MATH • SCIENCE • NURSING • ALUMNI

NEWSLETTER

MORNINGSIDE COLLEGE, SIOUX CITY, IOWA SUMMER 1986

Science Education and Undergraduate Research Project

A new and exciting project is about to begin at the College. Under the auspices of the Iowa Public Service Company, a research project which emphasizes science education and undergraduate research will begin this summer. IPS will fund research stipends for eleven students, four faculty and a modest supplies/equipment budget. Faculty members of the Departments of Biology, Chemistry, and Physics proposed the project as a means to strengthen undergraduate science education through additional emphasis on research, to assist pre-college teachers to upgrade their teaching and laboratory techniques, and to address special educational needs of the community. The objectives of the projects are:

...to offer a variety of undergraduate research experiences for outstanding science students.

...to structure research projects which will be of educational benefit to the community.

...to develop projects in concert with area industry.

...to encourage faculty involvement in research as a component of faculty development.

...to provide a research program which will attract high quality science students to the College.

...to develop and offer workshops for science teachers of elementary and secondary students (to support science education in Northwest Iowa).

...to involve gifted high school students in research.

...to acquire equipment and supplies for undergraduate research.

...to expose student researchers to experimental design as well as technical writing and reporting.

...to publicize the program within the College and the Siouxland community.

The project was proposed to IPS as a four-year project. The majority of the activities will be summer projects since this is the best time for faculty and student involvement in research. This summer undergraduate research will be emphasized while the science education component is in the planning stages, but in future summers the two sections will be more evenly balanced.

The science education section is directed at the secondary and undergraduate level. It focuses on the needs of teachers and students in the natural sciences. Four projects will be used to develop an outdoor laboratory on Iowa Public Service Company property near the George Neal Complex, south of Sioux City. There students and teachers will be able to practice field biology through observation and experimentation. The projects include: (1) an industry-related problem—fly ash stabilization; (2) a restoration study—prairie restoration; (3) planting for landscape and practical value—experimental tree/shrub plantings; and (4) the development of a site for additional field research—a field study area for teachers.

Aquatic researcher Robert Conklin, a senior chemistry major arranges substrates in the Missouri River.

Two other projects are designed especially for secondary science classes—biology field activities for science students and workshops for science teachers. One additional project, a species composition study, will become a classroom activity for Morningside College students in general ecology and field biology classes.

Many of these projects will require three to four years for planning, development, and actual field work such as planting, maintenance, and monitoring. Each project will involve research and development by faculty and college students. In several projects, college biology faculty will work with high school teachers to plan science activities, field study areas, and a workshop for secondary science teachers.

In the summer of 1986 six undergraduate research projects will be underway with direction from Jane Hey and Dr. Joseph Claflin of the Biology Department, Dr. Edward Shane of the Chemistry Department, and Rod Tondreau, Aquatic Studies. Under the supervision of these faculty members a college student(s) will be involved as a summer research assistant(s) in a basic or applied research project. Faculty will offer the primary direction for the project. Students will work on the formulation of the research problem, the development of laboratory or field procedures, the collection and processing of experimental data, library research, and report writing. After this first summer gifted high school students will be involved in selected research projects.

This year's research projects include:

...Loess Hills Microorganisms and Microhabitat Study—to identify and document microorganisms in the Loess prairie ecosystem.

...Comparative Aquatic Productivity—to compare the gross primary productivity over the course of the summer growing season in two oxbow lakes.

...Microcomputer Interfacing in the Chemistry Laboratory—an APPLE microcomputer with special adapting hardware will be interfaced with existing instrumentation to allow computerized collection and processing of data.

...Heavy Metal Analysis—to study the toxic heavy metals—lead, copper, zinc, and chromium—in the Missouri River and in a closed oxbow lake system. These metals will be observed in the water, in algae, and in other species such as invertebrates and fish.

...Research Report on Missouri River Aquatic Ecology—to prepare an extensive report on the ecology of the Missouri River. The report will be based largely on recent data gathered at the College by the Aquatic Studies Research Project.

...Fish Populations in Oxbow Lakes—to study the size and composition of fish populations in the Snyder and Winnebago oxbow lakes.

