

Confessions of a University Lecturer



LITTLE PIPITEA ST

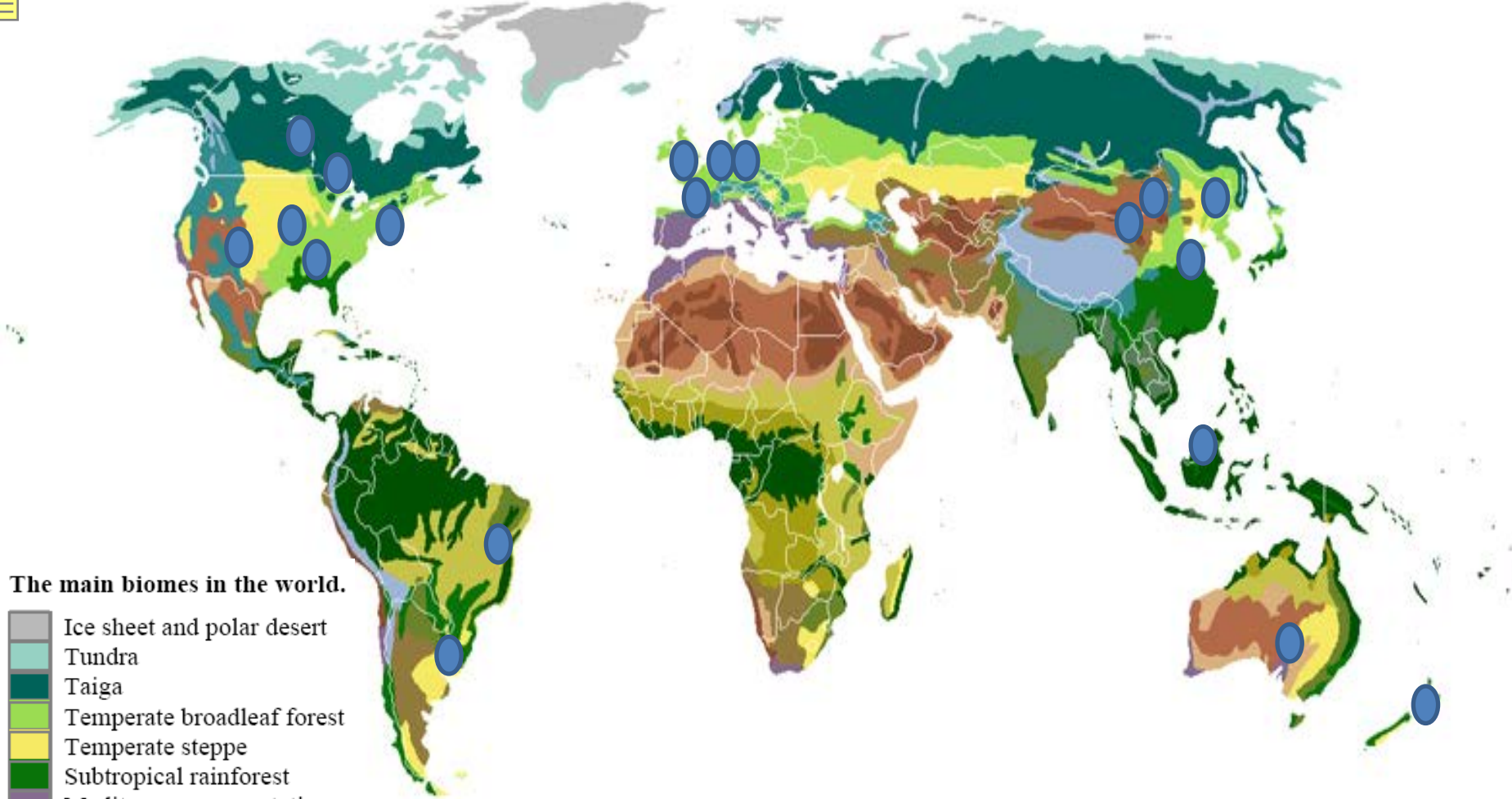


The Kiwi Attitude (Olympics)

Country	Medals	pop. (m)	M/m
Soviet	113	300	0.38
U.S.A.	108	253	0.43
Germany	82	89	0.91
China	54	996	0.05
N.Z.	10	3.4	2.94



Log cabin 6m x 4m built from stems of “ponga” tree ferns. James Morgan lived here c. 1920 – 1945 until he married. Note horse drawn plough used by James for pasture establishment and rabbit traps which provided income during the great 1930s depression.



