A Primer of Botanical Latin with Vocabulary

Latin is one of two acceptable languages for describing new plants, and taxonomists must be able to translate earlier texts in Latin. Providing a simple explanation of Latin grammar, along with an in-depth vocabulary, this is an indispensable guide for systematic botanists worldwide.

All relevant parts of speech are discussed, with accompanying examples as well as worked exercises for translating diagnoses and descriptions to and from Latin. Guidelines for forming specific epithets are also included. The authors cross-reference their grammar to Stearn's *Botanical Latin* and to articles in the *International Code of Nomenclature for Algae, Fungi and Plants*. The comprehensive vocabulary is enhanced with terms from recent glossaries for non-flowering plants – lichens, mosses, algae, fungi and ferns – making this an ideal resource for anyone looking to hone their understanding of Latin grammar and to translate botanical texts from the past 300 years.

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To my parents Tudor and Enid Powell, who encouraged the Latin, and Edward Mason who taught the botany: multae gratiae. (ES)

To 'Foureyes', my Latin teacher at school (also known as Edward J. Price): gratias reddo; semper meminero. May the Roman gods be smiling upon you. (AG)

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Preface

This primer is based on short courses in botanical Latin run in Australia at the Northern Territory Herbarium, Darwin, and the Western Australian Herbarium, Perth. We presented these independently and, on discovering that we had similar approaches, decided to combine them as a book.

Between 1 January 1935 and 31 December 2011 it was mandatory that new plant names be accompanied by a diagnosis or description in Latin. For non-fossil algae the period was 1 January 1958 to 31 December 2011, while for fossil plants published on or after 1 January 1996 either Latin or English could be used. From 1 January 2012, descriptions of all of these are permissible in either Latin or English. Besides this, there will always remain a need for translating from Latin in order to understand the many botanical texts in this language.

William Stearn's wonderful *Botanical Latin* appeared in 1966 and has gone through many new impressions and editions, as well as a Chinese translation. It provides almost all one could require for translating to and from Latin, but a primer (in the sense of works such as Kennedy's *Shorter Latin Primer*, providing the basic needs) may be useful for those who need to translate the more straightforward diagnoses and short descriptions now widely used when describing new taxa. Besides its concise approach, our work also differs from Stearn's in including many more terms (especially from cryptogamic groups) in the vocabulary, while excluding many terms not used in descriptions.

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To those who attended our courses, which provided the inspiration for Alex George's course notes, and Emma Short's *Aide-mémoire*, and who attended our classes faithfully in spite of the seemingly indigestible nature of Latin grammar, many thanks.

We are grateful to the Northern Territory Herbarium for providing desk space for our working bees (not *Apis mellifera*).

Introduction

Classical Latin – that used by the Romans – is fairly different in many respects from modern Latin, and from scientific Latin in particular. In scientific Latin the basic grammar and syntax remain but much of the vocabulary is different – understandably, as many terms were unknown to the Romans. In particular, in botanical Latin we tend to omit most verbs, making a kind of telegraphic style, so avoiding one of the more difficult parts of the language.

This primer aims to teach you the very basics of botanical Latin, so that when the time comes for you to compose your own first description or diagnosis, starting off will not be the drama you feared, as at least you will understand the basic workings of the language and the methods used in translation. Likewise, with this primer as a guide you should be able to translate most botanical texts written in Latin. Bear in mind that early botanical Latin – say, until 1850 or later – is more akin to classical Latin, and so texts from that time will require wider knowledge of grammar, or assistance from a Latin scholar.

In many examples in this book, we give the literal translation into English as well as the colloquial so that the differences between the two languages can be demonstrated. This means that the English may sometimes appear slightly unusual or stilted, as the word order will be a bit eccentric.

Whereas classical Latin is a dead language, botanical Latin is very much alive and kicking and has evolved to include a goodly smattering of Greek words – which are then 'forced' into behaving as Latin words instead of being declined in a Greek way, which can cause wincing, groans and horror in the Classical establishment. The classical Latin alphabet comprised 23 letters, that is, the modern Latin alphabet minus 'j', 'u' and 'w'. The letter 'k' was rarely used and 'y' appeared in few words, mainly of Greek origin. The letter 'u', which was pronounced as a vowel, was represented by 'v' and came into use when lower-case letters were developed much later. (Did you know that lower case letters didn't exist when letters were first invented?) In botanical Latin we use the whole English alphabet. The letter 'j' represents the consonantal or classical 'i' and is pronounced like the 'y' in 'yes'.

Latin is a highly inflected language which means that not only do words change according to whether they are singular or plural, e.g. 'flower' and

'flowers' in English, but also the relationship of the word to the rest of the sentence, whether it is the subject or object, whether it is governed by a preposition, and so on, can be deduced from the ending of the word. In other words, the subject and object of a verb are not denoted by their positions relative to the verb within the sentence (in English, sentence construction is based upon subject, verb and object in that order), but the sense is incorporated into the nouns themselves, e.g.

The boy picked the fruit

Puer fructum carpit **or** *fructum carpit puer* **or** *fructum puer carpit*

In each of the three Latin examples above, exactly the same words with therefore exactly the same meanings are used, although they are written in three different orders. Grammatically the sentences are still the same, although the emphasis has been changed. If this is tried in English, however, the sentence is rapidly reduced to nonsense (unless the author is writing Romantic poetry: Alexander Pope 'Pleasures the sex, as children birds, pursue, Still out of reach, yet never out of view …') (Epistle II. *To a Lady. Of the Characters of Women* 1743).

