

# MOVERS

**Paul Gilna, executive director, Community Cyber-infrastructure for Advanced Marine Microbial Ecology Research and Analysis (CAMERA) project, San Diego, California**



**2001-06:** Director/manager, Center for Human Genome Studies, Los Alamos National Laboratory (LANL), New Mexico  
**1998-2000:** Programme director, computation biology and database activity programmes, National Science Foundation, Washington DC  
**1994-98:** Programme manager, biology and environmental research, LANL, New Mexico

A recurring theme of Paul Gilna's career has been to serve the scientific community while working at the cutting edge of computational biology. His work to set up computational tools and annotated genetic-sequence databases, such as GenBank, has aided the research of countless scientists.

After earning a degree in pharmacology at University College Dublin, Gilna pursued a PhD focused on the drugs affecting the hormones oestrogen and progesterone. Advised by mentors to enter the new world of molecular biology, he serendipitously met molecular biologist Pierre Chambon. Gilna's collaboration with Chambon's group and colleagues at the University of Chicago in Illinois culminated in the cloning and sequencing of human oestrogen and progesterone receptors.

While a postdoc at Chicago, Gilna published papers that would become the basis of current genetic testing for the predisposition to breast cancer. At this point, however, he opted out of research to use the computational-biology skills he had taught himself. A position at GenBank, the annotated collection of publicly available gene sequences at Los Alamos National Laboratory, met his goals. "I was looking for something more tangible as evidence that what I doing was of assistance to others," he says.

Gilna constructed the now familiar requirement that authors of journal articles submit gene sequences to GenBank in exchange for an accession number printed with the article. The procedure made digital data available to researchers and streamlined the process of lifting printed data from journals. He was co-principal investigator until GenBank moved to the National Institutes of Health.

After two years at the National Science Foundation, Gilna returned to Los Alamos to oversee the human-genome sequencing arm of the Department of Energy's Joint Genome Institute. One of his best achievements, he says, was aiding its transition to microbial genome sequencing.

His new role is executive director of the CAMERA project, which provides computational and data-analysis tools to decipher the collective genetic codes obtained from as-yet unculturable ocean microbes. The partnership between the J. Craig Venter Institute at the University of California, San Diego, and the San Diego Supercomputer Center will test his ability to lead disparate groups. "The challenge is not only that this is a new partnership, but that it is creating the new field of metagenomics," he says. ■  
**Virginia Gewin**

# RECRUITERS & ACADEMIA

## Lessons from the jungle

Since I graduated in 2003 with a bachelor's in biology, my professional life has been an on-again, off-again drama. Should I move to a graduate programme straight away? Or should I test the waters outside of the hallowed halls of academia? I chose the latter.

I'm glad I did. I had little wind left in my jib after four tough years. The challenge has been to remain active and keep my mind astute in the ever-changing fields of biology and ecology. Small, volunteer gigs and journal-reading sufficed for a while, but I soon became more aggressive in applying for full-time positions.

I first targeted biology departments and also sought private-sector and federal positions. Many opportunities I saw were for full-time volunteers, most requiring major expense and lasting a short time. Then in early 2005 I spotted a volunteer post at the Primate Habituation Programme at the Dzanga-Ndoki National Park in the Central African Republic. I had never been there and had never worked with primates. With a one-year commitment, I wouldn't feel like a tourist. I applied, got the position and was soon on my way.

The goal of the programme, based at a camp called Bai Hokou, is to acclimatize western lowland gorillas and semi-terrestrial mangabays to the

presence of humans. An eco-tourism programme was set up with the backing of the government, the conservation charity WWF and the German aid agency GTZ. The revenue is placed in a programme for local communities. Tourists have been visiting since 2001, although acclimatization efforts are labour-intensive and ongoing.

The position enabled me to witness a new model of wildlife conservation that had to weather poachers and limited government supervision. It was a stark contrast to the carefully choreographed efforts I'd seen in the United States.

Because I was either fixing fuses, cooking over a wood fire or following gorillas, I gave little thought to what would come next. So, since coming home, I'm once again excruciatingly over-analysing my career options.

I now plan to capitalize on the discipline and intellectual stimulation I gained in the Congo basin by pursuing a master's degree in evolutionary biology with an emphasis on conservation. In the mean time, I'm doing public presentations about working with wild animals in an effort to raise awareness of conservation issues. ■

**Ayres Christ is currently splitting time between Washington DC and Tennessee.**

### GRADUATE JOURNAL

## Write and wrong

There are many books on scientific methodology, but guidelines for writing a good scientific paper are harder to come by. My month-long battle with a manuscript has made me ponder many aspects of writing.

First, there is the choice of scope. The best articles put their subject in a wider framework, but it's a fine line between relevant and ridiculous parallels. As a sociobiologist, I'm wary of making careless comparisons of ants to humans, despite frequent requests from friends both within and outside science.

Then there is the eternal temptation to promise more than your results deliver. My paper is on kin selection and insects. Do I suggest that it will change the way we study ants, the way we see social insects, or the roots of social interaction? The insanely inflated claims of some papers make me side with a friend of mine, who once suggested that articles should include only methods and results, leaving interpretation to the reader.

And how much room is there for speculation? Writing my paper has inspired many ideas about my ant system that remain untested. Gratuitous musings may transmit the ideas, but they make many reviewers see red.

After weeks of rewrites, I finally submitted my manuscript. At the moment, I have no clear picture of what it says or, indeed, why any of it matters. But I'm hopeful that given some time, I will be pleasantly surprised by my handiwork. ■  
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