INVENTORY OF TIGER MOTHS OF SIKKIM
(ARCTIINAE: ARCTIIDAE: LEPIDOPTERA)

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Abstract
A total number of 24 species of Tiger moths belonging to subfamily Arctiinae of family Arctiidae have been collected from nine localities i.e., Gangtok, Mangan, Ranipul, Chungthang, Lachen, Lachung, Namchi, Singtam, Phodong in the Sikkim state. A list of these species including their first reference, synonymy, material examined and distribution have been given in this manuscript. Spilarctia coma (Walker) has been reported for the first time from this state.

Keywords
Arctiidae, distribution, inventory, moths, Sikkim, survey

Introduction
The insects belonging to the subfamily Arctiinae of the family Arctiidae are commonly known as ‘Tiger Moths’. These insects can be easily recognised by the presence of a tymbal organ on the meta-episternum and a prespiracular counter tympanal hood (Holloway, 1988). The larvae of these moths are usually hairy, sometimes so much so that they are called as Woolly Bear Caterpillars. Another taxonomic attribute for recognizing these moths is that the vein Sc+R₁ of the hindwing always anastomoses with cell, near or beyond its middle part and separate from vein Rs. The vein Sc is swollen at base.

A collection-cum-survey tour was conducted in Sikkim in 1995 and 2000 to study the tiger moths of the state. The altitude of the various nine localities covered during this survey was between 4000-6000ft (2300-6200m). As many as 139 adult representatives belonging to 24 species referable to 12 genera of the subfamily Arctiinae were collected and identified. The identification was done from relevant literature (Hampson, 1894, 1919; Arora & Chaudhary, 1982; Arora, 1983) and by comparison in the museum of Forest Research Institute, Dehradun and Zoological Survey of India, Kolkata. The identification of the doubtful species i.e. Nyctemera varians Walker, Spilaectia coma (Walker) and Arctata carissima (Swinhoe) has been verified from the Natural History Museum, London for authenticity and latest nomenclature. A list of 24 species along with their first reference, synonymy, material examined and distribution has been included in this manuscript. The first reference of different genera alongwith their type species has also been included in the observations.

Material and Methods
The tiger moths were collected from different localities of Sikkim with the help of portable light traps fitted at different places i.e., Botanical Survey of India in Gangtok, PWD Rest House in Mangan, PWD Rest House in Chungthang, Forest Rest House in Namchi and different private guest houses during night time between 2000 and 0100hr. The adult representatives of different species were also captured from fluorescent tube lights fitted on petrol pump stations, forest rest houses and dak bungalows. The collected moths were killed with ethyl acetate vapours in the killing jars. The freshly killed specimens were pinned, stretched, dried and preserved in air tight wooden boxes fitted in insect cabinets (Beirne, 1955).

Observations
Genus Trypheromera Butler
Trypheromera Butler, 1881, Ill. Lepd. Heterocera, 5: 45
Type species: Trypheromera plagifera Walker

Trypheromera adversata (Schaller)
Distribution: India: throughout; outside: China
**Genus Arctata Roepke**


Type species: *Nyctemera arctica* Walker

**Arctata arctica** (Walker)


Distribution: India: Assam, Meghalaya, Sikkim, West Bengal.

**Callimorpha principalis** (Kollar)


Material examined: Two females, one male, 29.vi.2000, Gangtok, Sikkim.

Distribution: India: Himachal Pradesh and Sikkim; outside: Myanmar.

**Callimorpha equitatis** (Kollar)


Material examined: One female, one male, 12.v.1995, Lachung, Sikkim; one male, one female, 26.ix.2000, Gangtok, Sikkim.

Distribution: India: Assam, Meghalaya, Sikkim, West Bengal.

**Arctata carissima** (Swinhoe)


Distribution: India: Assam and Sikkim.

**Genus Nyctemera Hübner**


Type species: *Phalaena (Geometra) lacticina* Cramer

**Nyctemera varians** Walker


Distribution: India: Assam, Bihar, Meghalaya, Nagaland and Sikkim; outside: Myanmar.

