

on end, etc., which may have indicated a source of electro-power. Their car started immediately after the incident, without any problem, and there was no sign of any interference with any car instruments or their watches (they checked).

It was not possible to make out the shape of the object, it could only be judged by following the outline of the surrounding lights. The object was finally lost from sight as it passed over a nearby hill. Witnesses subsequently reported the incident to Epsom Police Station.

UFO ODOURS AND ORIGINS

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ODOURS are usually not experienced in UFO sightings since the object must be nearby and the witness must be within the downwind dispersion plume. Even in close encounters with disc UFOs, only about one out of four cases includes perception of odours. Witnesses generally report an unfamiliar, nauseating, pervasive and oppressive smell, pungently irritating to the mucosal tissues of eyes, nose and throat. Depending on the magnitude of integrated exposure, immediate effects may include dizziness, upset stomach and vomiting. The odour may still be noticeable hours later, from the lungs and on the skin, which may peel. Severe exposures may be followed by temporary loss of appetite and low blood lymphocyte count, and may necessitate hospitalization.¹

In a representative selection of 52 close encounters with disc UFOs, comprising 16 with odour which are noted explicitly in this discussion, and 36 others without odour,² there is no significant statistical correlation between occurrence of odours and most other common features, including hum, whistle, roar, whoosh or throbbing sounds; smoke, haze or mist; coloured glow, electromagnetic effects, or sighting duration. Duration is evidently statistically insignificant as witnesses in several brief encounters noted immediate visibility of copious vapour emissions, to which they attributed the reported

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Specific Description	Interpretation	Chemical Formula	Remarks
Burning sulphur ⁵	Sulphur dioxide	SO ₂	Ozone is more likely but unfamiliar to many witnesses.
Pepper in the air, ⁶ burned out electrical motor ⁷ or transformer ⁸	Ozone; (one witness also suggested hot bakelite)	O ₃	Expected in vicinity of electrical discharges and ionized air. Besides irritating the upper respiratory tract, produces headaches, ¹⁶ usually not experienced by witnesses.
Fat burning ⁹	Fatty acids appear in vapour or among combustion products	E.g., formic acid, HCOOH	Formic acid produced in low-temperature oxidation of formaldehyde by moderately vigorous oxidizing agents.
Embalming fluid ¹⁰	Formaldehyde	HCHO	Colourless, water-soluble, highly poisonous, irritating gas. Occurs in low-temperature oxidation of methyl alcohol by moderately active oxidizing agents.
Hot bakelite ⁷	Formaldehyde and phenol	C ₆ H ₅ OH (phenol)	Phenol (carbolic acid) is a pungent, solid derivative of benzene, producing skin burns.
Nitrobenzene ¹¹	Nitrobenzene	C ₆ H ₅ NO ₂	Oily, yellowish liquid, poisonous, with strong, slightly sweetish odour like oil of bitter almonds. Made from oxidation of benzene by nitric acid (nitrite ion; NO ₂ ⁻).

Table 1: Odour Descriptions and Interpretations

odour.³ Witnesses close to the UFO are statistically somewhat more likely to sense any odours emitted by the UFO.⁴

In some of the CEII cases, odour at the landing site is not detected until the ground traces are inspected immediately after the sighting. The relative wind direction is unfortunately not stated in most UFO reports and may be responsible for apparent absence of odours in the majority of close encounters. In four of the 16 sightings with odour the witnesses did note a distinct hissing sound. This was not heard in any of the 36 typical close encounters without odour.

A provisional explanation for the odour evolves from literal interpretation of the specific odour descriptions, as summarized in Table 1, and from consideration of reported electromagnetic effects of UFOs. Thus, with the exception of ozone, which sometimes may be misinterpreted as burning sulphur, the specific odours reported are apparently from oxidation products of hydrocarbons, either methyl alcohol or benzene. Evidently these are somehow available in the UFO's vicinity, perhaps through venting or incomplete combustion. It is significant that they are not petroleum derivatives, but rather from wood and coal, respectively. On this planet at least, they are more likely to be available in later stages of technological development than petroleum derivatives.

