

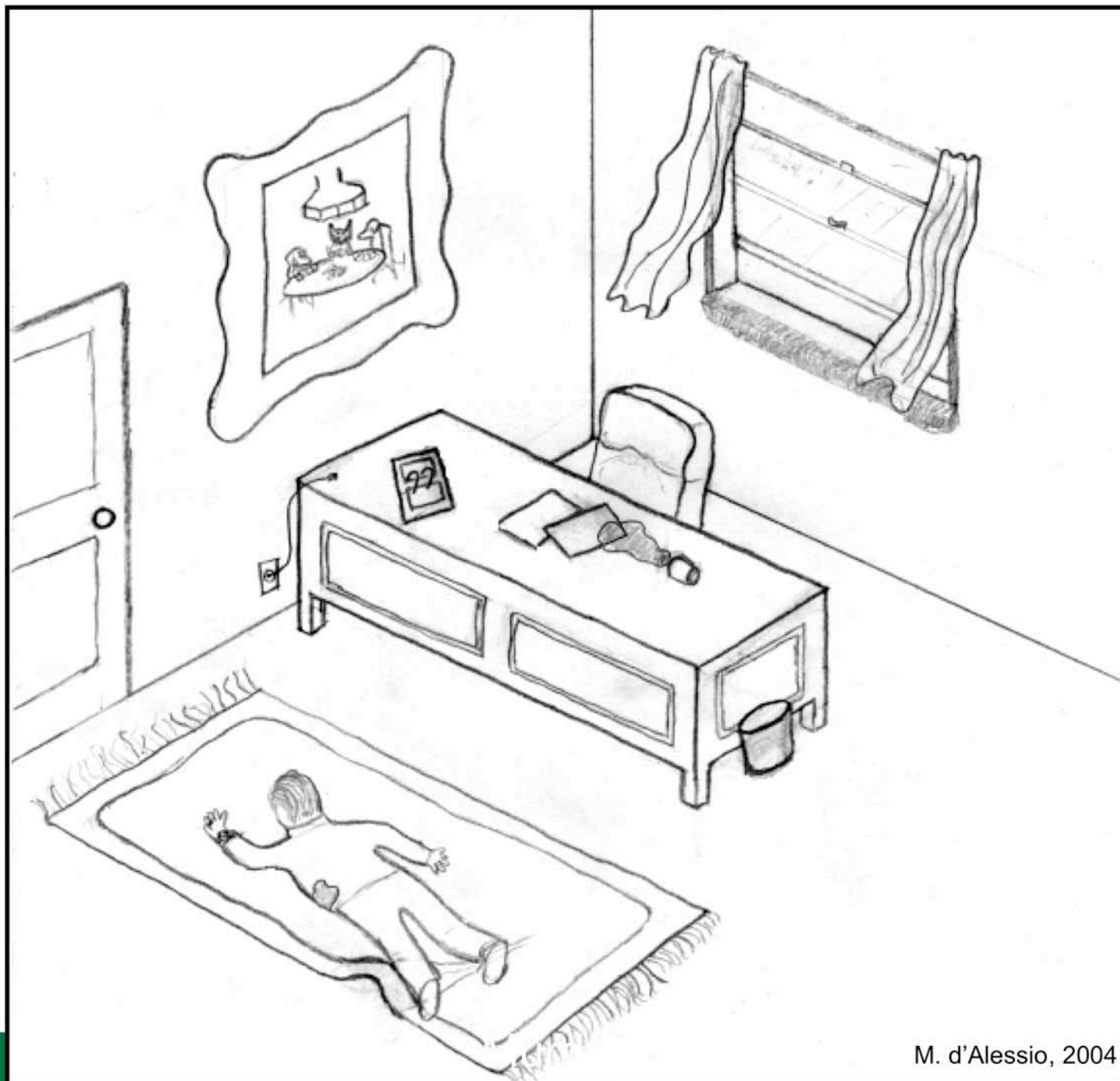


<http://www.monmouth.com/~cathygrim/mystery.htm>



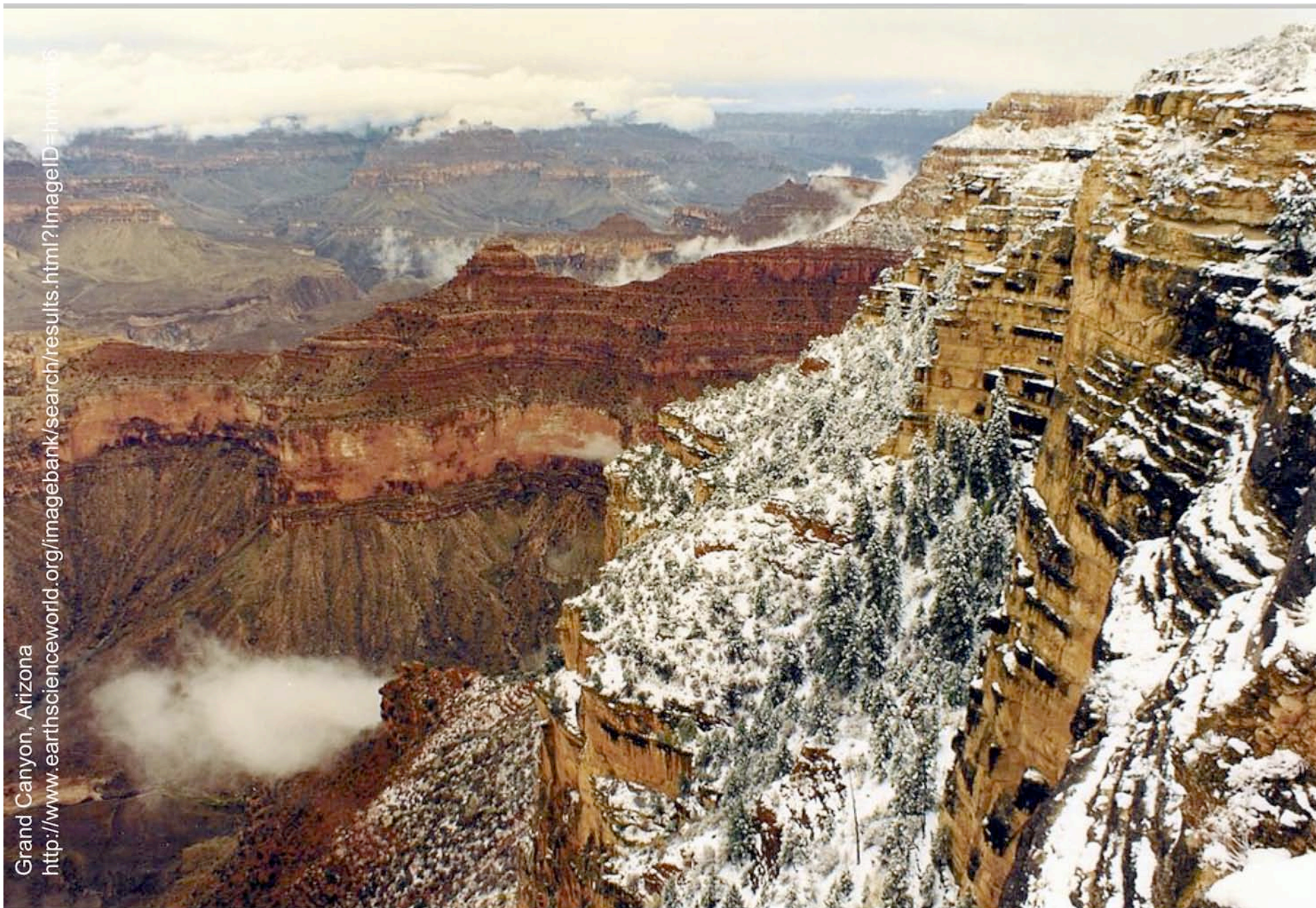
# GeoSleuth





M. d'Alessio, 2004





Grand Canyon, Arizona

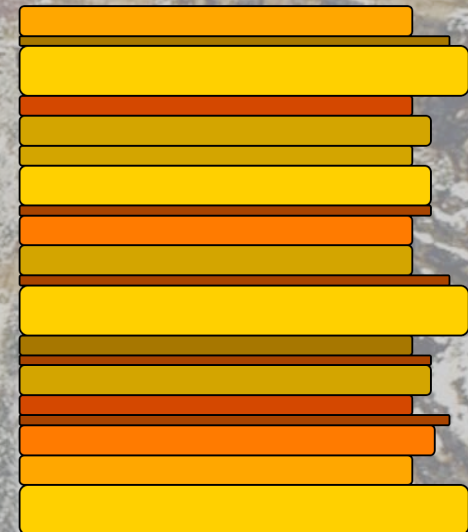
<http://www.earthscienceworld.org/imagebank/search/results.html?imageID=hmvw16>



