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The Emergence of *Systematic Biology*

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In late 1989, Bill Fink, then the President-Elect of the Society of Systematic Zoology (SSZ), called me up on the telephone. He wanted to know if I would consider running for election as Editor of *Systematic Zoology*. I quickly said no, but I made the mistake of not hanging up. "Before you say 'no,'" he said (ignoring the fact that I already had), "hear me out." Bill first talked about the importance of *Systematic Zoology*, a point to which I readily agreed. He then said he was concerned with the recent decline in the size of the journal, its chronic lateness, and the declining membership of SSZ. Bill said that he was looking for an editor who would be an activist and shake things up. He said that as President of SSZ, he wanted to invigorate the society and turn it around, and that the journal was the most important aspect of the society. I admitted that *Systematic Zoology* was one of the few journals that I read cover to cover each issue, but said that I couldn't imagine taking the time to be Editor.

As Bill and I discussed *Systematic Zoology*, we talked about the possibility of expanding the mission of the society and the journal from zoology to biology in general. Since its beginning, the journal had been the primary outlet for papers on systematic theory and systematic methodology, and many leading botanists (and other nonzoologists) were active members of the society and contributors to the journal. In recent years, papers in zoology that were primarily taxonomic were more likely to be published in more specialized taxon-oriented journals, and *Systematic Zoology* seemed to have evolved beyond a strictly zoological orientation. Given the journal's emphasis on theory, methods, and outstanding applications of biological systematics, neither of us saw much reason to exclude systematic papers that dealt with plants or fungi or microbes as the objects of study. Bill said that if I were elected Editor, I could propose and push that change in the journal. He also said that as President he would support a change in the society name. As we talked, Bill seemed to forget that I had already told him no, and by the end of the phone call, Bill's enthusiasm for the prospects of the future made me forget as well. By the time I remembered, it was too late.

Bill told me that the nominating committee would present two candidates for Editor to the SSZ Council. We were each to make a presentation to the Council at the SSZ annual meeting in Boston in December 1989, and the Council would vote at that time. I decided that it might be interesting to be Editor of the journal and push for a change in SSZ (in other words, I was clueless), but I didn't want to the job unless I had some support about the expansion in emphasis from zoology to biology. When I met with the Council,[1] I made it clear that I thought the journal and society should work toward a change in name and mission, and that if I were elected Editor, I would push for that change. I further stated that even if that change in name did not take place, that I would solicit papers on all organisms, and not just on animals. A majority of the Council must have agreed, for shortly after the interviews they told me that the job was mine. The bad news was that this was in December 1989, and my first issue of the journal was due out in March 1990! Fortunately, when I contacted the outgoing editor (Bob Shipp), he agreed to help fill the first two issues of 1990 with the manuscripts he had received, so I actually had until September to solicit manuscripts, get them reviewed, fill an issue of the journal, and get it published.

My first order of business was to get the journal back on schedule (it was running 3 to 4 months late). The September 1990 issue was still a month late, but the journal was back on track by December 1990. I started soliciting and receiving reviews and manuscripts by

[1] J. A. Powell (President), W. L. Fink (President-Elect), J. Cracraft (Program Chair), K. Fauchald (Secretary), and council members D. L. Swofford, J. M. Carpenter, W. E. Bemis, D. Frost, V. A. Funk, M. Miyamoto, and H. B. Shaffer were present.

E-mail (still relatively in its infancy in 1990, at least compared to today), wrote an open letter to the membership of the society asking for submissions, targeted many individual authors with requests for manuscripts, and worked together with Roy McDiarmid (SSZ Treasurer) on a campaign for new members. The number of manuscripts submitted to the journal doubled in 1990 over that of the previous 4 years, and the size of the journal began to increase. This trend has continued, to the point that now in its 50th year, the journal has expanded to six issues annually.

In early 1990, Bill Fink appointed a committee consisting of himself, Mike Donoghue, Joel Cracraft, Vicki Funk, and me to explore the possibility of changing from SSZ to SSB. Bill Fink sent an open letter to the society membership for input on this issue. The June 1990 meetings of SSZ were at the International Congress of Systematic and Evolutionary Biology at the University of Maryland. Our committee made a formal proposal to the SSZ Council[2] to change the society's name to the Society of Systematic Biologists. I mocked up a proposed cover for the journal, changing the name to *Systematic Biology*. There was considerable discussion of the pros and cons of the plan by the Council, including the possibility of naming the journal simply *Systematics*. In the end, the Council voted unanimously in favor of the proposal and sent it to the membership for a vote (this was required because the proposal involved numerous constitutional changes). The proposed changes to the society's constitution were mailed with the fall 1990 ballot, and the membership voted by a ratio of 8:1 in favor of the changes.

