

SCIENCE / ENVIRONMENT

Dalhousie's Dr. Doolittle

Dal prof talks of evolution, genetics... and the Pope

BY NATALIE MACLELLAN

Dr. W. Ford Doolittle has spent most of his life working with bacteria and genes, things far too small to be seen with the naked eye. He analyses them and manipulates them. He wants to know where they come from, and why. He says these microscopic organisms are important for understanding the process of human development.

"I strongly feel part of being human is knowing how we got here, where we came from," Doolittle says. "Knowing the evolution of life is an important part of the 'laundry list' of things people want to know about. It helps us to understand the complexity of life on the planet."

Dr. Doolittle has been at Dal since 1971, and in that time he's done some very impressive work, keeping his name on the front line of microbiology and genetic research for the past two decades.

"The past 10 years have been really exciting times to do genetic research, because of all the genome research going on," said Doolittle. "There's an enormous amount you can read — tremendous amounts of

historical information is stored [in genes]."

Much of Doolittle's early genetic work focused around introns — otherwise known as "junk DNA". Comprising 85-90 percent of the DNA in your body, introns, as far as researchers can tell, are useless. The body does not use them at all to make proteins.

"Introns were fascinating when they were first discovered. They made no sense," Doolittle said. "I started a theory that came to be known as 'Introns Early' — that introns are relics of early genetics. It became a popular theory. It's in many textbooks."

When Doolittle published his theory in 1978, it was the beginning of much debate about the origin and purpose of introns. It became widely accepted, but Doolittle, however, has begun to doubt it.

"About five years ago, I was convinced by my students that it's not true. Our work now is to prove that it's not true."

After the intron theory, Doolittle's focus moved to bacteria — archaeobacteria to be exact. Archaeobacteria are bacteria which

live in extreme conditions — high salt concentrations or intense heat or cold. They are believed to be the ancestors of more advanced plant and animal cells.

"Basically what we're interested in right now is a particular period in the evolution of life — 2-3 billion years ago — during which eukaryotic cells broke from prokaryotic cells somehow.

Activist files counter-claim against logging company

BY PATTI EDGAR

VICTORIA (CUP) - A man who has spent six years defending British Columbia's Upper Walbran Valley wants to see the company that has been logging the area and the provincial government in court.

Steve Pittner has announced he will respond to a civil suit against him by TimberWest Forest Ltd. by launching a counter-suit.

We want to know how."

Helping people understand the complexity of life and evolution seems to be Doolittle's calling. So much so, when the Pope decided it was time he learned more about evolution, Dr. Doolittle was called to Rome to meet with the Pope and his scientific advisors. Impressive, but unfortunately "the Pope did not show up. [He] would have shown up if he hadn't been ill," Doolittle says.

No Pope, but still Doolittle had the chance to discuss evolution — not a traditional Christian idea — with the Pope's chief advisors.

"It was interesting. — it must have been quite different when Galileo was talking to him many years ago," he said in a tone somewhere between joking and serious.

"It seemed like there were only two things the Catholic Church would insist on — God played a role in the origin of life, and humans have a soul which differentiates them from animals. And there's no way to *disprove* that. It was quite friendly. I was impressed with the liberal attitude of the theologians, but disappointed the Pope didn't show up."

The company's lawsuit, filed last November, prohibits Pittner from blockading the logging road leading into the valley and could make him financially responsible for its losses if he does.

In his counter-claim, filed in B.C.'s Supreme Court on Jan. 21, Pittner alleges the company is "degrading the wilderness" and says the Ministry of Forests has been "grossly negligent in its watchdog role."

The Upper Walbran Valley, an old-growth forest near Port Renfrew, BC, was designated as a special management zone in 1995.

Pittner says he hopes his case will end up in court so his lawyer

can obtain ministry documents he believes will prove the area is being logged without sufficient inventory requirements — and in violation of the International Bio-diversity Convention.

Pittner, who has been conducting an inventory in the valley since 1991 and has categorized 300 species, also hopes his suit will send a message to the province.

"I think this... will make [the province] think twice about what they are doing," said Pittner.

A spokesperson from the Ministry of Forests declined comment on the suits, as did representatives from TimberWest.

Suzuki joins Ontario anti-smog campaign

BY TRACY TATKA

TORONTO (CUP) — David Suzuki has joined forces with the Toronto Environmental Alliance and the Sierra Club of Canada to try to persuade incoming Ontario provincial government candidates to reduce air pollution.

In response to the 1,800 premature deaths attributed to smog in Ontario last year, the team of environmental heavy weights launched their campaign last week.

The group is calling for a 75-percent reduction of sulphur dioxide from the air, a 6,000-tonne cap on emissions from nitrogen oxides and a virtual elimination of mercury emissions by 2005.

To bolster its campaign efforts, the group has also issued a non-partisan challenge to make a reality what has been promised in the past — clean air.

The coalition doesn't blame past governments for the current state of air quality. Instead, it plans to target incoming candidates to make them responsible.

"It's hard to hit the invisible

boxer in the ring," said Lois Corbett, executive director with the Toronto Environmental Alliance.

The group's ultimate aim is to ensure that whoever wins the next provincial election will be held accountable to better air quality standards.

Increasing those standards is essential to improving the health of Ontarians, the group says.

According to the Ontario Medical Association, smog-filled air, especially on hot and sunny days, contributes to an increased risk of illness, asthma attacks and cardiorespiratory problems.

The association notes medical problems such as these have already cost the province \$11-billion in health care costs to date.

And Ontario spends about \$1-billion a year on respiratory health care costs, including smog-inflicted asthma, the association says.

Corbett says pollution-related medical problems are a crisis.

"[It is] a provincial tragedy and one that those running for office must address," Corbett said.

Suzuki, a leading ecologist

and the host of CBC's *The Nature of Things*, says Ontario can significantly improve its air-quality by taking into account the coalition's recommendations.

"This is an opportunity for Ontario to lead Canada in emissions reductions and move towards a cleaner, healthier future," he said.

"You don't mess with air because it's so fundamental," warned Suzuki. "It keeps us alive."

Relying on public support and pressure, the coalition will try to persuade the provincial government to take action and help erase past mistakes.

"We had a similar demand, across society, to move on acid rain in the 1980s," said Elizabeth May, director of the Sierra Club Canada.

The group doesn't plan to support any one candidate in the provincial election, which is expected to be called this spring.

Instead, they have chosen to publish each candidate's stance on air-pollution, including what his or her plans are to reduce it, leaving the voter to decide who has the best proposal.


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CALGARY	—	18:55	—	—	—	—	—
TORONTO	—	16:00	—	15:20 ² 15:50 ²	16:00 ²	—	—
ST. JOHN'S	—	06:00 ² 11:05 20:10 ²	—	06:00 ² 10:25 21:35 ²	—	—	—

HALIFAX DEPARTURES TO USA							
ST. PETERSBURG	—	—	18:45 ²	—	—	—	07:20
FT. LAUDERDALE	—	—	07:55 ²	—	—	—	—
ORLANDO	17:50 ²	11:50 ²	07:55 ²	—	—	—	—

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