Era of Transition: The University of Maine 1984-1986

University of Maine

Follow this and additional works at: https://digitalcommons.library.umaine.edu/univ_publications

Part of the Higher Education Commons, and the History Commons

Repository Citation
https://digitalcommons.library.umaine.edu/univ_publications/190

This Monograph is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in General University of Maine Publications by an authorized administrator of DigitalCommons@UMaine. For more information, please contact um.library.technical.services@maine.edu.
Era of Transition:
The University of Maine 1984-1986
Era of Transition:
The University of Maine 1984-1986
In the life of every organization there are periods of growth, consolidation, decline and revival. Universities are no exception. In the years 1984-1986 the core unit of the university system of Maine entered a period of transition which promises well for the future. Our name was restored to University of Maine, reflecting our statewide mission. The state endorsed a bond issue that reflected confidence in our research role, particularly, and the Legislature increased its funding substantially in response to the findings of a blue-ribbon Visiting Committee appointed by Governor Joseph E. Brennan. On the campus we instituted numerous initiatives to stem the decline in enrollment, improve management practices, practice fiscal responsibility, and offer quality teaching while increasing our research and public service efforts. For the benefit of all who are interested in the University of Maine, and particularly for those who will follow us in positions of responsibility, we offer the following report on a critical period of transition in the history of the University of Maine.

Contents

President’s Report 3
Arthur M. Johnson

Enrollment and Planning 9
Anita S. Wihry
Director, Institutional Planning and Enrollment Management

Financial Report 11
Charles F. Rauch, Jr.
Director, Financial Management

Academic Affairs 13
Richard C. Bowers
Vice President for Academic Affairs

External Affairs 19
Kenneth Allen
Vice President for External Affairs

Research 24
Charles E. Tarr
Vice President for Research

Student and Administrative Services 29
Thomas D. Aceto
Vice President for Student and Administrative Services

Athletics 31
Stuart P. Haskell, Jr.
Director, Physical Education and Athletics
Maine and the nation are in a period of major transition. The forces for change range from accelerating technology, which is changing the nature, location, and costs of production, to changing demographics, with an increasing percentage of our population beyond the prime working years of the traditional industrial society. Educational institutions inevitably reflect these changes in the composition of their student bodies, in their curricula, and in their costs of operation. The following report focuses on what the University of Maine at Orono, now once again the University of Maine, has done to meet these changes during the last two years.

When the current administration took office in March 1984 the impact of the transition that was underway in America and Maine was having a reverberating effect on the Orono campus. For a decade the campus had been seriously underfunded by about $5 million a year. Relations with the Chancellor's Office and with the rest of the system were at a low ebb. Faculty were dispirited, and from a high in 1982, enrollment was on a rapid decline. The land-grant and sea-grant institution of Maine seemed to many to have lost its way and its vision at a critical moment. The Concert Hall Museum that had been started a decade earlier was under construction but its completion required an additional $1.2 million from private sources. There was a serious operating budget deficit that had to be rectified by June 30, 1984. There was clearly a need to improve the Development Office, whose head had just resigned, and to work more closely with the Alumni Office, where a similar situation existed. The campus was badly in need of scientific equipment, computers, and repair of physical facilities such as the Library. The Chemical Engineering Department and its pulp and paper program had been waiting for years for an essential addition to Jenness Hall. The situation in Hitchner Hall, the home of biological sciences, was such that important research equipment was being stored in hallways and hazardous material was being transported past active classrooms. Across campus there was an acute shortage of space.

Despite these problems, the Orono campus had a fine, dedicated, able faculty; an energetic and enthusiastic student body; capable classified employees and alumni who held their alma mater in high esteem. With these resources, we set out to solve the problems that had unexpectedly become our responsibility.

Management

We knew we must make the best possible use of our human resources as well as our limited financial resources. To attain that goal, we reorganized the administration and established new management protocols.

An Executive Committee was established to meet weekly and interact with invited guests specifically chosen for their expertise in management practices. Semiannual retreats to address major problems were established, as were weekly meetings with the vice presidents and planners. Management review by external consultants was put in place to improve the University's management expertise and to enhance its level of administrative professionalism.

In addition, we sent some members of the administrative team to participate in special workshops and training programs so they might bring their sharply honed up-to-the-moment skills back to Orono and apply them to the benefit of the institution. All of these techniques have worked well. They have sharpened our ability to plan for the future and move assertively and wisely along paths of sensible development and change.

Universities have typically been administered, that is, educators have assumed the responsibility of allocating a fixed amount of resources. This technique focuses attention on situations as they arise; generates responses to crises on an ad hoc basis, promotes more of a reactive than proactive posture. In 1984 it was clear that events were moving too rapidly to permit continuation of a reactive style of management. This fact had become equally clear at the System level. Its impact was significantly reflected by abandoning a ten-year effort to homogenize the various campuses of the system and placing a new emphasis on differentiation of missions and planning. In this context, Orono was reaffirmed as a land-grant university and sea-grant college with statewide responsibilities different from those of other campuses.

Mission Statement

The unique demand made by our University's land-grant status is that we must be responsive to the needs of the people of Maine. The traditional mission, as defined in the Morrill Act of 1863 with its emphasis on agriculture and the practical education of the industrial classes, has been refined and restated as the tripartite mission of the modern land-grant university: teaching, research and public service. Our sea-grant college mission is also tied to the needs and concerns of the people of Maine: it is a
FORMER ORGANIZATION

ORGANIZATIONAL CHART
University of Maine at Orono

BOARD OF TRUSTEES

CHANCELLOR

PRESIDENT, UMO

Special Assistant to the President

Director of Equal Opportunity

EXECUTIVE VICE PRESIDENT and VICE PRESIDENT for ACADEMIC AFFAIRS

VICE PRESIDENT for RESEARCH AND PUBLIC SERVICE

Assistant Vice President for Research and Public Service

Balanced Growth for Maine

Center for Marine Studies

Darling Center

UMO Sea Grant Program

Cooperative Extension Service

Department of Industrial Cooperation

Division of Sponsored Programs

Land and Water Resources Center

Institute for Quaternary Studies

Laboratory for Surface Science and Technology

Maine Agricultural Experiment Station

Migratory Fish Research Institute

Social Science Research Institute

University of Maine Pulp and Paper Foundation

Academic Deans

College of Arts and Sciences

School of Performing Arts

Bangor Community College

College of Business Administration

College of Education

College of Engineering and Science

School of Engineering Technology

College of Forest Resources

College of Life Sciences and Agriculture

School of Human Development

Technical Division

Associate Vice President for Academic Affairs

Canadian-American Center

Cooperative Education/Field Experience

Honors Program

Instructional Systems Center

Registrar

Graduate School

Continuing Education/Summer Session

University Libraries

VICE PRESIDENT for STUDENT AFFAIRS

Admissions

Career Planning and Placement

Counseling Center

Currier Health Center

Dean of Student Affairs

Center for Student Services at BOCG

Consumer and Non-Traditional Students

Franco-American Program

Italian Programs and Services

International Students

Memorial Union

Student Activities Organizations

Student Conduct

Onward

Disabled Students

Residential Life

Student Aid

Tutoring and Research

VICE PRESIDENT for FINANCE AND ADMINISTRATION

Assistant Vice President for Finance and Administration

Budget and Fiscal Services

Bursar

Chief Accountant

Business Manager

Bookstore

Purchasing

Telecommunications Office

Employee Relations

Children’s Day Care Center

Labor Relations

Personnel Services

Employee Benefits

Payroll

Personnel

Physical Plant

Police and Safety

Campus spirit abounded at the reactivated Maine Day observance, 1986.
The vice presidential level was reorganized and responsibilities consolidated; the position of Executive Vice President was eliminated.

The overall development area was assigned to the Office of the Vice President for External Affairs.

The tradition of convocations was restored and strengthened by the Task Force on Preparing Ourselves for a Changing World, the work of which resulted in a series of programs focusing on trends and megatrends in the modern world.

Athletics was reassigned to the Office of the Vice President for Student and Administrative Services.

The entire admissions-retention program was reorganized and expanded; under the Director of Institutional Planning and Enrollment Management, Admissions, Financial Aid, and Institutional Planning were combined to form the program’s core.

The marine studies program was reactivated.

An executive committee was established to coordinate campus administration and advise the President on major issues of the University.

The Registrar’s Office was brought under the enrollment management program.

Public Service was reassigned to the Office of the Vice President for External Affairs.

A Government Relations Committee was established to advise the President on matters such as legislative action.

A Presidential Advisory Committee of outstanding community leaders was established.
statewide, cooperative effort to ensure the wise use and development of the coastal and marine resources of the Gulf of Maine. Our University is an intrinsic part of the Maine landscape: our mission and our efforts are inextricably linked with the people of the State of Maine.

In this context a comprehensive five-year financial plan was developed in 1984 with input and review by a large number of faculty.

Finances

One of our first steps on campus was to establish by College and Department what was needed to fulfill the mission of a first-class land-grant university. The results documented the debilitating effects of a decade of underfunding. Reviewed and prioritized by a policy review committee comprised of faculty, professionals and administrators, the data was translated into a five-year long-range financial plan. This plan in turn was submitted to the Chancellor and trustees and became Part II of their request from the legislature in the Spring of 1985. The legislature declined to fund this request, and we are therefore now completing fiscal year 1986 with no new operating monies. However, those priorities remain the cornerstone of our continuing requests of the legislature.

During our financial review process, it became apparent that the University of Maine at Orono was spending beyond its means and meeting crises on an ad hoc, and frequently inequitable, basis. Since 1984 we have regularized and systematized the financial affairs of the campus. Much of the credit for improvement belongs to the emphasis on financial management in our seven colleges and in the Athletic Department, where one of the major financial problems has been partially resolved and remains under review. We have also initiated incentive budgeting: rewarding those who saved and penalizing those who overspent.

Orono has remained substantially underfunded during the past two years, but there have been bright spots:

- An energetic alumni fund-raising effort began to produce very significant results. Under GAA President William Johnson in 1984 that source provided appreciably more than $1 million; under his successor, Henry Schmelzer, in 1985 support reached $1.25 million and in 1986 the GAA expects to top the last figure by a substantial amount.
- New alumni programs that tie graduates more closely to the president’s office, to current students, and to other university activities have generated significant dividends in alumni enthusiasm, cooperation, and support of various kinds.
- Good progress has been made identifying the complex and varied routes by which private gifts flow to the campus and in coordinating fund-raising activities, which have taken on increasing importance in the financial picture.
- Private funding for public institutions is being recognized by donors who once gave exclusively to private institutions. For example, in 1986 New England Telephone made a grant to Orono for the first time; that grant will be renewed for the next two years.
- We have put a new emphasis on recruiting outstanding students through Maine Scholars Day, which had been seriously underfunded for some time. Today corporate contributions are helping to bring 500 of Maine’s best high school students to the Orono campus and to offer financial aid to the best of them. In addition, we have made a special effort to attract National Merit Scholars, who are the most promising of their generation. In the Fall of 1985, we attracted eight; we expect to add more in 1986.

