

SOLAR ECLIPSE

Educational manoeuvres in the dark

Astronomy groups in India will defy folk belief that eclipses are unlucky to catch a glimpse of the darkened skies on Wednesday



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NEW DELHI

Debashish Bose has travelled to the far corners of the Earth – to Mongolia, Libya and Zambia – to see a solar eclipse. But on Wednesday, he will watch this century's longest eclipse from much closer to his home in Calcutta. "Close to home, just 55,000 feet up," he noted with a delighted chuckle.

Mr. Bose will board a flight with a handful of other eclipse chasers and paste his face against the window to watch the sun go dark. "I choose to see it from heaven this time," he said with a sigh of anticipatory pleasure. "We will be deep in monsoon season in India and I thought of flying out of the clouds to see it this time."

There are eclipse chasers – people who will travel anywhere to witness a solar eclipse – all over the world, but in India they are a different breed. They chase the darkened sun in defiance of deeply rooted religious and cultural beliefs, including a widely held conviction that the safest thing to do in an eclipse is to stay indoors, well away from windows. Mr. Bose's flight, the first in India dedicated to viewing a solar eclipse, has been organized by the Eclipse Chasers Athenaeum, one of a number of science-promotion organizations that are making the eclipse a focus of their efforts to end the superstitions and popularize science.

"Astronomy is the easiest way to explain science to common people – because they can easily see the moon and the stars," said Sunita Mukherjee, an amateur astronomer and spokesperson for the Athenaeum. The eclipse flight is a splashy stunt for the group, but most of its work is done in schools, trying to interest kids in science through looking at the sky.

Many people in the scientific community see eclipses – which come every decade or so – as opportunities. "In India, we always take these events with great enthusiasm because it is an occasion to appeal to people for scientific rationality," said Sabyasachi Chatterjee, a professor with the Indian Institute of Astrophysics. "Many people have superstitions that an eclipse is harmful – that pregnant women will lose their babies, that there will be biological effects on human beings. Many people believe that these rays are poisonous, that something toxic takes place."

Such ideas originate in the ancient texts of Hinduism, which describe dragons and serpents engulfing the sun and the moon, causing them to disappear. The texts prescribe an elaborate code of behaviour to be followed during an eclipse. At the onset, people should



ABOVE: Debashish Bose, centre, aims his camera at the sun, while his daughter, Samragyie, and his wife, Chandra, observe the sky through eclipse-viewing glasses.
LEFT: The Bose family looks at a solar-eclipse illustration, which was published in 1905, that occurred in Sohag, Egypt.
SANTANU CHAKRABARTI FOR THE GLOBE AND MAIL



bathe; in the middle, they should pray and then give to charity; at its conclusion, they should bathe again, said Hari Mohan Sharma, a Delhi-based astrologer. Food cooked before the eclipse should not be consumed after it. It is an auspicious time for anyone except a menstruating woman to plunge into a wide river. Pregnant women must not stitch clothes, cut vegetables, roast anything edible or "perform any act that is physically or mentally exciting."

For this week's eclipse, Mr. Sharma advises those who consult him not to eat, drink or have sex from the sunset be-

fore the eclipse until after its conclusion. "Because this eclipse is in the astrological sign of Cancer, it is believed that low-caste people and tribals will face a lot of hardships in following times – maybe earthquakes or tsunamis or accidents in the sea or spread of water-borne disease," he said. "That could last for about three months – although opinions vary on this."

Mr. Sharma is alarmed at the plans of Mr. Bose and other eclipse chasers to seek out a view of the event. "The texts forbid us from seeing the eclipse," he said. "It will have a very ill effect on your eyes.

[Shaded] eyes will make it all the worse. Scientifically speaking, you can go and watch it with your filtration glasses, but astrology forbids it."

Talking about these ideas, Prof. Chatterjee sounded weary. "About 20 years ago when my wife was expecting our first child, there was a lunar eclipse and the neighbours came a few days before and said, 'You shouldn't come out,' " he recalled. Trying to find the source of the myths, the professor consulted his wife's gynecologist, who didn't know either. "But even so, he said, 'Don't come out, don't take a chance!' I was flabber-

gasted." The professor's wife watched the eclipse with him anyway – his whole family enjoys them – and, he added, in case there is any suspicion, "I'd like to assure everyone that my son is perfectly healthy and in law school."

At a mass viewing in Patna, on the banks of the River Ganges, Prof. Chatterjee's institute will hand out filtration glasses and then encourage everyone to have a cup of tea and a biscuit while the sun disappears to counter the idea that it is unsafe to eat during an eclipse.

"Our biggest message is that nature is understandable, and let's all try to do that," he said, then added after a moment's reflection, "That idea is not very popularly held here."

Mr. Bose, who is often joined by his wife and daughter when he chases eclipses, will be taking the \$2,000 flight alone. "I come from a middle-class family – and this pursuit puts tremendous economic pressure on me. But still, I don't know why this happens to me every time. I get a high," said Mr. Bose, 44, who runs a printing press. "What I feel is that the light that comes out from the sun – it's so unworldly – I can't explain. It's as if I am seeing God. It's like looking at God. I am an atheist, but still I feel that: I get an eerie feeling."

He added in a mildly mortified, confessional sort of voice,

"I have goose pimples just talking about an eclipse."

The special flight will leave Delhi at 4:30 in the morning, and by the start of the eclipse at 6:24 a.m., be over Gaya in the state of Bihar. Organizers chose this location after analyzing several years of weather patterns. This, they reckon, is the site least likely to be clotted with monsoon clouds. The eclipse will be partially visible all over India, but the full event will be visible only over a 220-kilometre-wide path through the northern part of the country, where it will last slightly more than three minutes. The longest and best view – over five minutes – will come in Anqing, China, unless you happen to find yourself in the middle of the Pacific Ocean, where you could see seven minutes.

