University). Also Paul L. Rice, of the Delaware Agricultural Experiment Station, states that he and Donald MacCreary have frequently observed this spider near Camden and Wilmington in the fall of 1936.

Letters from Clarence E. Mickel, of Minnesota, and C. J. Drake and H. E. Jaques, of Iowa, report that they have no records of this spider having been found in their states, but that it probably occurs there. Thus Minnesota and Iowa are the only states from which this spider had not been recorded.

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WESTERN HIGHWAY HAZARD FOR JACK RABBITS

WHILE passing over the highways of Idaho one is usually impressed by the great number of jack rabbits which have been killed by automobiles. On November 17, 1936, the writers passed through the Hagerman Valley, where dead jack rabbits were especially numerous along the highway, and a count of dead rabbits the following day showed that 154 had been killed by automobiles in three tenths of a mile. It was evident that they had been killed within a few days, as otherwise they would have been devoured by the scavenger crows and magpies.

At the point where the count was made, there was a stack of alfalfa hay in a small alfalfa field on one side of the road, while on the other side sagebrush extended back for miles. The fall weather had been unusually dry, so there was no green vegetation amongst the sagebrush. It therefore appears that at this place the jack rabbits had been attracted to the alfalfa and had subsequently met their death.

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PROTECT DIONAEA MUSCIPULA

Dionaea muscipula Ellis or Venus fly-trap is not only one of the most interesting biological objects but is also a plant species that is strongly endemic. It has been reported from the environment of Wilmington, N. C., and from a few localities in South Carolina.

I was frequently able to visit this region, especially around Wilmington. In many places here this plant has become extinct. In fact, during the last three years I was able to witness the disappearance of plants over several fields. An important reason for its disappearance is that a considerable part of its natural habitation is being artificially drained to aid agriculture, the result being that we find on the remaining land another type of vegetation which threatens the existence of *Dionaea* very distinctly, whereas, in other places, we observe a modification of plant associations, although *Dionaea* still remains.

It would be very desirable that some typical parts of that interesting country should be protected before it is too late. The land of that neighborhood is cheap. Its purchase by state or government would offer no objections.

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CUSCUTA NOT A COMPLETE PARASITE

Too often, when a false statement creeps into a book, it is copied and passed along. Thus it is, again and again, when a new text on botany appears, once more appears the statement that Cuscuta is a complete parasite devoid of chlorophyll. Though I make no claim to having read every American text-book on botany, I believe I have seen the majority of them, and with no exception, these state that cuscuta is devoid of chlorophyll.

Dodder is a phanerogam, Convolvulaceae. Its seed germinates somewhat differently from others of that family, for it sends forth a green (protonema-like) filament, which runs over the surface of the ground, drying at the seed end as it grows, until it reaches a succulent host, whereon it twines and forms haustoria. Then its stems become somewhat brownish, but the areas where haustoria are functional are still quite green. In midsummer it blooms. Its buds also are quite green, its fruits very green.

Alcoholic and ether extracts would show that the fruits have as much chlorophyll as any other convolvulaceous plant, its buds nearly as much, its haustellate areas about half as much and other parts of the stem a little. Inasmuch as plants with little chlorophyll produce more carbohydrate per unit than those with much chlorophyll, it is quite likely that Cuscuta may be able to sustain itself on its own organic foods, as does mistletoe. Let some physiologist solve that problem.

Dr. Louis Knudson in a personal conversation stated he had grown dodder on nutrient agar unsuccessfully unless a green host plant was supplied. He admitted, however, other factors might be involved.

Cassytha (Lauraceae), often mistaken for Cuscuta, has about the same relative distribution of chlorophyll. Cuscuta and Cassytha are green plants, even though they are parasites. They do contain chlorophyll, both alpha and beta. Strasburger states they have chlorophyll.

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