertzica maximella* Walker, 1866; type locality: Java Ragonot and Hampson, 1901

= *Galleria macroptera* Snellen, 1880; type locality: Indonesia, Sulawesi (Celebes), Makassar, Java Ragonot and Hampson, 1901

Distribution: Assam, Bihar, Himachal Pradesh, Karnataka, Meghalaya, Punjab, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal

Host Range: Dried fruits, cashew, groundnut, spices, rice and other cereals in stores

Genus:*Lamoria* Walker,1863;type species: *Lamoria planalis* Walker, 1863

= Hornigia Ragonot, 1885; type species: *Tinea anella* Denis and Schiffermuller, 1775

= *Lammoria* Turner, 1905

= *Maraclea* Walker, 1863; type species: *Maraclea inostentalis* Walker, 1863

= *Microcyttara* Turner, 1913; type species: *Microcyttara eumeces* Turner, 1913

= *Tugela* Ragonot, 1888; type species: *Tugela clathrella* Ragonot, 1888

Distribution: Throughout India

Lamoria adaptella (Walker, 1863) (*Pempelia*);type locality: Sri Lanka

= *Crambus foedellus* Walker, 1866; type locality: Indonesia (Flores) Ragonot and Hampson,1901

= *Lamoria bipunctanus* Moore, 1886; type locality: (Sri Lanka)

= *Lamoria fusconervella* Ragonot, 1888; type locality: Indonesia (Sumatra) Hampson, 1917

Distribution: Bihar, Maharashtra, Meghalaya, Tamil Nadu and Uttar Pradesh

Host range: Indigo leaves, ripe fallen gullar fruits, ripe banyan fruits and stored onion.

Lamoria hemi Rose, 1981; type locality: India (Uttar Pradesh)

Distribution: Bihar, Uttarakhand and Uttar Pradesh

Host range: Unknown

Lamoria infumatella Hampson, 1898; type locality: India (Assam)

Distribution: Assam

Host range: Unknown

Genus: *Stenachroia* Hampson, 1898; type species: *Stenachroia elongella* Hampson, 1898

Stenochroia elongella Hampson, 1898; type locality: India (Khasi Hills

Distribution: Assam, Bihar, Kerala, Tamil Nadu and West Bengal

Host range:Maize, sorghum and ragi

Genus: *Thalamorrhyncha* Meyrick, 1933; type species: *Thalamorrhyncha isoneura* Meyrick, 1933

= *Cleticaula* Meyrick, 1937; type species: *Cleticaula philographa* Meyrick, 1937

= *Hypaulacistis* Meyrick, 1934; type species: *Hypaulacistis zalorrhoa* Meyrick, 1934

Thalamorrhyncha nigrisparsalis (Hampson, 1903) (*Lamoria*); type locality: Sri Lanka (Matale and Nawalapitya) Whalley, 1964 (*Thalamorrhyncha*)

= *Crambus phaeophleps* Hampson, 1908; type locality: Sri Lanka

Distribution: Assam, Bihar, Kerala, Tamil Nadu and West Bengal

Host range: Pods of *Cassia fistula*

Genus: *Tirathaba* Walker, 1864; type species: *Tirathaba mundella* Walker, 1864

= *Coleoneura* Ragonot, 1888; type species: *Coleoneurata canovella* Ragonot, 1888

= *Harpagoneura* Butler, 1885; type species: *Harpagoneura complexa* Butler, 1885

= *Harpagomorpha* Turner, 1937

= *Metachrysia* Hampson, 1901; type species: *Metachrysia acyperella* Hampson, 1901

= *Mucialla* Walker, 1866; type species: *Mucialla mundella* Walker, 1866

= *Suisharyona* Strand, 1920; type species: *Suisharyona aperta* Strand, 1920

Tirathaba grandinotella Hampson, 1898; type locality: India (Khasi Hills)

Indonesia, Maluku, Ambon (Amboyna)

Distribution: Assam and Meghalaya

Host range: Unknown

Tirathaba mundella Walker, 1864; type locality: Malaysia (Sarawak)

= *Melissoblaptes fructivora* Meyrick, 1933; type locality: Malaysia (Malaya), Batu Tiga Whalley, 1964

= *Mucialla mundella* Walker, 1866; type locality: Malaysia (Sarawak)

Distribution: Assam and Meghalaya

Host range: Coconut, arecanut and oil palm

Tirathaba rosella Hampson, 1898; type locality: India (Khasi Hills)

Distribution: Assam, Karnataka, Kerala, Meghalaya and South Andaman.

