



## Additions to the known larval host plants of Indian Lepidoptera

Peter Smetacek<sup>1</sup> & Rajni Smetacek<sup>2</sup>

<sup>1,2</sup>The Butterfly Research Centre, The Retreat, Jones Estate, P.O.Bhimtal, District Nainital, Uttarakhand 263136 India  
Email: <sup>1</sup>petersmetacek@rediffmail.com (corresponding author); <sup>2</sup>rajnismetacek@rediffmail.com

The larval host plants of some families of Indian Lepidoptera such as the Papilionidae, Saturniidae and Sphingidae are relatively well known (Bell & Scott 1937; Robinson et al. 2001). Information on most of the other families is quite incomplete.

The present list consists largely of species bred by the authors at Butterfly Research Centre, Bhimtal, Nainital District, Uttarakhand, India in the Kumaon Himalaya west of Nepal (29°20'41"N & 79°30'17"E). Most of the species recorded were obtained as wild

larvae in various instars from forests in Nainital District between 1200m and 2400m elevation. The places visited were mainly in the Bhimtal and Sattal valleys (1200–1500 m), the Bhowali Valley (1600m), the Gagar pass (2400m), Maheshkhan forest (2200m) and Rata forest (2200m) at all seasons, opportunistically over a period of 20 years but focussed on Maheshkhan, Gagar and Rata forests during 2008 to 2009. All the above mentioned locations are within a 50-km radius of Bhimtal. Since the same species was often encountered in different locations within the district, we have refrained from giving exact locations in the list. Voucher specimens of the material bred are in the authors' personal collection at the above address.

In addition, an invitation to the Forest Research Institute in Dehra Dun to the senior author resulted in the identification of a number of moths that had lain unidentified in the Indian National Forest Insect Collection since the 1930s. Several of these had been bred in different parts of India and Burma and the localities on their data labels are mentioned in this list. It should be noted that the names of several localities have changed during the intervening 80 years. The original names on the data labels have been noted so as to facilitate reference to these specimens, while the currently valid names have been mentioned in parenthesis. Similarly, names of plants on which the Lepidoptera were bred are, in many cases, not currently valid. Nevertheless, these have been mentioned as noted on the original data labels and the current botanical names included in parenthesis. In one case (*Pseudomicronia coelata* Moore), it was not possible to discover the author or family of the plant name mentioned on the data label, yet this name has been included in the hope that others are more fortuitous than the present authors. In another case, (*Nephele hespera* Fabricius) it was not possible to locate the authority for the species of plant (*Carissa affinarium*) mentioned on the moth's data label, so this name has been listed as such. All specimens in the Forest Research Institute have been distinguished by an asterisk in the following list.

The Syynini (Erebidae) do not seem to have a subfamily placement yet (I.J. Kitching pers. comm.) so it has been placed as a Tribe in the Erebidae.

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In addition, there are eight records, one each by Antram (1924), Bailey (1951) and Troup (1899), two by Mackinnon & de Nicéville (1897–1898) and three by Wynter-Blyth (1957) that appear to have been overlooked by subsequent authors, notably Robinson et al. (2001). These have been included in this list.

### Systematic section

#### Psychiidae

\**Eumeta* Walker sp.: seeds of *Pinus wallichiana* A.B. Jackson (= *Pinus excelsa* Wallich ex D. Don) (Pinaceae), Kangra, Himachal Pradesh.

#### Tortricidae

*Archips machlopi* Meyrick: *Neolitsea umbrosa* (Nees) Gamble (Lauraceae).

#### Sesiidae

*Sesia* Fabricius sp.: bark of *Phyllanthus emblica* L. (Euphorbiaceae).

#### Limacodidae

\**Parasa lepida* Cramer: *Strychnos nux-vomica* L. (Moraceae), Dehra Dun.

\**Miresa albipuncta* Herrich-Schäffer: "*Dicopyros melanoxylum*" = *Diopyros exsculpta* Buch.-Ham. (Ebenaceae), Hoshangabad, C.P. (=Hoshangabad, Madhya Pradesh).

\**Cania himalayana* Holloway: *Bombax ceiba* L. (Bombacaceae), Dehra Dun.

\**Cheromettia apicata* Moore: *Terminalia belerica* (Gaertn.) Roxb. (Combretaceae); *Litchi chinensis* Sonnerat (Sapindaceae), both Dehra Dun.

\**Aphendala cana* Walker: *Citrus* L. (Rutaceae), Dehra Dun.

\**Narosa conspersa* Walker: *Desmodium triquetrum* (L.) DC (Fabaceae), Coorg Titthimatti (=Titthimatti, Kodagu District, Karnataka).

