

from northern Europe, Canada and the norther Lake states, but as yet botanists are not agreed as to the causes of this type and Tom hopes to do further work on this phase of the problem.

In general this bog turns out to be a complex mosaic, similar in some respects and in some parts to the more southern shrub-carr and southern lowland forest vegetation types as described by J. T. Curtis. It is not entirely typical of *Sphagnum* bog types as found in northern Wisconsin, probably due to a less acid condition and higher nutrient levels caused by inflow from the relatively fertile calcareous soils and substrate of the surrounding area.

The shallow glacial basin occupied by the bog is not a smooth bowl, deepest in the center, but rather irregular with measured depths up to fifty feet but much of it less than 20 feet to mineral soil. Marl layers up to four or five feet thick underlie the peat in places. The water table varies considerably with weather cycles, affecting shallower areas more than the deep peats, but this has been complicated by early feeble attempts to improve drainage by clearing and deepening the outlet and later, 1959-61, by a small dam at the outlet which raised the water level of Mud Lake and its borders by 18-24 inches. This flooding killed many trees in the swamp forest areas near Mud Lake and up to the bend of Blue Goose Road. Logging for pilings, poles, and posts, mainly before 1940, also was a major influence in some parts of the bog. Yet much of the bog reflects a more typical successional sequence from the open water through emergent aquatics, sedges, bog shrubs, tamarack and cedar stages to swamp hardwoods on the border areas.

Our congratulations and thanks to Tom for accomplishing this important contribution to our field studies. Our thanks, too, to the State Board for the Preservation of Scientific Areas and the Wisconsin Department of Natural Resources for permission to study the portions of the bog which they control.

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PHENOLOGY

AFTER THE CHARM of the winter season comes to an end, there is a renewal of interest in various events which herald the coming of spring. Some of these include the earliest appearance of wild flowers, the emergence of various insects, bird migrations and the sounds and movements of animals which have not been noted since the past autumn. Oldtimers often look forward to the ice break-up on their favorite lakes, the sap flow of the sugar maple trees or signs indicating the frost is out of the ground. Events of

this type are being continually observed by both amateurs and professionals of a little-known organization called the Wisconsin Phenological Society. This group defines the word "phenology" as the science of phenomena—the dating of natural events from year to year and place to place. In contrast to the temporary interest of the average person, the members of this society continue observing natural events on an all year basis. These observations help them explore the interrelationships of these events to each other and to seasonal changes in weather and climate. The results of this work enable the participants to learn a great deal about the land and its plant and animal life, the geographic as well as yearly variation in predicting these events and the earliness and productivity of the various seasons.

The records of these events have a practical and scientific value as well as an esthetic appeal. Long term observations may enable predictions to be made, with a high degree of confidence, of the emergence of various insect pests, the suitable time for plowing fields, the possible threat of floods on streams and rivers, the flowering and fruiting times of many cultivated plants and many others. Scientists are especially interested in these records as long-range research projects to accumulate information on the life history, longevity and population changes of plant and animal species.

A number of events are being recorded at the UWM Field Station, chiefly concerning the earliest arrival dates of certain birds and the earliest flowering dates of native woodland and bog plants. In the table below are listed some events which may be observed during the months of April and May. Those starred (*) are of particular interest to researchers at the Field Station, and any observations by our readers will be appreciated. This information may be sent on a post card to the address shown on the back cover of this *Bulletin*. Additional information about the Wisconsin Phenological Society may be obtained by writing to the secretary at 731 University Avenue, Madison, Wisconsin 53715.

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PHENOLOGICAL EVENTS

April

Earliest bird arrivals:

- Catbird _____
- *Chimney Swift _____
- House Wren _____
- *Ovenbird _____
- *White-throated Sparrow _____
- *Wood Thrush _____
- *Yellow Warbler _____

Earliest flowers:

Bloodroot _____
 *Harbinger-of-Spring _____
 Hepatica (either species) _____
 Marsh Marigold _____
 Red Maple _____

Earliest insects:

Bumble Bee _____
 Cabbage Butterfly _____
 Mourning Cloak Butterfly _____

May

Earliest bird arrivals:

Baltimore Oriole _____
 *Indigo Bunting _____
 *Nighthawk _____
 Rose-breasted Grosbeak _____
 Scarlet Tanager _____

Earliest flowers:

Oak (any species) _____
 Trillium (species _____) _____
 Violets (species _____) _____
 Wild Geranium _____
 Woods Phlox _____

We inadvertently sent out some defective copies of the Fall issue. Those who wish another copy or those who are not already receiving the *Bulletin* and wish to be put on our mailing list, should write to Dr. Millicent S. Ficken, UWM Field Station, Route 1, Box 216, Saukville, Wisconsin 53080.

Field Stations Personnel

Director	Millicent Ficken
Resident Manager	Paul Matthiae
Field Stations Committee	Millicent Ficken (Chairman)
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	Norman Lasca
	Paul Matthiae
	David Miller
	Carroll Norden
	Peter Salamun
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