



Species Epithets and Gender Information

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SPECIES EPITHETS AND GENDER INFORMATION

“Partes orationis quot sunt? Octo. Quae? Nomen pronomen verbum adverbium participium conjunctio praepositio interiecto.” Donati De Partibus Orationis Ars Minor.

Dan H. Nicolson¹

Summary

Adjectives (including participles) and nouns are regularly used as species epithets. Nouns maintain their gender and are grammatically independent of the generic name but adjectives indicate the gender of the generic name to the extent they have three, two or only one ending(s) in nominative singular. Generalizations and exceptions are presented with examples.

Early Latin grammars, such as the *Ars Minor* of Donatus (fl. 350 A.D.), the most commonly used grammar from 400 to 1500 A.D., treated nouns (nomina) as including substantives (nomina substantiva) and adjectives (nomina adjectiva). Eventually they came to be treated as different parts of speech.

Article 23.5 of the International Code of Botanical Nomenclature provides that “The specific epithet, when adjectival in form and not used as a substantive, agrees grammatically with the generic name.” This paper cannot deal with the complex, often controversial, problems of correct gender of generic names and deals only with gender information reflected by species (and infraspecific) epithets. When gender is cited, it appears as a single-letter abbreviation, i.e., m. (masculine), f. (feminine), and n. (neuter).

Only three parts of speech are regularly used for species (or infraspecific) epithets: nouns (substantives), adjectives, and participles. Other parts of speech: pronouns, verbs, adverbs, conjunctions, prepositions, and interjections, are rarely used and, if used, should be treated as if they were nouns.

1. *Nouns*. A noun (a substantive in the sense of the Code) is defined as “a word that is the name of a subject of discourse, as person, place, thing, quality, idea, or action.” For purposes of botanical nomenclature, nouns may be divided into two kinds, *proper nouns* that name a particular being or thing and *common nouns* that name a class or group of beings or things, including abstractions. Proper nouns were commonly capitalized in early works and, under an option included in Rec. 73F.1, may continue to be capitalized. For purposes of this paper, I use the tradition of capitalizing proper names and certain adjectives derived from proper names, thereby preserving some of the grammatical information carried by these epithets.

Nouns maintain their own gender, number and case and, unlike adjectives and participles, do not concord with the gender, number and case of the generic name except by coincidence. Nouns appear either in nominative or genitive case and are grammatically referred to as ‘nouns in apposition,’ that is, as an adjunct term.

1.1. *Nouns in nominative*: Nouns in nominative case are often proper, being former generic or vernacular names, e.g., *Diospyros Ebenus*, *Aesculus Hippocastanum*, and *Dianthus Caryophyllus* (former generic names, now the bases of family names), *Zea Mays*, *Acacia Julibrissin*, *Nicotiana Tabacum* (vernacular names).

However, common nouns sometimes appear in nominative, e.g., *Rubus amnicola* (river dweller, m.), *Lepidium arbuscula* (little tree, f.) and *Anthurium lancea* (lance, f.). These common nouns are sometimes treated as adjectives, hence, *Anthurium monticulum* (instead of *monticola*, m.), *Chenopodium hybridum* and *Amaranthus hybridus* (instead of *hybrida*, f.). In botanical Latin, either way is possible for such classical nouns and the assumption should be that a noun is meant (i.e., an epithet

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ending in *-icola* in a feminine genus should be assumed to be a noun) unless the first usage indicates that an adjective was intended, such as *Anthurium monticulum*.

One case has provoked repeated correspondence, *Panicum colonum* L. (Syst. Nat. ed. 10, 870. 1759) and *Echinochloa colona* (L.) Link (Hort. Berol. 2: 209. 1833), both clearly using *colonus*, *-a*, *-um* as an adjective, although a few dictionaries indicate that it was a masculine noun. It should be treated as an adjective, indicated by the first (Linnaean) usage. Some dictionaries show that there was late usage of *colonus*, *-a*, *-um* as an adjective. Thus, the spellings originally used by the authors are correct as published.

