The Two Sequoias

ERWIN G. GUDDE

OF ALL the true American names, Sequoia is one of the proudest and from the point of view of an onomatologist one of the most interesting. Indeed, the name offers a parcel of problems—linguistical, botanical, historical, psychological, political—as complex as any one interested in name research could wish to confront. Much has been written about the name, especially about the controversial issue of *Sequoia gigantea,* but the whole story of the name and the naming has never been brought together.

The genus *Sequoia* with its two species *sempervirens* and *gigantea* designates what is contended to be the largest tree in the world and what quite certainly is the oldest living organism. Popularly the *sempervirens* is called "redwood" and the *gigantea* "big tree." Both designations are unsatisfactory: "redwood" is applied to numerous conifers and "big tree" might be applied anywhere to any tree bigger than others.[1] Yet, the two names will probably continue to be used since the name sequoia is ambiguous unless it is qualified as Coast sequoia or Sierra sequoia to designate the species.

The mightiness of the tree impressed even the Indians—otherwise unaware of trees that did not provide edible fruit. They had a name for it and gave it a place in their mythology:

> The California big tree is also in a manner sacred to them, and they call it *woh-woh'-nau,* a word formed in imitation of the hoot of the owl, which is the guardian spirit and deity of this great monarch of the forest. It is productive of bad luck to fell this tree, or to mock or shoot the owl, or even to shoot in his presence. Bethel states that they have often, in earlier years, tried to persuade him not to cut them down—pity they could not have succeeded!—and that when they see a teamster going along the road with a wagonload of lumber made from these trees, they will cry out after him, and tell him the owl will visit him with evil luck.[2]

No mention of the sequoia is made in the reports of the early navigators along the California coast. When the Spaniards opened

up the land route to San Francisco Bay in 1769 the redwoods of Monterey, Santa Clara, and San Mateo counties were noticed by them and called *palos colorados.* No attempt was made to describe or classify the tree—unlike the Jesuits, the Franciscans did not combine scientific fervor with religious fervor. Hence it was left to European botanists to "discover" the sequoia in the botanical sense.

Thaddeus Hänke, the scientist of the Malaspina expedition in 1791, was the first botanist to collect specimens of the redwood near Monterey.[3]

Aylmer Lambert,[4] on the basis of specimens collected by Archibald Menzies of the Vancouver expedition (1790–93) gave the specific name *sempervirens,* "ever living," but placed it in the genus *Taxodium* and added cautiously:

> . . . having only a single imperfect specimen of this species for examination. It is not without some hesitation, that I have referred it to *Taxodium.* I have thought the plant too interesting, however, to omit in the present work, leaving to future observations to determine, whether or not the place I have assigned to it be its true place. This plant I propose to call *sempervirens,* from its evergreen leaves, so different from the *Taxodium distichum,* whose leaves are deciduous.

Lambert's classification was accepted by later botanists—Douglas, Hooker, Arnott, Hartweg—as indeed the tree belongs in the Taxodiaceae or Redwood family.

In 1847 the Swiss publishers, Scheitlin and Zollikofer in St. Gallen, published *Synopsis Coniferarum* by Stephan Endlicher. Here the tree was first recorded as a separate genus. (This interesting entry is reproduced on the next page.)

Endlicher was one of the scholars who were instrumental in establishing the methods, principles, and theories of humanistic research. Born in 1804 of a German family in Pressburg, Hungary, Endlicher first studied theology, then turned to linguistic and historical studies, and finally found greatest satisfaction in the natural sciences. Without losing interest in his earlier studies he published between 1830 and his death a number of epoch-making books and monographs in the field of botany. His *Synopsis Coniferarum* was the last contribution which appeared during his lifetime. Deeply involved in the political upheaval in Austria and Hungary, he died, probably by his own hand, in Wien on March 24, 1849.[5]

Although we have no documentary evidence, there does not seem to be any question that Endlicher named the newly estab-

lished genus in honor of Sequoyah, the Cherokee Indian, also known as George Gist, Guest, Guess, etc. Sequoyah was apparently the son of a German-American trader and a Cherokee girl.[6] He became world famous when he created an alphabet for a literary language of his tribe and in general took a lead in the cultural assertion of the American Indian. The name Sequoyah was well

---

1. SEQUOIA SEMPERVIRENS Endl.

Sequoia foliis linearibus (½ — 1″) obtusiusculis subtus albidis.

