

## Science Matters

# Global warming still an issue

By David Suzuki

Six months ago, a friend told me that public opinion and media fascination with global warming would be over in six months at most because the public is fickle and the media are obsessed with latest trends. My friend clearly forgot to inform the public and the media.

A quick scan of the "latest news" page posted on New Scientist online finds no fewer than six stories about global warming: "Europe's recent heatwaves aren't a mirage," "New flood warning to save rural Bangladeshis," "Revealed: America's most polluting power plants," "Sunshade for global warming could cause drought," "Asia's brown clouds heat the Himalayas," and "Early springs show Siberia is warming fast."

Many of these stories weren't just in the science news, either. Several, including the more obscure articles, made it into the mainstream press. I think, rather than getting bored with global warming, reporters and readers are surprised by how complex and interesting these issues really are.

Some of the stories are simple – like the one on heatwaves. According to the latest research, Europe's current heatwave is part of a trend that shows increasing numbers of very hot days on that continent. In fact, today there are three times as many very hot days in Europe every year as there were in 1880. Interesting. And pretty simple, really.

But other stories are decidedly more complex, making them harder to understand, but much more fascinating in that they help explain how our planet works. Our atmosphere, for example, is complex and connected to everything else in the biosphere (that thin layer of our planet in which life exists – including the air, soil and water). Because everything is connected, small changes in one area cause large, unexpected changes in another. And global trends and regional realities can actually be quite different.

Take the story on Asia's brown clouds. For years, brown clouds of pollution have wafted over Asia – sometimes making their way all the way across the Pacific Ocean to North America. These sooty clouds come from burning wood, dung, charcoal and fossil fuels in Asian countries, particularly China and India.

While most people tend to think of air pollution as



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just dirty air, it is actually a complex soup of particles and gases that all have different effects. Some of those gases or particles may hurt our lungs, for example, while others, like carbon dioxide, don't cause direct damage, but build up in the atmosphere and heat up the planet. Others can do both.

One of the least-understood factors that make up air pollution is the effect of small particles, sometimes called aerosols, and how they relate to global warming. When sunlight hits aerosol particles in the atmosphere, the light scatters. Some of that light and heat is reflected back into space. This reflectivity is why aerosols have generally been thought to be cooling agents. In fact, many scientists say that all the aerosol pollution in our atmosphere may be masking as much as 50 per cent of the impact of increasing greenhouse gases.

But a new study published recently in Nature shows that while aerosols may have an overall cooling effect, locally they can do quite the opposite. The study, headed by Veerabhadran Ramanathan of the Scripps Institution of Oceanography, used unmanned aircraft to fly into Asia's brown cloud and take measurements. The team found that because aerosols can also hold solar energy as well as reflect it, these brown clouds of pollution actually increased solar heating of the local lower atmosphere by 50 per cent. These findings may help explain why the Himalayan glaciers, which are in the path of these brown clouds, appear to be shrinking at an alarming rate.

They also show us that we obviously need to consider the entire mix of what we put into the atmosphere, and not just greenhouse gases. Global warming is a serious problem and one we are only beginning to understand. But it is also an issue where interesting, relevant and important scientific research is actually making it into the mainstream press. In the long term, an educated public will be one of the most powerful tools in the fight against the problem.

# Free kick to Bolton side finishes championship challenge from Acton

## Girl's under 16 soccer



Acton's Pet Valu fell to Bolton by a golden goal in the championship final of the Under 16 Girls' North Peel Halton Soccer League. Acton ended the regular season with a win and a tie to place them eighth in a 12-team league.

With team members only receiving playoff notification on Friday night before Saturday's game in Bolton, Acton was only able to field 10 girls. Acton was placed in a pool with 4<sup>th</sup> place Rockwood and 5<sup>th</sup> place Heads (Erin/Hillsburgh). In the first round robin game against Rockwood, Renee Martineau opened the scoring by putting away a penalty

kick. Rockwood scored late in the second half to tie the game 1-1.

Later that afternoon, against Heads, Acton opened the scoring first again with Martineau tapping in a corner kick from Rachel Kirkwood. The girls were relentless and achieved another corner kick. A kick from Martineau to Tanya Carscadden, a quick pass to Katelyn Roesner and

it was 2-nil. Sam Marciano kicked a high one in to make it 3-nil by half-time.

Early in the second half Heads came out strong and popped one past Kirkwood. The Acton girls dug deep and Hayley Halls and Jennifer Pettitt worked the ball to Marciano who blew her second of the game past the Heads goalie to put the game away, Acton 4 Heads 1.

### Reach semis

With a win and a tie, Acton reached the semi-finals, to face another Heads team. Two more Acton players arrived making a full team, with one sub.

Acton opened the scoring first again with Carscadden sending in Taylor Bulstrode for a breakaway goal. Mar-

tineau put in Acton's second goal from Stephanie Angot's pass. Angot made it 3-nil on a quick pass from Rachel Amirault before half time.

There was no scoring in the second half with the strong defence of Tess Kennedy, Amirault, and Kirkwood. Dali Carmicheal earned the shutout.

The win put Acton in the final against Bolton. Acton opened the scoring again with Angot finishing a nice breakaway late in the first half. Late in the second half Bolton tied it up and sent the game to overtime.

After 10 minutes of overtime, Bolton was awarded a free kick, ending the game Bolton 2, Acton 1.

Coach Mark Kennedy was proud of the girls' achievement demonstrated by their grit and perseverance. Absent team members were Elyse Kollenhoven, Tori Petersen, Brianna Forbes and Meghan Pincivero.

-Gord Carscadden.



**HOCKEY CAMP HERE:** Inside Edge Pro Sports which organizes the Bryan Trottier Hockey Camp in Acton had their students drop by Acton Optical to pick up their hats, jersey's etc.. Trottier was here to greet the kids and their families. The hockey camp completed their first school in Milton last week and have returned to a full house in Acton for a second year. Nancy Wilkes of Acton Optical greets the former New York Islander star in this photo. Submitted photo.



**POLITICAL POT:** Wellington-Halton Hills MP Mike Chong enjoyed the festivities at the 150<sup>th</sup> anniversary celebration in Limehouse. Here, he talks to a constituent on serious matters.

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