

### Water Relations assignment.

Due Feb 1. 22 points

Read the attached popular article from 'Natural History' magazine, about sea snakes (Lillywhite, H.B 2009. A Long Drink of Water. Natural History. July/August pg 22-28). The pictures and captions in the attached scanned version are a little hard to see, but are much clearer in the online version: <http://www.naturalhistorymag.com/features/081302/a-long-drink-of-water>

1. Why do you think that the author feels justified in saying that for sea snakes the 'water balancing act is more complicated than expected'?
2. What evidence is provided to support the idea that sea snakes must drink fresh water to maintain water balance?
3. Where can a marine snake find freshwater to drink?
4. The article gives many examples of adaptations for dealing with osmotic stress in marine environments – list two, and briefly explain how they work (you may need to refer to the book for the explanation)
5. Develop a hypothesis related to one of the topics raised in this article. What sort of information, observations, or experiments could help evaluate this hypothesis?
6. Explain one thing that you learned from this article that was exciting or interesting to you.
7. List one thing in this article that you didn't understand, and what was unclear about it.
8. Find a research article from the primary literature (one that reports data, methods and results) that is related to this article (e.g., about sea snakes, water balance, etc.). Give the full citation for the article (Author, year, article title journal, volume, page numbers), and explain how it is connected to the sea snake paper you just read. You don't have to read the whole journal article, but skim it and then tell me what new things you learned.

The "primary literature" refers to journals that report the results of original scientific research. For this exercise, please choose from among these journals that focus on ecological topics Ecology, Ecology Letters, Oikos, Oecologia, Journal of Ecology, Journal of Animal Ecology, Functional Ecology, Ecosystems, Molecular Ecology, Evolutionary Ecology, Population Ecology, Journal of Chemical Ecology, Journal of Applied Ecology, Plant Ecology, Global Change Biology, Global Ecology and Biogeography, Ecological Entomology, Ecological Research, American Naturalist

These sources are available in the Library's 'Electronic Journal Center' online (<http://journals.ohiolink.edu/cgi-bin/sciserv.pl?collection=journals>) (or go to [www.uakron.edu/library](http://www.uakron.edu/library), and click on 'electronic resources', then on 'electronic journals', then on 'electronic journal center'.

Your article MUST be from one of these journals, or you must request special permission. It should also be a research article (with original data), not a review or summary of the work of others.

Citations: Use this format: Author(s), year. Article title. Journal Volume:pages.

For example:

Mitchell, RJ, JD Karron, KG Holmquist, JM Bell. 2004. The influence of *Mimulus ringens* floral display size on pollinator visitation patterns. *Functional Ecology* 18:116-124.