CASCADIA SUBDUCTION ZONE

REAGAN-ERA PUZZLE

SPUR

SUBSIDENCE, SOUTH ANDAMAN ISLAND

RECORDEING AN EARTHQUAKE

Before earthquake

One year after earthquake

Decades to centuries later

Land subsides during earthquake

Cedar snag

Spruce stump

Mud

by Guillaume Del'Isle, 1720

University of Washington Libraries

WPPSS Satsop Plant, 1984

Javed Malik, January 2005
**Earthquake Dating**

- Tsunami noticed
- Tsunami departs

<table>
<thead>
<tr>
<th>Year</th>
<th>Genroku 12</th>
<th>A.D. 1700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>12</td>
<td>January</td>
</tr>
<tr>
<td>Day</td>
<td>8</td>
<td>26 Gregorian</td>
</tr>
<tr>
<td>Hour</td>
<td>“hour of nine”</td>
<td>evening</td>
</tr>
</tbody>
</table>

**Great Earthquakes Since 1900**

- Chile
- Kamchatka
- Alaska
- Sumatra-Andaman

**Estimated Magnitude 8.7-9.2**

- 1700 Cascadia

Cascadia estimate: Satake et al. (2003)

**Tree-Ring Test**

- Dendrochronology by David Yamaguchi
- Gordon Jacoby

**Thailand, March 2007**

- Tsunami Hazard Zone
- In case of earthquake, go to high ground or inland

- Sign:
  - Tsunami hazard zone
  - In case of earthquake, go to high ground or inland