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*Likely an indication of future climate trends in region.*

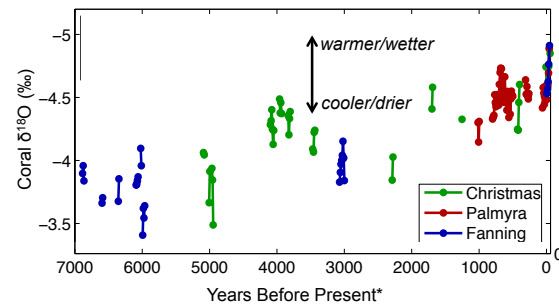
### FOUR OPTIONS

- 1) use less energy
- 2) shift to low-carbon energy
- 3) take CO<sub>2</sub> out of the sky
- 4) geo-engineer our planet's energy balance

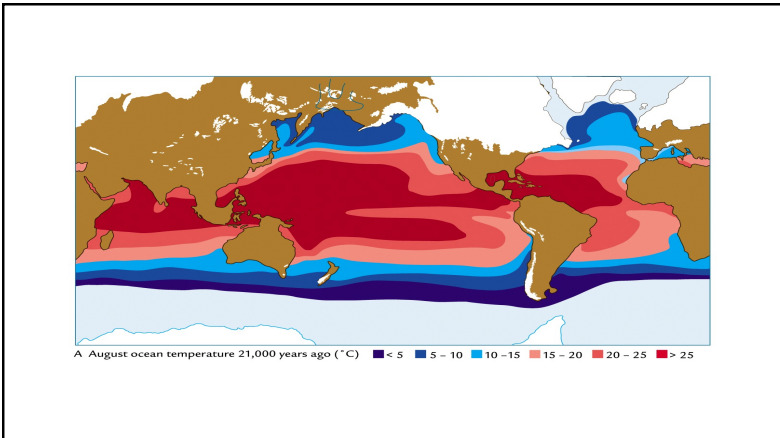
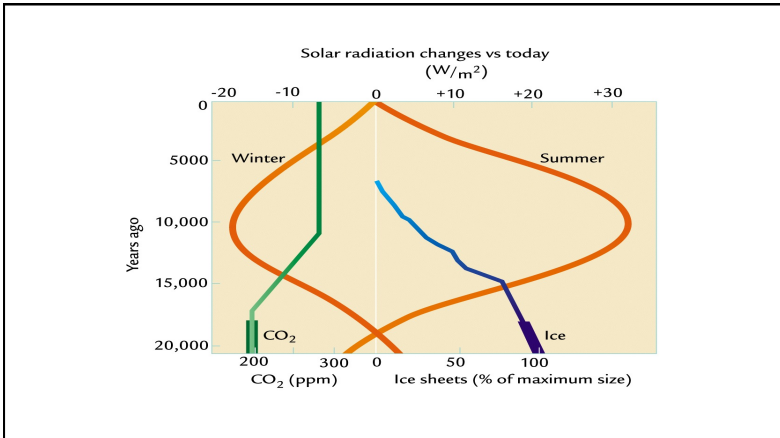
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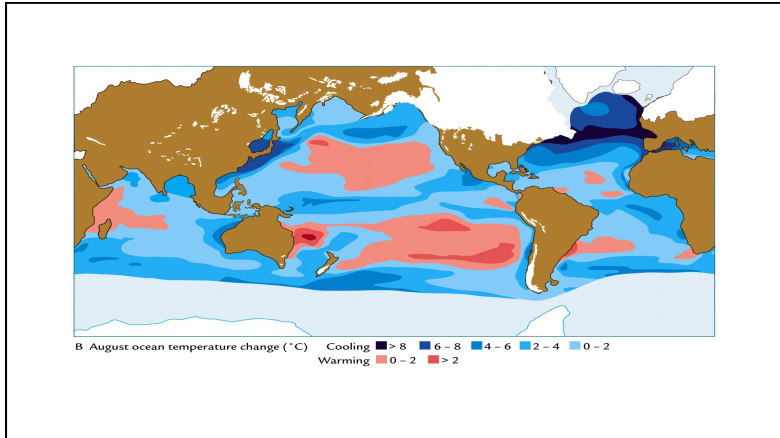
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### AVERAGE CLIMATE IN CENTRAL PACIFIC



Cobb et al., in prep





**TABLE 13-1** Approximate Volumes of Ice and Amounts of Water Stored in Glacial Ice Sheets Shown by Lowering of Sea Level beneath Today's Level

Ice sheet	Location	Excess ice volume (million km <sup>3</sup> )	Sea level	
			Amount (m)	Change (m)*
Laurentide	East-central Canada	25-34†	72-100	50-70
Cordilleran	Western North America	1.8	5	3.5
Greenland	Greenland	2.64	7	5
Britain	England, Scotland, Ireland	0.8	2	1.5
Scandinavian	Northern Europe	7.3	21	15
Barents/Kara	Shelf north of Eurasia	6.9	20	14
East Antarctic	Eastern Antarctica	+3.3‡	9	6
West Antarctic	Western Antarctica	+6.5‡	18	13
Others	Various	1.2	3	2
All ice sheets		55-64	155-183	109-129

\*Net sea level changes are 30% smaller than the volumes of seawater removed from the ocean because ocean bedrock rises when the weight of water is removed.  
 †The higher estimate shown is for a thick ice sheet like that in the CLIMAP maximum reconstruction; the lower estimate is for a thin ice sheet.  
 ‡Present-day volume of ice on Greenland is 3 million km<sup>3</sup>.  
 §Present-day volume of ice on Antarctica is 29 million km<sup>3</sup>.  
 Source: Adapted from G. H. Denton and T. J. Hughes, The Last Great Ice Sheets (New York: John Wiley, 1981).

