

Some Unfamiliar 'PSUFOs'

The Phosphorescent Wheels*

by Richard Turner

IT is generally agreed that between 90 and 95% of alleged UFO sightings can be explained, with greater or lesser certainty, as natural or man-made phenomena. Indeed, a large part of the time of those engaged in UFO research has, in the past at least, been devoted to the evaluation and elimination of such reports. Although this is in itself a fascinating (and, arguably, useful) occupation, it is unfortunate that so much energy must be dissipated on 'irrelevances'. Nevertheless, given that the evaluation of quantities of heterogeneous phenomena reports is inevitable, we must ensure that is carried out in the most efficient and scrupulous manner. This obviously involves a thorough knowledge of the phenomena which may be confused with UFOs, and since information on some of the more unusual forms is often unavailable to the non-specialist, it may be useful to present accounts of them to readers of FLYING SAUCER REVIEW.

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'Bioluminescence' may be defined as the production of light by living animals and plants. Glow-worms and fire-flies are familiar examples on land, and in the sea myriads of planktonic organisms may combine to produce the often spectacular luminous displays known as 'phosphorescence'. It is not generally realised that this term covers a number of visually very distinct phenomena, whose precise appearance depends on the species of organism involved, their concentration in the sea, and on the environmental factors which provoke them to emit light. For the majority of creatures do not luminesce continuously, but in discrete flashes in response to a specific external stimulus.

Most forms of phosphorescence are quite unmistakable, and very likely to generate UFO reports¹. However, one very spectacular type, the 'phosphorescent wheel', mystified seamen and scientists alike for many years, its bioluminescent origin not being initially recognised. Instances were gleefully and uncritically recorded by curiosity collectors like Fort, and it is probably through these channels that they have found their way into the 'historical files' of UFO chroniclers such as Leslie and Vallée.

It is perhaps best at this point to give a sample account of a phosphorescent wheel: the following is taken from a letter dated Bahrein, May 17, 1879, sent by Commander J. E. PRINGLE, captain of H.M.S. *Vulture*, to his superiors, and subsequently published in *Nature*².

"... at about 9.40 p.m. on May 15, when in lat. 26°26'N and long. 53°11'E... an unusual phenomenon was seen from the vessel. I noticed luminous waves or pulsations in the water, moving at great speed and

passing under the ship from the south-south-west. On looking towards the east, the appearance was that of a revolving wheel with centre on that bearing, and whose spokes were illuminated, and looking towards the west a similar wheel appeared to be revolving, but in the opposite direction. I then went to the mizen top (fifty feet above water) with the first lieutenant, and saw that the luminous waves or pulsations were really travelling parallel to each other, and that their apparent rotatory motion, as seen from the deck, was caused by their high speed and the greater angular motion of the nearer than the more remote part of the waves. The light of these waves looked homogeneous, and lighter, but not so sparkling, as phosphorescent appearances at sea usually are, and extended from the surface well under water; they lit up the white bottoms of the quarter-boats in passing. I judged them to be twenty-five feet broad, with dark intervals of about seventy-five feet between each, or 100 from crest to crest, and their period was seventy-four to seventy-five per minute, giving a speed roughly of eighty-four English miles an hour... The phenomenon was beautiful and striking, commencing at about 6h. 3m. Greenwich mean time, and lasting some thirty-five minutes. The direction from which the luminous waves travelled changed from south-south-west by degrees to south-east and to east. During the last five minutes concentric waves appeared to emanate from a spot about 200 yards east, and these meeting the parallel waves from south-east did not cross, but appeared to obliterate each other at the moving point of contact, and approached the ship, enclosing an angle about 90°... The ship passed through oily-looking fish-spawn on the evening of the 15th and morning of the 16th inst...."

I have records of nearly 100 phosphorescent-wheel-type phenomena, dating from 1875 to the present day, and from these a list of characteristics can be assembled. It is first of all interesting to note that their geographical distribution is restricted, instances, with very few exceptions, being confined to the shallower seas bordering the Indian Ocean—the Gulf of Aden, Persian Gulf, Andaman Sea, the Straits of Malacca, the South China Sea and so on. As to their appearance, the essential feature is the swift passage of waves of light: their configuration whether radiating 'spokes' (the true wheel), parallel formations, expanding concentric circles etc.—is variable, as is the spacing and brightness of the beams and the overall extent of the phenomenon, though this is always very large and often a matter of miles.

Accumulations of plankton were often described by non-biological seamen as 'fish-spawn'; one frequently finds such evidence of high plankton concentrations immediately preceding accounts of spectacular phos-

* PSUFO = pseudo UFO.

