

## TRANSLITERATION AND LATINIZATION OF GREEK WORDS <sup>1</sup>

When a Greek word is transliterated its letters are given their exact equivalents. When it is latinized it is given the form which is determined by the usage of classical Latin or, where that differs, of modern scientific Latin. The following Table illustrates the correct procedure.

### THE GREEK ALPHABET, ASPIRATED LETTERS, AND DIPHTHONGS, WITH LATIN EQUIVALENTS AND MODE OF LATINIZATION

#### *Alphabet and Aspirated Letters*

Greek letter	Name	Latin equivalent	Latinized as	Example	Latinized as
A	α alpha	a	a	ἄναξ	Anax
'A	ᾶ		ha	ἄβρός	in <i>Habrobracon</i>
B	β beta	b	b	βάλανος	Balanus
Γ	γ gamma	g	g	γλώσσα	in <i>Glossina</i>
	γγ	gg	ng	ἄγγος	in <i>Angio-neurilla</i>

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<sup>1</sup> Document prepared by L. W. Grensted and J. Chester Bradley, reprinted from *Bull. zool. Nomencl.* 15: 1111-1113, with amendments.

*Transliteration and Latinization of Greek Words*

Greek letter	Name	Latin equivalent	Latinized as	Example	Latinized as
	γκ		gk	nc	ἄγκιστρον in <i>Ancistrocerus</i>
	γξ		gx	nx	σάλπιγξ <i>Salpinx</i>
	γχ		gch	nch	ἄγχι in <i>Anchisaurus</i>
Δ	δ delta	d	d	d	δυνάστης <i>Dynastes</i>
E	ε epsilon	ě	e	e	ἐλατήρ <i>Elater</i>
‘E	έ		he	he	ἕλιξ <i>Helix</i>
Z	ζ zeta	z	z	z	ζῶον in <i>Protozoa</i>
H	η eta	ē	e	e	ἡώς in <i>Eohippus</i>
(final)	η	e	a	a	αἴγλη <i>Aegla</i>
‘H	ή		he	he	ἦλος in <i>Heloderma</i>
Θ	θ theta	th	th	th	θρίψ <i>Thrips</i>
I	ι iota	i	i	i or j	ἰχνεύμον <i>Ichneumon</i> ἰωάννης in <i>Joannisia</i>
‘I	ί		hi	hi	ἵππος in <i>Hippocampus</i>
K	κ kappa	k	c	c	κύπρις <i>Cypris</i>
Λ	λ lambda	l	l	l	λεπίς in <i>Lepidoptera</i>
M	μ mu	m	m	m	μύρμηξ <i>Myrmex</i>
N	ν nu	n	n	n	ναυτίλος <i>Nautilus</i>
Ξ	ξ xi	x	x	x	ξένος in <i>Xenotoma</i>
O	ο omicron	o	o	o	ὀρθός in <i>Orthoptera</i>
‘O	ό		ho	ho	ὄμος in <i>Homoptera</i>
(final)	ον	on	um	um	ῥυγχίον <i>Rhynchium</i>
(final)	ος		us	us	βόμβος <i>Bombus</i>
Π	π pi	p	p	p	παρά in <i>Parahoplites</i>
P	ρ rho	r	r	r	πτερόν in <i>Hemiptera</i>
‘P	ῥ		rh	rh	ῥέα <i>Rhea</i>
	ρρ	rr	rrh	rrh	πυρρός in <i>Pyrrhomutilla</i>

*Transliteration and Latinization of Greek Words*

Greek letter	Name	Latin equivalent	Latinized as	Example	Latinized as
Σ σ, ς	sigma	s	s	σφίγξ	Sphinx
Τ τ	tau	t	t	τέττιξ	Tettix
Υ υ	upsilon	u	y	βόμβυξ	Bombyx
Ϛ ϛ			hy	ὑδρα	Hydra
Φ φ	phi	ph	ph	φύλλον	in <i>Phylloxera</i>
Χ χ	chi	ch	ch	χιτών	<i>Chiton</i>
Ψ ψ	psi	ps	ps	ψυχή	<i>Psyche</i>
Ω ω	omega	o	o	ὠκύπους	<i>Ocypus</i>
Ϝ ϝ			ho	ῥα	in <i>Horaeocerus</i>

*Diphthongs*

ΑΙ αι		ai	ae	ταινία	<i>Taenia</i>
ΑΙ' αί			hae	αίμα	in <i>Haematopota</i>
ΑΥ αυ		au	au	αύλαξ	in <i>Aulacus</i>
ΕΙ ει		ei	i	χείρ	in <i>Chiroptera</i>
ΕΥ ευ		eu	eu (or ev)	εὖ εὐαγής	in <i>Eumenes</i> in <i>Evagetes</i>
ΕΥ' εὐ			heu	εὐρίσκω	in <i>Heuretes</i>
ΟΙ οι		oi	oe	οἶστρος	<i>Oestrus</i>
ΟΥ ου		ou	u	πούς	in <i>Platypus</i>
Ω ω		o(i)	o	ὠόν	in <i>Ootypus</i>

The remaining diphthongs are unimportant in zoological nomenclature.

**Notes**

1. The sign ' (rough breathing) placed over a vowel or rho, or before a capital, or after a capitalized diphthong, is represented in Latin by the letter h. The reversed sign ' (smooth breathing), placed over a vowel, is silent and is disregarded.

2. When rr (ρρ) occurs in the middle of a Greek word it becomes rrh on latinization. Thus *πυρρότης* becomes *Pyrrhotes*.

3. Of the two Greek forms of s, σ is used in the middle of a word and ς at the end only.

## Latinization of Geographical and Proper Names

4. The three long vowels written with iota subscript,  $\alpha$ ,  $\eta$ ,  $\omega$ , are in principle diphthongs, but the iota is normally ignored in latinization. The only important case in taxonomy is in the words derived from  $\acute{\omega}\acute{\omicron}\nu$ , an egg, which are always formed as in *Ootyplus*, *Oodes*.

5. In Latin, but not in Greek, the vowels u and i are also used as consonants. It has become customary to represent u by v, which appears whenever the Latin u is followed by a vowel, as in "*Evander*", "evangelize". This principle is varied whenever euphony demands, especially when eu, representing the Greek  $\epsilon\nu$ , is followed by the vowel o, as in *Euomphalus*, *Euodice*. Similarly in modern Latin an initial I is usually written J.

6. The substitution of "a" for the final  $\eta$  is the substitution of the Latin feminine nominative singular case-ending of the -a stem declension (first declension) for the Greek ending. Similarly in the o-stem declension (second declension) the Latin masculine nominative singular case-ending "us" is substituted for the Greek " $\acute{\omicron}\varsigma$ ", and the neuter ending "um" for the Greek " $\acute{\omicron}\nu$ ".

