

### Vegetable Ventilators

➤ DURING THE later months of World War II, new German submarines went into action with high hopes of eluding the ever-watchful eyes of Allied observers in planes, in blimps, on lofty lookout posts of ships. They did not need to come to the surface for weeks on end, because alongside the periscope was a tube through which air could be sucked down for their diesel engines and for the crew to breathe.

It was a most ingenious device, but after all not original. If you will cut through the stem of a waterlily, or a lotus, or almost any plant that grows with its roots under water you will find that it is not solid like the stems of most land plants, but that it has one or more holes in it. If you split the stem lengthwise you will find that these holes are long open channels. They lead down from leaves and flowers clear to the submerged roots.

The roots of a plant must have air, just as the leaves do. Without it they smother, just as a drowning man really dies of suffocation, because he cannot get air into his lungs.

Plants unlike animals do not have an elaborate system of lungs, respiratory muscles and blood corpuscles to carry oxygen supplies to the body's remotest tissues. Their oxygen supplies reach all their cells quite directly. That is one reason why leaves are a plant's most active organs—they are flat and thin, and oxygen from the air does not have to travel far to supply all their cells.

Although the roots of most common plants are underground, they can still get their oxygen. Enough air filters through the myriad crevices between soil particles to take care of that. That is, it does when the soil is in good tilth; if

there is too much rain and flat fields are flooded too long most of the plants in them simply die of drowning.

Herbaceous plants like waterlilies and arrowleaf are not the only ones that have air-passages in their stems. Waterside shrubs like the buttonbush, and even great trees like the pond cypress, have breather systems. They differ in details of structure but they all serve the same function in the end.

The cypress uses a peculiar contrivance to get air to its roots. Every here and there a steeple-shaped structure projects up through the water where the trees stand. It is not hollow, like stems of some aquatic herbs, but is filled with a loose, sponge-like woody tissue, through which air can filter without too great difficulty.

*Science News Letter, June 15, 1946*

### HERPETOLOGY

## Black Widow Spiders Killed by Alligator Lizards

➤ ALLIGATOR LIZARDS, slender rough-scaled reptiles found in southern California, feed on black widow spiders and their eggs. Pleading for the life of

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the snake-like lizards, Dr. Raymond B. Cowles of the Los Angeles campus of the University of California says they could soon make the dread black widow spider a rarity as they can squeeze into cracks and crevices where the black widow spiders live.

Alligator lizards, that grow 12 to 16 inches in length, are harmless as far as humans are concerned. Unfortunately, the common house cat preys upon the lizards about as avidly as the lizard preys upon the spiders.

*Science News Letter, June 15, 1946*

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1.

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2.

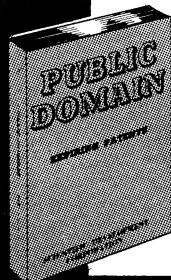
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