

## Caught on tape



### Conversations in Genetics

A series of videotaped interviews produced by the Genetics Society of America

Reviewed by Jan A. Witkowski

J.W. Charles, let's turn to the dramatic events of June 1858.

C.D. Well, Jan, that was when the letter from Alfred Wallace arrived and it was one of the worst days of my life. I'd been working for years on evolution and suddenly Wallace sends what reads like an abstract of my big essay. I felt that all my originality was smashed.

J.W. But you did as Wallace asked and forwarded his letter to Lyell?

C.D. Yes, it was the decent, the only thing to do. Lyell and Hooker presented Wallace's letter and writings of mine to the Linnean Society, so we were acknowledged together.

J.W. What about your relationship with Wallace?

C.D. Wallace was a delightful man. He went on to do wonderful things in geographical distribution, but I could never understand how so intelligent a naturalist came to be taken in by spiritualism.

Some might think that this is not the most exciting of dreams, but wouldn't any biologist want to talk to Darwin? Who wouldn't want to ask questions that might reveal the inside story of his scientific work, what it felt like to be the world's best known and most vilified scientist, and to learn what he really thought of Admiral Fitzroy and Bishop Wilberforce? Alas, there is no recording of such an interview although, remarkably, there is a recording of Florence Nightingale dating from 1890. (If Darwin had lived just eight years more years, we might have been able to listen to his voice!)

Unfortunately, oral histories of science are a recent endeavor, having become an industry only since Thomas Kuhn interviewed the pioneers of quantum physics in the early 1960s. Here we have a set of DVDs produced by the Genetics Society of America featuring interviews with Seymour Benzer, Jim Crow, Lee Hartwell, Ira Herskowitz, François Jacob, Ed Lewis, Dan Lindsley, Arno Motulsky, Janet Rowley and Evelyn Witkin. But why oral histories? Who are they for? Are they histories or anecdotes? Why should we listen to them when there are so many other things clamoring for our attention?

My impression is that historians once regarded oral histories as unreliable; some memories fade whereas others become stronger with time, as they are told and retold until they become the accepted truth. Ed Lewis, for example, is at pains to point out that he was not interested in

development when he began his work on homeotic mutants. But written sources are subject to the same criticism; Peter Medawar went so far as to call scientific papers fraudulent in their descriptions of how the research reported was done.

There is also the concern that oral histories cover only what is already known. This is especially true for interviews with scientists who have done famous experiments. François Jacob, for example, must have described the PaJaMo experiment repeatedly (as he did for me some years ago), and he does so again in conversation with Lucy Shapiro. What we might like to hear is what we don't know—here, oral histories can be fascinating. Who would have thought that Ira Herskowitz' interest in biology was sparked by preserved fetuses in the Department of Biology at Indiana where his father was a geneticist? Or that Ed Lewis found his first *Drosophila* mutant while still in high school and wrote to Calvin Bridges asking for stocks? Oral histories can also provide insights into the sociology of science. I was struck by how everyone knew everyone else and passed through the Pasteur Institute, Cold Spring Harbor Laboratory or Caltech.

Oral histories are a very limited sampling of a field; this set should not be taken as representative of the development of modern genetics. Oral histories are also limited by concentrating on the elite. There are obvious reasons for this, but concentrating on the pinnacles of genetics distorts the overall picture of a field. (At Cold Spring Harbor Laboratory, we have a web-based "Memory Board" to which everyone—technicians, grounds staff, administrative staff and scientists—is encouraged to contribute.)

One problem with video is finding the information. In this respect, these DVDs don't cut it. Four of the interviews were recorded as single 60-minute takes. The remaining four interviews have chapters, but they are arbitrarily set at 10-minute intervals without regard for content. It would have been easy to use the questions (paraphrased if necessary) as chapter headers and provide a menu like those found on commercial DVDs. Teachers may find interesting snippets to use in class, but they might have to set aside a whole day to find them. The production standards are good, although the Benzer video is rather poor, and the sound quality on the Jacob recording is strange. (The picture on Jacob's box urgently needs to be replaced.)

Technical quibbles aside, the geneticists interviewed are charming and delightful people, with fascinating stories. Seymour Benzer tells us that he and Jean Weigle were owl and lark, respectively, and that they formed a phage genetics tag team, getting in two experiments each day, one setting up plates for the other. Evelyn Witkin talks fondly of Al Hershey and how he didn't demur when she said she wanted to take a year's maternity leave and then to work part time. Janet Rowley encourages us when she points out that she was 48 years old when she made her first major discovery. And I felt tremendous empathy with Dan Lindsley when he talked of writing the *Drosophila* Red Book and described how the first pages were getting out of date even as the final pages were being written. Ira Herskowitz gives us a very special treat—much of his DVD consists of him playing guitar and singing his songs. *Grant Proposal Blues* is not to be missed.

So, while I will never be able to listen to Darwin except in my dreams, future generations of geneticists will be able to listen to and see the heroes of our time.

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