Taxodium sempervirens *Lambert Pin. ed. 2. II. t. 64.*
Taxodium nutkaense *Herb. Lamb.*

Habitat in America boreali occidentali ad sinum Nutka. **(Menzies, Nee, Hänke.)**

2. SEQUOIA GIGANTEA Endl.

Sequoia foliis linearibus (1½ — 2″) acutis subtus glauco pulverulentis.

Taxodii species *Douglas in Bot. Mag. Comp. II.* 150.
Abies religiosa *Hook. et Arnott ad Beechey* 160. *non Humb.*
Taxodium sempervirens *Hook. et Arnott ad Beechey* 392. *Hooker Ic. t.* 379.

Habitat in California. **(Dougl.)**

Arbor trecentorum pedum altitudinem attingens, trunci ambitu trigintapedali.

---

known in Germany.[7] What, then, was more natural than for a botanist, who was also a linguist, to follow his romantic inclination by naming the conifer, which he recognized as a distinctive genus, in honor of the great Cherokee Indian? Another evidence, although again hypothetical, is the fact that no Greek or Latin root has been found for the name. Scholars of a century ago, just as today, were not in the habit of coining names or taking them out of thin air.[8] The naming of the tree in honor of Sequoyah must be accepted until proof to the contrary is established.

The etymology of the name Sequoyah has naturally been the object of investigation and interpretation. In the authoritative work on the American Indian, A. F. Chamberlain states that the name

is Sikwâyĭ in the Cherokee language but he makes no attempt to give the meaning or origin.[9] Most of the interpretations by others are products of folk etymologists, who believe that behind such a sonorous name must be something interesting or attractive. Even a careful scholar like J. A. C. Leland was first willing to accept the fanciful interpretation "whispering leaves" for lack of a more authoritative interpretation:

> Authority for these definitions does not appear, but to one who has listened to the voices in the tops of the sequoias—California's most distinctive and inspiring monument—"Whispering Leaves" is most appropriate.[10]

However, Leland's inquiring mind was not satisfied and he made a startling discovery. In James Adair's *History of the American Indians* he found that *seequa* means "opossum" in the Cherokee language. Adair's statement can hardly be challenged. He came to South Carolina in 1735 and lived many years among the Cherokee. A letter from the Bureau of American Ethnology to Leland confirmed that *sequo yah* means opossum "and that the person called by that name belonged to the opossum clan."

The inference is obvious. The Cherokee, like other people, consider the opossum a sort of mixed animal: neither this nor that.[11] It was natural for the Cherokee to call a member who was half white half Indian a "sequoyah"—an opossum. This was confirmed by Chief Iron Eyes Cody, a member of the Los Angeles Corral of *The Westerners.*

We come to the next question to be considered. Endlicher in 1847 could hardly have named the big tree of the west slopes of the Sierra Nevada *Sequoia gigantea.* According to Farquhar[12] and other authorities the big tree was not discovered and described until 1850—although John Bidwell and others had probably seen one of the groves in the 1840s. It seems to be out of question that Endlicher could have had specimens of it before 1847, and the above reproduced entry in his *Synopsis Coniferarum* shows clearly that the description could not refer to the big tree. The type that Endlicher named "Sequoia gigantea" is doubtless a variety of *sempervirens,* probably Var. *glauca.*

While the propriety of the name *Sequoia sempervirens* Endl. has never been questioned the scientific name of the Sierra big tree has caused an international controversy which is not yet settled.

In *Gardener's Chronicle* (London) of December 24, 1853, the editor, John Lindley, assuming the newly discovered tree, the Sierra sequoia, to be unrelated to the genus *Sequoia* and that Endlicher had based the name *Sequoia gigantea* upon conjecture, proposed the name *Wellingtonia gigantea:*

We think that no one will differ from us in feeling that the most appropriate name to be proposed for the most gigantic tree which has been revealed to us by modern discovery is that of the greatest of modern heroes. Wellington stands as high above his contemporaries as the Californian tree above all the surrounding foresters [!]. Let it then bear henceforward the name of *Wellingtonia Gigantea.* Emperors and kings and princes have their plants, and we must not forget to place in the highest rank among them our own great warrior.

