

# Spittle Bug Bubbles Up A House

➤ IN MIDDLE or late summer throughout a meadow of Queen Anne's lace, timothy or other high growing weeds, hundreds of small white frothy "spittles" or cuckoo spits cling to the tall succulent stems.

In the middle of these teaspoons of tiny bubble masses lives one, or sometimes two, shy semihelpless green insects with big eyes.

This is the young spittle bug, member of the family Cercopidae, which has blown itself a house of bubbles to keep safe from hungry birds and from the drying rays of the summer sun.

The immature spittle bugs are so completely adapted to life in this frothy shelter that they die if it is removed. Their thin skin is unable to prevent water loss, and they dry up.

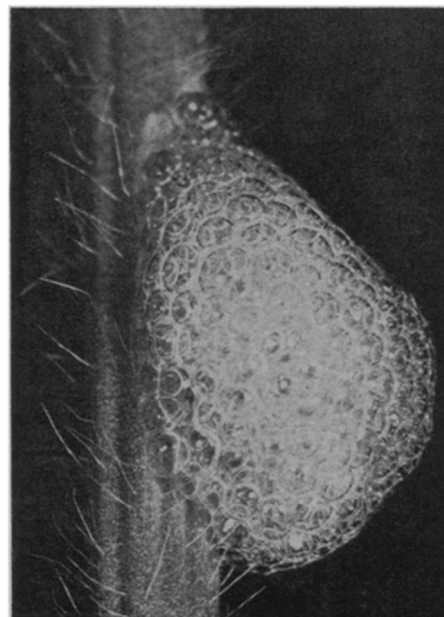
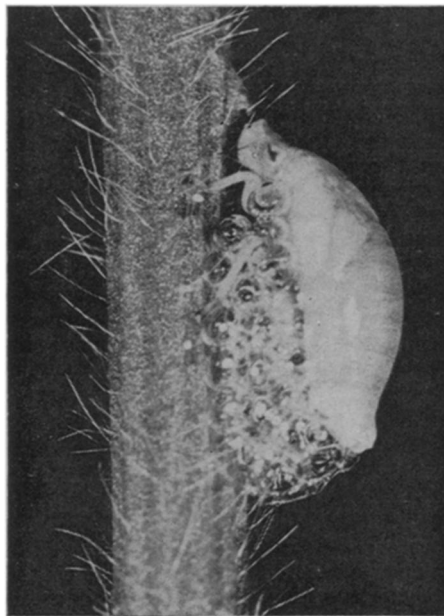
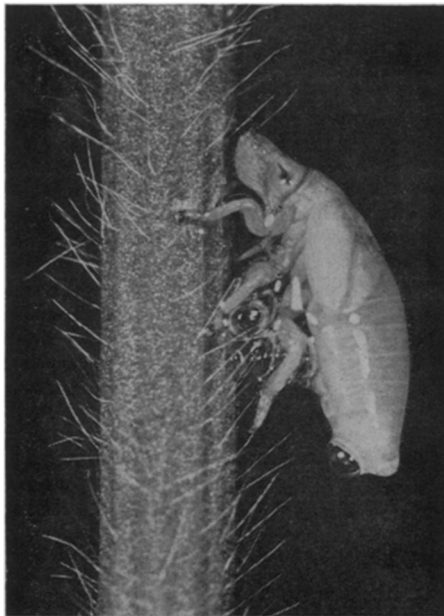
There are about 30 species of spittle bugs known in the United States, all less than half an inch long, with rather large heads. They can be a soft clear green or brown. Eggs are laid in early spring or summer, but do not hatch until the following spring.

Once hatched, the young larva sinks its mouth parts into a grass or plant stem and sucks out the juices.

These insects can cause severe damage to crops of alfalfa or clover, and also to pine trees in many parts of North America.

The young spittle bug absorbs part of the vegetable juice for its food and passes out the waste juice. This waste liquid becomes mixed with a mucilaginous substance secreted from glands in the abdomen. Little by little the insect blows bubble after bubble from this mixture until it has completely surrounded itself. Here it stays moist and protected, and finally emerges as an adult—a lively leaping insect called froghopper because it resembles a squatting frog.

Spittle bugs belong to the Homoptera order which includes insects of great variety of size, form and habits. Among members of this order are the cicadas which produce their summer song by vibrating a pair of shell-like drums located on their abdomen; the tree-hoppers with strange outgrowths from the front of the thorax; the lantern-flies, a tropical family with a large hollow projection from the front of their head; the greenfly or plant-lice and the tiny scale insects.



Jerome Wexler

## CONSERVATION

## 'Super Trees' Will Keep United States in Paper

➤ "SUPER TREES" are being grown to keep the United States well stocked with paper plates, napkins, copy paper and newsprint.

The country is undergoing what some economists have called a "paper explosion" and forest genetics experts are breeding seedlings that grow faster, produce more and better pulpwood, and resist disease.

Tall, straight pines are expected to cover one-third of a million acres of Alabama woodlands belonging to the Kimberly-Clark Corporation, which has produced more than 82 million seedlings at its Coosa River nursery.

Scientists, convinced that the same principles of genetic control used to improve corn and wheat crops would also lead to better trees, discovered 44 superior trees to serve as "parents" of Kimberly-Clark's future forests.

Cuttings from these chosen 44, nearly ideal in shape, height, limb formation and growth characteristics, were grafted to root stock in the nursery to produce the first crop of seedlings.

A 30-year rotation system of all forest lands is aimed at achieving uniform harvest and a steady increase in paper trees to help meet the expected demand for 102 million tons of paper, twice the current amount.

## AGRICULTURE

## Dried Mushroom Powder Is New U.S. Product

➤ A DRIED mushroom powder that can be stored at room temperature for as long as nine months without loss in flavor has been developed by scientists at the U.S. Department of Agriculture.

The new mushroom product can compete with imports in price and quality. It is ideally suited for use in many prepared foods, such as sauces, soups and gravies, and as a seasoning in the home kitchen, according to USDA's Agricultural Research Service.

The powder is light brown in color and has the characteristic flavor of *Agaricus campestris*, the only commercially important variety of mushroom commonly cultivated in the United States.

A commercial plant producing 253 pounds of the powder a day would require about \$57,000 of fixed capital investment. Selling price of the powder would range about \$4.50 per pound when using mushrooms of good quality and condition.

The process for producing the powder was developed at the Agricultural Research Service's Eastern Utilization Research and Development Division, Philadelphia, Pa.