

In memory of Arthur Cronquist (1919–1992)¹

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Takhtajan, A. L. (V. L. Komarov Botanical Institute of the Academy of Sciences of the U.S.S.R., 2 Prof. Popov Street, 197376 St. Petersburg, Russia). In memory of Arthur Cronquist (1919–1992). *Brittonia* 48: 376–378. 1996.—Arthur Cronquist's contributions to botanical science are summarized to commemorate his death.

On 22 March 1992, Arthur Cronquist, Senior Scientist at The New York Botanical Garden, died suddenly while working in the Brigham Young University Herbarium, in his beloved state of Utah.

Arthur Cronquist was born in 1919 in San Jose, California. He graduated from Utah State University in 1938 and received his Ph.D. from the University of Minnesota in 1944. For most of his life he worked in the herbarium of The New York Botanical Garden, where he was Director of Botany for several years. During this time he taught at Columbia University in New York City and issued two general botany textbooks, which were translated into several foreign languages. The scope of his scientific interests was very broad, comprising the theory of evolution, evolutionary morphology of plants, phylogeny and systematics of the plant kingdom, and floristics and phytogeography.

Two of his books brought Cronquist worldwide fame: *The Evolution and Classification of Flowering Plants*, published in 1968 and revised in 1988, and his monumental book, *An Integrated System of Classification of Flowering Plants* (1981). In these works he provides an outline of his classification of flowering plants, based on the principles developed by American botanist Charles Bessey. The Cronquist system was original and has been used worldwide. As he wrote in the introduction of the first edition of *The Evolution and Classification of Flowering Plants*, the system, though close to Takhtajan's *Systema Magnoliophytorum* ([in Russian] 1966), also has several differences. In contrast to the systems of Takhtajan and R. Dahlgren (the

last variant of his system published by Gertruda Dahlgren in 1989), Cronquist presented a broader circumscription of orders and families that, as he once said, correspond better with the traditions of American botany. Cronquist's system, as well as other modern systems, is based on the acceptance of the monophyletic origin of flowering plants; the origin of monocotyledons from the ancient dicotyledons; the primitiveness of families with apocarpous gynoecia, such as Magnoliaceae and Winteraceae; and the advanced position of families with simplified unisexual, anemophilous flowers. *An Integrated System of Classification of Flowering Plants* is characterized by exceptionally precise descriptions of families, excellent synoptic keys, and extensive references that include Russian literature printed in the Cyrillic alphabet. It is extremely important to emphasize the significance of the introductory chapters of the second edition of *The Evolution and Classification of Flowering Plants*, which are devoted to Darwin's philosophy of evolutionary systematics. In this book, as well as in his paper "A Botanical Critique of Cladism" (1987), Cronquist acted as a witty and convincing critic of modern cladism, which dates back to the ideas of Willi Hennig.

Cronquist was coeditor of *Flora of the Pacific Northwest* (1973, 1976) and editor of the multivolume *Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A.* The first volume of *Intermountain Flora* was published in 1972 and was followed by others; the series has yet to be completed. It is undisputedly one of the best regional floras for North America. In 1991 his last book was published: the second edition of *Manual of Vascular Plants of North-eastern United States and Canada*. Also an excellent regional flora, this work was begun by

¹ First published in *Bot. Zhurnal* 77(5): 90–92. 1992. [In Russian.] Translated by Alice Takhtajan and amended.



FIG. 1. Armen Takhtajan and Arthur Cronquist, photographed during a visit in the United States [originally published in Ward's Bulletin 8(58). 1969].

his teacher, Henry A. Gleason. Cronquist successfully completed the work for the first edition in 1963 and largely rewrote the second edition.

Among his other books is *The Natural Geography of Plants*, published in 1964 with H. A. Gleason. As with previous works, this book was started by Gleason and completed by Cronquist. Without exaggeration it can be said that it is the best book on the botanical geography of North America.

For several years Cronquist was the editor of one of the important American botanical journals, *Botanical Review*. In his successful effort to make this an international journal, he invited Russian authors and often actively helped to translate the manuscripts into English. Thanks to his initiative, *Botanical Review* published papers by S. B. Meyen, B. A. Krasilov, M. A. Bara-

nova, N. N. Tsvelev, S. G. Zhilin, L. Yu. Budantsev, and A. L. Takhtajan.

Cronquist had studied Russian and spoke fluently enough to give lectures in Russian. He visited Russia several times and participated in expeditions to the Altai Region, Armenia, and Georgia. He especially loved St. Petersburg and the Komarov Botanical Institute, referring to it occasionally as his second home. Cronquist was a lover of Russian music and folk songs. He particularly enjoyed the operas *Queen of Spades*, *Eugenie Onegin*, and *Prince Igor*; it gave him immense pleasure to sing in his baritone their arias, especially his favorite song "Dubinushka." He was at his best when singing "Hey, ukhem." Because he also liked to whistle these tunes, the late I. Tolmachev, a very witty man, called him "Cronqvist" (svist in Russian means "whistle").