

Regulatory Entomology in Indiana

PAUL T. ULMAN, Department of Conservation

Regulatory Entomology in Indiana covers a period of a little more than a half century. The first law establishing the inspection work was passed in 1899 and was aimed primarily at controlling San Jose scale in orchards and preventing the dissemination of this pest on nursery stock. The enforcement of this law was placed in the hands of James Troop, our first State Entomologist, who at that time was head of the Department of Horticulture and Entomology at Purdue University. The Act of 1899 provided for an appropriation of \$1,000 to carry on the work, and certainly this sum was not sufficient, even in that day, to accomplish much in the inspection of nurseries and orchards for San Jose scale.

The Act of 1899 remained in force until 1907 when the legislature passed a more comprehensive law covering the inspection of nurseries in the state and defining the duties of the State Entomologist. The law provided for a separate office of the State Entomologist which shall be in the Statehouse at Indianapolis, consequently the regulatory work in this field was separated from Purdue University.

The Acts of 1907 specified that the State Entomologist shall receive \$1,500 per annum and necessary traveling expenses, and a clerk shall be appointed at a salary not exceeding \$720 a year. There apparently was no lump sum appropriated covering salaries and general expenses, and one wonders just where the money came from for necessary expenses.

The Acts of 1907 did not provide for apiary inspection, but this situation was remedied in 1909 by additional legislation clarifying the nursery inspection laws and making the State Entomologist the State Inspector of Apiaries. The Acts of 1909 also provided for deputies and specified duties and powers of the State Entomologist in controlling infectious diseases of bees. The Acts of 1909 provided for the sum of \$15,000 annually; and for the first time deputies could be put into the field. It is interesting to note that the Indiana State Beekeepers Association was an active organization at this time and it was undoubtedly due to their urging and active support that the Apiary Inspection Law was passed.

The regulatory acts were again amended in 1915, strengthening certain sections and providing for nursery agents and dealers' licenses.

In 1919 the legislature created the Department of Conservation, composed of the following divisions: Geology, Entomology, Forestry, Lands and Waters, and Fish and Game. The State Entomologist Office ceased to be a separate office and became a part of the Conservation Department where the office has remained up to the present time.

The regulatory laws were again amended in 1927, strengthening the powers of the office in relation to introduced agricultural pests: "An act providing for the control and eradication of European corn borer, Japanese beetle, and other destructive insect pests and plant diseases, etc." Introduced pests will be briefly referred to later on.

Professor James Troop has been referred to in the beginning as our first State Entomologist; however, with the creation of a separate office

by an act of the legislature, Benjamin W. Douglas was appointed State Entomologist on June 10, 1907, and served until 1911 in that capacity. With the passage of the Act of 1909 deputies were hired and the names of George S. Demuth and Frank N. Wallace appear on the records of the office in 1908-1909. In 1910 the records show that Harry F. Dietz worked apparently part time for the office, and in 1911 Harold Morrison worked for a short period, probably during the summer inspection period, both men later becoming full-time members of this staff.

George S. Demuth should be given special mention as the First Chief Inspector of Apiaries and who later went with the Apiculture Division of the United States Department of Agriculture. George S. Demuth was recognized nationally as one of the outstanding bee experts of his day and was especially recognized for his publications on comb honey production.

Charles F. Baldwin was appointed State Entomologist in 1912 and remained in that capacity until September 30, 1915. It is unfortunate that during this period the names of the members of the office personnel were omitted from the reports.

Frank N. Wallace was appointed State Entomologist in October, 1915, and served in that capacity up to the time that this meeting is being held, October, 1954.

Extensive reports were made each year to the Governor for the first nine reports, well illustrated, and covering many phases of economic entomology. Since the Ninth Annual Report for the years 1915-1916, comparatively brief reports have been issued covering primarily the regulatory activities of the office.

Special mention should be made of the work of Dietz and Morrison, who, under the administration of Frank S. Wallace, reported on the Scale Insects of Indiana Not Heretofore Reported in Indiana, which appears in the Sixth Report, 1912-1913. The Coccidae or Scale Insects of Indiana was then published in April, 1916.

R. E. Snodgrass, who later became associated with the Bureau of Entomology of the U. S. Department of Agriculture, and became known as an outstanding authority in his particular field, made all of the drawings for this publication.

Harold Morrison likewise joined the Bureau of Entomology and is now recognized as an international authority of the Coccidae.

Harry Dietz later became associated with the E. I. du Pont de Nemours & Company and became manager of the Agricultural-Biological Section of the Graselli Chemicals Department, was known throughout the United States for his sound grasp of entomology in all of the ramifications of this broad field. Entomologists throughout the country and his many friends in the Indiana Academy of Science will mourn his untimely passing this fall.

Previous mention was made of introduced pests. The State Entomologist's Office is required by law to take such steps as necessary to deal with new and not widely disseminated insect pests and plant diseases when introduced into the state.

Three major projects have been included in this type of regulatory work, and all of these have involved a cooperative arrangement with the

Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture. The first major project was started when the European corn borer was found in Steuben County in 1926. Two additional projects were established in 1934 with the introduction into the state (at Indianapolis) of the Japanese beetle and the Dutch elm disease.

Immediate steps were taken to control both of these, and a program of eradication was started on the Dutch elm disease. Eradication appeared to be a possibility until the smaller European bark beetle, *Scolytus multistriatus*, became widely distributed over Central and Southern Indiana, and this vector of the disease brought about a general infection of our elm tree population. The Dutch elm disease eradication program was discontinued in 1947.

The Japanese beetle control program has been successful in eliminating many of the isolated infestations by using soil insecticide treatments, but it is undoubtedly just a question of time until we all will have to learn to live with this introduced insect. It is felt, however, that the regulatory program has retarded a serious agriculture pest up to the present time, and with the introduction of biological controls and new insecticides, it may not be as serious a threat to agriculture as when it was first reported in the state.

It should not be necessary to duplicate the records already assembled by John J. Davis in his Presidential Address before the Indiana Academy of Science in 1931 and so this report will merely attempt to bring the regulatory personnel up to date.

The Apiary Inspection work has been supervised by James E. Starkey, 1931 to 1948; Gerald Hodson, 1948-1949; Gilbert Perigo, 1949 to date.

The present staff of the Entomologist's Office includes the following: Frank N. Wallace, State Entomologist, 1915 to date; Paul T. Ulman, 1926 to date; John J. Favinger, 1942 to date; James A. Clark, 1941 to date, and G. Earl Huff, 1952 to date. The names of Albert W. Trippel and Henry W. Gilbert should be added to this list as they are former members of the staff, Albert Trippel from 1936 to 1951 and Henry Gilbert from 1932 to 1935.