A major victory for the University System and for Orono came out of the 1984 statewide bond referendum. The proceeds of that referendum are now being put to work on this campus and others. We have added substantially to the availability of computers for students across the campus; we have been able to take care of some of the more acute problems in Aubert Hall, and ground has been broken for additions to Jenness Hall and to Hitchner Hall. The Pulp and Paper Foundation, which has supported that program on campus for more than 30 years, has pledged itself to raise more than a million dollars to equip the new Jenness addition. That drive is now moving rapidly to a successful conclusion.

Early in this administration the System Office, at the Chancellor’s direction, released funds to complete the third floor of Fogler Library. The System Office has given and loaned other funds to help meet some of our most pressing needs.

The serious nature of Orono’s financial situation was publicly recognized by the trustees in November 1985. In January 1986 a Visiting Committee appointed by Governor Joseph E. Brennan reported that Orono needed to be restored to its position of preeminence by adequate fund-
ing. The Trustees of the System accepted this recommendation and others at their meeting of February 24, 1986. In accordance with the Visiting Committee's recommendations, the trustees requested an initial down payment from the State of $15 million. This recommendation was accepted by the Governor, who put the case to a joint session of the Legislature in March 1986. Approved and enacted, Orono's share of approximately $8.5 million will be used for critical projects, with faculty development having the highest priority, followed by items such as research equipment, student aid, and improvement of the library.

**Admissions and Retention**

Applications for admissions were declining in the Spring of 1984. The firm of Barton-Gillet, which handles marketing and communications matters for a number of prestigious schools, colleges, and universities, was employed to design new recruiting material. The results were outstanding and positive.

The entire admissions-retention program was reorganized and expanded in 1985. Admissions, Financial Aid and Institutional Planning were combined to form the core of the enrollment-management program. Faculty, students, and alumni were brought into the effort. The Admissions Office moved from its crowded quarters in Alumni Hall to more spacious and accessible offices in Chadbourne Hall at the entrance to the campus.

A comprehensive campus visit program was developed for prospective students and their parents throughout the year; student Dirigo guides were outfitted with distinctive blazers and became the official tour guides for prospective students and their parents. Outstanding recent graduates were employed to represent the university and recruited extensively throughout New England, the Middle Atlantic States and points as distant as Minnesota. As a result, we have dealt with unfavorable demographics; met our admissions targets for Fall 1985, and we are well ahead of last year's figures in our current admissions cycle.

To retain students already enrolled, the enrollment management program has developed a variety of programs, including special seminars for secretaries, chairpersons, Cooperative Extension Service faculty and others who routinely come in contact with current and prospective students, to involve them in the recruiting and retention process.

New efforts to improve student advising are being made in several colleges. The Registrar's Office has been brought under the enrollment management program, and on-line, computerized registration became standard during 1985-86.

As of March 1986 the systematic effort to recruit more and better students is succeeding. The number of applications on hand in March 1986 was already greater than the total number of new students who registered in September 1985. The same kind of persistent and systematic effort is being applied to attracting transfer students. But the fact remains that unless and until the University receives more funding to pursue such programs, demographics will slowly but surely erode some of the projected student base. Rather than cutting enrollment, which could deny a public university to all but the best students, we are attempting to maintain and upgrade our undergraduate student base at or near 8,000 students on a full-time basis. At the same time we are gradually expanding our graduate student population. The optimum size we visualize is a total of approximately 12,000 students, graduate and undergraduate combined.

**Teaching**

Beginning in the spring of 1985 a special effort was made to improve teaching, particularly in large freshman classes where data analysis suggested large class size was producing a negative response from students. To teach sizeable classes well takes specialized skills, and we moved at once to make those skills available. In addition to a special retreat for deans and vice presidents, which focused on this matter, a special program for instructors in large courses was financed by the President's Office in the summer of 1985. It will be repeated in 1986. During the year a special task force investigated the status of teaching on campus and made a number of recommendations which are currently being implemented.

In the belief that academic achievement should receive special support and recognition, in 1984 we inaugurated a special pin that is awarded by each college to its majors who achieve an average of 3.5 or better. The practice of academic recognition will become as institutionalized as that of awarding athletic letters.

**Nontraditional Students**

Nationally, and in Maine, there has been a growing trend for people more than 24 years of age to return to school.
“UMO should not be compared to other campuses in Maine, but to its peer institutions across the country.”
—Senator Edmund Muskie

These nontraditional students are typically part-time and many of them require special services and facilities. We have taken a number of steps to attempt to meet these needs. Part of Chadbourne Hall has been reserved for their occasional overnight use. A counselor and special space have been provided in the Memorial Union for their use, and we have appointed a special liaison to report periodically on the needs of this group.

The need for special attention to nontraditional students was also reflected in the reorganization of Bangor Community College (BCC) in the summer of 1985. For some time the residential role of BCC had been declining in importance while the drain on Orono’s resources to support it was growing. A committee of faculty and administration recommended that residential facilities on the Bangor campus be closed; that diagnostic, remedial, and developmental work be combined under a new entity, the University College, which would include the Continuing Education Division and the Conferences and Institutes Division. While continuing BCC academic programs, University College students would receive housing and some of their studies on the Orono campus. This plan was put into effect, on an 18-month trial basis, in September 1985 and to date has appeared to work well.

Another source of future students is third world countries. We already have some representation, especially in our graduate programs. The University, working under the aegis of the Agency for International Development, recently has had active representation in Haiti and in Africa. Out of the latter association has grown the beginnings of the International Research and Education Office.

Since the world impinges directly on Maine, its people, international initiatives will undoubtedly be strengthened in the years ahead. A contemporary example involves the Canadian-American Center, which has well-established ties with Canada, and especially the Maritimes, involving faculty and student exchange as well as research. In 1985 Governor Brennan asked our University to assist the State in responding to the problem of Canadian imports which are having a major impact on northern and eastern Maine. Initial surveys showed substantial student involvement with Canada, as well as an appreciable variety of faculty contact and cooperative research. A major conference in January 1986 was followed by the Governor’s request of the Legislature for $50,000 to enable the Canadian-American Center to nurture and develop existing research and teaching ties.

Research
As a land-grant and sea-grant institution, Orono has a special obligation to do research in areas of particular importance to Maine and to communicate those results to Maine people. Among the projects of direct importance to the State are radon research, research on spruce budworm, acidic deposition and red tail lobster disease. The Institute for Quaternary Studies continues its distinguished multidisciplinary research program. The allied Center for the Study of Early Man is currently meeting a challenge grant from the Bingham Trust which will establish it firmly at this university. The Maine Agricultural Research Station and units such as the Canadian-American Center contribute to research on specific Maine problems. The internationally recognized Laboratory for Surface Science Technology and some environmental science research will be housed in a new building scheduled for construction in the summer of 1986.

Early in this administration we decided to revive the Marine Studies program, which earlier had experienced a series of serious setbacks; the program has moved rapidly ahead. A new permanent director, a top-level administrator in the oceanographic program of the National Science Foundation, will take office July 1, 1986. We expect the quality of this operation to continue to attract federal funds despite economy moves at the national level.

The same is true for a highly successful submersibles program in the Gulf of Maine. This program involves investigation of the floor of the Gulf from free-swimming submersibles for a month each summer. Maine has been singled out as one of the most successful programs nationally, while cutbacks at the federal level have eliminated similar programs.

The University has joined with the private Bigelow Laboratory for Ocean Sciences at Boothbay Harbor, the State of Maine Department of Marine Resources, the State Geological Survey and others to form a cooperative research project under the name ARGO-Maine. Funding is being sought at the state level for an intensive and cooperative investigation of the sources of productivity in the Gulf of Maine.

The Sponsored Program Office, which handles grants and contracts for the University, was placed under the Office of the Vice President for Research and has made steady progress in generating faculty interest in research and in obtaining funds to support it. The amount of these
Enrollment and Planning

external funds has increased at the rate of about $1 million a year.

We can quantify the specific programs in place at the University, count the monies raised and grants awarded to various individuals and units, and consequently measure their effectiveness. At the same time, we are all aware of an indefinable new spirit on campus, a spirit which does not lend itself readily to analysis. It was reflected in April 1986 when 1500 students turned out to clean up the campus on Maine Day which had been abandoned several years earlier for lack of interest.

Part of that new mood may perhaps be attributed to removing an emphasis on privacy surrounding the President's Office, from our being accessible to students and faculty, as well as strongly interactive with other administrators.

Formal and informal liaisons, ranging from an active and supportive relationship with groups such as the Council of Colleges to meals taken with students in their dining halls, have created a visible presidential presence. Presidential presence and accessibility provide a mechanism for the entire University community and the people of the State of Maine to participate in the conduct and ongoing improvement of our institution.

There are many more problems to solve and further challenges to meet, but we have made a strong beginning, established lines of communication, developed a cross-college and interdisciplinary tradition, and reaffirmed our mission as the Land-Grant University and Sea-Grant College of the State of Maine. Maine may indeed look confidently to the future based on the dedication and quality of its university.

Institutional Planning

Two major planning initiatives have marked the passage of this administration. In June of 1984 the University of Maine at Orono submitted a five-year plan to the Board of Trustees. That plan identified three primary institutional goals:

- To become the best undergraduate teaching institution among the land-grant institutions of the Northeast.
- To make a significant difference in the lives of the people of the State of Maine through our research and public service activities.
- To maintain national prominence in selected programs while striving to attain national prominence in others.

This plan included a request for $6.3 million in the first year and a total of $11.65 million for the planning period. This request was presented to the legislature in 1985 and was not funded.

Among the ten objectives specified in the plan were a number that required no funding or minimal funding. These objectives were implemented. Among them were University College, an expanded summer session program and an enrollment management program.

The second major planning effort began in November, 1985, when the Board of Trustees issued its Statement of Goals and Strategies. That statement required the University of Maine at Orono to prepare a plan showing how the institution would move in the direction of a substantially increased graduate enrollment, a substantially decreased undergraduate enrollment, and the termination of the undergraduate teacher education function of the College of Education.

With the publication of the REPORT OF THE VISITING COMMITTEE TO THE UNIVERSITY OF MAINE, and the acceptance of the Visiting Committee's recommendations by the Board of Trustees, planning efforts were redirected in keeping with the recommendations of that report.

These recommendations specified that the University of Maine at Orono be strengthened as a research and doctoral institution befitting its historic role as the state's land-grant university, and that its graduate offerings rest upon a first-class undergraduate educational program. Other recommendations provided for a name change for UMO to the University of Maine; a special role among system presidents for UMO's president; greater differentiation of campus roles with UMO as the research and doctoral institution of the system;
The Maine Difference, amplified in the lines from the Robert Frost poem: two roads diverged in a wood—And I—I took the one less traveled by and that has made all the difference has been the theme of the recruiting campaign. The campaign publications have won four Council for the Advancement and Support of Education (CASE) gold medals.

stabilization of libraries, computer services and teacher education; increased faculty development efforts and improved academic support services; and varying admissions standards and strengthened program review procedures.

Planning activities during this administration have involved many faculty and staff. One of the long-term benefits of planning in the last two years has been the investigation of a wide range of topics by committees. These reports explore issues and make recommendations that are the foundation for the decisions and initiatives represented in the campus' response to the Board of Trustees' Goals and Strategies Statement and to the Visiting Committee report. Committees have studied issues such as graduate education, teacher education, two-year program delivery, the land-grant mission and statewide role, and institutional cost and size.

In addition to responding to specific planning initiatives, the Institutional Planning Office has developed management information systems relating to a variety of areas and has provided support for such critical functions as computerized course registration and enrollment management planning. In conjunction with the Financial Management Office's efforts in developing improved financial management reporting systems, the overall institutional research and planning efforts of the campus have advanced significantly during the past two and one-half years.

Enrollment Management

Effectively communicating the strengths of the University of Maine at Orono to prospective students and parents is critical to the future of this institution. Institutions of higher education are engaged in increasingly vigorous competition for a declining pool of high school students, particularly for the very best students. In January 1985, UMO began an enrollment management program which is enabling the institution to tell its story as the State University and Land-Grant/Sea-Grant Institution of Maine.

In an effort supported widely by faculty, staff and current students, the University has initiated an exciting, comprehensive and effective enrollment management program. The declining numbers of applications which had been occurring since 1982 have been reversed. The quality of applicants, even with increased numbers taken from a declining applicant pool has been stabilized.

Recruiting publications have won a national award.

The heart of enrollment management is a sense of self-identity that provides the essential foundation for an understanding of what the institution is and what it is about.

The beauty and idyllic setting of the campus that have been proudly displayed to more than 2000 prospective students and parents in summer, fall and spring on-campus recruiting events have been central to the success of the recruiting effort. As beautiful as the campus is in all seasons, the Maine Difference for many participants was the inclusion of people in the program, in particular the deans and other academic officers, and student tour guides.

Admissions recruiters have visited high schools throughout Maine, New England, New York, New Jersey and as far west as Minnesota. Alumni Ambassadors, trained on-campus during a summer program, have represented us at college nights, have interviewed prospective students, and have raised funds and developed programs such as the extremely successful recruiting event at the Portland Museum of Art. In the coming year, Alumni Ambassadors will continue these activities, as well as add a recruiting event at the Museum of Fine Arts in Boston and in our new Maine Center for the Arts building here on campus.

Special emphasis on communicating with guidance counselors about events, opportunities, and programs on campus has been implemented through a quarterly guidance counselor newsletter and breakfast update held periodically in various parts of the state.

Publications and the Spend a Morning at Maine series developed by Admissions office staff have made a significant difference in the success of the enrollment management effort. Last, but fundamental to the enrollment management effort, has been the involvement of many campus offices in the development of the enrollment management plan and the implementation of programs addressing both recruitment and retention. The widespread cooperation of faculty and staff has been buttressed by organizational changes that have brought Admissions, Financial Aid, and the Registrar's Office together with the Institutional Planning Office under the direction of a director of institutional planning and enrollment management.

Greta Wiby
A good means of assessing the changing financial status of the University of Maine at Orono is to compare the fiscal year 1987 estimated Education and General (E&G) budget with fiscal year 1974. It is not clear that fiscal year 1974 was a particularly golden age for this campus, but since it was just before the devastating cuts of the mid-'70s it has the appearance of being a time of a reasonable level of funding. To get even a better perspective, it is useful to remove the effects of inflation by deflating recent figures to constant 1974 dollars. Figure 1 shows such a comparison of expense budgets for a twelve-year period from fiscal year 1974 to 1987.

It is clear that compared to 1974, at least, the University has been underfunded for several years but, due to the salary and wage increases over the past five years, had in fiscal year 1986 just about caught up with the 1974 level. Comparing the actual annual expense budget with the fiscal year 1974 level indicates an average underfunding of approximately $5 million yearly. In spite of being more than $50 million dollars (in 1974 dollars—it would be more than twice that in 1987 dollars) short over the total period, the campus grew in the number of professionals and faculty performing research. This was in keeping with the move, started in the '60s, to change from a teaching institution to a full service land-grant university combining teaching with research and public service. This growth exacerbated the funding shortfall.

It is against this backdrop that the recent funding increase from the State Government of $15 million for the University of Maine System, $8.5 million of which will come to Orono, should be viewed. Although this is nearly an 18 percent increase in only one year, it is also only a funding increase of 18 percent over the 1974 level; that means an increase of 1.4 percent annually, which is about what the growth was during this period of time. However, there will be an additional salary and wage increase in fiscal year 1987 that has already been negotiated and funded; consequently, there will be an additional 5 percent increase for this purpose. Thus, the total funding level for fiscal year 1987 as depicted on the fiscal year 1987 bar graph of Figure 1, which includes the new $8.5 million in addition to the salary and wage increase, is nearly 23 percent higher than the 1974 and 1986 levels. This should be a significant help in correcting some of the deficiencies that occurred during the low-funding years.

The above description alone does not tell the true significance of the additional State appropriation; within this funding there are two distributions that are important. The first of these is a comparison through the years of the State portion of UMO’s total revenue. Figure 2 shows that the State appropriation in 1974 was 36.9 percent of the total UMO revenue budget compared to 16.3 percent from tuition. By 1984 the State portion had dropped to 31.3 percent while the students were covering 18.8 percent with their tuition. It is very significant that the projected revenue budget in 1987 shows the student share of the burden back at the 1974 level of 16.3 percent while the State will be picking up 38.6 percent of the total.

The second important distribution to examine is the amount of the instructional system budget that can be devoted to operation and maintenance. With the reduced funding during the lean years, in order to honor commitments to faculty and staff, the operating budgets were diminished. The academic affairs division in a state university similar to Maine’s should have only about 80 percent of its budget going to salaries and wages; the remainder should go to equipment and operations. However, through the mid '70s and early '80s, the payroll accounted for an average of 89 percent of the instructional system budget. With the projected utilization of the additional state funds in 1987, the salaries and wages will account for only 80.8 percent of the academic division budget. This means an adequate operating budget for the first time in more than ten years.

In addition to the above campus wide issues, there are two specific funding problems that have plagued UMO for the past several years. The first of these is the athletic
Budget. UMO has entered every year for at least the past three years with all departments but athletics funded at least at the survival level. Consequently, each year, extensive resources have been consumed in seeking ways of funding our athletic programs, many of which have attained regional and national stature. It appears that for the first time in several years, the Athletic Department will have sufficient E&G money to go with outside funds so that the athletic department will start the year no worse off than the other departments on campus.

The second specific funding issue is the building of the Maine Center for the Arts that is scheduled for completion this Fall. Figure 3 shows the progress that has been made over the past few years in meeting this obligation.

A discussion of the change in the financial status of UMO over the past few years would not be complete without a comment on the increased care and management that the department chairs and account managers have effected in meeting the ever-decreasing operating budgets. Although the amount of underfunding compared to the 1974 level left departments with insufficient operating budgets, there was a period of small growth, in the early '80s, in enrollment and in administrative costs that could be recovered from grants and contracts. This provided a cushion that could absorb any overexpenditure at the end of the year. Because of this flexibility and because many operating budgets were ridiculously low, many departments simply overexpended. However, as this cushion disappeared, it became necessary to reprogram numerous accounts to be more in line with actual needs and to insure that each account was carefully controlled. Accordingly, well over two million dollars of reallocation was implemented in 1984 and 1985; in 1986, deans, department heads, and account managers have been very conscientious about maintaining their accounts with a positive balance throughout the year.

The discussion thus far pertains to annual Education and General funds used for payrolls, operations, and maintenance. The use made of the funds acquired by the recent University Bond Issue has been covered in other portions of this report. The significance of this bond issue is brought into a little better perspective if bond issue attempts for capital improvements at UMO are reviewed over the past two decades. In the history of the University of Maine System, there have been only two successful bond issue authorizations out of a total of five attempts. Figure 4 shows that prior to the November 1984 bond issue, which produced about $8.9 million for the Orono campus out of a total package of $16.5 million, the only success had been in 1972. At that time, Orono received just under $2 million out of the $8.36 million University-of-Maine bond issue.
During the past two and one-half years, major efforts within Academic Affairs have been directed at the implementation of a few new programs, the improvement of existing academic programs and the enhancement of the academic experience of our undergraduate students.

An extension of the University of Southern Maine's baccalaureate Nursing Program was established at the University of Maine at Orono in the fall of 1983 with the addition of an upper-division two year clinical program to an already existing prenursing program. The junior year was first offered in 1983-84 and the senior year in 1984-85. Thirty-six baccalaureate Nursing degrees were awarded in the spring of 1985 and we awarded 56 at the 1986 Commencement. Accreditation for the University of Southern Maine’s baccalaureate program by the League of Nursing has been extended to the Extension at Orono. By every measure this program has been successful.

A baccalaureate program in Molecular and Cellular Biology was initiated in the fall of 1984, and a Doctor of Philosophy in Biological Sciences was begun in the fall of 1985. The Bachelor of Science in Molecular and Cellular Biology is designed to enable students to prepare for careers in the rapidly developing fields of molecular biology and biotechnology, especially recombinant DNA technology. One of the goals of the program is to serve as a nucleus around which the College of Life Sciences and Agriculture can focus its continued planning for development of the Division of Life Sciences, which consists of the departments of Biochemistry, Botony and Plant Pathology, Entomology, and Microbiology. The bachelor of science in Molecular and Cellular Biology draws upon strengths in these and other biological science departments within the University.

The Ph.D. program in Biological Science is designed to meet two broad goals:
- To allow students to pursue advanced study in a broader range of biological specialities than is available through existing programs.
- To provide a mechanism through which advanced students may focus on some of the important cross-disciplinary biological problems that extend beyond traditional departmental lines.

The program extends opportunities for study at the doctoral level in biological areas that are not restricted to a specific discipline, such as the Ph.D. in Zoology, or to fairly narrow interdisciplinary specialities, such as the Ph.D. programs in Nutritional Sciences and Plant Sciences.

The University of Maine at Orono has for a number of years offered its Master of Public Administration program at the University of Maine at Augusta as well as on the Orono campus. Recently this program has been initiated as well in Presque Isle in cooperation with the University of Maine at Presque Isle.

In the fall of 1985, the University initiated the offering of Business Administration courses in Bucksport leading to a Master of Business Administration.

The University of Maine at Orono completed a five-year Mobile Graduate Program at the University of Maine at Machias in the spring of 1985. The program led to the M.S. degree in Education. A total of 44 students completed the work and received their degrees, something they would not have been able to do without the Orono outreach program.

The Canadian Studies, the Honors, and the Women in the Curriculum Programs have all been developed. A senior seminar in Canadian Studies has been added, and a new two semester sophomore honors sequence has been started. In addition, foreign studies opportunities for our students have been expanded through additional student exchange programs such as those with the Universidade do Rio Grande do Norte, Brazil; the University College Galway, Ireland, and the University of Salzburg, Austria.

In the fall, 1984, a third ROTC program (Navy) became available to UMO students through the Maine Maritime Academy's NROTC program. With the addition of this program, the University of Maine became one of the few Universities in the country at which students have the opportunity of enrolling in any one of the three Armed Services Reserve Officers Training Programs.

During the past two years major efforts have been directed toward improving undergraduate advising and new student orientation. A revamped freshman advising system has been established in the College of Arts and Sciences which provides for weekly evening advising sessions in the residence halls for freshmen. The College of Life Sciences and Agriculture has combined its freshman advising programs with its freshman seminar program wherein the advisors become the seminar instructors.

Plans are being made to expand our New Student Welcome into a fall semester new student orientation to replace the summer orientation which has attracted only about one-third of our new students. The new orientation program will have an expanded academic component and will stress the centrality of our academic programs.
The Honors Program
The Honors Program began in the College of Arts and Sciences in the 1920s and expanded to become a university-wide program in 1962. Because it is highly respected by the more than 500 members of the National Collegiate Honors Council (NCHC), it is looked to as a model for fledgling programs at other institutions. Both Honors faculty and students participate in the activities of the NCHC and its regional affiliate (NE-NCHC).

Each semester some 175 to 200 students enroll in Honors courses under the tutelage of approximately 70 faculty members. Successfully completing the requirements of the Honors Program is the only way to receive a degree with honors. Among the challenges of Honors work is the completion of a senior thesis or project, followed by an oral examination by a committee of faculty members. It is this intensively focused independent work that provides the greatest reward of Honors work. By the time students complete this project, they have learned research techniques and methodological approaches that are usually not accessible until graduate or professional school.

The Fogler Library
A well-equipped library is essential to the educational enterprise. During the past two years significant progress has been made at Fogler Library, whose holdings include more than 600,000 volumes, 4,800 journal titles, 1 million government documents and 1.2 million microforms, a listening center, and a microcomputer lab.

The completion of the Library's third floor in 1985 provides increased study space for students, graduate student study carrels, and space for books. An adjacent remodeled area houses a totally reorganized and more efficient acquisitions and processing center for books and journals. The addition of this valuable space has allowed the Library to reorganize other parts of the building to improve services to library users. To provide better support for study and research in the Sciences and Engineering, the Library formed a Science and Engineering Center in August, 1985. This library within the library brings together reference materials and current issues of journals covering all areas of sciences and engineering. Having the Center has allowed the Library to focus on building stronger collections and a higher level of staff expertise in these areas.

The Graduate School
The Graduate School has moved forward decisively in several areas during the past two years. These areas include recruitment and retention; enrollment management; program reviews and course development; orientation; office automation, and financial support of graduate students.

During the spring of 1985, an ad hoc graduate recruitment committee was formed to conduct a separate evaluation of graduate level recruitment efforts. As a result of this assessment, a broad review of the parameters of graduate education, recruitment, retention, and graduate school procedures occurred. Several goals were established, many of which have been met.

Recruitment procedures, including publications, of both the graduate school and departments were reviewed. A Graduate School Prospectus was developed and completed in March 1986 to complement the Graduate School Catalogue and supplement departmental publications. Copies are available to recruit highly qualified applicants. The Prospectus will undoubtedly increase our visibility and serve as a valuable marketing tool.

The Graduate School has made a commitment to increase enrollment: since 1984, graduate enrollment has increased by more than 10 percent. An additional seven percent increase has been projected for 1986-87.

During the past two years, three new programs were approved and sent forward to the Vice President for Academic Affairs. The Ph.D. in Biological Sciences was approved by the Trustees. This interdisciplinary Ph.D. will allow the university to offer graduate work in emerging research in the biological sciences. The Master of Science in Surveying Engineering and the Master of Computer Science are currently being reviewed at the system level.

In response to program and accreditation reviews, as well as the need to maintain currency, a number of courses have been modified or developed. Twenty-nine new courses have been proposed and have been approved by the Curriculum Committee. In addition, modifications of 45 courses have been approved.

Financial support of graduate students is essential to the well-being of graduate programs. While new general budget monies have not been allocated for additional support, we have met with some success in this area. Recently, a substantial sum of money, The Nauman Scholarship,
was dedicated to be used for graduate students in applied economics. Working with the departments of Economics and Agricultural and Resource Economics, a plan was developed to award several students assistantships. This scholarship funding was first distributed in the fall of 1985.

The Canadian-American Center
Among the activities selected for national prominence by this administration is the Canadian-American Center. It has continued to respond to the need for greater understanding of the U.S.-Canada relationship. In January 1986 the Center hosted a conference focused on problems of cross-border trade in the resource industries of agriculture, forestry and fishing. Currently, the Center is coordinating an effort to establish University of Maine leadership in the study of Canadian-American economic relations in the Northeast.

This is one example of the Center's projects aimed at enhancing the study of Canada in the United States. As one of three Title VI National Resource Centers for Canadian Studies, recognized and partially funded by the U.S. Department of Education, the Canadian-American Center directs and facilitates activities ranging from undergraduate and graduate programs in Canadian Studies, to supporting faculty research and development, and providing the University and the State with opportunities to experience Canada's achievements in arts and culture.

College of Arts and Sciences
While limited by funding shortfalls—many of which will be helped by an increased budget in 1986-87—the College has revamped its core requirements, improved student access to campuses, served the State of Maine in significant ways and expanded to capitalize on existing excellences. During the past two years, the College of Arts and Sciences approved and began implementing a major reform in its core requirements. The new requirements significantly upgrade the writing skills necessary for liberal arts graduates, and introduce proficiency requirements in foreign languages and mathematics. They also require a one year sequence in the sciences or mathematics, courses in the arts, and at least one course that emphasizes a foreign or international perspective on world affairs. These new requirements serve to increase writing competency and provide students with broader training in mathematics/science, the arts, and in the study of cultural perspectives other than those of the United States.

The College has completed the implementation of the Classroom Computer Clusters afforded as a result of the State bond issue to upgrade computer access on campus; this program makes microcomputers available for word processing and other computer tasks.

Sponsoring statewide meetings of foreign language teachers; chairing the State Board of Examiners in Audiology and Speech Pathology; coordinating the University Affiliated Program, an interdisciplinary cooperative effort between the University and Eastern Maine Medical Center, and close liaison with the State Historical Society have all contributed to intellectual, medical and historical bases for the State of Maine.

The College also has had a major international impact. Collaborative faculty research with psychology colleagues in the Netherlands; repeated participation by the College's faculty in high level mathematics seminars in Europe; a study of the roots of terrorism in Cyprus, and the creation of a manpower study for the Indonesian government are just a few of the examples.

In addition to these broad categorizations of the College's influence on the state, national and international scenes, one can chronicle other achievements by various departments of the College. For example, the student recitals sponsored by the Music Department, plays produced by student directors studying Theatre, and student art shows sponsored by the Art Department are clear evidence that the arts are alive at the University of Maine.

The Departments of History, Philosophy, and Foreign Languages and Classics have cooperated in the development of a new interdisciplinary Course Cluster in Classical Studies. The Department of Political Science has expanded its Master of Public Administration program to the University of Maine at Presque Isle, thus making available a highly desired advanced degree program in Aroostook County. The continuing success of the Department’s Congressional Intern program also benefits students. The Department of Sociology’s revised curriculum reflects a new emphasis on Applied Sociology—an area of study well-suited to Maine’s rural nature.

Additionally, two outstanding departments are making modest expansions to meet student needs. The Department of Computer Science has developed cooperative degree programs with the College of Business Administration and has also initiated plans for a new Master of Science degree.
"The University of Maine at Orono is an active cultural and intellectual center."
—The Washington Post

College of Business Administration
During the past two years, business courses have continued to be very popular with students. While teaching undergraduates and graduate students on campus, the College of Business Administration also coordinates outreach teaching programs for students who need business courses but cannot attend the Orono campus. Responding to a request from management at Champion International, an outreach Master of Business Administration program (with needed undergraduate courses as well) is being offered in Bucksport. There are 12 MBA candidates participating in the graduate program, most of whom are from Champion International.

The research activities of the College of Business Administration faculty since 1984 are reflected in the places they have been published such as Business Horizons; The Accounting Historians Journal; Business, and Journal of Small Business Management.

The faculty of the College of Business Administration have also served on the editorial boards and as reviewers of several professional journals such as Dryden Press; Journal of Financial Computing; Journal of Marketing; Northeast Journal of Business and Economics; Financial Review, and Business Publications.

The public service mission of the University of Maine at Orono is actively and effectively addressed by the faculty in Business Administration on local, state and national levels.

College of Education
During the past two years the College of Education has strengthened its role in public education. It has a natural link to every community in the state through the public school systems. Therefore, it has the dual responsibility of providing quality programs to students and of providing efficient, valuable educational services to local communities to help improve the quality of life of Maine citizens. The College's instructional involvement with its students does not end with their graduation as is the case with most other campus units. State certification and recertification regulations, teachers' needs to stay current, the changing nature of expectations of the schools in which they teach, and the requirements for further degree work for specialization all define the responsibilities of the teacher education faculty at Orono.

During the past two years the traditional academic, research and public service missions of the College have been vigorously pursued.

- The College has continued to receive external funding which in the past two years has exceeded $1.7 million.
- A conference focusing on aspirations of Maine youth was initiated by the College and attended by more than 700 people. The impact of the conference has been apparent in the follow-up activities in communities statewide. The issue continues to receive attention from state government leaders.
- The Center for Educational Field Services has received contracts from 11 school systems from Eliot to Easton to survey citizen and school personnel attitudes and opinions regarding their public schools.
- The College has responded to recent changes in Maine's teacher certification law by expanding services to the public regarding certification procedures. The College has experienced a dramatic increase in the number who have sought College assistance in obtaining certification. These requests have come from individuals in Maine who currently hold baccalaureate degrees. In addition, more than 100 out-of-state constituents have sought College services.
- More than 60 field-based courses have been offered throughout the state in this two year period.
- Exemplary practices in education are being presented by College faculty throughout the state through outreach seminars.
- The implementation of an innovative, newly designed undergraduate program for the preparation of elementary and secondary teachers has been a major focus of activity. It features a strong four-year clinical program. Capitalizing upon the most current research about human development and learning, this program places students as early as their freshmen year on teams which are permanently assigned to public school systems and coached by outstanding public school teachers in concert with University faculty. It represents a critical juncture where theory meets practice, where preparation turns into performance. A solid liberal arts component complements the professional portion of the program.
- The College has been selected by the national Council for Accreditation of Teacher Education to be one of ten pilot sites for that Council's newly adopted accreditation system.
• Our Research in Rural Education journal is an excellent vehicle for international dissemination of current information on rural education.
• The College has initiated an Occasional Paper Series that is intended to place before the Maine educational leadership information which can assist them as they ponder the solutions to complex problems confronting communities, educational systems, or their students.
• Faculty are actively engaged in research in such areas as school climate, special education services, learning and behavior problems of children, administrator certification, aspirations of Maine youth and marine education.

College of Engineering and Science

The College of Engineering and Science has maintained its traditions of excellence and service during the past two years. Among these accomplishments are the following:

• In the Chemical Engineering Department, design of the laboratory addition to Jenness Hall has been completed and construction has begun. The University of Maine Pulp and Paper Foundation program to obtain gifts of equipment, services and money to equip the new addition is well underway. A computer-based process monitoring and control system has been received from Measurtext. This Vision 2002 system which is state-of-the-art and which is valued at more than $350,000 has been sized to serve all of the process and research activities which will be included in the addition. Under the leadership of E.C. Jordan, six engineering companies are cooperating to donate all of the engineering services required to specify, design and install the equipment. Cianbro is leading a group of contractors who will be donating their services to move, install, pipe, and wire the equipment. The total of all gifts of equipment, services, and cash from the pulp and paper industry and its suppliers will exceed $2,500,000.
• The unique properties of peat are being utilized in the treatment of landfill leachate, which is extremely polluted water resulting from rain water percolating through landfills. Civil Engineering faculty have shown peat to be an effective filter in removing heavy metals and other contaminants.

