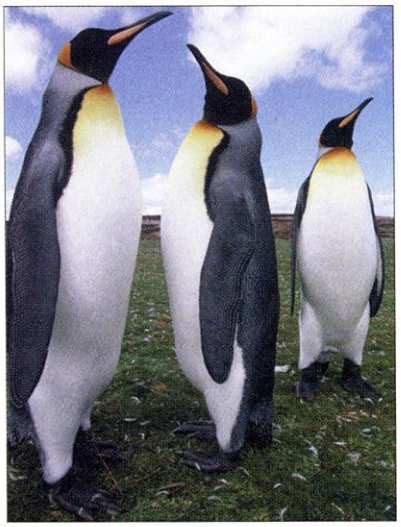
Prostrate Penguins?

Are antarctic penguins toppling onto their backs when aircraft fly low over their icy domain? British press reports earlier this month suggested they were, quoting a Navy officer as saying that penguins are so intrigued by the sight of helicopters that they crane their necks until they fall over.

In fact, little is known about how penguins and other birds are reacting to increasing activity by low-flying aircraft, according to the British Antarctic Survey (BAS). So a team of researchers set off this month to find out. They will use helicopters to buzz some of the 400,000 pairs of king penguins on the 170-km-long island of South Georgia, with five daily overflights every other day for 9 days at altitudes ranging from 500 to 2000 meters. The researchers, led by Richard Stone of BAS, will videotape penguins at Antarctic Bay before, during, and after the flights and will do chick and nest counts to see how breeding is affected. (Penguins at Possession Bay will be used as controls.) The data will be used to produce guidelines for antarctic helicopter flights.



King penguins looking skyward.

Past studies of overflight impacts have documented penguins running away from nests, exhibiting "head movements," and changing heart rates and body temperatures. But creative reporting to the contrary, the BAS says that "there is no scientific evidence for penguins falling over backwards when helicopters overfly."

Physics Mecca for Ontario

Few people have carte blanche to hire anyone they choose to staff a new scientific institute, let alone one in theoretical physics. But executive director Howard Burton is smacking his lips at the thought of the talent he'll be able to attract with the $80.4 million that high-tech moguls are donating to found the Perimeter Institute for Theoretical Physics in Waterloo, Ontario.

Burton, who recently completed his physics doctorate at the University of Waterloo, hopes to hire as many as 40 physicists within 5 years to conduct research on quantum gravity, quantum information theory, and complementary aspects of cosmology. "We're already actively pursuing people," he says.

The windfall has come in the form of $67 million from Mike Lazaridis, founder of Research in Motion, a mobile telecommunications firm in Waterloo, and $6.7 million each from company colleagues Jim Balsillie and Doug Fregin. "Just about every major industrial revolution and technical advancement is rooted in basic theoretical physics," said Lazaridis, a 37-year-old engineer whose company nets $120 million a year, at a press conference last month. Burton called the gift a "strikingly unusual" form of philanthropy that may inspire other science-minded industrialists to follow suit. Lazaridis's fondness for science, he adds, translates into a particularly large boost for theoretical physics, as its practitioners require few costly resources.

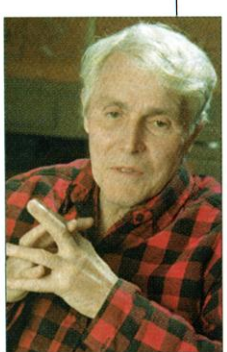
Micro Cosmos

These fanciful mushroom designs are actually the skin of a medusa worm amplified 100 times. The photo, by Christian Gautier of PHO.N.E. photo agency in Paris, captured second prize in Nikon's 2000 International Small World Competition. A traveling exhibit of the winners' photos opens in New York next month. See more gorgeous winning images at www.nikonusa.com

Science and Technology Medals Awarded

A biologist who grafted a third branch onto the tree of life and an astrophysicist who helped launch the search for the universe's missing "dark matter" are among 16 winners of the National Medals of Science and Technology announced last week by President Bill Clinton. The winners will pick up their hardware at a 1 December ceremony in Washington, D.C.

Until a few decades ago, most biologists assumed that all life was divided into plants and animals. But in 1977, Carl Woese of the University of Illinois, Urbana-Champaign, shook the foundations of biology by announcing his discovery of a third group: the Archaea, one-celled organisms so different from all other living things that they deserved their own branch on life's tree (*Science*, 2 May 1997, p. 699).



Tree man Carl Woese.

The other science medal winners (see www.nsf.gov/nsb/awards/nms) include Princeton astronomer Jeremiah Ostriker, Nobel physicist Willis Lamb of the University of Arizona, schizophrenia researcher Nancy Andreasen of the University of Iowa, and ecologist Peter Raven, director of the Missouri Botanical Garden.

The winners of the four technology medals (see www.ta.doc.gov/Medal) include the IBM Corp., for 40 years of computer innovation.

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