Insects of Indiana in 1953

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The 1953 season in Indiana provided variable climatic conditions, favorable to some insects and unfavorable to others; likewise favorable to some crops and unfavorable to others.

Field Crop Insects

Early in the season insects attacking crops of the grass family were unusually prominent. Of these the army worm was most prominent.

The army worm *(Pseudaletia unipuncta)* was the most widespread and abundant in my experience in Indiana, which dates back to 1911, and apparently was indirectly due to weather conditions. Army worm moths were abundant the last of April and early May and notices were sent out predicting possible abundance of army worms a month hence. It is not uncommon in Indiana to have army worm moths abundant in the early spring, but only every three or four years do the worms cause appreciable damage, because they are normally checked by parasites.

The first reports of army worm abundance were received the last week in May. From June 1-20 we were answering long distance telephone calls almost continuously regarding army worm outbreaks. The early reports all came from southern Indiana. Beginning about June 10 we began receiving reports of abundance and damage in the northern half of the state, although not as general and severe as in southern Indiana. By June 20 we were receiving reports of abundance of "eggs of army worms," which proved to be cocoons of common army worm parasites. No further trouble was experienced during 1953. Major damage was to corn, wheat and pastures.

The absence of normal parasitism will explain the outbreak, and the absence of parasites may be explained by the weather. A cool spring prevented normal development of the parasites, but the army worms, not requiring as high a temperature as parasites, continued to develop. Also vegetation was rank which favored maximum army worm egg laying. As a result, more eggs were laid than usual and the worms developed without their normal parasite checks. It was not until the worms were nearly full grown that the weather permitted the parasites to "catch up" with them and check their development.

It should be noted that insecticide dealers were very cooperative and maintained adequate supplies of needed insecticides. Likewise, county agricultural agents were alert to the situation and aided materially as did also service applicators, especially aerial applicators. It is estimated that at least $4,000,000 were saved for the farmers because of adequate service provided by county agents, insecticide dealers and service applicators.

The yellow striped army worm *(Prodenia ornithogalli)* became destructively abundant in the latter part of June in southern Indiana following the common army worm outbreak. The outbreak was not too important but alarming following the disastrous army worm outbreak.

Cutworms, especially the overflow, black, or greasy cutworm *(Agrotis ypsilon)*, as it is variously called, became a serious pest throughout the state.

The corn flea beetle *(Chaetocnema pulicaria)* was unusually abundant and destructive during the last of May and during June and in many cases called for insecticide treatment. In some areas the flea beetles continued abundant throughout the growing season. Stewart's disease, carried by the flea beetle, caused much loss to corn plantings the latter part of June.

Chinch bugs *(Blissus leucopterus)* were destructively abundant in northeastern Indiana from Wayne County northward and to a lesser extent in northwestern Indiana. Damage was not serious, but indications are that there may be a carry over which may develop a serious infestation in 1954.

The corn seed maggot *(Hylemia cilicrura)* was unusually abundant, probably due to the cold, wet spring, which prevented prompt seed germination.

Sod webworms *(Crambidae)* were abundant in many corn fields in northern Indiana.

The common stalk borer *(Papaipema nebris)* was destructive, especially to corn, during June and especially in northern Indiana.

Grasshoppers *(Melanoplus mexicanus, M. femur-rubrum,* and *M. differentialis)* were more abundant and destructive than usual, especially in the southern third of the state. In the northern half of the state they were abundant but were scattered and damage was in isolated areas. Grasshoppers were especially abundant during July and August, and especially to grass, corn, soybeans and other legumes.

In general, the European corn borer *(Pyrausta nubilalis)* was not destructively abundant although there was a noticeable increase and damage in a few localities, particularly in certain northwestern and south central counties. Practically no infestation in corn planted between May 15-30. The 1953 fall survey of overwintering borers showed an increase in borer population from 39 borers per 100 stalks in 1952 to 62 in 1953. Furthermore, the borers were in a better condition for overwinteing this fall than a year ago.

The corn earworm *(Heliothus armigera)* was unusually abundant throughout the season. Damage to early sweet corn was first observed in the Evansville area. Damage to early market tomatoes was also noted. During September infestation of canning tomatoes became so severe that a number of canneries stopped operation several weeks before normal closing.

Wireworms *(Elateridae)* continue as major pests of various crops, but especially corn and potatoes, in sandy loam soils as well as in muck. The larger growers are using soil insecticides and in general are getting good results.

Pea aphids *(Macrosiphum pisi)* were unusually abundant on clover and alfalfa during April and first half of May in the southern half of Indiana, so much so, in fact, that insecticide control was practical in many areas.

The clover leaf weevil *(Hypera punctata)* was abundant on clover, and to a lesser extent on alfalfa in early May, but apparently did not cause appreciable damage.

The clover root borer *(Hylastinus obscurus)* was exceptionally abundant in second year clover near Huntington. Counts made by R. T. Everly in one field showed 75 percent of the plants infested, averaging six borers per plant. There is reason to believe that this insect is more abundant and destructive than commonly believed.

The common spittle bug *(Philaneus leucophthalmus)* began hatching from overwintering eggs in early April and was normally abundant and destructive over the state. The more general use of insecticides on clover, as recommended, has doubtless reduced losses materially.

Bean leaf beetles *(Ceratomia trifurcata)* damaged soybeans in some localities the latter half of June.

The Japanese beetle *(Popilia japonica)* was found in conspicuous numbers in 1953 in Newton County, Indiana, and adjoining Iroquois County in Illinois. The extent of the infestation indicates that the introduction occurred at least six years ago. The insect is well established in a typical corn belt farm area and we can anticipate a rapid spread to adjacent areas, unless extermination methods are practiced and are effective. Although the Japanese beetle has been found in few numbers in many localities in the state, primarily in cities, only one previous infestation, comparable with the one reported above, has been found and that in the outskirts of South Bend.

