MACALESTER COLLEGE
SAINT PAUL, MINNESOTA 55105

■ DEPARTMENT OF BIOLOGY

Ordway Bulletin No. 42

Subject: GRASS-FIRES at ORDWAY.

Each growing season brings on a luxuriant growth of grasses in the open areas at Ordway. The warming rains of spring and the life-giving sun of summer combine to produce a thick growth of prairie grasses which have staged a comeback since the property was withdrawn from agricultural uses about twelve years hence. The recovery of prairie vegetation has been quite remarkable and the most prominent among these plants, the Bluestem Grasses, attain a height of up to 3 meters by the end of summer.

The mass of grassy vegetation causes conditions which can lead to conflagrations, particularly in the springtime of the year. Of course, there are offsetting factors - the spring rains and the early snows which dampen conditions and make grassfires less probable. However, there are times - such as in 1976 - when conditions seem to combine to magnify tendencies rather than to offset them as is often so in the forces of Nature. To begin with, the winter snows came late and the total snowfall was rather sparse; this combined with a reduced spring rainfall and a number of windy days to produce almost hazardous conditions on the property.

Grassfires have occurred since time immemorial and have been the principal controlling factor in the environmental balance of prairie habitats. Most of such fires have been caused naturally - by lightning or spontaneous combustion. On a more modern note, though, we find a different causal force at Ordway: The causes of the fires are sparks from hot-boxes on railroad cars or flaming globs of diesel oil from the stacks of the slow-moving locomotives as they labor to drag their heavy trains upgrade.

The effects of such fires are usually quite dramatic and beneficial. This year we had a good set of conditions in which to make comparisons. A fire which burned about one hectare late in November produced a "burn" which is only a few meters from a similar one which took place late in March. It is very interesting - and instructional - to observe the differences in re-growth of vegetation in these burned areas in contrast with contiguous areas which are unaffected by such burning.

The first areas to "green up" in the spring are those which have burned over, for the burning removes the grass litter which covers the ground thus permitting the entering of the natural forces - sun and rain. Also influenced by the fires' action are the shrubs and saplings which are removed thereby from their competitive takeover of the grassland. Thus, a grass-fire brings about beneficial circumstances which sustain and revive our grasslands.

Like most things in the natural state of affairs, grass-fires are neither "bad" nor "good"; what is more important is that this factor, like other factors, should be "in balance". At Ordway controlled fires are good for the grasslands so long as they do not endanger nearby residences and property. In fact, a grass-fire every four or five years is almost necessary for a prairie to remain in healthy condition.

R J CHRISTMAN,
Natural ist,
Katharine Ordway Natural
History Study Area.

July, 1976
"E pluribus unum"