

A CATALOGUE AND ANALYSIS OF AUSTRALIAN 'ANGEL HAIR' CASES

Compiled by Keith Basterfield

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This document brings together a compilation of Australian reports which appear to relate to the topic of "Angel hair," and presents an analysis of the available data.

The catalogue format is (where known), case number, date of the fall, time of the fall, duration of the fall and geographic location of the fall, followed by a latitude and longitude figure in degrees and minutes. The available text is next, with a source or sources quoted.

Attachment one provides an analysis of the catalogue data broken down in a number of ways.

Attachment two lists known instances of falls of spiders' web, as identified by the presence of spiders, for comparison purposes with the main catalogue.

Attachment three presents two cases of falls where scientific analysis indicated the fall was due to spiders' web.

Attachment four is a compilation of notes from various sources about the topic of spiders and spiders' web.

THE CATALOGUE

(1) Kingsthorpe Queensland (Date unknown)

“My neighbour, Mrs E Kath, while in her garden happened to look up and saw what she thought was a huge flock of birds, or a large amount of smallish pieces of tissue paper high in the cloudless sky. However, several pieces came floating down. She examined them and found they were like lather off soap. They quickly melted in her hand.”

Source: (1) Morell, R W (1983). “Some observations on Angel Hair” OSEAP Journal 1(2):6. Gives a date of 13 July 1959 and cites Hervey as his source. (2) Hervey, M (1969). UFOs over the Southern Hemisphere. Sydney. Horwitz. p122 carries a letter from one Mrs Kajewski, Kingsthorpe but provides no date and is listed under a heading of “First hand reports (Queensland, Northern Territory and New Guinea.)”

(2) Winter 1914 Mid-afternoon Ca 60mins. Mount Lyndhurst Station Far North of South Australia (30.12S 138.34E)

“I would like to add my experience with this silk like substance which has fallen on farms recently. During the unusual weather conditions following the break of the 1914 drought, in the Far North of SA (at a boundary riders hut called Leslies Well on Mount Lyndhurst station) the weather was cool and damp following the first winter rains.

In mid-afternoon, on a steady light breeze from the south-west, this substance floated by at a constant altitude. Some pieces, six to nine inches long, fell to earth and dissolved in about minutes, leaving no trace.

This visitation lasted about an hour, and was followed by another two or three weeks later, in the same conditions. My late father spoke of several visitations, especially after the great drought of the 1860's. The consensus was that the substance was an atmospheric fungus.”

Source: Letter to the Editor from E C Finn, Seaview Road, Lynton. Adelaide Advertiser. 25 May 1968.

(3) October 1953 Victoria

“In recent years only a few UFO reports refer to a filamentous substance “angel's hair”, having been seen falling from the sky after a flying saucer had passed over. In the case below, the second in Australia but only now reported to UFOIC, it is believed that the same substance is involved. In the earliest report of October 1953, over Victoria a sample was recovered and made available for laboratory analysis. The examination revealed that the substance consisted of a nylon-like amorphous mass with traces of magnesium, calcium, boron and silicon. Since then the original material, which was kept in an air-tight container shrank from three to a mere half inch without residue.” (A photograph of the remaining sample was shown.) (1)

Source: (1) Australian Flying Saucer Review (NSW) No. 9 p12 (including photo). Other references: (2) UFOIC Newsletter Nov. 1966 p12. (3) Saga's UFO Report Dec 1977 p27.

(4) 9 October 1953 1550 hrs Caulfield Melbourne Victoria (37.49S 144.53E)

“While cycling along a street in the Melbourne suburb of Caulfield at about 3.50 p.m. on October 9th 1953, Mr John Anderson noticed a silken thread curving to the roadway. On investigation, it turned out to be a grey-white, cobweb-like filament which was draped around a telegraph pole at a point a few feet from the top, and across to a tree, growing in a nearby church forecourt. The thread had a tendency to become wrinkled as thin woollen threads do, and on handling, rapidly disintegrated until no trace of it was left.

Returning to his home with a tangled length of the substance, Mr Anderson placed it on top of an ink bottle while debating what to do with it, but before a sample could be analysed the substance, again disappeared, this time within an hour.”

Source: Hervey, M (1969). “UFOs over the Southern Hemisphere.” Sydney. Horwitz. p.72.

Weather: Essendon Airport 3pm 19.6C 8/8 cloud cover Wind from NW at 37km/hr.

(5) 12 May 1954 1600hrs Shepparton Victoria (36.23S 145.24E)

“Mr Ramon Estrada, of Shepparton, reported that at 4pm on May 12th 1954, he happened to see silk-like threads floating down from the sky. He also saw several long strands of this material sailing north. The average length of these strands was thirty feet. At 4.30 pm there was a similar occurrence, only the number of strands was doubled.

Mr Estrada gathered some of these filaments and although they became wrinkled, they did not disintegrate. In an air-tight container he sent a sample of this mysterious substance to the headquarters of AFSB which, in its subsequent report, said that the substance was pure white in colour, silky in formation, though harder in texture. It was odourless, warm on touch like cotton, and different from cobwebs which, after a time, are sticky and grey.

A microscopic examination revealed a mass formation of uniform threads of a very fine type. A comparison with the microscopic analysis of cobwebs showed that the Shepparton filaments were coarser. There was some resemblance to white raw silk or even nylon. The ‘Cosmic Silk’ was highly susceptible to the disintegrating action of the atmosphere and the sample had to be kept in a tightly-closed container. The substance did not dissolve in water. A test in a strong caustic soda solution caused the matter to disappear momentarily. It burned rapidly, leaving no smell or ash unlike wool, cotton, silk or cobwebs.

The threads were not sticky, or oily but dry. Like silk they stretched easily at the ends as little hairs were detached from the spool. The most important characteristic was the length of the original strands coming down from the sky which averaged thirtyfeet.

