

Name: \_\_\_\_\_

Grade \_\_\_\_\_/100 (+5 bonus)

### GY 112L Lab Assignment 9

#### Paleozoic Lab 3

**Note:** This is another lab that contains a lot of specimens so make sure that you do the physical specimens as quickly as possible. The map of Alabama Geology that is outside of your lab room (LSCB 335) will be necessary to answer the mapping question.

**Part one: Fossils**

**Brachiopods:** (Phylum Brachiopoda; Cambrian to Recent)

**Specimen 9-1a:** *Platystrophia* sp. Ord-Sil.; **Specimen 9-1b:** *Hebertella* sp. Ord.;

**Specimen 9-1c:** *Rafinesquina* sp. Ord.; **Specimen 9-1d:** *Dictyoclostus* sp. Miss – Perm. ,

**Specimen 9-1e:** *Mucrospirifer* sp. Dev.

How are brachiopods distinguished and classified? (Hint, what is the difference between an articulate and inarticulate brachiopod?)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [3 points]

Discuss the mode of life of the brachiopods. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [5 points]

Consider any one or two of the brachiopod specimens in this station to answer this question: what is the symmetry of the of the articulate brachiopods. Draw a small sketch to augment your written answer?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [5 points]

Specimen #: \_\_\_\_\_  
  
  
  
  
  
  
Scale: \_\_\_\_\_

This question continues on the next page→





Name of Specimen: \_\_\_\_\_ Specimen Number: \_\_\_\_\_

Scale

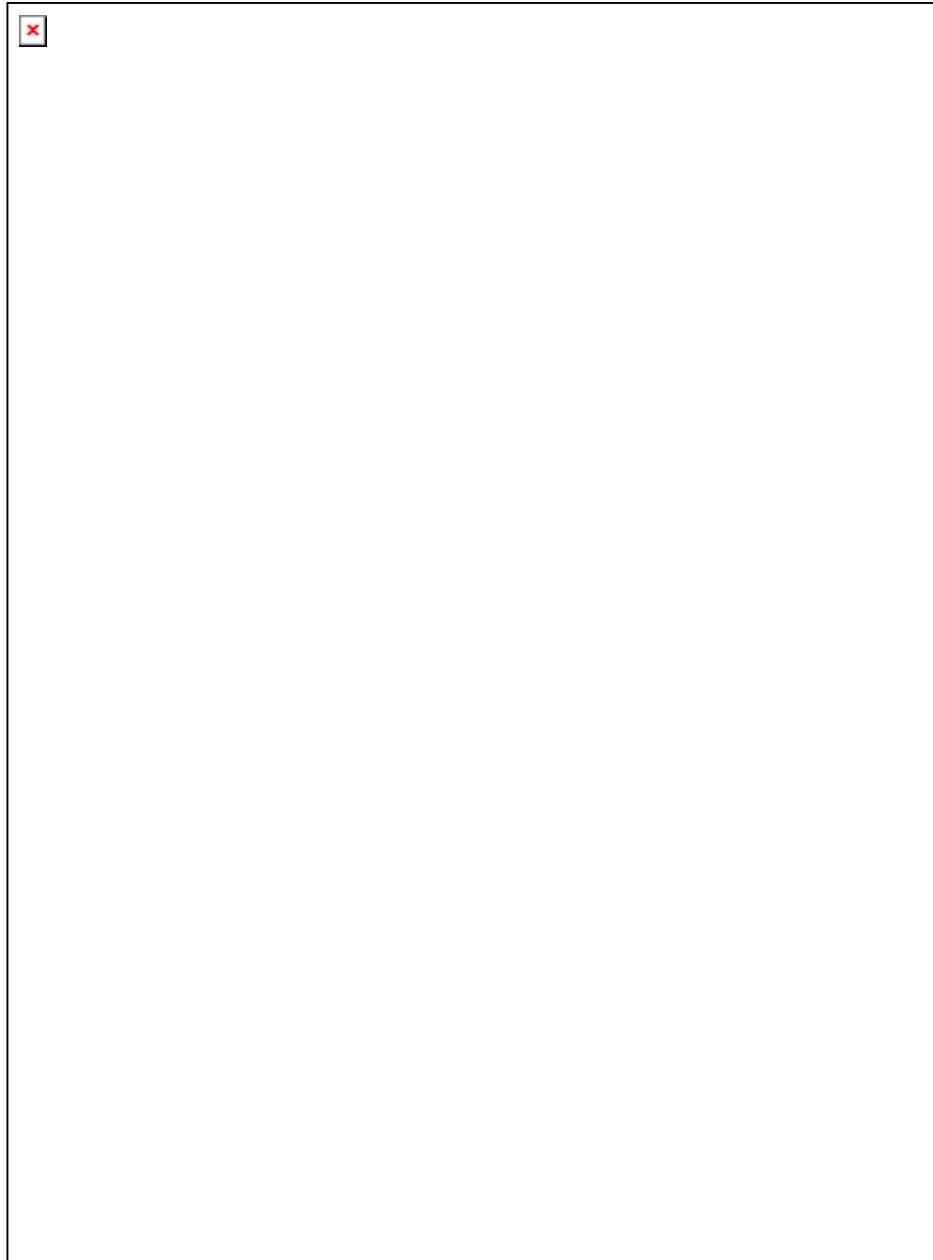
Want some additional credit? Draw another (different) beastie for 5 bonus points