Morningside students who will work in various aspects of the project this summer include: Jane Jones (Griswold), Julie Schlosser (Oakland), Karen Munsen (Correctionville), Max Stevens (Marshalltown), Robert Conklin (Sioux City), Florence Weeber (Mt. Pleasant), Sara Ulven (Paullina), Kevin Scholten (Sioux Center), Julie Lien (Graettinger), and Rod Chamberlain (Dakota City, NE)

Faculty Person of the Year: Kathleen Buchheit

Energic, committed, concerned, supportive, motivated. This is how students have described the 1986 Faculty Person of the Year. Each year the student honorary society selects one person as the outstanding faculty member for the year. This year, for the first time, a member of the Nursing faculty received the award—Kathleen (Kathy) Buchheit, Acting Chair of the Nursing Department.

Kathy joined the department as a part-time member in the fall of 1981. At the time she held her BSN (1967) from St. Teresa College, MN, and was working to complete her master's degree. By the fall of 1982 Kathy was a full-time member of the department, and by May 1984 she had finished her master's degree and was promoted to Assistant Professor. In 1985 Kathy became Acting Chair of the Nursing Department while it searches for a chair who holds the doctorate degree in nursing. And she does all of this while being a wife and mother of two young boys.

By the time she came to Morningside Kathy already had a wealth of professional experience. She had served as a staff nurse, had been an instructor and later Program Director in the Human Services program for Southeast Community College, Lincoln, NE, had been an instructor in the College of Nursing, University of Nebraska, Lincoln, and had run a community services program dealing with child abuse. She had even at one point worked partly through a master's degree in adult and continuing education before deciding to work towards her master's degree in nursing. Kathy's master's degree is from Wichita State and is a generalist degree with clinical concentration in mental health nursing.

Kathy is active professionally. She has been a consultant to the St. Luke's Regional Hospital, Sioux City, and helped to design their psychiatric nursing services. She has been a volunteer speaker in the schools, K-12, on topics like stress, communication, and 'going to the hospital'. She has presented nursing workshops in gerontologic nursing, stress, and mental health nursing and has herself attended numerous workshops in areas such as nursing education and mental health nursing. Kathy is President of District #1, Iowa Nurses Association and also serves on the Board of Directors of the Association. In the fall 1985 she and Rick Peterson collaborated on a very successful presentation, 'Renaissance and Health Care: Genesis of Change' as a part of the Renaissance Connection series presented by the College.

At Morningside Kathy has taught primarily the gerontological and mental health nursing courses for sophomores and juniors; although, as she notes, this is not as specialized as it seems because one also teaches communication, physical assessment, historical nursing, etc., as a part of the courses. For the past year Kathy has also taught the RN degree completion students in the new program which allows RN's to complete their BSN degree. This coming fall Kathy will be teaching a specially designed Interdisciplinary Seminar on 'Aging in America'.

To know Kathy is to know that when she says "I love teaching; it's my life" she means it from the bottom of her heart. Kathy begins with the premise that her students want to learn. She says she enjoys the relationships she can build with her students and values the opportunity to influence their lives. For her teaching is not just a matter of passing along information but helping the student to "learn values associated with the content". The reward for her as a teacher is the pleasure that comes when the "light goes on in the student, and they find they really understand what nursing is all about".

But who can decribe this outstanding teacher better than her students. "Kathy Buchheit has been one of the most inspirational instructors I have ever had. She has always encouraged all those around her to excell and be the best that they can be." "Kathy Buchheit is an instructor who motivated me and made me want to learn." "Kathy is one great teacher—and friend."

Four Plus More

Of the thirty-five division students who graduated in May, sixteen will be continuing their study in graduate or professional schools. Following is a listing of these students, their undergraduate majors, and plans for advanced study. Best of luck to our newest alumni.

Thomas Bachmann, Mathematics/Physics. Graduate school in physics, Mankato State or the University of Minnesota.

Charlene Callen, Biology. Medical Technology School, Marian Health Center, Sioux City.

'Charlie' Dai, Computer Science. Graduate school in cmputer science, University of Houston.

Patrick Foster, Biology. Physician's Assistant program at the Osteopathic Medical School, Des Moines.

Lezlie Haddad, Biology. Medical Technology School, St. Luke's Medical Center, Sioux City.

Hua-Pei Chen, Computer Science. Graduate school in Information Science, SUNY at Albany

Gayle Kruger ('85), Mathematics. Graduate school in mathematics, Iowa State.