The American reaction was prompt. When a section of a fallen big tree was exhibited in New York in the same year the accompanying descriptive pamphlet quoted liberally from an article of the *London Illustrated News* of February 11, 1854 (page 120), based on Lindley, but substituted for "Wellingtonia Gigantea"—"Americus Gigantea." This little forgery of an American patriot had no consequences. More serious was Dr. C. F. Winslow's attempt to change the name to *Taxodium Washingtonianum* or, if it would prove to be a separate genus, to *Washingtonia Californica.*[13]

It was, however, a French botanist who challenged Lindley's name in a scientific spirit. In a meeting of the Société Botanique de France of June 28, 1854, Joseph Decaisne reported on the newly discovered gigantic conifer, specimens of which the French consul in San Francisco had sent to Paris. He stated:

Il fait observer que l'existence, chez ces arbres, de différentes formes de feuilles, ne peut justifier l'établissement du genre *Wellingtonia,* que M. Lindley a cru pouvoir baser sur cette particularité. En effet, les Conifères présentent toutes ce caractère à un degré plus ou moins remarquable, et en lui accordant la valeur que lui assigne M. Lindley, on se trouverait conduit à séparer génériquement chacune des espèces du groupe des Eutassa.[14]

There is no indication whether Decaisne assumed that Endlicher's *gigantea* refers to and describes the Sierra sequoia or whether he realized that Endlicher had been in error. The latter is more likely and we may assume that Decaisne nevertheless thought Endlicher's name, until then hypothetical, most appropriate.

In 1855, Berthold Seemann (in botanical literature often misspelled Seeman) offered what seemed to be a compromise and what is now, according to the interpretation of the International Rules

of Botanical Nomenclature, the correct name of the Sierra sequoia. He examined the specimens in the Kew Museum in London and like Decaisne came to the conclusion that there are not sufficient differences between *S. sempervirens* and *S. gigantea* to establish the latter as a separate genus:

Ich erkenne daher Wellingtonia gigantea als eine wahre sequoia, und erlaube mir, sie *Sequoia Wellingtonia* Seem. zu nennen. Der alte Species Name "gigantea" konnte deshalb nicht beibehalten werden, weil derselbe bereits von Endlicher einem Nondescript verliehen worden ist, wie Lindley und Hooker nachgewiesen haben.[15]

Although the great Sargent himself uses Seemann's name in his *Silva of North America* it was only sporadically used in botanical literature. An attempt to connect again the "father of our country" with the oldest and proudest tree of the United States was likewise doomed. George B. Sudworth, for many years with the U. S. Forest Service, proposed in 1898 the name *Sequoia Washingtoniana* for the Sierra sequoia.[16] For a number of years this name was used officially by the Forest Service and it also appeared occasionally in literature until the Secretary of Agriculture decreed in 1940 that the International Rules be observed.

Until 1930 the name created by Endlicher and applied by Decaisne to the Sierra sequoia, *Sequoia gigantea,* was almost universally used and could be considered perfectly legitimate and lawful. Then the International Botanical Congress held at Cambridge, Great Britain, made a decision which opened a controversy which is still to be settled. Article 61 of the International Rules of Botanical Nomenclature was formulated:

A name of a taxonomic group is illegitimate and must be rejected if it is a *later homonym,* that is if it duplicates a name previously and validly published for a group of the same rank based on a different type. Even if the earlier homonym is illegitimate, or is generally treated as a synonym on taxonomic grounds, the later homonym must be rejected.

This means that Decaisne's name must be rejected because it is a homonym, and Lindley's name must be rejected as long as the two species of sequoia are considered to belong to the same genus. Under ordinary circumstances this decision would end the matter and establish Seemann's name *Sequoia Wellingtonia* as the botanical name of the big tree. Although, as in our case, a decision concerning the legality of a scientific name is sometimes not easy, due to

different opinions and interpretations, in general one can say that one of the blessings in our troubled world is an international understanding regarding scientific names: priority decides. Indeed, it seems that the majority of botanists now consider the old name illegal: "no one denies that *Sequoia gigantea* (Lindl.) Dec. being a homonym, is untenable under present International Rules."[17] Rimo Bacigalupi suspects that Seemann's name is for the most part rejected on chauvinistic grounds, and regrets that California botanists are "still calling it by the unlawful name, *Sequoia gigantea.*"[18]

