4. Dark oblique posterior to seta D2 5
   Dark patch posterior to seta D2 ..... *L. xylina* Hulst
5. Dark transverse bar between D2 setae (Fig. 1) ..... *L. explanata* Walker
   No dark transverse bar between D2 setae ..... *L. flavibrunneata* McDunnough
6. Setae D1 and D2 on same dark line 7
   Setae D1 and D2 not on same dark line 8
7. Middorsal line continuous ..... *L. testata* Linnaeus
   Middorsal line not continuous (Fig. 2) ..... *L. molliculata* Walker
8. Oblique dash anterior to seta D1; larvae on *Salix* and *Populus* 9
   No oblique dash anterior to seta D1; larvae on *Ribes* ..... *L. propulsata* Walker
9. A continuous dark line through seta SV3 ..... *L. destinata* Moeschler
   Little or no dark line through seta SV3 ..... *L. flavibrunneata* McDunnough

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ON THE GRAMMAR OF THE NAME *HELIOTHIS* OCHSENHEIMER (NOCTUIDAE)

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In recent works by Hardwick (1958, 1965, 1970), including extensive citation of literature, the subfamily name Heliothidinae is used. Investigation into the classical origin of the genus name *Heliothis*, upon which that subfamily name is based, reveals that it is an aorist passive participle of the Greek verb hēlioō, meaning to lie in the sun, to bask. This derivation is given by Treitschke (1826, p. 215) and is confirmed by Ochsenheimer's citation in parentheses after *Heliothis* of the plural nominative form "*Heliothentes* Hübn."

As a participle, one of the 2 kinds of verbal adjectives in Greek, there will be 3 gender forms. These forms and their form in the genitive case, from which family-group names are formed in the singular number and from which names of parasites and other associated organisms may be formed in the plural as well as the singular number, are as follows:

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		Masculine	Feminine	Neuter
Singular	Nominative	hēliōtheis	hēliōtheisa	hēliōthen
	Genitive	hēliōthentos	hēliōtheisēs	hēliōthentos
Plural	Nominative	hēliōthentes	hēliōtheisai	hēliōthenta
	Genitive	hēliōthentōn	hēliōtheisōn	hēliōthentōn

In classical transcription into Latin, these forms are:

Singular	Nominative	heliothis	heliothisa	heliothen
	Genitive	heliothentis	heliothises	heliothentis
Plural	Nominative	heliothentes	heliothisae	heliothenta
	Genitive	heliothenton	heliothison	heliothenton

Strict application of Article 30.a.i of the International Rules of Zoological Nomenclature requires treatment of *Heliothis* as masculine (column 1, above) and strict application of Article 29 requires use of the stem *Heliothent-* in forming family-group names. This would result in the subfamily name Heliothentinae. This procedure, according to Hardwick's citations, has never been followed.

However, if Article 11.b of the Rules, which states that zoological names "must be either Latin or Latinized," be interpreted strictly, we may consider that the complex Greek participial system was not a part of Latin, except in the case of a few words used as nouns and to be found in Latin dictionaries. We may then consider *Heliothis* as declinable in the way the great majority of Latin nouns in *-is* are declined, viz.:

Singular	Nominative	Heliothis
	Genitive	Heliothis
Plural	Nominative	Heliothes
	Genitive	Heliothium

If this be done, the stem used in forming family-group names will be *Helioth-* and the subfamily name consequently Heliothinae. At any rate, there can be no basis for the insertion of *-id-*.

The matter of gender, however, is something else. Article 30.a.i of the Rules requires a ruling by the Commission to establish the name as feminine, because it is grammatically clearly masculine and only masculine, even though ever since Ochsenheimer its usage has been generally as feminine, probably because the species with adjectival names were originally described in the genus *Noctua*. Meigen (1832, p. 224) even changed the generic name into the feminine from *Heliothisa*.

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Editor's Note: Mr. Steyskal's paper is an illuminating one and we are happy to have it for the *Journal.* I cannot see, however, how Article 11(b) would override Article 29(a) which states: "—if the name of a type-genus—is a Greek or Latin word—the stem is found by deleting the case-ending of the appropriate genitive singular." From a puristic standpoint, the subfamily name should be the Heliothentinae. This, as well as the matter of the gender of *Heliothis* as suggested by Mr. Steyskal, should be submitted to the Commission for a ruling.

VARIATION IN LARVAL COLOUR PATTERNS OF *ITAME RIBEARIA* (GEOMETRIDAE)

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Some geometrid larvae have distinctive colour patterns, others do not; some species of *Itame* are good examples of the former (McGuffin 1956). Dugdale (1961) has shown the importance of infraspecific variation in colour patterns and has suggested that such variation could offset the value of coloration for the separation of species. An opportunity to examine infraspecific variation came in 1968 when a colony of *Itame ribearia* (Fitch) was located on an ornamental species of *Ribes* at Bells Corners, Ontario.

Of the larvae collected the following were preserved in 70% ethyl alcohol: 1 in third instar, 33 in fourth instar and 17 in fifth instar. A small number was reared; these provided head capsules in second, third, and fourth instars and information on changes in colour pattern as the larvae matured.

In the first instar, the head capsule is black; the body is light grey with a black area surrounding the base of each D seta, a subdorsal grey stripe of irregular width, and setae L, SV, and V each with a patch of grey at the base.

In the second instar, the head (3 examined) is light brown with five black patches, one as a bar at base of clypeus and two on each parietal