Doubts may also exist about compound and derivative words that end with classical nouns such as *latifolium* (*folium*, n.), *leucosperma* (*sperma*, n.), *macrorrhiza* (*rhiza*, f.), and *melanoxyton* (*xylon*, n.). In general, botanists regard such as adjectives (as done in Latin and Greek), but occasionally they appear as common nouns, e.g., *Acacia melanoxyton* (n. in f. genus), *Anthurium lividispica*, *Anthurium cymbispatha* (f. in n. genus). Usage of compound words as common nouns, rather than adjectives, borders on the pedantic but cannot be considered as incorrect (or correctable).

The technique for deciding the question of whether an epithet (particularly a compound word) should be treated as a noun or an adjective differs in zoology and botany. In cases, such as *Arum* (n.) *sagittifolium* (*folium*, n.), there is uncertainty whether this should be treated as an adjective and agree with the generic name when transferred to feminine genus, i.e., *Urospatha sagittifolia*, or as a common noun, i.e., *Urospatha sagittifolium*. In most cases, a botanist will assume that an adjective is intended but a zoologist will assume that a common noun is intended. If the species epithet of *Arum sagittifolium* is accepted as a noun (in apposition) the name is not easily translatable into English, being literally, 'Arum, the arrow-leaf.' Treatment as an adjective is easily translatable, 'the arrow-leaved Arum.'

1.2. *Nouns in genitive*: Nouns in genitive case are probably more frequent than nouns in nominative, particularly those involving personal names, e.g., *Hieracium Gronovii* (2nd Decl., m., Gronovius), *Allium Aaseae* (1st Decl., f., of Hannah Aase), *Ranunculus Chamissonis* (3rd Decl., m., of Chamisso). Forms in plural, that is, named for more than one person, exist, e.g., *Artemisia Verlotiorum* (2nd Decl., m., of the Verlot brothers) and, presumably, in feminine (*-arum*). Those interested in latinization of personal names are referred to Nicolson (1974).

Workers dealing with parasitic plants will also see the use of nouns in genitive which are based on the name of the host, e.g., *Gleosporium Balsameae* (of *Abies Balsamea*), *Puccinia Chrysanthemi* (of *Chrysanthemum*), and *Phyllosticta Hamamelidis* (of *Hamamelis*).

Other usage of nouns in genitive refer to plants of a particular habitat, place, or people, e.g., *Briza tectorum* (of the roofs, *tectum*), *Randia dumetorum* (of the thickets, *dumetum*), *Acacia Saharae* (of the Sahara), *Saccharum officinarum* (of the shops, *officina*), *Artistida Adscensionis* (of Ascension Island), *Euphorbia antiquorum* (of the ancients, *antiquus*), *Dipsacus fullonum* (of the fullers, *fullo*).

1.3. *Phrase names*: There is another class of specific epithets that function as nouns, phrase names that can include other parts of speech such as verbs, pronouns, adverbs, prepositions, etc., e.g., *Nyctanthes arbor-tristis* (tree of sadness), *Aster Novi-Angliae* (of New England), *Elymus caput-Medusae* (head of Medusa), *Adiantum capillus-Veneris* (hair of Venus), *Crataegus crus-galli* (leg of cock, i.e., spurred), *Impatiens noli-tangere* (be unwilling to touch), *Cyanea noli-me-tangere* (be unwilling to touch me, touch-me-not). These extraordinarily evocative epithets (the last two constituting complete sentences) are monuments to a time when grounding in Latin was the property of every educated person.

2. *Participles*: A participle is a part of speech partaking of all the functions and characteristics of an adjective and a verb, the latter permitting distinctions of time (past, present and future):

2.1. *Present, active participles*, distinguished by ending in *-ans* or *-ens* (translatable as *-ing*), are functionally identical to one-ending adjectives, discussed below. Examples include *scandens* (climbing), *nutans* (nodding), and *fragrans* (sweet smelling).

2.2. *Past, passive participles*, distinguished by ending in *-(a)tus*, *-(a)ta*, *-(a)tum* (translatable as *-ed* or in past tense), are functionally identical to three-ending adjectives, discussed below. Examples include *apertus* (opened), *erectus* (erect), and *notatus* (marked). A distinction is sometimes made between words derived directly from verbs (as used above) and those from nouns, e.g., *ovatus* from *ovum* (egg) and *cristatus* from *crista* (crest), but this has no importance for epithets, although the latter more commonly appear as epithets and the former more commonly appear in descriptions or diagnoses.

