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Iowa Field Notes on Reproduction of Canada Thistle (Cirsium arvense)

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THE SOMATIC CHROMOSOMES OF EIGHT SPECIES OF THE ORCHIDACEAE

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A study of the somatic chromosomes of eight species of the Orchidaceae native to Minnesota was undertaken in 1931. Root tips were used, and were run into paraffin and stained with gentian violet. The diploid numbers were found to be as follows: *Cypripedium acaule* 20, *C. pubescens* 20, *C. candidum* 20, *Calypsa bulbosa* 32, *Orchis spectabilis* 42, *Orchis rotundifolia* 42, *Habenaria bractiata* 42, and *Habenaria orbiculata* 42. Sharp morphological differences were noted. The chromosomes of the cypripediums were very large measuring from 7-10 microns long, and from one to nearly two microns in diameter. Those of the other genera were much smaller. In Habenaria orbiculata, the chromosomes measured about 1½ microns long by about ½ micron in diameter. Considerable size variation was noted within each species.

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IOWA FIELD NOTES ON REPRODUCTION OF CANADA THISTLE (CIRSIUM ARVENSE)

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There is a legend that Canada thistle does not reproduce viable seed in southern Iowa. There exists diversity of recorded statement as to whether the root or the stem is responsible for the vegetative spreading of this plant.

The deep-penetrating and horizonally growing root of Canada thistle appears, if judged by structure and behavior, to be organized for extension of its area of occupation, for water and nutrient absorption, as well as for food storage. It bears numerous upward-growing, stem-producing buds whose photosynthetic activity maintain its supply of carbohydrate food. The plant seeds throughout Iowa wherever male and female plants grow sufficiently close to each other.

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