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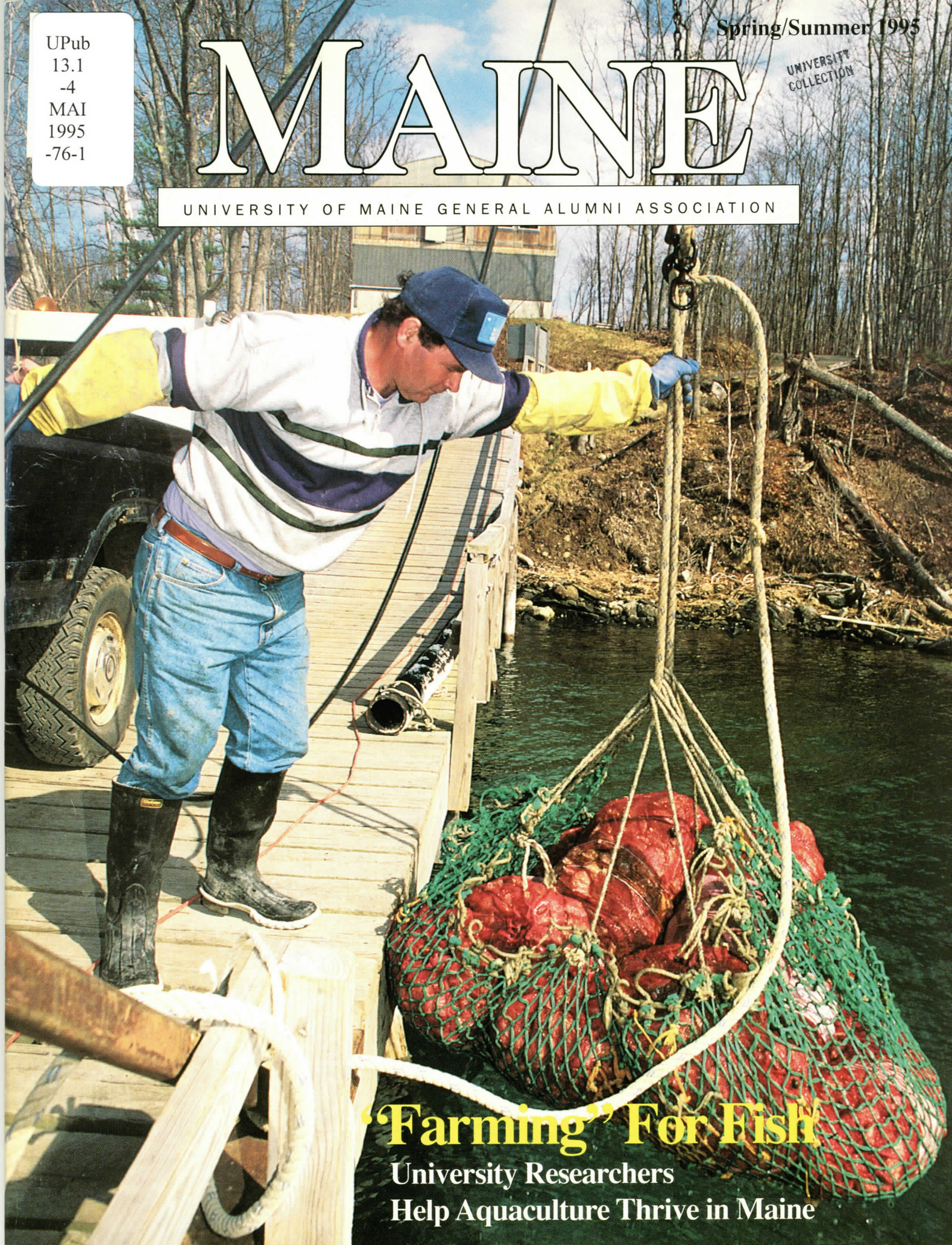
Spring/Summer 1995

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UNIVERSITY OF MAINE GENERAL ALUMNI ASSOCIATION



'Farming' For Fish

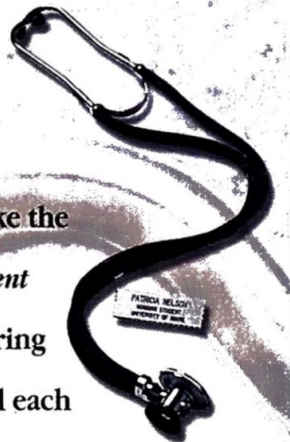
University Researchers

Help Aquaculture Thrive in Maine

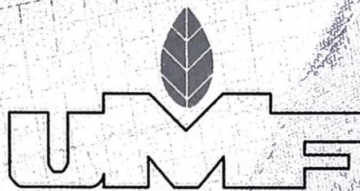
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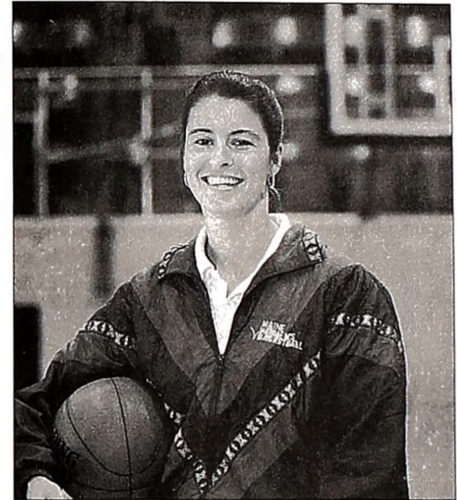
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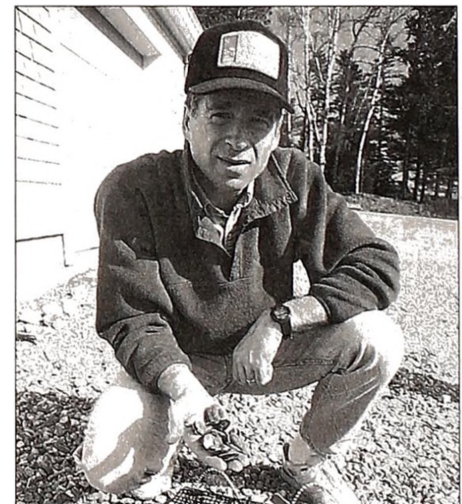
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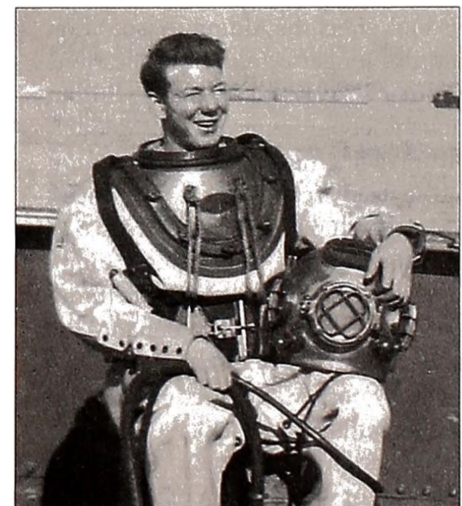
Charles McKay '51 was a deep-sea diver at Bikini Atoll in 1946 when the U.S. detonated its fourth and fifth atomic bombs. Now he works to help atomic veterans.



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Cover photograph of oyster farmer Richard Clime '76G by Damon Kiesow

June 1988	Feb. 1989	Jan. 1990	May 1990	Nov. 1990	Oct. 1992
Membership Program Proposed	Board Endorses Program	First Member Enrolls!	Complimentary memberships for New Graduates	First Decade Member Enrolls	Automatic Renewal Program Offered

Membership Program Celebrates its 5th Anniversary

By Max Burry '57, President

One Member at a Time

Ever since that day in January of 1990 when Raymond Fogler became the first to join the General Alumni Association's membership program, we have been steadily adding to our numbers. Now, as we celebrate the fifth anniversary of the membership program, we are over 8,600 strong with more than 7,400 dues-paid members and approximately 1,200 complimentary members from the Class of 1994.

We've come this far by building the program one member at a time with the best interests of our members at heart. When the I.R.S.'s new substantiation tax laws took effect the Alumni Association could no longer offer its publications and other services to alumni without seriously jeopardizing the tax deductibility of their gifts to the Annual Alumni Fund. Instead of curtailing these services, the Membership Program was created as a separate entity from the Annual Alumni Fund. As a result we had the opportunity to not only continue but to enhance the programs and services we provide to University of Maine graduates, with those benefits now exclusively a part of Association membership.

Many of the benefits of membership resulted from requests from alumni

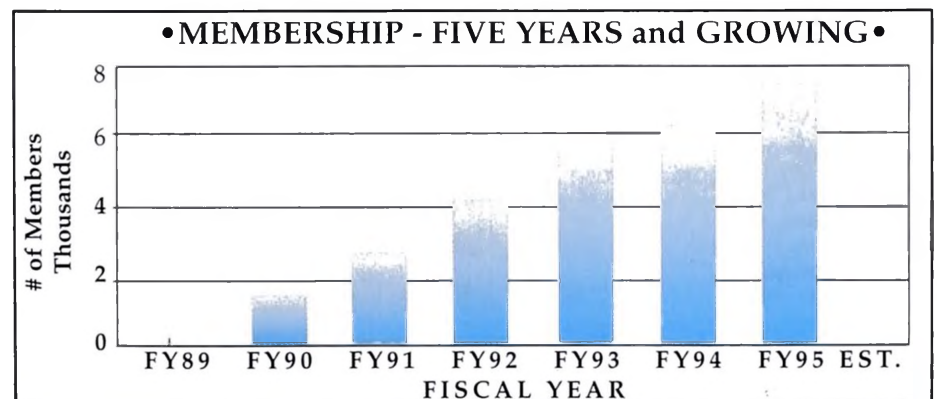
and we can't always promise a change. But we can promise one thing. When our members talk, we listen. We take your concerns seriously.

"When our members talk, we listen. We take your concerns seriously."

Other programs, like a discounted Fogler Library card and the Good Neighbor Network, are in direct response to requests from members. Not all individual ideas or concerns can be acted on,

Benefits Expanded

We are constantly looking to augment the benefit package we offer to our members. And now, after five years we feel we have a strong offering of programs and services. But we're not stopping. Our newest benefit for members is eligibility to join the A.C.E. advocacy network, our Advocates for Continued Excellence. The General Alumni Association is the university's chief advocate and our members have the unique university experience and inside perspective that is crucial to the future.



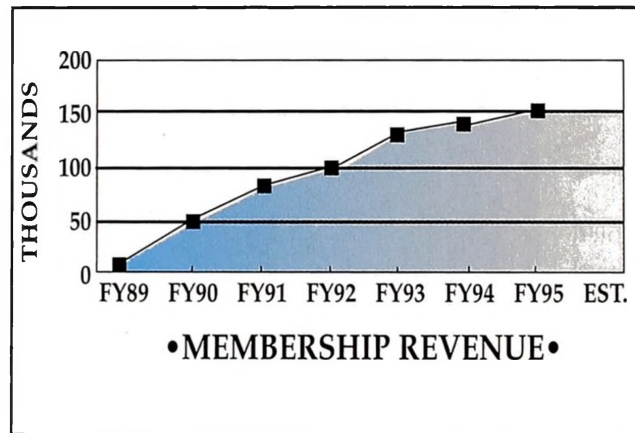
Jan. 1993	March 1993	March 1993	Jan. 1995	Jan. 2000
24-hour Hotline for Dues Processing 800-034-ALUM	Mainely People becomes a "members only" benefit.	Personalized membership cards introduced.	Maine Members advantage program introduced.	MAINE magazine becomes a "members only" benefit.

of our alma mater. The Association listens to you and is your eyes, your ears, and, most importantly, your voice to those who determine the University's vision and direction—whether it be administrators, trustees, or legislators. We invite you to join us and help us continue to make a difference.

Are You a Member?

The alumni staff and volunteers continue to seek members one at a time. We have members from every state and from several foreign countries — including one from Micronesia! And we want to make it easy for every graduate to become a member of the General Alumni Association. Our board of director's vice chair for membership, Joe Cuccaro '59, has worked closely with Bill Skoolicas '80, the Annual Alumni Fund National Campaign Chair, to help clarify the distinct differences between the two programs yet make it simple to support both. The "write one check" option was developed to allow alumni to do just that—write one check to the Association earmarking \$25 for annual membership dues (or \$35 for a joint membership) and the remainder as their contribution to the Annual Fund. An independent, self-funded association such as ours does not exist without the support of its members. And we're counting on you. This is my personal invitation for you to join our membership program. I'm confident you will find membership in the General Alumni Association worthwhile. In fact, I guarantee your satisfaction. For more information about membership fees and benefits, please call us at 1-800-934-ALUM or 207-581-1134

As we look to the next five years of the membership program, we anticipate



zine has the letter "M", as shown below, you are already a dues-paying member of the General Alumni Association of the University of Maine—and we thank you. If you're not a member I hope my words have convinced you that it is a worthwhile thing to do. The more members we have the better we can serve you

and the university. burgeoning participation from our alumni. Membership provides a common vehicle for UMaine graduates to connect and reconnect to the university. It takes a lot of shared experiences and commitment to make an alumni association and it all depends on folks like you joining one at a time.

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- The *Maine Alumni Good Neighbor Network*—members helping members get acquainted.
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- Special credit card, insurance, and home mortgage programs for those who qualify.
- Eligibility for the *Sugarloaf Card Club*—with special discounts on lift tickets, lodging, and more.
- The *Maine Members' Advantage*—providing discounts on hotels, car rentals, restaurants, and at retail stores.

Habib J. Dagher is 1995 Distinguished Maine Professor

Habib J. Dagher, an associate professor of civil engineering, was presented with the 1995 Distinguished Maine Professor Award at the Honors Convocation on April 25.

The award is presented each year by the General Alumni Association to a UMaine faculty member who has made outstanding contributions in teaching, research, and service to the people of Maine. It is supported by a generous gift from the Class of 1942.

Dagher has earned a reputation as an outstanding teacher since he arrived at the university 10 years ago. His commitment is marked by meticulous class preparation and a level of enthusiasm that inspires his students.

As a civil engineering researcher, he has done groundbreaking work with both steel and concrete materials. And he has been an important catalyst for reviving the use of timber in bridge construction. In fact, his work has resulted in six innovative timber bridges already in place on Maine roads. And he has recently helped to develop a new construction material called Fiberwood (see page 8), which has the potential to provide new markets for a major Maine resource. That project is indicative of his effort to incorporate his research with the needs of the people of Maine.



General Alumni Association vice chair William Skoolicas '80 presents the Distinguished Maine Professor Award to Habib Dagher.

Field House to close for new roof and repairs

A much-needed upgrade of one of UMaine's most widely used facilities, the Field House, began May 1.

A new roof, doors, and windows will be the first improvements made to the nearly 70-year-old facility, and are expected to be completed by the start of the 1996 spring semester. Further refurbishing in the form of new baseball and softball netting, indoor track resurfacing and portable basketball backboards is dependent on private donations.

"We remain optimistic that private donations will enable us to stay on the projected timeline of December 1

for the entire project," says Jim Dyer, assistant athletic director.

According to Dyer, the repair of the roof will eliminate the leaks the building has always had and will increase the safety of the building. With new painting, nets, and a floor surface, it will be a more attractive facility. New doors and windows will make it more energy efficient.

As many as 1,500 people come through the Field House on a busy day, and the reroofing and renovation project will displace many traditional campus and community events. The Alford Sports Arena will be the site for summer sports camps. The fall college fair is also scheduled for Alford, while activities associated with Family and Friends Weekend and Homecoming may use Lengyel Gym.

UMaine signs exchange agreement with French school

On April 20, the University of Maine and L'Universite d'Angers in France signed an agreement formalizing the two institutions' desire to develop academic and cultural exchanges involving faculty, professional, and support staff, students, and community members, conducting joint research, cultural, and community programs.

It is hoped that the agreement will bring together people of similar heritage. Angers is located in western France, the ancestral home of a good portion of Maine's French-American population.

"This is a special agreement," noted UMaine president Frederick Hutchinson '53. "The university bears a major responsibility in a state like Maine where we don't have cultural diversity."

First vice president Jacques Louail signed the agreement on behalf of the University of Angers. He said that it was part of the role of a university to help reunite our cultures and that his school is pleased to be working with UMaine to revive French culture in the state.

The benefits from the exchange could end up being more than just academic and cultural. According to the French counsel general in Boston, it could have implications for business and politics for both the United States and France.

Civil engineering seniors design fitness center of the future

A recent survey of University of Maine students has revealed what collegiate fitness experts and educational institutions nationwide have increasingly realized in the last few years: state-of-the-art fitness facilities are not only expected but seen as essential elements of campus community life.

While construction of a new fitness center is many years off, it is nonetheless a high priority for the university.

"If we wish to be competitive relative to other institutions throughout New England, facilities that support students in their out-of-class activities are critical," said Anita Wihry, director of institutional planning.