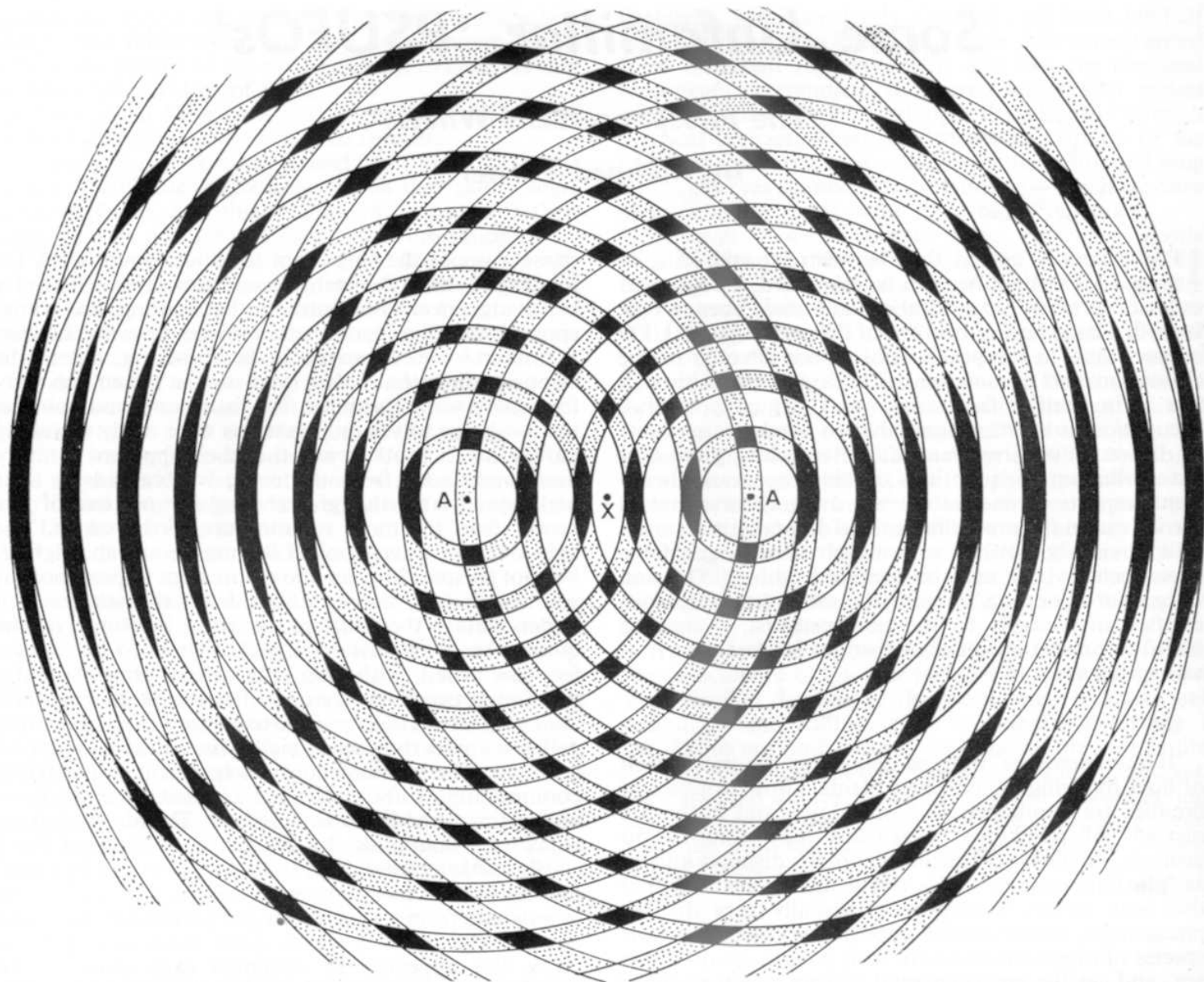


Fig. 1. Pattern resulting from the interference of two sets of concentric rings. In the case of phosphorescent wheels the latter represent shock-waves expanding from points A, A¹; if plankton is stimulated only at places where the waves are in phase (dark areas) a luminous 'wheel' with centre X will be produced. (Figure should be viewed obliquely).

phorescence displays to which they give rise. One final point is that phosphorescent wheels are occasionally reported as moving through mist-layers above the sea surface. Where corresponding light-waves are specifically stated to be absent from the water, a simple reflection effect must be discounted, and this remains one of the more inexplicable features of the phenomenon.