Source: Hervey, M (1969.) UFOs over the Southern Hemisphere. Sydney. Horwitz. pp73-74.

Weather: Bureau of Meteorology unable to supply details for Shepparton for this date.

(6) October 1955 Port Augusta South Australia (32.30S 137.46E)

“October-, 1955 Port Augusta Australia Yes” (1) In a section about angel hair, where ‘yes’ refers to a ‘UFO in area.’

White filament falls at time of UFO sighting (2).

Source: (1) Stringfield, L H (1957). “*Inside Saucer-Post...3-0 Blue*” Cincinnatti. p50.
(2) CUFOS trace catalogue.

(7) 10 July 1956 Melbourne Victoria (37.49S 144.53E)

“Millions of gossamer threads draped Melbourne’s seaside suburbs and hung from wire and trees, but then completely vanished in a few hours. A Commonwealth Industrial Organisation studied and tested them with ethyl acetate, acetone and lactophenol dye. They magnified the threads 100 diameters, burned, and melted them. They decided that the threads were not wool, did not come from feathers, were not cotton, nor did they appear to be any known synthetic fiber.”

Source: (1) *Saga magazine’s UFO Report Dec 1977 p 26.* (2) *Flying Saucer Review (UK) Jul/Aug 1956 p27.*

Weather: Essendon Airport 12 noon 8.9C 2/8 cloud Wind from S at 11km/hr.

(8) 5 August 1961 0820hrs 55mins Mt Hale Station Western Australia (26.03S 117.15E)

“Twelve round flying objects, moving fast in pairs, were sighted on August 6th, 1961, by ten independent witnesses near Meekatharra. They left a white trail of “streamers” which crumbled and disappeared when picked up by startled watchers at Mt Hale station, seventy-five miles west of Meekatharra. The silvery, round objects passed over the station at regular intervals between 8.20 and 9.15 am.

One of the witnesses, Mr E Payne, stated: “The objects were flying at an altitude of 8,000 to 10,000 feet. I picked up one of the ‘streamers’, but it vanished in my hands as it touched my skin.” He drove into Meekatharra to report the incident to the police. Constable J Coyle checked with the Department of Civil Aviation, which said that no aircraft were in the area and no meteorological balloons had been sent up. An official said that the RAAF would make a report on the sightings to the Department of Air.”

Source: *Hervey, M. (1969.) UFOs over the Southern Hemisphere. Sydney. Horwitz. p156. (Hervey gives date as 6th August.)*

“I am a Shearing Contractor aged 37 years and am at present working at Mt Hale station which is situated about 70 miles west of Meekatharra. My home address is (deleted). About 8.20 am on the 5th August, 1961, Mr (deleted) Mt Hale Station came over the shearing shed and asked me to have a look at two objects in the sky. The objects were round in shape, bright silver, about 2 feet each in diameter, that is from ground level. The objects appeared to be about 8 to 10,000 feet, possibly higher. They were travelling at a fast speed and could be kept in sight for only about two minutes. Their course appeared definite, no surface wind. In all 12 objects were sighted, the last being about 9.15 a.m. They appeared to be in pairs. The objects gave off a white substance which took on various shapes whilst falling to the ground. The white substance was followed and I managed to pick up some of the substance. It was of snow white colour and appeared to be in a fine mesh. It crumbled very easily. Apart from (deleted) the following persons saw the objects. (deleted). The persons mentioned are

shearers employed by me. Some station hands also saw the objects....”

Source: RAAF files.

Other references are (1) APRO Bulletin 1962 1 p1 (2) Lorenzen, C & J (1969.) UFOs The Whole Story. New York. Signet. p232. (3) Adelaide Advertiser 7 August 1961. (4) Holledge, J (1965). Flying Saucers Over Australia. Sydney. Horwitz. p86. This source mentions that the objects travelled from N to S.

Weather 9am Meekatharra 15.2C 1/8 cloud Wind from N at 18km/hr.

(9) 6 June 1962 1120hrs Caroda New South Wales (30.01S 150.22E)

“On 6th June 1962, at 11.20 a.m., six silent UFOs, erratically flying high in a cloudless sky, attracted the attention of residents of “Shalimar” Caroda. The first of these objects resembled a very brilliant star, and climbed slowly to an altitude slightly south of the zenith, where it became too small to be seen.

A few minutes later, a second silvery globe was observed travelling from the north about half-way between the zenith and north-east horizon, then in an arc which brought it overhead. After completing a circle, it hovered for ten seconds, then moved off in a south-easterly direction where it was lost from view about 30 degrees above the horizon. Of all the objects, this one was the lowest and best defined, enabling its circular outline to be distinguished from that of an aircraft.

A third object appeared, resembling the first and following a similar route. Then another very high speck of light became visible in the west. It appeared to leave a trail of shiny, web-like filaments, which gradually disintegrated as they drifted through the air. Two UFOs, followed very high in the sky and were seen for only a short while.

Mrs Jean Williams, her daughter Julie and Mrs Marie Moore are agreed that, for some time afterwards, a hazy mist of light threads seemed to fill the sky. Mr S Willams, who returned home later, noticed that these traces of silvery thread, which slowly disintegrated, were sometimes as long as five feet, and seemed to be of a fine nylon-like texture. Although a search over the countryside for traces of these wispy threads was to no avail, he is convinced that the strange substance emanated from the flying saucers which had passed overhead.

Source: Hervey, M (1969.) UFO over the Southern Hemisphere. Sydney. Horwitz. pp47-48.

Note: Caroda is 140km NNW of Tamworth. Weather: 9am Narrabri West 7.2C Cloudless Wind-calm.

