

November 2016

Leaf Miner's Leaves

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Recommended Citation

Hoenig, Susan (2016) "Leaf Miner's Leaves," *The STEAM Journal*: Vol. 2: Iss. 2, Article 11. DOI: 10.5642/steam.20160202.11

Available at: <https://scholarship.claremont.edu/steam/vol2/iss2/11>

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STEAM is a bi-annual journal published by the Claremont Colleges Library | ISSN 2327-2074 | <http://scholarship.claremont.edu/steam>

Leaf Miner's Leaves

Abstract

For many years I have been collecting leaves and discovered a phenomena that I find truly fascinating on specific leaves called "leaf miner's leaves". The leaves are the dwellings of animals, various insects' architectural habitat. Leaf miner's leaves are a phenomena in nature in the plant kingdom where the larvae of various insects tunnel their way through a leaf eating its living tissue. The leaf miners create distinctive patterns on each leaf. The snake-like serpentine tunnels protect them from predators and plant defenses.

Keywords

Leaves, insects, collecting, patterns, art, nature

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Leaf Miner's Leaves

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American Holly



White Birch



Black Locust



White Oak

Leaf Miner's Leaves

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For many years I have been collecting leaves and discovered a phenomena that I find truly fascinating on specific leaves called "leaf miner's leaves". The leaves are the dwellings of animals, various insects' architectural habitat. My paintings of "Leaf Miner's Leaves" are inspired by the exquisite patterns they make. A leaf miner is the larvae that dwell in the layer between the leaf's upper and lower epidermis. Leaf miners can be the young of moths, sawflies, beetles, weevils, wasps and flies; all lay their eggs in an opening, a cut they make on a leaf. The larvae tunnels its way through the leaf while eating its living tissue. The pattern on the leaf is from the serpentine tunnels that leaf miners make as they eat their way through. The snake-like pattern across the leaf gradually widens as the insect grows avoiding the cellulose of the leaf. Different miners make different, distinctive kinds of tunnels. Leaf miners are protected from many predators and plant defenses by feeding within the tissues of the leaf, eating only the layers that have the least amount of cellulose. The mine often contains 'frass', droppings blocking the passageways that protect the larvae. The miners then emerge as adults from the mine within the leaf and pupate in the soil below, often overwintering. It is rare for miners to significantly affect plant health unless the plant is already compromised. I am intrigued by this ingenuity in nature.