In the primary ecological literature, find data that indicate density-dependence in 2 different species (representing at least two kingdoms or phyla). For each example:

1. Name the organism and give the citation(s).
2. Briefly describe the biological scenario that seems to result in density dependence;
3. Sketch a graph indicating a realistic response of the specified vital rate to increasing density (label the y axis);
4. Indicate whether or not the process depicted in your verbal and graphical model will lead to population regulation;
5. Indicate whether there is any reason to expect a delay in the density-dependent effect on the vital rate.

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum/Division</th>
<th>Order or family</th>
<th>Species</th>
</tr>
</thead>
</table>

**Organism #1:**

Citation:

Biological scenario of density-dependence (verbal model):  
Graphical model of density-dependence (graphical model)

Will the above process lead to population regulation? (circle one)  
Yes  Probably  Probably not  No

Would you expect this to be delayed density-dependence? (circle one)  
Yes  No  If yes, how long a delay? ________

Would you expect the endogenous dynamics to be simple or complex? Explain?
Organism #2:

Citation:

Biological scenario of density-dependence (verbal model):

Graphical model of density-dependence (graphical model)

Will the above process lead to population regulation? (circle one)

Yes   Probably   Probably not   No

Would you expect this to be delayed density-dependence? (circle one)

Yes   No   If yes, how long a delay? ________

Would you expect the endogenous dynamics to be simple or complex? Explain?

Electronic literature searches

I strongly recommend that you perform your searches using the ISI Web of Science.

http://portal.isiknowledge.com/

There are thousands of papers in the primary literature on the topic of density-dependence in biological populations. Using the advanced search options, you can identify subsets of this literature. The abstracts and full citations can be viewed, saved, printed, or imported directly into a reference manager. On the course website, under exercises, you can find a listing of top journals in population ecology that can be pasted into the search engine of ISI.