



BROWNTAIL MOTH AND CATERPILLARS

INTRODUCTION

The browntail moth was introduced into North America from Europe in the late 1800's and rapidly spread through New England and up to Nova Scotia. Since then there have been periodic outbreaks; the last one was in 1999-2005. Today, almost all of the North American browntail population is found in Maine.

Outbreaks appear to be largely related to weather. Browntails thrive in dry, warm conditions. The large infestations in 2021 can be attributed to the dry summer of 2020, which produced a “bumper” browntail crop. Unlike moths such as the gypsy moth, BTM infestations are not cyclical.

If it is wet and cold, a native fungus and natural browntail enemy called *entomophaga autica* can decimate regional populations. Small variations in seasonal timing and weather can greatly influence the effectiveness of the fungus.

The University of Maine Biology and Ecology and the Maine Agriculture and Forestry Experiment Station are researching management strategies for the browntail but to date have not come up with a “silver bullet.”

https://sbe.umaine.edu/wp-content/uploads/sites/92/2021/04/Browntail_Moth_Report_FINAL_6-15-2020-V2.pdf

THE YEAR-LONG LIFE CYCLE

The life cycle of the browntail begins in June, when adult caterpillars form cocoons that produce the browntail moth. The moth lays eggs from which come the caterpillars that cause harm to trees and humans. During the following summer those caterpillars form cocoons that are the birthplace for the next generation of moth.

June	Adult browntail caterpillars go to the tops of trees and form cocoons.
Late July/August	Moths emerge from the cocoons. They have snow white wings with a span of about 1.5 inches, tufts of brown hair on the tips of their abdomens, and fuzzy white heads that distinguish them from other white moths and butterflies seen at this time of year. They lay their eggs on the underside of leaves in the tops of trees. A moth can lay 400 eggs in one area and can travel up to 100 miles. <i>Browntail moths are only seen in July and August.</i>
August	Caterpillars emerge from the eggs laid by moths and feed on the upper side of leaves.
Fall	Caterpillars form winter webs on the tips of tree branches, mostly red oak and apple.
January - March	Caterpillars are dormant in their webs.
April/May	<i>Caterpillars are at their most active</i> , feeding on young leaves. As they grow they shed their skins several times. These skins are covered in microscopic, barbed hairs filled with a toxin that can cause skin irritations; the hairs are dangerous if inhaled. By June the caterpillars are fully grown. About 1.5 inches in length, they are dark brown, with a broken white stripe that runs along each side of them and two distinctive red spots on their backs.

HOW TO PROTECT YOUR TREES

Winter/early spring	Survey your trees for browntail webs on the tips of branches. Cut out those you can reach and submerge them in a pail of soapy water.
May	Arrange to have a professional arborist inject the trees affected by webs that you cannot reach with the organic product TreeAzin, derived from the seed of the Neem tree (native to India). It is administered via tiny pressurized capsules that are injected under the bark of the tree. Once absorbed, the insecticide disrupts normal moth molting.
May/June	Sticky barrier bands can be effective in preventing female browntail caterpillars from climbing to the tops of trees to lay their eggs. Band specimen trees that matter the most to you. You will need duct tape and a tacky substance such as Tree Tanglefoot. The website for Harpswell, Maine has good instructions for tree banding. https://www.harpswell.maine.gov/vertical/Sites/%7B3F690C92-5208-4D62-BAFB-559293F6CAE%7D/uploads/WMBarrierHowTo_band.pdf Monitor the bands carefully, for birds have been known to get stuck on them. Covering the bands with a wire mesh can help with this problem.
Late July/August	<i>The moths are strongly attracted to artificial light, so extinguish as much outdoor lighting as possible during this period, including streetlights.</i>
Spraying pesticides in areas infested with browntail is not recommended. Chemical sprays are toxic to many creatures, including bees and shellfish. B.t., a naturally-occurring soil bacterium, is less toxic, but certain strains can be harmful to bees and butterflies.	
Other moths such as the forest tent caterpillar moth and fall webworm moths make triangular white nests in the crotches of tree branches in the spring and fall. These can be carefully cut out and put in soapy water or removed with Dipel.	

HOW TO PROTECT YOURSELF

- | |
|--|
| <ul style="list-style-type: none"> • Avoid places heavily infested by caterpillars. • Take a shower after activity that might involve contact with hairs, first using warm water to open the skin's pores and then changing to cool water, which will close them. • Wash and dry clothes after activity that might involve contact with hairs. • Use caution cleaning debris where caterpillars may have been such as a pile of leaves or sticks, for the toxin is stable and remains a hazard for a number of years. • When working in heavily infested areas, wear a respirator, goggles, and coveralls. • Work in infested areas on damp days or moisten foliage with a hose, as moisture helps to keep the hairs from becoming airborne. |
|--|

TREATING SKIN IRRITATIONS FROM CONTACT WITH BROWNTAIL HAIRS

- | |
|--|
| <ul style="list-style-type: none"> • The following over-the-counter products help to relieve itching: Perrigo Hydrocortisone Cream 1%, Benadryl Itch Stopping Cream, calamine lotion. • Applying sticky tape like duct tape or scotch tape on skin areas that have the rash is effective, the sooner the better. The tape picks up the little hairs, which helps to clear up the rashes. • Severe irritations should be treated at the Islesboro Health Center with a prescription topical steroid cream. |
|--|

Printed copies of this information sheet are available at the Town Office.