prising agility when the beings returned to their machine? Usually small men are more agile than bigger ones, or at least that is the impression their movements tend to create: was there anything peculiar in the way the beings moved?

[Mr. Schönherr's dismay at some apparently glaring omissions is understandable, and even if it should serve no other purpose, the foregoing questionnaire is of the utmost importance as a model of what is required at an

investigation.

I do feel, however, that our contributor should bear in mind the inescapable fact that UFO investigators and groups are amateurs, that their time and funds are usually very limited, and invariably the first they hear of a new case is the report given out on radio or on television, or in newspapers. Then, especially if it is a

startling case like Valensole, the hordes descend and the damage is done before the would-be investigator obtains leave of absence from his employment. This is why investigators have to rely mainly on interrogations long after the event, and it is little wonder that small contradictions creep in. (Aimé Michel pointed out small discrepancies at the beginning of his article The Valensole Affair.)

at the beginning of his article The Valensole Affair.)
Concerning question No. 10, it should be noted that a drawing was obtained. The object shown in miniature on the sketch on p. 7 of the November/December 1965 issue of the REVIEW is an exact replica of the object drawn by M. Masse, and published in the GEPA bulletin.

As for the apparent contradiction in question No. 11, could not M. Michel's questioning have been more persuasive—and successful—because he himself is a native of the region and speaks the same 'fine old Provenzal' tongue as does M. Masse?—EDITOR.]

## Canadian Fireballs

## By Richard Hunt

Our contributor was born in Thorpe Bay, Essex, studied at the Royal Academy of Music, and emigrated to Canada in 1956. He now teaches music in Montreal

On April 1st, 1965, the Montreal Gazette carried an item on a "silver ball" seen over British Columbia and other areas. Later, the Montreal Star said this "fireball" had been identified as "one of the heaviest meteorite showers in Canada since 1913". Then (still April 1st), the T.V. News stated that a satellite was about to fall back in the area about this time. Smelling a rat, I sent for local newspapers and acquired a selection of clippings which cover the whole incident up to the time of the aerial survey, I have summarised the incident for the record.

From Kamloops Daily Sentinel, of April 1, 1965, we learn that R.C.M.P. and civilian researchers, led on by the smell of sulphur fumes, were attempting today to locate the remains of brilliant balls of fire that lit the skies and landscape across British Columbia and parts of the U.S. Wednesday night

(March 31).

The flashing, streaking objects were reported from Kamloops in the south-central B.C. interior, across the Okanagan and the Kootenays in the south-east of the province and as far north as Fort St. John, B.C., and as far south as points in

Washington and Idaho states.

In some cases, observers reported the brilliant objects were accompanied by rumbles which shook houses, rattled windows and made lighting fixtures swing, A weather observer at Revelstoke said a "meteorite" which passed over that central B.C. community was accompanied by "ten minutes of thunder which shook the buildings."

Most observers reported the phenomena as of brilliant intensity and changing colours—ranging through red, orange, yellow, white and brilliant blue, and of duration lasting from

3 to 25 seconds.

The pilot of a commercial airliner over Euphrata, Washington, reported the object made the cockpit of his DC-3 as "bright as day" as it swept north-northwest.

Elmder Devore, news director of radio station CJDC, at Dawson Creek, said he saw it begin as a small, falling star. Its colour was yellow.

"But it gradually increased in intensity and lit up the city," he said. "Then it changed to white and remained white until it struck the ground, then turned blue and disappeared."

A police matron at Lewiston, Idaho, reported seeing the bright flash of the object as it moved across the sky at about 9.50 p.m. Witnesses in the Edmonton area reported similar sightings at 10.45 p.m. A brush fire was reported at Anglemont.

The major impact of the shower was said to be concentrated



in the Chase area (Shuswap Lake) around 9.45 p.m. According to Cecil Myers, of Anglemont, the object appeared to be about two feet in diameter, with a tail about two feet long, and emitting a brilliant light which ranged from orange to yellow in colour. Three minutes after sighting the object, there came a sound like a sonic boom.

"When the boom came there was a tremendous suction," he said. "It seemed to be taking our breath away—just like a dynamite explosion. It shook everything and felt like an earthquake. When we ran outside the ground was still shaking. It lasted maybe three seconds and then echoed down the valley."

The Lethbridge Herald of April 5 tells how preliminary enquiries indicate that the "fireball" was a fast-moving meteor that weighed more than 100 pounds.

Dr. E. P. Argylle, a federal astonomer who made the estimate, emphasized in an interview that it was subject to change after careful analysis of information acquired and yet-to-be acquired. But with that qualification, he estimated that the meteor was fast-moving, fell at a fairly steep angle and continued to burn to an extremely low altitude.

