

P A Knight

NEWS LETTER

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PLANT QUARANTINE AND CONTROL ADMINISTRATION

UNITED STATES DEPARTMENT OF AGRICULTURE

Number 11

(NOT FOR PUBLICATION)

November 1, 1931.

ADMINISTRATIVE

A public hearing to consider the advisability of extending the quarantine on account of the Japanese beetle to the States of Ohio and South Carolina was held October 8, before the Plant Quarantine and Control Administration, in the auditorium of the United States National Museum, Washington, D. C. The hearing was presided over by Mr. Lee A. Strong, and approximately 80 persons were in attendance.

In inspections last summer four Japanese beetles were found in Charleston, S. C., and five in Columbus and one in Cleveland, Ohio. The Administration now believes that, for the present at least, the situation can be handled by these States without the aid of a Federal quarantine. It is expected that Ohio and South Carolina will undertake control measures and this Administration will cooperate. Accordingly, on October 10, the Secretary of Agriculture announced that the Japanese beetle quarantine would not be extended at this time to the States of Ohio and South Carolina.

This decision is in line with the policy which has been followed in similar cases in the past, and is in full accord with the desire of the Department to place restrictions only where they are absolutely necessary to prevent the spread of a dangerous pest.

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TECHNOLOGICAL

D. B. Mackie, Senior Entomologist of the California Department of Agriculture, who is collaborating with this Administration on various phases of some pest control problems, contributed the following brief discussion of heat treatments of fruits and vegetables to destroy certain pests.

A collaborative project between the Technological Division of the Plant Quarantine and Control Administration and the California Department of Agriculture is seeking to develop information on the compatibility of California fruits to thermal treatments that will prove 100 per cent lethal to fruit-inhabiting insects. The project differs from most other projects in that it is in the nature of a preparedness program, whereas most of such projects are of a remedial nature.

It was initiated with the idea in view that the solutions of too many of our problems are forced to wait until the day of reckoning is at hand, a practice inherently conducive to much confusion and loss. The project does not seek to develop specific formulae but rather to develop general information on the compatibility of fruits and to determine the thermal death point of such insects as may inhabit them.

The work was started in 1930 to continue the study of the so-called Florida process of exposing fruit at 110° F. for 8 hours, a schedule known to be lethal to Medfly. It is hoped that data will be developed that will enable compatibility curves in relation to temperature to be constructed which will furnish an index as to the range of availability of such treatments in special regulatory entomology wherein 100 per cent kill is sought. The problem presents many aspects, as its availability depends upon whether or not it is capable of industrial application. Hence, all work has to be carried on upon an industrial scale. In this case the commercial lug box is being used as a unit. Only commercial grades of fruit are used. With each lot that is treated, a similar lot is carried as a check. Both are placed in cold storage and subjected to daily observation, the check being used as a basis of comparison. In order that the individual, i. e., the human element, may be reduced to a minimum, two men check on the fruit daily, the results being their joint opinion on such points in which they are in agreement.

The seasonal work in deciduous fruit and summer citrus is being brought to a conclusion. It involves about 90 commercial lots representing about 45 varieties. It is expected that by continued observation over a number of seasons a more comprehensive understanding of the reactions that take place in different fruits will supply information on methods not only as to schedules of treatment which various fruits will stand, but the time they best lend themselves to treatment and also the practices to be avoided.

That great interest attaches to this work is evidenced by requests not only for further information but on all details as to where equipment can be purchased, its costs, capacity, etc.

FOREIGN PLANT QUARANTINES

RECENT ENTOMOLOGICAL INTERCEPTIONS OF INTEREST

Living larva of Mediterranean fruit fly found.--A living larva of the Mediterranean fruit fly (Ceratitis capitata) was intercepted at Philadelphia on a grape leaf among grapes in stores from Spain. (See also News Letter No. 1, January, 1931; No. 2, February, 1931; No. 3, March, 1931; No. 4, April, 1931; No. 6, June, 1931; No. 7, July, 1931; No. 10, October, 1931.)

Mediterranean fruit fly in sweet orange.--The Mediterranean fruit fly was intercepted at New York in sweet orange in stores from Spain. This fruit fly has also been intercepted by inspectors of the Plant Quarantine and Control Administration in oranges from Algeria, Azores, Brazil, Hawaii, and Italy.

Fruit fly in cherries.--One larva, 3 prepupae, and 35 pupae of the trypetid Rhagoletis cerasi L. were intercepted at New York in 200 cherries in baggage from France. This fruit fly, which is not known to occur outside of Europe, was intercepted previously in dry sour cherries in cargo from Yugoslavia in 1930.

Fruit fly in Haden mango.--Anastrepha sp. (near fraterculus) was intercepted at New York in the Haden variety of mango in baggage from Cuba. (See also News Letter No. 9, September, 1931.)

Mangoes heavily infested.--Five hundred and forty larvae of the fruit fly Anastrepha sp. (near fraterculus) were found at New York in 80 mangoes in stores from Cuba.

A lentil weevil from Italy.--Bruchus ervi Froh. (Bruchidae) was intercepted at Philadelphia in dry Lima beans and peas in the mail from Italy. This bruchid was intercepted in lentil (Lens esculenta) seed from Palestine in 1926.

Coccid on cactus.--Protortonia cacti (Linn.) (Coccidae) was intercepted at San Diego, Calif., on cactus in cargo from Porto Rico. This represents the first interception record of this coccid in our files.

Pink bollworm in okra pod.--A larva of the pink bollworm (Pectinophora gossypiella) was found by Max Kisliuk, Jr., and C. E. Cooley in an

okra pod at Adrian, St. John, American Virgin Islands, August 4, 1931. The pink bollworm was reported to be very destructive to both cotton lint and to cottonseed in St. Croix, American Virgin Islands, by Charles E. Wilson in 1923. (See also News Letter No. 1, January, 1931; No. 3, March, 1931; No. 6, June, 1931; No. 8, August, 1931; No. 9, September, 1931.)

Pink bollworm in St. Kitts.--Larvae of the pink bollworm were found in Sea Island cotton four miles east of Basseterre, St. Kitts, British West Indies, by Max Kisliuk, Jr., and C. E. Cooley, August 9, 1931.

Weevil on bananas in cargo.--Metamasius sericeus var. carbonarius (Curculionidae) was intercepted at Mobile, Ala., on bananas in cargo from Guatemala and Mexico. This weevil has also arrived with bananas from Honduras.

Scale insect from Japan.--The coccid Coccus pseudomagnoliarum (Kuwana) was intercepted at San Francisco on an ornamental plant in ship's quarters from Japan. This scale insect has also been intercepted on Aralia sp., Citrus sp., Daphne sp., and orange from Japan.

Chrysomelid on banana.--Myochrous tibialis Jacoby (Chrysomelidae) was intercepted at Mobile, Ala., on banana in cargo from Nicaragua and at New Orleans on banana leaf in cargo from Mexico. This beetle was intercepted with banana debris from Nicaragua in 1930.

Scale insect from the Azores.--The coccid Targionia bromeliae was intercepted at Providence, R. I., on a pineapple leaf in baggage from the Azores. This scale insect has also been taken on pineapple from the Canary Islands, Cuba, Federated Malay States, Haiti, Hawaii, Jamaica, Porto Rico, and the Straits Settlements, on Ananas sp. from India, and on Neoglaziovia variegata from Brazil.

Whitefly on guava.--Cardin's whitefly (Aleurodicus cardini) was intercepted at Jacksonville, Fla., on guava leaf in parcel post from Cuba. This aleyrodid was described in 1912 by E. A. Back from material collected by Dr. Back at Havana and Santiago de las Vegas, Cuba, in November, 1910. This whitefly has been recorded as occurring in Florida.

RECENT PATHOLOGICAL INTERCEPTIONS OF INTEREST

Diseased apples from Australia (in Tasmania wrappers) were intercepted at Seattle and submitted to experts in the Bureau of Plant Industry. The spotting proved to be one with which they were not familiar. No organism was found associated with the disease.

