

### GNOME-PLANT \* *Hemitomes congestum*

*Hemitomes congestum* is a monotypic genus of plants containing the single species *Hemitomes congestum*, which is known as **gnome plant**. This rare and unusual plant is native to the west coast of North America from British Columbia to California, where it grows in dense, dark forests regions. This is a small, fleshy, stemless perennial plant forming lumps in the leaf litter. It gets its common name due to its appearance as a small, fleshy lump in the leaf litter. It is white, yellowish, or reddish-pink in color. Like its botanical cousin *Monotropa uniflora*, Indian Pipe, *Hemitomes congestum* is a mycoheterotroph; lacking chlorophyll, it taps into an existing tree-fungal root-association and extracts sugars via the fungus via the tree. One of the known fungal associates of *Hemitomes congestum* is *Hydnellum peckii*, a fungus species.



Little is known about the life cycle of the plant due to its rarity, but it probably obtains its nutrients by parasitizing fungi, so it lacks the green of chlorophyll. It grows from a rhizome with fragile roots and its form is covered in sparse scales which are the rudimentary leaves. An inflorescence emerges on a thick stalk from the soil bearing solitary to densely bunched flowers. The flowers have ragged yellowish or pinkish petals and contain hairs and large rounded yellow stigmas.

*Hemitomes congestum*, the so-called Gnome Plant, is one of the rarest of the monotropoids--the group that includes Indian Pipe.

Seen from above, the flowers of *Hemitomes congestum* have four, sometimes five petals (united at their bases), which are fringed and curve outwards. The yellow stigmas are prominent in these flowers.

The upper portion of a flower of *Hemitomes* just as it opens reveals that the anthers are still closed, but the yellow stigma is sticky and looks receptive. If this were true, the flower would have to be pollinated by pollen from another flower. That's a way in which cross-pollination between plants could be achieved. Nobody knows what insect pollinates *Hemitomes*.



*Hemitomes* seen from above. The large yellow stigma is conspicuous. The very hairy nature of the inside surfaces of the petals is also evident. Why such a hairy flower? The hairs might keep small insects from climbing down into their flower and robbing the nectar. In that case, we would expect *Hemitomes* flowers to be pollinated by a long-tongued insect like a moth. The tongue of a moth could reach through the hairs down to the nectar at the bottom of the flower.