(10) 11 May 1968 Brinkley South Australia (35.15S 139.13E)

Web-like strands, up to a chain in length, floated down like snow, on a farm belonging to Mr R A Kennett. He said that it was similar to asbestos rope of pencil width, which stuck to soil and twigs. Mr Mincham of the South Australian Museum believes it to be spiders’ web.

Source: Sunday Mail 12 May 1968.

Note: Compare this case to the others of May 1968 listed in attachment 2. Weather: 12noon

Adelaide 16.1C 6/8 cloud Wind from the W at 11km/hr.

(11) 11 May 1968 Cheltenham Adelaide South Australia (34.56S 138.36E)

Web-like “fine woven cotton” was seen on a lawn and draped over wires and a fence. Mr V H Mincham of the SA Museum believed it to be spiders’ web.

Source: Adelaide Advertiser 13 May 1968.

Note: Compare this case to the others of May 1968 listed in attachment 2. Weather: 12noon

Adelaide 16.1C 6/8 cloud Wind from the W at 11km/hr.

(12) 29 August 1969 Mid afternoon Grafton New South Wales (29.41S 152.56E)

“Mid afternoon found me relaxing on a surfboard in the middle of the Clarence River. I noticed streams of fine white filament coming down (out of the sky) over the river. I was immediately fascinated as this was a great opportunity to directly sample what I took to be a good example of a natural phenomenon. I took the streams to be the floating web of migratory balloon spiders. I also knew that in UFO lore material of a similar appearance was occasionally linked to UFOs-namely “angel hair”-thought by some researchers to be a by product of whatever strange processes powered flying saucers. So that afternoon I paddled over to the riverbank where large amounts of this “spider web” were coming down. I felt that getting a good look at this stuff and keeping samples would be a handy resource or a calibration for the unlikely prospect of coming across alleged UFO related “angel hair”-an exotic item of UFO physical evidence. What I was not prepared for was the improbable. There in my hands was material that did not quite fit into the migratory spider web category. There were no tell tale baby spiders. As the baby spiders can quickly detach themselves from the web, the absence of spiders did not in itself intrigue me. What followed did. I began rolling up a copious amount of the material in my hands. The filaments diminished in size (not too unusual given the viscous changes that can occur in those conditions, particularly with the possible addition of water from my hands), and then the material eventually dissipated into nothing visible and leaving no trace. It gave the impression of rapid sublimation from solid to gas, but no vapors or odor were noticed. The properties of spiders web are well known, and apparently disappearing to touch is not one of them! With the realization that I may be dealing with something exotic I raced to a nearby residence to get some sample jars. The fall of filaments had been quite profuse and much of it had come down along the riverbank. When I returned a few minutes later there was none in evidence. While only a very light breeze was apparent, the topography was such that spiders web should have been still in great profusion. I even entered the water and investigated the riverbank for a considerable distance in the direction of apparent travel. There was no trace of the filament fall. The material did not seem to be spiders web. So called “angel hair” had the reported characteristic of quickly disappearing. Was this the apocryphal “angel hair”-the “manna” of the saucers!

“Imagine my chagrin when I subsequently found out that at the same time, a number of Grafton people, including my own parents, had seen a UFO, described by some as an elongated white mass, travelling in a trajectory that would have passed over my river position but in a direction at right angles to the aerial flow of material I had witnessed. Perhaps the “UFO” may have been a more compacted mass of the filaments I had seen travelling in a different direction? While tantalizing the experience was ultimately frustrating. I had it right there in my own hands.”

Source: (1) Personal communication from Bill Chalker to the author. 30 Dec 2000.

(2) *Chalker, Bill (1996.) The Oz Files. Duffy & Snellgrove. Potts Point. pp4-5.*

(13) 14 March 1971 1600hrs Christies Beach Adelaide South Australia (34.56S 138.36E)

Five silver objects were seen. Four of these were in a "box" formation, i.e. forming the corners of a square, and a fifth leading. Filaments were reported falling.

Source: Personal communication from C Norris to J Burford. 20 May 1971. Weather: 3pm Adelaide

30.7C 8/8 cloud Wind from the W at 11km/hr.

(14) 15 March 1971 1510hrs 40mins Maslins Beach South Australia (34.56S 138.36E)

Between 3.10 and 3.50pm Mr Matthews of Maslins Beach sighted objects described in the AFSRS Newsletter in the following terms: silvery white, globular, moving (a) rapidly west to east, (b) almost stationary. Some were rising until they disappeared. Some appeared to be double, joined together by a cord or thread. These double objects moved around each other in an apparently aimless pattern. Near the ground were a lot of pieces of what looked like white "fairy floss." When picked up and handled, this tended to "melt" or "disappear." It was extremely light and tenuous, and sometimes seemed to be made up of white strands, extremely thin. Some of the very high objects moved from west to east. Some in other directions. Some changed direction. The high ones went higher and disappeared. It was a perfectly cloudless day, bright sunshine. Absolutely no wind at ground level. "Small pieces were floating in our garden later."

Source: AFSRS Magazine June 1971 p16.

Weather: 3pm Adelaide 21.7C 5/8cloud Wind from SE at 21km/hr.

(15) 28 November 1972 1400hrs Glenelg Adelaide South Australia (34.56S 138.36E)

"At 1400 hours while working outside I noticed a length of glistening material wrapped round a signpost...Looking up, I could see that the sky was holding a small amount, and that in places around the Anzac Highway, pieces of "cobweb" had stuck fast to telephone cables and other objects. I was curious about the substance so collected a small sample in a plastic drinking cup. It did not dissolve before I placed it in a fairly airtight container at home.

Looking up near the Sun, strands of the cobweb could be seen., along with small spheres of it, drifting by occasionally. I cannot estimate the size of the spheres, because I had no reference point with which to guess their size, except blue sky...As sample specimens were sparse I decided that I would get the longest strand visible, which was the one initially seen...It was not easy collecting the sample in the open because of the wind and sunlight. However, a small piece of the thickest section was collected but unfortunately the thin strands dissolved into my fingers."

