by Olga Kuchment

Iain E P Taylor: Singer and Scientist

"I sing or whistle everywhere I go," says Iain Taylor. Perhaps you noticed the music in Taylor's talks at the 2008 CSE annual meeting. Taylor, an organizer of the meeting, performs in the University of British Columbia Opera (UBC) Ensemble and has been singing in choirs for most of his life. He is a botanist, an editor, and an ethicist.

At the end of World War II, 6-year-old Taylor sang occasionally in the chapel in his grandmother's Welsh community. "I was the performing seal," he says. Taylor's father fought in the war, leaving Taylor's mother to run the family pharmacy. Taylor's grandmother lived with them, and she raised and educated Taylor for the first few years of his life. She helped start a life-long addiction to choral music.

At a boarding school in north Wales, Taylor became truly immersed in singing, and he even repeated 12th grade partly as an "excuse to do more" of it. One reason for staying that extra year was the performances that the school choir gave along the Welsh coast. Percy Heywood, the choirmaster, "simply believed that the best thing you could possibly do with life is to sing," Taylor says. Several of Taylor's contemporaries became renowned singers, and one was a founding member of the King's Singers, one of England's premier small-group choral ensembles. Taylor thought about studying music in college, but "my mother told me to get a proper degree first," he says.

Learning, Teaching, and Research

Following his mother's advice, Taylor began his studies at the University of Liverpool in biochemistry. He did well on the examinations but "discovered that I would need to do terrible things like calculus," he says. In attempting to escape mathematics, Taylor eventually enrolled in honors botany. He did undergraduate research on seed biochemistry and then continued in the same laboratory for his PhD. At Liverpool, Taylor got his first taste of musical theater as a member of the student revue, in which he performed in light satirical skits. He finished graduate school in 1964 and considered what to do next.

Taylor initially "wasn't too keen on being a researcher." He accepted a job teaching biology at Blundell's School, a prominent high school in southwest England. While teaching at Blundell's, Taylor sang with a nearby operatic society, performing in two operettas: *The Merry Widow*, by Franz Lehár, and *The Gypsy Baron*, by Johann Strauss II.

Blundell's had a long tradition of original research by upper-level students, and this "had an enormous impact on my career," says Taylor, who later started a research program for college freshmen. While Taylor was at Blundell's, a UK scientific society was giving grants to teachers to find original projects for student investigations. Taylor wanted to apply for these grants but was discouraged by his school principal. He decided that he "could do with a bit of travel" and a bit more scientific research, perhaps in systematic botany. He embarked on a postdoctoral fellowship at the University of Texas at Austin.

At Austin, Taylor collaborated with Billie L Turner in studying plant cell-wall proteins and looking for proteins important in plant systematics. He also taught a freshman biology course almost identical to what he had taught in the UK. "The only 'adaptation' required", Taylor says, "was to avoid mention of the 'heresy' of evolution!"

After 2 years at the University of Texas, Taylor was hired by UBC to teach freshman biology and "bring things up to date". In 1969, he started Biology Electives, a program in which freshmen work to answer unanswered questions in biology; the program is still running. His own research initially focused on plant and fungal cell-wall compositions. In 1978, he began a collaboration with physicist Alex McKay to study the structure of the plant cell wall by using nuclear magnetic resonance. The 30-year collaboration ended in 2007, 3 years after Taylor's official retirement from UBC. During the "not awfully prolific" but "very rewarding" collaboration, Taylor "discovered that even though I didn't know mathematics I could read equations. And I taught my physics colleagues some botany."

Editing and More

Taylor's editing career began in 1980, when he became an associate editor of the *Canadian Journal of Botany (CJB)*, a journal of the National Research Council Canada (NRC) Press, and joined the Council of Biology Editors (now the Council of Science Editors). By 1989, Taylor had moved up to editor-in-chief; 2 years later, the editor-in-chief of the NRC Press Research Journals, Bruce Dancik, asked Taylor to become assistant editor-in-chief of these journals. "[Taylor] wanted to see [the journals] succeed and thrive," Dancik says. "Many of the editors [at NRC Press] do very good jobs but aren't interested beyond that." Taylor helped Dancik to find editors for the journals—where all editorial positions are filled by volunteers—and to "put out periodic brush fires", in Dancik's words.

