

PLANT TAXONOMY

Chairman: GAYTON C. MARKS, Valparaiso University

ABSTRACTS

The Genus *Gleditsia* in North America. DONALD GORDON, Indiana University.—The genus *Gleditsia* in North America is comprised of two species and their putative hybrid. *G. triacanthos* L. is a highly variable species with a wide distribution in eastern North America. *G. aquatica* Marsh. is sympatric with *G. triacanthos* but has a more limited distribution and is usually found growing in or near water. The putative hybrid *G. texana* Sarg. has an extremely limited distribution, reportedly occurring only in isolated counties of Indiana, Arkansas, Louisiana and Texas. Information will be presented concerning the distribution, ecology and variability of the three taxa.

Interspecific Hybridization in the Genus *Helioeris* (Compositae). WILLARD F. YATES, JR., Ball State University.—The four species of the genus *Helioeris* occurring in the southwestern United States form a compact group showing close genetic relationships between all members. Under cultivation, interspecific hybrids have been obtained between all four species. The hybrids display surprisingly high fertility and where reduction in fertility is observed it can be largely attributed to chromosomal aberrations rather than to genic sterility. In addition to the artificial hybrids, at least one instance of natural hybridization between species is known. In spite of their obvious close affinities the species are distinct morphologically and should definitely be retained as species. Since genetic barriers to interspecific hybridization appear to be poorly developed, it would seem that ecological and geographical factors are primarily responsible for maintenance of the entity of species within the group.

The Uredinales that Parasitize Three-Awn Grasses. GEORGE B. CUMMINS, Purdue University.—From a study of extensive collections it is concluded that there are five species of *Puccinia* and two of *Uromyces* on the genus *Aristida*. Two species and four varieties are new. American collections on *Aristida adscensionis* are varietally distinct from the Old World *Puccinia aristidae* Tracy. *Uromyces seditiosus* Kern is a valid species distinct from *U. peckianus* Farl.

A New Direction for Plant Taxonomy and the Greene-Nieuwland Herbarium at the University of Notre Dame. MICHAEL H. LEVIN, University of Notre Dame.—The consolidation of the Greene-Nieuwland Herbarium in new quarters during July 1965 marked a significant step in the activation of an important university herbarium. The herbarium is now closely aligned with the objectives of the Ecology-Systematics Program, but not to the exclusion of research in the variety of disciplines which have denoted progress in plant taxonomy.

Plans for development and use, expansion, geographical specialization, and the current areas of research are discussed.

Botanists and other visitors are invited to inspect the herbarium which is presently located in Farley Hall.

A New Genus of the Actinoplanaceae, *Pilimelia* Gen. N., with a Description of Two Species, *Pilimelia terevasa* Sp. N., and *Pilimelia annulata* Sp. N. KANE, WILMA D., (Indiana State University, Terre Haute, Indiana, and The University of North Carolina, Chapel Hill, North Carolina).—Several keratinophilic organisms resembling the genus *Ampullariella* Couch (1964) differ sufficiently from *Ampullariella* in spore size and flagellation, sporangial wall breakdown, and in cultural characteristics to be described as a new genus. Studies of cultural characteristics, photomicrographs and drawings of morphological characteristics, and electron micrographs of flagellated sporangiospores are used to describe the new genus *Pilimelia*. Two distinct species, the type species *Pilimelia terevasa*, and *Pilimelia anulata*, are compared with similar organisms described by Karling (1954), Gaertner (1955), and Rothwell (1957), and these are all compared with *Ampullariella*. The two species described here were isolated from soil samples flooded with water and baited with human hair. Working cultures were maintained in sterile soilwater baited with hair. Pure cultures were maintained on Tryptone Glucose Yeast Extract Agar.