GUNDER, J. D., 1934. Various new butterflies (Lepid., Rhopalocera). Can. Ent., 66: 125–131.

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, 1959. Francis Hemming, ed. Opinion 541. Suppression under the plenary powers of the generic names *Chrysophanus* Hübner, 1818, and *Bithys* Hübner, 1818 (Class Insecta, Order Lepidoptera) (*Opinion* supplementary to *Opinion* 165). Opinions and declarations rendered by the International Commission on Zoological Nomenclature, 20: 90–101.

STALLINGS, D. B., AND J. R. TURNER, 1947. Texas lepidoptera (with description of a new subspecies). Ent. News, 58: 36–41.

ON THE NATURE AND USE OF THE SUFFIX *-ELLUS, -ELLA, -ELLUM* IN SPECIES-GROUP NAMES

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The use of the suffix *-ellus* (*-ella, -ellum*) to form species-group names, especially in Microlepidoptera in the form of *-ella*, has been common for a long time, but fortunately it now seems to be waning. There is nothing to be gained by adding this suffix to specific names, except a few letters to the length of the name. Of the approximately 950 names cited in Heinrich's revision of the American Phycitinae (1956), for example, more than 500 are formed with this suffix, starting with *Tinea abietella* Denis and Schiffermueller, 1776,[2] *Tinea convolutella* Hübner, 1796, *Tinea decuriella* Hübner, 1796, and *Tinea elutella* Hübner, 1796, and continuing to *Ambesa columbiella* McDunnough, 1935, and *Epischnia vividella* McDunnough 1935. None of the 89 new names proposed by Heinrich in this work are formed in this wise.

Latin grammars deal with *-ellus, -a, -um* as follows:

a) . . . "diminutives (with endings for gender), forming nouns or adjectives, meaning *little* or *tender*: as . . . *puella, asellus, misellus.*" (Allen and Greenough, 1872).

b) "There is a class of derivatives called diminutives, which express smallness: hence also sometimes endearment, contempt, pity, or depreciation. Such are of the

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[2] I am indebted to R. W. Hodges for pointing out that the ending dates back at least to the 10th edition of Linnaeus' Systema Naturae, where the genus *Phalaena* is divided into 7 sections, in some of which the specific names regularly bore characteristic endings: Bombyces, Noctuae, Geometrae (-aria and -ata), Tortrices (-ana), Pyralides (-alis), Tineae (-ella), Alucitae (six species: monodactyla, didactyla, tridactyla, tetradactyla, pentadactyla, hexadactyla). These sections were distinguished in a manner similar to that in which we now designate subgenera, e.g., *Phalaena* (*Tortrix*) *ameriana, P.* (*Tinea*) *bella, P.* (*Tinea*) *euonymella.* The Linnean sections now correspond roughly to families. The endings were used by later authors in various families. The endings -ana and -alis form adjectives; -aria and -ata are used with both nouns and adjectives; and -dactyla is the second member of compounds, which with the numerical 1st members form adjectives.

same gender as their primitives. They are formed by adding 1. *-ulus, -ula, -ulum* . . .; 2. *-culus, -cula, -culum* . . . Note 2.—A contraction is sometimes formed (especially when the clipt stem of the primitive ends in l, n, or r), and the termination is changed into *-ellus, -ella,* or *-ellum*; . . . *oculus,* an eye, *ocellus,* a dear little eye; *catulus,* a puppy, *catellus,* a little puppy; *populus,* the people, *popellus,* the rabble . . . Note 4.—Adjectives also have diminutives: as *miser, misellus.*" (Chase, 1882).

c) "Diminutives, either nouns or adjectives, are formed from nouns or adjectives with the endings . . . *ellus,* in any or all genders . . . The gender of the primitive word is generally retained in the diminutive. (Examples) *castellum, tabella, libellus, puella, flagellum.*" (Jenks, 1911).

d) "From the stems of other nouns . . . *El-lus, el-la, el-lum,* . . . are used when the stem of the primitive ends in a or o, preceded by l, n, or r: *ocellus* . . ., *fabella* . . . Adjectives from adjectives . . . Note 1.—The endings *ellus* and *illus* also occur as nouns: novellus." (Harkness, 1892).

e) "The diminutive ending *-ellus* is due to phonetic changes: as *agellus* (*ager*); *fabella* (*fabula*) . . . Diminutive adjectives are formed like diminutive nouns, and with a similar variety of meaning: *pulchellus* (from *pulcher*)." (Burton, 1911).

