

Insects of Indiana for 1952

JOHN J. DAVIS, Purdue University

The 1952 season was marked by periods of extremes in temperature and rainfall which had a marked effect on the abundance of some insects and scarcity of others.

The month of May was normal or below normal in temperature, but high in precipitation. June was noticeably above normal in both temperature and precipitation. July was rather dry and with a rather high average temperature. August and September were about normal for both temperature and precipitation, while October was below normal in both temperature and precipitation.

Field Crop Insects

European corn borer (*Pyrausta nubilalis* Hbn.) was of little importance in 1952. The borers passed the winter of 1951-52 in few numbers, and although there was more than normal acreage of corn planted early, that is, before our recommended date for corn borer prevention, the first generation of borers did not develop to serious numbers. Also, although there was a considerable acreage of late planted corn, which normally would be favorable for the second generation of borers, weather conditions were unfavorable for the borer and no appreciable damage resulted. At present, all indications are for a small overwintering population. (Recent survey shows 39 borers per 100 stalks, compared to 68 last fall, although a large percentage were immature last year and would not pass the winter safely, while in 1952 most of the borers are fully grown.) Even so, if conditions are favorable and we have a large acreage of early planted corn in 1953, a destructive population may develop.

The chinch bug (*Blissus leucopterus* Say) again threatens the grain and corn crops of Indiana. In 1951 there was a noticeable increase, especially in northeastern Indiana, but not much damage resulted. However, in 1952, beginning the first of July, calls began coming in and considerable damage to corn resulted in spite of some early heavy rains. Doubtless the rains did destroy many of the bugs, but were not adequate to completely control them. The hot, dry weather the last half of June favored the bugs that survived the rains. As a result, chinch bugs were common in the eastern two tiers of counties from Randolph County on the south to Steuben County at the Michigan state line and caused considerable loss to corn. At present, conditions are favorable for a large carry over and likely abundance in 1953.

The black or greasy cutworm, also known as the overflow worm (*Agrotis ypsilon* Rott.) was a major pest throughout the northern half of the state during the first half of July, destroying thousands of acres of corn. During the last half of May it was abundant and destructive along the Wabash and White rivers in southwestern Indiana. This species is common in that area following late overflows. Apparently the moths from this early generation migrated north and hit the northern half of the state in July following heavy rains which provided favorable condi-

tions for egg laying such as occur in the southern part of the state following late overflows. Soybeans were also severely damaged.

Grasshoppers (*Melanoplus differentialis* Thos. and *M. femur-rubrum* De G.) were abundant in southern Indiana and during the early part of July moved into cultivated fields causing much damage. During August they continued abundant and caused rather serious damage to tomatoes by eating into the fruits and at a time when canning tomato harvest was at its peak. During September they appeared in the northern part of the state and caused severe losses to young alfalfa.

Corn rootworm (*Diabrotica longicornis* Say) was serious, causing lodging of corn even as early as August, in areas of central Indiana where corn had been grown continuously on the same ground for three or four years.

Corn leaf aphid (*Aphis maidis* Fitch) was exceedingly abundant in southern Indiana during August, but there was little evidence that it was causing much damage excepting in the drought areas where aphid abundance increased the seriousness of drought.

The corn earworm (*Heliothis armigera* Hbn.) developed a heavy infestation in southern Indiana in late June and was moderately severe farther north later in the season.

Sod webworms (*Crambidae*) were unusually abundant in southeastern Indiana causing noticeable losses to corn.

Flea beetles, especially the corn flea beetle (*Chaetocnema pulicaria* Mels.), was destructive to small corn in central Indiana early in the season.

Hessian fly (*Phytophaga destructor* Say) infestations were generally light over the state. There was a tendency for moderate to heavy infestations in the southwestern region, and spotted moderate to heavy infestations in some other areas of the state.

The wheat jointworm (*Harmolita tritici* Fitch) was generally light or spottedly heavy with the exception of the northwestern region which showed average moderate to heavy infestation. Only a few cases of itch mite (*Pediculoides ventricosus* Newp.) were reported, which was to be expected with the decrease in abundance of jointworm and Angoumois grain moth, two principal hosts of the mite.

Clover leaf weevil (*Hypera punctata* Fab.) was more abundant than usual in the southern half of the state and most reports referred to abundance on clover.

Clover budworm (*Hypera nigrirostris* Fab.) was abundant and destructive in central Indiana, destroying the new shoot buds of clover.

Clover root curculio (*Sitona hispidula* Fab.) began emerging in unusually large numbers in northern Indiana August 25, indicating the importance of this pest.

The pea aphid (*Macrosiphum pisi* Kalt.) was exceptionally abundant and destructive to alfalfa in the southern third of the state the last half of April. This situation may be attributed to the cool weather which checked the parasites that would have otherwise held the aphids in check.

The common spittlebug (*Philaneus leucophthalmus* L.) has been on the increase for several years. It was first conspicuously abundant in

northern Indiana about seven years ago, but is now destructive throughout the state, being especially damaging to clover, alfalfa, and strawberry. This year they began hatching April 7 in southern Indiana, and at Lafayette April 17, about two weeks earlier than usual.

The alfalfa plant bug (*Adelphocoris lineolatus* Goeze) became conspicuously abundant in the northern half of the state by July 10. At that time most of the insects were nymphs.

