

Louise B. Preer

Louise Bertha Brandau (Louise to her family, Bertie to everyone else) was born in the east side of Baltimore, Maryland, in a row house with marble steps. After high school her short career as an accountant in a saddle shop was put in jeopardy when she was awarded a scholarship from the Baltimore Eastern High School Alumni Association. Although the total scholarship of \$200 was for but one year, and a year's tuition at Goucher was \$250, and although her only other source of funds was what she could earn, she decided to take the plunge.

At Goucher she soon became fascinated with the work of a young faculty member, Ralph Cleland, who was unravelling the peculiar cytogenetics of the evening primrose. Cleland himself had worked on evening primroses with Hugo DeVries, a pioneer in the young science of genetics, the inventor of the word "mutation," and one of the rediscoverers of Mendelism. The year she finished her undergraduate work, Cleland decided to accept a position as head of the Department of Botany at Indiana University; Bertie followed him to Bloomington as his research assistant and began graduate work. There she met her future husband, a graduate student in the Department of Zoology; they were married two years later, just before the United States entered World War II. The war years were spent writing and working on her evening primroses, either in Bloomington or while following her husband from one army camp to another when he was not overseas. In 1947 the Preers completed their Ph.D. degrees in Bloomington and began a twenty-year stay at the University of Pennsylvania. In 1967 they returned to Bloomington, where they have remained.

Bertie's work on evening primroses consisted of the unravelling of the phylogenetic relations within a group that had undergone reciprocal translocations. Relations were determined by making appropriate crosses between races and counting the numbers of rings and pairs of synapsed chromosomes at meiosis. Then the

characteristic end arrangements of each of the chromosomal complexes making up the race and their evolutionary origins were deduced. Most of her career, however, she spent working on the bacteria, viruses, and plasmids found in the protozoan *Paramecium*. She delighted in unravelling the symbioses within symbioses found there (to quote Hegner, "all fleas have lesser fleas to bite 'em and so on *in finitum*"). At one point she made one of these bacterial symbionts, called "alpha," that lives only in the nucleus, her special project. Later, when the molecular biology of nucleic acids became the obsession of most geneticists, she made it her obsession as well. When the odd genetic code that was to prove characteristic of many one-celled animals was found, she had the satisfaction of knowing that she had put in many long and late hours, personally sequencing many thousands of bases among which the occasional odd codons were discovered.

To understand Bertie's career one must understand a few things about her. First, the welfare of people always comes first: before research, before leisure, before the conventional and easy path of action. Second, whatever is done must be done right, no matter how difficult, no matter how laborious, no matter how obnoxious—with no short cuts and no compromises. And whatever she does, she does in a responsible, sympathetic, outgoing, optimistic and cheerful way. During the war years her first child arrived, and her second came a few years later. When the children began school, she joined her husband in the laboratory at the University of Pennsylvania. However, when school was out in the afternoon, she was home, for the children came first. As they grew older, Bertie spent more and more time at work. When the younger son left home for college, she became a full-time laboratory worker.

Although she is concerned about the status of women, she has never been an outspoken advocate of women's rights. She did chafe, however, in the early days when she was told that anti-nepotism rules forbade her being paid for her work—even the work funded by government research grants. It didn't seem right not to be paid at all when others were being paid for doing less. In fact her presence in the laboratory provided the insight

and continuity that was necessary for the research to proceed without interruption. Without her it would have withered for many a protracted period when her husband was distracted by other academic duties. Finally, as the anti-nepotism barriers were dropped, she was appointed as a senior research scientist at Indiana University. Although she was compensated for her services, the amount was still far less than the principle of "equal pay for equal work" would require.

Although Bertie was never involved in the formal training of undergraduates, she was the mainstay of the actual training of the many undergraduates and graduate students who passed through the laboratory. She is exhilarated by experiments that work, and says "Oh, well" for the experiments that don't. Bertie usually prefers to collaborate with others, though when she does strike off on her own, the results are impressive. Once, at the University of Pennsylvania, she thought that her collaborators were headed in the wrong direction, and she decided to embark on a new project all alone. She was so successful that the others in the laboratory changed to the new line of investigation that she had begun.

Her avocation of growing orchids provides her with great satisfaction, for she has always been a botanist at heart. Her hobby has also provided her many friends with abundant gifts of her prized orchids. Birthdays, minor celebrations, sickness, bad luck, or just being deserving in her eyes are all that one needs to qualify for a flower. Position in life is irrelevant; the most menial of workers is just as likely to receive an orchid as one at the top of the social ladder.

Finally, nothing that a friend needs is too much trouble for Bertie. For the sick she will always be there. If a need is expressed that she can supply, it will be met. We won't miss her at IU, because she will still be here working away in the laboratory.

John R. Preer, Jr.