Oospora citri-aurantii (sour rot) was intercepted at Bellingham on an orange from Australia. This disease occurs on lemons in California and has been reported on oranges in Southern Europe but it is not listed by Stevenson or by Fawcett & Lee as occurring in Australia.

On the 1st of August, 1941, the following was reported to be very important in the field of research on the control of the mite, *Dermanyssus*...

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Tylenchus dipsaci was intercepted in Sternbergia (Amaryllis) lutea bulbs from Istanbul, Turkey, at the Washington Inspection House. These bulbs are said to have been collected in the wild, and this finding is the first record for this host.

Parasitic nematodes were intercepted at Detroit in several lots of hyacinth bulbs from Holland within a few days, the parasites being Aphelenchus parietinus (3 lots), A. sp., Paraphelenchus sp. (?) and Tylenchus dipsaci (3 lots).

Tylenchus dipsaci (the bulb nematode) has been intercepted in six shipments of bulbous Iris recently at the Inspection House, Washington, D. C. The infestations are apparently heavier in the individual bulbs, often causing complete decay, particularly in the English Iris. Infestations have been found in bulbs of English, Dutch, and French origin.

The nematodes Aphelenchus avenae, A. parietinus, and A. subtenuis were also intercepted in shipments of bulbous Iris--the first two species from Holland, and the last in a shipment from London, England.

Coniothyrium hellebori was determined as the cause of a leaf spot of Helleborus niger collected at the Washington Inspection House on a shipment from Holland. The disease had been collected previously, once in New York, once in Oregon, and once in Europe, according to the Bureau of Plant Industry records.

A leaf spot of oleander apparently caused by Septoria oleandrina was intercepted at New York in oleanders in baggage from Bermuda. S. oleandrina is reported from France and Italy as well as from Bermuda, according to Stevenson's Manual, and is listed in U. S. D. A. Bul. 1366 as having been found in Florida and Louisiana.

LIMA BEAN SCAB SURVEY

Lima bean scab (Elsinoe canavaliae) is not yet present in the continental United States, so far as could be determined by surveys made this season in the eastern seaboard States and in California.

Eight of the eastern seaboard States (Florida, Georgia, South Carolina, North Carolina, Virginia, Pennsylvania, New Jersey, and New York) were included in a survey made by the Office of Mycology and Plant Disease Survey in cooperation with this Administration. In this survey, conducted in July and August, over 100 examinations of Lima beans were made in the States mentioned, either of field beans or those in markets and packing houses. No scab was found in any case.

A survey in California was considered desirable in view of the presence of the disease in the Sinaloa region of Mexico, as shown by several interceptions of diseased beans coming from that area at the port of Nogales,

Ariz., last January. A limited survey was therefore made of the Lima bean areas of California, August 10-15, by W. A. McCubbin, in cooperation with the California Department of Agriculture. In this survey 58 lots of beans amounting to 173.5 bushels in 53 produce and grocery stores in eight cities and towns were examined. No trace of the scab disease was present. Examination was also made on 49 farms in five counties south of San Francisco. In the 50 fields examined on these farms, amounting to 796 acres of Lima beans, the disease was not found.

SHIP'S CAPTAIN IGNORES QUARANTINE SAFEGUARD

A report by W. W. Chapman, of the port of Philadelphia, on October 8, tells of the finding of a 30-pound lot of turnips in stores on the French SS Merope heavily infested with a weevil, Ceutorhynchus sp. The inspector sealed the lot as a proper safeguard, whereupon the captain became indignant and broke the seal. With the cooperation of the customs officials a detainer was put on the clearance of the ship until the matter could be adjusted. However, when the ship was later boarded with an order for destruction of the infested material, the captain made no further objection and even apologized for his action. It is further noted that the local agents for this steamship line were much disturbed over the attitude of the captain and were ready and willing to have the offending turnips disposed of as we might require.

This is said to be the first time that any ship's officer has ignored the seal of the Plant Quarantine and Control Administration, and it is safe to say that it is not likely to happen very often in the future.

PIONEER PLANE INSPECTED

On September 1, H. W. Hecker inspected on arrival at Chicago the German seaplane Groenland Wal, traveling over the Arctic regions in an attempt to determine the feasibility of this northern route between Europe and America. The plane arrived via Hudson's Bay and Long Lake, Canada. No prohibited plant material was found aboard.

FRENCH CRUISERS ATTENDING YORKTOWN CELEBRATION INSPECTED

Special arrangements for interpreters and a certain amount of foresight enabled M. C. Rich, of the Norfolk, Va., port, to make an inspection of the French cruisers Duquesne and Suffern, which arrived in the Chesapeake Bay October 15, carrying a delegation of French notables to the Yorktown celebration. As no customs inspection was made in these vessels, our inspector made arrangements to board through the Commandant of the naval base at Norfolk, and through the Virginia Pilots' Association, the naval base having undertaken to notify both visitors by radio of his coming. The inspection was made as planned and instructions were issued to retain all vegetables on board while in territorial waters, to destroy all vegetable

refuse in the ships' incinerators, and to have the small amount of fruit present consumed as soon as possible. The inspection was carried out in good faith on our part and was accepted in the same spirit by the French officials.

OFFICIAL VISITS

Richard Faxon, in charge of Federal plant quarantine inspection in Porto Rico, visited Washington on October 20, to report on the plant quarantine situation in the island and discuss with Mr. Sasscer plans for future activities.

E. R. Sasscer left Washington on October 4, for a two-weeks' visit with the Seattle District inspectors.

G. G. Becker returned on September 28 from District No. 1 on the Mexican border, where he took up the personnel situation brought about by the partial or complete closing of several of the bridge ports as an economy measure.

INSPECTORS TRANSFERRED

Because of a shortening of the hours during which the bridges between this country and Mexico are open, it has been necessary to make certain adjustments in our Mexican border personnel during the past month. The appointments of R. R. Roberts, E. L. Friday, and R. T. Kyzar were terminated, without prejudice; J. D. Smith has been temporarily detailed from Brownsville to Nogales; J. A. Stanton has been transferred from Brownsville to Seattle; E. L. Tolbert has been transferred from Del Rio to Laredo; H. G. Frane has been transferred from Hidalgo to Nogales, replacing R. A. Rodgers, who has been retired; G. A. Pfaffman has been transferred from Laredo to Zapata, where he will be acting in charge, and E. W. Ingle has been temporarily detailed from Brownsville to furnish relief at a number of stations in District No. 1.

REDUCTION IN AUTO EQUIPMENT

In line with the present economy program, a careful study has been made of the need for government owned automobiles at the various ports of this Division. As a result, arrangements have been made to dispense with the automobiles at Mercedes, Ysleta, and Del Rio, Tex., and to dispense with one of the two automobiles at Nogales, Ariz. It is believed that it will be found possible to dispense with one or two additional automobiles in the near future.

ROBERT A. RODGERS RETIRES

In retiring from the service at the age of 66 years on September 30, 1931, Robert A. Rodgers earns the distinction of being the first employee

of the Administration to be retired on account of age. At his own request Mr. Rodgers was granted the privilege of retiring at the age of 62 because of his work with poisonous gas. When the time for his retirement arrived, however, he requested an extension of time, which was granted, and at the end of this extension a second one was requested and granted. The second extension expired on September 30.

Mr. Rodgers had served in the Department of Agriculture for almost 26 years. He was employed in the Forest Service from January 24, 1906, until January 16, 1922, when he was transferred to the Federal Horticultural Board to serve as an inspector at Nogales, Ariz. He served continuously at that port from the date of his transfer.

In the last month of his employment, Mr. Rodgers was credited with saving the life of a coworker. On September 10, while working at an incinerator with R. C. Watson, the clothing of the latter took fire and it was only the prompt action of Mr. Rodgers in tearing off the burning shirt and rushing his companion to the hospital that averted consequences which might have proved fatal.