2.3. *Future, passive participles* (or gerundives), distinguished by ending in *-andus* or *-endus* (*-a*, *-um*), carry a sense of obligation, e.g., *conservandus* (to be conserved), *addendus* (to be added), *memorandus* (to be remembered), *agendus* (to be acted upon). Some are used as nouns (gerunds), in

plural (*agenda*, things to be acted upon) or singular (*memorandum*, a thing to be remembered). Future participles rarely appear as epithets.

3. *Adjectives* (here including *participles*): An adjective is a part of speech that modifies a noun. In plant names an adjectival epithet must concord (grammatically agree) with the generic name in gender, number, and case. Most authors write in modern languages and plant names appear in their dictionary form, nominative singular. For questions about handling adjectival epithets when writing in Latin, see Stearn (1973) or a Latin grammar.

Latin dictionaries discriminate between three kinds of adjectives according to the number of endings associated with the three genders in nominative singular. By convention, the first cited is masculine (m.), the second is feminine (f.) and the third is neuter (n.).

The endings associated with the three basic kinds of adjectives are also used for nouns, especially a problem in dealing with one-ending adjectives. The method for distinguishing an adjective from a noun in a dictionary is discussed below under one-ending adjectives but applies to all.

Three-ending adjectives appear in dictionaries in the format of the entire word in masculine, plus the terminations for feminine and neuter, thus "*pilosus, -a, -um*" (pilose) is an abbreviation for *pilosus* (m.), *pilosa* (f.) and *pilosum* (n.). Three-ending adjectives usually end in *-us, -a, -um* (see below for exceptions and exceptions to exceptions).

Two-ending adjectives appear in dictionaries in the format of the entire word as it is in masculine and feminine, plus the termination for neuter, thus "*viridis, -e*" (green) is an abbreviation for *viridis* (m.), *viridis* (f.) and *viride* (n.). Two-ending adjectives usually end in *-is, -e* or, less frequently, *-os, -on* (see below for exceptions and exceptions to exceptions).

One-ending adjectives appear in dictionaries in a slightly different format, the entire word as it would be for masculine, feminine and neuter, plus the inflection for genitive singular that is, normally, preceded by the final letter(s) of the stem, thus "*simplex, -icis*" (simple) is an abbreviation of *simplex* (m.), *simplex* (f.), *simplex* (n.) with *simplicis* as the genitive singular for all genders. This format for one-ending adjectives can be confused with the format used for nouns. However, in dictionaries, nouns always appear with a gender designation, m., f., n. or c. and adjectives never appear with a designated gender. Common gender (c.) refers to nouns which can be used in masculine or feminine, e.g., *canis* (dog) can refer to a male or female dog. One-ending adjectives commonly end with *-es, -ns, -ys, -x* and, rarely *-ar, -or*, etc. (see below for exceptions).

The above paragraphs listed endings normally associated with genders of the three kinds of adjectives. To restate (ignoring exceptions and irregularities, discussed below), adjectives ending in *-us, -a, -um* (three endings) reflect (make clear) all three genders, adjectives ending in *-is, -e* or *-os, -on* (two-ending adjectives) reflect (make clear) only neuter gender, and adjectives ending in *-es, -ns, -ys, -x, -ar, -or*, etc. (one-ending) reflect (make clear) no gender. With this information, the reader can correctly interpret and modify gender for more than 90% of adjectival epithets in common use. The reader now knows more than the author did when he published *Filarum* (n.) *manserichensis* (m. or f.), instead of *Filarum manserichense* (n.).

3.1. *Exceptional three-ending adjectives with -er in masculine*: Some adjectives with *-er* in masculine use *-(e)ra* and *-(e)rum* for feminine and neuter while others use *-ris* and *-rum* for feminine and neuter. The latter, although classically using *-er* in masculine, now is usually treated with *-ris* (m. and f.) and *-re* (n.).

