



2008

# A History of the Biology Department

Omer R. Larson  
*University of North Dakota*

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UNIVERSITY OF NORTH DAKOTA  
1883-2008  
CELEBRATING 125 YEARS

A HISTORY OF THE  
BIOLOGY DEPARTMENT

Omer R. Larson



**A History of the Biology Department**

by Omer R. Larson

A project of the University Quasquicentennial Committee,  
Dawn Botsford, Special Events Coordinator

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## FOREWORD

In the 125<sup>th</sup> anniversary of the founding of the University of North Dakota, all departments and programs were asked to provide histories. A similar request was made in 1983 for the institution's centennial observance, thus for most entities, the current effort only required a quarter century of updating. For the Department of Biology however, fulfilling the request was daunting. Paul B. Kannowski, Department Chair at the time of the centennial, produced a penultimate draft, requiring only minor corrections and final editing. That manuscript remained unfinished, but survived with damage the flood of 1997. When past and current colleagues urged me to compile a history for the 125<sup>th</sup>, I asked Kannowski about the possibility of a co-authored version. After assessing the situation, he believed it would not work, and "make the whole effort look like some indescribable animal." I respect his opinion and have proceeded to write my own version, but made the better by his valued contributions of materials and memories.

It is not within the scope of this history to present extensive non-biological material. Anyone seeking to know UND's history through its first 75 years, is referred to **University of the Northern Plains**, a detailed account by Louis Geiger (1958). **A Century on the Northern Plains** is a multi-authored book of six essays edited by Robert Wilkins (1983). This publication is especially rich in pictures. **North Dakota, Heal Thyself** by John Vennes and Patrick McGuire (2005) is a history of the Medical School, but it acknowledges Melvin Brannon's important biomedical contributions during his 20 years as Professor of Biology. Lastly, for a comprehensive view of the state's past, **History of North Dakota** by Elwyn B. Robinson (1966) is a recommended treatise.

There are two obvious ways of presenting Biology's history: 1) by sections chronologically devoted to topics (i.e., faculty, students, curriculum, facilities, etc.) and augmented with appropriate appendices; and 2) an integration of topics through time to produce a flowing story, also bolstered by appendices. Kannowski chose the former approach, I the latter, although Chapters 2 and 8 are clearly topical. From the mid-1960s to the present, the narrative tends to resemble a journal. That however, is the result of having been a faculty member involved in the daily life of the Department for more than 30 years. In late August 2008, Kannowski donated his manuscript and numerous files of supporting data to the University's Department of Special Collections. That deposit contains an extraordinary amount of specific information from Biology's first century, but some topics have not received similar detail from me. Conversely however, student/faculty awards and Department staff are given extensive coverage in my version. The inclusion of pictures, blueprints, and other historical memorabilia is intended to provide illustrative support to the narrative. With five acknowledged exceptions, all pictures are from Special Collections, UND publications, the Biology Department's files, or my own personal holdings.

One of the striking impressions gained in recounting the University's founding was the unbridled optimism and enthusiasm of that time. The late 1870s and early 1880s were "heady" years, the Great Dakota Boom. Wheat was king and the economy was strong, huge bonanza farms had emerged even as homesteaders were claiming their 160

acre parcels, and the railroads were penetrating the prairie landscape. Statehood could only be a few years away. In the autumn that the cornerstone was laid for the University's first building, Teddy Roosevelt was hunting in the North Dakota Badlands, and the Marquis de Mores was founding the town of Medora and its ambitious meat processing plant. On both sides of the Red River, small towns were being born, several of which also celebrated their 125<sup>th</sup> anniversary in 2008, including Carrington, Sheyenne, New Rockford, Michigan, Minto, Lakota, Hallock, and Halstad. Against this backdrop of progressiveness and "can do" attitude, a new university arose with biological courses from the very first day the school opened its doors in 1884. What occurred then, and subsequently, is my attempt to present Biology's history over the past one and a quarter century. Errors of omission and commission are solely mine.

31 May, 2009  
Grand Forks, North Dakota

Omer R. Larson  
Professor Emeritus

## Chapter 1

### IN THE BEGINNING

Six years before the United States Congress authorized the division of Dakota Territory into two states, an important event occurred in the Red River Valley. Nearly two miles west of the boom town of Grand Forks, a 20-acre parcel of barren prairie was the chosen site for the future campus of the University of North Dakota. The land, with the English Coulee running through it, was donated by William "Billy" Budge, a local real estate developer. Although the site seemed more remote than necessary, its location next to the railroad tracks was important in an era before automobiles. The only other route to the site was a graded gravel road, known today as University Avenue.

October 2, 1883, was a cool but sunny autumn day filled with satisfaction and ceremony. A \$30,000 territorial bond had been secured for the first university building, and now a cornerstone was to be laid for the partially completed basement and foundation. In addition to Territorial Governor Nehemiah Ordway and a small group of dignitaries who spoke, the gathering included numerous local citizens who came by buggies and carriages, or simply on foot. A 17-piece band and an unknown number of other individuals rode a special train from Grand Forks to the site.

James Twamley, a member of the first Board of Regents, was on the building committee. Plans called for a three-story structure, 150 x 51 feet, with a "high" basement. Facilities within the building, known as "Main," included offices, classrooms, laboratories, library, museum, chapel, apartments, and in the basement, a kitchen and dining area. Main was in essence a self-contained community on the prairie, and the largest building in the northern half of the Dakota Territory. Although the time line was tight, the Regents managed to open UND to classes in the fall of 1884, even though some finishing work remained undone. In addition to Merrifield, the initial faculty of four included Henry Montgomery, professor of natural sciences. He, and all subsequent biology faculty members are listed chronologically in Appendix 1. (Note: A smaller "Old Main" as it was known after 1930, was finally razed in 1963).

During the winter and early spring of 1883-84, Merrifield and Montgomery designed UND's first curriculum leading to B.A and B.S. degrees. This endeavor was not without controversy since President Blackburn favored a more practical curriculum. However, the Merrifield-Montgomery versions were adopted with required courses in classical languages. (In current context, such would be part of the "general education requirements".) Surely students, parents and the general public must have questioned the value of Greek and Latin in a frontier environment. This rigorous academic blueprint was promoted even though there was barely the start of a library, no laboratories and little or no equipment. However, UND had a museum, even from its earliest years (see the next chapter for more on this topic.) Its importance and "success" was due in large part to the public's inherent curiosity in strange and exotic items, biological and otherwise.





"Main" in the mid-1880s before any trees had been planted.

The student body that first year did not all appear on 8 September 1884, the first day of classes. Some enrolled after the autumn harvest was completed, while others came later in the year. Eventually, 79 students enrolled, and they mostly represented the immediate area. Fifty-five were from Grand Forks County, and 38 of these were from the city itself. Nine miles west of Grand Forks near the present day Oakville Biology Prairie site, was Ojata, a small community of nearly 300 individuals which no longer exists. However, in 1884, six of its residents were UND students, as were seven others from the village of Arvilla. The most distant students, one each, came from Dunseith, Cavalier, Mountain and Minnewaukan. Minnesota was represented by three from East Grand Forks and two from Fisher, the only non-Territorial students that first year.

There was no tuition in 1884 if the student had been a resident of the Dakota Territory for at least a year. This policy continued after statehood was attained in 1889, at least into the late 1890s. There was however, an incidental fee of \$5.00 for residents, and a \$10.00 fee for non-residents. By 1896, a new fee of \$1.00 was charged for each laboratory course, payable at the start of each term. A limited number of women that first year were housed on the second floor of Main. Some out-of-town male students had lodging on the third floor, while others were dependent on private homes and/or Grand Forks relatives for housing. Room and board for those staying in Main paid \$3.50/week, excluding laundry. The entire building was uncomfortably cold that first winter as it lacked a furnace and central heating. Individual rooms were warmed by an unknown number of wood burning stoves, but none were needed for the toilets since they



Emma Mott

were non-functional. Meals were prepared and eaten in the basement, family style, with President and Mrs. Blackburn and their two daughters, and the janitor and Mrs. Emma Mott, who taught remedial courses in elementary arithmetic, geography, spelling and penmanship.

Unfortunately, of the 79 students who eventually enrolled in 1884-85, none was ready to begin college-level courses. Their unqualified status was not surprising, as the entire state had only three recently established high schools (Fargo, Grand Forks, Bismarck). In Grand Forks the first students did not receive high school diplomas until 1887. The students that enrolled at the University were placed in a remedial program in the Preparatory Department. Here, elementary and high school subject matter was taught in order to prepare the students for college coursework. In addition to Mrs. Mott, the President, Merrifield and Montgomery all taught remedial subjects during UND's first year. The biological component of the "Scientific Course" leading to a B.S. degree is presented in Appendix 6. It can be termed the Montgomery Curriculum, and he alone taught all the biology courses.



Merrifield

In addition to his instructional duties, Montgomery was an avid collector and his display cases of artifacts basically constituted "the museum." In the summer of 1885 he was funded by the Board of Regents to collect minerals and fossils in the Black Hills, and in 1886 and 1887 he pursued his archaeological interests by excavating Indian mounds in the Devils Lake and Red River Valley areas. Following the Board's dismissal of President Blackburn, Montgomery was appointed acting president for the next two years. By any standard, one could say that he was "multi-tasking" with an overload of duties and activities. Montgomery left UND in 1889 as eight students became the first graduating class. Montgomery's career continued at the State Normal and Training School at Cortland, NY, but after only a year, he accepted the position of Professor of Geology and Mineralogy, Curator of Museum, and Superintendent of the Mining Department at the University of Utah. In 1894, he resigned that multiple position and returned to his native Ontario as head of the Dept. of Geology and Biology at Trinity University in Toronto. Montgomery's name lives on at UND. The Commons building completed in 1911 became the library in 1928. This predecessor to the Chester Fritz Library has been known as Montgomery Hall since 1965, and since 1990, the offices of the Arts and Sciences College have occupied a portion of this building.



Henry Montgomery

## Chapter 2

### EVOLUTION OF THE MUSEUM AND HERBARIUM

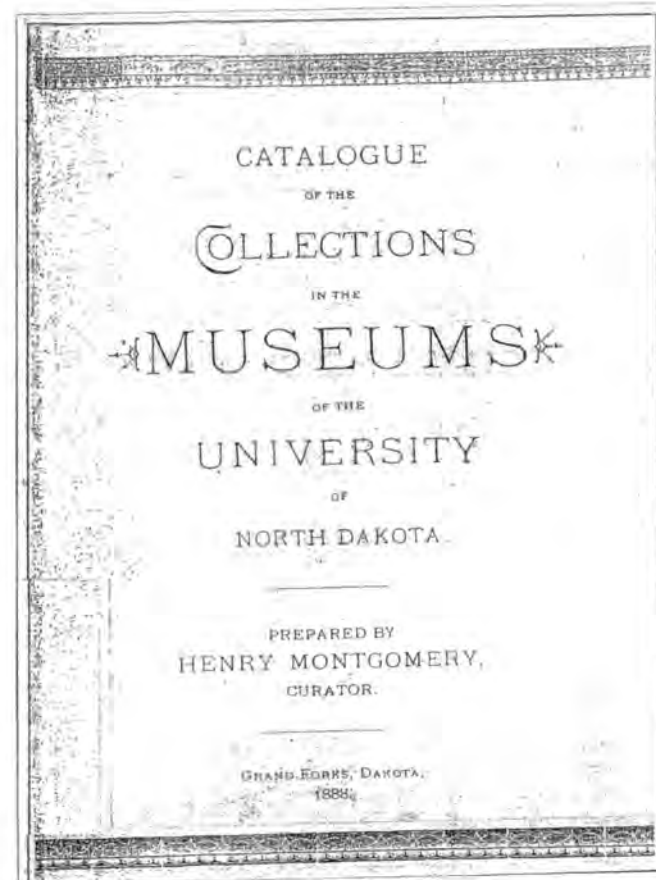
The earliest UND catalogue (1884-85) reported the presence of a museum with the following description. "The Natural History, Anatomical and Geological collections are of considerable dimensions. The collection of skulls, representing the different orders of the Mammalia, birds, reptiles, amphibians and fishes, is especially good. The typical fossils of the various formations of the Silurian and Devonian ages are well represented, and there is an unusually fine collection of the birds of Dakota, mounted and classified." This material was displayed in eight cases, each 8 ½ feet high and 4 ½ feet wide. There were also many anatomical models and other preparations for illustrating lectures. In the previous chapter, Montgomery's active role in collecting and curating museum material was mentioned. He also loaned the University his own personal collection, some of which he used as demonstration material in his teaching. Montgomery must have had "connections," since in 1886 the National Museum in Washington, D.C. was acknowledged for its contribution of marine animals and shells. UND's 1885-86 catalog noted that the museum had four distinct components (natural history, anatomy, mineralogy and geology). Perhaps because of these separate entities, some informational material from that time referred to "Museums," as seen on the cover of an 1888 publication.

A near disaster befell UND on June 16, 1887, when a severe windstorm caused serious damage to Main, and especially the wing housing the museum. Montgomery thought it to be a tornado, but widespread damage across Grand Forks suggests that it was straight-line winds. Collections in the building were "damaged and scattered" according to Montgomery, but were for the most part repaired and/or partially replaced by 1889. By that time display cases had increased to 28. At first glance it is unclear how this growth was funded, since at that time appropriations for the museum ranged from \$1000 to \$2000 per biennium. However, an inventory of the museum 50 years later (i.e., 1938), listed new cases with glass doors as having a value of \$22.50 each. Even though this price would have reflected conditions during the Great Depression, it seems plausible that monies allocated in the 1880s were sufficient for significant museum growth. A second uncertainty concerns the disposition of Montgomery's personal collection which he loaned UND. One would assume that he took it with him when he left in 1889, but museum descriptions in catalogs from the 1890s shed no light on this question.

Montgomery's museum catalog ran 47 pages with hundreds of items listed. It is unknown how many specimens have survived to the present. However, in the animal kingdom section of the 1888 catalog, item no. 346 (orangutan skull from Borneo) can be seen in a display case on the second floor of Starcher Hall. The last page of the



catalog noted the Devils Lake collection containing about 600 specimens. It is prefaced with Montgomery's regrets that the material had not yet been studied and cataloged. However, he provided a brief account of the artifacts, some of which (such as human skeletal material) were recovered from his excavations of Indian mounds in 1887. By 1889, the museum possessed several specimens too large for display cases (i.e., elk, Rocky Mountain sheep and bear). There is no doubt that Montgomery's collecting and curatorial efforts made the museum the center piece of pride and interest during UND's early years.





With Montgomery's departure for the state of New York in 1889, the museum acquired a new curator... William Patten, a 28-year-old Ph.D. with a solid background in marine zoology and laboratory work. His position, Professor of Biology, is noteworthy, since it was the first time "biology" was used in an academic title at UND. As with his predecessor, Patten was a one-man department teaching all the courses. The only exception occurred in 1890-91 when he had the help of a laboratory assistant. Patten spent part of the 1890 summer collecting at the Woods Hole Biological Laboratory on Cape Cod. These marine specimens were primarily for his classes. In that same year, he announced plans for a new and practical exhibit featuring what might be termed "economic entomology." This was to be "a collection of insects injurious to vegetation, showing all the stages in the development of each insect, from the egg to the adult, in a natural position on the plant." Patten believed such an exhibit would "be of great value to the agriculturist and student of natural history." There is no indication in the UND catalogs that the exhibit was completed prior to his departure in 1893. It is also unclear how deep was Patten's commitment to the museum, but probably less than Montgomery's. After only four years, Patten joined Dartmouth College as Head of its Biology Department. By the early part of the 20<sup>th</sup> century he was well known for his hypothesis linking the evolution of primitive fishes from arachnids.

The museum was without a curator for much of the 1893-94 school year. Patten's successor, Melvin A. Brannon, did not join UND until early in the spring of 1894. He possessed a broad and modern knowledge of biology, and his expertise in matters of public health was important to the state and local community. Among his many contributions to UND was his role in the establishment of the Medical School in 1905. From 1900 to 1905, Brannon's only biology colleague, Johanna Kildahl, served as Assistant Curator. Brannon's extraordinary 20-year career at UND is covered more fully in Chapter 3.

UND catalogs published during Brannon's tenure as curator (1894-1911) suggest a museum with limited activity. Descriptions were repetitive from year to year, with acknowledged donations being the occasional new comment in the annual narrative. That museum activity was negligible in the mid-1890s is not surprising, since Brannon joined UND when the school was on the brink of severely reduced funding. The Union's newly admitted state was experiencing the collapsed economy associated with the Panic of 1893.

A very significant event for the University was the completion of the school's second classroom building in 1902.....Science Hall ("Old Science" after 1949). The new structure provided adequate space for housing the museum on the third floor, along with all other components of the Biology Department. As with the two previous curators, Brannon invited friends of UND to donate material to the museum. One of those friends was Rolla P. Currie, class of 1893, a staff member of the Smithsonian Institution. Many submitted items were biological, such as 500 mounted North Dakota and Minnesota plants in 1894-95, plus a musk ox in 1901-02. A collection of birds and marsupials was donated in 1902 by John P. Bray, Consul-General of Australia. Some of these specimens

are still present in the current Vertebrate Museum. Some donated items, however, were inappropriate or freakish, such as twin calves joined at the pelvis.



The Museum on 3rd Floor of Science Hall (1903)

Although this account of the museum focuses on the biological portion, geological aspects were not ignored by early curators. The 1888 museum catalog listed 333 minerals and fossils, many collected by Montgomery in the Black Hills. Samples of North Dakota clays were mentioned in 1894-95 as having potential value for pottery and building materials. (Parenthetically, both came to fruition in the form of highly prized "Cable" pottery and a brick factory at Hebron, ND). With the completion of a building for the School of Mines in 1908, the museum found new space on the top floor of what is now known as Babcock Hall. It is unclear when the move



Marcia Bisbee

occurred, but by 1911, the UND catalog noted the presence of the museum in that building. Marcia Bisbee (B.A. 1898, M.A. 1900), an assistant in mining research and former chemistry instructor, was appointed curator, having replaced Brannon who was on leave. Upon his return, he did not resume curatorial duties. It was logical to have the curator in the same building as the museum. However, Bisbee's role in that task was short-lived as she was on a leave-of-absence in 1912-13. The specific faculty title of "Curator" disappeared altogether by 1914, and for the next 20 years, the museum's stature and general availability became ever less so. Earl Babcock, Dean of Engineering, served as nominal curator until his death in 1925. The School of Mines and the Biology Department placed emphasis on preservation of materials for instructional purposes, rather than for public display. The 1931-32 UND catalog was the last to mention the existence of a museum.

As for the actual collections, that of a geological nature was largely merged with mineralogical material in the School of Mines. Although Biology was confined to the Chemistry Building basement (now Gillette Hall), George C. Wheeler, Department Head, found space for some biological material. Unfortunately, large specimens remained in the unsecured and uncurated museum. In the late 1920s, Wheeler hired Neal Weber (B.S. 1930, M.S. 1932) as a student assistant to prepare a catalog of the department's zoological material. Wheeler's plans for developing a good teaching museum never materialized, as lack of space and monies became major impediments.

The sad state of affairs led to Mr. James A. McCrae, a member of UND's Extension Division, being charged with reviving and renovating the museum. Geology, biology and history were the three components of UND's "general" museum. Of these, the historical part was in greatest disarray with many items uncataloged and/or missing. In addition to routine cleaning, maintenance and repair, a major effort was made to catalog and cross reference the collections by use of 3x5 index cards. McCrae's report to President John C. West recommended improved museum security and the appointment of a "responsible" curator. McCrae's museum project was funded by the CWA (Civil Works Administration), a federal employment program born out of the Great Depression. According to the President, 127 students were in the program and earning about \$15/month during the winter of 1933-34. McCrae's involvement with the museum was relatively brief, for by 1935, he was no longer listed among the school's faculty or staff, nor is there any indication that he served as curator at any time. Despite the improvements made under his supervision, no UND catalog after 1932 mentions a museum open to the public.

A decentralization of what remained of the museum continued in the spring of 1938 with the transfer of non-biological material for safekeeping in Merrifield Hall. Except for mounted fishes and large mounted mammals, other biological material and necessary cases were transferred to Biology. On 12 May 1938, Wheeler acknowledged the receipt of these items having an estimated value of \$2,007. In June 1947, from the attic of Macnie Hall (a men's dorm from 1925), came the dispersal of additional specimens. Some items went to Merrifield Hall, others, to Biology and the State Historical Society in Bismarck. With the availability of new space in "The Annex" (a

post-World War II wooden structure south of the Chemistry Building), came a dispersal of large mounts such as Rocky Mountain sheep, deer, bear, musk ox, kangaroos, wombat, etc. The size and poor condition of some of these large mounts resulted in their discard prior to Biology's expansion into the space vacated by the Chemistry Department in 1961. This expansion coincided with the arrival of Robert W. Seabloom, UND's first mammalogist. Two adjoining rooms on the first floor were designated for museum functions, one for teaching and display, the other for research.

During the summer of 1952, Wheeler purchased, for \$125, an assortment of bird and mammal specimens, both skins and mounts. These were provided by H. V. Williams, a taxidermist/naturalist in Grafton, ND. The Williams family were turn of the century pioneers in the Grafton area, and H. V. Williams learned taxidermy from his father, W. H. Williams. Ten years after Wheeler's purchase, Seabloom reestablished

contact with Williams, who was now in his 70's and seeking to sell his personal collection. A sum of \$5,000 was agreed upon, with the Robert D. Campbell Foundation funding the purchase over a five-year period beginning in September 1964. The \$1000 annual payments allowed Williams to avoid reduced Social Security income. The collection included 55 study skins, 227 mounted specimens, 3 habitat groups and 36 wall cases. Initially, the latter two items lined the basement and first floor hallways of the Biology Building. In Starcher Hall they are located in the Vertebrate Research Museum and an adjacent classroom (#225).



H. V. Williams & Paul B. Kannowski  
accepting the collection  
(August 1965)

The acquisition of the Williams Collection more than filled the space designed for vertebrate material. Except for Seabloom's mammalogy students preparing study skins each year, the expansion of the vertebrate collection was relatively small in the 1970's. Starcher Hall provided a larger museum and a separate preparation room, but many specimens were relegated to a classroom and have remained unseen by the public. The funding and space reductions incurred during the designing of Starcher Hall precluded any plans for a public display museum.

In the early 1980's, hope for such a facility arose when Thomas W. Ryan, a wealthy local potato farmer and avid big game hunter, showed interest in donating all or part of his collection of trophy taxidermy. Seabloom and Richard Crawford viewed the collection in Ryan's home and knew it would be impossible for Starcher hall to house such large mounts, thus an addition to the east side of Starcher was proposed.



Biology Building: 1st floor hallway, looking west (1977)



Seabloom in the vertebrate museum of the Biology Building (1970s)

From December 1994 through December 1995, Ryan, the Planning Department of UND's Plant Services, and a local architect, Keith Porter, pursued this idea via three possible plans. The most ambitious option included an auditorium and aviary. Although Ryan did donate his collection directly to the University, his philanthropic interests turned elsewhere. He donated the money for the long 42<sup>nd</sup> Street skyway linking two Aerospace buildings. One of these was subsequently named Ryan Hall, and the collection he donated is currently displayed there.

From the time of Seabloom's arrival in 1961 until his retirement at the end of 1996, he served as curator of the bird and mammal portions of the vertebrate collection and supervised the

work of student assistants. In 1983 the collection was entered into a computerized accession file. As of 2008, the cataloged vertebrate collection numbers 1,873 fish, 404 amphibians, 248 reptiles, 1,539 birds, and approximately 4,000 mammals.

Unfortunately, since Seabloom's retirement, there has been less interest or effort in maintaining the collection, hence it is in somewhat of a disarray.

### Invertebrate Collections

Montgomery's 1888 museum catalog listed 225 invertebrates, mainly marine specimens donated by the Smithsonian Institution. Of these, 48 were arthropods, but the Class Insecta was not represented. Perhaps that omission was one of several reasons for Patten to announce in 1890 his plans for an insect exhibit. Despite Brannon's standing invitation for friends of UND to donate material, very few invertebrate specimens were mentioned in the annual catalogs. Although Brannon and Young identified aquatic invertebrates during their 1911-23 studies of Devils Lake, there is no indication that these were retained as part of a departmental collection. Another extensive assemblage of aquatic invertebrates collected by Joe K. Neel while at UND was "conditionally" offered to North Dakota State University, but the donation did not materialize. After Neel's death in 1990, his collection was moved from temporary storage in the Medical School to the Invertebrate Museum. External to the Biology Department are the fresh-water clams of North Dakota. These, with accession numbers, are housed in UND's Geology Collection.

As for insects in general, there is not now, nor has there ever been an entomological collection at UND comparable to that at NDSU. It seems reasonable to consider Wheeler's arrival in 1926 with his research collection of ants as the beginning of UND's "invertebrate" collection. The department's first offering of an entomology course a year later, was the origin of a general teaching collection, to which students have added many specimens over the years. There are, in addition, substantial assemblages of collembolans and arachnids in the invertebrate collection.

The research collection of ants assembled by Wheeler and his students was maintained in his office in the Biology Building. Upon retirement in 1967, he divided the collection roughly in half, between himself and the Department. Paul Kannowski assumed responsibility for the departmental collection and added his own. It remains the largest in the department, numbering over 11,000 lots containing at least 500,000 specimens, and representing the ant fauna of six continents.

In 1979, the Department received from Mrs. Ralph Rohde of Grand Forks, her later husband's collection of shells. These number in excess of 3,000 and represent a world-wide assortment. Four years later, a second major gift was received. One of Biology's most distinguished alumni and former faculty member, Neal Weber, donated his extensive library on social insects and myrmecology, plus specimens of ants and other invertebrates. For a number of years, the library was housed in room 130, and the space was (and still is) named the Neal Weber Room.

The entomology teaching collection was moved to Old Science in 1968, this a matter of convenience since the course was taught there until Starcher Hall was

completed. Other invertebrate material continued to be stored in the Biology Building. Starcher Hall's inclusion of an 828 sq. ft. invertebrate museum allowed the research and teaching collections to be housed in one place for the first time. The only exception still being the parasitology collection with its 1,857 accessions. Bottled specimens are in room 109 under Jeff Vaughan's care, and slide mounted material with Omer Larson in room 223. The spacious museum, however, has been significantly reduced since 1980 through partitioning off a research laboratory and a photocopying room. Since the retirement of Kannowski in 1990 and William Wrenn in 2000, the museum has remained largely unused and in great need of curatorial attention. Except for the ants and shells, the collections are predominantly from North Dakota and Minnesota.

### The Herbarium

The 1893-94 UND catalog was the first to state that "A collection of specimens of native flora is being made which will offer the foundation for a herbarium." This wording reappeared in every annual catalog through 1902-03, and always in the future tense... "will offer." An "official" herbarium may not have existed yet, but the receipt of specimens was noted by Brannon annually. For example, there is in the 1895-96 catalog an acknowledgement for plants donated by Josie Kildahl (50), Marcia Bisbee and J. F. McLain (70 each). Larger donations a year earlier included 200 specimens from C. A. Engebretson (a University student) and 500 plants from Mrs. Sadie Lanterman of Hillsboro. However, the largest early donation came in 1897-98 from Dr. William Camby of Wilmington, DE. Of his 2,300 specimens, 306 are still present in the herbarium, as are 691 sheets from Brannon's efforts. John La Duke, the curator since 1980, states that only 22 of Kildahl's specimens and 2 of Bisbee's are present in the collection. Similar attrition has left only 9 of Lanterman's specimens and 40 of Engebretson's in the herbarium. That substantial losses have occurred over more than a century and five major moves of the herbarium is perhaps not too surprising.

With the move of the Biology Department and museum to the newly completed Science Hall in 1902, came the first acknowledgement of a "herbarium and conservatory adjoining the general laboratory" on the third floor. This was a rather brief arrangement since space was required after 1905 by the Medical School, and by the State Public Health Laboratory two years later. When the museum moved to the top floor of Babcock Hall in 1911, the herbarium came along.

Joel Lunell, a physician and avid plant collector in Leeds, ND, donated 200 specimens in 1898-99, and additional material later. Currently, 370 sheets in the herbarium bear his name, but this was only a small fraction of his holdings. When he died in 1920, Lunell had a personal collection of about 30,000 plants, not only from ND, but other parts of the United States and beyond. The collection was examined in 1926 by the curator of the New York Botanical Garden. He described it as "the finest private collection I have seen." Mrs. Lunell desired to sell the collection for \$3,000, and President Kane sent Edgar Baird of the Biology Department to evaluate the collection. Baird documented the contents and estimated the value at \$9,600, but the President did not pursue the matter. Perhaps a tight University budget caused him to do nothing, or a

realization that neither the deteriorating museum in Babcock Hall, nor Biology's cramped quarters in the basement of the Chemistry Building could house such a large collection. In any case, Mrs. Lunell sold her husband's collection to the University of Minnesota in 1927.

Norma Etta Pfeiffer joined the biology faculty in 1912 as an Assistant in Biology. After she received a Ph.D. in 1914, her rank and title became Assistant Professor of Botany. She was trained in plant systematics and well qualified to curate the herbarium. Raynold Shunk's collection of plants in Ransom County, ND, led to an M.S. thesis in 1916 under Pfeiffer's supervision. Two hundred, seventy-three of his specimens are present in the herbarium, but only three bear Pfeiffer's name. After she left in 1923, the herbarium lacked active curation, although both Edgar Baird and later, George Wheeler, maintained the collection. The herbarium was moved from Babcock Hall to the Biology Department in 1939.

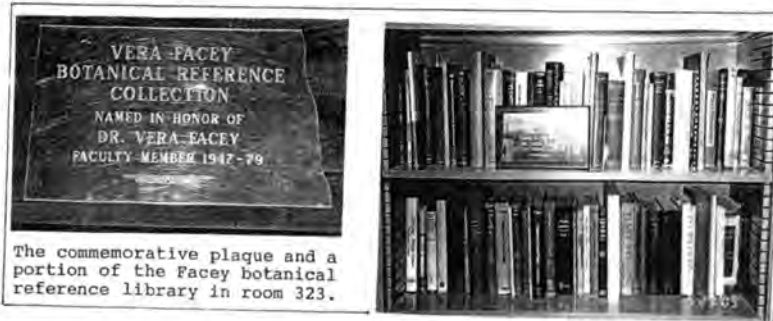


Gregg Johnson (graduate student) and Dr. Facey

Soon after Vera Facey joined the faculty in 1947, she took over the herbarium and added specimens that she herself collected. For some years, she made summertime collecting trips to the Medora area of the Badlands, and also brought her students in systematic botany there during spring semesters. Facey maintained a card file, and by 1962 she estimated that the collection contained 15,500 sheets. Currently, 1,820 sheets in the herbarium bear her name as collector. With the Chemistry Department vacating the building in 1961, came the opportunity for the herbarium to acquire a home of its own. Room 7 in the basement was outfitted with numerous built-in storage cabinets, all of

them with locks. Facey's tight control over access to the herbarium was not generally appreciated by her botanical colleagues. But her implementation of strict security is what the museum woefully lacked 30 years earlier in Babeock Hall.

John La Duke is the first UND botanist since Pfeiffer to be trained in plant systematics and have experience in curation. His arrival in 1980 as the Department was beginning its move to Starcher Hall allowed him to oversee the organization of the new herbarium with its cabinets, map drawers and work tables. The facility had a separate room (no. 320) for preparing specimens. This space, however, was converted into a research laboratory in the early 1990s. By the spring of 1985, La Duke had finished computer cataloging the herbarium. Concurrent with the completion of that project was the faculty's approval to establish and maintain a "Vera Facey Botanical Reference Collection," a library of books, reprints and other reference materials of a botanical nature. This, in recognition of Dr. Facey's contributions to the Department, particularly in vascular plant biology. As of 2008, the herbarium houses the library and 18,889 catalogued specimens.



The commemorative plaque and a portion of the Facey botanical reference library in room 323.

The oldest specimen in the herbarium was presented to the Department in 1985 by Professor Hugh H. Iltis, Director of the University of Wisconsin Herbarium. The sheet bears the grass, wirestem muhly, *Muhlenbergia frondosa* f. *commutata* (Scribn.) Fernald, collected by I. A. Lapham in 1857 in the Red River Valley of the North. The sheet does not indicate which side of the Valley, but the specimen is most likely from Minnesota since Lapham did most, if not all, of his collecting in that state. The specimen is, however, the oldest verifiable plant in UND's Herbarium. For more than 20 years, the sheet has been on display, framed and under glass in Biology's Conference Room.

### Chapter 3

#### THE BRANNON ERA

By the early 1890s, President Merrifield began a concerted effort to build a competent and loyal faculty. Some of these individuals would remain at UND for 20 or more years. The decade began with the state's economy in decline. The Dakota Boom of the 1880s had run its course, and the "bust" part of the cycle would arrive with the nationwide Panic of 1893. In North Dakota there were record low wheat prices in 1894 and numerous farm bankruptcies. State tax revenues were greatly diminished, and by early 1895, faculty salaries were six months in arrears. UND bills were going unpaid, and the science departments could not even replace expendable materials. Into this increasingly bleak situation, arrived Melvin Amos Brannon in April 1894. Brannon's rank and title, Professor of Biology and Curator of the Museum, were the same as his predecessor, William Patten, who had resigned the previous September.

North Dakota was in a crisis, and the newly elected governor, Roger Allin, was determined to balance the budget by slashing to the bone. In March 1895, President Merrifield offered to forego his salary and suggested that a \$40,000 budget could keep the University running for the next two years. The Governor refused, and allocated only \$15,980 for the 1895-97 biennium (21.6% of the previous budget). This amount would maintain the buildings and pay the janitor. It was expected that UND would close for two years at the end of spring semester classes. Some feared that it might never reopen, even if conditions were better by 1897-99. A stopgap solution came in the form of contributions from the faculty, and many residents of Grand Forks and the northeastern portion of the state. William Budge, who had donated the initial 20 acres for UND's campus, was a close friend of Merrifield's. Budge was the driving force behind the solicitation, and almost \$26,000 was raised. This, plus the state appropriation, was enough to allow UND's survival during the 1895-97 biennium. Several faculty members left at the onset of the crisis, thus it is not surprising that Louis Geiger's 1958 history, **University of the Northern Plains**, is dedicated "to those who stayed in 1895." Melvin Brannon not only stayed, he also contributed \$1000 to the University's survival.

It is difficult to overstate the importance of Brannon in UND's early years. During his tenure (1894-1914), he was the innovator and stimulus for all aspects biomedical. He held B.A. and M.A. degrees from Wabash College in Indiana where he had majored in botany and specialized in a new science, bacteriology. He was aware of, and embraced the work and theories of Pasteur and Koch linking bacteria to disease. Brannon possessed a vigorous personality and proved to be a talented promoter, organizer and stimulating teacher... "a mover and a shaker" by today's standards and jargon.

As with his two predecessors, Montgomery and Patten, Brannon was a "one-man department" until 1898 when Johanna Kildahl joined him. The lack of suitable space in Main was brought to the attention of the Board of Trustees soon after his arrival, and repeatedly thereafter through 1900. In conjunction with his science, mining and

engineering colleagues, Brannon's persistence, persuasiveness and highly respected reputation led to the construction of Science Hall. Ground breaking for UND's second classroom building occurred on 11 June 1901, and although it had no structural steel, it cost \$36,000 and was well over budget. The Board of Trustees formally accepted the building in early March 1902. By then, the Biology Department and the Museum were already occupying the third floor, where the rooms were "excellently lighted and conveniently arranged." President Merrifield was well pleased with the facility and predicted that, with proper care, it could serve the University for a hundred years. Although Science Hall (Old Science after 1949) went on a list of proposed demolitions in 1974, Merrifield was very nearly correct in guessing its longevity. In early 1997, the State Historical Society questioned UND's intent to demolish the building, and on campus, Gordon Iseminger of the History Department was a vocal advocate for saving the facility. Plant Services explored the cost of restoring and renovating the structure to meet present day code and requirements, and found it to be prohibitively expensive...over \$2.23 million. During the summer of 1999, Old Science was razed, having served its varied and many occupants for 97 years. Saved from ruin were the handsome inner doors which now grace the entrance to the Department of Special Collections in Chester Fritz Library. Also spared the wrecking ball were the Ionic columns and pediment they supported outside the main entrance to the building. These, and some of the original brick work have been attractively incorporated into the University Bookstore.



Melvin A. Brannon

Brannon was most appreciative of Science Hall, but it was not long before space was again inadequate. In a very real sense, he was the cause of his Department's problem, for the Medical School and the Public Health Laboratory were largely his creations in 1905, and 1907, respectively. Chemistry's relocation to the School of Mines building (Babcock Hall) in 1908, allowed Biology to fill their vacated space on the second floor. The Museum and the Herbarium followed Chemistry to Babcock three years later.



Science Hall

Within a year or two of Brannon's arrival in 1894, came a new fresh focus and direction in the curriculum. The science course leading to a B.A. degree required French, German or Scandinavian instead of Latin. Individual courses in algae, fungi, vegetable physiology, economic botany and theoretical zoology were added to the Department's offerings, as was bacteriology. Brannon and Earle Babcock, Professor of Chemistry and Geology, were the spokesmen for science. President Merrifield, although a traditionalist in the classics, recognized the value of science, not only in education, but

perhaps even more so as a source of practical service to the state. None would be more relevant or obvious than the successful Brannon-Babcock project in late 1894 to slowly filter river water before it entered the city's mains. Their work was in response to an outbreak of typhoid fever the previous winter which claimed the lives of more than a hundred residents. A similar public health benefit of Brannon's expertise was his testing of local dairies for sanitation, and their cattle for tuberculosis.

Another example of Brannon's practical service involved the cereal, Cream of Wheat. This hot porridge was developed in Grand Forks in 1893, and made its appearance that year at the World's Columbian Exposition in Chicago. The public acceptance and economic success of the product was in jeopardy due to insect contamination at the local flour mill. Brannon, however, found a method for sanitizing the cereal with heat, thus killing the insect eggs and making the product "bug free."

In 1896, the Federal Government sought Brannon's botanical competence. He was requested to survey all grasses and forage plants native to North and South Dakota. This large project ran most of two years. The current UND Herbarium contains nearly 700 sheets bearing his name as collector. In the classroom, Brannon's courses were popular as he was a stimulating teacher who required that students "depend on their own individual efforts in solving the problems assigned." From his earliest days (1894-95), the labs were equipped with 16 compound and 12 dissecting microscopes, plus two microtomes, four aquaria, one terrarium, and a large number of charts and wax models. Some of the latter had been produced by Patten, or under his supervision.



Professor Brannon teaching in Science Hall (early 1900s)

The first biology lab in 1884-85 had only one "first class" microscope with lenses capable of 90 to 650 diameters. Thus, Brannon inherited instruments and teaching materials substantially improved over those of a decade earlier. By 1897-98, the number

of dissecting microscopes had doubled in number to 24. In addition to his teaching obligations, was that of Curator of the Museum. Not until 1898-99, was his load reduced by Johanna Kildahl's appointment to the faculty.



This picture is from about 1903. The instructor standing at the far end of the room is most likely Johanna Kildahl. Since histology was one of her areas, a room full of students using microscopes would fit that interpretation.

Brannon's colleague, Miss Kildahl, was an interesting person in her own right and deserves a closer look. Johanna (sometimes listed as Josie) would have been well known to him since she was a long time student in the Department. In 1896, she completed the



Normal Course, and continued on to earn a B.A. in 1898 and an M.A. degree in 1900. Her thesis title is unknown, but her studies in biology, anthropology and history fulfilled the required major and two minors. Her academic and professional record affirms that Johanna was a motivated and industrious woman, endowed with the perseverance to pursue eight years of studies at UND. She was a faculty member in the Biology Department, 1898-1905, and in 1905-06, taught histology for the new Medical School. She was the first woman to teach in both entities. In 1909, Johanna also became the first female graduate of UND to earn a Ph.D., this at the University of Chicago. Materials in

UND's Special Collections suggest, however, that she was a complex person with strong opinions outside the realm of science.

Johanna was born in Minnesota in 1868, but at the age of 15 moved with her family to Maza, ND, some 30 miles northwest of Devils Lake. In her 1936 autobiographical family history, she recounts that the move was made by covered wagon pulled by oxen. With her mother bedridden for five years, her life on the prairie frontier was very difficult. However, in her "reflective" writings, she never complains, only declaring that adversity makes her a stronger and better self-disciplined person.

Kildahl's post-graduate career and life are incompletely known. The 1926 UND Annual Yearbook notes a number of alumni who have gone on to major accomplishments. Johanna is listed as an Assistant Professor of Botany at the University of Minnesota. However, in a July 2008 inquiry, Anita Cholewa, Curator of the U. of MN Herbarium, stated that Kildahl's name does not appear in the history of their Botany Department. Other information in her file in Special Collections confirms that she was a Minneapolis resident in the early to mid-1920s. The longevity of her stay and employment in the Twin Cities is unknown, for she apparently taught school in Chicago for the remainder of her career. What is available for perusal in Special Collections are Johanna's 1919 and 1920 letters to President Woodrow Wilson and President-Elect Warren Harding. These, and several lengthy essays, strongly opposed America's possible membership in the League of Nations. Rather, she argued for a World Court based on international law as the means to global disarmament and peace. Johanna's outspoken views were covered by the Twin Cities' press. In 1951, she donated to Special Collections, copies of her letters and essays, plus assorted newspaper clippings. Johanna died 5 June 1967 at the age of 99.

Kildahl's replacement in 1906-07, was Robert T. Young, an Instructor in Biology. He had a B.S. degree from the University of Pennsylvania and a Ph.D. from the University of Nebraska. As with Brannon, Young was cross-listed as a member of the Biology and Medical School faculties. Young's main role with the latter was the teaching of embryology and histology. By training and expertise, Young was "the zoologist" in the Department, and by 1914 he had been promoted to Professor and Director of the Biology Station at Devils Lake.



The establishment of UND's Medical School was chiefly the work of Brannon. Although he did not possess an M.D. degree, he was well aware of what was occurring in medical education. He proposed a four-year curriculum that required two years of premedical studies, followed by another two of medical coursework. The Board of Trustees and the legislature approved the proposal, and the first class enrolled in September 1905. The new school, with Brannon as Dean, was situated on the third floor of Science Hall...basically sharing Biology's space. Equipment and laboratory facilities needed for medical instruction were severely limited, but the state did provide unclaimed

bodies for dissection. The Medical School gained accreditation in 1907. That same year, a Public Health Laboratory sought by Brannon was established, and in 1908, the Medical School gained space when Chemistry's departure allowed Biology to move down a floor. Brannon's deanship ended in 1911, perhaps because he was not an M.D. or even a Ph.D! However, his value to UND was still appreciated, thus he assumed another deanship...that of the College of Liberal Arts, 1911-14. In 1911-12, Brannon took a leave of absence to complete his Ph.D. studies at the University of Chicago.

The acceptance of, and enthusiasm for "science" was alive in the state in the early 1900s. This was seen, not only with the funding to build Science Hall, but with the establishment of a Medical School and Public Health Laboratory. Also indicative of an increasing science awareness was the appearance of the North Dakota Academy of Science. A small group of six, including Brannon, held an organizational meeting in Valley City on 31 December 1908. The first regular meeting followed on 21 May 1909 in UND's Biology Department, with Brannon as President, a position he held for two years. The theme of the meeting was "What can the Academy do for the State of North Dakota?" Brannon began the session with a talk on "Biological Opportunities in North Dakota." This was followed by Young's presentation, "The Zoological Outlook in North Dakota." Brannon and Young, plus 23 other individuals attending the meeting were deemed Charter Members.

Concurrent with the earliest Academy activities were the legislature's 1909 authorization and funding for a Biological Station. Brannon had stressed a year earlier that a biological survey of the state was much impeded by a lack of funds. A \$5,000 appropriation allowed for the construction of the station building on the shore of Devils Lake. Research began in the summer of 1909 with Brannon as Station Director, a position he held until he left UND in 1914. (Note: A more detailed account of the Station's history and activities is presented in Chapter 4.)

This chapter concludes with two final examples of Brannon being a "man for all seasons and all tasks." First, his role as coach of the UND football team in the autumn of 1897 and 1898. He was substituting for the regular coach who was called to serve with the army during the Spanish-American War. On another level of leadership, Brannon was twice viewed as a possible president for UND, replacing Merrifield in 1909 or Kane in 1933. Although neither occurred, he went on to head the University of Idaho (1914-17) and Beloit College (1917-23). Beginning in 1923, and for 10 years, he served as Chancellor of the University of Montana. On June 8, 1947, Brannon returned to UND from his retirement home in Florida to receive an honorary Doctor of Science degree, the first one given to a former UND Biology faculty member. Between the English Coulee and Stanford Road is a complex of residence halls. One of these dedicated in October 1965 bears Brannon's name. Thus he joins Merrifield as the only two former Biology faculty members to have their names on UND buildings.



## Chapter 4

### DEVILS LAKE AND THE R.T. YOUNG ERA

Near the end of the previous chapter, the existence of a biological station at Devils Lake is first noted. The 1909 Legislature passed a bill providing for the creation, establishment and maintenance of a biological station on the shore of Devils Lake. It was to be under the control of the University's Board of Trustees, and the biology staff would be responsible for the work done at the Station. The enabling legislation specified that "It shall be the duty of the staff of said station, as directors thereof, to study the animals and plants in Devils Lake and other portions of North Dakota with reference to the problem of restocking and cultivating fish in Devils Lake and in any other water of the state, especially those of an alkaline character; to study and make collections of any animals and plants in North Dakota that have commercial and scientific value."

The legislation also specified that the land for the station be donated, a requirement met by the Chautaugua Association of Devils Lake. This organization, dating from the 1890s, was an influential and thriving part of the community with its own "campus" of buildings adjacent to the lake. A variety of educational and recreational activities was offered to the public each summer, and a 5-mile light railway linked the area to the city proper. It is not surprising that the enlightened and progressive Association would donate 400' of Creel Bay frontage to the state for a biological station.

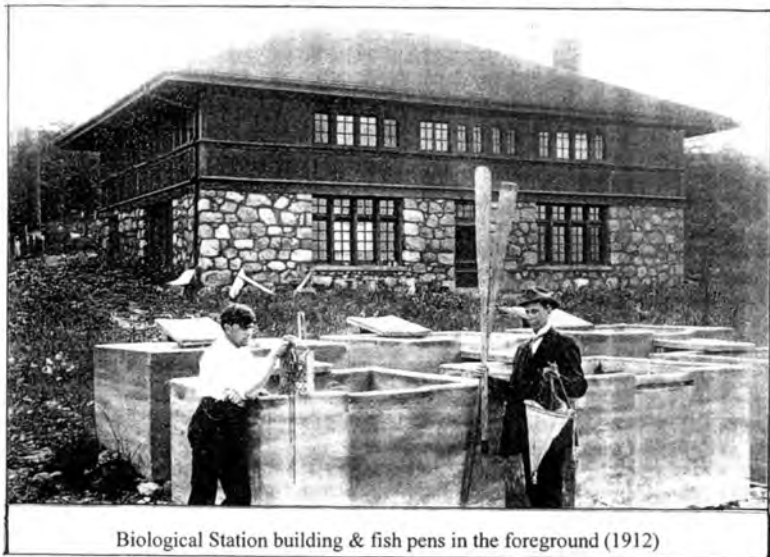
A \$5,000 appropriation allowed for the construction of the station building, a two story structure, 34' wide x 54' long. When completed in the fall of 1910, the first floor walls were of native boulders which sat on a concrete slab, while the upper floor was of wood and stucco. The interior was divided into a series of rooms, including two laboratories, a museum, a darkroom, a combined library/lecture room, toilets, an office, and five small rooms for research workers. A mechanical room housed pumps for delivering lake and artesian water to the building and several concrete fish tanks having 500 to 4,000 gallon capacities. These tanks were added to the facility at a cost of \$600. The remaining \$2,400 of the annual appropriation went toward the purchase of field equipment, boats, chemicals and staff salaries. Melvin Brannon, as Station Director, received \$500 per summer, while Young was paid \$400. J. Marshall Brannon, variously listed as Instructor in Biology, Biologist and Chemist, and Station Assistant or "engineer" earned \$800 to \$1,000 per year. Others on the summer laboratory staff were paid lesser amounts. (Note: J. M. Brannon, a native of Dickinson, earned a B.A. from UND in 1907 and worked at the Station for three years. What level of kinship he had with Melvin Brannon is unknown, but in 1912 both men were listed as residents of 207 Chestnut Street. The younger Brannon went on to earn an M.A. at the University of Wisconsin and a Ph.D. at Cornell).

For those who have been students or visiting faculty at the University of Minnesota's Forestry and Biological Station, the similarity of it all is striking. The Biological Station at Devils Lake and at Minnesota's Lake Itasca were both begun in 1909. The major building at both stations was a two story structure, with the first floor



walls constructed of native boulders, and the upper story of wood. Was this a coincidence, or was this the accepted model of the time, or was it an example of "keeping-up" with your academic and biologic neighbor?

Collections were begun in 1909-10, even before the station building was completed at Devils Lake. Professor Brannon reported on these in 1911 and provided an outline of the work contemplated at the Station. During the summers of 1911-12, staff members conducted four extensive field trips fulfilling the Legislature's requirement to

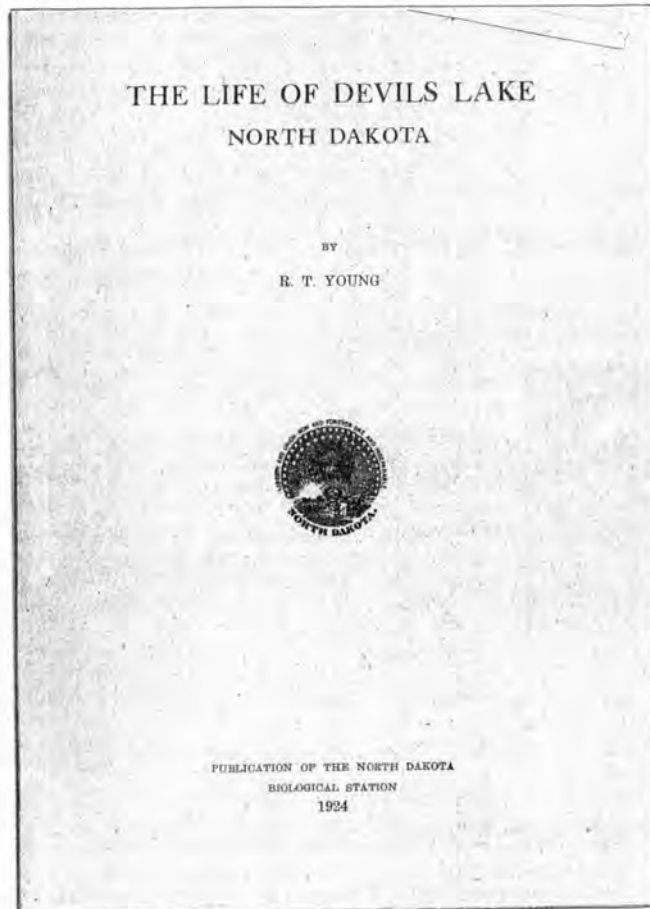


Biological Station building & fish pens in the foreground (1912)

study "other waters of the state." Two of the four included the Red River from Fargo to Pembina, and a westward sampling of seven small lakes ending with Lake Metagoshe in the Turtle Mountains.

With the addition of fish tanks in 1911 or 12, studies on the acclimatization of fish to the water of the lake became a major focus. At the time, only sticklebacks (*Eucalia inconstans*) were found in the highly saline water of Devils Lake, and numerous attempts since 1908 to introduce fish to the lake were without any permanent success. However, beginning with fish eggs and fry gave some hopeful results of acclimatization in the early years of the study. That optimism was expressed in Brannon's 1913 report to President McVey, stating "There is not a shadow of doubt but what the waters of Devils Lake and Stump Lake...can be successfully stocked with fish if we have an adequate hatchery under the control of the Biological Station." After Brannon left UND in 1914, Young

became Station Director and continued studies to acclimatize yellow perch, pike perch and rainbow trout, but these attempts failed as the declining lake level made the water ever more saline. By 1920, he concluded that restocking Devils Lake was not possible without bringing in a supply of fresh water. That solution was deemed impractical. Young's efforts turned toward a detailed compilation and assessment of the lake's abiotic and biotic data, 1911-1923. This comprehensive work appeared in 1924 as a 114 page publication, the last to be issued by the Biological Station, per se. State funding for the Station ceased in 1923, and no UND studies were conducted there for the next 40 years.



Despite the relatively brief life of the Station, its work caught the attention of various biologists. Whether they were invited by Brannon and/or Young to visit is unknown. Perhaps requests for identifications of specimens was the impetus for working visitations, with publications on algae, diatoms and protozoa the result. Beginning in 1919 and for a few summers following, there was an active involvement of University of Michigan zoologists with specialties in malacology, ornithology, herpetology, entomology and ichthyology. Although these individuals ranged beyond Devils Lake, they all spent some time at the Biological Station.

Six week Summer Session courses in biology and geology were offered at the Station from 1911 through 1916 with uneven enrollments. Biology's initial offerings included Hydrobiology A, (Brannon's course on botany and phytoplankton) and Hydrobiology B, taught by Young and emphasizing the geophysical and chemical aspects of water, and animal life of the lake. Students could secure board and lodging at the nearby Chautauqua facilities, and furnished tents were available for \$10 per month. With Brannon's resignation in 1914, Norma Pfeiffer who joined the Department in 1912, assumed all the botanical courses in 1914-15. No classes were held at the Station from 1916 through 1918, but zoology courses taught by Young resumed, 1919-22. No courses were offered in 1923 as the Station ceased to be funded by the state.

With the closure of the Station and the publication of his Devils Lake book a year later, Young was nearing the end of his career at UND. In the 1920s, the campus was in serious turmoil over President Kane's administration of the University, and the politics of the state were equally contentious. The 1919 Legislature controlled by the Non-Partisan League abolished UND's Board of Trustees and replaced it with a Board of Administration responsible for all state institutions. Pro- and anti-Kane factions among the faculty created an especially hostile atmosphere on campus. Young's criticism of Kane's supporters placed him on the President's least favorite list, and probably contributed to his resignation after the 1<sup>st</sup> semester, 1925-26. Several years earlier, Young was the recipient of Kane's unfavorable recommendation to the Board of Administration. In a report dated 17 May 1922, the President stated "No one has ever yet expressed the view that his work was satisfactory or successful." Kane followed that with a recommendation "that his salary be not

advanced...because his work is not regarded satisfactory." Kane's view of Young may not have been totally biased. In the same 1922 report, Pfeiffer was considered the better teacher. "Sections of work that she handled in alternate semesters with Young showed the enrollment...just about double that when Young was handling the work." This opinion by Kane even though he considered her "only moderately attractive and could not be rated as what you would call a drawing card in the Department." Criticism of Young's teaching may have been justified, but his publication record while at UND was impressive...25 papers, plus eight book reviews and a 509 page book, "Biology in America." Young's papers covered a wide array of disciplines, including ecology,



Thomas F. Kane

mammalogy, ornithology, vertebrate embryology, physiology of fish, and his favorite...cytology and development of cestodes. Several of his publications were lengthy (i.e., 15-70 pages) and appeared in highly respected national and international journals. The Journal of Parasitology first appeared in 1914, and Young was a member of its editorial board. Between 1915 and his resignation in 1926, Young also mentored five M.S. degree students. Young's directorship of the Biological Station, and his research and teaching there have already been duly mentioned.

