



Chester I. Bliss, 1899-1979

Author(s): B. G. Greenberg

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Notices Nécrologiques

Chester I. Bliss, 1899–1979

Chester Ittner Bliss was born in Springfield, Ohio, on 1 February 1899 and died in New Haven, Connecticut, on 14 March 1979. An entomologist turned biometrician, he influenced a generation of biologists and statisticians to develop fruitful collaboration. For over 30 years a staff member of the Connecticut Agricultural Experiment Station, he held adjunct posts at Yale University, and served responsible positions in all the English-speaking statistical organizations.

As a young biologist he was primarily concerned about the control of insects that fed on the grape leaves and its fruit in his native state, and he worked every summer as a young man in field stations at Sandusky, Ohio, and Lake Laboratory. After graduation in 1921 from Ohio State University with an A.B. degree in entomology, Bliss went to New York City to study and work as a Fellow in Zoology with the world-famous Thomas H. Morgan, on biological and genetic investigations using the fruit fly *Drosophila melanogaster*. Columbia University awarded him the A.M. degree in 1922 and the Ph.D. in Zoology in 1926.

In the summer of 1925 he was engaged in research at the Marine Biological Laboratory, Woods Hole, Massachusetts, an assignment which was to influence his choice many years later when he took the initiative to arrange the First International Biometric Conference at Woods Hole on 5–6 September 1947. There was born the Biometric Society and Dr Bliss was elected its first Secretary.

His first full-time employment started in 1926 as an Associate Entomologist in the U.S. Department of Agriculture Bureau of Entomology research unit in New Orleans. His career advanced as his reputation for statistical knowledge spread, and he was consulted as a biometrician by other entomologists working in Florida, California, and Mexico City – the latter being the first joint venture of the Bureau of Entomology with a foreign nation.

The depression years made Dr Bliss a victim of federal cutbacks in employment and the research unit in New Orleans was disbanded in 1933. This turned out to be the most important turning point in his career for he decided it was the right time to learn more about biometry. Moving to England to study at the Galton Laboratory, University College, London, he started a personal friendship with R.A. Fisher that lasted a lifetime. Fisher apparently recognized immediately the unusual biometrical insight in Bliss' biological perspective, and for two years, 1933–35, they collaborated on several problems.

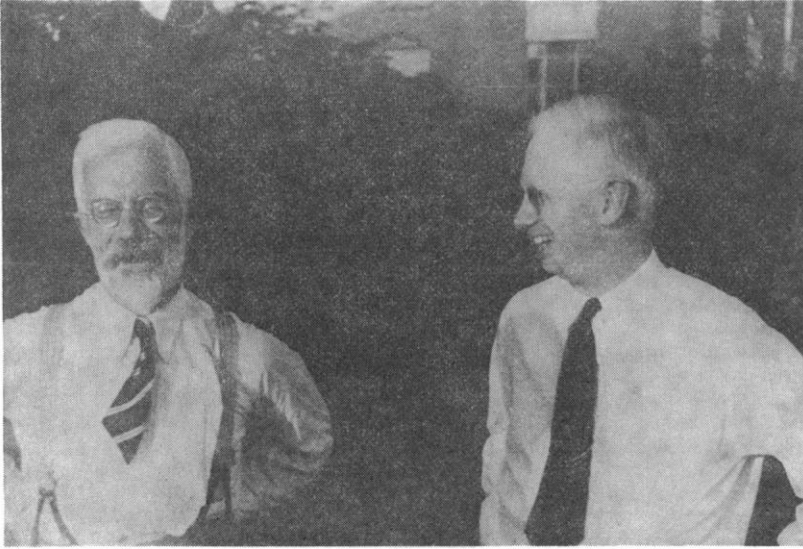
The most significant result was that Bliss interested Fisher in developing the maximum likelihood solution for the method of probits which Bliss had proposed as a solution to the fitting of dosage-mortality curves. Bliss may not have been aware of J.H. Gaddum's work on quantal response in 1933 but in his first paper in *Science*, 1934, he referred to the probit by name as a transformation to probability units and suggested plotting data on the normal probability paper being used at the time by sanitary engineers for water supply and control problems. In 1935 in the *Annals of Applied Biology* he published a classic set of three papers on dosage-mortality curves, with an Appendix to the first article by R.A. Fisher for the case of zero survivorship.

