

## BOTANIST'S CORNER

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We will now discuss the reasons for name changes. Botanical history goes back for several hundred years during which time new plants were being discovered and named. In many cases, due to the lack of efficient communications, two botanists could get hold of the same plant and each would give it a different scientific name without knowing what the other was doing. Years later it would be discovered that here was one plant species (NOTE: the word "species" is always used as a plural form, whether it applies to one plant specimen, one species, or several species. The use of the word "specie" is never correct) with two scientific names, a situation which could not exist without much confusion.

What was to be done? Well, one of the most important rules of the International Code of Botanical Nomenclature, which attempts to stabilize nomenclature and allow for the fewest changes, is the rule of *priority*. This simply

states that the *first* name to be validly published for a plant is to be the one and only correct one, and this is usually the oldest name. Valid publication involves giving the plant a proper Latin binomial name with a brief Latin description, and published where it has a reasonable chance of being available to most botanists. So, if there are two scientific names for a plant, one has to be the correct name and the other becomes a synonym. Thus, one way a well-known name can be changed is for someone to discover that another name had been proposed earlier than the one currently in use. This applies either to the generic name or the specific epithet. For example, the names *Sarracenia drummondii* and *S. sledgii*, well-known a generation ago, had to be changed to *S. leucophylla* and *S. alata*, respectively, when it was discovered that the latter names were older. These changes would not affect later generations of botanists and laymen who would be learning "*S. leucophylla*" and "*S. alata*" for the first time; but they would have to know about the earlier used synonyms if they had to look up any information about these species in the older literature.

Names may be also be changed when a botanist, or layman, studying a group of plants decides that the classification of these plants must be altered to reflect a more accurate view of the evolutionary relationships of the plants. He would come to this decision after exhaustive studies of the plants in the field, in the garden plot, in the laboratory and in the literature, and it is not a thing to be taken lightly. He may thus *transfer* a species from one genus to another, or he may change the rank of some species, for example, from a subspecies to a species, or vice versa. For example, "*Sarracenia jonesii*," from the mountains of North Carolina, may be recognized as *S. jonesii*, *S. rubra* ssp. *jonesii*, or *S. rubra* variety *jonesii*, depending on your taxonomic interpretation of the biological significance of the plant populations. (See C. R. Bell, A cytotaxonomic study of the Sarraceniaceae of North America, J. Elisha Mitchell Sci. Soc. 65:137-166 + 14 pl., 1949; S. McDaniel, The genus *Sarracenia*, Bull. Tall Timbers Research Station (Tallahassee, FL), No. 9, 1971; F. W. and R. B. Case, The *Sarracenia rubra* complex, Rhodora 78:270-325, 1976; D. E. Schnell, The Carnivorous Plants of the United States and Canada, Blair Publisher (Winston-Salem, NC), 1976; and D. E. Schnell, Intraspecific variation in *Sarracenia rubra*, Castanea (in press), 1977.)

The foregoing two situations indicate that these types of name changes will always be occurring; and, though inevitable, supposedly they reflect our ever increasing botanical knowledge and our changing (improving) views regarding populations of living, dynamic plants. I would agree that this concept goes against the notion of stability of names and facilitation of communication; but scientific names are still more specific than common names (because at any one time, there can be only one scientific name) and scientific names must be flexible to be useful in an ever changing field. At this point I embarrassingly bring up the case of the Douglas Fir of western North America. Over the past 200 years or so it has had four different scientific names, but it has always been known as "Douglas Fir." This is definitely an exception to the general situation.

At the risk of seeming contradictory to the previous discussion, I bring up one final point. Because name changes *are* annoying, no matter how important, and because they *may* interfere with the availability and flow of information and must be avoided whenever possible, the Code has a special clause that provides for the conservation

of names to prevent *certain* changes in the interest of stability. According to this provision, an incorrect name can be conserved (i.e., preserved) if it is widely known to and used by horticulturists, botanists, foresters, laymen, etc. Conservation thus can occasionally be used to avoid an otherwise inevitable name change which would inconvenience a great many people (See Jeffrey, 1968). By legislative action names can be conserved by the vote of a committee of the International Botanical Congress. They are then listed in the Code book along with the corresponding rejected names. Conservation is thus a limitation to the principle of priority in that the earliest name may not be used. Conservation itself has one limitation however: conservation applies only to names of genera and families; specific names cannot be conserved. As an example of conservation of names, take the names *Darlingtonia* and *Chrysamphora* which have both received varying degrees of acceptance as the correct generic name for the California Cobra plant. Under the rules of priority, *Chrysamphora* is the oldest *legitimate* name that applies to these plants because when the name *Darlingtonia* was proposed to refer to the cobra plant, the same name (*Darlingtonia*) had already been given to another entirely different species--and the same name can't be used twice (so *Darlingtonia* for the cobra plant had to be dropped, theoretically). However, by time this confusing situation had been discovered, the name *Darlingtonia* had been in use for a long time and had become well known as the California cobra plant. (The original "*Darlingtonia*" being a much more obscure member of the legume family). Thus, it was decided by a very narrow vote that *Darlingtonia*--as the California Cobra plant--should be conserved over the other use of the name, and therefore conserved over *Chrysamphora* also. Consequently, by legislative action, *Darlingtonia* is now and forever more (no matter what else might turn up) the correct name of the California cobra plant.

In conclusion, this has been a brief and highly simplified article in which I have tried to indicate that though botanists and laymen alike are annoyed by name changes of well-known plants, we must realize that there are special reasons for the changes; and taxonomic botanists are not to be scorned as merely name-jugglers, playing some silly game. Names can only be changed in accordance with the very specific rules layed down in the ICBN. You cannot alter the name of a plant just because you want to, or because you think the name is inappropriate, objectionable, misleading, etc. Scientific names are very important to botanists and laymen and they have their special uses, just as do common names. We must make the best of things and not let anything dampen our interest in the plants we enjoy, which after all, is the most important part of our concern. Fortunately, the plants remain unchanged and intriguing no matter what their names.

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"Notes on *Nepenthes mirabilis* and other Carnivorous Plants in Queensland"  
by P. S. Lavarack

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