Young's accomplishments were substantial, and had it not been for his negative relationship with the President, he might have stayed at UND indefinitely. However, he resigned and accepted a position at the University of Montana where his former colleague, Brannon, had become Chancellor in 1923. Young left Montana in 1934 and continued his career at the Scripps Institute of Oceanography, and with the Zoological Society of San Diego. His last parasitology publication appeared in 1956 at the age of 82. Young's temporary replacement in 1926 was William Templin. As for Kane, he survived the campus turmoil and continued to serve as President with more restraint until 1933 when he retired by request of the Governor.

So what can be said of Young's colleague, Norma Etta Pfeiffer, the young faculty member whom Kane thought was "only moderately attractive.?" She was a native of Chicago with a B.S. and Ph.D. from the University of Chicago. The latter degree she earned in 1913 at the age of 24, the youngest person to receive a Ph.D. at the school. Her dissertation concerned a new species of flowering plant, a tiny saprophyte growing on low, wet prairie soil on the southside of Chicago. Despite many efforts to find this unique plant, it has not been seen since 1916.

In 1985, Kannowski established contact with Pfeiffer, and she responded with four amazing handwritten letters detailing her recollections of life at UND, 1912-23. She knew Brannon from the time they both were botany graduate students. Brannon, as Dean of the College of Liberal Arts, needed help with his botany courses, and a governess for his two daughters, Eleanor and Lida. That employment, and President McVey's authorization of a half-time appointment at \$40/month sustained Pfeiffer during 1912-13. The following year the position became full-time and she no longer needed the job of governess. From 1914 to 1923, Pfeiffer and Young constituted the professorial faculty of the Department, she the botanist, he the zoologist. They appear to have had an amicable work relationship. Young's June 1918 report to President Kane noted that "Cordial cooperation exists between us and we frequently consult one another in matters of departmental interest." Likewise, there is nothing in Pfeiffer's letters suggesting problems between the two of them, only that Young "had no great sense of humor to help sustain him." She was more blunt, however, when it came to Kane, a "disappointing" and "very political" administrator. Pfeiffer resigned in 1923 when she could no longer tolerate it. Her replacement was Edgar A. Baird.



Norma Pfeiffer

A surprising omission in Pfeiffer's letters were the autumn events of 1918 which quarantined the University. The fall term was suspended when the influenza epidemic (i.e., Spanish flu) struck the campus, resulting in 29 fatalities among 473 ill students. Two Greek houses and the third floor of Budge Hall were converted into hospitals. That should have been memorable to her, even 67 years after the fact.

Lastly, it is to Pfeiffer's credit that despite a heavy teaching load, she was able to publish five papers and a lengthy monograph on ferns while at UND. She also mentored two graduate students who earned, in 1917 and 1918, the fourth and fifth masters degrees to be given by the Department. In her last year at UND, Pfeiffer served as President of the North Dakota Academy of Science. In 1924, Pfeiffer accepted a position in morphology with the Boyce Thompson Institute for Plant Research in Yonkers, NY. She remained there for 30 years. Although her early expertise was with ferns, she became widely known for her work with lilies. Miss Pfeiffer died in Dallas, 23 August 1989, at the age of 100.

The Biological Station had a varied fate after its closure in 1923. As property of the state of North Dakota, it was turned over to the Game and Fish Department for their use until 1931. In November of that year it was deeded to the Devils Lake Park Board, which for some years leased it to the city's Jaycees. The unfinished Garrison Diversion project never delivered water to Devils Lake as intended, nor was it needed as increased precipitation and drainage of agricultural land in the basin caused the lake to begin a slow rise in the 1940s. Despite fluctuating levels in the late 1950s and '60s, the lake's growth has become a huge problem by inundating thousands of acres of nearby land.

After Richard Tubb joined the faculty in 1963, he became interested in limnological studies at Devils Lake, and by late 1964, one of his graduate students had begun sampling the lake. The former Biological Station building was of interest to Tubb,



and he initiated negotiations with the Park Board in 1965 that resulted a year later in a 5-year lease at \$300/year. The Park Board was also willing to sell the building and offered it to UND in 1967 for \$25,000. President George Starcher's counter offer of \$1,000 was unacceptable to the Park Board. At a May meeting of the Commissioners, Joe Neel and John Owen appeared with the hope of reaching a reduced purchase price. The Board's new offer was to sell the building and shore frontage for \$5,000. This reduced figure was based on the estimated \$18,000 to \$20,000 that UND would need to spend in restoring the building. Once again the price

tag was too high, thus at the June meeting of the Commissioners, Neel and Acting Biology Chair, Omer Larson, met unsuccessfully with the Board. Their only concession was to sell the property, interest free, at a rate of \$500/year spread over ten years. President Starcher approved the arrangement, but by late April 1968, the Robert D. Campbell Foundation had granted him the funds to complete the purchase with a single payment. Concurrent with the above events were the arrangements allowing the State Game and Fish Department to rent part of the building for four years as their district office. Besides providing security at the site, a lump-sum payment of \$2,400 allowed for immediate improvements to the building, making it livable in all seasons. Security was enhanced with a chain link fence in 1970, and a new roof in 1972 eliminated another problem. A major remodeling proposal in 1983 was put "on hold" as the rising lake level was becoming a serious concern. Research at the Station apparently ceased a year or two earlier, but Game and Fish continued to rent space until 1992, when new facilities became available at Camp Grafton. On 7 February 1992, the biology faculty voted to notify the UND administration that it had no further direct interest in the Station, and that the administration has the Department's approval to utilize the property as it saw fit. Between 1965 and 1981, the Biological Station played a role, wholly or in part, in six M.S. theses, four Ph.D. dissertations, and 15 publications. During this "second life," the Station directorship was John Owen's, 1966-67, and J. K. Neel's, 1967-81. After Neel's retirement, control of the facility was assigned to Biology's Field Station Committee.

The Station's final chapter was a battle lost to the rising lake. A temporary dike built during the spring of 1994 failed to keep the building dry, and the following year's spring thaw looked even more ominous. Despite a controversy over its ownership (UND or Ramsey County), Tom Wakefield of Devils Lake purchased the structure and moved the upper story to a new location on the south shore. The move occurred in mid-March 1995, across the still frozen lake. As of 2008, Wakefield's widow uses the building as her residence. The stone walls of the lower floor remained on site and are now submerged.



Preparing to move the upper story  
(Photo from the Devils Lake Journal)

## THE WHEELER ERA



Edgar Baird

Norma Pfeiffer's replacement, Edgar A. Baird, held B.A., M.A. and Ph.D. degrees, all from the University of Wisconsin. He completed his doctorate in botany in 1920, and stayed on as an instructor until joining UND in 1923 at the rank and title of Associate Professor of Botany. Baird was a mycologist, who, while at UND, took a special interest in the abnormal or "deformed" growth of elms on campus and along University Avenue. His observations and experiments were inconclusive as to the cause, or causes, and not surprisingly, nothing was published. In Baird's 12 years in the Department, he only had one publication and a book review. In 1928-29, he mentored two M.S. graduate students. Their thesis topics included sexuality of the blue-green mold, *Aspergillus*, and the effect of alkaline soil-water on plant growth. Baird resigned prior to the second semester, 1934-35, and was temporarily replaced by Max Benson, a UND product with an M.S. Ed. degree.

In 1922, after 20 years in Science Hall, the Biology Department moved to the basement of the Chemistry Building. The structure was completed in 1919 and was UND's first fireproof building, measuring 62' x 100' and four stories tall. Initially, Chemistry occupied the entire building, but Biology's relocation displaced the chemists from all but room 8 in the basement. The two departments shared the third floor lecture room which could seat about 100 students. It seems curious that the impending move was not mentioned in Young's or Pfeiffer's June 1922 end of the biennium reports to President Kane. Was the move unexpected, and/or was it the administration's solution to the growing enrollment of medical students after World War I? Clearly, for several years after the move, Biology's presence in Chemistry's basement was viewed as temporary, but "temporary" became 39 years.

When Young left after the fall semester of 1925-26, Kane filled the position for the spring semester with William Templin. He had B.S. and M.S. degrees from DePauw University and had been a high school teacher in Chicago for 10 or more years. Kane's report to the Board of Administration noted Templin's wish to acquire some college-level teaching experience before pursuing a doctorate. Although Templin's stay at UND was brief, he minced no words in reporting the Department's "inadequate, poor and insufficient" equipment and furniture. He also stressed the need for a larger laboratory for beginning students, plus a research lab "to keep pace" with expected growth, and that Biology needed a "permanent adequate building." These observations were similar to those of Young two years earlier. Perhaps inadequate facilities and/or heavy teaching loads prompted Templin to accept a pastorate in Oklahoma rather than a career in biology.

Following Templin's departure came a permanent replacement... George C. Wheeler. He had earned a D.Sc. degree from Harvard in 1921, and had served as an Assistant Professor of Zoology at Syracuse University. Wheeler accepted UND's offer and position as Professor of Zoology and Head of the Department of Biology. In 1970, Kannowski responded to a request for information on Wheeler, stating "I can be of little help to you. When Dr. Wheeler turned over the department "files" to me, he gave me nothing on himself or any other staff member." Despite the loss of historical material, Kannowski assembled a detailed biography on Wheeler which is printed in the program distributed at each Wheeler Lecture. It is included as part of Appendix 2.



Esther W.H. Wheeler

Wheeler arrived in 1926 with his wife, Esther Wadsworth Hall, and young son, Walter. Her academic credentials were impressive, with a B.A. from Smith College in 1918, and M.S. and D.Sc. degrees from Radcliffe. While at the latter school, she was the first woman to be admitted to the Bussey Institute of Harvard at the Arnold Arboretum. Her graduate studies concerned parasites that prey upon destructive plant pests. Esther joined her husband in his study of ants, and co-authored four papers with him on the subject, the last one posthumously in 1944. She died in April 1940 at the age of 43 from a "closed head injury," according to her granddaughter, Diana. Information on a graduate student research award in Esther's memory can be found in Appendix 3.

Why did the Wheelers choose UND, a small institution in a relatively remote area of the country? Although both had Northeastern roots, academically and otherwise, perhaps they viewed North Dakota as a challenging "frontier." Nothing in President Kane's 1926 correspondence file suggests that either of them visited Grand Forks prior to their arrival. What they found was an institution enjoying the benefits and stability of the "golden twenties," that period after World War I which preceded the Great Depression. The campus was alive with a new liberal arts building (i.e., Merrifield Hall) on the drawing board, as was Memorial Stadium. There was a new building for the Law School, and the Carnegie Library's overcrowding would soon be solved by moving its holdings to a larger facility known today as Montgomery Hall. Graduate studies showed new life as three M.S. degree programs were added in 1926, and a formal Graduate Division appeared a year later. University enrollments were up, and the State's appropriations were respectable....even funding for faculty travel and sabbaticals!

Wheeler's first biennial report consolidated the Department's submission into a single document. Previously, Pfeiffer and Baird had individually submitted reports on behalf of the Department of Botany. Wheeler's 1928 report to President Kane echoed forcefully the same concerns as did his predecessors, namely poor equipment, lack of space, and unsuitable quarters for living animals. He requested special appropriations to improve the animal side of the Department, and on behalf of Baird, he proposed a botanical laboratory be set aside in the greenhouse. This structure, between Babcock Hall and the power plant, was UND's second greenhouse and was used until 1941. An earlier, larger structure near the English Coulee was razed in about 1915. (Note: As to

lack of space, Dean William Bek of the College of Science, Literature and Arts evicted Chemistry from room 8, thus Biology had the entire basement).

Whether Wheeler's failure to acquire additional appropriations was a financial decision, or something more personal, is unclear. He was, however, generally known to be anti-Kane. In any case, his 1930 biennial report on the Department's needs was largely a carbon-copy of his 1928 submission, but with some reductions in estimated costs. The stock market crash of 1929 had produced caution, but not panic in the state. "Hard times", however, arrived in 1930 and '31 as drought and low grain prices impacted the state's economy. That dilemma, and North Dakota's meager assets for supporting its institutions, would remain throughout the decade defined by the Great Depression. By 1932-33, all biology budgets (salaries, supplies, equipment, student assistance, etc) were reduced from 10 to 50% from the previous year.



Biology Class - 1931

It was obvious by the spring of 1932 that UND was on the brink of its worst funding crisis since 1895. To reduce salaries, 17 faculty members were designated for leaves of absence, part-time appointments or retirement. This retrenchment, though necessary, was not without controversy, and President Kane was again in the mix. The legislature's appropriation for 1933-35 was only 45% of what had been authorized for the previous biennium. The numbers got even worse when Governor Langer exercised his right to "line item veto" funds for a number of programs, including summer sessions, lignite research, leaves of absence, and the graduate division. Although Wheeler and Baird were not on the "list of 17", their identical salaries of \$3,500 in 1931 were reduced by 10% in 1932, and another 39% in 1933. Not until the mid-1940s, did faculty salaries equal or exceed those in 1931.

Despite the hardships of the 1930s for faculty and students alike, Wheeler managed to stimulate the research interests of five students which lead to Master's degrees. These individuals were Neal Weber (1932), James Goldberry (1934), Joe Davis (1937), Lionel Monda (1938) and Clinton Schoenberger (1939). All worked on ants except Monda who studied spiders. Of the five, Weber went on to a distinguished career in entomology. He first caught Wheeler's attention as an undergraduate and was hired by him to catalog the Museum's zoological material. After earning a B.S. in 1930, he was invited by Wheeler to study the biology of the thatching ant, resulting in an M.S. degree in 1932. With Wheeler's encouragement, Weber entered Harvard and completed a Ph.D. in 1935. In 1936, a year and a-half after Baird's resignation, Weber returned to UND as Associate Professor of Biology, a position he held until 1943. Four years on the Medical School faculty followed, and in 1947 he became Professor of Zoology at Swarthmore College until retirement in 1974. He died in 2001 in Tallahassee, FL at the age of 92. During his career, Weber published more than 100 papers and books, receiving national and international recognition for his work. UND awarded him an honorary Doctor of Science degree in 1958, and a Sioux Award in 1985. His social insect library was donated to the Department, and room 130 in Starcher Hall is named in his honor.

With Baird's position vacant for 1935-36, Wheeler hired Edith Larson as an



E. Larson, 1965

Instructor while waiting for Weber to finish his postdoctoral research at Harvard. Edith had an M.A. degree from the University of Kansas and was on the faculty of Washburn University. She returned to UND for the spring semester of 1947 as an Assistant Professor. She carried a heavy burden in premedical instruction, teaching comparative anatomy, histology and embryology, until resigning in June 1966 to care for her terminally ill sister in Kansas. Much belatedly the State Board of Higher Education granted Miss Larson emeritus status in 1983. Miss Larson's standards were very high and her courses rigorous. They were often viewed as a "screening tool" for premedical students, similar to organic chemistry's role in weeding-out marginal applicants. Her best remembered test occurred each year in comparative anatomy. Students were expected to know, by feel, the bones of a disarticulated cat skeleton. This involved Miss Larson placing bones in a student's hands held behind one's back!



Facey, 1947

In 1946 and '47, a wave of returning service men with G I benefits impacted UND and its academic programs. Biology was not immuned to this sudden increased pressure. Until 1947, the Department had never had more than two full-time faculty members, plus an occasional assistant. Wheeler and Edith Larson were both zoologists, thus there was a serious need for an individual who could teach botanical courses and maintain the department's herbarium. To fill that position, Wheeler hired Vera Facey, who had completed her Ph.D. in plant physiology at the University of Toronto in

1946. A superior student, she was first in her 1936 graduating class at Dalhousie University (Kings College), Nova Scotia. For 15 years, Facey was the only botanist in the Department until Gary Hulett, a plant ecologist, joined the faculty for a year in 1962. Her graduate research was in leaf and stem abscission, which she continued at UND. She was much pleased that her only Ph.D. student, Donald Becker, studied that process in tumbleweed. Facey's role in teaching ecology led to her studies of the forest-prairie transition in northwestern Minnesota, and to extensive plant collecting at the Oakville Prairie site and in the ND Badlands. Facey was a petite but strong-willed and independent woman possessing thoroughness in all that she did. Prior to 1961, she shared an office with Edith Larson who was equally strong-willed. Collegial respect, however, was evinced by Facey's service as President of the North Dakota Academy of Science, the UND Chapter of Sigma Xi, and the UND Chapter of the American Association of University Professors. During the difficult summer of 1971, she served as Acting Department Chair. Dr. Facey retired in 1979 and died in East Grand Forks of an inoperable brain tumor on 15 December 1985 at the age of 76.



Facey, 1979

Post-World War II enrollments continued to grow with added pressure on the General Biology course. Although Wheeler had attracted a new crop of graduate students working on ants by the early 1950s, (M.S. recipients, Ernest Krause and Wallace Laberge, 1951; Paul Kannowski and Howard Osborn, 1952; and Kenneth Kraft, 1953), there were not enough GTAs to teach all the introductory labs. Wheeler's solution was to hire a few promising undergraduate majors to cover the shortfall. These included Jim Hundley, Dalton Halverson and Omer Larson. Larson had begun work in the Department in the spring of 1952 doing laboratory chores at \$0.75/hour, but was "upgraded" to teach labs his junior and senior years, 1952-54. Because of the continuous staffing problem, Wheeler brought Hazel McMaster out of retirement in 1954 to teach General Biology labs for four years. She possessed an M.A. degree from Columbia University and had a strict, no-nonsense reputation from her years as a biology teacher at Grand Forks Central High School. Hazel died in 1992 in East Grand Forks at the age of 101.

The shortage of space until 1961 required great efficiency in room utilization. It is to Wheeler's credit that the Department functioned as well as it did in the basement of the Chemistry Building. Advanced course laboratories shared the same room and were usually separated in time only by the 10-minute break between classes. That meant that the instructor of the completed laboratory would remove all materials so that the next teacher could get prepared for the incoming class. Although awkward, this mandatory arrangement worked with minimal irritation. One of Wheeler's requirements was "the Saturday Morning Inspection." Usually two assistants (one with a clipboard) followed Wheeler as he did a walk-through of every room looking for problems, large and small. These were to be corrected, immediately, or by Monday morning. It was customary for the "Saturday Assistants" to fortify themselves at the bookstore's snackbar in the basement of Budge Hall, this before there was a Student Union.

Dr. Wheeler as a teacher...tall, slim and always in a suit and tie, was for many



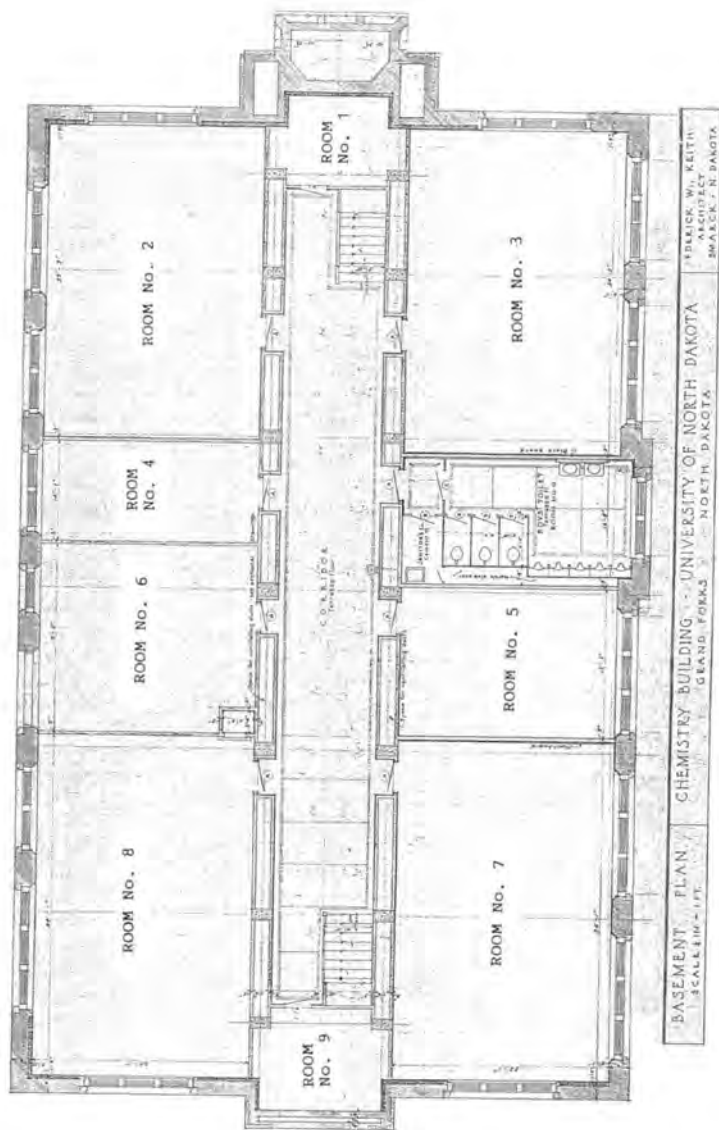
DR. GEORGE C. WHEELER, PROFESSOR AND HEAD OF THE BIOLOGY DEPT.

freshman in General Biology an intimidating, formal, no-nonsense professor. Those who took his upper division courses, saw a softer, less formal side, and came to appreciate him as a true naturalist, especially evident on field trips. His knowledge of both the fauna and flora was exceptional. Less favorable, however, was Wheeler's method of lecturing. This he did by reading directly from the textbook and advising his students to underline those portions in their own texts. Wheeler believed that students in the laboratory should accurately draw what they saw. A frequent comment written on returned drawings was "diagrammatic," a frustrating notation that their efforts were inadequate. Wheeler ran "a tight ship," and by necessity, a frugal one during the Great Depression. A notable example was the need for cats in the Comparative Anatomy course. Students were required to provide their own, and in order to facilitate that, Wheeler devised a gas chamber for humanely killing cats...hopefully strays! At some distant time, the State of North Dakota instituted a requirement that all public schools post the Ten Commandments in their classrooms. Wheeler, who was about as non-religious as one could be, kept a framed copy of the Commandments in his desk. When Kannowski inquired about this in the late 1950s, Wheeler explained to him that he had removed the item from a classroom wall after joining the Department in 1926, and had since stored it in his desk. Therefore, he could produce it at any time and be in compliance with the law. That framed copy is now housed with the history files in the Department Office.

Page 34 is from a 1918 blueprint of the Chemistry Building basement. In the



1950s, the rooms had the following functions: 2 - botany/ecology laboratory; 3 - general biology laboratory; 4 - office for E. Larson and V. Facey; 5 - office for the Wheelers; 6 - mechanical room, but converted to a small museum about 1953 or '54; 7 - general biology lab and advanced zoology courses; 8 - a multi-purpose room for preparations and small classes such as microtechnique. Most of the bottled specimens were stored in this room, and a



large, free-standing lab bench was used for giving "practical exams." An adjacent bench was the faculty's gathering spot for 3 o'clock tea. A small greenhouse was attached to the east end of room 8 in 1942. No. 9 – a small storage room, but augmented by "The Annex," a nearby wooden barracks previously mentioned in Chapter 2. At the west end of the hallway, but beneath the stairway and the building's main entrance was room 1. A low doorway and passage to a small darkroom justified Wheeler's description of it being a "skull cracker." In the cramped space beneath the stairway were barrels of water, cartons of non-perishable food and a Geiger counter. The basement had been designated a fall-out shelter during the Cold War. Prior to Chemistry vacating the building in 1961, the basement's only modification was the 1957 partitioning in room 8 of a 12'x 14' office for a new faculty member, Paul Kannowski.

### Field Stations

Concurrent with increasing enrollment pressures was another type of growth for the Biology Department. The Biological Station at Devils Lake had been inactive since 1923, but two new field stations were acquired in the 1950s. Details presented here on the acquisition of properties vary to some degree from the account provided in 2007 by the Office of the Vice President for Finance and Operations. In any case, the earlier of these was the **Forest River Biology Area**, some 40 miles from campus and two miles west of Inkster. This area, comprising 160 acres, was purchased by the University Memorial Corporation as two adjacent parcels in 1952 and 1953 from Ira Muir and Robert McConnachie. About ¼ of the area is prairie and old fields, with the remainder being gallery forest on steep slopes and aquatic habitats associated with a loop of the Forest River. Wheeler came to know of the area through two brothers, Harold and William Groth, who lived about a mile from it. The area was fenced in 1955, and for many years the Groth brothers were unofficial caretakers of the property. Wheeler and Facey brought their field-oriented classes to the site, mostly on weekends because of the distance from campus. In 1963, one of the metal hutments was moved to the area from the future site of Leonard Hall. This structure was intended as an overnight or weekend shelter. Two years later, water to the building was provided from a well that tapped into the Inkster Aquifer, and a cement-block building housed the required water pump. For about a decade (mid-1960s to mid-1970s), nearly a dozen graduate students used the area's biota for their M.S. and Ph.D. research projects, but by the early 1980s, use of the area was negligible and both buildings were removed in 1984. Current usage includes Steve Kelsch's ichthyology, fisheries, and fish ecology classes, and Brett Goodwin's ecology labs. Projects concerning the parasites of the area's vertebrates have involved Vasyil Tkach. In 1983, the Society of American Foresters added the Forest River Biology Area to the National Register of Natural Areas.

The second field station acquired in the 1950s was **Oakville Prairie**. In the fall of 1955, Facey had urged Wheeler to purchase a tract of lowland prairie in Oakville Township, about 10 miles west of the University. Her concern was on securing a parcel of natural prairie before such habitats were altered or unavailable. The cause became greater when Kannowski joined the faculty in 1957 with needs for studying ant colony distribution by use of radioactive tracer. Wheeler suggested the alkali flats near Emerado

with its many ant mounds. In 1958, the owner sold 160 acres (NW quarter, section 9, Oakville Township) to the Alumni Association for \$1,000, and use of the property (**Oakville 1**) was given to the Biology Department. That led Kannowski to secure an NSF grant and an Atomic Energy Commission license to begin studies on the Oakville ant population. The Alumni Association provided additional funds in 1960 for the construction of a cement-block laboratory building, and in 1963, a metal hutment from UND was added to the site. The latter, a two-apartment structure, was extensively rebuilt and used by students working at Oakville. In later years it was rented to Air Base families. Unlike the Forest River station with its own well, Oakville was dependent on truck loads of potable water stored in an underground cistern. The laboratory had inadequate footings and sustained serious damage with each freeze-thaw cycle. It was demolished in 1983, as was the hutment four years later. Since 1988, UND's celestial



Invertebrate Zoology field trip to the Forest River Biology Area (fall of 1953). Jim Hundley on the left and Wheeler with a knapsack. Son, Ralph and wife, Jeanette Wheeler at the river's edge.

observatory has been located near the SW corner of this property and used by the Space Studies Department.

In 1960, Kannowski and Wheeler urged President George Starcher to obtain control of section 16 in Oakville Township, the "school section," with its 640 acres of virgin prairie. At the time, the section was leased to area farmers for haying rights. Starcher sought an appropriation in 1961 to buy the land, but it was denied on the basis that one state agency should not use appropriated money to buy property from another. NSF used similar reasoning when Kannowski's purchase proposal was turned-down in August 1961. In 1963, UND arranged with the State to use the section rent free, but later for a nominal fee of \$100/decade. That arrangement appears to have continued until 1998. In 2004, the University purchased the property from the North Dakota State Land Department for \$74,258. It currently is known as "**Oakville 3**" in the University's portfolio.

The virginal status of section 16 has not been immune to disturbances. The earliest occurred in 1963 when the state allowed the construction of an oil pipeline diagonally across the center of the property. Another earth-moving event occurred in 1973 when a bulldozer was used to create a firebreak for containing a spreading grassfire. One or more of these fires have escaped from the Emerado landfill, but that is not to negate the historic and ecological reality of having prairie fires. Their value lies in reducing thatch and inhibiting exotic plant species, while promoting the growth of native ones. It was for those reasons that the Biology Department initiated a prescribed burn of the southern half of section 16 on 1 May 1982. Subsequently, Seabloom taught a Directed Studies course in Fire Ecology, and participated in three additional burns (1984, '85, and '95) of Oakville Prairie. Since his retirement in 1996, little interest has been shown in this method of managing the Department's grasslands or their stewardship.

On the original 160 acre parcel, a very different disturbance had Kannowski's approval, but events followed which were excessive and unacceptable. A small area marked with proper signs was set aside in the late 1960s for the disposal of Kannowski's radioactive waste. When the Medical School needed a landfill site for their wastes, Kannowski agreed, believing the quantity would be small. However, when carcasses of radioactive sheep appeared for burial without Biology's approval, the Department protested and that activity was halted. The State Health Department conducted a study of the site and terminated its use.

N	
NW Sec 9 "OAKVILLE 1" (UND)	NE Sec 9 (Private)
SW Sec 9 "OAKVILLE 2" (UND)	SE Sec 9 Crawford Wild. Mng. Area (ND G&F)
NW Sec 16 (UND)	NE Sec 16 (UND)
"OAKVILLE 3"	
SW Sec 16 (UND)	SE Sec 16 (UND)



Despite ownership and disturbance problems, Oakville Prairie has been more frequently used by Biology faculty and students than the other field stations. Beginning with Facey collecting plants in the mid-1950s, and Kannowski's ant studies later that decade, the station has a history of educational and research endeavors. Students in systematic botany, general ecology and entomology have often used Oakville Prairie, as has Central High School's field biology class. Throughout most of the 1960s, NSF supported a variety of research programs for undergraduates, high school biology teachers, and high school students. Many participants in those programs worked at Oakville. UND biology faculty who have conducted personal research and/or supervised projects include Facey, Kannowski, Wheeler, D. S. Borgoankar, Dean Blinn, Richard Crawford, James Cronin, Elmer Hadley, Gary Hulett, Syed Jalal, Fred Smeins, and Mohan Wali. Biologists from other institutions have also conducted research at Oakville, including those from the Universities of Georgia, Michigan, Illinois, Clemson and Saskatchewan. During the station's greatest period of activity (1960-1977), 27 papers, 10 abstracts, nine M.S. theses and three Ph.D. dissertations appeared which were based, totally or in part, on research done at Oakville Prairie. In more recent times, research for a D.A. degree (1994) and an M.S. (2006) have connections to Oakville. Currently, and in addition to field trips by Goodwin's ecology labs, are his research projects on insect movement and diversity. Research on amphibian ecology and population genetics are those of Robert Newman, and parasites of Oakville vertebrates are of interest to Tkach. Research on Bobolinks by Katherine Mehl rounds out the present Biology Department activities at Oakville Prairie. The Council on Environmental Quality has recognized the research potential of Oakville as an "Experimental Ecological Station."

A third property (**Oakville 2**) consisting of the SW quarter of section 9 borders the Emerado landfill. This was purchased in July 2004 by The Fellows for \$34,229.25 with intent that it become the University's property. Its location provides an uninterrupted two-mile stretch of prairie under UND's control. Although not University property, the quarter section bordering "Oakville 2" on the east is the "**Crawford Oakville Prairie State Wildlife Management Area.**" This, a gift from the Richard Crawford family to the State Game and Fish Department upon Rich's retirement from UND in 2007.

Although not established in the 1950s, it's convenient to package the **Air Base Field Station** with the previous facilities. When the Grand Forks Air Force Base was being designed in the early 1950s, sufficient land was purchased for two runways, but only one was built. Therefore, 603 acres of Mekinock Township were declared surplus. In the fall of 1964, the Biology Department and the College of Engineering proposed use of the land, and in February 1965 the U.S. Department of Health, Education and Welfare approved the University's application for ownership. Terms, however, of the Quitclaim deed required that for 20 years the land be used for education and research, and that such be reported annually to the U.S. Department of Education. As of 1985, UND received full ownership of the property. These are "**Mekinock 1**" and "**Air Base Property**" in UND's portfolio.

Although only some 5-6 miles west of Oakville Prairie, the Air Base property has received minimal interest or use. Educational and research activity at the site included the development of management plans under the supervision of James Reilly and Richard Crawford, but such saw little implementation. About 300 trees and shrubs from the State Game & Fish Department were planted between 1970-72 on a portion of the area. Sporadic use by classes in systematic botany, general ecology, entomology and wildlife management has occurred throughout the years. In 1970, the College of Engineering was granted control of an 80 acre parcel, but after their use of it ended two years later, it was returned to Biology.

Most of the land was cultivated while under Air Base control, but with Biology's ownership, much of it remained idle with the hope that it would regain a more natural cover. That, and a difficult problem controlling noxious weeds, resulted in an antagonistic relationship with the previous landowners. Despite Biology's objections, the area has been sprayed a number of times with herbicides, and it also is mowed as needed.

There was valid concern among some faculty members in the early 1970s that the Air Base property was an overextension for the Department. That, in the light of the preferential use of the other three biology stations by faculty and students. At the present time, the Department has no activity on the Air Base property, but the land is leased by the University for the production of crops. (Note: On 21 June 2007, UND established a five-member UNIVERSITY FIELD STATION COMMITTEE charged with the operation and management policy of all field station properties).

There is little doubt that the acquisition of the Forest River Biology Area and Oakville Prairie was a contributing factor to what became the Department's ecological focus for the next three decades. About 1980, the faculty chose to officially characterize and promote the Department as emphasizing the "Ecology of the Northern Great Plains." That statement first appeared in UND's 1981-83 Graduate School Bulletin, and has appeared in all subsequent Bulletins, including the current 2007-09 issue. However, over the past 20 years, a much more balanced and integrative perspective reflecting the maturation of biology as a discipline has emerged. There is increasing emphasis in the Department on the integration of knowledge across levels of biological organization, from the gene/molecular to the physiology of organisms and their adaptation to local environments. There is no longer strictly a focus on organismal ecology.

#### Faculty Staffing and Additional Space

Despite the opportunity of taking students to a variety of habitats at the newly acquired field stations, staffing a growing number of General Biology labs continued to be a major problem in the late 1950s and early '60s. The solution came in the form of new faculty, albeit a gain of only one per year. The first of these was Paul Kannowski, a former M.S. student of Wheeler's, who had earned a Ph.D. from the University of Michigan in 1957. He was an instructor at Bowling Green State University when he accepted Wheeler's offer of an Assistant Professorship for 1957-58. In 1958 McMaster

retired for a second time and was replaced by Dalton Halverson and Jean Pfeiffer, both of whom had the title of Assistant in Biology.



Halverson, 1968

In every generation of students, there is at least one who is unforgettable, and in this case for all the right reasons, it was Dalton D. Halverson. He came to be a proverbial "institution" in UND Biology for nearly two decades. Hal was a northern Minnesota native and U.S. Navy veteran who attended UND, 1950-53, completing a bachelor's degree, and was a member of that small cadre of undergraduates that Wheeler hired to teach General Biology labs. Hal, an imposing but gentle giant stood about "six-foot-six" and had the build of a college linebacker. As Wheeler's student working on ants, he completed an M.S. (1959-64), and in 1969, a Ph.D. as Wheeler's last graduate student. During his 19

year association with the Department (with some interruptions), he held a variety of positions, all done with exceptional thoroughness. In her letters of reference, Dr. Facey described Dalton "as one of the most conscientious teachers known to her at UND." He was also known for his uncanny ability to remember the names and home towns of all his students. Hal died on 7 January 1996 while Head of the Science Department at Turtle Mountain Community College, Belcourt, ND. He was 67 years old.

In 1959-60, Halverson was "promoted" to an instructorship and Oscar Kalin joined the staff as an Assistant in Biology. Breaking the trend of hiring B.S. and M.S. faculty was Olga Lakela, Ph.D., a retired botanist who had been on the faculties of Minot State Teachers College and the University of Minnesota-Duluth. She only stayed a year at UND, but went on to be founder and first curator of the herbarium at the University of South Florida.



Bill Schmid

New faculty in 1960-61, included Myron Freeman, B.S., and Constance Tuthill, M.S. At this point in time, only three of the Department's eight faculty held Ph.D. degrees. That ratio would be reversed by 1963-64 as the Department added new members. Recruitment was a very different, unstructured process in the early 1960s. Affirmative Action/Equal Opportunity procedures did not yet exist. Robert Seabloom's hiring in 1961 did include meetings with Wheeler and Dean Witmer, but no seminar or two-three day campus visit, as formal interviews were rare in those days. William Schmid, seen here, was hired in March 1962, "sight unseen,"

after Wheeler had examined his credentials. Schmid appeared in the Biology Office on a warm June day in a sport shirt, shorts and tennis shoes, asking to see Dr. Wheeler. Mrs. Wheeler assumed the fellow to be a student and was prepared to send him on his way when Schmid commented to her that Dr. Wheeler had recently hired him to teach next fall. That this very young-looking, casually dressed individual was to be a new faculty member was a very large surprise and a case of mistaken identity.

The early 1960s was a time of change for the Department, and none was more profound than Chemistry's move to Abbott Hall in 1961. With that event came Wheeler's claim to the upper three floors of their former building. But...did Biology deserve or need all of it, or should Psychology and/or the NSF funded Science Institute be given some of the space? In the end, President Starcher decided that Biology alone should occupy the facility. What the Department got was a building devoid of benches, tables and chairs, and a serious need for better heating, lighting, plumbing and floors. Seabloom, who arrived in 1961, was the first faculty member to have an office in the vacated (and vacant) portion of the building. Not only was Seabloom UND's first mammalogist and curator of the Vertebrate Museum, he also was instrumental in formulating a professional curriculum in Fishery and Wildlife Management. Dean Witmer encouraged this, and after due consultation with all parties concerned, a curriculum was developed which also met the College and Department requirements. When Dean Witmer was asked about the next step in the process, he replied to the affect that "we'll simply print it in the catalog, and there might be objections inside and outside the University. However, by the time anyone notices it in the catalog, the program will be in place, we'll have majors, and it will be essentially impossible to kill it." Such a bold and presumptive stance could only succeed in the absence of scrutiny by curriculum committees. With Seabloom on board in the fall of 1961, the Department distributed a flier for the recruitment of graduate students for the following year. It is the earliest such announcement in the Department files, and a reduced copy is shown on the next page. (Note: Although the stipends appear to be small, they were within \$100 of what half-time GTAs in zoology were paid at the University of Minnesota in 1962-63).

The 1961 Legislature provided \$100,000 for remodeling the building, but nothing for furnishings. Scrounging was a necessity, and especially useful were the oak tables and chairs from the old library. Major reconstruction occurred in 1962 and included new plumbing, heating, floors, and electrical facilities. Of the new partitions, those for an elevator shaft never housed an elevator. That same year NSF funded a \$25,000 proposal for "Facility Remodeling for Graduate Research." There was also success in acquiring \$10,000 from NSF for "Undergraduate Instructional Scientific Equipment," this earmarked for General Biology. In 1963-64, NSF provided \$11,550, matched by the University, for "Expansion of Biology Laboratories." These funds were used for fixed furnishings in graduate student and research rooms. At some point in the 1960s, a small metal sign stating "BIOLOGY" covered over Chemistry's name on the building. After the Department moved to Starcher Hall, the Biology Building was renamed Gillette Hall in honor of John M. Gillette, a founding father of rural sociology.

In addition to Bill Schmid, Gary Hulett, the first plant ecologist in the Department, was hired by Wheeler in 1962 to fill a new position. It's unknown if he too was hired, sight unseen, but he left after only a year to return to his alma mater, Fort Hays State College in Kansas. In 1962, President Starcher modified the role and title of administrators. Sixty-five was now the maximum age for anyone in that role, although one could continue to teach or perform other duties until 70. This policy moved younger individuals into leadership roles in several departments. He also changed the titles from

THE UNIVERSITY OF NORTH DAKOTA

DEPARTMENT OF BIOLOGY

Grand Forks, North Dakota

The Department of Biology offers graduate work leading to the degrees of M.A., M.S., Ph.D.

Students majoring in Biology may minor in any of the following fields: Anatomy; Bacteriology, Biochemistry; Chemistry; Geology; Physiology and Pharmacology; Meteorology and Climatology.

ASSISTANTSHIPS

Half-time graduate assistantships carry stipends of \$1,800 for those with Bachelor's degrees and \$2,100 for those with Master's degrees. Incidental fees (tuition) are waived to assistants and they pay only a \$30 student service fee. Application for these appointments should be made prior to April 15, 1962.

PHYSICAL FACILITIES

The Department of Biology has recently moved into larger quarters so that it is now occupying an entire building. This summer, laboratory, office and classroom facilities will be renovated with funds supplied by the legislature and a graduate research laboratory grant from the National Science Foundation. Physical facilities will include a controlled environment laboratory, animal room, radioisotope laboratory, greenhouse, herbarium and extensive collections of vertebrates and invertebrates.

For field studies the department has two tracts of 160 acres each. One is 40 miles by highway from the campus; it includes a spring brook, a swamp, a beaver pond, moist woods, dry woods, and a section of the Forest River, a clear swift stream with rapids. The other tract, which is located 12 miles west of the campus, includes both upland and lowland prairie, part of which is virgin; there is a laboratory building on this tract.

STAFF AND FIELDS OF RESEARCH

George C. Wheeler (Sc.D., Harvard). Professor and Head of the Department. Myrmecology (the ants of North Dakota; the ant larvae of the world); Biogeography (the fauna of North Dakota).

Vera Facey (Ph.D. Toronto). Associate Professor. Systematic Botany; Plant Ecology; Abscission.

Paul B. Kanno (Ph.D., U. of Michigan). Associate Professor. Animal Behavior; Animal Ecology; Zoogeography; Microclimatology.

Edith E. Larson (M.S., U. of Kansas). Assistant Professor. Vertebrate Anatomy and Embryology.

Robert W. Seabloom (M.S., U. of Minnesota). Assistant Professor. Vertebrate Ecology; Mammalogy; Ornithology.

INFORMATION

For information about admission to Graduate School and appointment to assistantships and fellowships write: Dean, Graduate School, University of North Dakota, Grand Forks. For information about the Department of Biology write: G. C. Wheeler, Department of Biology, University of North Dakota, Grand Forks.

Head to Chairman. Wheeler, who was 65 in 1962 and had been Head for 36 years was subject to Starcher's new regulation. However, he was allowed to continue for an additional year with the title of Chairman in consideration of his long and dedicated service. Wheeler's final years in the Department were busy years. He continued to teach Evolution, Entomology, and Invertebrate Zoology each year until his retirement in 1967 at the age of 70. His book, "The Ants of North Dakota" appeared in 1963, and during the summers of 1964 and '65, Wheeler participated in the Department's summer research program for undergraduate students. In 1962, '64, and '66, his last three M.S. students received their degrees, and in 1962 he served as adviser to the Department's first Ph.D. student, Jeanette Wheeler, his second wife of some 20 years. Wheeler received **The Hilborn Distinguished Teacher Award** in 1967. He returned to UND in 1970 for an honorary doctoral degree, and she in 1989 for a **Sioux Award**. The Wheelers continued to do research on ants in Nevada after leaving UND. Additional information on their lives and work is presented in Appendix 2.



Jeanette W. -1965-

Paul Kanno succeeded Wheeler as Chair. His leadership and the growth of the Department through the balance of the 1960s are presented in Chapter 6.

## Chapter 6

### GROWTH AND NEW LEADERSHIP

As Wheeler's one-year Chairmanship was ending, a replacement was needed to assume that responsibility. The "short list" was mighty short since only Vera Facey, Paul Kannowski and Edith Larson held ranks higher than Assistant Professor. They also were the only ones familiar with many aspects of the Department, and aware of administrative procedures within the University. Dean Witmer of the College of Science, Literature and Arts was responsible for recommending Department Chairs, and his first choice, Facey, was rejected by Vice President for Academic Affairs, William Koenker. Kannowski was acceptable to both administrators, thus on 1 June 1963, he was named Chair for an initial three-year term.

Kannowski's immediate concern was staffing for 1963-64. Hulet's resignation created a vacancy, but two other full-time, plus a part-time position, needed to be filled. During the mid-1960s, new faculty did not necessarily replace in kind what had left. Thus the area of plant ecology was not represented by those who joined the Department that year. One of these individuals was D. S. Borgaonkar, a new Ph.D. in plant cytogenetics from Oklahoma State University. A second faculty member from the same school was Richard Tubb, the Department's first aquatic biologist since R. T. Young's departure in 1926. New staffing for the General Biology course included Virginia Pedeliski, wife of a Political Science faculty member, and the part-time appointment of Jeanette Wheeler.

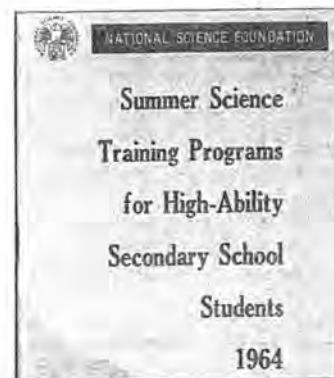
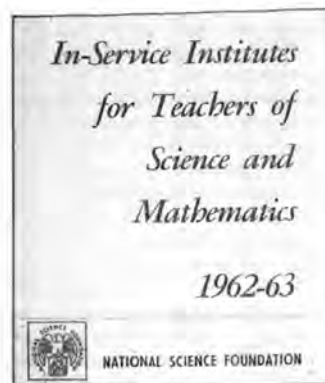
From the very beginning, Kannowski was determined to carry out a departmental reorganization to give the faculty controlling power on issues of policy. Initially, ad hoc committees served the purpose for studying various issues, but later the faculty approved his recommendation that the Chair be empowered to appoint the membership of five standing committees: Introductory Course Coordination, Graduate Student Affairs, Research Grants, Field Stations, and Library. Membership was restricted to faculty, but eventually, most of these (and those established later) had student members. The Executive Committee originally included all tenured faculty with the rank of Associate or Full Professor. Duties of the committee and its membership have been redefined many times, and currently, all full-time faculty in Biology are eligible for nomination and election. In 1962, formal faculty meetings replaced Wheeler's daily 3-o'clock tea and cookies session with the faculty and assistants. Such informal gatherings were his opportunity to obtain input on actions he was about to take, and with a small faculty confined to the Chemistry Building basement, this arrangement worked well. As the faculty grew in size and spread throughout the building, however, formal meetings evolved with minutes being first kept in 1963-64. Eventually, agendas and a secretary to record the minutes became standard procedure. In that initial year as Chair, Kannowski distributed a roster of biology graduate students. There were six faculty members mentoring 15 individuals, five of them in Ph.D.



P. B. KANNOWSKI

programs. Several did not yet have advisers, including David Voth who was waiting for a parasitologist. In 1964-65, Kannowski produced the first annual Department report since the early 1930s. It, and subsequent reports, have been valuable sources of material for this Department history. In addition to restructuring the policies and procedures for departmental governance, Kannowski also had plans for a substantial revision of Biology's curriculum, and the discontinuance of Wheeler's Laboratory Manual for General Biology. It was in its 5<sup>th</sup> edition having been used since 1944, and was much out of date. The textbook by Alexander also met the same fate, but these decisions were not favored by Facey, and even less so by Mrs. Wheeler. A recommendation that the faculty write a lab manual during 1963-64 did not materialize.

The late 1950s and most of the 1960s was a time for Science Institutes at UND. These were funded by NSF and came in two versions: 1) the Summer Science Institute, initiated and directed by Professor J. Donald Henderson of the Physics Department, 1957-70; and 2) the Academic Year Science Institute, 1959-60, and 1961 to 1970. Both programs were restricted to high school science teachers, and a specific degree was developed, the Master of Science Teaching (M.S.T.). Biology's continuous role in the programs was Basic Principles of Biology (471-472), an 8-credit version of General Biology, but with a bit more depth. Each student in the program concentrated in two areas, and those who chose biology took additional graduate level courses. Ted James with an M.S.T. degree was an exception by not returning to high school teaching, but rather by successfully earning the second Ph.D. in the Department, this in 1967 under Seabloom's supervision. Marjorie Behringer served as Director of the Summer Institute from 1971 to 1974, after which funding ceased and the M.S.T. degree program was dropped by the Graduate School.



Within the Biology Department itself, were a number of NSF-supported summer programs. Kannowski was an active promoter of the Department's participation in these throughout the 1960s, and he directed and administered nearly all of them. One of the

early programs was the 1962-63 In-Service Institute for Teachers of Science (Biology) and Mathematics. The class was split into two...one at UND, the other at Bismarck Junior College. They met on alternate Saturdays with Kannowski, Seabloom and Wheeler as instructors focusing on evolution. The following year, Schmid alone conducted the In-Service Institute, teaching courses in genetics and cell biology. Earlier, and lasting longer than these two endeavors, were the Summer Science Training Program for High School Students (1960-68) and the Undergraduate Research Participation Program (1960-62, 1968). Research Participation for High School Teachers was offered in 1964 and '65, and the 3-4 participants each summer were named predoctoral students by NSF. Donald Sather, a former student in the Department, attended both summers working with Wheeler on ants, and eventually completed a Ph.D. in 1972 under Kannowski's supervision. It is unknown if any other participant attained the same degree.

A search for three new, tenure-track faculty was authorized for 1964-65. One of these involved replacing Borgaonkar, who joined the Medical Genetics staff at Johns Hopkins University after only a year at UND. His replacement was Syed M. Jalal, a new Ph.D. from the University of Wisconsin. He too was a plant cytogeneticist, but being in a zoology dominated department, he and several of his graduate students would eventually do most of their cytogenetic studies on mammals, including humans. Elmer B. Hadley, a recent Ph.D. from the University of Illinois restored the plant ecology position vacated by Hulett two years earlier. The third individual was Omer R. Larson, a UND biology major from 1950 to '54 who had taught General Biology labs for Wheeler. After his Ph.D. at Minnesota in 1963, he taught at Minot State Teachers College for a year before coming to UND. He was the Department's first parasitologist.



S. M. Jalal

In mid-March 1965, the Department sponsored for the first time an ambitious two-week field trip. Seabloom and Hadley served as organizers and instructors for a group of 8 or 9 students during a cold-weather trip to the Pacific Northwest. Three years later in 1968, a similar excursion under the direction of Seabloom and Fred Smeins explored the deserts and grasslands of Colorado, Arizona, New Mexico and Utah.

During those years, 1965-68, the biology graduate program had excellent support in the form of fellowships and traineeships, numbering 7-9 each year. Funding for fellowships was provided by the National Defense Education Act, the Higher Education Act, the Agency for International Development and the National Institutes of Health. At the time, the first NSF traineeship was also part of the mix. In addition, there were an average of 17 GTA's and two research assistantships, annually. Interest in biology and increased financial support was reflected in graduate student enrollments, growing from 26 to 36 in those three years. The number of undergraduate majors, however, remained rather constant in the vicinity of 100 each year.



Front row: Facey, E. Larson, W. Schmid, S. Barbario, S. Jalal. Back row: J. & G. Wheeler, O. Larson, R. Seabloom, E. Hadley, P. Kannowski, M. Jasper.  
The 1964-65 Biology Faculty & Staff (less R. Tubb & V. Pedeliski)

In 1965-66, another "triple search" for new faculty occurred. The first of these Howard McCully, a temporary replacement to coordinate the non-majors course, Introduction to Biology. He was an ichthyologist with a Ph.D. from Stanford. Although his personnel file is missing, he is well remembered by a few retired faculty members for his willingness to counsel female students....causing problems that Kannowski and the University Counseling Center did not need! After leaving UND in 1966, McCully joined UNESCO in the Philippines. The second new addition to the faculty was John B. Owen, a fisheries biologist with a Ph.D. from Iowa State University. He had taught at NE Missouri State Teachers College, and had been employed by the U.S. Fish and Wildlife Service in Alaska. Owen took over Tubb's fisheries courses and developed a close working relationship for 21 years with the state's Fisheries Division. Two of Owen's 31 graduate students, would serve as Director of the ND Game and Fish Department....Dean Hildebrand (M.S. 1967) 1996-2005, and Terry Steinwand (M.S. 1982), since 2006. Owen's wife, Alice, also had a Ph.D. from Iowa State, and as a part-time Assistant Professor, taught embryology 15 spring semesters between 1967 and 1982. She also taught physiology labs in the Medical School for a number of years, and became the proverbial "permanent temporary" faculty member. The third new member was James R. Reilly who earned his Ph.D. in Wildlife Disease at the University of Illinois. Prior to that, he had worked for the New York Department of Fish and Game.



J. R. Reilly

Successful hiring of new faculty with Ph.D.'s, 1962-66, suggests that recruitment was not a large problem. All areas of science and engineering were basking in the afterglow of Sputnik....that accelerated effort to "catch-up." A wave of newly trained individuals entered the market each year in the early to mid-1960s. Also improving recruitment for UND was President Starcher's establishment in 1962 of a base salary of \$7,000 for anyone holding a Ph.D. That minimum starting salary helped the University be competitive in the job market, but the edge was soon lost. Retaining new faculty for

more than a year or two was the problem. Better salaries, facilities, and opportunities elsewhere, led to a continual turnover of the faculty. Sometimes the difference between staying or leaving hinged on a few hundred dollars of salary.

Only four years after getting all of the old Chemistry Building, Biology's growth in research-oriented faculty required additional space. With Geology's move from Babcock to Leonard Hall in 1965, came an opportunity to acquire more laboratory and office space. This was assigned to the Owen-Tubb fisheries and limnology programs. Tubb's stay in Babcock was brief, for he resigned, June 1966, to become Assistant Leader of the Cooperative Fisheries Unit at South Dakota State University. While at UND, his interest in Devils Lake was the initial motivation for reestablishing the Biological Station. Tubb was replaced by Joe K. Neel, Director of the Potamological Laboratory at the University of Louisville. This was a significant departure from previous recruitments, as he was the first since Wheeler in 1926 to be hired at the rank of Professor. Neel was a senior scientist, well respected in the field of limnology, water pollution and waste management. He continued to do research in these areas until his retirement in 1981. Neel's 11 year study of the Turtle River can best be characterized as his "hobby." Neel and John Owen both received office space in Montgomery Hall, but Neel declared his limnology laboratory in Babcock to be unacceptable. Fine dust permeating the building from the Ceramics Department in the basement was a serious hazard to his instruments, thus he was assigned space in the basement of Leonard Hall for two years, much to the displeasure of Wilson Laird, the Geology Chair. In the fall of 1968, Neel joined Owen in using the renovated basement of Montgomery Hall. Although it had the ambiance of catacombs, the facility was used for teaching, research and storage for nearly a decade.



