NEW DEVELOPMENTS ON OTTAWA'S MYSTERY METAL

In our last issue, we reported that we were still awaiting receipt of the long-promised report on the tests and findings of the metal samples of the 3,000-lb. chunk of unidentified hardware. Meanwhile, that dedicated researcher, Arthur Bray, has again approached Dr. P. Millman, who heads Canadian Government UFO investigation and with whom Arthur initiated this latest request for a governmental analysis of samples of the mystery metal. Arthur now reports as follows: "To the best of my knowledge, the Geological Survey has concluded its testing, although I have no idea what tests the sample was subjected to. Whether the tests which I specifically requested were carried out, only time will tell. I have been informed verbally by Dr. Millman that Dr. Smith of Geological Survey will publish the results of the analysis in one of the scientific journals issued by the Federal Department of Energy, Mines and Resources. When this will be, is another question. Dr. Millman has promised to inform me when this has been done, and to see that I receive a copy of the journal concerned." While it is encouraging to learn that an official report may eventually appear in a government journal, the fact remains that, for the time being, we are back to square one again, still playing the "waiting game". After what is now over 10 years of governmental delaying tactics in producing this report, we may perhaps be excused if we wonder if this is yet another stalling action. However, as Arthur Bray so philosophically points out: "We may have to wait another year, but after 10 years already, what is one more?" We are certainly not discouraged - in fact, we welcome this time lag in which we can continue with our own constructive research on a private basis.

In view of this continuing situation, our metal research group has agreed to step up its efforts to obtain a larger number of individual analyses from private professional sources. When, with time, we receive all the results of these tests, we shall then be in a better position to make a thorough comparison to note similarities and/or differences and also to check them with the governmental report if and when it is finally published. Over the past year, a largish number of metal samples were sent out by our group at the request of interested parties. Arthur Bray is also continuing his own personal efforts to secure further analyses and is presently negotiating with a reputable source in the U.S.A., while our co-worker in Montreal, Mr. Ronald W.G. Anstee, is now awaiting receipt of reports of tests on the samples he sent out last year. We readily appreciate that it takes some time to perform thorough analyses, particularly as it is often a case of having to fit in such tests with other, higher-priority lab. work. However, as far as our group is concerned, the first of the reports are now beginning to trickle in, with some interesting results. For obvious reasons and until the government report is published, we are now compelled to adopt our own "silence policy" on the exact details, on a quantitative basis, of the reports received. However, for the interest of our readers, we give below some details of a preliminary report (Phase One of a Two-Phase Program) of a chemical analysis of the metal samples as carried out by Unidentified Flying Objects Researchers Alliance of 214 South Arch Avenue, Alliance, Ohio 44601, U.S.A.

RESULTS OF TESTS CONDUCTED ON: "CANADA'S MYSTERY METAL" BY UFORA
PHASE ONE: DECEMBER 31, 1970.

Listed below are the results gleaned from tests conducted by UFORA's Chemistry Advisor and his associates on a sample of "Canada's Mystery Metal".

As soon as the metal was received, attempts were made to obtain smaller samples from the larger piece of metal. First attempts were made to cut the metal with a Tungsten Carbide blade, but after five minutes, it was decided that this attempt was in vain. The next avenue of thought turned to using a diamond-tipped powered saw. After 15 minutes of cutting time had elapsed, a small fragment was cut from the parent body. The piece was roughly triangular in shape with a thickness (point at which it was cut) of about three/thirty-seconds of an inch.

One of the major tests conducted on the metal was by the X-Ray Vacuum Quantometer, a non-destructive testing device. The findings of the Quantometer were as follows :

MAJOR CONSTITUENTS		MINOR CONSTITUENTS	
Iron	(Fe)	Cobalt	(Co)
Nickel	(Ni)	Silicon	(Si)
Manganese	(Mn)	Magnesium	(Mg)
Chromium	(Cr)	Sulfur	(S)
		Potassium	(K)

No traces were found of Aluminum (Al), Sodium (Na), Phosphorus (P) and Chlorine (Cl).