The main biomes in the world.

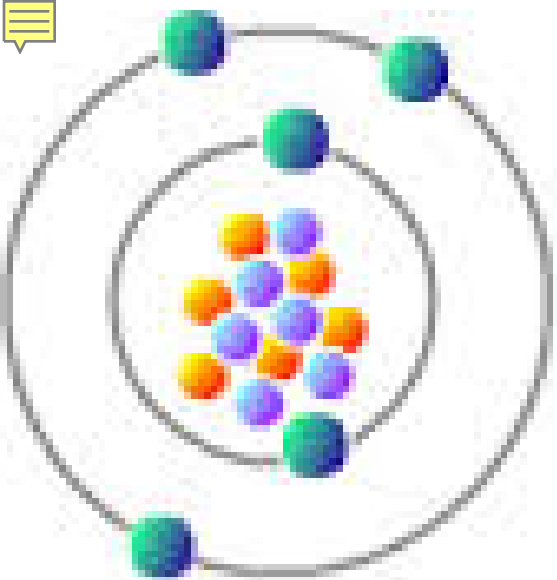
- Ice sheet and polar desert
- Tundra
- Taiga
- Temperate broadleaf forest
- Temperate steppe
- Subtropical rainforest
- Mediterranean vegetation
- Monsoon forest
- Arid desert
- Xeric shrubland
- Dry steppe
- Semiarid desert
- Grass savanna
- Tree savanna
- Subtropical dry forest
- Tropical rainforest
- Alpine tundra
- Montane forest