This brings the nouns into better conformity with normal Latin usage. It is advisable to do this in coining new names, but there are many instances in which such Greek words have been taken over into Latin unchanged, e.g., *Cyrene*, *Pelion*. Similarly in Neo-Latin we have many such zoological names as *Ennomos* from  $\epsilon\nu\nu\omicron\mu\omicron\varsigma$  and *Theridion* from  $\theta\eta\rho\acute{\iota}\delta\iota\omicron\nu$ .

There are also many cases where the nominative case-endings of Greek nouns of other declensions have been unnecessarily altered, even changing the gender and declension (and therewith the stem) in forming zoological names. Thus words ending in  $\acute{\kappa}\epsilon\rho\alpha\varsigma$ , a third declension neuter, are normally latinized as "-ceras" (e.g., *Calliceras*). But in *Trichocera*, the first declension case-ending -a has been substituted for the Greek ending, changing not only the gender and declension, but also the stem itself, which now ends in -a instead of -at. In *Heterocerus*, similarly, a second declension masculine ending has been used, and the stem of that word ends in -o. The stems referred to are the grammatical stems used in forming derivative words, not those to be used in forming family-group names [see Art. 29]. *Trichocera* and *Heterocerus* are not examples of the latinization of  $\acute{\kappa}\epsilon\rho\alpha\varsigma$  but the creation of wholly new words, such as, of course, any author has the right to make.

## LATINIZATION OF GEOGRAPHICAL AND PROPER NAMES

The geographical and proper names of nations that employ the Latin characters should be written with the orthography of the country in which they originate.

The geographical and proper names of countries that do not employ the Latin alphabet, have no true alphabet, or have no written language, should be in orthographies that take into consideration the following paragraphs. By means of the letters given below, an attempt should be made to represent as exactly as possible the local pronunciation without trying to give a complete representation of all the sounds that are heard.

## *Latinization of Geographical and Proper Names*

1. The vowels *a*, *e*, *i*, and *o* should be used to represent the sounds that they express in French, German, Italian, and Spanish. The *e* should not be used with the value of a mute vowel.

2. The French sound *u* should be represented by the German *ü* (written as *ue*).

3. The French sound *ou* should be represented by *u*, as in German, Italian, Spanish, etc.

4. The French sound *eu*, pronounced as in *jeu*, should be represented by *oe*.

5. The consonants *b*, *d*, *f*, *j*, *k*, *l*, *m*, *n*, *p*, *r*, *t*, *v*, and *z* should be used to represent the sounds that they express in French.

6. The letters *g* and *s* should represent only the hard sounds, as in the French (English) words *golfe* (*gulf*) and *sirop* (*syrup*).

7. The sound expressed in French by *ch* (as in *chambre*) and in English by *sh* (as in *shot*) should be represented by *sh*.

8. *Kh* should be used to represent the harsh guttural and *gh* the soft guttural of Arabic.

9. *Th* and *dh* should be used to represent respectively the sounds equivalent to the soft *th* (as in *path*) and the hard *th* (as in *those*) of English.

10. Aside from such employment (7, 8, 9) of the letter *h* modifying the letter that precedes it, *h* is always aspirated.

11. The semivowels *w* and *y* should be used to express the phonetic value that they have in the English words *will* and *young*.

12. Complex sounds should be represented by letters or groups of letters, such as *d+j*, *t+ch*, *t+sh*, which express the basic sounds, as in *Matshim*.

13. The sound expressed by the Spanish *ñ* should be represented by *gn*, pronounced as in the French *seigneur*.

14. The letters *x* and *c* should not be used, since they are duplicates of other letters representing the same sounds.

15. The letter *q* may be used to represent the Arabic *qaf*. The combination *qu* should be used to represent the sound that it expresses in the English word *quote* and the French word *quoi*.

# RECOMMENDATIONS ON THE FORMATION OF NAMES

## I. General

1. A new genus- or species-group name should be short and euphonious in Latin.

2. A word that has been used as the name of a taxon above the family-group should not be used as a new genus- or species-group name.

3. A zoologist should not publish a new genus-group name that differs from other such names only in its termination or in small differences in spelling, e.g., *Hygrobia*, *Hygromia*; *Leucochile*, *Leucochilus*; *Merope*, *Merops*; *Odhnerius*, *Odhneria*, *Odhnerium*; *Peroniceras*, *Peronoceras*; *Sciurus*, *Seiurus*.

4. A Latin adjective or past participle should not be used for a genus-group name, e.g., *Prasina*, *Productus*.

5. A zoologist should not publish a new species-group name

(a) identical with one already in use in a closely related or associated genus-group taxon, or

(b) that differs from such a name only in its termination or in small differences in spelling, e.g., *fluvialis*, *fluviaticus*, *fluviatilis*; *furcifera*, *furcigera*; *granulatus*, *granulosus*; *marginalis*, *marginatus*.

6. A zoologist should not base a new species-group name on a personal or geographical name if another name derived from the same word is in use in the same or in an allied or associated genus, e.g., *hispanus*, *hispanicus*; *moluccensis*, *moluccanus*; *sinensis*, *sinicus*, *chinensis*; *ceylonicus*, *zeylanicus*.

7. A zoologist should not choose a new species-group name differing from one in the same or in an allied or associated genus in being an adjective instead of a noun or vice versa; this applies also to the terminal element of a compound name, e.g., *cauda* (noun): *caudatus*, *-a*, *-um* (adjective); *crassicosta*: *crassicostatus*, *-a*, *-um*.

8. The words *typus* and *typicus* should not be used as new names, since they are liable to lead to confusion.

9. A zoologist should not propose a name that, when spoken, suggests a bizarre, comical, or otherwise objectionable meaning.

## II. Names formed from words of classical origin

(see also Part VI)

10. In forming a zoological name from a word of classical origin, the declension of the language of origin should be used.

11. In forming a compound name, a zoologist should not choose components of which one is Greek and the other Latin.

12. The prefix *sub-* should be used in combination only with a Latin noun or adjective. It should not be used with a name based on a personal name, e.g., *subviridis* or *substriatus*, but not *subwilsoni* or *Subdarwinia*.

13. The prefix *pseudo-* should be used in combination only with a Greek noun or adjective. It should not be used with a name based on a personal name.

14. The suffixes *-ides* and *-oides* should be used only with Greek or Latin nouns. They should not be used with proper names.

## III. Names based on personal names

15. The use of personal names in the formation of compound genus-group names is objectionable, e.g., *Eugrimmia* and *Euagassiceras*.

16. In forming a species-group name from the name of a modern man that is neither Latin, nor latinized, nor of Greek origin, the genitive singular case-ending *-i*, in preference to the termination *-ii*, should be added to the entire name, e.g., *smithi* rather than *smithii* (from Smith), *krupai* (from Krupa), *bonarellii* (from Bonarelli).

(a) Such a name may also be formed by adding the adjectival ending *-ianus*, *-iana*, *-ianum* to the entire name, but it is better to use the genitive singular.

(b) Latinization by the addition of *-ius* to a proper name, which would produce the genitive *-ii*, is not recommended.

17. (a) If the name is based on a Latin or latinized name of a modern man, the nominative singular ending *-us* should be replaced by the genitive singular ending *-i*, e.g., *fabricii*, *aurivillii*, *sartorii*.

