be slightly north and very definitely east of the center of population of the United States, which in 1930 was 39°3′45″ north latitude and 87°8′6″ west longitude. On the other hand, it seems hard to find any national group for which Richmond, Va., or even Pittsburgh could be considered "far west." Quite possibly some eastern members fail to realize the size of the United States as a whole.

From one point of view, the ideal place for an annual meeting of one of these societies would be the nearest city to the center of population, for the total number of miles of travel necessary for every member to attend would thus be a minimum. From this point of view, it would certainly seem that Columbus and Cincinnati are excellent convention cities.

The writer wishes to acknowledge his indebtedness to students working under the National Youth Administration, without whose help in the routine details this study would have been impossible.

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A NEW DISEASE OF SNAP BEANS

IN June of 1938 while the writer was making a disease survey of his hybrid progenies and varieties of snap beans in connection with a bean-breeding program, he discovered a very destructive disease which has not previously been described. During the present growing season the disease has again appeared and is even more destructive than during 1938.

The end result of this disease is a severe chlorosis followed by wilt and death of the host. Perhaps the most characteristic symptom of the disease throughout its course is a pronounced deep brown to black discoloration of the inner phloem and outer xylem of the entire plant. Of course, the extent of vascular discoloration varies with the extent and severity of infection.

When severely infected, the roots appear dark gray to black on the exterior, due to the intense discoloration of the vascular elements. Symptoms on the upper hypocotyl and stem appear as longitudinal streaks or stripes of varying width, varying in color from brown to brownish purple due to the masking effect of the chlorenchyma. The only external symptoms on infected pods is the presence of a brownish purple discoloration of one or both sutures, which might easily be mistaken for a slight anthocyanescence. In cross sections of infected pods few to all the vascular bundles are discolored, depending on the extent of infection. The chlorenchymatous pulp of severely infected young pods often presents an "inky" appearance.

This disease takes its greatest toll about blossoming time. Although some less severely infected plants survive and mature seed, fatalities are extremely high.

Numerous attempts to isolate a causal organism in culture have consistently failed. This fact, combined with other data at hand, indicates that the disease is caused by a virus. Certain experiments indicate that the virus has a long incubation period, since plants from seed taken from infected pods remain apparently healthy until about blossoming time.

Further work on the etiology of the disease is in progress. From our records we find indications that the disease was brought in on western-grown seed. This note is being published with the hope that persons noting a disease with the above described syndrome will report to the writer.

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GENERAL ANESTHESIA BY CHILLING

THE use of ether, chloretone and other drugs as anesthetics preparatory to operating on lower animals is often objectionable because of the after-effects of the drugs. This difficulty can be overcome by the use of low temperatures for stupefaction. Fishes, amphibians and reptiles may be conveniently and fully anesthetized by immersion in water and cracked ice or simply in cracked ice. After ten to fifteen minutes in the cooling mixture the animals are fully stupefied and, if they are laid out on cracked ice, they may be subjected to an extended and uninterrupted operation. Recovery is quick and satisfactory at the ordinary temperature of the laboratory, and the animals so treated may be almost at once tested in a particular way without waiting for the gradual disappearance from their systems of an anesthetizing drug. This method has been applied with success in the Harvard Laboratories to salt-water and fresh-water fishes, to amphibians and to reptiles. Wiesner (1935) appears to have been the first to use it. Both he and Pfeiffer have applied it to new-born rats. Whether it will have any operative significance for adult, warm-blooded vertebrates remains to be seen. Press reports of a kind of cold hibernation induced in human beings by a slight lowering of their bodily temperatures is suggestive of such a step.

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SCIENTIFIC BOOKS

RECENT BOTANICAL BOOKS

The Stapelieae. By ALAIN WHITE and BOYD L. SLOANE. 3 vols. xvi + 1186 + 23 + 23 pp. 1,233 + figs. + xxxix plates + 2 maps. 2nd edition. Pasadena: Abbey San Encino Press. 1937. $12.50.

SINCE the Stapelias are found only in the eastern