During his nine years of conscientious service Mr. Rodgers has always shown to the public and to his fellows an agreeable and friendly personality, and he carries with him in his retirement the entire good will of both the Department and his coworkers.

BURNED INSPECTOR RETURNS TO DUTY

R. C. Watson, inspector at Nogales, referred to in the above note, has returned to duty, the burns received in his accident having proved not to be of a permanently serious nature.

COMMITTEE ON FORMS

In order to provide in prompt and orderly manner for revision of the numerous forms employed in the work of the Division, Mr. Sasscer has appointed a committee to study these forms and present recommendations for any needed change, simplification, or merging that may be desirable. The committee, composed of W. A. McCubbin, G. G. Becker (or C. A. Locke), and N. R. Hunt, will at the outset give particular attention to forms which are in immediate need of revision. One of the problems now being attacked is uniformity in the use of rubber stamps, as a basis for which request has been made for facsimiles of all stamps used in the various ports with a note as to their function. The committee will also attempt to gather material for the compilation of a "Manual for Port Inspectors." This is a task of some magnitude and will require much reference to the experience of port inspectors before it can be completed.

WOMAN SMUGGLES IRIS

A woman traveler coming from Canada through Rouse's Point, N.Y., recently, was observed by the eagle eye of a customs inspector to be somewhat more corpulent than was consistent with an otherwise slender figure. When searched by the woman inspector of the port, it was discovered that the traveler had a quantity of valuable iris roots wrapped in a towel and wound around her waist under her outer clothing. After being subjected to the humiliation of search and seizure, the smuggler suffered final complete mortification when she learned that she could have brought her personally conducted cargo into the country openly and freely under a permit.

PLENTY OF FRUIT FLY

W. H. Freeman calls attention to the interception in New York on August 8, of 67 living larvae of the Mediterranean fruit fly (Ceratitis capitata) taken from 14 pears in the stores of the S.S. Triolus. The pears apparently originated in Algeria. This is one of those cases that throw a convincing flash of revealing light on the pest dangers to which we are constantly exposed and which only occasionally are made evident with such startling clearness.

PROTECTION TO OTHER COUNTRIES

Two cases have recently come to hand in which our inspection serves to protect the interests of neighboring countries. A shipment of 20 mango plants from Calcutta, India, destined to Sinaloa, Mexico, was entered at San Francisco September 14, 1931, and found on examination to be infested with eggs, larvae, and adults of the citrus blackfly (Aleurocanthus woglumi). The plants were also rooted in unsterilized soil. The material was refused entry and was ordered to be either returned or destroyed.

The second case involved a shipment of 15 raspberry plants which were examined at the port of New York for certification and export to Brazil. Four of the plants were found infested with the raspberry root borer (Bem-becla marginata). All infested plants were located and destroyed before a certificate was issued. It is of interest to add that a State nursery inspection tag accompanied this shipment.

The Department makes no claim to purely altruistic motives in such cases. In the first-mentioned instance it is clearly to our advantage to have our neighbor to the south kept free from pests which might later on invade our own borders; and in the second we are only trying honestly to make our certificate mean what it says. Yet in both cases the countries in question have been undoubtedly benefited by our activities.

FOREIGN PLANT QUARANTINE SUMMARIES

MEXICO.--On account of the apparent extermination of the Mediterranean

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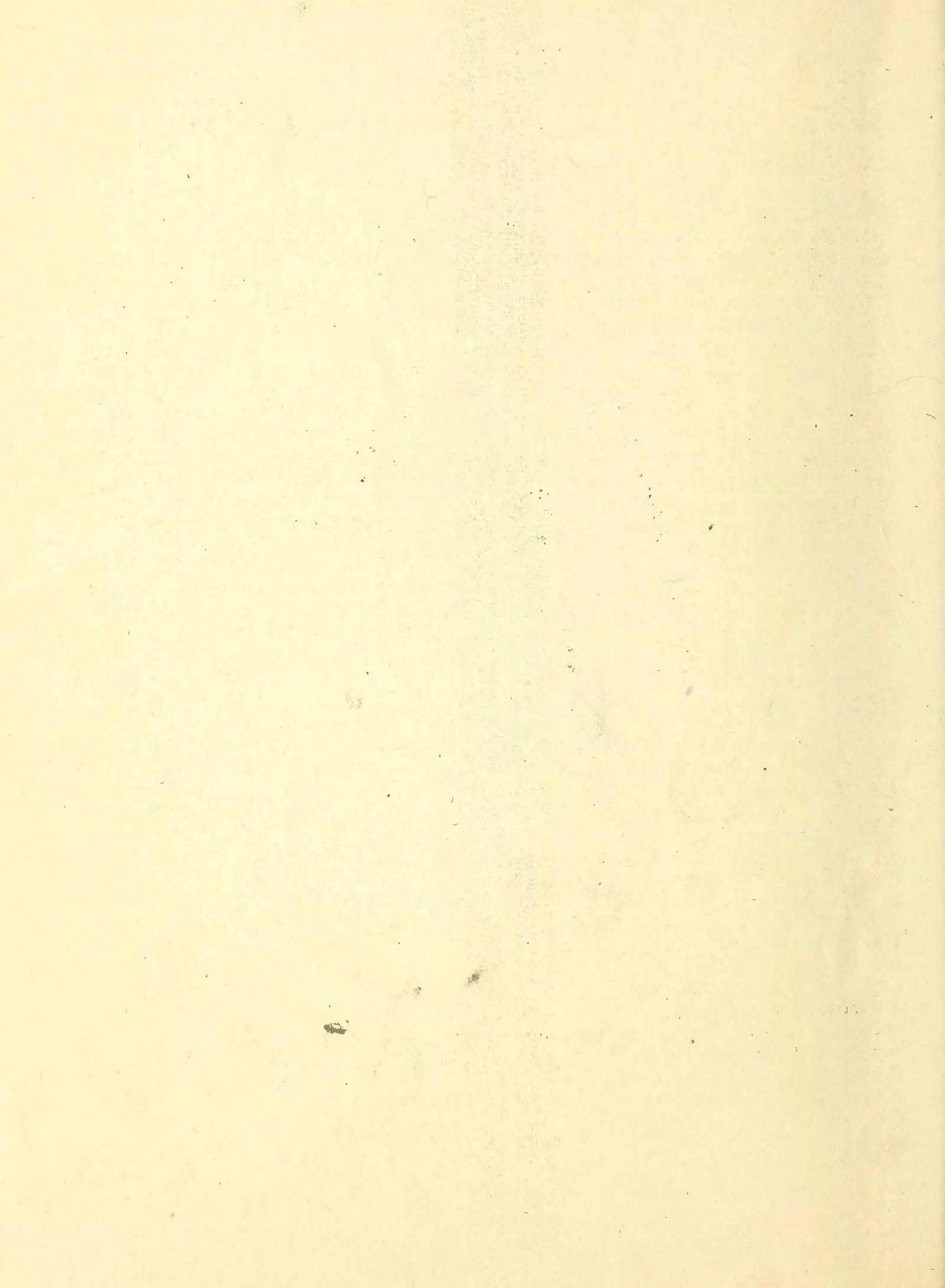
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fruit fly in Florida and the consequent lifting of Quarantine No. 68, the Mexican Resolution of June 22, 1931, amends Exterior Quarantine No. 5 by excluding the State of Florida from the places affected by that quarantine. The text of Article 1 of this Resolution has been published as Supplement No. 4 to Circular PQCA-284.

The Mexican Decree of July 23, 1931, revokes that of March 4, 1931, which imposed an absolute Exterior Quarantine (No. 8) against wheat on account of the flag-smut and take-all diseases, and provides for the entry of wheat under permit, besides listing the countries in which the two diseases are known to occur. The text of this Decree has been published as Supplement No. 5 to Circular PQCA-284.