J.K. Neel

Finding space in Leonard Hall for Neel was one of Omer Larson's first problems as Acting Chair. He had been selected to do that task for 1966-67 while Kannowski was on sabbatical leave at Harvard and Barro Colorado Island in the Panama Canal Zone. For Larson, an untenured Assistant Professor with only two years on the faculty, the job was intimidating, difficult, and the cause of an ulcer. What criteria Vice President Koenker used to select him are unknown, but Seabloom, with five years in the Department, and Facey with the rank of Professor, were the more logical choices.

In late July 1966, Biology got into the "transportation business." Using cost-of-program funds, a nine-passenger International Travelall van was purchased for exclusive use by the Department. It was the first of two such vehicles owned by Biology. That summer, however, can best be characterized as a "revolving door" of faculty. Four members left (E. Larson, H. McCully, W. Schmid, R. Tubb), and four new ones joined the Department. In addition to Professor Neel, Marjorie Behringer, Gary Bryan and Harold Kittilson were the new Assistant Professors. Since no one was qualified to teach Edith Larson's courses, two temporary individuals took those over... Ted James in Comparative Anatomy,



M. Behringer

and Alice Owen in Embryology. Behringer had a Ph.D. in biological education from the University of Texas and was hired to replace McCully as Coordinator of the Introduction to Biology labs. That assignment included the implementation of an audio-tutorial laboratory serving about 300 students. This method of instruction was modified from one developed at Purdue University. Based on a sign-up schedule, each student worked at his/her own pace in one of 20 small lab bench cubicles. Instructions were delivered via head phones from a reel-to-reel tape recorder. In an October 1966 letter to Kannowski, Behringer reported that the A-T lab was "the quietest classroom ever witnessed," with only the "clicking on and off of tape players." This method of laboratory teaching had its pros and cons, but was abandoned after five years.



A student at work in the audio-tutorial lab

Bryan, with a Ph.D. from the University of Chicago, filled the position vacated by Schmid. His area of research concerned photosynthesis, and he came with two years of postdoctoral experience at the Argonne National Laboratory. Although Bryan produced two M.S. students while at UND, his inability to communicate was a serious problem, especially in large lecture sections. This led to his contract not being renewed for 1970-71. The fourth new faculty member in 1966-67 was Harold Kittilson. He was a native of southern Minnesota with five years of teaching experience at the high school and junior college level before earning a Ph.D. from North Carolina State, this in biochemical genetics. Kittilson's teaching style was low-keyed but adequate; however, his research never took root and he published nothing in his three years in the Department. The possibility of gaining tenure was very dim, thus he resigned and accepted a position at the University of Tennessee-Martin for 1967-68.

During 1965-66, Kannowski was the prime mover for the creation of the Institute for Ecological Studies (IES). This multidisciplinary organization consisted of a variety of faculty, scientific and otherwise, and Kannowski served as its first Director, overseeing the IES from his biology office in Old Science. By the fall of 1969 (if not earlier), the organization was part of Arts and Sciences, and Dean Bernard O'Kelly considered it to be one of the College's three "bureaus." The focus of the IES was the study of rural and urban ecological/environmental problems and concerns, mostly within the state. The result was a series of special publications and 47 Research Reports, with Kannowski as editor in the early years. The first two publications, both on North Dakota fishes, were noted as being "Contributions of the Institute for Ecological Studies." The IES and the North Dakota Natural Science Society had similar interests. In 1968, this synergism led the IES to begin publishing, for the Society, a new journal, THE PRAIRIE NATURALIST, with Kannowski as Editor. With the slow but steady demise of the IES, it no longer had a role in publishing the journal after March 1985, although Kannowski remained as Editor through June 1995.

At the Founders Day dinner, 27 February 1967, George Wheeler and Richard Beck (Scandinavian Languages) were honored with **Ernest C. Hilborn Distinguished Teacher Awards**. At the same event, Omer Larson received the **AMOCO Foundation Outstanding Teacher Award**. The two biologists are seen here a day or two later.



Staffing for 1967-68 included temporary appointments of two graduate students (Donald Becker and Dalton Halverson), and the addition of Fred E. Smeins. He was the third plant ecologist in a span of five years, following in the footsteps of Hulett and Hadley. Smeins had M.S. and Ph.D. degrees from the University of Saskatchewan, and an interest in wetlands ecology. A month after he accepted UND's offer, Kannowski returned from his sabbatical leave and resumed the chairmanship, year number two, of his second term. Larson was relieved to have him back, and looked forward to a stress-free appointment teaching in the Summer Session. As for Smeins, unfortunately his stay was brief, resigning in 1969 to accept a position at Texas A & M.

With the resignations of three temporary individuals (Becker, Halverson and James) during the summer of 1968, Biology was again seeking new faculty. In addition to the one year appointment of Robert Ahokas, a Ph.D. student, was the recruitment of Frederick G. Duerr, an invertebrate physiologist with a Ph.D. from the University of Minnesota. He had taught at the University of South Dakota, 1961-67, and came to UND after one year at the University of Saskatchewan. Duerr twice applied for the Department's physiology position, and was twice recommended for appointment. He accepted the second time. Despite Duerr's training, only two of his nine graduate students studied invertebrates. Most of the others chose projects in physiology of fish. Duerr was a gifted teacher with an uncommon ability for explaining complex material in the clearest of terms, often with an element of humor. Duerr was also a gifted musician, and he and Jim Reilly became active members of the Grand Forks Symphony Orchestra. Conditions which led to Duerr's resignation from the Biology Department are presented in Chapter 7.



Duerr

The other new recruit for 1968-69 was Lewis W. Oring, who specialized in bird behavior. In addition to ethology, his other major teaching obligation was comparative anatomy, a course Ted James had taught for the two years since Edith Larson's resignation. Oring's Ph.D. was from the University of Oklahoma and he had postdoctoral experience at the Universities of Copenhagen and Minnesota. His research was well funded by NSF and he quickly attracted graduate students. Oring gained a North American and Scandinavian reputation for his research, and at the state level, he would come to have a large leadership role in the Experimental Program to Stimulate Competitive Research (EPSCoR). As with Duerr, Oring was an excellent teacher with a talent for making



Oring



Wrenn

complex issues understandable. With Seabloom, Larson, Duerr and Oring all having strong University of Minnesota roots, one faculty member in the early 1970s accused the group of cliquishness and an inability to vote independently on issues. That was never the case. The foursome's only guilt was promoting a U of M tradition of a faculty/graduate student party every February in celebration of Darwin's birthday. Biology's 1965 expansion into Babcock and Montgomery became wider in 1968 with Kannowski and Oring acquiring offices in Old Science. Laboratory space in the building also accommodated comparative anatomy and entomology, and the following year, William J. Wrenn would join his colleagues there. Wrenn was nearing the completion of his Ph.D. program at the University of Kansas in the field of entomology. His expertise was in mites, and to some he was known as "Chigger Bill." Wrenn also brought a new and most useful discipline to the Department....biometry.

In addition to Wrenn, three other faculty were hired in 1969. In no particular order they were: 1) Dean W. Blinn, a phycologist with a Ph.D. from the University of British Columbia. His stay was brief, resigning in 1971 to accept a position at Northern Arizona University. 2) Mohan K. Wali, was a plant ecologist, also with a Ph.D. from the University of British Columbia. He was a replacement for Smeins. Wali's research mostly focused on reclamation ecology in western North Dakota, and with it a good deal of entrepreneurship to further his interests and stature in such endeavors. Some aspects of this will be presented in future chapters. 3) Robert T. Pollock, a developmental geneticist replaced Kittilson. Pollock's Ph.D. was from the University of California-Davis and he remained at UND for five years. Circumstances prompting his resignation are noted in Chapter 7. Beyond this influx of new faculty was the unsuccessful search for a new Department Chair, 1968-69 was Kannowski's third year in his second term, and he did not wish to be considered for a third term. However, a search committee composed of Duerr, Seabloom and Larson was unable to recruit anyone acceptable to the faculty. In mid-June 1969, when the last possible candidate withdrew his name, Kannowski agreed to O'Kelly's request that he stay-on one more year.



R. T. Pollock

1968-69 was the first year of the George C. Wheeler Distinguished Lectureship. Generous funding brought nine highly respected biologists to the Department between December and May. These individuals, and all subsequent ones are listed in Appendix 2, as are the details which established the lecture series. The nine Wheeler Lectureres, plus all the faculty and chairperson candidates brought to the Department for interviews during those six months, created an unparalleled demand on the faculty's time and cooperation for hosting visitors. Unlike more recent times, faculty homes were frequently used for dinners and receptions.

The 1969-70 school year began with Kannowski in his 7<sup>th</sup> year as Chair, and with the Department fully staffed with 16 faculty, two secretaries and Mr. Jasper running the stockroom. In addition, six individuals from the Northern Prairie Wildlife Research Center were granted Adjunct Professorships that fall. Enrollment in first semester courses numbered 1,190, with 116 students majoring in the Department, up 26% from a year earlier. The graduate program was also continuing to grow, up by 5 students to 39. Broadening participation in Biology's affairs, was the granting of membership to graduate students on five of the Department's standing committees. Neel, Owen and Duerr had substantial funding for their aquatic research projects, and Oring's NSF equipment grant proposal for Ethology was successful. Except for the increasing need for more and better facilities, one could say that in many ways, the "State of the Department was good," as the 1960s were ending.



John Owen

## Chapter 7

### THE 1970s: A TURBULENT DECADE

After the progressive leadership and robust growth of faculty, graduate students and research productivity in the 1960s, no one could have anticipated that the next decade would be so unsettled. During that time, six faculty members resigned, and two others (plus a stockroom manager) retired. Illness and accidents claimed the lives of two faculty members, two students and two friends of the Department. Annual budgets were frustratingly unpredictable, as were the funds and changing blueprint for the new building. Through it all, seven faculty members chaired the Department for various lengths of time. The broadest crisis, however, came with the 1979 spring flood which closed the University and placed it and the entire city in great peril.

The decade started on two positive notes with Dr. Peter Marler of Rockefeller University visiting the Department in early January 1970. He was the 11<sup>th</sup> George C. Wheeler Lecturer in a series begun two years earlier. At Founders Day, Bob Seabloom received an **AMOCO Foundation Outstanding Teacher Award**.

Kannowski was serving as Chair in 1969-70, this, an extra year due to the unsuccessful search for an external replacement. After his seven years of leading the Department though unparalleled growth, the faculty was very concerned that new leadership would continue the Department's progress. The Administration approved an external search for a new Chair, and a committee (Neel, Larson and Reilly) was elected by the faculty to find Kannowski's replacement. By mid-April 1970, three candidates had interviewed, and Floyd Hunter, a 41-year old Assistant Professor of Biology at Brown University was the faculty's choice to fill the position.

In late April 1970, a 15-page proposal for a new graduate program was debated by the faculty. This, the Doctor of Arts in Teaching (D.A.T.) degree, was later renamed the Doctor of Arts, or D.A. degree. This program was designed to produce broadly trained biology teachers for two and four-year colleges. The Department was polarized on the prospect of a new doctoral program draining away already limited resources, but after spirited discussion the faculty approved the proposal with Marjorie Behringer as the program's coordinator.

In the spring of 1970, the anti-Vietnam war movement was growing more heated. The National Guard's fatal shooting of four students at Kent State University in Ohio on May 4<sup>th</sup> set-off a nationwide wave of protests on college campuses. UND classes were canceled on the 5<sup>th</sup> and students rallied in what might be best described as "agitated mourning." However, the discontentment with the war, and in a broader sense, "the establishment and issues of the day" kept festering. The Biology Department was warned on May 14<sup>th</sup> to be especially aware of possible problems since a bomb scare in Witmer Hall and a fire outside Oxford Hall (presently the Alumni Center) were part of the day's security concerns. When Larson, who was an Associate Dean for the year, left the Arts



and Sciences office late that afternoon, he had to step over dozens of students who had chosen to do a peaceful sit-in occupation of the 2<sup>nd</sup> floor hallway of Twamley Hall.

The culmination of a hectic spring semester was the tragic death of Shih-Kuo "Scott" Tao on May 22<sup>nd</sup>. He was one of John Owen's students finishing his M.S. research at the State Game and Fish Hatchery at Spiritwood Lake. He died in a car accident near Jamestown, ND. The writing of Tao's thesis was completed by John and Alice Owen, thus Tao was granted his M.S. degree posthumously.

The fall semester began with all 16 faculty positions filled and a graduate student enrollment of 43. Floyd Hunter was now serving as the new chair. He earned his Ph.D. at Rutgers in 1964 and had for six years been on the Brown University faculty. Hunter was hired by UND at the rank of Associate Professor. He and his wife, JoAnn, were both endocrinologists, thus they filled an academic void in the Department. They also brought a fresh vitality and enthusiasm to Biology. Hunter continued the Kannowski tradition of Department governance through an array of standing committees. Only one of the 10 was new, namely a Building Rationale Committee. Its focus was to gather the data necessary to create a well-documented case for a new biology building. (Note: It would take almost seven years before monies needed for that structure would become available.)



The only serious problem that occurred in the fall semester was Jim Reilly's "light" heart attack in early October. This required that others cover his Wildlife Management class of eight students while he convalesced for a month or so.

The new year began well, but with a typical spring semester of fewer students. The faculty's concern over Reilly's health was real, but in no way did it prepare the Department for a second tragic death in less than nine months. About mid-afternoon on 2 February 1971, Biology received a call that Hunter's body was found in the garage of their apartment building. In the absence of a Chairperson, the Executive Committee governed until Neel was elected Interim Chair on February 8<sup>th</sup>. JoAnn Hunter was hired as a half-time Assistant Professor to complete her husband's course in endocrinology, and another search committee (Kannowski, Larson, Reilly) was elected. It was ironic that at this most difficult time, the Department had the honor of a visit by one of the world's most famous anthropologists, Richard Leakey.

A month later, a bit of good news came at the Founders Day banquet on March 10<sup>th</sup>. The Department received the **Edward H. McDermott Award for Excellence in Research**. This included a plaque and \$600 to be spent as the faculty saw fit. (Note: Later that year, they voted to use the interest for an annual award recognizing a graduate student who had done outstanding research.) The bad (or at least the controversial news) was the reemergence of the faculty's contentious debate on Biology's commitment to the D.A.T. graduate program. On three critical issues, the faculty vote was nearly 50/50, for and against parts of the program. Finally, by a 9 to 5 vote, the D.A.T. program was

approved for two years with the tacit understanding that it would then be reevaluated. (Note: During its lifetime, the program only produced about a dozen degrees, and support for it waned after Behringer's retirement in 1978. In September 1998, the Department eliminated the program. It has over the years, however, been more successful in UND's History Department.)

Despite the lateness of the search for a new chair during the spring of 1971, a total of 24 applications were received. Of these, five were finalists. Harry L. Holloway, Jr., a 45-year old parasitologist with a Ph.D. from the University of Virginia was the faculty's first choice. He came with an extensive background in administration, both as Dean of the Faculty at Western Maryland College, and in an earlier 10-year stint as chair of Biology at Roanoke College in Virginia. Bernard O'Kelly, Dean of Arts & Sciences, accepted the Department's recommendation, and also that Vera Facey serve as Acting Chair for the summer until Holloway's anticipated arrival in mid-August.

The Department was destined to be short-staffed in 1971-72 due to the resignation of Dean Blinn, phycologist, and Bob Seabloom's sabbatical to work with colleagues at the Whiteshell Nuclear Research Establishment in Manitoba. The physiology position vacated by Gary Bryan's resignation a year earlier remained unfilled. The teaching gap was partially solved by William "Bill" Koenker, Vice President for Academic Affairs, when he authorized two, part time, temporary faculty appointments. Someone in biology once compared Koenker to a skilled juggler with three "financial oranges" in the air at one time. It always seemed that at the last minute, he found the dollars to cover Biology's staffing dilemmas, whether it be GTAs or temporary faculty.

The fall semester ran smoothly with Holloway as Department Chair. However, an increase in the number of standing committees by three to 13, was surprising. He hoped to codify past and current faculty actions, thus leading to a "constitution" for the faculty. No such document ever appeared, but the membership and duties of standing committees were spelled-out in detail. Even more surprising was Holloway's October declaration that he would serve as an ex-officio member of all committees, over and above those on which he was a bona fide member. Although this approach did not cause noticeable problems in Holloway's first year, it surely did in years two and three of his chairmanship. There was increasing and widespread discontent among the faculty that he was micromanaging and challenging the autonomy and recommendations of the Department's committees.



Funding for faculty positions was very tight, thus it was great news to have Koenker authorize the refilling of the Blinn position for 1972-73. The faculty voted to seek another phycologist, with Facey, Jalal and Wali serving as the search committee. Among approximately 25 applicants, Dianna Tupa, a 27-year-old new Ph.D. from the University of Texas was hired as the Department's first choice.

Tempering the good news of Tupa's hiring were the wintertime deaths of two valued friends of the Department. In December, William Groth of Inkster died. He was a conscientious neighbor and good "watch-dog" over the Forest River Biology Area for many years. He and his brother Harold were naturalists and reputable amateur historians. They had carefully documented the occurrence of events in the area since the arrival of fur traders in 1797. Of special value to the University were Groth's listings of the many transfers of title to the land that became the Forest River Biology Area. The Wheelers and Groths were close personal friends, and a daughter, Patty Groth, was a secretary in Biology from 1969 to 1972.



On 21 February 1972, death in Grand Forks claimed Robert Bonner Witmer at the age of 72. Witmer was a native son, born to pioneer settlers in Pembina County. His initial field of training was in electrical engineering, but the Ph.D. from the University of Michigan was in physics and mathematics. He joined the UND faculty in 1924, and after World War II he returned to UND and was appointed Acting Dean of the College of Science, Literature and Arts, now known as the College of Arts and Sciences. In 1949 Witmer was named Dean, a position he filled until 1965. His predecessors in the college office were steeped in the humanities, thus the science side of the curriculum received a staunch advocate during his deanship. That was abundantly clear in Witmer's significant support in the establishment of the Department's Fish and Wildlife major in the early 1960s. The physics-mathematics building bears his name.

The spring semester saw three positive events: 1) At the Founders Day banquet, Joe Neel became the first biologist to receive the **Sigma Xi Award for Individual Excellence in Scientific Research**; 2) The establishment of the **Edith Larson Award** to recognize an outstanding undergraduate biology major each year. (Both of the above are covered more fully in the appendices;) and 3) Syed Jalal being chosen to receive a 1972 Summer Research Professorship.

In July, officials from the State Game and Fish Department and UND gathered in the Biology Building to hammer-out the agreement which led to the creation of the North Dakota Fishery Research Unit. This collaboration of the Biology Department and the State Game and Fish would conduct research needed for, and directed to, the management of sport and commercial fisheries, and the protection of the state's aquatic environments. John Owen and his many graduate students would be UND's primary contributors to this alliance for the next 14 years.

The summer of 1972 ended with Larson teaching parasitology at the University of Minnesota's Itasca Biology Station during the second session. In the earlier session, Oring taught Field Ethology, and returned to UND to host the annual meeting of the American Ornithological Union in mid-August.

The fall semester of 1972-73 began with a new secretary, Cathy Olson, replacing Nancy Ahokas who had resigned after four years. Cathy would be one of four secretaries

during the year. This frequent turnover was counterproductive to efficiency and stability in the Department office. The biology directory listed 16 full time faculty, plus Alice Owen with a half time appointment. Dianna Tupa, was the newest member of the Department. Also listed were 31 on-campus graduate students located in three different buildings. The inadequacy of space was a perpetual problem which figured heavily in the work of the Building Rationale Committee. In a similar vein, 1972-73 was destined to be a lean year as UND was ordered to reduce its budget 1% because of lower enrollment. For Biology, there was no increase of funds for office and instructional supplies (\$13,000) or repairs (\$630), and only 8% more for equipment (\$8,315, total). The supply budget was augmented by requiring each student in 101-102 Biology Lab to purchase a \$1.00 "Happy Pig Pass" at the bookstore. This allowed a student permission to participate in dissecting a fetal pig.

In September, an invitation was received from the University of Minnesota to recommend one member of the Department to serve on the Advisory Board of the Lake Itasca Biology Station. For about a decade, UND Biology had a history of encouraging its students to attend Itasca's summer programs. In addition, four current or former faculty members (Larson, Oring, Seabloom, Schmid) had already taught one or more times as invited instructors. At a faculty meeting on 9/27/72, Holloway was elected to serve on the Advisory Board "to the end of summer 1974."

In the autumn of 1972, Biology sold its two 9-passenger vans to the UND Motor Pool for \$1,925. These two vehicles were purchased in 1966 and 1969 from local dealerships, and are those mentioned in an earlier chapter. Although the vans were controlled by the Department and provided convenient transportation for field trips, there were recurring problems with maintenance and responsible useage.

The fall semester concluded with an extraordinary faculty meeting on December 14<sup>th</sup>. It was in essence the pivotal point in Holloway's chairmanship in that several faculty members openly questioned his leadership. It should be noted that in addition to the Executive Committee staffed by tenured faculty, Holloway had during the fall, appointed 13 standing committees and four ad hoc or "special" committees. This meant that each faculty member served on three or four committees. In addition, Holloway had proposed in mid-November that the Building Rationale Committee be renamed the "Planning Committee" with far greater responsibilities. Jalal, as chair of the BRC, expressed serious concerns over the scope, time and effort that might be required of a Planning Committee.

The meeting on the 14<sup>th</sup> began with Holloway introducing his new Administrative and Technical Assistant, Gordon Russell. Holloway had suggested this position some nine months earlier, but the filling of it came as a surprise to most, if not all of the faculty. Russell had a major in biology and a minor in chemistry from the University of Connecticut, and experience as an "administrative specialist" in the army. Holloway stated that "the specific duties of the position have not been outlined," but "he will help Mr. Jasper when needed." (Note: there are no Department files showing the source of

funding for Russell's 71/2 month appointment. In the fall of 1973, he became Owen's graduate student and completed an M.S. under his direction in 1975).

When the meeting got to unfinished business, Facey, Jalal, Oring, Owen and Seabloom all expressed concern over the structure, status and number of committees. Kannowski broadened the comments to question departmental administration in general, and Jalal again noted that it was not feasible for the Building Rationale Committee to undertake the additional duties proposed in Holloway's Planning Committee. Wrenn attempted to sum up the whole controversy as "a question of whether we want to stand still or move ahead." This comment was sufficiently vague that his views were undefined. The fallout from the meeting was two-fold, both immediate and long term; 1) by mid-January 1973, Holloway had instituted procedural changes for increasing the efficiency of the Department Office, and 2) an increasingly adversarial relationship with the faculty during the second half of his chairmanship.

It must be said, however, to Holloway's credit, that during the spring semester he worked toward a reduction in Departmental committees through consolidation and elimination. After much discussion, the faculty approved the restructuring on May 11<sup>th</sup> and the number of existing committees fell from 17 to 11. Unfortunately, this improvement was tempered by Holloway's continued role as an ex-officio member on all committees on which he was not specifically named. Beyond the restructured committees was his proposal for a new one. It was to be a Committee of National External Consultants (numbering 2-5 individuals) who, in conjunction with five biology faculty members would "review programs and activities of the Biology Department and propose changes for development and growth of said department." The faculty was somewhat reluctant, but did approve the new committee. (Note: In its five-year existence, the committee was never convened.)

Other developments occurring during the spring semester included McGraw Hill's early publicity of Marjorie Behringer's soon to be released book...**Techniques and Materials in Biology**. Another positive event was Kannowski's doctoral student, Akey Hung, receiving the initial **Outstanding Graduate Student Research Award**. On 16 April 1973, an undergraduate Biology Club was formed, having as its purpose "fellowship and development of the common interest of undergraduate biology majors." This organization was preceded by several earlier ones, including The Biological Club from the mid-1890s under Brannon's leadership. In 1923, Phylon, a local honorary club was formed for students "who make special research in biological studies." A year later, this group successfully petitioned the national honorary biology fraternity, Phi Sigma, for a charter. However, it became inactive in 1928 and the charter was withdrawn in 1946 with Wheeler's approval. In 1960, Kannowski served as advisor for a new Biology Club which remained active for an unknown number of years. The history and "paper trail" of the various organizations (and journal clubs) are tenuous at best. Better known and with continuing demonstrable functions are the Biology Graduate Student Association (BGSAs) formed in 1973, and the UND Student Chapter of the Wildlife Society established in 1975. A student chapter of the American Institute of Biological Sciences (AIBS) formed in 1979 became inactive a few years later.

The academic year ended with the unexpected resignation of Dianna Tupa after only a year in the Department. That led Jalal, Neel and Wali to conduct a summertime search for a new phycologist. Of some 20 applicants, L. Elliot Shubert was offered an Assistant Professorship. Shubert was a new Ph.D. from the University of Connecticut, with primary research interests in the ecology and physiology of algae.

The fall semester began with a distinct atmosphere of administrative paralysis. Committee membership assignments for 1973-74 were not made by Holloway until the fourth week of October, and graduate students were "floating around" without assigned desk space for a month. Their term for the tardiness and frustration was "Biogate," a play on words for President Nixon's "Watergate" problem. From an instructional perspective, supply and equipment orders and bids went out much too late. These problems, and simmering discontent within the Department, led Dean O'Kelly to initiate on October 8<sup>th</sup> a "review of the Department and its chairmanship." This action was undertaken much earlier than usual, and focused on whether or not Holloway should be reappointed for another 3-year term as Chair. The actual faculty vote was not disseminated, but in a November 26<sup>th</sup> memo, Holloway acknowledged that his future efforts would be "a return to full-time teaching and research." That announcement was followed a day later by a meeting with Dean O'Kelly to discuss procedures for electing a new Chair. An ad hoc faculty committee (Facey, Kannowski, Larson, Neel) was charged with the task of developing recommendations. Throughout much of the spring semester, the faculty wrestled with issues of policy and procedure, and approved the following: "The position of Chair shall be rotational with tenured faculty members serving non-successional two-year terms. The process requires three ballots...i.e., nominating, run-off and final." On 10 April 1974, Joe K. Neel was chosen over Marjorie Behringer, but it took two months before Dean O'Kelly would accept the Department's decision.

The relatively quiet summer of 1974 was broken by a sad and unexpected event...the death of Professor James Reilly on June 28<sup>th</sup> while on vacation in NY. Holloway's request to fill the position for the up-coming year was denied by Vice-President Bill Koenker on the basis that there were no reserve funds available. He also gave the gloomy assessment that "filling the position in a subsequent year will depend on the adequacy of the number of positions authorized by the Board and funded by the Legislature." That appropriated funds for 1974-75 were tight was confirmed by what Neel inherited as Chair. The equipment budget was 33% less than the previous year, and the supply allocation was down 5%. The fate of Reilly's salary was not revealed, but Koenker did allow the first semester appointment of Reilly's graduate student (Clifford Mehrer) to teach the Wildlife Management course.

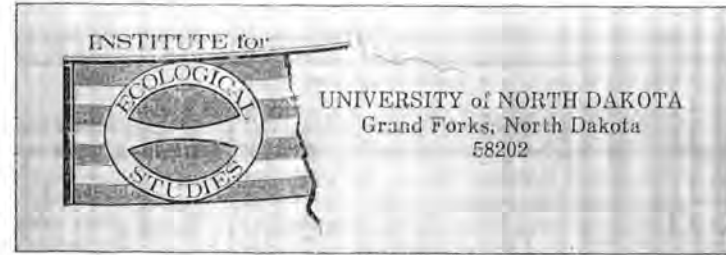
The prospect for refilling the wildlife position became even more grim in early October when Koenker declared the Biology Department overstaffed. His solution (if the Department wanted to refill the position) was that the current faculty be reduced by one! That suggestion was totally unacceptable and led to a vigorous response. An ad hoc Wildlife Study Committee (Facey, Larson, Owen, Seabloom) was later joined by John Vennes of the Medical School and John Reid, Associate Dean of Arts & Sciences. Data

were compiled to rebut Koenker's assertion of overstaffing, and the pros and cons of various possible courses of action were evaluated. Most unacceptable were discontinuance of the wildlife program and/or cutting one faculty member. A joint program with NDSU was also viewed as unlikely and impractical. Finally, the following recommendation was approved on 11/26/74: "That Dean O'Kelly be informed that the Biology Department urges the re-establishment of the wildlife management position; this to be done immediately so that a search might be conducted in order to fill the position for '75-76 with a professional from the outside."

The Department's position was successful, and in early February 1975, Koenker authorized recruitment of a replacement for the wildlife position. Facey, Owen and Seabloom constituted the search committee. Following interviews with three candidates, Richard D. Crawford, a Ph.D. from Iowa State University, accepted the position with the rank of Assistant Professor. He rejuvenated the wildlife program and its courses, and would attract a steady stream of graduate students during his 32 years on the faculty.

Although efforts required to solve the wildlife problem spanned the entire academic year, it was not the only event. Illness again struck the Department. Holloway suffered a serious heart attack on December 10<sup>th</sup>, it and subsequent by-pass surgery, resulted in the cancellation of his spring semester course, Wildlife Disease.

The multi-and interdisciplinary Institute for Ecological Studies (IES) mentioned in the previous chapter had a rapid growth in the 1970s. By 1970-71, it had a budget and its own secretary, and the following year, a single room in Chandler Hall was assigned to the Institute. Space for the IES grew by the mid-1970s to become a suite of 5-6 rooms with a staff of 8-10, most of whom were part-time individuals associated with the state's Regional Environmental Assessment Program (REAP). The potential for massive coal-related development in western ND in the early 1970s, prompted the 1975 State Legislature to fund (with coal severance taxes) initial "baseline" studies. These included the biota and other facets, such as air quality, in western North Dakota. Among the largest of these studies was the 1978 report on "Vertebrates of Southwestern North Dakota: Amphibians, Reptiles, Birds, Mammals," with Seabloom as P.I., and a staff of 22 individuals. Parasites and soil invertebrate faunas were also studied in the same region, with Kannowski as P.I. Projects were funded and administered through the IES. By the early 1980s, however, the Institute was in decline as evinced by space being reduced to two rooms in Chandler, and a staff of only three. Kannowski resigned as Director on 30 June 1981. It seems quite certain that the last IES Report (No. 47) was "North Dakota Fleas. X. An Atlas of the State's Siphonapterans," by Omer Larson (1997), and funded by the ND Department of Health. Several have served as IES Directors since 1981 (Rodney Saylor, Robert Seabloom, Staria Vanderpool, Richard Crawford, and Brett Goodwin), but the Institute has basically ceased to exist. It was evicted from its one remaining room in Chandler in 1996 and moved to a basement room in Leonard Hall. That space has also been lost, and apparently no files, records, or extra copies of IES Research Reports have survived.



The logo used on IES Research Reports

In 1974, the State Board of Higher Education mandated a policy for faculty evaluation. This led the University Senate on 16 January 1975 to approve legislation that all departments develop "Procedures and guidelines for the evaluation of tenured and non-tenured faculty to provide a means whereby the performance of individual faculty members and their contributions to the University community may be equitably assessed and documented." Arts & Sciences had a five-person committee which reviewed each department's plan for carrying out the mandate. After much time, effort and some serious concern over how the process would actually work, it was approved on 16 April, with implementation to occur in 1975-76. Despite early problems and some contentious issues, a review and evaluation process has continued. It now uses explicit criteria for judging the expectations of faculty performance in teaching, research and service. These are spelled-out in the Department's 2008 Faculty Handbook.

One of the necessary but time consuming features of higher education is the occasional need for an in depth self-evaluation. Sometimes these are huge projects and involve the entire campus, sometimes only an academic department. The latter occurred in 1975-76 when Biology's graduate program was chosen for review. The lengthy document produced became even more so with the Graduate School's opinions of the Department's strengths and weaknesses, and Biology's responses. An enrollment average of 37/year during the previous five years was not an issue, but the uneven distribution of graduate students among the faculty was a concern, as was the unevenness of teaching loads. Low support for the D.A. program and inadequate channels for graduate student feedback were also of concern. Not surprisingly, the Graduate School committee had empathy for Biology's "crowded, antiquated and inadequate space."

Assistant Professor Robert Pollock had been in the Department since 1969, but he was denied tenure and received a terminal contract for 1975-76. Although his teaching was satisfactory, his research productivity was minimal. In five years he produced only one graduate student, and that person he "inherited" after Reilly's death. Pollock chose to resign rather than linger on another year. He and his wife, Jean, decided to move to Colorado and pursue free lance photography and writing. (Note: They must have been successful because in 1980 Pollock was teaching "nature photography" at Rocky Mountain National Park in CO.) For his UND vacancy, Koenker gave prompt authorization to recruit a geneticist, and by mid-July, William Sheridan was on-campus as the only candidate to interview. His Ph.D. was from the University of Illinois, but

unlike most newly hired members of the Department, Sheridan came with postdoctoral training at Yale, and academic experience at the University of Missouri. His research on maize developmental genetics would attract large grant support.

The 1975-76 year began with Sheridan on board, but again the Department was short staffed. Oring had been granted a sabbatical at Cornell University, and Larson was going to the Arts & Sciences office as Associate Dean for the year, a ¼-time appointment. Biology budgets were better than the previous year.....equipment up 79% to \$16,858, and supplies up 19% to \$15, 500. However, the best "monetary news" came in early January 1976 when Neel and the Executive Committee met with Vice President Koenker and Gordon Kroeber, Assistant to the President for Facilities. This meeting concerned the possibility of a new building (or an addition to the existing one) and was a revival of a request that had failed two years earlier.

The implementation of the recently approved evaluation process for faculty was a major activity during the year. It was an arduous task for those serving on the committee in 1975-76. The most significant evaluation that year was the one for Associate Professor Frederick Duerr. He was in his 8<sup>th</sup> year in the Department, but his review and evaluation documented serious and long standing problems. These included 1) course evaluations reflecting reduced quality of teaching and frequent unavailability; 2) scarcity on campus, thus often missing faculty and committee meetings; and 3) grant funding and equipment accountability issues with the Game & Fish Department. It was well known that Duerr was heavily involved as a housing developer in the city, thus time for his UND obligations were greatly diminished. By mid-July, the Vice President for Academic Affairs, Conny Nelson, was reviewing the "Duerr situation." The Department files do not provide a paper trail of subsequent events, but even though tenured, Duerr did not fight the issue. He resigned his faculty position prior to the start of the fall semester, but was granted an unsalaried Adjunct Professorship in order to oversee the completion of his graduate students. In addition, Duerr agreed to teach the Cell Physiology course, gratis, during the fall semester. This arrangement had the approval of Dean O'Kelly and Bob Seabloom, the new Department Chair for 1976-78.

### Cheating

This topic could be part of any chapter, since this frailty of human behavior is not confined by time. Four examples, three undergraduate and one graduate, are presented here. Two of these involved the author of this history.

- 1) In the early 1970s, Bob Pollock, an instructor in General Biology prepared a test which ended up in a student's possession, probably due to failed security at the Stenographic Bureau in Twamley Hall. The student made copies of the test and sold them to others in the course, but Pollock learned of this a day before the scheduled exam. Despite the shortness of time, he completely re-wrote the test and had it ready for giving. Those who had bought copies of the stolen test must have been shocked to see a different version!

- 2) In the 1960s, class attendance was expected, and absences could affect one's final grade. In order to monitor attendance, students in General Biology were assigned seats in the 100-capacity lecture room on the third floor of the Biology Building. After an exam or two, Omer Larson as the instructor knew the names and abilities of many of his students, especially the best and poorest. It was customary during exams to move a student who had blatantly wandering eyes to a seat in the front row. On one occasion, a rather good student with "an eye problem" was reseated next to an individual failing the course. The good student's eyes frequently fell on the failing student's answer sheet, but Larson did not intervene, believing that "justice was served" by the seating arrangement.
- 3) In the early and mid-1970s, lecture exams for Introduction to Biology were given in the evening, back-to-back at 6 and 7pm in three large rooms. This arrangement allowed a single version of a test to be given to 600-700 students within a two-hour block of time, rather than testing three or four times during the day with multiple versions of the exam. On one occasion, Larson and Lew Oring were administering the exam in room 114 of Witmer, when a student at 6pm took the test under a fictitious name, but came back at 7pm and took it again using his real name. At that time in Biology, answers to multiple choice questions were "a, b, c, d, e" hand written on a separate sheet, and turned-in with the exam booklet for hand-scoring the next day. When the bogus answer sheet surfaced among the valid ones, the two instructors compared it to the hundred turned-in from the 7pm group, and a match was found! The letters were sufficiently distinctive to leave no doubt as to the student's identity. Larson and Oring, with Bob Seabloom attending as an observer, confronted the student after his evening lab. Denial to cheating was his initial response. However, when told that he could appeal the decision of a zero test score by going before UND's Student Relations Committee, he became contrite and admitted his guilt. He seemed a bit relieved that he was not given an "F" in the course, and he did manage to earn a final grade of "C".
- 4) The most serious of these examples was the situation involving one of Rich Crawford's M.S. students. With support from the State Game and Fish Department, the student was conducting research on ruffed grouse in the Turtle Mountains. When he submitted his thesis for approval in 1978, there were suspicious discrepancies which strongly suggested falsified data. When confronted, he admitted his guilt and was suspended from the Graduate School.

Although there was no evidence of cheating, proctoring the Introduction to Biology final exam on 6 May 1976, was unusual. Approximately a hundred students in Leonard Hall's lecture bowl had begun taking the test at 1pm when a power outage occurred. All the students were dispersed onto the grassy area west

of Leonard and Witmer to continue taking their exams. Fortunately, it was a warm and sunny afternoon.



Biology 102: final lecture examination on 6 May 1976. (Note: The low building in the background housed Industrial Technology).

On 1 September 1976, Seabloom began a weekly internal newsletter, known as the BIOLOGY NEWS. It provided an efficient way of distributing information with a minimum amount of paper. In 1980, the name was shortened to BIO NEWS, and by the end of that decade it appeared biweekly. The availability of e-mail further reduced the importance of the newsletter, and the printed version disappeared early in the new millennium.

Biology's budgets were again in a "yo-yo" mode, with equipment down 48% to \$8,896 and supplies up a disappointing 5% to \$16,275. Adding to the frustration was a problem with Graduate Teaching Assistantships. One half time GTA had been lost the previous year, but in 1976-77, three more were cut from Biology's allocation. These were belatedly restored for the fall semester after classes had begun, but the process and decisions by the administration were viewed as deplorable. The problem continued in the spring semester when only one of the three GTAs was returned. There was no delay, however, in getting permission to fill the Duerr position. By mid-September, a search committee of Oring, Crawford and Shubert were soliciting applications for an assistant professor in physiology/endocrinology. Unfortunately, neither of the two candidates who were offered the position accepted it. Therefore, in late April the faculty chose to seek a temporary, one-year replacement. Seabloom appointed Larson and Wrenn to serve as a summer search committee. Eight applications were received by mid-July's closing date.

and Gary Mallow, a Ph.D. candidate at the University of Georgia, accepted the position for 1977-78.

Despite the fact that Biology would finally be getting a new building, pursuing additional space remained an on-going activity. In 1976, the two beneficiaries of this included Sheridan gaining a suite of rooms in Budge Hall, and Owen acquiring remodeled space in Chandler for his fisheries program. By the autumn of that year, a Biology Building Committee had been appointed. During Seabloom's second year as Chair, and both of Larson's (1978-80), the new building and the move to it would remain the central focus and concern of the Department. Nothing of that huge effort is presented here, but it is covered in some detail in Chapter 8.

The 1977-78 budgets were increased, thus alternating "up and down" years, especially for equipment. Supplies were up 4.5% to \$17,000, with equipment increasing 312% to \$27,733. In October, Seabloom reappointed Oring, Crawford and Shubert to again conduct a search for a physiologist/endocrinologist. This time the effort was successful, and Albert J. Fivizzani, Jr. was hired, effective August 1978. He received his Ph.D. from Louisiana State University in 1977. Another search (Neel, Wrenn and Facey) was also successful. They found a replacement for Behringer who planned to retire after the 1977-78 academic year. John H. Fitch (Ph.D., Michigan State University, 1974) was chosen from 194 applicants to assume the primary responsibility for coordinating the introductory course. Also retiring was Maurice Jasper, long time stockroom manager. Peggy Stuppa was hired to fill the position, but she resigned after 28 months. A week after her departure, Morris Pung became her replacement. (Note: Appendix 4 provides more information on these three individuals and other staff members).

The spring semester ended with Larson being chosen Department Chair for the next two years. On May 16<sup>th</sup>, a tragedy. Two days after graduating with a B.S. in Fishery and Wildlife Management, Glenn Allen Paur drowned at Leech Lake, Minnesota. He had just begun working as a research assistant for Oring when a boating accident claimed his life. Many faculty and students attended Glenn's funeral at St. John's Catholic Church in Pisek, ND. Glenn is remembered annually through the presentation of the PAUR AWARD to an outstanding student in wildlife biology. (Note: See Appendix 3 for additional information.) With Dean O'Kelly's help, Kay Oring solicited funds for a memorial to Glenn. It was a color reproduction of a very large Czech painting which has hung in St. John's Church since 1887. A year after Glenn's death, Kay and the Larsons delivered 1,000 copies to the congregation for inclusion in their church history booklet.



Glenn Paur, 1953-78

The 1978 fall semester began short staffed. Fivizzani was on board in August, but Fitch's arrival was delayed until January, which resulted in Oring coordinating the

Biology 101 lectures, and Larson the labs. In September, the faculty approved what Larson had proposed in the spring when elected chair, namely a reduction of standing committees from 12 to 3. As with Holloway's restructuring of committees five years earlier, this additional contraction was through fusion and elimination. (Note: In the 30 years since the second restructuring, the major committees and their duties remain largely unchanged.)

Midway through the fall semester, Dean O'Kelly approved the Department's request to recruit a botanist to replace Facey who would be retiring at the end of the academic year. Jalal, Kannowski and Shubert constituted the search committee. The job description included "curator of the herbarium." By early March, about 2/3 of 60 applications were complete. Four finalists were interviewed during a period of inconvenience and cancellations when UND closed due to a serious spring flood...at the time, the 2<sup>nd</sup> greatest in the city's history. Unfortunately, no candidate was hired. The faculty decided to seek a temporary botanist for a year, and to resume the search for a permanent replacement in 1979-80. The temporary position was filled by Ann Wyckoff, one of five applicants. She had an M.S. degree from the University of Utah and teaching experience.

In addition to the botany search, the spring semester had several other significant events. Biology 100, a new 4-credit course for non-science majors was taught for the first time with an enrollment of 119. It replaced Biology's role in Natural Science I and II, an 8-credit "integrated" course for non-science majors which was unacceptably shallow and disjointed, with four departments (Biology, Chemistry, Geology, Physics) participating.

A new federal program appeared during the year. NSF was sponsoring an Experimental Program to Stimulate Competitive Research (EPSCoR). NSF had identified North Dakota as one of seven disadvantaged states in competing for their funds. Each state was offered \$125,000 as a planning grant leading to a self-analysis of the state's research programs. Mohan Wali was one of three UND faculty members on North Dakota's committee. He reported in May 1979, that the State had been funded to do the self-study, and by late August, UND's Office of Research and Program Development was soliciting and evaluating EPSCoR preproposals.

Beginning in the 1960s with Kannowski's chairmanship and committee structure, a growing number of policies and procedures had been enacted by the faculty. By the late 1970s, it became obvious that these actions were buried in the minutes of faculty meetings, and often only vaguely remembered. With a goal of eliminating uncertainty and increasing administrative efficiency, Larson spent a portion of the 1979-80 winter assembling and documenting all Department policies and procedures. These appeared in a Biology Faculty Handbook which ran 43 pages, plus an 11 page appendix. Since its appearance in 1980, the handbook has been updated a number of times, the most recent in 2008. It is now three times as long as the first edition.

Anyone who ever chaired the Department can confirm that the task is easier with reliable and efficient staff in the office, stockroom and greenhouse. Thus it was with the Department's regret that Holly Erdmann was forced to relocate to Dickinson. She had served as head secretary for nearly three years. Her replacement, Carolyn Ewasik, was also very competent, and was "stolen" from the History Department. Another example of high "competence" was the selection of Wali's graduate student, Louis Iverson, as a Fulbright Fellow for 1979-80 at England's University of York.

The 1979 fall semester began with Biology's enrollment down 14% from the previous year. There were extenuating reasons for the decline, but such numbers are always viewed in an unfavorable light by the Administration. Spring semester with a decline of 6.6% was less ominous, but still a concern to the "bean counters." However, there was no renegeing on the authorization to fill the botany position. Jalal, Wali and Kannowski resumed the search, and 48 complete applications were considered, with three candidates interviewing in April. John LaDuke (Ph.D. 1980, Ohio State University) accepted the position. This good news was tempered by the resignation of Fitch who agreed to join the staff of the Massachusetts Audubon Society.



La Duke

Concurrent with the spring semester's botany search, came an unwelcome upheaval in the Department. Neel, Seabloom and Larson had each served as Chair in accordance with the 1974 legislation of a rotational, two-year, non-succession system for choosing Chairs via a series of three ballots. Larson had polled the faculty four months earlier as to their views on the current system. There was consensus that a 3-year term was preferable, and that the "no succession" rule be eliminated. The faculty approved these changes on 3/18/80, but when Larson proposed to proceed with balloting later that month using the amended system, faculty dissension flared. One or more on the Executive Committee and an unknown number of other faculty members challenged the Chair's authority to conduct the election specified by Department policy. On May 8<sup>th</sup>, the faculty agreed to a one-year Interim Chair for 1980-81, and that the election process be restricted to those willing to serve, if elected. The process only required one ballot as Neel and Oring were the only ones willing to be considered. On 4/21/80, Dean O'Kelly was notified that Oring received a majority vote, thus he replaced Larson as Chair on August 16, 1980. Unfortunately, a year later, the same dilemma on selecting a Chair would lead to an awkward and rather contentious stalemate between Dean O'Kelly and the Department.

## Chapter 8

### THE GENESIS OF STARCHER HALL

A few months after Thomas J. Clifford succeeded Starcher as President in 1971, a large study group was formed to conduct an in depth self-evaluation of all aspects of the University. Among the 180 faculty and 100 staff on 42 subcommittees were Facey, Holloway and Larson. The whole assemblage was known as the "Study Committee on Planning and Evaluation" (SCOPE), and after 6-7 months of deliberations, 246 specific recommendations appeared. No. 231 was of special significance since it recommended a **new building for Biology**, and listed it as an imperative goal for the 1970s. This recommendation was much better than the one made in 1964 to the State Board of Higher Education. In it, UND's "Campus Master Plan" acknowledged that **an addition was needed** to the existing building, and that it should have 14,821 sq. ft. of assignable space.

By 1965, a growing Biology Department with its research-oriented faculty and vigorous graduate program had filled all the space vacated by the Chemistry Department. Partial solutions to the problem for most of the next 15 years came through piecemeal space acquisitions and relocations to other buildings. These were mentioned in the two previous chapters, and the reality of the situation was that by the mid-1970's, 15 full-time faculty and more than 40 biology graduate students were scattered across campus in six buildings (Biology, Chandler, Corwin, Budge, Montgomery and Old Science). Bernard O'Kelly, Dean of Arts and Sciences since 1966, was sympathetic to the Department's dilemma, but not until 1974 did the University submit a request to the State Board of Higher Education for a new 90,000 sq. ft. office-laboratory building for Biology. The building and its \$3,000,000 price tag was linked to the removal of three old structures (Babcock, Budge Hall and Old Science.) The Board ranked the proposal 5<sup>th</sup> on its list, but on the state-wide list it fell to 12<sup>th</sup>. The General Fund balance was insufficient for projects that low in priority.

In 1976 the funding proposal had new "legs" in the form of a "life sciences" building at a cost of \$3.75 million. Again, removal of old structures was part of the package, but with the substitution of the Industrial Technology Building instead of Old Science. (Parenthetically and in all honesty, the I.T. situation was even worse than Biology's as they were crowded into the last of the World War II wooden buildings on campus.) In order to accommodate I.T., President Clifford specified that a new building must house both departments. This unlikely combination, and funding reduced to \$3.5 million, were not what biology had favored or anticipated. Despite these developments, there was hope that a new shared building would allow each department to better meet its mission in teaching and research. It was known, however, that UND's enthusiasm was not shared to the south, as the entire Fargo delegation voted against the appropriation. There were, in addition, two potential problems in Bismarek; 1) a rumor that Arthur Link, the Democrat Governor might veto the appropriation, and 2) that Bob McCarney, a maverick Republican who never served in the legislature but frequently meddled in its affairs, threatened to refer the appropriation to a vote of the people. Fortunately, neither event occurred.

Actions by the State Board of Higher Education prior to the 1977 legislative session were of huge importance. In an October meeting in Minot, the Board prioritized the requests for capital improvements throughout the system. UND's request for a new office/lab building ranked number two on the list. That favorable action caused Seabloom, the Biology Chair, to appoint a Building Committee on 11/17/76. Kannowski was elected to chair the committee, with Shubert as secretary. Oring, Sheridan and Larson were the other members, with Seabloom ex-officio. Sheridan was replaced by Jalal during the summer of 1977 when he left on developmental leave. A UND Building Committee was named by President Clifford in April, chaired by Henry Tomasek, Dean of the College for Human Resources Development. Biology was represented by Kannowski, Seabloom, Shubert and Larson, while Myron Bender and Herbert Auer represented Industrial Technology. Gordon Kroeber, Assistant to the President for Facilities, rounded-out the eight person committee. Until 1971, Kroeber served as Superintendent of Buildings and Grounds, thus he was familiar with the campus and its infrastructure. These individuals are acknowledged on a plaque in the Starcher Hall lobby. It is unlikely that any member of the biology committee had the slightest idea of the time, effort and frustrations that would ensue over the next 29 months, leading to groundbreaking in May 1979!

During the summer of 1977, the University hired Grosz and Anderson as architects with the hope that bids could be let by early spring, and groundbreaking by May 1978. No one imagined that the process would require an extra year of difficult planning. The summer was a busy one as the Department compiled data to support the faculty's ideas on office, research and instructional space. Additional ideas were gleaned in August through site visits to biological facilities at Moorhead State, University of Manitoba, University of Winnipeg and the Saint Paul campus of the University of Minnesota. No site visit to NDSU was proposed, even though their biology building (Stevens Hall) was only nine years old.

By early September 1977, the allocation of space to Biology and I.T. had not yet been resolved. The proportion varied in the vicinity of 1/3 I.T., 2/3 Biology, but the actual proposed square footage changed several times. Each change resulted in the Biology Building Committee making painful revisions in their priorities and space allocations. Eventually, the University approved plans for a facility of 70,000 sq. ft. gross space, to be divided, 51,000 for Biology and 19,000 to I.T. As of 9 December 1977, the actual net assignable space for biology was calculated to be 38,848 sq. ft. Those surprisingly small numbers excluded any hope for a display museum, large lecture bowl or library. It also negated hopes of bringing Owen's fisheries unit and Wali's Project Reclamation facility into the new building. Each of those occupied about 3,500 sq. ft. of acceptable space in Chandler Hall. The Institute for Ecological Studies and its director, Kannowski, would also remain in Chandler.

Reports of shrinking space affirmed the Department's view that Biology's share of the appropriation should go into "brick and mortar." Furnishings and equipment were issues put into abeyance, although there were lists totaling nearly half million dollars by



early November 1977. In late autumn, ideas were floated to keep part or all of the current biology building, and to make the new structure an addition. President Clifford was not favorably inclined to that idea, but he encouraged applications for funds from organizations such as the Kresge, Kellogg and Northwest Foundations. Biology's request to solicit private and/or corporate contributions via an extensive brochure was never approved. However, a December meeting between Clifford, Kannowski and Seabloom gave unexpected optimism for supplemental funding in the range \$500,000 to \$1,000,000. Such monies would permit the inclusion of a display museum, mid-sized classroom and a 4<sup>th</sup> floor. On 1/24/78, the architect informed the Biology Building Committee that \$3.65 million was all that was available. This was a \$150,000 increase over the \$3.5 million appropriation, but far short of the monies mentioned by Clifford in December. With frustration and considerable distress, the Department returned to the plans of 12/9/77.

Other concerns and potential problems surfaced in the fall of 1977. One was a suggestion from Conny Nelson, Vice President for Academic Affairs, that space in the new building might be needed for one or two deans (presumably O'Kelly and Tomasek.) Both the Arts & Sciences Council and the University Senate were opposed to sacrificing academic space for administrative space, and the idea was not pursued. Another threat of encroachment was a suggestion that the Psychology Department's rat colony in Old Science could be accommodated in our new animal quarters, but Kroeber advised against this.

Two major questions persisted throughout much of the planning phase; 1) an acceptable building site, and 2) shape of the building. In reality, the two questions were interdependent. In July 1977, the Biology Building Committee went on record as favoring two locations on the mall as preferable to the empty site of the original Winter Sports Building that had preceded the first Engelstad Arena. This site was west of the water tower and parallel with the railroad yard. President Clifford did not favor using the mall, hence by late November the architect proposed a rectangular building adjacent to the tracks. Several sites deemed unacceptable included 1) the Bronson property north of 6<sup>th</sup> Avenue North, 2) the area south of the present day Medical School, 3) an area west of the English Coulee near the Chester Fritz Auditorium, and 4) the open space between Corwin and Robertson Halls. While discussing possible sites, the Biology Building Committee had concurrently convinced the architects that a square design might be better than a rectangle. An inner laboratory core, approximately 48' x 48' would be advantageous and cost effective since much of the expensive infrastructure would be confined to a vertical space. Instructional laboratories and offices would occupy the periphery of all three floors.

By 1/24/78, Anderson was receptive for the first time to a new site, south of the fieldhouse covering the tennis courts. From late January until early April 1978, there was a frustrating absence of new information or advice from the President or the UND Building Committee. The death of Mr. Grosz on 29 May had no noticeable effect on the architectural process.

Except for a few minor problems, I.T. considered schematic #7, dated 8/24/78, as a final acceptable design. The architect was now producing drawings of a square biology building. The rectangular design had been abandoned, but Tomasek was growing increasingly impatient with Biology and said that only major errors would be considered. That mandate was largely ignored and a final list of 24 recommendations and concerns was sent to Anderson in mid-October. On two previous occasions Biology had also ignored Tomasek's orders, namely that the only darkroom and substantial classroom would be in I.T.'s area. Plans for Biology's 40-capacity classroom was hidden from Tomasek by calling it a "seminar room." Likewise, tucking a darkroom behind Biology's drafting/graphics room escaped his scrutiny. A final committee meeting with the architect in December concerned the types and locations of utilities for each biology room. In mid-August, Larson replaced Seabloom as Department Chair, and with it, they swapped their ex-officio membership on the building committee.