A small sample of the metal (.8 grams) was placed in a solution of Sulfuric and Nitric acids, full strength, for a period of two days. After the two-day period had ended, the residue of what was left of the metal was filtered through a Millipore Filter, and the filter and residue were stored in a closed plastic petri dish. After a time lapse of two days, it was noticed that a form of bacteria culture was growing on the filter paper and was apparently using it as its food source. It should be noted, however, that no conclusion can be drawn with regard to the influence of the metal on the culture growth. The Chemistry Lab., being geared for metallic compositions, has no means at the present to analyze the culture to determine the culture's composition.

The metal was found not to be very magnetic in nature. The consensus of opinion among those involved with the testing is that at one time the metal was subjected to a tremendous amount of heat.

This concludes Phase One of the tests carried out by the Chemistry Lab. The metal is now in the possession of the Metallurgy Dept. The findings of the Metallurgy Dept. will constitute Phase Two of the analyzation program. Metallurgy is now in the process of evaluating the metal; they have already determined that the hardness of the metal is B-92 Rockwell. Photomicrographs taken at magnifications ranging from 100x to 800x show that the "planes" of the metal did undergo a type of slippage such as the metal might receive if it underwent a severe impact or if the metal, being extremely hot, underwent a super cooling in a relatively short amount of time, or perhaps even a combination of the two aforesaid circumstances. The complete test results will be made known as soon as they are available. (Signed) Paul J.L. Rozich, UFORA Director.

It is interesting to note from this report that it confirms 3 of the repeated findings of earlier analyses: (1) that the metal at one time was subjected to a tremendous amount of heat; (2) that it underwent severe impact; and (3) the low magnetic nature of the metal. But perhaps the most significant finding of the report is, in fact, a non-finding, i.e., according to the major test conducted on the metal by the X-Ray Vacuum Quantometer, no traces were found of Aluminum, Calcium and Copper which normally, one would expect to find in a terrestrial alloy of Magnesium! Another intriguing feature is the strange formation of a bacteria culture on the filter paper. Could there possibly have been some element in the metal residue which stimulated this organic growth? We are not experts in this field (we are not experts period - merely sincere seekers of the truth) and possibly there is some perfectly mundane explanation for the bacteria growth in a sealed plastic dish, but while there is even a remote avenue of research open to us, we intend to follow it up even if it turns out to be a process of elimination. In the meantime, we would like to express our grateful thanks to the research workers of UFORA for their painstaking efforts and precious time so freely given in an endeavour to shed some new light on the dark mystery of the unidentified metal. We shall look forward, with eager interest, to their report on Phase Two, the findings of their Metallurgy Dept., appropriate details of which will be published at a later date.

According to an article which appeared in the Fall 1970 issue of Canadian UFO Report, Arthur Matthews, in conversation with the Editor, John Magor, stated that the scrap dealer who found the 2 chunks of metal on a shore of the St. Lawrence River, had admitted to im that he had removed them from the site of the old Quebec Bridge which collapsed in 1907 and that he towed them 20 miles to the beach near his home where he first reported to have found them. He said he'd been hesitant about telling the truth in case he was

accused of taking government property. The article suggests that the truth of this story could be checked by comparing the Ottawa Chunk with the bridge relics. If these still exist, this is certainly another avenue of research which could be followed up. However, the article goes on to throw some very logical doubts on the veracity of the story and wisely leaves the case of the mystery metal open until more acceptable answers are forthcoming.

As a matter of record, Mr. Matthews propounded his Quebec Bridge theory to our group prior to making his test on the Chunk with the Tesla Bridge, a test which, as reported earlier, left some grave doubts in the minds of some of our technical workers who witnessed it, particularly as no scientific proof was forthcoming to support it, and most of them were unable to accept that it was possible to prove that the metal mass had never been in space with a device used primarily for detecting flaws in metal railway lines! It was also noted that the volume indicator on the tape recorder linked to the Tesla Bridge showed no signs of 'life'. Last summer, one of our readers visited Mr. Matthews who, during an interview, claimed he had worked on the Quebec Bridge - and immediately recognized the Chunk as part of it! In view of the fact that Mr. Matthews had seen photos of the Chunk a long time ago, one wonders why he kept silent about its origin for so long? In this reader's report to us, he stated that Matthews had admitted to him that the Government had asked him to check the metal in the hope that we would believe him, thereby confirming a suspicion we expressed in an earlier report.

