NAMES OF PLANTS: A LINGUISTIC APPROACH

NUME DE PLANTE: O ABORDARE LINGVISTICA.

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Rezumat: *Din cele mai vechi timpuri oamenii au avut nevoie de termeni pentru a denumi obiectele din mediul înconjurător. Acesta este singurul mod de însuşire a cunoştinţelor şi de a le transmite mai departe. Procesul de identificare şi descriere a plantelor este extrem de important datorită întrebuinţării acestora în domeniul alimentar şi în fabricarea medicamentelor. Cele mai comune, atrăgătoare sau folositoare plante aveau nume diferite de la ţară la ţară, chiar şi de la zonă la zonă. Savanţii şi botaniştii recunoşteau planta după o propoziţie latină lungă şi descriptivă. De exemplu,* Cladonia rangiferina*, cunoscut ca "Lichenul renilor" a fost descris ca* Muscus coralloides perforatum *(muşchiul în formă de coral, perforat). Acest sistem de numire s-a dovedit a fi mult prea greoi, astfel încât la sfârşitul secolului al XVI-lea, Casper Bauhin a inventat un nou sistem prin care unei plante i se atribuia doar dotă nume. Acest sistem nu a fost însă adoptat pe plan mondial. Naturalistul Carl Linnaeus (1707-1778) a venit cu o nouă ipoteză, de a clasifica şi denumi sistematic întreaga lume naturală. Lucrarea este o prezentare a diferenţelor sau asemănărilor numelor de plante din limba engleză şi limba română.*

MATERIAL AND METHOD

I have inventoried a number of 41 lexical units naming plants and I explained the origin of their names, the grammatical gender of the Latin word.

RESULTS AND DISCUSSIONS

The scientific names of plants should always be underlined or written in italics (underlining is simply the typographic code for italics). The generic name is always written with a capital initial letter, and the specific epithet should always have a lower case initial letter. (Sometimes specific epithets honoring people are given a capital letter, but a small letter is always correct and therefore safer). The name is only correct and complete if it is followed by the name of the person or people who first described it or assigned the name to it. Often, for convenience, these names are abbreviated. For example, "L." always stands for Linnaeus. Thus, the correct names of the Red Oak, Chestnut Oak and Chinquapin Oak are: *Quercus rubra* L., *Quercus prinus* L. and *Quercus muehlenbergii* Engelm. The first two species were described by Linnaeus, but the third was named by George Engelman (1809-1884), the German-American botanist whose collections are in the Missouri Botanical Gardens, St. Louis.

Once a plant has been given its full, correct name in a text, further references to it (provided they are unambiguous) may be shortened to the initial letter of the generic name followed by the specific epithet. The authority may be dropped. Thus the three oak species may now be referred to as *Q. rubra*, *Q. prinus* and *Q. muehlenbergii*. Plants are classified according to their assumed relatedness. A unit of classification, at whatever level, is called a taxon (plural

taxa). There is a strict hierarchy of taxa of which the species is the lowest natural unit. The hierarchy is: species, genus, family, order, class and division. There are, however, several possible subgroups at each level. An example from Radford (1974) illustrates ascending ranking:

"*Quercus alba* L., *Quercus laevis* Waiter, *Quercus falcata* Michaux and *Q. bicolor* Willdenow are four species in the genus *Quercus*. *Quercus* L., *Fagus* L. and *Castanea* Miller are three genera in the family **Fagaceae**; **Fagaceae** and **Betulaceae** are two families in the order **Fagales**. **Fagales**, **Urticales** and **Piperales** are three of the many orders in the class **Magnoliopsida**, which is in the division **Magnoliophyta**."