• Each summer the University and the Pulp and Paper Foundation sponsors a one-week program at Orono for academically gifted high school juniors who are interested in studying engineering in college. In the 1985 class, 10 of 56 students were selected as National Merit Scholarship semifinalists. Sixteen of the 46 students who attended the 1984 program, which had a similar student quality, have enrolled at UMO with the majority of the other students being recruited to other outstanding universities. The program will be continued in 1986.
• Five Mechanical Engineering Technology students chose as their Senior Design Project (1984-85) to design and build a Parapodium Chariot. This particular device was to allow a three-year old Bangor youngster, who is suffering from a congenital malformation of the spine, the ability to get around. Their advisor oversaw the project which was received very enthusiastically by the youngster and his parents.
• The University has put increased emphasis on recruiting National Merit Scholars to attend college at UMO. Of seven entering freshmen in the Fall of 1985, six chose to study engineering.
• Civil Engineering faculty and graduate students are developing advanced techniques for computer-aided map production and revision. This involves innovative methods for the storage and retrieval of land-related data. Work includes the design of a special database for land-related data coupled with a retrieval system and having artificial intelligence capabilities to provide easy access for users.
• Landslides in the glacial clay deposits of eastern and southern Maine have been triggered by housing development and erosion along rivers and the coast. A Civil Engineering faculty member is working jointly with the USM Geology Department and the Maine State Geological Survey to investigate the causes of five major slides in order to predict the future occurrence of major slides.
• Leaking underground gasoline storage tanks are posing a major threat to water supply wells. Research in Civil Engineering is identifying and investigating the compounds in gasoline-contaminated water supplies that will control the effectiveness of water treatment processes, such as activated carbon and aeration, designed to remove these pollutants.
• A Civil Engineer and an economist are studying the use and value of data and information contained in nautical charts produced by the National Oceanic and Atmospheric Administration. This evaluation will be used by NOAA to formulate policies and strategies for efficiently providing nautical charts and other information to public officials and private citizens for navigation and the management of resources and facilities in coastal areas.

• The Robotics Laboratory at UMO was established in 1985 and represents the first attempt in the state to develop a state of the art Robotics Laboratory. The laboratory, which is presently being used for education, research and development, will further enhance new high technologies within the state. Industrial interactions with companies such as General Electric, Fairchild, Shape, and Nu-Tec have been established.

• A surface acoustic wave (SAW) microsensor capable of measuring gas concentration in the parts per billion range and less has been developed in the Electrical Engineering Department. The research is currently being oriented toward monitoring gases such as sulfur dioxides and nitrous oxides which are the primary gases responsible for acid rain.

• The microprocessor laboratory has grown rapidly in the last two years, in part because of industrial grants, but also because of University support. At present it is one of the best equipped microprocessor development laboratories in the Northeast. The laboratory has both a teaching and an applied research function, with current interactions with both in-state, and out-of-state companies.

The examples cited are a small part of the many endeavors embodying excellence and service within the College of Engineering and Science. They do provide some insight into the breadth of the College’s activities.

During the past two years, the College of Forest Resources has continued to build on previously established strengths in many programs and has added several new programs.

All of the six curricula in Forest Resources are either accredited or certified by their respective professional societies, and two of the programs, Recreation and Park Management and Wood Technology, have been established since 1984.

An endowment for a distinguished professorship directed toward hardwood silviculture, management and/or products recently has been received bringing the College’s total of endowed professorships to five.

Most recently, the College was awarded the National Cartographic Information Center. It also recently was awarded a Cooperative Unit with the National Park Service which will support research programs in recreation and park management, wildlife management and forest management.

The College of Forest Resources is active in the public service arena, reflecting the land-grant status of the University of Maine at Orono. It continues to host more than 25 regional and national meetings per year covering a broad array of forest resource disciplines. In addition, a current effort is underway to expand continuing education offerings for professionals in forest resources, and a position is pending final funding to direct development and coordination of professional continuing education programs. The College also works closely with the Cooperative Extension Service in extending applied research information to the public of the State. The College recently has also become active in international forestry programs directed toward agroforestry projects in developing nations.

College of Life Sciences and Agriculture

The past two years have been a period of dynamic change in the academic programs of the College of Life Sciences and Agriculture. The direction for change is governed by the realization that production agriculture no longer is a major goal of Maine’s young people. The College has begun a planned transition in programmatic goals and objectives designed to meet the needs of students who will live their professional lives in the 21st century.

Many changes have been initiated, and several have come to fruition.

College of Forest Resources
The University of Maine at Orono provides the third largest forestry program and the sixth largest forest resources program in the United States. Because of the regional and national reputation of these programs, the College enrolls a high percentage of nonresident students, a situation which is unique relative to other forest resources programs in the U.S.
We have instituted a new baccalaureate program in Molecular and Cellular Biology, coordinated through the Department of Biochemistry. One of the first programs of its kind for undergraduates, it is designed to prepare students for careers in research, medicine, and in the expanding fields of commercial biotechnology.

A proposal for a baccalaureate program in Food Science is in the final stages of preparation and shortly will be available for internal review.

Preliminary discussions are underway concerning development of a multidisciplinary cross-college program in marine resources. Marine resources is an area in which student interest appears strong; it is an area of great significance to the State of Maine; it is an area in which the University of Maine at Orono has substantial strength in several departments, and it is an area which the University has targeted for the development of expanded research programs. All of the components for a strong undergraduate program are in place, and the concept will be pursued.

University College
At the beginning of the 1984-85 academic year, President Arthur Johnson identified those goals deemed essential in the University’s pursuit of excellence. One goal was to enhance educational opportunities for current and prospective students through the creation of... a University College.... Consequently a University College Task Force was charged with exploring ways by which a University College would serve as, a vehicle for strengthening and focusing University of Maine at Orono efforts to serve a segment of the current and potential student population in need of the services that Bangor Community College faculty and others currently provide, and as a means for enhancing UM-Orono’s outreach activities to those students not academically prepared for the more traditional offerings of the institution.

The primary mission of the new college is to serve as the principal access, assessment and educational unit of UM-Orono for students not sufficiently prepared for the academic challenges of the other colleges. It also is the center for innovative, experimental and alternative courses, curricula and delivery systems for those not appropriately served by the other UM-Orono units.

Richard C. Bowers

The division of External Affairs was established in March 1984. The units of Public Service were administratively moved from Research & Public Service as part of this new organization. At the same time Athletics and the Development Office were placed in External Affairs as part of the administrative reorganization. Later in 1985 Athletics was moved to the office of the Vice President for Student and Administrative Services, and Public Information and Central Services was assigned to External Affairs as were the fund-raising units. A committee on Governmental Relations was also established in External Affairs for purposes of advising the President on matters pertaining to State Government. Since 1984 External Affairs has had three major functions:

- Public Information and Central Services division has increased its efforts to publicize the activities of the Orono campus throughout the State, to improve the quality of publications and to modernize the print shop.
- The fund-raising efforts were coordinated with the goal of increasing private gifts to the campus.
- The public service units increased their efforts in serving our external clientele with the major thrust directed to economic development.

Fund-Raising Units
Raising funds from private sources for the Orono campus is carried out by four separate units: the General Alumni Association, the Pulp & Paper Foundation, the University of Maine Foundation, and the Development Office. The first three units are independent of the University of Maine’s administration, but are coordinated in their activities by the Vice President for External Affairs. The Development Office is part of the campus administration and reports to the Vice President for External Affairs.

During the last two years UMO has received more than $9 million in private funds, of which $5.6 million came from new contributions and $3.4 million were received as investment earnings from prior gifts. This is a new record that represents a steady but modest growth in our ability to attract private philanthropy.

The investments by the campus are managed by either the University of Maine Foundation or by the Trustees of the University of Maine through System Wide Services. Of the $3.4 million in investment earnings, $2.4 million
were received from funds invested by System Wide Services, and $1 million came from the University of Maine Foundation. During this same two-year period, the endowment managed by System Wide Services grew by $5 million and the University of Maine Foundation’s grew by about $4 million.

The Development Office has received from all units, including its own activity, $4.6 million during 1984-1986. These monies were placed directly into campus accounts.

Table 1
Principal UMO Activities Supported by Gifts and Income
1984-86

<table>
<thead>
<tr>
<th>Activity</th>
<th>Thousands of dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Construction</td>
<td>$2,955</td>
</tr>
<tr>
<td>Scholarships</td>
<td>2,717</td>
</tr>
<tr>
<td>Department Operations</td>
<td>1,409</td>
</tr>
<tr>
<td>Professorships/Faculty Salaries</td>
<td>387</td>
</tr>
<tr>
<td>Endowments</td>
<td>661</td>
</tr>
<tr>
<td>Other</td>
<td>918</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$9,047</strong></td>
</tr>
</tbody>
</table>

Alumni contributed more than $3.5 million. This includes the funds from the sale of the Palmer (William P. Palmer, III, Class of 1958, who left a pre-Columbian art collection to UM) artifacts which exceeds $1.1 million. However, most of the contributions came from friends of the University, including individuals, corporations, foundations and associations, which provided more than $5 million.

Bureau of Labor Education

Maine has the dubious distinction of having the second highest occupational injury rate in the nation and also the second highest rate in severity of job injuries. These workplace conditions have had a significantly negative impact upon Maine’s economy and its people in terms of human suffering, losses in employee income and business productivity and profits, and large increases in Workers’ Compensation costs.

The Bureau of Labor Education has been working to deal with this ongoing problem through a variety of educational approaches. In one case, through nationally competitive grant funding awarded by OSHA of the U.S. Department of Labor, the Bureau staff successfully implemented a six-year educational project designed to help workers attain a healthy and safe workplace through hazard identification and abatement. This project effort had significant impacts in major areas:

- By developing new project proposals required by OSHA for each year of project funding and aggressively addressing a key public policy issue and need in Maine, the Bureau’s staff efforts resulted in raising a total of $395,532 in outside project funding for the State of Maine.
- Since the inception of this project at least 5,000 Maine workers, health professionals, union officers, and educators have been provided with training, educational resources, and fundamental competence to identify occupational hazards and initiate steps to mitigate them.
- Through the teacher educational component of the project, a cadre of educators in Maine’s secondary adult/vocational education schools and manpower training centers has incorporated the Bureau’s occupational health and safety teaching materials into their curriculum on an ongoing basis.

