

## Richard Bovbjerg and The Iowa Lakeside Laboratory

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### A Personal Introduction

In the spring of 1977, in Ames, a struggling biology major who had earlier shown some promise was ordered by his advisor: "Go to Lakeside Lab and take Dick Bovbjerg's Aquatic Ecology course." I did and it worked. I've parlayed that early potential into a career. And like so many others I return to Lakeside, the first time to take another course, then to do my Master's research. More recently I come back to teach the Field Vertebrate Zoology course. Likewise, Dick has shifted from mentor to colleague, and we've co-authored a paper (Lannoo and Bovbjerg, 1985). Now, I am truly honored to be the special editor of this issue commemorating Dick's 70th birthday and his retirement as the Director of the Iowa Lakeside Laboratory.

### The Man

The statistics on Dick Bovbjerg read as follows: born in 1919 in Chicago; earned his BS in 1941, and his Ph.D in 1949 from the University of Chicago; from 1941-'45 served in the Navy as the skipper of a minesweeper; arrived at The University of Iowa in 1955; became Director of the Iowa Lakeside Laboratory in 1963, and retired while still vigorous in 1989. He published over 50 papers on the behavioral ecology of crustaceans, molluscs, insects, and amphibians, including the classic: "Dominance order in the crayfish *Orconectes virilis* (Bovbjerg, 1953). Dick's teaching has won him recognition as well. The University of Iowa *Spectator* article profiling him after he was honored as Distinguished Iowa Scientist by the Iowa Academy of Science was headlined: "He does everything in his power to show the splendor of science (Anon. 1982). Nationally, he served six terms on, and chaired, the College Testing Board's panel.

Two conversations I have had with others illustrate the force and scope of Dick's influence in both research and teaching. While I was in graduate school in Nova Scotia, another student popped up and said, "Bovbjerg! I know his paper on crayfish; we read it in our animal behavior seminar at North Carolina." Later, in Idaho I ran into a colleague of Dick's from the 1960s, who said: "His class was the only one I've ever seen where, at the end, the students gave him a standing ovation".

### A Few Quotations.

Dick once described a zoology lab session and its impact on the students as follows:

*"We get freshly slaughtered cows' eyes. The students come in and they see a tray of cows' eyes and they are ready to vomit. They have never seen anything so gross in their lives. We cut into those things, and here is this object of supreme beauty. It is esthetically beautiful, and it is conceptually beautiful. It is so beautiful that it makes you gasp, literally. You can bear it from a student who has just opened the eye and seen the beautiful colors. And the vitreous humor which fills the eye, which gives it its round plump shape, is glass clear Jello-O that shimmers as it catches the light. And the lens is that smokey gray thing in the front, and there are a hundred black fibers radiating in all directions holding it in place. Those fibers, you can just tell instantly, are what flatten the lens to change focus. And then in the back is the retina, and behind that in the cow is a gorgeous iridescent backing. It blows your mind. You don't have to know the names of all those parts to remember them and to understand how they work." (Anon. 1982)*

About teaching ecology and evolution to non-majors: *"We have as an audience essentially 100 percent uninterested and unmotivated students, and many of them are downright frightened of science. Their majors are education and art and history and foreign language and so on. Their talents*

*are verbal and artistic, not scientific. They're not dumb, they're just not interested in science. You have to create in — no no! — elicit from them interest in science itself, the process, the attitude, more than the facts of the subject matter. Here I would fall back on an old truism: You have got to teach both the subject matter and the student." (Anon. 1982)*

And on his own research: *"I enjoy the kind of ecology where I can see patterns in nature and take them to the laboratory for analysis and try, on a small scale, to duplicate nature so that, under controlled conditions, I can try to figure out what is happening out there in the real world." (Anon. 1982)*

### As the Director of the Iowa Lakeside Laboratory.

It is at the Lakeside Lab that most of us included in this issue got to know Dick, and this may have been the best place for that. He appeared to prefer the solitude (no telephones in the labs and the faculty living quarters) and the comradeship of the Lab to the squabbles, aggressiveness, and competition that have become a part of university zoology departments ("where egos sore" — my phrase, not his, but he'll love the word play). This has in part come about as departments have become more "reductionist", embracing the techniques of molecular biology at the expense of organismal biology. Dick never felt a part of this modernization. He respects the new techniques and is in awe of their power. But at the same time he knows that natural selection acts on organisms, not DNA, and that to study an organism outside of its environment is to understand it only partially.