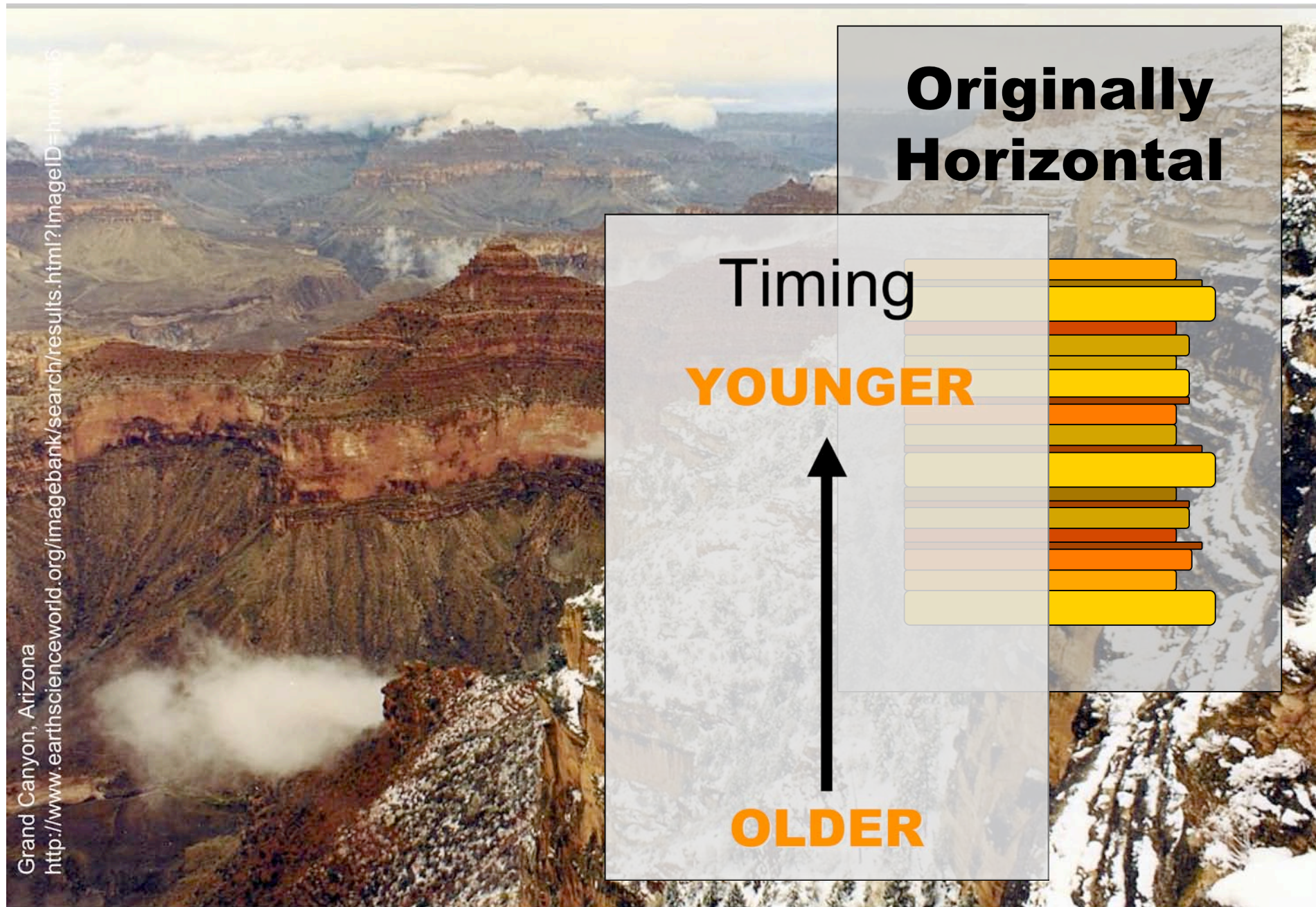
Grand Canyon, Arizona

<http://www.earthscienceworld.org/imagebank/search/results.html?imageID=hmvw16>

## Originally Horizontal













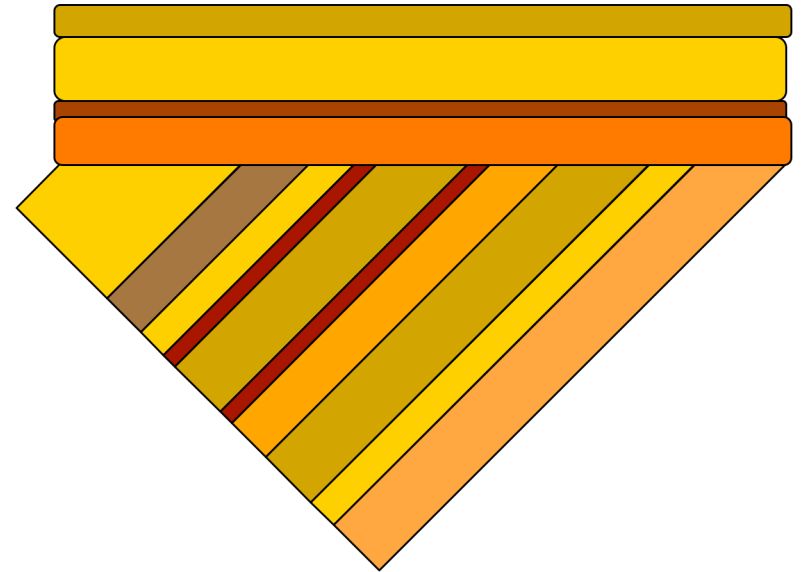


Olympic Coast, Washington: 4th Beach near Kalaloch  
<http://patti.tensegrity.net/album/hoh/images/unconformity.jpg>