The news on the radio gave the temperature as 28.5 degrees C. There was an ENE wind blowing with a sea breeze. "The sea breeze was coming directly from the WNW and so were the strands."

The threads were thin and fine, with pieces up to four times at least thicker than other parts of the same strand. It adhered to everything, fingers and containers. The thinnest parts dissolved on the fingers almost immediately. No small spiders were seen near the substance. The majority of the web was shiny and transparent, but other pieces were solid and whitish in colour.

Source: Personal communication from observer Peter Horne to Keith Basterfield.

(16) 19 May 1973 Gawler South Australia (34.36S 138.45E)

Strange nylon-like patterns observed in the sky, which vapourised on touching when they descended. Looked like a "shower of nylon."

Source: (1) The Gawler Bunyip newspaper 11 July 1973 (2) The Australian UFO Bulletin (Vic) Nov 1973.

Notes: The Gawler paper carried a short piece in its "On the Grapevine" column in Jan 2001 calling for anyone who knew of the case. No response has been received to date by the author.

Weather: 12noon Adelaide 16.3C Cloudless Wind from the N at 5km/hr.

(17) 10 August 1998 (Sometime between midday and 1 pm) 90-120mins Quirindi near Tamworth New South Wales (31.30S 150.41E)

A Mrs Eunice Stansfield, 61 and a female friend, Noelene Mozetic, reported seeing a silver ball travelling quickly across the sky from east to west. Several other objects were then seen in the sky, reportedly up to 20 altogether. They were a bright metallic grey in colour. Some moved quickly while others were stationary at times. There was no noise at all. One of the larger objects was seen to be two spheres connected by a cylinder shape.

The objects maneuvered across the whole sky in complex patterns. When the spheres were maneuvering, a light whitish material could be seen streaming from them. This material formed into long, white strands which fell slowly downwards onto telephone wires and trees. There was no surface wind. Air temperature was cool.

The material fell in surrounding areas. The female friend collected a piece of it, a 30cm long strand from a bush. "...it was extremely light, whitish and strong, like cotton, requiring a good tug to break. It quickly "dissolved" away to nothing when handled." A second piece was collected in a clean yoghurt container.

A Telstra technician, Gary from Gunnedah reported he was at Pialloway, 40km north of Quirindi at 2pm and saw masses of cobweb-like material falling around. The material evaporated upon handling.

The yoghurt container was passed to Moira McGhee and then to Bill Chalker for analysis of the contents.

The sample as received by Bill Chalker was approximately the size of a match head. The sample was placed in a freezer-no phase differences were noted. "The sealed container contents were then sampled through the intact gladwrap via an eppendorf syringe to sample any possible gas phase. None confirmed per comparison to ambient conditions & atmosphere."

A comparison of the Quirindi sample and known spider's web, using video microscopic imaging led to the conclusion that the Quirindi material was identical to the control sample of spider's web "...including inclusions of coloured webbing, which often occurs."

However, Chalker noted that the container with the original white material in it, was opened by the witness at a later stage to add some more of what she thought was the same material, but could have been ordinary spiders' web. (2)

Source: (1) Compilation published by the Keith Basterfield Network of sightings etc for 1998. Investigators: Moira McGhee, Bill Chalker, Bryan Dickeson, Diane Harrison, Robert Frola UFO group: INUFOR, UFOIC, UFOR(NSW), UFOICQ. (2) personal communication from Bill Chalker to the author dated 30 December 2000.

Weather: 12noon Tamworth 14.4C Cloud cover data not available. Wind from the SW at 9km/hr.

(18) 9 June 1999 1000hrs (210-300) mins Esperance Western Australia (33.52S 121.54E)

“A man witnessed tonnes of white filamentous threads falling from the sky Paddocks, hedges, trees were covered with the stuff and it hung off power lines in great shrouds with lengths up to thirty feet long.

Apparently the sky was thick with it up to a thousand feet or more. There was no wind. The threads fell from 10am to 3pm. All the paddocks in the area had a “sheen” caused by layers of the stuff. Peter, the witness, picked up some of the “hair” to try and get it analysed. A Cessna aircraft was flying around as low as 200 ft through the falling threads. Three contrails were stationary much higher, one with a spiral in it...” (1)

“The witness, Peter G was some ninety kilometres east of Esperance. At 10 am he noticed thread-like substance falling out of a clear sky. There was no wind. He travelled west, and near Esperance the stuff was still falling and continued to do so till 3 pm. Trees, bushes and power lines were festooned with threads up to four and a half metres long. The ground took on a sheen as the stuff settled. Reports came in from the north, east and west from Gibson’s Soak, Condonup and Munglinup (33.43S 120.52E 80km West of Esperance), covering a 10,000 square kilometre area. The local paper ran a story and an Esperance resident Marilyn Burnet collected a sample. I had some of that sample analysed spectrographically and with electron microscopy. Copper, aluminium, zinc, iron, sodium, manganese, silicon and a number of other minerals were found in it, which eliminated the spider’s web theory...” (2)

Another witness was located 85km East of Esperance, 15km in from the coastline. Long strands of white material settled on everything, with trees, fences and pastures covered. No unusual objects were seen in the sky. There was no associated noise. The length of the strands was estimated as 6 metres. No material was picked up. The material disappeared overnight. The sky was cloudless, with temperature estimated as 17-18C. No spiders were observed. (3)

Source: (1) Brian Richards UFORUM Perth. E-mail on the Keith Basterfield Network list. 1 July 1999. (2) Richards, Brian (2000.) “West Australian Sightings” Journal of Alternative Realities.8(1). (3) Personal communication from witness to Keith Basterfield 14 February 2001.

Weather: 9am Esperance 13.9C 1/8 cloud Wind from the WSW at 8km/hr.

