

# Hundreds of plant bug species exist in Pa.

**UNIVERSITY PARK** — Over 400 species of plant bugs occur in Pennsylvania, according to entomologists at Penn State. These plant bugs are the only group of insects that both scientist and layman can properly call "bugs," says Alfred G. Wheeler, adjunct entomologist with the College of Agriculture at Penn State. Plant bugs suck sap by means of a beak or proboscis, Dr. Wheeler explained. They're relatively tiny insects, 1/8 to 5/8 inches long. Some species damage crops, but not all are plant

feeders. In fact, a surprisingly large number feed on other insects. The 400 are technically known as the insect family Miridae.

Wheeler has studied the biology of the more common species of plant bugs in his dual role as entomologist with the Bureau of Plant Industry, Pennsylvania Department of Agriculture. He and Thomas J. Henry, also with the Harrisburg bureau, described some of their findings, in the Summer issue of "Science in Agriculture," the research quarterly of the College of Agriculture.

When Dutch elm disease began eliminating many American elms, a search began for other kinds of shade trees. In the 1950's and 1960's, a number of thornless and seedless varieties or cultivars of honeylocust were developed.

For several years, ornamental honeylocusts were considered nearly pest free. However, one yellow or golden-leaved cultivar, Sunburst, proved attractive to the honeylocust plant bug when the tree was grown along city streets and in home plantings. Plant bugs feeding on new growth discolor and distort the leaflets. Large numbers of bugs can cause premature defoliation of entire trees.

"This is an example of an insect that rarely damages its host plant in its normal habitat but has become a pest under urban conditions," Dr. Wheeler said. "It is well known that ash plant bugs prefer native trees growing in open areas. They have now become common pests of ornamental ash in street plantings."

The sycamore plant bug, Mr. Henry indicated, is another example of an insect that only recently has become a pest. This insect normally does not injure native sycamore (American plane tree), but often becomes a problem when this plant and the related London plane tree are grown in nurseries or along city streets.

Sycamore plant bugs suck juices from tender, expanding foliage and apparently inject a poisonous substance into the leaves. Plant tissue that has been "fed on" turns brown and drops out, leaving many small holes in the leaves. At one time, the "shot-hole" appearance of the foliage was blamed

mistakenly on frost, chewing insects, or a disease.

Most plant bugs insert their eggs deep into plant stems, making detection nearly impossible, it was pointed out. In this way, bugs move long distances with plants. A number of European species have entered the U.S. with nursery stock and have become established. While most "imports" have remained harmless or economically unimportant, a serious pest could enter, Dr. Wheeler cautioned.

Not so long ago, a pest of ornamental ash in the western states was brought into a Pennsylvania plant nursery with dormant, bare-rooted young trees or "ships" grown in Oregon. Only prompt detection prevented this potential pest from becoming established in the Commonwealth, it was noted.

"Our studies have shown that several species may be important biological or natural predators of ornamental pests. We have studied one plant bug that is common on white oak where it destroys populations of aphids, lace bugs, and spider mites. Two other species, referred to as jumping tree bugs, feed on obscure scale."

He added that Christmas tree growers are aided by several kinds of plant bugs that feed on aphids on Scotch pine and on gall aphids on spruces and Douglas fir. Spider mites on spruce trees are eaten by another plant bug. This mite predator, Wheeler reported, was accidentally brought in from Europe — a rare example of a beneficial insect entering the country unbeknown to scientists.

The article in "Science in

Agriculture" is typical of each issue's reports describing research, extension, and resident education within Penn State's College of Agriculture. To get on the free mailing list for this quarterly magazine, write to 229 Agricultural Administration Building, University Park, PA 16802.

Further work is needed to

determine the "friend or foe" status of plant bugs in the Commonwealth, Wheeler and Henry claimed in their report. With species already known to be injurious, control has been made easier, they affirm, by correlating egg hatch of the bug with stage of growth of the host plant. In this way, insecticide sprays can be timed, with best accuracy.

## Virginville Grange has election

**VIRGINVILLE** — At the meeting on September 20, the following were elected as the officers for the new year: Master-Ernest Miller; Overseer-Keith Treichler; Steward-Steven Mohn; Assistant Steward Sandra Hill; Gatekeeper-Kenneth Spease; Chaplin-Sue Treichler; Pomona-Anna Balthaser; Ceres-Brenda Miller; Flora-Joan Dietrich; Secretary-Joyce Miller; Treasurer-Arlan Seidel; Finance Committee-Leroy Shollenberger; Executive Committee-P. William Stitzel; Lecturer-Carlina Blatt; Pianist, James Schlegel.

At the next meeting on Oct. 3, the officers will be installed starting at 7:30 p.m. On October 1 the women will meet and do needlepoint. An appreciation banquet will be held at the Kutztown Grange hall on October 13.

The youth will meet on October 2 at 8 p.m. They will sponsor a dance Oct. 20 with

music by the Driftwoods. In the softball playoffs, Virginville is the champion team of the district.

The social committee thanked all who made salads for the outing and asked all to bring desserts to the next meeting.

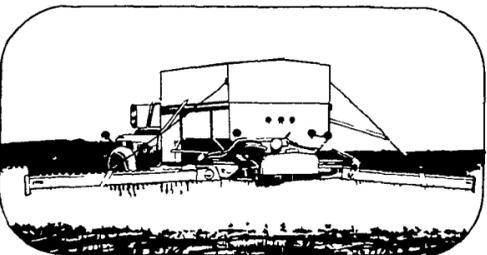
They will have a sale on October 9 and are asking for help and pastries.

The program for the evening included a skit, "It is all in what goes into it", by Steven Mohn, Ella Wessner, Richard Kieffer, Kim Stump, Richard Schaffer, Brenda Miller, and Scott Miller, and the announcement of the Granger of the Year as Kenneth Spease.



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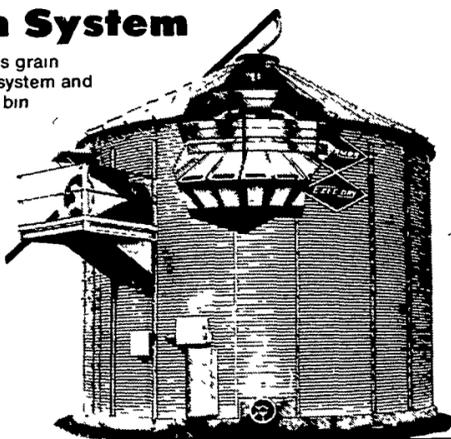
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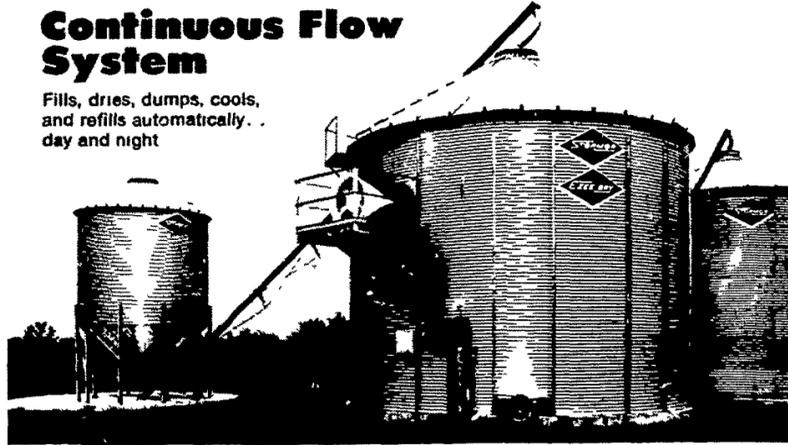
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