Not finding ready employment back home, Bliss decided to travel further east and became a member of the Institute for Plant Protection in Leningrad in 1935 on a three-year contract. He published several papers in Russian, but remained only two years in Leningrad, returning to the United States in 1938 as Consulting Biometrician for the Connecticut Agricultural Experiment Station in New Haven. He became a permanent member of that group in 1940 and remained there until his retirement in 1970. He was also a Lecturer in Biometry (and Pharmacology) at Yale University from 1942 to 1963, and a Senior Research Associate from 1963 to 1967. He was a Visiting Professor at North Carolina State College for the Summer Session in 1946.

Honors and duties came to Bliss from the professional statistical organizations. He was selected a Fellow of the Institute of Mathematical Statistics in 1944, and elected as a member of the International Statistical Institute in 1952. He was a Fellow of the American Statistical Association and an Honorary Fellow of the Royal Statistical Society. He served as Vice-President of the American Statistical Association in 1943 and 1947, and was a Director from 1944 to 1946. His greatest organizational talents, however, were reserved for the Biometric Society, which he helped to found with the active cooperation of Fisher, Frank Yates, and Gertrude Cox. In addition to serving as its first Secretary from 1947 to 1955, he held office as Treasurer from 1951 to 1956, President in 1962 and 1963, and Vice-President in 1964. He helped to arrange and himself attended the first six International Biometric Conferences.

In 1953 he returned to England for four months of research with Fisher at Cambridge University as a member of Gonville and Caius College. From that effort resulted another memorable paper with Fisher, who prepared an appendant note to demonstrate the fitting of the negative binomial distribution to biological data.

Bliss had an unusually gifted and intuitive feeling for the statistical meaning behind biological data, and collaborated with more mathematically-trained biometricians to produce joint efforts now viewed as classics. Thus, besides the articles with Fisher, he wrote a paper in 1937 on time-mortality curves with an Appendix by W.L. Stevens, and in 1948 he teamed with W.G. Cochran to write a paper on discriminant functions with



R.A. Fisher (left) and Chester Bliss at Special Summer Session at North Carolina State College, Raleigh, June–July 1946.

covariance for the *Annals of Mathematical Statistics*. His publication list of over 140 manuscripts contains joint papers with eminent statisticians as well as biologists. He authored several texts including the famous *The Statistics of Bioassay, with Special Reference to the Vitamins* in 1952, and a three-volume *Statistics in Biology* published in later life.

As a biometrician Bliss is probably the closest in modern times to G. Udny Yule, a statistician who could sense and extract more from a set of data than anyone else. In the words of the Director of the Connecticut Agricultural Experiment Station, Dr Paul E. Waggoner, who was quoting another scientist, ‘Chester is the best data walloper around’. He was also the hardest working member when he joined effort with others. In reviewing their collaborative efforts, Cochran said ‘His abundant energy made me a bit uncomfortable – he seemed to be doing all the work on this team – but there was no stopping him’.

Bliss was a charming man with unbounded energy and enthusiasm and always ready to smile. During the 1930s, he sported a striking red beard that attracted attention everywhere. Never married, he seemed wedded to biometry as a tool to help entomologists, pharmacologists, and other biologists to get more out of life. In this he succeeded to a remarkable degree.

The writer of this memoir would be remiss not to record his gratitude for the advice Bliss gave him as a statistics hopeful early in 1946, to look into the interesting graduate training developments at the new Institute of Statistics in North Carolina. Many another biometrician will doubtless have similar testimonial to Bliss’ interest in and encouragement of students.

B.G. Greenberg

Kjeld Johansen, 1978

Dr Kjeld Johansen, former director of the Statistical Office of Copenhagen, died in September 1978.

After World War II Dr Johansen was one of the most zealous promoters of a resumption of the international statistical co-operation.

He was a member of The Committee on Statistics of Large Towns set up by The International Statistical Institute; internationally he was well-known for his work for many years in The International Association of Municipal Statisticians of which he was Chairman of the Board. In the period 1962–1966 he was President of the Association, and in 1966 he was elected an ordinary member of the ISI.

In Denmark he was in charge of the Statistical Office of Copenhagen in the years 1929–1965; besides he was closely attached to the University of Copenhagen, first as an external examiner for many years, later as the chairman of the external examiners at the Faculty of Political Science and Jurisprudence, which latter post he held up to the age of 78.

Dr Johansen last attended a meeting of international municipal statisticians in Zürich in 1974. He was always an energetic and inspiring colleague in our international co-operation, and his skill has left its mark. The fact that he will also be remembered for his charm and wit, during meetings and social gatherings alike, is mentioned here simply for the sake of completeness. He will be missed.

J. Wedebye