It may have hit the ground at supersonic velocity that would make a crater. It probably fell near Sicamous, 60 miles east of Kamloops, B.C. Its light was in the neighbourhood of 10,000,000,000 candlepower. Dr. Argylle said the ordinary "shooting star" seen high in the sky is a meteor about the size of a grain of sand with 10,000 candlepower of light.

American and Canadian officials have discounted earlier theories that the fireball was an American satellite re-entering the atmosphere.

According to the *Prince George Citizen* of April 12, a fragment of the meteorite may have been found at Squam Bay, about 70 miles north-east of Kamloops.

A certain Elmer Saunders said he was looking in a pasture on his father's farm at Squam Bay for milky quartz when he found a black fragment, about an inch and a quarter long, tapering from a thickness of three-quarters of an inch to little more than a quarter of an inch. He said he found the fragment in a blackened area, about  $1\frac{1}{2}$  feet square, which he had not noticed before, in a field which still had large areas of snow.

Dr. John Galt, director of the Dominion Radio Astrophysical Observatory at White Lake, examined the fragment but could not be sure it was a part of a meteorite. It is to be sent to the geological survey of Canada for further examination.

Back to the Kamloops Daily Sentinel this time of April 17, to learn that an aerial survey was launched in the Shuswap Lake area of the British Columbia interior for a crator believed to have been carved by the falling meteor.

Dr. John Galter—I can only presume this to be the Dr. John Galt mentioned above—director of the Dominion Observatory here, spent 2½ hours in a helicopter yesterday, criss-crossing the area, but saw nothing that resembled a crater.

But Dr. Edward Argylle said it is believed the March 31 fireball exploded in the earth's atmosphere with the force of a small atomic bomb.

"Based on considerable evidence from eye-witnesses," he said, "I believe the meteor broke up at an altitude of 5 miles. The descriptions indicate to me the meteor was crushed by

atmospheric pressure and it was fragmented into tens of thousands of pieces, the largest of which became a white-hot meteor on its own."

He said a seismometer at a weapons establishment at Suffield, Alta., recorded a shock caused by the meteor equal to the explosive force of 75 tons of TNT. Suffield authorities thought the shock was caused by the meteor striking the ground.

Finally, a metallict fragment was found near Kamloops, and sent to Ottawa for testing, and then for tests to the Smithsonian Institute in Cambridge, Mass.

So much for the newspaper reports.

I would now like to deal with one aspect of the sightingthe ballistic. The final explanation of Dr. Edward Argylle that, after being "fragmented into tens of thousands of pieces", one large chunk "became a white-hot meteor on its own" appears to be an attempt to account for the apparent double landfall at Shuswap Lake and at Dawson Creek (see sketch). For such a secondary object to continue in exactly the same direction as its primary would appear to be nothing short of a miracle, unless the secondary was in fact the hard central core of the primary-in which case, the explosion at Shuswap Lake caused the jettisoning of the object's soft outer layers and left the hard core to carry on to Dawson Creek. However: the average speed between these two places was sub-sonic (400 miles in 45 minutes); therefore (a) why was the Dawson Creek object not found intact? and (b) assuming an altitude consistent with the observed phenomenon at Shuswap Lake, could a Free-Falling object cover this distance at such a low speed? (N.B., Dr. Argylle suggests 5 miles as the altitude of the fragmentation, and the supposed meteorite is actually being sought in the Shuswap Lake area, not at Dawson Creek.) Since the original "meteorite shower" hypothesis has been voluntarily dropped by the astronomers themselves—perhaps because showers involve large numbers of very small particles-and since the returning satellite mentioned was found to be travelling N. to S. instead of S. to N., and since no single meteorite could perform the necessary ballistic miracles to account for the observed facts, I submit that this case should be categorized UFO.

For a similar case (minus sulphur) I refer readers to flying saucer review, Vol. 8, No. 1, page 29, under "Southern Rhodesia".

For a case with sulphur, see flying saucer review, Vol. 8, No. 2, page 23, under "Cumberland Meteorite". Here an expert on meteors asserts that sulphur smells are out of place; also that meteorites cool before final impact and, I presume, are not expected to start fires.

There was also the case of a "smell" reported in the Liverpool area in the World Round Up columns of the FLYING SAUCER REVIEW, Vol. 11, No. 5.

Finally, the piece of evidence discovered by Elmer Saunders, a fragment which seems to have disobeyed all laws of meteorite behaviour, reminds me of a piece of metal given to me last summer by Ronald J. Anstee of Montreal; Mr. Anstee claims it was from a 15 ft. circular object found on a submerged rock in the St. Lawrence River. It is black, heavy, without "ring", slightly magnetic but a good conductor; it appears to consist of two compacted layers and one side bears a startling resemblance to the Saunders fragment, a photograph of which appeared in the Kamloops Daily Sentinel of April 10.