COLOMBIA.--Colombian Decree No. 1128, of July 1, 1931, prescribes that every shipment of trees, fruits, plants, bulbs, seeds, banana slips, unmanufactured plant products, or any part thereof, offered for entry into Colombia shall be accompanied by a certificate issued by competent authority of the country of origin and visaed by the Colombian consul or that of a friendly nation. It prescribes also that an import permit shall be obtained in advance by the importer. A summary of this Decree was transmitted in a memorandum to chief inspectors and collaborators under date of September 1, 1931.

CANADA.--The text of Canadian Regulation No. 10 (Foreign) 6th Revision, has been received and transmitted to chief inspectors and collaborators. This revision excludes Vermont from the list of States quarantined against the importation into Canada of certain cut flowers, straw, and vegetables.

The text of the first revision of Canadian Regulation No. 6 (Foreign) also has been received. In addition to prohibiting the importation into Canada of five-leafed pines from all foreign countries, the revision prohibits also the importation of the Austrian pine (Pinus nigra), Swiss mountain pine (P. mugho), and Scotch pine (P. silvestris) from Europe.

Copies of the Canadian regulations may be obtained from the Destructive Insect and Pest Act Advisory Board, Ottawa, Canada.

MANGO IN FROZEN PACK NOT ADMITTED FROM
REGIONS INFESTED WITH MANGO WEEVILS

Pending the completion of experiments in Hawaii to determine whether the frozen pack method described in Circular PQCA-311 will effect the destruction of mango weevils in mangoes, it has been decided to permit the importation of that fruit in the frozen pack condition only from countries of North and South America and the West Indies. This does not apply to mango pulp in the frozen pack condition, but only to the whole fruits.

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DOMESTIC PLANT QUARANTINES

TRANSIT INSPECTION

The States of Missouri, Minnesota, and Iowa have assigned State inspectors to work with Federal transit inspectors during the rush nursery stock shipping season this fall. Two Missouri inspectors are being assigned to Kansas City and St. Louis, respectively, one Iowa inspector to Council Bluffs, and one Minnesota inspector to St. Paul. This additional help makes it possible to cover freight and express more completely at the points named and relieve the transit inspectors, at least partially, of a certain amount of overtime, which has heretofore been necessary.

With the removal of restrictions on farm products from the areas generally infested with the Japanese beetle, which became effective on September 28, there has been a noticeable decrease in the number of violations of this quarantine. Narcissus bulb shipments are beginning to come through in considerable numbers, however, and several violations of this quarantine have been reported, as well as some infringements of the white-pine blister-rust quarantine.

Specimens of the European corn borer (Pyrausta nubilalis Hubn.) were discovered by the transit inspectors at New York in a recent shipment of corn moving from the two-generation regulated area.

BLACK STEM RUST

Permits to ship Barberry and Mahonia plants that are resistant to the black stem rust have recently been issued to 17 nurserymen who are growers of these plants. The black stem rust quarantine, as recently revised, requires a permit for shipping these plants to or among the 13 "protected States" which are eradicating the susceptible species. Before growers' permits are issued, inspection is made by the Barberry Eradication Office of the Bureau of Plant Industry, to determine that only immune species are present on the premises of the applicant. The Bureau then makes a recommendation to the Administration as to whether a permit should be issued to the nurseryman. The applicant must also agree that shipping certificates will not be used in connection with plants not grown in his nursery, and that he will not handle any species or variety of Berberis or Mahonia not listed in his application, unless written authorization to do so is received from the Administration. Of the 17 growers to whom permits have been issued, 8 are located in Ohio, and 3 are within other protected States. The other 6 are located outside the barberry-eradication area.

WHITE-PINE BLISTER RUST

The Administration has tentatively approved an application by the Federal Forest Service for a permit to grow five-leafed pines in the Wind

River Nursery at Carson, Wash., for interstate movement under the conditions specified in the white-pine blister-rust quarantine regulations, as to nurseries located in generally infected States. The Wind River Nursery comprises a part of the Forest Service Experiment Station in the Columbia National Forest, and, according to the Forest Service, distributes annually about a million young trees to various points in the Northwest for planting on denuded areas. Experience and investigation indicate that blister-rust-free white pine can be produced in infected areas such as the State of Washington by carrying out the Ribes-eradication measures outlined below. The tentative approval of the application was based on a report by the Bureau of Plant Industry showing there are no European black currant plants within a mile of the nursery, and that all other currant and gooseberry plants have been destroyed within a radius of over 1,500 feet of the pines. The premises are also checked annually by inspectors of the Administration. The authority for interstate shipment relates to pines grown from seed which will be planted this fall and next spring, authorization for shipping being deferred until after reinspection of the premises and environs prior to shipment. Ribes eradication is being carried out around three other Federal and State-owned nurseries in the Pacific Northwest, but has not yet advanced far enough to justify the distribution of five-leafed pines from such of these points as occur in generally infected areas.

PHONY PEACH DISEASE

The inspection of the premises and environs of peach-growing nurseries in Texas was resumed and extended in September and October by Inspectors Dopson and Connolly. Several of the nurseries reported as handling peach trees for intrastate movement were, in fact, growing them for other nurseries which make interstate shipments. The number of nurseries it was necessary to inspect was, therefore, greater than the first report showed.

NARCISSUS BULBS

On a recent trip to the Pacific Coast, Dr. S. B. Fracker consulted with the plant quarantine officials of California, Oregon, and Washington concerning narcissus certification measures. He also attended informal conferences of bulb growers at Portland, Oreg., and Sumner, Wash.

A recent outbreak of the bulb eelworm (Tylenchus dipsaci Kuehn) in onions at Canastota, N. Y., is of interest to narcissus producers. Only two small areas of a few square yards each in one onion field are involved, but these are reported to have been a total loss in 1930. The infected onions were destroyed as rapidly as found in 1931, and lettuce and broccoli planted in their place. As an eradication measure, the soil was sterilized by steam under 80 pounds pressure. It is not as yet known whether the eelworms involved in this outbreak belonged to one of the narcissus-attacking strains of T. dipsaci or not, nor how the pest reached the locality. According to the Bureau of Plant Industry, this is the first instance in which this species of eelworm has been found attacking onions, under natural conditions, in the United States.

DATE SCALE

The hope of success in the Date Scale Eradication Project is based on the assumption that an infested date palm can be found by inspection and the scale eliminated before the infestation reaches the point where it will spread to near-by palms.

It is essential, therefore, that all the date palms and other hosts of the Parlatoria scale in the date-growing areas be located. The first operation when the project was reorganized in 1928 was a survey to locate palms. Reports were made by the inspectors giving, among other items, the location of the planting and number and age of the palms, and stating whether ornamental, commercial, or abandoned.

From these reports the plantings were located on maps, the Coachella Valley and Imperial Valley in California and the Salt River Valley and Yuma Valley in Arizona being taken as units. Next the maps were divided into districts, probability of infestation and convenience in inspection being the criteria. The reports were filed by districts and lists were made of the properties, giving the owners' names, size of planting, and location. The places requiring less than 5 one-man days were listed for "scouting inspection," and those requiring more than 5 days, for "routine inspection." The routine inspection was done by crews of four or more men working under squad leaders, and the scouting inspection by inspectors working in pairs.

When the inspection work is laid out for the month, the squad leaders and scout inspectors are given lists of the properties to be inspected. They are supposed to be on the alert for plantings in the district not listed. This, of course, affects the scout inspectors more than the routine crews.

When the inspectors come in at the close of the day's inspection, the reports submitted are checked with the lists. The changes in number of palms, etc., are made and new places added. When inspection of a district is completed, the lists are typed with corrections for the next inspection.

Following the first survey, many new places were added--all small, abandoned, or ornamental plantings overlooked previously, or new plantings. When the scout inspectors became familiar with the districts, they naturally fell into beaten paths and were not as liable to locate new plantings as when unfamiliar with the territory. New men, therefore, were put on scouting work from time to time.

