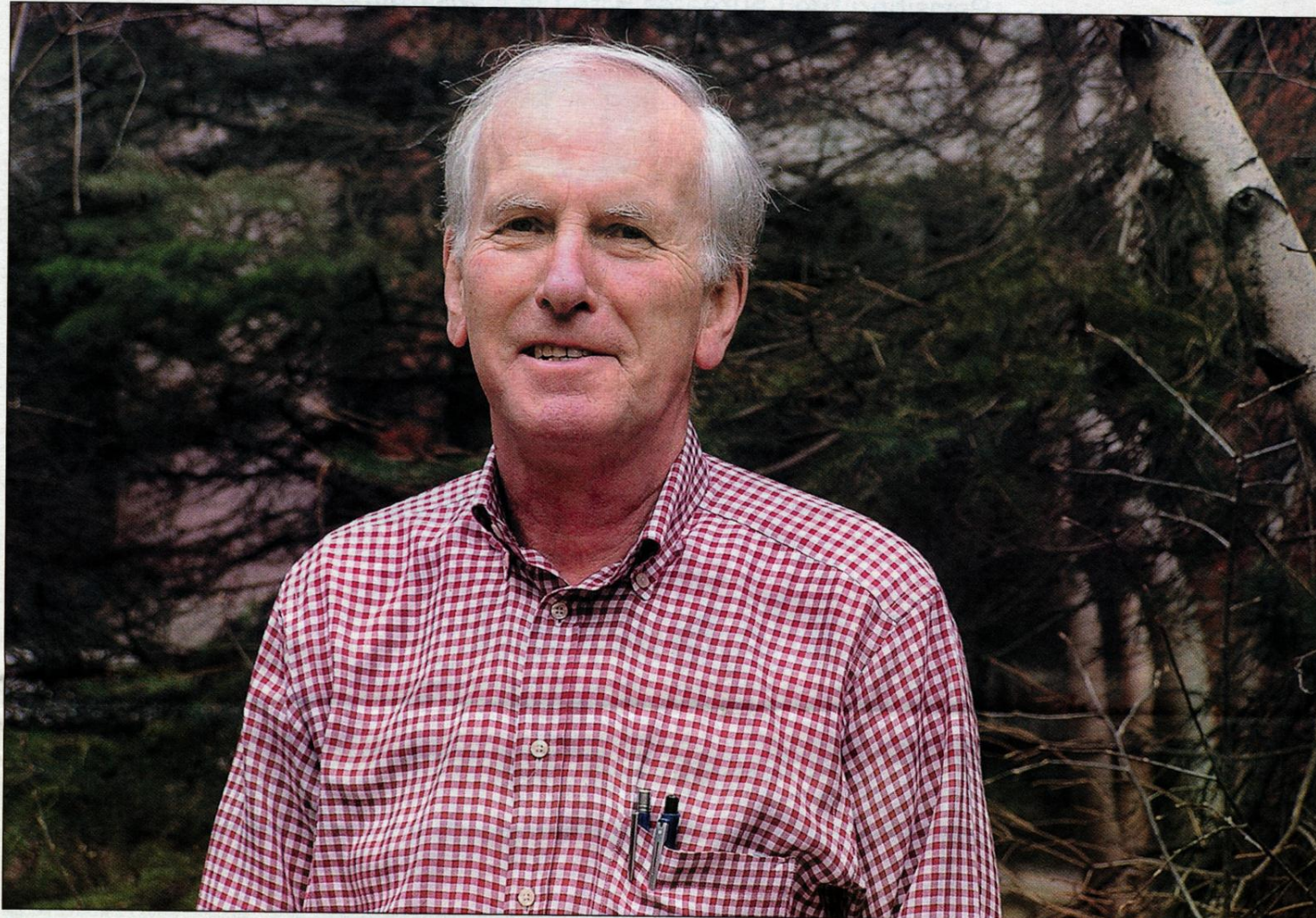


Professor Bob Jefferies: A class act



Nobel Laureate, Arctic Scientist, and Professor Emeritus, Robert Jefferies is known to many students from BIO150, which he taught since its commencement in 1990.