The reported electromagnetic phenomena from UFOs are sufficient to produce the necessary oxidizing agents in the immediate vicinity. Thus, ozone is expected in a region ionized by static electric and magnetic fields, and by microwave and optically visible electromagnetic energy. Moreover, the characteristic yellow afterglow of active nitrogen,¹² visible in spite of the quenching effect of oxygen in the air,¹³ is described by some witnesses.¹⁴ The active nitrogen fixes the oxygen to produce N₂O (unstable), NO (oxidizes to NO₂), N₂O₃ (also unstable), NO₂ and N₂O₅. The latter oxide is a white, crystalline

solid below 30°C (86°F).** Thus, only NO₂ is considered here, in addition to ozone, as an effective oxidizing agent. Its important properties are listed in Table 2.¹⁵

The fact that N₂O₄ is used as a fuel oxidizer in contemporary rocket technology is ignored in the UFO context since, as discussed above, the oxidizing agent appears to be produced outside of the UFO as an unavoidable consequence of the electromagnetic field.

In summary, considering the reported characteristics, UFO odours are attributed to externally produced oxidizing agents, ozone and NO₂/N₂O₄, and their reaction with methyl alcohol and/or benzene. While it may be difficult to accept the implication that hydrocarbons are used as an energy source in disc UFO, and wastefully too, the reported descriptions of occasional black smoke emission from disc UFO must be recognized as further evidence.¹⁹

**Angel's hair can hardly be N₂O₅, which sublimates rapidly at room temperature, and also reacts vigorously with atmospheric moisture to produce drops of nitric acid.

Notes and references

1. Coral and Jim Lorenzen: *Encounters with UFO Occupants*, (New York: Berkley Publishing Corp. 1976) p12.
2. Thomas M. Olsen (Ed.): *The Reference for Outstanding UFO Sighting Reports* (Riderwood, Maryland 21139: UFOIRC 1966)
3. See e.g., *Strange Effects from UFOs* (NICAP 1969), p53.
4. Biserial correlation coefficient = -0.3 with estimated distance in meters on a common logarithm scale.
5. See Grey Barker: *They Knew Too Much about Flying Saucers* (New York: University Books, Inc. 1956), p23; FSR January/February 1966, p24 and FSR September/October 1968, p7; and *Strange Effects from UFOs*, op. cit., p1.
6. Charles A. Maney and Richard H. Hall: *The Challenge of Unidentified Flying Objects (NICAP 1961)*, p29.
7. FSR November/December 1967, p6, and Lorenzen, *op. cit.*, p12.

Name.....	Nitrogen dioxide/nitrogen tetra-oxide (NO ₂ tends to polymerize to N ₂ O ₄ on cooling)
Chemical formula.....	NO ₂ /N ₂ O ₄ (equilibrium between two)
Form.....	Liquid up to 21.2°C (70.1°F)
Specific gravity (liq.).....	1.34
Specific gravity (gas).....	1.59 to 3.18 depending on mixture
Colour (liquid).....	Brown
Colour (gas).....	Brown to light yellow, depending on mixture ¹⁷
Solubility.....	Quite soluble in water, yielding nitric acid solution
Odour.....	Very unpleasant ¹⁸
Toxicity.....	Injurious to animal tissue, resulting in severe burns to skin and eyes. Produces delayed pulmonary oedema, which may not develop until the day after exposure