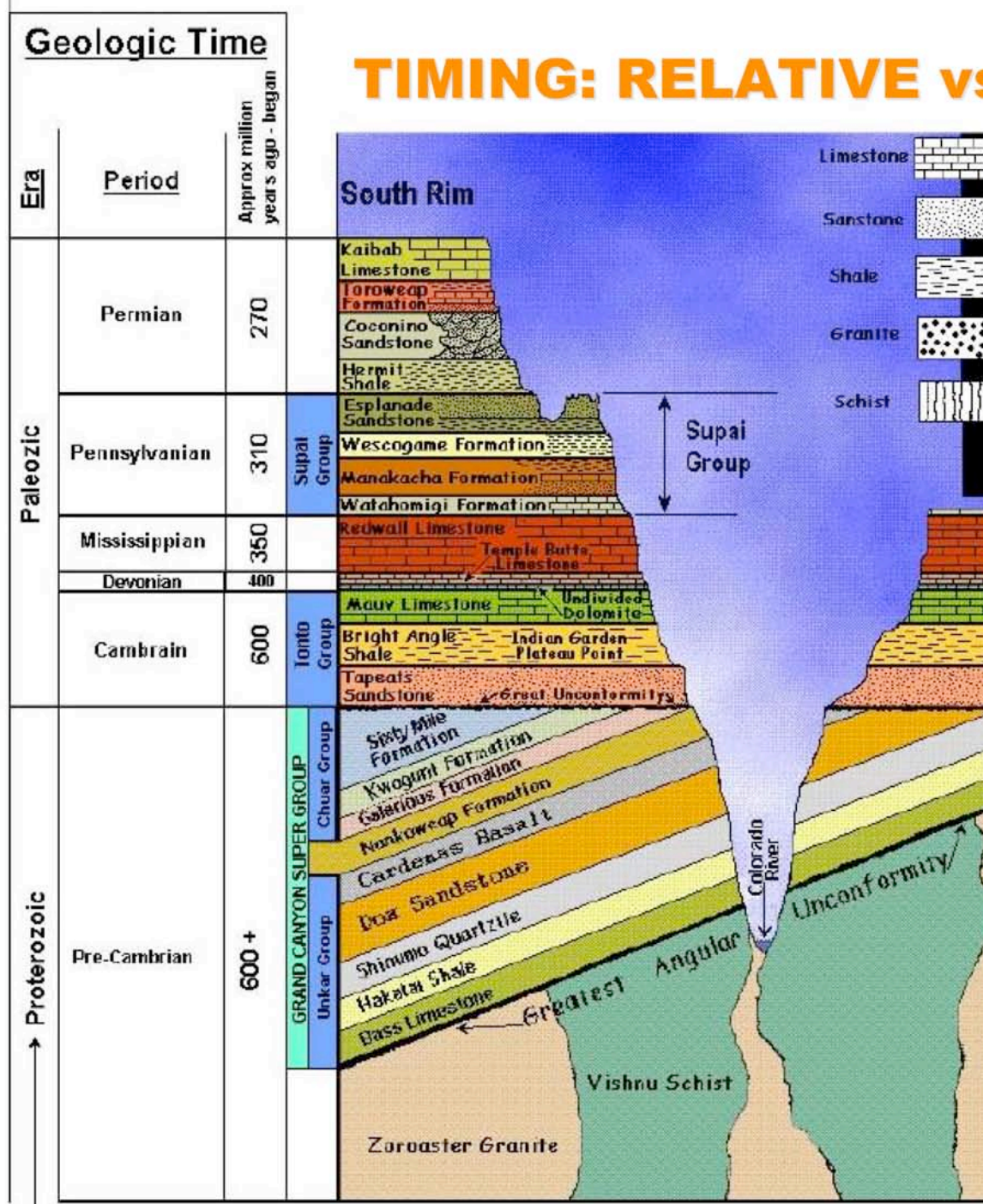
# Unconformity



Olympic Coast, Washington: 4th Beach near Kalaloch  
<http://patti.tensegrity.net/album/hoh/images/unconformity.jpg>