Last year it seemed evident that practically all palms were listed in the date-growing areas which could be located in this manner, and a section-by-section survey commenced. A large map of the Coachella Valley was obtained, giving the sections and property owners as nearly up to date as possible. Two inspectors worked together and were given three or four

sections cut from the map with instructions to scout them thoroughly, walking over the entire area to be sure there were no palms growing in wind-breaks and mesquite jungles overlooked. The listed palms were not to be inspected, but any unlisted palms were to be inspected and all located on the maps.

A considerable part of the Coachella Valley has been covered in this manner, and a few small unlisted palms--none of them infested--have been found to date. This type of survey was also started in the Imperial Valley and a number of unlisted palms found--one of them infested. The survey has not yet been commenced in Arizona.

Early in the summer this work was discontinued because of the hot weather and because of the difficulty in locating small palms in the dense growths along the ditch banks in the Imperial Valley and mesquite thickets in the Coachella Valley. It will be resumed when the weather is cooler and the summer growth dies down. The survey is the final operation in the location of palms in the date-growing areas.

Another phase of this operation is the location of date palms outside the date-growing areas. This will not be so difficult, as we are interested only in offshoots taken from the infested areas. This movement has been very limited because of the State and Federal quarantines, and also because of the demand for offshoots for planting within the infested areas. Some work has been done along this line but most of it will be postponed until reduction in the eradication areas can be safely made.

EUROPEAN CORN BORER AND JAPANESE BEETLE

General Project News

Exhibits of an educational character at largely attended fairs were a prominent factor in the work of the project for September. During the Eastern States Exposition, in Springfield, Mass., open from the 20th to the 26th, both European corn borer and Japanese beetle displays were shown. On several days this exhibit apparently attracted more attention than any other within the grounds. Many inquiries were made as to the habits of the pests, the products which they attack, and the best means of control. Special interest was generally manifested in the miniature stubble field, stressing the comparative scarcity of borers resulting from low cutting of corn and illustrating the increase in infestation proportionate to the height of the stalk left in the field. Machinery and equipment for borer control were the main features of the exhibit at the Ohio State Fair, held in Columbus, from August 30 to September 5. Life history and seasonal habits were featured in display for the Kentucky State Fair, at Louisville, September 14 to 19, inclusive. Here the comparison in yields as between infested and uninfested

fields was displayed, and a corn borer question box, originally designed by the western section offices for the International Live Stock Exposition, was the center of attraction for many of those in attendance.

The first official announcement concerning spread of the Japanese beetle, as developed in the current season's scouting and trapping, was contained in the call issued by the Acting Secretary of Agriculture on September 17 for a hearing on proposed extensions of the quarantine, to be held in Washington October 8. Ohio and South Carolina are the two States specially to be dealt with, infestations of the beetle having been found this year for the first time at Cleveland and Columbus, in the former, and at Charleston, in the latter. Findings of the beetle in States already affected by the quarantine, of which there have been several in territory outside the present regulated areas, were not mentioned in the call for the hearing, but some of them were named in an accompanying Department press release. Specific reference was made in the news story to new infestations in Somerset and Worcester Counties, Md., Altoona and Erie, Pa., and Albany, Ft. Edward, Little Falls, and Watkins Glen, N. Y. As some scouting for the corn borer was still under way at the end of September, the Department has not given out lists of the places where this pest has been discovered for the first time during the season.

Project activities of a seasonal character were greatly reduced in volume by the end of the month, as regards both European corn borer and Japanese beetle field inspection and quarantine enforcement. In the eastern section of borer control work, the last scouting was done in the concluding days of September, road patrols previously having been discontinued. Central section special scout crews still were covering portions of Connecticut, Delaware, and New Jersey, on the 30th, and a few highway stations for vehicle inspection also were in operation, most of the latter, however, under orders to cease on October 3. Western section scouts all had been withdrawn on the 5th, except three ~~two~~ man crews in Wisconsin. Highway stations in the west mostly were abandoned on September 6, those in Indiana having been kept on, however, until the 20th. Japanese beetle scouting was entirely finished during the month, and further lessening of the road inspection forces took place.

Specialized Corn Borer Activities

The annual field day and corn borer conference held on September 17, at the Berkley farm of the Department, located near Taunton, Mass., was attended by more than 60 plant pest control officials, who manifested keen interest in the reports presented by the three bureaus cooperating in the maintenance of the property for experimental and demonstration purposes. In the list of speakers for the occasion, the Plant Quarantine and Control Administration was represented by Mr. Strong, Chief; Mr. Hoyt, Assistant Chief; Mr. Worthley, in charge of European corn borer and Japanese beetle work, and by Prof. C. O. Reed, of Ohio State University, Collaborator. For the Bureau of Entomology, talks were made by Mr. Rohwer, Assistant Chief;

Dr. Larrimer, in charge Division of Cereal and Forage Insects; Mr. Caffrey, in charge European corn borer research; Mr. Jones, in charge of the Arlington field laboratory, and Dr. Batchelder, in charge Experiments at Berkley Farm. Bureau of Agricultural Engineering representatives who spoke included Mr. Gray, Chief of Division of Mechanical Equipment, and Mr. Merrill and Mr. Irons, of the Corn Borer Control eastern unit. Field demonstrations of control machinery made during the day, under the direction of Dr. Batchelder, Mr. Merrill and Mr. Irons, were devoted to corn binder attachments and hand hoes, for low cutting, sled-type stalk shavers, attachments to plows for complete coverage of crop remnants and debris, and spraying equipment. High lights of the discussions were the encouraging results of the year's experiments on spray materials and moth baits and the success attained in adapting mechanical devices for control to New England conditions. At the conclusion of the formal exercises, many of those present inspected heavily infested fields in the vicinity, where severe commercial damage was noted. Berkley farm was acquired by the Department late in 1929, and since has been operated by the three bureaus joining in corn borer control activities as a means of concentrating, at one point on the Atlantic seaboard, work such as it was felt could be more efficiently prosecuted if combined in this manner. Soil and terrain conditions on the farm are fairly typical of those generally found in New England, and the ravages of the corn borer have been particularly injurious in the neighborhood of the property. Corn was grown in this section by the Indians before the settlement therein of the English early in the seventeenth century, and the crop continued to be a major one until after the advent of the borer.

The survey of commercial damage to crops from the European corn borer in sections of western New York, conducted for the Administration during the second week in September by Mr. Crossman and Mr. Stockbridge, of the South Norwalk offices, developed information in large measure confirming other reports indicating substantial losses to farmers, especially on sweet corn. In several of the counties visited, evidence was available showing serious damage, and it was clearly apparent that the growers of field corn for seed, and for grain and ensilage had suffered materially, even if not to as great an extent as the producers of sweet corn. Typical instances of losses incurred from infestations of the borer were as follows: Jefferson County--numerous complaints of damage made to county agent; crop from one 60-acre plot of sweet corn all put in silo or plowed under--none picked for canning; field of grain corn expected to yield 600 bushels will turn off 200 bushels or less; Livingston County--loss of ears in 200 acres of sweet corn will run 20 per cent or more; Monroe County--farmers lost 50 to 60 per cent of the ears on sweet corn, planted for supply of stores and roadside stands; in some cases damage so great crop was plowed under without attempt to harvest; Ontario County--in two communities, groups of farmers who planted 75 and 60 acres of sweet corn, respectively, have had a 40 per cent loss of ears; a leading canning concern is writing the sweet corn growers urging practice of control measures to prevent heavier infestations next season; Orleans County--one grower offered privilege of picking sweet corn at 10 cents a dozen, but persons who tried it gave this up as a bad job; another was able to harvest

less than half of the anticipated crop, leaving the rest for hog feed; Wayne County--one grower lost 15 per cent of a 40-acre sweet corn crop; another farmer, who raises corn for seed, estimates his damage at 90 per cent. Newspaper clippings and other advices also confirm reports of severe damage in Cattaraugus County, which Mr. Crossman and Mr. Stockbridge were unable to visit on account of limited time.

