

A DESTRUCTIVE PINE-MOTH INTRODUCED FROM EUROPE

(*Evetria buoliana* Schiffermiller)

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In May, this year, a correspondent from Long Island reported to the Division of Forest Insects of the United States Bureau of Entomology, that a Lepidopterous insect was seriously injuring some young Scotch pines (*Pinus sylvestris*), under his surveillance at Great Neck. Specimens of the larvæ and the injury were referred to the writer for identification.

The severity of the injury was at once realized, but the larva could not be identified. In order to ascertain the extent of the injury and to obtain sufficient live material for study and rearing, the writer was authorized to visit the locality and this was done on June 1. It was found that the trees had been planted on both sides of avenues, in a large, newly developed suburban tract, and that all of these trees were heavily infested by a Lepidopterous larva, which tunnelled the tips of the leading branches and thereby severely checked the growth and injured the appearance of the trees. On some of the young trees, eight to ten feet high, as many as fifty terminal shoots had been destroyed and their usefulness as ornamental trees was much impaired.

At this time many of the larvæ had pupated and from the material secured a large number of the moths issued during the last half of June at the field station for forest insects, East Falls Church, Va. It proved to be the well-known European *Evetria buoliana* Schiffermiller, which has hitherto not been reported from this country.

This species, which also occurs in Siberia, does considerable damage to the pines of Europe, and it has been the object of much study and an extensive literature. It is generally recognized by leading foresters in Europe as one of the most or even the one most injurious insect to *Pinus sylvestris* and other pines. A characteristic result of the injury of this insect is a peculiar curved growth, the so-called "Posthörner," "Baionnette," which is a familiar sight in European pine forests, and which seriously depreciates the value of the trees.

The occurrence of this insect on Long Island is, therefore, of some importance; our several indigenous *Evetria* species already constitute a serious problem, especially in the culture of young pine trees, and this European importation may well outrank our native species in destructiveness. However, it is futile to speculate about the possible spread of the species to our native pines and the resulting injury, but it is, at least, a just cause for apprehension and it should be care-

fully watched in view of the experience with other forest *Lepidoptera* introduced accidentally from Europe.

How long the species has existed in this country and how extensive is its present range must be determined by investigation. It was observed on the pines at Great Neck last season also, 1913, and Dr. Hopkins was informed about it, but too late to secure material.

However, it seems probable that it is a recent introduction, considering that the species has not been noticed before, although special work on this group of pine insects has been done by Packard, Riley, Fernald and later workers, and extensive and careful collecting has been done in recent years on Long Island by the several active entomologists of the vicinity, and the more so, as it is a strikingly colored, orange-red insect, three fourths of an inch or more in alar expanse, larger and quite different from the other species of the genus. The work also is easily noticeable and presumably would have been observed before, if the species had been present.

The eggs are laid on the buds of pine in the late summer; the young larva eats out one bud during the fall and overwinters within; in the spring it leaves this bud and attacks the young growing buds, excavating and successfully killing a number of these; as the twigs grow, the larva often eats only one side of them, thereby causing the above-mentioned curved growth, which results in the characteristic "Posthorn." The larva is dark brown with black head and thoracic shield, it becomes mature early in June and pupates within the last silk-lined burrow; the moth is 17-22 mm. in alar expanse; the forewings are ferruginous orange, suffused with dark red, especially toward apex, and with several irregular, anastomosing, silvery cross-lines and costal strigulae.

The species has only one generation in Europe, overwintering as half-grown larvæ and issuing as moths in July, but allied species of the genus in this country have two generations annually, and it is not impossible that *Evetria buoliana* may also develop two broods in this climate and thus greatly increase the potentiality for injury.

Entomologists and others interested are asked to be on the lookout for this destructive insect and to please report eventual outbreaks to Dr. A. D. Hopkins, in charge of Forest Insect Investigations, Bureau of Entomology, United States Department of Agriculture.

EXPLANATION OF PLATE

Fig. 1. "Posthorn" growth caused by *Evetria buoliana*.

2. *Evetria buoliana* 2½ times enlarged.

3. *Evetria buoliana* young larva in pine buds.

1, after G. Severin: "*Le genre Retinia*."

2 and 3, after J. E. V. Boas: "*Dansk Forstzoologi*."