UBATUBA RESIDUE*

By Jerome Clark

In early September 1957 Ibrahim Sued, society columnist for the Rio de Janeiro newspaper *0 Globo,* received a letter which would initiate years of controversy. The correspondent, his name obscured by an illegible signature, wrote in part:

I was fishing together with some friends near the town of Ubatuba, São Paulo, when I saw a flying disc. It approached the beach at unbelievable speed, an accident seeming imminent — in other words, a crash into the sea. At the last moment, however, when it was about to strike the water, it made a sharp turn upwards and climbed up rapidly in a fantastic maneuver. We followed the spectacle with our eyes, startled, when we saw the disc explode in flames. It disintegrated into thousands of fiery fragments, which fell sparkling with magnificent brightness. They looked like fireworks, in spite of the time of the accident — at noon. Most of these fragments, almost all, fell into the sea. But a number of small pieces fell close to the beach, and we picked up a large amount of this material — which was as light as paper. I enclose herewith a small sample of it. I don't know anyone that could be trusted to whom I might send it for analysis ["Physical Evidence,"1960].

After Sued published the letter in his September 14 column, he was contacted by Olavo T. Fontes, a prominent Rio physician and Brazilian representative of the Aerial Phenomena Research Organization (A.P.R.O), then based in Alamogordo, New Mexico. Fontes viewed the samples in Sued's presence. There were three of them, metallic-looking, made of a

dull-gray solid substance. . . . Their surfaces were not smooth and polished, but quite irregular and apparently strongly oxidized. Their appearance suggested.. pieces or fragments disintegrated from a larger metallic mass or object; in fact, the surface of one of the samples was shot through with almost microscopic cracks, always longitudinal, and even showed on one face a large longitudinal fissure running through almost two-thirds of its length, as if that piece had been disrupted under the action of some force. The others did not show many cracks or fissures, but the surfaces of all samples were covered in scattered areas with a whitish material. These whitish smears of a powdered substance appeared as a thin layer. The fine, dry powder was adherent, but could be displaced easily with the nail. It also filled the fissures and cracks on the surface of the first sample. This powder presented some similarity with the whitish powdered cinders on a chunk of burned charcoal — as if the fragments had been scorched by some fire or were damaged by too much heat [Lorenzen, 1962].

Sued, who had no interest in UFOs, was glad to hand the samples over to Fontes, who took them to the Mineral Production Laboratory, a division of the Brazilian Agricultural Ministry's National Department of Mineral Production. After chemical, spectrographic, and X-ray tests the laboratory determined that the samples were composed of "magnesium of a high degree of purity," with no other detectable metallic elements. According to chemist Luisa Maria A. Barbosa, who conducted the spectrographic analysis, "not even the so-called trace elements usually detected" were apparent ("Physical Evidence," *op. cit.).*

Fontes had other tests conducted on the samples. A chemist and former laboratory

employee, Elson Teixeira, did a second spectrographic analysis, the Brazilian Army a third. Additional X-ray diffraction work was conducted at the Laboratory of Crystallography at the department's Geology and Mineralogy Division. The Army did not inform Fontes of its findings, but otherwise all the new tests came to the same conclusions as the first: the material was pure magnesium. Moreover, one sample was found to have a density of 1.866; the density of pure terrestrial magnesium should have been 1.741.

To Fontes it was clear that the magnesium "represents something outside the range of present-day technological development in earth science. . .. They are, in fact, 'fragments' of an extraterrestrial vehicle which met with disaster in the earth's atmosphere, as reported by human beings who witnessed the catastrophe" (Lorenzen, *op. cit.).*

Controversy and confusion

A.P.R.O first told the story of what it called "physical evidence" of an extraterrestrial UFO in the March 1960 issue of its bimonthly newsletter and issued a press release, which received little attention. Director Coral Lorenzen wrote the Pentagon's UFO spokesman, Air Force Maj. Lawrence J. Tacker, to inform him that her organization

"has in its possession the physical evidence which the United States Air Force denies having been able to acquire. It is, in fact, a portion of an extraterrestrial vehicle which met with disaster in the earth's atmosphere. The catastrophe was witnessed by numerous human beings. The gratifying aspect of this case, however, is that we do not have to depend on the testimony of witnesses to establish the reality of the incident for

THE MOST ADVANCED LABORATORY TESTS INDICATE THAT THE RESIDUAL MATERIAL COULD NOT HAVE BEEN PRODUCED THROUGH THE APPLICATION OF ANY KNOWN TERRESTRIAL TECHNIQUES."

The testing procedures destroyed all of the first sample, making further replications of the analysis impossible. A.P.R.O possessed only samples two and three — a fact that would add to the confusion and irresolution that would dog the case in the years ahead.

The amount of remaining material was further reduced when an Air Force analyst accidentally burned up a sample as he was preparing an emission spectrograph examination. When the Air Force requested another sample, A.P.R.O refused. That sample stayed locked in a safety-deposit box until 1967, when David R. Saunders, an investigator for the Air Force-sponsored University of Colorado UFO Project (better known as the Condon Committee), brought the case to the attention of physical chemist Roy Craig, another scientist associated with the project. Soon A.P.R.O agreed to surrender a fragment of its sample.

In February 1968 Craig flew to Washington, where tests on the fragment were run at the National Office Laboratory, Alcohol and Tobacco Tax Division, Internal Revenue Service (Craig, 1995). Craig subsequently reported that the "claimed UFO fragment is not nearly as pure as magnesium produced by known earthly technology prior to 1957, the year of the UFO report.. . . This project has found no physical evidence which, in itself, clearly indicates the existence in the atmosphere of vehicles of

extraordinary nature" (Gillmor, 1969). Other tests run at Dow Chemical's Metallurgical Laboratory came to the same conclusion.

