# A Half Century of Science at Ball State University

ROBERT H. COOPER, Ball State University

In October, 1952, O. B. Christy and Robert H. Cooper co-authored a paper, "The First Thirty-four Years of Science at Ball State Teachers College," which was presented at the Fall meeting of the Indiana Academy of Science at Valparaiso University. The paper reviewed a few of the professors who contributed much to the development of the institution and a number of graduates who have done much in the field of science at various locations in the world and in numerous professions. The present paper reviews in some detail the administrative and curricular science development of Ball State and brings the information up-to-date.

The Administration Building, where science was first taught on the Ball State University campus, was built in 1898. The institution went by a number of names up to June 17, 1918, when it became known as the Indiana State Normal School—Muncie Branch. For some years the president of the Indiana State Normal—Terre Haute Branch also served in that capacity for both schools.

The professors who stand out as setting up the initial high standard of training in the fields of science included Frederick J. Breeze, Professor of Geography and Geology; Dr. Otto B. Christy, Professor of Botany and Agriculture; Richard A. Gantz, Professor of Physiology and Zoology; Frank V. Graham, Professor of Chemistry and Physics; Harry H. Howick, Assistant Professor of Mathematics, Physics, and Chemistry. These five instructors were outstanding teachers and the author of this paper had the privilege of having classes with each of them. Professor Graham in Chemistry remained in the institution until his death in 1944; Professor Howick in Physics remained in the institution until his retirement in 1956; and Dr. O. B. Christy in Biology remained with the institution until his retirement in 1950. Dr. Christy is still living and resides, along with Mrs. Christy, at the Teachers Retirement Home (Greenwood Village), Greenwood, Indiana.

In February 1921 the Indiana General Assembly appropriated $125,000 to start the work on the Science Hall. In 1923 the State provided an additional $128,000 to complete and also to equip the Science Building. In the Fall of 1923 some classes were held in Science Hall before its entire completion. The building was not in full operation until the summer of 1924. At that time it had located within it the Department of Business Administration, as well as English, Mathematics, and Science.

During the Spring of 1924 a change too place in the college and in the science program which helped many of the teachers who were working in eight-month schools. Announcement was made of a *six-week Mid-Spring Term* from May 5 to June 13, 1924. The terminology Summer Quarter was now changed to First Summer Term and Second Summer

Term. This made it possible for a student in an eight-month school to enter Ball State at the Mid-Spring Term and continue with the First and Second Summer Terms and thus get in a half year of credit.

On September 9, 1929, Burris Laboratory School was opened. This was to be a very important part of Ball State for the remainder of the half century and more. Dr. Earl Johnson started as principal and became Professor of Education and finally Dean of the College of Education when Ball State became a university in 1965.

In 1930-31 the course numbering changed to 100's, 200's, 300's and 400's. The second digit in the listings under the different divisions was the key to that division—thus 2 became the number indicating the Division of Biology, so Science 120 was the freshman General Biology; 3 indicated the Division of Agriculture; 4 indicated the Division of Chemistry; 5 indicated the Division of Geography and Geology; 6 indicated the Division of Physics; and 7 indicated the Division of Human Physiology and Hygiene.

Dr. Willis S. Blatchley, famous author-naturalist of Indiana, visited Ball State Teachers College, and lectured during the early 1930's. Dr. Alfred Kinsey came to Ball State and lectured and conducted field study with children in Christy Woods during the 1930's. Both men were very skillful in field work and were very knowledgeable.

Mr. Frank Wallace, State Entomologist, was a guest speaker and adviser in the Science Department many times through the years. His excellent photography, his wholesome Hoosier philosophy, and his sage advice were of much value. His death in May 1968 was a real loss to Indiana.

Dr. Charles Deam, one of Indiana's most important plant taxonomists, aided with advice concerning Christy Woods and other work within the Science Department. The numerous visits by the flora classes to his well-labeled arboretum at Bluffton were of inestimable value. During these visits he gave much valuable information to the Ball State students. His death occurred in 1953.

For a number of years the curriculum in Agriculture was an integral part of the work at Ball State. The institution was fortunate to have a 17-acre woods and arboretum developed by Dr. Christy, known later as Christy Woods. More recently the institution purchased 16 acres about two miles from the campus which became known as Ball State University Wildlife Preserve, and is an area for study and for collecting both fauna and flora. Christy Woods has become an outstanding research and teaching laboratory with a sizeable greenhouse and preparation facility.

In more recent years Ball State University has offered curricula for the Nursing Degree, the Degree in Medical Technology, the Pre-medical Program, the Pre-dental Program, the Pre-engineering Program, the Pre-veterinary Program, and the Pre-pharmacy Program.

Dr. Donald Crooks joined the Biology staff in 1929 and later became a research worker in the U. S. Department of Agriculture, specializing

in the research on the virus of tobacco. He retired December 15, 1967, with honors. Dr. Floy Hurlbut, a geographer, joined the staff in 1931 and was a very outstanding teacher in the field of Geography. She retired from Ball State in 1954. Dr. Donald E. Miller joined the staff as a Professor of Biology in 1936 and has done a fine piece of work with the Indiana Academy of Science, with the counseling of Pre-medic students, with his own teaching, and with Sigma Zeta, national science honorary organization. Dr. Robert H. Cooper, Professor of Biology, joined the staff in 1936 and became Head of the Department of Science after Dr. Christy's retirement in 1950. He continued in this capacity until 1965 when he became Coordinator of Sciences and Mathematics until his retirement in 1968.

In 1947 Dr. P. A. Wiseman, with special training in Organic Chemistry, joined the staff and is at the present time Chairman of the Department of Chemistry in the new Physical Science Building. Dr. Jerry J. Nisbet and Dr. George W. Welker joined the Science Department in 1950. With the organization of separate departments Dr. Nisbet became Chairman of the Department of Biology. Dr. Welker has counseled in Medical Technology and aided students in many ways. Malcom E. Hults joined the Ball State staff in 1953 and has given much time to research and to the development of the Department of Physics, of which he is now Head. Dr. George F. Beatty, a graduate of Ball State, returned to his Alma Mater in 1958 as Professor of Geography and Geology and is presently Head of the Department of Geography and Geology and Professor of Geography and is located in the new Physical Science Building with the other members of his staff. Dr. Warren E. Schaller came to Ball State University in 1959 and has co-authored a college health text and has done much toward organizing and reorganizing the certification of teachers of health in the State of Indiana. He is currently Chairman of the Department of Physiology and Health Science.

Through the years Ball State University has moved from offering the Two-year Certificate for Teaching to the Four-year Bachelor's Degree in the many fields of teaching and research. The Master of Arts in Education, the Master of Arts and the Master of Science Degrees are offered as the beginning of the graduate work. In recent years more advanced degrees have been offered and at the present time the Doctor of Education Degree with specialization in Science Education and specifically a major in the Department of Biology is being offered. Minors for the doctoral degrees are available in the other fields of science.

There was a Physical Science Club devoted to the consideration of physics and chemistry problems listed in the catalog in 1937-38. Later there was a Science Club to represent all of the sciences. In 1938 the **Sigma Zeta** math and science honorary was organized and has served as a fine stimulus for science research.

In September of 1939, under the authorship of Dr. O. B. Christy, a bulletin was put out entitled *An Outdoor Laboratory at Ball State Teachers College.* This was a bulletin concerning the history and use of Christy Woods and was the first of its kind. It was revised in 1960.

Listed in the catalog of 1939-40 is the **Shrawder Collection.** Through contributions of the George A. and Frances Ball Foundation, the William H. Shrawder Collection of rocks and minerals was added to the science geology collection and is still carefully maintained as one of the finest in this part of the United States. Mr. Shrawder, a resident of Indiana, was a teacher of geology in Schenley High School, Pittsburgh, Pennsylvania.

With the publication of the 1951-53 catalog, an offering was listed as Science 400, Science of Distant Areas, four or eight quarter hours credit. This listing finally led to rather extensive field study in various parts of the United States and in other countries. The purpose of the course was to help the student become acquainted within the five weeks' time, with the flora and fauna, the agriculture and conservation, and any unique science peculiar to the area. Beginning with the summer of 1956 this became a reality in that a class was organized. Since that time, under Dr. Robert Cooper, five summer studies have been offered in the Northwestern Rocky Mountains areas of the United States and the Southwestern Rockies of Canada; four summers of study have been spent in the State of Alaska, including the Point Barrow and Pribilof Island areas, two summers in the State of Hawaii, including field work in six of the islands; and one summer in the study of countries around the world, including Norway, Switzerland, Africa, India, Australia, New Zealand, and Fijii. Also, field study, under Dr. Forrest Stevenson, has been done in Jamaica in two different summers.

In 1954 Ball State Teachers College, along with Earlham College, started to sponsor the Eastern Indiana Regional Science Fair and this has been continued by Ball State up to the present time. Earlham decided some years ago to go into a different type of activity to inspire young high school students to go into the field of science. The Fair has been sponsored by Dr. Gerald E. Doeden and Dr. George W. Welker of Ball State, along with other members of the staff, including Dr. Robert L. Shelley, Dr. Homer D. Paschall and Dr. Leon Reynolds.