\**Altha subnotata* Swinhoe: "*Terminalia tomentosa*" = *Terminalia alata* Heyne ex Roth (Combretaceae); *Citrus* L. (Rutaceae); *Shorea robusta* Gaertn. (Dipterocarpaceae), all Dehra Dun.

\**Chalcoscelides castaneipars* Moore: "*Cinchona*" = ? *Cinchona officinalis* L. (Rubiaceae) Darjeeling, West Bengal.

\**Scopelodes ursina* Butler: "*Aleurites montana*" = *Vernicia montana* Lour. (Euphorbiaceae) Lashio, Burma.

#### Zygaeniidae

\**Gynautocera papilionaria* Guérin-Ménéville: "*Litsea polyantha*" = *Litsea monopetala* (Roxb.) Pers. (Lauraceae) Dehra Dun.

*Soritia leptalina* Kollar: *Bridelia montana* (Roxb.) Willd. (Euphorbiaceae); *Rubus ellipticus* Smith (Rosaceae).

#### Pyralidae

*Heterocrasa expansalis* Warren: *Quercus leucotrichophora* A Camus (Fagaceae).

#### Drepanidae

##### Drepaninae

*Callidrepana argenteola* Moore: *Rhus wallichii* Hook. F. (Anacardiaceae).

*Deroca hyalina* Walker: *Benthamidia capitata* (Wallich) Hara (Cornaceae).

*Deroca inconclusa* Walker: *Benthamidia capitata* (Wallich) Hara (Cornaceae).

*Drepana* near *quinaria* Moore: *Alnus nepalensis* D. Don (Betulaceae).

*Oreta extensa* Walker: *Swida oblonga* (Wallich) Soják (Cornaceae).

#### Bombycidae

*Penicillifera lactea* Hutton: *Ficus neriifolia* var. *nemoralis* (Wall. Ex Miq.) Corner (Moraceae).

#### Saturniidae

*Actias selene* Hübner: *Symplocos chinensis* (Lour.) Druce (Symplocaceae).

*Samia canningii* Hutton: *Zanthoxylum armatum* DC (Rutaceae).

#### Sphingidae

\**Ambulyx liturata* Butler: *Shorea robusta* Gaertn. (Dipterocarpaceae), Dehra Dun.

\**Clanis phalaris* Cramer: *Ficus benghalensis* L. (Moraceae), Salem, Tamil Nadu.

*Polyptychus trilineatus* Moore: *Terminalia chebula* Retz. (Combretaceae), Dehra Dun. (included in Robinson et al. (2001) with an interrogation mark.).

\**Nephele hespera* Fabricius: "*Carissa affinarium*"??

*Psilogramma menephron* Cramer: *Tecomaria capensis* (Lindl.) Spach. (Bignoniaceae).

*Hyles gallii* Rottemburg: *Euphorbia stracheyi*

Boiss. (Euphorbiaceae), Leh, Ladakh, Jammu & Kashmir.

*Hyles nicaea lathyrus* Walker: *Euphorbia stracheyi* Boiss. (Euphorbiaceae), Leh, Ladakh, Jammu & Kashmir.

\**Macroglossum bombylans* Boisduval: "Terminalia tomentosa" = *Terminalia alata* Heyne ex Roth (Combretaceae), Dehra Dun.

\**Cephonodes hylas* Linnaeus: *Xeromphis spinosa* (Thunb.) Keay (Rubiaceae), Paonta, Himachal Pradesh.

### Lasiocampidae

*Trabala vishnou* Lef.: *Coriaria nepalensis* Wallich (Coriariaceae); *Rubus ellipticus* Smith (Rosaceae).

*Malacosoma indica* Walker: *Salix denticulata* Andersson (Salicaceae).

### Epicopeidae

*Epicopeia polydorus* Westwood: *Persea odoratissima* (Nees) Kosterm. (Oleaceae).

### Uraniidae

#### Uraniinae

\**Pseudomicronia coelata* Moore: "*Congronema nepalensis*" ??, Dehra Dun.

### Epipliminae

\**Orudiza protheclaria* Walker: *Oroxylum indicum* (Link) Vent. (Bignoniaceae), Dehra Dun.

\**Dysaethria fulvilinea* Hampson: *Gmelina arborea* Roxb. (Verbenaceae); *Premna latifolia* Roxb. (Verbenaceae), both Dehra Dun.

\**Dysaethria* near *ruptaria* Moore: *Premna berbata* Wall. Ex Schauer (Verbenaceae), Dehra Dun.

