



## Revision of Holarctic Teleiodini (Lepidoptera: Gelechiidae)

SANGMI LEE<sup>1,2</sup> & RICHARD L. BROWN<sup>1</sup>

<sup>1</sup>Mississippi Entomological Museum, Box 9775, Mississippi State, MS 39762

<sup>2</sup>Corresponding author. E-mail: microlepi@hotmail.com

### Table of contents

Abstract .....	2
Introduction .....	2
Historical review .....	3
Materials and methods .....	4
Taxonomy.....	7
Tribe Teleiodini.....	7
Key to Genera of Teleiodini of Asia (A), Europe (E), and North America (NA).....	9
Systematic treatment of genera .....	11
<i>Agnippe</i> Chambers .....	11
<i>Glauce</i> Chambers.....	12
<i>Telphusa</i> Chambers .....	10
<i>Arogalea</i> Walsingham .....	15
<i>Sinoe</i> Chambers.....	19
<i>Recurvaria</i> Haworth.....	22
<i>Exoteleia</i> Wallengren .....	23
<i>Coleotechnites</i> Chambers .....	25
<i>Parachronistis</i> Meyrick.....	26
<i>Stenolechiodes</i> Elsner.....	27
<i>Parastenolechia</i> Kanazawa.....	28
<i>Stenolechia</i> Meyrick.....	29
<i>Chorivalva</i> Omelko .....	30
<i>Pseudotelphusa</i> Janse .....	31
<i>Carpatolechia</i> Căpușe.....	31
<i>Arcutelphusa</i> <b>gen. nov.</b> .....	32
<i>Arcutelphusa talladega</i> , <b>sp. nov.</b> .....	33
<i>Istrianis</i> Meyrick .....	34
<i>Streyella</i> Janse .....	35
<i>Neotelphusa</i> Janse .....	35
<i>Teleiopsis</i> Sattler.....	36
<i>Schistophila</i> Chrétien .....	37
<i>Teleiodes</i> Sattler .....	37
<i>Xenolechia</i> Meyrick .....	38
<i>Argyrolacia</i> Keifer.....	39
<i>Altenia</i> Sattler .....	40
Acknowledgments.....	40
References .....	41
Appendix 1. Checklist of Teleiodini in Nearctic and Palearctic Regions.....	48

## Abstract

The 25 genera of Teleiodini (Lepidoptera: Gelechiidae) occurring in the Holarctic Region are revised. A new genus and new species, *Arcutelphusa talladega*, are described from Alabama and Mississippi, United States. *Evippe* Chambers (1873a) is synonymized with *Agnippe* Chambers (1872a), *Hapalosaris* Meyrick (1917) is synonymized with *Coleotechnites* Chambers (1880b), and *Laris* Omelko (1988) is synonymized with *Parastenolechia* Kanazawa (1985). *Telphusa* is restricted to three species, and *Teleiodes* is restricted to four species. A key to genera and a checklist of species, which includes 28 new combinations, are provided. Each generic treatment includes descriptions of imagos, including venation and genitalia, and immature stages so far as known, larval hosts, diversity and distribution, and illustrations of selected species.

**Key words:** Lepidoptera, Gelechiidae, Teleiodini, new genus, new species, Palearctic, Nearctic, Holarctic genera, Alabama, Mississippi

## Introduction

The Gelechiidae (Lepidoptera: Gelechioidea) are one of the largest families of microlepidoptera and include more than 4,600 described species in the world referred to about 500 genera in four subfamilies, of which Gelechiinae is the largest (Hodges 1999b). About 1,500 species occur in the Palearctic Region (Piskunov 1990), and about 690 species occur in the Nearctic Region, although only 30% of the species in the latter are estimated to be described (Hodges 1983, 1999b). A large number of species are also present in the Oriental, Neotropical, Afrotropical, and Australian Regions (Becker 1984; Common 1990; Janse 1958–1963; Heppner 1991; Nielsen and Common 1991; Park 1992; Vári and Kroon 1986).

Gelechiidae are similar to other gelechioid families in having a basally scaled proboscis and strongly upcurved labial palpus. Gelechiidae differ from other gelechioid families by having a combination of the following characters: 1) hindwing subrectangular to trapezoidal with sinuous or concave termen and prominent apex, 2) forewing lanceolate to elongate–ovate with CuP absent, 3) retinaculum of the wing–coupling mechanism situated on the radial vein of the forewing in the female, 4) labial palpus long, reaching vertex of head, second segment often with ventral brush, third segment subequal in length with second, acute, rarely with dorsal brush of rough scales, 5) male gnathos forming a pair of lateral, articulated, symmetrical sclerites and usually with an articulated, mesial hook (Hodges 1986, 1999b).

Teleiodini, one of seven tribes in Gelechiinae, include about 160 species in 24 genera in the Holarctic Region, of which 63 species in 19 genera occur in the Palearctic Region (Elsner 1995 [1996]; Huemer and Karsholt 1999), and 94 species in 14 genera occur in the Nearctic Region (Hodges 1983). Additional species assigned to eight genera occur in the Neotropical Region, but all of these genera occur in the Holarctic Region (Becker 1984). Species of Teleiodini in the Afrotropical Region have been assigned to only two genera that occur in the Holarctic Region. The Australian and Oriental Regions lack genera that have been reported as members of Teleiodini. Additional genera unique to these latter areas probably will be defined as the fauna of Gelechiidae becomes better known.

Huemer and Karsholt (1999) recently reviewed the European Teleiodini and defined this tribe by the following characters: 1) small patches of raised scales on the forewing, 2) gnathos with tendency toward reduction, without culcitula (a membranous, spiny cushion at the base of the gnathos in Gelechiini and Gnorimoschemini), 3) phallus fused with the vinculum, and 4) female with apophyses anteriores longer than those in species of *Gelechia*. Most genera in Teleiodini lack distinctive external features, and many species lack contrasting colors and patterns. Thus, examination of genital characters is important for diagnoses. The Teleiodini have not been studied in the Nearctic Region, and the definition of genera and assignment of species have been uncertain.