By 1959 the requirement for the training of elementary teachers had been balanced in such a way that there were two courses required in the life sciences, two in the physical sciences, two in the earth sciences, two in the health sciences, and one methods course taught by persons in the Science Department who had had experience in the elementary school. This type of program is still in existence and has proved very successful for the training of students going out to do elementary work and including science in their teaching.

In 1960 Dr. Robert H. Cooper was awarded the first annual Dr. James A. McClintock Award. The $500 was applied toward the publication of a revision of *Christy Woods—Outdoor Laboratories.*

In 1961 the **Science Lecture and Discussion Series** was held the first week of February and has been conducted annually up to and including the current year, 1968. At least five outstanding scientists have appeared each time on this two-day or one-day lecture series. Prominent

persons who have appeared include Nobel prize winners and others from the National Severe Storms Forecast Center, the Bell Telephone Laboratories of New Jersey, and the National Aeronautics and Space Administration of Washington, D. C. and Huntsville, Alabama. Speakers from medical colleges, from research departments of various colleges, and from industry have been included in these series over the years. This has proved very stimulating for students, staff, and the community.

In 1962 A *Sigma Xi* Club was organized by staff members in the Departments of Science, Mathematics, Psychology, and Social Science (Anthropology). This club has been continuing its meetings and will be applying for Sigma Xi Society chapter status in 1968. This has been a stimulating addition, so far as faculty activity is concerned.

In 1965 a complete reorganization of the departments occurred with the Science Department being organized into a Department of Biology, Department of Chemistry, Department of Geography and Geology, Department of Physics, and Department of Physiology and Health Science. Each department has its own department head and offers graduate degrees and curricula of various types. Physics, Chemistry, Mathematics, and Geology moved into the new Physical Science Building in the summer of 1967. This five-story building was completed at a cost of $4,200,000.

At the present time construction is progressing on the new Life Science Building, which will house the Departments of Biology, Physiology and Health Science, and Geography. The completion of this five-story building is anticipated late in the school year of 1969 or early 1970 at a cost of $5,500,000.

As of 1967 additional staff members in the different departments of science have made worthwhile contributions to the development of each science in the fields of research and teaching. Included are:

**Biology:** Dr. Jerry J. Nisbet, Chairman of the Department, Dr. Alice H. Bennett, Dr. Frank Bernhardt, Dr. William B. Crankshaw, Dr. Arthur L. Eiser, Dr. Clyde W. Hibbs, Dr. Ralph D. Kirkpatrick, Dr. James C. List, Dr. Margaret McElhinney, Dr. Thomas R. Mertens, Dr. D. E. Miller, Dr. Jeanette C. Oliver, Dr. Charles E. Smith, Dr. Forrest F. Stevenson, Dr. George W. Welker, Dr. Charles D. Wise, Dr. Harold L. Zimmack.

**Chemistry:** Dr. P. A. Wiseman, Head of Department, Gerald L. Alexander, Dr. William H. Bowman, Dr. Gerald E. Doeden, Dr. Ralph D. Joyner, Dr. Richard M. Lawrence, Dr. LeRoy McGrew, Dr. Robert L. Shelley.

**Geography-Geology:** Dr. George F. Beatty, Chairman of the Department, Dr. Lowell I. Dillon, Dr. Henry E. Kane, Edward E. Lyon, Dr. Harlan H. Roepke, William H. Stevenson.

**Physics:** Dr. Malcom E. Hults, Head of Department, Roger D. Burgess, Dr. Edwin C. Craig, Ben Hurd, Dr. Leon M. Reynolds, Dr. Newton G. Sprague.

**Physiology and Health Science:** Dr. Warren E. Schaller, Head of Department, Dr. William Bock, Dr. Raymond E. Henzlik, Dr. Homer D. Paschall, Dr. Gordon L. Rosene, Dr. Russell E. Siverly, Dr. Robert J. Synovtiz

Ball State, with its 675 acres, approximately 50 buildings, about 15,000 students, and a faculty of over 600, is considered "one of the emerging universities." It developed from a private school to an institute, to a normal school, to a teachers college, and to a university. From an institution with 230 students and 30 faculty members it has developed into a university with five colleges—Architecture and Planning, Business, Fine and Applied Arts, Teachers College, and College of Science and Humanities. The science instructional staffs now include not only full-time professors but also local physicians, local research workers and laboratory technicians and registered nurses who may serve on a part-time basis.