\**Dirades adjutaria* Walker: "*Randia uliginosa*" = *Catunaregam uliginosa* (Retz.) Sivaraman (Rubiaceae), Coorg (=Kodagu District, Karnataka); "*Randia dumetorum*" = *Catunaregam spinosa* (Thunb.) Tirven (Rubiaceae), Coorg (=Kodagu District, Karnataka); "*Adina cordifolia*" - *Haldina cordifolia* (Roxb.) Ridsdale (Rubiaceae), Wynaad (in Tamil Nadu); *Cassia fistula* L. (Leguminosae), Dehra Dun.

\**Gathynia miraria* Walker: *Randia* L. sp. (Rubiaceae), Titthimatti, Coorg (=Kodagu District, Karnataka).

### Geometridae

#### Ennominae: Orthostixini

*Naxa textilis* form *huegeli* Felder: *Osmanthus fragrans* Lour. (Oleaceae) (vide Troup (1899)), Kausani, Uttarakhand.

#### Ennominae

*Psyra spurcataria* Walker: *Rosa* L. (Rosaceae).

*Cleora reciprocaria* Walker: *Sapindus mukorossi* Gaertn. (Sapindaceae).

*Cleora repulsaria* Walker: *Bauhinia vareigata* L. (Caesalpinaceae).

*Ectropis crepuscularia* Hübner: *Glochidion heyneanum* (Wight & Arn.) Wight (Euphorbiaceae), *Tagetes* L. (Asteraceae).

#### Larentiinae

*Phthonoloba decussata* Moore: *Bridelia montana* (Roxb.) Willd. (Euphorbiaceae).

#### Notodontidae

\**Phalera raya* Moore: *Cassia fistula* L. (Leguminosae), Dehra Dun.

*Dudusa sphingiformis* Moore: *Acer oblongum* Wallich ex DC (Aceraceae).

*Somera viridifusca* Walker: *Syzygium cuminii* (L.) Skeels (Myrtaceae).

### Erebidae

#### Lymantriinae

\**Caviria ochripes* Moore: *Grewia* sp. (Tiliaceae), Dehra Dun.

*Artaxa guttata* Walker: *Citrus* L. sp. (Rutaceae).

*Euproctis varia* Walker: *Coriaria nepalensis* Wallich (Coriariaceae).

*Euproctis plagiata* Walker: *Syzygium cuminii* (L.) Skeels (Myrtaceae).

"*Euproctis*" sp.: *Carpinus viminea* Lindley (Corylaceae).

*Arctornis subvitrea* Walker: *Carpinus viminea* Lindley (Corylaceae).

*Ilema kosemponica* Strand: *Dioscorea bulbifera* L. (Dioscoreaceae); *Impatiens edgeworthii* Hook. F. (Balsaminaceae).

*Olene inclusa* Walker: *Quisqualis indica* L. (Combretaceae); *Rosa* L. (Rosaceae).

*Olene magnalia* Swinhoe: *Begonia picta* Smith (Begoniaceae).

*Rhyptoses drepanioides* Kishida: *Quercus floribunda* Lindley ex A. Camus (Fagaceae)

### Arctiinae

*Phissama transiens* Walker: *Crassocephalum crepidioides* (Benth.) S. Moore (Asteraceae).

*Spilarctia casigneta* Kollar: *Cirsium verutum* (D. Don) Sprengel (Asteraceae), *Mirabilis jalapa* L. (Nyctagenaceae); *Dahlia* Cav. (Asteraceae); *Tagetes* L. Asteraceae); *Craniotome furcata* (Link) O. Kuntze (Lamiaceae); *Gynura bicolor* (Roxb. Ex Willd.) DC (Asteraceae); *Goldfussia dalhousiana* Nees (Acanthaceae); *Passiflora edulis* Sims. (Passifloraceae); *Girardinia diversifolia* (Link) Friis (Urticaceae); *Lantana camara* L. (Verbenaceae).

\**Mangina argus* Kollar: "*Crotolaria sericea*" = *Crotolaria spectabilis* Roth (Fabaceae), Dehra Dun.

*Nyctemera adversata* Schaller: *Debregeasa longifolia* (Burm. f.) Wedd., *Girardinia diversifolia* (Link) Friis, *Urtica dioica* L. (all Urticaceae); *Gynura bicolor* (Roxb. Ex Willd.) DC (Asteraceae); *Crassocephalum crepidioides* (Benth.) S. Moore (Asteraceae).

### Calpinae

*Gonitis mesogona* Walker: *Rubus ellipticus* Smith (Rosaceae).

*Gonitis* near *mesogona* Walker: *Grewia optiva* J.R. Drumm ex Burtt. (Tiliaceae).

### Erebinae

#### Sypnini

*Sypna curvilinea* Moore: *Rubus ellipticus* Smith (Rosaceae).

