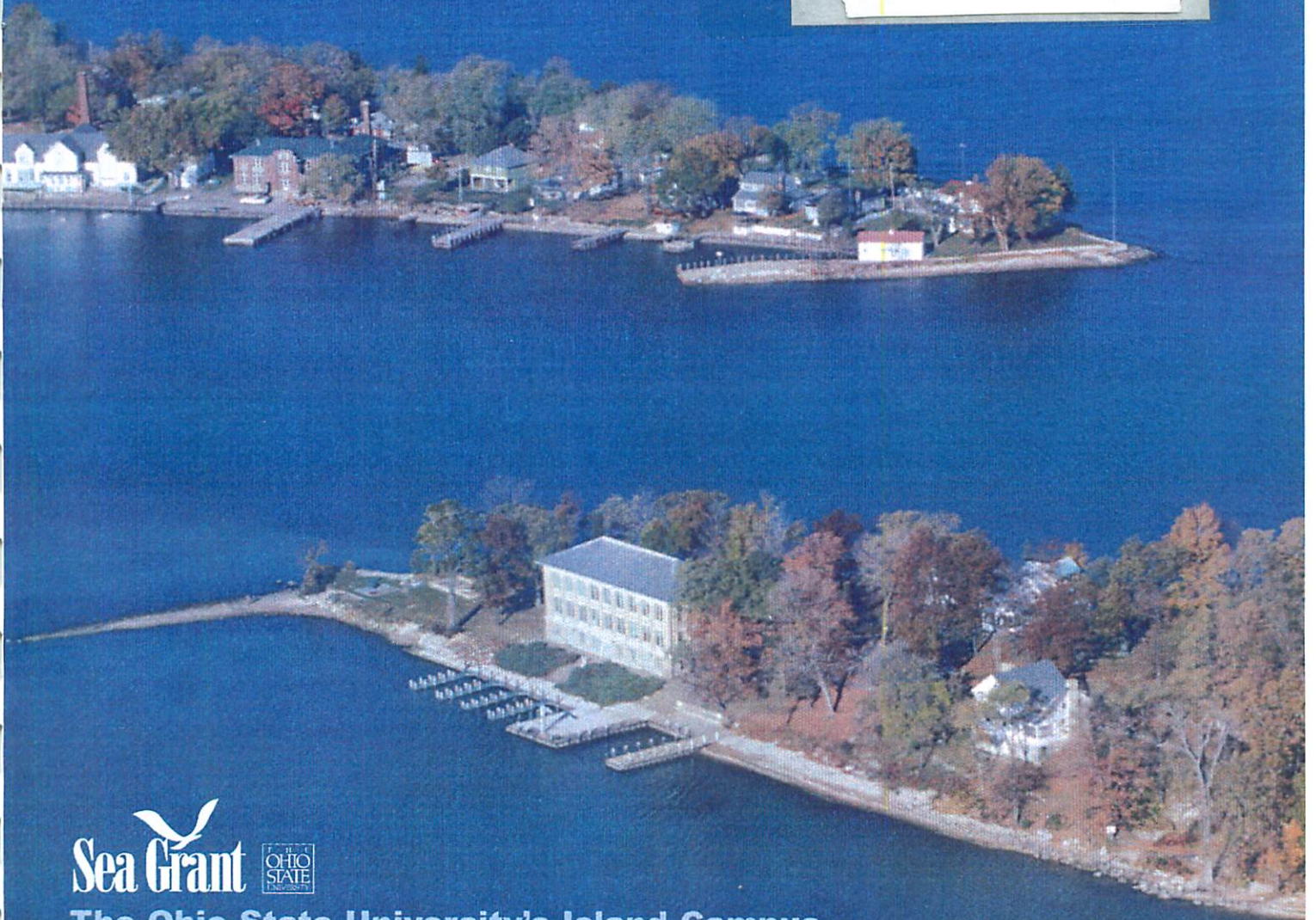


# STONE LABORATORY 2002 PROGRAM REVIEW

Jeffrey M. Reutter, Ph.D., Director



The Ohio State University's Island Campus



# STONE LABORATORY PROGRAM REVIEW 2002

F.T. Stone Laboratory  
School of Natural Resources  
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# FRANZ THEODORE STONE LABORATORY

## 2002 PROGRAM REVIEW

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### 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 island campus of The Ohio State University. The year 2002 was very productive at Stone Laboratory. Enrollment in the summer program in 2002 was 199 students (Figure 1). While the majority of our students come from Ohio State University, since 1990 our summer students have also come from 43 other Ohio colleges, 44 out-of-state colleges, and 302 high schools (Figures 2 and 3). Enrollment of high school students, undergraduate students, and graduate students were all strong in 2002 (Figure 4). The number of credit hours taken (934) surpassed 800 for the 12th consecutive year (Figure 5). Our efforts to enhance opportunities for women in science, initiated in 1989, continue to bear fruit as we now annually enroll more women than men (Figure 6). Efforts to expand the number and diversity of course offerings have met with mixed success. In 2002, a new term course ("Digital and Field Techniques for Coastal Environmental Studies") and two new one-week courses ("Aquatic Environmental Science for Teachers" and "Curriculum Development for Environmental Decision Making") were offered successfully. One new term course ("Great Lakes Maritime Studies") was cancelled due to low enrollment and one new one-week course ("Environmental Chemistry of Soil and Water") was cancelled when faculty members became unavailable. We were also able to offer a one-week course in "Great Lakes Limnology" aboard the USEPA Great Lakes National Program Office vessel the *Lake Guardian*, but had to cancel an attempted offering of "Great Lakes Limnology" in conjunction with NOAA's Great Lakes Environmental Research Laboratory at their Muskegon, Michigan, field station due to low enrollment.

**Supporting Diversity.** 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 enrolled two Young Scholars in 1999, but the program was unable to send any in 2000 due to funding difficulties. Four students from the Young Scholars Program enrolled in 2001 and one during 2002, while the Columbus Public Schools I Know I Can program supported 14 students in 2001 and nine in 2002.

**Workshops, Conferences, and Field Trips.** During the spring and fall, we offer a workshop/conference/tour program for students from grade 4 through adult. This program set new records for the number of groups and the total number of participants each year from 1997-2000 (Figures 7 and 8). Despite the events of 11 September 2001 and a very sluggish economy, 2001 was an excellent year producing the third highest number of groups and participants—162 groups and 5,288 participants. In 2002, our number of groups fell to 153, but we set a new record with 5,755 participants. In 2002 we also set a record for the number of student participants in the workshop program—3,755. While the majority of these students were in the influential middle school years (2,048), we also set a record for high school participants in 2002—975 (Figure 9).

**Research.** The demand for research space at the Laboratory remains very strong. The 77 scientists and students conducting research at the Laboratory in 2002 came from 16 different colleges and agencies and worked on 23 different research projects (Figure 10).

**Scholarships.** Last year was a great year for scholarships at Stone Laboratory, thanks to the Friends of Stone Lab. They awarded 49 scholarships in 2002 (second only to the 57 awarded in 2000) with a total dollar value of \$17, 736, a new record (Figures 11 and 12). However, we are still able to provide scholarships to only about 25% of the students attending Stone Laboratory and cover only about 25% of the cost for those students.

**Endowments.** Since 1995, additions to our endowments through deferred gifts as part of the donor's estate total over \$4,000,000. Clearly 2002 was a banner year for our fundraising efforts. Two new research/education endowments totaling approximately \$1 million (Kate Stone Farms and John L. Crites Research Endowment) were created and another totaling approximately \$1 million is nearing completion.

**Celebrations and Losses.** In 2002 we celebrated the 25<sup>th</sup> anniversary of the Ohio Sea Grant College Program and the 20<sup>th</sup> anniversaries of both the founding of the Friends of Stone Laboratory and Ohio Sea Grant's first State Legislature/Congressional Day on Lake Erie. We mourned the loss of Dr. Walter Carey, former Associate Director of Stone Laboratory, and Franz T. Stone, a strong supporter of Stone Laboratory and the son of Julius Stone, who donated Gibraltar Island to Ohio State University in 1925.

**Equipment and Facilities.** While Stone Laboratory is the oldest freshwater biological field station in the country and has served as Ohio's Lake Erie laboratory since 1895, until this year, we had never received federal funding to improve the Laboratory for the benefit of thousands of students and research scientists each year. Through the hard work and leadership of Senator Mike DeWine, Stone Laboratory received \$348,000 for equipment and facilities this year through NOAA. Most of the new equipment items should arrive during 2003. **Thank you Senator DeWine and NOAA!!** Ohio State University has also committed \$2.3 million and completed the planning and design phases to bring city water and sewer lines from the Village of Put-in-Bay to the Stone Laboratory Research Building and then across the bay to Gibraltar Island. This work should be completed in 2004.

**Web Site and Sea Grant's Electronic Reports.** Our web site ([www.sg.ohio-state.edu](http://www.sg.ohio-state.edu)) was significantly improved in 2001 and 2002 to make it more useful to students, teachers, scientists,

elected officials, and the general public, and to make it handicapped accessible. The site contains copies of *Twine Line*, many of our publications, information on courses and programs at Stone Laboratory, and summaries of all of Ohio Sea Grant research projects. This site, and our electronic reporting system for research projects, were selected as “best management practices” by the National Sea Grant College Program. In 1999, the site had 258,165 hits. In 2000 it had over 571,756. In 2001 it had 988,631 hits, and in 2002 it had 1,623,916 hits. In April 2001 Dr. Reutter made a presentation on the reporting system to the Sea Grant Association and offered the system to all Sea Grant programs. To date 20 programs have requested the system.

## I. INTRODUCTION

Franz Theodore Stone Laboratory, Ohio's Lake Erie Laboratory, is the nation's oldest freshwater biological field station, and the Lake Erie and Island 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 that 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 The 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 (a National Historic Landmark 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.

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 12-20+ years, while the tables cover only 2002, adding to similar tables in reports produced in 2001, 2000, 1999, 1998, 1997 (covering the period 1995-97), and 1995 (covering the period 1988-94.)

## **VISION FOR THE FUTURE**

Our vision is to be universally recognized as the premier freshwater education and research facility in the country. Our education and research programs will be unsurpassed. Our education programs will be models for science education in this country. The results of our research will be used to solve Lake Erie environmental problems and enhance the value of the Lake.

## **MISSION**

The mission of the Franz Theodore Stone Laboratory is to serve The Ohio State University, the Ohio Sea Grant College Program, the State of Ohio, and the people of Ohio as their research, education, and outreach facility on Lake Erie. We must enhance the value of, and improve the management of, our marine and coastal resources through the education, research, and outreach programs conducted at the Laboratory. The Laboratory's programs should address the needs of, and create opportunities for, the following audiences: students in grades 4-12, college undergraduate and graduate students, K-12 teachers, research scientists, decision-makers and elected officials, technical staff in state and federal agencies, and the general public. Within this mission we have several goals:

- 1) Improve the quality of science education in Ohio by creating high-quality, hands-on science education opportunities for students in grade 4 through adults;
- 2) Create opportunities for undergraduate and graduate research training;
- 3) Create special educational opportunities for high school students and teachers;
- 4) Foster more informed decision-making through education and training programs for decision-makers and elected officials; and,
- 5) Encourage and support research on critical issues and problems facing Lake Erie, the Great Lakes, and the environment, providing the science behind more informed management decisions.

## **PROGRAM RELATIONSHIPS AND REPORTING STRUCTURE**

Dr. Jeffrey M. Reutter is Director of the Lake Erie Programs at The Ohio State University: the Ohio Sea Grant College Program, F.T Stone Laboratory, CLEAR, and GLAERC. Stone Laboratory is part of the School of Natural Resources within the College of Food, Agricultural and Environmental Sciences. The Director of Stone Laboratory reports to the Vice President for Agricultural Administration, Dr. Bobby D. Moser. CLEAR is part of The Ohio State University Office of Research and the Director reports to the Vice President for Research, Dr. C. Bradley Moore. Structurally, the Ohio Sea Grant College Program is part of CLEAR, and GLAERC is part of Sea Grant, but operationally, Sea Grant has become the umbrella organization for the other three: Stone Laboratory, CLEAR, and GLAERC. This operational strategy takes advantage of Sea Grant's broader mission—research, education, and outreach. Stone Laboratory is the shared research facility for GLAERC and the base for many of Ohio Sea Grant's research, education, and outreach programs.

## II. OVERVIEW

### EDUCATION

Courses for College Credit. Stone Laboratory began offering regular courses for college credit in 1900. Each summer The Ohio State University offers 18-26 courses at Stone Laboratory. All courses take advantage of the Laboratory's unique location and capabilities and emphasize a hands-on approach to learning with a combination of lecture, laboratory, and field experience. Enrollment is limited to 12-20 students per course. The curriculum is rigorous with students in class from 8:00 a.m. to 4:00 p.m. 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. The initial courses for teachers—Marine and Aquatic Education, Great Lakes Education Workshop, and Global Change Education—were developed by faculty from the Ohio Sea Grant Education Program and use curriculum activities and reference materials developed with Sea Grant support as text. In addition to these instructional methods courses, science content courses for teachers introduce fundamentals of biological and earth systems topics where they can best be taught—in field settings. Both methods and subject matter courses meet Professional Development Standards established by the National Science Education Standards, and together they assist teachers in preparing their K-12 students for mandated state testing programs.

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—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 increased significantly in the 1990s. During the 1980s average annual enrollment was approximately 57 students. From 1991-2002, average annual enrollment jumped to over 200 students—an increase of over 350 percent (Figure 1). Furthermore, from 1990-2002, students from 44 Ohio colleges and universities, 44 out-of-state colleges and universities, and 302 high schools participated in the Laboratory's courses (Figure 3).



Aquatic Science Field Trips, Workshops, Tours, 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 adult. For each grade level 4-12, the workshop is matched with Ohio Science Education Standards to enhance the classroom-based curriculum. These workshops range in duration from 1-3 days and generally include a science cruise on one of the Laboratory's research vessels, the *MV Bio-Lab* or the *MV Gibraltar III*. Students collect samples using fish trawls, bottom samplers, plankton nets, electronic probes, etc. and return with them to the Laboratory, where they 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/conference/tour program has increased from approximately 1,850 to over 5,700 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 1999, the number of projects dropped to 17, the number of institutions involved dropped to 13, and the number of principal investigators dropped to 21. However, the projects were larger and the number of graduate students and technicians working on the projects set a record at 55. In 2000, the number of projects increased to 23, the number of institutions increased to 14, the number on principal investigators increased to 24, and we set another record with 61 students and technicians working at the Laboratory. The year of 2001 was very similar in numbers to 2000, with 22 projects, 20 investigators, and 57 students and technicians from 15 institutions, as was 2002 with 23 projects, 24 investigators, and 53 students and technicians from 16 institutions. 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 Lake Erie ecosystem, 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 seven more. These endowments, with additional contributions from organizations, clubs, industries, and individuals, support dozens of student scholarships each year.

## III. STONE LABORATORY HISTORY

**Note:** 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 Ihnat. 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 \$500,000 to complete the renovation of the building exterior that was accomplished in 2001.

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. THE LABORATORY IN 2002 AND RECENT YEARS**

##### **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. 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. Dr. Rosanne Fortner has taught at the Laboratory since the mid-1980s and became our Associate Director on 1 June 2000. Dr. R. Christopher Stanton was the Assistant to the Director from August 2000 to August 2001 and began teaching at the Laboratory in 1999. Bonita Cordi has been the Office Associate and Receptionist in Columbus since October 1999. Karen Ricker was hired as our Communications Coordinator and the Assistant Director of Ohio Sea Grant in January 1998. Kelly Dress became the Office Associate at Put-in-Bay in April 1998. Matt Thomas became the Assistant Laboratory Manager at Put-in-Bay in

June 1999 and the Diving Safety Officer for the Laboratory and the University in October 1999. Table 1 lists the Laboratory's administrative staff, teaching faculty, graduate teaching associates, research staff, student assistants, and office and technical staff for 2002.

## **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."

Historical Location within the University. 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 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 departments still must approve the course offerings, the faculty members selected, and the teaching assistants (TAs). 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. The impact of these changes is readily apparent in Figure 1.

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 the Ohio Sea Grant College Program and Stone Laboratory, and Ohio Sea Grant's Education Coordinator, Dr. Rosanne Fortner, is also the Associate Director of Stone Laboratory. These arrangements guarantee maximum cooperation and collaboration between the programs, guarantee that the State of Ohio will receive the maximum benefit from the programs, and eliminate any opportunity for duplication of effort.

The Ohio Sea Grant College Program at The Ohio State University is one of 30 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.

Within Ohio Sea Grant, Stone Laboratory 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 also 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, *Twine Line*, thus increasing the readership of both. It should also be noted that *Twine Line* was selected as the best newsletter in the country at Sea Grant Week in Oregon in 1999. Furthermore, in March 2001, the Stone Laboratory Brochure (including the poster and flier) was selected as the best brochure in the country.

## 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 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. 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." The 1999 curriculum was the same as 1998 with two exceptions, we offered two new one-week courses for teachers—"Ornithology for Teachers" and "Lake Erie Shipboard Research for Teachers" on USEPA's 180-ft research vessel, the *Lake Guardian*. New courses offered in 2000 included "Biological Oceanography for Educators" (a one-week course, EEOB 694), "National Curricula for Water Education" (a two credit hour course taught on three Sundays), and "Marine and Aquatic Education: Tropical Studies" (a 10-day course at a marine lab in Jamaica offered jointly with SUNY, Buffalo). New Courses offered in 2001 included "Ichthyoplankton Identification Workshop" (a one-day, one-hour course, EEOB 692), "Waterfowl Ecology" (a one-week course, Natural Resources 694), and "Stream Ecology for Teachers" (a one-week course offered at Old Woman Creek, EEOB 694). Three other new courses were attempted in 2001 but cancelled due to low enrollment: "Natural History of Ohio" (a term course, Natural Resources 510), "Outdoor Recreation Behavior" (a one-week course, Natural Resources 841), and "Watershed, Estuarine and Coastal Ecology" (a term course, Natural Resources and Civil

Engineering 694). New courses offered in 2002 included, "Great Lakes Limnology," a one-week course aboard USEPA's 180-ft research vessel, the *Lake Guardian*, for teachers and graduate students; a term course, "Digital and Field Techniques for Coastal Environment Studies" (CE/NR 797), supported by the National Science Foundation's Division of Undergraduate Education; and a one-week educators course "Curriculum Development for Environmental Decision Making" (NR 694), supported by an Ohio Sea Grant's education project. Also new in 2002, the Thursday night lecture series was institutionalized with its own course number [NR 798] for both graduate and undergraduate credit. 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 the 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 identify careers. It was also 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 worked 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 1995-02. 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 were 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, from 1998-02, 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 this important audience. 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. William 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 go by van 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" (Entomology 520). This course has been very popular and well reviewed by students and has been offered annually since 1996.

In late 1998 and early 1999, Dr. Reutter worked with John Condit from the Department of Evolution, Ecology and Organismal Biology to develop a new ornithology course for teachers. "Ornithology for Teachers" (EEOB 522) was offered successfully for the first time in 1999 and again in 2000, 2001, and 2002.

In late 1998 and early 1999, Dr. Reutter worked with USEPA's Great Lakes National Program Office to develop a one-week course for teachers taught entirely aboard the USEPA, 180-ft., research vessel, the *Lake Guardian*. The course was taught by Drs. Rosanne Fortner and David Culver and two scientists from USEPA. It was a huge success and was repeated in 2002 and will be offered again whenever we can get participation from EPA.



In 2000 and 2001 Dr. Reutter worked with Dr. Joseph Holomuzki from the OSU Mansfield Campus and the staff at the Old Woman Creek NERR to develop a one-week course for teachers, "Stream Ecology for Teachers" (EEOB 694), that was taught successfully in 2001 and again in 2003. In 2002 Dr. Fortner worked with new faculty in environmental communications to teach "Curriculum Development for Environmental Decision Making" (NR 694). Projects developed by teachers in that course are now on an Internet site for use by others [<http://earthsys.ag.ohio-state.edu/decision/>].

## **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 that 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 including: 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. We awarded seven in 1998 and six in 1999, 2000, 2001 and 2002. This has been a great opportunity to reward and recruit outstanding students and we have found that the majority of the students do indeed attend the Laboratory and use the scholarship.

## **GUEST LECTURES**

In 2002, 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 Housing, Food Service and Event Centers, these lecturers are encouraged to spend additional time at the Laboratory and participate in some of the classes. Course credit is now available for student participants in the seminar series.

## **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 2000 we set records for the number of groups (174) and the number of participants (5,660), and in the six years from 1995-2000, we hosted 816 groups with a total of 27,707 participants, or an average of 136 groups and 4,618 participants per year (Figures 7-9). In 2001, we were on a record setting pace when the event of 9/11/01 derailed the program for a time. However, it was still one of our best years with 162 groups and 5,288 participants (Table 4). In 2002, our number of groups fell to 153, but we set a new record with 5,755 participants. In 2002 we also set a record for the number of student participants in the workshop program—3,755. While the majority of these students were in the influential middle school years (2,048), we also set a record for high school participants in 2002—975 (Figure 9).

## **SCHOLARSHIPS**

In 2000, 57 Stone Laboratory students (new record) received scholarships valued at \$14,389 from the Friends of Stone Laboratory (Table 4). Twenty-seven of the scholarship recipients were high school students and 30 were college students. From 1996-2000, 225 students received a total of \$63,357 in scholarship support to attend Stone Laboratory (Figures 11 and 12). These numbers have been gradually increasing each year. During the previous five years, 1991-95, we awarded 156 scholarships totaling \$43,146. In 2001, we awarded 32 scholarships totaling \$13,005. In 2002 we awarded 49 scholarships (32 to college students and 17 to high school students) with a total dollar value of \$17,736, a new record (Figures 11 and 12).

## **ENROLLMENT**

During the 1980s enrollment at Stone Laboratory averaged 55-60 students per year. Enrollment 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, 214 in 1998, 222 in 1999, 201 in 2000, 185 in 2001, and 199 in 2002 (Figure 1 and Table 6). The 199 students that attended during the summer of 2002 came from 22 colleges and universities and 51 high schools (Figure 3).

## **V. FINAL SUMMARY AND PLANS FOR THE NEAR FUTURE**

The development of our program of introductory courses and our new courses for educators, 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 other Ohio colleges and universities, out-of-state colleges, and Ohio State University (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 adult. 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 set a record in 2001 (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 stonework was completed in 2000. In 1999 we initiated a contract with an architectural firm to develop the plan for the renovation and reuse of the interior of the structure. This plan calls for the construction of 13 private rooms with bathrooms, a kitchen and dining room, a conference room capable of seating 30, several small meeting rooms, and air-conditioning throughout. Our ultimate goal is to use the Castle as an education and outreach/conference center for Stone Laboratory. We believe the Castle will attract influential groups that can help the Laboratory and the University with fund raising and enhance our ability to influence resource management decisions in the Great Lakes region.

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 added four Pentium machines, and in 2000, with support from the OSU Office of Research, we upgraded to 14 new computers. In the future we hope to add a node from the Ohio Super Computer Center.

The *Gibraltar II* was decommissioned in 1997. Prior to the 1999 season, the Office of Physical Facilities replaced the engine and cabin on the *BioLab*. At the end of 1999 we took possession of the 1981, 42-foot *Explorer* from the Ohio Division of Wildlife to replace the *Gibraltar II* and renamed it the *Gibraltar III*. The vessel cost \$45,000 and the Friends of Stone Laboratory contributed an additional \$15,000 to split the cost of an engine rebuild with the Office of Physical Facilities. This vessel has more than twice the work area of the *BioLab* and is about twice as fast. It has greatly increased the capabilities of the program.

Enhancing communication capabilities at the Laboratory has been a very high priority. In 1999, with assistance from UNITS, Housing and Food Service, Physical Facilities, and the Office of Research, a

T1 line was installed at the Laboratory. A telephone and Internet connection was placed in each classroom, dormitory room, cottage, our main office, and the Research Building. This should allow us to do distance learning/teaching from Stone Laboratory to classrooms throughout the state, and to transmit research data anywhere in the world. This system was fully operational when classes began in 2000. In 2001, with assistance from the Office of Research, we purchased and successfully deployed a multi-probe sonde to study and monitor water quality in Lake Erie. In 2003 we anticipate purchasing four more and beginning a sophisticated research effort on the "Dead Zone" in the central basin of Lake Erie.

In 2001, Senator Mike DeWine was successful in placing \$350,000 in the NOAA budget for Stone Laboratory. These funds will be awarded in 2002 and have been used to purchase three 15-passenger vans, 30 microscopes, a 25-ft research boat, the construction of an educational Kiosk, the final \$12,000 payment on the *Gibraltar III*, water quality monitoring buoys for Lake Erie, and renovations in the Research Building.

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 process has been used annually ever since.

We will continue to host groups of leaders and Great Lakes decision-makers and hope this program will grow when Cooke Castle is completed.

- In 2001 we co-sponsored the first Put-in-Bay Legislative Day with Representative Chris Redfern and Senator Randy Gardner. This program attracted over 45 elected officials.
- In February 2002 we hosted the fourth Sea Grant/Stone Laboratory Winter Lecture in Columbus. This program focused on aquatic research conducted at the Columbus Zoo.
- In May 2002, we hosted the Annual Meeting of the Great Lakes Aquatic Nuisance Species Panel at Stone Laboratory.
- In June 2002, we hosted the Nature Conservancy's Island Research Colloquium at Stone Laboratory.
- In July 2002, Ohio Sea Grant hosted its 14<sup>th</sup> State Legislature/Congressional Day on Lake Erie. The all-day event attracted elected officials and decision makers from over 25 offices. This was also the 20<sup>th</sup> anniversary of our first program in 1982 and the 25<sup>th</sup> anniversary of the Ohio Sea Grant College Program.
- In September 2002 we hosted the Annual Meeting of the International Association of Amusement Parks and Attractions at Stone Laboratory.

## VI. MILESTONES IN THE HISTORY OF STONE LABORATORY

- 1895 Professor David S. Kellicott, Chairman of the Department of Zoology and Entomology, presents a proposal to the University to establish a field station for the study of biology at Lake Erie. The University approves the project, appropriating \$350 for the construction of a second floor on the State Fish Hatchery in Sandusky.
- 1896 Professor David S. Kellicott is named the first director of the Lake Laboratory and operates the Laboratory for special studies during the summer.
- 1899 Professor Herbert C. Osborn is named the second director upon the death of Professor Kellicott.
- 1900 The first courses are offered at the Lake Laboratory.
- 1903 The University obtains a 50-year lease for property on Sandusky Bay at Cedar Point, erects a frame building at a cost of \$3,376, and moves the Lake Laboratory to this new site.
- 1918 The Lake Laboratory moves to the upper story of the State Fish Hatchery at Put-in-Bay on South Bass Island; an adjacent lot is purchased by the University.
- 1925 Mr. Julius F. Stone, Chairman of the Board of Trustees, acquires Gibraltar Island in Put-in-Bay Harbor from the Jay Cooke family and presents it to the University. In accepting the gift, the University changes the name to Franz Theodore Stone Laboratory in honor of Mr. Stone's father.
- 1926 The Laboratory is moved to Gibraltar Island and utilizes the two buildings on the island, Cooke Castle (1865) and Barney Cottage (1907). A construction program, which includes a new laboratory building, dining hall and two housing units, Stone Cottage and Gibraltar House, is initiated in 1926 and completed in 1930.
- 1928 "Periodic oscillations in Lake Erie," by Dr. F.H. Kreeker, contribution number 1 of a new series of papers, is published by Stone Laboratory. Contributions 2 through 13 are published from 1929 to 1974.
- 1929 The Franz Theodore Stone Laboratory on Gibraltar Island is formally dedicated.
- 1934 President George W. Rightmire appoints an Advisory Committee to study the Laboratory and plan for future development. The committee recommends 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 is named the fourth director, the first to be appointed to a full-time position. Professor Thomas H. Langlois serves as assistant director from 1936 to 1938.

1938 Professor Thomas H. Langlois is named the fifth director upon the resignation of Professor DeLong.

The Franz Theodore Stone Laboratory is 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 are approved; Drs. Charles F. Walker and David C. Chandler are appointed.

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

1939 Professor Milton B. Trautman joins the staff of the Laboratory.

1940 The Federal Fish Hatchery on Peach Point, South Bass Island, is transferred to the University. This facility includes the main hatchery building (converted to the principal research building of the Laboratory), superintendent's residence (converted to the Laboratory Office and Library) and a shop building.

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

1947 The Laboratory purchases a 37-foot steel research boat, the *Bio-Lab*.

1951 The Laboratory name is changed to the Franz Theodore Stone Institute of Hydrobiology.

1953 The Laboratory purchases a 30-foot passenger boat, the *Gibraltar II*.

1955 The Laboratory is renamed Franz Theodore Stone Laboratory, and becomes a program of the Natural Resources Institute, College of Agriculture and Home Economics. The year-round research program is suspended.

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

1964 The bequest of Professor Mary D. Rogick permits the purchase of two faculty housing units, Sycamore Cottage and Rogick Cottage near Peach Point.

1966 The administration of Stone Laboratory is transferred to the new College of Biological Sciences.

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

1967 The Hydrospheric Sciences Committee recommend establishment of a research center at Lake Erie.

- 1970 The Coast Guard Lighthouse on the south point of South Bass Island is transferred to the University and converted to a radiobiology laboratory and faculty housing unit.
- 1971 The Center for Lake Erie Area Research is established with facilities at Stone Laboratory.
- 1973 The summer instructional program is suspended and no regular courses are offered. Students attend in independent and group study courses.

The President's Task Force on Stone Laboratory recommends continuation of research and instruction at the Lake Erie field station.

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

A lease agreement is 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 are reinstated at Stone Laboratory.
- 1977 A Sea Grant education project is funded with Dr. Victor Mayer as the principal investigator and Dr. Rosanne Fortner comes to Ohio State to work on the project.
- 1978 The Ohio Sea Grant Program is established with one research project to market underutilized fish species, one education project working partially at the Laboratory, and one extension agent, Fred Snyder, housed within the offices of the Ohio Division of Wildlife in Sandusky.
- 1980 The 50th Anniversary of Stone Laboratory on Gibraltar Island is 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, takes place.
- 1982 The Ohio State University Board of Trustees holds a summer meeting at Stone Laboratory.

Ohio Sea Grant sponsors the first Congressional Day on Lake Erie.

The Ohio General Assembly provides \$950,000 for capital improvements at Stone Laboratory.

Dr. Jeffrey M. Reutter is named Associate Director.

- 1983 A Scholarship Endowment is established by the Friends of Stone Laboratory.

Ohio Sea Grant sponsors the second Congressional Day on Lake Erie.

- 1984 Sustaining and Visiting Professorship Endowments are established by the Friends of Stone Laboratory.

The Lake Erie Laboratory Visitors Center is created, with initial displays built by OSU Environmental Interpretation students led by Drs. Gary Mullins and Rosanne Fortner.

Ohio Sea Grant expands Congressional Day to include the State Legislature as Ohio Sea Grant's State Legislature/Congressional Day on Lake Erie.

The first course for teachers (NR/EDST 614, Marine and Aquatic Education) is offered by Drs. Rosanne Fortner and Victor Mayer.

- 1985 Construction is 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 December 84 - December 85 while Dr. Charles E. Herdendorf was on sabbatical in New Zealand.

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.

Governor Richard Celeste, at the request of Ohio Sea Grant, declares 1986 "The Year of the Lake" for Lake Erie.

- 1987 John R. Hageman is named Laboratory Manager.

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

Dr. Charles E. Herdendorf retires 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 following the retirement of Dr. Charles E. Herdendorf.

- 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 for teachers, 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 Reporting lines for Stone Laboratory were 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.

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. In subsequent years Cleveland State University, Ohio University, and Wright State University joined the consortium.

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 IV.

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 Trisler, Wittenberg University, receives the "Outstanding Visiting Professor Award."

Stone Laboratory receives the first "Lake Erie Award" from the Ohio Lake Erie Commission in recognition of the Laboratory's many contributions to education, research and the improvement of the Lake Erie ecosystem.

1996 Waldock Gazebo and Lakeview Pavilion are built on Gibraltar Island using donations from Jack Waldock, 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 Waldock and Bobby Moser place capsules into the base of Waldock 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 Trisler, Wittenberg University, receives the "Outstanding Visiting Professor Award" for the second time.

1997 Ohio Sea Grant celebrates its 20<sup>th</sup> anniversary with its 10<sup>th</sup> 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.

A remotely operated vehicle (ROV) is purchased for the Laboratory by the Office of Research and Ohio Sea Grant.

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 set records for the number of scholarships awarded (43) and the total value of the scholarships (\$13,632).

Melissa Haltuch is hired as the 1st ROV operator.

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.

1999 The Laboratory and the Friends of Stone Laboratory set records for the number of scholarships awarded (49) and the total value of the scholarships (\$14,860).

Matt Thomas is hired as the first Assistant Laboratory Manager and the University's Diving Safety Officer.

Dr. Rosanne W. Fortner is hired as the Associate Director.

On 2 July, the University Board of Trustees meets at the Laboratory for the first time in 17 years.

On 9 July, Ohio Sea Grant and Stone Laboratory host the 11<sup>th</sup> State Legislature/Congressional Day on Lake Erie.

New carpeting and air conditioning/heat installed in Lecture Hall.

Ornithology for Teachers is offered for the first time.

Collaboration between Stone Laboratory, Ohio Sea Grant, USEPA, and the EPA Great Lakes National Program Office bring about the offering of a new 1-week course for teachers aboard EPA's 180-ft research vessel, the *Lake Guardian*.

The total value of the 6 endowments of the Friends of Stone Laboratory surpasses \$500,000.

Enrollment in summer courses reaches 222—the second highest total in history. A total of 125 OSU students enroll—the highest number in history.

During the 1990's, students from 40 Ohio colleges, 31 out-of-state colleges, and 260 high schools take courses at Stone Laboratory.

The workshop, tour, and conference program sets records for the number of groups (173) and the number of participants (5,566).

Dr. David L. Moore, Utica College of Syracuse University, is selected as the "Outstanding Visiting Professor."

2000 The Laboratory and the Friends of Stone Laboratory sets records for the number of scholarships awarded—57.

On 22 July, Ohio Sea Grant and Stone Laboratory host the 12<sup>th</sup> State Legislature/Congressional Day on Lake Erie.

The workshop, tour, and conference program sets records for the number of groups (174) and the number of participants (5,660).

Dr. R. Chris Stanton is hired as the Assistant to the Director, a newly-created post-doctoral position.

A plan for the renovation of the Castle is developed and approved. The porches are replaced, drainage is repaired, and masonry joints are repointed completing the exterior renovation.

With the assistance of the Friends of Stone Laboratory, the Ohio Division of Wildlife, and the Office of Physical Facilities, we purchase and renovate a research vessel from the Division of Wildlife—the 42-foot, *Explorer*, which is renamed the *Gibraltar III* when the repairs are completed and the vessel is documented.

The Ohio Sea Grant College Program receives the 2000 Lake Erie Award from the Lake Erie Commission.

The first comprehensive strategic plan for the entire program, Ohio Sea Grant, Stone Laboratory, CLEAR (Center for Lake Erie Area Research), and GLAERC (Great Lakes Aquatic Ecosystem Research Consortium) is completed and built around the strategic plan for the National Sea Grant College Program and the Academic Plan for The Ohio State University.

The entire program goes through an extensive review by a Program Assessment Team from the National Sea Grant College Program and receives the highest possible rating: Excellent.

A monitoring instrument is deployed off the north side of Gibraltar Island, beginning the Lake Erie Monitoring Network (LEMNet).

With the assistance of UNITS, Physical Facilities, Housing and Food Service, the University Office of Research, and the FOSL, Stone Laboratory gets a T1 line for telephone and Internet communication. Telephones and Internet connections in all rooms allow 5-digit dialing to main campus and research data transmission worldwide.

The Office of Research at Ohio State donates \$50,000 to purchase equipment including: 14 new computers, a laptop computer and LCD projector, an electro-shocker, two hand-held GPS units, a GPS unit for the *Gibraltar III*, a water quality data recorder for our monitoring program, two new trawls, and more.

Housing and Food Service donates chairs for the Lecture Hall. The FOSL clean and transport them to the Laboratory.

Physical Facilities donates 39 new trees and shrubs. The FOSL plant them on Gibraltar Island.

The Council of Great Lakes Research Managers of the International Joint Commission meets at Stone Laboratory for the first time.

Dr. Michael Hoggarth, Otterbein College, is named “Outstanding Visiting Professor.”

2001 In May the main office on campus moves to newly renovated space in The Ohio State University Research Center. The cost of renovation, \$585,000 was provided by Ohio State University.

In June 2001 Ohio Sea Grant and Stone Laboratory host the first Lake Erie Leadership Institute for Newly Elected Officials. Ten offices are represented.

In July 2001, Ohio Sea Grant and Stone Laboratory host a special Put-in-Bay Legislative Day developed by State Representative Chris Redfern with the village of Put-in-Bay and a number of other sponsors. Over 45 State Representatives and Senators attended.

While Stone Laboratory is the oldest freshwater biological field station in the country and has served as Ohio's Lake Erie laboratory since 1895, until this year, it had never received federal funding to improve the Laboratory for the benefit of thousands of students and research scientists each year. Through the hard work and leadership of Senator Mike DeWine, Stone Laboratory receives \$350,000 for equipment and facilities.

Friends of Stone Laboratory celebrate their 20<sup>th</sup> anniversary. The Friends are composed of former students and faculty and just "friends of Lake Erie" who banded together in 1981 to upgrade the Laboratory's facilities and equipment, raise money for scholarships, bring in more outstanding faculty members, make it easier for non-OSU students to attend the Laboratory, and, in general, improve the quality of the research, education, and outreach programs conducted at Stone Laboratory. Annually, the group of about 500 members donates thousands of dollars and person-hours to the Laboratory and Lake Erie. They have established 6 endowments and 4 general fund-raising accounts valued at more than \$600,000. In the last 10 years they have awarded 400 scholarships valued at approximately \$115,000 to students at colleges and universities all over Ohio, to help them attend Stone Laboratory. In 1996 the FOSL began awarding scholarships for outstanding science projects at the Ohio Academy of Science's State Science Day. To date, they have honored and awarded scholarships to 34 high school students from all over Ohio and they have purchased over \$100,000 of equipment to support research and courses at Stone Laboratory.

The Stone Laboratory Brochure and Flier took first place in the brochures category during the publications competition at Sea Grant Week 2001.

Dr. Michael A. Hoggarth, Otterbein College, and Dr. David L. Moore, Utica College of Syracuse University, share the "Outstanding Visiting Professor Award."

2002 The FOSL award 49 scholarships (32 to college students and 17 to high school students) with a total dollar value of \$17,736, a new record.

We set a new record with 5,755 participants in the workshop program. In 2002 we also set a record for the number of student participants in the workshop program—3,755. While the majority of these students were in the influential middle school years (2,048), we also set a record for high school participants in 2002—975.

On 19 July 2002, Ohio Sea Grant and Stone Laboratory host their 14<sup>th</sup> State Legislature/Congressional Day on Lake Erie. The all-day event attracts elected officials and decision makers from over 25 offices. This is also the 20<sup>th</sup> anniversary of our first program in 1982 and the 25<sup>th</sup> anniversary of the Ohio Sea Grant College Program.

The University approves plans to bring village sewer and water from Put-in-Bay to the Research Building and then across to Gibraltar--\$2.7 million.

Dr. Michael A. Hoggarth, Otterbein College; Dr. C. Lavett Smith, American Museum of Natural History; and Dr. Carmen E. Trisler, Wittenberg University, share the “Outstanding Visiting Professor Award.”

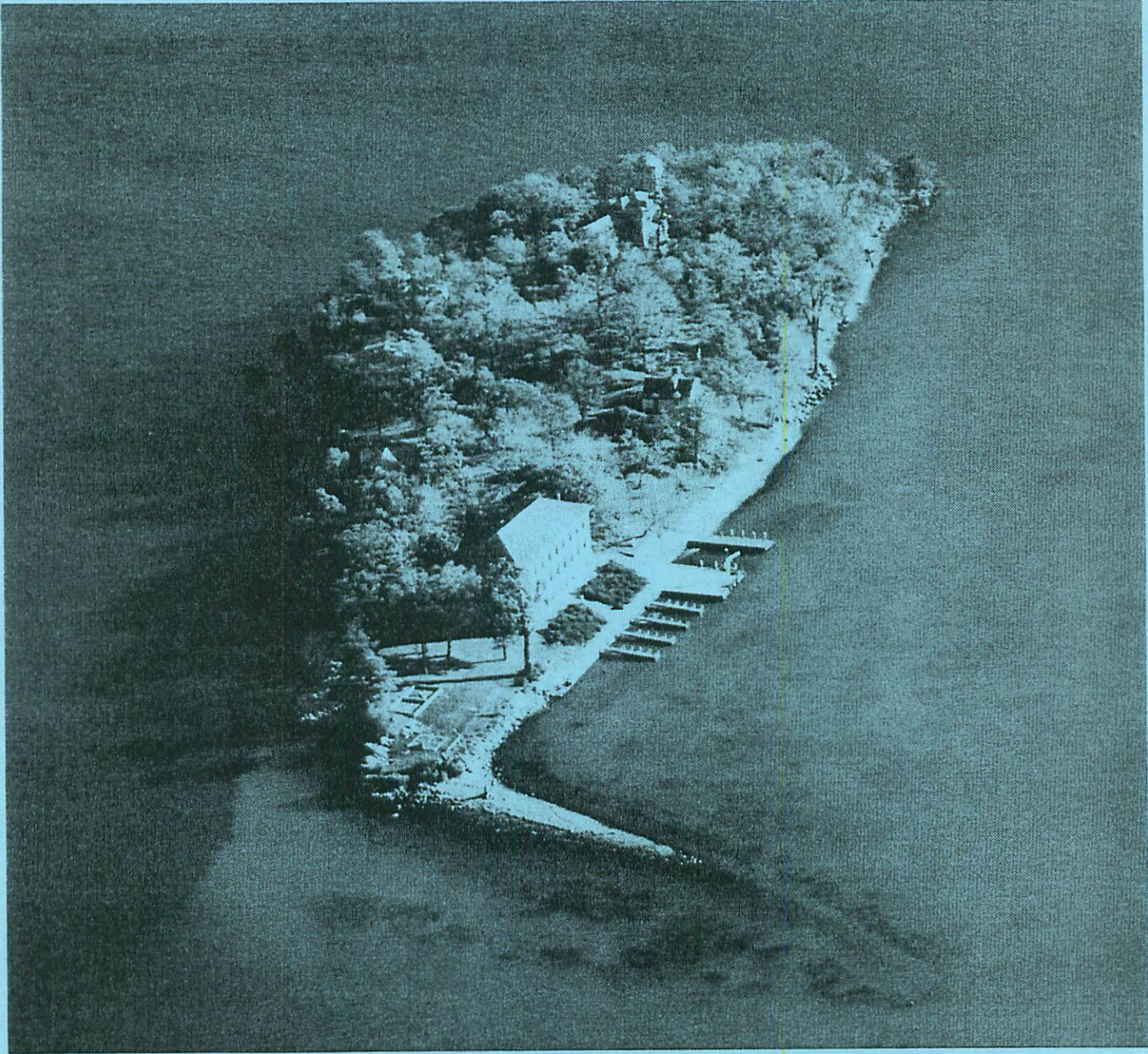
The Friends of Stone Laboratory partner with the Young Buckeyes Club and the College of Biological Sciences Alumni Society to host the first “Buckeye Island Hop” at Stone Laboratory. Groups work at Stone Lab, the South Bass Island State Park, and the Island Historical Society.

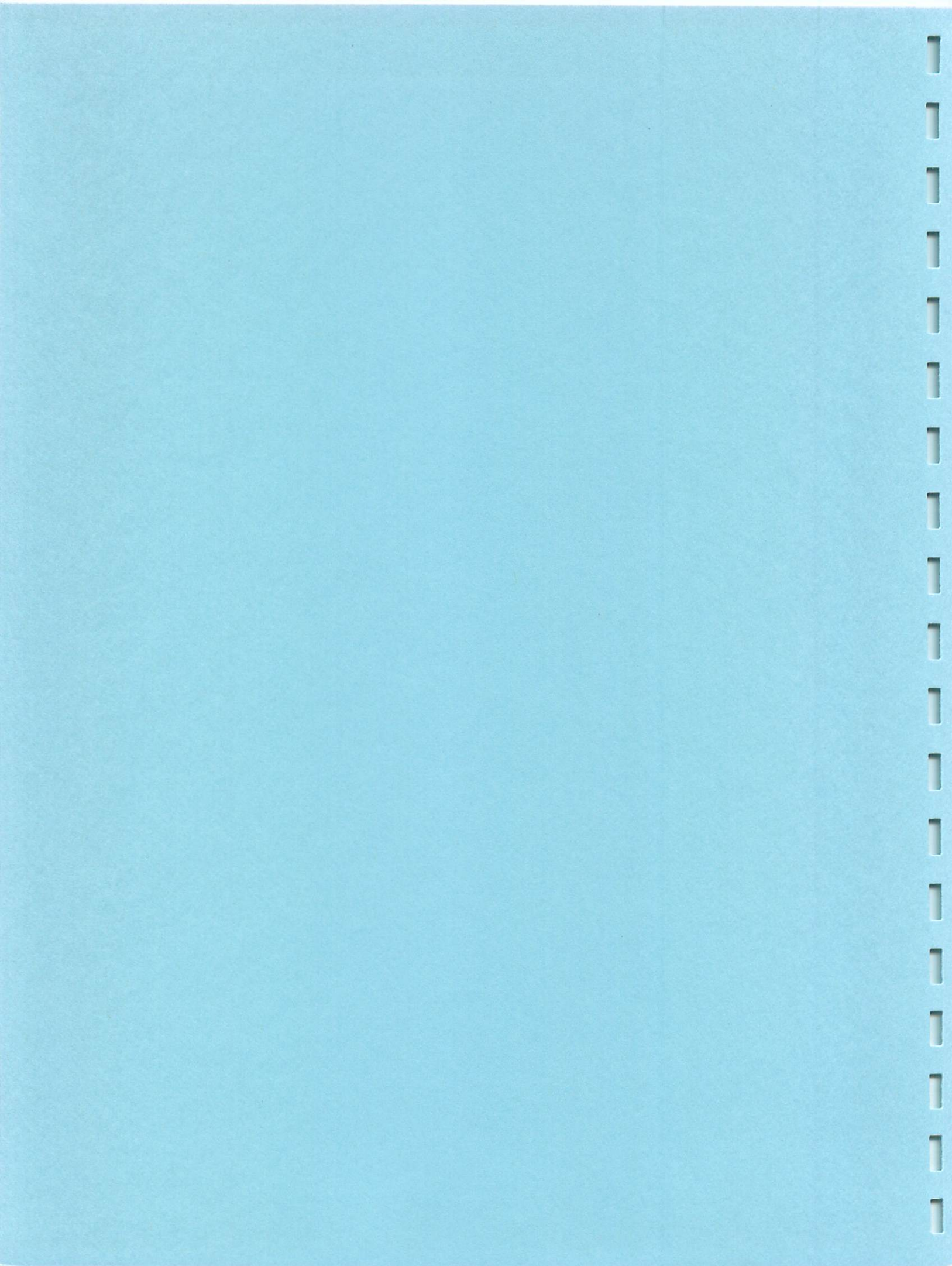
The John L. Crites Research Endowment at Stone Laboratory is created with gifts from the sale of John Crites numbered prints of Stone Laboratory, the Research Building, and Cooke Castle.

The Franz T. Stone Research Endowment at Stone Laboratory is created with proceeds from the donation of two farms in the will of Kate Stone.



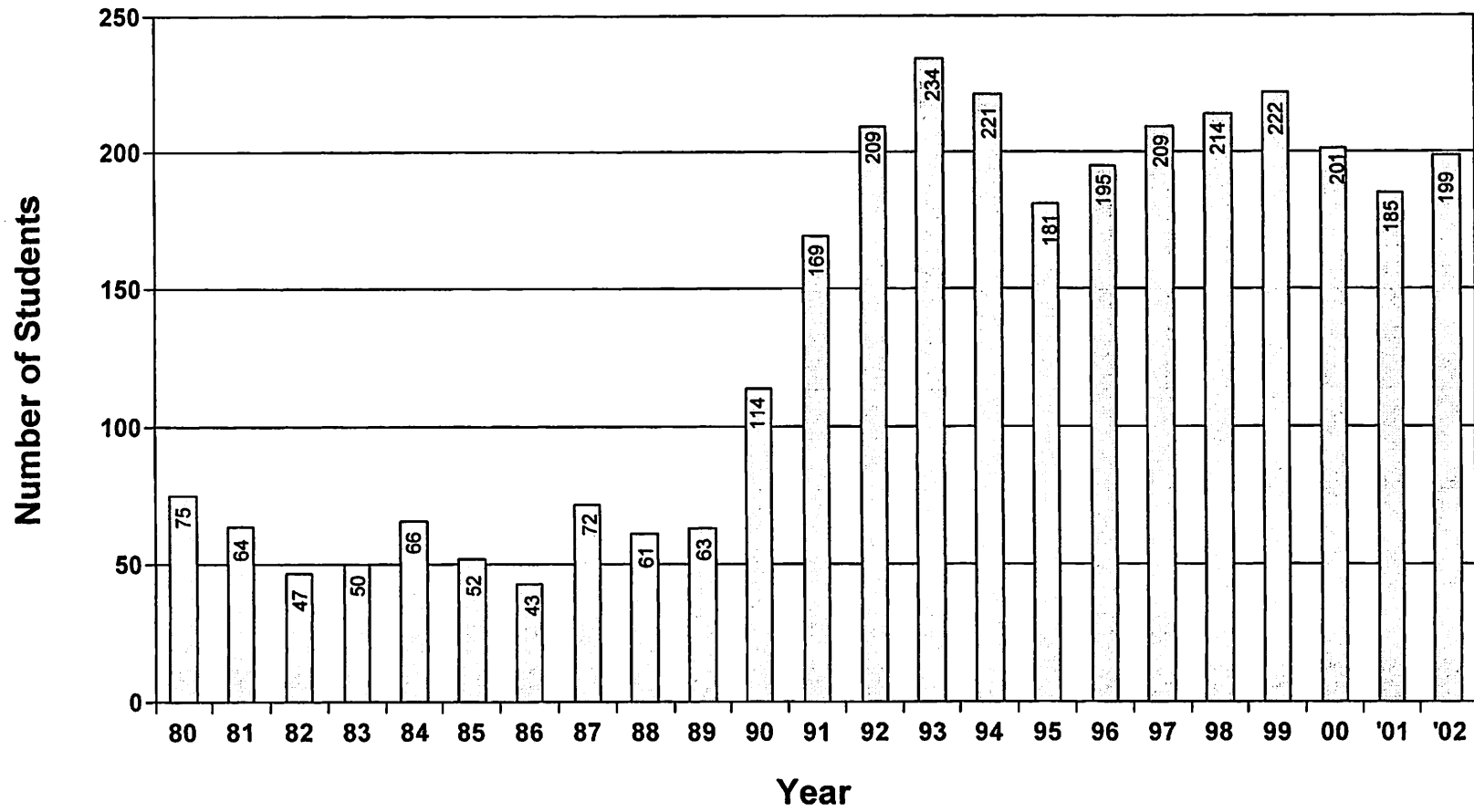
# STONE LABORATORY 2002 PROGRAM REVIEW FIGURES





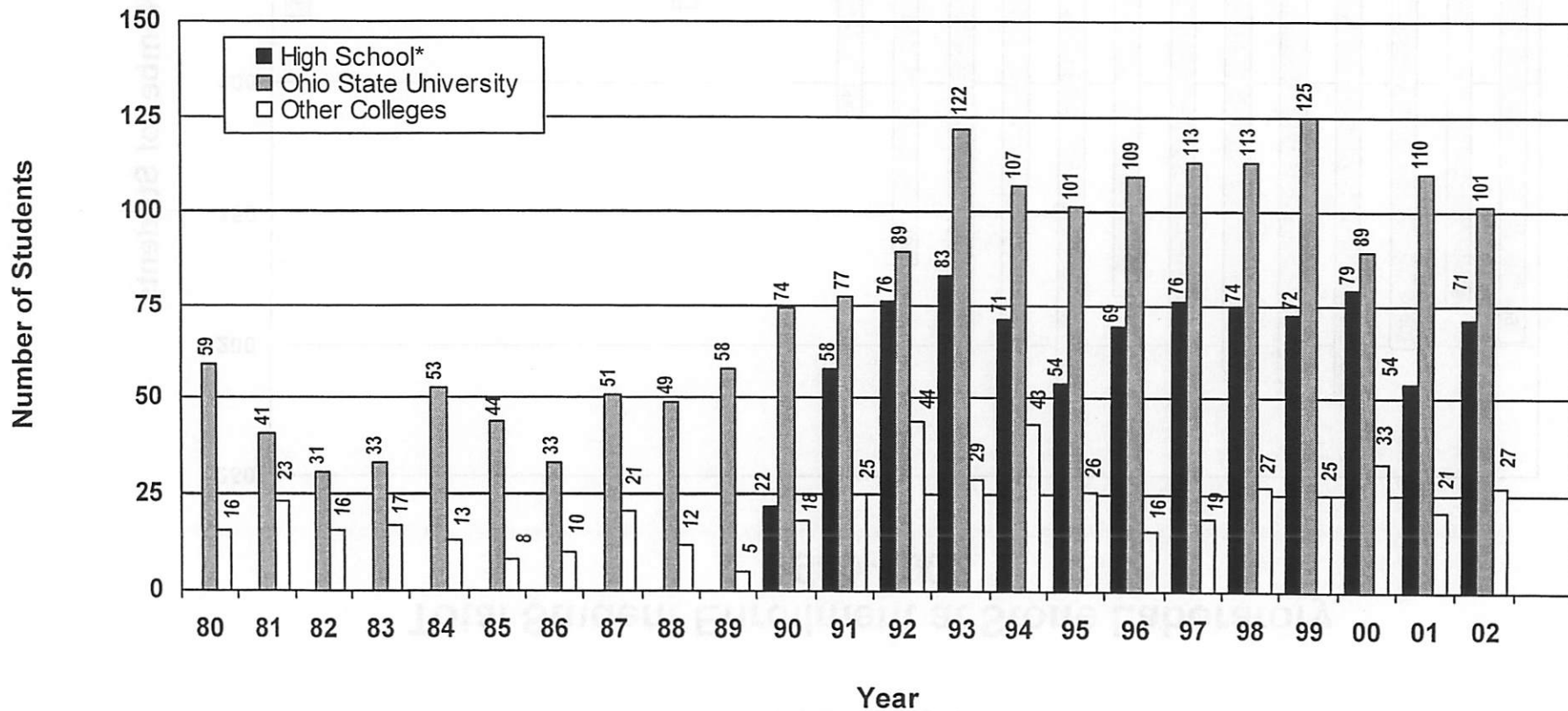
**FIGURE 1**

**Total Student Enrollment at Stone Laboratory  
1980-2002**



## FIGURE 2

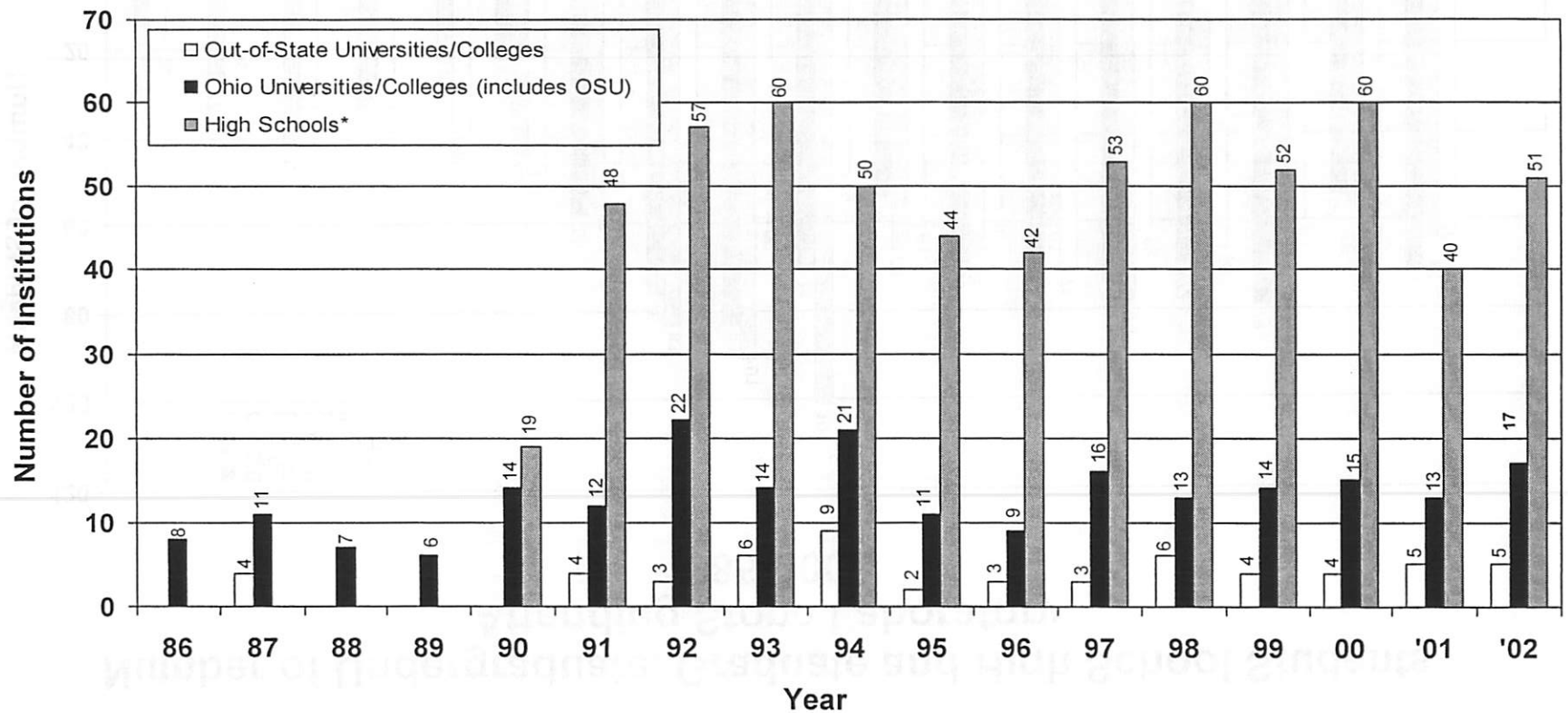
### Number of Students Attending Stone Laboratory from High Schools, Ohio State University, and Other Colleges 1980-2002



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

**FIGURE 3**

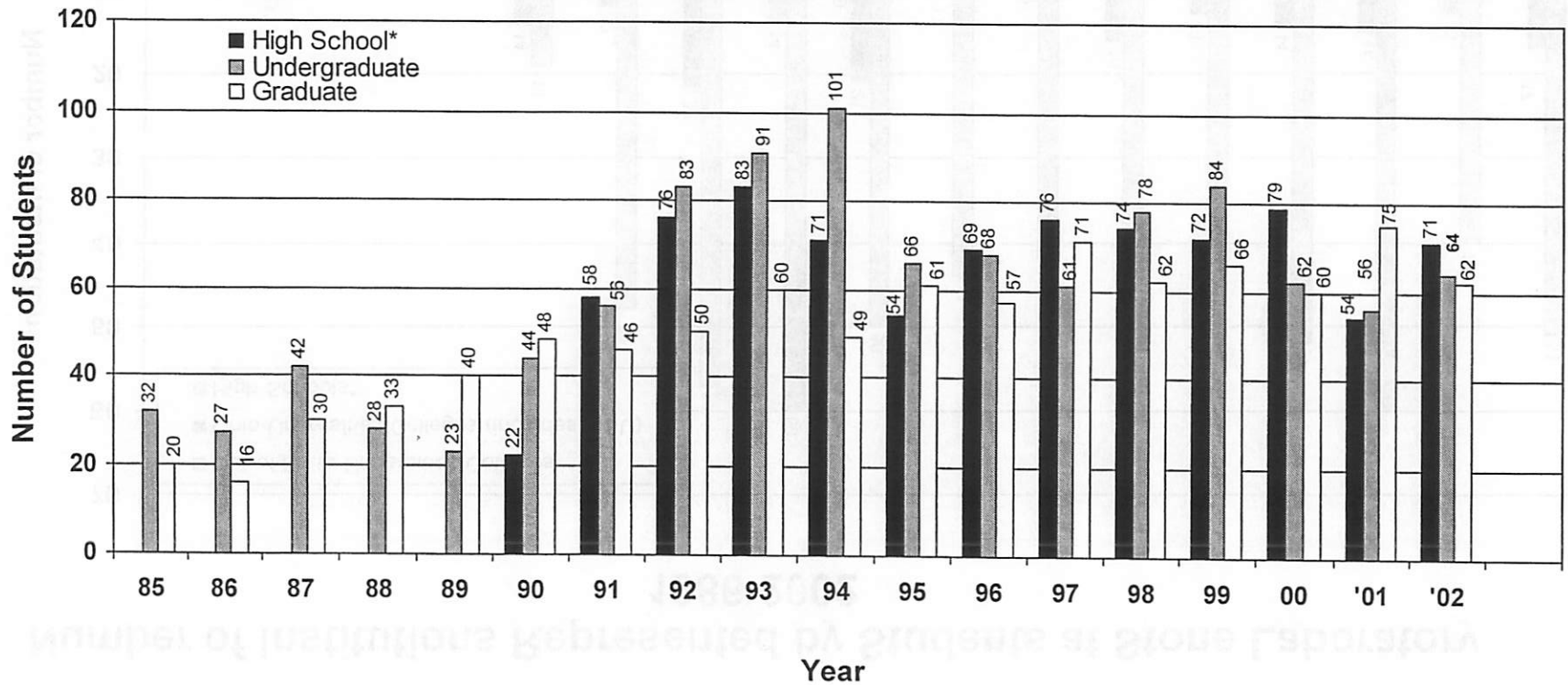
**Number of Institutions Represented by Students at Stone Laboratory  
1986-2002**



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

**FIGURE 4**

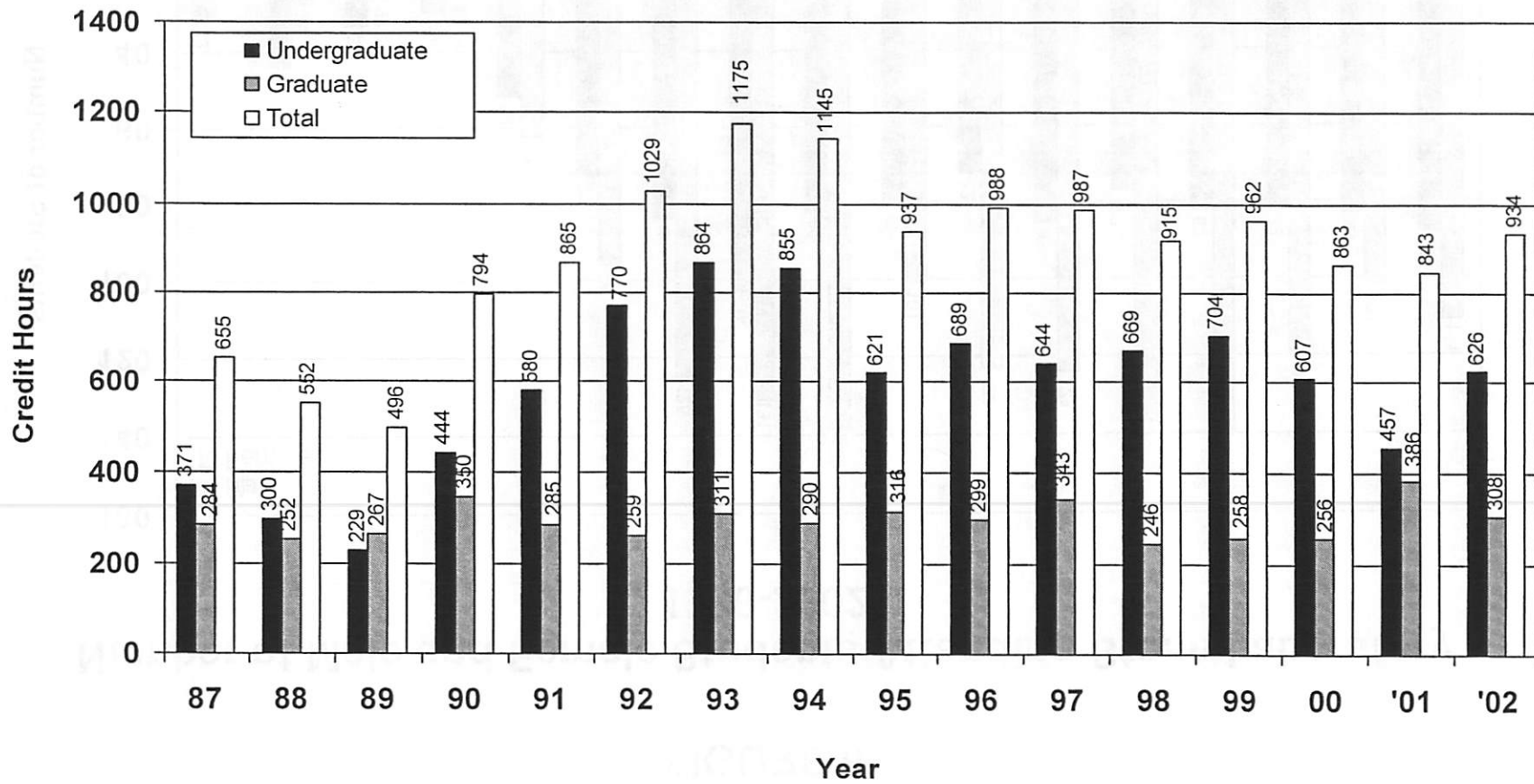
**Number of Undergraduate, Graduate and High School Students Attending Stone Laboratory 1985-2002**



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

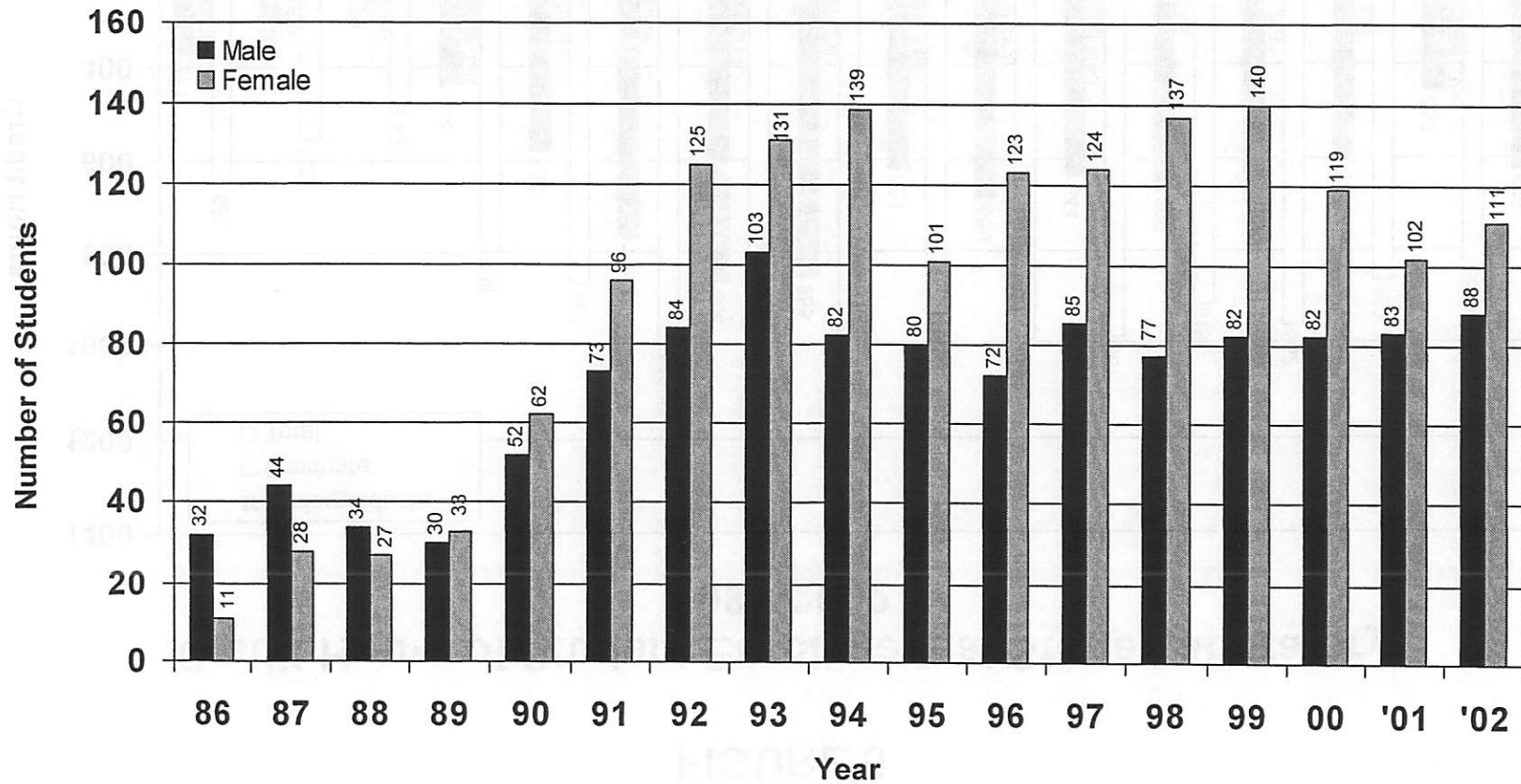
**FIGURE 5**

**Credit Hours of Student Enrollment at Stone Laboratory  
1987-2002**



**FIGURE 6**

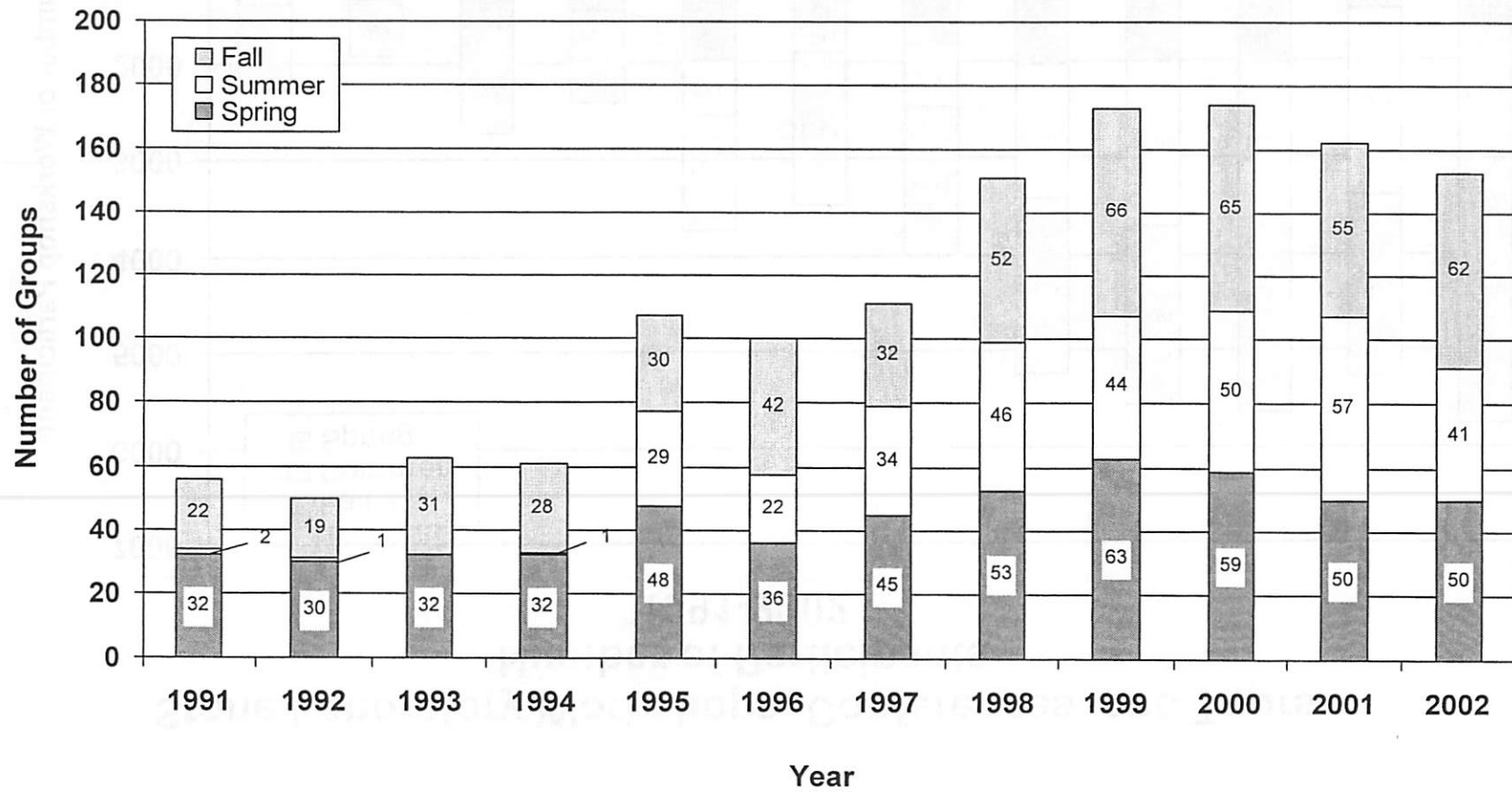
**Number of Male and Female Students Attending Stone Laboratory  
1986-2002**





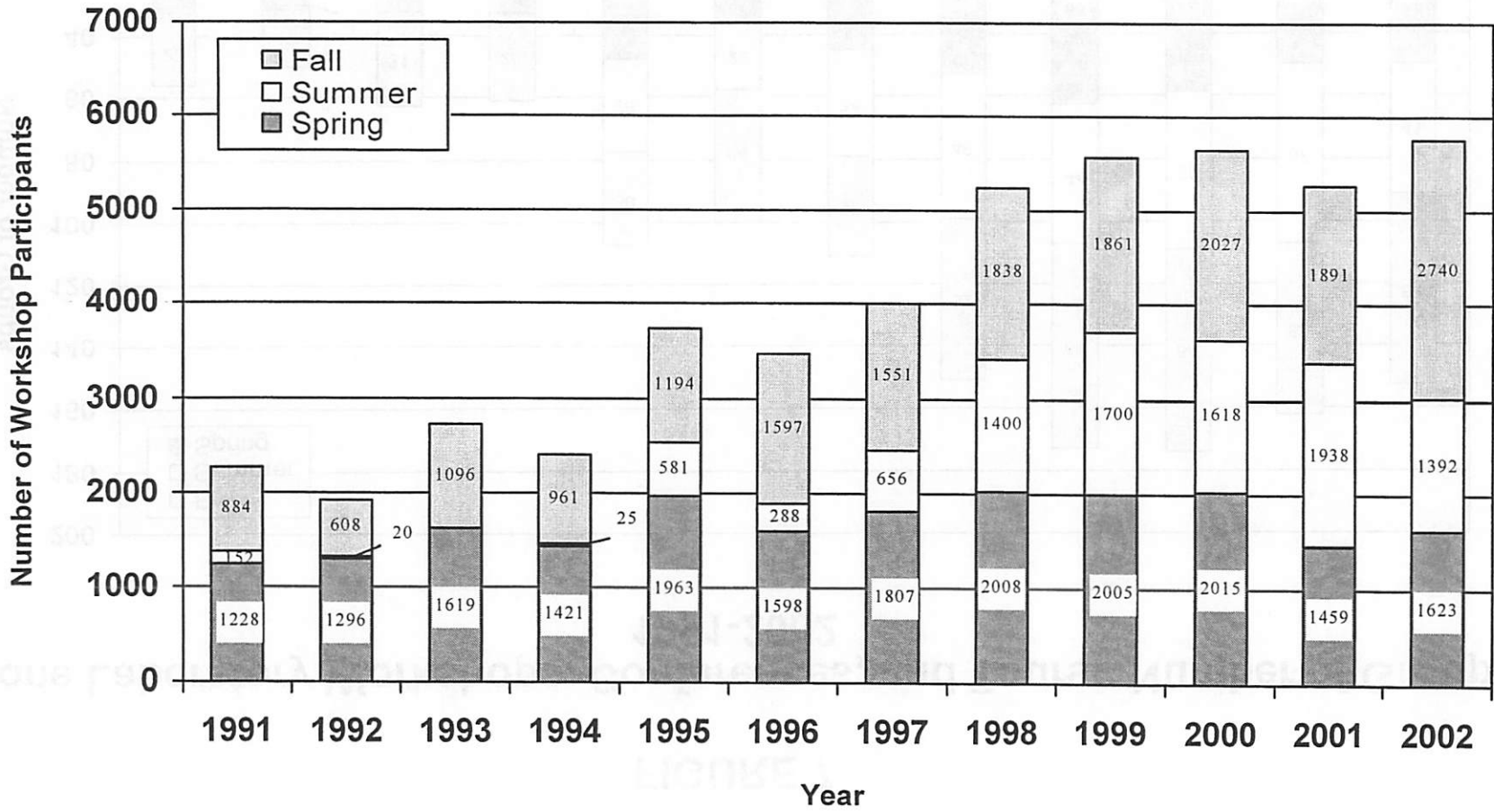
**FIGURE 7**

**Stone Laboratory Workshops, Conferences, and Tours: Number of Groups  
1991-2002**



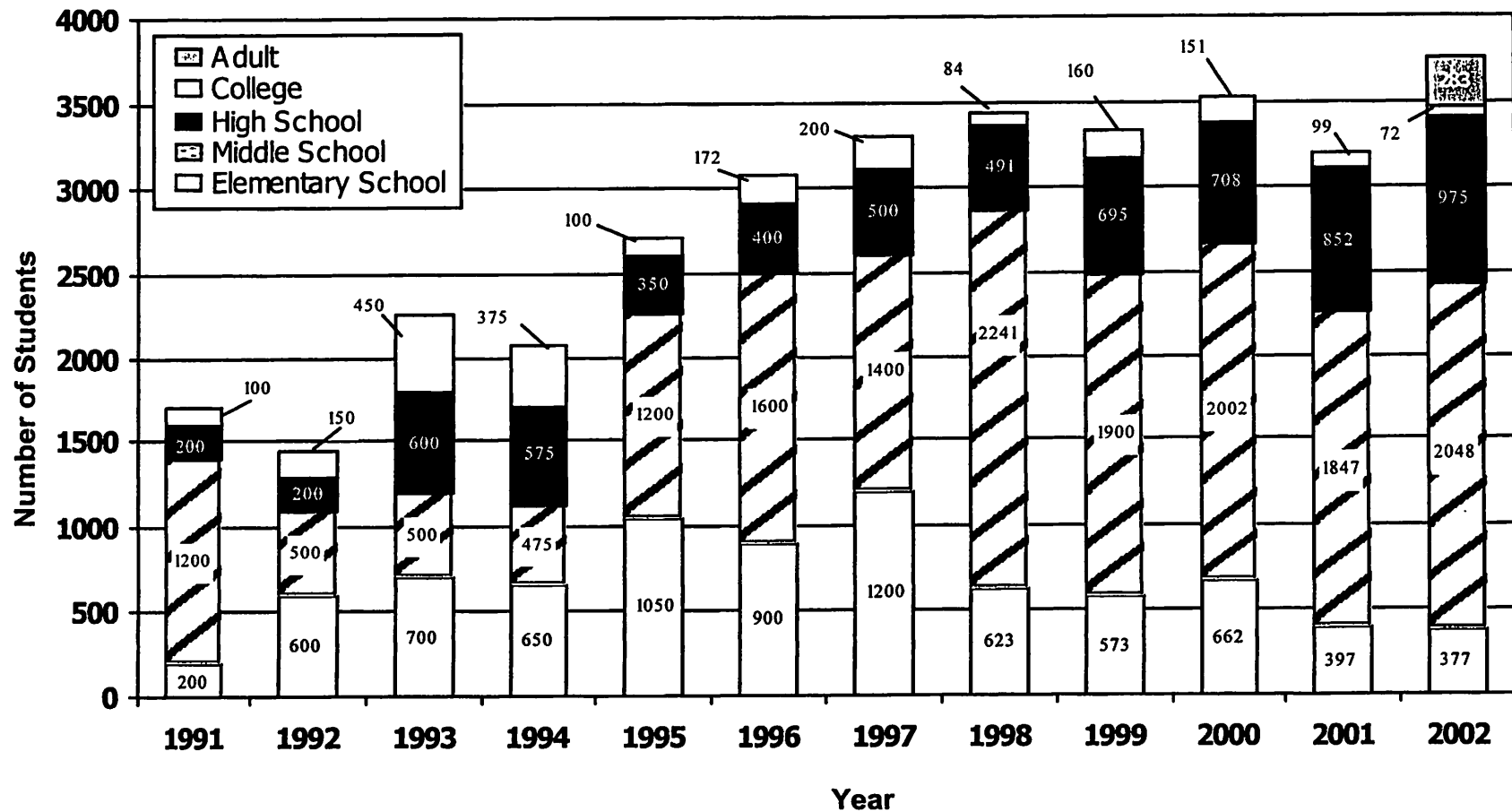
**FIGURE 8**

**Stone Laboratory Workshops, Conferences, and Tours:  
Number of Participants  
1991-2002**



**FIGURE 9**

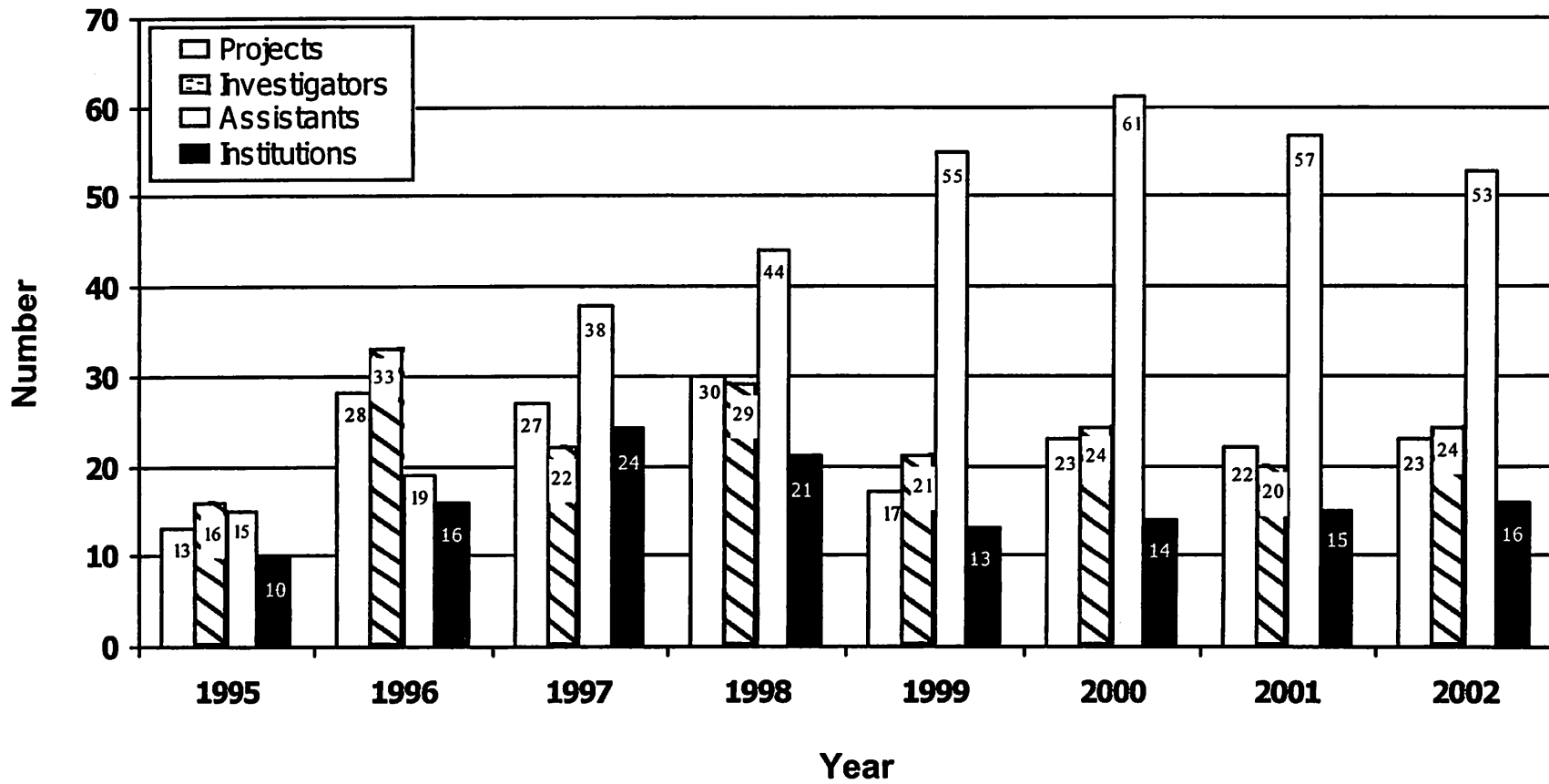
**Stone Laboratory Workshop Program: Composition of Participating Students\*  
1991-2002**



\* Adult numbers included beginning in 2002

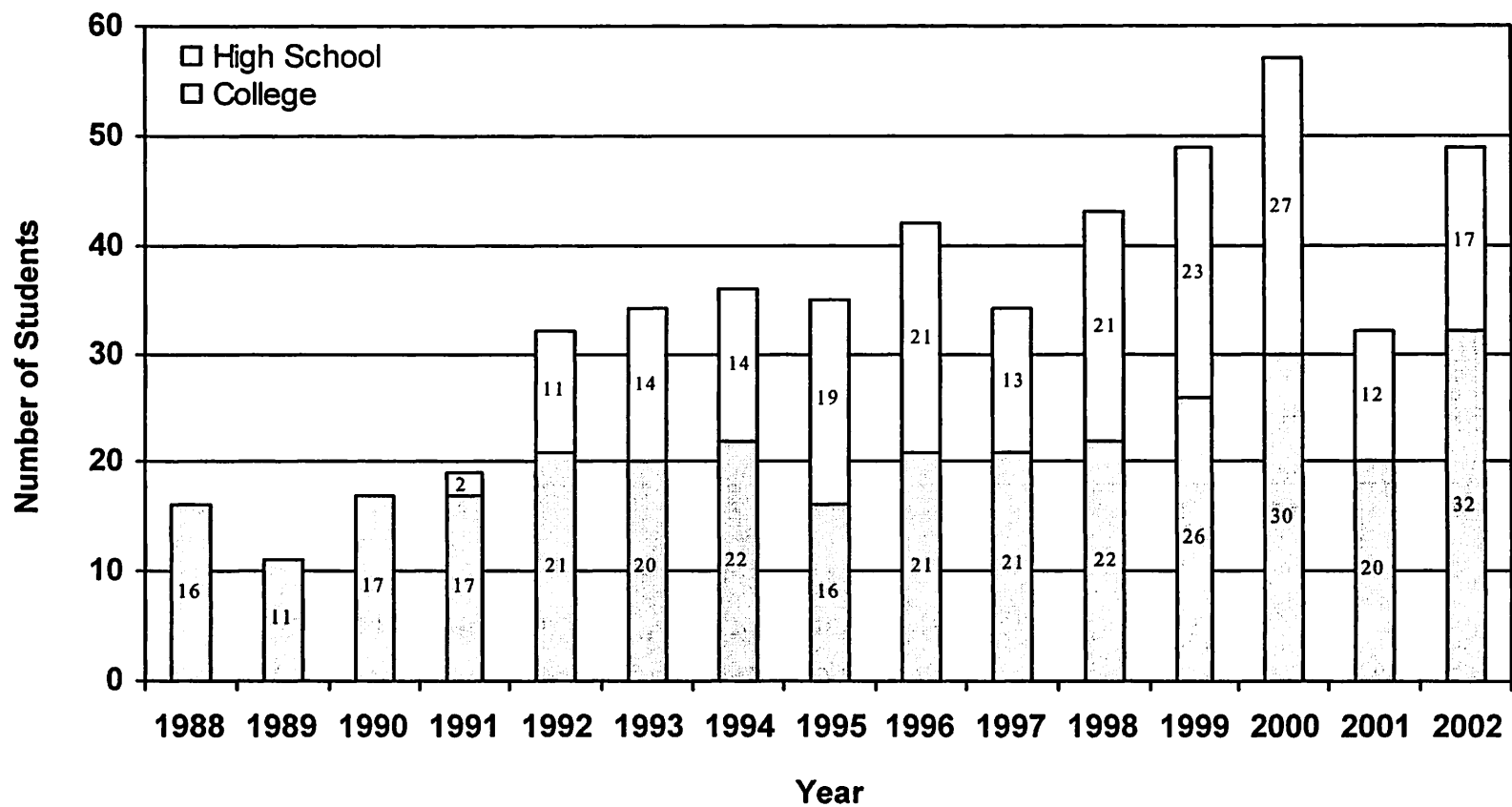
**FIGURE 10**

**Research at Stone Laboratory: Number of Research Projects, Principal Investigators, Research Assistants, and Institutions 1995-2002**



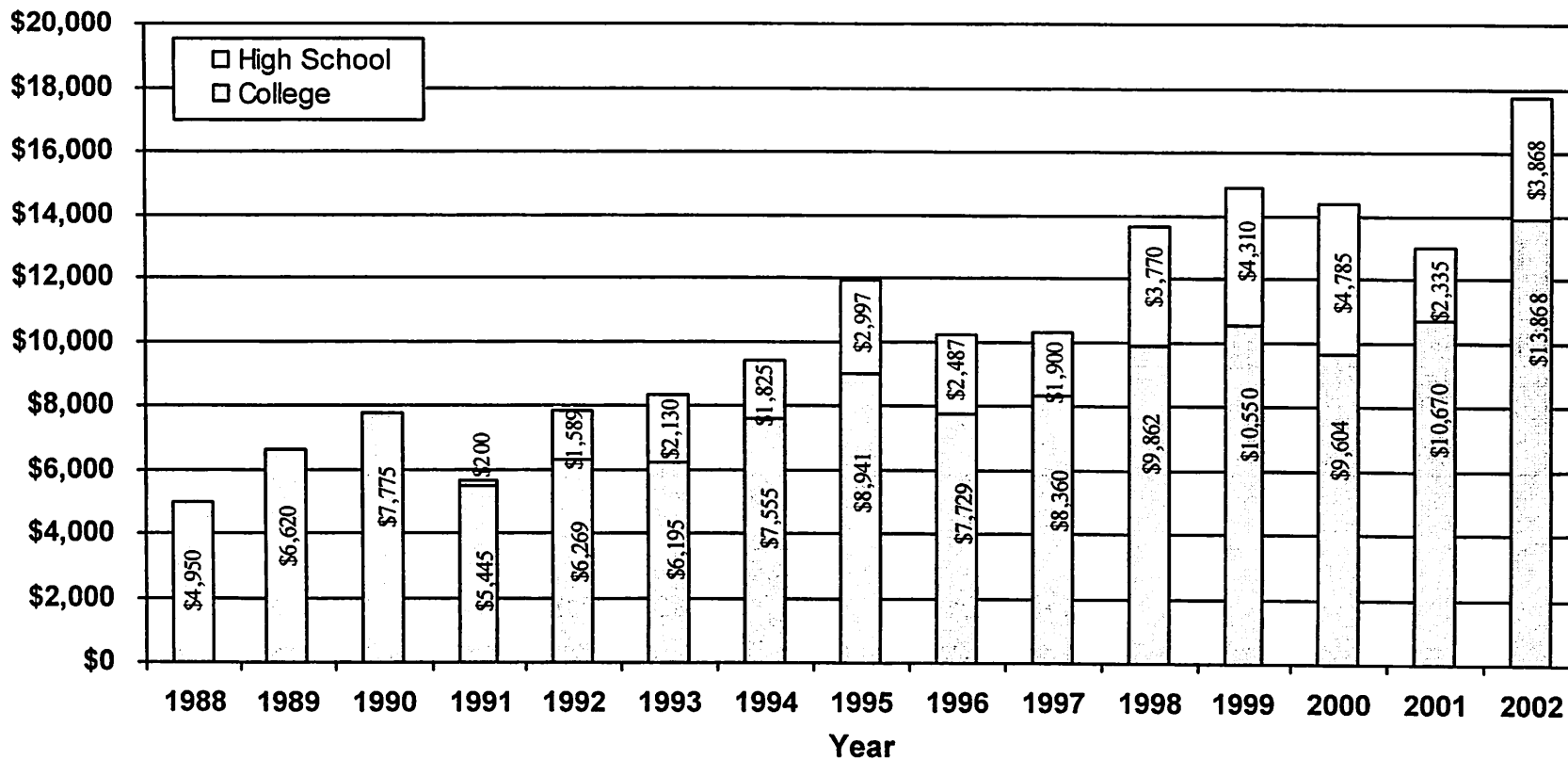
**FIGURE 11**

**Number of Students Receiving Stone Laboratory Scholarships for  
Summer College Programs  
1988-2002**



# FIGURE 12

## Total Value of Scholarships Awarded to College and High School Participants in Stone Laboratory Summer College Program 1988-2002



# STONE LABORATORY 2002 PROGRAM REVIEW TABLES

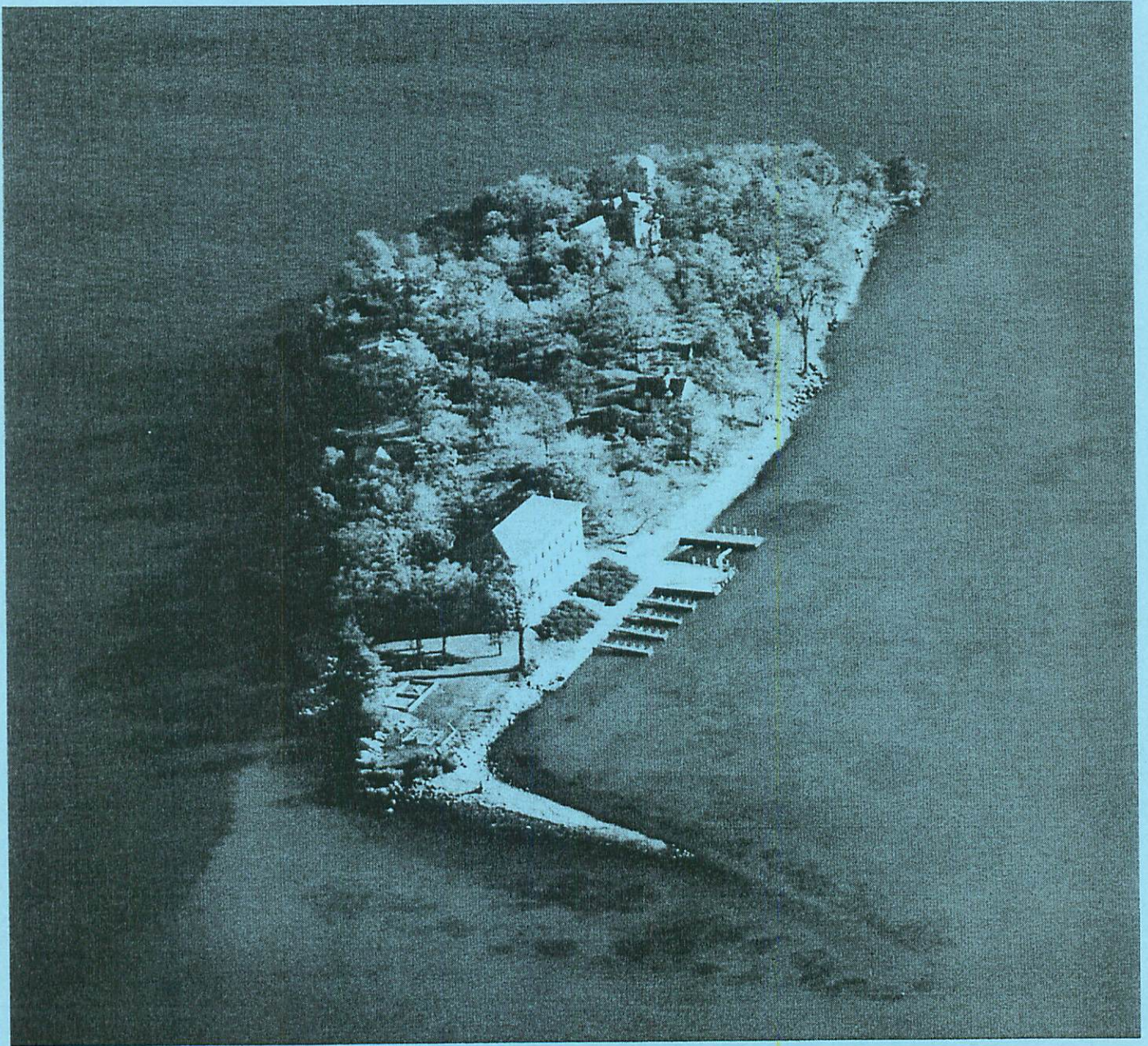


TABLE 1

**Stone Laboratory Staff  
2002**

**Administration**

Jeffrey M. Reutter	Director
Bonita C. Cordi	Office Associate
Kelly L. Dress	Laboratory Office Associate, Put-in-Bay
Rosanne W. Fortner	Associate Director
John R. Hageman	Laboratory Manager, Put-in-Bay
Richard D. Lighthiser	Director, Maintenance, Physical Facilities
J. Stephen Martin	Manager, Housing and Food Service, Put-in-Bay
Arleen N. Pineda	Program Coordinator
Gerald K. Pullins	Assistant Director, Maintenance, Physical Facilities
Karen T. Ricker	Communications Coordinator
Matt A. Thomas	Assistant Laboratory Manager, Put-in-Bay
John L. Tripp	Business Manager
Diane S. Whitbeck	Assistant Vice President, Student Affairs

**Teaching Faculty**

David J. Berg	EEOB 125- <i>Introductory Aquatic Biology</i>	Jul 28 - Aug 3
John M. Condit	EEOB 522- <i>Ornithology for Teachers</i>	Jun 30 - Jul 6
David A. Culver	EEOB 698.01- <i>Great Lakes Limnology</i>	Jun 23-Jun 29
Coleen T. Edwards	EEOB 698.01- <i>Great Lakes Limnology</i>	Jun 23-Jun 29
Bill J. Edwards	EEOB 698.01- <i>Great Lakes Limnology</i>	Jun 23-Jun 29
Rosanne W. Fortner	Nat. Res. 798- <i>Topics in Environmental Science and Engineering</i>	Jun 23-Aug 24
"	Nat. Res./Civil Engineering 797- <i>Digital and Field Techniques for Coastal Environment Studies</i>	Jun 23-Jul 24
"	Nat. Res. 694- <i>Curriculum Development for Environmental Decision Making</i>	Jun 16-Jun 22
John E. Gannon	EEOB 653- <i>Fish Ecology</i>	Jul 25 - Aug 24
Robert J. Gates	Natural Resources 694- <i>Waterfowl Ecology</i>	Jun 23 - Jun 29
John R. Hageman	EEOB 692- <i>Ichthyoplankton Identification Workshop</i>	Jul 14
Michael A. Hoggarth	EEOB 651- <i>Field Zoology</i>	Jun 23- Jul 24
David L. Johnson	EEOB 125- <i>Introductory Aquatic Biology</i>	Jun 30 - Jul 6
"	EEOB 125- <i>Introductory Aquatic Biology</i>	Jun 9 - Jun 15
"	Nat. Res. 694- <i>Aquatic Environmental Science for Teachers</i>	Aug 4- Aug 10
David J. Jude	EEOB 653- <i>Fish Ecology</i>	Jul 25 - Aug 24
Kenneth A. Krieger	EEOB 652- <i>Limnology</i>	Jun 23 - Jul 24
Lawrence A. Krissek	Geological Sciences 107- <i>Field-Based Introduction to Oceanography</i>	Jun 16 - Jun 22
"	Geological Sciences 583- <i>Geologic Setting of Lake Erie</i>	Aug 10 - Aug 16
"	Geological Sciences 584- <i>Prin of Oceanography for Science Teachers</i>	Jul 28 - Aug 3
"	Geological Sciences 801- <i>Sem in Sedimentation &amp; Sedimentary Rocks</i>	Aug 10 - Aug 16
Lisa Kutschbach-Brohl	EEOB 110- <i>Introduction to Local Flora</i>	Jul 7-Jul 13
Carolyn J. Merry	Civil Engineering/Natural Resources 797- <i>Digital and Field Techniques for Coastal Environment Studies</i>	Jun 23-Jul 24
Jeffrey G. Miner	EEOB 652- <i>Limnology</i>	Jun 23- Jul 24
David L. Moore	EEOB 611- <i>Higher Aquatic Plants</i>	Jul 25 - Aug 24
Paul G. Rodewald	EEOB 126- <i>Introduction to the Study of Birds</i>	Jun 16-Jun 22
C.Lavett Smith	EEOB 621- <i>Ichthyology</i>	Jun 23 - Jul 24
Frederic L. Snyder	EEOB 125- <i>Introductory Aquatic Biology</i>	Aug 18 - Aug 24
R.Chris Stanton	Entomology 126- <i>Introductory Insect Biology</i>	Aug 11 - Aug 17
Carmen E. Trisler	Entomology 520- <i>Insect Biology for Teachers</i>	Jul 14 - Jul 20
"	Entomology 612- <i>Aquatic Entomology</i>	Jul 25 - Aug 24



**Table 1 – 2002 cont'd**

**Graduate Teaching Associates**

Sibyl Bucheli	Insect Biology for Teachers	w06
Hongxia Duan	Digital and Field Techniques for Coastal Environment Studies	t1
Julia Froschauer*	Field Zoology	t1
“	Ichthyology	t1
“	Fish Ecology	t2
Katherine Johnson <sup>1</sup>	Field-Based Introduction to Oceanography	w02
“	Prin of Oceanography for Science Teachers	w08
Jason Lin	Digital and Field Techniques for Coastal Environment Studies	t1
Bareena Silverman	Introductory Insect Biology	w10
Thomas Thorne*	Introductory Aquatic Biology	w01, w04, w08, w11
“	Limnology	t1
“	Curriculum Development for Environmental Decision Makers	w02
“	Aquatic Environmental Science for Teachers	w09
Carolyn Waggoner	Aquatic Entomology	t2

\*non-graduate Ohio State University teaching associate

<sup>1</sup> also enrolled in Stone Laboratory core courses

**Student Research Assistants (also enrolled in Stone Laboratory courses)**

Rebecca Cox	Research, t2 mwf	Langlois Research Fellowship
Kathleen LaFay	Research, t2 trs	Langlois Research Fellowship
Lanie Marbaugh	Research, t1 trs	Langlois Research Fellowship
Seth Richards	Research, t1 mwf	Langlois Research Fellowship
Kristina Shockling	Student Research Internship, t2	
John Spaeth	Research, t1 trs	Langlois Research Fellowship
Allison Stanton	Research, t2 trs	Langlois Research Fellowship
Benjamin Sylak	Research, t1 trs	Langlois Research Fellowship
Bradley Titchenell*	Research, t1 and t2	Charles R. Morin, Sr., Research Fellowship
Melissa VonderBrink	Research, t2 mwf	Langlois Research Fellowship
George Ziegler	Research, t1 mwf	Langlois Research Fellowship

\*non-Stone Lab student

**Student Assistants**

Rebecca Cox	Laboratory, t1 mwf
Kathleen LaFay	Laboratory, t1 trs
Allison Stanton	Laboratory, t1 mwf
Melissa VonderBrink	Library/Bookstore, t1 trs
Christopher Wells	Laboratory, t1 trs
Rebecca Williams	Library/Bookstore, t1 mwf and t2 trs
George Ziegler	Library/Bookstore, t2 mwf

**Office, Technical, and Physical Facilities Staff**

Senthil Balasubramanian	Computer Technical Support, Columbus
Allen J. Duff	Boat Captain and Building Maintenance Superintendent, Physical Facilities, Put-in-Bay
Cindy A. Hayter	Graphic Illustrator, Columbus
Paul Lipke-Benn	Office Assistant, Housing and Food Service, Put-in-Bay (5-20-02 to present)
Bradley A. Titchenell	Courier, Put-in-Bay
Mark J. Wilhelm	Maintenance Repair Worker, Physical Facilities, Put-in-Bay
Art L. Wolf	Boat Captain and Plant Maintenance Engineer, Physical Facilities, Put-in-Bay

**Workshop Assistants**

	<u>Season of Employment</u>		
Matt Adkins	spring	----	(volunteer)
Michael Bolan	spring	fall	
John Matt Brehm	----	fall	
Lisa Kutschbach-Brohl	----	fall	
Julia Froschauer	spring	fall	
Alycia M. Gabriel	----	fall	
Jen McClain	spring	----	(internship-not a paid position)
Lynn Overholser	spring	----	
Karen N. Riddle	----	fall	
Kelly Riesen	----	fall	
Thomas J. Thorne	spring	fall	

TABLE 2

**Stone Laboratory Curriculum  
2002**

**EEOB 110 • Introduction to Local Flora**

Week 5, July 7-July 13.....Lisa A. Kutschbach-Brohl  
An introduction to the identification and ecology of terrestrial and wetland vegetation.  
3 undergraduate credit hours.

**EEOB 125 • Introductory Aquatic Biology**

Week 1, June 9-June 15..... Dr. David L. Johnson  
Week 4, June 30-July 6 ..... Dr. David L. Johnson  
Week 8, July 28-August 3 .....Dr. David J. Berg  
Week 11, August 18-August 24 .....Mr. Frederic L. Snyder  
An introduction to field techniques and the study of aquatic biology providing undergraduate  
credit for college students and advanced high school students. 3 undergraduate credit hours.

**EEOB 126 • Introduction to the Study of Birds**

Week 2, June 16-June 22.....Drs. Paul G. and Amanda Rodewald  
An introduction to the study of birds including field techniques and identification providing  
undergraduate credit for college students and advanced high school students. 3 undergraduate  
credit hours.

**EEOB 522 • Ornithology for Teachers**

Week 4, June 30-July 6 ..... Mr. John M. Condit  
Field and laboratory studies of the visual and acoustical characteristics of common Ohio birds;  
discussion of world-wide birds and their classification; identification of resource materials for  
classroom use. For classroom teachers and non-formal educators. 3 undergraduate/graduate credit  
hours.

**EEOB 611 • Higher Aquatic Plants**

**CANCELLED**

Term 2, July 25-August 24, MWF .....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 undergraduate/graduate credit hours.

**EEOB 621 • Ichthyology**

Term 1, June 23-July 24, MWF..... Dr. C. Lavett Smith  
Study of the distribution and classification of fishes, which includes methods of identification,  
collection, and preservation. 5 undergraduate/graduate credit hours.

**EEOB 651 • Field Zoology**

Term 1, June 23-July 24, TRS.....Dr. Michael A. Hoggarth  
Field and laboratory identification of aquatic and terrestrial vertebrates and invertebrates of the  
region, in relation to habitats occupied. 5 undergraduate/graduate credit hours.

EEOB = Department of Evolution, Ecology, and Organismal Biology

**EEOB 652 • Limnology**

Term 1, June 23-July 24, TRS.....Drs. Kenneth A. Krieger and Jeffrey G. Miner  
 Study of the physical, geological, chemical, and biological factors influencing freshwater life; field and laboratory techniques for determining morphometry, chemistry, and biological productivity of lakes, streams, and wetlands are emphasized. 5 undergraduate/graduate credit hours.

**EEOB 653 • Fish Ecology**

Term 2, July 25-August 24, TRS.....Drs. John E. Gannon 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 undergraduate/graduate credit hours.

**EEOB 692 • Ichthyoplankton Identification Workshop**

One Day, Sunday, July 14, 10:00 a.m.-6:00 p.m.....Mr. John R. Hageman and  
 Dr. Jeffrey M. Reutter (Instructor of Record)  
 This workshop will take students, agency professionals and other interested individuals through the techniques involved with the collection and identification of common larval fishes of the Lake Erie drainage basin. May be taken as a non-credit workshop for \$225. This course is graded S/U.

**Entomology 126 • Introductory Insect Biology**

Week 10, August 11-August 17 ..... Dr. R. Chris Stanton  
 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 undergraduate credit hours.

**Entomology 612 • Aquatic Entomology**

Term 2, July 25-August 24, MWF .....Dr. Carmen E. Trisler  
 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 undergraduate/graduate credit hours.

**Entomology 520 • Insect Biology for Teachers**

Week 6, July 14-July 20 .....Dr. 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 undergraduate/graduate credit hours.

**Geological Sciences 107 • Field-Based Introduction to Oceanography**

Week 2, June 16-June 22.....Dr. 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 undergraduate credit hours.

**Geological Sciences 584 • Principles of Oceanography for Science Teachers**

Week 8, July 28 - August 3 .....Dr. 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 undergraduate/graduate credit hours.

**Table 2 - 2002 cont'd**

**Natural Resources 694: Aquatic Environmental Science for Teachers**

Week 9, August 4 – August 10.....Dr. David L. Johnson  
Hands-on field and laboratory studies of coastal and lake environmental systems, including current science of physical and biological characteristics and processes, interactions of species, identification of organisms and conditions related to their survival. For in-service teachers and non-formal educators. 3 undergraduate/graduate credit hours.

**Natural Resources 694: Curriculum Development for Environmental Decision Making**

Week 2, June 16 – June 22.....Dr. Rosanne W. Fortner  
This course introduces the basics of decision science as it relates to classroom methodology with an emphasis on using scientific information during problem identification, clarifying values and objectives, creating alternatives, and making tradeoffs. Teacher will develop decision making curriculum activities using current scientific data about the Great Lakes. Designed for science or social studies teacher of grades 7 – 12. 3 undergraduate/graduate credit hours.

**Natural Resources 694: Environmental Chemistry of Soil and Water**

**CANCELLED**

(course cross listed as Chemistry 694)

Week 5, July 7 – July 13.....Drs. Patrick Hatcher and Samuel Traina  
Examination of global environmental problems, carbon and nitrogen cycles, chemical weathering pollutants, and human impacts on global cycling of elements. Teachers will learn how to collect field samples and conduct lab tests for most of the topics covered. 3 undergraduate/graduate credit hours.

**Natural Resources 694: Great Lakes Maritime Studies**

**CANCELLED**

Term 2, July 25 – August 24 TR.....Dr. Charles E. Herdendorf  
Investigation of the physical setting, natural resources, historical development of harbors and commerce, evolution of ships, seamanship and navigation, shipwreck archaeology, modern vessel operation, recreational uses, and current Great Lakes issues. 3 undergraduate/graduate credit hours.

**Natural Resources 694 • Waterfowl Ecology**

Week 3, June 23 - June 29.....Dr. Robert J. Gates  
Ecology, life history, and management of waterfowl (Anseriformes and related species) from a wetland habitat perspective. Emphasis on North American populations and wetland habitats. 3 undergraduate/graduate credit hours.

**Natural Resources 797: Digital and Field Techniques for Coastal Environment Studies**

Term 1, June 23 – July 24.....Drs. Rosanne W. Fortner and Carolyn J. Merry  
Interdisciplinary Great Lakes topics are studied using field methods and GIS, and compared with equivalent oceanic issues. Problem-based course using cooperative learning and noncompetitive grading. Permission of instructors required.

**Natural Resources 798: Current Topics in Environmental Science and Engineering**

Summer Quarter.....Dr. Rosanne W. Fortner  
Seminar course that presents current research findings on environmental topics. Lectures on Tuesday and/or Thursday evenings throughout summer quarter. 1 undergraduate/graduate credit hour. This course is graded S/U.

**SPECIAL OFFERINGS:**

**EEOB 694 • Stream Ecology for Teachers** **CANCELLED**  
 Week 7, July 21 – July 27.....Dr. Joseph R. Holomuzki  
 This course introduces high school teachers to hydrology, stream organisms, field techniques and experimental design in ways that can be applied in the classroom and field. Course held at Old Woman Creek, Ohio. 3 undergraduate/graduate credit hours.

**EEOB 698.01: Great Lakes Limnology** **CANCELLED**  
 May 5 – May 11 (Spring Quarter 2002).....Dr. David Culver (Instructor of Record)  
 Instructors: Dr. Gary Fahnenstiel, Mike McCormick, Steve Brandt, and Steve Pothoven, GLERL.  
 A field intensive course offered by The Ohio State University, F.T. Stone Laboratory and Ohio Sea Grant in collaboration with the NOAA/GLERL Lake Michigan Field Station at Muskegon, Michigan. Course Description: A field intensive 1-week course at the National Oceanic and Atmospheric Administration (NOAA) Great Lakes Environmental Research Laboratory's (GLERL) Michigan Field Station in Muskegon, MI. Every day participants will be sampling on Lake Michigan using the latest physical and biological oceanographic methods (e.g. moored instrument arrays, state-of-the-art profiling systems, and much more) on a NOAA ships (R/V *Shenehon* and R/V *Laurentian*). The course will focus on physical measurements, and the dynamics of plankton and fish populations. If conditions permit, an extended cruise on Lake Michigan (2-4 days) will be conducted. This course is open to advanced undergraduates and graduate students who want to experience field sampling techniques in the offshore, open-water environment of the Great Lakes.

**EEOB 698.01: Great Lakes Limnology**  
 Week 3, June 23 – June 29.....Dr. David A. Culver and William J. and Coleen T. Edwards  
 Students will live aboard the USEPA 180-ft RV *Lake Guardian* while studying the interactions among the physical, chemical, and biological components of the Lake Erie ecosystem at numerous point between Detroit and Buffalo. 3 graduate credit hours.

**Geological Sciences 583 • Geologic Setting of Lake Erie**  
 Week 10, August 10-August 16 .....Dr. 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 \$450. Class will originate from and end at the Fawcett Center in Columbus. 3 undergraduate/graduate 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\*  
2002**

All lectures begin at 7:45 PM and conclude at approximately 9:00 PM. An OSU boat leaves the dock in front of the OSU Research Building (near State Fish Hatchery) at 7:15 PM before each lecture. Transportation on this boat to and from Gibraltar Island is free.

<b>Week 1</b>	6/13	<b>No Lecture</b>
<b>Week 2</b>	6/20	<b>Christopher Jones</b> , Director, Ohio EPA "Is 'Environmentalist' a Noun or an Adjective"
<b><u>TERM 1</u></b>		
<b>Week 3</b>	6/27	<b>Dr. Jane Forsythe</b> , Bowling Green State University "The Geologic Setting of Lake Erie"
<b>Week 4</b>	7/3	<b>Dr. Charles E. Herdendorf</b> , Ohio State University "Exploring Shipwrecks of the New Kelleys Island Underwater Preserve"
<b>Week 5</b>	7/11	<b>Dr. Richard King</b> , Northern Illinois University "Lake Erie Water Snakes"
<b>Week 6</b>	7/18	<b>Dr. Bobby D. Moser</b> , Vice President and Dean, College of Food, Agricultural and Environmental Sciences, Ohio State University "Environmental Issues in Agriculture in Ohio"
<b>Week 7</b>	7/25	<b>Transition between terms—No Lecture</b>
<b><u>TERM 2</u></b>		
<b>Week 8</b>	8/1	<b>Dr. Carol Stepien</b> , Cleveland State University "Unlocking the Mysteries of Lake Erie Fishes and Invasive Species Using DNA Clues"
<b>Week 9</b>	8/8	<b>Dr. Sam Speck</b> , Director, Ohio Department of Natural Resources "Resource Management Issues Facing the Great Lakes Region"
<b>Week 10</b>	8/15	<b>Chief Justice Thomas Moyer</b> , Ohio Supreme Court "Law in a Scientific World"
<b>Week 11</b>	8/22	<b>Finals Week—No Lecture</b>
<b>Week 14</b>	9/14	<b>Open House—11:30-4:00 Saturday—Open to Public</b> Friends of Stone Laboratory Annual Meeting with Educational Programs and Tours of Gibraltar Island and the South Bass Island Lighthouse

\* Sponsored by the Friends of Stone Laboratory, the Ohio Sea Grant College Program, and the Office of Housing and Food Service.

TABLE 4

**Stone Laboratory Workshops, Conferences and Tours  
2002**

<b>Date</b>	<b>Group Name/City/Leader</b>	<b>No.</b>	<b>Description</b>
4/15	Bucyrus High School / Bucyrus, OH Ron Suter	34	Workshop
4/16	Kenwood Elementary I / Bowling Green, OH Kent McClary	37	Workshop
4/17	Ian Black / Northwood, OH Lara Fish	1	Shadow
4/18	Wynford High School / Bucyrus, OH Glen Smith	23	Workshop
4/18-19	Gibsonburg High School / Gibsonburg, OH Heather Whitner	12	Workshop
4/18-'9	Jonathan Alder High School / Plain City, OH Brenda Boyd	9	Workshop
4/19	Kenwood Elementary II / Bowling Green, OH Kent McClary	38	Workshop
4/20-21	Friends of Stone Lab Work Weekend Michael McBride	25	Work Weekend
4/23-24	Kelley's Island School / Kelley's Island, OH Mike O'Brien	9	Workshop
4/23-24	Jackson Middle School / Grove City, OH Dave Crosby	35	Workshop
4/25-26	Sewickley Academy / Sewickley, PA Lisa Heberling	70	Workshop
4/25	Shadows from A.I. Root Middle School	5	Shadow
4/25	Mallory Hageman / Toledo, OH "Take Daughter to Work Day"	4	Shadow
4/29-30	Mills School 6 <sup>th</sup> Grade I/ Sandusky, OH Patty Hamilton	44	Workshop
4/30-5/1	Mills School 6 <sup>th</sup> Grade II/ Sandusky, OH Patty Hamilton	48	Workshop
5/1-2	Mills School 6 <sup>th</sup> Grade III/ Sandusky, OH Patty Hamilton	44	Workshop



Table 4 – cont'd

Date	Group Name/City/Leader	No.	Description
5/2-3	Mills School 6 <sup>th</sup> Grade IV / Sandusky, OH Patty Hamilton	45	Workshop
5/3	St. Edward High School / Lakewood, OH Guy Eckels	28	Workshop
5/3	OSU Limnology Class / Columbus, OH Dr. David Culver	29	Workshop
5/4-5	Ohio Staters – Students / Columbus, OH Jim Stevens	15	Workshop
5/6-7	Mills School 6 <sup>th</sup> Grade V / Sandusky, OH Patty Hamilton	38	Workshop
5/7	Elderhostel I / Put-in-Bay, OH Ed Isaly	31	Workshop
5/7-8	Mills School 6 <sup>th</sup> Grade VI / Sandusky, OH Patty Hamilton	44	Workshop
5/8-9	Mills School VII / Sandusky, OH Patty Hamilton	49	Workshop
5/9-10	Miamisburg Middle School / Miamisburg, OH Susan Baker	62	Workshop
5/10	St. Ignatius of Antioch Elementary / Cleveland, OH Linda Ziska	28	Workshop
5/13	All Saints Catholic Elementary School / Rossford, OH Carol Gutierrez	28	Workshop
5/13-14	West Carrollton Middle School / West Carrollton, OH Jean Kremer	45	Workshop
5/14	Elderhostel II / Put-in-Bay, OH Ed Isaly	31	Workshop
5/14-15	Ecole Kenwood Elementary School / Columbus, OH Elvina Palma	19	Workshop
5/15	South Central Jr. High School / Greenwich, OH Jami Scott-Honigford	19	Workshop
5/15-16	Village Academy / Powell, OH Monte McCulloch	29	Workshop
5/16-17	Perry/McCord Middle School / Worthington, OH Marty McTigue	66	Workshop

Date	Group Name/City/Leader	No.	Description
5/18	Girl Scout Troop #635 / Columbus, OH Kathleen Lally	17	Workshop
5/20	Clay High School / Oregon, OH Dennis Slotnick	34	Workshop
5/20-21	Nordonia Hills Middle School / Northfield, OH Lisa Heint	32	Workshop
5/20	Ladyfield Catholic I Middle School / Toledo, OH Sr. Pamela Duganski	34	Workshop
5/21	Ladyfield Catholic II Middle School / Toledo, OH Sr. Pamela Duganski	34	Workshop
5/21	Elderhostel III / Put-in-Bay, OH Ed Isaly	31	Workshop
5/21	Olmstead Falls High School / Olmstead Twp., OH Laura Kirchner	26	Tour
5/22	Springfield South High School / Springfield, OH Michael Willets	12	Workshop
5/22-23	Horizon TPS/Devilbis / Toledo, OH Dinah Lattin	68	Workshop
5/23-24	Erwine Middle School / Akron, OH Jim Trogdon	45	Workshop
5/23-24	Englewood Elementary / Englewood, OH Sis Litvin	15	Workshop
5/28-29	Buckeye Valley Middle School / Delaware, OH Amos Price	42	Workshop
5/29	Northwood (Boys) Middle School / Northwood, OH Lara Fish	39	Workshop
5/29-30	Great Lakes Commission / Ann Arbor, MI Kathe Glassner-Shwayder	63	Conference
5/30	Northwood (Girls) Middle School / Northwood, OH Lara Fish	28	Workshop
5/30-31	Jones Jr. High / Upper Arlington, OH Kelly Gibson	36	Workshop
5/31	Lake High School / Millbury, OH Jessie Kubuske	23	Workshop

Table 4 – cont'd

Date	Group Name/City/Leader	No.	Description
6/1	O.S.U. Extension Williams Co. Watershed Ecology / Bryan, OH Florian Chirra	15	Workshop
6/3	Lorain Co. Extension Office / Elyria, OH Lynette Goard	23	Tour
6/3	O.S.U. Lima Reaching Out To Youth / Lima, OH Hope Raschke	16	Workshop
6/4	Laurel Elementary / Shaker Heights, OH Abby Bole	45	Workshop
6/5	Whiteford Middle School / Ottawa Lake, MI Susan Bixler	79	Workshop
6/6	Grizzel Middle School / Dublin, OH Larry Hohman	61	Workshop
6/6-7	O.S.U. Agriculture Business Education / Bowling Green, OH Amy Stone	21	Conference
6/10 - 12	The Nature Conservancy / Dayton, OH Kendra Cipolini	25	Conference
6/12	Girl Scout Troop 60 / Lakewood, OH Eileen Dixon	8	Workshop
6/13	Huron Co. Soil and Water Conservation / Norwalk, OH Christine Stelzer	33	Workshop
6/20	Visitors to See Guest Lecturer Chris Jones Ohio E.P.A., "Is 'Environmentalist' a Noun or an Adjective"	54	Tour
6/26	Ohio Division of Wildlife, State Wildlife Specialists	9	Tour
6/27	Visitors to See Guest Lecturer Dr. Jane Forsyth "The Geologic Setting of Lake Erie"	60	Tour
7/2	Put-in-Bay Yacht Club / Put-in-Bay, OH Linda Mansell	42	Tour
7/4	Visitors to See Guest Lecturer Dr. C.E. Herdendorf "Lake Erie Shipwrecks"	86	Tour
7/9	B.G.S.U. Governors Summer Institute I / Bowling Green, OH Matt Partin	54	Workshop
7/10	Green Co. Parks / Xenia, Ohio Chris Barnett	8	Workshop

Date	Group Name/City/Leader	No.	Description
7/11	Cleveland Scholarship Program / Cleveland, OH Stacy Watts	46	Workshop
7/11	Visitors to See Guest Lecturer Dr. Richard King "Lake Erie Water Snakes"	50	Tour
7/15	Lakeside Women's Club	45	Tour
7/15	Ottawa County Commissioners Bob Arndt	10	Tour
7/16	B.G.S.U. Governors Summer Institute II / Bowling Green, OH Matt Partin	54	Workshop
7/16	Jackson Smith Family	4	Tour
7/18	O.S.U. Northwest District Extension Office / Findlay, OH Jerry Thomas	18	Conference
7/18	Cleveland Scholarship Program / Cleveland, OH Stacy Watts	46	Workshop
7/18	Visitors to See Guest Lecturer Bobby Moser "Environmental Issues in Agriculture in Ohio"	35	Tour
7/19	Ohio Legislators & Invited Guests / Columbus, OH Dr. Jeff Reutter	164	Tour
7/20	Kent State University	22	Tour
7/27	Pheasants-Forever State Chapter Summer Meeting Gary Comer	34	Workshop/ Conference
8/1	Visitors to See Guest Lecturer Carol Stepien "DNA Clues of Lake Erie Fishes and Invasive Species"	50	Tour
8/2	Tom Lotshaw, The OSU Lantern	2	Tour
8/3	Lisa Richards Mindy Thompson	2	Tour
8/8	Dr. & Mrs. Al Quillin and Mr. & Mrs. Norm Landis / Kelleys Island, OH	4	Tour
8/8	Ottawa National Wildlife Refuge Rebecca Hinkle	12	Tour

Table 4 – cont'd

Date	Group Name/City/Leader	No.	Description
8/9	Visitors to See Guest Lecturer Sam Speck "Resource Management Issues Facing the Great Lakes Region"	42	Tour
8/12	Marion Co. Rotary Club	12	Conference
8/13	Ken Radie Family & Guests – Wedding At Perry's Look-Out	40	Tour
8/15	Visitors to See Guest Lecturer Chief Justice Thomas Moyer "Law in a Scientific World"	41	Tour
8/15-16	Lake Erie Protection Fund Grant Making Committee Meeting	8	Conference
8/15-16	Albert Enterprise Center / Marion, OH Mary Jo Munday	7	Conference
8/21	Tom Blaine, O.S.U. Extension Coastal Research Opportunities	5	Conference
8/22	Lisa Morris, Geo. Elmaraghy, Ohio E.P.A. Lake Erie Research Opportunities	5	Conference
8/26-28	O.S.U. Residents Life / Columbus OH Cheryl Lyons	49	Conference
8/28	Larry Capitini, ILACUC Laboratory Annual Protocol Meeting	3	Conference
8/28-29	Phillips-Osborne 7 <sup>th</sup> Grade / Painesville, OH Meg Anderson	11	Workshop
8/29-30	Hathaway Brown Middle School / Shaker Heights, OH Beth Armstrong	71	Workshop
9/4-5	Hilliard Station 6 <sup>th</sup> Grade I, Hilliard, OH Lynda Floehr	41	Workshop
9/5-6	Hilliard Station 6 <sup>th</sup> Grade II, Hilliard, OH Lynda Floehr	37	Workshop
9/6	Jefferson Elementary / Port Clinton, OH Jim Bergeman	50	Workshop
9/6-8	O.S.U. Council of Graduate Students Executive Committee J. Briggs Cormier	27	Conference
9/9-10	Bexley Middle School / Bexley, OH Marge Galloway	51	Workshop

Table 4 – cont'd

Date	Group Name/City/Leader	No.	Description
9/10	Elderhostel IV / Put-in-Bay, OH Ed Isaly	33	Workshop
9/10-11	Jonathan Alder H.S. / Plain City, OH Brenda Boyd	31	Workshop
9/13	International Association of Amusement Park Operators	60	Tour
9/13-15	Friends of Stone Laboratory Board Members Annual Homecoming	22	Conference
9/14	Stone Laboratory Open House – Gibraltar Island	430	Tour
9/14	Stone Laboratory Open House – South Bass Island Lighthouse	180	Tour
9/14	Friends of Stone Laboratory Annual Meeting	40	Conference
9/16	Avon High School / Avon, OH Tess Wearsh	26	Workshop
9/16	Amherst Steel / Amherst, OH Darlene Elsasser	100	Workshop
9/17	Elderhostel V / Put-in-Bay, OH Ed Isaly	30	Workshop
9/17	Bataan Memorial Elementary / Port Clinton, OH Marty Willis	44	Workshop
9/17-18	Bellefontaine H.S. / Bellefontaine, OH Dennis Versele	12	Workshop
9/18	Genoa H.S. German Club / Genoa, OH Gene Aufderhaar	23	Tour
9/19	St. Vincent DePaul 8 <sup>th</sup> Grade / Elyria, OH Loretta Grentzer	29	Workshop
9/20	McCormick 5 <sup>th</sup> Grade / Huron, OH Elaine Bores	131	Tour
9/20 - 22	Association of Diving Contractors / Ann Arbor, MI Karl Luttrell	25	Conference
9/21	Heidelberg Ichthyology Class / Tiffin, OH Dr. Ken Baker	7	Workshop

**Table 4 – cont'd**

<b>Date</b>	<b>Group Name/City/Leader</b>	<b>No.</b>	<b>Description</b>
9/21	Girl Scout Troop #926 / Willoughby Hills, OH Chris Bartolotta	11	Workshop
9/21	Black River Middle School / Sullivan, OH Dave Reber	17	Workshop
9/23	West Holmes High School / Millersburg, OH Doug Mohr	17	Workshop
9/23-24	Brecksville High School / Broadview Heights, OH Bob Berg	16	Workshop
9/24	Gibsonburg Middle School / Gibsonburg, OH Heather Whitner	104	Tour
9/24	Elderhostel VI / Put-in-Bay, OH Ed Isaly	30	Workshop
9/25	Portage School 6 <sup>th</sup> Grade / Gypsum, OH Pat Adkins	46	Workshop
9/25-26	The Wellington School / Columbus, OH Sara Harris	59	Workshop
9/27	St. Mary of the Falls 8 <sup>th</sup> Grade / Olmsted Falls, OH Lorretta Grentzer & Rick Rusnak	19	Workshop
9/27-28	Milford Jr. High School / Milford, OH Raylene Gerber	72	Workshop
10/1-2	Mary Bridgeman, Columbus Dispatch Photographer	2	Tour / Assignment
10/1-2	Worthingway Middle School / Worthington, OH Jim Wightman	66	Workshop
10/2-4	Columbus School for Girls / Columbus, OH Bob Farrell	64	Workshop
10/4-4	Franklin Elementary / Elyria, OH Holly Kramer	37	Workshop
10/5	Owens Community College / Toledo, OH Dave Gardener	25	Workshop
10/5-6	Buckeye Island Hop Friends of Stone Laboratory Work Weekend	42	Conference / Work Weekend
10/7	Bay High School / Bay Village, OH Chet Sadonick	25	Workshop

Table 4 – cont'd

Date	Group Name/City/Leader	No.	Description
10/8	Put-in-Bay High School / Put-in-Bay, OH Paul Genzman	22	Workshop
10/8-9	Rocky River Middle School / Rocky River, OH David Opdycke	46	Workshop
10/9-10	Clintonville Academy 7 <sup>th</sup> & 8 <sup>th</sup> Grades / Columbus, OH Sally Lindsay	34	Workshop
10/10	Ravenna High School / Ravenna, OH Diane Conyer-Rizzo	9	Workshop
10/10-11	Robinson Jr. High School / Toledo, OH Diane McClellan	33	Workshop
10/11-12	Granville Middle School / Granville, OH Kay Porr	31	Workshop
10/11-13	O.S.U. Plankton Class / Columbus, OH Dr. David Culver	12	Workshop
10/14	Great Lakes Commission Dr. Jeffrey Reutter	14	Conference
10/14-16	Hudson Middle School I / Hudson, OH Ken Radie	42	Workshop
10/16-18	Hudson Middle School II / Hudson, OH Ken Radie	38	Workshop
10/18	O.S.U. Extension Ottawa County Marcia Jess	7	Tour
10/18-19	The Andrews School for Girls / Willoughby, OH Lisa Richardson	30	Workshop
10/21-22	Hilliard Tharp 6 <sup>th</sup> Grade I / Hilliard, OH Jan Snyder	32	Workshop
10/22-23	Hilliard Tharp 6 <sup>th</sup> Grade II / Hilliard, OH Jan Snyder	32	Workshop
10/23-24	Evangel Christian Elementary / Gahanna, OH Robert Shauck	28	Workshop
10/24-25	Dempsey Middle School / Delaware, OH Deb Bogard	25	Workshop
10/24-25	Highland High School / Medina, OH Joe Wise	35	Workshop



Table 4 – cont'd

Date	Group Name/City/Leader	No.	Description
10/25-26	Jackson Middle School / Grove City, OH David Crosby	50	Workshop
	<b>TOTAL =</b>	<b>5755</b>	

TABLE 5

## Stone Laboratory Scholarship Recipients -2002

<i>Name</i>	<i>Institution</i>	<i>Name of Scholarship</i>
Ahnmark, Eric	Worthington Kilbourne High	Friends of Stone Lab
Attie, Christina	Ohio State Univ	Polish Fishermen's Club
Bartolotta, Matthew	St Ignatius High	Fairport Rod & Reel
Below, Gabe	Ohio Wesleyan Univ	Franz and Kate Stone
Bircher, Lisa	Ohio State Univ	Karen Jennings
Blatnica, Steven	Cuyahoga Community College	Ray Frederick
Blatt, Angela	Ohio State Univ	Franz and Kate Stone/TerrAqua
Bradley, Lauren	Ohio State Univ	Friends of Stone Lab
Bruner, LeAnn	Baldwin-Wallace College	Ray Frederick
Cloud, Carrie	Ohio State Univ	McDonald's
Costello, Kathleen	Ohio State Univ	Franz and Kate Stone
Cox, Rebecca	Bowling Green State Univ	Ray Frederick
Crivella, Ellen	Ohio State Univ	Franz and Kate Stone
Deem, Todd	Ohio State Univ	Franz and Kate Stone
Detrick, Suzanne	Univ of Dayton	Friends of Stone Lab-StateSciDay*
Fink, Rebecca	Trinity International University	Ray Frederick
Flood, Eric	Bloom-Carroll High	Friends of Stone Lab-StateSciDay*
Gilliland, Anne	Ohio State Univ	Franz and Kate Stone
Hammond, Eric	Elyria High	Kelly Prochazka
Hardesty, Amanda	Fayetteville High	Franz and Kate Stone
Hawkins, Ian	Ohio State Univ	Franz and Kate Stone
Hegna, Robert	Dayton Christian High	Friends of Stone Lab-StateSciDay*
Holden, Stephen	Bucyrus High	Ray Frederick
Holton, Sarah	Bishop Watterson High	Ray Frederick
Hundley, Stacey	Ohio State Univ	Franz and Kate Stone
Jauch, Jennifer	Columbus State Community Coll	Ray Frederick
Jones, R	Ohio State Univ	Pepsi-Cola Bottling Company
Kerr, Patricia	Ohio State Univ	Friends of Stone Lab
King, Jeremy	Ohio State Univ	Franz and Kate Stone
Konfal, Danielle	Otterbein College	Ray Frederick
Kudlu, Priya	Ohio State Univ	Langlois
Ledford-Jones, Catherine	Ohio State Univ	Pepsi-Cola Bottling Company
Lewicki, Sheila	Ohio State Univ	Kelly Prochazka
Liu, Jacob	Upper Arlington High	Ray Frederick-StateSciDay*
Malott, Thomas	Lynchburg-Clay High	Ray Frederick
Marbaugh, Lanie	Ohio State Univ	Franz and Kate Stone
Marshall, Joshua	United High	Ray Frederick
Mousoulis, Jaclyn	Thomas Worthington High	Friends of Stone Lab
Reider, Kelsey	Oak Harbor High	Friends of Stone Lab
Richards, Seth	Ohio State Univ	Friends of Stone Lab, TerrAqua
Ruggles, Nicholas	Danbury High	Friends of Stone Lab
Sasak, Sandra	Brecksville-Broadview Heights	Franz and Kate Stone
Schiros, Sarah	Lakewood High	Polish Fishermen's Club
Schmidt, Elizabeth	Ohio State Univ-Lima	Friends of Stone Lab
Spaeth, John	Northern Kentucky Univ	Ray Frederick
Spolnik, Jenny	Ohio State Univ	Friends of Stone Lab
Vice, Lisa	Ohio State Univ	Friends of Stone Lab
White, Sara	Ohio State Univ	Friends of Stone Lab
Yaussy, Nathan	Buckeye Valley High	Franz and Kate Stone

\*State Science Day = Ohio Academy of Science State Science Day participant selected to receive an award from the Friends of Stone Laboratory scholarship fund.

TOTAL number of scholarships – 49

TOTAL value of scholarships – \$17,736

TABLE 6

**Stone Laboratory Student Roster -- 2002  
(199 students)**

<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Eric Ahnmark	Columbus OH	High School Junior			Worthington Kilbourne High
Marybeth Anderson	Shreve OH	High School Sophomore			Triway High
Christina Attie	Lorain OH	Senior	Biology	Biological Sciences	Ohio State Univ
John Bailey	New Carlisle OH	Senior	Fisheries Mgt	Natural Resources	Ohio State Univ
Bennisa Baldwin	Columbus OH	High School Junior			South High
Adam Barkley	Berea OH	High School Junior			Berea High
Ethan Barr	Delaware OH	Junior	Biology/Education	Biological Sciences	Denison Univ
Matthew Bartolotta	Willoughby Hills OH	High School Sophomore			St Ignatius High
Jamie Beaudry	Waterville OH	Senior	Operations Mgt	Business	Ohio State Univ
Gabe Below	Port Clinton OH	Senior	Zoology		Ohio Wesleyan Univ
Craig Biegler	Columbus OH	High School Junior			Upper Arlington High
Deborah Bigelow	Centerburg OH	Special		Education	Ohio State Univ
Lisa Bircher	Columbiana OH	Master's	Natural Resources	Graduate	Ohio State Univ
Melinda Bixel	Worthington OH	Master's	Natural Resources	Graduate	Ohio State Univ
Steven Blatnica	Middleburg Hts OH	Senior	Biology	Education	Cuyahoga Community College
Angela Blatt	Powell OH	Senior	Fisheries and Wildlife Mgt	Natural Resources	Ohio State Univ
Lauren Bradley	Marion OH	Senior	International Studies	Arts and Sciences	Ohio State Univ
John Brehm	West Liberty OH	Senior	Fisheries Mgt	Natural Resources	Ohio State Univ
LeAnn Bruner	Youngstown OH	Senior	Biology		Baldwin-Wallace College
Sibyl Bucheli	Columbus OH	Ph.D.	Entomology	Graduate	Ohio State Univ
Thomas Budd III	Ashland OH	High School Sophomore			Ashland High
Isaac Campbell	Columbus OH	Ph.D.	Ag & Extension Edu	Graduate	Ohio State Univ
Roxana Capper	Granville OH	High School Junior			Granville High
Meredith Carr	Urbana IL	Master's	Civil & Envir Engineering		Univ of Illinois
Tina Cegala	Columbus OH	Senior	Art Education	Arts	Ohio State Univ
Jason Cervenec	Columbus OH	Graduate Non-Degree		Graduate	Ohio State Univ
Yang Chen	Columbus OH	Ph.D.	Environmental Sci	Graduate	Ohio State Univ
Andrew Claus	Perrysburg OH	High School Sophomore			St John's Jesuit High
Carrie Cloud	Dayton OH	Junior	Environmental Edu	Natural Resources	Ohio State Univ
Kathleen Costello	Columbus OH	Master's	Science Math & Technology Edu	Graduate	Ohio State Univ
Rebecca Cox	Strongsville OH	Junior	Marine Biology	Arts and Sciences	Bowling Green State Univ
Ellen Crivella	Mt Pleasant PA	Senior	Environmental Sci	Natural Resources	Ohio State Univ
Matthew Custis	Lebanon OH	Senior	Biology	Arts and Sciences	Ohio State Univ
Todd Deem	Toledo OH	Graduate Non-Degree		Graduate	Ohio State Univ

<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Nicholas Delphia	Columbus OH	High School Junior			Grandview Heights High
Suzanne Denny	Salem OH	Post-Graduate		Continuing Education	Ohio State Univ
Dawn DeThomas	Huber Hts OH	Senior	Biology	Biological Sciences	Wright State Univ
Suzanne Detrick	West Mansfield OH	Sophomore	Pre-Med	Arts and Sciences	Univ of Dayton
Katelyn Dever	Hilliard OH	High School Sophomore			Hilliard Darby High
Carla Dilling	Columbus OH	Senior	Ecology/Evolution & Anthrop	Arts and Sciences	Ohio State Univ
Jessica Dingman	Lebanon OH	Junior	Biology	Arts and Sciences	Ohio State Univ
Bruno DiPietro	Columbus OH	Senior	Environmental Sci	Natural Resources	Ohio State Univ
Cathleen Doyle	Columbus OH	Graduate Non-Degree	EEOB	Graduate	Ohio State Univ
Hongxia Duan	Columbus OH	Ph.D.	Natural Resources	Graduate	Ohio State Univ
Jennifer Dudley	East Lansing MI	Master's	Envirnmtl Comm, Edu & Interp	Graduate	Ohio State Univ
Jamie Evans	Loveland OH	High School Sophomore			Loveland High
Lauren Fiala	Peninsula OH	Freshman	Expl Agr	Food, Ag, and Env Sci	Ohio State Univ
Muna Findley	Columbus OH	High School Junior			Eastmoor High
Rebecca Fink	Oconomowoc WI	Sophomore	Biology	Sciences	Trinity International University
Eric Flood	Canal Winchester OH	High School Senior			Bloom-Carroll High
Andrew Fujimura-Williams	Upper Arlington OH	High School Junior			Olney Friends High
Lisa Gardner	Crescent Springs KY	Junior	Environmental Sci	Natural Resources	Ohio State Univ
Paul Genzman	Put-in-Bay OH	Master's		Graduate	Ohio State Univ
Anne Gilliland	Columbus OH	Graduate Non-Degree		Graduate	Ohio State Univ
Theodore Gilliland	Rocky River OH	High School Junior			Rocky River High
Joseph Grabo	Medina OH	High School Junior			Medina High
Deborah Gravitt	Centerville OH	Graduate Non-Degree		Graduate	Ohio State Univ
Douglas Griebble	London OH	Graduate Non-Degree		Graduate	Ohio State Univ
Sean Grosz	Gates Mills OH	Graduate Non-Degree	Microbiology & Botany	Graduate	Ohio State Univ
Angela Groth	Springfield OH	High School Sophomore			Greenon High
Lemone Hammock	Columbus OH	High School Junior			Beechcroft High
Eric Hammond	Elyria OH	High School Sophomore			Elyria High
Patrick Hanigan	Sheffield Lake OH	High School Sophomore			Brookside High
Katurah Hansen	Columbus OH	High School Sophomore			Upper Arlington High
Amanda Hardesty	Fayetteville OH	High School Senior			Fayetteville High
James Harper	Grove City OH	Master's	Sch of Teaching & Learning	Graduate	Ohio State Univ
Ian Hawkins	Toledo OH	Senior	Zoology	Arts and Sciences	Ohio State Univ
Robert Hegna	Beavercreek OH	High School Senior			Dayton Christian High
Dana Henry	East Liberty OH	Graduate Non-Degree		Graduate	Ohio State Univ
Patrick Herak	Columbus OH	Master's	Edu T & L	Graduate	Ohio State Univ
Ryan Herb	Columbus OH	High School Junior			Fort Hayes Metro Educ Center
Bridger Hill	Spencer OH	High School Sophomore			Black River High
Nikki Hochstetler	Westerville OH	High School Sophomore			Westerville-South High
Stephen Holden	Bucyrus OH	High School Junior			Bucyrus High
Courtney Holm	Columbus OH	High School Sophomore			Grandview Heights High
Sarah Holton	Powell OH	High School Senior			Bishop Watterson High

<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Hilary Homenko	Brecksville OH	High School Sophomore			Magnificat High
Jonathan Hsu	Dublin OH	High School Sophomore			Columbus Academy High
Stacey Hundley	Fairborn OH	Ph.D.	Science Edu	Graduate	Ohio State Univ
Nikki Husat	Columbus OH	Master's	Wetland Ecology	Graduate	Ohio State Univ
Megan James	Bexley OH	Post-Graduate	Education/Sciences	Education	Capital Univ
Jennifer Jauch	Columbus OH	Senior	Environmental Technology	Environmental Technology	Columbus State Community College
Katherine Johnson	Columbus OH	Master's	Geology	Graduate	Ohio State Univ
R Bryan Jones	Franklin OH	Graduate Non-Degree		Graduate	Ohio State Univ
William Jones	Cedarville OH	Ph.D.	Education	Graduate	Ohio State Univ
Joaquin Jordan	Powell OH	Graduate Non-Degree		Graduate	Ohio State Univ
Douglas Kane	Columbus OH	Ph.D.	EEOB	Graduate	Ohio State Univ
Patricia Kerr	Belle Center OH	Ph.D.	Science Edu	Graduate	Ohio State Univ
Grace Kilbane	Delaware OH	Ph.D.	EEOB	Graduate	Ohio State Univ
Jeremy King	Columbus OH	Master's	Environmental Edu	Graduate	Ohio State Univ
Katharine Kleber	Columbus OH	Master's	Wildlife Mgt	Graduate	Ohio State Univ
Brian Koch	Monroeville OH	High School Junior			Monroeville High
John Kohli	Geneva OH	Junior	Pharmacy	Pharmacy	Ohio Northern Univ
Danielle Konfal	Columbus OH	Graduate	Ecology		Otterbein College
Dustin Kubasek	Ashland OH	High School Junior			Ashland High
Priya Kudlu	Columbus OH	Master's	Wetland Ecology	Graduate	Ohio State Univ
Kathleen LaFay	Cincinnati OH	Senior	Zoology	Biological Sciences	Ohio State Univ
Colena Lambert	Columbus OH	High School Sophomore			Briggs High
Jennifer LaMora	Vernon Hills IL	Graduate Non-Degree	Biology	Graduate	Ohio State Univ
Michelle Lanning	Wellington OH	High School Sophomore			Black River High
Catherine Ledford-Jones	Franklin OH	Graduate Non-Degree		Graduate	Ohio State Univ
Paul Lehmann	Toledo OH	Graduate Non-Degree		Graduate	Bowling Green State Univ
Sheila Lewicki	Olmsted Falls OH	Graduate Non-Degree	Environmental Studies	Graduate	Ohio State Univ
Choulene Li	Columbus OH	High School Junior			Northland High
Jason Lin	Columbus OH	Master's	Remote Sensing	Graduate	Ohio State Univ
Becky Lippmann	Columbus OH	Master's	Environmental Sci	Graduate	Ohio State Univ
Kristin Little	Culver IN	Graduate Non-Degree		Graduate	Ohio State Univ
Jacob Liu	Columbus OH	High School Sophomore			Upper Arlington High
Thomas Lloyd	Worthington OH	Graduate Non-Degree		Graduate	Ohio State Univ
Amy Long	Norwalk OH	Freshman	Undecided		Bowling Green State Univ
Suzanne Macy	Westlake OH	Junior	EEOB	Biological Sciences	Ohio State Univ
Thomas Malott	Lynchburg OH	High School Junior			Lynchburg-Clay High
Sarah Manor	Powell OH	High School Junior			Olentangy High
Lanie Marbaugh	Celina OH	Senior	Environmental Sci	Natural Resources	Ohio State Univ
Joshua Marshall	East Rochester OH	High School Sophomore			United High
Donald Masaitis	Fairview Pk OH	Graduate Non-Degree		Graduate	Ohio State Univ
Gina Mathias	Bowling Green OH	Senior	Human Dimensions in NR	Natural Resources	Ohio State Univ
Joseph McDonough	Franklin OH	Post-Graduate		Continuing Education	Ohio State Univ

<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Molly McHugh	Wooster OH	High School Sophomore			Triway High
Jeffrey Mihalik	Pittsburgh PA	Workshop		Workshop	Ohio State Univ
Scott Minter	Dublin OH	Sophomore	Photography	Photography	School of Visual Arts
Mary Moehring	Granville OH	Senior	Early Child. Dev/Geology	Human Ecology	Ohio State Univ
Douglas Mohr	Millersburg OH	Graduate Non-Degree		Graduate	Ohio State Univ
Steven Moss	Akron OH	Senior	Conservation/Aquatic Bio	Arts and Sciences	Kent State Univ
Jaclyn Mousoulis	Worthington OH	High School Junior			Thomas Worthington High
Matthew Naujoks	Solon OH	High School Junior			Solon High
Jill Neagle	Cincinnati OH	High School Junior			Turpin High
Erin Nenadal	Hudson OH	Senior	Comprehensive Science	Education	Univ of Findlay
Ngoc Huynh Ngo	Columbus OH	High School Junior			Northland High
Melissa Niese	Put-in-Bay OH	High School Junior			Put-in-Bay High
John Oliver	Carrollton OH	Junior	Education	Education	Kent State Univ
Dominic Perry	Rocky River OH	High School Junior			Rocky River High
Jason Porter	Oxford OH	Ph.D.	Microbial Ecology	Arts and Sciences	Miami Univ
Katie Powell	Columbus OH	High School Sophomore			Briggs High
Joshua Pretzer	Culver IN	Graduate Non-Degree		Graduate	Ohio State Univ
Craig Pucher	Cincinnati OH	Senior	Ag Communication	Arts and Sciences	Ohio State Univ
Jennifer Raab	Columbus OH	Senior	Human Dimensions in NR	Natural Resources	Ohio State Univ
Kelsey Reider	Oak Harbor OH	High School Senior			Oak Harbor High
Matthew Reinemeyer	Columbus OH	Ph.D.	Edu T & L	Graduate	Ohio State Univ
Teresa Rice	Kensington OH	Graduate	Organizational Mgt	Arts and Sciences	Malone College
Seth Richards	Gallipolis OH	Senior	Fisheries Mgt	Food, Ag, and Env Sci	Ohio State Univ
Nicholas Ruggles	Marblehead OH	High School Junior			Danbury High
David Rupp	Columbus OH	High School Junior			Worthington Kilbourne High
Amanda Sagle	Galion OH	Senior	Animal Science	Food, Ag, and Env Sci	Ohio State Univ
Michael Sandel	Columbus OH	Junior	Zoology	Arts and Sciences	Ohio State Univ
Sandra Sasak	Broadview Hts OH	High School Sophomore			Brecksville-Broadview Heights
Christina Schaefer	Lima OH	Junior	Biology	Biological Sciences	Ohio State Univ-Lima
Darlene Scheid	Monroeville OH	High School Sophomore			Monroeville High
Dannielle Scherley	Monroeville OH	High School Junior			Monroeville High
Sarah Schiros	Lakewood OH	High School Sophomore			Lakewood High
Elizabeth Schmidt	Sidney OH	Senior	Zoology, Chemistry	Biological Sciences	Ohio State Univ-Lima
John Shea	Willowick OH	Ph.D.	EEOB	Graduate	Ohio State Univ
Kristina Shockling	Wooster OH	Junior		ATI	Ohio State Univ
Bareena Silverman	Columbus OH	Master's	Entomology	Graduate	Ohio State Univ
Kurt Simmons	Coshocton OH	Senior	Environmental Sci	Natural Resources	Ohio State Univ
Benjamin Smith	Kensington OH	High School Sophomore			United High
Cassandra Smith	Ashland OH	High School Junior			Ashland High
Stuart Smith	North Fairfield OH	High School Junior			South Central High
John Spaeth	Okeana OH	Senior	Biology	Biological Sciences	Northern Kentucky Univ
Jenny Spolnik	Columbus OH	Master's	Art Policy & Admin	Graduate	Ohio State Univ

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<i>Name</i>	<i>Permanent City/State</i>	<i>Rank</i>	<i>Major</i>	<i>College</i>	<i>Institution</i>
Amy Stamp	Conneaut OH	Graduate Non-Degree		Graduate	Ohio State Univ
Allison Stanton	Cincinnati OH	Senior	Biology	Arts and Sciences	Ohio State Univ
Nicole Stepsis	Westerville OH	Graduate Non-Degree		Graduate	Ohio State Univ
Amy Stevens	Republic OH	High School Junior			Seneca East High
Donald Stoeckel	Columbus OH	Graduate Non-Degree		Graduate	Ohio State Univ
Susan Stoneman	Grove City OH	Senior	Zoology	Arts and Sciences	Ohio State Univ
Shanah Suping	Columbus OH	Ph.D.	Chemistry/Edu	Graduate	Ohio State Univ
Rebecca Swab	Hudson OH	Junior	Environmental Sci	Natural Resources	Ohio State Univ
Benjamin Sylak	Columbus OH	Junior	Fisheries	Natural Resources	Ohio State Univ
John Taylor-Lehman	Zanesville OH	Graduate Non-Degree		Graduate	Ohio State Univ
Tracey Trzebuckowski	Seven Hills OH	Ph.D.	Aquatic Ecology	Biological Sciences	Kent State Univ
Matthew Tupps	Bucyrus OH	High School Junior			Bucyrus High
Tierra Turner	Columbus OH	High School Sophomore			Linden-Mckinley High
Robert Ventorini	Pittsburgh PA	Workshop		Workshop	Ohio State Univ
Dennis Versele, Jr	Bellefontaine OH	Graduate Non-Degree		Graduate	Ohio State Univ
Lisa Vice	Columbus OH	Senior	Zoology	Arts and Sciences	Ohio State Univ
Ashley Vitello	Monroeville OH	High School Junior			Monroeville High
Levi Vladiff	Monroeville OH	High School Junior			Monroeville High
Melissa VonderBrink	Cincinnati OH	Junior	Animal Science	Food, Ag, and Env Sci	Ohio State Univ
Carolyn Waggoner	Mt. Vernon OH	Master's	Entomology	Graduate	Ohio State Univ
Davida Wagner	Uniontown OH	Master's	Biology	Biological Sciences	Kent State Univ
Nathan Wagoner	Hartville OH	Senior	Integrated Policy & Planning	Natural Resources	Ohio State Univ
Montana Walters	Minster OH	High School Junior			Minster High
Ryan Watson	Amherst OH	Junior	Aquaculture	Environmental Sciences	Unity College
Kelly Weber	North Fairfield OH	High School Senior			New London High
Christopher Wells	Galloway OH	Senior	Civil & Envir Engineering	Engineering	Ohio State Univ
Sara White	Columbus OH	Master's	Environmental Edu	Graduate	Ohio State Univ
Valerie Whitehouse	Heath OH	Senior	Ecology	Life Science	Otterbein College
Kellie Wilhelm	Monroeville OH	High School Junior			Monroeville High
Rebecca Williams	Galion OH	Senior	Biology	Arts and Sciences	Ohio State Univ
Robert Wilson	Defiance OH	Graduate Non-Degree	Industrial Technology	Graduate	Ohio State Univ
Michael Wisniewski	Sylvania OH	Senior	Wildlife Mgt	Natural Resources	Ohio State Univ
Rudy Wojtecki	Mantua OH	High School Junior			Crestwood High
Denyse Woods	Blacklick OH	Senior	Speech & Hearing	Arts and Sciences	Ohio State Univ
Nathan Yaussy	Sunbury OH	High School Sophomore			Buckeye Valley High
Mei Yee	Columbus OH	High School Junior			Eastmoor High
Breanna Zack	Columbus OH	High School Sophomore			Upper Arlington High
Hongyan Zhang	Columbus OH	Ph.D.	Aquatic Ecology	Graduate	Ohio State Univ
George Ziegler	Newark OH	Junior	Biology	Biological Sciences	Ohio Univ

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