The question of cause is not one of direct relevance to ufology, but some space may perhaps be devoted to it. Fort envisaged the wheels as 'vast super-constructions' rolling through space; caught in the Earth's gravitational field, they apparently become over-heated by friction with the atmosphere and were forced to plunge into the sea to cool down! More conventional commentators suggested that they were due to a combination of bioluminescence, regular sea-waves and optical illusion, but this is unsatisfactory on many

counts. The precise mechanisms are not wholly understood, but the most acceptable current theory involves an interference pattern generated by the interaction of two or more sets of expanding concentric pressure waves of seismic origin, made visible by the stimulation of potentially luminescent plankton at the points where two waves are in phase, (see Fig. 1). Rotation, curved and concentric light-waves and so on can be accounted for in terms of the relative differences in velocity and wavelength of the waves generated by the seismic sources³.

I would like to emphasise that investigators are unlikely to be confronted by modern reports in which a phosphorescent wheel has been mistaken for a UFO. Indeed in first-hand accounts they are manifestly neither flying nor objects. Nevertheless it is clear from a study of 'saucer' literature that they constitute a pitfall for the enthusiast seeking to establish the an-

tiquity of the UFO phenomenon. This is particularly so where a researcher relies on reports of reports of reports. It should not, but regrettably does, need emphasising that so much error and misunderstanding can creep into a story in transit from hand to hand that the final product becomes unrecognisable. Witness the Vulture incident, quoted quite fully above, but rendered in one highly reputable book :“On May 15th, 1879, at 9.40 p.m. from the “Vultur” (sic) in the Persian Gulf two giant luminous wheels were observed spinning and slowly descending. They were seen for thirty-five minutes, had an estimated diameter of forty metres and were about four diameters apart.” Two very plausible UFOs indeed, when dimensions, circularity, implied solidity and a vertical motion are added to the original account!

In conclusion I have appended a list of sightings of bioluminescent phenomena which have in the past been claimed as possible UFOs. There may be others but these are the ‘classics’, and I offer them in the hope that they may never be “unidentified” again!

NOTES

¹ For those interested, a classification and brief description of the various phenomena of this type is given in the Meteorological Office journal *The Marine Observer* Vol. 36, pp. 20-29 (January, 1966).

² *Nature*, Vol. 20, p.291

³ Those who wish to pursue the matter further are referred to the article in Reference (1) and to Kalle (1960): *Dt. hydrogr. Z.* Vol. 13, No. (2), pp.49-77. (In German.)

Obituary

Richard Turner

It was with utter dismay that we learned of the sudden illness of Richard Turner, Chairman-elect of the Cambridge University Group for the Investigation of UFOs, and then, at the age of 21, of his tragic death on June 25, 1967.

This cruel blow deprived Science of the services of a marine biologist of outstanding promise, and ufology of a researcher of quiet good humour and wisdom.

We know readers will join the Editor and Directors of FLYING SAUCER REVIEW in extending an expression of their sympathy to Richard's family and to his many friends at the University.

<i>Date</i>	<i>Ship</i>	<i>Area</i>	<i>Reference</i>
April, 1875	<i>Bulldog</i>	N. of Vera Cruz	<i>Nature</i> , 20, 428
May 15, 1879	<i>Vulture</i>	Persian Gulf	<i>Nature</i> , 20, 291
January 5, 1880	<i>Shahjehan</i>	Malabar Coast	<i>Nature</i> , 21, 409
May, 1880	<i>Patna</i>	Persian Gulf	<i>Knowledge</i> , 4, 396
October, 1890	<i>Guthrie</i>	China Sea	<i>L'Astronomie</i> , 10, 312
April 4 & 9, 1901	<i>Kilwa</i>	Persian Gulf, etc.	<i>Q. J1. R. met. Soc.</i> 28, 29-31
? 1906	<i>Patrick Stewart</i>	Gulf of Oman	<i>Q. J1. R. met. Soc.</i> 32, 280
March 14, 1907	<i>Delta</i>	Malacca Strait	<i>Q. J1. R. met. Soc.</i> 33, 294
June 19, 1909	<i>Bintang</i>	Malacca Strait	<i>Naut.-Meteorol.</i> Aarborg, No. 41, (1910)
August 12, 1910	<i>Valentijn</i>	China Sea	<i>Zee</i> , 32, 890

Note: This was to have been first of a series of articles dealing with pseudo UFOs.

For close on thirteen years Flying Saucer Review has fearlessly presented the mounting evidence of UFO visitations and landings. In *The Humanoids* (see inside front cover) we have documented and studied the staggering evidence of flying saucer landings and occupants. Whatever the future holds in store we will continue to search for the truth behind these strange visitations. You have enjoyed reading what we have to say; we are sure there are many others who would like to join you, so . . .

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