(b) If the name is Greek, the latinized genitive should be used; if the correct latinized genitive cannot be found in either Greek or Latin lexicons, the genitive ending *-i* should be added to the entire name.

18. In forming a species-group name from the name of a woman [Art. 31], a final *-a* or *-e* may be elided for euphony, e.g., *josephineae* or *josephinae* (Josephine).

19. In forming a zoological name from a compound personal name, a zoologist should consider using only one of the components, giving preference to the better known, e.g., *bakeri* (Bethune Baker), *guerini* (Guérin Méneville).

20. The Greek or Latin declension should be followed in basing a zoological name on the forename of a modern person, if this is of classical origin, e.g., *caroli* (from Charles), *annae* (from Ann, Anna, Anne).

21. Personal names bearing prefixes should be treated as follows in forming zoological names.

- (a) The prefixes "Mac", "Mc", or "M' " should be spelled "mac" and united, as in *maccooki* (McCook), *maccoyi* (M'Coy).
- (b) The prefix "O' " should be united without an apostrophe, as *obrieni* (O'Brien).
- (c) A prefix consisting of an article (for example, le, la, l', les, el, il, lo), or containing an article (for example, du, de la, des, del, della), should be united, as *leclerci* (Le Clerc), *dubuyssoni* (Du Buysson), *lafarinai* (La Farina), *logatoi* (Lo Gato).
- (d) A prefix, abbreviated or not, consisting of a nobiliary particle or indicating Christian sainthood, should be omitted, as in *chellisi* (De Chellis), *remyi* (St. Rémy), *clairi* (St. Clair).
- (e) A German or Dutch prefix which is normally united with the personal name may be included in a zoological name, as *vonhauseni* (Vonhausen), *vanderhoecki* (Vanderhoeck), but should otherwise be omitted, as *iheringi* (von Ihering), *strasseni* (zur Strassen), *vechti* (van der Vecht).
- (f) All other prefixes should be omitted.

#### IV. Names formed from geographical names

22. A species-group name based on a geographical name should be

- (a) preferably an adjective derived from the geographical name, and ending in a suitable suffix, such as *-ensis* or *-iensis*, e.g., *cubensis* (Cuba), *timorensis* (Timor), *ohioensis* (Ohio), *siciliensis* (Sicily);
- (b) or a noun in the genitive case, e.g., *neapolis* (Naples), *ithacae* (Ithaca), *sanctipauli* (St. Paul), *romae* (Rome), *vindobonae* (Vienna), *burdigalae* (Bordeaux).



## Recommendations on the Formation of Names

23. Geographical names used by the Romans or by mediaeval writers in Latin should be preferred to more modern forms, e.g., *vindobonensis* rather than *viennensis* (Vienna); *burdigalensis* rather than *bordeausiacus* (Bordeaux); *londiniensis* rather than *londonensis* (London).

### V. Other names

24. A mythological name that is not of classical origin should be given a Latin termination.

25. A word taken from a non-classical language should be given a Latin termination, e.g., *Fennecus* (fennec), *Kobus* (kob), *Okapia* (okapi).

26. An arbitrary combination of letters, used as a name in the species-group, should be treated as an indeclinable noun.

### VI. Types of words eligible as genus-group names

27. Simple Greek nouns, e.g., ἀγκύλος (*ancylos*), *Ancylus*; φύσα (*phusa*), *Physa*; ὀπλίτης (*hoplites*), *Hoplites*; including Greek vernacular names for animals, such as λεπάς (*lepas*), *Lepas*.

28. Derivative Greek nouns formed from stems by the addition of suffixes that change their meaning. Such words may have been used in Greek or may be coined for zoological use, e.g., γαστήρ stomach, + -ωδης having the form of, *Gastrodes*; ἔρπειν to creep, + -της implying the agent, *Herpestes*.

29. Compound Greek nouns used in Greek or coined for zoological use. If the attribute in such a name expresses quality, it should precede the substantive (as *Schistosoma*, split-body); if it expresses activity or an action, it may precede or follow (as *Philopotamus*, lover of rivers, or *Potamophilus*, river-lover). Such compounds are of three principal types:

- (a) The first element is an inseparable particle, such as the alpha privative (*a-* before a consonant, *av-* before a vowel), e.g., ἀ-πτέρυξ wingless, *Apteryx*; ἡμι half, + μέρος share, *Hemimerus*.
- (b) The first element is a preposition or adverb, such as περί, around, + σφιγκτ-, bound, *Perisphinctes*; ἐπι, towards, + νεφέλη, cloud, *Epinephelus*; μετά, after, + κρίνον, lily, *Metacrinus*; εὖ, well, + μάσταξ, mouth, *Eumastax*.

*Recommendations on the Formation of Names*

- (c) The first element is the stem of a noun or adjective, such as πολυ-, many, + ὄμμα, eye, *Polyomma*; ἀρχαῖος, old, + κίδαρις, turban, *Archaeocidaris*; στενός, narrow, + πέλμα, sole, *Stenopelmatus*; ὄνυχος, nail, + μορφή, form, *Onychomorpha*.

30. Simple Latin nouns, such as *discus*, a disc (*Discus*); *tuba*, a trumpet (*Tuba*); including Latin vernacular names for animals, such as *canis*, a dog (*Canis*).

31. Derivative Latin nouns formed from stems by the addition of suffixes that modify their meaning. These may have been used in Latin or may be coined for zoological use, e.g., *Sturnus* + diminutive suffix *-ella*, *Sturnella*; *Buccinulum*, a small trumpet; *clamare*, to shout, + suffix *-tor* implying the agent, *Clamator*.

32. Latin nouns combined with inseparable particles, *ambi-*, *di-*, *dis-*, *in-*, *por-*, *re-*, *se-*, *ve-*, *semi-*, e.g., *Diloba*, *Reduvius*.

33. Latin compounds formed by prefixing a preposition or an adverb, e.g., *Bipes*, *Subursus*.

34. Latin nouns formed by combining stems, with the addition of suffixes as necessary, e.g., *Capricornis*, *Stiliger*, *Carinifex*.

35. Mythological names, e.g., *Danaus*, *Dardanus*, *Maja*, *Venus*.

36. Proper names used by the ancients, e.g., *Cinara*, *Diogenes*, *Ligur*.

37. Names of modern persons with an appropriate suffix, which should be *-ius*, *-ia*, *-ium* if the personal name ends in a consonant (e.g., *Selysius*, *Barbouria*, *Matthewsium*); *-ia* if it ends in *-a* (e.g., *Danaia*); and *-us*, *-a*, *-um* if it ends in a vowel other than *-a* (e.g., *Rudolphius*, *Fatioa*, *Milneum*).