Among the brush fires Taylor needed to put out were cases of scientific misconduct. While Taylor was a new associate editor, one case began when a reviewer attempted to stall the publication of an article that he was sent. The article was eventually reviewed by others and published; shortly thereafter, another journal published a work by the first reviewer that drew heavily on the reviewed article without citing it. Taylor was deeply affected by the case. "We had all assumed that botanists were honest, professional people," Taylor says.

Through cases like that one, Taylor became interested in the ethics of science. He has taught courses, given talks, and written about professionalism in science and in science publishing. Taylor is an associate member of the UBC Center for Applied Ethics.

One of Taylor's contributions to the teaching of science ethics is the writing workshops he offers at UBC and other institutions. Scholars must be writing an article to attend; at the end of the workshop, the manuscripts are reviewed by two attendees in unrelated fields. He has taught 40 writing workshops since 1993. "We are teaching about the ethics of authorship, dealing with reviewers, and having the manuscript formatted correctly," Taylor says. "I am just reading a thesis. What do I see? . . . The quickest way to gain a reputation as a sloppy author is to have sloppy references."

In 1999, Taylor retired from the *CJB*, and in 2004, he retired from the Department of Botany. After his 40-year tenure, Taylor knows about 80% of the students who ever graduated from the Department of Botany. He is coediting a book on the history of science at UBC.

When Taylor attempted to retire as editor at the NRC Research Journals, Dancik talked him into staying until 2006. "I was sorry to see him go," Dancik says. "He said, 'It's probably time to put me out to pasture,' and I said, 'But we get along so well.' So I convinced him to stay a little longer." The two collaborated again to cochair the program committee for the 2008 CSE annual meeting.

Taylor now works half time as the project director at the UBC Botanical Garden. He also edits the garden's scientific journal, *Davidsonia*, a quarterly named after the garden's founder, John Davidson. In 2002, Taylor brought *Davidsonia* back to life, 20 years after funding cutbacks had killed it. *Davidsonia* now operates on a small but stable annual budget, accepts submissions from all over the world, and is peer reviewed. "We print it in house and get friends of the garden to staple it together," Taylor says.

Singing in the Opera Ensemble

Shortly after Taylor retired, he began singing with the UBC Opera Ensemble. He was invited to sing by Nancy Hermiston, director of the UBC Voice and Opera Division, after they worked together at UBC ceremonies. "I found myself singing in a variety of operas, always as 'the tame gray hair'," says Taylor, who is at least 30 years older than most of the other performers.

The UBC Opera Ensemble recently performed the world premiere of *Dream Healer*, by Vancouver composer Lloyd Burritt, about the psychiatrist Carl Jung. As part of the chorus, Taylor had the freedom to invent a character. He chose to play a janitor who had been cured at Jung's clinic. To get into character, he went to a run-down Vancouver neighborhood where homeless, mentally ill people congregate. "I spent a lot of my time downtown and found someone behaving peculiarly and looked at their gestures," Taylor says. Hermiston says that Taylor "surreptitiously mixed with all the levels of society at the clinic" when he found a broom and swept the entire stage.

Hermiston says that Taylor not only is a good singer but helps the ensemble in many other ways. When one of the students is writing a thesis, he or she may come to Taylor for editorial advice. "He is a great example for discipline and concentration," she says.

Taylor has a talent for bringing diverse people together, Hermiston says. For instance, Taylor's connections made it easy for an Opera Ensemble fundraiser, the Opera Tea, to be held at the UBC Botanical Garden. According to Hermiston, Taylor also combines different sorts of people within himself. Says Hermiston: "He has the imagination of a scientist and an artist, combined."

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