John Kelzenberg, Chemistry. Graduate school in chemical engineering, Iowa State.

Lance Lund, Chemistry. MAT in Chemistry program, Washington University.

Nichole Nystrom, Biology. Graduate school in molecular biology, University of Texas, Dallas.

Dawn Poppen, Biology. Physical therapy program, Northwestern University.

Renee Reinholdt, Biology. Optometry school, Washington University, St. Louis.

Kevin Schieuer, Mathematics/Physics. Graduate school in electrical engineering, University of Utah.

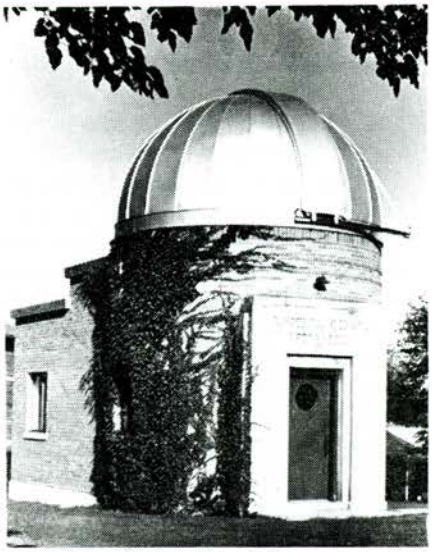
David Sokolowski, Biology. Medical school, University of Iowa.

Richard Svatos, Computer Science. Graduate school in computer science, Tulane.

Jill Wells. Medical Technology School, St. Luke's Medical Center, Sioux City.

Halley's Comet

Probably one of the bigger thrills of the 1985-86 year was opening up the observatory to over 1,000 people to see the Halley's Comet on January 11 and 12. In addition to using the 12" reflector telescope mounted in the observatory, three other telescopes were mounted in the area between the observatory and Jones Hall of Science. Dr. Robert Green, Chair of the Physics Department, Ron Thompson, 1979 graduate, Frank Hefner, 1980 graduate and Tom Zimmerman helped those who came to see the comet. Some of the visitors were those who had observed the spectacular sight in 1910; they climbed the stairs of the observatory to see it again this year even though the sight wasn't nearly as spectacular as it was then.



The O'Donoghue Observatory

New Nursing Faculty

Trudy Crawford

BSN from South Dakota State University. MSN from SDSU with an education emphasis. Trudy has been a staff nurse (coronary care) and was an instructor in nursing at SDSU with responsibilities for classroom and clinical instruction in medical-surgical nursing. She joined the faculty in the fall '85

Mary Hettinger

BSN from Briar Cliff College. MSN from the University of Nebraska College of Nursing in psychiatric/mental health nursing. Mary has been a staff nurse at St. Luke's Hospital, Sioux City, and was a staff nurse, assistant head nurse, and nurse clinician at the University of Iowa Hospitals and Clinics. She has recently developed and presented workshops on "Depression in the Elderly" and "Burnout" and in March presented a paper based on her Master's thesis to the Mid-America Congress on Aging. Mary edits the newsletter for the Iowa First District Nurses Association and is faculty advisor for the new monthly department newsletter, "Nursing Notes".

Janet Philipp

BSN from University of Dubuque. She will finish this summer her MS in Family Nursing and Education at Creighton University. Janet joined the faculty in January '86 and is teaching community health nursing. She has been a staff nurse, developed a wellness program for the Galva-Holstein School, and held several teaching positions in nursing. Janet even served for a year on the SS HOPE hospital in Brazil.

Internship Pays Off

The Mathematical Sciences Department has for several years operated an internship program under the leadership of Mr. William Steinman, a computer science faculty member. For one of the interns the experience has paid off. Barry Jones, a Morningside College junior majoring in computer science, was awarded, in the fall of the 1985-86 school year, an Internorth Corporation scholarship under the firm's minorities program. Jones is the recipient of a tuition, books, and fees scholarship for the remainder of his undergraduate work as the result of a computer internship with Northern Natural Gas Company, a division of Internorth.

Barry completed a three month internship with the Northern Natural Gas Company in Omaha, Nebraska this past summer, working in the firm's computer customer service department. Jones, of Waterloo, Iowa, is to maintain at least a 3.0 grade point average to retain the scholarship.