3.1.1. *Masculine in -er (-er, -(e)ra, -(e)rum)*: If you assume that *glabra* (f.) and *glabrum* (n.) or *aspera* (f.) and *asperum* (n.) are typical three-ending adjectives and form '*glabrus*' or '*asperus*' in masculine you are wrong, they are *glaber* or *asper* in masculine. By the same token, it is an error to assume that masculine *glaber* or *asper* become feminine '*glabera*' or '*aspera*' and neuter '*glaberum*' or '*asperum*.' Some adjectives with masculine in *-er* retain the *-e-* in other genders (ending in *-ifer* or *-iger, lacer*) but most do not (*integer, pulcher, ruber, scaber*).

3.1.2. *Masculine in -er (-er, -ris, -re; -ris, -re)*: Other adjectives with masculine *-er* use the usual two-ending forms (*-ris*, f. and *-re*, n.) but, sometimes (classically), *-er* for masculine. The ones occasionally used as epithets are *paluster* (of swamps), *lacuster* (of lakes), *campester* (of fields), *silvester* (of forests), *terrester* (of earth) and *acer* (bitter). These few adjectives, essentially irregular three-ending adjectives in classical Latin, have become regular two-ending adjectives in botanical Latin. Hence Linnaeus formed *Scirpus* (m.) *palustris*, rather than classically correct *S. paluster* (see Stearn, p. 95, 1973). Nonetheless, a few classically oriented botanists used masculines in *-er* and the rest of us must remember that they end in *-ris* and *-re* in feminine and neuter, not *-ra* and *-rum*, as expected for three-ending adjectives with *-er* in masculine.

3.2. *Comparative degree (-ior, -ius)*: Adjectives appear in three degrees, positive (usual), comparative (indicating more), and superlative (indicating the most). In English we say 'tall' (positive), 'taller' (comparative) and 'tallest' (superlative), commonly adding -er for comparative degree and -est for superlative degree. Romans commonly formed superlative by adding -issimus, -a, -um (more rarely -errimus or -illimus, -a, -um), creating a regular three-ending form that gives no problems. A few adjectives have irregularly formed comparative and superlative aspects, such as *parvus* (positive), *minor* (comparative) and *minimus* (superlative) and Stearn (1973, p. 100) should be consulted for other examples.

3.2.1. (-ior, -ius): To form comparative degree Romans commonly added -ior (m. and f.) and -ius (n.), forming an irregular two-ending form, hence *altior* (m. and f.), *altius* (n.) (taller) from *altus* (tall). The trick for coping with this irregularity is to remember that most adjectives in comparative degree end in -ior or -ius and handle their gender modification accordingly, not as you normally do with three-ending adjectives ending in -us (or one-ending adjectives ending in -or). Hence *Masculinus tenuior* (thinner) becomes *Feminina tenuior* or *Neutrum tenuius*. By the same token, *Neutrum altius* does not become *Feminina altia* but becomes *F. altior*.

Unfortunately, not all adjectives ending in -ius are necessarily neuter in comparative degree, e.g., *dubius*, -a, -um, although most are.

3.2.2 (-or, -us). The problems with comparative degree do not end with learning to cope with -ior, -ius because a few simply end with -or, -us. They must be memorized but knowing them will avoid a pitfall that has trapped many. They are masculine and feminine *major* (larger) and *minor* (smaller) with neuter *majus* and *minus*. Another is *pejor* (worse), rarely used as an epithet and preferably spelled *peior*. The Linnaean binomials *Tropaeolum majus* (n.) and *T. minus* may look 'queer' but they are correct. Authors have formed binomials such as *Neutrum 'major'* or *N. 'minor'* but this is an error of gender concordance and they must be corrected to *N. majus* and *N. minus*.

3.3. *Irregular one-ending adjectives*: A few adjectives, all appearances to the contrary, are one-ending adjectives. Fortunately they are rarely used as epithets but one may meet *uber* (fertile, as *Betula uber*), *puber* (pubescent, as *Alocasia puber*), or *vetus* (old). Temptation to treat these exceptions as three-ending adjectives must be resisted.