The organizers have splashed out on a Boeing 737-700 chartered from an Indian airline, but are nervous that the hefty price tag – three times as much for those on the sun-view side as the Earth-view side – won't sell out.

Ms. Mukherjee's hope lies in students – her group has sponsored 10 of them to travel to China to watch the eclipse. "We are asking everyone in India to step out of their doors and watch this grand event this year," she said. "At least the young people are daring to go out."

WATER FIGHT

Winnipeggers battle city proposal to privatize water system

Activists warn potential partnership could lead to commodified water nationwide

BY PATRICK WHITE WINNIPEG

To privatize or not to privatize, that is the question.

Or is it?

Many of the activists hanging around Winnipeg City Hall say so. Their placards and stickers warn that a controversial city plan to partner with the private sector to upgrade and maintain Winnipeg's outdated water system is tantamount to selling off one of its most important assets.

Much more worrisome, they say, is that the Winnipeg water fight could be an early skirmish in a larger push to privatize and commodify water resources right across Canada.

"It may seem like a small decision – should the City of Winnipeg allow a public-private utility model – but it's part of a larger question that's being fought on the ground all over the world," said Maude Barlow, national chair for the Council of Canadians.

But advocates of the plan, which council will vote on Wednesday, scoff at the very mention of the P-word. "Many people have thrown

around that word, 'privatization,'" said Mayor Sam Katz. "But it has absolutely no basis in truth."

So what exactly is the water fight all about? For the past several weeks, residents have packed community meetings, scrutinized a business plan and crammed the gallery of City Hall trying to figure that out. It's proved a confusing endeavour.

The city needs to sink \$1-billion into its water and waste infrastructure by 2012 to comply with new pollution rules imposed by the province, according to Mr. Katz. But he has found the customary process of putting mass public-works projects out to tender incredibly costly for the city.

"In the past when we've taken on this type of project, it's proved beyond our abilities to deal with it," he said. "And as a result, it's come in over-budget by a significant amount of money."

The mayor is endorsing a plan to split off the Water and Waste Department from the city and place it in an arm's-length corporation, much like

some provincial Crown corporations, but with a major catch: The new utility would be a partnership between the city and a private-sector company.

The company would share the risk of construction financing and overruns. But that risk could come with a huge reward – the potential bonanza of expanding the utility to serve thirsty markets beyond city limits. Even before the business plan has passed, 15 companies have applied for consideration.

That expansion objective is just one aspect of the plan that has upset so many Winnipeggers. "The focus seems to be solely on the money to be made from the sale of these services to exurban communities," said city councillor Jenny Gerbasi, who will submit a motion to delay the water vote until the fall.

During a session of the city's executive-policy committee last week, more than two dozen opponents voiced a slew of reasons to reject the plan, including a lack of transparency, reduced city-council over-

sight and the dearth of independent research that went into the proposal.

But the reigning grievance is the muddled language used in the proposal itself.

"It's very unclear," said Josh Brandon, a co-ordinator for Resource Conservation Manitoba. "What exactly are we signing on for?"

Even the mayor confesses that the public pitch has been vague.

"The wording was very confusing," he said. "I'll be the first to admit that."

Some opponents see a much broader issue in Winnipeg's water fight. Some 90 per cent of the country's water systems lie in municipal hands, and they fear conversion of Winnipeg to a private-sector partnership could set off a cascading effect across the country. Such a trend could create a continental market for water services.

"Who gets water and who doesn't would be determined by the market," said Ms. Barlow. "It would become just another commodity like electricity, running shoes or Coca-Cola."

ADOPTION

Would-be parents seek ministry's help

BY TREVOR PRITCHARD TORONTO

Dozens of prospective parents hope the Ontario government will step in and complete the work of a Cambridge, Ont., adoption agency that recently declared bankruptcy.

The parents held meetings across the province yesterday to figure out what to do after Kids Link International Adoption Agency went under July 13. The agency, which operates publicly as Imagine Adoption, was the only one licenced by both the province and the Ethiopian government to arrange adoptions of Ethiopian children to Ontario parents.

In Toronto, some 50 people met in a downtown condo to share their frustrations and carve out potential solutions.

"It's important to make a difference and to stick together," said Shawn Smith, who was trying to adopt a child from Ethiopia with his wife, Alicia.

The \$16,000 in adoption fees the Smiths paid evaporated last week when Imagine Adoption's board of directors failed to approve its latest financial statements, and the not-for-profit agency filed for bankruptcy.

But for most parents, the primary concern isn't about getting their money back, but

ensuring their child arrives safely in Canada, said Ingrid Phaneuf, who organized yesterday's meeting.

Ms. Phaneuf, 42, decided to adopt a baby girl from Ethiopia after she had a stillborn child three years ago. She and her husband paid the agency \$14,000.

According to financial documents from BDO Dunwoody, which stepped in after Imagine Adoption declared bankruptcy, the agency owed \$800,000 to 400 families. The agency's assets were \$723,004 – \$363,000 less than its liabilities.

One of the parents' long-term goals, said Ms. Phaneuf, is a face-to-face meeting with Deb Matthews, Ontario's Minister of Children and Youth Services.

Ms. Phaneuf said she was heartened by the fact that representatives from Ms. Matthews's office attended.

"We've gotten some good news in [that] we know that the ministry is on it," said Ms. Phaneuf. "We didn't have a face telling us that before."

Ministry representative Kevin Spafford told reporters after the meeting that Ontario officials were working with federal immigration officials to fast-track visas for 22 completed adoptions in Ethiopia.

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