As for the Quebec Bridge theory, our group analyzed it carefully but finally dismissed it as completely untenable and certainly no scientific proof of the origin of the metal, in fact, we considered this theory to be more incredible than the possibility of the Chunk coming from Outer Space! Let us briefly analyze the facts proffered by Mr. Matthews. We are told that in 1907, the scrap dealer illegally removed 2 large pieces of metal, weighing 3000 lbs. and 800 lbs. respectively, from the collapsed bridge site. This immediately raises a number of questions: How was he able to lift this heavy material without the use of a crane which could immediately attract attention? And even if he was successful in removing it thusly, why would he go to all this trouble if the only purpose was to tow this material 20 miles and then dump it on a beach near his home? Even more intriguing, how did he manage to place the larger chunk in a delicately balanced position on a rock, and for what purpose? Having gone to all these extraordinary lengths, are we then expected to believe that the 2 chunks of metal lay undetected and untouched on the beach for 53 years? And why, after over half a century had elapsed, did he suddenly decide to pick up the 800-lb. piece and sell it as scrap metal? This aspect of the case does not tally with the story of the local beach-comber interviewed by our group in June, 1960, who said that he had covered the beach pretty thoroughly the first week of June; then came 3 days of rain when he did not work the area, but when the weather cleared, he then found the 2 metal chunks on the beach. Now if we assume that the original scrap dealer was of the average age of 30 when he took the 2 metal chunks from the Quebec Bridge in 1907, we wind up with the ludicrous picture of a doddering old man of 83 finally picking up the 800-lb. piece of metal! With all due respect to Mr. Matthews, we must make allowance for the fact that he is now a very old man and therefore, in our search for the truth, we must apply a certain amount of scientific reservation to some of his statements.

Mr. Ronald Anstee, who has played an active role in the metal research since 1965, has sent us a copy of a letter he directed to the Editor of Canadian UFO Report in which he makes some strong comments on Mr. Matthews' Quebec Bridge story, extracts of which follow: "I was present with members of the Ottawa New Sciences Club when Mr. Matthews examined(?) the metal. His statements are, when taking into consideration the way in which the metal was found plus the state of the metal, idiotic. The metal mass is very dense and heavy, and very ragged. It is in layers, having apparently gone through intense heat and very severe impact. I have been used to hard work and exercise for the past 35 years, so I know that it was not easy to break off the few metal pieces I have. The shape(of the mass) is unusual and bears no heavy scarring as one would expect to find on metal that has been cut by acetylene torches. It originally weighed about 3,000 lbs. If it was ever part of an old bridge, then how many thousands of tons did the bridge weigh? When the

chunk was being moved to a site in Ottawa, it slipped, falling on to a concrete floor and cracking it. (This incident occurred when the late Wilbert B. Smith and co-workers were placing the metal mass in a government laboratory. - Ed.) There was apparently no evidence of such a mass ever having been towed to where it was found. What methods were used to put the metal down on the boulder where it was found, without causing indentations on the rock? (There was not even rust on the metal when first found! -- Ed.) Personally, taking all things into consideration, I cannot agree with Mr. Matthews' statements."

With the copy of the above letter, there was a covering letter from Mr. Anstee in which he sums up the metal situation as follows: "When I first saw the metal in 1965, the first and lasting impression I got was: (1) that it had been impacted by some extremely heavy force; (2) it had also at some time been subjected to great heat; and (3) various components, by these actions, had been forced to one central point, thus allowing for the different aspects of the overall mass, i.e., some parts can be drilled, some cannot; some parts are magnetic and some are not. In Mr. Matthews' test, he placed a device in the form of a dial on the surface of the metal from which wires passed to a tape recorder, apparently necessitating the attachment of cables to the electric power source of a car. All things give off radiations which can be picked up by the appropriate equipment, such as special cameras which can phbtograph the aura of the metal. It did not strike me that Mr. Matthews tests could either record the radiations or photograph the aura of the metal. If he was prepared to test the metal, he could have made sure that he was in possession of a better power source, such as a large battery. I did not see him make any physical examination of the metal or even photograph it. I had with me a 3-lb. hammer and 2 steel chisels with which I finally managed to break off a few pieces. After 20 minutes' heavy pounding, I was able to break off a larger piece which was a small part of one of the layers which had been heavily impacted on to other layers. This piece weighed 2½ lbs. and measured 9" in length; its width varied from ¼" to 2 5/8" and its thickness from ¼" to 13/16". This was, in my estimation, a basic physical examination from which a researcher could deduce a certain amount of knowledge of the metal. The idea that such heavy material could come from a bridge is, in my opinion, preposterous, and following so closely on the other theory of the metal being slag from a Sorel foundry, it reminds one of the many cases of funny Air Force answers from sources thousands of miles away from the scene of a sighting. History is full of remarks made by so-called authorities on subjects and material they have neither seen nor examined. Such funny answers are being directed to those who have neither seen nor know anything of the metal, i.e., the majority. For those who do know something, silence is all they will receive from those who should know better - until the day finally arrives when there will be more red faces in high places than there are tomatoes in the world's largest vegetable gardens!"