The report of the Joint Committee on the European corn borer, formulated at the annual meeting in Toledo, Ohio, September 30, stressed the spread and increase of the pest in 1931 as indicating danger from it in 1932 corresponding to the greater intensity of infestation--estimated as two and a half times as much as last year and more than twice that of the year before. Increase in borer population was reported as having been particularly heavy this year in northwestern Ohio, south of the former center of infestation along Lake Erie, and in the important sweet corn area of New York, along the southern and eastern shores of Lake Ontario. Continued cooperation of farmers, scientists, educators and State and Federal administrative officials was declared to be justified by the fact that the borer potentially is one of the most destructive crop pests ever introduced into America. Practice of control measures by farmers was commended and endorsement given to the research, regulatory, and educational activities of public agencies. Appropriations by State and Federal governments of funds needed to maintain and, if necessary, to expand the research, educational, and quarantine programs, were earnestly recommended. Support from all agencies and individuals interested in the welfare of American agriculture was urged for thorough scouting, careful clean-up of isolated infested areas, and maintenance of quarantines. Extension workers were asked to strengthen, expand, and coordinate their educational programs pertaining to the borer. Investigations should be continued, it was recited, especially in relation to parasites, insecticides, environment, immune varieties, mechanical devices for control, feed values as affected by the borer, substitute crops, and influence on live stock production costs and quality. The Joint Committee represents the American Association of Economic Entomologists, the American Society of Agronomy, the American Society of Agricultural Engineers, the American Farm Economic Association, and the American Society of Animal Production.

Low cutting of corn and removal of crop remnants with disposal according to recommended practices, followed last year by a goodly proportion of Rhode Island farmers, is credited by the State department of agriculture with an apparent reduction this season of from 46 to 24 in the figures showing the percentage of corn borer infestation. In a survey of early sweet corn, from 1 to 67 per cent of plants examined were found infested in the 28 towns covered. As high as 3,600 plants in a town were inspected, the smallest number having been 250. The greatest drop in intensity of infestation, from 85 to 12 per cent, was in a county where clean-up work was most complete in 1930. The largest gain, on the other hand, from 40 to 56 per cent, was developed in a county where there is said to have been lack of cooperation in respect to control measures.

An investigation was conducted this month, at the request of Dr. Britton, Connecticut state entomologist, with respect to a reported 33 1/3 per cent borer infestation of corn in Wethersfield, the inquiry having been directed from the Hartford office of the central section. While not as great as had been represented to Dr. Britton, the infestation was found to be heavy--more so than ordinarily would be expected in view of the fact that the territory involved had been in the regulated area for only one year. Corn production is an important item in the agriculture around Wethersfield, and farmers are greatly concerned by reason of the increase in borer population. Control measures, principally consisting of plowing under stalks and crop remnants, were begun by some of them before the Department inspectors had finished their studies.

Heavy infestations of the corn borer in Lima beans growing on Long Island led to an intensive survey of conditions on the northeastern end of the Island, in the township of Southold, Suffolk County, by special scouts sent from the central section headquarters. Two crews of scouts commenced work in the second week of September and concluded their inspection in approximately ten days. Detailed counts were made in some 125 fields to determine the percentage of plants infested and number of borers to the plant. Data also were collected as to dates of planting and acreage.

All highway stations for inspection of vehicles were discontinued, in the central section of corn borer control, during the first ten days of the month, except the ones located in New York City. Scouting activities also were ended in this territory, except with respect to a few crews engaged in special duty. Equipment employed in the field work has been collected in the South Norwalk warehouses for storage.

Exclusive or Combination Japanese Beetle Work

Flower shows held within the Japanese beetle regulated area annually present the necessity for protecting from infestation all certified cut flowers and plants brought to the show from classified establishments, and returned to certified greenhouses after the exhibition. The most recent of these shows was the Second National Atlantic City Flower and Garden Pageant, held from September 4 to 10, inclusive. An inspector was stationed in the Atlantic City Auditorium, which housed the show, from August 31 until all certified stock had been removed on September 11. Since the show was held during the period of adult beetle flight, all cut flowers were individually inspected before they were taken into the auditorium. Due to the care with which the flowers had been grown and tended, not a single beetle was found among 115,000 cut flowers examined. A total of 11,779 potted plants were received and returned under certification. One unusual feature of the show was a vegetable exhibit from Sutton's, of Reading, England. Five tons of vegetables and paraphernalia were included, the majority of the vegetables being of mammoth proportions. On the evening of September 8, thirty employees connected with the project in New Jersey attended the exhibition.

Practically all of the sand pits in the Brunswick Township area of Middlesex County, N. J., late in the month were released from the fumigation requirements which had been enforced during the period of adult beetle infestation. These pits were found to be infested for the first time this year. Several pits in the southern section of New Jersey around Millville and Bridgeton were also similarly released from the treating requirements. Beetles were still found in reduced numbers in most of the sand pits in the vicinity of Mount Holly, in Burlington County, N. J. During the months of the year when the pits are free from adult beetles, the quarantine restrictions impose few, if any, burdensome requirements upon sand shippers, since all sand shipped is dug only after considerably more than the required twelve inches of top soil have been stripped from the pit. While adult beetles are present in the pits, however, all sand must be fumigated with carbon disulphide before certification is granted.

With the lifting of the farm products quarantine, this project has again, through Pennsylvania Secretary of Agriculture John A. McSparran, extended its thanks to the Delaware River Joint Bridge Commission for its courtesy and cooperation in permitting the erection of the Philadelphia farm products inspection platform on ground owned by the Commission at the south side of the bridge approach. Appreciation has also been expressed to the Director of Public Works of Philadelphia for the assignment of a policeman for duty at the platform. The Philadelphia inspection center is ideally located, convenient to the two principal market districts of the city. A portable, covered platform annually has been erected on this same site. It would be extremely difficult to obtain a location equally as accessible and free from traffic congestion as the one which has been gratuitously offered for the project's use.

Preliminary demonstrations to determine the practicability of applying lead arsenate to nursery plots and heeling-in areas by means of a spray, rather than in dry form with fertilizer distributors, were started during the month. An application by the spray method of 500 pounds of lead arsenate to one-third of an acre of nursery section was made in a nursery near Philadelphia. The mixture was not washed into the ground by additional water from the sprayer, as has been the practice in treating isolated infestations. Rather the spray mixture was permitted to dry and the lead arsenate coating then harrowed into the ground. Grub diggings were made before and subsequent to the application. Sufficient observations and grub tests have not yet been made to determine the effectiveness of the new method.

Surveys are now under way in Pennsylvania, New Jersey, Delaware, Maryland, and Virginia with a view to so subdividing nursery and greenhouse establishments classified under the Japanese beetle regulations that groups of from 15 to 30 establishments, dependent upon the sizes and locations of the concerns, may be allotted to a single nursery and greenhouse inspector. In a number of instances it may be feasible to permanently station the inspector in the subdivision under his immediate supervision, and permit him to operate somewhat independently of a project suboffice. Maintenance of closer contact with all classified establishments should result in mutually

improved relations between the project and those affected by the quarantine restrictions.

Road inspectors stationed at Osterhout, Pa., intercepted during the month two uncertified shipments which, upon examination, were found to contain Japanese beetle larvae. The first shipment consisted of five spruce trees carried by a motorist traveling from Vineland, N. J., to Olean, N. Y. A single grub was removed from the soil about the roots of one of the trees. The second shipment contained two potted plants, en route from Philadelphia, Pa., to Penn Yan, N. Y. Five grubs were removed from the latter shipment. Quantities of uninfested articles were also intercepted and examined.

Employees working under the jurisdiction of the New Jersey district office at White Horse were recently given an examination based on the lecture courses held in connection with the third annual school for New Jersey inspectors, on June 1 to 4. The examination included questions concerning parasites, traps, sprays, physiological reactions of the Japanese beetle to poison, chemical treatments, administrative practices, ecology, identification of nursery stock, and general entomological data.