Bureau of Public Administration

Created in 1965 by the 102nd Maine Legislature the Bureau applies University resources in assisting Maine state and local governments. During the last two years the Bureau has been involved in a number of activities including

- Pro-Maine: a strategic planning process, the purpose of which has been to chart the economic future of Northeastern Maine. More than 500 individuals, representing government, business and industry, and the nonprofit sector, have participated directly in the Pro-Maine effort over the last two years. The reactions to Pro-Maine have been dramatic. In some cases, there has been evidence of new activities by state government in line with Pro-Maine’s objectives. This has included executive actions which have culminated in legislative proposals. In other cases Pro-Maine has elicited a change in attitudes about the prospects for Northeastern Maine as well as about the relationship between Northeastern Maine and the rest of the State.
- Evaluation of Community Development Block Grant (CDBG) Program. The Bureau of Public Administra-
tion assists the State Planning Office in planning, administering, and evaluating its Community Development Block Grant program (CDBG). The CDBG program, specifically that part which is targeted at Maine's small communities, allocates approximately $11 million annually. UMO's evaluation activities have resulted in a number of modifications in the way the program is designed and administered. Maine's CDBG program including its evaluation component has received national attention and has been identified as a model program for other states to follow. The U.S. Department of Housing and Urban Development (HUD) has cited Maine's program and has disseminated our evaluation findings nationwide.

- The Washington County Children's Project is an effort to assist in the design and implementation of an evaluation system for the 0-3 Project administered by the Washington County Children's Program (WCCP). The 0-3 Project is a demonstration project funded by the Office of Special Education, U.S. Department of Education, to develop a model for delivering home and group services, through the use of indigenous workers, to special needs children 0-3 years of age.
- The Bureau of Public Administration conducted a six-month supervisory and management development program for the City of Portland. This project was designed to train all supervisory and managerial employees through an in-house capacity building/instructor development approach.
- The Hancock County Soil and Water Conservation District needed information on the use of peat moss as filter material in septic tank systems. Based on work done by the University in response to this request, it may become possible to site houses, schools, etc. in areas otherwise prohibited because of soil structure.
- The operators of wood-fired power plants wanted to know the chemistry of the ash generated in order to provide adequate disposal; the University performed this service.
- A manufacturer of aluminum oil tanks asked for help in the analysis of certain metal failures. University professionals responded to the problem.
- National Sea Products Company in Rockland required a safety study to evaluate the repairs that had been done to an elevator. The University was able to perform this service.
- The General Electric Company in Bangor builds turbines for the Navy and their heat treating ovens must have controls calibrated to the specifications of the National Bureau of Standards. The University performs this service for G.E. on an on call basis.

Cooperative Extension Service

During 1985 an administrative reorganization of CES was accomplished through which the responsibility of Area Coordinator was abolished and Program Leaders were established. Today CES administration consists of five program leaders in the areas of Agriculture, Natural Resources/Community Development, Family Living, 4-H, and Economic Development. Two new positions were created: an Assistant Director and a Staff Development Officer. The new organization has improved relations between the county offices and the state office.

Agriculture

During 1984-86 CES has concentrated its efforts in its agriculture program on increasing farm profitability. An example of one program in this area is the Maine Dairy Crisis Program. In response to mounting concern over the Maine dairy farmers' economic plight, CES, the State Department of Agriculture, and the Finance Authority of Maine initiated a pilot project to assist dairy farmers improve the viability of their business. Two private business management consultants were hired to analyze farm businesses and to coordinate assistance to farmers from CES and the State Department of Agriculture. Depending on the nature of each farmer's problems, Extension teams were assembled, drawn from a pool of specialists in dairy management, nutrition, breeding, crop production, and economics. Presently, the teams are making follow-up visits.

Natural Resources/Community Development

CES over the last two years has focused attention on increasing the understanding and stewardship of Maine's vast forest and marine resources. In each case
the thrust was to improve the economy in these sectors of the State's resources. A program example is *Great American Woodlots*, a 13-part television series scheduled for delivery to public television across the country in the Fall of 1986. While woodlot owners will be the program's primary audience, the general public will also become better informed about the importance of caring for woodlands.

**Family Living**

In the Family Living Program, CES has pursued solutions to factors that have a negative impact on the rural family. Although the influence of this program on the economic well-being of rural dwellers in Maine cannot be measured easily, it is a positive step in improving the life and general well-being of numerous people living in the country.

The Family Living Program emphasizes personal health through vehicles such as wellness programs. During 1985 CES agents, volunteers and paraprofessionals reached 2,881 adults in six Maine counties with programs to improve personal health.

**4-H**

Maine's 4-H program stresses citizenship, family living, career education and substance abuse prevention. Despite declining numbers of youth in the general population, 4-H still worked with 4,800 youths in active clubs throughout the state. Camp Tanglewood is one of the more popular summer programs offered 4-H students. A staff of 18 counselors, many of them students in the University of Maine System, lead the students in courses in forestry, wildlife, marine ecology and nature study.

**Economic Development**

In December 1985 CES established a unit program called Economic Development. During the first year of its existence it has worked in assisting citizens establish bed and breakfast homes, pick your own fruit and vegetable farms, roadside fruit and vegetable stands and at present is working with the City of Bangor planning a trade fair for 1987. Although still in its infancy, this unit is growing and having an impact on new small business ventures in the rural and urban setting.

**Maine Council on Economic Education**

The Maine Council on Economic Education is associated with the University of Maine but is directed and administered by an executive committee chaired by Perry M. Hudson of Cumberland Foreside. The purpose of the Council is to influence, develop and coordinate economic education in the public school systems throughout the state. During the past two years this unit received a major increase in its support base through a special challenge grant from the International Paper Company. As a result of this challenge grant the Council experienced a 50 percent increase in its funding base.

The Council cooperated with the Maine Development Foundation in developing an institute on the Maine economy for members of the 112th Legislature; they developed an instructional MPBN television series on taxation that was aired each school day on a statewide basis, and the Council instituted and implemented the stock market game program in 51 Maine towns and 169 classrooms.

**University of Maine Technical Services Program**

This program has experienced an active two years with a strong impact on economic development.

Its major undertaking during the last two years is the sludge research project instituted after identifying the problem of finding alternate uses for sludge besides landfill. UMTS formed committees covering the public and private sectors to deal with various aspects of the problem and a national symposium was structured. The results of this symposium catalyzed three major industry-funded research projects. Field testing for sludge on blueberry fields as mulch along with field testing sludge for poultry bedding and, finally, land-spreading cover for roadsides are already underway. In all cases this is with the cooperation of the paper companies and state agencies responsible for the product.

UMTS was also involved with developing a highly efficient oil-fired cogenerator of heat and electricity with potential applications for home and small commercial buildings. This activity is going on here on campus at the present time. A major thrust of UMTS is that of providing technical seminars. All of the seminars held this past year provided a positive economic impact. The inventors workshop is one example that deserves particular note as it identified a previously unrecognized need: assisting individual inventors and entrepreneurs with patent rights and licensure.
Marine Advisory Program

The Marine Advisory Program is the outreach arm of the Sea Grant Program at the University of Maine at Orono. It, in essence, is the technical transfer and educational program of Sea Grant to the particular clientele they serve. Some examples of their outreach and impact on the economy for fisherman include the following:

- Working with shrimp fishermen to develop a trawl that would eliminate juvenile fish of commercial species in the catch.
- Working with the harvest of ocean quahogs which has become a thriving industry for fishermen in Down East Maine.
- Assisting in the development of the Portland Fish Exchange, the first of its kind in North America.
- Helping to bring the lobster industry and the University of Maine at Orono together to plan a Lobster Research Institute. This is still in the planning stages in 1986, and we look forward to developing this joint venture with that industry to improve through Research and Extension those aspects of the lobster industry that need our attention.

Public Information and Central Services

The 1984-86 period was a time of modernization, innovation and achievement for the Public Information and Central Services (PICS) Division. It also was a time when public relations became an organized activity and was assigned to the division as one of its primary responsibilities.

The Printing Office

Major capital improvements were effected in the printing office as the result of a loan negotiated with the University of Maine System. The installation of new equipment increased the volume of production and resulted in significant cost savings for clients.

Electronic Media

PICS electronic media specialists during the last two years have prepared several video productions for commercial television stations. In addition, numerous videotapes have been produced for such purposes as student recruitment, the promotion of cultural and athletic events, fund-raising activities and serving the public interest.

News

PICS personnel were active in the preparation of both traditional and nontraditional stories and feature articles, with increased emphasis on stories concerning student, faculty, staff and alumni achievements as well as significant research and public service projects.

Sports Program Series

A highly successful enterprise initiated by PICS was the Sports Program Series. Programs for major intercollegiate athletic contests are produced free of charge, made possible through the sale of advertising space. All revenue realized from program sales goes directly to the Department of Physical Education and Athletics to help support its operations.

Publications, Photographs, Graphic Designs and Video Productions

Several PICS publications, photographs, graphic designs and video productions have won awards from state, national and international professional organizations and associations during the past two years.

Public Relations

A major enterprise undertaken by PICS in 1986 was the launching of a comprehensive public relations program designed to enhance Maine citizens' understanding of the significant and exciting ways in which the University affects their general well-being. The program encompasses all units of the University and all elements of the media. A sponsored video production entitled Maine Spectrum is presented each month on commercial television stations; public service spots are produced for Maine's radio stations and a kiosk featuring the University's seven colleges, to be located at the Bangor International Airport, is near completion.

The Governmental Relations Committee

The Governmental Relations Committee keeps the President of the campus apprised of matters pertaining to our relationship with the State Legislature and advises on matters regarding the political environment. Established in July 1985, the committee's activities are still evolving, but it played an important role during the 1985 and 1986 legislative sessions.

Kenneth Allen
Research

Research at the University of Maine touches the lives of every Maine person and reaches out to people of the nation and the world with new knowledge, ingenious applications of existing knowledge, and solutions to complex problems and puzzles. In many cases, University of Maine research helps predict the future, and by doing so, makes it possible for humans and their societies to plan sensibly and well.

During the past two years, research activities at the State of Maine’s land-grant institution have embodied the traits of excellence, efficiency and service.

New records were set in 1984-1985 in nationally competitive grants monies awarded to University of Maine faculty and staff. Those grants reflect the prestige and respect with which the University’s faculty are recognized throughout the nation.

University of Maine faculty are a powerful presence in forest resources with expertise and experience in demand by other universities and countries as well as instate. The Institute for Quaternary Studies represents the most concentrated, experienced and nationally honored group of polar researchers in the United States; the Migratory Fish Research Institute provides a unique service to faculty and graduate students with its support of projects, travel and international speakers. Maine’s Agricultural Experiment Station continues to build on the firm research foundations established during its first century with a modern focus on the cutting edge of molecular biology and genetic manipulation. University of Maine personnel perform in leadership roles with work on radon and acid rain; solve problems with computer chips on which rest essential components of the national defense system, and they explore the unmapped underwater frontiers of the Gulf of Maine. The awards through which they are able to conduct these projects are available only after stiff competition, and the awards represent money which would not otherwise be available to Maine, her land-grant university and her research personnel.

Research projects funded by sources other than the University of Maine abound, and many of those projects are interdisciplinary and multinstitutional. Careful administrative coordination in research funds procurement and management helps avoid duplication of effort and increases the scope of research projects.

Efficiency is further enhanced by focusing on the subject matter of research projects through advisory committees and liaisons with business and industry.