Capital Equipment Fund

The departments in the division have been major benefactors of the Academic Equipment Fund which the College established in 1983 to upgrade academic support facilities. With allocations totaling $32,675 in the last two years, departments have been able to make equipment purchases that are well beyond regular departmental budgets. Some of the recent purchases include:

Biology—binocular microscope, histology slides, explosion-proof refrigerator.

Chemistry—high pressure liquid chromatograph and atomic absorption spectrophotometer (partial funding).

Mathematical Sciences—new terminals for the PRIME computer, five IBM-PC's (two additional IBM-PC's were obtained independently), software.

Nursing—extensive computer software, films, APPLE disk drive and printer, miscellaneous clinical supplies.

Physics-storage oscilloscope, software, lockable drawers, timers, air tracks, photogates.

Many of our Alumni work in laboratories that are frequently updating their equipment. If your company has used but good equipment and is looking for a home for it, consider the College. Such a gift may qualify as a nice tax write off for your company and will help Morningside at the same time. Contact Dr. Edward Shane, Division Chair.

Kelzenberg Tops

It is a rare student who is able to combine excellence in academics and athletics. John Kelzenberg is one of those rare individuals. John, a 6-7 senior from St. Paul, MN, carries a 3.8 grade point average with a chemistry major and minors in mathematics and economics. He has been a forward on the basketball team for four years and has been a pitcher on the baseball team for three of his four years.

John was named the North Central Conference Commissioner's Academic Player at the annual NCC Holiday Tournament. He is a three-time selection to the NCC All-Academic team. In his senior year he was selected for the NCC All-Conference basketball team. He was recently honored by the Morningside College Alumni Association as one of two students given their annual Alumni Senior Award.

John graduated magna cum laude and next year plans to study chemical engineering in graduate school at Iowa State University where he has received a handsome scholarship. In addition, he is one of ten students nationally who has received a special $2,000 NCAA scholarship for graduate study.

Math and Computer Science Faculty News

Kerry Frampton, a Morningside Alum ('71) has joined our faculty full time. Kerry has taught successfully at Morningside half-time for the last 8 years while he has operated a computer consulting service. He is an active member of the local Data Processing Management Association and is an authorized DPMA workshop director. His years of professional experience are a great addition to our department. He plans to continue graduate studies at USD this year.

Mr. Frampton has given generously of his professional knowledge in the past by serving as a department consultant on equipment, maintenance, software, and curriculum. He has sponsored several of our majors through internships in the past and given them an excellent start on their careers. Kerry and his family are also members of Grace UMC on our campus.

Bill Steinman and Doug Swan have continued their active roles on the staff of the "Student Centered Computer Education" project. This project, headquartered at Union College in Lincoln, is partially supported by the Fund for the Improvement of Postsecondary Education.

As a result, Morningside has received thousands of dollars worth of benefits including curriculum consultations, software acquisitions, professional travel, and faculty scholarships. Also, Morningside received partial funding for a four-state conference on "student problem solving" hosted at Morningside last November, and a faculty workshop for Morningside's faculty this June.

In addition to being leaders of the November conference and the June workshop this year, Bill Steinman and Doug Swan were speakers at the spring meeting of the "Student Centered Computer Education" conference at the University of Nebraska. Another tangible result of their membership on the staff of the FIPSE project has been the implementation of a new introductory course to computers. The students spiral up through more and more advanced features of word processors, spreadsheets, and databases while working on solving problems. By focusing on problem solving skills and small group activities, the course succeeds in making computers a useful tool for the overwhelming majority of students. This success has also included those who have had high-anxiety about using computers before the course.

MORNINGSIDE COLLEGE

Zorabi Honargohar is marketing Ultimate BASIC for the Commodore 64 which he has recently completed. Ultimate BASIC has several advantages. First, he has simplified and strengthened the disk operating system. Second, he has added many programming aids. Third, he has provided new extensions to the BASIC language to include the use of sequential and random access files with sorts and searches. He has also written a database program using Ultimate BASIC with all the usual features.

Keith Tookey received a Regent's Scholarship to study at the University of Iowa last summer. He took graduate courses in Database and Computer Architecture. Since he teaches both of these courses in their undergraduate form, it was unusually valuable to our students.