38. Names of ships with an appropriate suffix, e.g., *Challengeria*, *Blakea*.

39. Words taken from languages neither classical nor modern Indo-European, e.g., *Vanikoro*, *Zua*.

40. Words formed as arbitrary combinations of letters, e.g., *Zirfaea*, *Velletia*.

41. Words formed as anagrams of existing names, e.g., *Milax* (from *Limax*); *Dacelo* (from *Alcedo*).

VII. Tables and explanatory notes compiled as an aid to  
zoologists <sup>1</sup>

TABLE 1

CONNECTING VOWELS USED IN COMPOUNDING CLASSICAL WORDS

*Part A. Latin compounds*

FIRST MEMBER	Insertion between Stems	SECOND MEMBER	Example of Complete Compound
Last Letter of Stem		First Letter of Stem	
(1) a vowel, becomes i <i>magno-</i> <i>capro-</i> <i>celeri-</i>	none	a consonant  <i>fac-</i> <i>cornu-</i> <i>pes</i>	  <i>magn-i-ficus</i> <i>capr-i-cornus</i> <i>celer-i-pes</i>
(2) a vowel, disappears <i>magno-</i>	none	a vowel  <i>animo-</i>	  <i>magn-animus</i>
(3) a consonant, retained <i>quot</i>	none	a vowel  <i>annis</i>	  <i>quotannis</i>
(4) a consonant <i>honor-</i> <i>mont-</i>	i <i>i</i> <i>i</i>	a consonant  <i>fac-</i> <i>col-</i>	  <i>honor-i-ficus</i> <i>mont-i-cola</i>

<sup>1</sup> Documents prepared by J. Chester Bradley and reprinted from *Bull. zool. Nomencl.* **14**: 231-243, with Table 2 amended.

### Part B. Greek compounds

FIRST MEMBER	Insertion between Stems	SECOND MEMBER	Exemplified by the genus
Last Letter of Stem		First Letter of Stem	
(5) (1st decl.) α becomes ο θαλασσα-	none	consonant χελυ-	<i>Thalassochelys</i>
(6) (2nd decl.) ο retained ποταμο-	none	consonant φιλο-	<i>Potamophilus</i>
(7) (3rd decl.) consonant φλεβ-	ο	consonant τομ-	<i>Phlebotomus</i>
(8) vowel, dropped λιθο-	none	vowel εδαφο-	<i>Lithedaphus</i>

At the beginning of the last element of a Greek compound, α (a) or ε (e) generally becomes η (ē), while ο (ō) becomes ω (ō) (e.g. no. 8 in the preceding table); στρατ-ηγός (*Stratēgus*) from στρατο- + ἄγω (*stratō + agō*); ἐπ-ώνυμος (*ep-ōnumōs*) from ἐπί + ὄνομα (*epi + ōnōma*).

### Latin syntactical compounds

In these, entire words instead of stems are combined, often without special connecting vowels. Examples: *duodecimpunctatus*, *quomodolibet*.

### Words compounded with a prefix

If the first element of the compound is a preposition or indeclinable particle, connecting vowels are not used, but reference should be made to grammars to find the form of the particle before various letters.

TABLE 2

## THE GENDER, DECLENSION, GRAMMATICAL STEM, AND CASE-ENDING OF THE GENITIVE OF TYPICAL LATIN NOUNS, INCLUDING THOSE DERIVED FROM GREEK, AND OF GREEK NOUNS

It is not the actual grammatical stem but the genitive without its case-ending that is used in forming names of taxa of the family-group.

The purpose of showing termination of grammatical stem is to aid in proper coining of derivative and compound words that are to serve as names. The proper form of a given suffix to be used depends upon the termination of the stem, easily seen from the table, but not too readily found in classical grammars. Thus, the Latin diminutive suffixes are "-lus", "-la", "-lum", "-ulus", "-ula", "-ulum", and "-culus", "-cula", "-culum". The suffixes "-lus", "-la", "-lum", are appended to stems terminating in "-a" or in "-o", "-ulus", "-ula", "-ulum", to stems terminating in a dental or a guttural, "-culus", "-cula", "-culum" to stems terminating in "-e", "-i", "-u", a liquid, or "-s". The proper form of any suffix to follow a given stem is shown in grammars. But further complication arises in the fact that the stem-vowels change in definite ways before the suffixes. Thus, before the suffixes, "-lus", "-la", "-lum", the stem-vowels *a* and *o* become *u* except that they become (or remain) *o* after *e* or *i*. Before the suffixes "-culus", "-cula", "-culum", a terminal *u* of a stem becomes *i*, and a terminal *on* of a stem becomes *un*. Rules for the several suffixes will be found in grammars, but the stem to which they are to be attached must be known.

In forming derivatives, the zoologist must recall that it is the actual grammatical stem with which he is working, and not rely upon using the genitive without its case-ending. The stems of *pullus* and of *puer* (second declension) for example, are respectively, *pullo* and *puero*, notwithstanding the fact that the stem ending *o* does not appear in either the nominative or the genitive. Only in forming names with the suffixes of the family-group can he safely rely upon the rule to add the suffix to the genitive singular without its case-ending (i.e., the "stem" as the term is used in the Code). In that case he is safe because the selection and application of these suffixes have been standardized [Art. 29, Rec. 29A].

## Part A. Latin

Termination of nominative singular	Example in nominative singular (Shown in lexicons)	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name based on example
<i>a</i>	<i>talpa, c., damma, c., agricola, m.</i>	m. or c.	1	<i>a</i>	<i>talp-ae</i>	TALPIDAE DAMMIDAE AGRICOLIDAE
<i>ā</i>	<i>alā</i>	f.	1	<i>ā</i>	<i>al-ae</i>	ALIDAE
<i>al</i>	<i>animal</i>	n.	3	<i>i</i>	<i>animal-is</i>	ANIMALIDAE
<i>ar</i>	<i>calcar</i>	n.	3	<i>i</i>	<i>calcar-is</i>	CALCARIDAE
<i>as</i>	(Greek) <i>lampas</i>	f.	3	<i>ad</i>	<i>lampad-os lampad-is</i>	LAMPADIDAE
<i>ās</i>	<i>aetas</i>	f.	3	<i>āt</i>	<i>aetat-is</i>	AETATIDAE
<i>ās</i>	(Greek) <i>Aensas</i>	m.	1	<i>ā</i>	<i>Aene-ae</i>	AENEIDAE
<i>e</i>	<i>mare, rēte</i>	n.	3	<i>i</i>	<i>mar-is</i>	MARIDAE
<i>e</i>	(Greek) <i>epitomē</i>	f.	1	<i>ā</i> or <i>ē</i>	<i>epitom-ēs</i>	EPITOMIDAE
<i>en</i>	<i>carmen</i>	n.	3	<i>in</i>	<i>carmen-is</i>	CARMINIDAE
<i>er</i>	<i>vesper</i>	m.	2	<i>o</i>	<i>vesper-i</i>	VESPERIDAE
<i>er</i>	<i>ager</i>	m.	2	<i>o</i>	<i>agr-i</i>	AGRIDAE
<i>er</i>	<i>passer</i>	m.	3	<i>er</i>	<i>passer-is</i>	PASSERIDAE
<i>er</i>	<i>pater</i>	m.	3	<i>tr</i>	<i>patr-is</i>	PATRIDAE
<i>es</i>	<i>dies, res</i>	f. or m.	5	<i>e</i>	<i>dī-ei</i>	DIIDAE
<i>es</i>	<i>miles</i>	m. or c.	3	<i>it</i>	<i>milit-is</i>	MILITIDAE
<i>ēs</i>	(Greek) <i>pyritēs</i>	m.	1	<i>a</i> or <i>e</i>	<i>pyrit-ae</i>	PYRITIDAE
<i>ēs</i>	<i>nubēs, sēdēs</i>	f.	3	<i>b</i>	<i>nub-is</i>	NUBIDAE SEDIDAE

