“GEOBOTANY” ARTICLE QUESTION SET Name_____
Due Friday May 25, 2018 Credit: 5 pts. of 2nd Field Trip Assignment

Directed Reading Assignment: Jane L. Forsyth (1971) "Linking Geology and Botany...a new approach"

1. The geology of Ohio (if not regarded too closely) may be divided neatly into two parts. Contrast these two parts in terms of their (1) geographic location, (2) types of underlaying rocks and their physical properties, and (3) the landscape/topography that characterizes each.

2. The reason for the difference in kinds of rocks is not difficult to understand. Describe (1) the original sequence of sedimentary rock strata (three types in order from top to bottom), (2) an arch that formed 200 million years ago ...note where the crest of the arch was located compared with the low-lying toe of the arch, and (3) an important river system that occupied OH for a long time... what is the name of the river ...about how many years did it flow ...what effect did it have upon the landscape ...what curtailed the activities of the river?

3. Pleistocene glaciers invaded OH a few hundred thousand years ago or less. What feature of the landscape (and where about is it located) slowed the glaciers and so caused there to be a glacial boundary cutting across OH? Sketch a map of Ohio and on it place the glacial boundary.

(3) Describe "glacial till" in terms of (1) its general composition (a definition of till), and (2) how it differs in eastern and western OH.

(4) Contrast the basic substrate for plants in western and eastern OH in terms of (1) drainage, (2) aeration, (3) pH (limey versus acid) and (4) nutrient availability.

WESTERN EASTERN

(5) Name 5 species of trees/shrubs that have a distribution generally limited to limestone or limey substrates (such as Ohio’s Lake Erie islands).

1.

2.

3.

4.

5.

(6) Name 5 species of trees/shrubs that have a distribution generally limited to high-lime, clay-rich substrates developed in the thick glacial till of western Ohio.

1.

2.

3.

4.

5.

Name 5 species of trees/shrubs that have a distribution generally limited to sandstone hill of eastern OH.

1.

2.

3.

4.

5.

What is the major determinant of the distribution of these species?

(1) sweet buckeye (contrast with hemlock):

(2) hemlock (contrast with sweet buckeye):

(3) rhododendron: