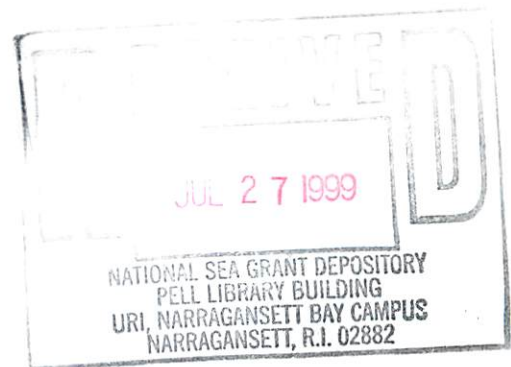


F.T. STONE LABORATORY



1998 PROGRAM REVIEW

JEFFREY M. REUTTER,
PH.D.
DIRECTOR



MARCH 1999

F.T. STONE LABORATORY

Franz Theodore Stone Laboratory: Program Summary 1998

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FRANZ THEODORE STONE LABORATORY

1998 PROGRAM REVIEW

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March 1999

EXECUTIVE SUMMARY

Stone Laboratory, founded in 1895 and located on the 6.5-acre Gibraltar Island in the harbor at Put-in-Bay, Ohio, is Ohio's Lake Erie laboratory, the oldest freshwater biological field station in the country, and the north coast campus of The Ohio State University. The past 12 months have been very productive at Stone Laboratory. Enrollment in the summer program of courses was very strong in 1998 surpassing 210 students for only the third time in the history of the Laboratory (Figure 1). While the majority of our students come from Ohio State University, since 1990 our summer students have come from 40 different Ohio colleges, 27 out-of-state colleges, and 251 different high schools (Figures 2 and 3). Undergraduate, graduate, and high school student enrollment were all strong in 1998, providing the balance we desire and have been able to achieve annually since 1995 (Figure 4). The number of credit hours taken each summer is holding steady between 900 and 1,000 (Figure 5), and our efforts to enhance opportunities for women in science continue to bare fruit as we now annually enroll more women than men (Figure 6). Efforts to expand the number and diversity of 1-week course offerings have been very successful, and we now have nine different 1-week courses with up to five sections per course, and eight 5-week courses. An experimental offering of one of the one-week courses for students in the Minority Research Initiative was very successful in 1998 and followed a successful offering for students from the Young Scholars Program in 1997. We hope to continue these offerings in 1999 and add a new one-week course in ornithology specifically for teachers.

During the spring and the fall, we offer a workshop/conference/tour program for students from grade 4 through adults. This program has set new records for the number of groups and the total number of participants each year from 1995-1998 with 151 groups and 5,246 participants in 1998 (Figures 7 and 8). The vast majority of these students are in the influential middle school years (Figure 9).

The demand for research space at the Laboratory continues to grow. In 1998, 73 scientists and students from 21 different colleges and agencies worked on 30 different research projects at Stone Laboratory (Figure 10). These figures were records for the number of projects and the number of students and scientists, surpassing the previous record in this category by over 20%.

With the assistance of the Friends of Stone Laboratory, we have been able to continue the trend of increasing the number of scholarships and the total amount of money we are able to award, and in 1998 set records for both (Figures 11 and 12). While these trends in scholarships awarded are indeed pleasing, we are still providing scholarships to less than 25% of the students attending Stone Laboratory and covering only about 30% of the costs for those students. Since 1995, additions to our endowments through deferred gifts as part of the donor's estate total over \$2,500,000. We also received donations, which have allowed us to construct a large gazebo/outdoor classroom (Waldock Gazebo), a speaker's pavilion (Lakeview Pavilion), and to purchase a new van for the Laboratory. And, with assistance from the University, construction was initiated and completed to replace the roof, remove the dome, and repair the windows on Jay Cooke's Castle.

I. INTRODUCTION

Franz Theodore Stone Laboratory, Ohio's Lake Erie Laboratory, is this nation's oldest freshwater biological field station, and the Lake Erie and North Coast Campus of The Ohio State University. The Laboratory, originally called the "Lake Laboratory," was created in 1895 when The Ohio State University Board of Trustees appropriated \$350 to build a second floor on the state fish hatchery in Sandusky. In 1903 the Laboratory moved to a new building at Cedar Point, then to the second floor of the State Fish Hatchery at Put-in-Bay in 1918, and finally to its current location on the 6.5-acre Gibraltar Island with additional holdings on South Bass Island, in 1929. At this time the name was also changed to the Franz Theodore Stone Laboratory in honor of the donor's father.

Lake Erie is biologically the most productive of the Great Lakes, and the Laboratory is ideally located near the boundary of the Lake's western and central basins--"the most favorable location in Ohio, possibly even in the Great Lakes basin," according to Julius F. Stone, a Columbus businessman and a member of the University Board of Trustees, who in 1925 donated Gibraltar Island to Ohio State University for teaching and research. Facilities at Stone Laboratory include a research building, a library, a 21-room laboratory/classroom building, a dining hall, five dormitory units, and the historic "Castle" residence (constructed in 1865) of Philadelphia banker and Civil War financier, Jay Cooke.

Today, the Laboratory: provides a facility for year-round research (it has been called "the base for the research that saved Lake Erie"), develops and offers custom-designed Aquatic Science field trips and workshops for grades 4 through adult, offers college credit through a rigorous summer program of courses, and offers special conference facilities and speakers for groups interested in Lake Erie and the region's natural resources.

Dr. Jeffrey M. Reutter has been the Director since 1988. Since 1 July 1994, the Laboratory has been a part of the School of Natural Resources (Dr. Gary Mullins, Interim Director) within the College of Food, Agricultural and Environmental Sciences (Dr. Bobby D. Moser, Vice President and Dean).

This report briefly reviews the past year, beginning with a program overview, followed by a discussion of the history of the Laboratory, and concludes with a more in depth discussion including "Milestones in the History of Stone Laboratory." The figures summarize the past 11 years, while the tables cover only 1998, adding to similar tables in reports produced in 1997 (covering the period 1995-97) and 1995 (covering the period 1988-94.)

II. OVERVIEW

EDUCATION

Courses for College Credit. Stone Laboratory began offering courses for college credit in 1896. Each summer The Ohio State University offers 14-18 courses at Stone Laboratory. All courses take advantage of the Laboratory's unique location and capabilities (raw lake water is pumped directly into the classrooms and research laboratories) with a combination of lecture, laboratory, and field experience, and emphasize a hands-on approach to learning. Enrollment is limited to 12-20 students per course. The curriculum is rigorous with students in class from 8:00 AM to 4:00 PM six days per week.

Until 1990, the Laboratory offered courses only for upper level undergraduate and graduate students. In 1990, in an effort to join the drive to improve the quality of science and math education in Ohio and in this country, a program of introductory courses for college freshmen and sophomores was developed. This program is also open to superior high school students on a competitive basis, and allows them to gain college credit while still in high school. These new programs strive to make science exciting and to challenge the best young minds this country has to offer. Special courses are also offered for teachers with the goal of improving the quality of science education in our schools.

Teaching at Stone Laboratory, while a great honor, is very different from teaching on the main campus and requires a great deal of expertise and energy, as few courses on college campuses are taught for eight hours per day with the opportunity to blend lecture, laboratory, and field work. We search throughout the state, region, and country to get the best faculty to teach at the Laboratory. In addition to faculty from The Ohio State University, it would not be unusual in a given summer to find faculty members from institutions such as Bowling Green State University, Heidelberg College, Kent State University, Miami University, Otterbein College, Penn State University, Syracuse University, the University of Massachusetts, the University of Michigan, Wittenberg University and the American Museum of Natural History in New York. Student evaluations consistently rank Stone Laboratory courses as being far superior to courses taken at their home institutions.

Enrollment and interest in Stone Laboratory have increased significantly in the 1990s. During the 1980s average annual enrollment was approximately 57 students. From 1991-1998, average annual enrollment jumped to over 200 students--an increase of over 350 percent (Figure 1).

Furthermore, from 1990-1998, students from 40 different Ohio colleges and universities, 27 out-of-state colleges and universities, and 251 different high schools participated in the Laboratory's courses (Figure 3).

Aquatic Science Field Trips, Workshops, and Conferences. During the spring and fall, we continue our efforts to enhance the quality of science education by offering custom-designed field trips and workshops for students from grade 4 to adults. These workshops range in duration from 1 to 3 days and generally include a science cruise on the Laboratory's research vessel, the *MV Bio-Lab*. The students collect samples using fish trawls, bottom samplers, plankton nets, electronic probes, etc. and return with them to the Laboratory, where the students are taught to use microscopes and analyze their samples and data. The Laboratory is also used as a conference facility for groups of up to 100. In the past 10 years participation in the workshop program has increased from approximately 1,850 to almost 5,250 students, annually.

RESEARCH

Research is conducted 12 months per year at Stone Laboratory, and the Laboratory's students are involved with many of the projects. From 1995-97, 65 different research projects were conducted at Stone Laboratory by 53 investigators (the average investigator worked at the Laboratory for two of the three years), with 71 student assistants, representing 27 different universities and agencies (Figure 10). In 1998, 30 different research projects, with 29 principal investigators and 44 assistants, from 21 universities and agencies, were conducted at the Laboratory. In addition to coming from Ohio's colleges and universities, research scientists come from out-of-state institutions, state agencies, federal agencies, the private sector, city governments, and foreign countries.

Stone Laboratory is the shared research facility of the Great Lakes Aquatic Ecosystem Research Consortium (GLAERC), created in 1992 and composed of aquatic scientists at 12 Ohio colleges and universities: Bowling Green State University, Case Western Reserve University, Cleveland State University, Heidelberg College, John Carroll University, Kent State University, Miami University, Mount Union College, Ohio State University, Ohio University, the University of Toledo, and Wright State University. GLAERC enhances collaboration, cooperation, communication, and equipment and facility sharing to make Ohio's top scientists more competitive for federal funding and to allow them to better address the critical issues and problems affecting Lake Erie and Ohio's surface waters.

FRIENDS OF STONE LABORATORY

In 1981, a group of former Laboratory students, faculty, and individuals concerned with science education and the well being of Lake Erie, formed the "Friends of Stone Laboratory." The goal of the Friends is to enhance the programs at the Laboratory and allow students in the future to experience the same opportunities they had. Many former Stone Laboratory students have said the Laboratory provided the best learning experience of their academic careers. They frequently

cite the value of the hands-on approach to learning and the corresponding increase in retention of the information. The words of Benjamin Franklin are frequently used to emphasize this point: "Tell me, I forget. Show me, I remember. Involve me, I understand."

The Friends raise funds for scholarships, supplies and equipment, and they volunteer time and materials to keep the facilities in good repair. They created their first endowment in 1983 and have since created five more, and the total for all six endowments now exceeds \$250,000. These endowments, with additional contributions from organizations, clubs, industries, and individuals, support dozens of student scholarships each year. In April 1998 the Library was moved from the main office in Bayview on South Bass Island to the third floor of Stone Laboratory on Gibraltar Island, by volunteers from the Friends of Stone Laboratory.

III. STONE LABORATORY HISTORY

This section is modified from an article in the October 1994 issue of *Twine Line* by Maran Hilgendorf. Research for this article was conducted by Becky Vidra and Ohio State Archivist Bertha Innat. Information was obtained from various deeds, reports, and newspaper articles.

It was a time far different from our own. The commercial fishery on Lake Erie was still strong but would soon collapse. Automobiles were being perfected, and only a few roads in the largest of cities were paved. Only a few elite hotels had electric lights and toilets, and the motion picture industry was brand new. The x-ray was discovered, the typewriter and wireless telegraphy were just invented, and the botulism bacterium, *Clostridium botulinum* was isolated.

It was during this time—in 1894—that Professor David S. Kellicott, Chair of the Department of Zoology and Entomology, requested of then Ohio State University President Scott "the establishment in the near future of a lake laboratory at or near Sandusky and the creation of a State collection of fishes in Ohio . . . to afford an opportunity and a stimulus to instructors and students of biology to spend their vacations investigating living problems in biology, especially such as are connected with important industries like the fisheries."

On 2 September 1895, The Ohio State University Board of Trustees approved the project and appropriated the sum of \$350 for the construction of a second floor to the Sandusky Fish Hatchery Building. Kellicott and four graduate students conducted research during the next two summers until Kellicott's death.

Professor Herbert C. Osborn became chair and Laboratory director in 1899. Courses for credit were first offered in 1900, chiefly at the request of high school teachers who wished instruction in field biology. Fourteen students attended that year.

"A more adequate location for field work with more laboratory space" was soon desired, so Osborn obtained a 50-year lease from Cedar Point Resort and for \$3,387 erected a frame building that was dedicated 2 July 1903. The number of students attending classes increased to 22 and research continued.

It soon became the policy that two members of the instructional staff were chosen from other institutions to "promote cooperation from the other colleges and universities and to attract students." This practice continued from 1902 throughout the first 50 years.

State Fish Hatchery officials at Put-in-Bay donated the second floor of their hatchery building to the Lake Laboratory in 1913 because Cedar Point had become so large and popular that it was no longer a desirable site for the Laboratory. For the next several years, most of the 20 or so students who attended each year were men who were housed and had their meals in a nearby cottage. Because of the hostilities of the First World War, attendance declined to an all-time low of two students in 1918.

From 1917 to 1937 Professor Raymond C. Osburn was Laboratory director. In 1920 he became a member of the advisory board of the Ohio Fish and Game Division. With this appointment he was able to arrange subsidies to conduct a fisheries survey in Ohio from 1920 to 1923. During this time, enrollment had grown to the point that they were "bursting at the seams."

On 6 July 1925, Julius F. Stone, a member of The Ohio State University Board of Trustees, presented Gibraltar Island to The Ohio State University as a permanent home for the "Lake Laboratory," to be devoted to the purposes and uses of teaching and research. In deeding the island to the University, Stone located the Laboratory in "the most favorable location in Ohio, possibly even in the Great Lakes basin."

In his letter to the Trustees, Stone stated that "with the enormous increase in population and with no indication of any diminution, it seems quite inevitable that human life will sooner or later press against the limit of subsistence, consequently every source of food supply must not only be conserved, but developed."

The University's Board of Trustees resolved that the Laboratory should thereafter be known as the Franz Theodore Stone Laboratory in honor of the father of Julius F. Stone. On 22 June 1929, the University formally opened the new 21-room Laboratory Building. According to Osburn, moving to Gibraltar Island would "permit more than twice as many students to attend."

In 1934, a committee appointed by Ohio State President Rightmire determined that the Laboratory should broaden its scope to include research and service in biology and human welfare. They also recommended that a full-time director and permanent staff should operate the Laboratory and that only graduate students be admitted for course work. This continued for nearly two decades, after which time the year-round program was discontinued because of such factors as logistical difficulties, limited facilities, years of economic depression, a second world war, and reduced state support and enrollment (only five students were enrolled in courses during the summer of 1955). Because of the enthusiasm and encouragement of former students, the Ohio State administration continued the summer course program under the direction of Professor Loren S. Putnam. For nearly three decades, approximately 18 courses were offered during two summer terms (5 weeks), with a capacity of 60 students.

After the retirement of Osburn, succeeding directors included Dwight M. DeLong, (1936-1938), Thomas H. Langlois (1938-1955), Loren S. Putnam (1955-1973), Charles E. Herdendorf (1973-1987), and Jeffrey M. Reutter (1988 to present).

By the late 1940s, after 50 years of operation, then retired Professor Osburn noted that students from "nearly every state in the Union" as well as students from Argentina, South Africa, and India had attended Stone Laboratory. "I hesitate to say how many doctor's and especially master's degrees have been completed on the work begun or completed at Stone Lab, and around 200 research papers have been published in connection with the work done at this laboratory."

In 1981, the Friends of Stone Laboratory was created to provide a way for former students to support the facility in its efforts to be not just the oldest, but the best, freshwater biological field station in the United States. This association raises awareness and funds for scholarships, research, and equipment.

In 1983, the University received \$1 million from the State Legislature for a sewage treatment plant, new housing for students and workshop participants; and for upgrading of the utility services, Dining Hall, and teaching laboratories. Construction of a 48-person, 12-unit housing facility was completed in 1986. During construction in 1985, Gibraltar House served as the Dining Hall. In 1989, the University received \$1 million dollars for erosion protection, new docks, a new water treatment plant on Gibraltar, and improvements in housing for faculty and research scientists. In 1997, the Laboratory received \$500,000 from the University to begin renovation of Jay Cooke's castle. In 1998, the State Legislature added another \$500,000 to continue this work.

Beginning in 1987, some courses were offered in either a 2.5-week or 5-week format. In 1990, introductory, one-week, courses were first offered to freshmen and sophomores and to superior high school students.

IV. 1998 REVIEW

PERSONNEL

Dr. Jeffrey M. Reutter has been the Director of Stone Laboratory since 19 September 1988. Before that time he had served as Associate Director beginning in 1982, and as the Acting Director from 19 December 1984 to 31 December 1985 and from 1 November 1987 to 18 September 1988. Dr. David W. Garton was hired as the Associate Director on 1 November 1997, but moved to a position at Georgia Tech on 1 September 1998. John R. Hageman has been the Laboratory Manager at Put-in-Bay since 1 May 1987. Arleen Pineda has been the program coordinator in the Columbus Office since May 1996 and before that had been our Columbus office secretary dating back to March 1986. Kit Kilen has been the Secretary and Receptionist for the program in Columbus since July 1996. Karen Ricker was hired as our Communications Coordinator and the Assistant Director of Ohio Sea Grant in January 1998. Kelly Dress was the new Secretary at Put-in-Bay starting in April 1998. Table 1 lists the Laboratory's administrative

staff, teaching faculty, graduate teaching associates, research staff, student assistants, and office and technical staff for 1998.

OPERATIONAL CHANGES

A thorough internal and external review of the Stone Laboratory program was completed in 1988 and culminated with the signing of a "Plan of Action" for Stone Laboratory on 5 October 1988. Among other things, this "Plan" called for: (1) efforts to increase enrollment in credit courses taught at the Laboratory, (2) the institution of "a series of experimental calendars over the next few years with the eventual goal of a more flexible, innovative course calendar by 1991," and (3) the development of a teaching budget "sufficient to hire faculty for all courses scheduled for a given year."

Reporting Structure. The Director reported to the Dean of the College of Biological Sciences until 30 June 1990. During this period the Director did not have a teaching budget for the Laboratory, and, therefore, had to rely on the goodwill of various department chairs to agree to offer courses at Stone Laboratory and pay the faculty. During 1989 and 1990, negotiations were completed that ultimately resulted in a transfer of reporting lines to the Office of Academic Affairs beginning 1 July 1990 and the creation of a teaching budget for the Laboratory under the control of the Director. This gave the Director greater flexibility in determining the courses to be offered and in selecting faculty. However, the offering department still must approve the course offering, the faculty member selected, and the teaching assistant (TA). In some cases, the home department assigns the TA and provides part of the stipend. During the summer of 1990, half of the teaching budget came from the departments offering courses and half came from the Office of Academic Affairs. This budget was supported entirely by the Office of Academic Affairs from 1991 through 30 June 1994.

In an effort to reduce the number of units reporting to the Office of Academic Affairs, and as a result of university-wide restructuring, Stone Laboratory was moved to the College of Food, Agricultural and Environmental Sciences beginning 1 July 1994. In this college the Laboratory is part of the School of Natural Resources and continues to have its own teaching budget, which is passed each year from the Office of Academic Affairs to the College of Food, Agricultural and Environmental Sciences.

Relationship to Ohio Sea Grant College Program. Dr. Jeffrey M. Reutter is the director of both Ohio Sea Grant and Stone Laboratory. This arrangement guarantees maximum cooperation and collaboration between the programs, guarantees that the State of Ohio will receive the maximum benefit from the programs, and eliminates any opportunity for duplication of effort. However, each program has a separate budget from the University and Dr. Reutter reports to a different Vice President for each program—the Vice President for Research for Ohio Sea Grant and the Vice President for Agriculture for Stone Laboratory.

The Ohio Sea Grant College Program at The Ohio State University is one of 29 Sea Grant programs in the National Sea Grant College Program, NOAA, U.S. Dept. of Commerce.

Patterned after the Land Grant system, a Sea Grant program must be a partnership between academia, government, and the private sector. Ohio Sea Grant strives to improve education, the economy, and the environment using a combination of research, education, and outreach. Our primary goal is to enhance utilization, development, and wise management of Lake Erie, Ohio's most valuable natural resource, to enhance the quality of life for the people of Ohio. Ohio Sea Grant solicits research proposals from every college and university in the state and has supported projects at 12 Ohio universities. The program also supports an education program to enhance the skills of Ohio teachers, an extension program with 6 extension agents located along the shores of Lake Erie, and a communications staff intent on making science understandable to non-scientists. Every federal dollar must be matched by at least \$.50 from non-federal sources.

Stone Laboratory falls under the Ohio Sea Grant umbrella in many ways: it is the facility used by many Sea Grant researchers and a major component in the Ohio Sea Grant Education Program; the Stone Laboratory Manager, John Hageman, has a 25% Ohio State University Extension appointment as a Sea Grant Agent for his support of outreach programs and the workshop/conference/tour program at the Laboratory; through the Sea Grant Education Program, Sea Grant has supported development of new courses at Stone Laboratory; Sea Grant assists in the dissemination of Stone Laboratory education and research materials; and in 1998 the Friends of Stone Laboratory newsletter was successfully incorporated into the Sea Grant newsletter, *Twinline*, thus increasing the readership of both.

CURRICULUM

Stone Laboratory offered 11-14 courses yearly from 1988-1994. During the summers of 1988 and 1989, the Laboratory offered a relatively traditional group of 13 courses each year. With one exception, these were all graduate and upper-level undergraduate courses. In 1988 there were two offerings specifically for teachers, but only one offering for teachers in 1989. We experimented considerably with the curriculum from 1988-1991 offering 17 different upper-level, 5-hour courses. However, the curriculum was much more stable between 1992 and 1997 with a core of the same eight 5-hour courses offered each year. In 1998, we again offered eight upper level term courses, five introductory one-week courses, and four one-week courses for teachers (Table 2). The one difference from previous years was that Field Entomology was replaced due to low enrollment by a new course—Experimental Aquatic Ecology and Research. Currently about half of the faculty members come from Ohio State University and half come from other institutions.

Introductory Courses. In the late 1980s, several international reviews and evaluations ranked the quality of science and math education in this country, and the capabilities of our students in these subjects, very low—as low as 13th or 14th among the countries of the world. One of the problems is that science frequently is not taught in an exciting fashion or by qualified individuals within many of our schools. Stone Laboratory accepted this problem as a challenge. We felt it was up to us to do our part to improve this situation, for clearly science could be taught in an exciting fashion to all age groups at Stone Laboratory. However, in order to have a program that addressed science

education at all levels, we had two gaps to fill—we needed to create courses for lower level undergraduates (freshmen and sophomores) and more opportunities for teachers.

Until 1990, Stone Laboratory had offered courses only for upper level undergraduate and graduate students. It seemed unfair that the Laboratory was not available to freshmen and sophomores as they were striving to determine majors, and it was very common to receive calls from the parents of high school students inquiring about opportunities for their sons and daughters at the Laboratory. Unfortunately, with the exception of our spring and fall workshop/field trip program, there were no opportunities for these students at the Laboratory. This seemed to be a logical gap to fill if we were to achieve our goal of enhancing science education at all levels. Furthermore, if successful, courses for this audience could serve as a feeder system to our upper level courses, thereby increasing enrollment at that level also, and providing increased flexibility in the academic calendar as we work for full enrollment.

With this in mind, Dr. Reutter developed a 3-hour, 1-week Introductory Aquatic Biology course (Zoology 125) in 1990. While preference was given to students already in college, the course was also advertised through the Concurrent Enrollment Program at Ohio State so that superior high school students could enroll and receive college credit while still in high school. Enrollment was so great that the course was offered twice and enough students were turned away to offer it two more times. In 1991 four offerings of the course were planned, but again demand necessitated that it be offered five times, and again many students were turned away. The course was also offered four or five times each summer from 1992-98. One of the five offerings in 1997 was limited to students from the Young Scholars Program at Ohio State, and one of the five offerings in 1998 was reserved for students in the Minority Research Initiative.

In 1991, Dr. Reutter encouraged Dr. David Horn in the Entomology Department to develop Introductory Insect Biology (Entomology 126). In 1992, Dr. Reutter contacted Dr. Larry Krissek in the Geology Department who developed an Introductory Oceanography course (Geology 107). This course has been so successful that it was offered twice each summer in 1993 and 1994 and once each year from 1995-98. Also, in 1992, Dr. Reutter worked with John Condit in the Zoology Department to change our 5-hour, upper level ornithology course (Zoology 624) to a 3-hour Introductory Ornithology course (Zoology 126). Consequently, from 1992-94, four introductory level courses have been offered each summer, and in 1993 and 1994, due to multiple offerings of two of the courses, Stone Laboratory had a total of nine one-week introductory offerings. In 1996, Dr. Reutter worked with Dr. Robert Klips from the OSU Marion campus to develop an introductory course in Local Flora (Plant Biology 294). Consequently, in 1998, five one-week introductory courses were offered, and, due to multiple offerings of Introductory Aquatic Biology, the Laboratory again had a total of nine one-week introductory offerings.

Courses for Teachers. While it is very common for teachers to participate in all courses at Stone Laboratory, we have been working to develop more courses specifically for teachers. Due to the multiplier effect, enhanced teacher training could have a greater impact on the quality of science education in this country than our new introductory courses.

Based on the success of his Introductory Oceanography course (Geology 107), in 1993 Dr. Krissek, developed a 3-hour, 1-week Oceanography course for teachers (Geology 584). As a result, we had three 1-week offerings specifically for teachers each year from 1993-95. Combining the teacher's courses with our introductory offerings resulted in 12 1-week offerings in both 1993 and 1994.

In 1996, Dr. Krissek, with the assistance of Dr. Ausich in Geology, offered a new course for teachers, "The Geological Setting of Lake Erie," Geology 583. This one-week course was developed with assistance from the Lake Erie Protection Fund and the Ohio Sea Grant College Program and represented a new experiment for the Laboratory. The course, which has been very successful, begins at the Fawcett Center for Tomorrow on main campus on Saturday afternoon. The students drive to Stone Laboratory, spend one night and visit Kelleys Island on Sunday, and then go to the mainland. Each day they work their way east along the Lake Erie shoreline visiting geological features and staying in motels. The trip culminates at Niagara Falls prior to driving back to Fawcett Center.

Also in 1996, Dr. Reutter worked with Dr. Carmen Trisler, Wittenberg University, and the Entomology Department to develop a new one-week course for teachers—Insect Biology for Teachers. This course has been very popular and well reviewed by students and has been offered annually since 1996.

PROMOTION AND OUTREACH

Enhancing and refining our promotion and outreach efforts has been a key to our success. Initially, to both reduce costs and increase awareness we replaced the distribution of our large and expensive brochure with a less expensive flier and poster, which could be distributed much more broadly. Arleen Pineda and Nancy Cruickshank with Ohio Sea Grant maintain our mailing lists (over 21,000 fliers are distributed annually) with assistance from the Ohio Academy of Science, the Ohio Board of Education, Ohio Biological Survey, the Science Education Council of Ohio, and others. In the early 1990's, other promotional activities were developed. These included: an annual open house at Ohio State, special lectures by Dr. Reutter to pre-med majors and university college students in addition to special teachers' organizations, a GLAERC Colloquium at the Laboratory each summer, booths at the Ohio Academy of Science and State Science Day, and numerous other activities. In 1995, Dr. Reutter replaced the single, large open house on main campus with 4-6 mini-open houses conducted at different locations and at different times during the winter and spring. He also initiated guest lectures about the Laboratory in a number of Zoology, Biology, and Natural Resources courses during the winter and spring, in addition to special presentations for UVC advisors.

In 1996, with the assistance of the Friends of Stone Laboratory, we began offering scholarships at the Ohio Academy of Science's State Science Day. In 1996, we reviewed the projects of 33 students and awarded three scholarships covering room and board for a 1-week introductory level course at the Laboratory. The winners have three years to use the award. In 1997, we increased

the number of scholarships to six, and we awarded seven in 1998. This has been a great opportunity to reward and recruit outstanding students.

GUEST LECTURES

In 1998, Stone Laboratory continued its traditional schedule of Thursday evening guest lectures (Table 3). With support from the Friends of Stone Laboratory and the Office of Residence and Dining Halls, these lecturers are encouraged to spend additional time at the Laboratory and participate in some of the classes.

WORKSHOP PROGRAM

Stone Laboratory's custom designed Aquatic Science spring and fall workshop and field trip program for grades 4 through adults continues to flourish as do our efforts with educational tours and conferences. In 1998 we set records for the number of groups (151) and the number of participants (5,246), and from 1995-98 we hosted 469 groups with a total of 16,481 participants, or an average of 117 groups and 4,120 participants per year (Table 4 and Figures 7-9).

SCHOLARSHIPS

In 1998, 43 Stone Laboratory students received scholarships valued at \$13,632—both records for the program (Table 4). Twenty-one of the scholarship recipients were high school students and 22 were college students. In the last four years, 1995-98, 154 students received a total of \$46,046 in scholarship support to attend Stone Laboratory (Figures 11 and 12). These numbers have been gradually increasing each year. During the previous 4 years, 1991-94, we awarded 121 scholarships totaling \$31,208.

ENROLLMENT

During the 1980s enrollment at Stone Laboratory averaged 55-60 students per year. This jumped to 114 in 1990, 169 in 1991, 209 in 1992, 234 in 1993, and 221 in 1994, 181 in 1995, 195 in 1996, 209 in 1997, and 214 in 1998 (Figure 1 and Table 6). The 214 students that attended during the summer of 1998 came from 18 colleges and universities and 60 high schools (Figure 3).

V. FINAL SUMMARY AND PLANS FOR THE NEAR FUTURE

The development of our program of introductory courses and our new teachers courses, coupled with enhanced promotional efforts and a more targeted curriculum, has allowed enrollment at Stone Laboratory to almost quadruple since the 1980s (Figure 1). However, this growth has not come simply from an influx of high school students, as we have seen increases in the number of

students of all types including students from Ohio colleges and universities, out-of-state colleges, and Ohio State University students (Figures 2 and 3).

As mentioned many times in this report, the academic program at Stone Laboratory focuses on science education for all ages—grade 4 through adults. Furthermore, while the enrollment of high school students and undergraduates has experienced great increases, graduate student enrollment in the 1990s is also much greater than in the 1980s, and in 1997 and 1998 we had numbers higher than any previous year (Figure 4).

Equally important is the increase in the number of female students at the Laboratory. In 1988 we initiated special efforts to attract women to the sciences and to Stone Laboratory. In 1986, the ratio of men to women was 3:1. As this country works to increase the number of women in science, it is important to note that in every year since 1989, the number of women attending courses at the Laboratory has exceeded the number of men (Figure 6).

It is apparent that as the cost of a college education increases, fewer and fewer students are able to spend an entire summer at Stone Laboratory, and more students are enrolling for one course or one 5-week term. Nevertheless, the total number of credit hours taken at the Laboratory has still more than doubled since the 1980s (Figure 5).

PLANS FOR THE FUTURE

Renovation of Jay Cooke's castle began in 1998 with the replacement of the roof, dome and windows. In 1999, the State Legislature, with Leadership from Senator Robert Latta, appropriated \$500,000 to continue the renovation. Renovation of porches and stone work will commence in 2000.

In 1997 we replaced all of our computers with 23 donated 386 machines from the OSU Research Foundation. In 1998, ten of these machines were replaced with 486 machines, again from the Research Foundation. In 1999 we will add four Pentium machines.

The Gibraltar II was decommissioned in 1997. In 1999 we hope to replace it with a vastly superior research vessel from the Ohio Division of Wildlife. This vessel may cost up to \$60,000. We also hope to replace the engine and cabin in the *BioLab* prior to the 1999 season.

Enhancing communication capabilities at the Laboratory is a very high priority. We are hoping to have a direct line from the university in place in 1999. Placing an Internet connection into each classroom is a very high priority, as we want to do distance learning/teaching from Stone Laboratory to classrooms throughout the state and we want to be able to transmit research data throughout the world.

In recent years maintaining high enrollments during second term has been difficult due to the late end date—many teachers and college students from schools on the semester system have to return

to school before our second term is completed. In 1997 we experimented successfully by reducing second term from 5 to 4.5 weeks. In 1998, we reduced both first and second terms to 4.5 weeks, which allowed us to conclude the entire summer program a week earlier. This will be repeated in 1999.

We experimented successfully with a special offering of Introductory Aquatic Biology for students in the Ohio State Young Scholars Program in 1997. We expanded this program in 1998 to include the Minority Research Initiative. Efforts with these audiences will continue in 1999 and we will offer a new course for teachers—Ornithology for Teachers (EEOB 694).

In 1999, we will co-host with US EPA, Environment Canada, and the University of Windsor, a major conference on Lake Erie research needs and priorities—"Lake Erie at the Millennium."

On 9 July 1999, Ohio Sea Grant and Stone Laboratory will host their 11th State Legislature/Congressional Day on Lake Erie.

We are attempting to develop formal ties to US EPA, US Geological Survey, and the NOAA Great Lakes Environmental Research Laboratory. In 1999, we are attempting to offer a new one-week course for teachers to be taught entirely aboard the US EPA, 180-ft., research vessel.

A major weakness of the Laboratory continues to be our dilapidated research building. We will continue to develop proposals to renovate this building and construct new docks for larger vessels in front.

In 1999, we will attempt to hire an Associate Director for Stone Laboratory and an Assistant to the Director for Sea Grant and Stone Laboratory. These individuals will spend considerable time working on a Masters Degree Program for teachers at Stone Laboratory and a large Lake Erie monitoring program centered at Stone Laboratory.

VI. MILESTONES IN THE HISTORY OF STONE LABORATORY

- 1895 Professor David S. Kellicott, Chairman of the Department of Zoology and Entomology, presented a proposal to the University to establish a field station for the study of biology at Lake Erie. The University approved the project, appropriating \$350 for the construction of a second floor on the State Fish Hatchery in Sandusky.
- 1896 Professor David S. Kellicott was named the first director of the Lake Laboratory and operated the Laboratory for special studies during the summer.
- 1899 Professor Herbert C. Osborn was named the second director upon the death of Professor Kellicott.
- 1900 The first courses were offered at the Lake Laboratory.
- 1903 The University obtained a 50-year lease for property on Sandusky Bay at Cedar Point, erected a frame building at a cost of \$3,376 and moved the Lake Laboratory to this new site.
- 1918 The Lake Laboratory moved to the upper story of the State Fish Hatchery at Put-in-Bay on South Bass Island; an adjacent lot was purchased by the University.
- 1925 Mr. Julius F. Stone, Chairman of the Board of Trustees, acquired Gibraltar Island in Put-in-Bay Harbor from the Jay Cooke family and presented it to the University. In accepting the gift, the University changed the name to Franz Theodore Stone Laboratory in honor of Mr. Stone's father.
- 1926 The Laboratory was moved to Gibraltar Island and utilized the buildings then on the island, Cooke Castle (1865) and Barney Cottage (1907). A construction program, which included a new laboratory building, dining hall and two housing units, Stone Cottage and Gibraltar House, was initiated in 1926 and completed in 1930.
- 1928 "Periodic oscillations in Lake Erie," by Dr. F.H. Kreckler, contribution number 1 of a new series of papers, was published by Stone Laboratory. Contributions 2 through 13 were published from 1929 to 1974.
- 1929 The Franz Theodore Stone Laboratory was formally dedicated.
- 1934 President George W. Rightmire appointed an Advisory Committee to study the Laboratory and plan for future development. The committee recommended expansion of the Laboratory's activities into multi-disciplinary studies, year-round operation, and appointment of a full-time director.

- 1936 Professor Dwight M. DeLong was named the fourth director, the first to be appointed to a full-time position. Professor Thomas H. Langlois served as assistant director from 1936 to 1938.
- 1938 Professor Thomas H. Langlois was named the fifth director upon the resignation of Professor DeLong.

The Franz Theodore Stone Laboratory was established as a regular department of the University, assigned to the President's Division. Full-time faculty positions for a fisheries biologist and a limnologist were approved; Drs. Charles F. Walker and David C. Chandler were appointed.

Peach Point Cottage was purchased by Mr. Julius F. Stone and donated to the Laboratory for use as faculty housing.

- 1939 Professor Milton B. Trautman joined the staff of the Laboratory.
- 1940 The Federal Fish Hatchery on Peach Point, South Bass Island, was transferred to the University. This facility included the main hatchery building (converted to principal research building of the Laboratory), superintendent's residence (converted to the Laboratory office and library) and a shop building.

Mr. Julius F. Stone donated a two-acre woodlot on Peach Point to the Laboratory.

- 1947 The Laboratory purchased a 37-foot steel research boat, the Bio-Lab.
- 1951 The Laboratory name was changed to the Franz Theodore Stone Institute of Hydrobiology.
- 1953 The Laboratory purchased a 30-foot passenger boat, the Gibraltar II.
- 1955 The Laboratory was renamed Franz Theodore Stone Laboratory, and became a program of the Natural Resources Institute, College of Agriculture and Home Economics. The year-round research program was suspended.

Professor Loren S. Putnam was named the sixth director upon the resignation of Professor Langlois.

- 1964 The bequest of Professor Mary D. Rogick permitted the purchase of two faculty housing units, Sycamore Cottage and Rogick Cottage, on Peach Point.
- 1966 The administration of Stone Laboratory was transferred to the new College of Biological Sciences.

The Jay Cooke Home (Cooke Castle) was designated a Registered National Historic Landmark by the U.S. Department of the Interior, National Park Service.

- 1967 The Hydrospheric Sciences Committee recommended establishment of a research center at Lake Erie.
- 1970 The Coast Guard Lighthouse on the south point of South Bass Island was transferred to the University and converted to a radiobiology laboratory and faculty housing unit.
- 1971 The Center for Lake Erie Area Research was established with facilities at Stone Laboratory.
- 1973 The summer instructional program suspended; the President's Task Force on Stone Laboratory recommended continuation of research and instruction at the Lake Erie field station.

Professor Charles E. Herdendorf was named the seventh director upon the retirement of Professor Putnam.

A lease agreement was negotiated with the U.S. Environmental Protection Agency for the 63-foot research vessel *Hydra* to be docked at Stone Laboratory.

- 1974 The summer instructional program and year-round research staff were reinstated at Stone Laboratory.
- 1977 The Ohio Sea Grant Program was established with projects at Stone Laboratory.
- 1980 The 50th Anniversary of Stone Laboratory on Gibraltar Island was celebrated.
- 1981 The first meeting of the Friends of Stone Laboratory, a group of alumni and friends of the Laboratory concerned with contributing to and preserving its high academic quality, took place.
- 1982 The Ohio State University Board of Trustees held a summer meeting at Stone Laboratory; the Ohio General Assembly provided \$950,000 for capital improvements at Stone Laboratory.
- Dr. Jeffrey M. Reutter is named Associate Director.
- 1983 A Scholarship Endowment was established by the Friends of Stone Laboratory.
- 1984 Sustaining and Visiting Professorship Endowments were established by the Friends of Stone Laboratory.

The Lake Erie Laboratory Visitors Center was created.

Ohio Sea Grant sponsored the first "State Legislature Day."

1985 Construction was initiated for the new Residence Hall, wastewater treatment plant, and renovations to the existing Stone Laboratory building and Dining Hall.

Dr. Jeffrey M. Reutter is named Acting Director from Dec. 84- Dec. 85.

Research Vessel *Hydra* returns to operation after two years, with line item support from the Ohio Legislature.

Students from Miami University, Oxford, Ohio are allowed to register for Stone Lab courses by enrolling at Miami, serving as a prototype for all state universities.

1986 New residence hall, Harborview, open for student occupancy.

John R. Hageman is named Laboratory Manager.

1987 Stone Laboratory Associates Program with other Ohio colleges and universities met for first time at Put-In-Bay.

Two-and-a-half week courses are offered for the first time.

Dr. Charles E. Herdendorf retired as Director.

Ohio Sea Grant conducts its fifth State Legislature/Congressional Day on Lake Erie ending with a picnic dinner at Stone Laboratory.

Dr. Jeffrey M. Reutter is named Acting Director.

1988 Dr. Jeffrey M. Reutter is named the Laboratory's eighth Director.

The program begins utilizing the week before the beginning of first term for a one-week early offering, thereby expanding the original 10-week summer program to eleven weeks.

The Ohio State University is designated a "Sea Grant College" by the U.S. Secretary of Commerce.

Dr. David Garton's class from Ohio State University records the first official record of a zebra mussel in Lake Erie on 15 October while on a field trip at Stone Laboratory.

Ohio Sea Grant funds Dr. Garton on the first research project on zebra mussels on 15 November.

1989 Ohio Sea Grant conducts its sixth State Legislature/Congressional Day on Lake Erie ending with a picnic dinner at Stone Laboratory.

1990 Stone Laboratory is transferred from the College of Biological Sciences to the Office of Academic Affairs.

The first introductory level course (Introductory Aquatic Biology, Zoology 125) is offered at Stone Laboratory. Superior high school students can enroll and receive college credit while still in high school. Demand is so great that the course is offered twice and many students are turned away.

Enrollment reaches 119, surpassing 100 for the first time.

Half of the Laboratory's budget is provided by the Office of Academic Affairs thereby providing increased flexibility for the Director in developing an innovative new curriculum. The other half is still provided by the departments offering courses.

1991 Ohio Sea Grant conducts its seventh State Legislature/Congressional Day on Lake Erie ending with a picnic dinner at Stone Laboratory.

Stone Laboratory's entire budget comes from the Office of Academic Affairs.

A second introductory course, Introductory Insect Biology (Entomology 126), is offered for the first time and demand for Introductory Aquatic Biology is so great that the course is offered five times.

Enrollment reaches 169, surpassing 150 for the first time.

Dr. Michael Ross, University of Massachusetts, is named the "Outstanding Visiting Professor."

1992 New introductory courses in ornithology (Zoology 126) and oceanography (Geology 107) are offered for the first time. Introductory Aquatic Biology is offered five times.

Enrollment reaches 209, surpassing 200 for the first time.

Dr. Ken Krieger, Heidelberg College, is named the "Outstanding Visiting Professor."

The Great Lakes Aquatic Ecosystem Research Consortium (GLAERC) composed of top aquatic scientists from Bowling Green State University, Case Western Reserve University, Heidelberg College, John Carroll University, Kent State University, Miami University, Mount Union College, Ohio State University, and the University of Toledo, is formed with Dr. Reutter as Director and Stone Laboratory as the shared research facility.

1993 Enrollment reaches 234.

Ohio Sea Grant conducts its eighth State Legislature/Congressional Day on Lake Erie ending with a picnic dinner at Stone Laboratory.

Dr. David Moore, Utica College of Syracuse University is named the “Outstanding Visiting Professor.”

Erosion protection work is completed as is the new reverse osmosis water treatment system for the Laboratory’s water supply.

1994 Franz and Kate Stone visit the Laboratory with their grandson Franz T. Stone.

Dr. C. Lavett Smith, American Museum of Natural History, New York, is named the “Outstanding Visiting Professor.”

Reporting lines for the Laboratory change from the Office of Academic Affairs To the School of Natural Resources within the College of Food, Agricultural and Environmental Sciences.

1995 Ohio Sea Grant conducts its ninth State Legislature/Congressional Day on Lake Erie ending with a picnic dinner at Stone Laboratory which also serves as the official start of the Laboratory’s Centennial Celebration.

The Friends of Stone Laboratory, with assistance from the College of Food, Agricultural and Environmental Sciences, place a new flagpole on the island.

The Stone Laboratory Hall of Fame is created and Franz and Kate Stone are The first to be inducted.

The Oakland Park Conservation Club is inducted into the Hall of Fame.

Former Directors Loren “Puttie” Putnam and Charles E. Herdendorf, and former Associate Directors John L. Crites and Ronald L. Stuckey are given distinguished service awards.

The Geologic Setting of Lake Erie (Geology 583), a one-week course for teachers, is offered for the first time.

The workshop program sets records with over 80 groups and over 3,000 participants.

Bobby D. Moser, Vice President and Dean of the College of Food, Agricultural and Environmental Sciences receives the first Superior Leadership Award.

Dr. Carmen Trissler, Wittenberg University, receives the Outstanding Visiting Professor Award.

1996 Waldo Gazebo and Lakeview Pavilion are built on Gibraltar Island using donations from Jack Waldo, longtime supporter of Ohio Sea Grant and Chair of the Northwest Ohio Sea Grant Advisory Committee.

The Centennial Celebration concludes with a program and gala during which time Jack Waldo and Bobby Moser place capsules into the base of Waldo Gazebo.

We receive resolutions and proclamations honoring the Laboratory from the Governor, Congress, the Ohio House of Representatives, the Ohio Senate, and the Ohio Board of Regents.

The workshop program sets new records for number of groups (100) and participants.

Former Directors Loren "Puttie" Putnam and Charles E. Herdendorf are inducted into the Hall of Fame.

Former Associate Director Walter E. Carey, and retiring Maintenance Supervisor, Timothy P. Luecke, receive Distinguished Service Awards.

Dr. Carmen Trissler, Wittenberg University, receives the Outstanding Visiting Professor Award for the second time.

1997 Ohio Sea Grant celebrates its 20th anniversary with its 10th State Legislature/Congressional Day on Lake Erie. It is also the 15 year anniversary of Ohio Sea Grant's first Congressional Day on Lake Erie in 1982.

New exterior lighting is placed on Gibraltar Island and new blackboards are placed in all of the classrooms.

The Gibraltar II is permanently taken out of service due to hull problems caused by age.

Introduction to Local Flora (Plant Biology 294) is offered for the first time.

The Ohio State University Young Scholars Program sends up an entire class of students for an offering of Introductory Aquatic Biology.

The workshop program sets records for the number of groups and participants for the third year in a row.

The Laboratory sets a record for the number of graduate students—71.

Dr. David W. Garton is hired as the Associate Director.

1998 Construction is initiated and completed to replace the roof, remove the dome, and repair the windows on Jay Cooke's Castle.

The Ohio State University Minority Research Initiative sends a class for Introductory Aquatic Biology.

The Library is moved from the main office in Bayview on South Bass Island to the third floor of Stone Laboratory on Gibraltar Island, by volunteers from the Friends of Stone Laboratory.

The Laboratory and the Friends of Stone Laboratory sets records for the number of scholarships awarded (43) and the total value of the scholarships (\$13,632).

The workshop, tour, and conference program sets records for the number of groups (151) and the number of participants (5,246) surpassing the previous records by 40 groups and over 1200 participants.

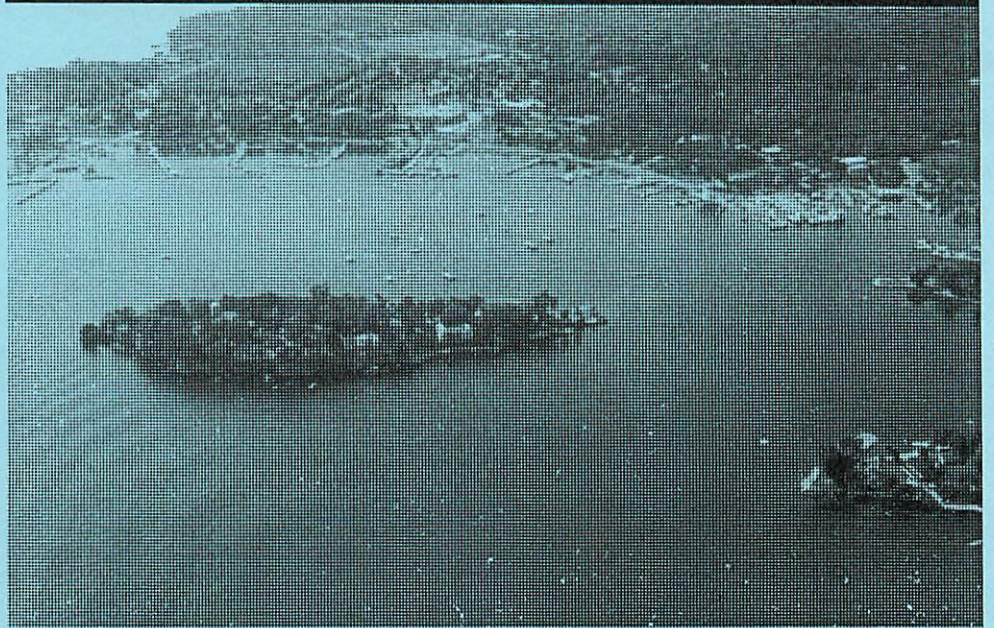
The FOSL kick-off the State's Coastweeks Program with tours and programs on Gibraltar Island and the Put-in-Bay Lighthouse. Approximately 1000 people participate.

The Cooke family holds their first reunion on Gibraltar Island with approximately 100 guests. Jim and Ann Harding are the organizers.

Former professor and Associate Director, John L. Crites, donates prints and water colors of Laboratory buildings which are numbered and used as a fund raiser to support research opportunities for students.

Dr. Ann M. Stoeckmann, Pennsylvania State University, is selected as the Outstanding Visiting Professor.

F.T. STONE LABORATORY



FIGURES

FIGURE 1

**Total Student Enrollment at Stone Laboratory
1988-1998**

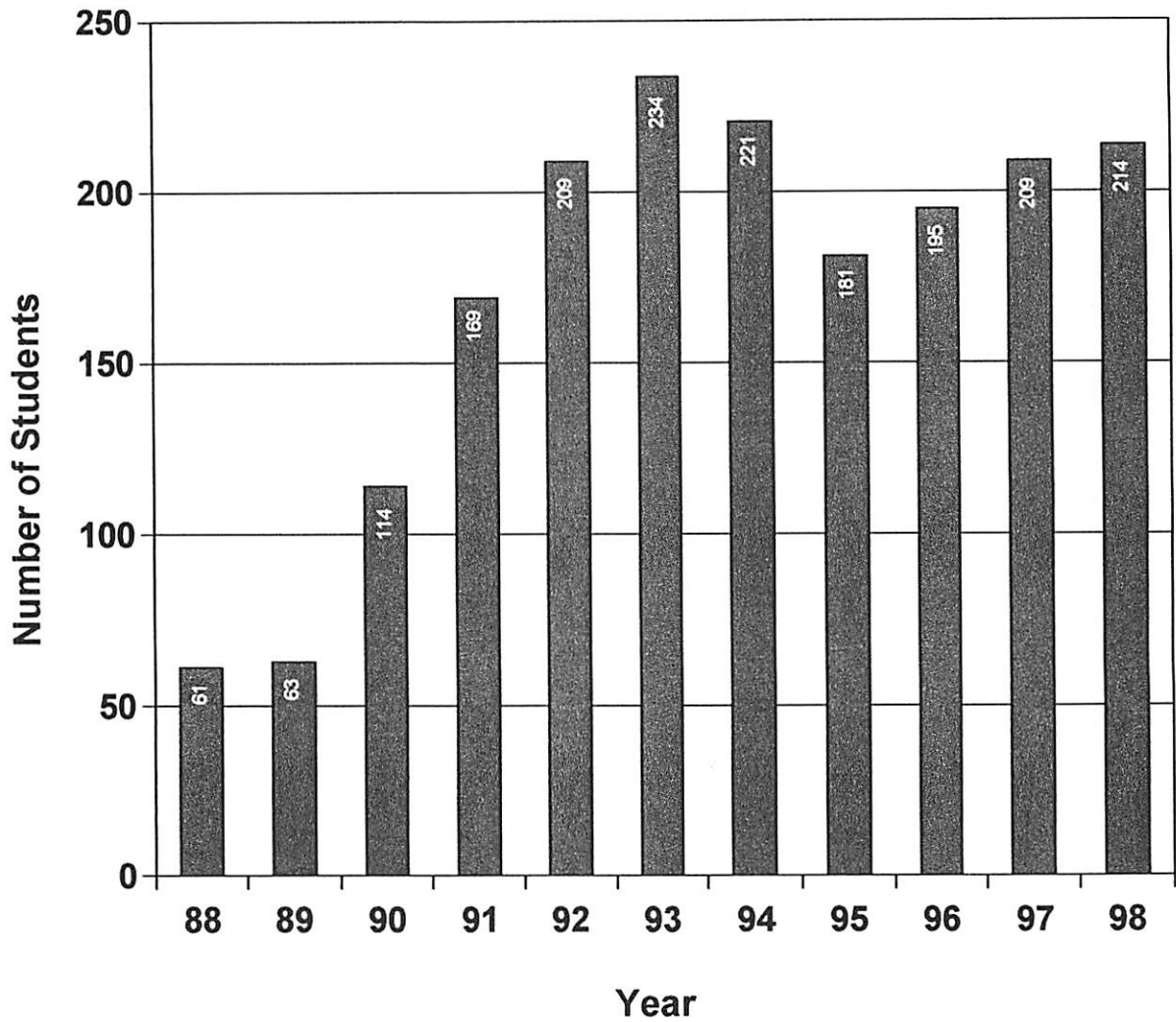
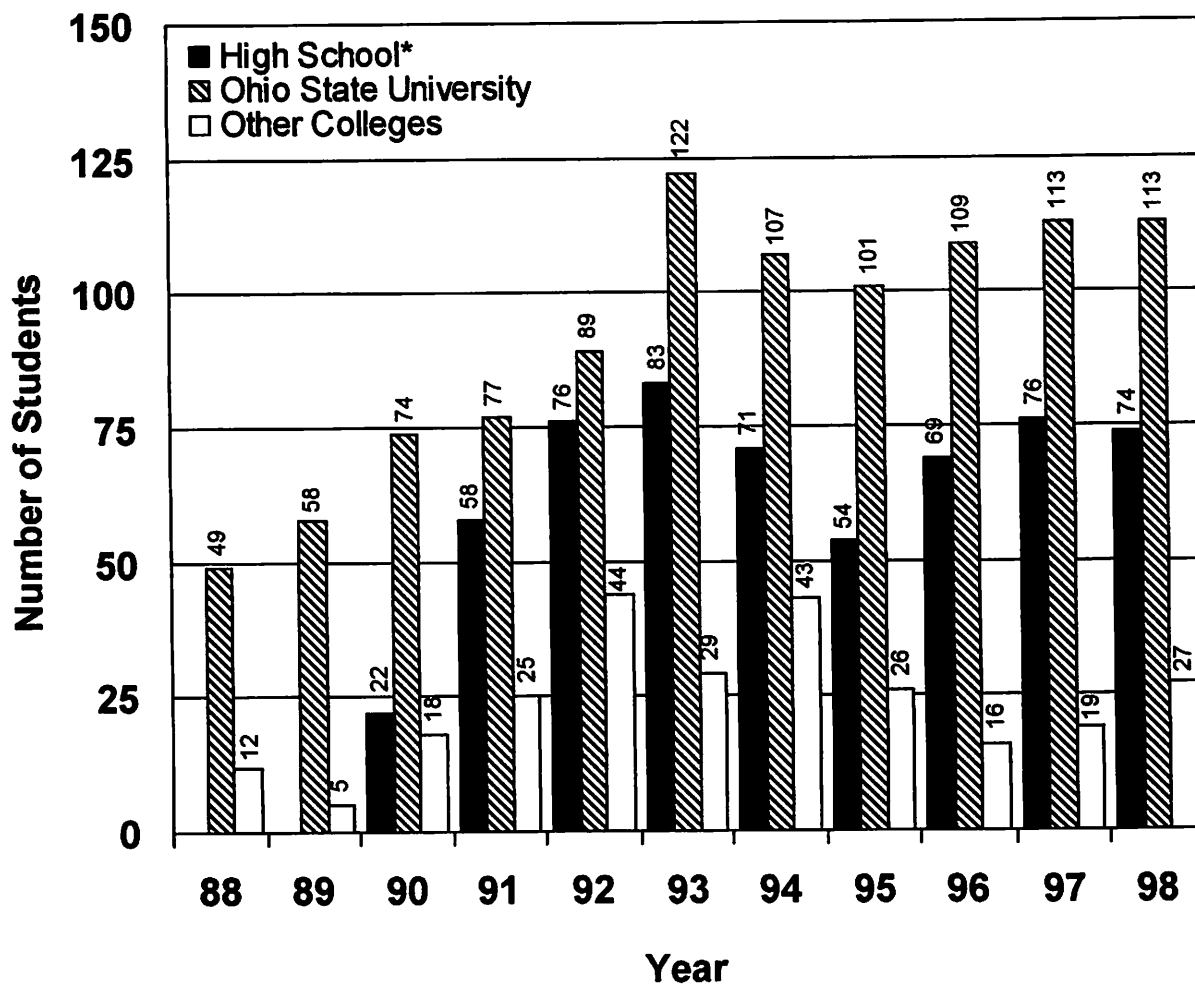


FIGURE 2

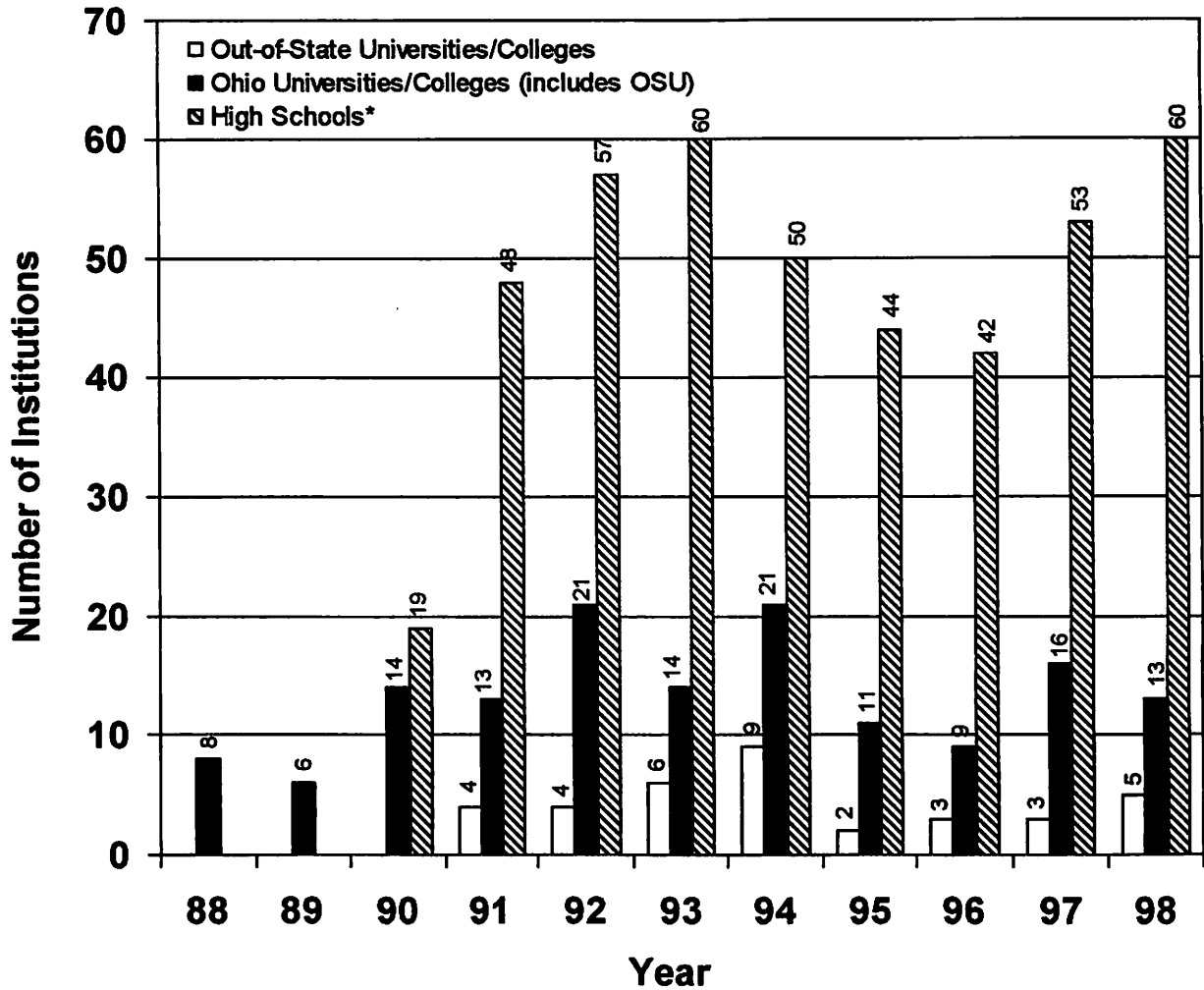
Number of Students Attending Stone Laboratory from High Schools, Ohio State University, and Other Colleges 1988-1998



*Introductory courses for high school students began in the summer of 1990. These students enroll through Ohio State and receive undergraduate credit.

FIGURE 3

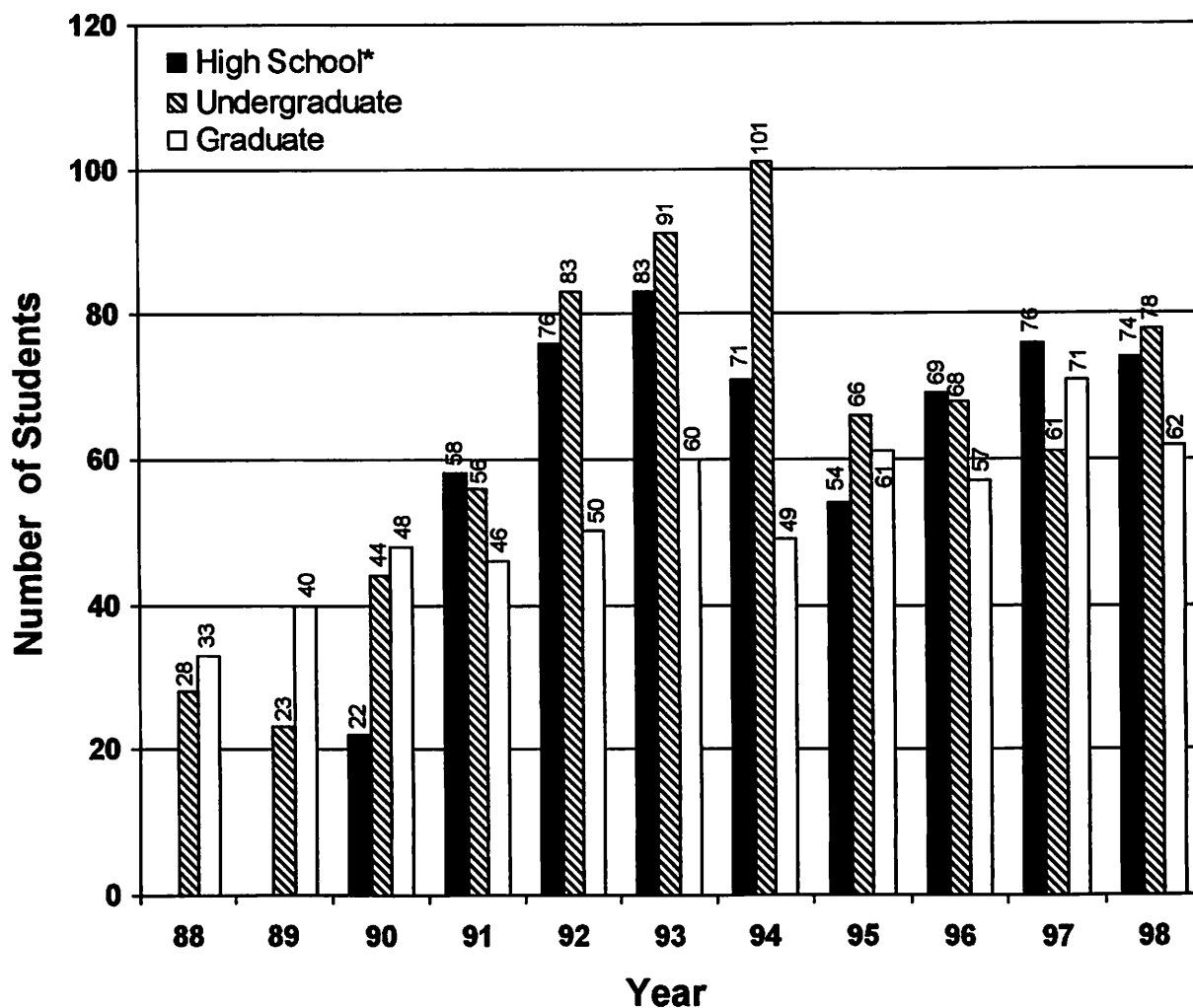
Number of Institutions Represented by Students at Stone Laboratory 1988-1998



*Introductory courses for high school students began in the summer of 1990. These students enroll through Ohio State and receive undergraduate credit.

FIGURE 4

Number of Undergraduate, Graduate and High School Students Attending Stone Laboratory 1988-1998



*Introductory courses for high school students began in the summer of 1990. These students enroll through Ohio State and receive undergraduate credit.

FIGURE 5

Credit Hours of Student Enrollment at Stone Laboratory 1988-1998

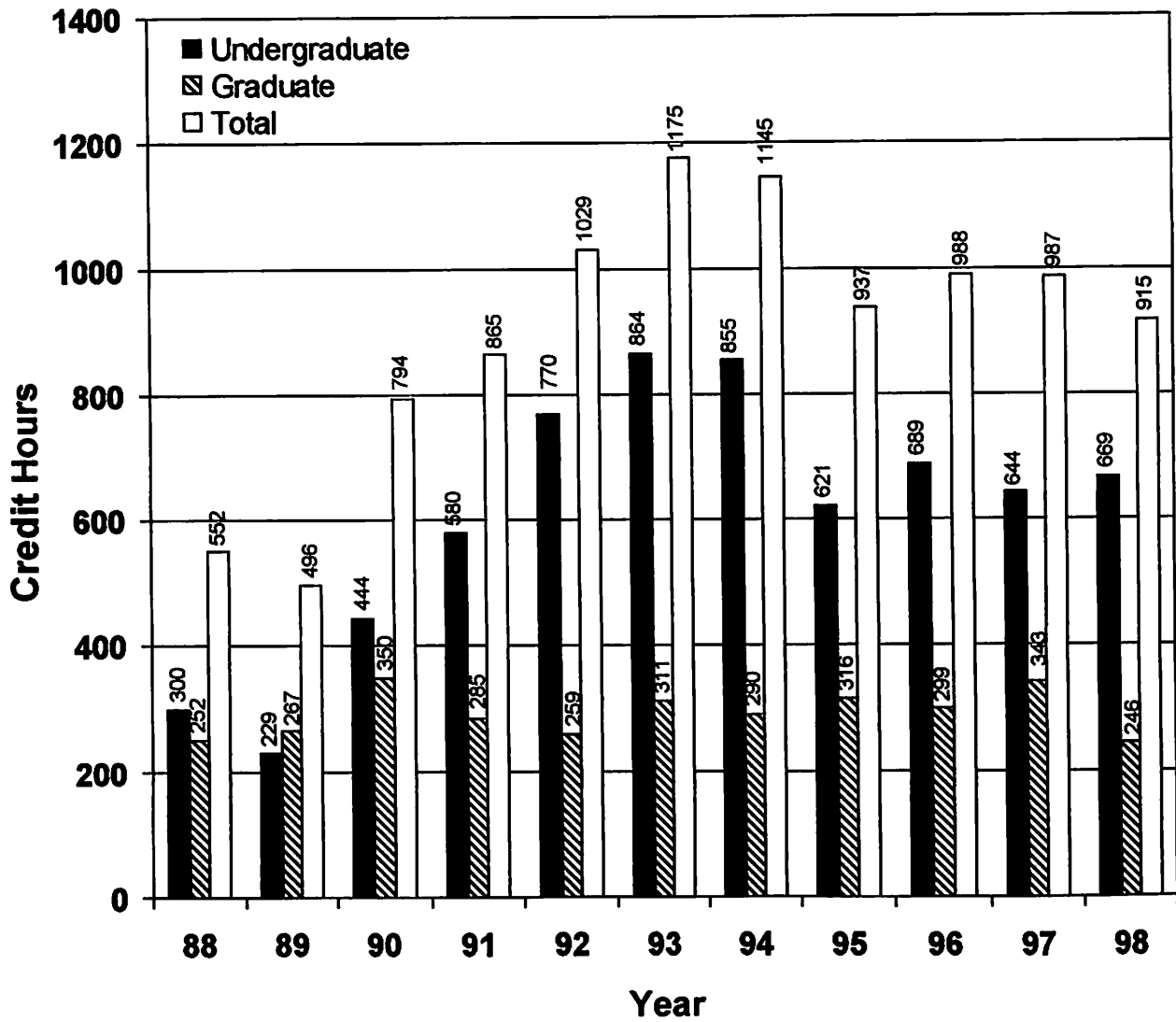


FIGURE 6

**Number of Male and Female Students
Attending Stone Laboratory
1988-1998**

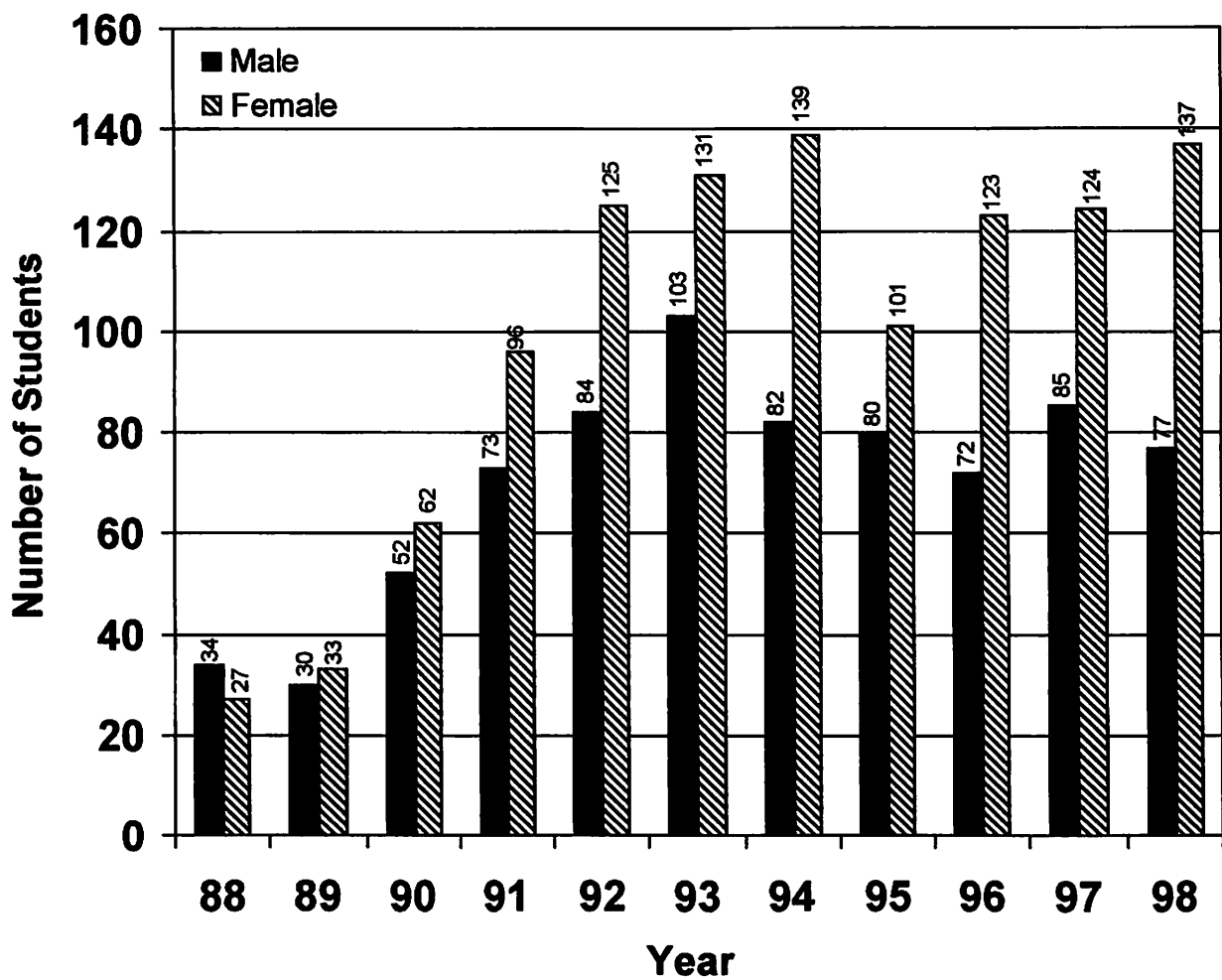


FIGURE 7

Stone Laboratory Workshops, Conferences, and Tours: Number of Groups 1991-1998

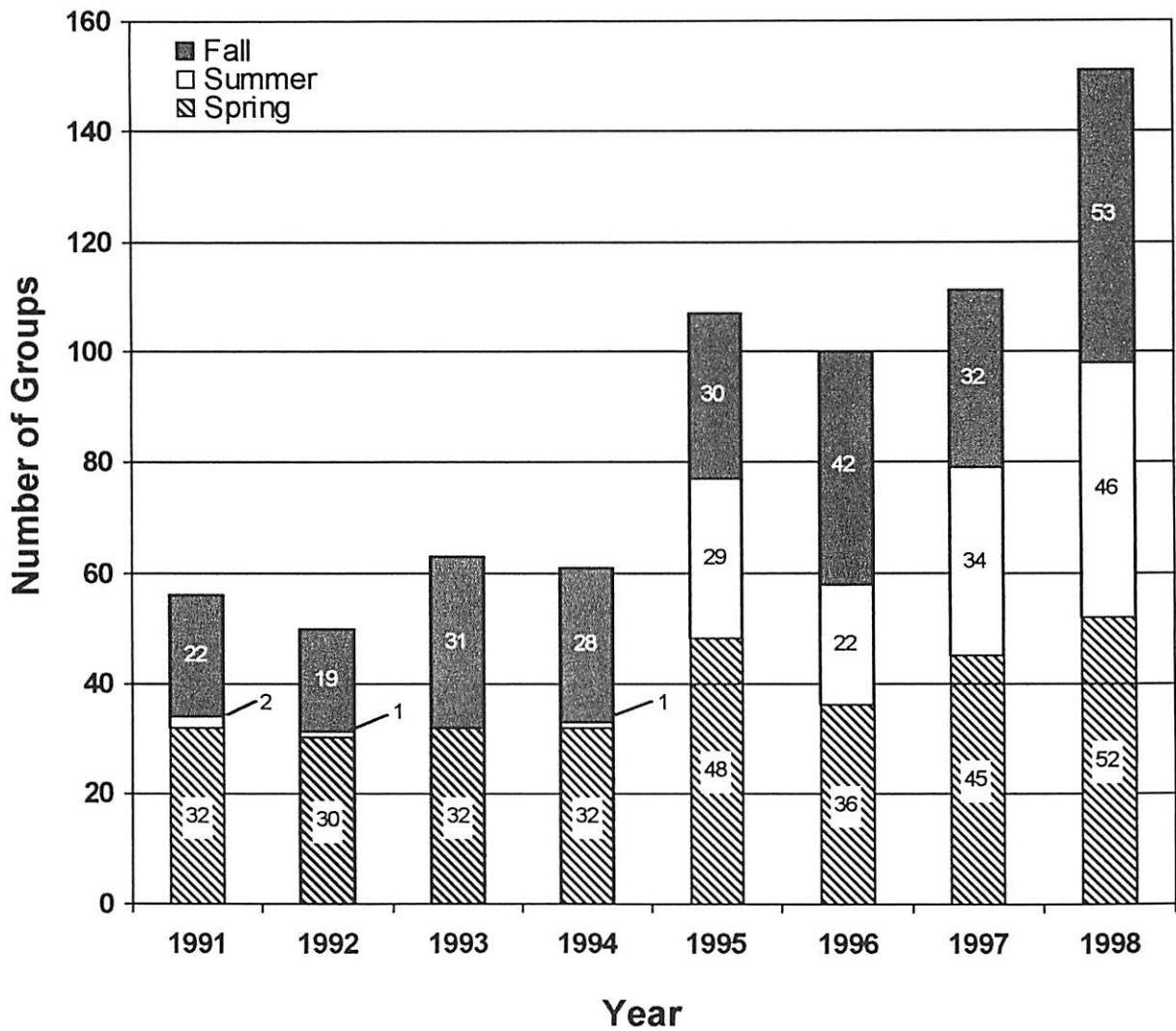


FIGURE 8

Stone Laboratory Workshops, Conferences, and Tours: Number of Participants 1991-1998

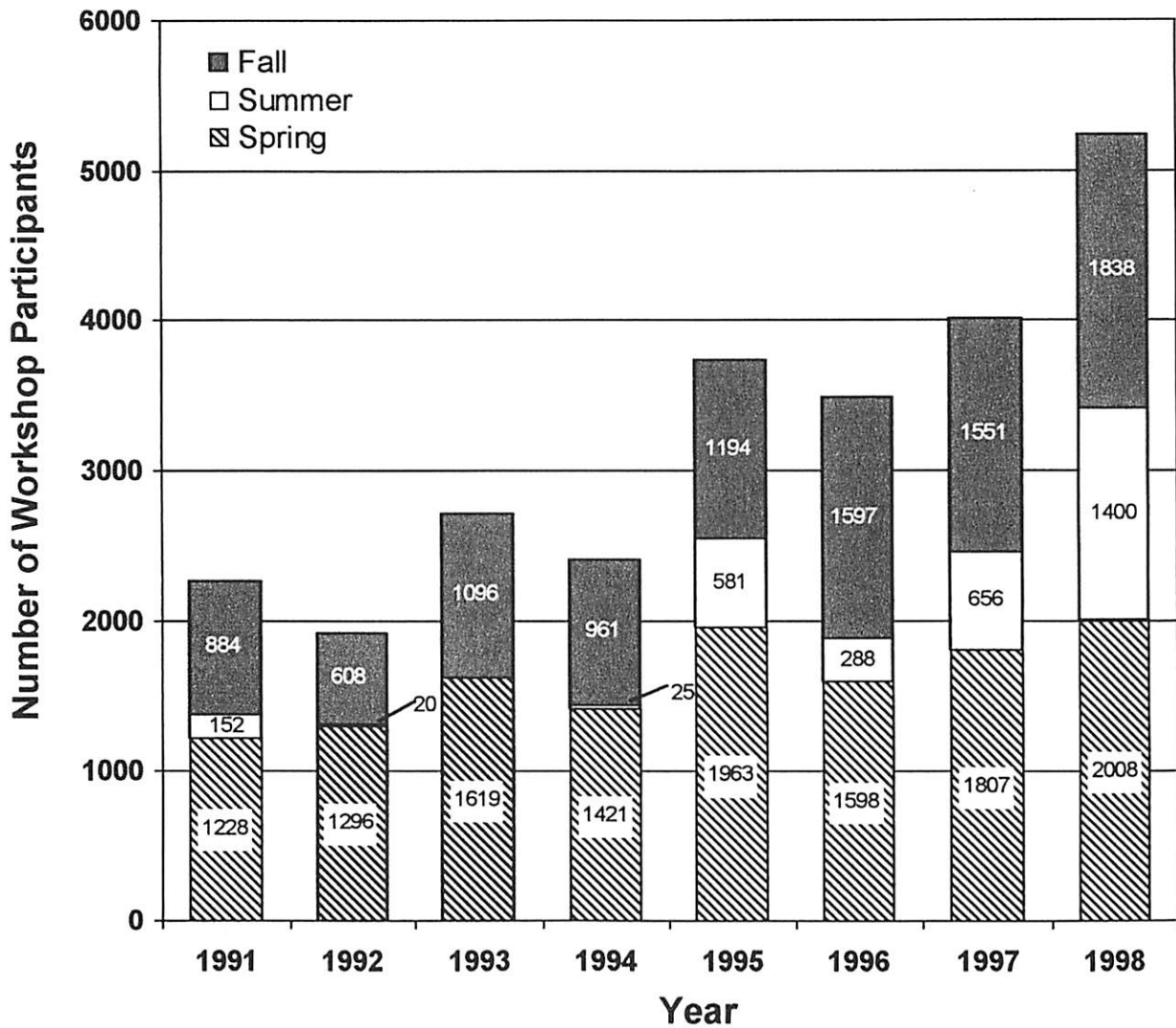
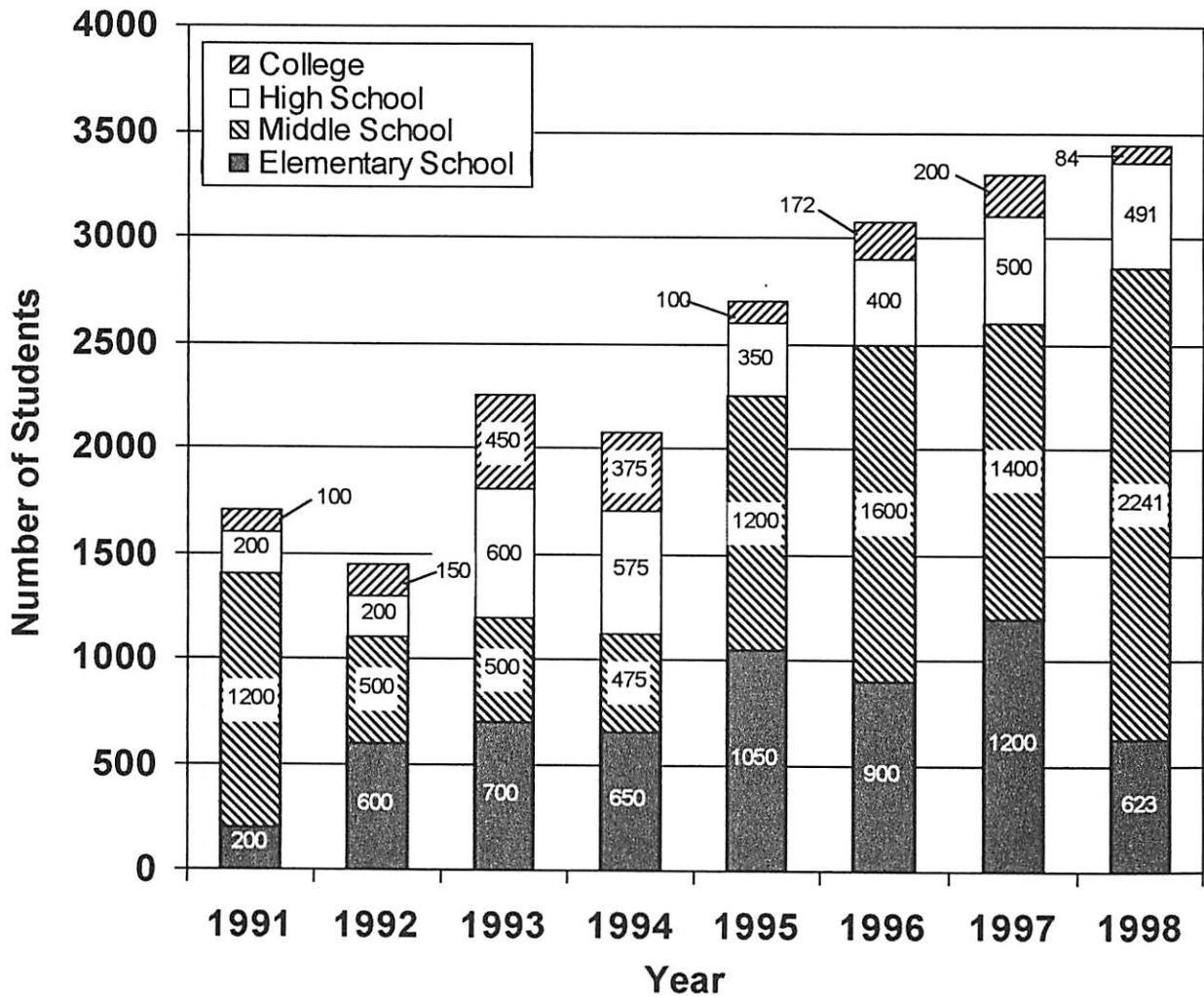


FIGURE 9

Stone Laboratory Workshop Program: Composition of Participating Students* 1991-1998



* Excluding adult groups

FIGURE 10

**Research at Stone Laboratory:
Number of Research Projects, Principle Investigators,
Research Assistants, and Institutions
1995-1998**

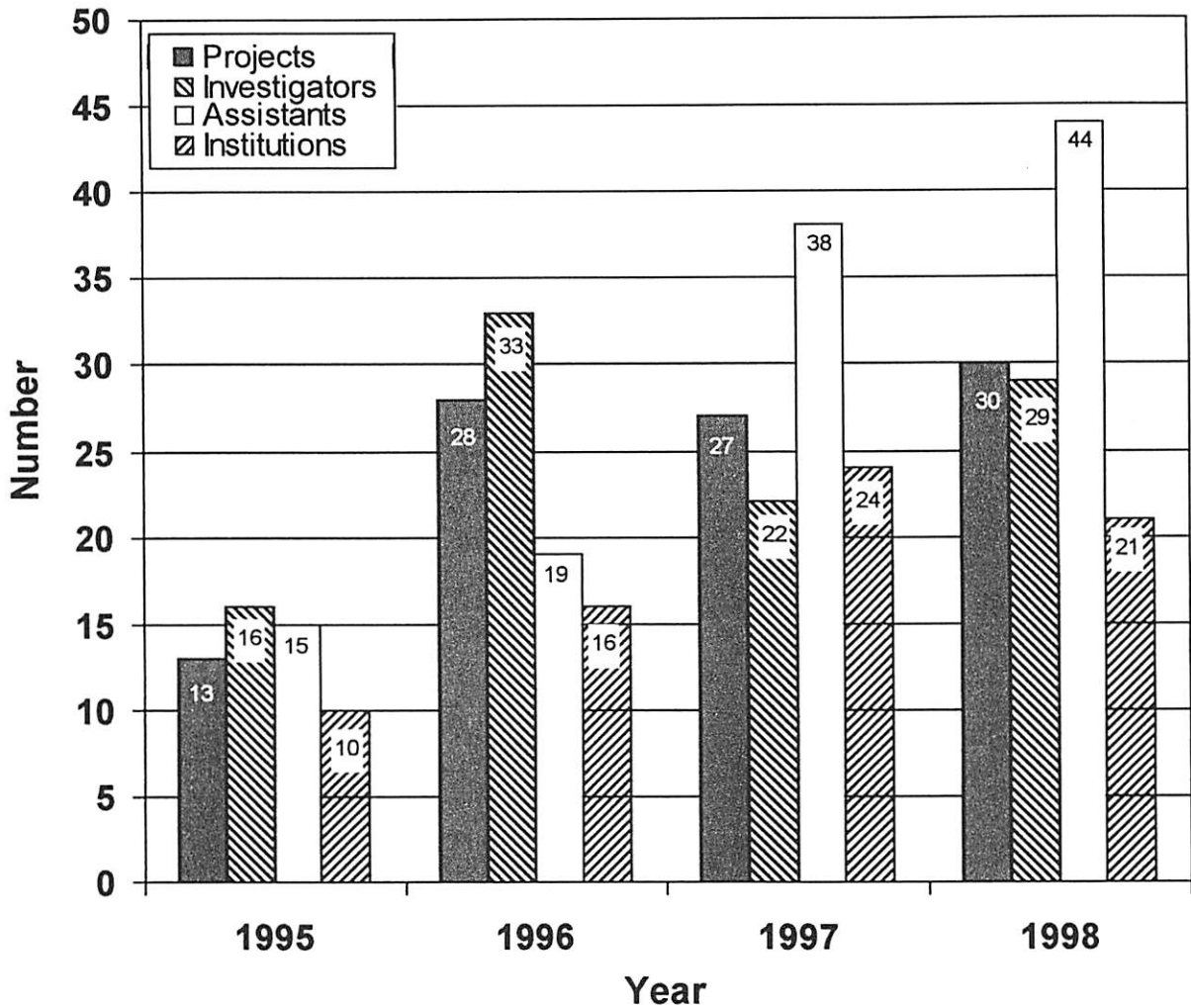


FIGURE 11

Number of Students Receiving Stone Laboratory Scholarships for Summer College Programs

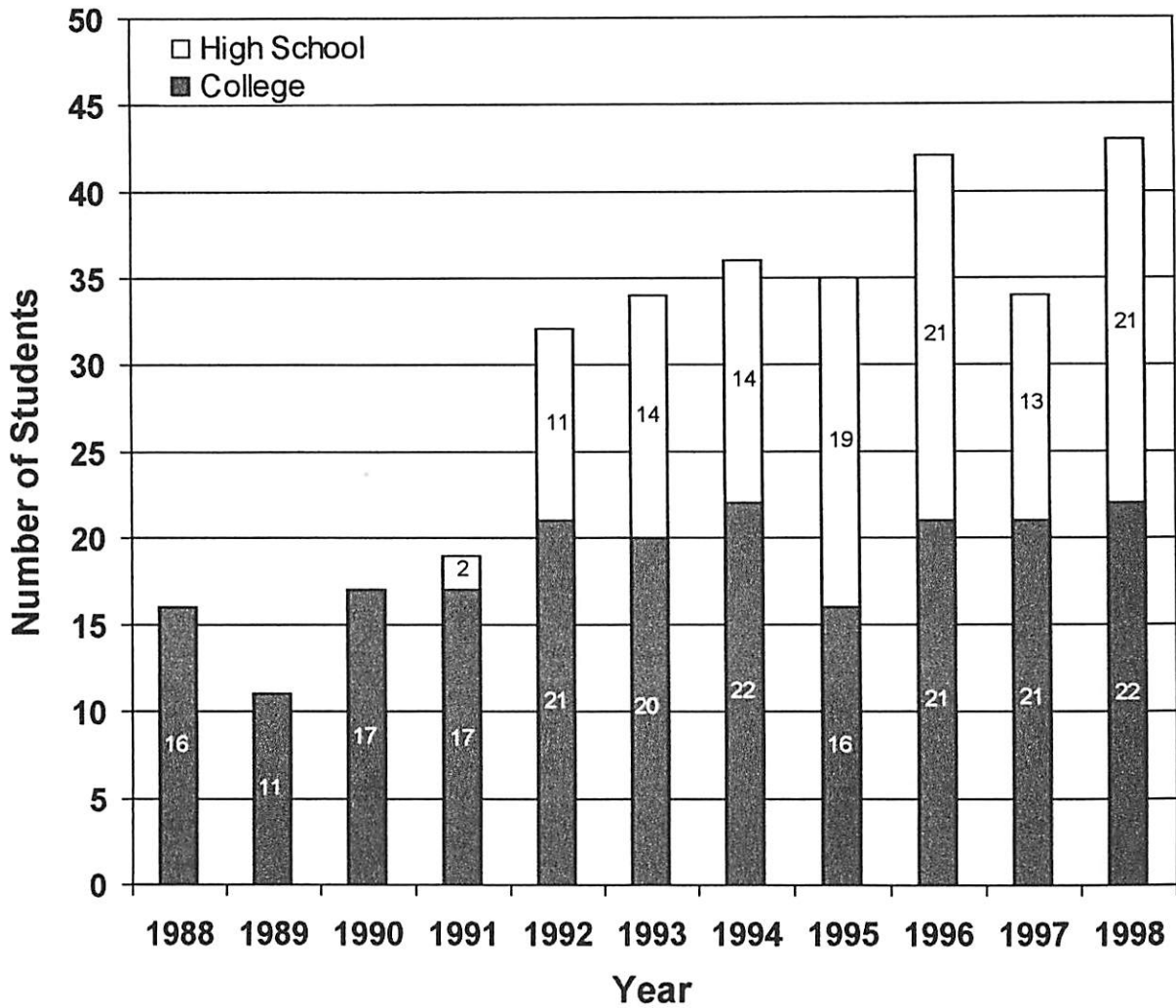
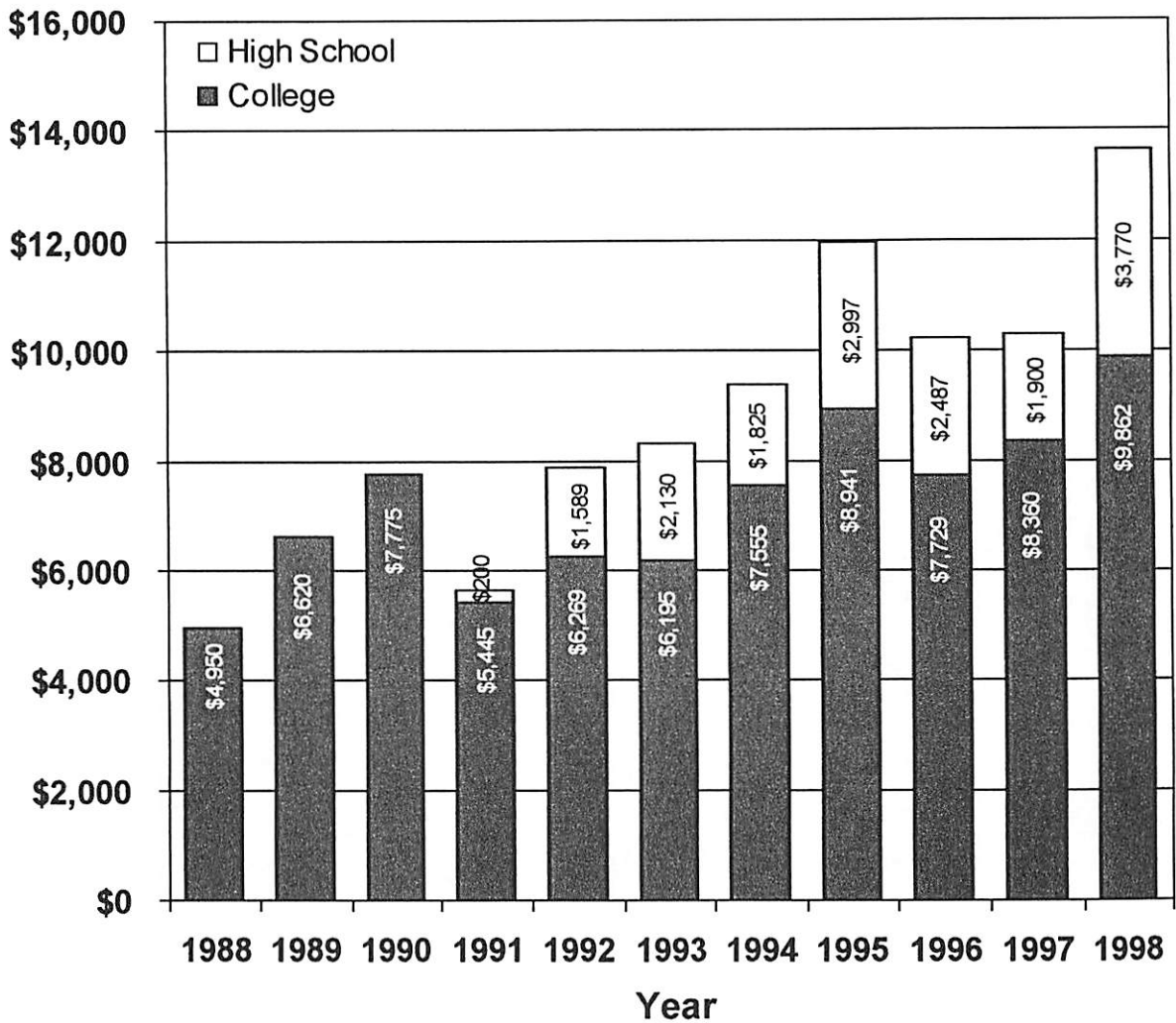


FIGURE 12

Total Value of Scholarships Awarded to College and High School Participants in Stone Laboratory Summer College Program



F.T. STONE LABORATORY



TABLES

TABLE 1

**Stone Laboratory Staff
1998**

Administration

Jeffrey M. Reutter	Director
David W. Garton	Associate Director (from 11/1/97 to 8/31/98)
John R. Hageman	Laboratory Manager
David L. Moore	Acting Associate Director (from 7/23/98 to 8/22/98)
Robin K. Bulger	Laboratory Secretary (to 4/4/98)
Allen J. Duff	Building Maintenance Superintendent, Physical Facilities
Kelly L. Dress	Laboratory Secretary (4/15/98 to present)
Kit A. Kilen	Columbus Office Secretary and Receptionist
Lisa A. Main	Housing Manager
Arleen N. Pineda	Program Coordinator
Karen T. Ricker	Coordinator, Public Relations (1/12/98 to present)
John L. Tripp	Business Manager
Diane S. Whitbeck	Assistant Director, Student Housing

Teaching Faculty

William I. Ausich	Geol Sciences 583- <i>Geologic Setting of Lake Erie</i>	Aug 8 - Aug 14
	Geol Sciences 801- <i>Sem in Sedimentation & Sedimentary Rocks</i>	Aug 8 - Aug 14
David J. Berg	Zoology 125- <i>Introductory Aquatic Biology</i>	Aug 2 - Aug 8
Paul A. Berkman	Zoology 505- <i>Marine Biology & Ecology</i>	Jul 23 - Aug 22
John M. Condit	Zoology 126- <i>Introduction to the Study of Birds</i>	Jun 14 - Jun 20
David A. Culver	Zoology 694- <i>Experimental Aquatic Ecology and Research</i>	Jun 21 - Jul 22
Susan W. Fisher	Zoology 694- <i>Experimental Aquatic Ecology and Research</i>	Jun 21 - Jul 22
Rosanne W. Fortner	Natural Resources 694- <i>Global Change Education</i>	Jul 5 - Jul 11
	Natural Resources 694- <i>Global Change Education</i>	Jun 28 - Jul 4
David W. Garton	Zoology 125- <i>Introductory Aquatic Biology</i>	Jun 7 - Jun 13
	Zoology 652- <i>Limnology</i>	Jun 21 - Jul 22
Robert T. Heath	Zoology 694- <i>Experimental Aquatic Ecology and Research</i>	Jun 21 - Jul 22
Charles E. Herdendorf	Zoology 505- <i>Marine Biology & Ecology</i>	Jul 23 - Aug 22
Michael A. Hoggarth	Zoology 651- <i>Field Zoology</i>	Jun 21 - Jul 22
David L. Johnson	Zoology 125- <i>Introductory Aquatic Biology</i>	Jun 14 - Jun 20
Robert A. Klips	Plant Biology 294- <i>Introduction to Local Flora</i>	Jul 19 - Jul 25
Lawrence A. Krissek	Geol Sciences 107- <i>Field-Based Introduction to Oceanography</i>	Jun 14 - Jun 20
	Geol Sciences 584- <i>Prin of Oceanography for Science Teachers</i>	Jul 26 - Aug 1
	Geol Sciences 583- <i>Geologic Setting of Lake Erie</i>	Aug 8 - Aug 14
	Geol Sciences 801- <i>Sem in Sedimentation & Sedimentary Rocks</i>	Aug 8 - Aug 14
David L. Moore	Plant Biology 611- <i>Higher Aquatic Plants</i>	Jul 23 - Aug 22
T.Keith Philips	Entomology 126- <i>Introductory Insect Biology</i>	Aug 16 - Aug 22
C.Lavett Smith	Zoology 621- <i>Ichthyology</i>	Jun 21 - Jul 22
Frederic L. Snyder	Zoology 125- <i>Introductory Aquatic Biology</i>	Aug 9 - Aug 15
Ann M. Stoeckmann	Zoology 125- <i>Introductory Aquatic Biology</i>	Jun 7 - Jun 13
Carmen E. Trisler	Entomology 612- <i>Aquatic Entomology</i>	Jul 23 - Aug 22
	Entomology 694- <i>Insect Biology for Teachers</i>	Jul 12 - Jul 18

Table 1 – 1998 cont'd

Graduate Teaching Associates

Matthew L. Adkins*	Introductory Aquatic Biology	w09, w10
Eugene C. Braig	Ichthyology	t1
Marc M. Branham	Introductory Insect Biology	w11
Lisa A. Kutschbach-Brohl	Insect Biology for Teachers	w06
	Higher Aquatic Plants	t2
Paul F. Doherty	Introduction to the Study of Birds	w02
Jason M. Earley*	Introductory Aquatic Biology	w01, w01a, w02
Deborah L. Green*	Introduction to Local Flora	w07
Melissa A. Haltuch	Marine Biology & Ecology	t2
Maura A. Metheny	Field-Based Introduction to Oceanography	w02
	Prin of Oceanography for Science Teachers	w08
Samantha J. Romanello	Global Change Education	w04, w05
John F. Shea	Field Zoology	t1
Krissie M. Weisgerber	Experimental Aquatic Ecology and Research	t1
none	Limnology	t1
none	Geologic Setting of Lake Erie	w10

*non-graduate teaching associate

Student Research Assistants (also enrolled in Stone Laboratory courses)

Lauren D. Augusta*	res, t1 mwf; t2 trs (Ohio State, Dr. Sohgen)
Jennifer E. Cline*	res, t1 mwf; t2 mwf (Miami University, Dr. Berg)
Dennis J. Eimer*	res, t2 trs (Ohio State, Dr. Sohgen)
Melissa Haltuch	res, t1; t2 (Charles Morin Research Fellowship)
Patricia M. Holowecky	res, t2 mwf
Abigail A. King	res, t1 mwf; res, t2 trs
Tammi M. Minotas	res, t1 trs
Elizabeth A. Strine*	res, t1 trs (Ohio State, Dr. Sohgen)

* Student paid by researcher, not by Stone Lab

Student Assistants

Eugene C. Braig	Laboratory, t2 trs
Danielle B. Brown	Library, t1; Laboratory, t2 trs
Melanie L. Ford	Laboratory, t1 trs; Library, t2
Michael A. Glane	Laboratory, t2 mwf
Patricia M. Holowecky	Laboratory, t1 trs; Laboratory, t2 mwf
Kristin M. Johnson	Laboratory, t1 mwf; Bookstore, t2 mwf
Cortney L. Marquette	Bookstore, t1 trs; Residence & Dining Halls, t2
Jennifer S. Roehm	Laboratory, t2 mwf
Megan E. Sellman	Laboratory, t1 mwf

Office and Technical Staff

Travis J. Hartman	Courier/Office Assistant
Cindy A. Hayter	Graphic Illustrator
Kathleen A. Kilen	Secretary

Workshop Assistants

Matthew L. Adkins	spring	fall
David A. Cachat		fall
Jason M. Earley	spring	
Lisa A. Kutschbach-Brohl	spring	fall
Loucile B. Powers	spring	
Karen N. Riddle	spring	fall
Alison D. Scherman	spring	
Julie L. West		fall

TABLE 2

Stone Laboratory Curriculum 1998

Entomology 126 * Introductory Insect Biology

Week 11, August 16-August 22.....Dr. T. Keith Philips
An introduction to the study of insects including biology, ecology, identification, and field techniques providing undergraduate credit for college students and advanced high school students. 3 credit hours.

Entomology 612 * Aquatic Entomology

CANCELLED

Term 2, July 23-August 22Dr. Carmen E. Trisler
Designed for preparation in the teaching of biology or for research on aquatic resources; emphasis on taxonomy and ecology of immature and adult aquatic insects. 5 credit hours.

Entomology 694 * Insect Biology for Teachers

Week 6, July 12-July 18Dr. Carmen E. Trisler
A hands-on course for K-12 teachers in formal and informal education. Includes morphology, identification, and unique behaviors of insects as well as activities to use with students for both terrestrial and aquatic insects. Teachers will each develop meaningful and useful curriculum activities about insects. 3 credit hours.

Geological Sciences 107 * Field-Based Introduction to Oceanography

Week 2, June 14-June 20Dr. Larry A. Krissek
An introduction to the study of oceanography including field techniques providing undergraduate credit for college students and advanced high school students. 3 credit hours.

Geological Sciences 583 * Geologic Setting of Lake Erie

Special Offering, August 8-August 14Dr. Larry A. Krissek
Examination of geologic features along the southern shore of Lake Erie during a week-long van trip, including an interpretation of the geologic history of Ohio in the Lake Erie basin, and an examination of relationships between human activity and the geology of the area. Approximate cost for room, meals, and transportation during one-week long van trip will be \$300. Class will originate from and end at the Fawcett Center in Columbus, Ohio. 3 credit hours.

Geological Sciences 584 * Principles of Oceanography for Science Teachers

Week 8, July 26-August 1Dr. Larry A. Krissek
Origin, development, and structure of oceanic basins and their contents; contemporary oceanic processes of geologic significance. Discussions of effective classroom presentations of oceanographic principles. Not open to students with credit for Geological Sciences 107 or 206. 3 credit hours.

Table 2 - 1998 cont'd

Natural Resources 694 * Global Change Education

Week 4, June 28-July 4..... Dr. Rosanne W. Fortner

Week 5*, July 5-July 11 Dr. Rosanne W. Fortner

Materials and methods for presenting interdisciplinary aspects of global climate change and its impacts on global and regional settings. For classroom teachers and nonformal educators. 3 credit hours.

* Not open for general enrollment

Plant Biology 294 * Introduction to Local Flora

Week 7, July 19-July 25 Dr. Robert A. Klips

An introduction to the identification and ecology of terrestrial and wetland vegetation. 3 credit hours.

Plant Biology 611 * Higher Aquatic Plants

Term 2, July 23-August 22 Dr. David L. Moore

Aquatic plants, other than the algae of the Great Lakes region; field and laboratory work on their identification and ecological and geographical relations. 5 credit hours.

Zoology 125 * Introductory Aquatic Biology

Week 1, June 7-June 13 Dr. David W. Garton

Week 1a*, June 7-June 13 Dr. Ann M. Stoeckmann

Week 2, June 14-June 20 Dr. David L. Johnson

Week 3**, June 21-June 27 CANCELLED... Mr. Frederic L. Snyder

Week 9, August 2-August 8..... Dr. David J. Berg

Week 10, August 9-August 15..... Mr. Frederic L. Snyder

* Reserved for Minority Research Initiative Program

** Reserved for Young Scholars Program

An introduction to field techniques and the study of aquatic biology providing undergraduate credit for college students and advanced high school students. 3 credit hours.

Zoology 126 * Introduction to the Study of Birds

Week 2, June 14-June 20 Mr. John M. Condit

An introduction to the study of birds including field techniques and identification providing undergraduate credit for college students and advanced high school students. 3 credit hours.

Zoology 505 * Marine Biology and Ecology

Term 2, July 23-August 22 Drs. Paul A. Berkman and Charles E. Herdendorf

Modern concepts in oceanography, including chemical, physical, and biological processes of the sea, environmental factors influencing marine life, and human impact on ocean resources. 5 credit hours.

Table 2 - 1998 cont'd

Zoology 621 * Ichthyology

Term 1, June 21-July 22Dr. C. Lavett Smith
Study of the distribution and classification of fishes, which includes methods of identification, collection, and preservation. 5 credit hours.

Zoology 651 * Field Zoology

Term 1, June 21-July 22Dr. Michael A. Hoggarth
Field and laboratory identification of aquatic and terrestrial vertebrates and invertebrates of the region, in relation to habitats occupied. 5 credit hours.

Zoology 652 * Limnology

Term 1, June 21-July 22Dr. David W. Garton
Study of the physical, geological, chemical, and biological factors influencing freshwater life; field and laboratory techniques for determining lake morphometry, chemistry, and biological productivity are emphasized. 5 credit hours.

Zoology 653 * Fish Ecology

CANCELLED

Term 2, July 23-August 2Drs. John A. Janssen and David J. Jude
Field and laboratory studies of life histories and interspecific relationships of fishes, and of the various factors influencing their abundance. 5 credit hours.

Zoology 694 * Experimental Aquatic Ecology and Research

Term 1, June 21-July 22Drs. David A. Culver, Susan W. Fisher and Robert T. Heath
Course designed to prepare students for undergraduate or graduate research in aquatic ecology by introducing them to the techniques of literature review, hypothesis testing, data collection and analysis, and publication. 5 credit hours.

Individual Studies 293/693

Qualified students may select problems in botany, entomology, microbiology, zoology or other participating departments, and may choose the instructor with whom they desire to work. 1-5 credit hours.

Research 998/999

This number is reserved for graduate students in a degree program conducting research for a M.S. thesis or Ph.D. dissertation.

Honor Course H783

This number is reserved for students in the honors program desiring to select problems in Individual Studies.

TABLE 3

STONE LABORATORY GUEST LECTURES* -- 1998

All lectures begin at 7:45 PM. A university boat leaves the dock in front of the Research Building at 7:30 PM before each lecture. Lectures normally conclude at approximately 9:00 PM. Transportation to and from Gibraltar Island is free.

Week 1	6/11	No Lecture
Week 2	6/18	Dr. Frederick P. Miller , Director, School of Natural Resources, The Ohio State University "Soils: Are They Worth Protecting?"
TERM 1		
Week 3	6/25	Dr. Chris Goddard , Executive Director, Great Lakes Fishery Commission "Sea Lamprey Control: Successes and Challenges"
Week 4	7/1	John R. Kleberg , Asst. Vice President, Business and Administration, The Ohio State University "Cooke Castle Then and Now"
Week 5	7/9	Dr. Jane Forsythe , Bowling Green State University "The Geology of Lake Erie"
Week 6	7/16	Randall E. Sanders , Ohio Division of Wildlife "The Development and Implementation of Ohio's State Management Plan for Aquatic Nuisance Species"
Week 7	7/23	Transition between terms—No Lecture
TERM 2		
Week 8	7/30	Dr. Charles E. Herdendorf , The Ohio State University "Treasures of a Lost Voyage: Science and the Columbus America Gold Expedition"
Week 9	8/6	Donald C. Anderson , Director, ODNR "The Ohio Department of Natural Resources: Recent Accomplishments and Challenges for the 21 st Century"
Week 10	8/13	Dr. Bobby D. Moser , Vice President and Dean, College of Food, Agricultural and Environmental Sciences, The Ohio State University "Environmental Issues in Agriculture in Ohio"
Week 11	8/20	Finals Week—No Lecture

* Sponsored by the Friends of Stone Laboratory and the Office of Residence and Dining Halls.

TABLE 4

**Stone Laboratory Workshops, Conferences and Tours
1998**

Date	Group Name/City/Leader	No.	Description
4/13	Sacred Heart Elementary / Shelby, OH Mary Obringer	13	Workshop
4/14	Marysville High School / Marysville, OH Peter Kain	18	Workshop
4/15	Perrysburg High School / Perrysburg, OH Lisa Wagner	64	Workshop
4/16	Jonathan Alder High School / Plain City, OH Brent Boyd	15	Workshop
4/18	University of Toledo Geology Dept. / Toledo, OH	14	Tour
4/20	Shaker Heights I Middle School / Shaker Heights, OH James Alt	55	Workshop
2/21	Shaker Heights II Middle School / Shaker Heights, OH James Alt	49	Workshop
4/22	Shaker Heights III Middle School / Shaker Heights, OH James Alt	50	Workshop
4/22	"Shadow Student", Sarah Witson / Bowling Green, OH Bowling Green H.S.	1	Tour
4/22	"Shadow Student", Karee Kimple / Maumee, OH Rogers H.S. via Maumee Valley Girl Scouts	2	Tour
4/23	Kenwood I Elementary / Bowling Green, OH Kent McClary	39	Workshop
4/24	Kenwood II Elementary / Bowling Green, OH Kent McClary	40	Workshop
4/24-25	Mansfield City T.A.G. Program-Middle School / Mansfield, OH Betsy Alexander	20	Workshop

Table 4 – 1998 cont'd

Date	Group Name/City/Leader	No.	Description
4/25-26	Friends of Stone Lab. Work Weekend	43	Work-Weekend
4/27	Wynford High School / Bucyrus. OH Glen Smith	44	Workshop
4/27-28	Clintonville Academy Middle School / Columbus, OH Sally Lindsay	37	Workshop
4/28-29	McCord & Perry Middle School / Worthington, OH Marty McTigue	63	Workshop
4/29-30	Toth Elementary / Perrysburg, OH Sandy Stewart	69	Workshop
4/30	"Shadow Student", Vern Hauge / Elyria, OH Northwood Middle School	1	Tour
5/1	Grizzel Elementary / Dublin, OH Larry Hohman	42	Workshop
5/2-4	Ohio State Univ. Plankton Class- College / Cols., OH Dr. David Culver	31	Workshop
5/4-5	Mills School I - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	51	Workshop
5/5	"Shadow Student", Sarah Weinreich and Ryan Bunetta / Padua Franciscan H.S.	2	Tour
5/5-6	Mills School II - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	48	Workshop
5/6-7	Mills School III - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	53	Workshop
5/7-8	Mills School IV - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	42	Workshop
5/11-12	Mills School V - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	46	Workshop
5/12-13	Mills School VI - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	44	Workshop

Table 4 – 1998 cont'd

Date	Group Name/City/Leader	No.	Description
5/13	"Shadow Student", John Reese / Millersburg, OH West Holmes H.S.	1	Tour
5/13-14	Mills School VII - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	40	Workshop
5/14	Northwood Jr. High / Elyria, OH 90 students and 10 Faculty	100	Tour
5/14-15	Mills School VIII - 6 th Grade / Sandusky, OH Park Shafer and Marcia Fordam	43	Workshop
5/15	Rogers High School / Toledo, OH John Calderenella	15	Workshop
5/15	Rogers High School and Youth Treatment Center / Toledo, OH C.J. Washington and Delores Samson	32	Workshop
5/15-16	Southmoor Junior High / Columbus, OH Maureen Huch	24	Workshop
5/18-19	Rittman I Middle School / Rittman, OH Cindy Baisden	46	Workshop
5/19-20	Rittman II Middle School / Rittman, OH Cindy Baisden	47	Workshop
5/20-21	New Albany I Middle School / New Albany, OH Jay Walker	51	Workshop
5/21-22	New Albany II Middle School / New Albany, OH Jay Walker	53	Workshop
5/26	Davey I Middle School / Kent, OH Jessica Burkey	55	Workshop
5/26-27	Toledo Patterson Gifted & Talented I M. S. / Toledo, OH Nadine Schroeder	51	Workshop
5/27-28	Toledo Patterson Gifted & Talented II M.S. / Toledo, OH Nadine Schroeder	53	Workshop
5/28-29	Englewood Elementary / Englewood, OH Sis Litvin	24	Workshop

Table 4 – 1998 cont'd

Date	Group Name/City/Leader	No.	Description
5/29	Springfield South High School / Springfield, OH Michael Willets	15	Workshop
5/29-30	Woodside Middle School / Ft. Wayne IN Ginny Ryan	28	Workshop
5/29-30	Brookside Ecology Club-High School / Sheffield, OH Bill Glynn	18	Workshop
6/1	Whiteford Middle School / Ottawa Lake, MI Susan Bixler	83	Workshop
6/2	Davey II Middle School / Kent, OH Jessica Burkey	58	Workshop
6/2	Cooke Castle Pre-Construction	15	Meeting
6/2-3	Buckeye Valley Middle School / Radnor, OH Amos Price	42	Workshop
6/3-4	Wickliffe Alternative Elementary / Upper Arlington, OH Kim Fordam	66	Workshop
6/4-5	Jones Middle School / Upper Arlington, OH Jim Snyder	35	Workshop
6/5	Whittier Middle School / Lorain, OH Lois Treboniak	32	Workshop
6/8	Holden Arboretum / Kirtland, OH Christine Holyland	22	Workshop
6/12	Lorain Co. Extension Office / Elyria, OH	19	Workshop
6/16	"A-Team", O.S.U. College of Food, Agriculture and Enviro. Sc. Fiscal Officers	33	Tour
6/18	Visitors to See Fred Miller Guest Lecture	4	Tour
6/23	Perry's Monument Staff / Put-In-Bay, OH	3	Tour
6/29	Debbie Snook, Cleveland Plain Dealer	1	Tour
7/1	Jim and James Harding / New York, NY	2	Tour

Table 4 – 1998 cont'd

Date	Group Name/City/Leader	No.	Description
7/1	Visitors to see John Kleberg Guest Lecture	74	Tour
7/8	State Senator Robert Latta Family	4	Tour
7/8	Henderson Family	4	Tour
7/9	Visitors to see Jane Forsyth Guest Lecture	48	Tour
7/14	American Red Cross Summer Enrichment Program/ Toledo, OH Karline Jaquillard	15	Workshop
7/15	Fred Ouweleen Family	6	Tour
7/16	Green Co. Park District / Xenia, OH Chris Barnett	8	Workshop
7/16	Visitors to see Randy Sanders Guest Lecture	16	Tour
7/24	Northwest Ohio District Extension Office	18	Workshop
7/24	Qua Cho Chen, Intern - O.S.U. Public Radio / New York Univ.	1	Tour
7/27	Barberton High School Teachers / Barberton, OH	6	Tour
7/28	Port Clinton Garden Club / Port Clinton, OH	23	Tour
7/28	Rosemaire Sanous	4	Tour
7/28	Jim Harding / New York, NY	1	Tour
7/29	Great Lakes Aquatic Ecosystem Research Consortium	38	Tour
7/29	Great Lakes Aquatic Ecosystem Research Consortium	38	Conference
7/29 & 30	Jim and Ann Harding (Cooke Castle Descendants) and Nan Card (Hayes Presidential Library)	3	Tour
7/30	Visitors to see Dr. C. E. Herdendorf Guest Lecture	24	Tour
7/30 & 31	Larry Rommel (Dev. Officer, OSU) and Alan Goodrich (Dean, Bio. Sci., OSU)	2	Tour
7/31-8/1	Council of Graduate Students / Columbus, OH Kathleen Carberry	12	Conference

Table 4 – 1998 cont'd

Date	Group Name/City/Leader	No.	Description
9/16-17	Wellington I Middle School / Columbus, OH Sara Harris	29	Workshop
9/17-18	Wellington II Middle School / Columbus, OH Sara Harris	29	Workshop
9/18-20	Ohio State University Molecular Genetics	67	Conference
9/19	Heidelberg Ichthyology-College / Tiffin, OH Dr. Ken Baker	9	Workshop
9/21	West Holmes High School / Millersburg, OH Doug Mohr	18	Workshop
9/21	Avon High School / Avon, OH Tess Wearsch	17	Workshop
9/22	St. Marys of the Falls Middle School / Olmsted, OH Loretta Grentzer	25	Workshop
9/23	Portage Elementary / Gypsum, OH Greg Twarek	55	Workshop
9/24	Bataan Elementary / Port Clinton, OH Martha Willis	45	Workshop
9/24-25	Edgewood Middle School / Hamilton, OH Dee Wells	21	Workshop
9/25	McCormick Elementary / Huron, OH Elaine Bores	132	Tour
9/25-26	Park Street Middle School / Grove City, OH David Crosby	70	Workshop
9/28-29	Hudson I Middle School / Hudson, OH Ken Radie	49	Workshop
9/29-30	Hudson II Middle School / Hudson, OH Ken Radie	53	Workshop
10/1	Owens Community College / Toledo, OH Dr. Gardner	11	Workshop

Table 4 – 1998 cont'd

Date	Group Name/City/Leader	No.	Description
10/1-2	Willis Middle School / Delaware, OH Teresa Bettac	24	Workshop
10/2-3	Granville High School / Granville, OH Kay Porr	20	Workshop
10/2-3	Mt. Union College / Alliance, OH Lin Wu	11	Workshop
10/2-4	Erie County Conservation	6	Conference
10/5-6	Worthingway Middle School / Worthington, OH Kevin Swabb	59	Workshop
10/6	Laurel Elementary / Shaker Heights, OH Mary Nohdar	39	Workshop
10/7-8	Columbus School for Girls / Columbus, OH Beth Damonte	59	Workshop
10/8	Ohio Board of Regents Officers	6	Tour
10/8-9	Deveaux Jr. High with O.S.U. 4-H / Columbus, OH Tina Milenovic	49	Workshop
10/8 & 9	Ohio Board of Regents Officers	8	Meeting
10/9	Ohio Board of Regents Officers Council	4	Tour
10/9-10	Lakota Jr. High / Amsden, OH Tom Bentley	34	Workshop
10/9-11	Miami University Faculty Development / Oxford, OH	6	Conference
10/10	Heidelberg Limnology - College / Tiffin, OH Dr. Ken Kreiger	7	Workshop
10/12-13	Brecksville High School / Broadview Heights, OH Robert Berg	22	Workshop
10/14-15	Woodside Middle School / Fort Wayne, IN Jeff Beck	29	Workshop

Table 4 – 1998 cont'd

Date	Group Name/City/Leader	No.	Description
10/15-16	Rocky River Middle School / Rocky River, OH Dave Root	37	Workshop
10/15-16	Japanese National for Educational Research / Japan Dr. Rosanne Fortner	4	Workshop
10/16-18	Ohio State Univ. Limnology-College / Columbus, OH Dr. David Culver	15	Workshop
10/19	Tiffin City I Jr. High / Tiffin, OH Tom Nahm	25	Workshop
10/21	Padua Franciscan High School / Parma, OH Terry Mansfield	33	Workshop
10/23	Tiffin City II Jr. High / Tiffin, OH Mrs. Swaiden	25	Workshop
10/26	Cuyahoga Heights High School / Cuyahoga Heights, OH Tish Rozewski	44	Workshop
11/6	O.S.U. Laboratory Animal Protocol and O.S.H.A. Mgmt.	4	Tour
TOTAL		5,306	

TABLE 5

**Stone Laboratory Scholarship Recipients
1998**

<i>Name</i>	<i>Institution</i>	<i>Name of Scholarship</i>
Aivaliotis, Christina	Mansfield Sr. HS	Franz and Kate Stone
Anthony, Kyle	Solon HS	Franz and Kate Stone
Augusta, Lauren	Ohio Northern Univ	Ray Frederick
Betz, Laura	Kent State University	Ray Frederick
Bigrigg, Jennell	Elyria HS	Kelly Prochazka
Cornett, Crystal*	Big Walnut HS	Franz and Kate Stone
Curtis, Jeanne	Notre Dame Academy	Franz and Kate Stone
Davis, Gary	The Ohio State University	Oakland Park Conservation Club
Diethelm, Jessica	University of Michigan	Ray Frederick
Dindia, Laura	The Ohio State University	Oakland Park Conservation Club
Doller, Christine*	Ross HS	Franz and Kate Stone
Duffy, Tara	Mansfield Sr. HS	Franz and Kate Stone
Eimer, Dennis	The Ohio State University	Pepsi-Cola Bottling Company
Farver, Dawn	The Ohio State University	Franz and Kate Stone
Feltes, Elizabeth	The Ohio State University	Franz and Kate Stone
Glane, Michael	The Ohio State University	Oakland Park Conservation Club
Grimm, Erin	The Ohio State University	Franz and Kate Stone
Hannibal, Roberta	Beaumont School	Franz and Kate Stone
Harty, Karina	St. Francis DeSales HS	Franz and Kate Stone
Hickey, Heather	Bishop Ready HS	Franz and Kate Stone
Kane, Douglas	The Ohio State University	Franz and Kate Stone
King, Abigail	Wittenberg University	Ray Frederick
King, Amber	Watkins Memorial HS	Franz and Kate Stone
Koppert, Eric	Loudonville HS	Franz and Kate Stone
Kremer, Kurt	Centerville HS	Franz and Kate Stone
Kunecke, Ivy	The Ohio State University	Ray Frederick
Landphair, Joni	Geneva HS	Franz and Kate Stone
Lorensen, Angela	The Ohio State University	Franz and Kate Stone
Matthews, Christopher	The Ohio State University	Franz and Kate Stone
Müller, Janet	Margaretta HS	Franz and Kate Stone
Minotas, Tammi	Ohio Wesleyan University	Ray Frederick
Plank, Cindy	Wright State University	Franz and Kate Stone
Ponting, Michael	Elyria HS	Kelly Prochazka
Reineck, Matthew	St. Joseph Central Catholic HS	Franz and Kate Stone
Roehm, Jennifer	The Ohio State University	Oakland Park Conservation Club
Schleibaum, Joy	Cincinnati State College	McDonald's
Sellman, Megan	The Ohio State University	Karen Jennings
Simmons, Lindsay	Crestview HS	Franz and Kate Stone
Stachowiak, Michael	James F. Rhodes HS	Franz and Kate Stone
Trzebuckowski, Tracey	The Ohio State University	Franz and Kate Stone
Walker, Laura	The Ohio State University	Franz and Kate Stone
Walton, Amelia	Big Walnut HS	Franz and Kate Stone
Weaver, Anna	Upper Sandusky HS	Franz and Kate Stone

*Scholarship recipient from Ohio Academy of Science State Science Day

TOTAL number of scholarships -- 43

TOTAL value of scholarships -- \$13,632

TABLE 6

**Stone Laboratory Student Roster -- 1998
(214 students)**

<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Aivaliotis, Christina	Mansfield OH	High School Sophomore			Mansfield Senior HS
Akin, Christyn	Columbus OH	High School Sophomore			Northland HS
Allan, Deborah	United Kingdom	Master's		Graduate	The Ohio State University
Anderson, Steven	Pickerington OH	Post-Graduate		Continuing Education	The Ohio State University
Anthony, Kyle	Solon OH	High School Senior			Solon HS
Augusta, Lauren	Newton Falls OH	Junior	Env Studies/Biology	Arts and Sciences	Ohio Northern University
Baioni, Phillip	Euclid OH	Senior	Biology	Arts and Sciences	The Ohio State University
Bajornas, Joseph	Fremont OH	Post-Graduate		Continuing Education	The Ohio State University
Balas, Andrea	Reynoldsburg OH	Ph.D.	Ed-Stds	Graduate	The Ohio State University
Barkley, Valerey	Cleveland OH	Graduate Non-Degree		Graduate	The Ohio State University
Behrendt, Heidi	Columbus OH	High School Junior			Bishop Watterson HS
Bell, Laura	Macedonia OH	Senior	Biology	Arts and Sciences	Kent State University
Betz, Laura	Hinckley OH	Master's	Secondary Educ-Comp Sci	Graduate	Kent State University
Bigrigg, Jennell	Elyria OH	High School Junior			Elyria HS
Bircher, Lisa	East Palestine OH	Graduate Non-Degree		Graduate	The Ohio State University
Bishop, Lee	Bellevue OH	High School Sophomore			Bellevue Senior HS
Bixler, Donna	Burton OH	Post-Graduate		Continuing Education	The Ohio State University
Blair, Ryan	Jeromesville OH	High School Sophomore			Ashland HS
Blake, Kevin	Ottoville OH	Graduate Non-Degree		Graduate	The Ohio State University
Blatt, Angela	Columbus OH	High School Senior			Whetstone HS
Bolger, Dennis	Whitehouse OH	High School Junior			Anthony Wayne HS
Bosick, Abigail	Alliance OH	High School Sophomore			West Branch Local HS
Bowers, Maurielle	Columbus OH	High School Junior			Fort Hayes HS
Boyd, Dionne	Columbus OH	High School Sophomore			Columbus Academic HS 2000
Bradley, Lauren	Shelby OH	High School Senior			Shelby Senior HS
Braig, Eugene	Columbus OH	Master's	Fisheries	Graduate	The Ohio State University
Branham, Marc	Columbus OH	Ph.D.	Entomology	Graduate	The Ohio State University
Branson, Christopher	Cincinnati OH	High School Sophomore			Anderson HS
Brickell, Michael	Grove City OH	Graduate Non-Degree	Zoology	Graduate	The Ohio State University
Brohl, Lisa	Put-in-Bay OH	Master's	Environmental Science	Graduate	The Ohio State University
Brooks, Jessica	Miamisburg OH	High School Sophomore			Miamisburg HS
Brown, Danielle	Bowling Green OH	Senior	Envs Stds/Policy		Bowling Green State University
Brugler, Robert	Columbus OH	Master's		Graduate	The Ohio State University

Table 6 cont'd

<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Budde, Mark	Columbus OH	High School Sophomore			Grandview Hts HS
Buell, Kimberley	Westerville OH	Post-Graduate	Education	Continuing Education	The Ohio State University
Burgasser, Joseph	Cincinnati OH	Senior	Horticulture	Agriculture	The Ohio State University
Buyansky, Joan	Brunswick OH	Graduate Non-Degree		Graduate	The Ohio State University
Carnes, Jeffrey	Dellroy OH	Graduate Non-Degree	Education		Kent State University
Cline, Jennifer	Hudson OH	Junior	Biology	Arts and Sciences	Kent State University
Collier, Martin	Lebanon OH	Master's	Classroom Teacher Sci	Education	Wright State University
Corey, Thomas	Columbiana OH	High School Sophomore			Crestview HS
Cornett, Crystal	Sunbury OH	High School Sophomore			Big Walnut HS
Corney, Jeffrey	Columbus OH	Ph.D.	Natural Resources	Graduate	The Ohio State University
Costello, Kathleen	Columbus OH	Post-Graduate		Continuing Education	The Ohio State University
Curtis, Jeanne	Toledo OH	High School Senior			Notre Dame Academy
Dane, Rachel	Hudson OH	Senior	Biology	Arts and Sciences	The Ohio State University
Daniel, Alexander	Cincinnati OH	High School Sophomore			Cincinnati Hills Christian Acad
Davis, Gary	Sardinia OH	Senior	Zoology	Arts and Sciences	The Ohio State University
Dickmann, Brian	Galloway OH	Graduate Non-Degree		Graduate	The Ohio State University
Diethelm, Jessica	Toledo OH	Senior	Biology	Literature, Science and Arts	University of Michigan
Dindia, Laura	Mentor OH	Senior	Env CE & I	Natural Resources	The Ohio State University
Doller, Christine	Hamilton OH	High School Sophomore			Ross HS
Domske, Helen	Buffalo NY	Graduate Non-Degree		Graduate	The Ohio State University
Donauer, Margaret	Minster OH	High School Junior			Minster HS
Dorsey Wallenhorst, Karen	North Royalton OH	Graduate Non-Degree		Graduate	The Ohio State University
Duffy, Tara	Mansfield OH	High School Sophomore			Mansfield Senior HS
Dulaney, Tressi	Columbus OH	Master's	Education	Graduate	The Ohio State University
Dunford, Paul	Avon Lake OH	Graduate Non-Degree		Graduate	The Ohio State University
Easterday, Cary	Columbus OH	Master's	Geological Sciences	Graduate	The Ohio State University
Eckley, Russell	Jewett OH	Junior	Pre-ECE	Engineering	The Ohio State University
Eimer, Dennis	Columbus OH	Senior	Sustainable Resources Mgt	Natural Resources	The Ohio State University
Eisnaugle, Nicole	Johnstown OH	Sophomore	Zoology	Arts and Sciences	The Ohio State University
Ellrott, Brian	Cohoes NY	Senior	Fisheries Management	Natural Resources	The Ohio State University
Embry, Erika	Warrensville Ht OH	Master's	Elementary Education	Graduate	The Ohio State University
Farver, Dawn	Brecksville OH	Sophomore	Biological Engineering	Engineering	The Ohio State University
Feltes, Elizabeth	Parma OH	Sophomore	Animal Sci/Pre-Vet Medicine	Agriculture	The Ohio State University
Fielden, Holly	Morehead KY	Senior	Environmental Science	Sci & Technology	Morehead State University
Finnegan, Kevin	Lewis Center OH	Graduate Non-Degree		Graduate	The Ohio State University
Ford, Melanie	N Ridgeville OH	Senior	Environmental Science	Natural Resources	The Ohio State University
Forston, Michael	Cincinnati OH	High School Sophomore			Cincinnati Hills Christian Acad
Froschauer, Ann	Columbus OH	Senior	Env Ed, Comm & Interpr	Natural Resources	The Ohio State University

1998

Table 6 cont'd

<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>	1998
Froschauer, Julia	Cincinnati OH	Junior	Biology	Arts and Sciences	The Ohio State University	
Fryar, William	Columbus OH	High School Junior			Eastmoor HS	
Gargas, Nathaniel	Amherst OH	Senior	Fisheries Management	Natural Resources	The Ohio State University	
Gilmore, Ann	Fairview Park OH	High School Sophomore			Fairview Park HS	
Glane, Michael	Columbus OH	Senior	Biology	Arts and Sciences	The Ohio State University	
Goetz, Sadie	Helena OH	High School Junior			Gibsonburg HS	
Goodman, Dale	LaPorte IN	Post-Graduate		Continuing Education	The Ohio State University	
Grabenstatter, Jonathan	Columbus OH	High School Sophomore			Grandview Hts HS	
Grimm, Erin	Fredericktown OH	Senior	Zoology	Arts and Sciences	The Ohio State University	
Hall, Jennifer	Akron OH	High School Junior			Firestone HS	
Haltuch, Melissa	Mentor OH	Master's		Graduate	The Ohio State University	
Hand, Virginia	Strongsville OH	Graduate Non-Degree		Graduate	The Ohio State University	
Hannibal, Roberta	Cleveland OH	High School Sophomore			Beaumont School	
Hartmann, Dianne	Troy OH	Master's	Geological Sciences	Graduate	Wright State University	
Harty, Karina	Gahanna OH	High School Sophomore			St. Francis DeSales HS	
Herak, Patrick	Columbus OH	Graduate Non-Degree	Education	Graduate	The Ohio State University	
Herak, Robert	Aurora OH	Post-Graduate		Continuing Education	The Ohio State University	
Hickey, Heather	Columbus OH	High School Sophomore			Bishop Ready HS	
Hill, Melanie	Zanesville OH	Senior	Biology		Wilmington College	
Hilton, Sunita	United Kingdom	Master's	Environmental Education	Graduate	The Ohio State University	
Hoffman, Harold	Lockbourne OH	High School Junior			St. Charles Preparatory	
Holowecky, Patricia	Avon OH	Junior	Biology/Zoology	Arts and Sciences	The Ohio State University	
Horn, Kristin	Columbus OH	Senior	Animal Science	Agriculture	The Ohio State University	
Howie, Mikaela	Columbus OH	Freshman	Zoology	Arts and Sciences	The Ohio State University	
Hsu, Chia-Chien	Columbus OH	Senior	Envir Comm, Ed, & Comm	Natural Resources	The Ohio State University	
Huelskamp, Lisa	Columbus OH	Ph.D.	Human Impact and Processes	Graduate	The Ohio State University	
Hustek, Jessica	Cleveland Hts OH	High School Junior			Cleveland Hts HS	
James, Kimberly	Columbus OH	Sophomore	Natural Resources	Natural Resources	The Ohio State University	
Jennrich, Seth	Parma OH	Senior	Biology	Science	University of Findlay	
Johnson, Kristin	Dublin OH	Senior	Biology	Arts and Sciences	The Ohio State University	
Jones, Steve	Bowling Green OH	Senior	Zoology	Arts and Sciences	The Ohio State University	
Kane, Douglas	Westlake OH	Senior	Zoology	Arts and Sciences	The Ohio State University	
Kemerer, Jennifer	Columbus OH	Senior	Environmental Sciences	Natural Resources	The Ohio State University	
Kilbane, Grace	Delaware OH	Junior	Biology	Arts and Sciences	Loyola Univ of Chicago	
King, Abigail	Tiffin OH	Senior	Biology		Wittenberg University	
King, Amber	Pataskala OH	High School Junior			Watkins Memorial HS	
King, Brian	Granville OH	High School Junior			Granville HS	
Kleber, Katharine	Columbus OH	Senior	Natural Resources, Fish Mgt	Natural Resources	The Ohio State University	
Knoop, Michael	Jewett OH	High School Junior			Jewett-Scio HS	

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<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Kobak, Kimberly	Parma OH	Graduate Non-Degree		Graduate	The Ohio State University
Konfal, Danielle	Columbus OH	High School Senior			Whetstone HS
Konfal, Stephanie	Columbus OH	High School Junior			Whetstone HS
Koppert, Eric	Loudonville OH	High School Sophomore			Loudonville HS
Kremer, Kurt	Centerville OH	High School Senior			Centerville HS
Kunecke, Ivy	Mansfield OH	Junior	undecided	University College	The Ohio State University
Laderer, Stacy	Bay Village OH	Graduate Non-Degree		Graduate	The Ohio State University
Landphair, Joni	Geneva OH	High School Junior			Geneva HS
Lee, Connie	Westerville OH	Master's	Ed-Stds	Graduate	The Ohio State University
Lee, Jae Young	Columbus OH	Ph.D.	Envir Ed & Communication	Graduate	The Ohio State University
Li, Elaine	Columbus OH	High School Junior			Columbus Alternative HS
Lieser, James	Columbus OH	Master's	Freshwater Ecosystem	Professional Program	Ohio University
Lobdell, Craig	Columbus OH	Graduate Non-Degree		Graduate	The Ohio State University
Lorensen, Angela	Oak Harbor OH	Master's	Agr Educ	Graduate	The Ohio State University
Luckydoo, Lee	Pataskala OH	Master's	Vegetation Monitoring	Graduate	The Ohio State University
Madewell, Rachel	Chardon OH	High School Junior			Chardon HS
Madison, Renee	Columbus OH	High School Sophomore			East HS
Marbaugh, Lanie	Celina OH	High School Junior			Celina Senior HS
Marquette, Cortney	Clinton OH	Senior	Biology/Ecology	Arts and Sciences	University of Akron
Martin, Karl	Galion OH	Ph.D.	Edu T&L	Graduate	The Ohio State University
Matthews, Christopher	Willoughby Hill OH	Sophomore	Aquatic Biology	University College	The Ohio State University
McCarthy, Alison	Columbus OH	Master's	Math Sci, Tech Ed	Graduate	The Ohio State University
McClain, Conlee	Columbus OH	High School Junior			Linden McKinley HS
McHenry, Abigail	New Carlisle OH	Senior	Zoology	Arts and Sciences	The Ohio State University
McTigue, Martha	Worthington OH	Master's		Graduate	The Ohio State University
Meier, Adam	Perrysburg OH	Sophomore	Veterinary Medicine	Agriculture	The Ohio State University
Metheny, Maura	Columbus OH	Master's		Graduate	The Ohio State University
Metz, Jerrie	Delaware OH	Junior		Continuing Education	The Ohio State University
Miller, Janet	Castalia OH	High School Sophomore			Margaretta HS
Miller, Mark	Columbus OH	Ph.D.	Environmental Education	Graduate	The Ohio State University
Minotas, Tammi	Mentor OH	Senior	Zoology		Ohio Wesleyan University
Morton, Jessica	Columbus OH	High School Junior			Eastmoor HS
Motley, Melanie	Mansfield OH	High School Junior			Ontario HS
Naujoks, Christen	Solon OH	High School Sophomore			Solon HS
Nenadal, Brent	Hudson OH	Sophomore	Comprehensive Sci Educ	Professional Studies & Sci	University of Findlay
Nenadal, Erin	Hudson OH	High School Junior			R.B. Chamberlin HS
Newsome, Kristine	Gahanna OH	High School Junior			Gahanna Lincoln HS
Nicholas, Brett	Centerville OH	Graduate Non-Degree		Graduate	The Ohio State University

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<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
O'Hara, Georgia	Columbus OH	Graduate Non-Degree		Graduate	The Ohio State University
O'Malley, Kevin	Avon OH	High School Junior			Avon HS
Orloff, Warren	Columbus OH	Master's	Science Education	Graduate	The Ohio State University
Overholser, Lynette	Granville OH	Junior	Horticulture	Agriculture	The Ohio State University
Peters, Catherine	Columbus OH	High School Sophomore			Columbus Academic HS 2000
Plank, Cindy	West Liberty OH	Master's			Wright State University
Plankell, Eric	Columbus OH	Master's	Arts & Sciences	Graduate	The Ohio State University
Ponting, Michael	Elyria OH	High School Junior			Elyria HS
Porter, Mark	Lakewood OH	Post-Graduate		Continuing Education	The Ohio State University
Powers, Lizabeth	Canton OH	Post-Graduate		Continuing Education	The Ohio State University
Powers, Loucile	Columbus OH	Senior	Environmental Science	Natural Resources	The Ohio State University
Prost, M.	Pataskala OH	Graduate Non-Degree	Education	Graduate	The Ohio State University
Puttick, Devin	Columbus OH	High School Junior			Briggs HS
Reineck, Matthew	Fremont OH	High School Junior			St. Joseph Central Catholic HS
Reisland, Melissa	Cleveland OH	High School Sophomore			St. Joseph Academy
Reutter, Caleb	Willoughby Hill OH	Senior	Comprehensive Science	Educ & Human Dev	Bowling Green State University
Richardson, Kiara	Columbus OH	High School Sophomore			Columbus Academic HS 2000
Rismiller, Christopher	Greenville OH	Senior	Environmental Science	Natural Resources	The Ohio State University
Rodgers, Camillia	Reynoldsburg OH	High School Senior			Reynoldsburg HS
Roehm, Jennifer	Leesburg OH	Senior	Biology	Arts and Sciences	The Ohio State University
Romanello, Samantha	Columbus OH	Ph.D.	Natural Resources	Graduate	The Ohio State University
Russell, Brandy	Guysville OH	High School Junior			Federal Hocking HS
Sanchez, Abby	Berea OH	Senior	Environmental Science	Natural Resources	The Ohio State University
Sandal, Jay	Duluth MN	Master's	Biology		Univ of Minnesota-Duluth
Savely, Cynthia	Columbus OH	High School Junior			Northland HS
Schleibaum, Joy	Cincinnati OH	Sophomore	Science		Cincinnati State College
Schmidt, Traci	Reynoldsburg OH	Graduate Non-Degree	Education	Graduate	The Ohio State University
Schneider, Kerri	Franklin WI	Master's	Paleontology	Graduate	The Ohio State University
Segrist, Shannon	Norwood OH	High School Sophomore			Norwood HS
Seifert, Sandra	Lancaster OH	Post-Graduate		Continuing Education	The Ohio State University
Selby, Amy	Lakewood OH	High School Sophomore			Lakewood HS
Seles, Joel	Toledo OH	High School Junior			Central Catholic HS
Sellman, Megan	Columbus OH	Senior	Zoology	Arts and Sciences	The Ohio State University
Semicek, LaVerne	Avon OH	Graduate Non-Degree		Graduate	The Ohio State University
Senapati, Suneeta	Worthington OH	High School Junior			Worthington-Kilbourne HS
Shea, John	Columbus OH	Ph.D.	Parasitology	Graduate	The Ohio State University
Shull, Jane	Duluth MN	Graduate Non-Degree		Graduate	The Ohio State University
Simmons, Lindsay	East Palestine OH	High School Sophomore			Crestview HS
Skinner, Gabriel	Dayton OH	Junior	Biology	Arts and Sciences	The Ohio State University

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<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Slavik, Beth	Coldwater OH	Senior	Biology Education	Education	Bowling Green State University
Smith, Cynthia	Worthington OH	Senior	Environmental Science	Natural Resources	The Ohio State University
Smith, David	Avon OH	High School Junior			Avon HS
Spencer, Amy	Columbus OH	Junior	Zoology	Arts and Sciences	The Ohio State University
Stachowiak, Michael	Cleveland OH	High School Sophomore			James F. Rhodes HS
Stewart, Raymond	Amherst OH	Graduate Non-Degree		Graduate	The Ohio State University
Strine, Elizabeth	Canton OH	Junior	Biology		Wittenberg University
Terrible, Rebecca	Amlin OH	Master's	Natural Resources	Graduate	The Ohio State University
Thelen, Rita	Lima OH	Post-Graduate		Continuing Education	The Ohio State University
Tolene, Ryan	West Carrollton OH	High School Sophomore			West Carrollton HS
Tolliver, Natasha	Columbus OH	High School Junior			Marion-Franklin HS
Travis, Rachel	Cleveland Hts OH	Junior	Biology	Arts and Sciences	Cleveland State University
Trzebuckowski, Tracey	Columbus OH	Graduate Non-Degree	Math, Science & Technology	Graduate	The Ohio State University
Voit, Elizabeth	Seven Hills OH	Graduate Non-Degree		Graduate	The Ohio State University
von Raabe, Philip	Upper Arlington OH	Sophomore	Biological Science		Beloit College
Walker, Laura	Columbus OH	Master's	Geology	Graduate	The Ohio State University
Waller, Neil	Flint MI	Junior		Arts and Sciences	The Ohio State University
Walton, Amelia	Sunbury OH	High School Sophomore			Big Walnut HS
Weaver, Anna	Forest OH	High School Junior			Upper Sandusky HS
Weisgerber, Krissie	Janesville WI	Ph.D.	Env Sci	Graduate	The Ohio State University
Wells, Dwight	Prospect OH	Post-Graduate		Continuing Education	The Ohio State University
Williams, Jeffrey	Pataskala OH	Junior	Fisheries Management	Natural Resources	The Ohio State University
Wilson, Thomas	Cleveland OH	Graduate Non-Degree		Graduate	The Ohio State University
Wirz, Donna	Sidney OH	Graduate Non-Degree		Graduate	The Ohio State University
Witt, Shaun	Dublin OH	Freshman			Cardinal Stritch University
Zack, Rhonda	Brook Park OH	R=Irregular	Vet Med	Veterinary Medicine	The Ohio State University
Zeno, Christopher	Shreve OH	Sophomore	Science Natural & Ent	University College	The Ohio State University

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