The student interest in expanded fitness facilities quickly came to the attention of the University Facilities and Campus Planning Committee.

Chet Rock, chair of the department of civil and environmental engineering, is a member of that committee. He decided that this was an abstract concept that could be one step closer to reality with the help of civil engineering seniors enrolled in a capstone course in project design.

"Despite the fact that this building is still in the early planning stage, the students realize how important it is and are very serious in undertaking their designs," Rock said.



Among the civil engineering students designing a new UMaine fitness center are (left to right): Steve Conklin, Jen Dostie, Lars Paulsen, Leslie Corraw, Kevin Kluzak, Bob Strong, Andy Thomas, Dan Brassard, Bethany Leavitt, and Corey Dionne.

The course, now in its second year, calls on students to take the "hard technical design" learned in their other civil engineering classes and "put it together with writing, public speaking, and creativity to address an open-ended problem where there is no solution and no end to possibilities," according to Rock.

The course was developed with the help of a number of civil engineering department alumni.

Maine student earns Mellon Fellowship

For the first time ever, a University of Maine student has been awarded an Andrew W. Mellon Fellowship in the humanities.

Douglas Dow, an art history and English major from Presque Isle, was one of only 97 winners of the annual humanities talent search.

The fellowship is awarded by the Woodrow Wilson National Fellowship Foundation to exceptional students who want to continue their studies in the humanities. It provides an annual \$13,250 stipend in addition to covering tuition and fees for the first year of graduate study.

UMaine professor Michael Grillo described Dow as "one of the most remarkable students I've ever worked with." Dow credits his professors, in particular Grillo, for the academic rigor and encouragement they provided.

The 97 fellowships were awarded from a pool of over 800 applicants.

UMaine Foundation to manage Charles F. Allen Society

The Charles F. Allen Society has been created to honor those generous alumni and friends who make a bequest or deferred gift through a life income plan to the University of Maine.

Membership will be open to anyone making a provision in their will or trust for a contribution of cash or property including life insurance with a value of \$10,000 or more for the University of Maine. Income arrangements such as pooled income funds, charitable remainder trusts, or gift annuities are eligible.

The UMaine Foundation will manage the Society.

UMaine engineer develops stronger wood

Researchers in the University of Maine's civil engineering program have come up with a way to make wood stronger than steel. The research could open new markets for Maine timber.

"We have added a thin layer of a synthetic material called a Fiber Reinforced Plastic or FRP to the part of the beam which receives the most stress," says associate professor Habib Dagher, who is heading the FRP research. "We are developing a new construction material by combining low-grade Maine timber and high-strength FRPs."

FRPs are space-age materials that are stronger and lighter than steel and do not corrode. The defense industry uses FRPs in applications such as the tips of ballistic missiles and airplanes. These materials have about 80 times the tensile strength of #2 hemlock.

"The addition of a small amount of FRPs to Maine timbers can make the timber much stronger and more valuable," Dagher says. "Our 12-inch hemlock beams became 50 percent stronger with the addition of an FRP layer thinner than a deck of playing cards. This will open up new markets for Maine timbers in the heavy construction industry such as in bridges and in commercial and industrial buildings."

Dagher calls the new beam Fiberwood and has a demonstration project planned in Bar Harbor this spring. Fiberwood, made with red maple—a common but underutilized Maine tree species, will be used to construct a 124-foot long pier to serve the Bar Harbor Yacht Club.

The structure will cost about \$35,000, making it about 25 percent cheaper than one constructed with steel. And the pier should last about 70 years, compared with the 20- to 30-year life span of a pier



A Maine student helps with a Fiberwood beam.

that uses steel.

Dagher believes that Fiberwood has the potential to help the Maine economy. He estimates that it would take about \$3 million to start a Fiberwood industry.

"We are the most heavily forested state in the country," he says, "and yet we have to import our pine to build our facilities. It doesn't make sense... Think of all the people we could put to work."

The project has received interest from local and national organizations including the Composites Institute which represents 400 composite firms in the United States and the American Plywood Association (APA). The APA has called the FRP-reinforced beams the "most important development in the glue-laminating industry in 40 years."

Biomedical engineering breakthrough

A 24-year-old Augusta man, left paralyzed from the waist down after an ATV accident nine years ago, is now able to stand for minutes at a time through the technological breakthroughs achieved by a team of clinical, industrial, and aca-

demical researchers.

Among the researchers who have contributed to the effort are Seth Wolpert, assistant professor of electrical and computer engineering, University of Maine students Monica Puri and Diana Snow, and UMaine McNair Scholars Jill Gartner and Marie O'Neill.

The man, known as Craig, has an implanted device which stimulates the nerves controlling 10 muscles in each of his paralyzed legs from computer commands. For three years, the stimulator was systematically tuned to the responsiveness of each of Craig's muscles and nerves. The following year, Craig's muscles were conditioned with the stimulator.

The Cochlear FES-22 implant receives commands from a computer controller by means of a radio wave that is synthesized by the computer, sent to the controller and transmitted through the skin by a small antenna coil.

With the ability to stand for extended periods, Craig and teams of clinical, industrial, and academic researchers will then endeavor to effect four types of movement intended to improve Craig's quality of life—standing up from a sitting position, sitting down from a standing position, shifting weight around while seated, and step over or around architectural barriers. Once these tasks are mastered, feedback of Craig's position and motion will enable more complex movements to be contemplated.

Wolpert and the electrical and computer engineering students performed computer modeling of standing and sitting transitions. Now they are planning designs for a portable controller to replace the bulky computer used to control Craig's leg muscles.

Salmon pepperoni?

A new product developed at UMaine was taste-tested on campus in April with mostly favorable results.

Brian Beloin, a master's degree candidate in the department of food science and human nutrition, has come up with a substitute topping for pizza—salmon pepperoni. Beloin says that a large portion of salmon meat goes to waste, either because there is meat left on the rack after filleting or a whole fish is not Grade A. Beloin, who began developing the pepperoni as a senior project, currently is using whole salmon to produce the pepperoni, which he says has a spicy flavor that will appeal to salmon lovers.

Beloin's advisor is Alfred A. Bushway, chair of the department of food science and human nutrition.

Graduate student finds compound protects some marine life from UV light

A University of Maine graduate student, Nikki Adams, has for the first time demonstrated conclusively that a class of chemical compounds produced in some types of marine algae protects cells from damaging effects of ultraviolet light.

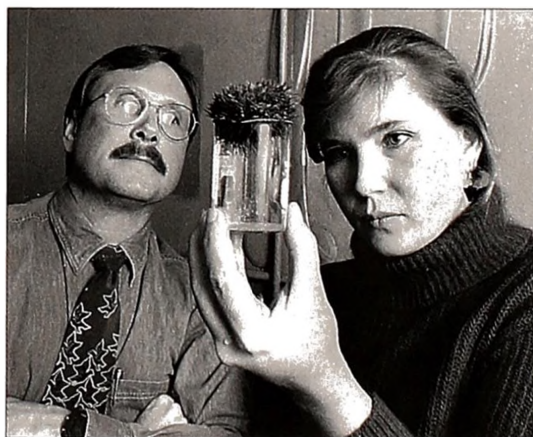
Adams works under the direction of Malcolm Shick, chair of the department of zoology, who has a 3-year grant from the National Science Foundation for the study of defenses against ultraviolet light in marine organisms, including sea urchins. Also working on the project are graduate student Amy Carol and postdoctoral research associate Freya Schafer.

The long-term goal of the research is to show conclusively whether mycosporine-like amino acids, or MAAs, have a sunscreen role in nature. The UMaine researchers also want to know where MAAs are produced and how they are transferred from one organism to

another in marine food chains. It is not known whether humans can concentrate the compounds in their tissues.

In her experiments conducted at UMaine and at Mount Desert Island Biological Laboratory, Adams studied green sea urchins, a commercially important and commonly used research animal whose development is well understood by scientists.

Since the 1960s, scientists suspected that MAAs protect marine organisms from UV light. Shick has also shown that MAAs may help protect urchin eggs against oxident stress caused by UV exposure. However, Adams' experiment is the first to show a direct reproductive benefit to an organism with high concentrations of the compounds.



Malcolm Shick and Nikki Adams

Yellow paper could hold key to more efficient paper-making process

The problem is as common as old yellow newspapers, but if a UMaine research team can find a solution, they may brighten the future of paper producers and help the environment at the same time.

Barbara Cole and Ray Fort, associate professor and professor of chemistry respectively, would like to stop newspapers from turning yellow and brittle. If

they succeed, they could turn a highly efficient but limited manufacturing process into the next generation of pulp-and-paper technology.

The process known as high-yield pulping, has been in use for more than a century. Compared to more commonly used chemical pulping methods, it has significant advantages. While chemical pulping uses only about half the wood going into most pulp mills, high-yield pulping uses about 90 percent, requires fewer chemicals, and creates less waste.

Its drawback is that the paper it produces is sensitive to light. "We've all seen newspapers that have been sitting in the sun turn yellow and brittle," says Cole. High-yield pulps are used mostly for newsprint and magazines, but if Cole and her colleagues succeed, these pulps also may be used in high-quality papers.

"Chemical pulps, primarily Kraft pulps, are preferred for most paper products," she says. "They are strong, which is important in products like paper bags, and they are resistant to yellowing, which is important in writing and book papers."

Cole and Fort are working with Chen Zhou, postdoctoral associate, and Johnna Brazier, research assistant. They are combining experimental and computational

methods in an effort to increase the strength of high-yield pulps and attack the problem of yellowing.

The culprit is lignin, an essential component of wood which reacts with light to produce colored compounds. According to Cole, several strategies have been developed to slow or prevent the yellowing process, but they all have drawbacks. Sulfur is effective in preventing yellowing but its odor makes it impractical. Cole and her colleagues have gone back to the sulfur compounds to determine exactly how they react with lignin. Once they understand that, they will search for alternative compounds which perform the same functions without the odor.

A Case of "No Confidence"

UMaine System campuses reject the ideas and style of J. Michael Orenduff and call for more faculty input.

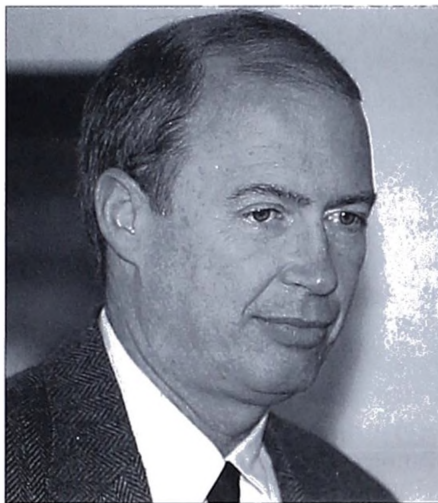
To some J. Michael Orenduff was a visionary whose ideas for the UMaine System were just too far ahead of his time.

But to a majority of the University of Maine faculty, he was an arrogant leader who didn't listen and whose ideas would have destroyed the preeminence and uniqueness of the flagship campus.

Those faculty members expressed their discontent in a vote of no confidence in the chancellor last March. So did the faculty on every one of the system's other six campuses. In the end that overwhelming discontent carried the day. On April 2, the UMaine System Board of Trustees accepted Orenduff's resignation. And just three days later they appointed former chancellor Robert Woodbury as the system's interim leader.

Orenduff's problems with the university's faculty were a combination of style and substance. There was strong sentiment that decisions were being made without feedback from any of the campuses. And there was a fear that Orenduff was pushing the trustees toward greater centralization with proposals such as a system-wide course catalog.

But it was the chancellor's ambitious ideas for the Educational Network of Maine (EdNet), the system that provides distance learning through interactive television, that caused the greatest amount of controversy.



J. Michael Orenduff

In January, the trustees approved a proposal to greatly expand the number and variety of courses offered through EdNet and to allow the network to grant bachelor's and master's degrees. The board went as far as to appoint a president for what it envisioned as the system's eighth, "electronic university."

Criticism of the proposal came quickly from all the UMaine System campuses.

The president of the UMaine Faculty Senate, James Gilbert, told the board it was moving ahead too fast and called for more discussion of the issue. He also questioned the need to create another degree-granting entity to oversee televised education.

General Alumni Association president Max Burry '57 also cautioned the board about moving too fast.

"The Alumni Association is concerned that the board of trustees and the chancellor are steering a course for System restructuring through uncharted waters at a speed that places vessel and crew alike at great risk," Burry said.

Discontent with EdNet, centralization, and the lack of communication from

the chancellor's office continued to rise until the no confidence votes from the campuses were registered.

Just prior to the no confidence vote in March, UMaine president Fred Hutchinson '53 added his voice to those concerned with the chancellor and the board's actions.

"I would hope the board would understand that most of what we are hearing are symptoms of a lack of shared governance," he said.

Hutchinson also questioned the board's move to seek accreditation of EdNet. He said it was ridiculous to suggest that EdNet accreditation was necessary because the campuses could not work cooperatively in deciding which one should grant various degrees.

Orenduff only made matters worse by insisting that the no confidence votes were a reflection of faculty discontent over contract negotiations.

"In my judgement, that is way off base," Hutchinson responded.

Concern spread to Augusta when Representative Elizabeth Mitchell introduced legislation to form a panel to examine how higher education is delivered in the state.

The trustees stood by Orenduff until his surprise resignation in early April. Immediately after his departure, however, many members of the board visited faculty on the various campuses and tensions subsided somewhat.

The situation was also enhanced by Woodbury's return, which was generally well received by faculty on the Orono campus.

Looking back on what happened during Orenduff's tenure, Woodbury speculated that too many ideas moved too fast with too little discussion.

"I think maybe some things got confused and some things that were said carried a life of their own," Woodbury said. "I understand why people were

very anxious about the idea of a common course catalog and some of the other things. I think what got confused was making a distinction between program responsibilities and missions of the campuses and the question of whether additional administrative responsibilities would be more cost effective if they were centralized. If you are going to present new ideas, you better have done the groundwork. Some of the ideas did seem to come from left field."

As for EdNet, the interim chancellor is a big supporter of moving ahead with the technology, but he draws the line with the concept of making it a separate degree-granting entity.

"That idea is premature at best, and is probably just not the way to go," he said. "In any case, there needs to be a lot more debate and discussion taking place before we take that step. I think the board is leaning that way, too. I think they realized that they jumped too fast."

Indeed, at a meeting of the board's academic and finance committee in early May several trustees admitted that they thought the board had acted prematurely in its decision to seek accreditation for



Robert Woodbury

EdNet.

"I have no interest in seeking degree-granting authority for the system," said trustee Bennett Katz.

"I think there ought to be a clear statement that we are not seeking degree-granting authority for EdNet," agreed committee chairman George Wood.

The board will take up the EdNet issue again, but without support from the chancellor and key trustees, it is unlikely they will vote to expand the EdNet system.

Woodbury hopes to get the EdNet debate "back on track" while he is interim chancellor.

"The debate shouldn't be whether EdNet is the greatest thing since Wheaties or whether it is a disaster," he said. "I'm hoping to encourage a discussion about the im-

lications of all the new technologies—interactive television, CD-Rom, compressed videos, E-Mail—everything. What does it all mean for the quality of teaching and learning? What are the implications of all these new technologies on higher education?"

Do We Need A Chancellor's Office?

The widespread discontent with the actions of former Chancellor Orenduff spurred a number of bills to dramatically alter and even eliminate the chancellor's office.

One bill, sponsored by Rep. Doug Ahearne, called for replacing the chancellor with a system president and current campus presidents becoming vice-presidents.

Another legislative proposal by Rep. Robert Keane would split the system into two systems. One system would include the University of Maine and the UMaine Law School. The other would encompass all of the other campuses.

In introducing his legislation, Keane said the system had become "bureaucratic and elitist."

Meanwhile on the Orono campus students were also calling for changes in the UMaine system.

"If there is to be downsizing, let it affect the chancellor's office as well," said graduate student Kevin McCarron. The Association of Graduate Students passed a resolution calling for the elimination of the chancellor's office. He said students are upset because tuition is rising and resources are scarce at the same time that the chancellor's office budget is increasing. That budget is currently \$3.7 million.

Also on campus, students were circulating a petition calling for replacing the chancellor's office with a "council of presidents."

Interim chancellor Robert Wood-

bury doesn't believe any of the current bills and proposals will get much support. Especially the concept of a "council of presidents."

"That's ludicrous," Woodbury said. "I just can't imagine seven presidents trying to get together to divide up the budget pie," Woodbury said.

Woodbury thinks that the current anti-chancellor bills will fade away and the Legislature will give its support to the Libby Mitchell proposal for a task force to look at higher education in the state.

"I support the Mitchell bill," he said. "I think we have a very good system and that system has to have a chief executive, but every 10 years or so, we should look and see how things are working."

A Big Step Toward Equity

A \$724,000 pledge to women's athletics keeps Joanne Palombo at UMaine and moves the university into closer compliance with Title IX.

Equality in men's and women's sports. It's a goal that the University of Maine has been slowly and quietly trying to move toward for a long while—with only partial success. And for most of that time the media wasn't paying much attention. Gender equity was a story that got lost in the barrage of strikes, salary negotiations, NCAA violations, and won-loss analysis.

Then UMaine's women's basketball coach Joanne Palombo got offered the head coaching job at Long Beach State and almost overnight gender equity became front page news.

Well, not quite overnight. At first the concern was simply about the possibility of losing Palombo.

In just three years she had become one of the University of Maine's most high-profile and popular personalities. Young, bright, charismatic—she had brought Maine women's basketball to a new level and its first ever appearance in the NCAA Tournament. What's more,



her team filled the Alford Arena with almost 54,000 fans in 1994-95, in part at least because she was able to recruit Maine's most famous basketball phenomenon, Cindy Blodgett.

Maine fans spent an anxious weekend in April wondering what Palombo would do. Their anxiety grew when Blodgett indicated she might follow her coach to California if she took the Long Beach job.

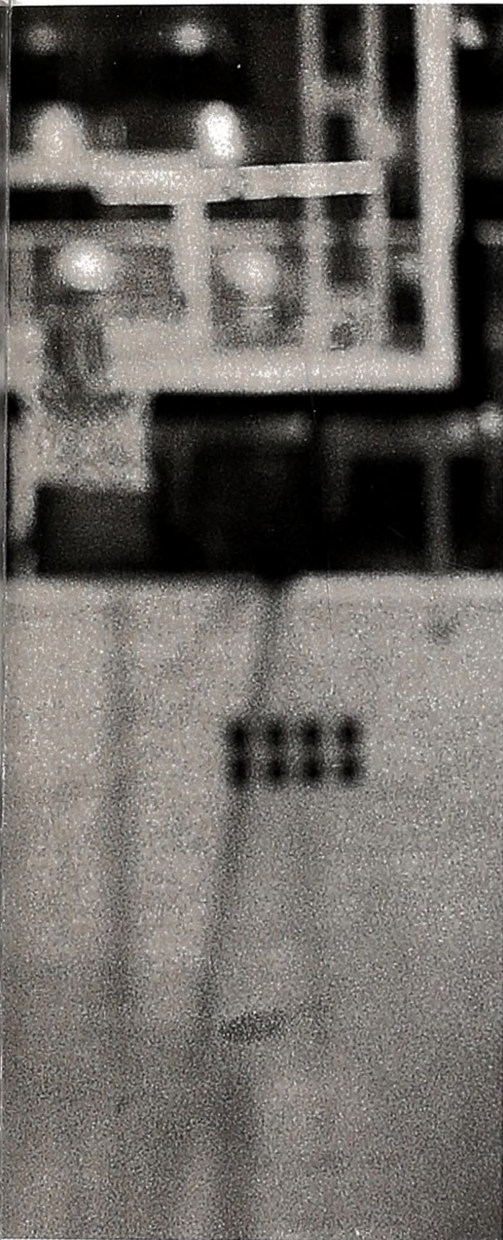
As people read the steady flow of newspaper stories, they began asking tough questions. Why was Palombo's

salary at UMaine so much lower than the men's coach? And why did her program receive only 60 percent of the men's level of funding?

All of a sudden Long Beach State's offer became a question of fairness and commitment at UMaine.

How would the university respond?

Palombo found out the Monday after her interview at Long Beach. She met with President Fred Hutchinson '53 and interim athletic director Walt Abbott '58 who together offered her a \$18,500 pay increase over two years (bringing her



just about even with men's coach Rudy Keeling). More importantly, as it turns out, he revealed that the women's basketball budget would be beefed up by \$79,000 a year

Palombo was impressed. She decided to turn down the big Long Beach State offer. In the end, support for her program was more important to her than salary.

"The university is clearly committed to the women's basketball program and to the student athletes who are part of it," she said.

Her decision brought a collective sigh of relief. Nobody would have blamed the young coach if she had used Maine as a stepping stone to the big time. But the fact that she didn't, that she stayed with her home state, only enhanced her already lofty image with Maine folks.

At the same time the university got lots of praise for taking a step toward providing women with a balanced playing field

But while the Palombo situation catapulted gender equity to the front page of Maine news, it turns out that the university was already on the verge of releasing a plan to boost all areas of women's athletics and bring the institution into compliance with Title IX.

That plan had been kept quiet. So quiet in fact that even Joanne Palombo didn't know a thing about it

The woman at the center of the plan and the gender equity issue at UMaine is Suzanne Estler, UMaine's director of equal opportunity. She says that incident in April simply pushed the release of the plan.

"The situation with Joanne and Long Beach galvanized the process," she said. "But if not for the work in progress, we wouldn't have been able to respond the way we did."

Now the entire plan is known and it is nothing if not ambitious. Over \$700,000 is to be pumped into women's athletics over the next three years. It will mean more female participants, more coaches, more resources, more financial assistance, more publicity, and better facilities.

Estler says that while all of Maine's recent athletic directors made women's athletics a high priority, the impetus for her plan came when Mike Plosek resigned and the search for a new athletic director began.

"When Mike left we decided we could not defer action on gender equity until we had a new permanent director," she says. "There was a strong feeling that this had to be an institutional initiative not just an athletic department initiative. President Hutchinson made it very clear

with Walt (Abbott) that this was a priority. And there was consensus that we couldn't do it piecemeal—that we had to put together the entire package now."

Part of the motivation was a sense of fairness and the growing popularity of women's sports. But a big part was also the university's concerns with Title IX.

"We have made a lot of progress on gender equity at the university," Estler says. "But when I look around, the area that we are most vulnerable in legally is athletics. The area in which we have failed to sustain progress, the most glaring area is athletics."

Estler admits that trying to get into compliance with Title IX is like trying to hit a moving target.

Lawsuits and the tremendous growth and interest in women's sports have made it hard for schools to clearly project just what being in compliance with Title IX entails.

Although specifics are cloudy the general guidelines of the law are quite clear. It calls for proportionality in financial assistance, training, facilities, and coaches' salaries, among other things.

The most important part of the law relates to participation. It offers institutions this three-prong test:

1. that intercollegiate participation opportunities for its students of each sex are substantially proportionate to its male and female undergraduate enrollments (often referred to as "safe harbor").

2. a history and continuing practice of program expansion responsive to developing interest and abilities of members of the "under represented sex."

3. that the interests and abilities of the "under represented sex" are fully and effectively accommodated by the existing program.

Just how far off is the university on the proportionality test? Not that far off, really. In 1994-95, females made up 44.9 percent of the student body, while 39.1 percent of its athletes were women (318 men in 10 sports, 204 women in nine sports). That represents a healthy improvement from the 32.8 percent female athlete population in 1993.

CAMPUS

In fact, Estler says that ten years ago such percentages would have been considered more than acceptable by the Civil Rights Office. But not today. The target has moved.

By 1997-1998 the athletic department will try to improve that proportion of women athletes to over 43 percent, bringing it within 1.5 percent of the proportion of women in the student body. Reaching that goal will not mean adding or eliminating any teams. It will mean an increasing number of participants in some existing women's teams and some decreases on the men's teams.

According to Estler, another part of what Title IX demands is that an institution respond to the demonstrated interests of the underrepresented sex. This has implications for women's ice hockey at Maine. Currently it is a club sport, and while the championship men's squad enjoys first-class treatment, the women actually have to pay for their own ice time at the Alford.

But the cost of elevating the club to varsity level would be prohibitive right now. And as Estler says, the level of interest and talent doesn't warrant Division I competition. But in order to give the club a better athletic experience, the university will make women's hockey an "enhanced club." This will allow it free ice time and improved resources with which to compete with other colleges.

But if that interest and talent does grow, the university might well be com-

pelled to respond, whatever the cost. Once again the target moves.

Women athletes have fared better in participation than in getting their share of the athletic budget. In 1994-95, men's teams received 73 percent of the total athletic budget. In 1994-95, for example, women received only 27 percent (\$1,622,193) of the university's athletic financial assistance. As you might guess, a big part of the reason is football.

"Football is problematic," Estler says, "because of the sheer number of

Title IX. But Estler says the university is committed to reaching equity without eliminating football. The key to that lies in Hutchinson and others convincing the Yankee Conference or the NCAA into reducing the number of football scholarships. The other possibility is for Maine to drop out of the Yankee conference and become part of a new reduced scholarship league.

Regardless of what happens in football, UMaine will be putting more money into financial aid for its female athletes.

Varsity Participation and Estimates for FY 93-98

	1993-94	1994-95	1995-96	1996-97	1997-98
Total All Sports	599	522	532	536	546
Men's Sports					
Baseball	42	35	35	35	35
Basketball	15	12	13	13	13
Cross Country	27	17	15	15	15
Football	97	84	85	85	85
Golf	11	11	9	9	9
Ice Hockey	35	33	33	33	33
Soccer	23	21	20	20	20
Swimming	24	20	20	20	20
Track (Indoor)	63	41	40	40	40
Track (Outdoor)	65	44	40	40	40
Total Male Athletes	402	318	310	310	310
Women's Sports					
Basketball	13	11	14	14	14
Cross Country	16	20	20	20	20
Field Hockey	23	24	25	25	25
Soccer	26	22	25	25	25
Softball	17	15	20	20	20
Swimming	19	17	22	24	30
Tennis	11	9	10	10	10
Track (Indoor)	37	46	46	46	46
Track (Outdoor)	35	40	40	42	46
Total Female Athletes	197	204	222	226	236
% Female Athletes	32.9	39.1	41.7	42.2	43.2
% Women at UM	46.5	44.9	44.9	44.9	44.9

male athletes involved. There is no corresponding women's sport with those kinds of numbers."

And because football is in a big competitive league, it must recruit a substantial number of players from out-of-state which only adds to its expense.

Court decisions have clearly indicated that football is not exempt from

By 1997 that aid will increase from \$433,000 to \$782,770 (compared to \$1,194,500 for men).

More money will also go into additional coaches for several women's teams. Salaries will also move closer to equity with men coaches.

Women's sports will even get a boost in the sports information department,

What do you think?

Alumni opinion is important. Let us know what you think of the university's gender equity plan. Please circle your choices. We will publish the results of this opinion poll in the next issue of *MAINE*. Please feel free to send us additional comments—we'd especially like to hear from former Black Bear female athletes. Send to: Alumni Publications, Box 550, Orono, ME 04473. E-Mail: manion@pluto.caps.maine.edu or fax: 207-581-3268.

1. In the context of the financial constraints and needs at UMaine today, what priority would you give gender equity in athletics?

- a. top priority
- b. high priority
- c. mid-level priority
- d. low priority

2. How do you think the university's plan addresses the gender equity question?

- a. extremely well
- b. quite well
- c. adequately
- d. less than adequately

3. How aware were you of the gender equity issue before this past year?

- a. very aware
- b. somewhat aware

c. not very aware

4. Do you support the concept of Maine football moving to a new less-competitive league in order to reduce the disproportionate number of scholarships it receives?

- a. yes
- b. no
- c. not sure

5. What do you think of the university's goals for funding its gender equity plan?

- a. achievable
- b. achievable but a long-shot
- c. unachievable

where the university will hire a new full-time person just to cover and promote women's athletics.

Without question, the most glaring area of inequity in athletics at UMaine is in facilities. The opening of the Alford Arena for basketball provided the women's program with a first-class facility, but that's it. No other women's sport has a facility that even approaches Division I quality. The most embarrassing of those is UMaine's softball field. Lots of high schools have better places to play ball.

The university's plan has an ambitious agenda to bring the women's facilities up to par.

1. Softball facility: A new field north of the tennis courts and west of Mahaney Diamond. The field would include dugouts, lighting, batting cages, fencing, and adequate seating. (estimated at \$750,000).

2. Conversion of alumni field to multi-use facility: (estimated cost \$4.5 million).

- Field hockey field: Artificial turf field which would also be used for football.
- Locker rooms with meeting space.
- Additional renovations for safety and

wider usage: This would include replacing seating and the press box and adding lighting for night competition.

3. Addition of second story above ROTC armory in Memorial Gym/Field House.

- Field hockey, softball, and women's soccer locker rooms and support facilities comparable in quality to men's baseball facility.

- Unisex weight room for all athletic teams.

Sounds great. In just three years that long-time elusive goal will finally be attained. But wait a minute. Isn't the University of Maine in the midst of downsizing? Where in the world is the money going to come from?

The annual increase in spending on women's sports programs will come from three projected funding sources: increased ticket revenues from Alford Arena, a \$98,000 fund generally used to fight inflation, and projected increased giving to the Black Bear Fund.

The entire funding for the development of new facilities would come from major donors. Fred Hutchinson, Sue Estler, and others hope that the goal of

attaining gender equity will attract new donors to UMaine athletics.

But can it attract enough donors to fund this ambitious plan? And is it realistic to think that once Cindy Blodgett graduates, women's basketball will generate its current level of revenue?

Only time will tell. One thing is for sure; women's athletics have come of age in America and there's no turning back on the march to achieve gender equity.

"It has to be done. The Alumni Association fully endorses the university's plan," said General Alumni Association board chair Trish Riley '73. "No matter where I go, University of Maine alumni support this issue. They want their daughters to play on a level playing field with boys. And if their children have the ability and desire to be an athlete at UMaine, they want them to have the highest quality, most fulfilling experience possible.

"In that regard, we are pleased that Joanne Palombo is staying. She has shown a real commitment to quality and to providing opportunities for female athletes from Maine to play for Maine."

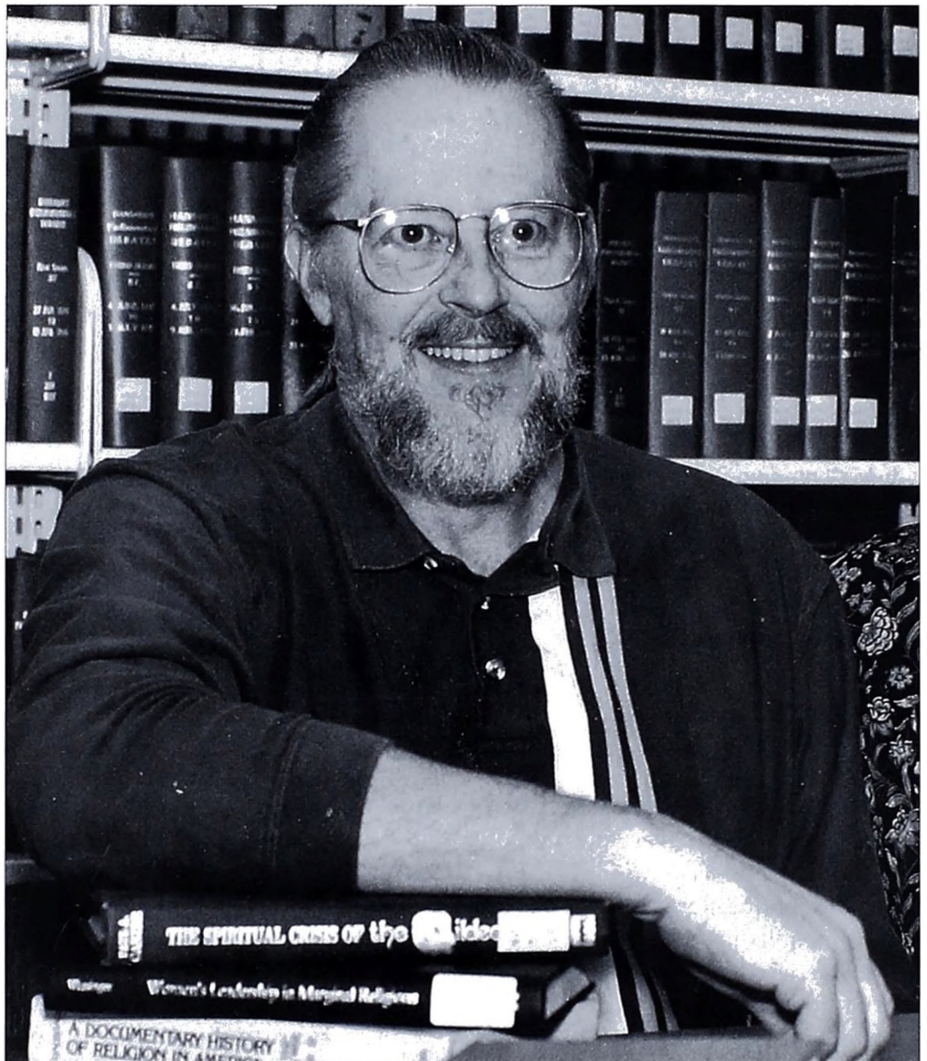
Rising Above Adversity

Graduate student Russell Witmer '94 has overcome personal pain and disability to pursue his educational dreams. Now he is the nation's outstanding nontraditional student.

Last December, Russell Witmer did what doctors predicted he would never do—graduate from the University of Maine. He not only beat the odds, but did it so exceptionally that he was named the Outstanding Continuing Education Student for Region I of the National University Continuing Education Association (NUCEA).

In February, the University of Maine Continuing Education Division was notified that Witmer had been named the national Outstanding Nontraditional Student by the National University Continuing Education Association—the first in UMaine history.

"When I learned of the award I was speechless, and that's unusual for me," says Witmer, who is pursuing a master's degree in liberal studies. "It's a validation of when doctors say you can't do something, the first thing you should do



is the opposite. Doctors told me going to school was not in my best interest. That's when I knew I absolutely should.

"All the other accomplishments in recent months have been exceptional. This one was the icing on a wonderful cake," he says of his national award.

Witmer has been a UMaine student since 1985 when he took his first course at the age of 47. Working full-time, he took courses on a part-time basis, maintaining a 3.6 grade point average in his first four semesters.

In 1989, Witmer began experiencing inexplicable mental and physical changes that forever altered his life and that of his family. The onset of Grave's disease, or hyperthyroidism, was misdiagnosed despite the symptoms—insatiable appetite and constant weight loss, double vi-

sion and disorientation, memory loss and equilibrium problems. A year later, a mild stroke went undiagnosed for nine months, further complicating Witmer's deteriorating condition.

In August 1990, the diagnosis of Grave's disease provided Russell and his family with the answers they'd been seeking for more than a year. It was a major turning point in their lives as Witmer, who had been taking a couple courses each semester even during his illness, was forced to quit his job and go on disability.

Witmer spent the next two years in the struggle of a lifetime. He underwent exhaustive psychological counseling to learn adaptations for day-to-day living, including alternative methods for cognitively encoding information. His

rehabilitation included learning to read and write again.

Fall 1992 was the "comeback," he says—a comeback directly related to his pursuit of a college education. It was far from easy. Witmer not only faced his personal challenges, but those presented by others who are quick to label persons with disabilities—and those who fail to understand the complexities of having disabilities that are not readily apparent

Despite the odds, Witmer persevered. Since 1992, he has maintained a 3.57 GPA. Now in the master's program, he may complete an individualized Ph.D

"I can't get enough of books, writing, going to class, and getting that special feeling of being on campus," Witmer says. "Today, I can't work and make a product that anyone can touch. But when I go to class and write papers that get A's and I show my family, that's something tangible."

Witmer continues to progress in his cognitive and physical abilities. He still can't deal with a cluttered environment, often becoming confused and disoriented, and stressful situations can result in stuttering or, at the extreme, in a seizure. There are still moments when he is overcome by fear—a feeling of being lost forever. There are cyclical weeks when he becomes physically incapacitated, unable to read or study, but he still manages to get his coursework completed.

Through it all, Witmer's achievements as a nontraditional student with disabilities are inspirational

"If people are disabled, my advice is don't be handicapped. Don't buy into it because those are simply words," Witmer says. "And what does disabled really mean? There are hundreds of people out there who think about doing something additional, but age stands in their way. They are as disabled as I am or as a person in a wheelchair. My advice: Don't disable yourself.

"The hardest thing for me was taking the first step to go into class that first day. Now I know there's nothing I can't do. I know there's always a solution—always a way."



Senator Olympia Snowe '69

The many tragedies in her life have only made her stronger and more focussed on achieving her goals.

In the June issue of *Mainely People* Washington correspondent John Day '63 tells of Senator Snowe's childhood, her years at UMaine, and her rapid rise in Maine and national politics.

We also have all your class notes, university news, fall sports and arts calendars, and much more.

You only get it if you're a member!

THE UNIVERSITY OF MAINE
GENERAL ALUMNI ASSOCIATION

To join just return the card on page 3 and we'll do the rest.

New Alumni House- Reception Center Will be the Gateway to UMaine

Proposed center will fill a host of needs for alumni and current university students as well as give the university a modern but friendly “first stop” for visitors.

After many years of discussion plans are beginning to take shape for the new University of Maine Alumni House/Reception Center, which will house both the General Alumni Association and the University of Maine Foundation. Viewed as a new gateway to campus, this facility will become the “front door” to the university, providing a warm welcome to all visitors and a gracious home for the use of alumni

“It will renew the tradition of the “Maine Hello” and create favorable lasting impressions in the minds of all who enter,” says Nancy Morse Dysart ’60, vice president of alumni activities.

Sited at the entrance of the campus on College Avenue, it will be a multi-purpose center serving the entire campus community—alumni, students, faculty, parents, and friends. The Alumni House/Reception Center will be a fully accessible, welcoming and hospitable place for holding events and conferences, hosting dignitaries, artists, and academicians lecturing or performing on cam-

pus, and greeting visitors and guests. It will provide modest yet efficient office space for the Alumni Association and the Foundation, allowing them to collaborate, share resources, and enjoy economies of scale in a way that is currently impossible.

The new facility will house a number of important student organizations—such as the Student Alumni Association, Senior Skulls, All Maine Women, Sophomore Owls, and Sophomore Eagles. It will also be home to a new alumni library/museum preserving the university’s rich traditions and past, including the Nelson B. Jones Stein Collection, the Association’s collection of *Prism* yearbooks, and literary works by alums.

“In this library we will be able to house the memorabilia representing the traditions of the University. All these mementos can be on display and archived in one area,” Dysart says.

The current home of the Alumni Association, Crossland Hall, was designed to be a farm house and is the

oldest building on campus. Space within the building is limited and inadequate for current needs. Files and supplies are stored in corridors and hallways. As a result, safety and fire regulations are in frequent jeopardy. The building is not handicapped accessible and many senior and physically challenged alumni have never been able to use the existing facilities. Closets have been converted to offices, and with the exception of one small lounge area, there is no space to host alumni or university functions.

The current premium on available space necessitated a costly move of the Association’s central phonathon facility from Dunn Hall to a space in the basement of Cutler Health Center. In addition, office supplies previously stored in Corbett Hall, because of the lack of adequate storage space in Crossland, were relocated to Oak Hall in order to allow for Corbett classroom renovations. The lack of heat and electricity in Oak make this an unsatisfactory arrangement. “Obviously, the time and cost inefficiencies



of operating out of three separate locations are detrimental to the Association and thus its ability to serve alumni and the university community," says Penny Harris '63, a university trustee and a member of the Alumni House/Reception Center steering committee.

In addition, in keeping with the University of Maine's Long Range Planning Committee's intent to keep all student facilities together, land surrounding Crossland Hall has been designated as the site of the proposed student fitness center.

Bert Pratt, Class of '43, feels strongly about the need for a new alumni facility. "In my travels as an admissions agent for UMaine, I got to see some wonderful alumni centers across the country. Crossland pales in comparison," Pratt says. "It is important the University of Maine have a facility it can be proud of."

Pratt and the Class of '43 feel so strongly about the importance of a new facility that they made the first gift to kick off the fundraising effort. Support

from the Class of '43 for a new alumni house is nothing new. It dates back to the mid '80s when Gordon Erikson '43 served as president (now called chair) of the Alumni Association.

"Gordon Erikson was the driving force behind the first formal discussion of an alumni house. He is the one that convinced the Class of '43 to make this a priority in our giving," Pratt says.

The need Erikson saw back in the '80s for a new alumni house has only grown in recent years. Although there are currently empty buildings on campus, as the university downsizes satellite departments and services that were formally housed off-campus, are being brought back on campus. The Bureau of Labor Education, the School of Nursing, and other university departments are designated to occupy buildings which may have been adaptable for alumni use. "It is appropriate that these programs be placed in facilities near the academic core of campus," Dysart says. "It is also appropriate, in keeping with the long range

plans for the campus, that Alumni House be strategically located at the entrance to campus where it can visually greet visitors and welcome alumni home."

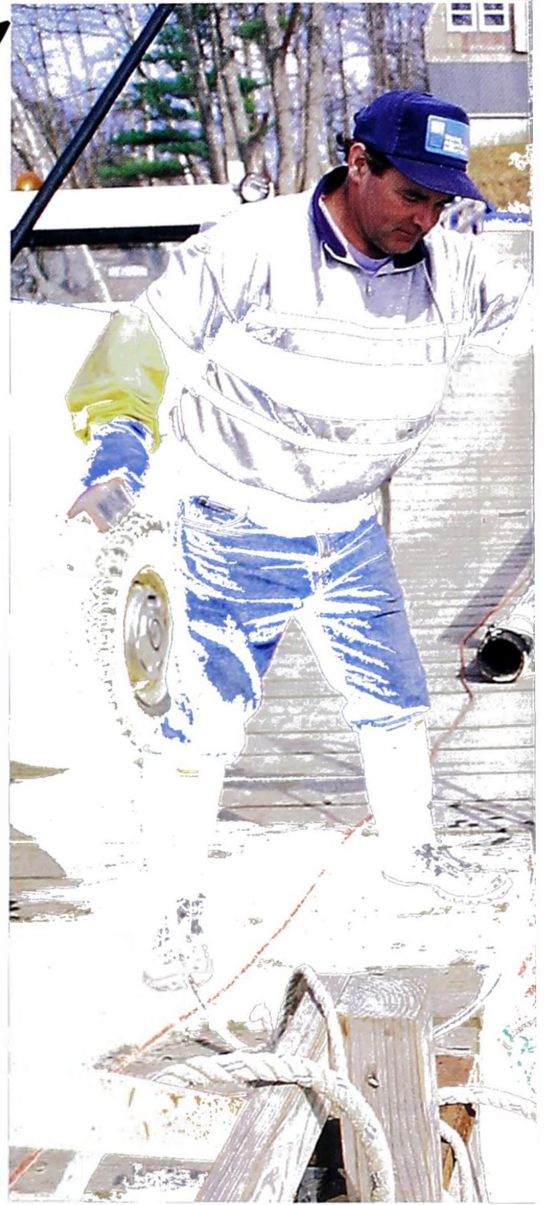
The Class of 1943's support of the new Alumni House/Reception Center is mirrored by other alumni. In a feasibility study conducted by Barbara Beers '74, 60 percent of the alumni polled felt there was a need for a new Alumni House on campus. Beers' study also showed strong financial support among alums, as well. And after a two year fund raising effort, there is 100 percent participation of the reunion classes.

It is hoped that the Alumni Association and the Development Office will go public with this fund raising effort by January of '97. In the meantime, reunion classes are being extended an opportunity to support this much-needed facility through contributions to their Class Reunion Funds.

Above: Architectural rendering of the proposed Alumni House/Reception Center.

“Farming” For Fish

A strong partnership between University of Maine researchers and fish farmers in the state may help keep seafood on our plates in spite of the decline of commercial fishing on the East Coast.



It's a sad story. The commercial fishing industry on the East Coast of North America is in a state of decline. Stocks of popular finfish, including salmon and cod, have dwindled to the point where the U.S. government has either restricted or banned their harvest.

Are fish lovers going to have to change their eating habits? Maybe not. While the fishing industry is declining, another industry is emerging which holds great promise for supplying us with a renewable supply of seafood for a long time to come.

Aquaculture, the cultivation and harvesting of marine animals for commercial food products, is now a fast-growing industry in Maine. Recent estimates have

placed the value of the products of Maine salmon and shellfish farms at close to \$50 million, making it the third largest livestock product in the state, behind dairy products and chicken.

This industry provided more than 500 full-time jobs in 1994.

Most of those jobs were centered in salmon production in coastal Washington county, one of the state's most economically depressed areas. Salmon farming is now a \$46 million industry in the state.

Maine, and in particular Washington county, has great potential for aquaculture because of its extensive coastline, its limited population, and its dramatic cleansing tides.

The University of Maine has been at the forefront of the aquaculture industry

since the late 1970s, lending the expertise of its faculty in undergraduate and graduate degree programs. UMaine alumni are at work now in the aquaculture industry, and they have at their disposal the resources of the university as they attempt to find answers to problems associated with the harvesting of marine animals.

According to Bruce Barber, the coordinator of the university's Fisheries and Aquaculture Research Group (FARG), the University of Maine is one of the few institutions in the Northeast to offer a degree-granting program in aquaculture. The aquaculture program originated in 1989 when the Maine Agricultural and Forestry Experiment Station expanded its focus to include research and development assistance to the state's aquaculture industry. Faculty and students now work

PHOTOGRAPHS BY DAMON KIESOW



to solve problems concerning the cultivation of salmon, bivalves (clams, oysters, scallops, and mussels), and lobsters. The program provides a research and development capacity that is not otherwise available, and many of its graduates are now pioneering members of the industry.

Most, but not all, of these students come from Maine, but there are international students as well, some hailing from Argentina, China, and Pakistan. They work toward a Bachelor of Science degree in aquaculture, specializing in either the technological or biological aspects of the discipline. Graduate students can earn a master's degree or Ph.D. in marine bio-resources.

The aquaculture program has a newly-acquired fisheries and aquaculture

building on the Orono campus which houses saltwater aquaria holding up to 1,000 Atlantic salmon smolts, with aquaria for lobsters and oysters under development. In addition to these on-campus facilities, UMaine also has a flow-through sea water system and shellfish hatchery at the Ira C. Darling Marine Center in Walpole, Maine, with living accommodations for students and faculty doing extended research on fish and shellfish management and production.

Aquaculture faculty and students are involved in research on a wide variety of topics such as shellfish disease, the feeding process for striped bass, atherosclerosis in Atlantic salmon, and even the creation of a pepperoni-like product made from imperfect Salmon fillets. (See story on page 9.)

The work that Professor Robert Hawes, the chair of the department of animal, veterinary, and aquatic sciences, and others within the department have done on improving the growth rate of American oysters is showing immediate beneficial results in the field.

"We started in '88 selecting for genetic improvement in growth rate," Hawes said. "Those lines are being used by the industry and are performing better than the wild stock they had been using."

That claim is backed up by the people on the oyster farms.

"We have definitely seen improved growth rates," says Richard Clime, co-owner of Dodge Cove Marine Farm in Newcastle. "Dr. Hawes' work has led to the genetic improvement of the American oyster." Clime received his master's degree from UMaine in 1976 and started

"Because the cod is depleted for fishing, it presents a good opportunity for aquaculture."

in aquaculture back in 1977 after working at the Darling Center.

Hawes lists an impressive array of research projects currently being tackled by faculty and students in the program: problems of shell disease which result in death or unmarketable lobsters; growing and feeding young cod on artificial feed; and the development of a vaccine for major salmon diseases, among other projects.

Hawes is enthusiastic about the program's potential for making a significant economic impact on the aquaculture industry.

"The American population is going to continue to eat fish, and salmon is very expensive," Hawes said. "If we can produce salmon less expensively or can find other species so we're not so dependent

on salmon, then we've accomplished something."

Economics is a driving force in much of the research related to aquaculture. Strong competition, especially in the "farmed" salmon market, is coming from Chile and Norway.

"They are producing so much fish that it affects the market by lowering prices," Barber says. "We need to find less expensive, alternative ways of raising fish in order to keep our industry competitive."

Barber is especially enthused about UMaine research efforts on cod.

"Because the cod is depleted for fishing, it presents a good opportunity for aquaculture," Barber says. He notes that university researchers are currently working on the problem of getting cod through the larval stage.

"That's the problem," he says. "Once they are through that stage they seem to take the artificial food okay and grow into healthy adults. Plus they have the added benefit of having a built-in antifreeze in their bodies which makes them do well in Maine waters year round. That's an advantage over salmon."

By all accounts UMaine's aquaculture program has achieved great results. But continued progress may depend on an infusion of money from a grant which has been submitted to the Maine Science and Technology Foundation and the Experimental Program to Stimulate Competitive Research (EPSCoR).

"We have a very limited budget," Barber said. "With the few people we've got working here, we really can't service the industry the way we should." The grant would fund additional faculty positions in the aquaculture program, as well as provide money for equipment and graduate research assistantships and continued renovations at research facilities.

Barber is optimistic about the university receiving more grant money because as the fishing industry declines, the government is realizing the importance of aquaculture.



Associate professor Bruce Barber

"I really appreciate the contribution the university, and especially Bruce, is making to the industry... he brings a refreshing attitude of wanting to get out and work closely with all of us."

And when you venture out to Maine's fish farms you begin to understand how important the university is to the industry. Carter Newell, a 1983 graduate of the University of Maine, is a biologist for Great Eastern Mussel Company of Tenants Harbor and co-owner and president of Pemaquid Oyster Company. He receives support from the university in his work with the cultivation of mussels and oysters. Newell feels that the Darling Marine Center is an important resource for people in the aquaculture industry and hopes it will receive the financial support needed to allow further development. He has received grants for several aquaculture research projects during the last five years and is active on a national, as well as international level, in support of the aquaculture industry. He feels that communication between the university's

aquaculture program and the industry is good, and praises the Maine Aquaculture Innovation Center (MAIC), located in Brewer, Maine, for its assistance as an interface between the research community and the industry.

According to Mike Hastings, the executive director of MAIC, the nonprofit group's mission is to create employment opportunities by expanding existing aquaculture farms and by adding to their numbers. "We're promoting research based on work done jointly by the scientific community and by the people in the industry," Hastings said. "The University of Maine, though not our only resource, is clearly the primary source of research expertise we draw upon."

MAIC has helped obtain financial funding for several university research projects which will ultimately benefit the state's aquaculture industry.

One project involved the spawning of surf clams, a species of deep-water clam marketed for use in canned soup. Through a grant from MAIC, Chris Davis, who is associated with the Darling Marine Center, was able to spawn one type of surf clam.

"For the shellfish aquaculture industry, the major problem is one of finding adequate supply," Hastings explained. "So we're very interested in the cultivation of new species, especially clams."

Kevin Scully, of Edgcomb, the owner of Glidden Point Oyster Company, received a master's degree in animal and veterinary sciences in 1989. Many of his colleagues in the industry are also UMaine alumni, and they keep in close contact with each other and the university regarding problems which arise in their work on aquaculture farms along the Damariscotta River.

"We have an ongoing problem with young oyster seed dying," Scully said. "At this point, there's talk of whether to even get baby oysters this year, because we're losing 90 percent of our oysters."

Chris Davis and others have had some success with the selective breeding of fast-growing oysters. "One of the selected groups seems to be better at surviv-

ing the problem," Scully said.

Davis and Bruce Barber met with growers in February of this year to discuss the situation, and are currently seeking funding for continued research into this problem. Scully and other growers are grateful for the university's assistance. "It's important for everyone to figure this out, and most growers don't have the time or money to do it themselves," Scully said.

Disease, says oyster farmer Dick Clime, is the biggest fear that aquaculturists live with

"In a self-contained population like we have, a disease can wipe out our entire population and ruin our business," he says

So far, however, Clime has met with fairly good fortune. He says he sells every oyster he grows, and his only limitation is in production. Part of that is the limited amount of hard bottom area in the river—the type of bottom that is needed to plant juvenile oysters

Clime raises oysters in part because the Damariscotta River is an excellent place to do so. He claims that the species has been harvested on the river since Native Americans enjoyed them over 1,000 years ago. He also cites the long shelf life of oysters which make them ideal for handling and shipping.

But the primary reason Clime grows oysters is economic. It brings in more money per unit than other shellfish. Most of the markets for Maine's oysters are large metropolitan areas such as Boston, New York, Philadelphia, and Toronto.

Clime believes there is a real potential for an aquaculture boom in the state. If that boom occurs it will partly be a reflection of filling an opportunity left open by the decline of commercial fishing. But it will also be the result of UMaine researchers working closely with people involved in the field—addressing their needs and concerns

That kind of cooperation has already led to a partnership with a bright future.

"I really appreciate the contribution the university, and especially Bruce (Barber), is making to the industry," Clime says. "He brings experience and expertise that we all can use. And he brings a refreshing attitude of wanting to get out and work closely with all of us."



Researchers working on new marine structures that could expand aquaculture

University of Maine researchers are investigating designs for new structures which could expand human use of the high seas. Richard Messier, associate professor of mechanical engineering, and Bruce Barber, associate professor of animal, veterinary, and aquatic sciences, will develop concepts for floating modular structures with enough strength and flexibility to survive the constant battering of waves and wind.

Such structures could serve to support military activities, but more importantly for Maine, they could mean expanded aquaculture activities in the state

"Supply of inshore protected sites suitable for aquaculture is limited," Barber says. "In order for the industry to expand significantly, facilities must be designed to operate in open waters."

Such facilities could pose advantages for raising new fish species such as cod and haddock, along with traditionally cultured species such as oysters and salmon. They may also avoid the potential environmental problems associated with coastal locations

The need to expand aquaculture facilities may become critical. A United Nations report indicates with the decline of commercial fishing, the world will need 15 million more pounds of fish in the not-to-distant future. The report indicates that as much as 40 percent of that fish may come from aquaculture.

The challenge the researchers face is to develop concepts for modular structures and the devices which link them together. The United States currently imports most of its aquaculture equipment from other countries, primarily Norway.

"We've examined the intermodule connectors and attachments on aquaculture structures within the sheltered inshore waters of the Gulf of Maine," says Messier, a specialist in the design of naval structures. "There is abundant evidence of metal fatigue and structural failure over a fairly short cycle of years. Discussions with aquaculture operators have repeatedly confirmed our observations. It's clear that these components will be critical in the design of new structures."

Messier and Barber will develop experimental concepts through computer simulation. Scale models will then be tested in the new UMaine Wave Dynamics Test Facility, and larger tests are scheduled in the Gulf of Maine.

The research is funded by a \$1.2 million grant from the department of defense and emphasizes collaboration with other research institutions and Bath Iron Works.

High-Tech Meets Higher Ed

Researching a paper on the Internet. Taking a course from Worcester Polytech while at UMaine. Getting your professor's lecture notes on E-mail. Virtually touring a modern power plant using a computer. Welcome to the new world of learning at the University of Maine.

By Lynne Nelson Manion '95G

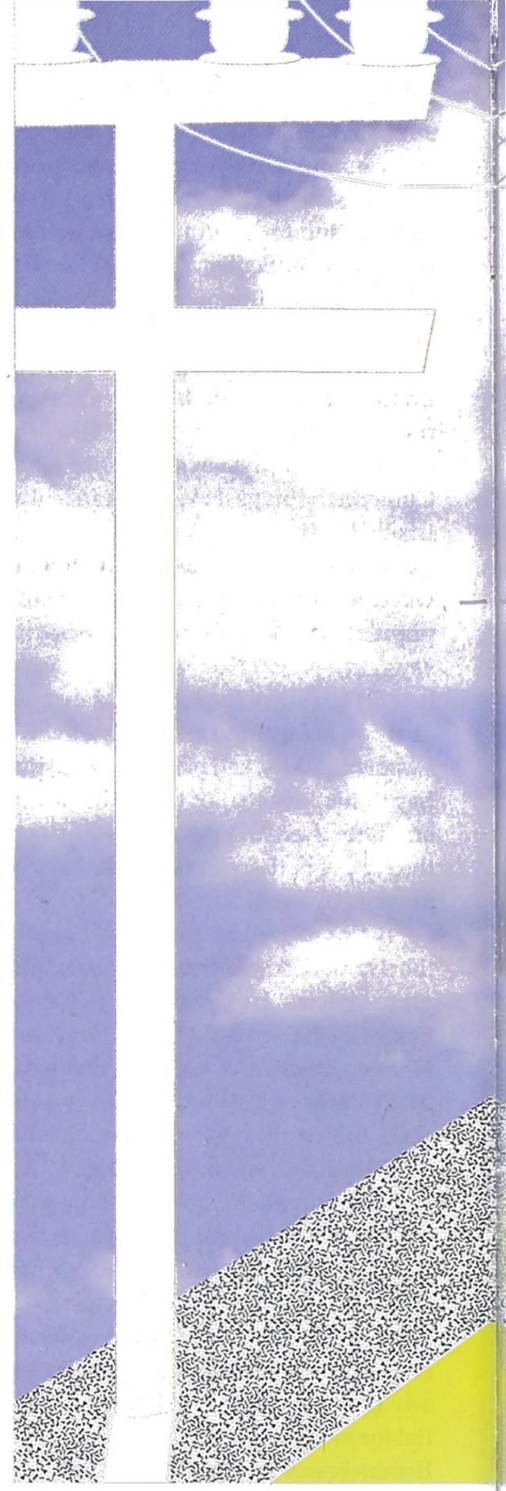
Can you imagine taking a college course in the comfort of your living room? What about conversing with your professor about a particular homework assignment at any hour of the day or night, regardless of his or her office hours? How about taking an exam via the computer? Would you miss the days of furiously scribbling down everything the professor has said for fear of missing something? Whether you missed what the professor said, or just plain missed the class, connect to the listserv or BBS (see glossary on page 26) via your computer for the notes

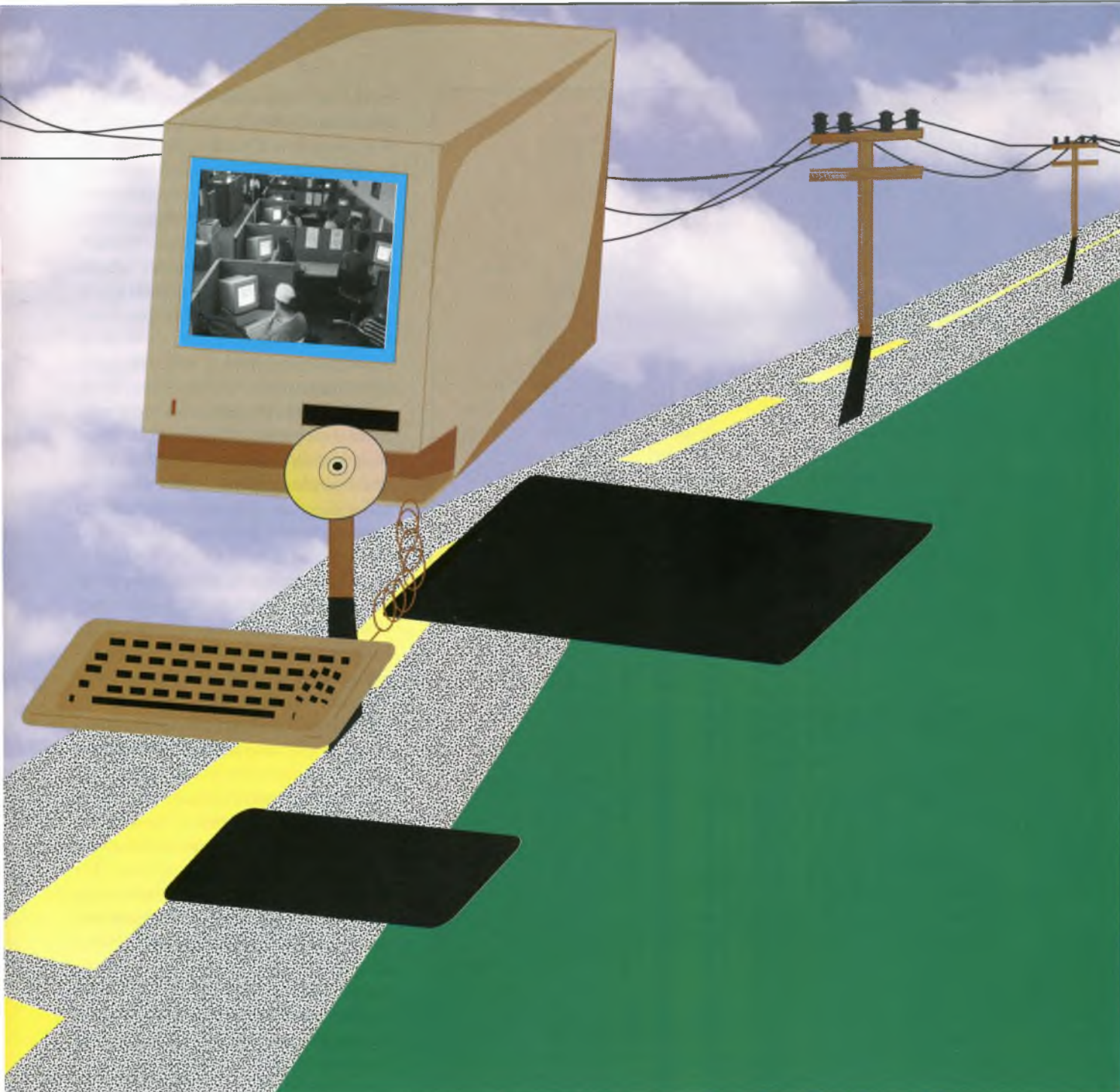
Imagine walking into a social studies classroom for a lecture about archaeology and being surrounded by video screens projecting a three-dimensional image of an archeological dig, complete with realistic sounds. Visualizing the ancient artifacts a real archeologist might find on a dig becomes much easier and exciting when you are at the center of the excavation.

College classrooms are changing. Technology is evolving at such a rapid rate, it is mind boggling, even to the professors responsible for using it. Slowly but steadily, college classrooms are be-

coming electronic, inviting students to become active participants in the learning process rather than passive receivers of information.

Thanks to the Internet or "information superhighway", the World Wide Web, the arrival of faster, smaller, less expensive, more powerful computers, advances in videodisc and CD-ROM technology, and the capability of offering classes electronically to distant locations, the face of education is changing across the country. Although none of these tools are all that new, the ability to use these technological devices has been made





easier and cheaper.

The Internet dates back to 1966 when a researcher at the Defense Department's Advanced Research Projects Agency (ARPA) set in motion the first serious effort to teach computers to talk to one another. Borrowing this concept, non-military organizations spawned their own networks, and these were eventually merged, or internetworked, with the ARPAnet to form the Internet.

The information superhighway is now fully accessible to anyone with a reasonably up-to-date PC, a fast modem, a few pieces of software, and an account

with an access provider. The advent of the Gopher and the World Wide Web have made accessing this superhighway much easier. As a result, more and more people are finding their way to the on-ramp. By the middle of last year, there were more than 2.2 million computers on the Internet, which merely sets the stage for a surge of growth unlike any this superhighway has seen before. Today, 30 million to 40 million people in more than 160 countries have at least E-mail access to the Internet.

Professor George Markowsky, in the computer science department at the Uni-

versity of Maine, describes the recent hype about the Internet as a circular type of occurrence. Even though computer networking and E-mail communication were available 25 years ago on the mainframe, the system was cumbersome and awkward. As networking systems have evolved, more and more people have gone on-line.

"It was just a matter of getting enough people on the system. Just like regular mail. If you could only mail to a small proportion of the population, the mail delivery system would not be that useful," Markowsky says. "One of the

The New Campus Lingo

A glossary of terms for the computer age

BBS—(Bulletin Board System) A computerized meeting and announcement system that allows people to carry on discussions, upload and download files, and make announcements without the people being connected to the computer at the same time.

CD-Rom—Stands for compact disc, read only memory; one CD-Rom can hold about 600 megabytes, or the equivalent of 700 floppy disks.

Chat Area—A cyber room where people can have live, on-line conversations with up to 23 other people from around the world.

Cyberspace—Cyberspace is an experience. The word cyberspace is currently used to describe the whole range of information resources available through computer networks.

Electronic mail—(Also known as E-mail) Messages, usually text, sent from one person to another via computer. E-mail can also be sent automatically to a large number of addresses (mailing list).

Gopher—A software program or browser that makes it easy for users to locate, read, and download files. Gopher organizes everything into menus. You start at a root menu and choose numbered items that lead you to other menus or actual files.

Home Page—It's the information space or site you create on the World Wide Web.

Hypertext—Generally, any text that contains "links" to other documents—words or phrases in the document that can be chosen

by a reader and which cause another document to be retrieved and displayed.

Internet—The mother network of globally-linked computers; also referred to as the i-way, the information superhighway, or the infobahn. The Internet is a massive network of computers that connects over 20 million computers throughout the world.

List Serves—Found on the Internet, they are sort of like party lines through the mail. They focus on one specific topic. After signing on to a list serve you can be guaranteed of receiving buckets of mail daily on your favorite subject.

Mosaic—A software program or browser that lets you access the World Wide Web. Mosaic runs on your computer and acts as a graphical interface between you and the Web.

Multimedia—Is the mixing and using of different mediums—text, audio, video, animation, print, and graphic formats—output to a screen. Multimedia provides a strategy to address multisensory learning, a complementary merger of the visual, auditory, and kinesthetic.

Surfing—Exploring the Internet; it implies a leisurely approach without any particular goal in mind.

World Wide Web—A set of connections that organizes information on the Internet as hypertext (that means that words or pictures in a document act as a link that jump you directly to related words or pictures in other documents) and makes it much easier to find your way around.

things that makes the mail system and telephone useful is that pretty much everybody has a mailing address and pretty much everyone has a telephone. With the explosion of interest about the Internet, more people are using E-mail and have E-mail addresses and thus are making E-mail a more effective form of communication. "For Markowsky E-mail offers a better means of communicating with students.

"Instead of relying solely on traditional office hours, if students are stuck on a problem they can send me E-mail about their particular problem and I can answer their questions a lot faster. Or students can send me a piece of a computer program they don't understand and I can send it back telling them what the problem is."

The bottom line for Markowsky is E-mail allows him to have better contact with his students. But, he cautions, there is still a need for face-to-face communication as well. Any type of technology, whether we are talking about the Internet or a multimedia presentation, is only a tool, and should only be used as such.

"The Internet is a resource. I think it is a mistake to focus on how it has changed education. Education changes all the time," Markowsky explains. "It's like saying how has the telephone changed education. The computer and the Internet are tools that can enhance education. People use the Internet or E-mail when it is appropriate and sometimes it is not the right tool. I use it as an additional information connection. Sometimes you can fix a lot of problems via the Internet or E-mail, but sometimes the problems just get too hairy and you say 'Come on in and show me what the problem is and let's be a little more interactive.'"

Markowsky cautions that E-mail or "surfing the internet" might not be applicable in all classes. Drawing the analogy, "You have a toolbox containing a hammer, screwdriver, and nails. It is a mistake to say that for every job you need the hammer. You might need the hammer for every job and you might not. That is how it is with the Internet. It is a tool that might apply in some classes and not in others. You need to look at the course and see what makes sense

and ask yourself how can I do what I want to do in the most efficient way possible?"

Ken Fink, associate professor of oceanography, agrees. "There is no question that the Internet, via the World Wide Web, potentially could be a great asset for classroom teaching and learning. It allows us to access information in ways and in layers that are impossible to do with most printed media." Fink says, "There is an 'instaneity' (if such a word exists) to the web sites that we have not yet fully or appropriately utilized. It presents the classroom teacher with the possibility of establishing an ad hoc textbook that provides interaction with the author."

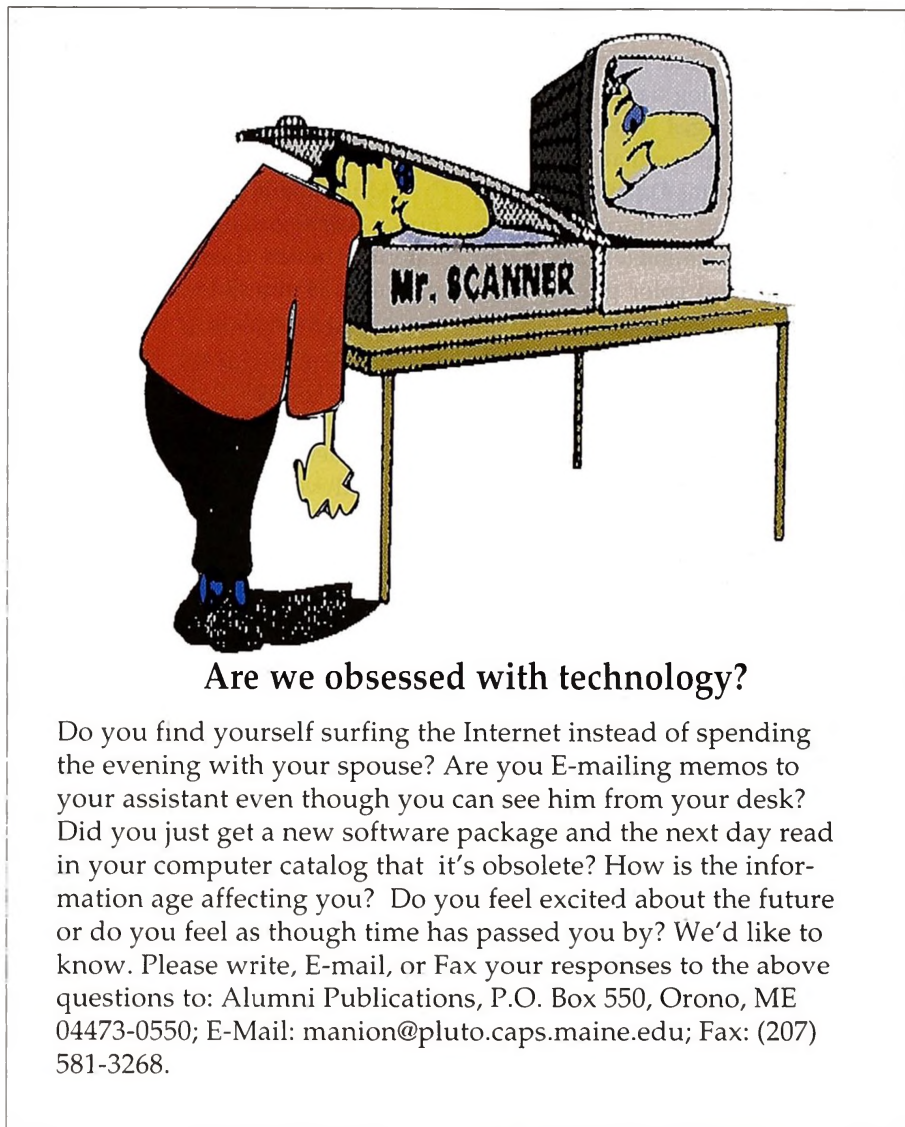
The most exciting part of incorporating the World Wide Web into the classroom setting, for Fink, is that it removes the classroom walls. The learning process is no longer restricted by traditional boundaries. Not only does Fink correspond with students using E-mail, but he uses selected web sites in his classroom to enhance the learning process. For instance, Fink's students are able to visit the tidal data archives in the United Kingdom to find information about various tide gauge stations around the world. Without the Internet, this wouldn't be feasible

As with everything, there is a good side and bad. With increased communication, there is the potential to get distracted more often. Fink compares the Internet to a slightly reduced scale model of civilization. Whatever you might imagine in this model is present. Much can and should be ignored or bypassed.

There are Internet junkies who spend their whole day "surfing" and sending mail and have difficulty focusing on their work. Balance is the key.

"You need a balance between the course material and the interaction you have with others. So for some courses the Internet is good but for others the Internet might be a distraction from the learning that needs to take place in that class," Markowsky explains.

Still, almost everyone concurs that the Internet opens up a multitude of exciting possibilities for both the professor and student. Via the World Wide Web, a professor can post class notes, scanned images, syllabi, textbooks, tu-



Are we obsessed with technology?

Do you find yourself surfing the Internet instead of spending the evening with your spouse? Are you E-mailing memos to your assistant even though you can see him from your desk? Did you just get a new software package and the next day read in your computer catalog that it's obsolete? How is the information age affecting you? Do you feel excited about the future or do you feel as though time has passed you by? We'd like to know. Please write, E-mail, or Fax your responses to the above questions to: Alumni Publications, P.O. Box 550, Orono, ME 04473-0550; E-Mail: manion@pluto.caps.maine.edu; Fax: (207) 581-3268.

torials, and assignments, making the access and retrieval of relevant course material easier and faster. For students, the Internet offers an opportunity to access a variety of information in an interactive environment.

Since UMaine's Fogler Library went on-line with a home page in July 1994, UMaine students (and anybody with Internet access for that matter) have had the option of accessing unlimited amounts of information and services without leaving the comfort of their homes, simply by cruising the World Wide Web. Whether a student wants to request a book, have a journal article photocopied, place something on reserve, seek help finding a particular reference, or just find out who works in the library, the on-line "virtual Fogler library" is ready to help.

Also changing the face of education in the '90s is the burgeoning use of

multimedia presentations. While older forms of technology, such as a slide projector or an overhead projector, can be used for multimedia presentations, the term nowadays usually refers to the integration of a variety of mediums usually under the control of a computer. Mixing and using different mediums of communication—like text, audio, video, animation, print, and graphic formats—output to a screen, provides a strategy to address multisensory learning and illustrate thoughts and ideas on a particular topic in a different format.

One popular way of venturing into the world of multimedia is by connecting the computer to a videodisc player. Videodisc resources include sound, video, text, graphics, or hypermedia animation. Videodisc technology has been around for about 15 years, but in the field of education more and more is being produced for educators to use

and the technology is getting more and more powerful. While videodisc technology uses an analog signal to store and view moving images and video, CD-ROM discs, another popular tool in constructing a multimedia presentation, have the capability of storing an enormous amount of data and text in a digital format. Sound and color graphics can also be stored in this manner. CD-ROM discs are a good format for storing reference materials such as encyclopedias, dictionaries, fonts, clip art libraries, and international language programs.

The use of multimedia can't help but impact the whole teaching process.

"We have a whole generation of students coming into the classroom who were raised on *Sesame Street* and that whole visual presentation of information. They are more responsive to that than merely listening to a lecture or reading plain text," says Sharon Quinn Fitzgerald, head of original cataloging at Fogler Library. "Whether you are accessing the Internet or incorporating a multimedia presentation in your class, you can get people more directly involved. Instead of standing at the front of the room and talking at the students, you can engage them at several different levels."

Professor George Patton, in the University of Maine's electrical and computer engineering department, is doing just that. In an upcoming class Patton will be using a multimedia presentation to provide students' access to a simulated power plant. Using a CD-ROM disc, students will be able to call up on their computer screen a three-dimensional image of a hydro-generation plant. The student will be able to actually operate the power plant through dials simulated on the screen. If the student does something wrong, an alarm might go off, or he/she might hear the sound of circuit breakers closing, or even the sound of water rushing around.

"The intent is to make the experience as realistic as possible and put the student in a situation that he/she wouldn't be put in otherwise. And in my opinion that is when a multimedia presentation is most advantageous," Patton says. "By being put in this situation, the student gains insight about a power plant

operation that he/she couldn't gain otherwise. The connection for the student comes when they realize the full potential of running a power plant, just by sitting at their computer screen."

Multimedia presentations in Ken Fink's oceanography classes consist of a carefully honed classroom lecture that uses text, 35 mm slides, video clips, artwork, and animation of concepts, organized into a program on his laptop computer. Complete class presentations are then uploaded to a student accessible BBS. Students can then download, review, and even print these presentations.

"If students have downloaded or printed the lecture material before class, they are relieved of the tedium of transcribing the text or copying the complex illustrations," Fink explains.

Professor Jim Chiavacci, assistant professor of education, cautions, however, that with the use of multimedia technology one runs the risk of substituting glitz for substance.

"Content is very important," Chiavacci says. "Educators have to make sure that the presentation packages they use are content rich and are not just loaded with glitz."

Reiterating these sentiments, Fink says that multimedia is not a substitute for poor teaching methods.

"The emphasis should always be on substance not form," Fink says. "Multimedia should be used to make an idea clearer in the same way that a carefully prepared illustration might be better than a hand-drawn picture on a chalkboard."

By tapping into the potential of the Internet and multimedia, the instructor has the potential for increasing both the breadth and depth of his or her teaching.

Chiavacci, who has been at UMaine for five years, acknowledges that with the advent of technology, the role of the teacher is changing. "The teacher is no longer the dispenser of information anymore. Instead, the teacher needs to be an orchestrator of how students retrieve and use information," Chiavacci explains. "And the teacher needs to help students find what information is worth using."

Instead of seeing a diminishing role for the teacher, however, Chiavacci sees the teacher's role as becoming even more important in the future.

"I see technology making the

teacher's role more important because they are going to have to teach kids how to sift through all of this information—what's good and what's junk."

Patton agrees with this philosophy. "I see being a facilitator of information as an opportunity rather than a threat. If I can bring my students the best information from all over the world, they can only do better."

This past semester, through the aid of a new teleconferencing system offering live two-way audio and video for point to point videoconferencing over the telephone lines, Patton offered a course not only to his UMaine students but also to students at Worcester Polytechnic Institute in Massachusetts. Last fall, Patton's students at UMaine were able, using this same teleconferencing system, to take a course at Worcester Polytechnic Institute by one of the country's leading authorities in power system control and operations.

Long distance learning is also being implemented throughout the UMaine system. Back in 1989, the state set up an interactive television network (ITV) linking classroom-studios at the university's seven campuses with classrooms in local school buildings around the state. Students can take courses by traveling to their town's schools instead of a college campus that could be hundreds of miles away.

Last fall, nearly 5,000 Maine students took at least one televised class and more than 100 received instruction in their own home via the network and their local cable system. Students connect with the classrooms via the phone, calling in with questions or comments that are broadcast over speakers in the studio. They send papers to the teachers using regular mail or E-mail. Tests are given in supervised classrooms. (See sidebar on ITV controversy on page 10.)

Changes resulting from new technology—whether it be the Internet, multimedia presentations, or long distance learning—however, are slow and not without their critics. Incorporating new technology into the classroom can be a tedious process. Markowsky says that changes resulting from new technology happen incrementally and are a result of finding better ways to do things.

"You don't set out to change your classes, it just happens. You say to yourself that it might be easier to do x, y, and z another way."

While the University of Maine community is making great strides in embracing the technology of the future, change is scary. Many people are not quite sure how all the new technology is going to fit into their lives. For many, the computer is still only a word processor.

"There are a number of professors using new technology in specialty areas but I don't think as yet there is a large population of professors using it and integrating it into the classroom to train or teach their students. That is not a blanket statement," Chiavacci says. "We still have a ways to go on campus, but I see a move to try to do this."

There is currently a proposal under consideration for the development of a faculty multimedia lab in Fogler Library. This lab would provide a centralized place for faculty to learn how to use and integrate new technology to enhance their repertoire of skills. This highly specialized facility would feature hardware and software applications for both the Microsoft Windows and Macintosh environments to create courseware and multimedia presentations as well as provide a starting point for various other electronic publishing projects.

Chiavacci sees this as a very positive sign.

Although integrating new technology into what we already do is time consuming and a little nerve-racking, it will be necessary. As the generation of students weaned on video games and computers from birth, graduates high school and enters college and the workforce, the demand to use this new technology will be great.

"I see that within the next five to ten years, the quality of the student leaving high school is going to be much more computer equipped. The quality of the person coming out of school, meaning their ability to use technology, is only going to increase in the coming years. Future students will be much more computer skilled. For young people today, the computer is their tool. It is their tool for the future," Chiavacci says.

Keypals Program Integrates Technology and Language Arts

University of Maine students in an elementary education course on teaching, reading, and language arts this past semester learned how the writing process works from some of the best teachers—fourth graders. Those same fourth graders at Asa Adams School in Orono have been seeking to hone their computer skills, and found willing recipients of their E-mail in the UMaine students.

In today's technological age, traditional penpals have turned into keypals, and their delivery system is the Internet.

The Keypals program in the College of Education is the brainchild of Joyce Salvage, a doctoral student in the literacy program and a teaching assistant in ERL 313 and 318, and Gail Garthwait, the Asa Adams school librarian. As a means of integrating technology with language arts, the Keypals matched UMaine undergraduate education students with Asa Adams children in Wyoma Grieve's fourth grade. With the help of Jim Chiavacci, assistant professor of education, the Shibles Hall computer cluster was linked via modems to the computer lab off the Asa Adams library.

"It came together as a collaborative effort," says Salvage, a former special education teacher at Asa Adams. "Rather than just working in the classroom, we wanted the university students to have a broader perspective in their 25 hours of field experience. What we found were university students not only learning lessons about reading and writing, but also about the importance of technology in education."

The UMaine course involved 26 juniors and seniors. "Most were not comfortable with the computer, and only a few had been using computers regularly for word processing," says Salvage.

"One of the most valuable parts of this experience was in developing awareness of where technology is, where these University students are and how much they need to catch up. For the most part, the fourth graders were more experienced on the computer. When the UMaine students were made aware of that, they were glad to have the fourth graders show them things. Now they're excited about the technology and many are registering for the Computers in Education course," she says.



IN HARM'S

In one second, the underwater bomb pushed a one-mile wide column of radioactive waste and coral over a mile into the sky. It looked like Niagara Falls in reverse.

Then, a full 10 seconds later, the water column collapsed back into the lagoon, creating enormous rolling waves of spray, mist, and debris that spread outward over the target fleet of 95 abandoned guinea pig ships and swallowed them from view. The cloud wafted downwind more than seven miles, leaving what the Navy later described as a "kiss of death" on all but nine of the target ships.

*Even veteran observers of Alamogordo, Hiroshima, and Nagasaki stationed on ships nine miles away were scared by the staggering sight of this unexpected radioactive cloud bank, later called a base surge. "Why doesn't the captain take this ship out of here?" shouted one, while others were terrified that the base surge, which billowed outward at more than 60 miles an hour, would spread to their ships. From *Operation Crossroads: The Atomic Tests at Bikini Atoll* by Jonathan M. Weisgall*

At 8:35 on the morning of July 25, 1946, Navy deep-sea diver Charles McKay '51 and his USS Coucal shipmates looked in silent awe across the Pacific as the world's fifth atomic bomb, code named Baker, detonated in a Bikini Island lagoon just miles away.

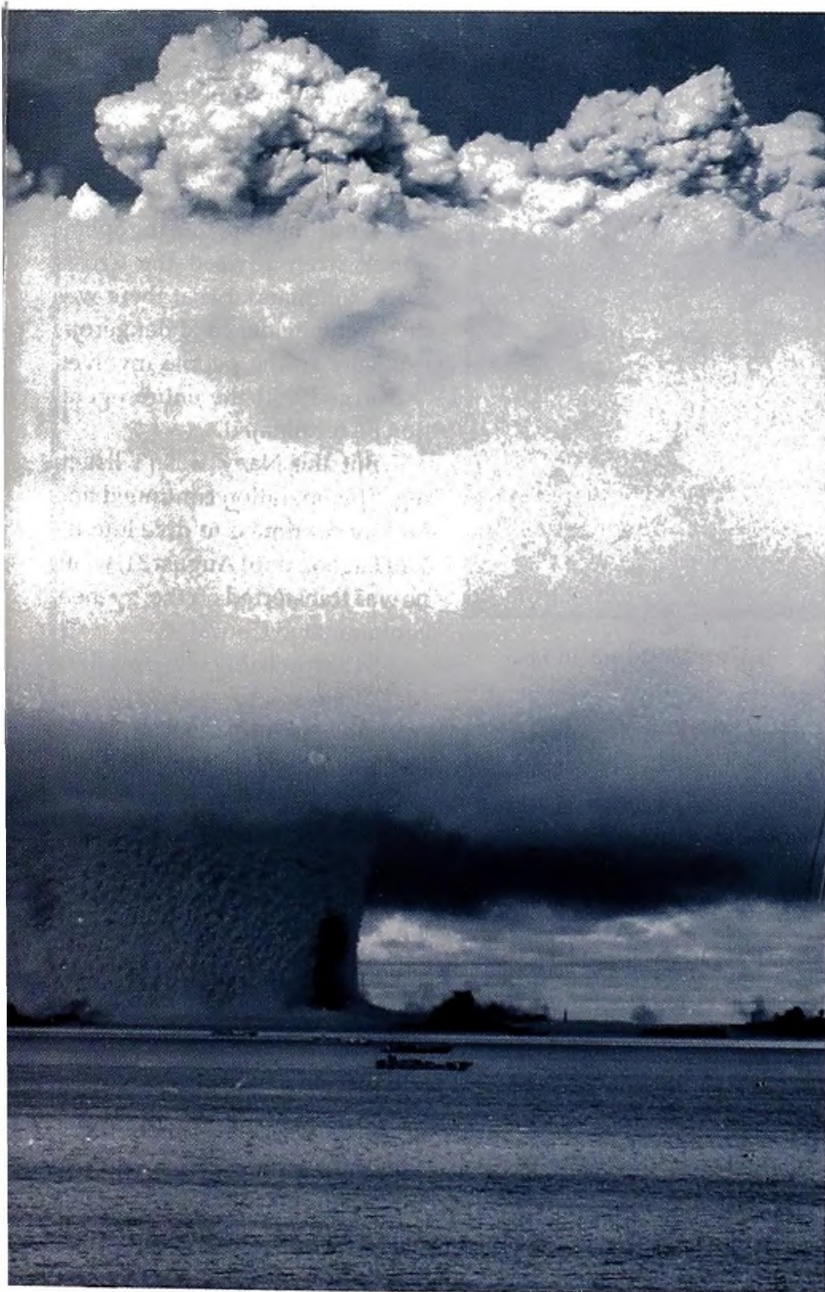
"We watched the entire underwater explosion from the ship," McKay remembers. "We didn't have to shield our eyes. There was a tremendous surge of water into the sky. It was awesome—the most awesome thing I ever witnessed. It made a lasting impression on all of us."

Sadly, it made more than just a mental impression on a large portion of the 42,000 men involved with that atomic weapons' experiment named Op-



BY JIM FRICK

NAVY



eration Crossroads Many have subsequently suffered from serious, often terminal, health problems.

Baker was not the first atomic bomb that McKay had witnessed. Earlier that summer (July 1) the world's fourth atomic bomb, code named Able, was exploded in the air above the waters off Bikini. McKay remembers the sight of that huge mushroom cloud from 22 miles away as though it happened yesterday.

Amazingly, within four hours of detonation McKay and his shipmates were back in the lagoon where the explosion took place. He remembers the eerie feeling of cruising past the sacrificial ships that still remained afloat and seeing the animals that had been left on board for experimental purposes. Some survived and were walking around, but many more lay dead on the decks.

Then, just three days after the Able blast, McKay and other Navy divers began diving into Bikini Lagoon to retrieve test equipment from the sunken ships.

"Our job was to go down and dive on these sunken ships," McKay said. "There were test instruments fastened on them to record the intensity of the explosion and the amount of radiation. We were to recover those instruments."

When McKay was making his dives he took an ionizing chamber which was fastened to the back of his diving suit. The device immediately recorded the amount of radiation he was absorbing on the sunken contaminated ships.

"I remember diving on one sunken Japanese cruiser that was highly radioactive," McKay remembers. "I was instructed to press my back against it with the ionizing recorder to determine the level of radiation. When I did, I heard someone on my headset say, 'God Mac, that's hotter than hell, get away from there.'"

When Operation Crossroads began Charles McKay was 20 years old and a veteran of the final years of World War II. He had joined the Navy immediately following his graduation from Bar Harbor High School in 1944, and was trained as a deep-sea diver before joining the Pacific fleet for the final drive to victory over Japan.

In fact McKay was headed for the waters off Japan when the U.S. dropped the first atomic bomb on Hiroshima. Like most people at the time he was

aware of the terrible destruction the bomb caused immediately after impact. But he and his fellow sailors had little knowledge of the long-term effects of radiation.

"I had heard of gamma radiation," McKay says. "I mean I had heard the term used. But I couldn't associate that term with anything. The truth is we didn't know the real danger involved."

That danger for McKay escalated greatly after the dropping of the second Baker bomb underwater in the Bikini Lagoon.

The concern about an underwater atomic explosion was that the mushroom cloud filled with radioactive material would not reach the upper atmosphere, where it could disperse around the globe.

Unfortunately for the men involved in Operation Crossroads, that concern was realized. The enormous radioactive column of water from the Baker bomb came crashing down into the lagoon and onto the ships around the target area.

Such an outcome was predicted by many experts. "An underwater test against naval vessels would contain so many hazards that it should be ruled out..." scientists from Los Alamos National Laboratory had warned in 1945. "The water near the surface explosion will be a witch's brew."

In spite of the warnings, the Navy was unprepared for such a radioactive disaster and had no plans for any organized decontamination effort. Within an hour of the explosion participants in Operation Crossroads were ordered into Bikini Lagoon.

By 2 p.m. McKay and the Coucal were anchored in the lagoon. And just a few days later, he and other divers were working in the very water where the atomic bomb detonated and where the wall of radioactivity fell. And as McKay stresses, even when they weren't diving on the sunken ships, which by all accounts were laden with radiation, the divers were tending to each other on deck—counting sections of air hose as they went overboard.

"We had to pull all that hose back up," McKay remembers. "And that hose we were handling every day had gone through all that highly contaminated water."

Just how contaminated was the lagoon? In his recent book *Operation Crossroads*, author Jonathan Weisgall writes:

"Scientists knew from studies of radium dial workers that only a few millionths of a gram of radium lodged within human bones could prove fatal. Plutonium, the main component of the Baker

told the Advisory Committee on Human Radiation Experiments.

According to McKay, ignorance and machismo served to make a bad situation worse. He saw many officers express disdain for the invisible hazard. For weeks after the Baker bomb, men were routinely exposed to the highly radioactive target ships and lagoon water.

The Navy also continued to ignore warnings. One came from Col. Stafford L. Warren, the man in charge of radiological safety for the operation. He cautioned that ships not utilize any equipment that used a saltwater cooling system. Yet as Weisgall notes, just a day after Baker, support ships were authorized to operate their evaporators, which distilled water for drinking.

Eventually, every support vessel in the operation became contaminated.

And nine days into the operation Warren advised the Crossroads commander that there was increasing evidence of dangerous exposure to the people involved and urged that the entire operation be terminated.

But the Navy wasn't listening. The operation continued and McKay continued to dive into Bikini Lagoon until August 31, when he was transferred off the, by then, contaminated Coucal.

"That probably saved my life," McKay says.

When he was discharged from the Navy, McKay was a healthy and still very young man. He gave little thought to his exposure to radioactivity on Bikini. Returning to Bar Harbor, he started a diving business, worked part-time for the police department, and took courses at the high school to prepare himself for enrolling in an engineering program at the University of Maine.

When he finished that degree in 1951, he was immediately offered a job with Dupont. He began a very successful career with regular promotions and patented inventions that helped him pay for his kids' college.

In fact, everything was going extremely well for McKay until 1978, when

Continued on page 34



Charles McKay before a dive off California in 1945.

bomb, has the same effect, and is even more toxic. The Baker test, though, did not involve millionths of grams of radium. It created the equivalent of 5,000 tons of radium, which is one billion times the radioactivity from just one gram of radium."

In congressional testimony last year on this issue, Weisgall noted that many men in Operation Crossroads received radiation doses in excess of the daily tolerance dose of 0.1 roentgen. He further noted that this 1946 tolerance dose has now been lowered by a factor of 365.

"This means that the sailors who were exposed to 50 times the maximum daily tolerance dose in 1946 would be overexposed by an order of magnitude of 18,000 by today's standards," Weisgall

MEMBERSHIP MATTERS

"Now when I return to Maine to attend events at the university I can take advantage of the discounts my Alumni Association membership offers."



Nancy Prisk Leathers

Class of 1972

Owner, The Systems Connection,
Winchester, Massachusetts

Nancy Prisk Leathers lives in Massachusetts, but she appreciates the fact that now when she comes back to Orono for Reunion, Homecoming, or to do research at the Fogler Library, her Alumni Association membership card can get her discounts at restaurants, motels, and the Maine Center for the Arts. We also have a growing number of participating merchants from other parts of the state and throughout New England. A complete list of Maine Members' Advantage businesses appears in every issue of *Mainely People*.

Maine Members' Advantage

Just one of the many valuable benefits of membership

McKay: Continued from page 32

he developed a nagging backache. Tests revealed that he had colon cancer.

"I didn't believe it," McKay says. "I had always been healthy and I had always been in control of my life. I told the doctor he had made a mistake and we did the tests all over again. But the results were the same and I scheduled surgery."

While he was recovering in the hospital he read an article about a fellow diver who had just died of cancer. This was the first time McKay gave any thought to the possibility that there might be a connection between his service in Operation Crossroads and his disease.

Five years later when he had fully recovered, he became active in the National Association of Atomic Veterans.

McKay has never tried to file a claim with the Veterans Administration for his colon cancer, but he nonetheless believes it was caused by his exposure to radiation at Bikini. One statistic that McKay points to as being supportive of his belief is the average interval between radioactive exposure and death from cancer is between 32 and 37 years. The average interval for colon cancer is approximately 33 years. When McKay was exposed to radiation on Bikini he was 20 years old. When he developed colon cancer he was 53—an interval of 33 years.

But as McKay and thousands of others have learned, making an absolute medical connection between exposure and a resulting cancer is extremely difficult if not impossible. At Operation Crossroads, concentrations of radioactivity were so erratic that determining levels of exposure was impossible.

"It is equally impossible to determine who has ingested or inhaled radioactive materials or received high doses from open cuts or wounds," Weisgall said.

The Defense Department says McKay received only six-tenths of a rem of radiation—less than the current occupational limit

McKay isn't sure how they arrived at that number, but he doesn't believe it. And he is diligently trying to find new information on radiation levels during the operation. One recent contact with a Los Alamos researcher has indicated that there may have been a series of teletypes and cables sent from Operation Crossroads to Los Alamos with information on radiation doses of the divers. Whether those records still exist, however, is another question.

But McKay is concerned with more than just his own medical history. He now volunteers up to half his time going to Washington talking to people in Congress on behalf of the widows and chil-



Charles McKay with Congressman Joseph P. Kennedy II.

dren of atomic veterans who died of radiation-related cancer.

It's not an easy task. The membership of the National Association of Atomic Veterans is only 5,000. Those are numbers that don't carry a lot of weight with politicians.

"Looking at it coldheartedly, if you don't have a strong constituent base you are just one of many, many groups trying to be heard," McKay says. The NAAV is helped by other powerful veterans groups. But that support is tempered by the fact that the World War II veteran population is aging. Vietnam and Persian Gulf vets now make up a huge part

of the veteran population and Agent Orange and the Persian Gulf War Syndrome have become the major focus.

McKay believes more attention should be paid to atomic vets. He points to studies showing that cancer-caused deaths for atomic vets is running over 75 percent—three times the average in the general population.

It would be one thing, McKay says, if these veterans had been exposed during war time in an effort to defeat an enemy. But America's atomic vets were put in harm's way during a time of peace—many think deliberately.

"When you enter the military you do give up certain rights," McKay says.

"But there still has to be culpability. I and many others were placed in harm's way deliberately. There is a lot of evidence indicating that they knew the danger. It's bad enough to be put in harm's way deliberately. It's even more of an injustice when that happens and then the government refuses to take care of you."

McKay's concern extends beyond military men to the indigenous people of Bikini. After the Baker bomb there were 23 additional tests on the island through 1958.

"We can't forget those people," he says. "I've heard testimony from a woman who was exposed to the first thermonuclear bomb. Her children were born so deformed that they weren't recognizable as being human. There is growing evi-

dence that we knew these people would be exposed, but they weren't cleared out."

In spite of all that has come to light about America's nuclear testing program, Charles McKay is not a bitter man. When he talks on the subject, he speaks softly with concern and factual knowledge. He has committed his life to a positive tract helping fellow atomic vets and their families get the benefits they deserve.

But in quieter, solitary moments he also searches for answers which might help him understand.

"For my own peace of mind, I have been trying to zero in on just how all this could have happened," he says.

MEMBERSHIP MATTERS

"I look forward to getting Mainely People so I can get the latest news about the university and also find out what my classmates are up to."



Herbert (Spike) Leonard
Class of 1939
University of Maine Professor Emeritus

Our 60 plus class secretaries do a great job of getting the latest news from their classmates. But *Mainely People* has lots more than class notes. We have in-depth feature articles, university news, alumni events calendar, and all the upcoming schedules for Black Bear sports, the Maine Center for the Arts, lectures, and campus music events.

Mainely People
Just one of the many valuable benefits of membership

King's Court

Six UMaine graduates are appointed by the new governor to key posts.

Among the new high-level appointees made by Maine's Governor Angus King are a good number of University of Maine graduates. King said his Cabinet posts and top executive agency heads are distinguished by their technical competence and reflect the diverse nature of the people of Maine. The following are some of the UMaine alums instrumental in governing the State of Maine.

General Earl Adams '57

General Earl Adams '57 is now adjutant general of the Maine National Guard. He started his military career when he received his commission in the United States Army through the University of Maine ROTC program. He served on active duty for a two year tour as an Infantry Officer and returned to Presque Isle where he taught history and English for six years.

General Adams joined the Maine Army National Guard in April 1962 as a First Lieutenant and became branch qualified as Artillery Officer assigned to the 1st Battalion, 152nd Field Artillery Commander in August 1970. General Adams became the first Chief of Staff, Headquarters, Maine Army National Guard in November 1976 and served in that capacity until October 1988. He received a special assignment at Headquarters, Maine Army National Guard



General Earl Adams '57

in October 1988 and served in that capacity until he retired from the Maine Army National Guard in February 1989.

Edward J. McLaughlin '78

Edward J. McLaughlin '78 was chosen as commissioner of agriculture, food, and rural resources. Previously, McLaughlin served as the executive director of the Maine Blueberry Commission (1987 to 1995). Appointed the first president of the Agricultural Council of Maine (AGCOM), he was instrumental in drafting bylaws and chairing the research and development and food safety committees of the Wild Blueberry Association of North America (WBANA).

While at the University of Maine, McLaughlin specialized in marketing, botany, and plant pathology. He also served in the United States Marine Corps. He was honorably discharged in 1971.

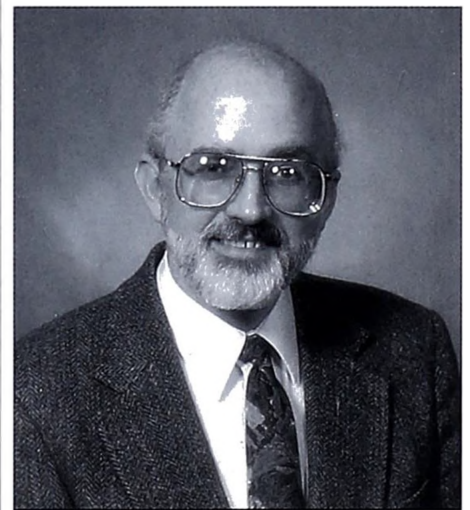
John Melrose '73, '75G

John Melrose '73, '75G was named commissioner of the Maine Department of Transportation. Seeing the quality of Maine's transportation system as directly affecting the state's economic well-being,

Melrose favors a balanced approach in which all sections of the state are treated equally in regards to road improvements.

Fellow UMaine alum Maria Fuentes '85G, executive director of the Better Transportation Association, is pleased with Melrose's appointment. "He really understands some of the big challenges at the Department of Transportation," Fuentes says. "He knows the process and is well respected by the Legislature."