The change from SSZ to SSB took effect on 1 January 1991 (with Mike Novacek as the first President, and Joel Cracraft as the first President-Elect under the new name), and the journal name changed to *Systematic Biology* the following year (Volume 41, 1992). In addition to the changes in masthead, color, and paper stock, perhaps the most visible change was the addition of an illustration on the cover. However, the role of the journal did not change appreciably, other than explicitly including systematic biologists working on any organisms. For the record, the first organism to appear on the cover was not an animal, but a diatom (*Stephanodiscus niagarae*). The first cover illustration, however, was a tubular tree of human mitochondrial DNA lineages (in March 1992).

In addition to the change of the name of the society, SSB began meeting with the Society for the Study of Evolution beginning in 1991. Prior to 1990, SSZ had met for many years in December with the American Society of Zoologists. These meetings were usually poorly attended by members of SSZ and the change to the summer meetings with SSE greatly expanded the participation by the SSB membership.

Today, the society has an expanding membership, a highly stimulating and well-attended annual meeting, and an enormously successful and prominent journal. The succeeding editors of *Systematic Biology* (Mike Miyamoto, David Cannatella, and Dick Olmstead) have each done an outstanding job of improving and expanding the journal, as I'm sure will be true for the Editor-Elect, Chris Simon. As a botanist, Dick Olmstead has helped expand the participation by plant biologists in the journal and society, as have several botanist presidents. In addition, a series of active SSB councils and presidents has expanded the activites of the society to include several regular awards, support of numerous symposia, and support of graduate student research and travel.

The journal (under both names) has been a part of an exciting half-century of systematic biology. Systematic biology as a field has become an important and respected part of science and society, and the applications of systematics today are almost boundless. I expect that the Editor of volume 100 of *Systematic Biology* will look back and laugh at the primitive state of systematics in 2001 ("they didn't even have an estimate of the complete tree of life back then!"), but I think that the advances of systematics over the past 50 years have been impressive. In 1961, Paul Ehrlich noted in *Systematic Zoology* that although Mendel would have been lost in a modern genetics laboratory, Linnaeus would have felt right at home in the laboratory of a modern systematist. Ehrlich (1961) also predicted, however, that things were about to change radically, and that we could

[2] W. L. Fink (President), J. A. Powell (Past-President), K. Fauchald (Secretary), R. W. McDiarmid (Treasurer), J. Cracraft (Program Chair), D. M. Hillis (Editor), and council members D. R. Lindberg, A. R. McCune, R. T. O'Grady, D. L. Swofford, D. G. Fautin, and H. B. Shaffer were present.

expect many more changes in systematics in the coming decade than had occurred in the previous two centuries. He was right about some particulars (such as the importance to systematics of "electronic data processing equipment"), and dead wrong about others (e.g., he thought that collections would cease to have value in scientific research). However, I think that his crystal ball was clearest when he wrote that "... a shift to a more rigorous methodology may well lead to a restoration of significant feedback of ideas from taxonomy [=systematics in his usage] to other biological disciplines." Anyone who has seen the ubiquity of phylogenetic analysis and the usefulness of phylogenetic thinking in modern biology would have to agree that Ehrlich's prediction eventually came true in spades. Where would fields such as developmental biology, population genetics, genomics, or molecular biology be today without the techniques and theory of systematics? How much harder would it be to study viruses that are newly emerging in human populations? How could we use the information from the various genome projects, or even organize and evaluate the many sequences in GenBank? Systematic methods and thinking have become so common in so many fields of biology that many biologists don't even realize that they have become systematists. The authors, editors, and readership of *Systematic Zoology* and *Systematic Biology*, as well as the members of SSZ and SSB, can take justifiable pride in the roles that these journals and societies have played in the transformation and application of systematic biology in the past 50 years.

REFERENCE

EHRLICH, P. R. 1961. Systematics in 1970: Some unpopular predictions. Syst. Zool. 10:157–158.