(19) 5 August 2000 1130hrs 90 minutes Old Noarlunga (35.09S 138.29E) & Aldinga South Australia (35.16S 138.29E)

A man spotted a silver disk in the sky, and called out his wife to look at it. Over the next 90 minutes they saw an additional three whitish balls and three things looking like a helicopter in shape, making a total of six to nine objects in all travelling west to east. The sky was completely cloudless at the time, with the temperature being mild. From the sighting of the first object there was a fall of material. Sheila stated that it fell in large wads/strands. She used a stick to pick up some of the material which fell onto her house and TV antenna and gate post. The material was long, silver, cob-web like in colour and texture. Once touched with the stick it shrivelled up and evaporated. No sound was heard.

There were other reports of material falling on the beach at Aldinga (10km due south of Old Noarlunga.) at the same time. One person at Aldinga reported seeing a bright light at the time of the fall and that as the material touched the sand or water it evaporated. (1)

A report was also received from Moana (4km south west of Old Noarlunga). A man, living about 1 kilometre from the sea, noticed what he took to be a "light fog" which had drifted in from the sea. He then saw a "bright light" travelling through the fog. As it passed over his house, the angel hair started to fall. As soon as it touched his house roof, the lawn, and the front fence it just "dissolved." He did try to grab some of it, but as soon as he touched it, the substance dissolved. Duration was about 10 minutes. (2)

Source: (1) Investigation by Charmaine Ballam, AUFORN State Director for South Australia. E-mail report on the Keith Basterfield Network dated 9 August 2000. (2) Personal communication from Charmaine Ballam to the author 15 January 2001.

Weather: 12noon Adelaide 19.6C Cloudless Wind from W at 9km/hr.

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ANALYSIS OF CATALOGUE DATA

1. Geographic location

1a. Longitude (n=17)

| Longitude East (degrees) | Number |
|--------------------------|--------|
| 115-119 | 1 |
| 120-124 | 1 |
| 125-129 | 0 |
| 130-134 | 0 |
| 135-139 | 9 |
| 140-144 | 2 |
| 145-149 | 1 |
| 150-154 | 3 |

Note: Australia stretches from 112 E to 154 E in longitude. 1b. Latitude (n=17)

| Latitude South (degrees) | Number |
|--------------------------|--------|
| 10-14 | 0 |
| 15-19 | 0 |
| 20-24 | 0 |
| 25-29 | 2 |
| 30-34 | 10 |
| 35-39 | 5 |
| 40-44 | 0 |

Note: Australia stretches from approximately 10 S to 44 S, yet known cases of Angel Hair cluster between 25 and 38 S. This clustering confirms an observation made by Sharp (1964) that all the cases of Angel hair in his global sample, occurred in the 27- 47 degree N or S band.

Source: Sharp, P F (1964.) "Angel Hair." Flying Saucer Review 10(1):14-15.

2. Monthly frequency (n=17)

| Month | Number |
|-----------|--------|
| January | 0 |
| February | 0 |
| March | 2 |
| April | 0 |
| May | 4 |
| June | 2 |
| July | 1 |
| August | 4 |
| September | 0 |
| October | 3 |
| November | 1 |
| December | 0 |

Note: Summer n=0. Autumn n=6. Winter n=7. Spring n=4.

3. Time of day and duration

3a. Time of day (n=12)

| Time of day | Number |
|-------------|--------|
| 0-5 hours | 0 |
| 6-11 hours | 4 |
| 12-17 hours | 8 |
| 18-24 hours | 0 |

Note: The known start times of cases actually cluster between 8.20am and 4pm. 3b. Start time of fall versus season (n=10)

| Case | Start time of fall | Season |
|-----------------|--------------------|--------|
| Mt Hale | 0820 | Winter |
| Esperance | 1000 | Winter |
| Caroda | 1120 | Winter |
| Old Noarlunga | 1130 | Winter |
| Quirindi | 1200 | Winter |
| Glenelg | 1400 | Spring |
| Maslins Beach | 1510 | Autumn |
| Caulfied | 1550 | Spring |
| Shepparton | 1600 | Autumn |
| Christies Beach | 1600 | Autumn |

Note: Why the start of winter falls should occur in the morning (Quirindi 12 noon) and Spring/Autumn falls occur in the afternoon is a feature requiring further research.

3c. Duration (n=6)

| Case | Duration (mins) |
|---------------|-----------------|
| Mt Lyndhurst | 60 |
| Mt Hale | 55 |
| Maslins Beech | 40 |
| Quirindi | 90-120 |
| Esperance | 210-300 |
| Old Noarlunga | 90 |

Note: Where fall duration is known, it tends to be of a lengthy as opposed to a short, duration.

4. Type of location (n=17)

| Type of location | Number |
|------------------|--------|
| Suburban | 4 |
| Rural | 13 |

5. Weather

Note: An * indicates that the data was obtained from the climate data section of the South Australian branch of the Bureau of Meteorology.

5a. Temperature (n=15)

| Case name | Detail |
|----------------------------|-----------------------------------|
| Kingsthorpe | N/a |
| Mt Lyndhurst | Cool and damp |
| Victoria | N/a |
| Caulfield at 1550hrs | 19.6C at Essendon at 1500hrs* |
| Shepparton | N/a |
| Port Augusta | N/a |
| Melbourne (time unknown) | 8.9C at Essendon at 1200hrs* |
| Mt Hale at 0820hrs | 15.2C at Meekatharra at 0900hrs* |
| Caroda at 1120hrs | 7.2C at Narrabri West at 0900hrs* |
| Brinkley (time unknown) | 16.1C at Adelaide at 1200hrs* |
| Cheltenham (time unknown) | 16.1C at Adelaide at 1200hrs* |
| Grafton | Approx 21C |
| Christies Beach at 1600hrs | 30.7C at Adelaide at 1500hrs* |
| Maslins Beach at 1510hrs | 21.7C at Adelaide at 1500hrs* |
| Glenelg | 28.5C |

| | |
|------------------------------------------|-------------------------------------------------------------------------------------------|
| Gawler 40km N of Adelaide (time unknown) | 16.3C at Adelaide at 1200hrs* |
| Quirindi at (1200-1300hrs) | Cool according to witness. 14.4C at Tamworth at |
| Esperance at 1000hrs | 13.9C at Esperance at 0900hrs* |
| Old Noarlunga 30km S of Adelaide | Mild unseasonably warm day for August according to witness. 19.6C at Adelaide at 1200hrs* |

