

# SYSTEMATIC ARRANGEMENT OF THE NORTH AMERICAN LEPIDOPTERA.

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The first attempt at an arrangement of the N. Am. Lepidoptera, including a reform in the nomenclature, which I published in 1896<sup>1</sup>, calls for some corrections. In the present list I have endeavoured to supply these, but, doubtless, there are others which have escaped me. Since 1896, Lord Walsingham and Mr. Durrant<sup>2</sup> have fixed the types of the genera *Tortrix*, *Tinea*, *Alucita* and *Pterophorus*, in the two former confirming my doubtful determination of 1895<sup>3</sup> and correcting the type of the last named genus to *monodactyla*. I have followed Dyar, in CAN. ENT., in using Hipocritidæ instead of Arctiidæ. I cannot find the sure type of *Geometra* or *Noctua*. I reject, however, the latter name, since it was differently used by Klein in 1753, and the assumption of 1758 as the basis of nomenclature is arbitrary. The present arrangement is based on that of the Syst. Lep. Hild., 1895. The views of Dyar with regard to the value of the larval tubercles are adopted. The superfamilies are regarded as parallel growths. It seems probable that the Hesperiadæ, Sphingidæ, Saturniadæ and Bombycidæ (Agrotidæ) are separate developments from the Tineid phylum. The subfamilies mark breaks in the sequence. This latter is arbitrary, but no scientific reason has been adduced for changing the general Linnæan plan, which is practically the most convenient. With regard to the family names, the oldest term, employed in a collective form and not preoccupied, is retained. At a time when new Catalogues are preparing, the publication of systems will be useful. The diurnals are arranged according to the diphyletic classification of 1897, the sequence and value of the groups are given by me in April, 1900<sup>4</sup>. With regard to the origin of the Lepidoptera, the Micropterygidæ show hymenopteriform and trichopteriform, the Hepialidæ neuropteriform characteristics.

## LEPIDOPTERA.

Superfamily *Papilionides*, Grote emend. 1897.

Family Parnassiidæ.	Type Parnassius apollo, L.
Family Papilionidæ.	Type Papilio machaon, L.

1 Mitt. Roemer Mus., No. 7.

2 Ent. Month. Mag., 1897.

3 Systema Lep. Hild., August, 1895.

4 id. Zweite Folge.

Superfamily *Hesperiades*, Grote emend. 1897.

Family Pierididæ.	Type <i>Pieris rapæ</i> , L.
Family Nymphalidæ.	Type <i>Nymphalis lucilla</i> , L.
Family Libytheidæ.	Type <i>Libythea celtis</i> , F.
Family Riodinidæ.	Type <i>Riodina lysippus</i> , L.
Family Lycænidæ.	Type <i>Lycæna meleager</i> , Esp.
Family Hesperiadæ.	Type <i>Hesperia malvæ</i> , L.
Family Megathymidæ.	Type <i>Megathymus yuccæ</i> , B. & Lec.

Superfamily *Sphingides*.

Family Sphingidæ.	Type <i>Sphinx ligustri</i> , L.
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Superfamily *Saturniades*, Grote, 1896.

Family Saturniadæ.	Type <i>Saturnia pavonia major</i> , L.
Family Citheroniadæ.	Type <i>Citheronia regalis</i> , F.

Superfamily *Bombycides* (Agrotides).

Family Lachneidæ.	Type <i>Lachneis catax</i> , L.
Family Hypogymnidæ.	Type <i>Hypogymna morio</i> , L.
Family Melalophidæ.	Type <i>Melalopha curtula</i> , L.
Family Ptilodontidæ.	Type <i>Ptilodon camolina</i> , L.
Family Platypterygidæ.	Type <i>Platypteryx hamula</i> , L.
Family Geometridæ.	Type <i>Geometra papilionaria</i> , L. (?)
Family Brephidæ.	Type <i>Brephos parthenias</i> , L.
Family Dioptidæ.	Type <i>Diopis cyma</i> , Hübn.
Family Thyatiridæ.	Type <i>Thyatira batis</i> , L.
Family Nycteolidæ.	Type <i>Nycteola degenerana</i> , Hübn.
Family Lithosiadæ.	Type <i>Lithosia complana</i> , L.
Family Sphecomorphidæ.	Type <i>Sphecomorpha incendiaria</i> , Hübn.
Family Hipocritidæ.	Type <i>Hipocrita jacobæa</i> , L.
Family Pericopidæ.	Type <i>Pericopis zerbina</i> , Stoll.
Family Agaristidæ.	Type <i>Agarista agricola</i> , Don.
Family Apatelidæ <sup>5</sup> .	Type <i>Apatela aceris</i> , L.

Superfamily *Tineides*, Grote, 1895.

Family Cochlidionidæ.	Type <i>Cochlidion limacodes</i> , Hübn.
Family Megalopygidæ.	Type <i>Megalopyge lanata</i> , Cram.

<sup>5</sup> This is (*Noctua* failing) the oldest collective term I can find, and I employ it for the whole group in sensu Lederer, etc. The group has been divided into families by Guenée and Herrich-Schaeffer (Agrotidæ, etc.).

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Family Thyridæ.	Type Thyris fenestrella, Scop.
Family Pyromorphidæ.	Type Pyromorpha dimidiata, H.-S.
Family Pterophoridæ.	Type Pterophorus monodactyla, L.
Family Pyralididæ.	Type Pyralis pingualis, L.
Family Tortricidæ.	Type Tortrix viridana, L.
Family Sesiadæ.	Type Sesia culiciformis, L.
Family Cossidæ.	Type Cossus cossus, L.
Family Ptochopsychidæ.	Type Ptochopsyche Melsheimerii, Harris.
Family Psychidæ.	Type Psyche viciella, Schiff.
Family Adelidæ.	Type Adela Degeerella, L.
Family Tineidæ.	Type Tinea pellionella, L.
Family Orneodidæ.	Type Orneodes hexadactyla, L.

Superfamily *Micropterygides*, Grote, 1895.

Family Micropterygidæ.	Type Micropteryx Sparmannella, L.
Family Eriocephalidæ.	Type Eriocephalus calthella, L.

Superfamily *Hepialides*, Grote, 1895.

Family Hepialidæ.	Type Hepialus humuli, L.
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THE LINNÆAN GENUS GRYLLUS.

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The Linnæan genus *Gryllus*, as first recognized in the tenth edition of *Systema Naturæ*, was composed of a number of sections which, while some have been recognized, are generally discarded. These names are used in the sense of subgenera, and as such are entitled to recognition. The case in hand being a deeply involved one, we must find some guide to be used as a standard in properly handling these names, and as to-day the Code of the American Ornithologists' Union is generally recognized as the *vade mecum*, we shall follow that. Canon XIX. of this Code is to the effect that a name "once established is never to be cancelled in any subsequent subdivision of the group, but retained in a restricted sense for one of the constituent portions." With this before us we must proceed to find on what a name should be retained. As was the case with the earlier writers (and is frequently the case with modern writers), Linnæus specified no types, and we must refer to the Code for help. Canon XXIV. informs us that "when no type is specified, the only