Potato leafhopper (*Empoasca fabae* Harr.) was exceptionally abundant during July, particularly on potatoes, beans, and alfalfa.

Vegetable Garden Insects

Wireworms (*Elateridae*) caused much damage to potatoes and most of our records and observations came from the muck areas in the northern half of the state. Some damage to corn was reported.

Tomato hornworms (*Protoparce sexta* Johan. and *P. quinquemaculata* Haw.) appeared rather suddenly in very large numbers early in September, causing considerable damage to canning tomatoes by eating into the ripening fruits. They appeared to be most prevalent in central Indiana.

Blister beetles, especially the striped species (*Epicauta vittata* Fab.), were general and abundant during August, attacking vegetable crops, especially potato and tomato, and flowering plants.

The Colorado potato beetle (*Leptinotarsa decemlineata* Say) was more than usually abundant the last of June and early July.

Rose chafers (*Macrodactylus subspinosus* Fab.) were very abundant in many parts of the state, perhaps more so in the northern half, early in June, attacking a variety of crops.

Cabbage maggot (*Hylemyia brassicae* Bouche) caused 40-50 per cent loss of untreated early cabbage and cauliflower, and as high as 90 per cent loss of late turnips in some fields in the vicinity of Indianapolis.

Turnip aphids (*Aphis pseudobrassicae* Davis) were very abundant on late turnips.

The rhubarb curculio (*Lixus concavus* Say) was the subject of inquiries from all parts of the state and in general, punctures in stalks were so numerous as to ruin them for use.

Fruit Insects

Codling moth (*Carpocapsa pomonella* L.) is no longer a problem of the apple grower in Indiana, since the introduction and general use of DDT. Ten years ago the codling moth was the major problem discussed in fruit growers' meetings. Now it is seldom referred to. However, as has been noted before, the use of DDT has been largely responsible for the increase of other problems, such as the European red mite and red-banded leafroller.

The apple maggot (*Rhagoletis pomonella* Walsh) is more or less of an annual pest in the two northern tiers of counties, and until this year has never occurred, according to our records, south of Fort Wayne. In 1952 it was reported very abundant in Morgan County, south of Indianapolis, and the reporter indicated it had been increasing for several years.

The cherry maggot (*Rhagoletis cingulata* Loew) was again reported as destructive in several areas in the northern tier of counties. It will be

recalled that reports were received in 1951, the first reports for a number of years.

The periodical or 17-year cicada (*Magicicada septendecim* L.), which appeared in great abundance throughout the state in 1936, is due in 1953. This is the major brood occurring in Indiana.

Insects of Trees and Ornamentals

Pine sawflies, particularly *Neodiprion sertifer* Geoff., has been on the increase in Indiana, especially in the northern half of the state, for the past several years. The past year considerable acreages of pines, including reforestation and Christmas tree plantings, were partially to completely defoliated. Perhaps the increase in plantings of pine is largely responsible for sawfly increase. It is suggested that in old plantings as trees are removed the removal be done so as to leave roadways to permit use of spray equipment, and for the same reason that new plantings be made to provide roadways.

Walking sticks (*Diapheromera femorata* Say) again defoliated acreages of trees, principally scrub oak, near Walkerton. In this same woodlot of perhaps 40 acres, they have been more or less abundant for a number of years.

The elm leaf beetle (*Galerucella xanthomelaena* Schrank) was abundant in many sections of the state, especially in the southern half. Based on reports received, it was more abundant than usual.

Bronze birch borers (*Agilus anxius* Gory) were the subject of an unusual number of inquiries during the first half of September. Perhaps dry weather during the past season has been responsible for the more than usual cases of dying branches.

Bagworms (*Thyridopteryx ephemeraeformis* Haw.), which has been a predominant pest for several years but showed a decrease in 1951, was conspicuous by its absence in 1952.

The canker worm (*Paleacrita vernata* Peck) was reported from a number of localities indicating that it may be returning as a serious pest.

The cottony maple scale (*Pulvinaria vitis* L.) was very abundant in some areas in northern Indiana.

Azalea mealy bug (*Eriococcus azaleae* Comst.) was abundant on azalea in central Indiana.

As usual, many different galls were submitted for identification, doubtless because of their conspicuousness. As in years past, the one most commonly sent in is the maple bladder gall (*Phyllocoptes quadripedes* Shim.) which is caused by a mite.

Household and Miscellaneous Pests

Houseflies (*Musca domestica* L.) were more abundant than for a number of years. Also greater difficulty was experienced in control with the new organic chemicals. Perhaps the fact that flies were more abundant than usual minimized the value of sprays.

Mosquitoes were excessively abundant during the past season.

The clover mite (*Bryobia praetiosa* Koch) was the subject of many inquiries from all parts of the state during May and June, invading homes and becoming annoying.

The common dog tick (*Dermacentor variabilis* Say) was more abundant than usual and during the spring months reports were received from all parts of the state.

Carpenter bees (*Xylocopa* sp.) were reported abundant from many places in the state and in some cases they were damaging to structural timbers as well as being annoying.

The subterranean termite (*Reticulitermes flavipes* Koll.) was abundant as usual. A major problem has been the fraudulent termite operators who have taken thousands of dollars from Indiana homeowners.