Cards, 4" x 6" in size, and bearing a colored picture of the Japanese beetle together with brief informative data concerning the Japanese beetle quarantine and the life history of the insect, were recently received from the Government Printing Office. Information on the card is applicable to scouting, trapping, and road inspection phases of the project, and next season they will be available for distribution by scouts, trap tenders, and quarantine line inspectors.

Road inspection at the border of the generally infested area in Pennsylvania was curtailed on September 1. Fourteen inspectors were retained to guard eight of the principal highways. Arrangements were made to move, on October 1, all road inspectors in Pennsylvania and Maryland to the boundary of the lightly infested areas in these States and in Virginia. A few highway stations in New York were still operating at the end of the month.

Changes in the classified status, under the Japanese beetle quarantine regulations, of 13 nursery and greenhouse establishments were necessitated by the discovery of infestations on their premises. Similar changes were made during August in 38 establishments. Ten of the establishments determined as infested were located in the generally infested area. The additional three establishments involved were located in the lightly infested areas.

Lead arsenate treating of the infestations in Erie, Pa., began during the latter part of the month. Eight tons of treating material were purchased for this purpose by the Pennsylvania Department of Agriculture. Four sprayer tanks and an International truck were dispatched from the South Norwalk headquarters to perform the work.

Withdrawal from the field of all scout crews operating outside the regulated areas was accomplished by September 1. Scouting of classified nursery and greenhouse premises continued on a reduced scale, within the regulated areas, until September 15.

MEXICAN FRUIT FLY

Inspection of citrus groves in the lower Rio Grande Valley preparatory to the certification of the movement of the 1931-32 crop was started September 2. During the month, 5,945 inspections were made. It was necessary to withhold 397 "Certificates of Grove Inspection" because of drop fruit or weedy condition of the orchards. It is customary for the growers to plant cover crops or to allow weeds to grow in the groves during the summer months. These are usually turned under in late August or early September, and the groves given an irrigation. In turning these cover crops under, some fruit is always knocked off the trees. In addition to the fruit on the ground from this source, the irrigations, together with heavy local showers during September, caused an excessive splitting and dropping of all varieties of oranges. In most cases the groves were immediately put in proper sanitary condition following the inspector's visit.

Following a conference of Federal and State officials with representatives of the citrus industry of the valley, Quarantine 64 was revised to allow the shipment of fruit from the quarantined area at any time in September that it passed the State green fruit test. Previous to this revision no fruit was allowed to leave the valley until October 1. However, it was held that the effectiveness of the host-free period was at an end when the fruit was ripe enough to pass the acid sugar ratio and juice control tests of the State green fruit law, and that there was no entomological justification for requiring the fruit to remain on the trees until October 1. Shipment of fruit did not begin under this ruling until about the 20th of the month, after which the movement gained momentum resulting in the shipment of 71 cars of fruit by rail and approximately 12 cars by truck.

Three adult fruit flies were caught in the traps in Matamoros during the month. Due to the lightness of the infestation and to the fact that the trees were developing a coat of sooty mold, the spraying operations were discontinued in that city on the 15th. Anastrepha larvae were found in apples, gravas, oranges, peaches, pears, and quinces reaching the market in Matamoros. Peaches from Ramos Arispe, Coahuila, were found to be most heavily infested. As a further clue to the dissemination of fruit flies in Matamoros, it was learned during the month from Sr. Gonzales, in whose yard adult flies were taken on July 31st, that prior to that date he had been given several sapote fruits from a premise on Independencia Street and on opening these fruit they were found to be wormy and consequently were thrown out in the yard to the

chickens.

Very few technical violations were encountered during the month. Three packers were found to have cut fruit from groves without having first secured permission from the district inspectors. Considering the fact that many of the field foremen for the packing plants are new men and that the competition for fruit at the opening of the season is always keen, it is gratifying that no greater violation of this kind was encountered.

The importance of the collection by the inspectors of specimens for identification was stressed throughout the month with the result that 1,434 collections, totaling 8,561 specimens, were submitted by the inspectors. Of these 123 were species of Anastrepha taken in Matamoros. All collections in Texas were material other than fruit fly.

P. A. Hoidale, who for the past two and a half years has administered the Mexican fruit fly project from the Atlanta and Orlando offices, returned to Harlingen September 18 to resume personal direction of the work.

PINK BOLLWORM

During the 1931 crop season there will be 130 gins in the regulated area, practically all of which are now in operation. This is a reduction of about 15 gins as compared to last season. Due to the present economic situation, the larger companies have closed some of their gins, especially where there was more than one in the locality. At the end of September, 19,846 bales had been ginned. This is just one-third of the total ginnings to the same date last season, and is due to a number of reasons. The cotton crop is quite a bit later this season than usual. Also, the price paid for picking, about 40¢ per hundred, does not seem to be attracting very many pickers; in fact, several districts are already reporting a shortage. As a result the owners and tenants are having to pick a large part of the crop themselves.

The slow ginning season has naturally delayed the operation of the oil mills. There will be 17 mills to operate this season, about half of which have already begun. These mills have received 6,751 tons of seed, 3,412 tons of which have already been milled. Most of these mills are now equipped with the roller system for treating second-cut linters, 390 bales of which have been produced to date. The remaining mills are waiting until a sufficient supply of seed is on hand to insure steady operation.

Only two fumigation plants were in operation in September, these being located in Tucson and Phoenix, Ariz. These two plants fumigated 2,231 bales of lint and 586 bales of linters, making total fumigations to date of 3,748 bales of lint and 1,727 bales of linters. The plant at Alpine, Tex., will begin operations during the coming month. The plant at Fabens, Tex., will

also operate occasionally during the coming season. In addition to the two fumigation plants, there were four compresses in operation, at which 3,034 bales of lint and 105 bales of linters, produced in lightly infested areas, were compressed.

At the end of September there were 35 gin trash machines in operation, 14 of which are located within the regulated area and 21 outside. A total of 29,469 $\frac{1}{3}$ bushels of trash was examined outside the regulated area in Texas, Arizona, California, Louisiana, and Mexico. The results were all negative. Within the regulated area, 650 $\frac{3}{4}$ bushels of trash were examined in Texas, 7,807 $\frac{1}{4}$ bushels in Arizona, and 621 $\frac{3}{4}$ bushels in New Mexico, or a total of 9,079 $\frac{3}{4}$ bushels. In the Big Bend section of Texas, 11,772 specimens of the pink bollworm have been found to date, or an average of 737 worms per bushel of trash examined. Two new findings were made during September. Trash from the Fort Quitman gin, in the lower part of Hudspeth County, yielded 8 specimens. The other finding was in the Salt River Valley of Arizona, at the Southern Avenue Gin, near Phoenix. A single specimen was taken from 4 bushels of trash on September 25. This trash was the accumulation of the ginning of 7 bales of cotton produced in 6 different fields. Trash had previously been examined from 5 of these fields, and since the finding additional trash has been examined from the fields with negative results. It will probably be necessary to await the second picking in order to determine definitely which of the fields is infested. Practically all of the machines are now able to secure sufficient trash for steady operation. The machines within the regulated area have thus far been able to examine all of the first cleaner trash.

The regular weekly infestation counts from 20 selected fields in Maricopa County and 3 in Pinal County, Ariz., have been continued. Due to the increase in regulatory activities, it has been necessary to reduce the number of bolls examined in the Pinal County fields from 300 to 100 each. During September, 29,700 bolls were examined with negative results. In addition, 1,900 bolls were examined from other fields which were infested last season, also with negative results. A rather thorough field inspection was made throughout the Parker Valley of Arizona. These inspections were made by gin trash machine men during the time when no gin trash was available for inspection. The gin trash machine in the Yuma Valley of Arizona developed mechanical trouble, and while this was being repaired the men devoted their time to field inspection, 7 $\frac{1}{2}$ man-days having been put in with negative results. Due to the local showers retarding ginning, the gin trash men in the Safford Valley of Arizona were also able to spend some time making field inspections, but no signs of the pink bollworm were discovered.

