

root hairs hold the soil physically and prevent its erosion into streams, rivers and reservoirs. In the spring, forests provide the shade which prevents over-rapid melting of snow. This limits flooding and reduces spring run-off.

Forest lands provide habitat for most big game species and some game birds. Recreational use of Saskatchewan's forests is increasing yearly and forests must be managed to maintain a continuing fish and game population for the growing numbers of hunters and anglers. In addition, forest areas containing lakes and streams, attract campers, picnickers and others who simply wish to enjoy, study or photograph the scenic beauty, animals and plants that are found there. Swimming, water-skiing, and boating are enjoyed in bodies of water bordered by forest land.

The forest provides food and shelter for most fur bearers, upon which many trappers in Saskatchewan's wooded areas depend for a livelihood. The beaver is considered of valuable assistance in forest conservation. Beaver dams help control water levels, prevent erosion and may eventually lead to the formation of rich glades in the forest, known as beaver meadows.

Cattle grazing is permitted in Saskatchewan's provincial parks and in some parts of the provincial forest. Grazing must be prohibited in recreational areas. Excessive grazing in forests reduces forest reproduction and competes with the food needs of wildlife.

Perhaps the most important conservation measure that we can apply in any forest area is fire prevention. Each year, thousands of acres of valuable timber land are destroyed by fire and about 85 per cent of these fires are caused by human carelessness. Forest conservation should therefore not be restricted to Forest Conservation Week. As custodians of our forest heritage, it is our responsibility to take every precaution against fire, all year round, when camping, fishing, hunting or travelling in a wooded area. One tree will make a million matches—don't let one match destroy a million trees!

A NATURAL APPROACH TO NATURE

By **H. Kagis**, Department of Natural Resources

Even animals seem to indulge classification: they eat certain things and reject others. Consequently there are two "classes" of things for them—edibles and non-edibles. Human beings who are so proud of their science often use classifications the major features of which recall the "classification" just mentioned: first, pure utilitarian criteria are used; second, a single distinguishing feature is applied.

The simpler such classifications are the easier it is to express them in popular doctrines and even slogans. Such doctrinized classifications can hamper the development of the human mind by offering ready-made explanations and blocking scientific examination. We have to remember that in principle no classification should be anything more than a tool for understanding. We have to remember, furthermore, that any part of nature is related to its surroundings, or, to use the scientific term, an open system.

Such an approach to nature in general and to living nature in particular is gaining more and more ground. Science has gone from studying single plants and animals to studying them as societies and has finally arrived at attempts to understand whole areas as natural units comprising soil and plant life and animal life, including microscopic organisms. A very important feature of such an approach is that these units are not viewed as unchanging and that an attempt is made to see the changes that occur as each constituent element influences the others. Many scientific names are used for such units, as ecosystems, biocoenoses, biogeocenoses, etc.; each of these terms has a somewhat different meaning, but they all tend to embrace a natural unit in its entirety—a concept fundamental to such a classification.

During the little walk at Emm Lake, an attempt was made to distinguish some such natural units and to see the functions and interrelations of their constituent elements. The first of such units was

the lakeshore. There the vegetation (*Scirpus*, *Juncus*, *Calamus*, etc.) by growing, dying off, and settling to the bottom, modifies those growing conditions which favoured its initial appearance. A classification that would stop at calling such a lakeshore, for instance, a hydrophytic plant society would probably satisfy some plant sociologists, but it would convey a static picture. It would probably be better to use the everyday name of lakeshore, because this name would not restrict the picture to a single element, the plants.

Such an attempt to comprehend natural units in their entity might seem the most normal thing in the world. But there have been scores of attempts made to explain all processes that take place in a locality and characterize them by just one element. This seems to be the result of specialization in science. It cannot be denied that one element, for instance water or soil, *initially* plays a prominent part in creating such natural units, but later a major formative role can be played by the vegetation, by animals and also by man.

Thus the next place observed, a mixed-wood stand of trembling aspen and white spruce, again showed the interaction of different elements. The stand was not very dense and various plants, including patches of moss, covered the ground. There were scattered sarsaparilla (*Aralia nudicaulis*), three species of wintergreen (*Pyrola* spp.), bedstraw (*Galium boreale*), twin flower (*Linnaea borealis*), bishop's cap (*Mitella nuda*) and others, indicating a cool, moist site. The humus and soil in turn showed the influence of this

plant society (including the trees as a major factor). A different plant society, for instance a grass cover, would have had a different influence. The plant cover modifies the amount of light penetration, the temperature above and below the ground (at Doré Lake, under a stand of balsam, frozen ground was encountered at the depth of 38 inches on July 24), and bacteria, fungi and chemical processes.

At the outing it was found that in an open stand of black spruce in a muskeg the humus was frozen at a depth of six inches, showing that the moss and the upper layer of peat had a very decisive influence on the life processes there. The people call it muskeg; they do not call it a moss area or a tract of black spruce. This means that the common man is sometimes wiser than the scientists; he apparently wants to convey the idea that this is a place where there is a certain moisture regime, a certain plant society, which varies with the degree of moisture, the tree growth, etc.

All this might seem so much theory or pure science. But some bitter experience has shown that actions influenced exclusively by momentary practical considerations have led to very undesirable results, especially in forestry. Considerable losses have been sustained by creating favourable conditions for the spreading of insects and diseases. Large areas have also been made simply unproductive. Therefore, considerable attention has been paid lately to the studies of natural units including soil, vegetation animal life, microflora and microfauna and to the interaction of all these elements.

Reports from Audubon Junior Clubs

In this issue of the **Blue Jay** we want to give recognition to the active study and conservation programmes being carried on by young people in the Prairie Provinces through the Audubon Junior Clubs. We should like to think that all these boys and girls are readers of the **Blue Jay**, and we invite contributions from them either as individual submissions to the Boys' and Girls' Section or as

group reports on their club activities.

Here are some typical reports of Audubon Junior Club activities. Reporting for the club at **Springside**, Sask., the leader, Mrs. M. Barber, tells of field trips around the school and out to the creek nearby. The group goes out in fall, for example, to watch for signs of approaching winter. Indoors, the members have