3.4. *Greek adjectives (-os, -on)*: There is a special problem with adjectival epithets in Greek form and how to modify their gender. Some years ago, Dr. L. A. S. Johnson (Sydney) brought this problem to my attention in connection with the transfer of *Arum* (n.) *macrorrhizon* to *Alocasia* (f.), advocating that *A. macrorrhizos* was correct and *A. macrorrhiza* was not. There is no doubt that the Linnaean usage is adjectival because the Greek noun for root (*rhiza*) is feminine. I resisted his conclusion, trusting that some solution would appear that satisfied the apparently incompatible virtues of consistency (simplicity) and no disturbance of usage. After much soul-searching, I conclude he is correct and that they should be treated as two-ending adjectives with -os (f. and m.) and -on (n.). It is appropriate to review the facts.

Greeks commonly used a two-ending format for compounds with -os (m. and f.) and -on (n.). Linnaeus occasionally used this two-ending format, thus *Astragalus glycyphyllos* (m.), *Convolvulus pentanthos* (m.), *Lichen polyrrhizos* (m.), *Festuca myuros* (f.), *Gleditsia triacanthos* (f.), *Ophrys monophyllos* (f.), *Tilia pentaphyllos* (f.), *Veronica triphyllos* (f.), *Arum macrorrhizon* (n.), *Cneorum tricoccon* (n.).

Following this Greek (and Linnaean) usage, *Arum macrorrhizon* (n.) becomes *Alocasia macrorrhizos* (f., not *A. macrorrhiza*), *Convolvulus pentanthos* (m.) becomes *Jacquemontia pentanthos* (f., not *J. pentantha*), and *Ophrys monophyllos* (f.) becomes *Malaxis monophyllos* (f., not *M. monophylla*). In these three cases the transferring authors used the Latin -a form, not the Greek -os form.

At this point it is necessary to point out conventions used by the Romans when dealing with words of Greek origin. In many cases, Greek words had not 'naturalized' into Latin and writers simply recorded these as direct transliterations from Greek. In other cases, with the passage of time, Greek words 'naturalized' into Latin and in such cases, the Romans transcribed them with Latin ('native') inflections that were comparable to the Greek inflections. An example is provided by Greek First Declension words that ended in eta. In 'unnaturalized' transcription these appear in Latin ending in -e (*spathe*, *Typha*) but in 'naturalized' transcription they took the 'native' ending in -a (*spatha*, *Typha*).

One might expect that Greek 2-ending adjectives ending in -os, -on would 'naturalize' to the Latin 2-ending adjectives ending in -is, -e. This did happen at least once, Greek *acaulos*, -on became botanical Latin *acaulis*, -e. However, the Romans 'naturalized' Greek neuter nouns ending in -on to -um and Greek masculine nouns ending in -os to -us. Thus, when they applied the same convention to Greek adjectives they 'naturalized' the Greek feminine adjectives in -os to -a. The result is that 'naturalization'

of Greek two-ending adjectives from *-os*, *-on* tended to lead to Latin three-ending adjectives in *-us*, *-a*, *-um*, thus Greek *macrorrhizos*, *-on* usually became botanical *macrorrhizus*, *-a*, *-um* and Greek *monophyllos*, *-on* became *monophyllus*, *-a*, *-um*, etc.

The two conventions, transliteration as 2-ending *-os*, *-on* and transcription as 3-ending *-us*, *-a*, *-um* led to inconsistency in botanical Latin. Stearn (1973, p. 264) recommends transcription, "It is, accordingly, a simplifying procedure when adopting Greek adjectives as botanical epithets to give them the Latin endings *-us* (m.), *-a* (f.), *-um* (n.). Thus *platyphyllos* (m. and f.), *-on* (n.) becomes *platyphyllus*, *-a*, *-um*." In the next paragraph, he says, "However, an adjectival epithet published with a Greek ending (transliteration) should keep in agreement with the gender of the generic name with which it is associated, e.g., *acaulos* (m., f.), *acaulon* (n.)."

After much thought I have concluded that Stearn's position should be accepted. Authors, when selecting an epithet for a new species and, having decided on a Greek adjective with two-endings (*-os*, *-on*), should shift to the three-ending format (*-us*, *-a*, *-um*). However, when dealing with an existing epithet using the transliterated Greek two-ending format (*-os*, *-on*), subsequent workers should maintain the original author's choice, maintaining the two-ending (*-os*, *-on*) format in making transfers or gender corrections.