Cooper (1895), in an extended work on word formation in popular Latin, devotes 33 pages (pp. 164–195) to diminutives, pointing out that they lost strictly diminutive meaning at an early date, that such weakening of the meaning continued throughout the history of the language, that in later periods a fondness for compound, 2nd and 3rd degree diminutives became more evident, and that diminutive adjectives were far less numerous than diminutive nouns. He cites many examples.

Stern (1966, p. 289) remarks, in regard to generic names in botany, that " . . . the suffix *-ella* has now come to be regarded, particularly by mycologists, as being simply a name-forming component to be attached to any personal name or any generic name of either Latin or Greek origin, usually without implication of smallness." The same condition is true with regard to generic names in entomology, and at least in the Microlepidoptera the condition has been carried over into species-group names. The following examples, all from Heinrich (1956), will show this.

A) From nouns: abietella (Abies), arizonella (Arizona), bahamasella (Bahamas), bacerella (Baker), bakerella (Baker), cacabella (cacabus), castrella (castrum = Fort [Wingate]), cnabella (Knab), constitutionella (constitution = constitutio), crataegella (Crataegus), exsulella (exsul), fasciella (fascia), gitonella (Greek geitōn), glendella (Glenwood [Springs]), homoeosomella (Homoeosoma), illuviella (illuvies), titillella (titillus).

B) From adjectives: aeneella (aenea), abietivorella (abietivora), albescentella (albescens), albidiorella (albidior), angustellus (angustus), atrella (atra), australella (australis), cinerella (cinerea), glabrella (glabra; better glabella), melanellus (melas, melan-).

C) From ?: cinerella (? noun cinis, ciner-; ? error for cinereella), demotella (? Greek noun dēmotēs); immorella; jocarella; obnupsella; obsipella (? verb obsipo); oporedestella (? Greek nouns opōra + edestēs); plorella (? verb ploro); senesciella (? verb senesco), verecuntella (? adj. verecunda).

With generic names ending in *-ellus, -ella, -ellum,* there is no trouble, since these endings clearly show the gender. But with species-group

names, it is necessary to know whether the name is noun or adjective when it is transferred to a genus of different gender. We cannot simply say that the names are either all nouns or all adjectives. It is not possible to make good Latin words like *pulchella*, *atrella*, or *angustellus*, into anything but adjectives, nor is it possible to make anything but nouns (invariable as to gender) out of such words as *cacabella*, *exsulella*, *castrella*, *bakerella*, *arizonella*, etc. With names that are obviously either nouns or adjectives by original stated derivation, by Latin or Greek dictionaries, by derivation from a generic name, etc., there is a clear choice, but with words such as those cited in category "C" above, no source yields any usable data for the choice between noun and adjective.

As an example of the problems that could be encountered, let us suppose that 7 names recently proposed (Shaffer, 1968) were to be transferred to a genus of different gender. These names are *Anacostia tribulella*, *Arivaca artella*, *A. linella*, *A. poohella*, *Homosassa incudella*, *H. platella*, and *Peoria floridella*. No derivations were given for these names, but personal communication with the author brought out the information that *floridella* was based upon the name of the State of Florida, that *incudella* was based upon the Latin verb *incudo* ("because the male genitalia have a part resembling an anvil"), and that the others are neologisms, or made-up names. None of these names contravenes any of the International Rules of Zoological Nomenclature; they are therefore validly formed and even rather good names from the standpoints of simplicity, shortness, distinctiveness, and ease of pronunciation for most people.