5b. Wind (n=15)

| Case name | Detail |
|------------------------------------------|-----------------------------------------------------------------------------------------------|
| Kingsthorpe | N/a |
| Mt Lyndhurst | Steady light breeze from SW |
| Victoria | N/a |
| Caulfield at 1550hrs | From NW 37km/hr at Essendon at 1500hrs* |
| Shepparton | N/a |
| Port Augusta | N/a |
| Melbourne (time unknown) | From S at 11km/hr* |
| Mt Hale at 0820hrs | From N at 18km/hr at Meekatharra at 0900hrs* |
| Caroda at 1120hrs | Wind was calm at Narrabri West at 0900hrs* |
| Brinkley (time unknown) | From W at 11km./hr at Adelaide at 1200hrs* |
| Cheltenham (time unknown) | From W at 11km./hr at Adelaide at 1200hrs* |
| Grafton | Light breeze |
| Christies Beach at 1600hrs | From W at 11km/hr at Adelaide at 1500hrs* |
| Maslins Beach at 1510hrs | No surface wind according to witness. From SE at 21km/hr at Adelaide at 1500hrs* |
| Glenelg | Seabreeze from WNW |
| Gawler 40km N of Adelaide (time unknown) | From N at 5km/hr at Adelaide at 1200hrs* |
| Quirindi at (1200-1300hrs) | No surface wind according to witness. From SW at 9km/hr at Tamworth at 1200hrs* |
| Esperance at 1000hrs | No wind/slight seabreeze according to witness. From WSW at 8km/hr at Esperance at 0900hrs* |
| Old Noarlunga 30km S of Adelaide | From W at 9km/hr at Adelaide at 1200hrs* |

5c. Cloud cover (n=15)

| Case name | Detail |
|------------------------------------------|----------------------------------------------------------------------|
| Kingsthorpe | Cloudless |
| Mt Lyndhurst | N/a |
| Victoria | N/a |
| Caulfield at 1550hrs | 8/8 cloud |
| Shepparton | N/a |
| Port Augusta | N/a |
| Melbourne (time unknown) | 2/8 cloud at Essendon at 1200hrs* |
| Mt Hale at 0820hrs | 1/8 cloud at Meekatharra at 0900hrs* |
| Caroda at 1120hrs | Cloudless according to witness. Cloudless at Narrabri West at |
| Brinkley (time unknown) | 6/8 at Adelaide at 1200hrs* |
| Cheltenham (time unknown) | 6/8 cloud at Adelaide at 1200hrs* |
| Grafton | Cloudless |
| Christies Beach at 1600hrs | 8/8 at Adelaide at 1500hrs* |
| Maslins Beach at 1510hrs | Cloudless according to witnesses. 5/8 at Adelaide at 1500hrs* |
| Glenelg | Cloudless |
| Gawler 40km N of Adelaide (time unknown) | Cloudless at Adelaide at 1200hrs* |
| Quirindi at (1200-1300hrs) | Cloudless according to witness. Cloud data N/a from Bureau. |
| Esperance at 1000hrs | Cloudless according to witnesses. 1/8 at Esperance. |
| Old Noarlunga 30km S of Adelaide | Cloudless according to witness. Cloudless at Adelaide at 1200hrs* |

Note: Cloud cover was 2/8 or less in 11 out of the 15 cases. The sky was reported “cloudless” in 9 out of the 15 cases.

5d. Direction of fall versus observed surface wind direction (n=15, however only 7 (marked **) have both elements of data.

| Case | Direction of fall | Observed surface wind direction |
|----------------------|----------------------------|---------------------------------|
| Kingsthorpe | N/a | N/a |
| Mt Lyndhurst** | From SW | From SW |
| Victoria | N/a | N/a |
| Caulfield at 1550hrs | N/a | NW* |
| Shepparton | “Sailing north” | N/a |
| Port Augusta | N/a | N/a |
| Melbourne (tim | N/a | From S* |
| Mt Hale at 0820hrs** | UFOs travelled from N to S | From N* |

| | | |
|---------------------------------------------|----------|-----------|
| Caroda at 1120hrs** | Various | No wind* |
| Brinkley (time unknown) | N/a | From W* |
| Cheltenham (time unknown) | N/a | From W* |
| Grafton | N/a | N/a |
| Christies Beach at 1600hrs | N/a | From W* |
| Maslins Beach at 1510hrs** | Various | No wind |
| Glenelg** | From WNW | From WNW |
| Gawler 40km N of Adelaide (time unknown) | N/a | From N* |
| Quirindi at (1200- 1300hrs)** | Various | From SW* |
| Esperance at 1000hrs | N/a | From WSW* |
| Old Noarlunga 30km S of Adelaide** | From W | From W* |

Note:

- There are 7 cases where both data elements are known
- Out of these, there are 5 cases where a wind was blowing
- In 4 out of these 5, the surface wind direction matched the fall direction.