### Nolidae

#### Chloephorinae

*Gabala roseoretis* Kobes : *Acer oblongum* Wallich ex DC (Aceraceae).

### Noctuidae

#### Thiacidinae

*Thiacidas ?indica* Walker: *Carpinus viminea* Lindley (Corylaceae).

### Plusiinae

*Trichoplusia orichalcea* Fabricius: *Cirsium verutum* (D. Don) Sprengel (Asteraceae).

**Arcteini** (currently unplaced to subfamily)

*Arcte caerulea* Guenee: *Girardinia diversifolia* (Link) Friis (Urticaceae)

### Nymphalidae

#### Satyrinae

*Elymnias malelas* Hewitson: "leaves of banana" = *Musa balbisiana* Colla (Musaceae) (vide Antram 1924) locality ?Assam; the butterfly is common in banana groves in the Kumaon Himalaya.

#### Acraeinae

*Acraea vesta* Fabricius: *Pouzolzia zeylanica* (Linn.) Bennet & Brown (Urticaceae).

#### Charaxinae

\**Polyura athamas* Drury: *Helicteres isora* L. (Sterculaceae), Coorg (=Kodagu District, Karnataka).

#### Limenitidinae

*Neptis mahendra* Moore: A female oviposited on several young leaves of a bush of *Pyracantha crenulata* (D. Don) M. Roemer (Rosaceae) in the field; larvae emerged but did not eat the leaves (Smetacek 2011)).

#### Lycaenidae

*Talicauda nyseus* Guérin-Ménéville: *Kalanchoë spathulata* DC (Crassulaceae).

*Celastrina gigas* Hemming: *Prinsepia utilis* Royle (Rosaceae) (Wynter-Blyth 1957); *mihi*).

*Celastrina huegelii* Moore: *Prinsepia utilis* Royle (Rosaceae) (Wynter-Blyth (1957); *mihi*).

*Celastrina argiolus kollari* Westwood: *Prinsepia utilis* Royle (Rosaceae) (Wynter-Blyth (1957)).

\**Acytolepis puspa gisca* Fruhstorfer: *Shorea talura* Roxb. (Dipterocarpaceae), Coorg (=Kodagu District, Karnataka); *Quercus leucotrichophora* A. Camus (Fagaceae), Nainital, Uttarakhand (identity of latter record confirmed on the basis of photographs taken by Manoj Chandran, Government Silviculturist).

*Horaga albimacula viola* Moore: *Coriaria nepalensis* Wallich (Coriariaceae) (vide Mackinnon & de Nicéville (1897–1898)).

*Dodona eugenes eugenes* Bates: *Myrsine semiserrata* Wallich (Myrsinaceae).

*Dodona dipoea nostia* Fruhstorfer: *Myrsine semiserrata* Wallich (Myrsinaceae).

**Papilionidae**

*Troides aeacus* C. & R. Felder: *Aristolochia dilatata* N.E. Brown (Aristolochiaceae).

*Atrophaneura aidoneus* Doubleday: *Aristolochia dilatata* N.E. Brown (Aristolochiaceae).

*Byasa dasarada ravana* Moore: *Aristolochia dilatata* N.E. Brown (Aristolochiaceae).

*Byasa polyeuctes* Doubleday: *Aristolochia dilatata* N.E. Brown (Aristolochiaceae).

*Papilio arcturus* Westwood: *Skimmia* Thunb. (Rutaceae), Kathmandu, Nepal (vide Bailey (1951)).

*Papilio agestor govindra* Moore: *Persea duthiei* (King ex Hook. f.) (Lauraceae).

*Graphium (Pazala) eurous cashmirensis* Rothschild: *Persea duthiei* (King ex Hook. f.) Kosterm., *Neolitsea umbrosa* (Nees) Gamble (both Lauraceae).

**Pieridae**

*Aporia agathon agathon* Gray: *Berberis chitra* Edwards (Berberidaceae).

*Aporia soracta* Moore: *Berberis chitra* Edwards (Berberidaceae).

*Pieris canidia* Sparrman: *Cardamine impatiens* L. (Brassicaceae).

*Gonepteryx rhamni nepalensis* Doubleday: *Rhamnus triqueter* (Wallich) Brandis (Rhamnaceae).

*Colias erate* Esper: ovipositing on *Vicia sativa* Linnaeus.

*Colias fieldii* Menétries: oviposited on *Trifolium repens* Linnaeus.

**Hesperiidae**

*Bibasis oedipodea aegina* Pl.: *Hiptage madablota* Gaertn. (Malphigiaceae) (vide Mackinnon & de Niceville (1897–1898)).

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