Termination of nominative singular	Example in nominative singular (Shown in lexicons)	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name based on example
<i>ēx</i>	<i>rex</i>	m.	3	<i>g</i>	<i>rēg-is</i>	REGIDAE
<i>īr</i>	<i>vir</i>	m.	2	<i>o</i>	<i>vir-ī</i>	VIRIDAE
<i>īs</i>	<i>lapis</i>	m.	3	<i>īd</i>	<i>lapīd-is</i>	LAPIDIDAE
<i>is</i>	<i>avis, f., collis, m.</i>	m., f.	3	<i>i</i>	<i>av-is</i>	AVIDAE COLLIDAE
<i>īs</i>	<i>vīs</i>	f.	3	<i>vī</i> in singular	<i>v-is</i>	VIDAE
<i>īx</i>	<i>radix</i>	f.	3	<i>īc</i>	<i>radīc-īs</i>	RADICIDAE
<i>ix</i>	<i>nix</i>	f.	3	<i>nīgv</i> ( <i>niv</i> )	<i>niv-is</i>	NIVIDAE
<i>ō</i>	<i>virgō</i>	f.	3	<i>in</i>	<i>virgin-is</i>	VIRGINIDAE
<i>ō</i>	<i>leō</i>	m.	3	<i>ōn</i>	<i>leōn-is</i>	LEONIDAE
<i>on</i>	(Greek) <i>Ilion</i>	n.	2	<i>o</i>	<i>Ili-ī</i>	ILIIDAE
<i>or</i>	<i>honor</i>	m., f., n.	3	<i>r</i>	<i>honor-is</i>	HONORIDAE
<i>ōs, os</i>	(Greek) <i>Delos</i>	m., f.	2	<i>o</i>	<i>del-ī</i>	DELIDAE
<i>ōs</i>	(Greek) <i>hērōs</i>	m.	3	<i>ō</i>	<i>herō-is</i>	HEROIDAE
<i>ōs</i>	<i>flōs</i>	m.	3	<i>ōs, s</i> becomes <i>r</i> between 2 vowels	<i>flōr-is</i>	FLORIDAE
<i>ōs</i>	<i>nepōs</i>	m.	3	<i>ōt</i>	<i>nepōt-is</i>	NEPOTIDAE
<i>ōs</i>	<i>bōs</i>	c.	3	<i>ou</i>	<i>bov-is</i>	BOVIDAE
<i>s</i>	<i>urbs</i>	f.	3	<i>b</i>	<i>urb-is</i>	URBIDAE
<i>s</i>	<i>hiems</i>	f.	3	<i>m</i>	<i>hiem-is</i>	HIEMIDAE
<i>s</i>	<i>princeps</i>	c.	3	<i>īp</i>	<i>princip-is</i>	PRINCIPIDAE
<i>s</i>	<i>praecipēs</i>	m.	3	<i>cīpit-</i>	<i>praecipit-is</i>	PRAECIPITIDAE

Termination of nominative singular	Example in nominative singular (Shown in lexicons)	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name based on example
<i>ū</i>	<i>cornu, genu</i> and <i>veru</i> only	n.	4	<i>u</i>	<i>corn-ūs</i>	CORNIDAE VERIDAE
<i>ul</i>	<i>consul</i>	m.	3	<i>ul</i>	<i>consul-is</i>	CONSULIDAE
<i>um</i>	<i>ovum</i>	n.	2	<i>o</i>	<i>ov-i</i>	OVIDAE
<i>ur</i>	<i>femur, jecur, and robur</i> only	n.	3	<i>or</i>	<i>femor-is</i>	FEMORIDAE JECORIDAE ROBORIDAE
<i>us</i>	<i>genus, n., Venus, f.</i>	n., f.	3	<i>os, es, s</i> changes to <i>r</i> between 2 vowels	<i>gener-is</i>	GENERIDAE VENERIDAE
<i>us</i>	<i>pilus</i>	m.	2	<i>o</i>	<i>pil-ī</i>	PILIDAE
<i>us</i>	<i>alvus, colus, humus, vannus</i> , most names of countries, towns, and trees <sup>1</sup>	f.	2	<i>o</i>	<i>alv-ī</i>	ALVIDAE HUMIDAE VANNIDAE
	<i>pinus</i> <sup>1</sup>	f.	4 or 2	<i>u</i> or <i>o</i>	<i>pin-ūs</i> or <i>pin-ī</i>	PINIDAE
	<i>ficus</i> <sup>1</sup>	f.	4 or 2	<i>u</i> or <i>o</i>	<i>fic-ūs</i> or <i>fic-ī</i>	FICIDAE

<sup>1</sup> The names of trees ending in “-us”, feminine in gender, are of mixed declension, partly second, partly fourth. The genitive singular of *cupressus* is *cupressi*, but that of *ficus*, *laurus*, *pinus*, and *quercus* may terminate in either “-i” or “-us”. However the form *pini* has been more widely used by zoologists, and the form *querci* was extremely rare among the Romans. The genitive plural of *quercus*, however, is *quercorum*. Both gender and declension of *ficus* were a matter of dispute among the ancients.

Termination of nominative singular (Shown in lexicons)	Example in nominative singular	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name based on example
<i>us</i>	<i>virus, pelagus, and vulgus</i> only	n.	2	<i>o</i>	<i>vir-ī</i>	VIRIDAE PELAGIDAE VULGIDAE
<i>ūs</i>	<i>grūs</i> and <i>sūs</i> only	c.	3	<i>ū</i>	<i>grū-is</i>	GRUIDAE SUIDAE
<i>ūs</i>	<i>corpus</i> <i>pectus</i>	n.	3	<i>os, s</i> changes to <i>r</i> between 2 vowels	<i>corpor-is</i>	CORPORIDAE PECTORIDAE
<i>ūs</i>	<i>crūs, mūs</i>	m.	3	<i>s</i> changes to <i>r</i> between 2 vowels	<i>crūr-is</i>	CRURIDAE MURIDAE
<i>us</i>	<i>arcus, lacus</i>	m.	4	<i>u</i>	<i>arc-ūs</i>	ARCIDAE LACIDAE
<i>us</i>	<i>acus, manus, tribus,</i> and 5 others	f.	4	<i>u</i>	<i>ac-ūs</i>	ACIDAE TRIBIDAE
<i>ūs</i>	<i>virtus</i>	f.	3	<i>ūt</i>	<i>virtūt-is</i>	VIRTUTIDAE
<i>ut</i>	<i>caput</i>	n.	3	<i>it</i>	<i>capit-is</i>	CAPITIDAE
<i>ux</i>	<i>dux</i>	c.	3	<i>uc</i>	<i>duc-is</i>	DUCIDAE
<i>x</i>	<i>arx</i>	f.	3	<i>c</i>	<i>arc-is</i>	ARCIDAE
<i>x</i>	(Greek) <i>Styx</i>	f.	3	<i>g</i>	<i>Styg-is</i> or <i>Styg-os</i>	STYGIDAE

#### Part B. Greek

In the following table in columns 1, 2, 5, and 6, each numbered entry shows first the Greek example(s), and below the equivalent in the Latin alphabet of the letter(s) of the word(s) used. These equivalents are transliterations, not latinizations such as are given in Appendix B; they are given here merely as an aid to reading the Greek, and it is Appendix B that should be followed in forming zoological names from Greek words.

