Canadians to circle globe

Jules Verne sent his fictional character Philias Fogg around the world in 80 days in a hot-air balloon, but a couple of young Canadians plan to complete the real thing in 77 days by automobile, reports Mike Hughes in the *Ottawa Journal,* June 7.

Garry Sowerby and Ken Langley, 29-year-old Maritimers will leave Toronto's CN Tower September 6 on the historic journey they hope to complete by November 21.

Even if they fail to achieve their target of 77 days, Sowerby, who will drive the entire 42,670 kilometres (26,514 miles), and navigator Langley probably will break the existing *Guinness Book of Records* mark of 102 days, established in 1976.

The Canadian pair will drive a Volvo DL Wagon assembled in Halifax.

"We first thought about 80 days after Mike Todd's successful movie; then we read a motorcyclist had completed the trip in 79 days," said Langley, who holds degrees in law and and philosophy.

"The Guinness people were not able to confirm the motorcycle trip, but we settled on 77 days to be safe and because we first thought of the project in 1977 and because seven is a magical number."

The $250,000-trip is now known as "Odyssey 77".

With ten days given to flying over water, the pair plans to average around 575 kilometres (350 miles) and ten hours a day on the road.

Other air journeys will involve San Francisco to Perth, Australia; Perth to Bombay, India, and Amsterdam to New York.

Crossing North America, Australia, Asia and Europe, the pair will pass through 23 countries and 92 cities, including 19 capitals. They will cross deserts, mountains, dirt roads and super-highways and are prepared for floods, snow, ice and extreme temperatures. They will experience all four seasons and cross the International Date Line, Equator and Arctic Circle.

In North America, the pair will stay overnight in Halifax, Moncton, Montreal, Ottawa, Toronto, Winnipeg, Regina, Edmonton, Calgary, Vancouver, Seattle, Portland, Salt Lake City, Las Vegas, Los Angeles, San Francisco, Houston, New Orleans, Atlanta, Washington, New York and Boston.

Canada's architecture praised

An Ottawa building has been singled out by Britain's top architectural magazine as an example of unique Canadian construction capabilities.

In a special edition devoted to Canadian architecture, the *Architectural Review* cited the C.D. Howe Building and Ottawa's Bank of Canada as examples of two forces shaping the look of Canadian buildings – weather and "the social climate".

"Of massive size, it is surely a luxury, but, suppressing puritanical misgivings, magnificent," said the article's authors, Lance Wright and Peter Collymore.

The Canadian architectural response to Ottawa weather – "bitter cold and blizzards" – is the ancient Roman idea of the atrium, an enclosed space at the centre of a building.

Explaining his reference to the "social climate", Wright said: "the Canadian architect seems able to respond more readily and more naturally than architects elesewhere to the public demand for an architecture people can live with".

C.D. Howe Building "unique".

The magazine goes on to say the C.D. Howe building "incorporates a fine old stone bank in the centre of a symmetrical arrangement of flanking mirror-glass office towers".

The magazine also states Canada has followed the ancient Roman tendency to produce "architecture which is unaffected, unique and of world-wide interest".

New molecule may be key to cheap solar energy

Scientists at the University of Western Ontario in London, have developed a molecule that could be the key to relatively cheap mass-produced solar cells.

The molecule, called P-Q, mimics plants' ability to use solar energy by duplicating the first stage of photosynthesis.

The photovoltaic cells based on the molecule could be sprayed onto film or plastic sheets, said Dr. James Bolton, director of the program. "We hope to distribute it (the molecule) in a plastic film that could be stretched out over a building's roof like saran wrap," he said. Dr. Bolton said he plans to program the molecule so that its stores electricity as a battery then releases it on signal.

Dr. Bolton said his molecule catches energy-laden photons from the sun at one end, then transfers a power-packed particle to the other end. He said he intends to attach that end to an electrode in his plant-like solar collectors.

Plants use process

Plants perform the same process during photosynthesis using two separate molecules – chlorophyll and another acceptor molecule – but neither is efficient at the process when taken out of its natural environment.

Dr. Bolton and his team had built and patented a chlorophyll-based solar cell and found it inefficient when it came to producing electrical currents. He then realized that he had to build a new molecule to duplicate the process in the test tube after he found that chlorophyll alone could not produce the desired results.

Most conventional solar cells made of silicon would cost $40,000-$50,000 to provide most of the electrical needs of an average size home, said Dr. Bolton. He speculated that solar cells using his molecule could do the same job for $1,000-$2,000.

Silicon solar cells work with a power conversion efficiency of 10-15 per cent. Dr. Bolton said that although a solar cell using his molecule had not been made, preliminary tests indicate that such a solar cell could achieve an efficiency comparable to photosythesis, which has an efficiency of about 18 per cent in its primary step.