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This summer, the U of T community lost one of its foremost arctic scientists and Nobel Laureates. Professor Emeritus Robert (Bob) Jefferies is best known to U of T students as the unchanging face at the front of the overwhelmingly large BIO150 lectures, a requirement for all Life Science programs. Few professors at U of T can claim to have touched the lives of as many students as Prof. Jefferies: the ecology and evolutionary biology department estimates that over 30,000 students have attended Jefferies' BIO150 lectures. His death in July took U of T, the scientific community, and the environmental movement by surprise.

Jefferies grew up in Somerset, England where his mother encouraged his interest in the natural world and natural history. He went on to complete undergraduate and doctoral degrees at the University of Bristol before further training at the University of California at Davis and a short tenure at the University of East Anglia in Norwich.

Dr. John Maron, a professor at the University of Montana at Missoula, met Jefferies while Maron was a graduate student at UC Davis where they both worked at the same marine lab. "As someone to work with as a PhD student, I can't imagine anyone better," says Maron about their time in the field.

Over the years Maron and Jefferies collaborated on research, but also formed a lasting friendship. "I've had a lot of fabulous collaborators, but none I felt as close to, or as strongly about as Bob. Bob was the kind of guy with no ego and incredibly selfless. We really clicked on a personal level. [He and his wife Susan] came to feel like family."

Jefferies arrived at U of T in 1973 as a visiting

professor and began the work for which he would gain recognition: the goose-plant interactions on La Pérouse Bay of the Hudson Bay salt marshes. He stayed on as permanent faculty and each year since 1978 travelled to the Cape Churchill peninsula from May to August with graduate students, research associates, and collaborators to focus on plant-herbivore interactions, the biogeochemistry of nitrogen and phosphorus, and the responses of plants to salinity. He and his group were members of the Hudson Bay Project and his studies were part of the International Polar Year (2007-08) incentive to understand the arctic ecosystem.

The Jefferies group demonstrated that changes humans make to a local environment can have a global effect through the movement of migratory animals. They showed that the abundance of grain left on un-ploughed farm fields of the American Midwest (a consequence of high-yield farming) has led to an expansion of the goose population that winters there. Upon returning to their traditional nesting ground in the arctic, the larger flocks of geese have slowly grazed the Hudson Bay salt marshes into a desert.

Without vegetation to combat erosion, the shore of the Hudson Bay is moving slowly inland, impacting not only the landscape but the other species who call this part of the world home. Sadly, the Jefferies group also showed that this process is not unique to the Canadian Arctic but is happening in Europe as well.

For his expertise on the effects of climate change in the Arctic, Jefferies was nominated to the Intergovernmental Panel on Climate Change. The work

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"What stands out above all is Bob as a human being. It sounds trite, but it's really true. He was a class act. You see some people like that these days, but Bob was 'old school' in the way that nothing got lost in the hustle and bustle of what we do."—John Maron

"I first met him as an undergraduate student in 1978. I worked in a multi-media lab, he was the team-leader that year, and there was a Christmas party. I remember meeting him there and my first impression of him was exactly the same as it is 31 years later: that gentle man, that powerful presence, yet never boastful, never loud, always soft-spoken."—Corey Goldman

From the BIOME forum

"Just remembered another Jefferies moment: he received an email in which a student told him he spoke too slow in lecture and then he asked all of Con Hall, 'Do you want me to speed up?' And there was

just a unanimous 'No' from all the students. Makes me smile thinking of it."—G. Latino

"He was so warm and approachable; he had a grandfather-like persona about him."—xtina24

"An inspirational researcher, a well-respected ecologist, a great lecturer, and really a true gentleman. Professor Jefferies, you will be missed by all!"—Jasmik

"I didn't know Professor Jefferies personally, but I think I would have liked to. He had a very funny, dry humour and was quite an entertaining speaker. Loved him in BIO150. I remember his story about carrying the head of a Danish Bog Man on a train and freaking out some lady who insisted on knowing what was in the box. He obviously had a mischievous streak. My condolences to his family and friends. I am sure he will be missed by many."—Lalaith

achieved by the IPCC and Al Gore won them the 2007 Nobel Peace Prize "for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change." Jefferies treated this honour with the modesty that was so typical of him.

Maron relates that when visiting Jefferies' home last fall, "Bob made an off-hand crack about Sue (Jefferies' wife) framing something sort of silly. He shoved it in the drawer. It came out that it was Bob's award for the Nobel Peace Prize. At that point I had spent a day and a half with him and he had only mentioned this off-handedly as a sort of joke. That's just how Bob was."