The nominative endings are alphabetized in the sequence of the Latin, not Greek, alphabet.

The ending of the stem in many Greek nouns, if a vowel, is difficult to discover, because it is often obscured by coalition with the case-ending.

Termination of nominative singular (Shown in lexicons)	Example in nominative singular	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name latinized
1. <i>a</i>	<i>οἰκία</i> <i>θάλασσα</i> <i>μνᾶ</i>	f. (ῆ)	1	<i>a</i>	<i>οἰκί-ας</i> <i>οἰκί-ας</i>	OECIIDAE THALASSIDAE MNIDAE
<i>a</i>	<i>οἰκία,</i> <i>thalassa,</i> <i>mna</i>			<i>a</i>		
2. <i>a</i>	<i>σῶμα</i>	n. (τό)	3	<i>ατ</i>	<i>σώματ-ος</i>	SOMATIDAE
<i>a</i>	<i>sōma</i>			<i>at</i>	<i>sōmat-ος</i>	
3. <i>ap</i>	<i>ἥπαρ</i>	n. (τό)	3	<i>ατ</i>	<i>ἥπατ-ος</i>	HEPATIDAE
<i>ar</i>	<i>hēpar</i>			<i>at</i>	<i>hēpat-ος</i>	
4. <i>as</i>	<i>ταμίας</i>	m. (ός)	1	<i>a</i>	<i>ταμί-ου</i>	TAMIIDAE
<i>as</i>	<i>tamias</i>			<i>a</i>	<i>tami-ου</i>	

Termination of nominative singular (Shown in lexicons)	Example in nominative singular	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name latinized
5. <i>ας</i> <i>as</i>	<i>λαμπάς</i> <i>lampas</i>	f. (ή)	3	<i>δ</i> <i>d</i>	<i>λαμπάδ-ος</i> <i>lampad-os</i>	LAMPADIDAE
6. <i>ας</i> <i>as</i>	<i>γίγας</i> <i>gigas</i>	m. (ό)	3	<i>ντ</i> <i>nt</i>	<i>γίγαντ-ος</i> <i>gigant-os</i>	GIGANTIDAE
7. <i>ας</i> <i>as</i>	<i>κέρας</i> <i>keras</i>	n. (τό)	3	<i>τ</i> <i>t</i>	<i>κέρατ-ος</i> <i>kerat-os</i>	CERATIDAE
8. <i>αυς</i> <i>aus</i>	<i>γραῦς</i> <i>graus</i>	f. (ή)	3	<i>αυ</i> <i>au</i>	<i>γρα-ός</i> <i>gra-os</i>	GRAIDAE
9. <i>αξ</i> <i>ax</i>	<i>κόραξ</i> <i>korax</i>	m. (ό)	3	<i>κ</i> <i>k</i>	<i>κόρακ-ος</i> <i>korak-os</i>	CORACIDAE
10. <i>αξ</i> <i>ax</i>	<i>ἄναξ</i> <i>anax</i>	m. (ό)	3	<i>κτ</i> <i>kt</i>	<i>ἄνακτ-ος</i> <i>anakt-os</i>	ANACTIDAE
11. <i>ευς</i> <i>eus</i>	<i>βασιλεύς</i> <i>basileus</i>	m. (ό)	3	<i>ευ</i> <i>eu</i>	<i>βασιλ-έως</i> <i>basil-eōs</i>	BASILIDAE
12. <i>η</i> <i>ē</i>	<i>πέλτη; συκῆ</i> <i>peltē; sukē</i>	f. (ή)	1	<i>α</i> <i>a</i>	<i>πέλτ-ης</i> <i>pelt-ēs</i>	PELTIDAE

Termination of nominative singular (Shown in lexicons)	Example in nominative singular	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name latinized
13. <i>ην</i> <i>ēn</i>	<i>ποιμήν</i> <i>poimēn</i>	m. (ό)	3	<i>ν</i> <i>n</i>	<i>ποιμέν-ος</i> <i>poimen-os</i>	POEMENIDAE
14. <i>ηρ</i> <i>ēr</i>	<i>γαστήρ</i> <i>πατήρ</i> <i>gastēr, f.</i> <i>patēr, m.</i>	m., f. (ό, ή)	3	<i>ρ</i> <i>r</i>	<i>γαστρ-ός</i> <i>gastr-os</i>	GASTRIDAE PATRIDAE
15. <i>ηρ</i> <i>ēr</i>	<i>άνήρ</i> <i>anēr</i>	m. (ό)	3	<i>ρ</i> <i>r</i>	<i>άνδρ-ός</i> <i>andr-os</i>	ANDRIDAE
16. <i>ης</i> <i>ēs</i>	<i>δεσπότης</i> <i>Ἑρμῆς</i> <i>despotēs,</i> <i>Hermēs</i>	m. (ό)	1	<i>α</i> <i>a</i>	<i>δεσπότη-ου</i> <i>despot-ou</i>	DESPOTIDAE HERMIDAE
17. <i>ης</i> <i>ēs</i>	<i>θής</i> <i>thēs</i>	m. (ό)	3	<i>τ</i> <i>t</i>	<i>θητ-ός</i> <i>thēt-os</i>	THETIDAE
18. <i>γξ</i> <sup>1</sup> <i>nξ</i>	<i>σάλπιγξ</i> <i>salpinx</i>	f. (ή)	3	<i>γ</i> <i>g</i>	<i>σάλπιγγ-ος</i> <i>salping-os</i>	SALPINGIDAE

<sup>1</sup> The Greek *γ* in this position (before *γ, κ, ξ* or *χ*) was sounded as "n" and was always so transliterated when taken over into classical Latin. *E.g.* *Syrinx* from *Σύριγγ* giving genitive *Syringis* = *Σύριγγος*.