# TIMING: RELATIVE vs. ABSOLUTE



270 Million Years Old

**YOUNGER**



**OLDER**

600+ Million Years Old

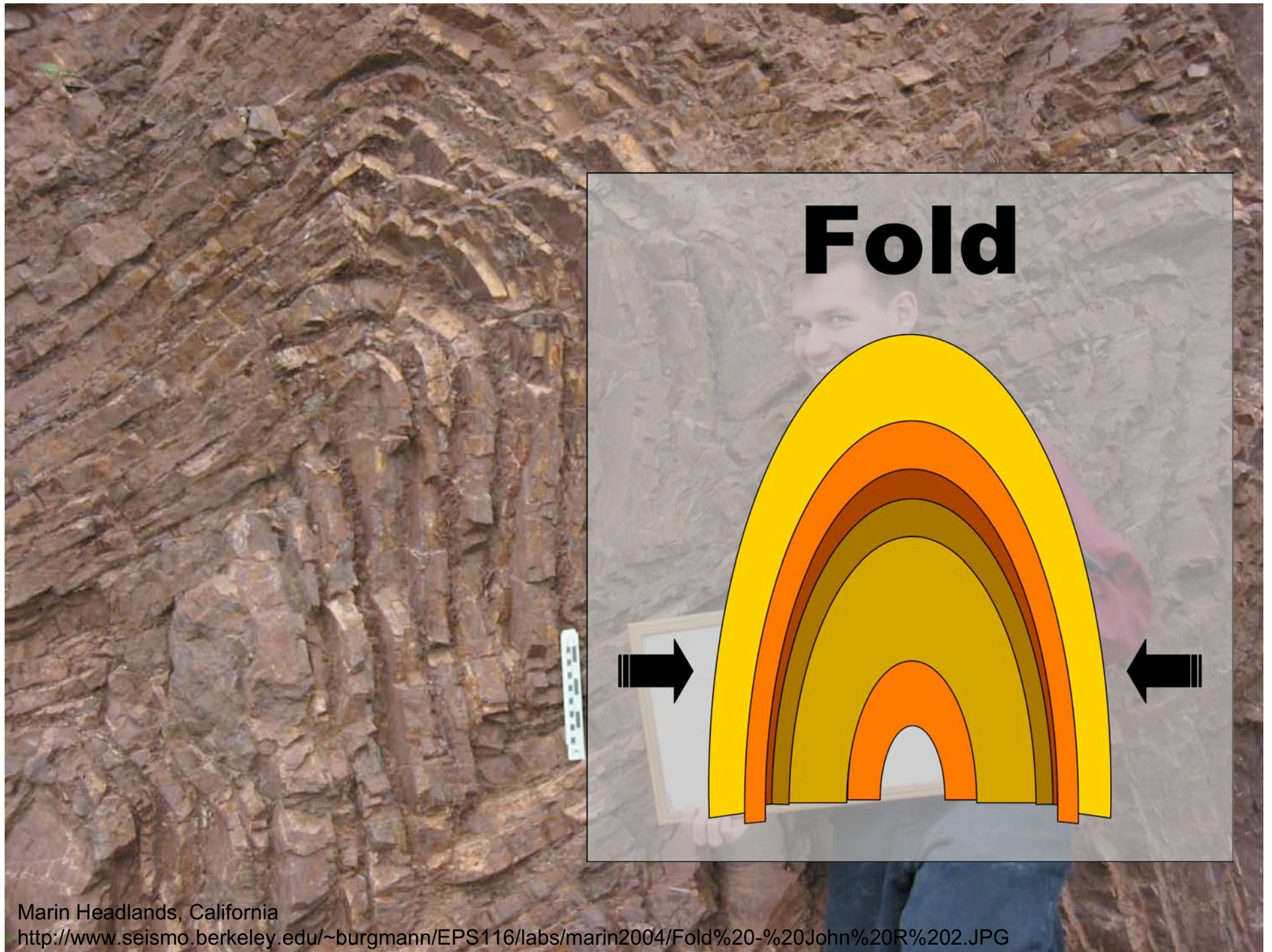




Marin Headlands, California

<http://www.seismo.berkeley.edu/~burgmann/EPS116/labs/marin2004/Fold%20-%20John%20R%202.JPG>





Marin Headlands, California

<http://www.seismo.berkeley.edu/~burgmann/EPS116/labs/marin2004/Fold%20-%20John%20R%20.JPG>



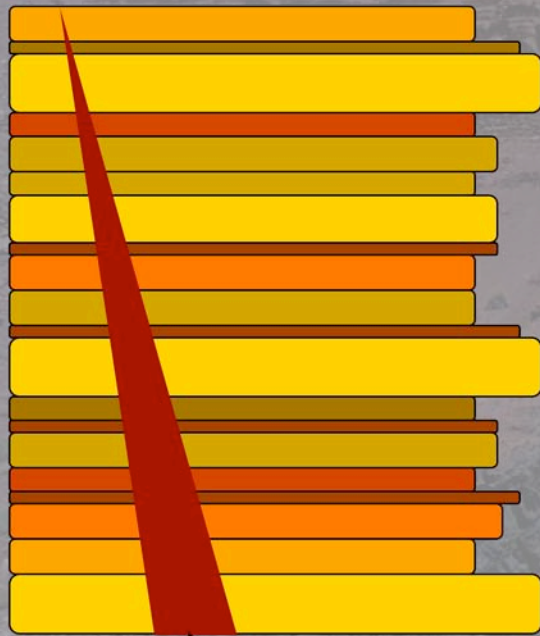


Grand Canyon, Arizona