Many zoologists nowadays are simply coining names rather than going through a rather laborious and time-consuming process of looking for something apt and linguistically correct in a language with which they lack familiarity. But that course, too, has its limits and dangers. One might come up with the names *alba* and *leo* by shuffling a set of letter cards, but the fact that those words have been good Latin words for many centuries cannot be controverted. They now belong to all mankind and cannot be said by any one person to mean anything other than what their usage as recorded in lexicons has been all this time.

Therefore, of Shaffer's names, one must be considered an adjective (*artella*, from the Latin adj. *artus*, *-a*, *-um* close, narrow, confined) and 5 others are clearly nouns (*floridella*, from Florida rather than from the Latin adj. *floridus*, *-a*, *-um* flowery; *tribulella*, from Latin noun *tribulus*; *incudella*, from the Latin noun *incūs* anvil, with gender change [the verb *incudo* is from the same root]; *linella*, from the Latin noun *linum* flax, thread, line, rope, with gender change; and *platella*, from either of the Greek nouns *platē* blade, flat part of an object, or *platos* breadth, but not

from the adj. *platys*, which would give *platyella*). This last name could have been formed from the generic name *Platus* Motschulsky, 1844 (Coleoptera), far-fetched of course, but that would also make *platella* a noun.

The remaining name, *poohella*, is rather obviously made-up; at least I can find no classical basis for it, nor does there seem to be a genus-name it could have been based upon. Since it is a neologism and certainly not derived from any Latin or Greek adjective, it is best considered as a noun, the most basic part of language. In order to be an adjective, it would have to have a meaning of adjectival nature. Any word, however, can be used as a noun. Latin adjectives had the capability of usage as nouns, but as species-group names in biological nomenclature what is by nature an adjective can have nothing like Latin sentence structure to show that it is being used as a noun. The names *obsipella* and *plorella* (see above, from Heinrich, 1956), being traceable only to a verbal root, are also best considered as neologistic nouns.

As long as the International Rules and the Latin language are what they are, indication of the derivation of newly formed names is highly to be recommended to save other workers much time and effort that might be used much more profitably. The tracing of such a word as *cacabella* to the obscure Latin word *cacabus*, found in only the most complete lexicons, or the word *incudella* to the noun *incūs*, with its hidden root form *incud-*, is certainly not a very useful occupation.

More concise statements in the International Rules regarding availability and treatment of non-Latin specific names would also do much to obviate growing confusion.

LITERATURE CITED

ALLEN, J. H., & J. R. GREENOUGH, 1872. A Latin grammar for schools and colleges, founded on comparative grammar. Ginn Bros., Boston, xv + 252 pp.

BURTON, H. E., 1911. A Latin Grammar. Silver, Burdett and Co., N. Y., etc., 337 pp.

CHASE, T., 1882. A Latin Grammar. Eldredge and Bro., Philadelphia, viii + 313 pp.

COOPER, F. T., 1895. Word formation in the Roman Sermo Plebeius. Privately publ., N. Y. (thesis, Columbia College, N. Y.), xlvii + 329 pp.

JENKS, P. R., 1911. A manual of Latin word formation for secondary schools. D. C. Heath and Co., Boston, etc., (v) + 81 pp.

HARKNESS, A., 1892. A Latin grammar for schools and colleges. Rev. std. ed., Amer. Book Co., N. Y., etc., 430 pp.

HEINRICH, C., 1956. American moths of the subfamily Phycitinae. U. S. Nat. Mus. Bull. 207: viii + 581 pp.

SHAFFER, J. C., 1968. A revision of the Peoriinae and Anerastiinae (auctorum) of America north of Mexico (Lepidoptera: Pyralidae). U. S. Nat. Mus. Bull. 280: vi + 124 pp.

STERN, W. T., 1966. Botanical Latin. Hafner Publ. Co., N. Y., xiv + 566 pp.