On 1/11/79, the North Dakota Board of Higher Education approved that bids could be let for construction of an office-laboratory building at UND. Monies available included the 1977 appropriation of \$3,500,000, plus \$150,000 from sources unknown to the Biology Building Committee. Bids opened in mid-April were about \$133,000 over budget according to figures received by Kannowski. In the absence of additional funds, certain changes and/or deletions were likely to occur, such as leaving the animal quarters unfinished and/or omitting one greenhouse. Unknown to most, if not all other members of the committee, was Oring's role in convincing President Clifford that animal quarters must be part of the new facility. That plea led Clifford to ask the Board for two 30-day extensions before accepting the bid, thus time for him to raise monies from private sources to cover the shortfall.

The State Board of Higher Education at its May 11<sup>th</sup> meeting in Mayville approved naming the Biology-I.T. Building, Starcher Hall in honor of George W. Starcher, UND's president from 1954 to 1971. It was a popular decision since Starcher was trained in math and science, and he was nationally known as a staunch defender of academic freedom. Some of his awards and honors are displayed in the lobby of the building that bears his name. The groundbreaking ceremony was held on the tennis courts at 11:30 a.m. on May 22<sup>nd</sup>, a cold and windy day with Dr. and Mrs. Starcher present. A luncheon in the Memorial Union followed the ceremony.

Of the information provided in the printed program, one was of special interest to Biology. The total funding/cost was listed as \$3.79 million, thus President Clifford had found \$140,000 of additional monies. It now appeared that Biology's animal quarters and greenhouses would be part of the building. Meinecke-Johnson, the general contractor, said that they would require 580 calendar days to complete the building, thus a 31 December 1980 deadline.



Mrs. Starcher, Pres. Clifford, Starcher, Dean O'Kelly, Omer Larson

## PROGRAM

GROUNDBREAKING CEREMONY, 11:30 A.M., TUESDAY, MAY 22, 1979, TENNIS COURT SITE

### Introductions

Dean Henry J. Tomasek

### Remarks

President Thomas J. Clifford  
 Dr. George W. Starcher  
 Architect Algot Anderson  
 Board of Higher Education Representatives

### Groundbreaking

Dr. George W. Starcher  
 Assisted by: Deans Bernard O'Kelly and  
 Henry J. Tomasek  
 Chairmen Omer Larson and  
 Myron Bender

12:15 p.m. — River Valley Room, Memorial Union

### Luncheon

### Remarks

President Thomas J. Clifford  
 Dr. George W. Starcher

### OFFICE-LAB BUILDING COMMITTEE

Henry J. Tomasek, Chairman  
 Paul Kannowski, ecological studies  
 Gordon Kroeber, facilities  
 Myron Bender, industrial technology  
 Herbert Auer, industrial technology  
 Robert Seabloom, biology  
 Omer Larson, biology  
 Elliot Shubert, biology



In June 1978, the six tennis courts were removed and a larger shovel than the ceremonial one was excavating the site for the future basement.



In the early autumn of 1979, construction of the second story was about to begin.



Russ Peterson, Dean O'Kelly, Starcher, Geraldine Clapp, Dean Tomasek

## Dedication Ceremony

10:30 A.M., SATURDAY, OCTOBER 4, 1980

### Presiding

Dr. Henry Tomasek, Dean, College for Human Resources Development  
and Chairman, Building Planning Committee

### Invocation

Dr. Russell Peterson, Professor, Center for Teaching and Learning

### Introduction of Guests

Dr. Henry Tomasek

### Remarks

Geraldine Clapp, Board of Higher Education  
Algot Anderson, Architect, Johnson/Halverson/Anderson/Architects P.A.  
Dr. Thomas J. Clifford, President of the University

### Dedication Address

Dr. George Starcher, President Emeritus of the University

On 7/1/80, the State Emergency Commission approved \$150,000 toward expenses associated with the move to Starcher Hall. Of this amount, Biology received \$102,900, but it was seriously inadequate. It did, however, allow for the purchase of fume hoods, bench tops, sinks, projection screens, caging for live animals, and various types of floor and wall cabinets, etc. President Clifford encouraged the Department to take *everything* of value from its facilities, except fixed classroom seats, chalkboards, and sinks "bolted to the wall." By necessity, scrounging old furniture at Central Receiving was done to fill empty spaces. For example, the used student benches in the introductory biology laboratories were once Microbiology's.

On August 16<sup>th</sup>, Lew Oring assumed the Department Chairmanship and appointed Larson, to be coordinator of Biology's move. Dedication of the building occurred in the I.T. wing of the building at 10:30 am, on October 4, 1980, with Dr. & Mrs. Starcher in attendance. This ceremony, and the President's luncheon, were held in conjunction with Homecoming activities.

Although the building was dedicated in early October, there was much interior finishing work to be done. In addition to painting and many "cosmetic" needs, were the complexities of the electrical and plumbing projects required to make the laboratories functional. By late November, the first "wave" of faculty, equipment and furnishings began the move, with the goal of being able to teach some second semester classes in Starcher Hall. Some essential items, however, could not be moved until fall semester courses were finished. To facilitate the process and lessen chaos, the destination of every item required a Starcher room number. For a period of more than six months, LeRoy Sondrol's Plant Services Department provided trucks and man power, almost on a daily basis. Most often the moving crew was led by Lloyd Blazer, who was exceptionally reliable and patient throughout the long and tedious process.

By early January, Crawford, Kannowski, La Duke, Lang, Oring, Seabloom, and Wrenn were functionally (if not totally) moved into Starcher Hall. By mid-semester, a second group (Fivizzani, Holloway, Jalal, Shubert) joined their earlier colleagues, with Larson being the last to vacate the Biology Building in May. Professor William J. Wrenn taught the first class (Biometry) in Biology's portion of Starcher at 8:00 a.m., Friday, 9 January 1981. The move and the long "settling-in" continued under Larson's supervision until 13 August 1982, when Kannowski relieved him of that duty.

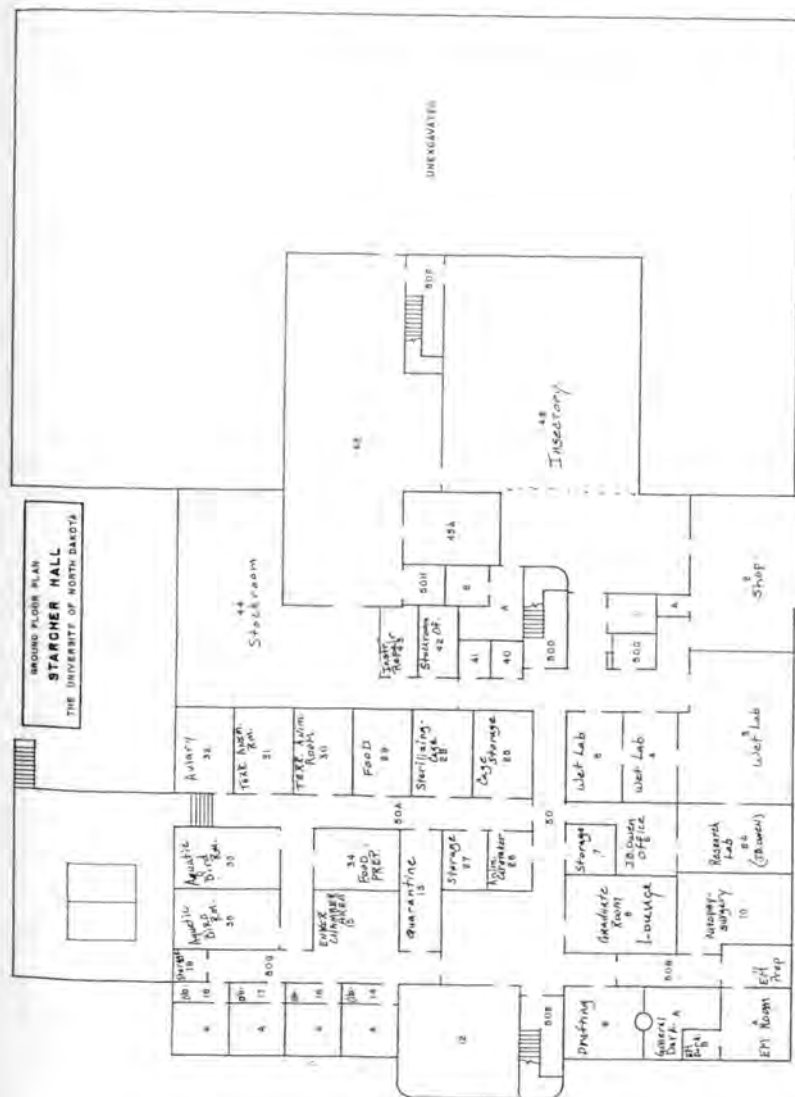
The last four pages of this chapter show the floor plan, functions and occupancy in Biology's portion of Starcher Hall as agreed to in 1979-80. In the 27 years since the first class was taught in the building, it has served the department well in many respects. Over and above the repainting of the interior walls during La Duke's chairmanship, are a number of structural alterations. It is not within the scope of this chapter to mention all the changes that have occurred, especially those relating to room function. There were, however, three major faculty relocations during the building's first three years. The earliest was to accommodate Sheridan on the third floor. He was forced to vacate his first floor space in Budge Hall after a small fire triggered extensive water damage in 1981. The following year, Owen left Chandler Hall after six years in that building. In

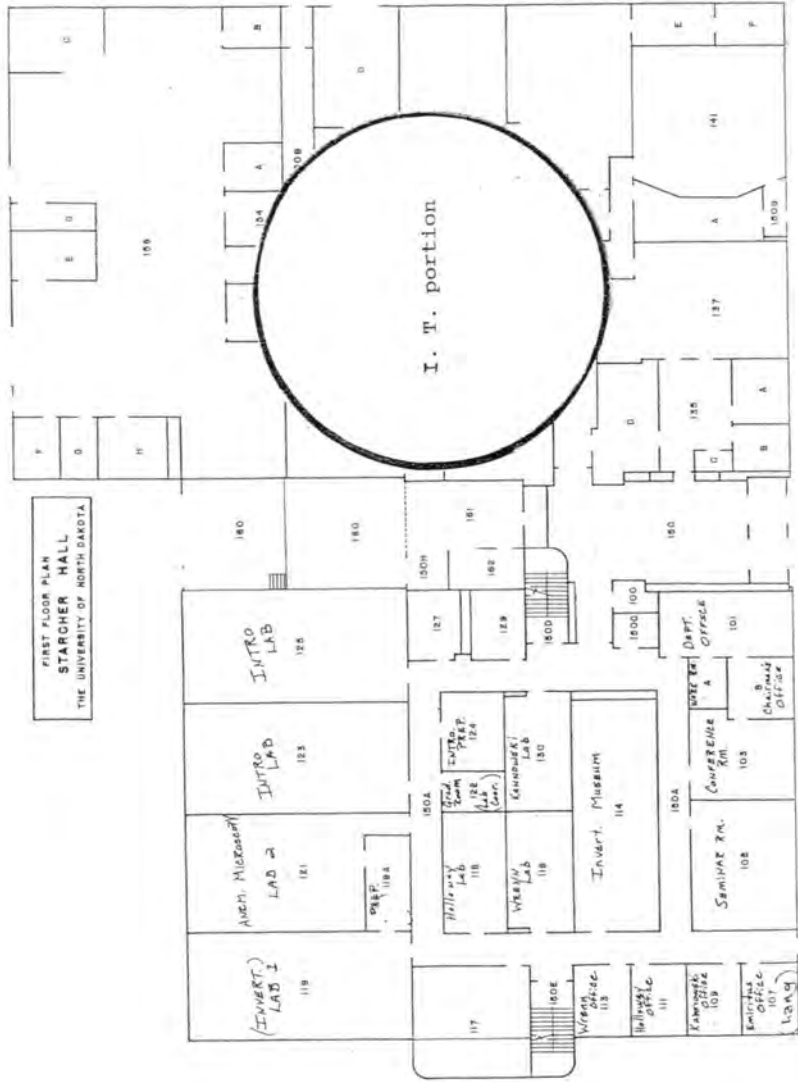
addition to office and research space in the basement, the shop (room 2) was converted into a teaching facility for fisheries biology. A small adjacent room (2B) for the fish, amphibian and reptile collections was carved out of room 46. In 1983, Lang also moved to the basement to occupy a suite of three rooms (no. 11, 11A, 11B) originally intended for electron microscopy. Choosing not to move to Starcher Hall were Neel who retained space in Montgomery, and Wali in Chandler. There were two projects in 1982-83 that enhanced everyone's convenience. This was the construction of a passageway between the lobby and the loading dock, and the partitioning of a corner of the invertebrate museum to create a room for photocopying.

In a collaborative venture, UND and the USDA Human Nutrition Laboratory funded a third greenhouse in 1986-87. This separate facility on the roof's west side allowed for radioisotope experiments in a controlled setting. By the early 1990's, a new doorway connected rooms 320 and 324. This led to nearly doubling the size of a faculty research lab, but lost in the remodeling was the separate room for preparing herbarium specimens. On the second floor during the summer of 1997, two office cubicles for retired faculty were carved out of the east end of the vertebrate museum. More recently, nearly half of the invertebrate museum was converted into a research laboratory. Access to that much smaller museum is now gained through a new doorway in a student study area (room 130), a room which earlier had been designated as the "Neal Weber Room."

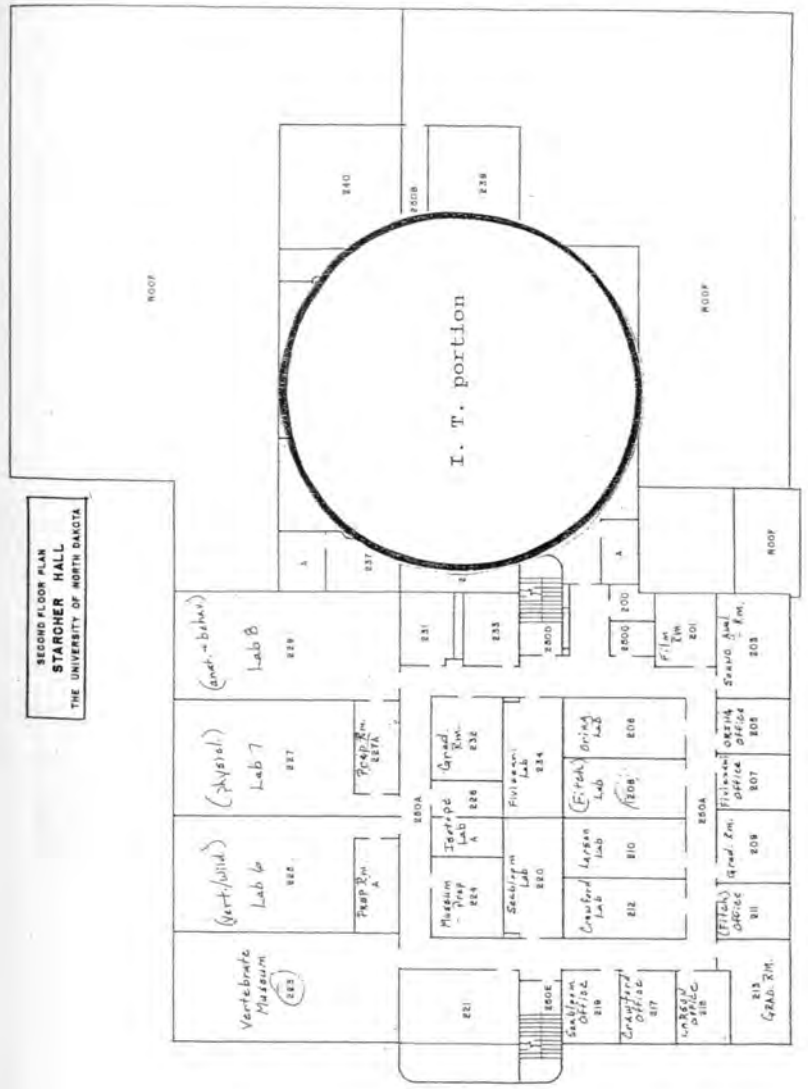
By any assessment of Starcher Hall, it is obvious that the largest number of functional changes have occurred in the basement. In addition to those mentioned for Owen and Lang, was the early partitioning between Biology and I.T. of a large undeveloped area (room 46). By the early 1990's, Biology's portion was converted into a research laboratory (room 47) and a smaller storage room (no. 48). Other changes in the basement have been (and still are) contentious. These include converting all four behavioral observation rooms (no. 14, 16, 17, 18) into mouse and rat-rearing facilities. An adjacent shower room (no. 19) is no longer that, since the floor drain has been sealed with concrete. The Psychology Department has gained a significant presence with rat colonies and work rooms. This, and Biology's loss of control of much of the basement, is directly attributable to Kap Lee's role as Director of UND's Center for Biomedical Research. His order to move the mosquito colony out of the animal quarters led to the 2007 conversion of the darkroom and a small adjacent space into an insectory/parasite rearing facility.

The most recent change in Starcher Hall occurred in the spring of 2008. The removal of a wall in the back of room 229 eliminated a small conference/classroom, thus enlarging the teaching laboratory. It is a given that changes in the building will continue as the department's faculty and research needs also change. Hopes for an addition to the building (lecture bowl, museum, library, etc) remain a distant dream.

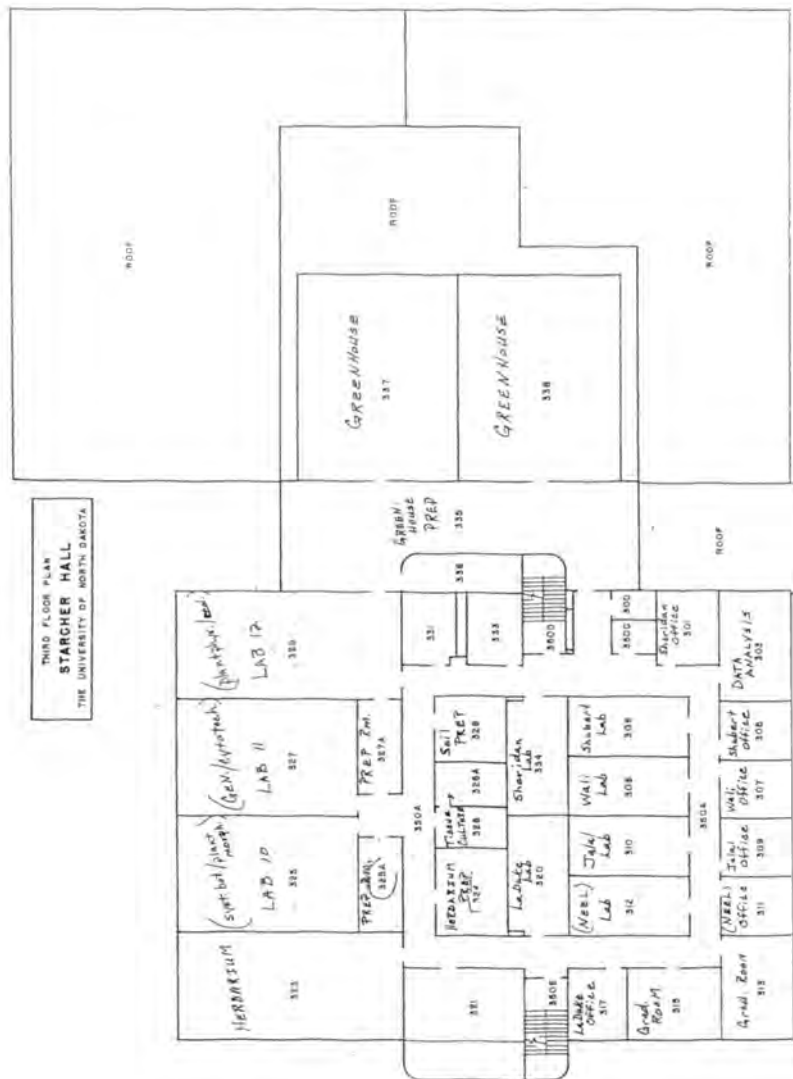




FIRST FLOOR PLAN  
STARCHER HALL  
THE UNIVERSITY OF NORTH DAKOTA



SECOND FLOOR PLAN  
STARCHER HALL  
THE UNIVERSITY OF NORTH DAKOTA



THE CENTENNIAL DECADE

The faculty's approval during March-May 1980 of changes in procedures and policies for choosing a Department Chair was disconcerting. When the dust had settled, Larson continued on as a "lame-duck" Chairman, and much preoccupied with overseeing the completion of Starcher Hall. Although steady progress was made, unexpected and frustrating delays occurred, none more so than the plumbers going on strike the 31<sup>st</sup> of May. However, bad news also was tempered by good news. In mid-June, President Clifford authorized an expenditure which allowed for carpeting, rather than tile in all offices. The most contentious issue during the summer of 1980 involved Paul DuBowy, one of Crawford's M.S. students. Paul was known campus-wide as "Kermit the Frog." He wore a Muppet-style costume and provided on-ice entertainment between periods at hockey games. His aggressive nature also suited intramural hockey, and led to a body check and broken leg for A. William Johnson, Dean of the Graduate School. Academically, DuBowy had a serious disagreement with the Department and the Graduate School over an unfulfilled organic chemistry requirement. Therefore, when his style for literature citations did not conform to those stipulated by the Graduate School, he was more than ready to lodge angry appeals to Crawford, Larson and the Graduate Dean.....all to no avail. His assessment was that the Dean was arbitrary and everyone in Biology was "spineless." DuBowy did graduate in August, thus he must have corrected the citation style in the 20-page bibliography of his thesis.

On 16 August 1980, Oring began his one-year term as Department Chair, with Larson assigned to coordinate the move to Starcher Hall. Fall enrollment was up 4% over the previous autumn, and Jalal had secured an Instructional Development Grant from the Busch Foundation for his genetics course (Biol. 357). Shubert was on developmental leave in England for the semester, and the dedication and tours of the new building were deemed a success. Despite these favorable events, Oring had many concerns, not the least of which was Wali's report that the state had received a negative review of its first attempt to gain EPSCoR funding for 1979-84. Oring also saw problems in the Department which caused him to distribute a lengthy list of intradepartmental items which needed faculty study. This was to be a "planning effort" with a five year focus. Research, curriculum and collections/field stations were the major areas discussed at a faculty retreat in late October at the University of Minnesota's Biological Station at Lake Itasca. Out of the retreat's recommendations came the faculty's approval to characterize itself as emphasizing "Ecology of the Northern Great Plains," a statement which still appears in departmental descriptions.



Jeff Lang

Jeffrey W. Lang, M.S. at UND and Ph.D. from the University of Minnesota, joined the faculty in 1980 as a part time temporary assistant professor, having research interests in reptilian physiology. (Note: Lang would become the epitome of a "temporary" inching into, and up the academic ladder. In 1982, Lang was appointed

Assistant Research Professor, and in 1989 he was promoted to Associate Research Professor. He finally attained a regular tenure track position as Associate Professor in 1991, and promotion to Professor in 1998).

Fitch's 1980 summer resignation left Introduction to Biology without a course coordinator. Patrick Theisen, an M.S. student was pressed into service to do the task for the year, while the faculty debated as to what type of biologist should fill the Fitch position. Once again, the need for new faculty in other areas of biology prevailed, thus relegating the "Coordinator" position to a lower priority. Crawford, La Duke and Seabloom were appointed to recruit a Population Biologist/Evolutionary Ecologist, and with Neel's impending retirement in the spring, a second search committee (Fivizzani, Owen, Wali) was asked to seek an Aquatic Ecologist/Limnologist. In addition to the two searches, staffing for the next year was clouded by three possible developmental leaves, and Jalal's prospect of becoming Director of the Human Cytogenetics Lab in Helena. The latter uncertainty persisted until early February 1981, when Jalal turned down the Montana offer. Also in early February came the relocation of the Department Office to Starcher, with its inherent chaos and nonfunctional phones. Within a month, however, Oring had procedures and policies in place to affect an orderly flow of work through the office.

At the Founders Day dinner on the 26<sup>th</sup> of February, Oring became the fourth biologist to receive the **Sigma Xi Award for Individual Excellence in Research**. This annual award was first given in 1969 by the local chapter, a tradition that continued through 2003. At the same event, Larson was presented the **B.C. Gamble Award for Teaching and Service**. He was known for lecturing with chalkboards full of multicolored drawings and diagrams, whether for introductory or advanced courses. He especially preferred class at 8am so that he might fill the boards the evening before. Students have never liked class at that hour, but in histology they often arrived 10-15 minutes early in order to copy the detailed drawings.



As for the two search committees, there was no shortage of applicants. Crawford reported that more than 125 had applied for the Population Biologist position, and Fivizzani noted 72 for the Aquatic Ecologist opening. Multiple interviews occurred during April and early May, with Diana Lieberman accepting the Population Biologist position, and Isaac "Ike" Schlosser the one in Aquatic Ecology. (Note: Malcolm Butler who interviewed for the latter position was hired by NDSU). Schlosser had a Ph.D. from the University of Illinois with research interests in population and community ecology of fishes. Also hired was Margaret "Meg" Burke to replace Theisen as coordinator of Biology 101-102. She was a behavioral ecologist with a Ph.D. from Duke University.

Lieberman's Ph.D. was from the University of Ghana, and she and her husband, Milton, were tropical forest ecologists with well-funded research projects in Costa Rica. Milton had a Ph.D. from the University of California, Irvine, and was granted an unsalaried Research Professorship in the Department. Both he and Diana had done research in West Africa prior to their work in Costa Rica. Also joining the Department in the fall was a larger than usual group of new graduate students. This was a direct result of intense recruiting made more successful through funding from the Graduate School and Arts & Sciences.



An unexpected event impacted Biology in the spring of 1981. Sheridan had acquired a suite of first floor rooms in Budge Hall in 1976 for his maize research project. Although the building was old (built in 1899), the space was to his liking and he preferred it over Starcher Hall. However, on the evening of April 17, someone broke into an English teaching assistant's office on the third floor, and while there set fire to a grade book and some other papers. Although a small fire, it triggered the sprinkler system which ran all night causing severe damage. The structure was condemned and razed later that year, and Sheridan's lost space needed replacement. The Department's attempt to meet his needs in Starcher Hall was partially met by converting a teaching laboratory (room 327) into a maize research facility. He also acquired additional space in Chandler Hall which had been occupied by Project Reclamation.



Oring's annual report listed 30 favorable developments for Biology during 1980-81. These he felt were "superficial accomplishments." In his list of 11 frustrations, he viewed the unsolved but crucial problem of stabilizing the chairmanship as a personal failure. Alice Clark, Vice President for Academic Affairs, responded that he was being too hard on himself, and she felt that he and the Department should feel great pride in what had been achieved during the year.

### A Big Dilemma: Finding a Chairman

Oring's frustration soon involved all faculty members. What follows is a detailed account of a contentious stalemate. On 5 March 1981, the Executive Committee alerted Dean O'Kelly that Biology was unable to proceed with the selection of a Chair for 1981-84 until the issue of adequate compensation was resolved. The rationale was that being the Department Chair was very nearly a full-time, 12 month task, thus only one extra month of salary was insufficient. Oring polled the full-time faculty and announced on

May 4<sup>th</sup>, that no one was willing to stand for election at a 10 month base salary. On 15 August, the last official day of Oring's Chairmanship, the Executive Committee was faced with the immediate chore of administering the Department for an unknown length of time. This prospect was not well received, and O'Kelly's blunt response was that "It is not a department's prerogative in this university to forego having a chairman." On August 20<sup>th</sup>, Oring reported that O'Kelly and Dean Johnson of the Graduate School, had reluctantly agreed to allow Biology to convert a portion of their GTA funds into an additional month of salary, if that issue was so critical to the faculty. The Department unanimously approved a counter proposal to select an Interim Chair for 1981-82 with a 10 month salary, if O'Kelly would agree to an 11 month salary base beginning in 1982-83. This proposal was rejected on August 26<sup>th</sup> by the Dean, with the admonition that, if necessary, he would proceed on his own to select a Chair for the Department.



O'Kelly

In an effort to get the issue off dead center, the Executive Committee (Crawford, Fivizzani, Larson) met with O'Kelly on September 3<sup>rd</sup>. That led to the Dean's presence at a special faculty meeting a day later, but the stalemate was not resolved. If anything, O'Kelly's position hardened when he stated that an unknown future salary base was not adequate grounds for declining the chairmanship, and that he had not found convincing arguments in support of Biology's position. By September 9<sup>th</sup>, it was obvious that O'Kelly would not (or could not) meet the Department's request on salary issues. Therefore, the faculty voted to proceed with the election of a one-year Chairperson for 1981-82, using nominating, run-off and final ballots. On September 25<sup>th</sup>, the Dean was notified that Crawford received a majority vote, and by October 6<sup>th</sup>, he began making decisions on behalf of the Department. Crawford's new role required his resignation from the Executive Committee, and Oring was elected to replace him. After seven months of uncertainty, the long and contentious situation was over, a relief for some, but for others, lingering discontent.

Despite the fall semester's distractions, several positive things occurred. Wrenn was on developmental leave for the semester and Sheridan for the year, with Kannowski scheduled for the spring. Enrollment was 1,057, up 1% over the previous fall, and in that number were 23 students taking Crawford's new course, Biol. 240, "Wildlife Conservation." The Department dropped its onerous requirement that all new graduate students take a diagnostic exam. Oring's efforts to have the conference room handsomely furnished was made possible by a \$4,000 grant from the Alumni Association. On October 8<sup>th</sup>, after many months of hospitalization and rehabilitation, Emeritus Professor Vera Facey returned to her Grand Forks home.

Biology's second retreat to Itasca occurred in late October, although several faculty members chose to not attend. Crawford suggested an ambitious agenda to include, minimally, animal care, collections, field stations, research, chairmanship, graduate studies and other concerns of APSAC. Faculty minutes from 30 October and 6 November contain several substantive actions arising from the retreat; 1) authorization

for a 3-person Field Station Committee, thus restoring one that had existed from 1968 to 1978; 2) authorization for a 3-person Research Committee (Note: a predecessor, the Research Grant Committee, had a short life in 1968-69), and 3) if or when a 17<sup>th</sup> faculty position is authorized, it should be for an Introduction to Biology coordinator.

The spring semester provided some favorable developments. At Founders Day in February, Biology received its second **Departmental Award for Excellence in Research**, and a month later, Wali confirmed that AIBS had accepted an invitation to hold its 1983 meeting at UND. A totally unexpected development was O'Kelly's letter in March stating that for 1982-83, Chairs of the College's four largest departments (Biology, Chemistry, English, Psychology) would receive 11 month salaries, plus an "administrative stipend" of \$2,000. President Clifford and Alice Clark, VPAA, were responsible for this new level of compensation, but O'Kelly was clearly uncomfortable being committed to it. For 1983-84 and 1984-85, he could only pledge to make every effort to find the funds necessary to continue the policy. For the Biology faculty, the new salary schedule for Chairs was a vindication of the Department's prolonged and difficult attempt to convince the Dean of its justification. The semester ended with Kannowski being elected Chair for 1982-85, and this time salary was not an issue! Except for opening a public display of the Rhode Shell Collection, with Mrs. Ralph Rhode in attendance, the summer of 1982 was pleasantly uneventful.

The 1982 fall semester began with Seabloom on developmental leave for the year at the University of California, Davis. Bob Rindy became the Department's first caretaker of the greenhouses, and Kannowski was again chairing the Department. After two consecutive years of "interims," it was gratifying to have continuity and experience at the helm. However, because of uncertainties a year earlier, the faculty approved a policy that the Chair of the Executive Committee would serve as Acting Chair in the absence of the Chairman. Fall enrollment was basically unchanged from the previous year, but the number of majors had increased 11% to 149. Unfortunately, the graduate program was having difficulty with only three of 30 students pursuing a Ph.D. Five years earlier there had been 12 students working toward that degree, plus five in the D.A. program. For the third October in a row, a retreat at Itasca was scheduled with faculty research, the graduate program, and Wali's replacement as the major agenda items.



Wali

And that was the big October news...Mohan Wali's announcement that he had accepted a position with SUNY-Syracuse as Professor of Environmental Science and Director of Graduate Studies in Environmental Science. After 13 years, his role in the Department would end with the fall semester, and he would take an unpaid leave of absence until August 15<sup>th</sup> in order to complete his obligations to the 1983 AIBS meetings at UND. He also needed time to close down Project Reclamation. This had been a large, multidisciplinary research program since August 1975, housed in Chandler Hall and funded with 1.67 million dollars from the U.S. Department of the Interior, Bureau of Mines. (Note: Although the largest, it was not Biology's first involvement with



reclamation. In 1966-68, the Knife River Coal Mining Company had funded a modest research effort under the direction of Reilly). Reclamation research always focused on effective restoration of the landscape after strip mining, an endeavor Governor Arthur Link was passionate about. Wali's heavy involvement often reduced his teaching load, to the point that in 1977-78, he was half-time Director of Project Reclamation and half-time Assistant to the President for Energy Affairs. Wali, however, had contentious issues with his biology colleagues, especially concerning his treatment of a D.A. student in 1976, the denial of his early promotion to Professor in 1977, and a committee's triennial review and evaluation of him in 1978. It was generally recognized in the Department that he was incapable of ever admitting an error or a shortcoming.

During the fall of 1982, the faculty debated what area of expertise should Wali's replacement have.... "evolutionary and/or physiological ecology with emphasis in higher plants" was the choice. By mid-March, the search committee (Diana Lieberman, Jalal, Schlosser) had narrowed the field to five finalists, with the faculty's first choice, Michael J. Auerbach, accepting the position. His Ph.D. was from Florida State University, with primary research interests in plant-animal relationships. He had just completed postdoctoral studies at Israel's Hebrew University. The spring semester concluded with the arrival of Neal Weber's library on social insects, and his presence on campus for a reception in late May. He would return two years later to receive a **Sioux Award** during Alumni Days.

### Celebrating UND's Centennial

A portion of this chapter relates some of the events which occurred during the first 1/3 of the decade in conjunction with UND's birthday. February 27, 1983, was precisely the 100<sup>th</sup> anniversary of Governor Ordway's signing of the Territorial bill establishing the University. As with the celebration of UND's 125<sup>th</sup> anniversary, the centennial observance was also preceded by at least two years of planning. Chairs of 72 academic departments were alerted by Dean Tomasek in early October 1981, that histories should be written with an early date of completion. Tomasek's notification was a bit tardy, because Chester Fritz Library had distributed seven months earlier, an informational sheet listing useful sources for prospective authors. Crawford, as Department Chair in 1981-82, responded to Tomasek that Kannowski would be Biology's author, and that the history would run about 40 pages with an anticipated completion date of September 1982. Both estimates were inaccurate. By 1984, Kannowski's manuscript was basically complete, but exceeded 100 pages in length, plus extensive appendices. These and supporting files are now in UND's Department of Special Collections. (Note: Tomasek announced that 32 of 72 departments failed to meet the September 1982 deadline for completion, thus Biology was not the only one late).

During the year-long celebration, an extensive list of events was scheduled, many with a centennial theme. Among the most notable was an Academic Symposium with 11 speakers over a span of four days. These included Louis Geiger, who for the 75<sup>th</sup>



anniversary wrote the definitive history of UND, "**University of the Northern Plains.**" Another was Elie Wiesel, survivor of Auschwitz, author and renowned spokesman for the Jewish people. Representing the sciences was the chemist, George Hammond, who focused on "The Role of the University in Science." Kannowski was a panelist at this presentation, and Wrenn a member of the Symposium Committee. Biology's largest centennial involvement was the AIBS and Canadian Botanical Association's joint meeting on campus, 7-12 August 1983. More than 2,000 attended, and for this event, Wali was the chair for local arrangements. On a lighter note was the humorous musical stage production, "Beacon Over Our Western Land," in which President Clifford portrayed himself in the final scene. Of special historical interest was the publication of "**A Century on the Northern Plains,**" a book authored by six individuals and edited by Robert Wilkins of the History Department. The centennial logo, minus the dates, remains widely used on printed material and University stationery. The Founders Day Banquet on 23 February 1984, concluded the centennial celebration which had begun with state officials in Bismarck 13 months earlier.

### After the centennial....

President and Mrs. Starcher visited Biology in August and October 1983, and found the building to their liking. The Department and campus resumed normal activities associated with the start of fall classes. The AIBS meetings were over, and except for Homecoming, the centennial celebration was winding down. Fall semester enrollment of 1,672 was up 5% and the number of majors had increased 9.5%, to 161. A concerted effort at recruitment had brought new life to the Ph.D. Graduate Program (Table 1). Auerbach had joined the Department, and Forest Ecology (Biol. 532), a new graduate course by D. Lieberman was on the fall schedule. Also for the first time, the Liebermans and Auerbach offered Natural History of the



Auerbach

Table 1. Average Number of Graduate Students/AY\*

	M.S.	D.A.	Ph.D.	Total
1980-81	27	0	5.5	32.5
1981-82	27	0	4	31
1982-83	25	1	3	29
1983-84	22	0	9.5	31.5
1984-85	16	0	10	26
1985-86	13.5	0	8	21.5
1986-87	18	1	7.5	26.5
1987-88	17.5	1	8	26.5
1988-89	22	1	11.5	34.5
1989-90	15	1	9.5	25.5

\*Based on the Department's annual reports.

Tropics, a field course in Costa Rica taught between semesters. Although feedback was very favorable, only 22 students took the course during the three times it was offered. At

a cost of nearly \$1000/student, the "field trip" was prohibitive for most. In mid-December, the faculty held their fourth consecutive retreat. However, instead of Itasca, it occurred locally and for only a day. The agenda included undergraduate curricula and teaching loads. With respect to the latter item, it was clearly established that the Chair of the Department had total authority over any and all issues concerning teaching loads. Except for increasing the biology major to 40 credits in 1980, few substantial curriculum changes had been made in 20 years. The "new look" of the biology major was its four options: General, Pre-Health Sciences, Plant Science, and Zoology. The Pre-Health Sciences Emphasis was a direct competitor to the Natural Science major, a long time favorite of pre-medical and pre-dental students. The major, administered by the College of Arts & Sciences, was discontinued by the mid- to late 1990s. Conversely, by the late 1980s and early '90s, the Pre-Health option had become a well accepted choice (Table 2).

Table 2. Average Number of Undergraduate Majors/AY\*

	Biol	Pre-Health	Bot/PISc	Zool	F&W	Total
1980-81	87	-	2	8	27	124
1981-82	95	-	1	9	19	124
1982-83	99	-	1	15	31	146
1983-84	112	-	2	13	31	158
1984-85	125	-	1	10	32	168
1985-86	139	-	0	7	34	180
1986-87	140	-	0	6	38	184
1987-88	128	8	0	8	35	179
1988-89	114	33	1	13	43	204
1989-90	126	49	1	14	40	230
1990-91	137	47	1	11	36	232
1991-92	163	55	1	12	40	271

\*Based on the Department's annual reports.

As for Biology's graduate program, a non-thesis Master's degree was approved, effective 1985-86. During the spring semester the faculty also approved Holloway's request for a 12 month leave of absence to serve NSF in its Directorate of Astronomical, Atmospheric, Earth and Ocean Sciences in Washington, D.C. His role would concern arctic and antarctic research programs. Lastly, the Department lost two of its best friends in the springtime deaths of Emil Paur and Stella Fritzell. The role of their families in establishing scholarships for our students can be found in Appendix 3.

The 1984 fall semester began with Holloway at NSF and Crawford on developmental leave for the AY. Enrollment was up 3.5% to 1,731, and majors numbered 177, a 10% increase over the previous autumn. Project Reclamation had continued under an associate director and small research staff since Wali's departure a year earlier. When the organization officially closed on August 31, the Department and Dean O'Kelly had vested interests in the equipment, furniture, supplies and space that had been in the Project's possession. O'Kelly claimed the furniture and typewriters, while items of equipment and various supplies were divided between Biology and the Institute for Ecological Studies. Especially rewarding was the retrieval of equipment that had been purchased for the general ecology course, but had "migrated" to the Project. Previous attempts to regain these items had been minimally successful. Vice President Alice Clark assigned vacated space in Chandler Hall to Owen for his fisheries field

equipment, and to Sheridan for his maize research project. Chandler Hall, known from the early 1900s as the Mechanical Engineering Building, was renamed in 1935 in honor of Elwyn Chandler, Dean of the College of Engineering, 1927-32. Mechanical Engineering remained in Chandler until the completion of Upson I in 1971. In addition to Project Reclamation, it has served as home to the Laundry, Institute for Ecological Studies, Owen's Fisheries Program, Theatre Arts and the Printing Center.



Chandler Hall

The Department's 8<sup>th</sup> edition of Regulations and General Information for Graduate Students was distributed in January 1985. This useful guide was first developed by Kannowski in the mid-1960s, but updating new editions is a responsibility of the Graduate Studies Officer. Two events in February were "firsts." The BGSU arranged for a celebration of Darwin's birthday by moving it out of Starcher Hall. Unlike earlier and more boisterous celebrations at the Faculty Club, this non-alcoholic gathering was held in the Memorial Union with about 60 in attendance. The other event occurred at Founders Day with Oring receiving the first Burlington Northern Faculty



Oring & Alex Kotch

Achievement Award. The spring semester ended with good and bad news. Departmental stability was ensured by Kannowski's re-election for another 3-year term as Chair. Unfortunately, Vera Facey's health had a grim prognosis. Unable to care for herself, she was forced to move to an East Grand Forks nursing home where she eventually died on December 15, 1985. At her request she was cremated and the ashes scattered over Oakville Prairie.

The summer of 1985 had an "overseas flavor." Lang completed several months of study on Mugger crocodiles in India, a research project funded by NSF and the Smithsonian Institution. Owen joined a People to People delegation of 27 American fishery biologists in a three week tour of commercial fisheries in Japan, South Korea and China. On the other side of the world, Oring served as senior lecturer at a week-long course in Norway on Animal Mating Systems, which was sponsored by the Nordic Council of Ecology. Larson's two week visit to Sweden included retracing parts of Linnaeus' 1734 collecting trip through the province of Dalarna. Distant travel and biological projects continued the following spring with Burke joining a Smithsonian Institution expedition to the Seychelles where she continued her research on feral goats.

The 1985 fall semester began with the Liebermans at NASA, Diana until January, but Milton for the year. Fivizzani was also on developmental leave. Fall enrollment was up 18% to 2,036, and majors increased by 10 to 187. The most ambitious, complex and labor intensive project during the AY was Biology's decision to seek funding in the second EPSCoR cycle. Oring was a member of the Steering Committee and research proposals were due on September 9<sup>th</sup>. His role increased, when after the fall semester, the Department released him from other duties so that he might coordinate the local effort, and that of the state as Project Director. He and his Administrative Assistant, Carolyn Kryzsko, ran the Project from rooms 205 and 207 in Starcher Hall. North Dakota's EPSCoR program was titled ASEND (Advancing Science Excellence in North Dakota). Biology's part in the state's proposal was a five-person group (Auerbach, Fivizzani, La Duke, Lang, plus Schwert from NDSU), the Biotic Resources Cluster. A separate multi-user subproposal for equipment was also submitted. One major component was funding for a 17<sup>th</sup> faculty position in evolutionary biology to strengthen the BRC. This negated Biology's earlier decision that a 17<sup>th</sup> faculty member should be a coordinator for Introductory Biology. After multiple layers of review and an NSF site visit in April, the state proposal was highly rated. In August 1986, NSF approved the state's proposal and equipment subproposal for \$3 million over a five year period. From multiple sources the state was required to match that amount. Oring remained Project Director until the end of 1990 when he accepted a position at the University of Nevada-Reno. He was succeeded by Mark Gordon of NDSU's Chemistry Department.

Although ASEND/EPSCoR was the definitive aspect of the year, several other items were noteworthy. With regards to instruction, Shubert's 3-credit course, Human Sexuality (Biol. 250), continued to attract large enrollments. It was the third consecutive year that more than 200 students filled Leonard Hall's lecture bowl. Only the introductory courses (100, 101, 102) drew larger enrollments and generated more student credit hours than Shubert's sex course. A different space problem was the Department's inability to properly display its taxidermy material. Thus during the spring of 1986, it seemed reasonable to remove 26 mounts and/or display cases from storage and loan them to the Myra Museum for a period of five years. This would allow the Grand Forks Historical Society to show an assortment of Red River Valley wildlife. There was no record of any material being returned, thus an inquiry in November 2008. The response was that mounts in display cases were ruined by the 1997 flood, but that some smaller individual specimens survived.

Two changes in the Department occurred at the end of 1985-86, one administrative and one professorial. The faculty approved abolishing the position of Budget Officer. Effective 1 July 1986, the Administrative Secretary would assume the monthly duties associated with that position. On May 5<sup>th</sup>, the Department held a retirement dinner honoring John Owen for 21 years of dedicated service. His research had stimulated grant and contract support from state and federal agencies in excess of \$700,000. His production of graduate students and significant relationship with North Dakota's Fisheries Division were noted in Chapter 6. The following year, a search committee (Fivizzani, Schlosser, Seabloom) brought three candidates to campus to interview for the Owen position. Unfortunately, none was acceptable to the faculty.

Most summers in the Department have been and still are rather similar... a much reduced instructional program, but increased research, both in the field and at the bench. Bomb threats, false fire alarms and other campus incidents have occurred occasionally; however, never before had it involved a corn field! In the dead of night, 5 August 1986, a portion of Sheridan's research crop of maize on the Bronson property (north of the present day Engelstad Arena) was visited by five young men intent on vandalism. Sheridan, who lived nearby confronted the five, and with the prompt arrival of campus and city police, the culprits were taken into custody facing misdemeanor charges. Sheridan reported that substantial damage had occurred, valued at about \$400.

The fall semester was a "mixed bag" of good and bad. Early on, all equipment budgets were frozen in response to a short fall in the state's treasury. Exacerbating the bad news for Biology was a decrease in enrollment and student credit hours by eight and five percent, respectively. Developmental leaves (La Duke, Shubert, Lang) and the unfilled fisheries position contributed to the declines, as well as moving the genetics course (Biol. 357) to the spring semester. A positive development, however, was the arrival of six new graduate students, plus five more at mid-year. During the autumn, two rooms were completed in the basement for the Psychology Department's experimental animals, a facility not favored by the biology faculty. Concurrently, a third greenhouse was erected on the roof with the cost equally shared by UND and the Human Nutrition Laboratory. Whether construction was complete before President Ronald Reagan's appearance at the Field House on October 17<sup>th</sup> is unknown, but doors to Starcher's roof were sealed by the Secret Service....no snipers wanted!

Another autumn retreat was held at Itasca with all faculty members on campus attending. The major issues were curriculum and the instructional impact of the EPSCoR grant. Out of the latter came the decision to recruit an evolutionary population ecologist with expertise in molecular techniques. The search committee (Auerbach, Burke, Oring) brought in three candidates for interviews. Robert C. Fleischer, with a Ph.D. from the University of Kansas and post-doctoral experience at Hawaii's Bishop Museum, accepted the Department's offer of an Assistant Professorship. His research area was genetic evidence of microevolution in birds through the use of molecular techniques. Besides successful recruitment, the 1987 spring semester included a series of honors for past and current faculty members. In February, Seabloom received the "North Dakota Award" from the ND Chapter of The Wildlife Society. Similarly, Owen was honored with a "Distinguished Professional Service Award" from the Upper Missouri River Chapter of The American Fisheries Society. On April 10<sup>th</sup> at the University of Florida, G.C. Wheeler was honored with a surprise party and seminar hosted by the Entomology Department on the occasion of his 90<sup>th</sup> birthday. One of his former students, Wallace LaBerge (M.S. 1951) was in attendance. At about the same date at UND, Oring became the first biology faculty member to be named a **Chester Fritz Distinguished Professor**, and only the 8<sup>th</sup> to be so honored by the University.



In response to a nationwide movement, the 1987 State Legislature banned smoking in public places. In compliance with the new law, President Clifford ordered all UND buildings to be smoke-free, except for designated areas. In Starcher Hall, smoking was restricted to the lobby, this with the mutual approval of the Chairs of Biology and Industrial Technology. This was not a big annoyance or inconvenience since only one biology faculty member and a few graduate students were smokers.

The 1987 fall enrollment and SCH had more than recovered from their declines of the previous year. What had not recovered were the budgets, which were cut 5% for supplies, repairs and travel, and for two consecutive years a reduction of 20% for duplicating services. The last of these cuts resulted in a frequent return to the use of dittos. The Department had Fleischer on board, and Ahmad Al-Absy with a temporary 1/3-time appointment to teach ichthyology. The fisheries position was readvertised and of the three who interviewed, Bruce A. Barton was hired after a protracted process. He had a Ph.D. from Oregon State University, and most recently was a Research Fisheries Biologist with the Utah Division of Wildlife Resources. Early in the fall and after 23 1/2 years at UND, Jalal accepted a position in Denton, TX as the state's Director of Cytogenetics, effective 1 January 1988. Later, his career would continue with the Mayo Clinic. A search committee chaired by La Duke attempted to recruit a new geneticist with expertise in molecular and/or cellular biology. Unfortunately, none of the three who interviewed was acceptable to the faculty.



Barton

Two serious health issues occurred in the Department during 1987. Valerie Schawaroch, one of Fivizzani's graduate students had a car accident during the summer. Failure of her neck injuries to properly heal, resulted in two surgeries during the fall to realign and fuse two cervical vertebrae. She suspended her M.S. studies and went home to New York for recuperation, never to return to UND. Also during the fall, another illness, but a very strange one! Seabloom was suddenly stricken with Transient Global Amnesia wherein he lost all memory. No etiological cause is known for this problem, but in Seabloom's case, he regained full memory in less than a day and was able to resume teaching mammalogy. The AY ended with Crawford's unopposed election to replace Kannowski as Chair for 1988-91. One of Crawford's early decisions was to establish a new position, that of Associate Chair. Fivizzani accepted this role and served during Crawford's term. The duties, without added compensation, mainly involved course scheduling and determining teaching assignments.

During the fall semester, the search for a geneticist was renewed with La Duke again chairing the effort, and an effort it was! The faculty's initial group of eight semi-finalists was disappointing, thus the unusual step of another review of applicants to expand the list to 14. From that assemblage, more ranking and balloting produced three finalists, with Roger M. Denome accepting the position. He had a Ph.D. from Michigan State University and



Denome

postdoctoral experience at Dartmouth's Medical School. Denome's research focused on regulation of RNA processing during cell differentiation. Except for developmental leaves for Schlosser and Auerbach, it now appeared that the Department would be fully



The Wheelers (25 May '89)

staffed for the coming AY. In the frigid month of February 1989, a plus and a minus. For the third time at a Founders Day dinner, Biology received the **Award for Departmental Excellence in Research**. Less pleasing that month was VPAA Alice Clark's cancellation of classes one morning because it was -20 degrees F. Scheduling problems caused by her decision was a large irritant to seven biology faculty members who signed a memorandum of protest. With adequate visibility and city streets open, cold weather was not an acceptable reason for cancelling classes. Clark did not respond to the protest, but neither did she ever again cancel classes because of cold weather. And...in the warmth of late May, George and Jeanette Wheeler returned to UND, she to receive a **Sioux Award** at Alumni Days. A reception was held for them in Starcher Hall. It would be their last visit to the campus.

Another faculty retreat was held at Itasca in October 1989, with an agenda mainly focused on the Graduate Program and the requirements for admission to it. In addition, the faculty agreed that the seldom used M.Ed. in Biology needed to be discontinued. Although not part of the Graduate Program, two curricular items were later approved: 1) Biol. 230, a new two-credit course, "Natural History of the Northern Plains," and 2) a name change for Biol. 357, from "Modern Genetics and Man" to simply "Genetics." (Note: Some faculty members on campus criticized the previous name as sexist). The course description was also changed with a reduced emphasis on human inheritance in favor of a broader and more molecular approach to the subject.

The status of funding for higher education in the state during the second half of the decade was a continuing problem. Budget reductions had become the norm, and faculty salaries were largely frozen. For example, Larson, the author of this history, had only an 8% salary increase between 1986 and 1989, and none at all for two of those years. It seems likely that his situation was not unique, but common place across campus. A bill passed by the 1989 state legislature to raise taxes was overturned in December by a referral vote of the people. The bleak economic outlook was a major reason that Oring tendered his resignation after 22 years at UND, and Larson was pleased to escape the financial gloom and doom by accepting a visiting professorship for 1990-91 at the U.S. Air Force Academy.

During the spring semester, Sheridan presented a detailed proposal that he first introduced at the October retreat. His concept was for the establishment of a Maize Genetics Research Center to be housed in Chandler Hall, and he as its Director. Sheridan

had an impressive record of grantsmanship and productive research, here and in Hawaii, and had mentored several excellent Ph.D. students (i.e., Don Auger, Janice Clark, Guy Farish). However, the Department Chair and the Executive Committee could not support his proposal. Especially unacceptable was his unilateral decision that two new tenure-track faculty members with expertise in maize molecular genetics be added as the 18<sup>th</sup> and 19<sup>th</sup> members of the biology faculty. Not only was this contrary to established departmental procedures for hiring, it was financially unrealistic. The more immediate concern was retaining the current 17 positions in a time of reduced funding by the state. (Note: Sheridan presented a revision of his proposal to the entire faculty in March 1991. However, by a vote of 6 to 7 it failed to gain the faculty's approval).



Sheridan harvesting his maize - 1989

On June 22, 1990, Professor Emeritus Joe K. Neel died at his home in Grand Forks at the age of 75. He joined the Department in 1966 and had been retired since 1981. However, Neel continued his studies of the Turtle River which culminated in his 1985 book, **A Northern Prairie Stream**. A week after Neel's death, Paul Kannowski began his early retirement. He had joined Wheeler, Facey and E. Larson as the fourth faculty member in 1957. During his 33 years in the Department, he served as Chair for 13, the first seven of which saw Biology's impressive growth under his leadership in the 1960s.

CLOSING-OUT THE TWENTIETH CENTURY

The 1990-91 fall semester began on a positive note with six new graduate students joining the Department, and a special September seminar by Diana Wheeler, a granddaughter of George C. Wheeler. There were, however, contentious issues over a failed nomination for Diana Lieberman's early promotion to full professor. There was also a serious instructional shortage of biology faculty that fall. La Duke and Larson were on leave for the year, and Auerbach for the first semester. The Oring and Kannowski positions were unfilled, thus five empty slots. Even with Auerbach's return at mid-year, the staffing became more dire in the spring. Barton resigned his fisheries position on December 31<sup>st</sup> to continue his career in Canada, and Fleischer took a spring semester leave of absence to work in the Genetics Laboratory of the National Zoo in Washington, D.C. Diana Lieberman was also absent, having gained approval to spend the entire spring semester conducting research in Costa Rica. The only faculty addition was Staria Vanderpool, a Ph.D. in botany from the University of Oklahoma.



