Confessions of a University Lecturer
## The Kiwi Attitude (Olympics)

<table>
<thead>
<tr>
<th>Country</th>
<th>Medals</th>
<th>pop. (m)</th>
<th>M/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soviet</td>
<td>113</td>
<td>300</td>
<td>0.38</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>108</td>
<td>253</td>
<td>0.43</td>
</tr>
<tr>
<td>Germany</td>
<td>82</td>
<td>89</td>
<td>0.91</td>
</tr>
<tr>
<td>China</td>
<td>54</td>
<td>996</td>
<td>0.05</td>
</tr>
<tr>
<td>N.Z.</td>
<td>10</td>
<td>3.4</td>
<td>2.94</td>
</tr>
</tbody>
</table>
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
- Tropical rainforest
- Alpine tundra
- Montane forest

http://en.wikipedia.org/wiki/Biome
Carbon
- 6 Protons
- 6 Neutrons

Nuclear number = 6 + 6 = 12

Carbon-13
- 6 Protons
- 7 Neutrons

Nuclear number = 6 + 7 = 13

Carbon-14
- 6 Protons
- 8 Neutrons

Nuclear number = 6 + 8 = 14

98.9%  1.1%  less than 0.00015
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
PIOMAS volume = 16.11*exp(-exp(.1076*(year-2010)))

2011 Gompertz prediction = 5.2 (3.0 – 7.3)

graph: L Hamilton 4/9/2011

data: PIOMAS (Zhang & Rothrock 2003)
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