6. UFO(s) reported? (n=19)

6a. Yes/no

| Detail | Number |
|--------|--------|
| No | 11 |
| Yes | 8 |

6b. If yes, what? (n=8)

| Case name | Number | Colour | Shape | Noise? |
|---------------|----------|--------------|-----------|----------------|
| Pt Augusta | ? | ? | ? | ? |
| Mt Hale | 12 | Silver | Round | No |
| Caroda | 6 | Silver | Round | No |
| Grafton | 1* | White | Elongated | No |
| Christies Bch | 5 | Silver | ? | ? |
| Maslins Beach | Multiple | Silver/white | Round | None mentioned |
| Quirindi | 20 | Silver/grey | Round | No |
| Old Noarlunga | 7 | Silver/white | Round | No |

Note: * Not observed by witness to fall.

Note: Where UFOs are reported in association with a fall, the number seen is greater than one and often greater than five.

7. What fell? (n=19)

| Case name | Volume | Colour | Length (cms) | Disappearance |
|---------------|--------|------------|--------------|----------------------------------------|
| Kingsthorpe | Large | ? | ? | Melted in hand |
| Mt Lyndhurst | ? | ? | 15-22 | Dissolved in minutes, |
| Victoria | ? | ? | 7.5 | ? |
| Melbourne | ? | Grey-white | ? | Rapidly disintegrated |
| Shepparton | ? | Pure white | 900 | Wrinkled but did not |
| Pt Augusta | ? | White | ? | ? |
| Melbourne | Large | ? | ? | Vanished in a few hours |
| Mt Hale | ? | White | ? | Crumbled & disappeared |
| Caroda | ? | Silver | 150 | Slowly disintegrated |
| Brinkley | ? | ? | 1980 | ? |
| Cheltenham | ? | ? | ? | ? |
| Grafton | ? | White | ? | Dissipated into nothing |
| Christies Bch | ? | ? | ? | ? |
| Maslins Bch | ? | White | ? | Melted or disappeared |
| Glenelg | ? | White | ? | Dissolved in hand |
| Gawler | ? | ? | ? | Vapourised on touching |
| Quirindi | Large | White | 30 | Dissolved away to nothing when handled |
| Esperance | Large | White | 450-600 | ? |
| Old Noarlunga | Large | Silver | "Long" | Shrivalled up & evaporated |

Note: Out of the 6 six cases where length of strand is given, the shortest is 7.5cm and the longest 1980cm.

8. Distance over which fall was recorded (n=4)

| Case | Details |
|---------------|-----------------------------------------------------------|
| Melbourne | "Seaside" suburbs |
| Quirindi | Also reported at Piallaway 40km N |
| Esperance | Also reported at Munglinup 80km W, and a location 85km E. |
| Old Noarlunga | Also reported from Aldinga 10km S, and Moana 4km SW |

9. Analysis of material (n=5)

| Case name | Details |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Victoria 1953 | Consisted of a nylon-like amorphous mass with traces of magnesium, calcium, boron and silicon |
| Shepparton 1954 | Microscopic examination revealed mass of uniform fine threads. Some resemblance to white raw silk or even nylon. Did not dissolve in water. Burned rapidly leaving no smell or ash, <u>unlike wool, cotton, silk or cobwebs. Stretched easily at ends</u> |
| Melbourne 1956 | Tested with ethyl acetate, acetone and lactophenol dye. Magnified 100 times. Burned and melted. Not wool, not derived from |
| Quirindi 1998 | Sample identical to spiders' web. However, question of contamination of sample with real cobweb raised |
| Esperance 1999 | Spectrographic and electron microscope studies. Found copper, aluminium, zinc, iron, sodium, manganese, silicon and a number of other minerals |

ATTACHMENT TWO KNOWN CASES OF FALLS OF SPIDERS' WEB

(1) 1920 Grace Plains (State Unknown)

"I was in the Grace Plains area in 1920. The fences, posts, trees, and thistles were all hung with gossamer-like streamers, and the air was full of them. On inspecting one on a post top, I found a small, fat, round spider in a ball of fluff. On releasing it from the post, it floated away in the air."

Source: Letter to the Editor from F H Treloar, Felixstow. Adelaide Advertiser. 15 May 1968.

Note: Anyone come across other references? Which state?

(2) 31 July 1964 Gundagi New South Wales (25.04S 148.07E)

Mr L W Hassack of Cowandilla SA took a remarkable photograph of an entire paddock covered with web in 1964 between Gundagi and Tumut NSW. Mr Hassack confirms that there were thousands of spiders in the web.

Source: (1) Personal investigation K Basterfield. (2) Photograph appears in Basterfield, K. (1981.) "Angel's Hair: Myth or reality?" UFO Research Australia Newsletter 2(4):24

(3) May 1968 Adelaide Hills South Australia (35.00S 138.50E)

Mrs Sybil Camac of Balhannah reported that transparent web had been noted on her property and identified as spiders' web from the spiders found in it.

Source: Adelaide Advertiser 14 May 1968.

(4) May 1968 Glenelg Adelaide South Australia (34.56S 138.36E)

Mr V Godic and Miss C Walsh picked up a few leaves covered with a web-like substance. They took them home and photographed them immediately. Spiders were scattered throughout the material which was later identified by the South Australian Museum as spiders' web.

Source: Personal communication from Vladimir Godic to Keith Basterfield.

(5) 11 May 1968 1630hrs Peterborough South Australia (32.59S 138.50E)

The lawns of the maternity wing of the Soldier's Memorial Hospital resembled a silken mat, after a fall of web. Mr Frank Foster reported that the web formed at about 4.30 p.m. Spiders were observed in the web. It disappeared overnight. Mr V H Mincham of the SA Museum said that although he hadn't seen the material it was probably web left by migrating orb weaverspiders.

Source: Adelaide Advertiser 13 May 1968. Sunday Mail 12 May 1968. Weather: 12noon Adelaide

16.1C 6/8 cloud cover Wind from W at 11km/hr.