Host range: Unknown

Tirathaba rufivena (Walker, 1864) (Lamoria); type locality: Malaysia, Sarawak

= *Harpagoneura acrocausta* Meyrick, 1897; type locality: Indonesia, Sulawesi (Celebes)

= *Mucialla fuscolimbalis* Snellen, 1901; type locality: Indonesia, Java, Jakarta (Batavia), Bogor

= *Harpagoneura distorta* Turner, 1937; type locality: Australia (Queensland)

= *Melissoblaptes rufovenalis* Snellen, 1880; type locality: Indonesia, Sulawesi (Celebes)

Makassar, Bonthain Ragonot and Hampson, 1901

= *Tirathaba ignivena* Hampson, 1917; type locality: Papua New Guinea, Louisiade Islands, St. Aignan

Distribution: Assam and Meghalaya

Host range: *Cocos nucifera, Nypafruticans, Elaeis guineensis, Musa* species and Phaseolus species

Tirathaba ruptilinea (Walker, 1866) (*Lamoria*); type locality: Malaysia, Borneo and Sarawak

= *Tirathaba chlorosema* Lower, 1903; type locality: Australia (Queensland)

Distribution: Assam and Meghalaya

Host range: Unknown

Tirathaba unicolorella (Hampson, 1896) (*Mucialla*); type locality: India (Khasi hills), Bhutan.

Distribution: Assam and Meghalaya

Host range: Unknown

Genus: *Trachylepidia* Ragonot, 1887; type species: *Trachylepidia fructicassiella* Ragonot, 1887

= *Aganactesis* Dyar, 1921; type species: *Aganactesis indecora* Dyar, 1921

Trachylepidia fructicassiella Ragonot, 1887; type locality: Egypt, Cairo. Lebanon, Beirut, India, Pakistan (Punjab)

= *Aganactesis indecora* Dyar, 1921; type locality: Trinidad

Distribution: Bihar, Delhi, Karnataka, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal

Host range: Golden shower tree (Cassia fistula)

Tribe: Megarthridiini Whalley, 1964; type genus: *Megarthridia* Martin, 1956

Genus: *Megarthridia* E. L. Martin, 1956; type species: *Megarthria velutinella* Hampson, 1899

= *Megarthria* Hampson, 1893; type species: *Megarthria velutinella* Hampson, 1899

Megarthridia canosparsalis (Hampson, 1896) (*Omphalocera*); type locality: Myanmar, Bernardmyo

= *Megarthria velutinella* Hampson, 1899; type locality: India (Meghalaya (Khasi hills)

Distribution: Assam and Meghalaya

Host range: Unknown

Genus: *Prasinoxena* Meyrick, 1894; type species: *Prasinoxena monospila* Meyrick, 1894

Prasinoxena metaleuca Hampson, 1912; type locality: Sri Lanka (Kandy)

Distribution: Bihar, Karnataka, Maharashtra, Meghalaya, Tamil Nadu and Uttar Pradesh

Host range: *Acacia mangium, Lansium domesticum* and other *Lansium* species

In the earlier studies, Shankaramurthy *et al.* (2015) prepared a checklist for five species of Galleriinae occurring in India. In the current study, checklist was prepared for 27 species of Galleriinae occurring in India. The current study provides base for further taxonomic research on this economically important group.

Conclusion

The present study is the first consolidated (upto 2021) comprehensive checklist of all the species of Galleriinae occurring in India, which comprises about 27 described species under 13 genera. The study provides base for further taxonomic research.

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