The way in which the scientific name of a family is formed: by the name of an included genus or kind of plant, plus the ending *-aceae*. However, some families may also have older names that do not conform to this pattern (for instance, *Compositae* is an older name for the daisy family, *Asteraceae*). Where these occur they will be indicated parenthetically. Members of a family typically share many morphological, chemical, or anatomical features that set them apart from other families. Many of the morphological features that, at least in part, define families are characteristics of their flowers or fruits, such as the arrangement of parts in a mustard flower (Brassicaceae), the pod of the bean family (Fabaceae), or the way in which the fruits of the parsley family (Apiaceae) come apart. These shared derived features ("synapomorphies") are often seen as evidence that members of a family share a single common ancestor, and so are *monophyletic*. Field botanists are mostly concerned at the family level and below. Latin names often seem long and unpronounceable, and the system of naming (nomenclature) is complicated and involved. The reasons why common or vernacular names, which are easy to remember and usually have a meaning in everyday language, are not used are listed below:

(i) Common names are not universal. They are usually only applicable to a single language. Thus the same plant may have numerous common names. Canadians should be aware that the Chinquapin Oak is also known as *Chêne à Chinquapin* and *Chêne Jaune*.

(ii) In most of the world only a small proportion of species have common names. Calling plants by common names usually means that the scientific name is translated or species are lumped under a generic name. The resulting names are often as cumbersome as the Latin descriptions used before Linnaeus. *Carex aenea* Fernald (or simply *Carex aenea*) is no harder to remember than "Fernald's Hay Sedge" which is one of its common names.

(iii) The convention of a generic name and a specific epithet is not used for common names. Sometimes closely related plants have completely different names. For example, in the genus *Eupatorium*, *E. maculatum* L. and *E. purpureum* L. are known respectively as Spotted Joe-Pye Weed, and Sweet Scented Joe-Pye Weed, but *E. fistulosum* Barrat goes under the name of Trumpetweed and *E. rugosum* Houtt is called White Snakeroot. There is no indication from the common name that all four are in the same genus.

(iv) It is quite common that two unrelated species have the same common name. For example, "snakeroot" is used not only for *Eupatorium rugosum*, which is in the family **Asteraceae**, but also for several members of the genus *Sanicula* L., in the **Apiaceae** or parsley family. Seneca Snakeroot is also the common name of *Polygala senega* L. that is a milkwort in the **Polygalaceae**. In another example, two common woodland plants are Snowberry and Creeping Snowberry. The first, *Symphoricarpos albus* (L.) Blake is a relative of the honeysuckles, whereas Creeping Snowberry (*Gaultheria hispidula* (L.) Muhl.) is in the Ericaceae or Heath Family.

The case against common names is exemplified by the genus *Pyrola*, common plants of the northern woodland. The common names for *Pyrola* are Shinleaf or Pyrola. The name Shinleaf on its own implies one particular species, *Pyrola elliptica* Nuttal, but may also refer to the genus. *Pyrola asarifolia* Michaux is known not only as Pink Pyrola or Pink Shinleaf, but also as Bog Wintergreen. The name Wintergreen also applies to at least five other genera. Wintergreen (*Gaultheria procumbens* L.) is also known as Checkerberry. *Chimaphila maculata* (L.) Pursh has the common names Spotted Wintergreen or Striped Wintergreen, and *Monesis uniflora* (L.) Gray is called One-flowered Wintergreen or One-flowered Pyrola. These three, at least, are in the same family. Less closely related are *Trientalis borealis* Rafinesque, which is known both as Chickweed Wintergreen and Starflower, and *Polygala paucifolia* Willdenow, which is called Fringed Polygala and Gaywings as well as Flowering Wintergreen, and is a relative of Seneca Snakeroot mentioned above. One of the reasons why people shy at scientific names is that they are unfamiliar and sometimes rather long and they may seem difficult to pronounce. Understanding and therefore remembering names of plants becomes much easier, simpler, and more interesting, if the meaning or the origin the name is known. Many of the specific epithets are very common. They describe color, shape of leaves, habit, number of parts, size, habitat, place of origin and so on. Most of these are Latin, but unfortunately, to confuse the issue, some are Greek. For example, epithets describing four leaves could be either *quadrifolius* (Latin) or *tetraphyllus* (Greek); they both mean "four-leaves". Nevertheless, many of the Greek and Latin words which go to make up species epithets are the origins of many English words, and the meaning of names can often be interpreted by someone with no Classical background. Specific epithets which honor people may be recognized because they end in "ii" if the name ends with a consonant and in "i" if the name ends with a vowel except *a*, and "e" if the name ends with an *a*. Naming a plant after a colleague was (and is) a good way of complimenting him, especially as, if he was a botanist, he might return the favor. The names of some North American species of the genus *Sphagnum* conjure up a wonderful image of a mid-nineteenth century bryological ring:

