Perfumed fungus on Arabis

by **Dorothea H. Calverley,** Dawson Creek, B.C.

There is a virgin prairie hillside near Dawson Creek where every spring the "crocuses" and a tiny lemon-yellow plant appear simultaneously. After five years of searching for this little plant in flower I decided to lift one in a piece of turf for transplanting to the garden. On the way home the car became filled with an exquisite and rather strong scent reminiscent of a very expensive face-powder. The perfume came from the bright-yellow leaves of this two-inch plant.

Transplanted, the plant became by autumn rather woody, almost normally green and about the diameter of a tea-plate. It persisted for two years, but did not produce flowers. It was identified as one of the Cruciferae in the genus *Arabis* by a U.B.C. botanist. The Research Branch of the Department of Agriculture advised me that the *Arabis* was diseased. The fungus is a rust probably *Puccinia monoica* (Peck) Arthur which has a wide range. It parasitizes *Arabis* and one or two other Cruciferae. I found it later on small Drummond's Rock Cress near Taylor, B.C. It does not occur on *Brassica* species in North America. The pycnial (spermagonial) stage of rusts often attracts insects, which can play a similar role in the life history of a rust as they do in a pollination of higher plants.

One very hot afternoon, in early June, 1960, I was attracted by a loud buzzing of a bumblebee, which was rolling and tumbling in an apparent ecstacy in and among the yellow leaves. He would fly off ten feet, only to return at once, and once more begin antics much like a cat in a catnip plant. I watched him for over an hour before he disappeared. Careful examination revealed no flowers at all, but the plant was highly scented, even when the leaves were not bruised. As the yellow appearance was a type of fungus, I destroyed the plant before bees could carry it to my rock-garden Cruciferae, or to the rapeseed crops.

For the purpose of attracting insects, this particular rust seems to have developed a very potent perfume in comparison with which even Chanel #5 should look to its reputation!

Blue-green Algae in Saskatchewan Lakes

by **U. Theodore Hammer,** University of Saskatchewan, Saskatoon

Teachers and students of high school biology as well as other naturalists may find it very rewarding to devote some time to the study of blue-green algae. These algae are found in most of the well-populated areas of Saskatchewan and are readily collected and easily studied with the aid of a microscope. Considered along with bacteria as very primitive plants, their characteristics are much more easily observed than those of bacteria and without the necessity of staining. In addition, they can be preserved for future use, or, in some cases, easily cultured.

The blue-green algae are a highly successful group of plants. They occur in extremely diverse habitats and conditions. These algae are found in inter-tidal belts of seas and salt marshes, are widespread terrestrially and are important constituents of free-floating (plankton) flora in all fresh-waters. They may occur in hot springs or under the ice during the winter. Most of them are free-living; some grow on animals while other grow on or in the tissues of plants. Some members of the group are the algal components in the symbiotic relationship of algae and fungi in lichens. Others even occur as parasites in the digestive tracts of man and other animals.

In Saskatchewan, although they occur extensively in the soil, blue-greens are most readily obtained from lakes. Algal "blooms" (heavy concentrations of algae at or near the surface) occur intermittently in many lakes during the summer and fall.