A.P.R.O protested that the "sample submitted to the University of Colorado was not the same fragment for which unusual property was claimed — it having been consumed by tests performed in Brazil" ("The Condon Report," 1969). By this time the organization was pursuing its own reanalysis, through one of its scientific consultants, University of Arizona metallurgical engineer Walter W. Walker. Walker's findings were independently confirmed by another metallurgist, Robert W. Johnson, head of the Advanced Materials Division, Materials Research Corporation, Orangeburg, New Jersey.

Walker and Johnson found that the material "had undergone a directional crystal growth type of manufacture. .. . The process was unknown when the fragments were recovered" (Walker, 1980; Walker and Johnson, 1992). Unfortunately, the two analysts wrote, the sample was too small to prove anything about the larger structure of which it was presumably a part. In 1992 Walker wrote:

The suspected chemical segregation and terrestrial contamination makes the surviving Ubatuba Samples No. 2 and 3 appear much less pure than purified triple sublimed terrestrial magnesium. . . . The interior metal of Sample Nos. 2 and 3 may be as pure as that reported in Brazil for Sample No. 1, but repeated chemical analyses to date have not verified this supposition. Since all of Sample No. 1 was destroyed in testing in Brazil and Sample Nos. 2 and 3 appear less pure than Sample No. 1, it can be concluded that all chemical analyses to date have not verified the extraterrestriality of the Ubatuba magnesium....

Considering the poor pedigree of the Ubatuba physical evidence, a hoax cannot be ruled out... [though] nothing unequivocally identifying the material as terrestrial was found either.... If one accepts that it is possible that a flying saucer has a soft, weak, technically pure, unalloyed, cast magnesium fuselage, then the metallographic evidence is consistent. The surface scale, the oxide intrusion into the grain boundaries and, particularly, the subscale from internal oxidation all suggest that the magnesium was exposed to the Earth's atmosphere at elevated temperatures. The white Mg(OH)2 coating is consistent with the burning fragments falling into the ocean....

In summary, after all these years, I consider the Ubatuba magnesium fragment as unusual material of still unknown origin [Walker, 1992].

No witnesses to the alleged UFO explosion over Ubatuba have ever come forth, though at least one effort, albeit a belated one, was made to find them. Pierre Kaufmann, a São Paulo physician, determined that the only known aerial incident in the area in 1957 was a DC-3 crash (Sturrock, 1985).

Sources:

"A.P.R.O Metal Extraterrestrial?*"* *NICAP Special Bulletin* (May 1960): 3*.*

*"*A.P.R.O's New Findings on Ubatuba Magnesium*."* *The A.P.R.O. Bulletin (*July/August

1970): 1,5.

"The Condon Report—An Appraisal." *The A.P.R.0. Bulletin* (January/February 1969): 1,5-6.

Craig, Roy. *UFOs: An Insider's View of the Official Quest for Evidence.* Denton, TX: University of North Texas Press, 1995.

Gillmor, Daniel S., ed. *Scientific Study of Unidentified Flying Objects.* New York: Bantam Books, 1969.

Harney, John. *"The Search for Physical Evidence, Part Three: The Ubatuba Magnesium."* Merseyside UFO Bulletin 4,2 (June 1971): 19-21.

Lebelson, Harry. "UFO Update: Alien Metals." *Omni* 2,2 (November 1979): 30,132.

Lorenzen, Coral E. *The Great Flying Saucer Hoax: The UFO Facts and Their Interpretation.* New York: William-Frederick Press, 1962. Revised edition as *Flying Saucers: The Startling Evidence of the Invasion from Outer Space.* New York: New American Library, 1966.

"Magnesium Study Continues." *The A.P.R.O. Bulletin (*January 1984): 6.

Maney, Charles A. "The Campinas Sighting." *Flying Saucer Review* 8,3 (May/June 1962): 3-6.

Pace, Anthony R. "Ubatuba Magnesium—UFO Fragments?" *Journal of Transient Aerial Phenomena* 1,2 (March 1980): 4 1-42.

"Physical Evidence." *The A.PR.0. Bulletin* (March 1960): 1,3.

"The Physical Evidence Story." *The APR0. Bulletin* (May 1960):1-3,8.

Saunders, David R., and R. Roger Harkins. *UFOs? Yes! Where the Condon Committee Went Wrong.* New York: World Publishing Company, 1968.

Sturrock, Peter A. "Brazil Magnesium Study." *The Explorer* 2,2 (1985): 6.

Swords, Michael D. "Analysis of Alleged Fragments from an Exploding UFO Near Ubatuba, Brazil: An Introduction." *Journal of UFO Studies* 4 (new series, 1992): 1-5.

U.S. Congress. House. *Committee on Science and Astronautics. Symposium on Unidentified Flying Objects. Hearings, Ninetieth Congress,* Second Session, July 29, 1968. Washington, DC: U.S. Government Printing Office, 1968.

Vallee, Jacques. *Confrontations: A Scientist's Search for Alien Contact. New York:* Ballantine Books, 1990.

Walker, Walter W. "Ubatuba (Brazil) Magnesium." In Ronald D. Story, ed. *The*

Encyclopedia of UFOs, 374-75. Garden City, NY: Doubleday and Company, 1980.

_____ "A 1992 Perspective." *Journal of UFO Studies* 4 (new series, 1992): 26-37.

Walker, Walter W., and Robert W. Johnson. "Further Studies on the Ubatuba Magnesium Samples (1970)*." Journal of UFO Studies* 4 (new series, 1992): 6-25.

Wightman, David. "The Aerial Phenomena Research Organization's 'Physical Evidence': Was the Ubatuba Disc a Missile, a Hoax, ora Flying Saucer?" *Saucer News 8,1* (March 1961): 5-9.

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