

Glowing strings in New Zealand caves

adapted from an article by Joanna Klein

- 1 In the Waitomo caves in New Zealand, thousands of blue lights dangle from the ceilings, twinkling like stars in a night sky. Tourists flock to the caves, awe-struck by the starry night illusions all around them. But the truth about this natural wonder may be hard to fathom — unless you're one of the glowing maggot masterminds behind it.



- 2 Along cave walls and ceilings, a fungus gnat egg hatches. The larva constructs a tube of mucus that can be up to a foot long. It coughs up dozens of silk strings — about a sixth the width of a human hair, and up to nearly two feet long — and dangles them from the bottom of the tube. To attract its victim, the glow worm illuminates these threads with sticky reflective drops by turning on its bioluminescent tail. Each thread can hold about three mayflies before it breaks. This keeps the whole nest from falling.
- 3 Scientists collected thousands of these threads and tested them with about 400 pounds of equipment they carried in and out the caves. They had to do the tests inside, because when the strings were removed from the cave, the droplets disappeared. They evaporate when humidity drops below 80 percent. Without the sticky nets, the glow worms starve.
- 4 The comings and goings of tourists can alter conditions. In fact, tourists once caused the climate in a cave to change so much that the glow worms vanished and didn't return for half a century.

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