Vegetable Garden Insects

Potato flea beetles *(Epitrix cucumeris)* were quite abundant on potatoes early in the season.

The potato leafhopper *(Empoasca fabae)* was very common on potatoes during the last half of June.

The rhubarb curculio *(Lixus concavus)* was reported from many scattered localities throughout the state.

The cabbage maggot *(Hylemia brassicae)* was a major problem throughout Indiana, attacking cabbage and other cole crops.

Fruit Insects

This has been the year of the 17-year cicada *(Magicicada septendecim)*. The adults began emerging in southern Indiana, at Orleans, May 19, and at Lafayette, May 29. It was common throughout the state but not as abundant or conspicuous in the northern half as seventeen years ago. In southern Indiana it was a severe pest of young and old fruit trees.

We were criticized by officials of the American Nurserymen's Association for reporting the anticipated cicada abundance and suggesting delay in planting fruit trees until this fall or next spring. The Association objected to our publicity on the grounds that we were hindering the sale of nursery stock. Observations subsequently made showed that our precautions and warnings were well made and that such criticism was

unwarranted. Damage for the season was notable, but more important is the fact that all attacked trees will show the damage in production losses, for years to come.

Insects of Shade Trees and Ornamentals

Bagworms *(Thyridopteryx ephemeraeformis)* are again building up to destructive numbers, after a couple of years of comparative scarcity.

The bronze birch borer *(Agrilus anxius)* was noticeably more abundant and destructive than usual, possibly due in part to drought conditions during the 1953 season, weakening the trees and making them more susceptible to attack.

The elm leaf beetle *(Galerucella xanthomelaena)* was common throughout the southern third of the state, and from reports received, much more so than usual.

The maple bladder gall, caused by a mite *(Phyllocoptes quadripedes)*, was perhaps the most common leaf gall reported, possibly because it is so conspicuous, although of little economic importance.

The flat-headed maple borer *(Chrysobothris femorata)* was reported many times from all parts of the state. Although primarily a pest of young hard maple trees, it has been reported attacking other trees including fruit and shade trees. Weakened trees and especially recently transplanted trees are especially subject to attack. Wrapping trunks of newly planted trees is becoming a common practice and will protect trees from attacks.

Household and Miscellaneous Pests

The American dog tick *(Dermacentor variabilis)* was more common than usual, according to the number of inquiries received, leading us to believe this increase might reflect in the number of cases of Rocky Mountain spotted fever. However, there seems to be no correlation between the 1953 tick abundance and spotted fever because Dr. J. D. Salisbury of the Indiana State Board of Health advises that cases reported to the Board were 14 in 1948, 9 in 1949, 8 in 1950, 4 in 1951, 2 in 1952 and 4 in 1953.

Black carpet beetles *(Attagenus piceus)* are still a major household pest, evidenced by the large number of inquiries. From reports and observations, they are far more important pests of woolens and furs than the clothes moth.

Fleas *(Ctenocephalides felis* and *Pulex irritans)* have been reported many times from all parts of the state and from both urban and rural areas.

We continue to receive many inquiries regarding bees in the walls of homes and wasp nests about homes, especially under eaves. We have prepared a mimeograph statement giving suggestions for control.

The subterranean termite *(Reticulitermes flavipes)* is an annual pest which maintains its importance from year to year. A major problem has to do with itinerate operators who move from town to town or from points outside the state. With rare exceptions their work is definitely fraudulent and costs Indiana citizens many thousands of dollars annually.

Another insect causing damage to building timbers is the powder post beetle *(Lyctus* spp.*)*. During the year many inquiries have been received, sufficient to recognize it as a problem of major importance.

Ants of various species are reported throughout the year, some disfiguring the lawn and garden and others annoying in the home. Reports are especially common in the fall when common species of ants swarm. Since they often swarm from their soil nests near foundations, they are mistaken for swarming termites. Our observations indicate that termites do not swarm in Indiana after July 1.

Invading Pests

From inquiries received there seems to be increasing annoyance from insects and mites which breed out-of-doors and enter homes in the fall of the year. They do no damage to buildings or furnishings but often become very annoying and obnoxious. The following may be included in the category of invading pests.

Box elder bugs *(Leptocoris trivittatus)* continue as an annual pest. They breed on box elder trees and in the fall, upon becoming mature, migrate about seeking shelter for the winter and in so doing enter homes where they may be annoying throughout the fall, winter and spring.

The clover mite *(Bryobia praetiosa)* again made its appearance in April and again in October, migrating into homes and becoming a conspicuous nuisance. Observations show that the majority of inquiries are from new subdivisions, where normal infestations occurred in natural vegetation, increasing with the succulent grass and clover vegetation, planted for lawns.

The strawberry root weevil *(Brachyrhinus ovatus)* is another home invader which is frequently reported.

With the increase of the elm leaf beetle *(Galerucella xanthomelaena)* in southern Indiana, increasing reports of their migration into homes as a nuisance are being received.

The willow aphid *(Melanoxantherium smithiae)* is abundant on willow every fall. They seem to do but little harm to the tree, but they have the habit of migrating to lawn furniture and into homes and when crushed cause a blood red stain.

The hackberry nipple gall psyllid *(Pachypsylla celtidis-mamma)* (Russell det.) has become an exceedingly annoying pest, getting through screens and into homes in the fall of the year. It first appeared as an invading pest just a few years ago, and this fall (1953) it has been more abundant and troublesome than at any time in the past.