Vanderpool

She was hired as a part-time, temporary to teach Biol. 336, Systematic Botany. (Note: Vanderpool had a continuing role in the Department and the Institute for Ecological Studies until 1995 when she accepted a botany position at Arkansas State University). Out of this large staffing dilemma came a one-day faculty retreat to determine what expertise should be sought in recruiting three new faculty members. Consensus identified, 1) a fish biologist, 2) a behavioral vertebrate zoologist, and 3) a cell biologist with the added duty of coordinating Biology 101. These search committees were chaired by Seabloom, Schlosser and Fivizzani, respectively. A total of 10 candidates interviewed for the three positions. Jeff Lang accepted the behavioral position at the rank of Associate Professor, and Steven Kelsch, with a Ph.D. from Texas A & M and three years of experience at Eastern New Mexico University, accepted the fisheries position. The cell biologist search was unsuccessful. That effort was promptly resumed in the fall of 1991 and four candidates were interviewed. Unfortunately, once again the search came-up empty.



Kelsch

During 1990-91, APSAC was assigned the task of determining the feasibility of a four-year schedule of course offerings. Except for Biol. 100, 101, 102, 332, 357, 364 and 369, all other undergraduate courses would be offered on alternate years. The intent was to establish a predictable schedule for students and advisors, and to reduce the faculty's annual teaching load. Despite serious problems, both real and potential, the plan was energetically promoted by Denome, Chair of APSAC. Over a period of 10 months, the proposal appeared several times on faculty meeting agendas, and was last considered at the Department's retreat in October 1991 where it died for lack of broad support. Two other proposals, both from the Executive Committee, were also discussed at the retreat

held at Turtle River State Park. One, a "Course Weighting Scheme," which attempted to quantify the effort required in teaching various lectures and labs. Not all courses were equal in that regard, hence teaching loads should reflect this variable, but this scheme was later abandoned. As for a faculty member's "allocation of effort," the basic 45:45:10% for teaching, research and service were deemed negotiable ratios. Specific criteria and limitations for such considerations are spelled out in the Biology Faculty Handbook.

Faculty staffing, unsuccessful recruitment, uneven teaching loads, contentious denial of promotion, and tight budgets were not the only problems in 1990-91. Faculty salaries had been an issue for several years, and especially vexing for full professors was the \$4-5 thousand dollar salary differential with those holding that rank in Chemistry and Physics. A compression of biology's salary scale had also reached a point where there was no longer a gap between the lowest full professor and that of the highest associate professor. With no resolution in sight, biology's full professors initiated a grievance process with VPAA Clark on 15 February 1991. A Special Review Committee, chaired by Barry Vickrey of the Law School, submitted its findings to Clark, Dean O'Kelly and President Clifford. On March 2<sup>nd</sup> the following year, the President resolved the matter by authorizing equity salary adjustments, effective 1992-93.



Thomas J. Clifford

Three notable events occurred during the 1991 spring semester. The earliest of these was the death of George C. Wheeler on February 18<sup>th</sup> in Silver Springs, FL at the age of 93. In late April as Crawford neared the end of his one year term as Chair, an election chose Fivizzani over Wrenn to next lead the Department, 1991-94. Lastly, at the spring commencement ceremonies on May 12<sup>th</sup>, William Sheridan became the second biologist to be named a **Chester Fritz Distinguished Professor**.

The 1991-92 AY began with Fivizzani as the new Chair and Crawford as Associate Chair. This was a reversal of their roles from the previous three years. Staffing problems continued to plague the Department. As feared, Fleischer resigned in order to accept the Directorship of the Genetics Laboratory at the National Zoo. As with Oring seven months earlier, he too said that the successful ND tax referral was a contributing reason for leaving UND. Also missing from the Department was Schlosser who had a leave of absence for the year as a Senior Research Biologist with the U.S. Forest Service in California. The third departure was that of Meg Burke. For a decade she had been an indispensable temporary Assistant Professor, especially in her role as coordinator of Biol. 101 and 102. She also had on three occasions taught the Animal Behavior course (Biol. 338, 338L). Her reliable and effective service was exemplary, as was her pleasant, positive and cooperative demeanor. (Note: Burke joined the University of Mary's faculty after leaving UND, and later became Director of Education for the California Academy of Science in San Francisco).



Burke

Fleischer's resignation resulted in a search for his replacement in the area of molecular/population/evolutionary biology. La Duke chaired a successful effort, with Colin R. Hughes being hired as an Assistant Professor for 1992-93. His M.A. was from Cambridge, and the Ph.D. from Rice University. Hughes had postdoctoral experience at Rice and the University of Houston. His research focused on the evolution of social insect behavior, and avian mating systems, including those of endangered South American species. Hughes was a productive colleague, but after six years he resigned to accept a position at the University of Miami, FL. The flood of 1997 may have been a contributing factor to his leaving UND as his home overlooking the Red River was doomed by the proposed location of the new levee.



Hughes

News of the death of Ted R. James on 26 December 1991 reached the faculty between semesters. He succumbed to leukemia at the age of 55. In several ways Ted was a "pioneer" in the Department during the 1960s. In 1963 he was one of the first to earn a Master of Science Teaching degree, and in 1967 was awarded the Department's second Ph.D. Under Seabloom's direction, Ted's research concerned the ecology and life history of the white-tailed jackrabbit in southwestern ND. Funding for his project was provided by the State Game and Fish Department, one of the first of many such collaborative efforts with UND biologists. Ted was the Department's first graduate student to track animals by use of radio telemetry. During the two years between Edith Larson's resignation and the arrival of Oring, Ted taught comparative anatomy for the Department. In 1968 he joined the biology faculty at the University of Tennessee, Martin, where he remained until his death. (The picture is of Ted processing a jackrabbit near Amidon in Slope County in about 1966).

The twice failed search for a cell biologist necessitated Shubert and Sheridan team teaching Biology 341. That assignment was not one they preferred, thus a respite from the task with the temporary appointment of Mildred Voss-McCowan to teach cell biology in the spring of 1992. She had recently earned a Ph.D. in the Medical School's Department of Microbiology and Immunology. The following spring (1993), the course was taught by Janice Clark, a colleague and former Ph.D. student of Sheridan's. Finally, the third cell biologist search in three years was successful! Larson chaired the effort which resulted in 80 applications and seven semi-finalists. Three applicants were

interviewed, and Samuel Galewsky, the faculty's unanimous first choice, accepted the position for 1993-94. His Ph.D. was from Texas A&M University, and he had four years of postdoctoral experience at the M. D. Anderson Cancer Center in Texas. Galewsky's research focused on cell interactions during development in *Drosophila*. During his four years in the Department, students in introductory and cell biology gave his teaching very high marks, and numerous undergraduates did research in Galewsky's lab. His resignation letter in May 1997 reflected his conviction that the liberal arts mission of Millikin University in Illinois better fit his future career. His departure from UND created two vacancies, having married a Theatre Arts faculty member while here. It is unlikely that any faculty member of the Biology Department has ever equaled Galewsky's hirsuteness!



Galewsky

At the Founders Day dinner in February 1993, biology faculty members were the recipients of three honors. Schlosser received **The Sigma Xi Award for Individual Excellence in Research**, and **The Burlington Northern Faculty Achievement Award**. Lang was honored with **The UND Faculty Advisor Award**. Less satisfying to the Department a month later was the faculty's second contentious situation with Diana Lieberman. Her Costa Rican course, "Natural History of the Tropics" had been upgraded from Directed Studies to formal course status (Biol. 372). It had been offered several times, both between semesters and during summer sessions, and her teaching evaluations in it and other courses were uniformly strong. In addition, Diana's promotion to full professor for 1993-1994 had strong faculty support, and was perhaps to her, a vindication of the failed nomination two years earlier. However, during the spring semester of 1993, she was again absent from campus doing research in Costa Rica. That marked the third consecutive year that she was permitted such an absence, albeit a 50% reduction in second semester salary. Thus, when she sought the same arrangement for 1994 and '95,



Diana L.



Milton L.

the faculty denied her request with the view that "released time for research be comparable to that extended to other members of the full-time faculty." The Chair's accommodation for 1994 was to allow Diana's absence for the first half only of the spring semester. It was clear that the professional relationship between she and the Department had become irreconcilable. Soon after her return from Costa Rica, Diana and the Department agreed to a three year appointment (1994-97) at an annual salary of 44%. This arrangement involved Biology and the Office of Academic Affairs, and named D. Lieberman as Coordinator of "Tropical International Programs." She and her husband, Milton, relinquished their offices in Starcher Hall and moved to Costa Rica permanently. All departmental and on-campus obligations were now null and void for them. The Lieberman's official connection to UND ended in the spring of 1997, when VPAA Marlene Strathe notified Diana that fiscal constraints precluded a renewal of

her contract. Diana's final connection with the University was that of her long time and only Ph.D. student, James D. Daniels, receiving his degree in 1998.

The 1993-94 AY began with Galewsky on board along with seven new graduate students. These more than replaced the six who had graduated at Summer Commencement. In support of the graduate program, Wrenn and Larson agreed to produce a new graduate student recruitment booklet, the first new one in six years. That fall UND was again invited to submit a proposal to the Howard Hughes Medical Institute for a grant to improve undergraduate science education in America. A similar effort submitted earlier was rated well but not funded, although the reviewers were particularly impressed with proposed Native American Outreach Activities and scholarships for underrepresented groups. Those remained a focus of a new, successful proposal which



Fivizzani

was developed by Fivizzani on behalf of Biology and the College of Arts and Sciences. He was "wearing many hats" that year, serving as Department Chair, Hughes grant writer, and as Associate Dean of Arts and Sciences for the first of five years. The grant for \$1.6 million dollars began in 1994 and ran through 2001 with Fivizzani as Project Director, and Cheryl Schreiner as Administrator. His summary of the Project's activities and accomplishments is presented in Appendix 5. The faculty's satisfaction with Fivizzani's leadership made his reelection as Chair no surprise. He ran unopposed for a second three year term, 1994-97. What was unexpected during the spring semester was Shubert's announcement that after 21 years in the

Department, he intended to take early retirement. His future plans included moving to England to marry his third wife, Eileen Cox, a British phycologist who was a Senior Scientist at London's Natural History Museum. She had, two years earlier, presented a seminar on diatoms in the Biology Department. Shubert's new unsalaried position would be as Honorary Research Fellow in the Museum's Department of Botany. He was granted an Adjunct Professorship in order to mentor his remaining M.S. student, Bruce Pankratz. The 1994 spring semester ended with the Department approving Auerbach's request for a one-year leave of absence to serve as Director of NSF's Ecology Program. The offer came with the possibility of an extension for a second year. This was viewed with serious concern, especially as it came to the faculty on the same day that Diana Lieberman's excessive spring semester absences had her seeking other options within the University. There was an underlying apprehension that "here we go again." However, there was nothing but genuine approval and satisfaction when Mori Pung and Cheryl Schreiner were honored with UND's **Meritorious Service Awards** at the Staff Recognition Luncheon in May. Many felt that it had taken too many years for the University to recognize the outstanding service of these two individuals.



Shubert

Sad news from Sarasota, Florida reported the death of former UND President George Starcher on June 10, 1994, at the age of 88. He had served as UND's seventh president from 1954 to 1971, and during those 17 years, enrollment and faculty both tripled in number. A memorial service was held on June 29<sup>th</sup> in the main reading room of Chester Fritz Library.

Although Lang and Wrenn had returned from developmental leave, instructional staffing for the 1994 fall semester was a again a problem. Auerbach was at NSF, Shubert and Vanderpool had resigned, and Lieberman's only teaching obligation was the tropical biology course in Costa Rica. To fill the gap, three recent graduates (Bruce Eichhorst, Guy Farish, Greg Romig) were hired as part-time, temporary faculty.



Newman

High on the faculty's agenda was the need to fill the Lieberman and Shubert positions. Schlosser was asked to chair a search committee for a population biologist, and Larson one for an introductory biology course coordinator. Both searches were successful. Ten semi-finalists for the population biologist position were ranked, and three interviewed on campus. Robert Newman accepted the position. He had a Ph.D. from the University of Pennsylvania and three years of experience at Virginia Tech. At the time, Newman was serving as coordinator of a research training program at Michigan State's Biological Station. His research was in population and evolutionary biology, especially of amphibians. For the other search, Larson reported 148 applicants for the introductory biology position. Three candidates were interviewed, with Jeffrey Carmichael hired. He arrived with all requirements for the Ph.D. completed, and received his degree in 1995 from the University of Georgia. His research focused on the evolution of sexual reproduction in seed plants, but of practical concern was his experience as a coordinator of biology labs at Georgia. Another search of considerable interest to Biology was also occurring on campus. Bernard O'Kelly was retiring after 29 years as Dean of the College of Arts and Sciences. Effective 1 August 1995, his replacement would be John Ettling, a historian with a Ph.D. from Harvard. He came to UND from his position as Associate Dean of the Honors College at the University of Houston. One thread of continuity in the College Office was Fivizzani beginning his second year as an Associate Dean. He was named a **Chester Fritz Distinguished Professor** at the May commencement ceremony.



Carmichael

The 1995 fall semester began with unpleasant news. One was the death in Texas of Marjorie Behringer at the age of 83. She had been a colleague from 1966 to 1978, and was the force behind the establishment of the Department's audio-tutorial laboratory, and the Doctor of Arts degree program. Behringer was widely recognized nationally for her leadership and contributions to biological education. In her obituary, Kannowsky described her as "a teacher's teacher."

The other unhappy news was the all too familiar message of reduced budgets. An update to the faculty from the Provost, Marlene Strathe, was quite grim. Financial

constraints would cause a reduction for academic affairs of about \$2 million dollars for the biennium. One impact on Biology was fewer GTAs, and for the first time in many years, the Department was seeking six qualified undergraduate majors to cover some of the lab sections. There were funds, however, to fill two faculty positions, one search chaired by Crawford in the area of genetics. More uncertain was the type of biologist that should replace Larson after his early retirement at the end of the fall semester. An initial straw vote of 4 to 6 opposed parasitology being a "major selector" in recruiting his replacement. Eventually, the faculty approved seeking a biologist having "modern approaches to the study of structure and function of animal cells and tissues," and capable of teaching histology or cytology. Lang chaired this search. By mid- to late November, the search committees had produced short lists, 10 applicants for the genetics position, and nine for the one in structural biology. There was some dissatisfaction with the adequacy of the lists, and four applicants were deemed to have sufficient expertise to qualify for either position. This unusual consideration was approved by Sally Page, UND's Affirmative Action Officer. However, none of the seven or eight individuals who interviewed for the two positions was hired. By mid-March, the search for a structural biologist was suspended, and in late April 1996, the same decision was reached on the genetics search. The faculty's intent was to resume the process early in the fall semester. Adding to the frustration of the failed searches, was Auerbach's surprising spring semester request for a third year leave of absence to remain with NSF. The faculty's initial concern over the possibility of Auerbach seeking multiple-year absence had come to fruition. Despite this, the faculty approved his request with the stipulation "that there will be no further extensions for leave from the Department." For unknown reasons, Auerbach did not stay at NSF for that additional year, but instead resigned from UND on 16 August 1996 to seek a new position. Biology's most pleasant and rewarding event of the semester was being selected for a **Departmental Excellence in Research Award** at Founders Day, the fourth time in 25 years.



Clark, Hughes, Carmichael, Kelsch, La Duke, Larson, Schlosser  
Wrenn, Seabloom, Newman, Fivizzani, Galewsky, Crawford, Sheridan

1996 AWARD FOR EXCELLENCE IN RESEARCH



The second year of the biennium was a continuation of serious budgetary reductions. The University had an active restructuring study underway, and in it was the possible discontinuance of the Fisheries and Wildlife program. Another type of reduction in the Department was that of faculty. During the 12 month period, 12/31/95 to 12/31/96, there was an unprecedented decline in the number of full-time biology faculty. Three chose retirement (Larson, Holloway, Seabloom) and two resigned, with Auerbach accepting a position as Chair of the Biology Department at the College of Charleston and Denome one at Stonehill College in Massachusetts. The Department was fortunate to find and to hire four temporary faculty members for 1996-97. Three of these taught upper division courses, i.e., Ecology and Advanced Biometry by Mark Gustafson, Genetics by Jan Clark, and Vertebrate Natural History by Bruce Eichhorst. In the spring semester, Judy Magnuson team-taught Biol. 102 with Gustafson.

The geneticist and structural biologist search committees promptly resumed their task in the fall, and by late October each committee had identified a short list of 11 applicants. The resignation of Auerbach also required a search for an ecologist, and Schlosser chaired that effort. All three searches were successful, with Ann Gerber filling the geneticist position, Sally Pyle the opening for a structural biologist, and James Cronin the ecology slot. It was fortunate that all interviews and hirings were completed by late March, because by mid-April 1997, the University was in a crisis mode. More than 170 volunteers emptied the basement of Chester Fritz Library before a flood of historic proportions overwhelmed the city's dikes on April 18<sup>th</sup>. The Paur Lecture scheduled for the previous day was postponed until December. When the city's water and sewage systems failed on the morning of the 19<sup>th</sup>, President Kendall Baker chose to cancel the remainder of the semester and close the University. Although the campus is several miles from the Red River, the English Coulee backed-up until University and 2<sup>nd</sup> Avenue were covered by more than a foot of water. Except for some Plant Service personnel and a few die-hards such as Mori Pung, Biology's stockroom manager, the faculty and staff joined nearly 50,000 local residents in a mass evacuation. The efforts of Pung to keep Starcher Hall's water damage to a minimum are noted in Appendix 4. The loss of electrical power for refrigerators and freezers caused far more damage than the actual flood waters in the building's basement. The loss of chemicals, temperature sensitive reagents and irreplaceable frozen specimens was estimated by La Duke to be about \$100,000. In addition, Sheridan's maize research program in Chandler Hall had equipment and facilities damage of more than \$50,000. There was also a heavy toll on living material in the animal quarters and greenhouses. Early estimates of damage to UND ranged from \$50 to \$70 million dollars. Flooded basements were the rule on campus and throughout the city, and four faculty members (Hughes, Kannowski, Schlosser, Seabloom) lost their homes to the water, or the subsequent realignment of dikes. Department records contain an interesting omission from the days immediately before the flood. In the faculty minutes file for 1996-97, there is an agenda for an April 9<sup>th</sup> meeting, but no minutes. This absence probably reflects the entire region's paralysis from the ice storm and blizzard of April 5 and 6 that preceded the rising waters. The first



Kendall L. Baker



U.S. Rep. Earl Pomeroy surveying the flood and fire damage in downtown Grand Forks, 4/20/97. (photo from the G.F. Herald).



Ike and Barb Schlosser's home at 1516 Chestnut St. stood one block from this street corner sign (about 4/23/97). Photo GF Herald.



Lorene and Maurice Jasper in a flood evacuation center, 4/19/97. Maurice was Biology's stockroom manager, 1962-1978 (see Appendix 4). Photo from the Minneapolis Star Tribune.

post-flood faculty minutes are dated 25 August 1997 with La Duke having replaced Fivizzani as Department Chair for 1997-2000.

From the perspective of one who has sandbagged and witnessed several significant spring floods in Grand Forks, the one in 1969 was serious, and the flood a decade later perilous. However, by every measure and criterion, the flood of 1997 was catastrophic. It has often been referred to as "the flood of the century." The time frame fits well as the crest of the 1897 flood was nearly equal to the one a century later. Both floods were accompanied by destructive fires in the city's center. What flood damage may have occurred in 1897 to the University's only substantial buildings (Main, and two dormitories, Ladies Hall and The Cottage) is unknown. It seems likely that the English Coulee would have been a major threat to the tiny campus.

President Baker, ever the optimist, promoted with conviction that the University would be open for 1997 Summer Session classes. That UND was able to meet Baker's goal is a testament to the extraordinary efforts by many to dry out and sanitize an adequate number of campus facilities. The official third-week enrollment was 2,852 students, of which 50 were taking biology courses from Wrenn and Crawford. Lessons from the flood were still a topic of concern at the first faculty meeting in the fall, and the University administration was soliciting ideas on flood mitigation. La Duke welcomed suggestions, in addition to his own view that back-up generators were needed to power freezers. A major flood casualty was the Department's \$25,000 liquid scintillation counter which was damaged beyond repair by power surges. The influence of the flood was also reflected in UND's fall enrollment, down 905 from the previous year's 11,300.

Galewsky had resigned in May 1997, but the post-flood fall semester began with three new faculty members. James Cronin with a Ph.D. from Florida State University was the new ecologist. He came with varied postdoctoral experience at California's



Bodega Marine Laboratory, the USDA Forest Service, and Bucknell University. His research involved plant/insect relationships, but after four years he left to accept an attractive position at Louisiana State University. The second new individual was Anne Gerber, an insect population geneticist with a Ph.D. from Washington University, and postdoctoral work at the Universities of Arizona and Arizona State. She resigned at the end of 2002-03, her 6<sup>th</sup> year in the Department, when tenure and promotion were unlikely to occur. Sally Pyle was the third addition to the Department that fall, and she would teach histology. Her Ph.D. was from Duke University and she had postdoctoral experience at Rutgers University. Pyle's field of research was neurobiology with emphasis on toxicology and cytoskeletal structures.



At the first faculty meeting in August 1997, Crawford was congratulated for having been named a **Chester Fritz Distinguished Professor** at the summer

commencement ceremonies. That initial meeting for the year also approved job descriptions for filling the Seabloom position with a wildlife biologist/mammalian ecologist, and the Galewsky position with another cell biologist.



Newman and Fivizzani respectively, chaired the two successful searches. Richard Sweitzer accepted the mammalian ecologist position as an Assistant Professor. He had M.S. and Ph.D. degrees from the University of Nevada, Reno, and postdoctoral experience in Alaska and at the University of California, Davis. His research focused on the ecology of porcupines and wild pigs. The other new faculty member was Peter Meberg, hired at the rank of Assistant Professor as the Department's cell biologist. His M.S. and Ph.D. degrees were earned at Northwestern University. Prior to UND, Meberg had five years of postdoctoral work at Colorado State University. Meberg's research field was neurobiology with emphasis on actin dynamics and the regulation of growth cone motility. Unauthorized and unresolved was the question of the vacant Holloway position, although there was some faculty sentiment toward an evolutionary parasitologist. Of more immediate concern was the surprise announcement in March 1998 by Hughes that he would be resigning to accept a position at the University of Miami. Dean Etling's opinion was that the Department was likely to be authorized to fill only one of the two positions, and once again the College Office was concerned over Biology's light teaching loads. Lastly, a substantial restructuring of the biology major was approved during the spring semester. This included the discontinuance of the Plant and Zoology Emphases. These changes are presented in Appendix 6.



The 1998 fall semester began with La Duke welcoming Meberg, Sweitzer and Carl Fox, Director of the Office of Research and Development, who had been granted a Research Professorship in the Department. Fivizzani, Acting Dean of Arts and Sciences, would continue to teach Biol. 442, but not routinely attend faculty meetings, wishing to avoid possible conflicts of interest. His role as Project Director of the Howard Hughes grant would continue. Fivizzani's new administrative role was the result of Etling leaving the College Office to become Interim VP for Academic Affairs and Provost. Another major change in Twamley Hall was the search for President Baker's replacement, and Crawford was a member of that committee. In the late spring of 1999, he reported that Charles Kupchella, as the new President, would also have the rank of Professor of Biology, but he did not wish for office space in Starcher Hall.

As part of UND's on-going budget cutting process in 1998-99, Harvey Knull, Dean of the Graduate School, suggested that the D.A. degree program in biology be discontinued. The faculty approved the idea since the last student in the program, Lonnie Baumgardt, had graduated in 1997. Also terminated was Milton Lieberman's appointment as a Research Professor. He and Diana were both residents of Costa Rica and neither had any further obligations to the Department. At the undergraduate level, APSAC and the faculty continued their study of the Department's curricula with a revision in October 1998 of the major having a Pre-Health Sciences Emphasis (see

Appendix 6). Four months later at Founders Day, Sally Pyle received a **UND Foundation/McDermott Award for Excellence in Teaching**.

A high priority on the Department's 1998 autumn agenda was finding a molecular population biologist to replace Hughes. By early December, a search committee chaired



Austin and his lizards  
(Photo from the G.F. Herald)

by Newman had a short list of eight applicants. From these, the faculty chose to invite three for interviews, and Christopher Austin, the faculty's first choice, accepted the position. He had a Ph.D. from the University of Texas and postdoctoral experience in Tokyo, Australia and Melanesia. His obligation to the Tokyo appointment delayed his arrival at UND until 1/1/2000. A biologist at the Smithsonian Institution described Austin as a "Renaissance Man," a talented blend of molecular and field biologist. He is perhaps best remembered in the Department for his work on green blooded lizards in New Guinea, the exploits of which appeared on television's Discovery Channel/Animal Planet, with Austin wearing a UND Biology T-shirt. Unfortunately, the Department lost

another young colleague to Louisiana State University when Austin resigned on 8/15/03 to accept a highly prized position in their Museum of Natural Science.

As the new millennium approached, a global concern was growing over the possible failure of functions controlled by computers. In late October 1998, the Department was asked to consider potential "Y2K" problems. The V.P. for Academic Affairs requested that every department appoint an individual to attend informational meetings on the subject, and Mori Pung agreed to represent Biology. An assessment of the Department's 94 computers revealed that only 53 were Y2K compliant, but Pung reported that no problems occurred when 2000 arrived. In a broader context, departmental problems and issues appeared also to be minimal during the first half of the

1999-2000 AY. Except for Austin's delayed arrival from Tokyo, the faculty was fully staffed, and Jefferson Vaughan, a new unsalaried Assistant Research Professor, had joined the Department and was assigned Holloway's former office. Vaughan had M.S. and Ph.D. degrees from Virginia Polytechnic Institute with majors in medical entomology and a three-year Visiting Assistant Professorship at the University of Maryland. His extensive postdoctoral experience with vector-borne diseases included Johns Hopkins School of Hygiene and Public Health, and the Army's Medical Institute of Infectious Diseases. His presence in Grand Forks was due to his wife, Roxanne, having accepted an assistant professorship in the Medical School in 1998.



Vaughan

Two issues of monetary importance appeared mid-way through the fall semester. One was Sheridan's announcement of a new source of money for research. Through his



Bill Wrenn

efforts the Grand Forks City Council approved the concept of "seed money" for UND research, and allocated \$300,000 for that purpose, contingent upon 3:1 matching funds from the UND Foundation. The second financial item was tied to Wrenn's proposed early retirement on 15 May 2000, wherein the University would buyout his tenure contract (i.e., his gross salary equal to that of the current AY to be paid over a span of several years). This policy under President Baker was deemed a financial benefit to the University, since it allowed senior faculty members to be replaced by younger, lower salaried replacements. In Biology, Kannowski, Larson and Seabloom had all chosen "buyouts" between 1990 and 1996, but when

Wrenn's request reached the new President, he denied it even though it had the College's and VPAA/Provost Etling's approval. This abrupt change in policy seemed to be grossly unfair since one or more requests had been approved that fall prior to Wrenn's. By early 2000, the Biology faculty and all the Department Chairs in Arts and Sciences endorsed a memorandum to Kupchella supporting Wrenn's request for early retirement and tenure buyout. The President's decision caused Wrenn to delay retirement one semester (from 5-15-00 to 12-31-00) while an appeal process ran its course. This contentious issue which began in the final weeks of the 20<sup>th</sup> century spilled into the new millennium. A partial solution came in May 2001 when Wrenn received (via Etling's authorization) a onetime payment approximately equal to one half of his AY salary. Although it was not considered a buyout, it verified Wrenn's grievance against Kupchella.



Charles E. Kupchella

## INTO A NEW MILLENNIUM

In January 2000, the University Administration called for proposals to be funded out of an "Academic Program Reallocation Pool." In the process of cost cutting and restructuring, UND was now able to consider new academic endeavors. This prospect grew even better in the fall when Kupchella announced that increased enrollments had produced added income of \$1.5 million to be allocated throughout the University. This led the biology faculty to approve a resubmission of an earlier proposal for a "biotechnology" person, but it was uncertain if such an individual would fill a new faculty position. Throughout the spring and into the fall semester, the Department faced two important requirements: 1) developing criteria and methods for assessing Biology's programs in advance of an accreditation visit by the North Central Association; and 2) developing a "strategic plan" for implementing the Department's goals and objectives within the context of current strengths and weaknesses. The latter document was completed on 13 October 2000, and forwarded to Arts & Sciences. (Note: No annual report was produced for 2000-01, hence the activities of the Department are incompletely known for that year. The University was at the time developing a new, structured format for future annual reports which would include the status of attaining a department's strategic goals).

Wrenn's retirement on 12/31/00, plus the unfilled Holloway position left the Department without anyone in the field of invertebrate zoology. In late October 2000, the faculty approved a search for an "invertebrate zoologist/parasitologist." The search committee was chaired by Crawford, and by the end of January, three applicants from a short list of six were selected for interviews. Jeff Vaughan was the faculty's first choice to fill the position at the rank of Assistant Professor. His academic and postdoctoral experience were noted in Chapter 10 in conjunction with his 1999 appointment as an Assistant Research Professor, hence they are not repeated here. (Note: Robert Sorensen, one of the three finalists, accepted a position at Minnesota State University, Mankato).

Midway through the 2001 spring semester, Cronin announced his intent to resign on 5/15/01, but with a continuing association to the Department through an Adjunct Assistant Professorship. A search committee chaired by Newman was given the task of recruiting a new ecologist in the fall. Meanwhile, Ronald Moen was hired ¾-time to cover Cronin's teaching duties during 2001-02. Another search with departmental implications was the selection of Martha Potvin as the new Dean of Arts & Sciences. After eight years (five as Associate Dean and three as Acting Dean), Fivizzani was again a full-time member of the Biology Department. As for Potvin, her academic background was in biology, thus she joined Kupchella in holding the title and rank of Professor of Biology. Enhancement of Introductory Biology was assured by a successful La Duke-Carmichael proposal to the Student Technology Fees Committee. Funding allowed an upgrading of computers for the laboratories. There were two notable awards in the



Martha Potvin

spring of 2001. At Founders Day, Carmichael received The UND Foundation/McDemott Award for Excellence in Teaching, and as the semester was ending, George Wheeler's granddaughter, Diana Wheeler, visited the Department for a seminar and the presentation of the Esther Wadsworth Hall Wheeler Award to Austin's graduate student, Alison Hamilton. A departmental project that summer was the preparation of another grant proposal to the Howard Hughes Medical Institute and their "Undergraduate Biological Sciences Initiative." Carmichael served as the lead writer, and although unsuccessful, the proposal included the reoccurring attempt to add a faculty position in biotechnology.

La Duke, who in 2001-02 was in his fifth year as Biology's Chair, was assigned additional duties for the AY by Dean Potvin. She appointed him to be Interim Chair of the Art Department (now known as the Department of Art and Design). At the time, no one in Art was willing to serve as Chair for the coming year. During a summer time meeting with the Dean, La Duke suggested, that if necessary, he could do the task, and as fall drew near she accepted his offer with the consent of the Art Department faculty. This author cannot recall another instance of one individual simultaneously chairing two vastly different Arts and Sciences departments. The nearest analogy (at least in modern times) was the 1991-92 fusion of the Philosophy and Religious Studies Departments, with one person serving as Chair. The best example of "wearing two hats" at the highest administrative level occurred in 1937-38 when UND President John C. West also served as Interim President of the North Dakota Agricultural College (now NDSU). It was a time of serious academic and leadership problems at the Fargo school, made even worse by politically motivated interference by the state Board of Administration, predecessor to the current Board of Higher Education.



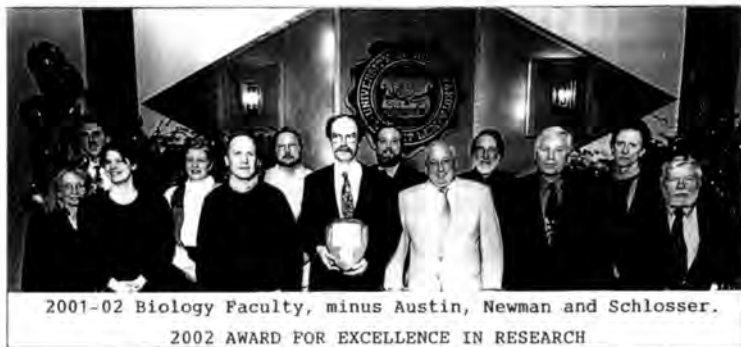
John C. West

The first faculty meeting of the 2001-02 AY received a request from Elliot Shubert in London that he be considered for Emeritus Professor. The process required a nomination from the Department to the Board of Higher Education, but the faculty chose to delay their negative decision until December. There are no Department records stating why Shubert's request was denied, but it may well have been influenced by legal issues stemming from his second marriage. By mid-January 2002, Newman reported that the ecology search committee had received 28 applications. From a short list of seven, three candidates interviewed on campus with the faculty's first choice, Brett Goodwin, offered the position. As with Austin three years earlier, Goodwin also wished to delay his employment at UND until the beginning of the second semester for personal and research reasons. Goodwin's Ph.D. was from Carleton University in Ottawa and his research area was in the interaction between insect movements and landscape spatial structure.



Goodwin

In what was becoming nearly an annual event, the Department and/or individual faculty members were the recipients of awards at Founders Day. From 1993-02, such recognitions occurred nine times. At UND's 119<sup>th</sup> anniversary in 2002, Biology received the **Departmental Award for Excellence in Research** for a fifth time. In addition, Lang was the recipient of **The UND Foundation/Thomas J. Clifford Faculty Achievement Award for Excellence in Research**. Later in the spring, Schlosser became the fifth biology faculty member to be named a **Chester Fritz Distinguished Professor**. The merit of these recognitions was also reflected "in the numbers." For 2001-02, active external funding was over \$914,000, and from internal sources, more than \$113,000. Pending proposals exceeded \$2.3 million. Undergraduate majors in the Department averaged 332 per semester, plus 16 minors. Of 25 students in the graduate program, 30% were pursuing the Ph.D. degree. Except for Lang's anticipated leave of absence in 2002-03, faculty staffing would be complete with Goodwin's arrival at mid-year, and Paul Klatt teaching Lang's courses. In the Department Office, Jeannie Lewis and Becky Haugen provided continuity and reliability. The "State of the Unit" for the coming AY appeared favorable.



2001-02 Biology Faculty, minus Austin, Newman and Schlosser.  
2002 AWARD FOR EXCELLENCE IN RESEARCH

Homecoming in the fall and Alumni Days in the spring are traditional attractions for UND graduates. However, an alternative to those occasions was the mini-reunion of former biology graduate students held in mid-July 2002. Jessica Sutherland organized a three-day event with help from Seabloom, her former advisor. Graduates in attendance included Gail Actor, M.S. 1984; John Carrol, Ph.D. 1989; Cheri Gratto, Ph.D. 1989; Susan Haig, Ph.D. 1987; Sarma Jatnieks-Straumanis, M.S. 1983; Karen Kreil, M.S. 1986; Valerie Naylor, M.S. 1987; Jessica Sutherland, M.S. 1987; Cheryl Tenneson, M.S. 1983; Michael Tenneson, M.S. 1983; and John Trevor, M.S. 1989. These individuals plus spouses, children, and a former faculty member (Meg Burke) are in a group photo on the next page.

Early in the 2002 fall semester, the Department initiated consideration of tenure and promotion for Pyle. This action was mandatory since she was beginning her 6<sup>th</sup> year on the faculty. Pyle's recent award for outstanding teaching affirmed her strength in the

classroom, but her research productivity was less favorable. The faculty's recommendation was to grant tenure, but not to promote. Subsequently, Pyle's allocation of effort was changed to 60:30:10% to more accurately reflect her contributions to the Department. (Note: in 2006-07 she was promoted to Associate Professor). During the fall semester, the faculty also reviewed Vasyi Tkach's credentials and approved an Assistant Research Professorship for him. He had earned the equivalent of a Ph.D. from the Zoological Institute of the Russian Academy of Science in 1990, and a D.Sc. degree from the Polish Academy of Science in 2000. From 1991 to 2002, Tkach did parasitological research at the Ukrainian National Academy of Science in Kiev, with emphases on molecular and traditional systematics, host specificity and helminth life cycles. He had an extensive research and publication record.



Tkach



Reunion of biology graduate students from the 1980s (July '02)

Beginning in the fall and continuing through much of the 2002-03 AY, were the searches for two new faculty members. Newman as Chair of the Infectious Disease Search Committee, reported that the advertisement which appeared during the summer had only produced eight applications. The faculty chose to revise the job description and combine it with the advertisement for a geneticist. Dean Potvin urged the Department to guard against bias in the process of recruitment and hiring, a concern she had for all departments in her college. With Gerber and Pyle as the only women in the Department, she appointed Ann Flower from Microbiology to be a fourth member of Newman's search committee. This appointment led the Department to define and restrict Flower's role to ranking and voting on the short list of applicants, but not on hiring

decisions. Potvin also retained the prerogative of reviewing the list of applicants before approving interviews. Eventually two were allowed, but the better of these candidates requested \$179,000 of start up funds, an unusually large amount for the Department. Further complicating the issue was the person's spouse who also needed a position. Potvin allowed that individual to interview for Lang's "open line" position, but in April 2003 both candidates declined Biology's offer. They felt that Virginia Tech was a better fit for them since the region provided greater amphibian and ethnic diversity. They also were negatively influenced by the Sioux name and logo controversy. In the hope of filling the position, the Department had proceeded to create and furnish a new laboratory. This 306 sq. ft. facility was carved out of room 114, the Invertebrate Museum.



Rhen

The other search committee chaired by Fivizzani had better success. From a short list of six geneticists who had been interviewed by phone, three were chosen to visit the campus and Turk Rhen accepted the position. His Ph.D. in 2000 was from the University of Texas-Austin and he had three years of postdoctoral experience at the National Institute of Environmental Science in North Carolina. Rhen's area of research was in vertebrate reproductive biology and endocrinology. He joined Lang and Kelsch as tenure track faculty with the same academic roots of having earned M.S. degrees at UND.

In November 2002, the faculty was asked to approve two spring semester buyouts. One was initiated by President Kupchella who wanted Sheridan to work closely with the Grand Forks City Council and Peter Alfonso, VP for Research, in support of the Faculty Research Seed Money Program. The other request was by Vaughan for the spring semesters of 2003 and '04. His research in southeast Asia required lengthy absences from campus. Both requests were granted, although Vaughan's was restricted to "the length of current projects only." The faculty remembered well the earlier problems associated with the long and multiple absences of D. Lieberman and Auerbach during the mid-1990s.

In addition to the two buyouts and active searches for new faculty, the spring semester of 2003 was a time of change. La Duke was in his sixth year as Biology's Chair, and he was willing to serve another term. Kelsch was also willing to lead the Department, and in a March 2003 election he received a majority vote. In the same month, Lang who was on leave, announced his intent to retire August 15<sup>th</sup> after a 23 year association with the Department. The semester ended with a mini-retreat to study the graduate program, and to consider Sheridan's proposal for a "Center of Excellence in Genetics and Genomics." Although no action was taken on the latter item, questions of space and staffing were raised.

Although Rhen replaced Gerber as Biology's geneticist in the fall of 2003, the resignations of Lang and Austin created a staffing shortage for the year. The solution came via four temporary assistant professorships. These included Klatt serving the second of what would become a three year appointment. The other individuals included

Corrine Carey, Roger Zinser and Loren Engelstad. Not since 1960-63, had the Department hired so many temporary and/or part time faculty to teach, and they were very much needed as enrollment in biology classes was up 14.9% over the previous year. In addition to quantity, the quality of instruction was also a concern at multiple levels. A mandate from the Board of Higher Education and endorsed by the Faculty Senate and UND's Administration, required that departments establish a statement on the expectations of instructional performance. Biology's Executive Committee produced a five level rating scale which ranged from "significantly exceeds expectations" to "falls significantly short of expectations." (Note: In 2007-08, the Department also approved using this scale for evaluating a faculty member's research and service).

All of the September 2003 faculty meetings dealt with defining what biological areas should be represented by those recruited for the three open positions. One was a renewed effort to fill the Infectious Disease position, although under a new designation, "Disease Ecology." Vaughan replaced Newman as the committee Chair, but Ann Flower continued for a second year on the committee. From a short list of six applicants, Tkach accepted the position. His credentials were noted earlier, hence they are not repeated here. The other two positions specified "Developmental Biology" and "Evolutionary Biology," and their search committees were chaired by Fivizzani and La Duke, respectively. As with the previous year, Dean Potvin was again involved in the recruiting process. She requested to see and approve lists of candidates prior to inviting any for interviews, and she also recommended no "one-on-one" meetings with the candidates. Potvin's involvement included her membership on the Evolutionary Biology search committee which considered a short list of 11 applicants. In late April 2004, Rebecca Simmons accepted the Department's offer of an Assistant Professorship. She had earned a Ph.D. in 2001 in entomology at the University of Minnesota, and had three years of postdoctoral experience in the USDA's Systematic Entomology Laboratory at Beltsville, MD. Simmons' area of research was on the evolution of moths and butterflies. Tempering the Department's two successful searches, however, was the failed one for a developmental biologist. That effort would resume in the fall with Fivizzani continuing as chair of the search committee.



Simmons

During the fall semester of 2004, the faculty approved a revision of the Department's 2000 Strategic Plan. Also in the planning stages for a spring semester retreat, was a comprehensive review of the undergraduate curriculum and a "vision statement" on the subject (approved changes are noted in Appendix 6). Another type of change was Sheridan's request for a fall semester 2005 buyout of his teaching duties (cytology), instead of spring semesters. His rationale for this change was based in part on his role as UND's liaison to the City Council for the funding of the Faculty Research Seed Money Program. Sheridan reported that from 1999 to the present, the Program had awarded \$2,693,988 to 104 faculty members, five of whom were biologists. During the first funding cycle, 21 of 32 faculty members acquired new grants. This was a 10-fold monetary success, since \$852,297 of seed money helped generate \$8,579,000 of external funding for research.

Fivizzani reported early in 2005 that the search for a developmental biologist had attracted a strong group of applicants. From a short list of seven, three were invited for interviews, and Diane Darland, the faculty's first choice, accepted the assistant professorship. Her Ph.D. in 1998 was from Oregon Health Sciences University, and she had more than seven years of postdoctoral experience at Harvard's Medical School. Diane's research area was neurovascular interactions in early mammalian brain development. Her spouse, Tristan Darland, also had a Ph.D. from the same Oregon school as his wife, and had been a research associate in neurodevelopment at Harvard. Tristan was named an Assistant Research Professor shortly after arriving at UND, and has subsequently taught part time for the Department, most frequently in histology.



The spring semester ended with a new policy for allocating salary raises for 2005-06. Three levels of meritorious achievement would be the determinants for 95% of the available funds, with 5% at the Chair's discretion. This policy was altered a year later, stipulating four levels of meritorious achievement, and up to 10% of salary funds at the Chair's discretion. It is unknown how many methods for determining salary increases have been proposed, used and discarded over the years in Biology or the University. No scheme is perfect, but perhaps none was more unusual than President West's 1944 numerical system for salary and promotion. He rated "effectiveness as teacher" having a maximum value of 40 points, and "public relations service" could be worth as much as 30 points. As for scholarly work, West suggested that publications might be rated at two points per book for the first three published, and one point each for any additional ones!

The 2005 fall semester began with Crawford's appointment to chair another search committee. Fivizzani's upcoming retirement at the end of the AY, required finding an animal physiologist to fill his position. By early November, 21 applications were ready for faculty review, and from these, a short list of six received telephone interviews. Three candidates visited the campus, and Dane A. Crossley, the faculty's first choice, accepted the position. His Ph.D. in 1999 was from North Texas University, and he had five years of postdoctoral experience in the USA. In addition, Crossley had done research in Denmark and Sweden pursuing his interests in the evolution and development of cardio-respiratory control in vertebrates. While in Oregon, he had acquired teaching experience at Lewis and Clark College, and Portland State University.



Concurrent with the search for Fivizzani's replacement, were three large, time consuming studies. The first of these to be completed was an "undergraduate program review." The second large task was the development of a "departmental plan for assessment of undergraduate student learning." Lastly, the biology curriculum was

revised to better prepare students for a competitive and rapidly changing world (see Appendix 6). The restructured curriculum was approved and available to students in AY 2006-07.

The anticipated retirement of Fivizzani after 28 years of service was known a year in advance, but Pyle's acceptance of the Directorship of the Honors Program was more sudden. As with most administrators, she retained her academic rank and title in Biology, but in essence her allocation of effort was 100% to the Honors Program, since T. Darland was hired to teach her histology course. The move to the Honors Program appeared to be a good fit for Pyle since her forte was teaching and she had participated in the program a number of times. In addition to the changes involving Fivizzani and Pyle, there was also to be one in leadership. Kelsch was nearing the end of his third year as Department Chair, and was willing to continue for another term. Schlosser was also willing to serve, and in a March 2006 election, he received a majority vote. In his annual report for fiscal year 2006, Schlosser noted the large increase in undergraduates majoring in biology, up 32% from the previous year. Despite the heavy teaching load, the faculty published 26 peer-reviewed papers, and presented another 49 at professional meetings. New monies for research was gained when 13 of 22 grant proposals were funded for more than \$1.15 million dollars. Although the State of the Unit appeared to be healthy, impediments were acknowledged, not the least of which was the excessive demand for response to "mandates," some having lesser value. Thirty years earlier, Dean O'Kelly of Arts & Sciences commented to one of his associate deans, that "not all things worth doing, are worth doing well." His view on excessive paperwork and the need to judiciously apportion time and effort are still valid.

The 2006 fall semester began with Crossley joining the Department, and Jeanne Place and T. Darland hired as temporary faculty to cover Pyle's teaching obligations. Crawford announced his intent to retire in May 2007, and the Dean approved Biology's



request to recruit two new faculty members. One position was advertised as a "Quantitative Wildlife Biologist" to replace Crawford, the other for someone in "Genomics," a new discipline in the Department. The search committees were chaired by Sweitzer and Meberg, respectively, with Kathryn Thomasson from Chemistry added as a fourth member on the genomics committee. By early November 2006, Meberg presented the faculty with a short list of eight applicants from a field 36. Following review and ranking, four were invited to UND after first having been interviewed by telephone. Steven G. Ralph accepted the genomics position at the rank of Assistant Professor. His 2002 Ph.D. was earned at the University of British Columbia. Ralph had five years of postdoctoral experience as a Research Associate with Genome Canada and its conifer forest health program with emphasis on plant-insect interactions. The other search was also successful. Sweitzer provided a short list of five applicants, and following phone interviews, three individuals were brought to the campus. Katherine Mehl, with a Ph.D. in 2004 from the University of Saskatchewan,



accepted the wildlife biology position as an Assistant Professor. Her postdoctoral experience included four years as a Research Scientist with Ducks Unlimited Canada. Mehl and Ralph joined Goodwin in giving the Department a Canadian "flavor."

During the fall semester the faculty approved a resolution supporting Dean Potvin's efforts to assist the Forensic Science Program in such ways as the Department could. This was consistent with Biology's role via required and elective courses, and the program's need for a molecular biologist. (Note: searches for such a faculty person failed in both 2006-07 and 2007-08). Another program which gained Biology's attention and participation was sponsored and funded by the ND Department of Public Instruction. This focused on certified North Dakota teachers by providing graduate level courses in science, mathematics and engineering via summer workshops and online instruction. Three new 500-level biology courses, plus their labs, were created for prospective students, but since its inception in the summer of 2007, few biology teachers have enrolled.

Two activities that occurred throughout much of the 2006-07 AY concerned the Graduate Program. The periodic mandatory review of the program was coordinated by Newman, and was a major topic at the Department's retreat in March. He reported that a Graduate Committee's review of Biology's report "contained no surprises." A new mandate, however, was the requirement for a "Plan for Assessment of Graduate Student Learning." This plan is included as Appendix VI in the 2008 Biology Department Faculty Handbook.

In October 2006, the faculty were alerted to a draft proposal from Robert Gallager, VP for Finance and Operations, concerning field stations. The Department's "ownership and control" of the Oakville Prairie and Forest River stations for more than 50 years were slipping away, as was the prospect of continued rental income from surplus Air Base property acquired in the 1970s. On 21 June 2007, President Kupchella approved Gallager's "Biology Field Station Operation and Management Policy." Proposed uses of the field stations would hereafter require unanimous approval by all five members of a new Field Station Committee, two of whom were to be from the Biology Department. Within this new policy, the VP for Finance and Operations would chair the committee and retain broad authority over field station activities. At the first faculty meeting of the 2007 fall semester, these changes and the discontinuance of appointed departmental "directors" of the field stations were announced. The new University policy and related property descriptions are presented in Appendix I of the Biology Department Faculty Handbook.

Despite Newman and Sweitzer being on leave for the year, and Carmichael to Norway for the spring semester, the 2007-08 AY was unusual. For the first time since 1999-2000, no faculty search committees were required. Matt Doeringsfeld and Jim Maskey, both Ph.D. candidates, were hired to cover the teaching obligations of those on leave. Relief from faculty recruitment was fortunate since the Department faced other major activities and mandates during the year, including learning assessment of biology majors, and criteria for faculty evaluations.

On 15 February 2008, the Department determined criteria for promotion, tenure, and annual evaluations. Five categories were approved to describe a faculty member's performance relative to an individual's percent allocation of effort in teaching, research and service. These were: "significantly exceeds expectations," "exceeds expectations," "meets expectations," "falls short of expectations," and "falls significantly short of expectations." Each category required written comments. The same standards were deemed applicable for assessment of Department Chairs. Evaluation for merit pay raises, however, was based on four levels of performance, with the lowest being "meets expectations." The corrected and updated 2008 Biology Department Faculty Handbook provided specific details for implementing any and all of the above assessments.

Midway through the 2008 spring semester came a depressing announcement from Dean Potvin. A projected budget short-fall of 2-3% in 2008-09 for Arts and Sciences would mean at least a \$40,000 reduction for Biology, if applied equally to all departments. Schlosser made a compelling case to the Dean that the Department be spared this large amount. Increases in the number of biology majors, and overall enrollments in departmental courses had dramatically outpaced increases in instructional resources (Table 3).

Table 3. Enrollment Data for the 21<sup>st</sup> Century\*  
Number of Biology Department Majors\*\*

	Biology & Pre-Health	Fisheries/Wildlife	Graduate Students	Enrolled in Biol Classes
2000-01	282	46	24	?
2001-02	290	42	24.5	3,751
2002-03	320	36	22.5	3,718
2003-04	359	57	23	4,271
2004-05	363	65	24.5	4,784
2005-06	510	56	22.5	4,818
2006-07	704	57	21.5	4,511
2007-08	698	48	19	4,458

\*Based on the Department's annual reports and data from the Registrar's Office.

\*\*Average number of majors/AY

To reduce already inadequate budgets would only exacerbate a difficult situation. Reluctantly, Schlosser proposed three scenarios for meeting the required reductions. The solution that was acceptable to the Dean, and having least impact on the Department, was releasing Sweitzer's salary line during his unpaid leave which had been approved for 2008-09. A related problem surfaced in the spring when Pung was given the task of surveying the usage of the Department's research space. Those numbers had monetary implications for determining future indirect costs associated with external grant proposals. The 125<sup>th</sup> anniversary of UND concluded on three positive notes for Biology; 1) no faculty turnover for the next AY; 2) Tkach was the recipient of an Arts & Sciences award for outstanding research; and 3) James Maskey received his Ph.D. degree at the December 2008 commencement.





Front row: Lewis, Paul, Meberg, Simmons, La Duke, Sheridan  
 2nd row: Goodwin, Schlosser, Drees, Mehl, Crossley, Newman, Tkach, Jancsik, D. Darland  
 3rd row: Carmichael, Kelsch, Pung, Maskey, T. Darland, Ralph, Rhen, Sheppard, Vaughan  
 (Absent on unpaid leave, 2008-09 AY, Sweitzer)

The Biology Faculty and Staff, Fall Semester 2008.



The anniversary flag and logo.



Robert O. Kelley

At the University level, the 125<sup>th</sup> anniversary celebration concluded under the leadership of a new President, Robert O. Kelley. The final observance occurred on 10 December 2008 with a closing ceremony in the Memorial Union's Ballroom. The anniversary flag was retired at the event, as confetti in the University's colors (green, white and pink) rained down on the crowd. Those present were encouraged to submit written predictions of what campus life will be like at UND's 150<sup>th</sup> anniversary. These prediction were placed in a time capsule to be opened in 2033. Although members of the Biology Department did not have their own time capsule, they also could contemplate the future...not only for the next quarter century, but as suggested in the epilogue, for the next 125 years!

## EPILOGUE

In the quasicentennial of the University, biology has remained a continuous and evolving discipline at the school. The threefold mission of the Department...teaching, research and service, have remained an uninterrupted tradition for 125 years. Even during the severe economic hardships of the 1890s and 1930s, the Department's mission continued through the strong and dedicated leadership of Brannon and Wheeler, respectively. Faculties, curricula, facilities, financial support and student enrollments are variables that at times have been quite unpredictable. Adapting to change, and occasional crises, has been the requisite response by the University. In a similar fashion, this has been equally true for the Biology Department.

How one evaluates the fulfillment of the Department's mission is debatable, but since the mid-1960s, its awards are one measure. These include five for excellence in research. In addition, nine faculty members have been recognized for individual research excellence, and another 11 for outstanding teaching and/or service. Perhaps the best validation of the Department's success is seen at every commencement when graduates are sent into the world with the basic knowledge and skills to begin productive lives. The progress of the Department has occurred because of the unusual quality of faculty it has recruited. Through their faithfulness, patience and indefatigability, faculty members have created and maintained a program of stimulating instruction, responsive service and creative scholarship. Generations of students have responded to those contributions by dedicated scholarship and fidelity to their field of learning.

What do the next 125 years hold for the Biology Department? Many believe that we are entering a new and major period of biological discovery. A period in which biology will play an increasingly critical role in society on issues ranging from the use of molecular technology to treat human diseases and significantly extend human lifespan, to the application of ecological and evolutionary theory to reduce climate change and species extinction. Just as over the past 125 years, this will lead to fundamentally new ways of thinking about biological processes that are hardly even imaginable today. What will be consistent, however, is that the foundation for the progress made by the Biology Department during the next 125 years will continue to be based on the efforts of the department's dedicated faculty, staff, and students. We wish them well in this endeavor.

## ACKNOWLEDGMENTS

This author's interest in the Biology Department's history and traditions date from 1950 as a UND freshman. Despite three interruptions (military service, graduate school, and my first college position), I've been privileged to have nearly six decades of contact and/or participation in biology at the University of North Dakota. Although this history has substantial deficiencies, I have neither the time nor energy to remedy those. After most of two years, it has become too long and large a project.