(6) 8 May 1982 1330hrs Wynn Vale Adelaide South Australia (35.00S 138.50E)

While having lunch outside, the catalogue author noted glittering “curtains” of material drifting by. These caught on bushes and trees. Upon closer inspection, one piece was observed floating by with a spider hanging on the end. Other spiders were noted. However, five minutes later, not trace of either web or spiders was to be found. The temperature was 18 degrees C; weather fine, 3/8 cumulus cloud. No detectable wind.

Source: Personal observation.

OVERSEAS CASES WHERE ANALYSES FOUND FALLS TO BE DUE TO SPIDERS' WEB

(1) On **30 September 1979**, between 3-6 pm there was a large fall of white material over an area of Denmark. The substance was described as light, thin, fibrous threads in long strands. It varied in size from small pieces to chunks the size of a football.

UFO group SUFOI spoke to a witness who stated that the material "...had disintegrated in his fingers." Two samples were analysed, one by SUFOI, and found to be composed of animal protein. In addition, some witnesses had seen spiders in the fall. SUFOI's investigations concluded it was a fall of spiders' web.

Source: Andersen, Per (1980.) "Strange material fell over West Jutland." SUFOI Magazine. No. 1 pp5-7.

(2) In **October 1976** a witness in the U.S. described a silent, dull silver, round object with a distinct outline. It was seen in the daylight for 2-4 minutes, "...dropping parachutes." White filaments fell to the ground. The witness stated that the material started to disappear. A sample was placed in a jar with a sealed lid. Analysis at the University of Illinois showed it was spiders' web.

Source: Hendry, Allan (1979.) (The UFO Handbook. New York. Doubleday & Co p81 (case 1065).

NOTES ON SPIDERS

Source: Barbara York Main. "Spiders." Collins. Sydney. 1984. ISBN 0 002165767.

p 181 "In the temperate parts of the Old and New World the sheet-web weavers of the Linyphiidae are amongst the most abundant of spiders...Linyphiids are renowned for their propensity to provide gossamer-the strands and meshes of silk threads which festoon grasslands and shrubs at certain times of the year, *chiefly warm still days in autumn*. Both ballooning spiderlings and aeronautical older individuals are responsible for the trails of silk which glisten in the sky and later drape vegetation after the spiders have fallen to earth. While Linyphiids are the principal gossamer spiders of England and other parts of the Northern hemisphere, they are certainly not responsible for all the *notable falls of gossamer in Australia which are caused by a variety of native species in addition to introduced members of the Linyphiidae...*"

p 184 "*Spiderlings balloon on still clear autumn days.*"

Source: Bert Brunet (1998). "The Silken Web." Reed New Holland. Sydney. ISBN 1 87633 427 4.

p49 "A particularly interesting application of silk seen among the spiders is the forming of air balloons. These are especially used by young spiders when they disperse from their rest site and are ready for migration. When the young spider wished to travel, it raises its abdomen high and releases an abundance of liquid silk which dries immediately the air touches it. This is caught by the breeze, and the air currents lift it into the sky. Ballooning spiders have been found 4,300 metres up in the sky having attached themselves to aircraft.

Only two species of Mygalomorphs-Missulena insignis and Conothele malayaria-are known to disperse by ballooning and consequently are found widely distributed. The majority of Araneomorphs do however disperse by ballooning to different locations. Often during mass migrations, the ground, grass and foliage of an area can be seen to be covered with masses of flocculent silk as a large population of spiderlings attempt to become airborne. "

p49 Ballooning in late Spring-Sep-Nov.

p51 "Even the coarsest spider silk is extremely fine...and it can be stretched to over 20 per cent its original length before breaking."

p52 "According to the species and the type of silk glands, a spider can produce an enormous range of silk textures, quality and colour...spiders' silk may be clear, white, silver, gold, yellow, cream, a range of pastel greens, blue, pink, or even deeper colours like bronze, brown or black."

p52 Seven types of silk glands. No spider has all 7. All spiders have at least three...Ampullate glands...produce dry silk for...balloons for migration.

p54 What is silk? "The silk of spiders is a complex albuminoid protein, secreted from specialised silk glands. The analysis of its composition is as follows" 25.3% alanine, 5.4% leucine, 42.8% glycine, 9.3% glutamine. 2.6% tyrosine and traces of other amino acids-etc."

Source: Paul Hillyard. "The Book of the Spider." Random House. New York. 1994. ISBN 0 679 40881 9.

p 50 "Small spiders attached to lines of silk often occur in considerable numbers high above the earth's surface. This unique method of aeronautical dispersal is known as ballooning."

p 51 "*Spider ballooning may occur almost anywhere and at any time of the year...particularly noticeable in late summer and autumn, especially during clear weather when the breezes are gentle...Later during the afternoon, when the air is no longer rising, spiders can be found landing...Toward evening, whole fields maybe covered by a carpet of silk.*"

p 53 Ballooning process-spider climbs to the top of a post etc. Faces the wind. Line of silk drawn out by the breeze. When uplift sufficient, lets go. When air is calm, they first drop down on a thread and then climb back up-this loop of silk rises into the air.

p 54 Spiders seen at heights up to 14,000 feet.

p 54 *Gossamer*. Sheets of silvery lines may accumulate when ballooning is occurring. May be 1 million spiders to the acre. Rising air currents break off pieces which fly off- *these are not ridden by spiders*.

p 57 25mg is the upper weight limit for ballooning.

p 118 "Spider silk is very strong but extremely fine...spider silks are proteins...The silk is affected by rain and absorbs water, causing it to swell and shorten, unlike nylon and silkworm silk. It returns to normal after drying. Spider silk is very durable and is insoluble in organic solvents. Very harsh acids are needed to break it down in order to study the protein units."

p 119 Jacqueline Palmer of Harvard is an expert in spiders silk.

Paul Hillyard is a spider specialist at London's Natural History Museum.
