

The White-Marked Tussock Moth

(*Hemerocampa leucostigma* S. & A.)

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The well-known tufted caterpillars of the White-marked Tussock Moth have been recognized for many years as among the worst enemies of deciduous shade trees in our eastern towns and cities. The species is a native of North America, and it is found on deciduous trees nearly everywhere each season in varying numbers. Periodically these caterpillars become so extremely numerous, especially about our cities and towns, that large numbers of our finest shade trees are stripped by them, and seriously weakened in addition to being completely disfigured by the defoliation.

The last outbreak in Eastern Canada occurred between the years 1903 and 1911, extending from Nova Scotia to western Ontario, but affecting the towns near the Great Lakes, the St. Lawrence river, and the sea coast more seriously than the others. Ottawa, for instance, has apparently no record of a serious outbreak, and egg-masses are as rare this year as usual. This very serious outbreak was finally and very suddenly brought under control by insect parasites in the summer of 1911, and since that time the White-marked Tussock caterpillars have been present usually in comparatively small numbers. Last season, however, the species had become very abundant in several towns and cities, and the numerous egg-masses now on the tree trunks indicate a severe outbreak next summer in several places, including Moncton, Montreal, and Toronto. This species is notably a pest of cities and towns, but is injurious everywhere in times of abundance. It is an important enemy of apple trees, since in addition to defoliating the trees, the caterpillars feed upon and destroy the young fruit. Vigorous and properly conducted control work during the coming winter and spring will prevent the greater part of the threatened injury.

DESCRIPTIONS OF THE INSECT.

The Adult.—The two sexes of the adult stage are strikingly different in appearance. The *male* is a beautiful greyish moth, about an inch and a half across the wings when spread, with tufted legs, feathered antennæ, and transverse wavy lines across the fore wings.

The *female*, on the other hand, is a very stout and clumsy creature, greyish in colour, almost without markings, and nearly wingless. She usually crawls upon the cocoon from which she has emerged, and after pairing deposits her mass of eggs, and dies.

The Eggs.—The eggs are deposited in masses containing from one hundred to five or six hundred; one egg-mass is laid by each female, usually upon an empty cocoon. The mass of eggs is covered by a thick layer of white frothy fluid which hardens rapidly, and, in addition to holding the eggs together, protects them from adverse weather conditions, and in some measure probably from their enemies. The individual eggs are small, whitish, and nearly spherical. The egg-masses of the closely related Rusty Tussock Moth are laid bare upon the cocoon, without the frothy covering, and are thus easily distinguished from those of the White-marked Tussock.

The Caterpillar.—The caterpillar of this species is perhaps as well known as any other among our shade-tree insects, owing both to its remarkable abundance during the outbreaks, and to the striking beauty of its colours and vestiture. The length, when full-grown, is slightly more than an inch. The