In other activities **Keith Tookey** again directed the DPMA's high school programming contest. Eight teams competed and Homer, Nebraska, won the three foot tall traveling trophy. **Bill Steinman** spoke at seven area high schools about careers in the computer field. He also directed 21 computer science interns in and around the Sioux City area.

Alumni Update

Name _____ Class _____

Address _____

Undergraduate Major _____ Advanced Degrees _____

Recent Employment _____ Honors _____

Activities and Items of Interest _____

Send to: Edward Shane, Division Chair, Morningside College, Sioux City, Iowa 51106

Chemistry Curriculum

Two revisions to the chemistry curriculum were made this past year. A course in Industrial Chemistry was taught for the first time in the May Interim. The Interim is a flexible period between the end of the spring term and the beginning of summer school when one course can be taken in a concentrated fashion. For the course visits were made to chemistry laboratories and chemistry plants in Sioux City, Omaha, Ames, and Des Moines. Students had the opportunity to talk first hand with practicing chemists and administrators to find out what it is like to be a chemist in the "real world."

A Chemistry Internship program will be initiated in the fall '86 with two students participating. The internships are patterned after the very successful internship program which has been run for several years for the computer science major. The students will spend about fifteen hours per week working in an area chemistry laboratory under the direction of an industrial chemist. Internships will vary; in some cases the student will participate in the regular work of the laboratory while in other cases they may work on special projects. In any event, they will be able to observe for themseles what it is like to work in industry.

Interdisciplinary May Interim Course

The 1986 May Interim provided twenty Morningside College biology and Spanish students an opportunity to combine their interests in a joint field trip to the desert southwest and Mexico.

Dr. Joe Claflin, Professor of Biology and Dr. Dave McAlpine, Professor of Spanish, directed the three-week tour, in an effort to expose students to the biology of the desert and Grand Canyon geology, and to study the culture and language of the Mexican people.

The first three days of the Interim provided a test of mental and physical endurance, by hiking to the Colorado River from the south rim of the Grand Canyon. The "recovery" period involved a study of life-zone ecology in Oak Creek Canyon at Flagstaff, and the vegetation of the Sonoran Desert in Saguaro National Park, west of Tucson.

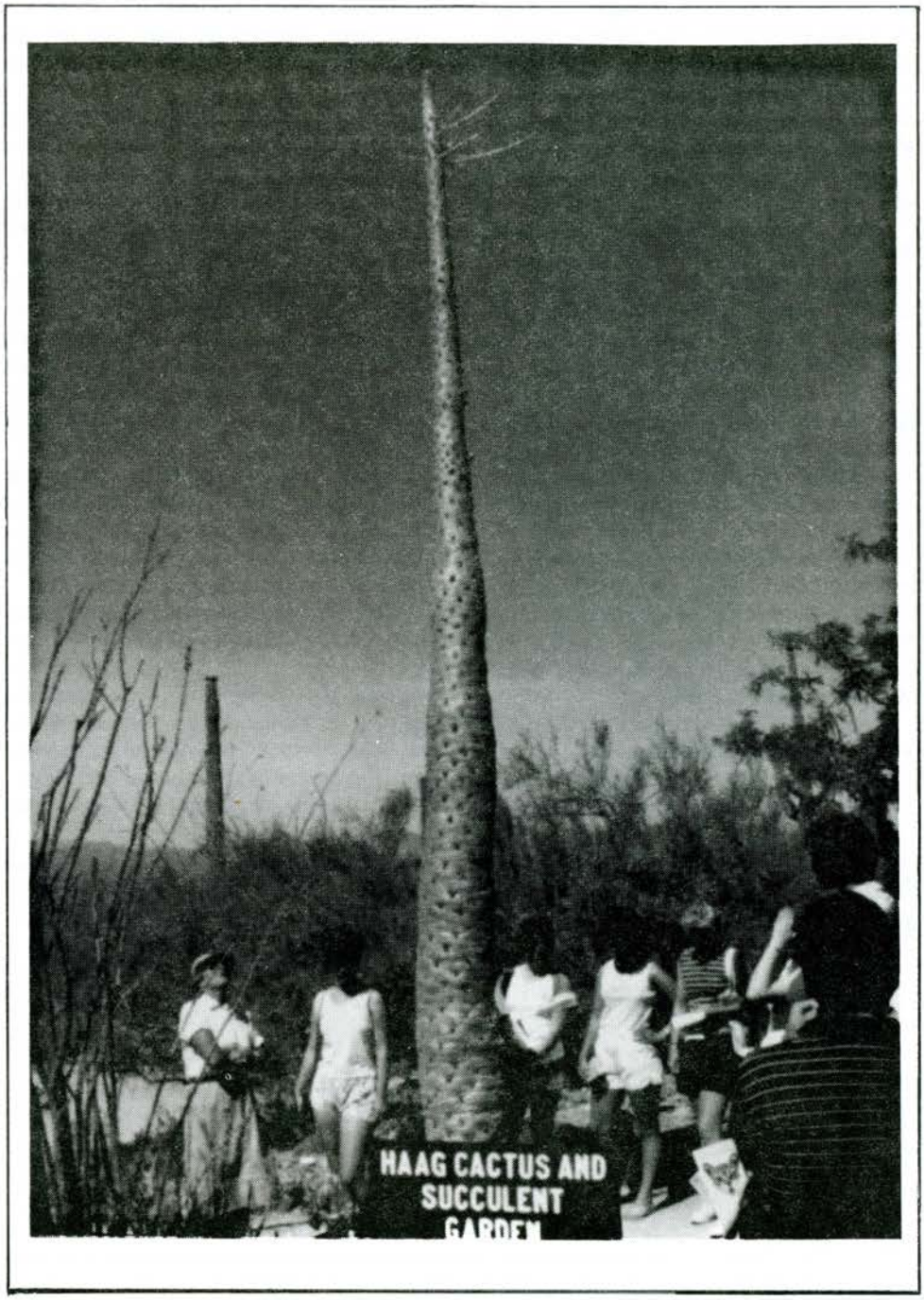
A ten-day tour of central Mexico included stops at Guaymas, Los Mochis, two days in Mazathlan, an exciting mountain trip to Durango, and four days in Saltillo, Mexico. During these brief visits, students were able to observe local customs, life styles, colonial architecture, and the cultural habits and traditions of the Mexican people. One of the highlights was an unexpected opportunity to participate in a local church Patron Saint Celebration. The experience was enhanced when our students joined the local young peopel in singing and dancing to traditional Mexican music. Young people have many ways of communicating and are very much alike wherever you go.

