BOTANY

NATURE RAMBLINGS

by Frank Thone

Mistletoe Is Different

➤ CONSERVATIONISTS are often much concerned—and with reason—over large-scale use of Christmas greens and garlands. Native holly, ground pine and several other plants largely used in holiday decorations are dwindling species in many regions; their continued exploitation strips our woodlands most destructively.

Mistletoe, however, falls into a wholly different category. Entirely aside from its romantic connotations, its use is approved without reservation. For mistletoe is itself a menace to the woods; it is a harmful parasite on some of our best tree species, and conservationists would not mind at all if it were reduced nearly to the vanishing point.

It surprises some persons to learn that mistletoe is a parasite, for we have become accustomed to thinking of plant parasites in terms of the cadaverous pallor of fungi, dodder and such-like leafless growths, whereas mistletoe has plenty of glossy green leaves.

There is, however, a kind of hemiparasitism, known to botanists as water- or sap-parasitism; and this is the habit of the mistletoe. It sends its root-like feeding organs (haustoria, if you want to be technical) into the sap-carrying regions of the wood and helps itself to the water that the tree has gone to all the trouble to raise many feet from the soil beneath. Along with the water, of course, it takes the dissolved mineral salts. But having chlorophyll in its leaves it is able to complete the manufacture of food substances out of these stolen materials, plus carbon dioxide from the air.

It might seem that this levy upon the host tree for part of its rising sap stream should not do too much harm. However, the fact is that a limb supporting a big clump of mistletoe usually shows a decided change in diameter above the point of infestation. It may be, of course, that the mistletoe excretes some poisonous substance into the tissues of its host, in addition to robbing it of sap, but that is only a conjecture.

In the South, where practically all native American mistletoe grows, market gatherers have a crude but effective method of harvesting it off the limbs of tall trees. They simply fire charges of buckshot into the clumps, and gather up only the better specimens from the resulting shower of broken pieces.

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Ivy poisoning runs its course in from one to three weeks.

No satisfactory substitute has been found for the *Japanese agar*, an important bacteriological medium, or germ-cultivation substance; production from American seaweed is far short of the 600,000 pounds needed annually.