

Scientific Nomenclature of Forest Trees

by ELBERT L. LITTLE, JR.
United States Forest Service

THE replacement of well-established scientific names of important forest trees and other economic plants through revival of old overlooked names is a serious, annoying problem for foresters and other workers in applied plant sciences. Fortunately, solutions are now being actively considered and should be adopted by the Ninth International Botanical Congress at Montreal in 1959.

Examples of scientific names of forest trees that have been replaced by old names through bibliographic searches of plant taxonomists are too familiar to require mention. Of particular concern to foresters is the recent change of the most important timber tree, Douglas-fir, from *Pseudotsuga taxifolia* (Poir.) Britton to *Pseudotsuga menziesii* (Mirb.) Franco. A possible benefit is the increased interest aroused among foresters in plant nomenclature and their support of proposals to amend the International Code of Botanical Nomenclature toward more stabilization. Thus, the Society of American Foresters, with membership of about 10,000 professional foresters, has requested through its Council retention of the name *Pseudotsuga taxifolia* and four other specific names and has endorsed the principle of the proposal stated below as well as other means toward stabilization of important tree nomenclature.

Soon after beginning the study of tree nomenclature more than fifteen years ago the writer saw the need for a rule of this kind. For the Seventh International Botanical Congress at Stockholm in 1950, an amendment was submitted similar to that quoted below to reject a name as not effectively published if it neither had been accepted by a second author nor listed in an index of scientific names within one hundred years after publication. Unfortunately, an earlier version was substituted in the published proposals and the improved revision was not formally considered. At the same time, the writer offered a proposal to conserve specific epithets of plants and stated the arguments for *nomina specifica conservanda* (*Phytologia* 3: 90-100, 1949.). There was no endorsement of these proposals by forestry organizations at the Stockholm Congress; instead, one botanist read statements from representatives of forestry schools in the United States indicating that no unanimity on the subject existed among American foresters.

This problem of nomenclature stabilization was one of the most important considered by the Nomenclature Section of the Eighth International Botanical Congress at Paris in 1954, in amending the International Code of Botanical Nomenclature of 1952. Two proposals to-

ward this object gained preliminary approval but were defeated by small margins in the final voting.

At Paris, the proposal for a Special Committee on Stabilization was carried unanimously, and its members were elected. Also carried by a considerable majority was a resolution "that something should be done" to solve the present problems of nomenclatural instability, expressing the conviction that a change may be accepted but that up to now the right proposal had not yet been presented.

Dr. J. S. L. Gilmour, Director, University Botanic Gardens, Cambridge, England, chairman of the Special Committee on Stabilization, listed five possible lines of approach discussed at Paris, from one or more of which acceptable proposals would seem likely to be evolved:

- (a) *nomina specifica conservanda*;
- (b) *nomina specifica rejicienda*;
- (c) banning of certain books;
- (d) banning of names not taken up after a certain date;
- (e) the recognition in the rules of "economic names" in addition to the strictly correct "botanical names".

He also asked members of this committee to send him not later than May 1, 1955, a list of widely used names which on a strict application of the rules should be replaced by less well-known names, in order to assess the approximate number of actual cases likely to be involved.

Foresters have the opportunity to participate in developing a workable solution and can submit lists of scientific names desired for retention in place of obscure recently revived names. Forestry organizations, institutions, and societies can endorse these proposals publicly and send copies of their resolutions to this committee and to the president of the Ninth International Botanical Congress, Dr. Jacques Rousseau, Director, Montreal Botanical Garden, 4101 Sherbrooke St. E., Montreal, Quebec, Canada. Also, they can request authorization to send voting delegates to this congress at Montreal in 1959. Support for the following proposal will be appreciated.

The writer proposes the following new article as an amendment to the International Code of Botanical Nomenclature under Section 5, Conditions and Dates of Effective Publication (after Article 41 in the 1952 edition):

"A name of a taxon is not effectively published if it neither has been accepted by a second author nor has

been cited in an index of scientific names within fifty years after publication or by 1 January 1960, if published before 1910."

This proposal provides for the automatic rejection of obscure old names more than fifty years old, as though they never had been published. Stressing effective publication rather than rejection of individual names, it is related also to Section 13, Rejection of Names and Epithets. Just as microfilm is not accepted (Article 39), names in obscure or rare works not afterwards adopted or indexed likewise do not meet the conditions of effective publication.