Table 2: Oxidising agent from active Nitrogen

8. *The APRO Bulletin* April 1977, p2.
9. NICAP: *UFO Investigator* July/August 1961, p5.
10. *Strange Effects from UFOs*, op. cit., p5 and Vallée's *Challenge to Science, the UFO Enigma*, p40.
11. Vallée, *op. cit.*, p53. The related benzene derivative, aniline, C₆H₅NH₂, is a colourless, poisonous liquid which turns dark red on standing and destroys red blood cells.
12. A. Nelson Wright and Carl A. Winkler: *Active Nitrogen* (New York: Academic Press, Inc. 1968), pps 1,19.
13. Wright and Winkler, *op. cit.*, pps 264-267.
14. E.g., *Strange Effects from UFOs*, op. cit., p42: a "yellow tail" appeared when the hovering object moved horizontally.
15. D. R. Cloyd and W. J. Murphy: *Handling Hazardous Materials* (U.S. Government Printing Office: NASA SP-5032 1965), pps 73-79.
16. Cloyd and Murphy, *op. cit.*, p66.
17. Compare colour and specific gravity with description in *Strange Effects from UFOs*, op. cit., p42.
18. Compare with the descriptions in *C.R.I.F.O. Newsletter* (Cincinnati, Ohio: Civilian Research, Interplanetary Flying Objects) November 1956, p4 ("an overpowering, noxious, nauseating odor") and Olsen, *op. cit.*, p3-13 ("worse than burning flesh — an awful smell")
19. E.g., Olsen, *op. cit.*, pps 3-24 and 3-49.

SANDY KNUDSEN'S ENCOUNTER BEYOND BRAGG CREEK

W. K. Allan

An unusual humanoid case from Alberta, Canada, edited from transcriptions of the taped interviews, parts of which are used in full.

THIS interview with Mrs. Sandy Knudsen took place on Sunday, October 28, 1979, almost a year after the incident which, as she told us, happened on November 11, 1978. She and her husband, who live in Oakland Way South West, Calgary, Alberta, were to go with two friends to a party at a place known as Bragg Creek. They set out in two cars, but although they had clear enough directions they still managed to get lost. Due to conditions of heavy snow they took off along a road going west past Bragg Creek. The snow was by then so deep that there was no chance to turn round, so, with the Knudsens' friends leading the way they ploughed on until they found themselves among the foothills, and at the end of the road.

It was decided that the leading car should have a go at turning, and if they got stuck, then the Knudsens would go up and turn and come in behind the first car in a position where they could help push the first car out of the drift.

As the Knudsens went up to start their manoeuvre Sandy looked at her watch and said to her husband: "It's eight-thirty, we're going to be missing the hayride."

Once they had got into position, the Knudsens got out of their car and joined the others. At that point Sandy looked up and saw a light approaching.

Said Sandy: "It seemed quite slow and I thought immediately that it looked like a giant hovercraft the way it was moving. And I turned to the fellow who was with us and I asked him what it was as it came closer. And he looked at it and he said 'Oh it's just a UFO Sandy.'"

As the thing was getting closer all the time a worried Sandy Knudsen called out to their friend: "Henry, please will you look at it."

All Henry could say was: "Let's get the cars out of the snow."

But Sandy wasn't giving up that easy. She told how she grabbed her husband's arm, and called to her other friend: "I made them all look at this vehicle. At this point it was very close, probably — I'm not very good at distances, but I'd say it was from here where I'm sitting to out on the road.

(John C. Smith, at whose home the interview was taped, later paced off the distance as approximately 90 feet.)

Sandy continued: "It made no noise, there was no sound at all from the vehicle. It was about — I've spoken to Jack about it and the length I was describing from one point to another, it was about 150 ft long. It was three floor length windows high. It was illuminated inside. I remember looking at the people I was with, because I had to keep telling them to look at it. They

were so blasé about it. I looked at the girl and her face was lit up by it. I don't really recall anything after that except that it just lifted and went away slowly. There was one thing about it I did notice, but that I didn't bring up till later. Then Henry said 'Alright Sandy, we've looked at your UFO, now can we please go and get these cars out of the snow.' So we did just that and got on our way, and I looked at my watch and it was twenty after nine!

"I was just sort of looking around" continued Sandy, "looking at my husband, and looking around, as we were driving back to the hayride. And I asked him: 'Didn't we see a UFO tonight?' and he said: 'Yeah, yeah, we did, but it was nothing.'"

"It seemed like nothing to him, and I kind of forgot about it again. We found our way back to where the hayride was, ate dinner, and nothing was thought about it again until we went out on the hayride and were looking up at the stars. All of a sudden my memory was jogged, and I turned to the people who were with us and said: 'you guys, didn't we see a UFO tonight. . . wasn't it there so close?' They replied 'Yeah, yeah, we did.'"

According to Sandy, they did not talk about it again that evening, and she was very upset. In fact she confessed that she and her husband got