However, there is a flaw in Article 61 of the International Rules.[19] The second sentence reads: "Even if the earlier homonym is illegitimate . . . the later homonym must be rejected." Let us assume that an American botanist discovers in the African jungle a plant which he believes to be a genus of some family. In his enthusiasm he names it in honor of the first magistrate of our country, "Eisenhoweria." After a few months it is proved that this plant does not constitute a new genus but is just a new variety of some well-known named species. The mistake is easily corrected but Eisenhower's name can never again be used for a genus in the plant kingdom. Endlicher mistakenly applied the name "Sequoia gigantea" to a tree which was at most a variety of *sempervirens*—yet the name cannot be used after a tree is discovered which fits the name.

Another reason that Article 61 should not be applied to the name of the Sierra sequoia is the statement that a later homonym must be rejected "if it duplicates a name previously and validly published for a group of the same rank based on a different type." When Endlicher applied the name "Sequoia gigantea" he named in fact a *variety* of *Sequoia sempervirens* (although he believed that it was a species); when Decaisne named *Sequoia gigantea* he applied it to what is definitely a *species* of the genus *Sequoia.* A variety and a species are not "of the same rank."

In the 1930's J. T. Buchholz started a new investigation on the morphologic differences between the two species and published several articles on the subject. He came to the conclusion that the big tree is not a species of *Sequoia* but represents a separate genus, related perhaps to *Steinhauera* Presl or other trees of which we have only fossils. If the Sierra sequoia should be recognized as a separate genus the acceptance of Lindley's name would be in order. Alas, the International Rules again prevent this. In 1840 a member

of the Sabiaceae had been named "Wellingtonia." The name was soon recognized as a synonym and was dropped from botanical nomenclature. Nevertheless, it makes Lindley's name a "later homonym" and hence illegal. What hypothetically happened to Eisenhower actually happened to Wellington. For this reason Buchholz suggests the name "Sequoiadendron giganteum" for *Sequoia gigantea.*[20]

In 1943 William A. Dayton of the U. S. Forest Service reopened the question by soliciting the opinions of the group of botanists mostly interested in the name of the big tree, namely, the botanists of California. The result was a document extremely interesting to onomatologists.[21]

Practically unanimously the botanists agreed that the name *Sequoia gigantea* is the established scientific name for the big tree. To quote two eminent botanists:

> The objection to a name change in conformity with the Rules would impose an artificial change upon a long-established and universally accepted scientific name, known even to many laymen (Lincoln Constance). Californians and California botanists in particular are still calling the "Big Tree" *Sequoia gigantea,* a scientific name that has about as nearly approached permanence through usage as any I can think of (John Thomas Howell).

In other words, these botanists subscribe to one of the foremost principles of nomenclature: any name which is once established and used by a majority of people concerned with the name should not be changed.

The argument can be advanced that any personal name can be changed by the person that bears it, the name of any town can be changed by the vote of its inhabitants. Should not the International Botanical Congress, representing all the botanists in the world, have a right to change a botanical name or make certain rules to be used in applying scientific names? This argument seems valid and indeed, as stated above, most of the scientists answering Dayton's questionnaire, including Constance and Howell, admit that the use of the name *Sequoia gigantea* has been illegal since 1930.

However, if we disregard academic hairsplitting and apply common sense we must come to these conclusions:

If the two trees are species of the same genus then not only Endlicher's name *Sequoia sempervirens* but also Decaisne's name *Sequoia gigantea* should be appropriate and legitimate. Endlicher's

"Sequoia gigantea" was a phantom which should not be seriously considered as an early homonym of Decaisne's name.

If the two trees represent different genera then the botanical name of the big tree should be *Wellingtonia gigantea.* When Lindley bestowed the name in 1853, the name "Wellingtonia," mistakingly used for a member of the Sabiaceae, had already been dropped. Today it is forgotten.

International rules and decisions concerning the nomenclature of any phase of human endeavor serve the practical purpose of clarifying and avoiding ambiguity and confusion. In naming a new type it is a sound principle to prohibit the use of a name which is really a homonym, i.e., which is now or was once used legitimately for another type. To adhere to this principle if an early homonym was applied illegally and erroneously and if this early homonym does not exist and never did exist legitimately, means serving the letter and disregarding the spirit.