Taking an open-minded view of the general metal analysis situation, we are the first to realize that numerous difficulties lie in the way of establishing definitely whether or not a metal sample is of extraterrestrial origin. The obvious reason for this and as pointed out in an earlier issue, is that there is every possibility that other planets have the same minerals as those of Planet Earth. Confirmation of this comes in an article by Dr. Allen R. Utke which appeared in the Dec. 1970 issue of that excellent journal SKYLOOK to which we give credit for the following extracts. As Dr. Utke states: "Most scientists are convinced that the same 92 natural elements found here on Earth are found everywhere in the Universe, with no new natrual elements yet to be discovered. -- We would only begin to suspect extraterrestrial origin if the sample, upon extensive analysis, was found to be one of the following: 1. An uncommon element, absolutely pure or of unusually high purity. 2. A mixture of elements or an alloy with a highly unusual or previously unknown composition and/or set of properties. 3. A compound or mixture of compounds with a highly unusual or previously unknown composition and/or set of properties. 4. A material with a highly unusual or previously unknown atomic or molecular structure." Dr. Utke concedes that the only evidence which would probably convince scientists of an extraterrestrial origin is a sample whose isotopic distribution differed significantly from that of the same elements on Earth. While he suggests that matter everywhere may be isotopically alike, as a

true scientist, he admits that this has not been proven, since stellar and inter-stellar isotopic distributions are difficult to determine. This brings up a vital point which was urged by our founder, the late Wilbert B. Smith, in the early days of the discovery of the unidentified chunk of metal, i.e., the necessity for an isotopic examination of the metal, something we have been unable to obtain from any source to date and regretably, there appears to be little hope of our doing so.

Where then do we go from here in our search for the truth of the mystery metal? Maybe our approach to date has been along the wrong lines - in short, have we been putting the cart before the horse? If, as now seems to be established by most scientists, all natural elements have a common origin throughout the Universe, there appears little hope of proving the extra-terrestrial nature of a suspected alien metal by an analysis of the elements it contains. Therefore, perhaps the most conclusive way to determine the possible extra-terrestrial nature of such a sample - and one frequently overlooked in tests and analyses - is to concentrate not so much on what the sample contains as what it does not or should not contain in normal earth metals. The crucial question is, however, even if 100%, fool-proof evidence were established, would the Scientific Establishment be prepared to admit it, or would they produce their usual flow of phoney alibis to wriggle out of acknowledging the existence of extraterrestrial material? A typical case in point were the UFO fragments found in 1957 on a beach in the Ubatuba region of Brazil. After a long history of various international tests, in 1968 the FBI Laboratories in Washington subjected one of the fragments to neutron activation analysis when the sample was found to be 99.9% pure magnesium. The remaining impurities were minute quantities of strontium, zinc, barium, manganese and chromium. Again, it was the non-contents of the material that were of vital importance, but despite the fact that no traces were found of aluminum or calcium, elements normally found in terrestrial magnesium, most scientists refused to be convinced of the extraterrestrial nature of these UFO fragments.