Termination of nominative singular (Shown in lexicons)	Example in nominative singular	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name latinized
19. <i>ις</i> <i>is</i>	<i>κρίσις</i> <i>krisis</i>	f. (ἡ)	3	<i>ι</i> <i>i</i>	<i>κρίσει-ως</i> <i>krisē-ōs</i>	CRISEIDAE
20. <i>ις</i> <i>is</i>	<i>λεπίς</i> <i>lepis</i>	f. (ἡ)	3	<i>δ</i> <i>d</i>	<i>λεπίδ-ος</i> <i>lepid-os</i>	LEPIDIDAE
21. <i>ις</i> <i>is</i>	<i>ρίς</i> <i>rhis</i>	f. (ἡ)	3	<i>ν</i> <i>n</i>	<i>ρίν-ός</i> <i>rhin-os</i>	RHINIDAE
22. <i>ις</i> <i>is</i>	<i>ὄρνις</i> <i>ornis</i>	c. (ὁ, ἡ)	3	<i>θ</i> <i>th</i>	<i>ὄρνιθ-ος</i> <i>ornith-os</i>	ORNITHIDAE
23. <i>ιξ</i> <i>ix</i>	<i>ἑλιξ</i> <i>helix</i>	f. (ἡ)	3	<i>κ</i> <i>k</i>	<i>ἑλικ-ος</i> <i>helik-os</i>	HELICIDAE
24. <i>ιξ</i> <i>ix</i>	<i>θρίξ</i> <i>thrix</i>	f. (ἡ)	3	<i>χ</i> <i>ch</i>	<i>τριχ-ός</i> <i>trich-os</i>	TRICHIDAE
25. <i>ον</i> <i>on</i>	<i>χόριον</i> <i>κρίνον</i> <i>chorion,</i> <i>krinon</i>	n. (τό)	2	<i>ο</i> <i>o</i>	<i>χόρι-ου</i> <i>chori-ou</i>	CHORIIDAE CRINIDAE

Termination of nominative singular (Shown in lexicons)	Example in nominative singular	Gender m, masculine f, feminine c, common n, neuter	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family-group names) (Shown in lexicons)	Family name latinized
26. <i>ος</i> <i>os</i>	<i>βίος</i> <i>νήσος</i> <i>bios, m.,</i> <i>nēsos, f.</i>	m., f.	2	<i>ο</i> <i>o</i>	<i>βί-ου</i> <i>bi-ou</i>	BIIDAE NESIDAE
27. <i>ος</i> <i>os</i>	<i>γένος</i> <i>εἶδος</i> <i>genos,</i> <i>eidos</i>	n. (τό)	3	<i>ε</i> <i>e</i>	<i>γένε-ος (-ους)</i> <i>gene-os</i> <i>(-ous)</i>	GENEIDAE IDEIDAE
28. <i>ους</i> <i>ous</i>	<i>βοῦς</i> <i>bous</i>	c. (ὁ, ἡ)	3	<i>ου</i> <i>ou</i>	<i>βο-ός</i> <i>bo-os</i>	BOIDAE
29. <i>ους</i> <i>ous</i>	<i>πούς</i> <i>πους</i>	m. (ὁ)	3	<i>δ</i> <i>d</i>	<i>ποδ-ός</i> <i>pod-os</i>	PODIDAE
30. <i>ους</i> <i>ous</i>	<i>ὀδούς</i> <i>odous</i>	m. (ὁ)	3	<i>ντ</i> <i>nt</i>	<i>ὀδόντ-ος</i> <i>odont-os</i>	ODONTIDAE
31. <i>ω, ως</i> <i>ῶ, ῶς</i>	<i>αἰδώς, ἠχώ</i> <i>aidōs, ēchō</i>	f. (ἡ)	3	<i>ο</i> <i>o</i>	<i>αἰδ-οῦς</i> <i>aid-ous</i>	AEDIDAE
32. <i>ων</i> <i>ōn</i>	<i>εἰκών</i> <i>eikōn</i>	f. (ἡ)	3	<i>ν</i> <i>n</i>	<i>εἰκόν-ος-(-ους)</i> <i>eikon-os (-ous)</i>	ICONIDAE

Termination of nominative singular (Shown in lexicons)	Example in nominative singular	Gender m, masculine f, feminine c, common n, neutre	Declension	Termination of grammatical stem (for use in forming derivatives)	Example in genitive singular (showing stem for purposes of Code, for guidance in forming family- group names) (Shown in lexicons)	Family name latinized
33. $\omega\nu$ $\omicron\eta$	$\lambda\acute{\epsilon}\omega\nu$ <i>leōn</i>	m. ( $\delta$ )	3	$\tau$ <i>t</i>	$\lambda\acute{\epsilon}\omicron\nu\tau\text{-}\omega\varsigma$ <i>leont-os</i>	LEONTIDAE
34. $\omega\rho$ $\omicron\rho$	$\rho\acute{\eta}\tau\omega\rho$ <i>rhētōr</i>	m. ( $\delta$ )	3	$\rho$ <i>r</i>	$\rho\acute{\eta}\tau\omicron\rho\text{-}\omega\varsigma$ <i>rhētōr-os</i>	RHETORIDAE
35. $\omega\varsigma$ $\omicron\varsigma$	$\eta\acute{\omega}\varsigma$ <i>ēōs</i>	f. ( $\eta$ )	2	$\omicron$ <i>o</i>	$\eta\text{-}\omicron\omicron\varsigma$ <i>ē-ous</i>	EIDAE
36. $\omega\varsigma$ $\omicron\varsigma$	$\lambda\alpha\gamma\acute{\omega}\varsigma$ <i>lagōs, m.</i>	m. ( $\delta$ ) f. ( $\eta$ )	2	$\omicron$ <i>o</i>	$\lambda\alpha\gamma\text{-}\acute{\omega}$ <i>lag-ō</i>	LAGIDAE
37. $\psi$ $\phi\varsigma$	$\phi\lambda\acute{\epsilon}\psi$ <i>phlēps</i>	f. ( $\eta$ )	3	$\beta$ <i>b</i>	$\phi\lambda\epsilon\beta\text{-}\acute{\omicron}\varsigma$ <i>phlēb-os</i>	PHLEBIDAE
38. $\upsilon$ $\upsilon$	$\acute{\alpha}\sigma\tau\upsilon$ <i>astu</i>	n. ( $\tau\acute{\omicron}$ )	3	$\upsilon$ <i>u</i>	$\acute{\alpha}\sigma\tau\epsilon\text{-}\omega\varsigma$ <i>aste-os</i>	ASTEIDAE
39. $\upsilon\rho$ $\upsilon\rho$	$\pi\acute{\upsilon}\rho$ <i>pur</i>	n. ( $\tau\acute{\omicron}$ )	3	$\rho$ <i>r</i>	$\pi\upsilon\rho\text{-}\acute{\omicron}\varsigma$ <i>pur-os</i>	PYRIDAE
40. $\upsilon\varsigma$ $\upsilon\varsigma$	$\pi\acute{\eta}\chi\upsilon\varsigma$ <i>pēchus</i>	n. ( $\tau\acute{\omicron}$ )	3	$\upsilon$ <i>u</i>	$\pi\acute{\eta}\chi\epsilon\text{-}\omega\varsigma$ ( $\text{-}\omega\varsigma$ ) <i>pēche-ōs (ōs)</i>	PECHEIDAE
41. $\upsilon\varsigma$ $\upsilon\varsigma$	$\iota\chi\theta\acute{\upsilon}\varsigma$ <i>ichthus</i>	m. ( $\delta$ )	3	$\upsilon$ <i>u</i>	$\iota\chi\theta\acute{\upsilon}\text{-}\omega\varsigma$ <i>ichthu-os</i>	ICHTHYIDAE

