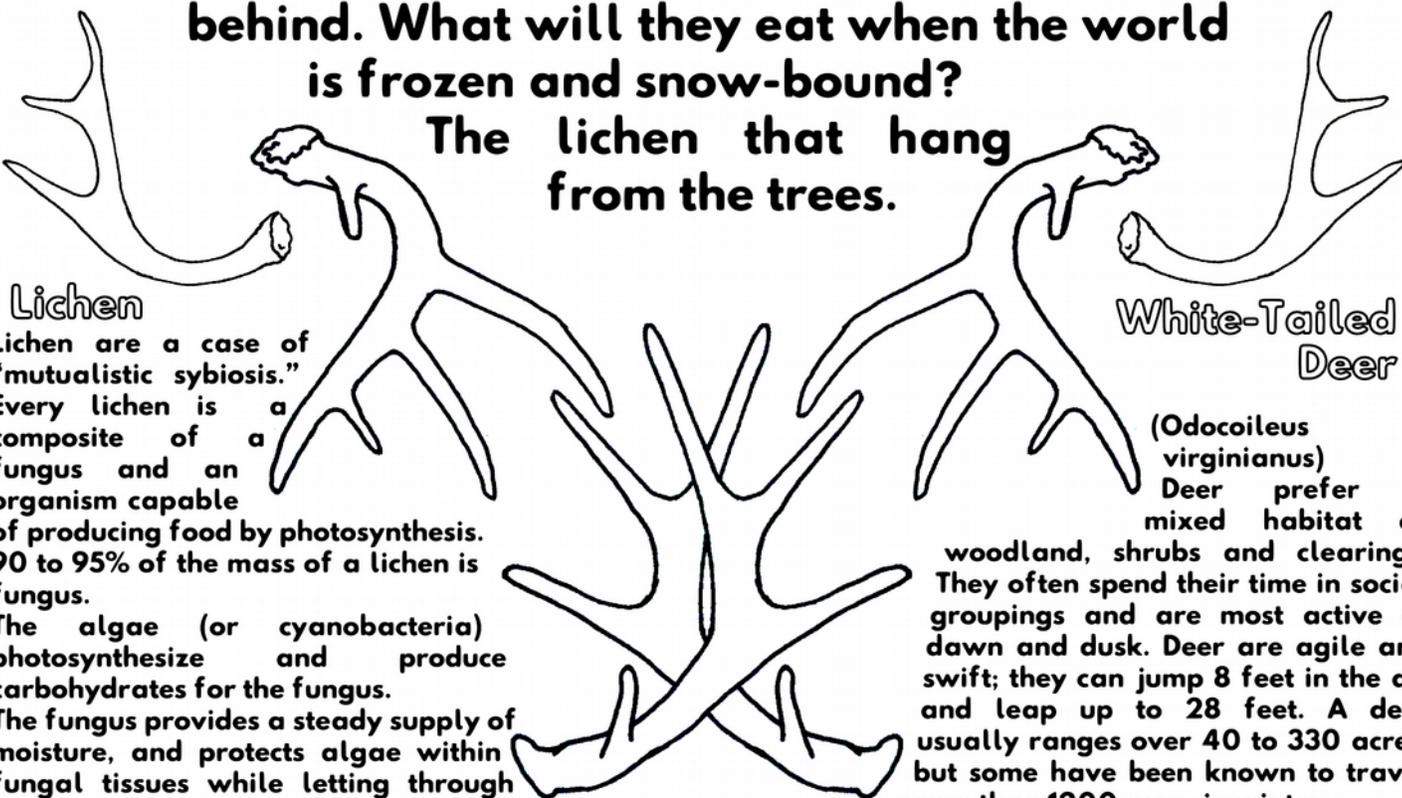


A herd of deer wake in the first light of a frosty morning. They stretch out and move silently to the edge of a woods. Their brown fur is thickened by a grey winter undercoat that matches the bark of the trees around them. The herd creeps into the backyard of a gardener who has finished harvesting and left some damaged cabbages behind. What will they eat when the world is frozen and snow-bound?

The lichen that hang from the trees.



Lichen

Lichen are a case of "mutualistic symbiosis."

Every lichen is a composite of a fungus and an organism capable of producing food by photosynthesis. 90 to 95% of the mass of a lichen is fungus.

The algae (or cyanobacteria) photosynthesize and produce carbohydrates for the fungus.

The fungus provides a steady supply of moisture, and protects algae within fungal tissues while letting through the right amount of light. Lichen that incorporate cyanobacteria also fix nitrogen.

One kind of arboreal lichen that deer eat is Usnea, shown below.

White-Tailed Deer

(*Odocoileus virginianus*)

Deer prefer a mixed habitat of woodland, shrubs and clearings. They often spend their time in social groupings and are most active at dawn and dusk. Deer are agile and swift; they can jump 8 feet in the air and leap up to 28 feet. A deer usually ranges over 40 to 330 acres, but some have been known to travel more than 1200 acres in winter.

Hunting and clearing of woods for farming had led to a Rhode Island deer population of under 700 in the 1940s, but their number is now over 15,000 and rising. The natural predators of deer (wolves and mountain lions) are no longer abundant in this area, but 35 to 40 % of does must be taken each year to maintain a stable population.

Antlers

Testosterone governs the development and growth of antlers in deer. Mature male (and sometimes female) deer grow a new set each year. The antlers, which are bone, grow covered with a velvety skin filled with blood vessels.

During a period of about a week in late summer, the velvet dries up and the deer rubs it off. Antlers are finally shed in the winter; exact timing varies based on health, location and genetics.

A few weeks after shedding, the deer begins to grow the next set.