I am indebted to a number of individuals for their assistance and/or contributions to the content of this history. None more so than Paul Kannowski and his foresighted concern for preserving materials of potential historical value. During his 13 years as Department Chair, he created and saved hundreds of files on all aspects of the Department. Approximately 180 of these are in the Department of Special Collections, but another 300 or more reside in Starcher Hall. The annual departmental reports, begun by him in 1964 and continued by subsequent Chairs, have provided a chronologic perspective to the Department's evolution, as did his penultimate manuscript for UND's centennial. Kannowski's recollections of events from the later years of the Wheeler era helped bridge a period for which there are very few departmental records. Similarly, Robert Seabloom's memories of the early 1960s were of value, as was his critique of several chapters. Lewis Oring provided information on Starcher Hall's funding, and on his role as the state's Director of EPSCoR's second cycle. Thanks to John La Duke for searching the herbarium files for the contributions of early collectors. Steven Kelsch and Robert Newman clarified the policies and procedures used by faculty search committees since 2003. In addition to reflections on his time as Department Chair, Albert Fivizzani gave a valuable critique of the activities and accomplishments supported by the Howard Hughes Medical Institute grant, 1994-2001. To Isaac Schlosser, my gratitude for his careful critique, contributions to the epilogue, and willingness to twice proofread the manuscript. His input and those of Fivizzani were helpful in presenting the Department's history for those years after my retirement in 1995.

Appreciation is extended to Curtis Hanson and his staff in the Department of Special Collections for prompt and efficient responses to my requests, and also to Jay Durgin for a template of suggested historical topics. Thanks to Larry Zitzow in the Facilities Management Office for providing blueprints of the first Chemistry Building, now known as Gillette Hall. To the personnel of the local FedEx-Kinko Office, and especially to Lynn McGarry, a big thank you for reliably making excellent copies of numerous pictures. My appreciation to Jeannie Lewis, Biology's Office Manager, for cheerfully providing helpful information and unrestricted access to departmental files. I am most grateful to Kristen Paul, Administrative Secretary, for her abundant patience in typing the final draft from my unorthodox and outdated methods of producing rough copy. Her willingness to do so, even after leaving the Department, was highly relevant to the completion of this project. Lastly, thanks to my wife, Pat, for doing the initial proofreading and providing moral support throughout this long process.

## APPENDICES

APPENDIX 1

UND's BIOLOGY FACULTY, 1884-2008

This listing, through 1969-70, was the work of Paul Kannowski. Using Arts & Sciences records, Department files and UND Directories, the list is complete through 2007-08. Unfortunately, the latter entries often fail to note developmental leaves and various curatorial and coordination duties. Incomplete or missing personnel files made it impossible to determine the duration or size of many part time appointments, and no summer session faculties or Adjunct Professorships are listed.

1884-85	Henry Montgomery, M.A.	Professor of Natural Sciences and Vice President
1885-86	Henry Montgomery	Professor of Natural Sciences and Vice President; Acting President
1886-87	Henry Montgomery	Professor of Natural Sciences and Vice President; Acting President
1887-88	Henry Montgomery	Professor of Natural Sciences
1888-89	Henry Montgomery	Professor of Natural Sciences (resigned)
1889-90	William Patten, Ph.D.	Professor of Biology and Curator of the Museum
1890-91	William Patten	Professor of Biology and Curator of the Museum
	Myron W. Smith, B.S.	Assistant in Biology Laboratory

1891-92	William Patten	Professor of Biology and Curator of the Museum
1892-93	William Patten	Professor of Biology and Curator of the Museum (resigned to become Head, Department of Biology, Dartmouth College)
1893-94	Melvin A. Brannon, M.A.	Professor of Biology and Curator of the Museum (beginning March 1894)
1894-95	M. A. Brannon	Professor of Biology and Curator of the Museum
1895-96	M. A. Brannon	Professor of Biology and Curator of the Museum
1896-97	M. A. Brannon	Professor of Biology and Curator of the Museum
1897-98	M. A. Brannon	Professor of Biology and Curator of the Museum
1898-99	M. A. Brannon	Professor of Biology and Curator of the Museum
	N. Johanna Kildahl, B.A.	Assistant in Biology Laboratory
1899-00	M. A. Brannon	Professor of Biology and Curator of the Museum

1899-00 (continued)	N. Johanna Kildahl	Assistant in Biology Laboratory
1900-01	M. A. Brannon	Professor of Biology and Curator of the Museum
	N. Johanna Kildahl (M.A. in 1900)	Instructor in Biology and Assistant Curator of the Museum
1901-02	M. A. Brannon	Professor of Biology and Curator of the Museum
	N. Johanna Kildahl	Instructor in Biology and Assistant Curator of the Museum
1902-03	M. A. Brannon	Professor of Biology and Curator of the Museum
	N. Johanna Kildahl	Instructor in Biology and Assistant Curator of the Museum
1903-04	M. A. Brannon	Professor of Biology and Curator of the Museum
	N. Johanna Kildahl	Instructor in Biology and Assistant Curator of the Museum
1904-05	M. A. Brannon	Professor of Biology and Curator of the Museum
	N. Johanna Kildahl	Instructor in Biology and Assistant Curator of the Museum

1905-06	M. A. Brannon	Professor of Biology, Curator of the Museum and Dean of the College of Medicine
1906-07	M. A. Brannon	Professor of Biology, Curator of the Museum and Dean of the College of Medicine
	Robert T. Young, Ph. D.	Instructor in Biology
1907-08	M. A. Brannon	Professor of Biology, Curator of the Museum and Dean of the College of Medicine
	R. T. Young	Instructor in Biology
1908-09	M. A. Brannon	Professor of Biology, Curator of the Museum and Dean of the College of Medicine
	R. T. Young	Instructor in Biology
1909-10	M. A. Brannon	Professor of Biology, Curator of the Museum and Dean of the College of Medicine and Director of the Biological Station
	R. T. Young	Assistant Professor of Zoology
	James M. Brannon, B. A.	Instructor in Biology

1910-11	M. A. Brannon	Professor of Biology, Curator of the Museum and Dean of the College of Medicine and Director of the Biological Station
	R. T. Young	Assistant Professor of Zoology
	J. M. Brannon	Instructor in Biology
1911-12	M. A. Brannon	Professor of Biology, Director of the Biological Station, and Dean of the College of Liberal Arts (on leave of absence 1911-12)
	R. T. Young	Assistant Professor of Zoology
	J. M. Brannon	Instructor in Biology
	Engebret T. Tufte, M.A.	Assistant in Biology
1912-13	M. A. Brannon	Professor of Biology, Director of the Biological Station, and Dean of the College of Liberal Arts
	R. T. Young	Assistant Professor of Zoology
	Norma Etta Pfeiffer, B.S.	Assistant in Biology
1913-14	M. A. Brannon (received Ph.D. in 1913)	Professor of Biology, Director of the Biological Station, and Dean of the College of Liberal Arts (resigned April 15, 1914 to become President of University of Idaho)
	R. T. Young	Assistant Professor of Zoology
	N. E. Pfeiffer	Instructor in Biology

1913-14 (continued)	O. D. Center	Lecturer in Biology
	J. G. Haney	Lecturer in Biology
	Grace Benton, B.A.	Assistant in Biology
1914-15	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer (received Ph.D. in 1914)	Instructor in Biology
	J. G. Haney	Lecturer in Biology
1915-16	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer	Assistant Professor of Botany
	J. G. Haney	Lecturer in Biology
1916-17	R. T. Young	Professor of Zoology and Director of the Biological Station (on leave of absence, 1916-17)
	N. E. Pfeiffer	Assistant Professor of Botany
	George E. Johnson, M. S.	Instructor in Zoology
	J. G. Haney	Lecturer in Biology
1917-18	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer	Assistant Professor of Botany (on leave of absence, second semester, 1917-18)

1918-19	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer	Assistant Professor of Botany
1919-1920	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer	Assistant Professor of Botany
1920-21	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer	Assistant Professor of Botany
1921-22	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer	Assistant Professor of Botany
1922-23	R. T. Young	Professor of Zoology and Director of the Biological Station
	N. E. Pfeiffer	Associate Professor of Botany, (on leave of absence 1 <sup>st</sup> semester 1922-23)
	Sara Imelda Lewis, M.S.	Acting Instructor in Botany (1 <sup>st</sup> semester)

1923-24	R. T. Young	Professor of Zoology and Director of the Biological Station
	Edgar A. Baird, Ph.D.	Associate Professor of Botany
1924-25	R. T. Young	Professor of Zoology and Director of the Biological Station
	E. A. Baird	Associate Professor of Botany
1925-26	R. T. Young	Professor of Zoology and Director of the Biological Station (resigned February 1, 1926 to become Professor of Zoology, University of Montana)
	E. A. Baird	Associate Professor of Botany
	William T. Templin, M.A.	Assistant Professor of Zoology (2 <sup>nd</sup> semester)
1926-27	George C. Wheeler, Sc.D.	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Associate Professor of Botany
1927-28	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Associate Professor of Botany
1928-29	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Associate Professor of Botany

1929-30	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Associate Professor of Botany
1930-31	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Professor of Botany
1931-32	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Professor of Botany
1932-33	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Professor of Botany
1933-34	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Professor of Botany
1934-35	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	E. A. Baird	Professor of Botany (on leave of absence 2 <sup>nd</sup> semester)
	Max Benson	Instructor in Biology (2 <sup>nd</sup> semester)

1935-36	G. C. Wheeler	Professor of Zoology and Head, Department of Biology
	Edith E. Larson, M.A.	Instructor in Biology
1936-37	G. C. Wheeler	Professor and Head, Department of Biology
	Neal A. Weber, Ph.D.	Associate Professor of Biology
1937-38	G. C. Wheeler	Professor and Head
	N. A. Weber	Associate Professor
1938-39	G. C. Wheeler	Professor and Head
	N. A. Weber	Associate Professor
1939-40	G. C. Wheeler	Professor and Head
	N. A. Weber	Associate Professor
1940-41	G. C. Wheeler	Professor and Head
	N. A. Weber	Associate Professor
1941-42	G. C. Wheeler	Professor and Head
	N. A. Weber	Associate Professor
1942-43	G. C. Wheeler	Professor and Head
	N. A. Weber	Associate Professor

1943-44	G. C. Wheeler	Professor and Head
	Jeanette Wheeler, B.S.	Instructor in Biology (April & May)
1944-45	G. C. Wheeler	Professor and Head
	Jeanette Wheeler	Instructor in Biology
1945-46	G. C. Wheeler	Professor and Head
	Jeanette Wheeler	Instructor in Biology
1946-47	G. C. Wheeler	Professor and Head
	Jeanette Wheeler	Instructor in Biology
	Edith E. Larson	Assistant Professor of Biology (second semester)
1947-48	G. C. Wheeler	Professor and Head
	E. E. Larson	Assistant Professor of Biology
	Vera L. Facey, Ph.D.	Assistant Professor of Biology
1948-49	G. C. Wheeler	Professor and Head
	Vera Facey	Assistant Professor (sick leave October-February)
	E. E. Larson	Assistant Professor
	Jeanette Wheeler	Instructor (first semester)
1949-50	G. C. Wheeler	Professor and Head
	Vera Facey	Assistant Professor
	E. E. Larson	Assistant Professor



1950-51	G. C. Wheeler	Professor and Head
	Vera Facey	Assistant Professor
	E. E. Larson	Assistant Professor
1951-52	G. C. Wheeler	Professor and Head
	Vera Facey	Assistant Professor
	E. E. Larson	Assistant Professor
1952-53	G. C. Wheeler	Professor and Head
	Vera Facey	Assistant Professor
	E. E. Larson	Assistant Professor
1953-54	G. C. Wheeler	Professor and Head
	Vera Facey	Assistant Professor
	E. E. Larson	Assistant Professor
1954-55	G. C. Wheeler	Professor and Head
	Vera Facey	Associate Professor
	E. E. Larson	Assistant Professor
	Hazel E. McMaster, M.S.	Instructor in Biology
1955-56	G. C. Wheeler	Professor and Head
	Vera Facey	Associate Professor
	E. E. Larson	Assistant Professor
	H. E. McMaster	Instructor in Biology

1956-57	G. C. Wheeler	Professor and Head
	Vera Facey	Associate Professor
	E. E. Larson	Assistant Professor
	H. E. McMaster	Instructor in Biology
1957-58	G. C. Wheeler	Professor and Head
	Vera Facey	Associate Professor
	Paul B. Kannowski, Ph.D.	Assistant Professor
	E. E. Larson	Assistant Professor
1958-59	H. McMaster	Instructor in Biology
	G. C. Wheeler	Professor and Head
	Vera Facey	Associate Professor
	P. B. Kannowski	Assistant Professor
1959-60	E. E. Larson	Assistant Professor
	Dalton D. Halvorson, B.S.	Assistant in Biology
	Jean Pfeiffer, M.S.	Assistant in Biology
	G. C. Wheeler	Professor and Head
1956-57	Vera Facey	Associate Professor
	P. B. Kannowski	Assistant Professor
	E. E. Larson	Assistant Professor
	D. D. Halvorson	Instructor in Biology

1959-60 (continued)	Oscar T. Kalin, II, B.S.	Assistant in Biology
	Olga Lakela, Ph.D.	Visiting Lecturer in Biology
1960-61	G. C. Wheeler	Professor and Head
	Vera Facey	Associate Professor
	P. B. Kannowski	Associate Professor
	E. E. Larson	Assistant Professor
	D. D. Halvorson	Instructor
	Myron L. Freeman, B.S.	Assistant in Biology
	O. T. Kalin, II	Assistant in Biology
	Constance T. Tuthill, M.S.	Assistant in Biology
1961-62	G. C. Wheeler	Professor and Head
	Vera Facey	Associate Professor
	P. B. Kannowski	Associate Professor
	E. E. Larson	Assistant Professor
	Robert W. Seabloom, M.S.	Assistant Professor
	D. D. Halvorson	Instructor
	C. T. Tuthill	Instructor, 1/2-time, in Biology
	M. L. Freeman	Assistant in Biology
	O.T. Kalin, II	Assistant in Biology
	1962-63	G. C. Wheeler
Vera Facey		Professor
P. B. Kannowski		Associate Professor

1962-63 (continued)	Gary K. Hulett, Ph.D.	Assistant Professor (resigned June 1963, to become Assistant Professor of Biology, Fort Hays Kansas State College)	
	E. E. Larson	Assistant Professor	
	William D. Schmid, Ph.D.	Assistant Professor	
	R. W. Seabloom (received Ph.D., 1963)	Assistant Professor	
	M. Freeman	Instructor	
	D. D. Halvorson	Instructor	
	C. Tuthill	Instructor, 1/2-time	
	O. T. Kalin, II	Assistant in Biology	
	1963-64	P. B. Kannowski	Associate Professor and Chairman
		G. C. Wheeler	Professor
Vera Facey		Professor	
E. E. Larson		Associate Professor	
Digamber S. Borgeonkar, Ph.D.		Assistant Professor (resigned June 1964, to become Instructor in Medicine, Johns Hopkins University)	
W. D. Schmid		Assistant Professor	
R. W. Seabloom		Assistant Professor	
Richard A. Tubb, Ph.D.		Assistant Professor	
Jeanette Wheeler, Ph.D.	Assistant Professor, part-time		

1963-64 (continued)	D. D. Halvorson	Instructor (resigned June 1964)
	A. Virginia Pedeliski, M.S.	Instructor
	C. Tuthill	Instructor, ½ time (first semester)
1964-65	P. B. Kannowski	Associate Professor and Chairman
	G. C. Wheeler	Professor
	Vera Facey	Professor
	E. E. Larson	Associate Professor
	Elmer B. Hadley, Ph.D.	Assistant Professor (resigned August 1965, to become Assistant Professor of Biology University of Illinois-Chicago)
	Syed M. Jalal, Ph.D.	Assistant Professor
	Omer R. Larson, Ph.D.	Assistant Professor
	W. D. Schmid	Assistant Professor
	R. W. Seabloom	Assistant Professor
	R. A. Tubb	Assistant Professor
	J. Wheeler	Assistant Professor (resigned February 1965)
1965-66	A. V. Pedeliski	Instructor (resigned June 1965)
	P. B. Kannowski	Associate Professor and Chairman; Director, Institute for Ecological Studies
	G. C. Wheeler	University Professor

1965-66 (continued)	Vera Facey	Professor and Curator of the Herbarium
	E. E. Larson	Associate Professor (retired June 1966)
	S. M. Jalal	Assistant Professor
	O. R. Larson	Assistant Professor
	Howard McCully, Ph.D.	Assistant Professor and Laboratory Coordinator for Introduction to Biology (resigned June 1966 to join UNESCO in the Philippine Islands)
	John B. Owen, Ph.D.	Assistant Professor
	James R. Reilly, Ph.D.	Assistant Professor
	W. D. Schmid	Assistant Professor (resigned June 1966 to become Assistant Professor of Zoology, University of Minnesota)
	R. W. Seabloom	Assistant Professor and Curator of Mammals
	R. A. Tubb	Assistant Professor and Director of the Biological Station (resigned June 1966, to become Assistant Leader, Cooperative Fisheries Unit, South Dakota State University)
1966-67	P. B. Kannowski	Associate Professor and Chairman; Director, Institute for Ecological Studies (on Sabbatical leave)
	O. R. Larson	Assistant Professor and Acting Chairman

1966-67 (continued)

G. C. Wheeler	University Professor (retired, June 1967)
Vera Facey	Professor and Curator of the Herbarium
Joe K. Neel, Ph.D.	Professor and Director of the Biological Station
Marjorie P. Behringer, Ph.D.	Assistant Professor and Laboratory Coordinator for Introduction to Biology
Gary W. Bryan, Ph.D.	Assistant Professor
S. M. Jalal	Assistant Professor
Harold J. Kittilson, Ph.D.	Assistant Professor
Alice K. Owen, Ph.D.	Assistant Professor (1/2 time)
J. B. Owen	Assistant Professor and Coordinator of Fisheries Biology Program
J. R. Reilly	Assistant Professor and Coordinator of Wildlife Biology Program
R. W. Seabloom	Assistant Professor and Curator of Mammals
Ted R. James, M.S.T.	Instructor (first semester)

1967-68

P. B. Kannowski	Associate Professor and Chairman; Director, Institute for Ecological Studies
Vera Facey	Professor and Curator of the Herbarium

1967-68 (continued)

J. K. Neel	Professor and Director of the Biological Station
R. W. Seabloom	Associate Professor and Curator of Mammals
M. P. Behringer	Assistant Professor and Laboratory Coordinator for Introduction to Biology
G. W. Bryan	Assistant Professor
S. M. Jalal	Assistant Professor
T. R. James (received Ph.D., 1967)	Assistant Professor (resigned August 1968 to become Assistant Professor of Biology at University of Tennessee, Martin)
H. L. Kittilson	Assistant Professor
O. R. Larson	Assistant Professor and Coordinator for General Biology
A. K. Owen	Assistant Professor (1/2-time)
J. B. Owen	Assistant Professor and Coordinator of Fisheries Biology Program
J. R. Reilly	Assistant Professor and Coordinator of Wildlife Biology Program
Fred E. Smeins, Ph.D.	Assistant Professor
Donald A. Becker, M.S.	Instructor (resigned August 1968 to become Assistant Professor of Biology at Midlands Lutheran College)

1967-68 (continued)	D. D. Halvorson	Instructor (1/2-time, second semester) (resigned August 1968)
1968-69	P. B. Kannowski	Associate Professor and Chairman; Director, Institute for Ecological Studies
	Vera Facey	Professor and Curator of the Herbarium
	J. K. Neel	Professor and Director of the Biological Station
	Frederick G. Duerr, Ph.D.	Associate Professor
	O. R. Larson	Associate Professor and Coordinator for General Biology
	J. R. Reilly	Associate Professor and Coordinator of Wildlife Biology Program
	R. W. Scabloom	Associate Professor and Curator of Mammals
	M. P. Behringer	Assistant Professor and Laboratory Coordinator for Introduction to Biology
	G. W. Bryan	Assistant Professor
	S. M. Jalal	Assistant Professor
	H. L. Kittilson	Assistant Professor (resigned August 1969 to become Assistant Professor of Biology at University of Tennessee, Martin)
	Lewis W. Oring, Ph.D.	Assistant Professor
	A. K. Owen	Assistant Professor (1/2-time)

1968-69 (continued)	J. B. Owen	Assistant Professor and Coordinator of Fisheries Biology Program
	F. E. Smeins	Assistant Professor (resigned June 1969 to become Assistant Professor of Range Management at Texas A & M University)
	Robert A. Ahokas, M.S.	Instructor (resigned June 1969 to return to graduate studies)
1969-70	P. B. Kannowski	Professor and Chairman; Director, Institute for Ecological Studies
	Vera Facey	Professor and Curator of the Herbarium
	J. K. Neel	Professor and Director of the Biological Station
	F. G. Duerr	Associate Professor
	S. M. Jalal	Associate Professor
	O. R. Larson	Associate Professor and Associate Dean, College of Arts and Sciences
	J. B. Owen	Associate Professor and Coordinator of Fisheries Biology Program
	J. R. Reilly	Associate Professor and Coordinator of Wildlife Biology Program
	R. W. Scabloom	Associate Professor and Curator of Mammals

1969-70 (continued)	M. P. Behringer	Assistant Professor and Laboratory Coordinator for Introduction to Biology
	Dean W. Blinn, Ph.D.	Assistant Professor
	G. W. Bryan	Assistant Professor (resigned June 70 & returned to Kansas farming)
	L. W. Oring	Assistant Professor
	A. K. Owen	Assistant Professor (1/2 - time)
	Robert T. Pollock, Ph.D.	Assistant Professor
	Mohan K. Wali, Ph.D.	Assistant Professor
	William J. Wrenn, M.S.	Assistant Professor
1970-71	Floyd Hunter, Ph.D.	Associate Professor & Chairman (died 2 Feb 71)
	J. K. Neel	Professor & Interim Chairman (8 Feb - 31 May 71)
	Vera Facey	Professor, & Herbarium Curator: Acting Chairperson (1 June - 15 Aug 71)
	P. B. Kannowski	Professor; Director, Institute for Ecological Studies
	F. G. Duerr	Associate Professor
	S. M. Jalal	Associate Professor
	O. R. Larson	Associate Professor
	J. B. Owen	Associate Professor
	J. R. Reilly	Associate Professor

1970-71 (continued)	R. W. Seabloom	Associate Professor & Curator of Mammals
	M. P. Behringer	Associate Professor
	L. W. Oring	Associate Professor
	D. W. Blinn	Assistant Professor (resigned 5/15/71 to accept a position at No. AZ Univ)
	JoAnn Hunter, Ph.D.	Assistant Professor (1/2-time, 2 <sup>nd</sup> semester)
	A. K. Owen	Assistant Professor (1/2-time)
	R. T. Pollock	Assistant Professor
	M. K. Wali	Assistant Professor
	W. J. Wrenn	Assistant Professor
1971-72	Harry L. Holloway, Jr. Ph.D.	Professor & Chairman
	J. K. Neel	Professor
	Vera Facey	Professor & Herbarium Curator
	P. B. Kannowski	Professor; Director, Institute for Ecological Studies
	M. P. Behringer	Associate Professor
	F. G. Duerr	Associate Professor
	S. M. Jalal	Associate Professor
	O. R. Larson	Associate Professor
	L. W. Oring	Associate Professor
	J. B. Owen	Associate Professor

1971-72 (continued)	J. R. Reilly	Associate Professor
	R. W. Seabloom	Associate Professor & Curator of Mammals (on sabbatical leave)
	A. K. Owen	Assistant Professor (1/2-time)
	R. T. Pollock	Assistant Professor
	M. K. Wali	Assistant Professor
	W. J. Wrenn, (received Ph.D. 1972)	Assistant Professor
	R. A. Ahokas	Instructor
1972-73	H. L. Holloway, Jr.	Professor & Chairman
	Vera Facey	Professor & Herbarium Curator
	P. K. Kannowski	Professor; Director, Institute for Ecological Studies
	J. K. Neel	Professor
	M. P. Behringer	Associate Professor
	F. G. Duerr	Associate Professor
	S. M. Jalal	Associate Professor
	O. R. Larson	Associate Professor
	L. W. Oring	Associate Professor
	J. B. Owen	Associate Professor
	J. R. Reilly	Associate Professor
	R. W. Seabloom	Associate Professor & Curator of Mammals

1972-73 (continued)	A. K. Owen	Assistant Professor (1/2-time)
	R. T. Pollock	Assistant Professor
	Dianna Tupa, Ph.D.	Assistant Professor (resigned June 73 to return to Texas)
	M. K. Wali	Assistant Professor
	W. J. Wrenn	Assistant Professor
1973-74	H. L. Holloway, Jr.	Professor & Chairman
	Vera Facey	Professor & Herbarium Curator
	P. B. Kannowski	Professor; Director, Institute for Ecological Studies
	J. K. Neel	Professor
	M. P. Behringer	Associate Professor
	F. G. Duerr	Associate Professor
	S. M. Jalal	Associate Professor (on leave 2 <sup>nd</sup> semester)
	O. R. Larson	Associate Professor
	L. W. Oring	Associate Professor
	J. B. Owen	Associate Professor
	J. R. Reilly	Associate Professor (died June 28, 1974)
	R. W. Seabloom	Associate Professor & Curator of Mammals
	M. K. Wali	Associate Professor
	A. K. Owen	Assistant Professor (1/2-time)

1973-74 (continued)	R. T. Pollock	Assistant Professor
	L. Elliot Shubert, Ph.D.	Assistant Professor
	W. J. Wrenn	Assistant Professor
1974-75	J. K. Neel	Professor & Chairman
	M. P. Behringer	Professor
	Vera Facey	Professor & Herbarium Curator
	H. L. Holloway, Jr.	Professor
	P. B. Kannowski	Professor: Director, Institute for Ecological Studies
	F. G. Duerr	Associate Professor
	S. M. Jalal	Associate Professor
	O. R. Larson	Associate Professor
	L. W. Oring	Associate Professor
	J. B. Owen	Associate Professor
	R. W. Seabloom	Associate Professor & Curator of Mammals
	M. K. Wali	Associate Professor
	A. K. Owen	Assistant Professor (1/2-time)
	R. T. Pollock	Assistant Professor (resigned June 1975 to try freelance writing and photography in Colorado)
	L. E. Shubert	Assistant Professor
	W. J. Wrenn	Assistant Professor
	Clifford F. Mehrer, M.S.	Instructor (1 <sup>st</sup> semester)

1975-76	J. K. Neel	Professor & Chairman
	M. P. Behringer	Professor
	Vera Facey	Professor & Herbarium Curator
	H. L. Holloway, Jr.	Professor
	P. B. Kannowski	Professor; Director, Inst. for Ecological Studies
	J. B. Owen	Professor (1/2-time)
	R. W. Seabloom	Professor & Curator of Mammals
	F. G. Duerr	Associate Professor (resigned Aug 76 to enter business)
	S. M. Jalal	Associate Professor
	O. R. Larson	Associate Professor & Associate Dean, Arts & Sciences
	L. W. Oring	Associate Professor (on sabbatical leave)
	William F. Sheridan Ph.D.	Associate Professor
	M. K. Wali	Associate Professor & Director of Project Reclamation
	Richard D. Crawford, Ph.D.	Assistant Professor
	A. K. Owen	Assistant Professor (1/2-time 2 <sup>nd</sup> semester)
	L. E. Shubert	Assistant Professor
	W. J. Wrenn	Assistant Professor
	Donald L. Rubbelke B.S.	Instructor (1 <sup>st</sup> semester)



1976-77

R. W. Seabloom	Professor, Chairman & Curator of Mammals
M. P. Behringer	Professor
Vera Facey	Professor & Herbarium Curator
H. L. Holloway, Jr.	Professor
P. B. Kannowski	Professor; Director, Inst. for Ecological Studies
O. R. Larson	Professor
J. K. Neel	Professor
J. B. Owen	Professor
S. M. Jalal	Associate Professor
L. W. Oring	Associate Professor
W. F. Sheridan	Associate Professor
M. K. Wali	Associate Professor & Director of Project Reclamation
W. J. Wrenn	Associate Professor
R. D. Crawford	Assistant Professor
A. K. Owen	Assistant Professor (1/2-time, 2 <sup>nd</sup> semester)
L. E. Shubert	Assistant Professor
Peggy J. Stupea M.S.	Lecturer in Biology (2 <sup>nd</sup> sem, part-time)

1977-78

R. W. Seabloom	Professor, Chairman & Curator of Mammals
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1977-78 (continued)

M. P. Behringer	Professor (retired June 1978)
Vera Facey	Professor & Herbarium Curator
H. L. Holloway, Jr.	Professor
S. M. Jalal	Professor
P. B. Kannowski	Professor; Director, Inst. for Ecological Studies
O. R. Larson	Professor
J. K. Neel	Professor
L. W. Oring	Professor
J. B. Owen	Professor
W. F. Sheridan	Associate Professor (on leave)
M. K. Wali	Associate Professor & Director of Project Reclamation; Assistant to the President for Energy Affairs
W. J. Wrenn	Associate Professor
Keith T. Killingbeck, Ph.D.	Assistant Professor (1/2-time) (accepted a position at Kansas State U for 78-79)
L. E. Shubert	Assistant Professor
Jerry Wolff, Ph.D.	Visiting Assistant Professor (2 <sup>nd</sup> semester, 1/4-time; returned to USDA Forest Service, Fairbanks, Alaska)
A. K. Owen	Assistant Professor (1/2-time)
R. D. Crawford	Assistant Professor

1977-78 (continued)	Gary K. Mallow, M.S.	Temporary Assistant Professor (accepted a position at Keen College, Union, NJ for 78-9)
	P. J. Stupca	Lecturer in Biology (1/2-time, 1 <sup>st</sup> semester)
1978-79	O. R. Larson	Professor & Chairman
	Vera Facey	Professor & Herbarium Curator (retired 5/15/79)
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor
	P. B. Kannowski	Professor; Director, Inst. for Ecological Studies
	J. K. Neel	Professor
	L. W. Oring	Professor
	J. B. Owen	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Associate Professor
	L. E. Shubert	Associate Professor
	M. K. Wali	Associate Professor & Director of Project Reclamation: Asst. to the President for Energy Affairs
	W. J. Wrenn	Associate Professor
	R. D. Crawford	Assistant Professor
	John H. Fitch Ph.D.	Assistant Professor (2 <sup>nd</sup> sem)
	Albert J. Fivizzani, Ph.D.	Assistant Professor

1978-79 (continued)	A. K. Owen	Assistant Professor (1/2-time, 2 <sup>nd</sup> semester)
1979-80	O. R. Larson	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor
	P. B. Kannowski	Professor & Director, Inst. for Ecological Studies
	J. K. Neel	Professor
	L. W. Oring	Professor
	J. B. Owen	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Associate Professor
	L. E. Shubert	Associate Professor
	M. K. Wali	Assoc. Professor & Director of Project Reclamation: Asst. to the President for Energy Affairs
	W. J. Wrenn	Associate Professor
	R. D. Crawford	Assistant Professor
	J. H. Fitch	Assistant Professor (resigned, summer of 1980, to join the staff of the Massachusetts Audubon Society)
	A. J. Fivizzani, Jr.	Assistant Professor
	A. K. Owen	Assistant Professor (1/4-time, 2 <sup>nd</sup> semester)
	Ann Wyckoff, M.S.	Temporary Assistant Professor

1980-81

L. W. Oring	Professor & Chairman
H. L. Holloway, Jr.	Professor
S. M. Jalal	Professor
P. B. Kannowski	Professor & Director, Inst. for Ecological Studies
O. R. Larson	Professor
J. K. Neel	Professor (retired, June 1981)
J. B. Owen	Professor
R. W. Seabloom	Professor & Curator of Mammals
M. K. Wali	Professor & Director of Project Reclamation: Asst. to the President for Energy Affairs
R. D. Crawford	Associate Professor
W. F. Sheridan	Associate Professor
L. E. Shubert	Associate Professor
W. J. Wrenn	Associate Professor
A. J. Fivizzani, Jr.	Assistant Professor
A. K. Owen	Assistant Professor (1/2-time, 2 <sup>nd</sup> semester)
John C. La Duke, Ph.D.	Assistant Professor & Herbarium Curator
Jeffrey W. Lang, Ph.D.	Temporary Assistant Professor (part-time)
Patrick W. Theisen, M.S.	Lecturer

1981-82

R. D. Crawford	Assoc. Professor & Chairman
H. L. Holloway, Jr.	Professor
S. M. Jalal	Professor
P. B. Kannowski	Professor
O. R. Larson	Professor
L. W. Oring	Professor
J. B. Owen	Professor
R. W. Seabloom	Professor & Curator of Mammals
W. F. Sheridan	Professor
M. K. Wali	Professor & Director of Project Reclamation: Asst. to the President for Energy Affairs
L. E. Shubert	Associate Professor
W. J. Wrenn	Associate Professor
Margaret G. Burke, Ph.D.	Asst. Prof., Temporary (3/4-time)
A. J. Fivizzani, Jr.	Assistant Professor
A. K. Owen	Assistant Professor (1/2-time, 2 <sup>nd</sup> semester)
J. C. La Duke	Assistant Professor & Herbarium Curator
J. W. Lang	Assistant Professor (part time)
Diana Lieberman, Ph.D.	Assistant Professor
Isaac J. Schlosser, Ph.D.	Assistant Professor

1981-82 (continued)	Milton Lieberman, Ph.D.	Adjunct Professor
1982-83	P. B. Kannowski	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor
	O. R. Larson	Professor
	L. W. Oring	Professor
	J. B. Owen	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	M. K. Wali	Professor & Director of Project Reclamation: Asst. to the President for Energy Affairs; (On leave 2 <sup>nd</sup> sem: resigned to accept a position at SUNY-Syracuse)
	R. D. Crawford	Associate Professor
	L. E. Shubert	Associate Professor
	W. J. Wrenn	Associate Professor
	M. G. Burke	Asst. Prof., Temporary (3/4-time)
	A. J. Fivizzani, Jr.	Assistant Professor
	J. C. La Duke	Assistant Professor & Herbarium Curator
	A. K. Owen	Assistant Professor (1/2-time, 2 <sup>nd</sup> semester)

1982-83 (continued)	J. W. Lang	Assistant Research Professor
	D. Lieberman	Assistant Professor
	I. J. Schlosser	Assistant Professor
	M. Lieberman	Research Professor
	Kathy Duncan, Ph.D.	Assistant Professor (1/2 time, 2 <sup>nd</sup> sem)
1983-84	P. B. Kannowski	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor
	O. R. Larson	Professor
	L. W. Oring	Professor
	J. B. Owen	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	R. D. Crawford	Associate Professor
	A. J. Fivizzani, Jr.	Associate Professor
	L. E. Shubert	Associate Professor
	W. J. Wrenn	Associate Professor
	Michael J. Auerbach, Ph.D.	Assistant Professor
	M. G. Burke	Asst. Prof., Temporary (2/3-time)
	J. C. La Duke	Assistant Professor & Herbarium Curator
	J. W. Lang	Assistant Research Professor

1983-84 (continued)	D. Lieberman	Assistant Professor
	I. J. Schlosser	Assistant Professor
	M. Lieberman	Research Professor
1984-85	P. B. Kanno	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor
	O. R. Larson	Professor
	L. W. Oring	Professor
	J. B. Owen	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	R. D. Crawford	Associate Professor
	A. J. Fivizzani, Jr.	Associate Professor
	L. E. Shubert	Associate Professor
	W. J. Wrenn	Associate Professor
	M. J. Auerbach	Assistant Professor
	M. G. Burke	Asst. Prof., Temporary (full-time)
	J. C. La Duke	Assistant Professor & Herbarium Curator
	J. W. Lang	Assistant Research Professor
	D. Lieberman	Assistant Professor

1984-85 (continued)	I. J. Schlosser	Assistant Professor
	M. Lieberman	Research Professor
1985-86	P. B. Kanno	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor
	O. R. Larson	Professor
	L. W. Oring	Professor
	J. B. Owen	Professor (retired, 15 May 1986)
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	R. D. Crawford	Associate Professor
	A. J. Fivizzani, Jr.	Associate Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	L. E. Shubert	Associate Professor
	W. J. Wrenn	Associate Professor
	M. J. Auerbach	Assistant Professor
	M. G. Burke	Asst. Prof., Temporary (3/4 time)
	J. W. Lang	Assistant Research Professor
	D. Lieberman	Assistant Professor
	I. J. Schlosser	Assistant Professor

1985-86 (continued)	M. Lieberman	Research Professor
	A. Wyckoff	Lecturer (1/2 time. 1 <sup>st</sup> sem)
1986-87	P. B. Kannowski	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor
	O. R. Larson	Professor
	L. W. Oring	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	R. D. Crawford	Associate Professor
	A. J. Fivizzani, Jr.	Associate Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	D. Lieberman	Associate Professor
	I. J. Schlosser	Associate Professor
	L. E. Shubert	Associate Professor
	W. J. Wrenn	Associate Professor
	M. J. Auerbach	Assistant Professor
	M. G. Burke	Assistant Professor (Temporary)
	J. W. Lang	Assistant Research Professor
	M. Lieberman	Research Professor
	A. Wyckoff	Lecturer (1/3 time)

1987-88	P. B. Kannowski	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	S. M. Jalal	Professor (resigned 12/31/87 to become the Director of Cytogenetics in Denton, TX)
	O. R. Larson	Professor
	L. W. Oring	Chester Fritz Professor & EPSCOR Director
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	R. D. Crawford	Associate Professor
	A. J. Fivizzani, Jr.	Associate Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	D. Lieberman	Associate Professor
	I. J. Schlosser	Associate Professor
	L. E. Shubert	Associate Professor
	W. J. Wrenn	Associate Professor
	M. J. Auerbach	Assistant Professor
	M. G. Burke	Asst. Prof., Temporary (2/3 time)
	Robert C. Fleischer, Ph.D.	Assistant Professor
	J. W. Lang	Asst. Professor (Temporary) & Asst. Research Professor

1987-88 (continued)	M. Lieberman	Research Professor
	Ahmad Al-Absy, Ph.D.	Lecturer (1/3 time, 1 <sup>st</sup> sem)
	JoAnn Lamb, Ph.D.	Lecturer (1/3 time, 2 <sup>nd</sup> sem)
	A. Wyckoff	Lecturer (1/3 time, 2 <sup>nd</sup> sem)

1988-89	R. D. Crawford	Assoc. Prof. & Chairman
	H. L. Holloway, Jr.	Professor
	P. B. Kannowski	Professor
	O. R. Larson	Professor
	L. W. Oring	Chester Fritz Professor & EPSCoR Director
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	W. J. Wrenn	Professor
	A. J. Fivizzani, Jr.	Assoc. Professor & Assoc. Chair
	J. C. La Duke	Associate Professor & Herbarium Curator
	D. Lieberman	Associate Professor
	I. J. Schlosser	Associate Professor
	L. E. Shubert	Associate Professor
	M. J. Auerbach	Assistant Professor
	Bruce A. Barton, Ph.D.	Asst. Professor & Leader, Fishery Research Unit

1988-89 (continued)	M. G. Burke	Asst. Prof., Temporary (full-time)
	R. C. Fleischer	Assistant Professor
	J. W. Lang	Assistant Professor (Temporary) and Asst. Research Professor
	M. Lieberman	Research Professor
	William Jensen, M.S.	Lecturer (part time)

1989-90	R. D. Crawford	Assoc. Prof. & Chairman
	H. L. Holloway, Jr.	Professor
	P. B. Kannowski	Professor (retired 6/30/90)
	O. R. Larson	Professor
	L. W. Oring	Chester Fritz Professor & EPSCoR Director
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	L. E. Shubert	Professor
	W. J. Wrenn	Professor
	M. J. Auerbach	Associate Professor
	A. J. Fivizzani, Jr.	Assoc. Professor & Assoc. Chair
	J. C. La Duke	Associate Professor & Herbarium Curator

1989-90 (continued)	J. W. Lang	Associate Professor (Temporary) and Assoc. Research Professor
	D. Lieberman	Associate Professor
	I. J. Schlosser	Associate Professor
	B. A. Barton	Asst. Professor & Leader, Fishery Research Unit
	M. G. Burke	Asst. Prof., Temporary (full- time)
	Roger M. Denome, Ph.D.	Assistant Professor
	R. C. Fleischer	Assistant Professor
	M. Lieberman	Research Professor
1990-91	R. D. Crawford	Professor & Chairman
	H. L. Holloway, Jr.	Professor
	O. R. Larson	Professor (on leave AY)
	L. W. Oring	Chester Fritz Professor & EPSCoR Director (resigned 12/31/90 to accept a position at the U of Nevada-Reno)
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Professor
	L. E. Shubert	Professor
	W. J. Wrenn	Professor
	M. J. Auerbach	Associate Professor

1990-91 (continued)	A. J. Fivizzani, Jr.	Assoc. Professor & Assoc. Chair
	J. C. La Duke	Associate Professor & Herbarium Curator
	J. W. Lang	Associate Professor (Temporary) and Assoc. Research Professor
	D. Lieberman	Associate Professor
	I. J. Schlosser	Associate Professor
	B. A. Barton	Asst. Professor & Leader, Fishery Research Unit (resigned 12/31/90 to do consulting work in Canada, but later accepted a position at the U of South Dakota)
	M. G. Burke	Asst. Prof., Temporary (full- time)
	R. M. Denome	Assistant Professor
	R. C. Fleischer	Assistant Professor (resigned 5/15/91 to become Director of the Genetics Lab at the Nat'l Zoological Park in Washington, D.C.)
	M. Lieberman	Research Professor
	Staria S. Vanderpool, Ph.D.	Lecturer (part time)
1991-92	A. J. Fivizzani, Jr.	Professor & Chairman
	R. D. Crawford	Professor & Assoc. Chair
	H. L. Holloway, Jr.	Professor
	O. R. Larson	Professor



1991-92 (continued)	R. W. Seabloom	Professor, Interim Director Institute for Ecol. Studies & Curator of Mammals
	W. F. Sheridan	Chester Fritz Professor
	L. E. Shubert	Professor
	W. J. Wrenn	Professor
	M. J. Auerbach	Associate Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	J. W. Lang	Associate Professor
	D. Lieberman	Associate Professor
	I. J. Schlosser	Associate Professor
	R. M. Denome	Assistant Professor
	Steven Kelsch, Ph.D.	Assistant Professor
	M. Lieberman	Research Professor
	S. S. Vanderpool	Lecturer (part time)
	Mildred Voss-McCowan, Ph.D.	Lecturer (part time, 2 <sup>nd</sup> semester)
1992-93	A. J. Fivizzani, Jr.	Professor & Chairman
	R. D. Crawford	Professor & Assoc. Chair
	H. L. Holloway, Jr.	Professor
	O. R. Larson	Professor
	R. W. Seabloom	Professor & Curator of Mammals

1992-93 (continued)	W. F. Sheridan	Chester Fritz Professor
	L. E. Shubert	Professor
	W. J. Wrenn	Professor
	M. J. Auerbach	Associate Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	J. W. Lang	Associate Professor
	D. Lieberman	Associate Professor
	I. J. Schlosser	Associate Professor
	R. M. Denome	Assistant Professor
	Colin R. Hughes, Ph.D.	Assistant Professor
	S. W. Kelsch	Assistant Professor
	M. Lieberman	Research Professor
	S. S. Vanderpool	Asst. Research Professor & Interim Director of the Institute for Ecol. Studies
	Janice K. Clark, Ph.D.	Research Scientist & Asst. Professor (Temporary: part time, 2 <sup>nd</sup> semester)
	Martin A. Tuegel, M.S.	Instructor (Temporary: 2/3 time)
1993-94	A. J. Fivizzani, Jr.	Professor & Chairman: Assoc. Dean of Arts & Sciences
	R. D. Crawford	Professor & Assoc. Chair
	H. L. Holloway, Jr.	Professor

1993-94 (continued)	O. R. Larson	Professor
	D. Lieberman	Professor
	I. J. Schlosser	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Chester Fritz Professor
	L. E. Shubert	Professor (resigned May 1994 to join the staff of the Natural History Museum in London)
	W. J. Wrenn	Professor
	M. J. Auerbach	Associate Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	J. W. Lang	Associate Professor
	R. M. Denome	Assistant Professor
	Samuel Galewsky, Ph.D.	Assistant Professor
	C. R. Hughes	Assistant Professor
	S. W. Kelsch	Assistant Professor
	M. Lieberman	Research Professor
	S. S. Vanderpool	Asst. Research Professor & Director of the Institute for Ecological Studies
	J. K. Clark	Research Scientist
	Wayne A. Deckert, M.S.	Instructor (Temporary: part time)

1994-95	A. J. Fivizzani, Jr.	Professor & Chairman: Assoc. Dean of Arts & Sciences
	R. D. Crawford	Professor & Assoc. Chair; Interim Director of the Institute for Ecological Studies
	H. L. Holloway, Jr.	Professor
	O. R. Larson	Professor
	D. Lieberman	Professor (44% time)
	I. J. Schlosser	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Chester Fritz Professor
	W. J. Wrenn	Professor
	M. J. Auerbach	Associate Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	J. W. Lang	Associate Professor
	R. M. Denome	Assistant Professor
	S. Galewsky	Assistant Professor
	C. R. Hughes	Assistant Professor
	S. W. Kelsch	Assistant Professor
	Bruce A. Eichhorst, Ph.D.	Asst. Prof (temporary, part time)
	Guy Farish, Ph.D.	Asst. Prof (temporary, part time, 1 <sup>st</sup> sem)

1994-95 (continued)	Greg P. Romig, D.A.	Asst. Prof (temporary, part time)
	M. Lieberman	Research Professor
	S. S. Vanderpool	Asst. Research Professor (resigned to accept a botany position at Arkansas State Univ)
	J. K. Clark	Research Scientist
1995-96	A. J. Fivizzani, Jr.	Chester Fritz Professor & Chairman: Assoc. Dean of Arts & Sciences
	M. J. Auerbach	Professor (resigned 8/16/96 & accepted a position at the U. of Nevada-Reno)
	R. D. Crawford	Professor & Assoc. Chair; Interim Director of the Institute for Ecological Studies
	H. L. Holloway, Jr.	Professor (retired 7/31/96)
	O. R. Larson	Professor (retired 12/31/95)
	D. Lieberman	Professor (44% time)
	I. J. Schlosser	Professor
	R. W. Seabloom	Professor & Curator of Mammals
	W. F. Sheridan	Chester Fritz Professor
	W. J. Wrenn	Professor
	J. C. La Duke	Associate Professor & Herbarium Curator
	J. W. Lang	Associate Professor

1995-96 (continued)	Jeffrey Carmichael, Ph.D.	Assistant Professor
	R. M. Denome	Assistant Professor (resigned May 1996 & accepted a position at Stonehill College, MA)
	S. Galewsky	Assistant Professor
	C. R. Hughes	Assistant Professor
	S. W. Kelsch	Assistant Professor
	Robert A. Newman, Ph.D.	Assistant Professor
	B. A. Eichhorst	Asst. Prof (temporary, part time)
	M. Lieberman	Research Professor
	J. K. Clark	Research Scientist
1996-97	A. J. Fivizzani, Jr.	Chester Fritz Professor & Chairman: Assoc. Dean of Arts & Sciences
	R. D. Crawford	Professor & Assoc. Chair; Interim Director of the Institute for Ecological Studies
	J. C. La Duke	Professor & Herbarium Curator
	D. Lieberman	Professor (44% time: contract not renewed during summer of 1997; moved to Costa Rica permanently)
	I. J. Schlosser	Professor

1996-97 (continued)	R. W. Seabloom	Professor & Curator of Mammals (retired 12/31/96)
	W. F. Sheridan	Chester Fritz Professor
	W. J. Wrenn	Professor
	J. W. Lang	Associate Professor
	J. S. Carmichael	Assistant Professor
	S. Galewsky	Assistant Professor (resigned 5/15/97 to accept a position at Millikin Univ)
	C. R. Hughes	Assistant Professor
	S. W. Kelsch	Assistant Professor
	R. A. Newman	Assistant Professor
	B. A. Eichhorst	Asst. Prof (temporary, part time)
	Mark P. Gustafson, Ph.D.	Assistant Prof (temporary)
	Judy K. Magnuson, Ph.D.	Assistant Prof (temporary) (2 <sup>nd</sup> semester)
	M. Lieberman	Research Professor (moved to Costa Rica, permanently)
	J. K. Clark	Research Scientist
1997-98	J. C. La Duke	Professor, Chairman & Herbarium Curator
	A. J. Fivizzani, Jr.	Chester Fritz Professor & Assoc. Dean of Arts and Sciences

1997-98 (continued)	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
	I. J. Schlosser	Professor
	W. F. Sheridan	Chester Fritz Professor
	W. J. Wrenn	Professor
	C. R. Hughes	Associate Professor (resigned 5/15/98 and accepted a position at the U. of Miami, FL)
	S. W. Kelsch	Associate Professor
	J. W. Lang	Associate Professor
	J. S. Carmichael	Assistant Professor
	James T. Cronin, Ph.D.	Assistant Professor
	Anne S. Gerber, Ph.D.	Assistant Professor
	R. A. Newman	Assistant Professor
	Sally J. Pyle, Ph.D.	Assistant Professor
	B. A. Eichhorst	Asst. Prof (temporary, part time)
	Jay T. Huseby, Ph.D.	Asst. Prof (temporary, part time)
	J. K. Clark	Research Scientist
1998-99	J. C. La Duke	Professor, Chairman & Herbarium Curator
	A. J. Fivizzani, Jr.	Chester Fritz Professor & Acting Dean of Arts and Sciences

1998-99 (continued)	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
	J. W. Lang	Professor
	I. J. Schlosser	Professor
	W. F. Sheridan	Chester Fritz Professor
	W. J. Wrenn	Professor
	S. W. Kelsch	Associate Professor
	J. S. Carmichael	Assistant Professor
	J. T. Cronin	Assistant Professor
	A. S. Gerber	Assistant Professor
	Peter J. Meberg, Ph.D.	Assistant Professor
	R. A. Newman	Assistant Professor
	S. J. Pyle	Assistant Professor
	Rick A. Sweitzer, Ph.D.	Assistant Professor
	B. A. Eichhorst	Asst. Prof (temporary, part time)
	J. K. Clark	Asst. Research Professor
	Carl A. Fox, Ph.D.	Research Professor and Director of the Office of Research & Program Development
1999-00	J. C. La Duke	Professor, Chairman & Herbarium Curator

1999-00 (continued)	A. J. Fivizzani, Jr.	Chester Fritz Professor & Acting Dean of Arts and Sciences
	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
	J. W. Lang	Professor
	I. J. Schlosser	Professor
	W. F. Sheridan	Chester Fritz Professor
	W. J. Wrenn	Professor
	S. W. Kelsch	Associate Professor
	Christopher Austin, Ph.D.	Assistant Professor (began 1/1/2000)
	J. S. Carmichael	Assistant Professor
	J. T. Cronin	Assistant Professor
	A. S. Gerber	Assistant Professor
	P. J. Meberg	Assistant Professor
	R. A. Newman	Assistant Professor
	S. J. Pyle	Assistant Professor
	R. A. Sweitzer	Assistant Professor
	Shaista Lunden, M.S.	Lecturer (part time)
	J. K. Clark	Asst. Research Professor
	C. A. Fox	Research Professor and Director of the Office of Research & Program Development
	Jefferson A. Vaughan, Ph.D.	Asst. Research Professor

2000-01	J. C. La Duke	Professor, Chairman & Herbarium Curator
	A. J. Fivizzani, Jr.	Chester Fritz Professor & Acting Dean of Arts and Sciences
	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
	J. W. Lang	Professor
	I. J. Schlosser	Professor
	W. F. Sheridan	Chester Fritz Professor
	W. J. Wrenn	Professor (retired 12/31/00)
	S. W. Kelsch	Associate Professor
	C. C. Austin	Assistant Professor
	J. S. Carmichael	Assistant Professor
	J. T. Cronin	Assistant Professor (resigned 5/15/01 and accepted a position at LSU)
	A. S. Gerber	Assistant Professor
	P. J. Meberg	Assistant Professor
	R. A. Newman	Assistant Professor
	S. J. Pyle	Assistant Professor
	R. A. Sweitzer	Assistant Professor
	J. K. Clark	Asst. Research Professor
	C. A. Fox	Research Professor and Director of the Office of Research & Program Development

2000-01 (continued)	J. A. Vaughan	Asst. Research Professor
2001-02	J. C. La Duke	Professor, Chairman of Biology & the Art Dept., & Herbarium Curator
	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
	A. J. Fivizzani, Jr.	Chester Fritz Professor
	J. W. Lang	Professor
	I. J. Schlosser	Professor
	W. F. Sheridan	Chester Fritz Professor
	J. S. Carmichael	Associate Professor
	S. W. Kelsch	Associate Professor
	R. A. Newman	Associate Professor
	C. C. Austin	Assistant Professor
	A. S. Gerber	Assistant Professor
	P. J. Meberg	Assistant Professor
	S. J. Pyle	Assistant Professor
	R. A. Sweitzer	Assistant Professor
	J. A. Vaughan	Assistant Professor
	Ronald A. Moen, Ph.D.	Asst. Professor (Temporary) (3/4 time)
	J. K. Clark	Asst. Research Professor

2002-03

J. C. La Duke	Professor, Chairman & Herbarium Curator
R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
A. J. Fivizzani, Jr.	Chester Fritz Professor
J. W. Lang	Professor (retired 8/15/03)
I. J. Schlosser	Chester Fritz Professor
W. F. Sheridan	Chester Fritz Professor
J. S. Carmichael	Associate Professor
S. W. Kelsch	Associate Professor
R. A. Newman	Associate Professor
C. C. Austin	Assistant Professor (resigned 5/15/03 to accept a position at LSU)
A. S. Gerber	Assistant Professor (resigned 5/15/03)
Brett Goodwin, Ph.D.	Assistant Professor (began 1/1/2003)
P. J. Meberg	Assistant Professor
S. J. Pyle	Assistant Professor
R. A. Sweitzer	Assistant Professor
J. A. Vaughan	Assistant Professor
Paul H. Klatt, Ph.D.	Asst. Professor (Temporary)
J. K. Clark	Asst. Research Professor
Pamela Elf, M.S.	Asst. Research Professor

2003-04

S. W. Kelsch	Assoc. Professor & Chairman
R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
A. J. Fivizzani, Jr.	Chester Fritz Professor
J. C. La Duke	Professor & Herbarium Curator
I. J. Schlosser	Chester Fritz Professor
W. F. Sheridan	Chester Fritz Professor
J. S. Carmichael	Associate Professor
R. A. Newman	Associate Professor
B. Goodwin	Assistant Professor
P. J. Meberg	Assistant Professor
S. J. Pyle	Assistant Professor
Turk Rhen, Ph.D.	Assistant Professor
R. A. Sweitzer	Assistant Professor
J. A. Vaughan	Assistant Professor
Corrine Carey, Ph.D.	Asst. Professor (Temporary; part time, 2 <sup>nd</sup> semester)
Loren Engelstad, M.S.	Asst. Professor (Temporary; part time, 1 <sup>st</sup> semester)
P. H. Klatt	Asst. Professor (Temporary)
Roger Zinser, Ph.D.	Asst. Professor (Temporary; part time)
J. K. Clark	Asst. Research Professor

2003-04 (continued)	P. Elf	Asst. Research Professor
	Vasyl Tkach, Ph.D.	Asst. Research Professor
2004-05	S. W. Kelsch	Assoc. Professor & Chairman
	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
	A. J. Fivizzani, Jr.	Chester Fritz Professor
	J. C. La Duke	Professor & Herbarium Curator
	I. J. Schlosser	Chester Fritz Professor
	W. F. Sheridan	Chester Fritz Professor
	J. S. Carmichael	Associate Professor
	P. J. Meberg	Associate Professor
	R. A. Newman	Associate Professor
	R. A. Sweitzer	Associate Professor
	J. A. Vaughan	Associate Professor
	B. Goodwin	Assistant Professor
	S. J. Pyle	Assistant Professor
	T. Rhen	Assistant Professor
	Rebecca Simmons, Ph.D.	Assistant Professor
V. Tkach	Assistant Professor	
C. Carey	Asst. Professor (Temporary; part time)	
P. H. Klatt	Asst. Professor (Temporary)	

2004-05 (continued)	J. K. Clark	Research Scientist
2005-06	S. W. Kelsch	Assoc. Professor & Chairman
	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies
	A. J. Fivizzani, Jr.	Chester Fritz Professor (retired 5/15/06)
	J. C. La Duke	Professor & Herbarium Curator
	I. J. Schlosser	Chester Fritz Professor
	W. F. Sheridan	Chester Fritz Professor
	J. S. Carmichael	Associate Professor
	P. J. Meberg	Associate Professor
	R. A. Newman	Associate Professor
	R. A. Sweitzer	Associate Professor
J. A. Vaughan	Associate Professor	
Diane Darland, Ph.D.	Assistant Professor	
B. Goodwin	Assistant Professor	
S. J. Pyle	Assistant Professor (resigned 5/15/06 to become Director of UND's Honors Program)	
T. Rhen	Assistant Professor	
R. Simmons	Assistant Professor	
V. Tkach	Assistant Professor	



2005-06 (continued)	L. Engelstad	Asst. Professor (temporary, part time)
	Tristan Darland, Ph.D.	Asst. Research Professor
	J. K. Clark	Research Scientist
2006-07	I. J. Schlosser	Chester Fritz Professor and Chairman
	R. D. Crawford	Chester Fritz Professor & Interim Director of the Institute for Ecological Studies (retired 5/15/07)
	J. C. La Duke	Professor, Assoc. Dean of Arts & Sciences & Herbarium Curator
	W. F. Sheridan	Chester Fritz Professor
	J. S. Carmichael	Associate Professor & Assoc. Chair for Curriculum & Assessment
	S. W. Kelsch	Associate Professor
	P. J. Meberg	Associate Professor
	R. A. Newman	Associate Professor
	R. A. Sweitzer	Associate Professor
	J. A. Vaughan	Associate Professor
	Dane Crossley, Ph.D.	Assistant Professor
	D. Darland	Assistant Professor
	B. Goodwin	Assistant Professor
	T. Rhen	Assistant Professor

2006-07 (continued)	R. Simmons	Assistant Professor
	V. Tkach	Assistant Professor
	T. Darland	Asst. Professor (Temporary; part time)
	Jeanne Place, M.S.	Instructor (Temporary)
	J. K. Clark	Research Scientist
2007-08	I. J. Schlosser	Chester Fritz Professor and Chairman
	J. C. La Duke	Professor, Assoc. Dean of Arts & Sciences & Herbarium Curator
	W. F. Sheridan	Chester Fritz Professor
	J. S. Carmichael	Associate Professor & Assoc. Chair for Curriculum & Assessment (leave, 2 <sup>nd</sup> semester, Norway)
	S. W. Kelsch	Associate Professor
	P. J. Meberg	Associate Professor
	R. A. Newman	Associate Professor (leave AY)
	R. A. Sweitzer	Associate Professor (leave AY)
	J. A. Vaughan	Associate Professor
	D. Crossley	Assistant Professor
	D. Darland	Assistant Professor
	B. Goodwin	Assistant Professor

T. Rhen	Assistant Professor
Katherine Mehl, Ph.D.	Assistant Professor
Steven Ralph, Ph.D.	Assistant Professor
R. Simmons	Assistant Professor
V. Tkach	Assistant Professor
T. Darland	Asst. Professor (Temporary; part time)
Matthew Doeringsfeld, M.S.	Instructor (Temporary)
James J. Maskey, Jr., M.S.	Instructor (Temporary)
J. K. Clark	Research Scientist

## FACULTY HONORS, AWARDS AND LECTURES

## HONORARY DEGREES

The most prestigious recognition that the University can bestow is an honorary doctoral degree. Three UND biologists have received such since this honor was first given in 1909. The notable achievements of these men are presented in chapters 3 and 5.