[http://activetectonics.la.asu.edu/ramon/Images/Grand\\_Canyon/36grandcanyon.tif](http://activetectonics.la.asu.edu/ramon/Images/Grand_Canyon/36grandcanyon.tif)



# Cross Cutting



— MOST RECENT

Grand Canyon, Arizona

[http://activetectonics.la.asu.edu/ramon/Images/Grand\\_Canyon/36grandcanyon.tif](http://activetectonics.la.asu.edu/ramon/Images/Grand_Canyon/36grandcanyon.tif)

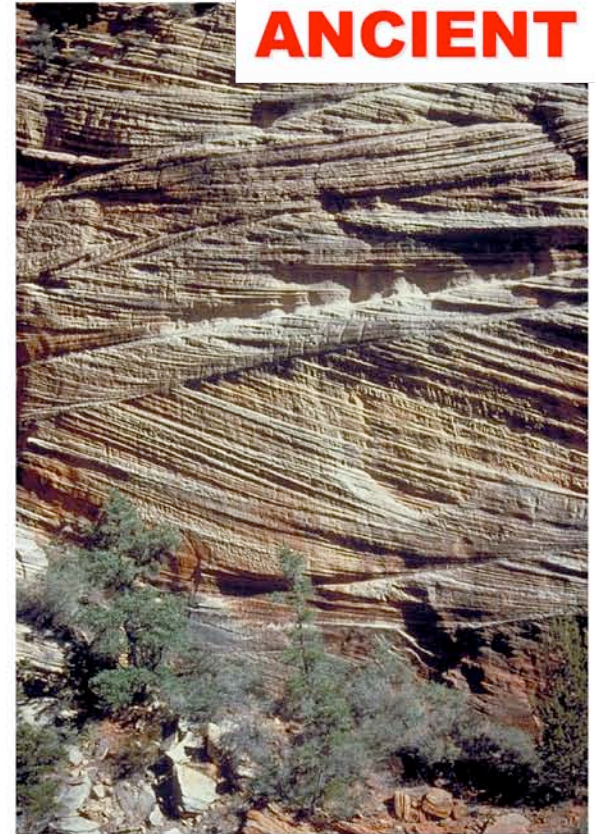


## PRESENT



Death Valley, CA  
AGI Image Bank photo ha45z2

## ANCIENT



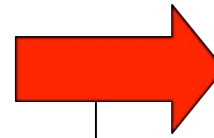
Zion, Utah  
AGI Image Bank photo ha45jb



