Sea level lower

A team of Canadian geologists, which dived into caverns more than 147 feet below sea level in the Bahamas, have found stalagmites that were deposited 160,000 to 139,000 years ago when the caves were above sea level.

The age of the stalagmites corresponds with the Illinoian glacial event that covered part of the North American continent and lowered the sea level.

The geologists, affiliated with McMaster University in Hamilton, reported in the journal, *Science,* that they broke off the submerged stalagmites and, using a pneumatic drill, chipped out samples of the cores and analyzed them to determine age.

Then, knowing the present depth of the caves and that the maximum subsidence of the site over the period of some 150,000 years was about nine feet, they estimated that sea level was about 137 feet lower then than now.

Automated fluid-testing speeds diagnosis, cuts costs

A Saskatchewan university professor is patenting a process which could speed up clinical testing of body fluids and cut costs by up to ten times over previous processes.

Fluid sample testing is one of the quickest and most economical means for diagnosing illness and monitoring the recovery process of a large number of patients in big hospitals. Although basic testing is now almost completely automated, special chemistry tests must still be done manually.

Many high-technology instruments have been developed over the past few years and are in wide use in some of Canada's larger clinics. However, in most cases their cost has been well out of the range of smaller clinics.

Dr. Karl Blass of the University of Regina is developing an automated analyzer for analyzing glucose in urine and serum samples. The analyzer could cost as little as $2,000 to mass produce.

Dr. Blass' process has been developed over the past two years under a $20,000-contract from the Saskatchewan Department of Industry and Commerce.

Clinical tests are usually performed by technologists who begin by taking the sample, splitting it into its components (serum, plasma, etc.), mixing the sample with reagents and dilutants, allowing for reaction time and instrument measurement time and recording results. The whole process could take several hours. With automated technology it can be done in a matter of minutes and a larger number of samples can be tested simultaneously.

Rapid automated testing is possible because of the electrochemical nature of certain body fluids when mixed with sensitive and selective reagents. Dr. Blass' device yields readouts in microamperes which can immediatedly be fed into a computer terminal for data processing. The resulting analysis is almost instantaneous. An accurate assessment of the body fluid composition is available in graphic or printout form.

Dr. Blass said that although his first prototype unit was only designed for glucose testing, future designs could be developed to conduct a number of different tests, some of them considerably more complex than the glucose reaction. Some examples include tests for liver and kidney function, testing for the presence of blood cancers or some specific inborn errors of metabolism.

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Robot business booming

The robot business is booming for a young Canadian inventor and his newly-formed company in Toronto.

The future for Robolabs, The Robot People, looks bright with international contracts, personal appearances at trade shows and export of the company's copyrighted robots round the world.

It all started a year ago when, 18-year-old Brian Matthews of Toronto, made an R2D2 robot, like the one in the movie *Star Wars,* "just for the fun of it". The three-and-a-half foot copy was controlled by a seven-channel remote-control radio.

Mr. Matthews received more than 100 calls from firms seeking to hire his robot. But the R2D2 character was covered by a world copyright and the Matthews' robot could not be used for profit. So Mr. Matthews created Q6, a similar robot with the added features of moving an arm and saying "I love you".

He got so many job offers as a result that he incorporated last autumn taking his friends, Sim Brigden, 21, Matthew Brigden, 19, and Chris Tattersall, 19, into the business.

The company has been adding more robots to the Robolab's family: Agamis 5; Max, a robot dog; Mister Metre and 2E (named after part of the Matthew's postal code). They also have added features such as being able to talk and take photographs.

The Robolabs' team will be travelling this year for Sperry Univac Computer Systems to all the major trade shows, making appearances for Eastman Kodak or Kodak Canada, performing for IKEA, a furniture company, appearing for another year on a children's television show in Toronto and making a television commercial for a Japanese car company.

Business is doing so well, especially in the United States, that the company is planning to open an office in Tampa.

TV programs can skip sex

Canadians are becoming more tolerant of sex in movies, magazines and night clubs, but continue to believe it has no place in the living rooms of the nation.

A recently-released Gallup poll shows fewer Canadians today than there were ten years ago are bothered by the treatment of sex in movies and magazines, but almost the same proportion finds sex on television objectionable.

Results of the poll are based on 1,044 personal interviews with adults 18 years and over, conducted in August in homes across Canada.

Twenty-nine per cent of those polled in 1969 objected to the treatment of sex on television, compared with 28 per cent today. Only 30 per cent object to sex in movies and magazines today, compared to 41 per cent in 1969.

In 1969, 49 per cent found pictures of nudes in magazines objectionable, compared to 35 per cent today.

And in 1969, 67 per cent found topless night-club waitresses objectionable, compared with 51 per cent today.

"Views on what is objectionable in the treatment of sex depend, in a large measure on age and sex," says the Gallup report. "Men and younger people accept such matters with far greater equanimity than women or older folk."