A couple of curiosities about Latin:

- there is no article (the, a, an), and
- there are no words for 'yes' and 'no' – instead you make a statement in the positive or negative.

Why do botanists need Latin?

A good explanation was given by Lack (2011), although it was published just before the XVIII International Botanical Congress in Melbourne and thus with the future of botanical Latin uncertain. We set out the main reasons thus:

(1) It is one of two languages allowed for describing new taxa under the *International Code of Nomenclature for algae, fungi and plants* (Melbourne Code, 2012). See below for requirements from 1935 to 2011.
(2) We need it in order to understand the many texts written in Latin, especially those without a translation into any other language.
(3) Latin can help us to know plants if an epithet is descriptive and hence to apply that name; e.g. if our plant has white flowers then we can be reasonably sure that it is not a species with the epithet *coccineus* (scarlet).
(4) It's a great language and can help in understanding both English grammar and the origin of many words, not only English but also of other Romance languages.

(5) It now belongs to no country, so is impartial, and it enables a reader anywhere to understand a description or diagnosis, even if the accompanying text is in a language that they cannot read.

Although it is no longer mandatory to provide a Latin description or diagnosis, it is important to understand the requirements that were in force previously. The *International Code of Botanical Nomenclature* (Vienna Code, McNeill *et al.*, 2006) refers to Latin in four Articles – 23, 32, 36 and 60. Of these the most important is Article 36.

Article 36.1 On or after 1 January 1935 a name of a new taxon (algal and all fossil taxa excepted) must, in order to be validly published, be accompanied by a Latin description or diagnosis or by a reference to a previously and effectively published Latin description or diagnosis.

Article 36.2 In order to be validly published, a name of a new taxon of non-fossil algae published on or after 1 January 1958 must be accompanied by a Latin description or diagnosis or by a reference to a previously and effectively published Latin description or diagnosis.

Article 36.3 In order to be validly published, a name of a new taxon of fossil plants published on or after 1 January 1996 must be accompanied by a Latin or English description or diagnosis or by a reference to a previously and effectively published Latin or English description or diagnosis.

Recommendation 36A.1 Authors publishing names of new taxa of non-fossil plants should give or cite a full description in Latin in addition to the diagnosis.

These rules ceased to be effective on 1 January 2012 but still apply to names published between the dates cited and 31 December 2011. At the Nomenclature Sessions of the XVIII International Botanical Congress held in Melbourne, Australia, in July 2011 a decision was taken to allow new taxa to be accompanied by a description in *either* Latin *or* English from 1 January 2012. The relevant Articles in the Melbourne Code are 39, 43 and 44.

Note that nowhere does the *Code* stipulate that a description or diagnosis must be *correct* Latin. Examples abound of errors, some so serious that the diagnosis or description is nonsensical.

Article 23 of the *Code* explains how the names of species should be formed and Article 24 the names of infraspecific taxa. Article 60 explains the orthography and gender of names. They can be formed using only letters of the modern Latin alphabet (which is the same as the English alphabet).

It is worth reading the introductory parts of William Stearn's *Botanical Latin*. You will find his text both instructive and entertaining. It's even better, of course, to read the whole book, though it is not the kind of work that you read from cover to cover – rather, you refer to it for advice or information.

In this Primer, references to Stearn's *Botanical Latin* are to the 4th edition (1992 and later reprintings).

Incidentally, the names of languages are usually written with an initial capital, hence it should always be Latin, not latin.

A word of advice right now. If in doubt, **look it up.** ***Don't guess!***

Consulting a Latin dictionary or vocabulary

When searching for a word in a Latin dictionary, remember that you have to look under the nominative singular for a noun, the masculine nominative singular for an adjective (and often for the comparative forms), and the first person indicative active of a verb. You will also see horizontal lines over many vowels; these are macrons and are placed there by modern editors to indicate pronunciation, an integral part of classical Latin. Botanists, however, leave them out, and a good diagnosis doesn't depend upon rhythm and scansion!

Overview

We start with the *parts of speech*. Those that we normally require for botanical Latin are:

(1) noun
(2) adjective
(3) adverb
(4) pronoun
(5) preposition
(6) conjunction
(7) verb.

We have to know about *declensions*, i.e. declining nouns, adjectives and pronouns. There are five declensions.

We have to know about *comparison*, i.e. comparing adjectives and adverbs. There are three degrees though, in practice, we think only of two – comparative and superlative.

We have to know about *gender*, i.e. whether nouns are masculine, feminine or neuter.

We have to know about *number*, i.e. singular and plural.

We have to know about *conjugating* verbs, i.e. distinguishing person, number, tense and voice. There are four conjugations.

Like most languages, Latin has some irregularities with words that are treated differently from the rest.

These topics are expanded in the following pages.

Bear in mind that you do not have to learn everything by rote (as we were expected to do at school). The part of speech is always indicated in the dictionary or vocabulary, likewise the declension or conjugation, gender, etc. And books such as Stearn's explain fully declensions, comparison of adjectives and conjugations. But clearly, the more you learn the better, as it will speed up your work.