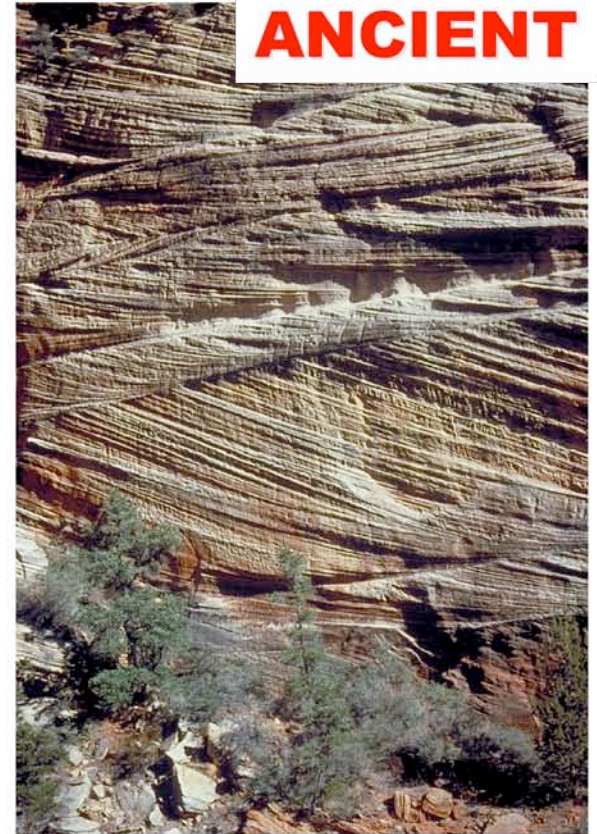
## PRESENT



Death Valley, CA  
AGI Image Bank photo ha45z2

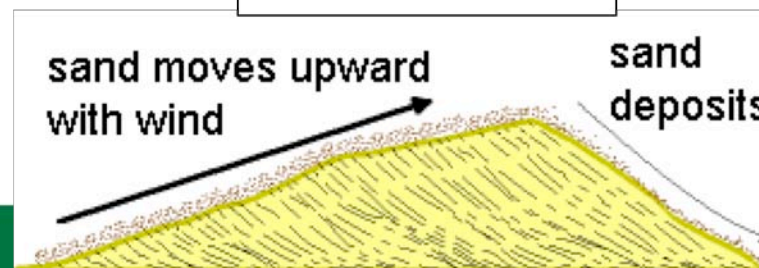


## ANCIENT



Zion, Utah  
AGI Image Bank photo ha45jb

## PROCESS





## PRESENT



Death Valley, CA  
AGI Image Bank photo ha45z2

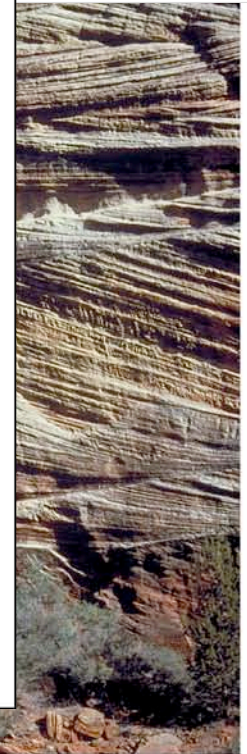


<http://www.physicalgeography.net/fundamentals/10c.html>

“The present is  
the key to the  
past.”

