

## **ESS 202: Earthquakes Spring Quarter, 2003**

**Read Yeats, Chapter 4**

**Due Monday, April 21: Write answers to questions 1 and 2. Also, write out a detailed answer to question A if your last name begins with (A-H), question B if your last name is (J-P) and question C if your last name begins with (R-Z). You will discuss these questions in class Monday.**

**Answer one of these discussion questions:**

A What is the history of the debate regarding whether there will be a great subduction zone earthquake? Discuss the arguments for and against up to the mid 1980's.

B. What are the direct observations that argue for the existence of great subduction zone earthquakes? What is the line of reasoning that leads to this inference. In particular discuss evidence that the coastline dropped during past earthquakes.

C. Describe the evidence for a Tsunami in the year 1700. Explain the inference that that Tsunami was caused by an earthquake in Cascadia. Do you believe it?

**Answer each of these questions:**

1. What is the rate of subduction?

2. If there were an earthquake every 300 years, how much slip would there be for every earthquake?