<http://en.wikipedia.org/wiki/Biome>









Carbon

● 6 Protons

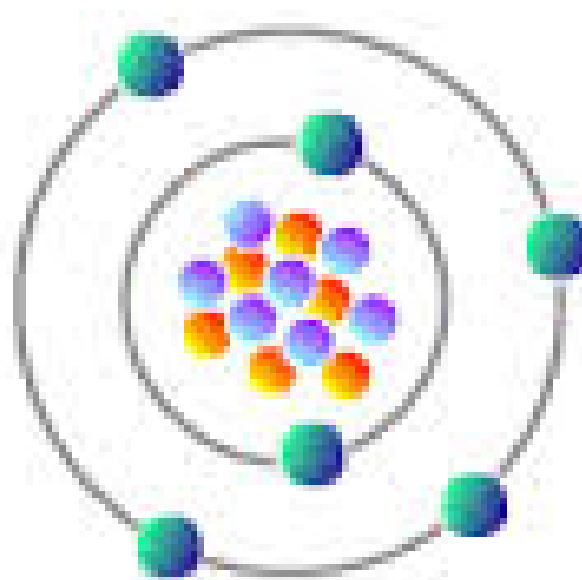
● 6 Neutrons

Nuclear number

$$= 6 + 6$$

$$= 12$$

98.9%



Carbon-13

● 6 Protons

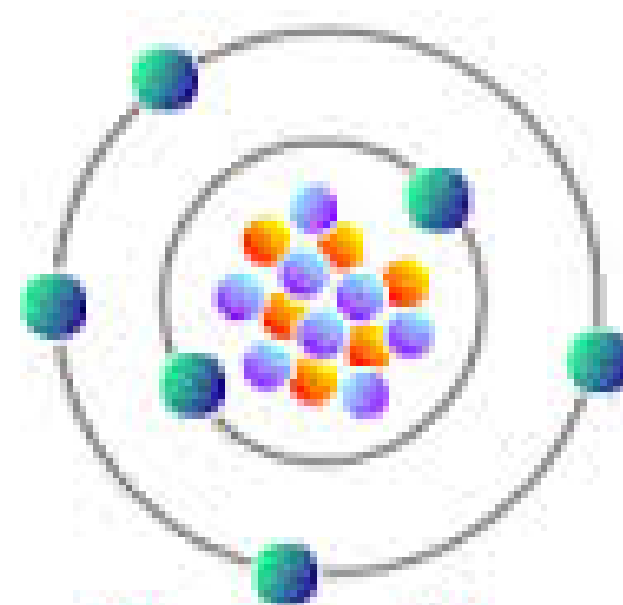
● 7 Neutrons

Nuclear number

$$= 6 + 7$$

$$= 13$$

1.1%



Carbon-14

● 6 Protons

● 8 Neutrons

Nuclear number

$$= 6 + 8$$

$$= 14$$

less than 0.00015











3-724

3-724

3-724

15-824

3-724

13-724

5-824

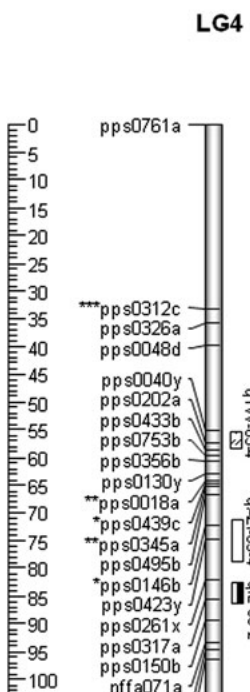
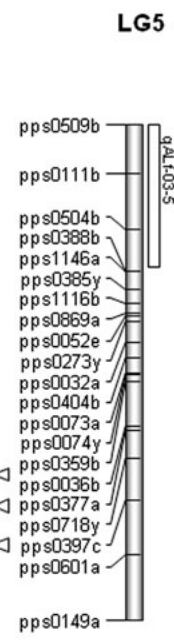
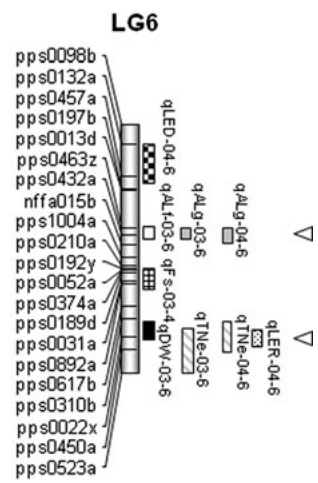
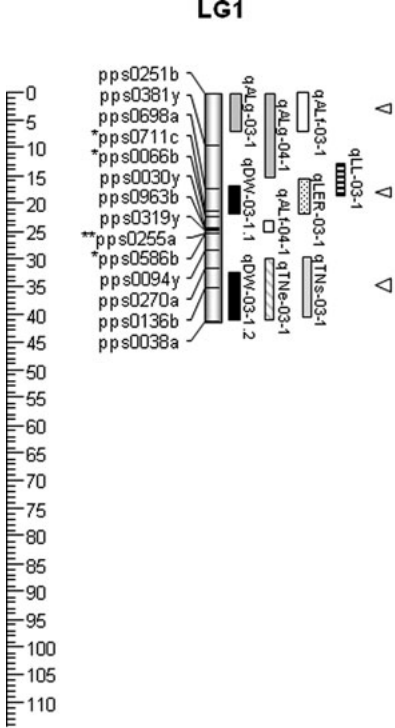
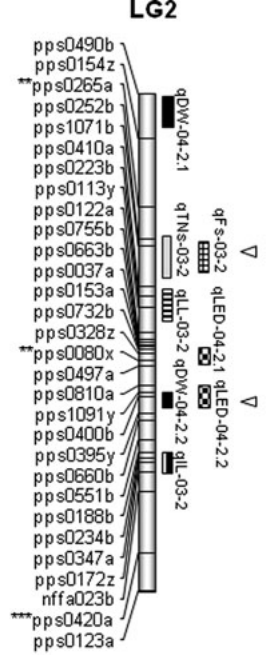
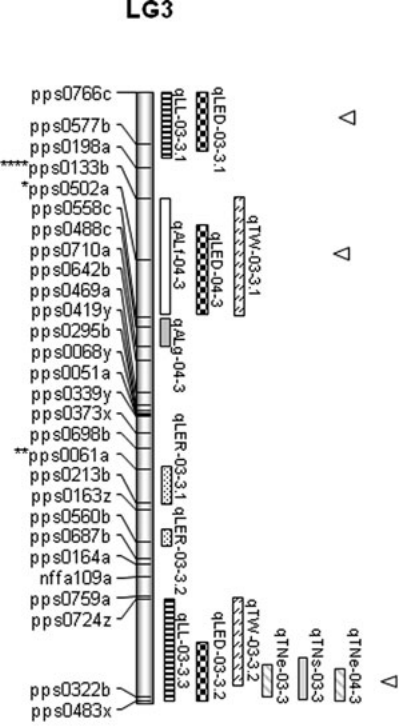
15-824

