

# INTRODUCTION



We want to make your journey in Michigan an interesting and enjoyable learning event rather than merely a trip from “point A to point B.” This book is not intended to be a field guide in itself for the identification of specific geological formations, rocks, fossils, plants, animals, or archaeological artifacts. On the other hand, the reader can learn to recognize some broad geological and vegetational features and concepts, some common Michigan animals and their habits, and some archaeological history of the state. Most importantly we hope to instill a curiosity about the natural wonders of the Great Lakes State that will encourage the reader to further explorations of the subjects.

## **Before You Start**

1. Get a Michigan highway map out of your glove box. If you don't have one, inexpensive Michigan highway maps are usually on sale at gas stations and at bookstores for a little more. We like best the free Michigan highway maps that one can get at welcome centers along the major freeways.

2. Get a transparent yellow marker and mark the route of your travel from start to finish. This will make things easier to find along the way. Then you might want to mark blue lines dividing the state into the four regional landscape ecosystems (fig. 1) or the Mason-Quimby line dividing the state into two ancient regions (see fig. 18). This will give you a general sense of where you are and where you are going from each of these standpoints.

3. Then read through the chapters on geology, plants and animals, and archaeology as background for the forthcoming trip. Of course you won't remember all of it, but it should help you to figure out what



Fig. 1. Map of Michigan divided into four regional landscape ecosystems

you might be looking for on the road and questions that might come up along the way.

4. If you have some experience identifying natural objects, don't forget to take your field guides along. If you do not have these, you might want to get some of the ones we list on pages 297–301, either at your public library or local bookstore.

5. Take along a small notebook to record interesting things you see or questions to be asked about them.

6. Do take your camera along, but we have learned that it is death-defying to try to take pictures along any busy roadside in the state. If you want to take photos, get your car and yourselves well off the road. We mention rest stops and scenic lookouts along the major routes, and

these are also indicated in many state maps, including the ones provided at major Michigan rest stops.

7. Field glasses and binoculars are often useful, but only for the passengers, not the driver!

8. Prepare to take a few of the short diversions discussed in “Seven Michigan Highway Trips,” the second part of this book. They not only will be relaxing but will allow you to park and see natural objects closer at hand.

9. Rather than stopping only at fast food places for your meals, plan to turn off the highway onto the main streets of towns along the way. Find yourself a mom-and-pop coffee shop or small restaurant and enjoy the atmosphere and ambience of the local community.

10. Or take a small ice chest along with your favorite sandwiches packed in and have a meal at Michigan rest stops. Many have tables under shady trees and most are in nicely wooded areas where you should see birds and squirrels and possibly other forms of wildlife.

11. Plan to play “car games” related to natural objects. Locate an isolated white cloud ahead (front cover) and let each person in the car guess how many minutes it will take to drive under it. Or, guess how many miles it is to any natural object ahead, be it a tree on the top of a hill or the first sighting of one of the Great Lakes. Award points to members of the car for each turtle, opossum, porcupine, rabbit, raccoon, or deer (etc., etc.) spotted along the road—two points for live ones, one point for dead ones. Points can also be awarded for bedrock outcrops, glacial features, or rivers (if they can be named before the signs appear).

12. Finally, consider the fact that taking an hour or so longer to reach your destination will not only make your drive much more enjoyable, but it will be safer and allow you to arrive at your destination with a more relaxed mind and body.

## **Regional Landscape Ecosystems in Michigan**

D. A. Albert, S. R. Denton, and B. V. Barnes of the School of Natural Resources of the University of Michigan have (1986) recognized four regional landscape ecosystems in Michigan (see fig. 1). These four major regions have, in turn, been divided into various districts and subdistricts, but for the purpose of this book we shall characterize only regions I–IV. The four units are recognized on the basis of climate and

physiographic features, which in turn are related to soil development and structure, as well as the occurrence of plant and animal communities. Two regions (I and II) are recognized in the Lower Peninsula and two (III and IV) in the Upper Peninsula. Highway trips in this book traverse all of these major regions.

## **REGION I**

Region I is warmer throughout the entire year than the other three regions, and it has a plant growing season that is longer and less changeable than in the other three units to the north. It is characterized by extensive lake plains of sand and clay, ground and end moraines, and various end features left by the ice sheets. The ridges in region I are lower than those in the northern three regions and range from about fifty to one hundred feet high. The dominant soils are loams and clays; sands are less common. The vegetation in region I includes many southern plant species, resulting in plant communities more diverse than in the more northern regions. Many animal species that occur in region I are absent in the more northern regions.

## **REGION II**

Region II has a decidedly different climate than region I. First, it is a more northern latitude; second, it is surrounded on three sides by the Great Lakes; and third, upland areas are more extensive and higher than in region I. The high upland areas contribute to a cooler and more variable climate in region II than in region I, and there is a greater chance for frost in the plant growing season. Moreover, precipitation is not only influenced by the more extensive upland areas, but by the bordering lakes as well. Soils are also more sandy in region II, and extensive, thick glacial deposits are abundant. Lowland swamps and bogs are more common and often more acidic than in region I. The lack of southern species of plants decreases the diversity of plants in region II.

## **REGION III**

Region III, which comprises the eastern part of the Upper Peninsula, is characterized by relatively low elevation and relatively young Paleo-

zoic bedrock consisting of patches of Devonian (just north of the Straits) and more extensive Silurian and Ordovician rocks. The plant growing season is quite similar in length (120–140 days) to region II. The three Great Lakes that surround region III (Superior, Michigan, and Huron) tend to modify extremes in temperature and to reduce the severity of thunderstorms. Soils are poor and composed mainly of poorly drained sand and clay, with a presence of bedrock relatively near the surface in some areas. Northern coniferous trees occur in low, moist areas, and upland areas are dominated by mixed hardwood-coniferous forest.

#### **REGION IV**

Region IV comprises the western portion of the Upper Peninsula. Here the oldest Paleozoic rocks (Cambrian) and a very complex system of Precambrian rocks are the important bedrock structures. Frequent outcrops of these rocks occur, and there are many uplands in the region as well as low mountains. The upland topography controls the composition of the vegetation, and the growing season may be as short as sixty days. The temperature in region IV is the most continental of all four of the Michigan regions. The climate is warm during the growing season, very cold in the winter, and more extreme than in the other regions, mainly because there is less lake moderation. Northern hardwood-coniferous forests are abundant, and white pine, red pine, and oak dominate the upland forests.