

Desert Plants

A quarterly journal devoted to broadening knowledge of plants indigenous or adaptable to arid and sub-arid regions, to studying the growth thereof and to encouraging an appreciation of these as valued components of the landscape.

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Editorial

Dr. Herman Augustus Spoehr and the Concept of Intellectual Scurvy in Plant Science. Recently your editor and his wife (F.S.C., C.D.C) purchased the historic Spoehr house on the west side of the University of Arizona, with the intention of making it the permanent Crosswhite residence for themselves and children. Hopefully this will allow us to have better contact with the UA campus, libraries, herbarium and colleagues while we continue to work at the Arboretum. It will also facilitate the education of our three children while they attend the University of Arizona over the next eight years. Having been assigned by the University to a slightly remote spot (the Arboretum) for the past 15 years has had its element of isolation, perhaps not unlike that of an early-day scientist on a long ocean voyage. In such a situation the idea of "scurvy" comes to mind and we became quite interested in the fact that an essay dealing in part with "Intellectual Scurvy" in *Plant Science* had actually been published and was written by no other than Dr. Spoehr himself! After taking possession of the home and sleeping in one of the many bedrooms, it seemed almost as if the spirit of Dr. Spoehr was communicating over the years. Coming to Tucson from Chicago, Spoehr had used Sullivan-esque design elements when building the home in 1913. We could see him as a product of the great experiment in education which resulted from infusion of private money (from the Rockefellers) which became known as the University of Chicago. His alma mater was a place of new thinking and new directions. We thought of other infusions of private capital into science and came up with the names of Andrew Carnegie and our own W. B. Thompson. We had the sudden realization that our family had occupied the Crider House for 15 years—that home built by W. B. Thompson for the plant scientist Franklin Jacob Crider at the Arboretum, and now we were in the home of H. A. Spoehr, so long associated with the Carnegie Institution of Washington, including the old Desert Laboratory on Tumamoc Hill. Crider and Spoehr shared many similarities. Although Crider had been a department head at the University of Arizona before going into privately financed plant research for Thompson, Spoehr had no connection with the University.

In reading Dr. Spoehr's book of essays in science published by Stanford University Press, we became intrigued with his definition of intellectual scurvy. He spent a

lifetime studying highly specialized and technical phenomena in plant science. He pioneered in joining chemistry with plant science and served as President of the young American Society of Plant Physiologists. He wrote the major book on photosynthesis which was current for many years. Students of desert plants remember him for his book on the carbohydrate economy of cacti. He served as Director of the Natural Sciences Division of the Rockefeller Foundation and as head of the Division of Plant Biology for the Carnegie Institution. But highly technical scientist that he was, he saw clearly that he and his fellow scientists became so highly specialized as to have tunnel vision, caring only for their own disciplines and failing to relate their findings to other branches of learning or even to the mainstream of humanity. This is what he meant by "Intellectual Scurvy." He saw real progress, even "breakthroughs" in our modern terminology, as occurring when scientists could take off their "blindness." This relates to the concept of "fitness" versus "flexibility." Something must be fit for the present but flexible for the future. The more fit something is, the less flexible; the more flexible, the less fit. What a paradox! Neither is good by itself and neither bad, but without the one the other may never be needed! Dr. Spoehr's own specialty of plant physiology began as a quite flexible hybrid of chemistry with plant science and quickly climbed its own inevitable adaptive peak representing fitness. Dr. Spoehr was a contributor to the quite flexible young and hybrid journal *Plant World* published in Tucson. This quickly climbed its own adaptive peak and became the highly technical journal *Ecology*, a model of fitness. We believe that Dr. Spoehr would find *Desert Plants* to be decidedly on the flexible side of the ratio. Perhaps private capital is the "vitamin" needed to promote flexibility in plant science. We believe that Dr. Spoehr would heartily approve of the relationship of the Arboretum (largely privately financed) with the Department of Plant Sciences of the University of Arizona, and also with Arizona State Parks, a highly flexible and hybrid situation. Hopefully, in regard to plant science, the fitness of the University married to the flexibility of the Arboretum will bear a rich harvest of good for desert dwellers. A number of ideas have emerged and many plans are on the drawing board.