25

15-824



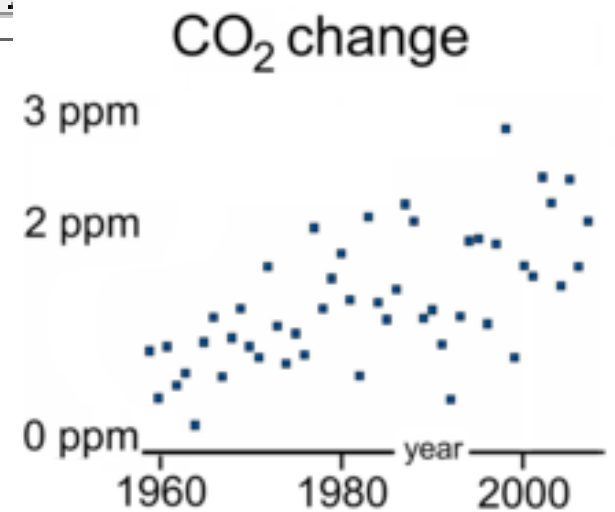
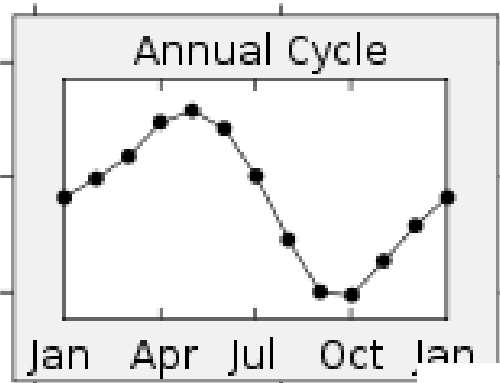
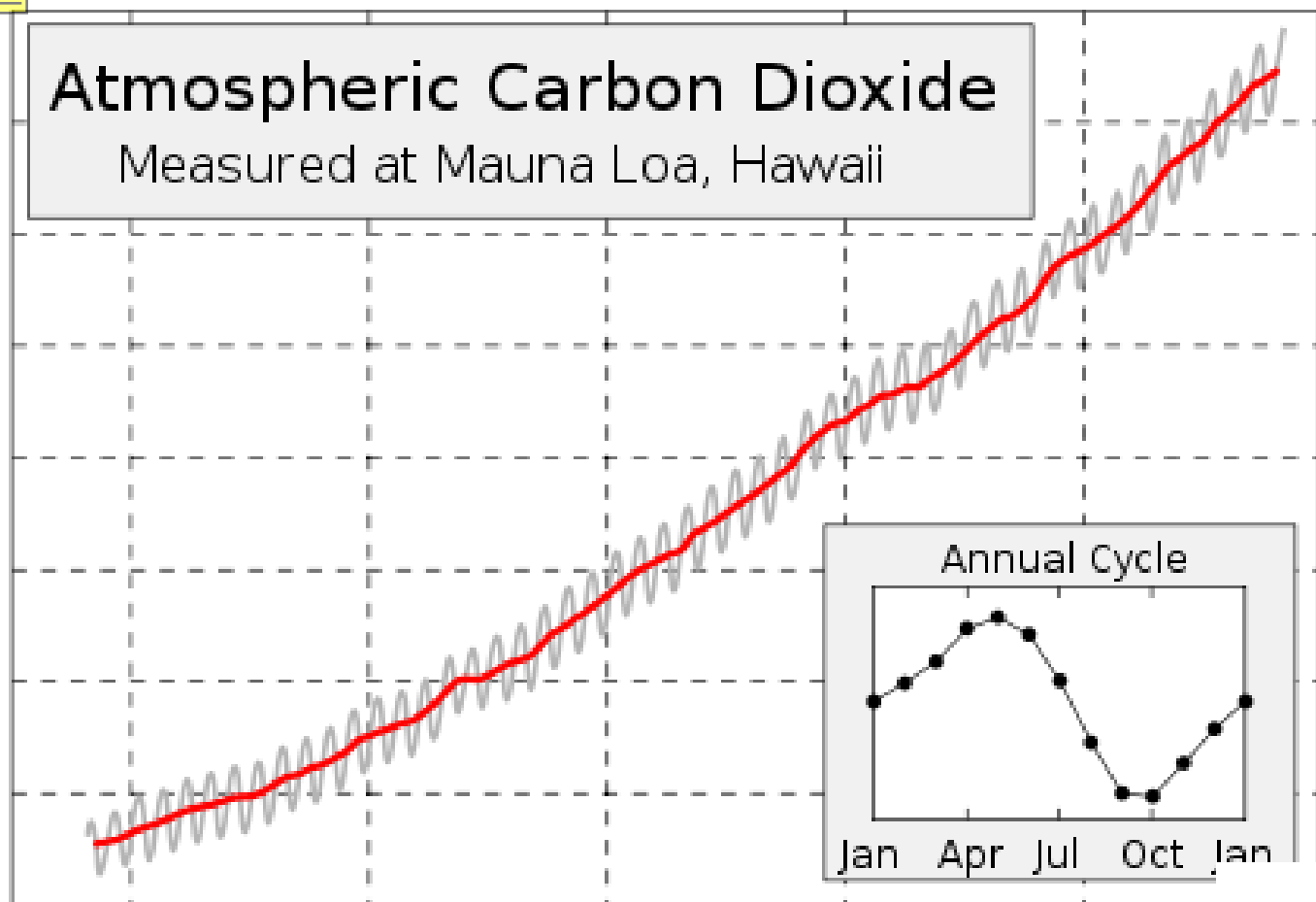
Osmotic pull of ryegrass plants in dry soil needs 300 psi pressure to force sap out of a cut leaf!.