**Callimorpha plagiata** Koda


Type species: *Hypercompa histrio* Walker.

**Genus Argina Hübner**


Type species: *Phalaena astrea* Drury

**Argina astrea** (Drury)


1894. *Argina cribraria* Clerck, *Hampson, Fauna Br. India, Moths*, 2: 51. *(astraea as synonym)*


Material examined: One female, 2.vi.2000, Mangan, Sikkim.


**Genus Callimorpha Latreille**


Type species: *Phalaena dominula* Linnaeus

**Callimorpha nyctemerata** (Moore)


Material examined: One female, one male, 7.v.1995, two females, 1.vi.2000, Mangan, Sikkim.

Distribution: India: Assam, Himachal Pradesh, Meghalaya and Sikkim.

**Callimorpha principalis** (Kollar)


Material examined: Two females, one male, 29.vi.2000, Gangtok, Sikkim.

Distribution: India: Himachal Pradesh and Sikkim; outside: Myanmar.

**Genus Creatonotos Hübner**


Type species: *Phalaena interrupta* Linnaeus
Creatonotus interruptus (Linnaeus)
1892. Creatonotus interruptus Kirby, 1892, Cat. Heterocera, 1: 241; Phalaena gangis Linn. 1764, Amoen Aead, 6: 410.
Distribution: India: throughout; outside: Myanmar and Sri Lanka.

Creatonotus transiens (Walker)
1892. Kirby, 1892, Cat. Heterocera, 1: 243.
Distribution: India: throughout

Genus Alphaea Walker
Type species: Alphaea fulvohirta Walker

Alphaea impleta (Walker)
Distribution: India: Assam and Sikkim.

Spilarctia irregularis (Rothschild)
Distribution: India: Sikkim and Meghalaya; outside: Myanmar.

Spilarctia rubilinea (Moore)
Distribution: India: Assam, Meghalaya and Sikkim; outside: China, Myanmar.

Spilarctia casignata (Kollar)
Distribution: India: northwestern Himalaya and Sikkim.

Spilarctia coma (Walker)
Distribution: India: northwestern Himalaya, Himachal Pradesh and Sikkim.
Remarks: This species has been reported for the first time from Sikkim.
Spilarctia niceta (Stoll)


Distribution: India: Assam and Sikkim; outside: China, Ireland, Phillipines.

Genus Cladarctia Koda
Koda, 1988, *Tyo to Ga*, 2: 45

Type species: *Euprepria quadriramosa* Kollar

*Cladarctia quadriramosa* (Kollar)

Material examined: One male, 1.vi.2000, Mangan, Sikkim.

Distribution: India: Jammu & Kashmir, northwestern Himalaya, Himachal Pradesh and Sikkim.

Genus Areas Walker

Type species: *Areas galerctina* Vander Höever

*Areas imperialis* Kollar
Kollar, 1844, Hügel's Kaschmir, 4: 466; Hampson., 1894, Fauna Moths, Ind., 2: 25.

Material examined: Four females, two males, 1.vi.2000, Mangan, Sikkim.

Distribution: India: northwestern Himalaya and Sikkim.

*Areas trigonalis* Voll.
Voll. 1863, Tijdsch., Ent., 5: 140.


Distribution: India: Assam and Sikkim.

*Areas galerctina* Hoever


Distribution: India: northwestern Himalaya and Sikkim.

*Areas orientalis* (Walker)

Material examined: One male, 5.v.1995, Gangtok, Sikkim; one male, 7.v.1995; Mangan; one male, 10.v.1995, one female, five males, 1.vi.2000, Lachung.

Distribution: India: northwestern Himalaya and Sikkim.

Genus Thanatarctia Butler

Type species: *Thanatarctia infernalis* Butler

*Thanatarctia flavens* Moore


Distribution: India: Assam, Sikkim and Meghalaya.

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