

# LEX LOCI'S TRAVELS

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*An irregular one-pager from The Public Land Consultancy*

## Lex confronts the Flat Earthers At various lakes on public land

Covid19 is a hoax, 5G towers emit death rays, climate change is not happening, and Donald Trump actually won the US election. There's little point in arguing with flat-earthers: anyone who does is either deluded or a co-conspirator.



Today's *metaphorical* flat earthers follow in a centuries-old tradition. Back in 1870, the *literal* flat-earthers challenged Alfred Russell Wallace (often associated with Charles Darwin) to refute them. So Wallace, a qualified surveyor, set up an experiment at the Bedford Flat, a 9.7k long stretch of still water in the Cambridgeshire fens.

There he placed three equally-spaced targets at a constant height above the water's surface. If the earth is flat, then the targets would form a straight line of sight. If the surface is convex then the middle target would be higher than the line of sight between the two end targets.

Wallace eventually won the bet, but only after libel actions and death threats.

Lex has attempted some mathematics, and has formed the view that, if the earth is spherical, then the height of the middle target above the straight line of sight between the two end targets will be:  $\epsilon = R - \sqrt{R^2 - (d/2)^2}$ , where  $\epsilon$  is the height of the middle target above the line of sight,  $R$  is the radius of the earth, and  $d$  is the distance between the end targets.

Now all he needs is some flat water. He starts at Lake Wendouree in Ballarat. In 1956 this was the rowing venue for the Melbourne Olympics - and the outline of the 2000m course is still visible. If the radius of the earth is 6371k (as round-earthers believe), then here  $\epsilon$  will be 0.08m. At nearby Lake Burumbeet, there's a 6k long sight-line, so the  $\epsilon$  figure rises to 0.7m. At Lake Eildon, there's a 12k sight-line, and  $\epsilon$  rises to 2.8 m.

If that's not enough, Lex heads to the longest inland stretch of water in Victoria - Lake Corangamite. Here he can set up his three targets over a distance of 20k. If the earth's radius is 6371k, then the middle target will be 7.8m above the line of sight. Here, Lex would need a good telescope and some tall targets.

What about Gippsland Lakes or Port Phillip? Longer sight-lines - but there would also be choppy seas and tidal effects.

**In fact, wherever he goes, there seem to be problems: the mozzies are biting, or it pours rain. And he forgot to factor in atmospheric refraction and the optics of temperature inversions. Our Lex doesn't get the predicted results. So now he is applying to join the Flat Earth Society. ♦**



*All these lakes are on the lands  
of Victoria's First Peoples*

See you there! Lex Loci

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