The judgement whether an adjective (agreeing with the generic name) or a substantive, i.e., common noun (gender independent of generic name) depends on whether the epithet can be seen as agreeing in gender with the generic name (adjectival for botanists but substantive for zoologists) or disagreeing with the generic name (substantive or common noun).

Ex. 1: *Dendrobium microchilos* Dalz. (Hooker's J. Bot. Kew Gard. Misc. 3: 345. 1851) is correct as published. Greek *cheilos* is neuter but a neuter adjective based on it would have been '*microchilon*.' Therefore *microchilos* must be understood as a neuter substantive epithet. The transfer, *Eria microchilos* (Dalz.) Lindl. (J. Linn. Soc. Bot. 3: 47. 1858), is correct as published.

Ex. 2: *Fagraea pachyclados* K. Schum. (in Schum. and Lauterb., Nachtr. Fl. Deutsch. Südsee 349. 1905) is correct as published. Since *pachyclados* can be interpreted as adjectival (f.) in agreement *Fagraea* (f.), botanists will interpret the epithet as a feminine adjective. The transfer, *Mastixiodendron pachycladon* (K. Schum.) Melch. (Bot. Jahrb. 60: 168. 1925, '*pachyclados*'), requires correction from '*pachyclados*' to neuter *pachycladon*, as correctly cited by A. C. Smith (J. Arnold Arb. 26: 109. 1945).

Table 1. Adjectival endings by gender with examples.

	Masculine	Feminine	Neuter	Examples
3-ending	<i>-us</i> ^{1,2}	<i>-a</i>	<i>-um</i>	<i>pilosus, longus</i>
3-ending	<i>-er</i> ³	<i>-era</i>	<i>-erum</i>	<i>florifer, asper</i>
3-ending	<i>-er</i> ³	<i>-ra</i>	<i>-rum</i>	<i>glaber, ruber, niger</i>
2-ending	<i>-is</i> ³	<i>-is</i> ³	<i>-e</i> ³	<i>brevis, silvestris</i>
2-ending (Greek)	<i>-os</i> ⁴	<i>-os</i> ⁴	<i>-on</i> ⁴	<i>macrorrhizos</i>
2-ending (compar.)	<i>-ior</i> ²	<i>-ior</i> ²	<i>-ius</i> ^{1,2}	<i>altior, longior</i>
1-ending	<i>-ar, -or</i> ²	<i>-ar, -or</i> ²	<i>-ar, -or</i> ²	<i>par, bicolor</i>
1-ending	<i>-es, -ns, -ps,</i> <i>-rs, -ys, -x</i>	<i>-es, -ns, -ps,</i> <i>-rs, -ys, -x</i>	<i>-es, -ns, -ps,</i> <i>-rs, -ys, -x</i>	<i>teres, repens, anceps</i> <i>simplex</i>

¹ Not all adjectives ending in *-us* have three-endings: The ending *-us* can also be neuter in comparative degree, e.g., *altius* and *minus*. *Vetus* (old) is an exceptional one-ending adjective.

² Although most adjectives in comparative degree end in *-ior*, *-ius*, two exceptions must be learned, *major*, *majus* and *minor*, *minus*. Some adjectives (as *dubius*) are not in comparative degree but are regular three-ending adjectives in positive degree. Note that *-or* can also indicate a one-ending adjective, as *bicolor*.

³ Not all adjectives ending with *-er* in masculine take *-era* (f.) and *-erum* (n.). A number drop the *-e*, thus *glaber*, *glabra*, *glabrum*. A small group classically had *-er* for masculine (as *acer*, *paluster*, *campester*, *silvester*, *terrester*, *lacuster* etc.) but botanical usage generally uses masculine *-is* (as *acris*, *palustris*, *campestris* etc.) and they function as two-ending adjectives in *-ris*, *-re*. Finally, *uber* and *puber* are exceptional one-ending adjectives.

⁴ Greek two-ending adjectives ending in *-os*, *-on* should be accepted as originally published and transfers made or corrected accordingly. However, when creating a new epithet, conversion of Greek two-ending adjectives to Latin three-ending adjectives (*-us*, *-a*, *-um*) is recommended.