Arthur Bray was one of the first to latch on to the importance of non-contents of metal analyses of suspected extraterrestrial material and at the time that Dr. P. Millman addressed our group in April, 1969, Arthur brought up this very point with him, but with little apparent response from this internationally-acclaimed scientist. However, despite the odds against us, we in private UFO research, should press on regardless and with sincere prayer that in the final analysis (pun unintentional but appropriate!), the TRUTH will prevail! Who knows, perhaps with a greater concentration on the non-contents of suspected alien material, we may yet be able to prove publicly the extraterrestrial nature of certain metal samples? From knowledge of the personal experiences of the late Wilbert B. Smith, of one thing we are sure - those government scientists engaged on UFO research, who work so mysteriously behind the "silence curtain", have been well aware of the existence of extraterrestrial material for a long time now!

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THE MISTERIOUS CHUNK OF HARDWARE AT OTTAWA

On the outside property of the Headquarters of the Ottawa New Sciences Club there lies a large piece of metal - an unidentified object which has so far baffled all attempts at positive identification and over which an aura of mystery hangs as to its exact composition, purpose, origin and most of all, the unusual circumstances surrounding the finding of this large chunk of hardware in the St. Lawrence River of Quebec. This piece of metal measures about 4 ft. by 6 ft. and is roughly oval in shape, somewhat like an inverted mushroom, i.e., flat on top and roughly hemispherical on the underside. A plug or post about 9" in diameter, at 90o to the flat surface, penetrates the centre of the mass and extends through top and bottom surfaces. A smaller protuberance, which may be the remains of a 2½" pipe, appears out of the flat surface near the plug. The weight is estimated at about 3,000 pounds. The whole is made up of layers of material which evidently have been subjected to very high temperatures and pressure. The material is ferrous, extremely hard, and resistant to all attempts to cut or dismantle it. It is faintly magnetic until melted when it seems to acquire approximately the magnetic permeability of mild steel.

As a couple of articles on this mystery metal have recently appeared in French language newspapers containing a number of inaccuracies with regard to the facts of the case as we know them in Ottawa, we propose to give our readers a brief account of the history of the metal as far as we know it.

According to an early account which appeared in a French language newspaper in Quebec - on June 12, 1960, between 3 and 4 a.m., EDT, a sonic boom rocked the area around Quebec City. At about the same time, a fiery object fell out of the sky splitting at about one to two thousand feet altitude, into two pieces, one somewhat larger than the other. Both fell into the St. Lawrence River, near Les Ecureils, about 20 miles up river from Quebec City. The smaller piece was quite close to the shore and visible at low tide; the other lay close to the shipping lane and was completely submerged.

It should, however, be pointed out that when, shortly afterwards, a group of Club members carried out an investigation at the actual location, they were unable to find anyone in the Les Ecureils area who had actually heard or seen the metal fall - strange, in such a small town. So the manner in which the metal arrived at the scene still remains a mystery.

The Area. At Les Ecureils, the river bank drops sharply to a relatively flat shale bed which extends out for nearly a quarter of a mile to the deep water shipping channel. The channel is separated from the shale area by a jumble of large boulders. The river is tidal so that the area of the find varies from dry to a maximum depth of water of about 1½ feet.

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The Find. A local resident, who supplements his income by beachcombing, covered the area pretty thoroughly the first day or two of June. Then came three days of rain during which he did not work the area. When the weather cleared, he found the two pieces of metal on the shale bed.

Disposition of the Metal. The finder, unable to handle the larger chunk, loaded the small 800-lb. piece and sold it for one cent a pound to a scrap metal dealer in Quebec City where it was erroneously classified as non-ferrous metal. The large magnetic crane used for handling the scrap, would not lift the metal due to its low magnetic permeability, so it was pushed into a pile of non-ferrous scrap and eventually shipped to Japan. As for the largerpiece of metal, rumour of the find reached the Canadian Arsenals Research and Development Establishment (CARDE) in the area, who, thinking it might have been part of a space capsule, picked it up for investigation. On completion of their investigations, CARDE eventually handed the metal over to a Club member who, at great difficulty, trailered the heavy object to Ottawa where it is now in the custody of the Club.