TABLE 3

## METHOD OF FORMING NOMINATIVE AND GENITIVE SINGULAR FROM GRAMMATICAL STEM OF GREEK NOUNS

Declension	Case	Masculine		Feminine		Neuter		Stem ending in:
		Termination <sup>1</sup>	Case-ending	Termination <sup>1</sup>	Case-ending	Termination <sup>1</sup>	Case-ending	
1	nom.	$\alpha\varsigma, \eta\varsigma$ ( $\alpha\varsigma, \acute{\epsilon}\varsigma$ )	$\varsigma$	$\alpha, \eta$ ( $\alpha, \acute{\epsilon}$ )		no neuters		$\alpha, \eta$ ( $\alpha, \acute{\epsilon}$ )
2	nom.	$\omicron\varsigma, \omega\varsigma$ ( $\omicron\varsigma, \acute{\omicron}\varsigma$ )	$\varsigma$	$\omicron\varsigma, \omega\varsigma$	$\varsigma$	$\omicron\nu, \omega\nu$ ( $\omicron\eta, \acute{\omicron}\eta$ )	$\nu$ ( $\eta$ )	$\omicron, \omega$ ( $\omicron, \acute{\omicron}$ )
	latinized as	us	s		s	um	m	
3	nom.	$\varsigma$	$\varsigma$	$\varsigma$	$\varsigma$			} consonant, $\iota, \upsilon$ or diphthong
	latinized as	s	s	s	s			
1	gen.	$\omicron\nu$ from $\alpha\omicron$ <sup>2</sup>	$\omicron$	$\alpha\varsigma, \eta\varsigma$ ( $\alpha\varsigma, \acute{\epsilon}\varsigma$ )	$\varsigma$	no neuters		$\alpha, \eta$
2	gen.	$\omicron\nu$ from $\omicron\omicron$ <sup>3</sup>	$\omicron$	$\omicron\nu$ from $\omicron\omicron$	$\omicron$	$\omicron\nu$ from $\omicron\omicron$	$\omicron$	$\omicron, \omega$

<sup>1</sup> The termination, if the stem ends in a vowel, is that vowel united with the case-ending, if any; if there is no case-ending, it is the final vowel of the stem.

<sup>2</sup> In masculines of the first declension the final  $\alpha$  of the stem combines with the case-ending of the genitive to form  $\alpha\omicron$  which becomes  $\omicron\nu$ .

<sup>3</sup> In masculines of the second declension the final  $\omicron$  of the stem combines with the case-ending  $\omicron$  to form  $\omicron\omicron$  which becomes  $\omicron\nu$ .

## GENERAL RECOMMENDATIONS

1. A zoologist, when drawing up the description of a new taxon, should include comparisons with related taxa such as will assist later identification of the taxon.

2. The scientific names for taxa of the genus- and species-groups should be printed in a type-face different from that used in the text. *Italics* are usual, e.g., "*Rana esculenta* Linnaeus, 1758, lives in Europe."

3. Vowels should not be linked together in printing diphthongs, since to do so risks errors in later transcription, e.g., *ae* and *oe* should be used, not *æ* and *œ*.

4. When the description of a new taxon is not written in English, French, German, Italian, or Latin, it should be accompanied by a translation into one of those languages.

5. In publications issued in any other language than English, French, German, Italian, or Latin, the explanations of figures should be translated into one of these languages.

6. An author should clearly state the class, order, and family (if the order is currently divided into families) to which his new taxon is referred.

7. A new name should be followed immediately by an appropriate statement in abbreviated form, such as "gen. n.", "sp. n.", etc.

8. A new species-group name should be cited in full, that is, preceded by the unabbreviated generic name in the case of a species, and by the unabbreviated generic and specific names in the case of a subspecies.

9. The author of the name of any taxon above generic rank need not be cited, except where useful for historical or bibliographic purposes, or in discussing the relationships between names in different usages.

10. A zoologist who cites the name of a genus or a taxon of lower rank should cite the name of the author and the date at least once in each publication.

11. The name of an author should not be abbreviated except, optionally, the name of an author who will be recognized by the importance of his work and by his abbreviated name. An author's name should never be so abbreviated that confusion with other authors' names will be caused.

12. When a nominal species has been later divided on taxonomic grounds, the name of the author who restricted the taxonomic species may be cited with a suitable notation, after the name of the original author, e.g., *Taenia solium* Linnaeus, partim Goeze [see Article 51(b) and Recommendation 51(B)].

13. If more than one citation or notation follows the name of a taxon, each should be separated by a comma from the one preceding.

14. A zoologist who cites the name of a genus or taxon of lower rank in a taxonomic work should give at least once a full bibliographic reference to its original publication [see also E(10) above].

15. An author establishing a replacement name should give a full bibliographic reference for the name replaced, citing the name itself, its author and date of publication, the title of the work in which it was published, the volume-number, if the work was divided into volumes, and the page-number and plates. If the pages are not numbered, the number, letter, or sign (signature) distinguishing the sheet or the portion of the text concerned should be given.

16. A zoologist should give the etymology and gender of a new genus-group name.

17. The description of a new taxon of the species-group should be accompanied by a satisfactory illustration or by a bibliographic reference to such an illustration.

18. The metric system of weights and measures and the centigrade scale of temperature should be used. The unit in microscopic measurements should be the micron (0.001 mm) represented by the Greek letter  $\mu$ .

19. A statement of enlargement or reduction is very desirable for the comprehension of an illustration and should be expressed by a scale, or in figures giving the linear dimensions.

20. If the enlargement or reduction is not linear, but relates to surface or volume, it should be specified.

**Examples.**—“ $\times 50$ ” shows that the object is illustrated at 50 times its natural size; “ $\times 0.5$ ” or “ $\times \frac{1}{2}$ ” at one-half its natural size.

21. The expression “nomen novum” should be used only to denote a replacement name for a preoccupied name.

22. A zoologist should not introduce the same name as new in more than one publication, nor repeat the publication of a paper containing a new name or information affecting nomenclature, without stating on each republication that the matter has already appeared elsewhere, giving a full bibliographic reference to the first publication.

23. A zoologist should not publish a name for the first time in an abstract, table of contents, introduction, or key, published in advance of the work or of that part of the work that contains the description of the new taxon in question.

24. In view of the paramount importance of the widest publicity being given to the erection of any new taxon, or to any significant taxonomic change, it is strongly recommended that authors take the earliest opportunity of forwarding copies of their works to the editors of the Zoological Record.