*"Biotechnology is the buzzword of the discipline. This is the 'breakthrough' triumph of all biology, the arena of genes and enzymes and ultramicroscopic anatomy, the biology that holds hope for healing the ill and engineering genes for food production."*

*"But our environmental problems have not been solved and we need and will continue to need young people trained by scientists in the science of ecology, trained out in nature. This responsibility makes the field station program essential. At the Lakeside Lab, we study those things better learned there than within the confines of a lecture hall on campus." (Bovbjerg 1989).*

Ecology is: *"... not just a cell, not just a liver, not just an individual bunny, not even all the bunnies on the hillside, but all the bunnies and all the grass and all the fungi and all the bacteria and all the hawks — everything on the hillside... We're dealing with systems, not just critters, and this extends to the whole globe." (Anon. 1989).*

During Dick's tenure as Director over 2000 students have attended Lakeside Lab and over 120 advanced degrees have been awarded for research done there. The King Lab and its annex were built, as was an aquatic ecology lab, and new faculty quarters; a beautiful library was converted from an old school house.

At least two themes run through Dick's years as Director. First, the quality of students has been maintained. If, over the years, this has meant fewer students, so be it. Class sizes have been limited to eight students per faculty member, in part to save the local habitats from being trampled but also to ensure that each student receives the individualized instruction necessary during the rigorous five week course. Secondly, Dick has managed to maintain Lakeside as an uncomplicated place, where students are allowed to focus on their studies and encouraged to talk with faculty. And where (sometimes despite themselves) students learn to enjoy the intellectual atmosphere of a quiet evening reading their text, or discussing biology on their porch while looking out over the lake.

### The Lakeside Lab

The history of the Lakeside Lab has been detailed in recent articles (Bovbjerg 1989, Ziegrowsky 1985) and won't be repeated. Likewise, descriptions of The Lab are found in the yearly brochure and will not be included here; besides, the Lab is better experienced than described. A feeling for its character however can be gleaned from Dick's words:

*"Students take only one course that meets all day, every day. This saturation learning is seldom possible on the large campus. At the field station, classes are small and professors work individually with students. The professor's research and teaching intertwine, and investigation is a part of each course — doing science rather than just hearing about science"* (Swaller 1989).

And further: *"... it's hard to bring the lake into the classroom. We have a clear specialization: study of the sort of biology that cannot be done at the university."* *"We will soon be needing more and more young scientists who understand the workings of the larger systems and who will help heal wounds we have inflicted on our environment.* (Swaller 1989).

In 1910, Thomas Macbride, the founder of the Lakeside Laboratory stated the lab's mission as follows: *"Dry dead fungi are dusty labelled things, as meaningless as the stuffed skin of mammal or bird, or a fossil in a box; better than no exhibit at all, to be sure, but poor indeed as compared with the natural world, where the fungus starts in the forest shade, the wings of bird or insect fan the sunny air, or the fossil speaks its significance from the stony pages of the riven quarry stone. The lakeside laboratory shall afford to all interested, for once at least a chance to see the real world, nature alive, accomplishing her miracles in their own silent splendor, often needing not, for the student's appreciation, the voice of interpreter or teacher..."* (MacBride 1910).