Nor does research at the University of Maine fail to meet its responsibilities to service. The Maine Agricultural Experiment Station is involved directly meeting the needs and solving the problems of Maine people and Maine business; many programs in research areas have an impact on citizens, and through cooperation and coordination with other agencies, application of research findings are taken directly to the people; educational programs and safety projects often grow out of research done at the University of Maine, and those programs are warmly received by the public. The University goes beyond the borders of the state which houses her, however, and brings research and educational programs, based on the tremendous strengths of the University of Maine, to other people in developing countries. And she recruits and trains, both formally and informally, young citizens of those developing countries so they may be brought forward to assume leadership roles promising stability and a brighter future for their people.

Research at the University of Maine is carried out to serve Maine people, and the citizens of the world, with pride in her excellence and a Yankee trader’s eye for efficiency and good sense.

THE CENTER FOR MARINE STUDIES

During the past two years, The Center for Marine Studies has become involved in two exciting, multidisciplinary, multinstitutional projects which are part of the broad-based University initiative in the Marine Sciences.

• ARGO-Maine, the Association for Research on the Gulf of Maine.
• The NURP Project, a study of the benthic productivity and resources of the Gulf of Maine funded by the National Oceanic and Atmospheric Administration’s National Undersea Research Program.

ARGO-Maine is an association with a principal mission to conduct a long-range, interdisciplinary research study of the Gulf of Maine, both as a natural ecosystem and to benefit the people living at its edge; making their living from its bounty; enjoying it as a recreational resource; developing businesses from its plenty, and exploiting it as a natural energy resource.

Four organizations are directly involved in the opening phases of studying the Gulf of Maine:
"Agricultural research today is looking not only at production, but at economics and markets. The Maine Agricultural Experiment Station . . . is where that research continues to be done."

—David Bright, Bangor Daily News

THE MAINE AGRICULTURAL EXPERIMENT STATION

For more than 100 years, the Maine Agricultural Experiment Station has served the land-grant research mission of the University of Maine. During the past two years, MAES scientists have continued to find solutions to Maine’s problems and to create opportunities for the natural resource-based industries that are the heart of the state’s economy.

Recent developments in the Experiment Station include scientific accomplishments and organizational improvements. Recent years have seen opportunities that face Maine’s agricultural, forestry, and marine economy. Major new research efforts were initiated to investigate the effects of acidic deposition in the forest environment; improved integrated pest management for potato production; the development of methods to control gaffkemia disease in lobsters, and the use of Maine’s agricultural and marine produce in new food products. The promise of biotechnology has come to Maine, as well, through the efforts of MAES scientists. Experiment Station programs in this area include research into the molecular genetics of conifer tree growth; a major program on the genetic improvement of potato varieties, and an innovative program on molecular biological approaches to the degradation of pesticides that threaten the state’s groundwater resources.

MAES scientists have also begun detailed studies on economic development strategies for Maine; on approaches to improve the marketing of Maine’s fruit and vegetable crops, and on ways to improve the nutrition of Maine’s families.

In addition to its research accomplishments, the Maine Agricultural Experiment Station has also undertaken organizational improvements to facilitate the fulfillment of its central mission: to conduct research that is relevant to the needs of the people of Maine.

To meet that requirement, two formal advisory committees, made up of concerned citizens and industry representatives, contribute their time to help assure the relevance of MAES research programs. The Agricultural Advisory Committee provides such program guidance in traditional agricultural areas, while the Forest Resources Research Advisory Committee helps guide the research programs in forest resources.
THE OFFICE OF INTERNATIONAL RESEARCH AND EDUCATIONAL PROGRAMS

The Office of International Research and Educational Programs was established December 1, 1985, with the appointment of its director. During its short history, the office has established an effective organization, put several programs and projects on-line, and laid the foundations of workable logistics. It has also developed a cooperative working orientation with other land-grant universities and an internationally respected credibility level.

The University of Maine has particular strengths of a magnitude which almost demand that they be shared with others, particularly developing countries.

The powerful presence of the College of Forest Resources with its multifaceted experience and expertise; the state of the art research done through the Maine Agricultural Experiment Station focusing on the cutting edge of molecular research and genetic improvement, as well as many other programs, could directly and indirectly help meet the needs of countries. Those countries are faced with critical problems which require amelioration: problems in agriculture, nutrition, deforestation, and their attendant crises. In each case, educational programs must be put in place to help the people of those developing countries.

The University of Maine is an ongoing presence in the USAID reforestation project in Haiti: basically addressed to reforestation needs in Haiti, the project is being conducted in the typically UMaine interdisciplinary fashion and has evolved to include community development, wild goat control, nutrition, second and third cropping and small fish ponds.

At this writing, the University of Maine is looking very closely at a competitive USAID reforestation project for Senegal, West Africa. That award would add appreciably to the University’s international profile and prestige. In economic terms, it would represent millions of dollars for the University of Maine, its research staff, and the State.

International programs, both for international students enrolled in educational programs on the Orono campus, and research and educational programs put in place in other countries have become an essential aspect of the University of Maine’s posture. That posture is one with immense potential for the State of Maine and her land-grant University.

MIGRATORY FISH RESEARCH INSTITUTE

The Migratory Fish Research Institute is an interdisciplinary organization on the University of Maine campus linking faculty and students from many departments with a common interest in fishes. MFRI was formed in 1974 with initial funding by the National Science Foundation. Today, the University of Maine provides the exclusive financial support for MFRI, recognizing and promoting excellence in the fisheries and aquatic biology programs at the University of Maine. Activities of MFRI can greatly expand the boundaries of the classroom for students.

THE LAND AND WATER RESOURCES CENTER

Since its inception in the mid-1960s, the Land and Water Resources Center has served as a vehicle through which funds from the United States Department of the Interior have been channeled into state water research projects. This funding, which has recently been on the order of $110,000 per year, has been occasionally supplemented by funds from state agencies and private foundations. The research funds have been used primarily to support faculty and students from various departments of the University rather than to support researchers on the Center staff.

The Center is an ongoing presence in the USAID reforestation project in Haiti: basically addressed to reforestation needs in Haiti, the project is being conducted in the typically UMaine interdisciplinary fashion and has evolved to include community development, wild goat control, nutrition, second and third cropping and small fish ponds.

At this writing, the University of Maine is looking very closely at a competitive USAID reforestation project for Senegal, West Africa. That award would add appreciably to the University’s international profile and prestige. In economic terms, it would represent millions of dollars for the University of Maine, its research staff, and the State.

International programs, both for international students enrolled in educational programs on the Orono campus, and research and educational programs put in place in other countries have become an essential aspect of the University of Maine’s posture. That posture is one with immense potential for the State of Maine and her land-grant University.
research projects on topics such as acidic deposition involve research professionals from eight to a dozen distinct University of Maine disciplines, and the Center serves to coordinate the separate activities essential to the effective solution of complex questions. Occasionally, such broad studies involve other universities as well as the University of Maine, and those projects are especially demanding of detailed intricate management.

THE LABORATORY FOR SURFACE SCIENCE AND TECHNOLOGY

The Laboratory for Surface Science and Technology (LASST) at the University of Maine maintains one of the major high-technology research programs in Maine. LASST provides high quality research, training, and industrial liaison in surface science and technology. The division is composed of scientists and engineers from several departments of the University working together, with their students, in an interdisciplinary research area. LASST members conduct research in a wide range of applied areas of surface science. Many of these projects involve close collaboration with industries. Current industrial research topics include:

- studying the effects of new silicon wafer processing procedures with engineers at Fairchild Semiconductor;
- investigating materials problems associated with tantalum capacitor fabrication with the Sprague Electric Company;
- studying a new piezoelectric material, berlinite (a-AlPO₄) for microwave acoustic applications with the Allied Corporation;
- studying novel low loss surface acoustic wave filters with RF Monolithics;
- developing a novel gas detector sensitive to the parts per billion level with Rexnord Industries;
- developing new wear-resistant materials with scientists at the Standard Oil Research Laboratory;
- analyzing metal/polymer interfaces for IBM - Owego;
- research related to heterogeneous catalysis with W.B. Grace;
- LASST professionals have also worked with Adams-Russell Semiconductor Division, Andersen Laboratories, GTE Sylvania, S.D. Warren Company, Georgia-Pacific and Eaton Industries.

This unique facility has contributed significantly to research on the University campus and throughout the State and has the potential to draw high-technology firms to Maine as well as to link Maine to high-technology endeavors in other regions of the country.

THE INSTITUTE FOR QUATERNARY STUDIES

The University of Maine's Institute for Quaternary Studies is a unique academic unit in the United States: it is composed of a carefully selected and interactive core group of teachers and very productive researchers representing the fields of prehistoric archaeology, glacial geology, marine geology, glaciology, marine and terrestrial ecology, and historic climatology.

In general terms, the research of the Institute concentrates on documenting the rapidly changing environments of approximately the last 2.5 million years, a time span properly known as the Quaternary Period and usually referred to as the Ice Age. The ultimate focus of the research is on the broad, complexly interrelated topics of paleoclimatology, paleoecology, and prehistoric archaeology with an emphasis on global problems. The solutions to those global problems are largely related to understanding the interactions of land, sea, and ice, and their effects on marine, terrestrial, and human ecology.

Faculty of the Institute are currently pursuing several long-term multidisciplinary research goals which focus on questions with the widest possible implications for Maine as well as national and international interests:

- The Quaternary History of Antarctica
- The Quaternary History of the North Atlantic Ocean and its fringing land areas.
- The adaptation of early Americans to the rapidly changing late and postglacial continental and marine environments. The emphasis is on the earliest people in the 13,000 to 10,000 years before present range and upon later peoples 7,000 years before present to the near present.
- The documentation of the historic climate record to be used to understand better the effects of climate changes on the affairs of people.

Other studies with international and national implications include:

- The glacial dynamics of outlet glaciers of the Greenland and Antarctic ice sheets in areas where they terminate in the sea.
- The glacial geology of Antarctica within the framework
The resource and artifact libraries, and archaeological collections at the Center for the Study of Early Man at the University of Maine, as well as the staff, provide the types of information I need before writing my books."

—Jean Auel, author of the Earth’s Children series

of global climate and human evolution, sea level, and glacial events.

- A long-term study of 200 million year-old glacial deposits in India and on other southern hemisphere continents to define the nature and timing of those ancient glaciers which, in turn, will aid in defining aspects of global continental drift.
- The glacial geology of northeastern North America and western Norway to understand the processes of former marine-based ice sheets and to understand the history of the North Atlantic region.

Other projects underway by Institute researchers have implications for the State of Maine and the nation:

- A study of postglacial to modern sea level changes in Maine ultimately aimed at determining the rate and magnitude of modern crustal level changes.
- Development and changes in the forests of the northeast primarily through the use of pollen analytical methods.
- Long-and short-term effects of man-induced pollution on the forests and lakes of the northeast based on a variety of ecological indicators found in lake sediment cores.
- The development of long historic climate records in northeastern North America based on diaries and instrumental records as part of a long-term national program aimed at predicting climate changes.
- Applications of these long climate records and trends to regional agricultural problems, both current and future, will be of clear relevance to Maine.