Shopping in open markets, visiting parks and professional art and music schools, and simply entering into conversations with people on the street, were the order of the day while in Saltillo. Colonial architecture prevails in this old city, which provided a very unique background, for Iowa students, to pursue a better understanding of a foreign culture.

The last two days of the trip were spent in a "relaxation mode" on Padre Island at Corpus Cristi, Texas. Only the anticipation of arriving home after three weeks decreased the pain of sunburns.

Due to the success of this trip, consideration will be given to designing future, off-campus Interim excursions which are interdisciplinary in content.

(Below) Morningside students on the May Interim trip admire a rare cactus.



New Prime Computers

This May, two new Prime computers were installed in the Jacobsen Computer Center. Morningside purchased Prime's top of the line model 9955 for administrative applications so that the library could go online with its cataloging. The business, admissions, registrar's, and development offices share this new machine.

In addition, we purchased a new Prime model 9655 for academic uses. This was necessary as the 8 year old academic machine was out of date and too expensive to maintain.

The Mathematical Sciences Department will receive two major benefits from the installation of the new academic machine. One benefit is that we will be able to add many new workstations to this computer to be able to serve the rather large number of computer majors and minors. The other benefit is that the new machine can now support a large scale professional database.

Where Are They Now? Class of '76, '66, & '56

The following Alumni from the classes of '76, '66, and '56 were gracious enough to share with us some of their activities and achievements since leaving Morningside. You will be impressed with the variety and scope of their involvement, personal and professional. Take a moment to fill in the "Alumni Update" to let us know what you are doing.

Class of 1976

Marilyn Brown. Biology/Physical Education. MA from the University of South Dakota (summa cum laude). Has taught high school physical education and junior high science in South Sioux City Community Schools for 10 years.

David Davidson. Biology. D.D.S. from Iowa. Practicing dentistry in Des Moines. Received several awards at Dental School including Award in Oral Pathology and Who's Who in American Colleges and Universities. Interests include international travel.

Janice K. (Lingebach) Galli. Physics/Mathematics. D.O. from Osteopathic Medical School, Des Moines. Now a resident in Family Practice, Siouxland Medical Education Foundation. Just starting medical practice in Elk Point, S.D.