### The Festschrift

This project began because some of us have been deeply influenced by Dick Bovbjerg, and wanted to mark his retirement. This JIAS issue was the most appropriate venture we could envision. We don't even know if he'll like it. Eschewing ceremony his whole life, he did not want a retirement party. And at the Lab he said: *"... I don't want a building named after me, and I certainly don't want a plaque!"* (Achterhof 1989). What Dick got however, besides this issue, is a diatom named after him. (Reimer 1990). Now algologists the world over will have to wrestle with correctly spelling "Bovbjerg".

Recent faculty of the Lakeside Lab were invited to submit articles. The variation in the subjects of these papers reflects the diversity of faculty interests at the Lab. We probably could have doubled or tripled the size of this issue had we requested submissions from friends of Dick and the Lab going back only a few years. What we have instead is a cross-section of the people, the courses, and the research interests of the Lakeside Lab staff as Dick left it.

In addition to the authors, several people helped us to assemble this issue. Sharon Hermann and James Baker, Lakeside perennials, reviewed manuscripts for us. Mark and Judy Wehrspann, who care for and manage the Lab, have supported us all. Roger and Marilyn Bachmann, the co-editors of JIAS, have encouraged this project from the beginning, first by making an issue available, then with editorial advice. Ann and Viktor Bovbjerg, Debby Ziegrowsky Baker, Dick Baker, Ken Lang, Bob Cruden, Roger and Marilyn Bachmann, Neil Bernstein, and Kelly Douglas read earlier versions of this manuscript and kindly gave me advice and perspective. Ann Bovbjerg tracked down the photograph.

### A Final Note

Organizing this project has been especially rewarding because it has revolved around the three people who influenced me most as a graduate student: Dick Bovbjerg — my first mentor; Marilyn Bachmann — my Master's advisor, co-author of my first paper on cannibal morph salamanders, and co-editor of the JIAS; and Richard Wassersug — my Ph. D advisor, whose ideas about amphibian predator satiation I've tapped for insights into the cannibal morph phenomenon. Without Dick Bovbjerg's influence it wouldn't have happened this way. (He tells the story about discovering me as a grill cook in a Hardee's restaurant and draws a parallel with the discovery of Marilyn Monroe as a waitress in a malt shop.) In fact without that timely Lakeside Lab aquatic ecology course it might not have happened at all.

### REFERENCES

- ACHTERHOF, C. 1989. The Okobojian, August 10, pp. 16a-17a.  
 ANON. 1982. The University of Iowa Spectator. Vol. 15(6)2.  
 ANON. 1989. The University of Iowa Spectator. Vol. 23(1):4-5.  
 BOVBJERG, R.V. 1953. Dominance order in the crayfish *Orconectes virilis* (Hagen). *Physiol. Zool.* 26:173-178. (Reprinted: 1975. Benchmark Papers in Animal Behavior, Vol. 3.)  
 BOVBJERG, R.V. 1989. A toast to the Old Gold Alumni. Patrons of Iowa's Natural Heritage. Iowa Alumni Review, March 1989. pp. 19-21.  
 LANNOO, M.J. and R.V. BOVBJERG. 1985. Distribution, dispersion, and behavioral ecology of the land snail *Oxyloma retusa* (Succineidae). *Proc. Iowa Acad. Sci.* 92(2):67-69.  
 MACBRIDE, T.H. 1910. The Okoboji Lakeside Laboratory. *Proc. Iowa Acad. Sci.* 16:131-133 (Reprinted 1985, the Palimpsest 66(2):66-68).  
 REIMER, C.W. 1990. Diatoms (Bacillariophyceae) from the Excelsior Fen-complex, Dickinson Co., Iowa. *Proc. Iowa Acad. Sci.* XX:xx-xx.  
 SWALLER, K. 1989. The Daily Reporter. Spencer, IA. Vol. 115:(118) 1.  
 ZIEGROWSKY, D.J. 1985. Thomas Macbride's dream: Iowa Lakeside Laboratory. The Palimpsest. 66(2):42-65.