These individuals include:

1947 Melvin A. Brannon  
1958 Neal A. Weber  
1970 George C. Wheeler



Brannon

Weber

Wheeler

## CHESTER FRITZ DISTINGUISHED PROFESSORSHIPS

Revenue from an endowment gift by Chester Fritz provides for cash stipends to full-time faculty members who have been selected by virtue of their outstanding professional contributions at UND. Such recipients may use the title "Chester Fritz Distinguished Professor." The following biology faculty members have been so honored:

1987 Lewis W. Oring  
1991 William F. Sheridan  
1995 Albert J. Fivizzani  
1997 Richard D. Crawford  
2002 Isaac Schlosser

## UNIVERSITY PROFESSORSHIPS

Before there were Chester Fritz Distinguished Professorships, there was the rank of "University Professor." This little known and largely forgotten title was first granted by the State Board of Higher Education in 1965. This honor was given to faculty who had rendered long and distinguished service to UND, and were nearing retirement. George C. Wheeler was a recipient of that title, joining Richard Beck of Scandinavian Languages and the historian, Elwyn Robinson, in a select group from Arts and Sciences. The tenth and final University Professor was named in 1984. (Note: With the death of former President Thomas Clifford on 2/4/09, Donald Severson of Chemical Engineering remains the only surviving University Professor).

## SIoux AWARD

The Sioux Award dates back to 1949 and is the highest honor given by UND's Alumni Association. The award recognizes former graduates for their achievement, service and loyalty.

1985 Neal A. Weber  
1989 Jeanette N. Wheeler

## DEPARTMENTAL AND INDIVIDUAL AWARDS

Departmental and individual awards and honors have been part of each Founders Day celebration since 1967. The first of these was funded by the AMOCO Foundation. Over the years the awards have become more numerous and have undergone several name changes depending in part on the funding entity. Biology, both as a department and as individual members thereof, have received a wide array of recognitions. The following list is based on the name of the sponsoring entity at the time each award was given. These, and a photograph of each recipient, are displayed outside the biology office in Starcher Hall.

### The University Award for Departmental Excellence in Research

1971, 1982, 1989, 1996, 2002



DEPT'L AWARD FOR EXCELLENCE IN RESEARCH - 1989

Schlosser, Oring, M. Lieberman, La Duke, Larson, Crawford  
D. Lieberman, Auerbach

### The Ernest C. Hilborn Distinguished Teacher Award

1967 George C. Wheeler

### The AMOCO Foundation Outstanding Teacher Award

1967 Omer R. Larson  
1970 Robert W. Seabloom

### The Sigma Xi Award for Individual Excellence in Research

1972 Joe K. Neel  
1975 Mohan K. Wali  
1978 Paul B. Kannowski  
1981 Lewis W. Oring  
1993 Isaac Schlosser

### The UND Alumni Association Distinguished Teacher Award

1977 Mohan K. Wali

### The B. C. Gamble Award for Teaching and Service

1981 Omer R. Larson  
1983 Richard D. Crawford

### The Burlington Northern Faculty Achievement Award

1985 Lewis W. Oring  
1993 Isaac Schlosser

### The B. C. Gamble Award for Individual Excellence in Teaching

1990 L. Elliot Shubert

### The UND Faculty Advisor Award

1993 Jeffrey W. Lang

### The UND Foundation/Thomas J. Clifford Faculty Achievement Award for Excellence in Research

1997 Richard D. Crawford  
2002 Jeffrey W. Lang

### The UND Foundation/Thomas J. Clifford Faculty Achievement Award for Outstanding Faculty Development and Service

2006 Albert J. Fivizzani

### The UND Foundation/McDermott Award for Excellence in Teaching

1999 Sally Pyle  
2001 Jeffrey Carmichael

**The UND Foundation Award for Individual Excellence in Teaching**

2009 Rebecca Simmons

**UND's North Dakota Spirit Faculty Achievement Award**

2009 Brett Goodwin

**HEADS AND CHAIRS OF THE BIOLOGY DEPARTMENT**

Appendix 1 lists all Biology faculty members since 1884. For the sake of convenience, however, the following list names only those who have led the Department as Head, or since 1962, as Chair. Prior to 1926, neither title was used.

1884 – 1889	Henry Montgomery
1889 – 1893	William Patten
1893 – 1914	Melvin A. Brannon
1914 – 1926	Robert T. Young
1926 – 1963	George C. Wheeler
1963 – 1970*	Paul B. Kannowski
1970 – 1971**	Floyd Hunter
1971***	Joe K. Neel
1971****	Vera Facey
1971 – 1974	Harry L. Holloway, Jr.
1974 – 1976	Joe K. Neel
1976 – 1978	Robert W. Seabloom
1978 – 1980	Omer R. Larson
1980 – 1981	Lewis W. Oring
1981 – 1982	Richard D. Crawford
1982 – 1988	Paul B. Kannowski
1988 – 1991	Richard D. Crawford
1991 – 1997	Albert J. Fivizzani, Jr.
1997 – 2003	John C. La Duke
2003 – 2006	Steven W. Kelsch
2006 –	Isaac J. Schlosser

\*Omer R. Larson, Acting Chair, 1966-1967

\*\*Hunter deceased, February 2, 1971

\*\*\*Neel, Interim Chair, February 8 – May 31, 1971

\*\*\*\*Facey, Acting Chair, June 1 – August 15, 1971

**STATEWIDE AWARDS AND HONORS**

**The ND Chapter of the Wildlife Society's "North Dakota Award"**

1987 Robert W. Seabloom

1992 Richard D. Crawford

**Presidents of the North Dakota Academy of Science**

1909 Melvin A. Brannon

1910 Melvin A. Brannon

1923 Norma E. Pfeiffer

1933 George C. Wheeler

1935 Edgar A. Baird

1943 Neal A. Weber

1961 Vera Facey

1965 Paul B. Kannowski

1986 L. Elliot Shubert

**FACULTY LECTURE SERIES**

President George Starcher began this campus-wide lecture series in 1954, his first year as president. For 54 years (with a nine year interruption), UND faculty have shared their scholarly insights and expertise with their colleagues, students and public. Dr. Wheeler's lecture was the third in a series that now, as of 2008, numbers over 200 presentations.

1954-55 George C. Wheeler  
"Don't go to the ant"

1958-59 Vera Facey  
"Plants turn over new leaves"

1965-66 Paul B. Kannowski  
"This view of life"

1972-73 Omer R. Larson  
"Plague and its influence on western civilization"

1977-78 Mohan K. Wali  
"Economy, energy and environmentalism: the ecodilemma"

1981-82 Lewis W. Oring  
"Polyandry: the cost and benefits of many husbands"

1985-86 L. Elliot Shubert  
 "Microscopic plants as indicators of environmental disturbance"

1997-98 Jeffrey W. Lang  
 "The puzzle of sex in reptiles"

2001-02 William F. Sheridan  
 "Genes, alleles and mutations: their roles in cancer and in stem cells"

2006-07 Richard D. Crawford  
 "The metaphor of the prairie: 35 years of watching the mystery unfold"

### WHEELER LECTURESHIP

In the autumn of 1968, the biology faculty approved a continuing series designated as the "George C. Wheeler Distinguished Lectureship." This, in honor of Dr. Wheeler's long and outstanding career at UND. From 1968 through 1974, there were multiple lecturers each academic year. Since then however, the lectures have continued with one visiting speaker per year, although there have been several gaps in the series. The lecturers and their topics are listed herewith.

An endowment administered by the UND Foundation was established by Paul and Phyllis Kannowski in 1986. Paul earned an M.S. degree under Wheeler in 1952, and was a faculty colleague for 10 years at UND prior to Wheeler's retirement in 1967. The following biography on Wheeler was written by Kannowski and is printed in the program distributed at each lecture.

The Man We Honor  
 George C. Wheeler

A member of the Biology Department Faculty for forty-one years and Department Head for thirty-seven years, George Wheeler shaped the minds of Biology students for longer than any other faculty member in the history of the Department. Arriving on the campus in the fall of 1926 as Professor of Zoology and Head of the Biology Department, he led a two-member faculty and taught all the zoology courses. His keen interest in ants has been a lifetime love, one that he shared with his students. From 1932 until after his retirement in 1967 he graduated fifteen Master's degree students and two with the Doctor of Philosophy degree. All but one studied some aspect of ant biology.

George Wheeler pioneered in the study of the morphology of the larval stage of ants, relating the structural features to the systematic position within the family. His initial studies were mainly based upon his own collections, but gradually he received specimens around the world from other scientists. His work led to modifications in our understanding of the taxonomic relationships of the tribes and subfamilies of ants and stimulated others to study the larval stage. Most of his larval studies were carried on between 1950 and 1975 and with the active participation of his wife, Jeanette. They summarized their work in a book, *ANT LARVAE: REVIEW AND SYNTHESIS*, in 1976. His second interest was in the distribution and habits of ants. These studies spanned his entire period of research activity, from early work in Panama in 1924, through his years in North Dakota, and more recently in the southwestern United States. From these studies have appeared three books: *THE ANTS OF NORTH DAKOTA* (1963), *ANTS OF DEEP CANYON* (1973), and *THE ANTS OF NEVADA* (1986). He was also interested in the study of amphibians and reptiles in North Dakota and wrote the book, *THE AMPHIBIANS AND REPTILES OF NORTH DAKOTA*, in 1966. In all, he published more than 100 articles and reviews in journals.

George Wheeler was born in Bonham, Texas, in 1897 and received his undergraduate training at Rice Institute, where his biology instructors were Julian Huxley and H. J. Muller, both of whom led distinguished careers. He completed a Doctor of Science degree at Harvard University in 1921 under the direction of William Morton Wheeler (who was not a relative), one of the most distinguished biologists of the first half of the twentieth century. Prior to coming to North Dakota in 1926, he was an Assistant Professor of Zoology at Syracuse University. After his retirement from the University of North Dakota in 1967, he moved to Reno, Nevada, where he and Mrs. Wheeler held appointments at the Desert Research Institute of the University of Nevada. After retiring for the second time in the early 1980's, they eventually settled in Silver Springs, FL, where George Wheeler died on 19 February 1991.

### Wheeler Lecturers

1. Daniel H. Janzen	9 December 1968	Predation on seeds and plant species diversity
University of Chicago	10 December 1968	Coevolution of plant and ant mutualism
2. Elroy L. Rice	10 March 1969	Soils and vegetation of Oklahoma
University of Oklahoma	11 March 1969	Role of chemical inhibitors in old field succession
3. Ari Van Tienhoven	25 March 1969	The hypothalamus of birds
Cornell University	26 March 1969	Environmental impact & reproductive activity in birds
4. David Frey	8 April 1969	Cladocera in space and time
Indiana University		
5. Clark Read	15 April 1969	Revolutionary roles of infectious disease in human history
Rice University	16 April 1969	Membrane phenomena in parasitism
6. Dennis L. Fox	1 May 1969	Carotenoid pigments in food and livery of animals
Scripps Institute of Oceanography	1 May 1969	Marine animals as trash collectors
7. Arthur C. Giese	7 May 1969	Ultraviolet radiation effects with reference to the origin and evolution of life
Stanford University	8 May 1969	Regeneration of parts of a single cell as observed in the ciliate, <i>Blepharisma</i>
	9 May 1969	Reproductive cycles in marine invertebrates
8. Arthur W. Martin	14 May 1969	The spermatophoric reaction and reproductive behavior in the male of <i>Octopus dofleini</i>
University of Washington	15 May 1969	Excretion in molluscs
9. Durwood Allen	20 May 1969	Ecology and behavior of buffalo
Purdue University	21 May 1969	The wolves and moose of Isle Royale
	22 May 1969	Man and the great complexity
10. William O. Pruitt	2 December 1969	Ecology of snow
University of Manitoba	3 December 1969	Ecology of tundra animals
11. Peter Marler	6 January 1970	Social communication in wild chimpanzees
Rockefeller University	7 January 1970	Development of bird songs: Parallels with human speech
12. Eville Gorham	17 February 1970	Pollution: The price of progress
University of Minnesota	18 February 1970	Chemical aspects of wetland ecology
13. Nelson T. Spratt	20 April 1970	Genes and development
University of Minnesota	21 April 1970	Principles of development illustrated by studies of chick embryos
14. Stanford H. Smith	13 May 1970	Invasion and ecological impact of the alewife in the Great Lakes
US Bureau of Commercial Fisheries Res. Lab., Ann Arbor, MI	14 May 1970	Ecological changes and species succession in fish populations in the Great Lakes
15. Ernest M. Gifford	5 November 1970	Use of scanning electron microscopy in plant morphology
Univ. of California, Davis	5 November 1970	Experiments on the flowering process
16. George M. Van Dyne	26 January 1971	The challenge of systems ecology
Colorado State University	26 January 1971	Organization & management of integrated ecological research
17. Curt Stern	31 March 1971	Mosaics in flies and man
Univ. California, Berkeley	31 March 1971	Interrelations between general and human genetics
18. Bentley H. Glass	18 October 1971	Prometheus and Pandora
State University of New York, Stony Brook	20 October 1971	The ascent of man

19. Kenneth D. Carlander  
Iowa State University  
20 April 1972  
21 April 1972  
Observations on some African fisheries and wildlife  
Yellow bass in Clear Lake, Iowa: Introduction, dominance and crash
20. Robert R. Sokal  
State University of New York, Stony Brook  
1 November 1972  
2 November 1972  
Classification, men and computers  
The ecology of natural selection
21. Robert H. Whittaker  
Cornell University  
5 April 1973  
6 April 1973  
The Sonoran: Desert ecology and man  
Species diversity as an evolutionary product  
Is applied science compatible with scholarship?
22. Thomas. C. Cheng  
Lehigh University  
29 November 1973  
30 November 1973  
Reactions of molluscs to endoparasitism
23. Charles D. Michener  
University of Kansas  
22 April 1974  
23 April 1974  
The African honey bee: A likely immigrant  
Are workers of social insects altruistic?
24. Jack Major  
University of California, Davis  
3 February 1975  
4 February 1975  
Ecology of the flora of Grand Teton National Park as part of a forest-steppe ecosystem  
Some current ideas on the ecology of plants
25. Marion Brooks-Wallace  
University of Minnesota  
12 April 1976  
13 April 1976  
Reflections on the ability of insects to resist disease  
The effects of endosymbionts on the reproduction and growth of an insect
26. Stephen T. Emlen  
Cornell University  
4 April 1977  
5 April 1977  
Migratory orientation in birds: A status report on why they so rarely get lost  
The advantages to colonial living among swallows  
The social behavior of the mule deer
27. Valerius Geist  
University of Calgary  
15 February 1978  
16 February 1978  
Evolution of aggression and weapons in relation to the ecology of large mammals  
Coevolution of orchids and their pollinators  
Germination of orchid seeds: A metabolic insight
28. Joseph Arditti  
Univ of California, Irvine  
18 April 1979  
19 April 1979  
The circadian connection to problems with jet-lag and shift work
29. Charles F. Ehret  
Argonne National Lab.  
15 April 1980  
16 April 1980  
Circadian cybernetics: Fourth integrating discipline  
Herbivory: The cost of leaf protection
30. Harold Mooney  
Stanford University  
12 November 1980  
12 November 1980  
Plant adaptations in extreme deserts
31. Fred Cooke  
Queens University  
4 February 1981  
5 February 1981  
Population genetics of snow geese: The causes and consequences of assortative mating  
Factors determining heritability of clutch size in snow geese
32. George W. Barlow  
University of California, Berkeley  
1 March 1982  
2 March 1982  
The benefits on being gold: The Nicaraguan Midas cichlid  
A new theory for life history tactics among coral reef fishes
33. G. Ledyard Stebbins  
University of California, Davis  
11 October 1982  
12 October 1982  
Biological evolution, cultural evolution and the position of sociobiology  
Punctuated equilibrium and mosaic evolution: An old timer looks at new ideas
34. John C. Holmes  
University of Alberta  
17 April 1984  
19 April 1984  
Sea snakes and their parasites  
Intestinal parasites of waterfowl as indicators of community structure
35. Francis R. Trainor  
University of Connecticut, Storrs  
8 October 1984  
9 October 1984  
Putting algae to work for mankind  
Control of mating in the green alga, *Chlamydomonas*
36. William R. Dawson  
University of Michigan  
24 March 1986  
25 March 1986  
Behavioral and Physiological Studies of the Galapagos Marine Iguana  
Little birds and big winters: Mechanisms of cold adjustment in small northern birds
37. John Avise  
University of Georgia, Athens  
22 April 1987  
23 April 1987  
Molecular probings into evolution  
Mitochondrial DNA and the evolutionary genetics of higher animals
38. Carl Gans  
University of Michigan  
10 February 1988  
11 February 1988  
All animals are interesting: Deep in the mud with UROPEL TID snakes  
Approaches to muscle architecture: A progress report

39. Murray S. Blum  
University of Georgia  
10 April 1989  
11 April 1989  
A grasshopper gourmand in a wild patch: of catholic tastes and predatory conundrums
40. Margaret B. Davis  
University of Minnesota  
5 March 1990  
6 March 1990  
Alkaloidal venoms of ants: chemical warfare by Lilliputians  
Northward dispersal of temperate trees in response to climatic changes during the last 10,000 years  
Documenting stand histories in a hemlock/hardwoods forest using paleoecological methods



Dr. Crawford and Murray Blum (1989)



Margaret Davis and Dr. Lieberman (1990)

41. Peter R. Grant  
Princeton University  
6 November 1990  
6 November 1990  
Population variation: An evolutionary problem  
Natural History of the Galapagos
42. James H. Oliver, Jr.  
Georgia Southern University  
21 September 1992  
22 September 1992  
Lyme Disease: Symptoms, distribution, natural cycle, epidemiology and current status  
The Epizootiology of Lyme Disease in Southern U.S.
43. Michael Soule  
University of California, Santa Cruz  
3 February 1994  
4 February 1994  
The Wildlands Project - An Ecocentric Vision  
A Theory of Genetic Variation in Natural Populations
44. Adelaide T. C. Carpenter  
University of Cambridge, United Kingdom  
27 April 1995  
28 April 1995  
The Recombination Nodule Story - Seeing What You Are Looking At  
Mechanisms of Meiotic Recombination
45. Alan R. Templeton  
Washington University St. Louis, Missouri  
16 October 1997  
17 October 1997  
Smokey the Bear versus Collared Lizards: Landscape Management in the Ozarks  
What is a Species?
46. Roy C. Brown & Betty E. Lemmon  
University of SW Louisiana Lafayette, LA  
16 April 1998  
17 April 1998  
Clues to the Origin of Land Plants: Ancient Patterns of Cell Division  
Cytoplasmic Domains and the Control of Cell Division in Plant Development
47. Michael J. Donoghue  
Yale University  
8 March 2001  
9 March 2001  
A new age of discovery  
Patterns in convergent evolution
48. Robert Zink  
University of Minnesota  
1 December 2005  
2 December 2005  
Species concepts and avian classification  
Conservation genetics meets politics and economics: the case of the California gnatcatcher
49. James W. Hicks  
University of California, Irvine  
20 November 2008  
21 November 2008  
Wall-E and the professor  
Turning crocodiles into birds: Lessons from altering cardiac anatomy

### APPENDIX 3

#### STUDENT AWARDS AND SCHOLARSHIPS

Since the early 1970s, superior students in the biology department have been the beneficiaries of an increasing number of recognitions having monetary value. As of 2008, these include six designated awards and four scholarships. Despite some variation in the selection process for naming recipients, one or more faculty members participate in all ten deliberations. Although the general intent has been to recognize outstanding students annually, in some years this has not occurred, but in other years there occasionally have been dual recipients.

#### AWARDS

##### Edith Larson Award

This, the earliest of the awards, is presented to an outstanding undergraduate biology major on the basis of academic excellence and need. The award was established in honor of Edith Larson, a long time faculty member, 1935-36 and 1947-66. Dr. Vera Facey, a former colleague of Miss Larson's, endowed and established the award by contributing her first place prize monies which she had won in a baking contest sponsored by American Crystal Sugar. Dr. Facey's winning recipe was "Winter Warm-Ups," a spicy, ginger-snap type of cookie.

#### Recipients

- 1972 Larry G. Baesler  
& David K. Pueppke
- 1973 Paul Olson
- 1974 Susan K. Schmit
- 1975 Peggy A. Sheldon
- 1976 Elizabeth Engelhardt
- 1977 Kristin L. Lengowski
- 1978 James Burdine
- 1979 Steven B. Mercil
- 1980 Mark L. Sperry
- 1981 Donald M. Goebel
- 1982 Brian D. Larsen
- 1983 Kristin Konzak
- 1984 Richard B. Lanctot  
& Barb J. Hagen
- 1985 Laurel J. Fry
- 1986 John H. Carlson
- 1987 Michael J. Ebertz
- 1988 Robert C. Kemp



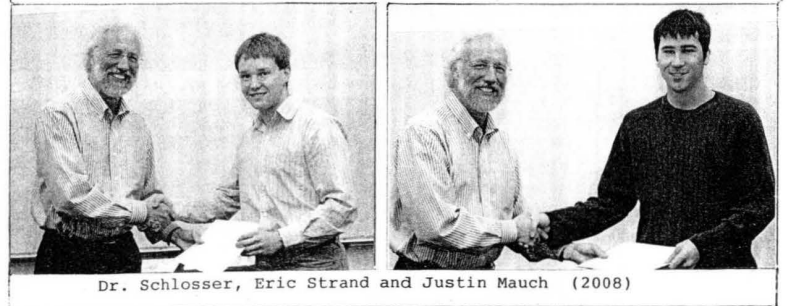
Laurel Fry & Dr. Kannowski (1985)

##### Edith Larson Award – continued:

- |      |   |      |                                   |
|------|---|------|-----------------------------------|
| 1992 | William O. Haug                           | 2002 | Ben Armitage                      |
| 1993 | Jennifer M. Fridlund                      | 2003 | Kelsey Thibert<br>& Kadon Hintz   |
| 1994 | Cameron M. Luitjens                       | 2004 | Katie Rau                         |
| 1995 | Barry L. Williams                         | 2005 | Miran Blanchard<br>& Sara Belanus |
| 1996 | Trent D. Trzpuć                           | 2006 | none                              |
| 1997 | Patricia K. Szczys                        | 2007 | Craig Mescher<br>& Patrick Odens  |
| 1998 | Jennifer Peterson                         | 2008 | Justin Mauch<br>& Eric Strand     |
| 1999 | Leah M. Cainor                            |      |                                   |
| 2000 | Elizabeth A. Kemnitz<br>& Joshua J. Flohr |      |                                   |
| 2001 | Katy Euliss                               |      |                                   |



Karen Sevigny, Drs. Crawford & Fivizzani, Jennifer Fridlund  
(1989) (1993)



Dr. Schlosser, Eric Strand and Justin Mauch (2008)

### Outstanding Graduate Student Research Award

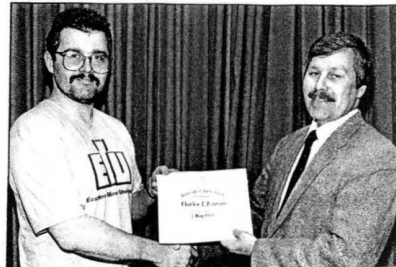
This annual award recognizes that graduate student who, in the opinion of the faculty, performs the most outstanding research during the period July 1 to June 30. In the absence of the faculty's approval of a nominee, no award will be given that year. The initial funds establishing this award were those received by the department in 1971 as part of the Edward H. McDermott Award for Excellence in Research.

#### Recipients

1973	Akey C. F. Hung	2001	Pam K. Elf
1974	Carlene Farmer	2002	Corinne Carey
1975	Gregg Johnson	2003	Matthew Miller
1976	Keith Killingbeck	2004	Matthew R. Doeringsfeld
1977	Donald Sparling	2005	Eric Pulis
1978	Thomas L. Starks & W. Daniel Svedarsky	2006	Sarah Fischer & Kelsey Metzger
1979	Roger Ruess	2007	James Maskey
1980	Allan D. Afton	2008	Chad J. Parent
1981	Louis R. Iverson & Rodney D. Saylor		
1982	none		
1983	none		
1984	John L. Maron		
1985	Janice Clark		
1986	Mark Colwell		
1987	Susan M. Haig		
1988	Jeb Barzen & Cheri L. Gratto		
1989	Charles L. Pederson		
1990	Timothy Hoffnagle		
1991	Donald Auger		
1992	None		
1993	None		
1994	Guy Farish		
1995	Jay T. Huseby		
1996	Matthew R. Doeringsfeld		
1997	Anne Scherer		
1998	David C. DeKrey		
1999	Pam K. Elf & Tina Squire		
2000	Mark A. Williams		



Drs. Sheridan & Kannowski and Janice Clark (1985)



Charles Pederson and Dr. Crawford (1989)

### Floyd Hunter Award

This award is in honor of Dr. Floyd Hunter, Chairman of the Biology Department, 1970-71. Hunter's widow, JoAnn, and his parents established the Hunter Memorial Fund to defray the costs of attending an inland or marine biological station. The award is based on scholastic achievement, and although earmarked for biology undergraduates, it has on a few occasions been given to an incoming or current graduate student.

#### Recipients

1977	Janet Boe
1978	Beth Meier
1980	Eric J. Lambie
1981	Greg J. Power
1983	Paul D. Munyer
1984	Roberta K. Ell
1985	Mandy J. Olson
1988	Steven R. Larson
1990	Daniel J. Albrecht & Janet D. Veit
1991	Turk E. Rhen
1992	Neal T. Butt
1993	Sharnell R. Hoffer
1996	Miranda S. Norby
1997	Timothy R. Frasier
2004	Kelly Folkedahl
2008	Jenifer Ness



Janet Boe and Dr. Seabloom (1977)



Dr. Fivizzani and Miranda Norby (1996)



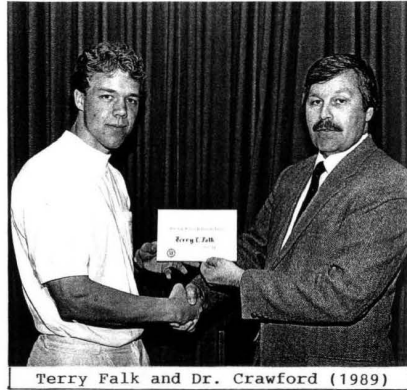
### Marjorie Behringer Award

This award honors Dr. Marjorie Perrin Behringer, faculty member, 1966-78. It is presented annually to the student who achieved (during the previous academic year) the highest combined lecture and laboratory scores in the two semester introductory biology course.

#### Recipients

1988 Karen Ann Erickson  
1989 Terry L. Falk  
1990 William L. Knotek  
1991 Bobbie A. Schauer  
1992 Patrice M. Dombrosky  
1993 Susan J. Massey  
1994 Kory A. Frey  
1995 Billie J. Grieve  
1996 James P. Whalen  
1997 Jennifer Peterson  
1998 Beth Klancher  
1999 Tori J. Duerre  
2000 Owen A. Anderson  
2001 Kendric D. Malmberg  
2002 Andrea Lund  
2003 Laura Voller  
2004 Sarah Ongstad  
2005 Dustin Bosch  
2006 Lora Schmitt  
2007 Kylee Ferris

2008 Hannah Peterson



Terry Falk and Dr. Crawford (1989)

### Joe K. Neel, Memorial Endowment in Limnology & Aquatic Invertebrate Zoology

Erma Neel and her son, Joseph Jr. along with other family members, colleagues, former students and friends, established this endowment in 1991. It is in memory and recognition of Dr. Neel's contributions to the UND Biology Department, 1966-81.

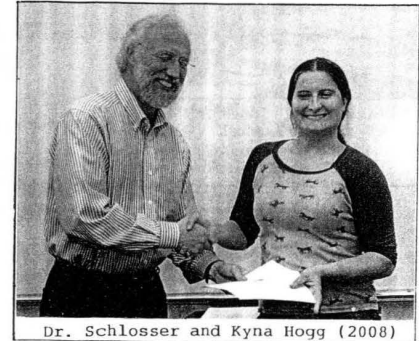
One or more research awards may be given each year to graduate students in the Biology Department who are pursuing thesis or dissertation research in the two main fields of Dr. Neel's expertise, limnology and aquatic invertebrates.

#### Recipients

1993 David Armitage  
& Jay Huseby  
1994 Matthew Doeringsfeld  
& Bruce Pankratz  
1995 David E. Price  
1996 none  
1997 none  
1998 none  
1999 none  
2000 none  
2001 Matthew Doeringsfeld  
2002 none  
2003 Jessica Gregory  
2004 Jessica Gregory  
2005 Jessica Larson  
2006 Eric Pulis  
2007 Kyna Hogg  
2008 Jay Schroeder  
& Kyna Hogg



Dr. Fivizzani and Jay Huseby (1993)



Dr. Schlosser and Kyna Hogg (2008)

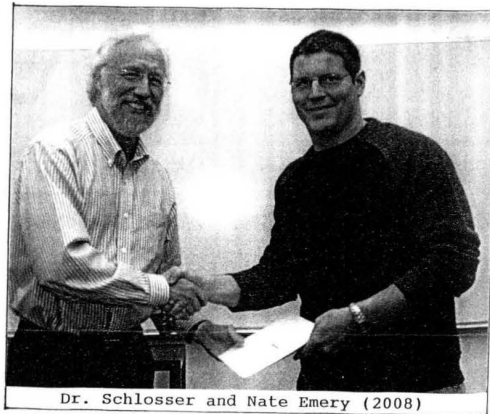
Esther Wadsworth Hall Wheeler Award for Support of Graduate Student Research

This award was established in 2000 and funded by George Wheeler's granddaughter, Diana E. Wheeler, and his daughter-in-law, Eula Wheeler, both of Tucson, AZ. The award honors the memory of Dr. Wheeler's first wife, Esther, who earned a B.A. degree from Smith College in 1918, and from Radcliffe, and M.S. in 1920, and a Doctor of Science in 1921. She was trained in entomology and aided Dr. Wheeler in his studies after their arrival at UND in 1926. Esther died, April 1940, in Grand Forks at the age of 43.

This award is intended to support a graduate student's direct expenses of research, including small items of equipment, supplies and travel to research sites. Applications are evaluated on the merit, design and relevancy of the proposal.

**Recipients**

- 2000 Eric Long
- 2001 Alison Hamilton
- 2002 Sara Milne
- 2003 James Maskey
- 2004 Tina Squire
- 2005 Christina Brewer
- 2008 Nate Emery

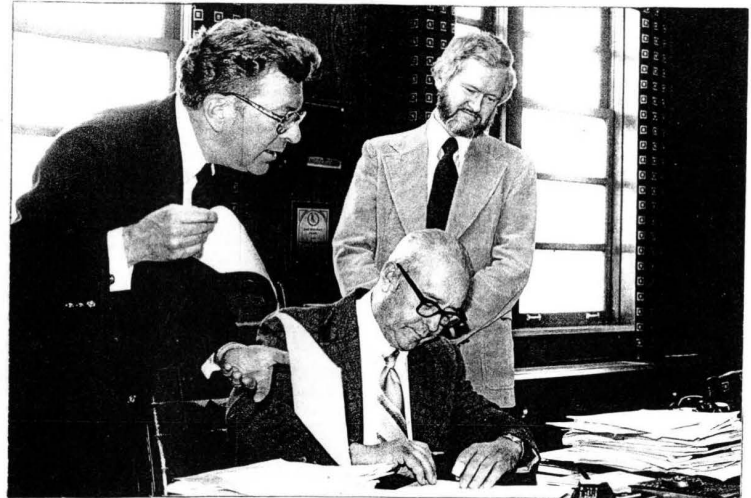


Dr. Schlosser and Nate Emery (2008)

**SCHOLARSHIPS**

Glenn Allen Paur Memorial Award

This award was established by the Paur family in memory of their son, Glenn, a 1978 UND graduate who majored in Fisheries and Wildlife Biology. Glenn died in a boating accident on 16 May 1978, while working as a research assistant at Leech Lake, Minnesota.



Glenn's father, Emil Paur, signing the document establishing the GLENN ALLEN PAUR MEMORIAL FUND & AWARD, late October 1978. Witnesses: Bernard O'Kelly, Dean of the College of Arts and Sciences, and Omer R. Larson, Chair of the Biology Department.

The award is given annually as a **scholarship** to a student who shows promise and dedication in the field of study, with preference to natives of North Dakota who are also studying wildlife biology.

**Recipients**

- |         |                     |         |                       |
|---------|---------------------|---------|-----------------------|
| 1979-80 | Karen L. Young      | 1982-83 | Patrick E. Lothspeich |
| 1980-81 | Randy L. Kreil      | 1983-84 | Randy J. Lehmann      |
| 1981-82 | Ronald A. Stromstad | 1984-85 | Glen A. Sargeant      |

- 1985-86 Kirk E. Smith
- 1986-87 Suzanne D. Fellows
- 1987-88 Sheldon M. Myerchin
- 1988-89 Renee R. Anderson
- 1989-90 Eric P. Pearson
- 1990-91 Jodie L. Provost
- 1991-92 Jay T. Huseby
- 1992-93 William Ladd Knotek  
& Carin M. Shoemaker
- 1993-94 William A. Meeks
- 1994-95 Jane E. Schuster
- 1995-96 Tiffany A. Parsons
- 1996-97 Randy J. Kjorstad
- 1997-98 Blane A. Klemek
- 1998-99 Carrie Sorenson
- 1999-00 Katy W. Euliss
- 2000-01 Ted R. Miller
- 2001-02 Sandra K. Hagen
- 2002-03 Deanna Tello
- 2003-04 Robyn Kunick
- 2004-05 Jessica Pogatchnik
- 2005-06 Wade Robinson
- 2006-07 Peter Christensen
- 2007-08 Candance M. Miller
- 2008-09 Amanda Rice



Drs. Kannowski and Crawford with  
Suzanne Fellows (1986)



Randy Kjorstad and Dr. Kelsch (1996)



Dr. Schlosser and Amanda Rice (2008)

Of the Biology Department's student awards and scholarships, only the Paur Award has a lectureship associated with it. The UND Student Chapter of the Wildlife Society is responsible for inviting speakers and making the necessary arrangements. Following, are these individuals and their lecture topics.

**Paur Lecturers**

1979 Alan Sargeant  
Northern Prairie Wildlife Research Center  
"Canids and Prairie Ducks"

1980 Gordon Gullion  
University of Minnesota  
"Ruffed Grouse – A Wildlife Beneficiary of  
Catastrophic Forest Disturbance"

1981 William Franklin  
Iowa State University  
"South American Andean Wildlife and the Patagonian Guanaco"

1982 Maurice G. Hornocker  
University of Idaho  
"Mountain Lion and Wolverine Research in a Wilderness Laboratory"

1983 Robert J. Robel  
Kansas State University  
"Energetics and Bobwhite Quail Management in Kansas"

1984 L. Daniel Frenzel  
University of Minnesota  
"History of Bald Eagles in the Chippewa National Forest"

1985 L. David Mech  
U.S. Fish & Wildlife Service (St. Paul, MN)  
"Wolf Ecology in Minnesota"

1986 Richard J. Mackie  
Montana State University  
"Comparative Ecology of Mule Deer in the Rockies by Habitat"

1987 Clait Braun  
Colorado Division of Wildlife  
"Ecology of the White-tailed Ptarmigan"

1988 Dale Henegar  
North Dakota Game and Fish Department  
"Salmon and Walleye Management in Lake Sakakawea"

1989 John Bissonette  
Utah State University  
"Solving Resource Problems: The Effect of Scale. Does Methodology Help or Hinder?"

1990 Peter B. Moyle  
University of California-Davis  
"Conservation of Biodiversity in Aquatic Environments:  
Messages from Fishes"

1991 William Berg  
Minnesota Department of Natural Resources  
"Wolves and Other Large Predators of the North"

1992 J. Michael Scott  
University of Idaho  
"Practical Approaches to Conserving Biological Diversity"

1993 Phillip Bettoli  
Tennessee Cooperative Fisheries Research Unit  
"Biological Control of Aquatic Vegetation, or is CARP  
always a Four-letter Word?"

1994 William O. Pruitt, Jr.  
University of Manitoba  
"The Boreal Forest of Manitoba in a Global Context"

1995 James W. Grier  
North Dakota State University  
"A Tale of Three Eagles and Two Countries"

1996 Bruce Barton  
University of South Dakota  
"Do Fish Get Ulcers? The Why, What & So What of Stress in Fish"

1997 Bill Jensen  
North Dakota Game and Fish Department  
"Deer Depredation"

(Note: Spring flood postponed the lecture until December)

1998 Thomas E. Martin  
University of Montana  
"Why Do Coexisting Species Differ in Microhabitat Use: A Fresh  
and Different Look at an Old Question"

1999 Ronald Royer  
Minot State University  
"Perspectives on the Development of Our Present Understanding of North Dakota  
Butterflies"

2000 Jon Jenks  
South Dakota State University  
"History, Ecology and Current Knowledge of Mountain Lions in  
South Dakota"

2001 Dan Svedarsky  
University of Minnesota-Crookston  
"Resource Management in the New Millennium"

2002 Glen A. Sargeant  
Northern Prairie Wildlife Research Center  
"Do Adult Males Regulate Black Bear Populations?"

2003 Gary Nuechterlein  
North Dakota State University  
"Courtship Behavior of Western Grebe Color Morphs"

2004 Josh Slotnick  
University of Montana  
"Agroecology: Seeing Nature as a Pattern for the  
Design of Agricultural Systems"

2005 Name Unknown  
Institution or Agency Unknown  
Lecture title Unknown

2006 Roger Hollevoet  
Refuge Manager/District Supervisor, Devils Lake Wetland Complex  
"A Recipe for Success for Today's Natural Resource Professionals"

2007 No Lecturer

2008 No Lecturer

2009 Robert F. Rockwell  
The City University of New York  
"The Early Bear Gets the Goose: Climate Change, Polar Bears  
and Snow Geese"

### Stella H. Fritzell Memorial Scholarship

This scholarship was proposed in 1984 by the Fritzell family in memory of their mother who died that year. She was a State Senator for almost 12 years and best known for her concern with the environment and natural resources. In 1975, the North Dakota Wildlife Federation named her "Conservationist of the Year."

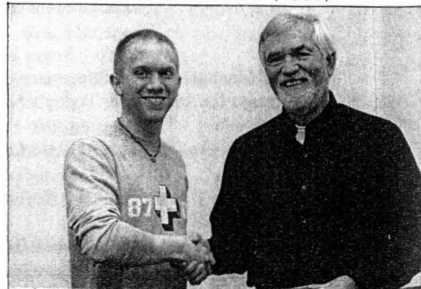
The annual scholarship is given to an undergraduate or graduate student. Preferably, the status of the recipients should alternate between graduate and undergraduate. Nominees should have an outstanding record in field biology, and an interest in and knowledge of governmental affairs in environmental or natural resource management.

#### Recipients

1985-86 Paul E. Pickett  
1986-87 Jeb A. Barzen  
1987-88 Suzanne D. Fellows  
1988-89 John P. Carroll  
1989-90 Larry A. Lysne  
1990-91 Renee A. Anderson  
1991-92 Carrie L. Summerfield  
1992-93 Neal T. Butt  
1993-94 Darla M. Freyholtz  
1994-95 Roger W. Sayre  
1995-96 Shawna M. Freyholtz  
1996-97 Rebecca R. Melland  
1997-98 Tracy A. Aicher  
1998-99 Jennifer Hanson  
1999-00 Melani L. Tescher  
2000-01 Kyla K. Schock  
2001-02 Corrine A. Carey  
2002-03 Erica Marchus  
2003-04 Anne M. Coyle  
2004-05 Sam Martin  
2005-06 Daniel S. Ackerman  
2006-07 Jordan Tollefson  
2007-08 Chad J. Parent  
2008-09 Kyle Gustafson



Sara Fritzell Hanhan, Dr. Kannowski  
and Paul Pickett (1985)



Kyle Gustafson and Dr. Erik Fritzell (2008)

### Curtis R. Malm Memorial Scholarship

This scholarship was established in 1984 by Mrs. Curtis "Vaughn" Malm in memory and honor of her husband, a 1939 graduate of UND, and successful Grand Forks businessman who died in 1982.

The annual scholarship is given to an undergraduate in biology who is majoring in the fisheries and wildlife curriculum, and who is interested in pursuing a career in this field of endeavor. To qualify, students shall have a positive attitude, be dedicated to achievement, and be of good moral character. The donor wishes preference for financial need and scholastic attainment.

#### Recipients

1985-86 Glen A. Sargeant  
1986-87 Asrun Kristmundsdottir  
1987-88 Renee R. Anderson  
1988-89 Dean N. Mostad  
1989-90 Shirley Jo Barcome  
1990-91 Craig A. Shoemaker  
1991-92 Jon M. Roaldson  
1992-93 David L. Buckmeier  
1993-94 Jane E. Schuster  
1994-95 Candida M. Dudley  
1995-96 Ted D. Wawrzyniak  
1996-97 Blain A. Klemek  
& Neal J. Finke  
1997-98 Scott R. Winkelman  
1998-99 Diana Tesky  
1999-00 Ryan J. Duffield  
2000-01 Robert C. Dvorak  
2001-02 Michael L. Szymanski  
2002-03 Blair E. Mace  
2003-04 Sam Martin  
2004-05 Riley K. Zavada  
2005-06 Peter J. Christensen  
2006-07 Joshua E. Frey  
2007-08 Kendall W. Strand  
2008-09 Krista Vogel



Dr. Kannowski, Asrun Kristmundsdottir  
and Mrs. Curtis Malm (1986)



Shirley Jo Barcome and Dr. Crawford (1989)

### Alven Kreil Memorial Scholarship

This scholarship was established in 1993 by the Kreil family and the Great Plains Fishery Workers Association (GPFWA.) It is in memory of Mr. Alven Kreil, a long time District Fisheries Manger for the North Dakota Game and Fish Department. Recipients should show outstanding potential as field biologists. Preference is given to students having field experience in fisheries biology, and an interest in presenting the results of their studies at the annual workshop of the GPFWA.

#### **Recipients**

1993	David Buckmeier	2001	none
1994	Barry Williams	2002	none
1995	Neil Powers	2003	Daniel Ackerman
1996	John Adams	2004	Matthew Sorum
1997	Thomas Weigel	2005	none
1998	Ian Adams	2006	Bryce Olson
1999	Ryan Krapp	2007	Nathan Nordlund
2000	Ryan Duffield	2008	none

### APPENDIX 4

#### **BIOLOGY STAFF, 1961-2008**

The role that staff play in the Department is critically important. Any faculty member who has ever served as Department Chair can attest to this. The first employees that filled positions defined as "staff" began work for the Department in 1961 and 1962, with a secretary and a technician hired by Dr. Wheeler. By the early to mid-1970s, staff positions became more precisely defined by the Central Personnel Division in Bismarck. Job descriptions now spell-out examples of work, desired knowledge, skills and abilities, and the minimum training and type of experience required. Within the various positions, a hierarchy of specializations is denoted by Roman numerals.

#### **Stockroom Manager/Technician**

It is remarkable that in 46 years, only three individuals (Jasper, Stupca, Pung) have filled this position. Their employment and contributions to the Department follow, chronologically.

#### **MAURICE P. JASPER**

Mr. Jasper was a native of Crookston, MN, who joined UND's employment in June 1957. He was a custodian in the Chemistry Building in the early 1960s, and was especially helpful to Dr. Wheeler. After Biology occupied all of the building, Wheeler arranged for Jasper to be hired as a "technician" in 1962. The job title was a grossly inadequate description of his many duties. Jasper's main obligation was as stockroom manager, thus ordering all supplies and equipment, and keeping the books on all purchases. In addition, he serviced departmental equipment and maintained an ever growing inventory. Jasper supervised undergraduate assistants and was a runner of errands around town, and occasionally to the Inkster and Oakville Biology Stations. His abilities as a carpenter were much valued as the faculty expanded into new spaces. By any standard, Jasper was the quintessential "Jack of All Trades." His formal education did not go beyond high school, thus it is to his credit that he learned a more technical career "on the job." In the autumn of 1966, Wheeler declared that "Mr. Jasper is the most indispensable person in the Department." Few if any, would dispute that perception.



As a diligent record keeper of the inventory, Jasper encountered a situation which required a good deal of sleuthing. Fred Duerr had conducted research supported by contracts from the State Game & Fish Department. When he resigned his faculty position prior to the 1976 fall semester, Game & Fish wanted all of their equipment returned. Despite Duerr's minimal cooperation, and equipment stored in multiple places outside the city, Jasper was able to retrieve all of it...but not a quick or easy task.

Jasper sustained two serious injuries while employed in the Department. The first was a work-related fracture of his right ankle and foot. This occurred on 9 January 1964, and resulted in a convalescence of nearly 10 weeks. From this injury the North Dakota Workmen's Compensation Bureau declared Jasper to have a 25% permanent partial disability. The second incident occurred on 24 December 1968, but was not work-related. It was, however, the same type of fracture, but on the left side.

The main purpose for mentioning these injuries is to affirm Jasper's exceptional determination to fulfill his responsibilities to the Department. That opinion was noted by Edmund Weis, M.D., who had evaluated Jasper's feet and ankles in August 1977, and stated:

"I believe this gentleman is having a great deal of discomfort...and I believe it's something of a testimonial to this gentleman that he has continued to be as functionally active as he has. I have seen no individual work beyond three years of the time of injury, even in a unilateral case. Therefore, I believe that this individual must sooner or later be considered permanently and totally disabled for working activity involving standing on his feet, walking, etc."

That physician's report set in motion the process which led to Jasper's retirement on 30 April 1978, after 21 years at UND, of which 16 were with Biology. Maurice Jasper died in Grand Forks on 21 February 2002 at the age of 89. In a letter from his wife, Lorene, dated 13 April 2002, she stated that "he enjoyed working at the Department...and always wanted to do his very best and he did not believe in making excuses."

#### PEGGY JANE STUPCA

Ms. Stupca replaced Mr. Jasper upon his retirement in the spring of 1978. Peggy, a native of Virginia, MN, joined UND as an undergraduate in 1968. She came with an Associate of Arts degree from Mesabi State Jr. College located in her hometown. Peggy earned a B.S. in biology in 1971, and entered the Department's graduate program the following year. She served as a GTA in several courses, but most importantly in the two genetics courses, one of which relied on her skills in maintaining the *Drosophila* colonies. Peggy received an M.S. degree under Dr. Jalal's supervision in 1976, having conducted a cytogenetic analysis of some patients at the Grafton State School. After completion of her M.S., she was twice hired as a part time lecturer in the two genetics courses. This was in addition to working as a lab technician at United Hospital (now Altru). With Jasper's anticipated retirement in the spring of 1978, Dr. Seabloom, Biology Chair, encouraged Peggy to apply for the Stockroom Manager/Technician position. She was one of six applicants, and by far, the most qualified in the group.



Peggy worked half time with Jasper for two months in a transitional setting, and

remembers him as a "very good stockroom clerk, but his paperwork was disorganized to any one but him."

Stupca was hired in 1978 as a Laboratory Technician II, the same classification as her predecessor. Her responsibilities were similar to those assumed by Jasper, but with some added duties of a more technical nature (i.e., chromosomal preparations and analyses) and those involving maintenance of the greenhouse and some animal colonies. One duty which had not changed at all, was the time and distraction of running errands in the city. Available expense vouchers for in-town travel averaged 98 miles/month in 1979.

Peggy's plan to solve the disorganized filing and paperwork situation in the stockroom office was never completed, but she did institute more flexible procedures for issuing course supplies, and greatly reduced the time required for assembling annual supplies and equipment bids by doing that task at home. It was abundantly clear that the complexities and demands of the job, plus Stupca's knowledge, skills and abilities, justified a reclassification of the position to Lab Tech III. With Dean O'Kelly's strong approval, Dr. Larson, Biology Chair, submitted the request, but it was denied and the position reclassified in Bismarck as Laboratory Storekeeper. This inexplicable action downgraded the position and was the opposite of what had been sought. It, and a non-competitive UND salary, prompted Peggy to resign her position, effective 7 May 1980. She accepted employment as a "senior technician" in cytogenetics at Oklahoma City's Children's Hospital at a substantially better salary, and benefits equal to or better than those offered at UND. Eventually, Peggy joined the staff of the Cytogenetics Laboratory of the Mayo Clinic in Rochester, MN.

#### MORRIS A. PUNG

Mr. Pung, a native of Langdon, North Dakota, answered Biology's April 1980 advertisement for a Laboratory Storekeeper. Of four applicants, he was the best qualified having earned a B.S. in Pharmaceutical Science from NDSU in 1977. Mori also had valuable work-related experience as a Pharmacy Intern in Rolla's hospital for two years, and with an Osco Drug Externship after graduation. Mori began work in Biology on 12 May 1980 with the same job title as his predecessor. Kannowski's 1983 successful recommendation to reclassify Pung to Administrative Officer I characterized his position thus: "Stockroom supervisor, which can be described as manager, purchasing agent, biologist, chemist, maintenance engineer, and bookkeeper." To this list could have been added caretaker duties in the animal quarters, and the same in the greenhouses prior to the hiring of Bob Rindy



in October 1982. Mori's classification was changed to Laboratory Equipment Technician II in 1988 when Cheryl Schreiner became the Department's Administrative Officer, and the department could not have two of those! Another change of titles occurred with

Crawford's successful petition to upgrade the position to Biologist II, which it still is except the current designation is "Science Professional."

Pung joined the Department about six months before the beginning of the move to Starcher Hall. Not only was relocating the stockroom a major task, but so too was his required attention to laboratory furniture and equipment when such arrived at the new building. Although all items were coded as to their destinations, Mori had to ensure that lab benches were correctly configured before plumbers and electricians made their hook-ups. He was then, and still is, pressed into service doing work unrelated to his job description. Mori's competence as another "Jack of All Trades" can be a plus, or a minus when it interferes with his primary responsibilities, just as it did for Jasper. Of the major responsibilities long associated with the stockroom position, one has disappeared during Mori's tenure. The arduous task of assembling the annual supply and equipment bids is no longer done, having been replaced by a simpler purchasing procedure.

