

Fall 2008
Bio. 463

STUDY QUESTIONS FOR:

Gauci et al. 2004

Explain how an increase in sulfate deposition onto wetlands can partially inhibit the production and emission of methane.

What two groups of microorganisms produce methane and under what conditions?

How did the author's go about estimating the global effect of sulfate deposition on wetland methane emissions?

Why did the authors conclude that their results suggest that the observed increase in atmospheric methane during the 20th century was the result of factors other than growth in the contribution from wetlands?

Using information from class notes (on the atmosphere & S cycle), information on page 7 of the textbook, and/or the information in the article by Charlson & Wigley, describe a second way that sulfates may affect climate. Does this effect reinforce or offset the effect described in this paper?