

exploration and selection. He has marveled at *M. campbellii* flowering near the top of the world in faraway Nepal, culled the shapely and showy Bradford pear from hundreds of average scrubs grown from Chinese seeds imported long ago, has observed horticultural practices and their results in such locales as Siberia, and was the first horticulturist to return from post-war China with the news that the Chinese, during their nearly 30-year anti-West hiatus, have like other people in temperate to tropical countries, become bewitched by *M. grandiflora*, from you-all know where. He's a lover who refers to the arboretum's spring splendored *M. sprengeri* 'Diva' as "she." We haven't consulted with him, but we believe to our soul the National Arboretum may be on the verge of becoming the place to see all or almost all of the considerable clan of Magnolias capable of prospering and pleasing in a large number of gardens. ——Editor

Magnolias for the Birds?

A. J. Bauman, Bioscience Section, Jet Propulsion Laboratory, Pasadena, California, and Henry Yokokama, Fruit and Vegetable Laboratory, U. S. Department of Agriculture, Pasadena, California 91106, published "Magnolia Seed Carotenoid Pigments: Typical Evolutionarily-Static Relicts?" (J. Theor. Biol. (1975) 53, 277-284).

The authors note that the red seed coats of archaic plants such as Magnolia have carotenoid pigments, the main one in Magnolia being lycopene with smaller amounts of beta-carotene, and suggest that this simple mixture is a relict color attractant which evolved with seed-eating birds and has remained static because there has been no necessity for change. The similarity of the pigments in the seed coats of Cycads in the *Gymnospermae* to those of Magnolia is pointed out.

The writers suggest that Magnolia is primitive morphologically, but advanced chemically in development of certain insect-defensive systems, and therefore that evolution has proceeded only to the degree of minimum biosynthetic effort. Magnolia seeds are colored, positioned within easy view, and suspended on threads to attract distribution vectors such as birds, and the result, the authors say, is a "coupled symbiosis."

Cherchez les Oreilles!

A Frenchman, Michaux, described *Magnolia macrophylla* in 1803, but apparently it's still not well known in France, and only too frequently *M. tripetala* is substituted when a "big leaf" Magnolia is ordered there. In July, 1977 a touring group of French ornamental nurserymen, led by L. Decourtye, chief in ornamental woody plant research at the government station in Angers, visited me in Urbana. They learned that *macrophylla* can be separated from *tripetala* in seedling stage by its pubescent new stems and the "ear lobes" on its leaf bases (both lacking in *tripetala*). ——J. C. McDaniel