Most skeptics believe that the universe harbours life-forms other than our own, but the evidence for them having visited here, either in the ancient past or in the present, is not convincing.

In 1947, pilot Kenneth Arnold saw nine crescent-shaped objects that "flew like a saucer would if you skipped it across the water". A newspaper article used the term "flying saucer", and people started to report seeing saucer-shaped objects.

In the early 1960s, Betty and Barney Hill reported that they had been abducted by aliens, describing them as men with big noses, dark or black hair and eyes, and a relaxed human appearance. Some years later, when the couple were put under hypnotic regression, they said that the aliens were small, had grey skin, large black wrap-around eyes.

This second description matched an alien character in the science fiction series *The Outer Limits*, the programme had screened 12 days before the interview. It formed the basis for the now-classic "Grey" alien, popularised by writers like Whitley Streiber and Budd Hopkins.

On December 6th 1952, people from all over New Zealand reported seeing two UFOs, making this one of the most well-documented UFO sightings of all time. It was, in fact, a sophisticated hoax planned by some Otago University students and not revealed as such for 20 years.

These three incidents reveal common problems with UFO sightings and alien abductions --

misreporting, malleable memory and outright hoaxes.

Misreporting

Surprisingly few people these days are familiar with the night sky, and even experts have difficulty judging the size and distance of objects. It can be easy to mistake the very bright planets (Venus and Jupiter) for objects within our atmosphere, especially when glimpsed from a moving vehicle. About 80% of UFO sightings are thought to be either Venus or Jupiter. Even the Moon can trick people, particularly when seen under unusual conditions. Add to that aircraft, advertising blimps, clouds, flocks of birds and other aerial objects, and you can eliminate the vast amount of sightings as natural phenomena.

Malleable Memory

Memories can change, blending new information with old. This is particularly so under certain conditions, such as hypnotic regression or other techniques used by people "treating" alleged alien abductees. It is possible to produce, for example, the full range of symptoms reported by abductees (such as paralysis, a feeling of being watched, floating, sexual manipulation) through such techniques and via a relatively common experience known as sleep paralysis. An earlier age reported similar experiences but saw them as resulting from visiting demons.

A major problem occurs when no independent verification exists. Confabulations - where false memories are built up from other memories and fantasies - can occur readily and can be difficult to tell from real recall. This area is a very difficult one as it can appear to call into question people's truthfulness when, in fact, they may genuinely believe in the experience they "remember". This aspect has obvious parallels with other areas of memory-related inquiry such as "recovered" memory of alleged long-past sexual abuse or Satanic Ritual Abuse.

Hoaxes

There is entertainment to be had in producing a UFO hoax and, these days, the potential for a lucrative income via media sales. Sometimes hoaxes are done for the latter, sometimes by people who want to be accepted in the UFO community and see an encounter as a form of "entry" pass.

A hoax perpetrated by a group of Otago University students in 1952 was regarded as one of the strongest cases for the existence of UFOs for over 20 years, until the carefully planned setup was revealed.

One set of UFO photographs taken in Venezuela in 1966 by Inake Oses is still often reproduced in UFO books, despite the fact that Oses has stated that he faked them to get revenge on some ufologist friends who had scorned him for not believing.

The often-mentioned MJ12 documents, sometimes called the Majestic Report, which allegedly contains papers relating to a highpowered US cover-up of UFO information, is generally recognised, even by UFO supporters, as fake. However, this doesn't stop it being referenced regularly. By the very nature of unidentified flying objects - a less biased name would be unidentified visual phenomena - not all will be identifiable. However, the fact that we can't tell what 100% of these things are, does not mean that the remaining 1% therefore have to be UFOs. They are merely unidentifiable using the available information.

Surveys of skeptical organisations show that around 80-90% of members believe that there is life on other planets; many support the scientific search for extra-terrestrial intelligence.

Given the vastness of space and the common existence of the appropriate elements required, it seems reasonable to believe that other life has evolved elsewhere. Skeptics, however, do not generally believe that other lifeforms have visited Earth either in the past (as ancient astronauts) or now.

Some alien abductee proponents claim that as many as 5 million Americans have been abducted. In the past 30 years since the Hills' alleged encounter, this would amount to roughly *one every minute every night of every year*. Yet no physical evidence has ever been found.

If aliens had visited this planet in the numbers implied, then it would be reasonable to expect some hard evidence by now - not grainy photos, out-of-focus films, uncorroborated encounters and vague skin markings.

Whole books have been written about the alleged crash of an alien craft at Roswell in 1947, where alien bodies were said to have been found by the military. It appears that there had been a cover-up, but of a secret surveillance balloon operation, not of an alien encounter.

Odd-looking materials and strange scripts on recovered artefacts were apparently the product of the factory which produced the balloons for the military. Eyewitness claims have changed or been contradictory; most of the reports are, in fact, second- and third-hand; basic errors of fact have been accepted without much in the way of questioning. The infamous Roswell autopsy film touted in 1995 is accepted, even by UFO supporters, as most likely a hoax.

Things to do

Try faking a UFO photograph and show it to friends to see their reaction.

Spend an evening near an airport and watch the lights in the sky to see how hard it can be to judge size and distance.

Vicki Hyde was a founder member of the New Zealand Spaceflight Association and is author of Godzone Skies: Astronomy for New Zealanders.







How is the evidence for UFOs or alien abductions any better than the evidence for Santa Claus or the Tooth Fairy?

[Finding evidence for extraterrestrial intelligence] would be an absolutely transforming event in human history. But, the stakes are so high on whether it's true or false, that we must demand the more rigorous standards of evidence. Precisely because it's so exciting. That's the circumstance in which our hopes may dominate our skeptical scrutiny of the data. So, we have to be very careful. There have been a few instances in the [past]. We thought we found something, and it always turned out to be explicable...