Name of Specimen: \_\_\_\_\_ Specimen Number: \_\_\_\_\_

Scale

**Part Two: Paleozoic Stratigraphy of Alabama.**

Figure 7-9, which admittedly, is very poor as far as resolution is concerned, summarizes the most important Paleozoic rock units of Alabama. It was scanned directly off of the official state geological map. It is included here to prove to you that stratigraphy is an important component of geology as you look at some of the rock specimens in this week's lab. If you want a clearer version, see Dr. Haywicks Alabama stratigraphy webnotes or try the Geological Survey of Alabama's website (<http://www.gsa.state.al.us/>)



*Figure 9-9: Alabama lower Paleozoic stratigraphy.*

**Specimens 9-5a, b: Knox Group (Cambrian)**

These two rocks both come from the Knox Group, an important group of formations that crop out across parts of north central Alabama. They look very similar, but they are actually very different. How?

\_\_\_\_\_  
\_\_\_\_\_ [3 points]

**Specimen 9-6: Red Mountain Formation (Silurian)**

This is one of the classic rocks of Alabama and it outcrops in the heart of Birmingham. What is the proper name of this “rock”? (Hint: If you took GY 111, you knew it as a type of "mineral". If you didn't take GY 111, ask for help).

\_\_\_\_\_  
\_\_\_\_\_ [3 points]

This rock was very much responsible for the growth and economic suggest of Birmingham, at least up until the 1970s. Why?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [3 points]

**Specimen 9-7: Hartselle Formation (Lower Mississippian)**

This rock should be very familiar to you by now. What is it?

\_\_\_\_\_ [3 points]

In what paleoenvironment was it deposited? \_\_\_\_\_  
\_\_\_\_\_ [3 points]

**Specimen 9-8: Lower Bangor Formation (Upper Mississippian)**

This rock should also be very familiar to you by now. What is it?

\_\_\_\_\_ [3 points]

In what paleoenvironment was it deposited? \_\_\_\_\_  
\_\_\_\_\_ [3 points]

**Specimen 9-9: Upper Bangor Formation (Upper Mississippian)**

One more time! What is the proper name for this rock?

\_\_\_\_\_ [2 points]

**This question continues on the next page→**

Look at the fossils in this sample with your hand lens. Most of them are crinoids, a type of echinoderm which you will see in a couple of weeks time. What is the most notable characteristic of these beasties?

\_\_\_\_\_

\_\_\_\_\_ [3 points]

**Specimen 9-10: Lower Pottsville Formation (Upper Pennsylvanian)**

And now for an entirely different question. How would you describe the sorting in this rock? \_\_\_\_\_

\_\_\_\_\_ [2 points]

In what paleoenvironment was it deposited? \_\_\_\_\_

\_\_\_\_\_ [3 points]

**Part Three: Coloring 101:** Color the distribution of Paleozoic rock outcrops in Alabama on the map on the next page. Use the map outside of room LSCB 335 to help you with this. There is another smaller map outside of Mary Anne Connor's office (LSCB 121) and it has a legend on it. Use a blue color for the Paleozoic rocks. [4 points]

Using the map you just colored estimate the percentage of the state where Paleozoic rocks are exposed at the surface

\_\_\_\_\_ [1 point]



Notes and Doodles

Name: \_\_\_\_\_

