

Meteorite sleuths need clues to find missing pieces of rock

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NORTH of Kipling's great grey-green greasy Limpopo River, in the remote scrub lands of Botswana, lies something that could help save humanity and the planet from annihilation. Helicopters and planes have been scouring the area, searching for pieces of rock, perhaps no bigger than a 50c piece.

They are strewn across the bush, after a meteorite exploded high in the sky. "We are still looking for the haystack," said meteorite collector Dr Ronnie Mckenzie, who is leading a team that is searching for the object on behalf of the Botswana government. What they are looking for is the meteorite that lit up the sky on the evening of November 21.

It was witnessed by thousands as it blazed over Joburg and Pretoria before heading north.

A day after the sighting, Mckenzie and his team were in Botswana searching for ground zero. Days later the President of Botswana, Ian Khama, joined the search in a military plane.

He and his government are keen to recover the meteorite and, for his efforts, Mckenzie will be given pieces of the celestial object to add to his collection.

But, more than a month later, Mckenzie is still looking, although he feels he is getting closer – he has now located witnesses who recorded seeing the meteorite flicker and go dark before hearing a big bang.

"The trick is to ask when you saw the light go out and when the noise reached them.

By counting the seconds from when they stop seeing the meteorite to the bang then you can work out how far away it was."

Meteorites usually explode in the sky, high above the ground, because of the friction of travelling through the atmosphere at tens of thousands of kilometres an hour.

Pieces of the meteorite are then scattered across an area – or that is the theory anyway.

"What complicates this is when you have multiple explosions."

What is also making the search difficult is that the suspected impact site is sparsely populated.

Still, Mckenzie believes they have narrowed down the search area to a size that most of Joburg could fit into. Mckenzie hopes to narrow it down even further by distributing pamphlets asking for more information.

"Hunting meteorites comes down to word of mouth, people saying they saw something."

That's why his most valued team member is a former police detective who conducts detailed interviews with eyewitnesses.

If they find the impact site, Mckenzie says there will be a feeding frenzy.

"The Americans will come off the fence and start offering lots of cash."

There is big money in the trade of meteorites. Just recently a 37kg meteorite on eBay had a starting bid of \$10 000 (R73 475).

But Mckenzie says that the Botswana government doesn't want this to happen. They plan to deploy troops to cordon off the impact site when and if it is located. And besides giving some of the pieces to Mckenzie, other pieces of the meteorite will be handed over to a museum.

Mckenzie, however, is not the only person searching for the meteorite. A group of scientists have been examining CCTV footage from cameras across the country.

Astronomer Dr Claire Flanagan, from the Joburg planetarium, visited several towns in Limpopo and Mpumalanga.

"What we want to know is where it went and how high it was," said Flanagan. With help of trigonometry and landmarks, the space rock's exact flight path could be determined.

Professor Roger Gibson, of the school of Geosciences at Wits University, hopes if they can glean information from CCTV cameras and from the meteorite on the ground, data can be gathered and passed onto the scientific community.

This data could include the speed it was travelling at, its size and what height it exploded in the air. This is data that could help track and find the "big one", any future meteorites large enough to destroy humanity if they hit Earth.

"Ultimately this will allow us to defend ourselves against extra-terrestrial rocks, rather than aliens," said Gibson.

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