Under this proposal an obscure old scientific name of a species, genus, variety, or other group could not be revived to upset usage unless it either has been accepted by a second author or listed in an index of scientific names before 1960. All names heretofore adopted by a second author and future names so recognized within fifty years after first published would not be affected. Likewise, this proposal would not apply to all names already cited in *Index Kewensis and Supplementa* as well as all names in *Gray Herbarium Card-index* and any other indexes of nomenclature. The date 1910 is added to prevent the rule from becoming retroactive. Names published between 1753 and 1910 have had from fifty to more than two hundred years for adoption. Every name published after 1910 would be granted fifty years' time in which to be indexed or accepted by a second author before it could be rejected. Ambiguities of a proposal considered in 1954 about "currently accepted" names and those "not taken up in a botanical paper published since 1900" are avoided.

The time interval of fifty years is believed to be the most satisfactory but could be changed if desired. As a precedent, names of genera, families, and orders to be conserved are preferably such as have come into general use in the fifty years following their publication (Article 24). A few foresters have suggested a shorter period. However, a reasonable number of years is required for cataloguing and publishing indexes and for contemporary workers to become familiar with new names, evaluate them, and check the nomenclature and synonymy. Also, a name in print only a few years has not become widely established in usage and could be changed without much confusion.

A desirable feature is placing the responsibility for the rejection of an obscure name upon its author for not publishing it effectively in a medium available to contemporary botanists. For practical purposes, an old name that has escaped all indexes and remained unrecognized by anybody has not been published. Certainly any scientific name now more than fifty years old which cannot meet one of the two modest qualifications of either acceptance by a second author or discovery by a bibliographer for an index was not effectively published in the first place! Whether or not the work was rare or primarily for others, obviously something was wrong with the distribution or circulation of the original printed matter in its failure to reach the general

botanical public (Article 39 and Recommendation 39A). Even where deliberately ignored by contemporary authors because of prejudice or other reasons, names in printed matter distributed to the general botanical public should have been picked up by later indexers before now.

Under this proposal an obscure old name has no status in nomenclature but is simply ignored somewhat as a *nomen nudum*. It is unnecessary to deliberate upon whether to restore the newly discovered old name or even to establish its synonymy or type, though it could be cited as an ineffectively published synonym if desired. No list of these rejected names is needed. A taxonomist discovering a specific name more than fifty years old omitted from *Index Kewensis and Supplementa* is not required to make any further search of botanical literature to determine whether the name was used again or indexed elsewhere.

The burden of proof is upon anyone wanting to revive an obscure old name. He could not resurrect the name to upset existing nomenclature unless by searching through botanical literature he could find the name listed in an index or accepted by a second author. If an author should revive an old name in violation, then this later publication would be the date of effective publication.

It has been argued that second use of the name might eventually be found (for example, Rickett, H. W., and Camp, W. H., *Taxon* 4: 37-40. 1955). However, any name now accepted, except the conserved generic and family names, is subject to the risk of reduction to synonymy at any time through discovery of an old name in a rare work. This proposal would reduce the probability very significantly to the low frequency of two rare events instead of one, the original publication and a second acceptance or listing.

One question raised is that some names of taxonomic groups of small size or restricted geographic distribution might pass a half century known but dormant because later botanists might have no occasion to refer to them. However, these names would be protected merely by listing in *Index Kewensis and Supplementa*. The numerous unused names published by Constantine S. Rafinesque in rare works ignored by contemporaries would be exempted through listing in E. D. Merrill's *Index Rafinesquianus* (1949).

This proposal should not be confused with those to conserve or reject specific names and should be acceptable even to taxonomists who strongly oppose the latter. Conservation or rejection of specific names could become of somewhat broader application and would require in each case special action individually by an International Botanical Congress.

Only a very limited number of names of any category could be affected by this proposal. It would eliminate the need for conservation of generic names upset by future discovery of earlier synonyms. Some old unused varietal names might be rejected automatically, especially since varieties are omitted from *Index Kewensis*. However, dropping of those old untypified varietal

names may help clarify future nomenclature. New World varieties back to 1753 are being listed in *Gray Herbarium Card-index*.

Not retroactive, the proposal could not apply to any old names already taken up by a second author. To

attempt to change automatically some names already in various degrees of acceptance would create more confusion. These cases could best be considered individually under a separate article for conserved or rejected names.