Of all of Mori's non-stockroom work, what transpired during the flood of 1997 was exceptional. While the city evacuated to the Grand Forks Air Force Base and more distant sites, he and the Plant Services staff stayed and worked through it all. Among Mori's many tasks was his need to monitor the two sump pumps that were keeping the Starcher basement minimally wet. He also sustained the animal quarters and greenhouses by arranging to have a tanker truck of water parked behind the building, and when frozen materials were threatened by the power outage, he convinced Food Services to lend him portable chest freezers. Lastly, he was "recruited" by desperate Plant Services personnel to help move the Computer Center's main frames to a safe, dry location.

The Meritorious Service Award that Mori received in 1994 was well deserved. After 28 years of work, his value to the Department is in harmony with Dr. Wheeler's view of Mr. Jasper, 42 years earlier.

### **Greenhouse Technician**

Since 1982, only four individuals have served the Department as greenhouse caretakers (Rindy, Shjeflo, Holman, Sheppard). As with the stockroom position, two of the employees have held long term appointments. All four are listed below in chronological sequence.

### **ROBERT "BOB" J. RINDY**

Mr. Rindy, a native Texan, enrolled at UND as a freshman in the fall of 1978, and received a B.S. in Fisheries and Wildlife Biology in December 1983. He came to UND as a Vietnam veteran with four years of service in the U.S. Navy, where he was trained as an electronics specialist. In 1979-80, Bob first worked half time as a student assistant for Dr. Kannowski in the Institute for Ecological Studies, and later as a lab assistant in the Department. Rindy possessed multiple skills, including photography, carpentry and



horticulture. In March 1982, the State Emergency Commission authorized funding for a greenhouse caretaker for the 1982-83 academic year. Seven applicants were interviewed in mid-October, and Rindy's prior employment with Olson's Garden Center and AGSCO in Grand Forks helped make him the most qualified applicant.

Much of 1981-82 was a transitional time in the Department as it settled into its new facilities in Starcher Hall. Dr. La Duke had been supervising all aspects of the greenhouses and the problems associated with getting them fully functional. By mid-March 1981, he was issuing policies concerning their use, but staffing the facility was yet uncertain. The earliest designated help was Sue Haig's 1/2-time GTA assignment during the fall semester of 1981, with dual responsibilities to the greenhouses and the herbarium. That same duty was Tim Sirek's in the spring, but reduced to only a 1/4-time assignment. It was obvious to all that the greenhouses required professional and reliable care. Thus, Rindy began his new job as a Laboratory Technician IV on 24 October 1982 with a very large assignment.

The duties prescribed in 1982 for the position included a knowledge of horticultural and native plant species, and of basic greenhouse practices. The person had to also be familiar with common greenhouse pests and diseases, and licensed to apply restricted use chemicals in ND. Also required, an understanding of environmental controls, and the ability to make minor repairs. Finally, as needed, preparing plants for class use, ordering supplies and supervising student help. Rindy was directly responsible to the Greenhouse Coordinator (La Duke, Shubert and Sheridan at various times) for all that did or did not occur in the facility. Besides the daily and routine "as needed" duties, Rindy provided a list of 38 projects that he had completed in his first 15 months, plus a secondary list of 22 additional items as "pending."

Despite Rindy's many accomplishments in making the facility functional, his employment was threatened when the Legislature failed to fund the position for 1983-84. In his annual Department report, Kannowski described it as "the most traumatic event of the year." From UND's Administration and through Dean O'Kelly's creative efforts, piecemeal funding kept the position alive. Beginning with 1984-85, Rindy's position became a regular line item in the budget.

Rindy's annual Staff Employee Performance Evaluations were consistently high during his nine years as greenhouse technician. The only concern occasionally raised was one of time management, especially as it related to his willingness to help others with their computer problems. Bob's knowledge in that area and his desire to share such expertise, was indicative of his good will and cooperative nature.

Rindy resigned on 25 September 1991, in preparation for his move to Cleveland, Ohio. By every objective and relevant measure, the entire Department was the beneficiary of his enthusiastic and loyal service. Rindy's successor would inherit an excellent greenhouse facility.



### ROBERT D. SHJEFLO

Mr. Shjeflo, a native of Bismarck, succeeded Bob Rindy as Biology's second greenhouse technician. Shjeflo earned a B.S. in horticulture from NDSU in 1983, and was employed by UND's Atmospheric Sciences Department prior to joining Biology. His earlier employment with a Bismarck nursery, and as a horticulturalist with the Bismarck School District made Shjeflo the most qualified among five applicants.

He was hired on 18 December 1991 as a Laboratory Technician IV, with a job description not unlike Rindy's. New, however, was a requirement that duties be split 60% as greenhouse manager and 40% as preparator for introductory biology labs. There is, however, no evidence in his personnel file that answering to two supervisors was a problem for him, or for them. What became a problem was Shjeflo's sensitivity to the frequent use of pesticides. He experienced respiratory stress sufficiently serious for him to seek medical attention in mid-June 1993. The episode occurred after he had spent several hours applying the herbicide, "Tordon," at the Oakville Prairie Station. Shjeflo submitted his resignation five weeks later, effective 6 August 1993.

### MICHELLE A. HOLMAN

Robert Shjeflo's replacement was Ms. Holman, a native of the Fertile, MN, area. She received an Associate of Applied Science degree in horticulture from the University of Minnesota, Crookston in 1980. Following graduation, Michelle had a summer job as a "greenhouse laborer" in a Fertile nursery, but joined the U. of MN, Crookston staff that fall as a gardener/greenhouse technician. She held the latter employment for 13 years prior to accepting the UND position. Of four applicants, Michelle was clearly the most qualified.

She began her Laboratory Technician IV employment on 1 October 1993. She, as with her predecessor, had split obligations to greenhouse management and as a preparator for the introductory biology labs. The latter task was not unfamiliar to her, since she had done such work for Crookston's horticultural and agronomy classes. Unlike Shjeflo's assignment, however, no specific percentage of effort to each of her two duties was spelled-out in the job description. Michelle's staff employee evaluations were excellent, thus it was unfortunate that she had to resign when her husband accepted a new job in Hibbing, MN. Her last day of work was 5 July 1996.

### ROBERT SHEPPARD

Bob Sheppard, local native and graduate of Central High School, replaced Michelle Holman six weeks after her departure. Bob attended Mayville State and UND for a year at each school. From his youth and beyond, Bob was exposed to the daily and seasonal tasks of greenhouse work through the family's business...Wy's Garden Center in East Grand Forks. At the time it was sold in 1985, Bob was its manager. Subsequently, he acquired the same position with Home of Economy's Garden Center. Bob is a graduate of the Master Gardener Program and has attended several horticultural

in-service programs. The job description/criterion of possessing a B.S. degree in biological sciences or a related horticultural area was waived in view of Sheppard's experience in all aspects of greenhouse work. He was the most qualified among five applicants, and was hired on 19 August 1996 as a Laboratory Technician IV. Everyone who was at UND in the spring of 1997 has their own special "flood story." For Sheppard, the most demanding and stressful work in the Department came, not during the actual flood, but a year or two later. It occurred during the lengthy campus-wide project to repair and reinsulate the buried steam lines. Unfortunately, water to Starcher Hall was interrupted during the work, and temporary, low pressure lines were inadequate for automated cooling of the greenhouses and for making distilled water. Although time and labor intensive, Bob manually provided many 5-gallon buckets of water and/or ice to serve as remedial solutions to the two problems over a span of two weeks.



### Office Personnel

The first professional secretary in Biology was hired by Dr. Wheeler. It was a half-time position beginning on 1 January 1961, and Margine Holland, wife of a geology professor, accepted the employment. Prior to that time, there were secretarial/stenographic services in Old Main which served all Departments. An "in house" alternative was the use of undergraduate assistants on an hourly basis, especially after World War II and throughout the 1950s. Biology's position became full-time in 1964, and that led Mrs. Holland to resign since she wanted only half-time employment. A second secretary was authorized in 1968, with that position filled by Nancy Wehler Ahokas, who stayed for four years.

With perhaps only one exception, multi-year service such as Nancy provided has contributed to stability and efficiency in the Department Office. During the first 10 years, eight individuals served as secretary, but during the next decade, 20 filled the various categories of secretary/clerk-typist/word processing operator. When it comes to longevity, none has exceeded Cheryl Schreiner's 17 years as Administrative Secretary. A native North Dakotan with an Associate of Arts degree from Mayville State, Cheryl first worked on campus for the North Dakota Geological Survey from 1979-1983. She joined Biology on 3 October 1983 and remained there until becoming the Administrative Officer in Arts & Sciences Office in 2000. On the other end of the longevity spectrum is Pam Romfo who was recommended by Dean Johnson of the Graduate School. She was hired as a word processing operator in late June 1985 and lasted only five days! In her resignation note, Pam stated that "I do not feel this is the appropriate position for me." Faculty patience and flexibility are valued attributes during intervals between a staff member leaving and the hiring of a replacement. One of the longest gaps occurred in the late 1970s when a two month maternity leave was granted to Holly Erdmann. Romance via the work place has blossomed at least twice. In about 1970, Nancy Wehler married

Robert Ahokas, former graduate student and part-time instructor during 1971-72. In 1972, Nancy's colleague, Patty Groth, also found "Mr. Right"...namely, Thomas Ruehle, a Natural Science major and associate of Professor Duerr.



In the following list, position titles and dates are as complete as existing Department records can provide.

Margine Holland	Secretary, 1/2-time	1961 - 64
Jennifer Foster	Secretary	1964 - 65
Sandra Barberio	Secretary	1965 - 66
Laurie Knop	Secretary	1966 - 67
Norah Humerez	Secretary	1967 - 69
Nancy Wehler Ahokas	Secretary	1968 - 72
Patty Groth	Secretary	1969 - 72
Joan Matthew	Secretary, 1/2-time	1969 - 71
Cathy Olson	Secretary	7/31/72 - 12/31/72
Judith Hegle	Secretary	8/22/72 - 4/13/73
Gordon Russell	Administrative Asst.	12/72 - 7/73
Roberta L. Zick	Secretary	3/6/73 - 7/21/73
Kathleen Benson	Secretary	4/73 - 8/21/73
Mildred Jensen	Secretary	8/21/73 - 10/5/73
Lois E. Bjerke	Secretary	8/23/73 - 8/26/74
Bonita Helfenstein	Secretary	10/4/73 - 5/1/74
Carol M. Gaffaney	Clerk-Typist	11/1/73 - 2/26/74
Gail A. Knudtson	Secretary I	2/25/74 - 8/8/75
Philys Gearhart	Clerk-Typist	9/13/74 - 10/29/76
Patricia G. Hagness	Secretary I	8/4/75 - 4/21/76
Hollis K. Erdmann	Secretary I/II	4/29/76 - 3/20/79
Carrie L. Miller	Clerk-Typist I	11/1/76 - 3/4/77
Debra A. Hendrickson	Clerk-Typist I	3/77 - 8/25/78
Rose Crawford	Clerk-Typist I	9/16/78 - 1/18/80
Carolyn Ewasik	Secretary II/III	4/9/79 - 12/31/80
June Duray	Clerk-Typist I	1/14/80 - 3/14/80
Deborah K. Kirby	Clerk-Typist I	3/31/80 - 8/15/80

Suzanne Poe	Clerk-Typist II	9/22/80 - 1/14/83
Heather Nelson	Secretary III	12/15/80 - 9/14/83
Kathi Gannon	Clerk-Typist II	1/19/83 - 9/9/83
Debbie K. Suda	Clerk-Typist II	9/12/83 - 7/6/84
Cheryl Schreiner	Secretary III/Adm. Off	10/3/83 - 6/21/00
Shelby J. Nelson	Clerk-Typist II	7/16/84 - 6/30/85
Pam Romfo	Word Process Oper I	6/24/85 - 6/28/85
Dawn M. Rath	Word Process Oper I	7/15/85 - 9/19/86



Fran Schmalenberger	Word Process Oper I	10/1/86 - 11/4/87
Deneen Heisler	Word Process Oper I	11/17/87 - 3/7/89
Linda Quamme	Word Process Oper I	3/27/89 - 11/24/89
Carol Herman	Word Process Oper I	10/29/89 - 11/2/90
Angela Hart Lommen	Word Process Oper I	12/14/89 - 10/8/90
Tammy Hegg Brenamen	Word Process Oper I	11/8/90 - 8/31/94
Brenda Schill	WPO / Secretary	9/12/94 - 10/16/98
Diane Hillebrand	Secretary	12/27/94 - 2/2/96
Donna Green	Secretary	4/96 - 1997
Renae Irwin	Secretary	8/97 - 5/27/98
Andrea Moses	Secretary	5/98 - 10/98
Mary Lord-Clifford	Adm Secretary	11/23/98 - 3/5/99
Catherine Rogers	Adm Secretary	4/6/99 - 8/2/99
Tessa Varnson	Adm Secretary	7/20/99 - 8/18/00
Jeannie Lewis	Adm Assistant	9/1/00 -
Marilyn Gregoire	Adm Secretary	9/25/00 - 7/10/01
Beverly (Becky) Haugen	Adm Secretary	8/16/01 - 1/21/05
Linda Harmon	Adm Secretary	4/16/05 - 5/31/06
Leslie Griffiths	Adm Secretary	5/16/06 - 11/30/06
Kristen Paul	Adm Secretary	12/1/06 - 12/19/08

During the year-long celebration of UND's 125<sup>th</sup> anniversary, the Biology Office was staffed by two highly competent individuals, Jeannie Lewis and Kristen Paul. Jeannie, a South Dakota native, received her A.A. degree in General Business from Northern State University in Aberdeen. She moved to the Grand Forks area in 1984, and has worked on the UND campus since 1989 – at the Alumni Association, UND Aerospace, and the Chemistry Department before joining the Biology Department as its office manager in the Fall of 2000.



Kristen is from Mahanomen, MN and earned a B.S. degree in Business Management and Marketing from the University of Minnesota-Crookston. She worked at Wells Fargo Bank and the J.C. Penney Company prior to joining the Biology Department as an administrative secretary in December 2006. She typed the final draft of the Biology Department history.

#### Research Staff

Since 1993, the Department Directories have listed a number of individuals as Laboratory Technicians, Research Technicians, and Research Specialists. Earlier Biology Directories did not name such employees. At the present time, 2008-09, only Ken Drees and Sharon Jancsik are listed, both as Research Specialists.

Ken, a native of Grand Forks, earned a B.S. in Chemistry from UND. That degree led to five years with Dupont, before becoming a potato farmer in the Reynolds area for 25 years. In 1999, Ken returned to science as a lab tech in the Medical School, and joined Biology's staff in February 2002.



Sharon is from Vancouver and has a B.S. degree in Forestry from the University of British Columbia. Since October 2007, she has served as Steven Ralph's lab manager, much involved with organizing the facility from scratch.

## APPENDIX 5

### HOWARD HUGHES MEDICAL INSTITUTE GRANT

The broad scope of this award was to **Improve Biological Sciences Education at UND, and to Enhance Recruitment of Women and Minorities into Scientific Careers.**

In 1993 UND was awarded \$1,600,000 from the Howard Hughes Medical Institute to pursue the major goals mentioned above. The grant was initiated in 1994 and ran through 2001. Albert J. Fivizzani served as Project Director during the duration of this initiative, and Cheryl Schreiner provided daily administrative supervision. The three major components funded by the grant are presented below.

#### **Student Research and Broadening Access for Minorities and Women into Science Careers.**

During the six year period of the grant, 25 students were awarded Howard Hughes Fellowships. These provided full tuition, plus other educational expenses and supported research participation in the laboratories of mentoring scientists at UND. Supplies for research activities were provided to the mentors. In keeping with the original intent of this initiative, the vast majority of those receiving fellowships were female and 20% were Native American.

An additional 60 students were awarded Howard Hughes Apprenticeships that provided hourly stipends up to 20 hours per week (40 hours/week in the summer) for students participating in research in the laboratories of UND scientists. Students were awarded these apprenticeships for fall and/or spring semesters, as well as for the summer term. Here too, the majority of the recipients were female, with a preference given to Native America students.

All fellows and apprentices were encouraged to present the results of their research at campus, regional and/or national scientific meetings. Their research participation often resulted in co-authored journal articles. Many of these students went on to graduate school or professional schools, and a substantial number have earned the Ph.D. or other professional degrees.

#### **Enhancement of Equipment for Science Education at UND.**

During the course of this initiative, new computing laboratories and upgrades of equipment for teaching laboratories were funded by the Hughes Initiative. Biology's "Computer Learning Laboratory" for advanced undergraduate and graduate students was established in 1994 with Howard Hughes funding. Thirteen dual platform Power Mac computers and three printers were purchased for the laboratory on Starcher Hall's third floor. This facility was used by students in a number of biology courses in which computer simulations or other computer-based exercises were integral parts of the course.

The laboratory was also available for general use by advanced undergraduate and graduate students. Later, Howard Hughes funding allowed for some of these initial computers to be replaced with more powerful models, including two for the Biology Department's "Data Analysis Laboratory" in the Starcher Hall basement. Improved networking connections to the existing Introductory Biology computer laboratory was part of this package.

New equipment was purchased for use in laboratory exercises on cellular and molecular biology. Most of these items allowed students to work with DNA technology and other molecular biology techniques. The physiology laboratory benefited from computer-based recording equipment which was integrated into about half of the lab exercises for the Organs and Systems course. This method of collecting data was viewed very favorably by the students. Small equipment grants were also made on a competitive basis to the five North Dakota tribal colleges to enhance laboratory experiences for their students.

#### **Outreach to North Dakota Tribal Colleges and Secondary Education Students.**

The third major component in the Hughes grant was improving the quality of science education in the five tribal colleges, and facilitating recruitment of their students to UND for completion of their degrees in the sciences. An important part in this effort was the establishment of Interactive Video Network linkages on the tribal college campuses. The goal was to allow the sharing of science courses among the colleges, and between UND and the tribal colleges. Funding provided for the purchase and installation of IVN equipment at Fort Berthold Community College, Little Hoop Community College, Turtle Mountain Community College, and United Tribes Technical College in Bismarck. An IVN classroom already existed at Sitting Bull Tribal College on the Standing Rock Reservation. IVN courses from the UND campus included Introductory Biology (Biol. 101), Conservation of Water Resources (Biol. 200), Wildlife Conservation (Biol. 240), Women and the Earth (Sociol. 309), Algebra II (Math. 104), and Statistics (Math. 240). The Hughes grant covered the network airtime costs as well as classroom technician fees on each participating campus.

Biology faculty members who participated in the IVN instruction were Jeffrey Carmichael, Richard Crawford, Bruce Eichhorst and Isaac Schlosser. These individuals reported that participating in IVN instruction presented unique challenges in presentation and various levels of student interactions.

Another outreach initiative was the establishment of a residential science summer camp at UND for middle school age students. The purpose was to expose them to scientific concepts and activities with a goal of promoting science as a career. This project was accomplished by a partnership between the Hughes Initiative at UND and the Dakota Science Center (originally known as the Children's Science and Technology Education Foundation). This partnership sponsored four summer camps from 1996 through 1999. These were staffed by mentors and counselors from middle schools statewide, and faculty and staff from UND. Activities to promote learning occurred in

the areas of Biochemistry, Chemistry, Engineering, Geology, Graphics Communication, Microbiology, Space Studies, and Energy and Environmental Studies. Recruitment targeted rural and Native American students, but all middle school students were eligible. The summer camps were named "Science in the Circle of Life" to focus on the symbolism of the circle in the Native American culture. Native American student participation was typically between 25-35%. The dates and number of participants for the summer camps were as follows:

16-21 June 1996, 26 7<sup>th</sup> and 8<sup>th</sup> grade students,  
18-27 July 1997, 50 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students,  
19 July-1 Aug 1998, 53 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students,  
18-24 July 1999, 25 7<sup>th</sup> and 8<sup>th</sup> grade students.

Offering the summer camp in 1997 was truly remarkable. It was the year of the Grand Forks flood, and the original schedule and logistical accommodations had to be altered as facilities at UND were unavailable. The campus was committed to flood relief and emergency housing. Instead, students were housed during the camp at Turtle River State Park, and their learning activities were altered to take advantage of the ecology and environmental opportunities at the Park. The tenacity of the Dakota Science Center staff was crucial to the success of that summer's camp. Without them, it would not have taken place.

**Note:** Although not part of the Hughes grant to Biology, it should be acknowledged that the Medical School also received funding for the improvement of elementary science education for Native American students, grades 4-6. This was administered through UND's Indians into Medicine Program (INMED). The grant for \$450,000 funded a collaborative effort between the School of Medicine, UND's Center for Teaching and Learning, the five tribal community colleges, and nine elementary schools on or near North Dakota's reservations.

## APPENDIX 6

### BIOLOGY CURRICULA SINCE 1884

When the University opened its doors to students on 8 September 1884, there were three programs of study available: 1) the remedial program in the preparatory department for those who had not completed secondary school; 2) the normal school for those intending to teach in elementary schools; and 3) the college program with its two curriculums, the "Course in Arts" and the "Scientific Course," leading to B.A. and B.S. degrees, respectively. Henry Montgomery crafted the scientific curriculum, and it appeared in the University's first general catalog. The biological portion of the curriculum specified traditional subject matter in botany and zoology, but with a more applied approach to the material in the student's third and fourth years. The general content and recommended sequence of subject matter are listed below.

#### 1<sup>st</sup> Year:

Botany, a general course with special reference to the flora of Dakota and neighboring states.

Zoology & Comparative Anatomy, a general survey course of invertebrates and vertebrates.

#### 2<sup>nd</sup> Year:

A course with basic emphasis on animal and vegetable tissues (i.e., histology and plant anatomy, and use of a microscope.) Physiology of the nervous system and sensory organs.

#### 3<sup>rd</sup> Year:

Advanced morphology and histology of flowering plants.

Flora of the northern United States.

Arboriculture and forestry.

Practical study of potato fungus, molds, wheat rust, bacteria, chara and bracken ferns, with special attention to plants of medical, agricultural and industrial importance. (The above with lectures, laboratories and field excursions.)

#### 4<sup>th</sup> Year:

Vertebrate zoology, including comparative anatomy, classification, geographic distribution and palaeontology.

Exercises in the dissection of native and domestic animals with lectures and recitations in osteology.

Although Montgomery was prepared to teach the first year's subject matter in 1884-85, none of it was, since none of the 79 students who eventually enrolled was qualified to enter the college program. All four faculty members, including President Blackburn, taught remedial subjects only during the first year. The two initial curriculums were designed to fit a two-term system, but abandoned after a year. It was replaced by a three-term structure which better fit the timing of rural schools and the

annual cycle of farm work. The "quarter" system continued until 1908-09, at which time the University returned to a semester system.

William Patten, a marine zoologist with a B.S. from Harvard and a Ph.D. from the University of Leipzig, replaced Montgomery in 1889. He established the Department of Biology in 1890, and was the first to hold the title and rank of Professor of Biology. In the first of his four years at UND, he basically used what he had "inherited"....Montgomery's curriculum. After that he modified it by moving physiology to the first year, and introductory biology to the sophomore year. The two advanced courses, botany and zoology, were required in the third and fourth years, respectively. Physiology in the first year may seem premature, but students advancing from the Preparatory Department would have had an elementary course in physiology and hygiene. Patten believed that the study of biology should consist mainly of laboratory work.

Coincident with Brannon replacing Patten in 1894, came a change in the University's foreign language requirement. French, German and Scandinavian replaced Latin as choices in the Science Course. President Merrifield promoted this change in conjunction with the discontinuance of the B.S. degree. The biological portion of the curriculum also changed as it reflected Brannon's background in botany. Although still a one-man department, Brannon offered a wider array of courses. From 1894-1899, thirteen were listed most years, one general, six botanical and six zoological, including:

Algae	General Biology
Fungi	General Zoology
Higher Cryptogams	Advanced Human Physiology
Phaenogamic Botany I and II	Invertebrate Zoology I and II
Vegetable Physiology	Vertebrate Zoology
	Theoretical Zoology

The theoretical course concerned heredity and evolution, and has remained a continuing theme in the Department since 1895.

From 1894 through 1905-06, Brannon's curriculum listed 23 botanical and 13 zoological courses, plus one in public health. Morphology was a common theme in many of his courses. With the catalog's incomplete descriptions, it is difficult to assess the content of these, but a new one in 1901 entitled "Algae, Mosses and Ferns," appeared to be a consolidation of the earlier "Algae" and "Higher Cryptogams." In other cases, some may well have been little more than name changes (i.e., "General Botany," "Morphology of Flowering Plants" and "Physiology of Flowering Plants" may simply be other versions of "Phaenogamic Botany I and II"). Beginning in 1898, the teaching load was shared with Johanna Kildahl, Brannon's graduate student. What seems obvious was that "Embryology," "Animal Histology," "Bacteriology" and "Public Health" were truly new and important courses that helped pave the way toward a two-year Medical School in 1905, and a Public Health Laboratory in 1907. The University catalog cross-listed

biomedical courses in the Colleges of Liberal Arts and Medicine, as were the biology faculty.

R. T. Young was a new Ph.D. in zoology from the University of Nebraska when he joined Brannon, replacing Kildahl in 1906. The department was now "balanced," one botanist, one zoologist. During Young's first year, no zoological courses were added or deleted, but he inherited what would be a continuing role in biomedical education. Embryology and Vertebrate Comparative Anatomy were Young's until he left UND in 1926, but teaching histology ended in 1915 after the Medical School's faculty assumed that task. Beginning in 1907, and continuing throughout Young's time at UND, "Biological Seminar" and "Research" were offered annually. The latter also carried graduate credit after 1920. It appears that with Young on the faculty, Brannon now had time to broaden the botanical offerings with 17 additional courses! Among these was "Hydrobiology A," a summer course at the Devils Lake Biological Station. The zoological equivalent, "Hydrobiology B" was Young's creation. With Brannon's resignation in 1914, came a major reduction in course titles in botany and zoology. Norma Etta Pfeiffer, the new botanist, routinely taught only seven or eight plant courses, in addition to biology. Young's teaching load was comparable with his role in biology and zoology.

While the biology curriculum was "evolving," so too was the University's policies and standards for a baccalaureate degree. Substantial changes occurred during the school's first 30 years. For example in 1903-04, a B.A. degree with an emphasis in biology (or any other subject offered in the College of Liberal Arts) required 48 "units" (i.e., credits) of passing work. A unit was defined as a course meeting a minimum of four times per week for a quarter. The grading scale was "excellent, good, fair, pass, fail." A grade of "pass" was worth 1.0 unit, but a "fail" yielded zero units, and a mandatory repeat of the course. An interesting aspect of the system was the "grade value" given to the three higher achievements. A grade of excellent produced 1.3 units, while good and fair grades were worth 1.2 and 1.1 units, respectively. Quantity and quality of effort were both recognized as important, and made it possible for superior students to graduate in less than four years. By 1906, A, B, C, D, F grading was adopted, as was a 3-part system for structuring a student's degree program. This included: 1) prescribed courses, mainly for the freshman and sophomore years; 2) elective subjects within certain groups; and 3) free electives. The academic calendar returned to the semester system in 1908-09, and defined the requirements for a baccalaureate degree to include a minimum of 124 credit hours. This was raised permanently to 125 in 1910, the same year that the grade value system was discontinued. Four years after Merrifield's retirement in 1909, the B.S. degree was reinstated and has remained the degree most often chosen by UND's biology majors. Beginning in 1916, the terms "major" and "minor" first appeared in the catalog. Course selections for both were to be made with faculty guidance.

The mid-1920s were transitional years for the Biology Department. Edgar Baird succeeded Pfeiffer in 1923 as the botanist, and George C. Wheeler replaced Young as the Department's zoologist and Head in 1926. Apparently, both individuals taught existing courses in their first years on the faculty. Six botanical courses from the Brannon-Young

era were dropped in 1924, and replaced by three new ones during Baird's early years. The new offerings were General Plant Physiology, Plant Histology, and Classification of the Seed Plants (the predecessor to Systematic Botany). What Wheeler inherited in 1926 was the Young-Baird curriculum which offered two majors, Botany and Zoology. A year later, Biology was added as a third option, with all three majors requiring 24 credit hours, and 16 for a minor. Students electing the biology major were advised to "take approximately half of their work in botany and half in zoology." In 1929, the major and minor were raised to 27 and 19 credits, respectively. Beginning in 1931, and for the next 33 years, the Department offered only one major...Biology. Despite being only a two-person department, Wheeler urged President Kane in 1930 to allow an increase in undergraduate courses, including Parasitology, (animal) Histology and Microtechnique, General Physiology, and Comparative Anatomy/Embryology of Vertebrates. The last of these was much in demand by pre-medical and pre-dental students. Of these courses, all but General Physiology were added to the curriculum by 1936. Microtechnique and Embryology were eventually given separate course status.

Wheeler organized the curriculum into three categories...introductory, advanced undergraduate, and graduate. After Baird's resignation in 1935, Wheeler consolidated the introductory plant and animal courses into General Biology. This basic eight-credit, two semester course was required of all students majoring or minoring in the Department, or pursuing pre-professional biological disciplines. Replacing Baird was Neal Weber, a zoologist and Wheeler's former M.S. student. This meant that the Department was "unbalanced," in that botany was not represented by a faculty member. However, after Baird's departure, Wheeler kept botany "alive" by teaching Systematic Botany until Vera Facey joined the faculty in 1947.



George Wheeler and General Biology students (early 1940s)

After Weber accepted a faculty position in the Medical School in 1943, the Department was short staffed for the next three years. Wheeler alone, along with his new wife, Jeanette, B.S. 1943, taught all the courses. The situation was similar to 45 years earlier when Brannon and Johanna Kildahl, B.A. 1898, constituted the biology faculty. In 1950, the biology major and minor were increased to 30 and 20 credits. In addition to the general course, the remaining 22 (or 12) credits were unspecified advanced courses chosen with faculty advice and a student's wishes. This unstructured arrangement continued through the 1962-64 catalog.

### **UND Biology: A Curricular Renaissance**

Until the early 1960s, the instructional and research focus of the Biology Department was, in the broadest sense, highly traditional. Morphology, systematics, and organismic life histories were the prevalent disciplines for 80 years. With the hiring of young, recently trained faculty in the 1960s and early 1970s, began a new diversity of expertise. This was especially apparent in the publications resulting from research in the areas of physiological, behavioral, cellular, and subcellular biology (see Appendix 7 for representative examples). With this infusion of new faculty and ideas, also came curriculum revision. During Kannowski's first year as Department Chair in 1963-64, Botany and Zoology joined Biology as undergraduate majors. The curricula approved by the faculty for all three required, in addition to General Biology and one credit of Seminar, that courses from five basic areas be represented in the 30-credit major.

These were:

#### Morphological and Developmental Biology

Comparative Anatomy, Cytology, Histology, Embryology, Morphology of Non-Vascular Plants, Morphology of Vascular Plants

#### Environmental Biology

Ecology, Limnology

#### Functional Biology

General Physiology, Plant Physiology

#### Genetic Biology

Evolution, Genetics

#### Systematic Biology

Aquatic Plants, Entomology, Invertebrate Zoology, Mammalogy, Natural History of the Vertebrates, Ornithology, Parasitology, Protozoology, Systematic Botany, Taxonomy of Lower Plants

This left only 1-5 credits of biology electives. Requisites in other departments included: algebra, trigonometry, and one year each of chemistry and physics. Previously,

cognate courses had been suggested, but not required. The B.S.Ed. for Biological Sciences in the College of Education had the same structure, but with fewer course choices. By 1966-68, the major was increased to 36 credits, and although the five disciplines were no longer named, the either/or "menu" of courses forced the same diversity as before. Requisites in other departments were of two options, and both included for the first time a one or two semester course in organic chemistry.

Concurrent with the above curricular changes in the mid-1960s, was the development of a new program leading to a B.S. in Fishery and Wildlife Management. This highly structured curriculum reflected the suggested requirements of professionals in these fields, and also met the University and Arts and Sciences degree requirements. A curriculum revision in 1976 incorporated new flexibility for required and elective courses. A year later, the degree was renamed B.S. in Fisheries and Wildlife Biology. (Note: Details concerning the unorthodox inclusion of this program into the UND catalog are presented in Chapter 5).

One of the striking aspects of the 1960s was the remarkable increase in the number of formal courses. The proliferation rivaled that of Brannon's in the early 1900s. Besides Introduction to Biology and General Biology, the 1964-66 catalog listed 22 "Senior Division" undergraduate courses, plus Seminar, Directed Studies and Research. Two years later the listing had increased to 31 courses. The pathway which partially allowed such increases was through Directed Studies which listed a dozen or more specific topics "designed to meet the needs of individual students." By this arrangement a number of topics attained formal course status, without needing to meet the State Board of Higher Education's requirement of dropping an equivalent number of existing courses. Through this process new faculty members had the flexibility of offering a wide variety of subject matter. Note: Special Work (1927-49) and Special Problems (1949-62) were the earlier titles of what was renamed Directed Studies in 1962.

Courses at the introductory level have undergone substantial changes over the past seven decades. Wheeler's fusion of the Animal and Plant Biology courses in 1936, resulted in General Biology 263, 264, but renumbered 163, 164 in the 1940s. This course provided the basic concepts of biology for those intending to major or minor in the discipline. Other courses have been developed for non-science students seeking a general understanding and cultural appreciation of biology. Concurrent with General Biology in 1936, was Wheeler's creation of Introduction to Biology which continued through 1944-45. Twenty years later, the same title reappeared as a new version of biology for non-majors. For several years, two new instructional approaches were used. One was the audio-tutorial laboratory, a topic covered in Chapter 6. The other innovation was a required recitation/discussion session in place of a third hour of lecture. This method of teaching was discontinued after 1971 when the introductory and general biology courses were combined under the existing title, Introduction to Biology; 101, 102. Combining the two produced a single course with enrollments of 500-700 students per semester. Such numbers required 3-4 lecture sections, and the need for large classrooms. The 110-capacity room on the third floor of the old biology building was often used prior to 1982, but routinely larger lecture "bowls" in Abbott, Witmer and Leonard Hall were utilized.

Of these, the view and acoustics were, and still are, best in Leonard Hall. In 1999 the course was renamed and renumbered, General Biology I and II, 150, 151. A basic 100-level course for non-science majors was unavailable in the Department until the spring semester of 1979 when Principles of Biology, a 3-credit course with an optional one credit lab first appeared. Since 1999 it has had the title, Concepts of Biology.

The faculty approved a new category of courses in the mid-1960s...those at the 200-level, and primarily intended for non-science majors. Biology's annual report for 1969-70 indicates that such were first taught during the fall semester, and for a decade only two were offered, Human Environment, and Modern Genetics and Man. The latter was an exception in having a prerequisite of Introduction of Biology. In 1976-77, the genetics course was given advanced course status as Biology 357, and a year later, Topics in Biology was approved. This open-ended 200-number allowed the faculty to offer a variety of 1-3 credit courses in a manner similar to those offered as Directed Studies. These included Sociobiology, Human Genetics, Sewage Treatment, Conservation of Water Resources, Diversity, Natural History of the Northern Plains, Plants and People, Wildlife Conservation, and Human Sexuality. The final four in this list attained formal course status by the mid-1980s, and collectively generated 700-800 student credit hours per AY. By the later 1990s, only two of these courses remained, and the current catalog for 2007-09 lists Wildlife Conservation as Biology's only 200-level course.

In the broader context of the undergraduate curriculum, three important changes were approved in 1971-72. These included: 1) restructuring Vertebrate Anatomy & Adaptations (4 cr) and Natural History of the Vertebrates (4 cr) into three 2 credit courses...Vertebrate Zoology, Vertebrate Anatomy Lab and Natural History Lab; 2) adding General Microbiology (4cr) as an extra-departmental requirement, and 3) providing two options for meeting the chemistry requirement, those being the year long Organic Chemistry 305-306 (8 cr) or a semester of Organic Chemistry 212 (5 cr) plus Biochemistry Lecture 301 (3 cr). Less significant, however, were numerous small curricular changes during the 1970s and early 1980s. These included the renumbering of courses or altering the credits they carried, and also the occasional addition of a new course (i.e., Phycology in 1975, Developmental Biology, and Principles of Biology in 1979, Fish and Wildlife Disease in 1983, Population Biology in 1984). By 1978-79, the biology, botany, and zoology majors all required 40 credits, and increase from 36 that did not please the Arts and Sciences Dean. The first large curriculum restructuring in 20 years was approved in 1984, and became effective the following year. The botany and zoology majors were discontinued, as was the requirement of microbiology. The biology major remained, but with four options; 1) General Emphasis for students wanting a broad, comprehensive background in biology; 2) Pre-Health Sciences Emphasis for those interested in medicine or allied health fields; 3) Plant Science Emphasis for students with primary interests in the study of plants; and 4) Zoology Emphasis for those preparing for work with animals. This four track arrangement remained in effect until 1998 when the Plant Science and Zoology Emphases were discontinued.

In the spring of 2006, the biology faculty approved a continuance of the major having a Pre-Health Sciences Emphasis. Substantive changes from the 1985 version

included Evolution, Cell Biology lecture, Senior Capstone, and a statistical course as requirements. Departmental electives were similar to the earlier version, but with several new additions to the "menu" (i.e., Neuroscience, Introduction to Immunology, Genomics, and Molecular Genetics). If one considers the pre-health changes as relatively small, then the restructured General Emphasis option of 1985 qualifies as being huge. The faculty's goal was to modernize the major through the integration of recent biological advances and new disciplines. From this, three options were defined, all with the same 23 credit core of required biology courses, plus 20 credits of advanced course electives. The three options are:

#### General Biology Option

This option is for students interested in obtaining a broad background in biology, with maximum flexibility in program design.

#### Molecular, Cellular, and Developmental Biology Option

This program is designed for students interested in the cellular and sub-cellular mechanisms underlying biological phenomena. It is especially appropriate for students anticipating a career in biotechnology or biomedical research. These courses will provide a foundation for students planning to continue their studies in graduate or professional programs, or students wanting to pursue technical positions in life science research or pharmaceutical companies.

#### Ecology and Evolutionary Biology Option

This program is designed for students interested in ecology, evolutionary biology, and related areas. Students will explore animal behavior, biodiversity, evolutionary history and interactions of organisms and their environments. The coursework outlined here will familiarize students with the conceptual framework of ecology and evolutionary biology and provide necessary analytical skills and familiarity with the major groups of living organisms. The program will prepare students for careers in ecological, evolutionary and related fields, including those in conservation, the environment, and graduate study.

Specifics on the requirements for the above options are spelled-out in the 2007-09 catalog, and the 2008 Biology Department Faculty Handbook. Although the number of biology credits required for departmental majors have increased several times over the past six decades (from 27 to 43 credits), the minor has remained unchanged at 20 since 1950. Beginning in the mid-1960s, a minor required a year of introductory biology, plus at least one advanced course from any three of five "basic areas of biology." The basic areas were redefined in 1992 as being three, but the current catalog simply mandates General Biology I and II, plus two sets of either/or choices (i.e., Genetics or Cell Biology; Evolution or Ecology). In addition, six hours of electives are required to reach the 20 credit minimum.

In addition to a major revision of the curriculum in 2006, was Biology's development of an instrument for assessing undergraduate student learning. This was in response to the University's commitment to improve educational programs and to more directly assess the learning experiences of students. Biology's approach to this was to



incorporate the College Learning Assessment Tasks (CLAT's) into the Department Plan, for those individuals majoring in Biology, and Biology with a Pre-Health Sciences Emphasis. The intent of CLAT was to better assess the direct impact of the undergraduate program on higher level skills for thinking, communicating, and making ethical judgments. The UND Assessment Committee reviewed Biology's plan in the spring of 2008, noting that progress had been made, and more was expected. The specifics of the plan are presented in Appendix 5 of the 2008 Faculty Handbook.

### Graduate Programs: Master's Degrees

In 1890 William Patten permitted two postgraduate students to work in his laboratory. These two individuals did not earn advanced degrees, but were in essence the first biology "graduate" students. The initial graduate degree program at the University was the Master of Arts, established in 1894, with the first student graduating a year later. The program was available in Biology, and required a major and two minors (one course in each), plus a thesis and an examination. In 1900, Johanna Kildahl became the first biology student to receive an M.A. degree, and she was only the third at UND. Her lengthy association with Brannon and the Biology Department are noted in Chapter 3. Brannon's only other graduate student, Engebret Tufte, earned an M.A. in 1911. Prior to 1910, a "Committee on Graduate Instruction" in the College of Liberal Arts ruled on admissions and conferring of the M.A. degree. The administrative replacement was the "Graduate Department," an organization overseeing all UND academic units which offered courses leading to advanced degrees.

The Master of Science degree was first listed in the 1914 catalog. It and the M.A. degree were basically indistinguishable, except that the work taken would determine the degree earned. Both degrees required a major and two minors, but with the restriction that "the major subject must, in every case, be taken in the College of Liberal Arts or the School of Education." The number of credits required were not specified, but approximately 16 hours of work/week for a year were expected of a student. In biology, Young's five students and Pfeiffer's two, all received M.S. degrees between 1915 and 1926. It is unclear when the Department discontinued the M.A. degree, but it was awarded twice in the mid-1930s, and most recently in 1963 to Seabloom's student, Stuart Iverson.

Although Young and Pfeiffer had graduate students, the catalogs from their years at UND listed no graduate courses per se, except Biological Seminar and Research. Graduate programs called for "advanced" courses, and some such as Plant Physiology with prerequisites of physics and two years of chemistry appeared to have graduate-level rigor. After Wheeler joined the Department in 1926, a new category was defined with four titles for graduate students only. These were Biology of North Dakota, Special Work in Botany, Special Work in Zoology, and Research, all with 200 numbers. In 1927, President Kane established the "Graduate Division," a new entity which raised the standards and requirements of the graduate programs. By the early 1930s, the graduate faculty was defined as those offering courses with 500-level numbers, and in 1937 the

Graduate Division specified 22 steps leading to a master's degree. From the 1930s until 1958, the master's degree required a major (16 credits) and two minors (8 credits each). Biology's graduate offerings remained unchanged during this time except for Special Work being renamed Special Problems in 1949.

The Graduate Division was replaced in 1951 by the current administrative structure, the Graduate School. For some years, Wheeler emphasized in the annual graduate bulletin that the Department had **no formal** graduate courses. However, he allowed that certain 300 and 400 undergraduate courses could qualify for graduate credit, provided that the student completed successfully a supplementary problem of a research nature. In 1958 the minimum number of credits for an M.S. degree was reduced from 32 to 30 credits, with 15 in the major, and the two minors with seven or eight. In biology there was also the expectation that the student have a reading knowledge of a foreign language, and German was preferred.

With the arrival of Kannowski as a faculty member in 1957, came new ideas and a new diversity of graduate offerings. The approach was the same as used for undergraduate courses, namely the designation of specific fields under Directed Studies, Biology 561. From 1957 to 1963, a dozen or more titles were listed each year. The 1964-65 catalog presented 10 new graduate courses, joining Seminar and the long standing titles, Biology of North Dakota, Directed Studies and Research as the Department's graduate curriculum. That same catalog presented a restructured M.S. program which the biology faculty had approved in April 1964. It recommended biology's 20 credit major be composed of 10 credits course work, four each of research and thesis, and two credits of seminar. Only a single 10 credit minor was required by the new program, and the foreign language requirement no longer recommended German. The 2008-09 M.S. degree in biology has three modifications from the preceding: 1) a minor is not mandatory; 2) no more than 50% of the required credits can be from research and thesis; and 3) no reference is made to any foreign language requirement.

An optional non-thesis M.S. degree program received faculty approval in December 1984, and with minor changes remains part of Biology's graduate curriculum. This option is designed for students seeking broad training in graduate-level biology without research emphasis. It requires 32 credits of course work, of which 23 are in the major. Two credits of seminar, and a substantial and rigorous independent study are also required.

Although not a biology program per se, the Department participated from 1959 to 1974 in the Master of Science Teaching program. This 32-credit, non-thesis degree (M.S.T.) was established for high school science teachers attending NSF sponsored Science Institutes. Students in this program concentrated their course work in **two** areas of science....biology, chemistry, geology or physics. Later mathematics became a fifth choice. Lesser number of credits could also be earned in astronomy and meteorology. Biology's involvement was its annual offering of Basic Principles of Biology, an enhanced eight-credit version of General Biology. Students choosing biology as an area of concentration took additional graduate-level courses in the Department. After NSF

ceased funding the Institutes, the degree was dropped by the Graduate School. The plus and minus of the M.S.T. program was its diversity, but unfortunately minimal depth in any field. For the general high school science teacher, however, the program probably was a useful choice. Commencement programs indicate that the last M.S.T. degree was awarded in May 1975.

### Graduate Programs: Doctoral Degrees

Concurrent with the establishment of the Graduate Department in 1910, came the announcement that "work leading to the degree of Doctor of Philosophy is offered in some departments." This statement also appeared the following year, but not in 1912. How many enrolled is unknown, but only one student received a degree, that in 1914. Not until 1927 with the creation of the Graduate Division did UND again offer a Ph.D. program. The following reflected the Division's views: "The quality of scholarly attainments is considered more important than the quantity of units (i.e., credits) gathered in courses." Admission to the program required a master's degree. A reading knowledge of French and German was required, as was a preliminary test one year before the final examination/thesis defense. An extraordinary requirement of a successful student in the early to mid-1930s, was the need to provide "50 bound copies of the doctoral thesis for exchange and library purposes." (Note: master's students only needed to provide two copies).

Biology's participation in the Ph.D. program was slow to emerge. From 1952 to 1962, Wheeler's statement on behalf of the Department was that "A few graduate problems are available for a limited number of specially qualified students." The 1958-59 Graduate Bulletin listed biology for the first time as having a Ph.D. program. Was the listing in response to Jeanette Wheeler beginning doctoral studies that year, or was the timing coincidental? What is factual is that George Wheeler was acknowledging a potential Ph.D. program six years before the University officially listed it. The program that Mrs. Wheeler entered required 90 credits of graduate work beyond the Bachelor's degree. A dissertation and reading knowledge of two foreign languages were required, but the program of study was determined by an advisory committee with the Dean's approval. Three major examinations were required: 1) qualifying/diagnostic; 2) comprehensive covering course work; and 3) final on the dissertation. Jeanette, thus in 1962, became the Department's first Ph.D., followed by Ted James in 1967, and Donald Becker in 1968. From 1969 through 1979, the program was productive, with 28 students receiving Ph.D. degrees.

As with the M.S. program, that of the Ph.D. was also defined and restructured in April 1964. Course work was to equal 24-35 credits, seminars 6, research 20-41, and dissertation 4-12 credits. Course work must include advanced studies in four of five basic areas of biology. Reading knowledge in two foreign languages was required, and attendance at a marine field station was expected. In the spring of 1972 in response to a growing trend among Ph.D. granting departments, the faculty approved the following: that "all graduate students admitted without an advanced degree shall study for the

masters degree, but if after one calendar year, any student wishing to by-pass the masters and work directly toward the Ph.D., may so request this of the faculty for approval." Additional changes in 1987 provided several options for meeting the scholarly tool requirement, with foreign languages no longer mandatory. Other programmatic changes listed in the 2008 Biology Faculty Handbook include minimal credits of course work reduced to 18, and seminars reduced to four. A five-member faculty advisory committee has broad jurisdiction over all aspects of a student's Ph.D. program.

In December 1969, the Biology faculty approved in principle a new graduate program, the Doctor of Arts Teaching (D.A.T.), later renamed the D.A. degree in 1975. Its focus was to produce broadly trained teachers for two and four-year colleges. The existing Ed.D. in education at UND did not mesh well with biology's goal, hence the new program. Individuals holding a master's degree in biological sciences were eligible to apply. As with the Ph.D. program, 90 semester credits beyond the baccalaureate were required, but no dissertation was needed. However, a research project roughly equivalent to that expected of M.S. students was required. Another distinctive feature of the program included a teaching internship, the development of curricular materials, or directing and supervising multiple sections of freshman laboratories. The D.A. program usually resulted in the student having dual advisors, one for research, and one for the instructional component. Although only 13 students earned D.A. degrees between 1971 and 1997, they generally found satisfactory positions in biology (i.e., Concordia College, Jamestown College, Marycrest College (IA), Northland College (WI), Saint Mary's College (MN), U.S. Air Force Academy, and two at the University of Mary). Reduced interest in the degree and budgetary constraints led Biology to discontinue the program in September 1998. As of 2008, only the History Department still offers the D.A. degree at UND.

As with the undergraduate program, the University also mandates an assessment of graduate student learning. The Associate Dean of the Graduate School is primarily responsible for all aspects of the assessment. Biology's instrument for implementing the plan for M.S. and Ph.D. programs was approved in April 2007. The specifics of the plan are presented in Appendix 5 of the 2008 Faculty Handbook.

Lastly, no history of Biology's graduate program would be complete without acknowledging the leadership of A. William Johnson. From 1967 to 1988, he served as Dean of the Graduate School and Professor of Chemistry. He was a tall, athletic man with a booming voice, and a hard-nosed reputation. In a 1979 interview, the Dean freely admitted that he was that when it came to petitions seeking to excuse established requirements. He ran the Graduate School "by the book," and most faculty and graduate students appreciated his candor and decisiveness, even when not in agreement with his decisions. Chapter 9 relates one such disagreement involving a biology graduate student.



## APPENDIX 7

### BIOLOGY FACULTY PUBLICATIONS

The following list of 125 peer reviewed publications have been selected to illustrate the research focus of the faculty through time. The titles chosen correspond to when the person was a member of the Department. In the case of papers with multiple authors, a faculty member is the senior author. The authors are listed alphabetically within each time period. A complete listing of all publications is too long for inclusion in this history, but such an assemblage is planned for deposition in the Department of Special Collections. Kannowski included such a list with his centennial history manuscript.

#### 1889 - 1910

- Montgomery, H. 1889. Aboriginal monuments of North Dakota. Pp. 342-344 in Proc. Am. Assoc. Adv. Sci., Toronto, Canada.
- Patten, W. 1889. Segmental sense organs of Arthropods. *J. Morphol.* 2: 600-602.
- Patten, W. 1890. On the origin of vertebrates from arachnids. *Q. J. Microsc. Sci.* 313: 317-378.
- Young, R. T. 1908. The histogenesis of *Cysticercus pisiformis*. *Zool. Jahrb. Abt. Anat.* 26: 183-254.
- Young, R. T. 1910. The somatic nuclei of certain cestodes. *Arch. Zellforsch.* 6: 140-163.

#### 1911-1930

- Baird, E. A. 1924. The structure and behavior of the nucleus in the life history of *Phycomyces nitens* (Agardh) Kunze and *Rhizopus nigricans* Ehrbg. *Trans. Wis. Acad. Sci. Arts Lett.* 21: 357-380.
- Brannon, M. A. 1911. Factors influencing the flora of Devils Lake, North Dakota. *Int. Rev. Gesamten Hydrobiol. Hydrogr.* 4: 291-299.
- Pfeiffer, N. E. 1914. Morphology of *Thismia americana*. *Bot. Gaz.* 57: 122-135.
- Pfeiffer, N. E. 1922. Monograph of the Isoetaceae. *Ann. Mo. Bot. Gard.* 9: 79-232.
- Young, R. T. 1916. Some experiments on protective coloration. *J. Exp. Zool.* 20: 457-507.
- Wheeler, G. C. 1928. The larva of *Leptanilla*. (Hym. Formicidae). *Psyche* 35: 85-91.

#### 1931-1950

- Facey, V. 1950. Abscission of leaves in *Fraxinus americana*. *New Phytol.* 49: 103-116.
- Weber, N. A. 1935. The biology of the thatching ant, *Formica rufa obscuripes* Forel, in North Dakota. *Ecol. Monogr.* 4: 165-206.
- Weber, N. A. 1937. The biology of the fungus-growing ants. Part I. New forms. *Rev. Entomol.* 7: 378-409.
- Weber, N. A. 1942. On ant nesting habits in North Dakota in 1941 compared with drouth years. *Can. Entomol.* 74: 61-62.
- Wheeler, G. C. 1935. The larva of *Allomerus* (Hym. Formicidae). *Psyche* 42: 92-98.
- Wheeler, G. C. 1947. The amphibians and reptiles of North Dakota. *Am. Midl. Nat.* 38: 162-190.
- Wheeler, G. C. 1950. Ant larvae of the subfamily Ceraphachyinae. *Psyche* 57: 102-113.
- Wheeler, G. C. and E. W. Wheeler. 1944. The ants of North Dakota. *N. D. Hist. Q.* 11: 231-271.

#### 1951-1960

- Kannowski, P. B. 1956. The ants of Ramsey County, North Dakota. *Am. Midl. Nat.* 56: 168-185.
- Kannowski, P. B. 1958. Swarming of the ant *Stenamamma brevicorne* (Mayr). *Entomol. News* 69: 231-233.
- Kannowski, P. B. 1959. The use of radioactive phosphorus in the study of colony distribution of the ant *Lasius minutus*. *Ecology* 40: 162-165.
- Kannowski, P. B. 1959. The flight activities and colony-founding behavior of bog ants in southeastern Michigan. *Insectes Soc.* 6: 115-162.
- Wheeler, G. C. and J. Wheeler. 1957. The larva of *Simopelta* (Hymenoptera: Formicidae). *Proc. Entomol. Soc. Wash.* 59: 191-194 & 270.
- Wheeler, G. C. and J. Wheeler. 1960. Techniques for the study of ant larvae. *Psyche* 67: 87-94.

1961-1970

- Blinn, D. W. 1970. The influence of sodium on the development of *Ctenocladus circinnatus* Borzi (Chlorophyceae). *Phycologia* 9: 49-54.
- Bryan, G. W., A. H. Zadylak, and C. F. Ehret. 1967. Photoinduction of plastids and chlorophyll in a *Chlorella* mutant. *J. Cell Sci.* 2: 513-528.
- Duerr, F. G. 1968. Excretion of ammonia and urea in seven species of marine prosobranch snails. *Comp. Biochem. Physiol.* 26: 1051-1059.
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- Oring, L. W. 1968. Vocalizations of the green and solitary sandpipers. *Wilson Bull.* 80: 395-420.
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1971-1980

- Crawford, R. D. 1980. Effects of age on reproduction in American coots. *J. Wildl. Manage.* 44: 183-189.

- Holloway, H. L., Jr. and J. A. Spence. 1980. Ecology of animal parasites in McMurdo Sound, Antarctica. *Comp. Physiol. Ecol.* 5: 262-284.
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- Seabloom, R. W., S. L. Iverson, and B. N. Turner. 1978. Adrenal response in a wild *Microtus* population: seasonal aspects. *Can. J. Zool.* 56: 1433-1440.
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2001-2008

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Omer R. Larson, a native of Roseau, MN., received a B.A. from UND in 1954 with a major in biology and a minor in history. After military service in Austria and Berlin, he returned to school and earned M.S. and Ph.D. degrees in zoology from the University of Minnesota. His field of specialization is parasitology. In 1964 he joined the UND faculty and retired in 1995 as Professor Emeritus in Biology.





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