There was a considerable increase in the traffic at the 4 road stations during the month of September, 11,192 cars having been inspected and 173 confiscations made. The material confiscated consisted of 59 small lots of cottonseed and seed cotton, 8 cotton stalks with bolls attached, 252 pick sacks, 25 pillows, quilts, and mattresses made of seed cotton, and 8 miscellaneous articles. On September 9, 1 specimen of the pink bollworm was intercepted at the Van Horn, Tex., road station. This specimen was found in

also available... the following... 1942...

At the end of September... 1942... the following...

The report weekly... 1942... the following...

There are a considerable... 1942... the following...

two lots of seed cotton taken from a pick sack which had been used at Presidio, Tex.

During the 1931 season, 30,303 cars have been inspected, from which 258 confiscations have been made.

PREVENTING SPREAD OF MOTHS

During the month of September a considerable force of men continued with the overhauling and placing of office furniture which had been transferred to Greenfield, Mass., from Melrose, Mass. Considerable shop equipment also was transferred to the new repair shop from Bound Brook, N. J.

The construction of racks, shelving, and bins in the repair shop progressed rapidly so that before the close of the month it was possible to commence arranging and storing a large amount of material used regularly in the field and for the repair and maintenance of motor equipment and spraying apparatus. Several pieces of shop machinery were set up and put in operation. Some delay was encountered in making necessary repairs to motor vehicles brought in by the field supervisors, but field supplies were promptly dispatched to the field personnel.

Thirteen Federal scouting crews were engaged throughout September in the examination of woodland in the towns of Chesterfield, Crown Point, Essex, Ticonderoga, Westport, and Willsboro, N. Y. Three of the above towns, namely, Essex, Westport, and Willsboro, were completed during the month.

The New York Conservation Department conducted scouting work in the following Hudson River Valley towns: Austerlitz, Canaan, Copake, Hillsdale, and LaGrange, N. Y.; the first two of these towns being completed during the month. No infestations were located by either the Federal or State crews in any of the foregoing towns.

New York Conservation forces also scouted all of the nurseries in the known infested area centering around Roslyn, L. I., with negative results. Two infestations were found, however, in Nassau County--one in the town of North Hempstead and the other in the town of Oyster Bay. It is impossible at this time to determine the size or extent of either infestation as no clean-up work has yet been attempted. Six State crews are now working in the northern portion of Oyster Bay Town, N. Y.

State of Connecticut crews were working during September in the towns of Colebrook, East Hampton, Enfield, Portland, and Suffield. A small amount of work conducted in Wethersfield, Conn., by State men resulted in the discovery of a gipsy moth infestation consisting of some 4,000 egg masses.

The first of these reports dated from the week ending 27th April 1951.

During the 1951 season, 30,000 tons have been imported into the country and the following have been made:

PRODUCTION OF RUBBER

During the month of September a considerable amount of the available stocks of rubber was used for the production of articles for the export market. The total amount of rubber used for this purpose was 1,000 tons. The following are the main items of rubber goods which were exported during the month:

The quantities of rubber, sheets, and also in the form of other articles, were exported during the month of September. The total amount of rubber exported was 1,000 tons. The following are the main items of rubber goods which were exported during the month:

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This town lies just south of Hartford, Conn., and all of the towns scouted by the State of Connecticut forces are east of the barrier zone.

In addition to the work conducted by the Federal forces in the Adirondack region during the month, a small force of men were engaged in the inspection of wooded areas in the eastern section of Bridgewater Township, N. J. No signs of the gipsy moth were found.

During September the necessary inspection work in New Jersey increased somewhat. One hundred and thirty-six lots of nursery stock and forest products were inspected and certified for shipment. The material inspected was found to be free from the gipsy moth.

On Long Island the inspection work at the quarantined nurseries in Nassau County also increased materially--so much so that it was necessary to transfer another man to Long Island to assist in this work. One hundred and thirty-four lots of nursery stock were inspected and certified for shipment. No infestation of the gipsy moth was found.

Demand for articles which seize popular fancy often provides additional inspection work. From the very nature of the demand, speed is of prime importance as the producers of the finished articles desire to get them on the market while the call is at its height. Often such articles are produced or shipped by individuals who have never handled any materials the shipment of which is regulated by quarantine, and who, therefore, have little if any knowledge of the requirements. As it is recognized by the inspectors that almost anything may be shipped at any time, they have to be on the lookout for new shippers and new products so that the quarantine may be properly enforced, and that no uninspected and uncertified shipments are transported. The responsibility for maintaining vigilance cannot be placed entirely on the shoulders of the agents of transportation, though it can be said that they have proven many times that they are alert.

For the last year or so miniature gardens constructed in ornamental dishes of various types, termed "dish gardens," have been exceedingly popular. These are made of pebbles overlaid on soil in which are planted a few particular species of small plants. Small rough pieces of stone, small clay figures, bridges, and other structures are added, and the whole arranged artistically after the form of Japanese gardens. The plants used are all greenhouse grown and are not in the classes for which inspection is required. Since the market for this ornamental indoor garden has developed, there has been a market for locally produced materials which can be used for their construction. A number of shipments of asbestos rock have been made out of the quarantined area to florists, and, of course, inspection was required for this rock. Rock of this type, after it has been exposed to the elements for some time, takes on the appearance of age and, besides, it has the necessary roughness to insure lack of formality; in addition, it can be broken into any desired size. In the preparation of the dish gardens too much drabness is to be avoided and, to relieve this, small touches of color are added. Asbestos rock takes color

readily and producers have been able to dye it with various colors.

Ordinarily one does not connect the practice of medicine with quarantine enforcement, but, at least in a certain sense, the former is responsible for some activity on the part of the inspectors. Bark from certain species of trees and shrubs is used to a degree in the preparation of specific remedies, and as this bark is a natural product of the woods, it has to be inspected and certified.

Shipments of lumber from the quarantined area are usually confined to carload or smaller shipments, but from time to time there are calls from seaport towns to inspect larger lots which are to be transported by water. The inspection of these barge loads is a considerable undertaking, as each barge has a capacity of from 25 to 30 carloads. Lumber moved in this way has to be inspected with all of the speed possible without the sacrificing of carefulness. The loading of such barges is accomplished just as rapidly as possible. Loading crews are as numerous as can be accommodated and the inspection has to keep ahead of the loaders. For such rush jobs the district inspectors have to request extra men, as it would be impossible for them to attend to this work unaided.

During the month of September, 12 tourist camps in Massachusetts and 10 in Connecticut were examined for gipsy moth infestations. None was found infested in Connecticut, but in Massachusetts 9 of the 12 camp sites examined were infested with this insect. The inspectors notified the property owners in each instance and advised them to eradicate the infestation as soon as possible. Additional inspections will be made before the opening of the next tourist season.

Rattlesnakes infest certain restricted sections of the barrier zone, particularly in the mountainous regions of southwestern Massachusetts, northwestern Connecticut, and adjoining areas in New York skirting the Hudson Valley. New York State scouting crews working in one portion of Copake Town, N. Y., early in September encountered a number of these snakes, killing from one to four nearly every day. It was, therefore, deemed advisable to temporarily transfer the men from this area so badly infested with these venomous snakes, but work will be resumed there as soon as cold weather sets in.

During September the greater part of the assembling cages distributed earlier in the barrier zone and towns to the east of it were taken in, so that very shortly it will be possible to report in greater detail the results of this work.

Seventy-five collections of miscellaneous insects, one of which was of satin moths, were made during the month and forwarded to the Gipsy Moth Laboratory at Melrose Highlands, Mass. All of these collections were made by field men incidental to their regular work.

The street numbers of the various buildings occupied by the gipsy moth project in Greenfield, Mass., are as follows:

Office - 20 Sanderson Street.

Repair Shop (Building No. 5), 38 Haywood Street.

Storage Building No. 3, No. 33 Riddell Street.

Storage Building No. 3A, No. 36 Riddell Street.



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