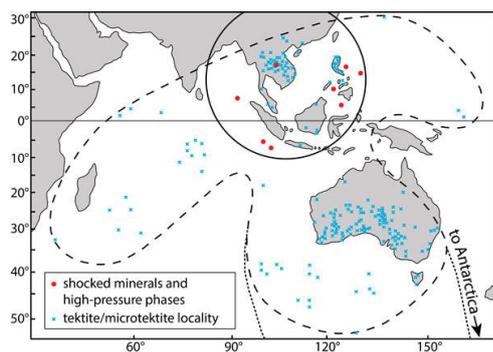


Has an extraterrestrial intelligence visited Earth? My new paper proposes that the vast Australasian tektite strewn field represents the first strong alien technosignature.



The Australasian strewn field stretches from Antarctica in the south, to China in the north, with microtektite samples recovered from as far-flung locations as Madagascar and the ocean floor far beyond Papua. There is no other geological debris field of comparable size anywhere on Earth.

For well over a century, the precise nature of the cataclysmic event that produced australite tektites, around 780,000 years ago, has remained mysterious and

scientifically contentious. In 1836, the inland New South Wales explorer, Major Thomas Mitchell, presented the famous biologist Charles Darwin with a button-shaped australite during the Australian part of the Beagle's voyage. Darwin later wrote that the object was almost certainly an *obsidian bomb* expelled during volcanic action. The volcanic formation hypothesis became popular as a result, but dissenters remained. Early opinions ranged from ancient lost Aboriginal glass making technology, through lightning strikes fusing material in dust clouds, to more extraterrestrial origins. Towards the middle of the 20<sup>th</sup> century the latter hypothesis, a cosmic cause of some type, had become widely accepted as the only scientific possibility.

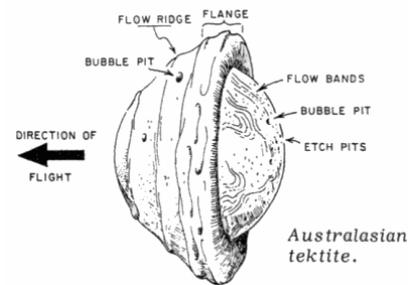
The approach I have taken in resolving the century-long australite mystery is based on the scientific method's sound principles, assessing the many relevant studies, performing measurements, and carefully evaluating findings. The legendary cosmologist and SETI (Search for Extraterrestrial Intelligence) enthusiast, Dr Carl Sagan, famously stated, "Extraordinary claims require extraordinary evidence". Regarding the australite alien technosignature hypothesis, it is more the case that extraordinary evidence has necessitated a remarkable claim.

The famous FERMI Paradox has long highlighted that we should expect to find plentiful evidence of other intelligent life in our galaxy. There has been sufficient time for other civilisations to arise,

colonise new star systems and even explore our region of space. While the chances of alien visitation occurring in any single century are minuscule, the odds for such an occurrence during the last 4.5 billion years are considerably higher. The question arises from the FERMI paradox: why don't we observe evidence that elder lifeforms once passed this way?

Australite representing debris from an extraterrestrial technology immediately resolves the FERMI paradox by confirming our expected extraterrestrial technological visitors of prehistory, at least once, 780,000 years ago. I propose that the source object was a type of Bracewell probe (an interstellar artificial superintelligence), one which may even have been observed in the sky by our distant hominin ancestors.

Experimental work at the NASA Ames Research Centre indicates the australite's source body was a highly transparent glassy object of well over 10,000 tons (~75% silica). This abnormal morphology and too high silica content make this exceptional, unlike any asteroids/comets detected. Additionally, for such a large object (1-2km diameter) to enter into an orbit around our planet is unprecedented, necessitating a very fortunate path of approach.



The cause of the explosive event that produced the australite tektite is perhaps unknowable; it may have been intentional self-destruction or the result of a catastrophic error. What is certain is the proto-australite tektite buttons formed in space, initially as spherical droplets of liquid glass, some of which trapped bubbles of hard vacuum. These spherules entered our atmosphere at shallow angles indicative of a decaying orbit and underwent secondary melting. The amount of ablation observed on australite buttons corresponds to velocities of ~11 km/sec, indicating an arrival from space. Tektites following ballistic trajectories from one point to another on the Earth, such as during an impact event, travel at up to ~6 km/sec.

It is notable that 780,000 years ago, our planet went through a series of anomalous events on a grand scale. Several distinct asteroid impact sites have been detected across Antarctica, Canada, Central America, Southeast Asia and Tasmania and concurrent with this bombardment is the last complete geomagnetic reversal. Alongside these profound geological occurrences was an anomalous change in hominin genetics that gave rise to all large-brained human ancestors, including Neanderthals, Denisovans, and modern humans. Further investigation is ongoing as to whether these anomalies indicate an interaction between the probe and Earth's environment or biosphere.

We should consider here the words of Harvard astronomer, Avi Loeb, speaking on his Oumuamua technosignature hypothesis: "If you're not ready to find exceptional things, you won't discover them. Of course, every argument needs to be based on evidence, but if the evidence points to an anomaly, we need to talk about an anomaly. Who cares if this anomaly appeared or did not appear in science-fiction books?"

The paper by Bruce Fenton, titled "*Australasian Tektite Strewn Field Indicates Extraterrestrial Technosignature*", is scheduled for publication in March 2021.

ABOUT THE AUTHOR Bruce R. Fenton is an independent technosignature researcher, founder of the Genomic SETI Project, and an Information Technology graduate of Anglia Ruskin University. He is best known for his explorations in the Ecuadorian Amazon as well as various appearances on both the Science Channel and History Channel.