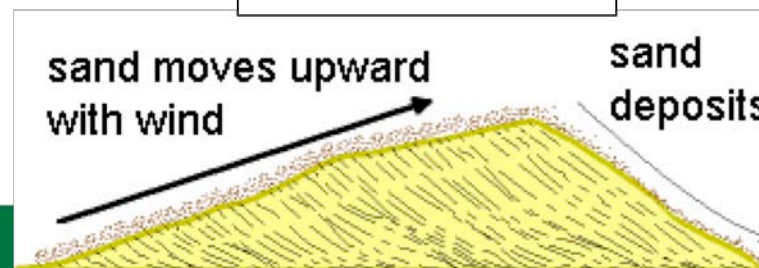
James Hutton  
Famous Geologist  
(lived 1726-1797)

## ANCIENT

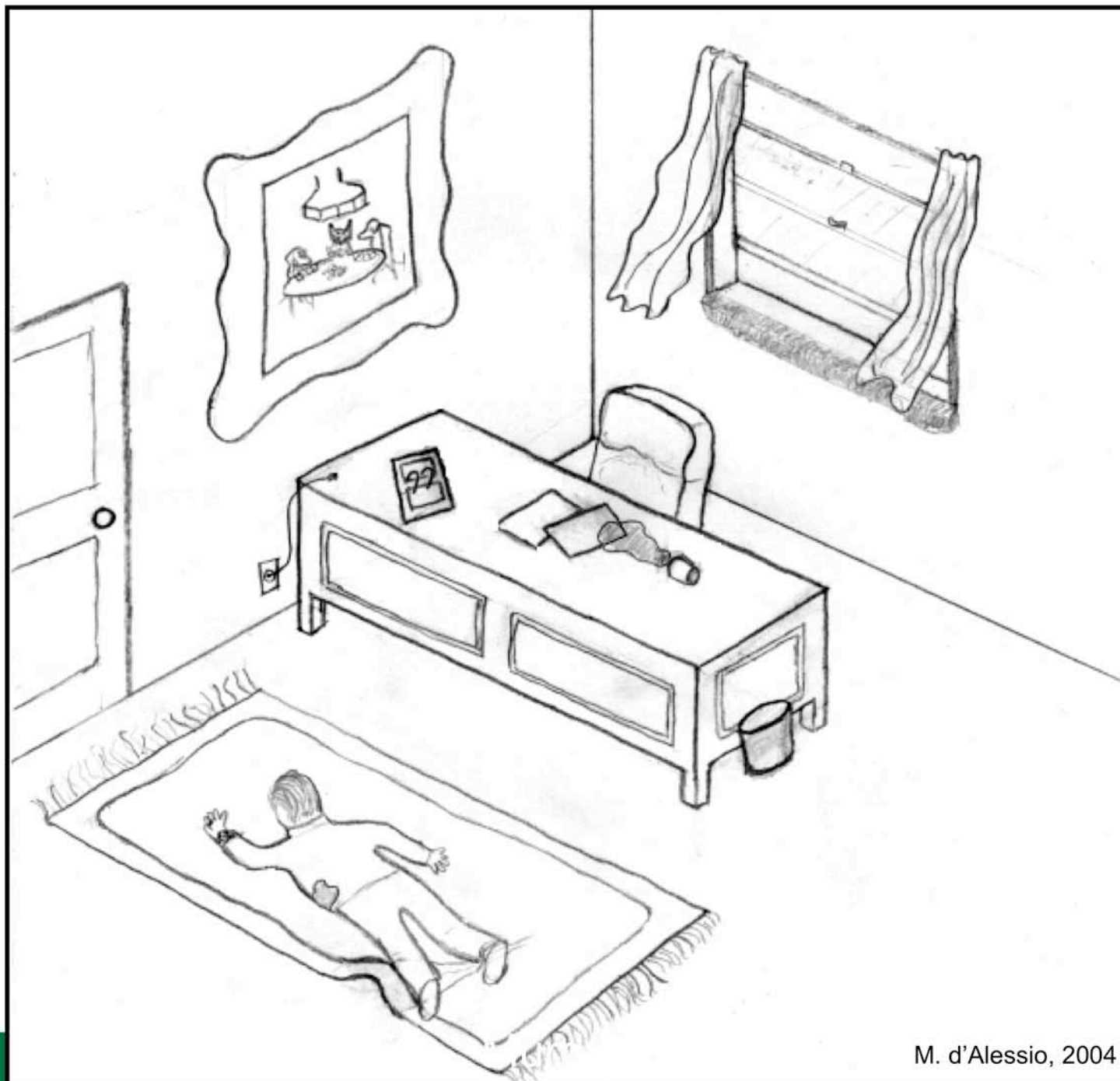


Zion, Utah  
AGI Image Bank photo ha45jb

## PROCESS







M. d'Alessio, 2004