Archaeological studies underway with an impact on both the State of Maine and the nation:

- An archaeological study of coastal shell heaps in the northeast as part of a long-term study of how early peoples adapted to coastal environments.
- A long-term archaeological study of procurement of stone for tool making in a northern Maine lakeside environment continuously used from 11,000 to 300 years ago.
- And of national and potentially international interest is a long-term archaeological study of Indian sites in western Montana, distributed in both time and altitude, and aimed at documenting changing adaptive strategies.

The complex and intense research projects underway by professionals of the Institute are all funded from sources through competition at the national level: none of them is funded from University of Maine sources.

THE CENTER FOR THE STUDY OF EARLY MAN

The Center for the Study of Early Man is an affiliate of the Institute for Quaternary Studies at the University of Maine. As its name implies, it is committed to collecting data about the earliest peoples in the Americas: searching for the first Americans. In addition to the ongoing work of collecting data pertinent to unraveling the tangled and mysterious web surrounding the first peoples in the Americas, the Center provides leadership and coordination support to scholars worldwide who are addressing the puzzle, and it works to publicize these discoveries through programs for both formal and informal education.

SPONSORED PROGRAMS DIVISION

Dollars (1000s) Cumulative Dollar Amount of Awards Received by Month

The Sponsored Programs Division is not itself a research unit but a service unit that assists faculty and professional staff obtain extramural funding for scholarly activities. Funding for sponsored activities at the University of Maine reached an all-time high in 1985 when more than $11.6 million was received. This level of success is an indication of the quality of the faculty and professional staff at the University and illustrates the effectiveness with which they are able to compete on a national basis.
The quality of student life, administrative support services, and facilities and grounds are matters of great importance to colleges and universities. Considerable progress has been made in each of these areas over the past two years in the pursuit of Service, Excellence and Efficiency. Professional and classified staff have worked cooperatively with faculty and students to create an improved learning environment on campus and to extend new learning opportunities to students beyond what is offered in the formal curriculum. Special attention has been given to the needs of nontraditional students and to addressing campus safety issues. New and expanded facilities have also received attention with the passage of the Legislative Capital Bond Issue and completion of the Maine Center for the Arts. Student support of a mandatory Recreation Fee will mean increased leisure-time and intramural recreational opportunities for students to complement a developing intercollegiate athletic program. Student Government and other student organizations also made important contributions to improving the quality of student life through the return of Maine Day and the promotion of volunteer service activities both on and off campus.

The departments and administrative units under the Vice President for Student and Administrative Services have worked during the past two years to make the University a better place to live and to learn. Highlights of these efforts include the following:

- Improved services for nontraditional and commuter students included initiation of the START Program (Service to Adults who are Returning and in Transition). Coupled with improved communication between the nontraditional population and administrators, this program has fostered improvement in the quality of life on campus for these students.

- International students with communication difficulties are being helped with reading, writing, speaking and listening skill development through a new arrangement with the Orono Adult Education Program.

- The Maine Recruiting Consortium was conceived by the Office of Career Planning and Placement as a method of attracting employers to Maine by providing a larger pool of qualified candidates than any one of Maine’s colleges and universities could offer alone. This cooperative effort has resulted in two recruiting programs annually (Bangor and Portland) involving nearly 40 companies and hundreds of Maine students.

- The Maine Mentor Program is a new effort designed to provide students with an opportunity to test career decisions by spending time with a UMO alumnus/a who is currently employed in the field the student is interested in exploring. Jointly sponsored by the General Alumni Association and the Career Planning and Placement Office, the program has already enrolled more than 130 alumni/ae as mentors.

- As a service for the children of students, faculty and staff, a Family Entertainment Series was initiated by the Memorial Union and Commuter Affairs Office. The series provides significant experiences in the arts for children of all ages and will enhance the role of the Maine Center for the Arts which will open in the fall of 1986.

- With encouragement from the Student Activities Office, University students continue to excel in their involvement in volunteer service activities and their support for charitable fund-raising efforts. In 1984-85 more than 46 different student organizations contributed more than 20,000 volunteer hours and in excess of $41,000 in support of charitable causes in the greater Bangor area. The spirit of volunteerism is alive and well at the University of Maine.

- A major program created in August, 1985, is the University Substance Abuse Services. Organized as part of the Center for Student Services, the program provides comprehensive activities including prevention programming, student, staff and faculty training, consultation, assessment and referral. A full-time Substance Abuse Consultant/Educator advises relevant University groups, and supervises a weekend transportation service for students. Funding for this program is generated on campus.

- As part of a continuing effort to provide faculty and students with outstanding service, the University Bookstore has obtained Board of Trustee approval to renovate and construct an addition using funds generated by effective and efficient management. (All textbooks are already discounted a full ten percent, an unusual practice for college bookstores.)

- Improved and additional parking facilities have been provided for students, faculty and staff throughout the campus. With the completion of the Maine Center for the Arts parking lot this summer, more than 400 new parking spaces will have been added to the campus during the past two years.
As a service to students, faculty, staff and guests, exterior lighting has been extensively improved; pedestrian crossing areas have been highlighted; a new hazardous waste facility has been developed some distance from any building on campus; new and improved fire alarm systems have been installed; safety deficiencies in laboratories have been corrected, and a serious effort to deal with asbestos in campus buildings is underway. Coordinating these expanded safety initiatives are a Campus Safety Officer and a Campus-Wide Safety Committee.

The Employee Assistance Program has been expanded and relocated to a more adequate facility with ample parking. This program is moving forward from a reactive service to a proactive force designed to work collaboratively with other employee service offices on campus to sustain a healthy and supportive work environment.

Gifts from loyal and generous outside supporters will provide a new locker area in the Alfond Arena and new grandstand seating at Mahaney Diamond. Both of these facilities are among the finest of their type in the Northeast.

With support of the Chancellor's Office, completion of the third floor of the new section of the Fogler Library was achieved. A grant of $500,000, made it possible to renovate and equip the third floor and relocate several service functions.

Student retention has been enhanced through the Center for Student Services. Coordinated efforts are under way to make the institution more responsive to the legitimate educational, cultural and social needs of students. Training for faculty and staff, the development of resource materials, review and revision of University policies, and improved academic support services are all part of the plan being pursued by the Center.

Taking advantage of Maine's natural beauty and resources, a new program called Maine Bound was introduced. A unique educational experience, Maine Bound promotes adventure, challenge, skills, responsibility, problem-solving, self-confidence, learning by doing and environmental awareness. The activities available to students, faculty and staff include rock and ice climbing, canoeing, kayaking, backpacking, cross country and downhill skiing, windsurfing and bicycling.

Programs receiving honors during the past two years include full accreditation of the Counseling Center Internship Program by the American Psychological Association and full accreditation of the Cutler Health Center as an Ambulatory Care Facility by the Joint Commission on Accreditation of Hospitals.

New student judicial peer review boards in several of the residential complexes and in the fraternity system allow increased student involvement and influence on promoting the standards for conduct established by the Board of Trustees. Experience with these new structures has been extremely positive.

To promote excellence throughout the Administrative Services area an evaluation and review system has been established whereby a major unit is assessed each year. Police and Safety was evaluated in 1984 and Purchasing in 1985. Considerable changes in policy and practice leading to improved programs and services resulted from each of these evaluations. The Business Office is scheduled for review in 1986 and Facilities Management in 1987.

As the result of recommendations received by a Review Committee appointed by President Johnson in 1984, participatory type management committees have been established in Residential Life involving food service employees, custodial staff, resident advisers and resident assistants. The results have been promising and have demonstrated the importance of communication across all levels of the organizations.

A collaborative effort involving faculty from the College of Arts and Sciences and staff from Residential Life has created a new residentially-based Freshman Advising Program. The purpose is to create closer bonds between freshmen and their advisers through assigning advisers to groups of students living together on a given floor of a residence hall. Upperclass students assist with the advising process, and a course for credit is associated with the program. Early reports indicate this type of advising arrangement holds great promise for improving student retention and student satisfaction with their academic program.
Outstanding advances by several young coaches and continued success on the part of some veteran coaches have brought regional and national recognition from the athletic world in the past two years.

• Peter Gavett, women's basketball coach, was selected the New England Coach of the Year in 1984-85.
• Nick Nicolich was the New England Wrestling Coach of the Year in 1984-85.
• Undergraduate student Scott Carzo was the New England Wrestling Coach of the Year in 1985-86.
• Black Bear soccer coach Jim Dyer was named the Maine Soccer Coach of the Year in 1984-85.
• Baseball coach John Winkin was awarded the prestigious Lefty Gomez Award for his contributions to college and amateur baseball.

Success in athletic arenas was evident during the past two years but there was also success in the athletic department service areas:

• The annual summer clinics last year attracted a record-high of nearly 2,000 young people.
• More people than ever used the department's indoor and outdoor facilities.
• For the first time the athletic scholarship fund reached $750,000, enabling a number of intercollegiate teams to become more competitive.

Football had a new beginning at the University with the hiring of Eugene Buddy Teevens, who at 28 became the youngest Division One football coach in the country. Teevens led the Bears to a winning 6-5 record in his first season, 1985, and in the process his team defeated Delaware for the very first time and finished in a third place tie in the Yankee Conference after the conference coaches predicted a last place finish for Maine in the preseason balloting. Maine running back Lance Theobald was the winner of the Jerry Nason Award, given by New England football writers to the senior who overcomes the greatest obstacles to contribute to his team’s success.

The Maine soccer team had its best season ever in 1985, winding up with a 12-5 record and was ranked fourth in New England. The wrestling team finished second in New England in the 1984-85 season and in 1985-86 qualified three wrestlers, all from the State of Maine, for the NCAA Championships in Iowa City. The men's indoor and outdoor track teams have been undefeated in dual competition for two years, winning 10 straight dual meets.

The Black Bear baseball team has provided national exposure for the institution in both 1985 and 1986 by appearing as one of the teams on the ESPN television college baseball game of the week. In 1985 the Bears ended Miami's 24-game winning streak with a 3-2 victory shown over ESPN to a national audience and played exceptionally well in dropping a 3-1 decision to the same Miami team in 1986 in the ESPN Game of the Week.

Among the women's teams, perhaps the most successful have been basketball and swimming. Peter Gavett's all-Maine basketball group has posted a two-year record of 43-16 and in 1986 was ranked as high as 30th in the nation among Division One schools. The team won 18 straight contests to set a New England record and one player, Elizabeth Coffin of Portage, became the first UMO women's basketball player to be selected to Kodak's All-New England team. The women's swim team capped a very successful year by winning the New England Championship with 777 points, nearly 300 more than its nearest competitor. The women's cross country team has won 17 and lost just one dual meet in the past two seasons and was seventh in New England in 1986.

Ice hockey, under second-year head coach Shawn Walsh, has been credited with securing some of the finest young talent in the country and is expected to challenge the top teams in the nation in the next couple of years while women's field hockey has held its own despite a significant upgrading of its scheduling.

During the 1984-85 year the 12 men's sports at Maine compiled a record of 112 wins, 99 losses and two ties while the eight women's sports were 65-45-1.

The future for intercollegiate athletics at Maine is bright with its energetic young coaching contingent bolstered by several proven veterans and a sustained interest from citizens of the state.

Stuart P. Haskell, Jr.