A current graduate student in the Jefferies group, Kate Edwards, was one of the many students who worked in the Arctic with him.

Edwards says, "As a researcher, I will remember him best for his commitment to being in the field. He had a profound wisdom of the Arctic environment that he worked in, spending each summer overseeing graduate student projects and collecting his own data and observations about the landscape and how it is changing. He constantly shifted his research focus and was never afraid to take on new subject areas. He could think at multiple scales at once, ranging from below-ground biochemical and biophysical processes to landscape-scale organization of vegetation types. He even ventured recently into the intersection between science and the humanities, having begun a project on the traditional ecological knowledge of the people of

Western Hudson Bay."

This sentiment is shared by Maron: "Bob was intensely curious about the natural world; he liked the intellectual challenge of the puzzle and trying to figure out how nature ticked. I think he obviously, genuinely liked field work. Here's a guy in his seventies who still went up to the Arctic every summer. In this day and age people become more specialized and overwhelmingly retreat to their own little area. Bob was just the opposite. He learned and took so many different angles to really dive into what was going on. There are very few cases of long-term field-based studies that attack a system from so many different angles as I think Bob did."

This dedication to high-calibre research did not overshadow his commitment to the people he worked with. Edwards says that Jefferies "was exceptionally devoted to his students, both undergraduate and graduate. He had great respect for the high calibre of the students that he taught and supervised and believed that the students that he interacted with throughout his career were a key element of his research success. He also genuinely cared about us as people and as young scientists, and coached us diligently through the various aspects of graduate life, and into whatever professions we decided to pursue."

His impact on undergraduate education can be seen in the tributes on the BIOME forum, an online community for U of T Life Science students. Over 5,000 students have viewed or contributed to the 12 pages of comments on his passing. One post by the user "Mango" says that "Prof. Jefferies was very patient, as well. I used to go to his tuto-



rials and ask so many questions that I was sure I would annoy him, but he seemed happy that I had taken such an interest in his topic."

Corey Goldman, Associate Chair (Undergraduate) of the Department of Ecology and Evolutionary Biology agrees, "One of the things that Bob was most proud of was that he continuously taught first year. Even when he was scheduled to take leave he would do it not all at once so that he could continue with his undergraduate teaching. BIO150 was one of the courses he was really proud of. He was one of the co-creators back in 1990."

"He was extremely dedicated to his teaching, and innovative. His lectures

were very current. He wasn't the type of professor who would dust off the lectures from the year before and give them the year later. That wasn't his style. If it was in the journal one week, it was in class the week later."

Goldman also relates how Jefferies always held long office hours and enjoyed interacting with students. "He loved having students sitting in his office discussing the lecture material. He was looking forward to teaching this year." It was to be Jefferies' 20th year teaching the course and the final year of BIO150. The course is changing to a half-credit format in 2010.

Maron believes that Jefferies held a quiet pride for BIO150 and its impor-

tance within the university. "I think he thought that the class could have an impact on folks. It wasn't about the fact that the class was a tonne of work, it was 'here's my chance to get people excited about biology.'"

The "Dean of goose-plant interactions in Arctic environments" (a title for which he is recognized internationally) was known to many for his manners and considerate nature. Maron says that "the thing that stands out about Bob is the word 'gentleman.' I use that word in referring to Bob as someone who just put other people first and was selfless in his approach in how he dealt with others."

Goldman holds the same opinion: "He was very unassuming and in his own way extremely powerful because he was gentle. He was the definition of the gentleman."

Jefferies' mark on science is immeasurable and his own research makes up only a part of that whole. Prof. Jefferies trained a generation of graduate students and researchers, many who have gone on to further science research or ecological policy-making.

Bob Jefferies was born in England on March 13, 1936 and died suddenly of a cerebral hemorrhage July 8, 2009. He is survived by his wife Susan, two daughters, a sister, and five grandchildren.

The university will hold a public memorial on Monday, November 9, 2009 from 2 to 5 p.m. at the Great Hall, Hart House. All are welcome.

A scholarship in Prof. Jefferies' memory has been established through the Office of Advancement and donations can be made online by through the office website (<https://donate.utoronto.ca>).