Ex. 3.: *Vincetoxicum gonocarpos* Walt. (Fl. Carol. 104. 1788) is correct as published. Greek *carpos* is masculine but a neuter adjective based on it would have been 'gonocarpon.' Therefore *gonocarpos* is correct as a masculine substantive epithet. The transfer, *Gonolobus gonocarpos* (Walt.) Perry (Rhodora 40: 284. 1938), is correct as published. The transfer, *Matelea gonocarpos* (Walt.) Shinnars (Field & Lab. 18: 73. 1950, 'gonocarpa') must be corrected from the Latin adjectival three-ending feminine form ('gonocarpa') to the original Greek masculine substantive form, *gonocarpos*.

Ex. 4: *Vaccinium macrocarpon* Aiton (Hort. Kew 2: 13. 1789) is correct as published. Since *macrocarpon* (n.) agrees with *Vaccinium* (n.), botanists will interpret the epithet as a neuter adjective. The transfers, (1) *Oxycoccus palustris* var. *macrocarpos* (Aiton) Pers. (Syn. Pl. 1: 419. 1805, 'macrocarpus'), (2) *Oxycoccus macrocarpos* (Aiton) Pursh (Fl. Amer. Sept. 1: 263. 1814, 'macrocarpus'), and (3) *Schollera macrocarpos* (Aiton) Britton (Mem. Torrey Bot. Club 5: 253. 1894, 'macrocarpa') all require correction from the three-ending Latin forms, masculine 'macrocarpus' and feminine 'macrocarpa,' to Greek two-ending form, *macrocarpos*.

Ex. 5: *Cyperus monostachyos* L. (Mant. 2: 180. 1771) is correct as published. Since *monostachyos* can be interpreted as adjectival (m.) in agreement with *Cyperus* (m.), botanists will interpret the epithet as a masculine adjective. The transfers, (1) *Abilgaardia monostachyos* (L.) Vahl (Enum. 2: 296. 1805, 'monostachya'), (2) *Fimbristylis monostachyos* (L.) Hassk. (Pl. Jav. Rar. 61. 1848, 'monostachya'), and (3) *Iriha monostachyos* (L.) Kuntze (Rev. Gen. Pl. 1: 752. 1891, 'monostachya') all require correction from Latin three-ending feminine form, 'monostachya,' to Greek two-ending format, *monostachyos*.

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PORPHYROSTROMIUM TREVISAN (1848) VS. ERYTHROTRICHOPELTIS KORNMANN (1984) (RHODOPHYTA)

Michael J. Wynne¹

Summary

Although *Erythrotrichia* Areschoug (1850) has been conserved against *Porphyrostromium* Trevisan (1848), these two generic names are heterotypic. The latter genus becomes available to serve for the new genus as established and circumscribed by Kornmann (1984) for *Bangia ciliaris* Carm. ex Harv. and *Porphyra boryana* Montagne. *Erythrotrichopeltis* Kornmann (1984) is to be regarded as a later synonym of *Porphyrostromium*.

Kornmann (1984) recently demonstrated the occurrence of a non-obligate heteromorphic life cycle involving two bangiophycean taxa previously regarded as belonging to two different genera. Thus, *Erythrotrichia ciliaris* (Carm. ex Harv.) Thur. is the erect filamentous/"trichoid" expression, and *Erythrotrichopeltis discigera* (Berth.) Schmitz is the prostrate/"peltoid" expression of the same alga. Both phases reproduce by monospores, and the trichoid phase also appears to undergo sexual reproduction. Kornmann established the genus *Erythrotrichopeltis* on the basis of this heteromorphic cycle, with *E. ciliaris* as type.

A second species was assigned to his new genus by Kornmann (1984), *Erythrotrichia boryana* (Montagne) Berthold (1882), originally *Porphyra boryana* Montagne (1846). This second species was the basis of the genus *Porphyrostromium* of Trevisan (1848). *Erythrotrichia* Areschoug (1850) has been conserved against *Porphyrostromium* (Voss et al., 1983); these two genera, however, are taxonomic synonyms, not nomenclatural synonyms. The type of *Erythrotrichia* is *E. ceramicola* (Lyngb.) Aresch.

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