Connie Hauswith. Mathematics. MA in Accounting from Iowa. Accounting Manager for Cargill, Inc., Carpentersville, IL. Received CPA (1985). Enjoys softball and racquetball.

James Hawthorne. Psychology. Safety and Personnel Director for Irving F. Jensen, Inc., and Brower Construction. Member, Board of Directors of Iowa Safety Council. Member, Sioux City Jaycees. Interests in camping and outdoor activities, music.

Tyler Kokjohn. Biology. Ph.D. in Biochemistry from Loyola University of Chicago. Presently a postdoctoral fellow at the University of Illinois at Chicago doing research on control of flagellan gene expression in E. Coli.

Dale Lenderts. Mathematics. MBA from Keller Graduate School of Management, Chicago. Marketing System Engineer for Nixdorf Computer Corporation, Chicago. In Outstanding Young Men of America (1983). Married to Martha Fowler (1985).

Tom McWilliams. Mathematics/Biology. Played 3 years of minor league baseball for the Minnesota Twins. Working for Hunter Systems as business system telepone tech.

Keith Ruffcorn. Biology/Chemistry. MD from Iowa. Now an emergency room physician in Waterloo, IA. Interests include flying and athletics.

Mike Sorn. Mathematics/Physical Education. Has taught mathematics and coached at Montgomery High School and The Cambridge—Isanti School District, both in Minnesota.

Class of 1966

Dennis Bainbridge. Mathematics. Has worked for 18 years for Joe Morton and Sons Insurance and Great West Casuality Company. Presently Vice President, Property Claims. Married (to Judy) and has two sons. Enjoys golf, boating, and Nebraska football.

James Beermann. Biology. MA in student personnel from Syracuse. Presently business adminstrator for the Department of Pharmacology, School of Medicine, University of Pennsylvania. Likes participating in and watching sporting activities.

Larry Heikes. Chemistry/Physics. Ph.D., University of Nebraska (1970). M.D., University of Miami (1979). In private practice, Centerville, IA. Spent 4 years in Peace Corps in the Fiji Islands and Lima, Peru. Married with two children. An avid gardener.

James Hey. Mathematics. MS from University of South Dakota. A secondary school mathematics teacher at Sergeant Bluff-Luton Community Schools. Enjoys hunting, fishing golf, and classic autos.

Gayle Wilcox Palmquist. Physical Education. M.A., University of Denver. Taught for 8 years in Sioux City Community Schools. Now doing substitute teaching and helping her husband run a farm. Special interest in "Beyond War Movement," enrichment program at their local elementary school. Serves on School Advisory Committee.

Gary Pfeister. Mathematics. Manager of Plant Computer Systems for Iowa Beef Processors. Responsible for computer systems at twelve plant locations. Is a commanding officer of the 185th Information Systems Flight, Iowa Air National Guard.

Sue Reider. Biology. J.D. from University of Arizona. Working part-time for Jefferson Davis Associates in market research but primarily involved in raising her three children. Active in Cedar Rapids Friends of the Library. Librarian for Temple Judah of Cedar Rapids.

Carl Toben. Biology. D.O. Presently self-employed as a family practice physician in Ida Grove. Interests include conservation, wildlife habitat enrichment, and local tree and forestry projects.

William Tordoff. Chemistry. Director of Technical Sales and Marketing for Ashland Chemical Company, Columbus, Ohio.

Dianne Daniels Sandholm. Mathematics. Presently in third year in J.D. at the University of Montana School of Law. Ran her own retail store for 9 years. Interests include Indian law, Central America peace issues, skiing, and weaving.

Class of 1956

Robert Bachert. Mathematics/Physics. MS in Mathematics, University of Dayton. Presently Technical Director, Armstrong Aerospace Medical Research Laboratory, Wright-Patterson AFB, OH. Member of Human Factors Society, Dayton SIGART.

John Thomas. Science/Mathematics. Most recently was a flight instructor in the aviation program at Iowa Lakes Community College. Taught math, physics, and chemistry at Lincoln Central High School, Emmet County, IA—1960-1972. Is a lay preacher in the Lutheran church. Raised purebred Angus cattle until 1972. Now retired from farming and teaching. Furnished air transportation for Terry Branstad when he was campaigning for governor.

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