The Findings. After analysis, CARDE reached the following conclusions: "The X-ray diffraction analysis indicated that the unidentified object consisted of a metallic face-centred cubic compound, with a unit-cell dimension agreeing with those of 1) austenitic steal, and 2) meteoric iron. The semi-quantitative specto-graphic analysis showed, however, that there was insufficient nickel present for the material to be of meteoric origin. The amount of manganese detected in the spectographic analysis suggests that the metallic material is best described as high-manganese austenitic steel. This is consistent with the very weak ferro-magnetic nature of the metal. The iron oxide and the hydrated iron oxides on the surface are normal results of the exposure of steel to the atmosphere. The amounts of quartz and calcite detected by X-ray diffraction are very small, and are common extraneous materials. The low nickel and high manganese content are not consistent with a meteoric origin, whereas they are consistent with common high-tensile steels. The object is therefore considered to be of terrestrial origin."

Another report states in part: "The metal object proved to be a mass of high strength metal which had fallen, or had been dropped, while in a plastic state, and had splattered like a ball of mud. It was 6 ft. in diameter and 2 ft. thick at the centre. At the centre of the body, there was an outline of a tube about 10 inches in diameter which protruded from the mass about 6 inches. A small electronic potting can was imbedded near one of the outer edges. By scratching away the potting plastic, it was possible to identify an electronic component which appeared to be a transistor. There was also the imprint of another electronic can which appeared to have been removed by curio seekers. It is not considered that the object

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fell in the location where it was found, because there was no crater or splattered material in the vicinity. The tidal flats at this point are solid rock. An analysis by CARDE revealed that the metal is an alloy with high manganese content. CARDE personnel who are familiar with foundry operations, consider it to be a normal product of a foundry consisting of slag with semi-molten scrap intedded. Their investigation did not reveal any electronic components."

Despite the findings of CARDE, an element of doubt exists as to whether these are completely accurate. Although they considered the object to be of terrestrial origin, laboratory experiments on the metal carried out by the late Wilbert B. Smith and co-workers, resulted in a number of unusual reactions not consistent with the normal behaviour of terrestrial metal. This was most evident when a small piece of the metal was heated with an acetylene torch which caused it to blossom into a miniature white cloud with extremely bright sparks in it - a sort of A-bomb in miniature. WBS concluded that the magnesium went exothermic, reduced the ferrite in the spinnal crystal structure, formed the cloud and left the iron free to burn with O_2 in the air. He warned that anyone attempting to heat a larger chunk of the metal might very well fry himself! He also considered that the intense heating should have burned the object worse than it did and he therefore reached the conclusion that it could not have been a blast furnace product. Further experiments revealed that some parts of the metal could not stand too much heat, thus limiting the possibilities as to why such a manufactured item came to grief. In testing the metal with the acetylene torch, it was noted that the resulting sphere, with its intensely brilliant shower of sparks, burned until nothing remained - no residue or slag, as is common with earth metals.

CARDE suggested that the metal may have been slag from a foundry brought to the area via an ice floe. The facts of the case, however, do not bear thisout. The nearest mills are many miles from Les Ecureils - and it was the month of June'. The material is not a common foundry product, and even if it had been, one wonders why the foundry would waste 3,000 pounds of metal!

More Mysteries. How the metal arrived at Les Ecureils remains the biggest mystery of all. The maximum depth of water at high tide and the closely-spaced boulders along the shipping channel would seem to rule out any possibility of arrival by boat or raft. Had it fallen from the sky, the noise would have been earth-shaking. Even a small meteorite sounds like a rushing freight train.

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A further mystery, indicating the possibility of exposure of the metal in outer space, is that the outer surface, under powerful magnification, shows minute inclusions which well may be micro-meteorites picked up during a long sojourn in space. The Club has in its possession a series of photographs of the outer surface of the metal, taken with the aid of micro-photography, in which these inclusions can be observed quite clearly. The density of these particles is about 30 per square centimeter. Dr. Peter Millman of the Canad National Research Council, estimated that micro-meteorites of this size would occur through a sq. cm. section at about 10^{-6} second, so it would take about a year to accumulate such a density.

Analyses. Several chemical analyses of the metal have been made by the Club. These vary, indicating that the mass is not homogeneous. To date, the Club has been unable to find any organization with the proper facilities, willing to carry out a mass spectographic analysis to determine the number of isotopes in the various elements contained in the metal. If this could be done, it would establish whether or not the material isof terrestrial origin, although, of course, there is always the possibility that other planets may have the same minerals as Planet Earth. And even if it were proved to be of terrestrial origin, there still remains the intriguing mystery of how it arrived on the beach!

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