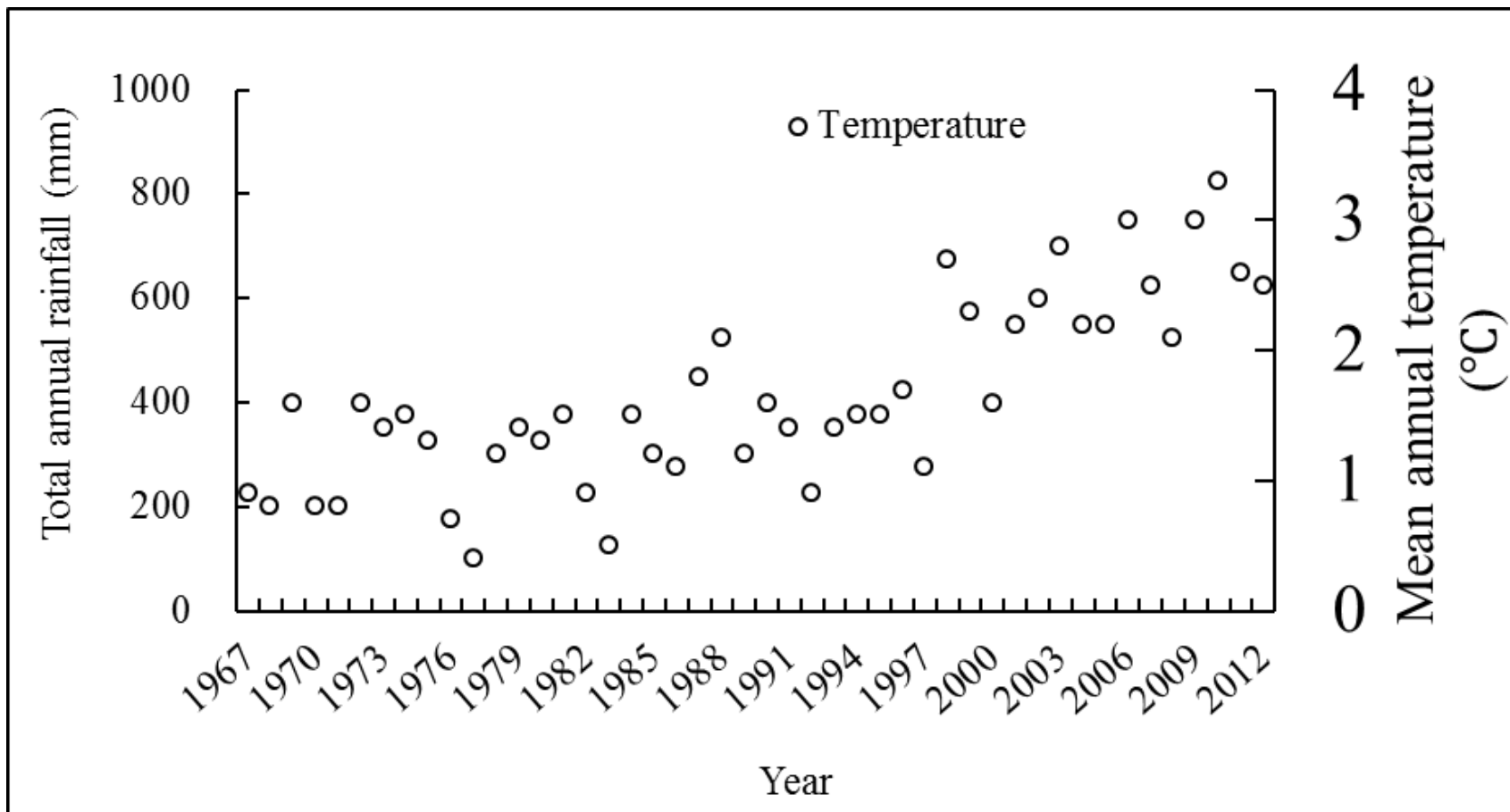
Climate change

Atmospheric Carbon Dioxide

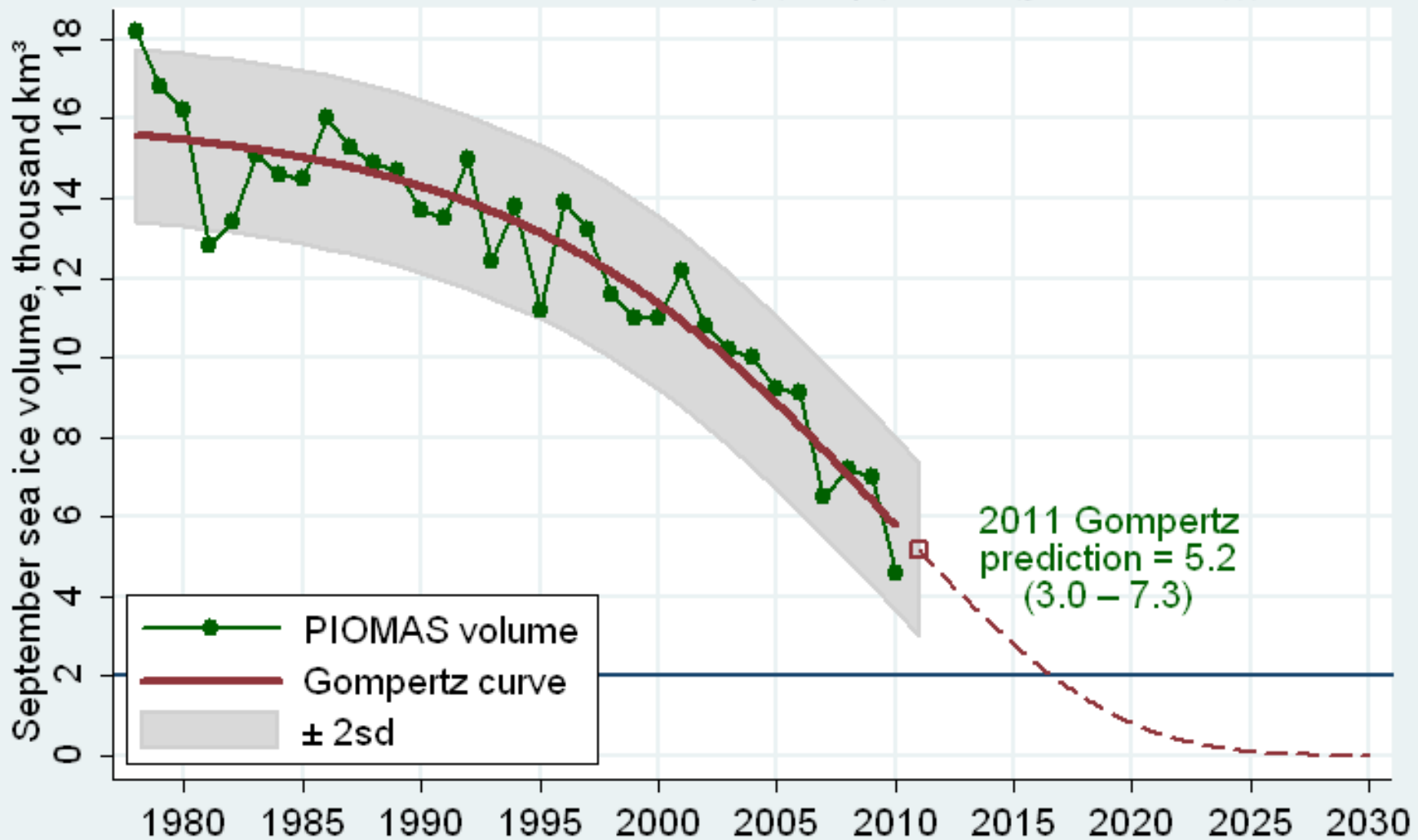
Measured at Mauna Loa, Hawaii







$$\text{PIOMAS volume} = 16.11 * \exp(-\exp(.1076 * (\text{year} - 2010)))$$



graph: L Hamilton 4/9/2011

data: PIOMAS (Zhang & Rothrock 2003)