Question 1

1. 704 collections
2. 24429
3. This is the person who first gave a name to this species or taxon.
4. *Strophomenata Strophomenida Strophomenidae Strophomena planumbona*
5. Jefferson County, New York
6. The Shermanian Stage
7. Limestone

Question 2

1. The different colors mean what time period the data is from.
2. The US, Britain, and Belgium
3. They are clustered mostly around Cincinnati, Ohio
4. The Katian time period
5. They seem to be arrayed parallel to the equator.
6. Myalinida

Question 3

1. https://paleobiodb.org/data1.2/occs/list.json?datainfo&rowcount&base_name=Ambonychia&strat=Lexington Limestone
2. https://paleobiodb.org/data1.2/occs/list.json?datainfo&rowcount&base_name=Mammal&interval=Paleocene,Oligocene
3. https://paleobiodb.org/data1.2/taxa/opinions.csv?datainfo&rowcount&base_name=Testudines&rank=order&interval=Mesozoic,Mesozoic&op_type=all
4. https://paleobiodb.org/data1.2/colls/list.csv?datainfo&rowcount&base_name=Aves,Marsupialia,Sirenia&cc=US
5. https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base_name=Ficus&taxon_reso=genus

Question 4

1. Vertiginidae
2. Aptian
3. Bridgerian
4. Extratropics
5. Raiga and Kotodzha

Question 5

1. > URL <-
   https://paleobiodb.org/data1.2/colls/list.csv?base_name=Mammut&interval=Pliocene
   > read.csv(URL)
2. 39,13
3. Collections
4. Genus: Mammut, colloquial: Mastadon, age: Pliocene

5. https://paleobiodb.org/data1.2/colls/list.csv?base_name=Mammut&interval=Miocene,Pleistocene
6. https://paleobiodb.org/data1.2/colls/list.csv?base_name=Mammut&interval=Miocene,Pleistocene&show=paleoloc

Question 6

1.
2. The morphological information on the Paleobiology Database can certainly help with the classifications, however, I don't think these resources alone are enough to definitively classify the ammonites. One particular reason I say that is because variables such as sexual dimorphism can still leave a lot of grey area. For example, *Glyptophiceras sinuatum's* shell diameter has a standard deviation of 16.5, which ranges the majority of the measurements that we saw. Another example of this is that for *Xenoceltites variocostatus*, the diameter mean is 23.5, but the maximum is 78.0. Therefore, with the resources given, we can come close to the correct classifications, but can not be completely certain.
3. A. Brayard and H. Bucher. Smithian (Early Triassic) ammonoid faunas from northwestern Guangxi (South China): taxonomy and biochronology.
4. With the pictures of the *Xenoceltites variocostatus* and the information about their measurements, this would be enough information to classify the specimens from lab 2 with a high enough degree of certainty.