NOTES

[1] Cf. the remarks by Emanuel Fritz, the well-known expert on the Sequoia, in *Leaflets of Western Botany,* III (1943), p. 218. For practical reasons Fritz suggested Coast Redwood and Sierra Redwood as vernacular names for the two species, and the State Park Service has made these two names official for the State of California. In this article the two species are designated as Coast Sequoia and Sierra Sequoia; they are not recognized names, but serve the purpose of avoiding confusion and misunderstanding.

[2] Stephen Powers, *Tribes of California* (Washington: Department of the Interior, 1877), p. 398.

[3] Willis Linn Jepson, *The Silva of California* (Berkeley, The University Press, 1910), p. 138. Jepson suspects that a redwood, 125′ tall and 4′ in diameter in 1926, near the Alhambra in Spain, was grown from seed which Hänke brought to Spain. According to Harriet N. Dimond, who reported this interesting fact, the guidebook says that the Duke of Wellington planted trees there (not necessarily this redwood though) *Madroño,* I, p. 242.

[4] Aylmer Bourke Lambert, *A Description of the Genus Pinus* (London, 1828; II, 107 f.).

[5] The best account of Endlicher's life and works is found in *Allgemeine Deutsche Biographie.*

[6] J. D. Moody in an article "Sequoyah" (*Pub. Historical Society of Southern California,* VI, 122–125) gives a detailed but not well substantiated account of Gist's family. See also R. S. Ellsworth, *The Giant Sequoia* (Oakland, 1924)

[7] *Über die Indianischen Sprachen Amerika's* (Leipzig, 1834) by Talv, the pen name of a well-known writer, Mrs. Robinson, of New York. The book contains a translation of John Pickering's article on Indian languages in the *Encyclopedia Americana* and a lengthy discussion of Sequoyah's alphabet.

[8] A newspaper reporter (Berkeley *Gazette,* October 22, 1930, p. 6), to be sure, quotes no less an authority than W. L. Jepson as having said: "The name sequoia, may however, be merely a derivation of the Latin word 'sequor' which means 'to follow.' These huge living trees, centuries old, followed [!] and are related to the giant petrified trees found buried under the ground, where they have been lying for centuries, also."

[9] F. W. Hodge, *Handbook of American Indians.*

[10] *California Folklore Quarterly,* IV, p. 408.

[11] *Western Folklore,* VI, p. 269.

[12] Francis P. Farquhar, *Yosemite, The Big Trees, and the High Sierra* (University of California Press, 1948), pp. 8 f.
[13] California *Farmer*, September, 1854.
[14] *Bulletin de la Société Botanique de France* (Paris, 1854, I, pp. 70 f.). It is interesting to observe that in the meeting of November 10, 1854, another member of the society speaks of the *Wellingtonia* as an established name (p. 216).
[15] *Bonplandia* III, p. 27.
[16] "Check List of the Forest Trees of the United States: Their Names and Ranges." U. S. Division of Forestry, *Bulletin* No. 17, p. 28. Reissued as U. S. Department of Agriculture, *Misc. Circulars* 92, pp. 32 f. In a not entirely convincing manner the well-known dendrologist tries to show that Winslow's *Taxodium Washingtonianum* was validly published and established the priority for the specific name.
[17] William A. Dayton, "The Name of the Giant Sequoia" (*Leaflets of Western Botany*, III, 209).
[18] *Ibid.*, p. 211.
[19] Now Article 74 of the *International Code of Botanical Nomenclature* (Utrecht, 1952).
[20] J. T. Buchholz, "The Generic Segregation of the Sequoias." *American Journal of Botany*, XXVI, 535 ff. (1939).
[21] Cited in notes 1 and 17.

We read Virginia's blazoned roll
Of heroes, and forthwith
Greets us upon the starry scroll
That homeliest name,—*John Smith!*

—William Allen Butler

A nick-name is the heaviest stone the devil can throw at a man.

—Old Proverb

A man's name is not like a mantle which merely hangs about him, and which one perchance may safely twitch and pull, but a perfectly fitting garment, which, like the skin, has grown over him, at which one cannot rake and scrape without injuring the man himself.

—Johann Wolfgang Goethe