

ON FLYING SAUCERS AND OTHER "UNUSUAL" AERIAL OBJECTS

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As the year is about to turn (I am writing this on Christmas day) it appears appropriate to look in retrospect on the subject of flying saucers and other things—a matter which has stirred many people both in and out of scientific circles. The daily press and magazines and journals of both good and ill repute have belabored the citizenry with a mixture of "fact" and "fiction." Teachers of *science* at all levels have been put in peculiar positions and a goodly number of inquiries have come to me. Some teachers, I know, have "lost face" by their inability to give their charges a solid reply—and we well know that kids can ask some pretty tough questions. What I propose to do in this article is precisely this: a number of highly reputable men have made some scientific utterances on the subject in reliable technical quarters. A summary of these will convey to the reader the general position now held by scientific observers. Although no *final* opinion has been stated—except by the quacks—the evidence points clearly in one direction, but readers are still free to interpret as their judgment or bias dictates.

Man's history is filled with all sorts of things, mythical and real. This is particularly true of the sky. The earliest written records, such as stone writings, show the sky to be filled with various gods and birds and animals. Indeed, the constellations are just mental constructions of these mythical creatures. Interestingly enough, this mythology abides with us still, and the constellations are taught to beginners in terms of the likenesses conjured up. Now quite apart from this "old" mythology a "new" one has arisen, the outgrowth generally of balloon and airplane observers and air-defense spotters. These reports appear to possess psychological character, however, rather than physical.

The Air Forces have been especially interested in the flying-saucer business, for obvious reasons. A sifting and analysis of the reports shows that roughly some 80% of these observations by reliable, competent observers fall into the following "facts": they are weather balloons; they are planes; they are reflections from objects like newspapers flying about; they are meteors (at night); they are reflections of searchlight beams incident on clouds. So far these *things* are real. *There remains some 20% of utterly reliable reports which have no simple explanation.* What shall we say of these? The position *now* taken in scientific quarters is that these *unexplained mysteries* are atmospheric phenomena such as mirages and fog and ice-crystal layers. Nearly all the "objects" reported by fliers at great heights can be explained on the basis of standard physical concepts. There is one observation, however, that of a hovering nocturnal light, which still does not fall within the description of known physics. Of course, *one way* to get out of this dilemma is to agree that these flying saucer images are craft from interplanetary space manned by men from other planets!

These "unusual" phenomena are really not new to the literature. A recent letter to *Science* (Vol. 116, page 640) refers to reports by Elihu Thomson in 1916 and by John Zeleny in 1932, wherein were described some "objects in the sky."

Finally there remains to be stated another point of view. If these things are not real in the sky and if they are not pure psychological abstractions could they not be spots in the eyes? Indeed, this is how the "canals" on Mars came to be "established"!

This fall the United States was short about 345,000 public elementary and secondary school classrooms. Three classrooms out of every five were overcrowded.