Sphagnum girgensohnii Russow;
Sphagnum russowii Warnstorf;
Sphagnum warnstorfii Russo; and
Sphagnum wulfianum Girgensohn.

Generic names are not always so easy to interpret, but there is no reason why *Carex* should be more difficult to learn that Sedge, or *Prunus* than Cherry or *Pinus* than Pine. Linnaeus showed unlimited imagination in inventing names for the plants he was cataloguing. Many, such as *Quercus*, retained their ancient Latin names; others merely described some aspect of the plant. *Aster* for example, means, "star" and clearly describes the flowers. Sometimes Linnaeus was much more fanciful. Bog Rosemary, known at that time as *Erica palustris pendula* caught his attention. He imagined that the beautiful flesh-pink flowers imitated the "beauty of a fine female complexion". The plant, growing on

hummocks in the middle of bogs, reminded him of Andromeda, legendary princess of Ethiopia, whose beauty lasted only as long as she was a virgin. In order to save her country from a terrible flood she was chained to a rock and left to be ravaged by a dreadful sea monster. Linnaeus saw the sea monster in the toads that inhabited the bogs in which he found the plant. He named the genus *Andromeda* after the distressed virgin (Black, 1979) and even drew a picture of her in his notebook. Often Linnaeus named new genera after friends and colleagues. In 1748, on Linnaeus' recommendation, the Swedish Royal Academy sent Peter Kalm, a former student, on a collecting trip to North America. When he returned in 1751 Linnaeus honored him by naming the Laurels *"Kalmia"* after him. One of his favorite plants, the beautiful and delicate Twinflower, Linnaeus kept for himself and named *Linnaea borealis*. Because plant names are Latin or Latinised, unlike English words, they have a gender. In most cases the ending of the generic noun indicates its gender. For example, nouns ending in *-a* are always feminine, those ending in *-us* are often masculine, and *-um* indicates neuter. In Latin, an adjective, or other modifier, has to have the same gender as the noun it modifies, so that the ending of the specific epithet usually agrees with ending of the generic noun, for example, *Kalmia ployfolia*, *Lathyrus latifolius* and *Vaccinium angustifolium*.

Most plant names, however, are feminine, including many whose generic name ends in *-us*. The commonest endings are listed below:

Noun:	*masculine*	*feminine*	*neuter*
Endings:	-us	-a	-um
	-er	-ra	-rum
	-is	-is	-is
	-r	-ris	-re

Some endings remain the same for all three genders, so that the specific name is the same regardless of the gender of the noun. Some examples are *-ans, -ens, -x*, and *-or* (Radford et al. 1974).

CONCLUSIONS

In 1753, Linnaeus published his "***Species Plantarum***". The modern names of nearly all plants date from this work or obey the conventions laid down in it. The scientific name for an organism consists of two words: the genus or generic name and the specific epithet. The generic name and specific epithet may be from any source, but they are always treated as Latin. The generic name is usually a noun. For example, the name *Quercus* is simply Latin for oak. The specific epithet is usually an adjective, but can be another noun or the name of a person. Thus in *Quercus rubra*, 'rubra' means red; in *Quercus prinus*, 'prinus' is another noun for another sort of oak, and *Quercus muehlenbergii* is named after the eighteenth century minister and botanist G.H.E. Muhlenberg.

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