Prior to becoming commissioner, Melrose was the founder and president of Maine Tomorrow, a private consulting firm located in Hallowell, Maine. With over 20 years experience in community economic development, land use planning, public administration, and public policy analysis, he led Maine Tomorrow's efforts in the area of land



Edward McLaughlin '78

use and transportation planning policy research and public participation. He has also conducted transportation-related projects for several state agencies as well as state and regional nonprofit organizations. His transportation work has focused on marine, rail, bus and highway systems.

During his consulting career, Melrose worked for the Maine Better Transportation Association, the Natural



John Melrose '73, '75G

Resources Council of Maine, Maineport Council, the Maine Turnpike Authority, the Legislative Task Force on Railroads and the Maine Transportation Capital Improvement Commission. He was the principal author of *Transportation of the Year 2002—A Capital Improvement Plan for Maine*. Prior to forming Maine Tomorrow, he worked seven years with the Maine Municipal Association and two years with Mallar Associates.

John Williams '78, '80G

John Williams '78, '80G is the director of the Maine Waste Management Agency. Previously, he headed the New York State Low-Level Radioactive Waste Siting Commission, where he was responsible for designing and siting an in-state low-level radioactive waste facility. Prior to his work in New York, he was the executive director of the Maine Low-Level Radioactive Waste Authority. In this capacity, he guided Maine's program to manage low-level radioactive waste.

With a BS in zoology and a MS in geology, Williams brings knowledge and experience to the King administration.

Robin Alden '79

Robin Alden '79 is the new commissioner of the Department of Marine Resources. She was the former publisher and executive editor of *Commercial Fisheries News*, a monthly newspaper (that she founded) with a circulation of 8,000; *Fisheries Product News*, a national tabloid with a circulation of 25,000; and *Fish Farming News*, a business newspaper for the aquaculture industry. She also established the Maine Fishermen's Forum, an annual convention that focuses on major issues associated with the fishing industry. Alden started in fisheries journalism in 1972.

Supporters of the new commissioner say she has a comprehensive knowledge of all aspects of the fishing industry and marine science. She has also been praised for her editorial positions favoring increased input from fishermen in the de-



John Williams '78, '80G

velopment of fishing regulations and her reputation as one who builds bridges between competing groups.

In her new position, Alden hopes to be "a consensus-builder, to find in



Robin Alden '79

the diversity of opinion the underlying principles, to keep everyone at the table."

Wayne Mowatt '78G

Wayne Mowatt '78G was chosen as King's education commissioner. He says that without knowing it, he has prepared for 25 years to be state commissioner of education. While serving as a teacher, athletic director, principal, college instructor and most recently superintendent of SAD 24 in Van Buren, Mowatt has developed cutting-edge ideas about education. He has worked in elementary and high schools and in universities in six communities in Maine. And everywhere he has been, it seems, he's made changes.

Mowatt is the founder of Eco 2000, a collaboration of six school districts that share resources in order to consolidate costs. The six systems now purchase in bulk as one unit, hold joint staff development sessions, do joint grant writing, and are working on their own telecommunications system for instruction and central office duties. As commissioner, Mowatt told the *Bangor Daily News* that he, "Wants to ensure that every child in the state of Maine will have an equal education."

Mowatt truly believes that all children can and will learn, given the right atmosphere and environment.

ALUMNI NEWSMAKERS

Sandra Hazelton '93 is first woman platoon leader of the Old Guard

Last November, 2nd Lt. Sandra Hazelton '93 became the first woman platoon leader in the history of the U.S. Army's elite Old Guard. The new platoon is part of the 289th Military Police Company which will now be assigned to the 3rd U.S. Infantry known as the Old Guard.

The Old Guard assists in military funerals and national observances and also guards the Tomb of the Unknowns at Arlington National Cemetery.

Hazelton leads a platoon of 50 soldiers, half of them women. Part of the motivation to form the new MP platoon was to give women opportunity to serve in "Washington ceremonial units." Women have served in the Old Guard before, but Hazelton is the first female platoon leader in the unit's history.

The addition of the MP platoon "offers women the chance to represent the Army to the world," according to 3rd Army commander Col Stephen A. Nash.

Hazelton's assignment was the result of an extensive search and screening process by the Army. The honor of being chosen for the elite assignment did not surprise Hazelton's former ROTC commander Lt. Col. Jeffrey Wright '74.

"Sandra is an outstanding soldier and an outstanding person," Wright said. "The Army could not have made a better choice for this important 'first' for women. She is intelligent, responsible, selfless, team-oriented, tough, and committed."

He added that Hazelton was a superb student at UMaine. In addition to her commitment to ROTC and her studies, she worked 25 hours per week to help pay for her UMaine education.

Wright says that Hazelton's impressive assignment with the Old Guard has placed her on the path for a bright military career.



2nd Lt. Sandra Hazelton '93 leads the Army's Old Guard Military Police Platoon.

James Mullen '72, '75G now president of Webber Energy Fuels

Earlier this spring, James D. Mullen '72, '75G was named president of Webber Energy Fuels in Bangor. The former head of Key Bank of Maine, Mullen joined Webber in 1991 and most recently served as executive vice president. Prior to joining Webber, Mullen spent 18 years in the banking industry, including time as president of Key Bank.

Mullen is a Bangor native and holds a bachelor's degree and a master's degree in business administration from the University of Maine. He is currently chairman of the Maine Alliance, a direc-

tor of Acadia Hospital, and a director and former chair of the board of the University of Maine General Alumni Association. He is also involved with the Greater Bangor Chamber of Commerce, the Bangor YMCA, and the Action Committee of 50.

Larry Mahaney '51, chairman and CEO of Webber Energy, had been president of the company until Mullen's appointment. Mahaney has been with Webber for 33 years. The company is headquartered in Bangor and has been in the petroleum distribution business since it was founded in 1935.

Webber serves commercial, wholesale, and retail customers in three states and is also involved in real estate, insurance, energy equipment, and heavy-duty truck repair.

MEMBERSHIP MATTERS

"The Career Center is a valuable benefit of membership. It keeps your morale up, and keeps you going when you feel there is no hope. Knowing there is a place at UMaine where you can get up-to-date career information is a great feeling. It's a lifeline."

Mary Freeman

Bachelor's: 1969

Master's: 1976

Doctorate/literacy ed. 1994

Reading recovery teacher
in Augusta.



Mary Freeman knows a lot about motivation and hope. She has raised nine children, six of whom she schooled at home. After being a homemaker for 16 years, her children started leaving the house and she experienced "dislocated homemaker syndrome." She needed some career counseling and job-seeking advice.

That's when the UMaine Career Center came to the rescue, giving her job counseling and advice on resume construction. And as a member she was able to get those career services at a 50 percent discount.

Alumni Career Services

Just one of the many valuable benefits of membership.

Beanhead Doug Hall '81 Wants to: "Jump Start Your Brain"

America's free-wheeling corporate creativity guru has fostered a lot of innovative thinking in some of the country's foremost businesses, universities, and even Congress. In his new book, he offers his often funny, and always provocative, techniques to everyone. Oh, by the way, Hall claims that he and his co-author drank nearly 5,000 cups of his own "Brain Brew" while writing this book.



If you're ready to escape conformity and realize your dream, Doug Hall's new book *Jump Start Your Brain* is just what you're looking for. It's jam-packed with fun and inspiring ways to enhance your day-to-day thinking and stimulate your brain to find creative answers to real-life problems.

Based on Hall's Eureka! Stimulus

Response Theory of Creativity, *Jump Start Your Brain* is a blueprint for conquering fears, cultivating gumption, and taking control.

Eureka! Stimulus Response is Hall's answer to the typical type of "brain-draining" that goes on whenever anyone is asked to be the least bit creative.

"Humans sit in a room. One of them says, 'Ready, set, create!' With that, they desperately try to suck solutions from their heads. They squint, grind their teeth, and sweat profusely, all in hopes of squeezing a few angry pellets of ideas from their straining craniums," Hall explains. "In short, they use their minds as



mere reference libraries. This SUCK method of creativity will shrivel your brain like a prune in the desert sun. It's not good for you."

Instead, Hall advocates the Eureka! Stimulus Response process of thinking creatively. Using this method, Hall likens your brain to a processing computer, instead of a reference library.

"Instead of withdrawing ideas from a finite collection of thoughts, your brain reacts off stimuli to create new associations, new Eureka!'s," Hall says.

A former Procter & Gamble marketing whiz, Hall sees his book as a manual for living your dreams.



While at Procter & Gamble, this UMaine alum put together an amazing string of successful ideas and creations. One of his most successful ideas was a coffee campaign called "Jump start Your Brain with Folgers." Other companies Hall has worked with include Walt Disney, Pepsi Cola, and Nike, to name a few.

Even if you don't know Doug Hall, you probably know his work. Surveys show that the average American home contains 18 brand-name products that Hall and his team of inventors helped to create or recreate.

Hall's colleagues—he calls them his

"Trained Brains"—are an integral part of his book. As you might expect he refers to them by unconventional names.

"There's my posse; my band of merry men and merry women, my wing and my prayer; my partners in crime against corporate convention," he writes. "They're hopeless romantics, incurable daydreamers, optimists, and willing adventurers blessed with sweet, gentle souls. They go eagerly where no imagination has gone before."

Recently, Hall brought his "Trained Brains" to Washington at the request of Congress to help try to balance the budget. Among the ideas that his team came

up was a "national garage sale" to sell government surplus and goods seized by the IRS and the Drug Enforcement Agency in a Home Shopping Network-type show. The other big idea was "holding all government spending at current levels for three years in a 'deep-freeze.'"

Those two ideas won approval ratings of over 80 percent in a weekend poll of the public.

In his own contribution to budget balancing, Hall did all his congressional consulting work for free.

Hall, a self-proclaimed practicing inventor; entrepreneur; magician; juggler; publisher; writer; market researcher; chemical engineer; advertising creative; Eagle Scout; marketing executive; husband; and daddy, is the founder of Richard Saunders International, a company aimed at helping clients jump-start their businesses.

"Jump-starting," says Hall, "is a matter of helping clients find a vision for making more profits, which in turn is a matter of building within the corporation the positive entrepreneurial energy it takes to succeed—as in 'be the best.'"

Hall likes to bring his clients to his Eureka! Mansion in Cincinnati where they work in a studio full of games and toys.

"The more you get into a childlike mind, the more likely you are to come up with big ideas," he says.

Hall is one of the great prophets of having fun at what you do. "Without fun there's no enthusiasm. Without enthusiasm, there's no energy. Without energy, there are only shades of gray," he writes.

Hall seems to have an unlimited amount of energy, enthusiasm, and fun. But make no mistake about it, although this book is entertaining and fun to read, the lessons put forth here are taken quite seriously by corporate executives around the country.

Let's put it this way: Doug Hall and the many CEOs whose profits he has boosted are laughing all the way to the bank. He wrote this book to give the rest of us the inspiration to join them.

ALUMNI BOOKSHELF

The Travels of Frank Forrester

Carl Osgood '38, '43G
Vista House Publishing
1993



Carl C. Osgood's *The Travels of Frank Forrester* is historical fiction, but the author's admission of combining fact with fiction downplays the strength of a narrative that, at times, rivals

Kenneth Roberts, perhaps the master of that genre.

Osgood, of Surry, Maine, has a real gem here, and readers will welcome the opportunity to trek across the world with this great adventurer.

Cleverly, the author sets the stage for this book through the eyes and ears of the main character's granddaughter, Mary Jordan, and beginning with a hand-drawn Forrester family tree, readers will be caught up and bound breathlessly to every mast of every ship that the old man ever sailed.

And although the author champions the self-imposed lifestyle of this true adventurer, he scolds him, too, for deserting a young family to pursue such seemingly selfish needs. But Forrester seems to shrug off even that criticism like a blast of seawater from the starboard side, and continues on his five-year journey, only to return to a family depleted in numbers by disease and death.

Besides spinning such a nifty yarn, Osgood gives us a good history lesson of our own region. But Frank Forrester is the real story here.

From Falmouth to the North Pacific for fur trading expeditions, Forrester's account reads like a Jack London short story. And just when readers think the author's imagination has outdone itself, he provides yet another story within a story through Boris Kernov's "Siberian Journal," and the crew's Vladivostok adventures.

Osgood's self-published *The Travels of Frank Forrester* deserves praise and attention from those who enjoy a good book and who may want to look at a surprising new local literary talent.

A native of Ellsworth, Maine, Osgood is a retired consulting engineer.

This book is available from Vista House Publishers, P.O. Box 169, Surry, Maine 04684 (207-667-9508)

(Review by Ron Brown, *Bangor Daily News*)

From the Old Country: An Oral History of European Migration to America

Bruce M. Stave & John F. Sutherland '64, '65G
Twayne Publishers
1994



For nearly a century, the symbol of the American "melting pot"—namely that all cultures are transformed into a single American identity—has enjoyed considerable popularity. Bruce M. Stave and John F. Sutherland offer the reader an opportunity to explore and question this and other concepts in *From the Old Country*, an oral history comprising the voices of the early European immigrants—the Irish, Scandinavians, Italians, Jews, Poles, Slavs, and others—who came to America by the millions between the late nineteenth to early twentieth century.

The authors, both practicing oral historians, have compiled their interviews and others conducted by the Works Progress Administration (WPA) in the 1930s. The resulting blend is a new and enlightening, sometimes disturbing, perspective on the forefathers and foremothers who gave so much to the country that they have adopted as their own. Their interviews, combined with those of the WPA, enable the authors to

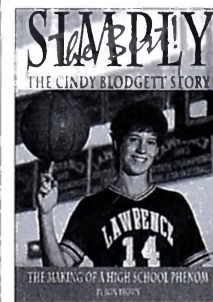
offer the reader a perspective of at least three generations of immigrant experience.

From the Old Country presents the concept that while there were, and are, many common experiences encountered by the American immigrant, there are also experiences that are not shared by all ethnic groups and individuals. Especially intriguing is the candidness with which many of the WPA interviewees express the prejudices and bigotries felt toward other ethnic groups, and at times even of the internal suspicions that served to divide rather than strengthen.

Sutherland received a Ph.D. in history from Temple University. He has been at Manchester (Connecticut) Community-Technical College since 1970, where he is a professor of history and director of the Institute of Local History. Besides this book, Sutherland has published several articles on immigration and housing reform in Philadelphia and immigration and labor history in Connecticut. He lives in Connecticut with his wife, Linda '62.

Simply The Best: The Cindy Blodgett Story

Ron Brown '73
Furbush-Roberts
1994



In this, the latest literary tribute to Cindy Blodgett, a former Lawrence (Maine) High School basketball star and current member of the University of Maine's women's basketball team, Ron Brown attempts to capture the determination and drive that propelled this young woman into state and national athletic fame.

Through the words of Blodgett's fans, teammates, and family, and a nice selection of photographs, Brown shares Cindy Blodgett's story.



UMaine Summer

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Blodgett's love of basketball began at a very early age, and Brown begins his book with information about her elementary school basketball experiences. He tells of Blodgett, the 35-pound third-grader on her school's junior high basketball team, a child so talented that she always sought out older children for an athletic challenge. Brown is never shy with his praise of this young athlete, deservedly so.

Brown wrote this book because he "felt someone had to dig deep into her (Blodgett's) psyche and find out what makes her tick. What was it about this girl that caused the uproar, before, during, and after the games?"

The most interesting sections of the book are those in which Brown develops a sense of narrative, showing Blodgett growing up and sharing her feelings. In these, the reader is not simply told what a terrific person, athlete, and scholar Blodgett is, he or she can see it for himself or herself.

The interest surrounding Cindy Blodgett remains high, and this book will provide fans with a fascinating glimpse into her life. *Simply The Best* is available at all Goldsmith's Sporting Goods stores throughout the state of Maine. All profits from the book benefit the University of Maine Foundation, the Maine Association of Basketball Coaches, and the Bangor Christian Schools Charities. (Courtesy of *Bangor Daily News*.)

ALUMNI AUTHORS

If you have written a book and would like to have it appear in the Bookshelf, send a copy of the book, a book review (if possible) and biographical information about yourself to:

Alumni Publications
P.O. Box 550
Orono, ME 04473-0550

NOTICE OF ANNUAL MEETING



The Annual Meeting of the General Alumni Association of the University of Maine, Inc. will be held on Sunday, June 4, 1995, at approximately 2 p.m. as part of the Reunion Weekend President's Luncheon in Wells Commons.

Dues paid members will elect new Board members during a very brief annual business meeting.

While it is not necessary to attend the luncheon beginning at noon, in order to participate in the Annual Meeting, members are encouraged to do so. The cost is \$18 per person.

Pre-registration through the Office of Conferences and Institutes is essential. For registration information please call 581-4093. For other questions, call the Alumni Association at (207) 581-ALUM or 1-800-934-ALUM.



Coming this fall...

...the 1995
University of Maine
Alumni Directory!

But, it won't be
complete without you.

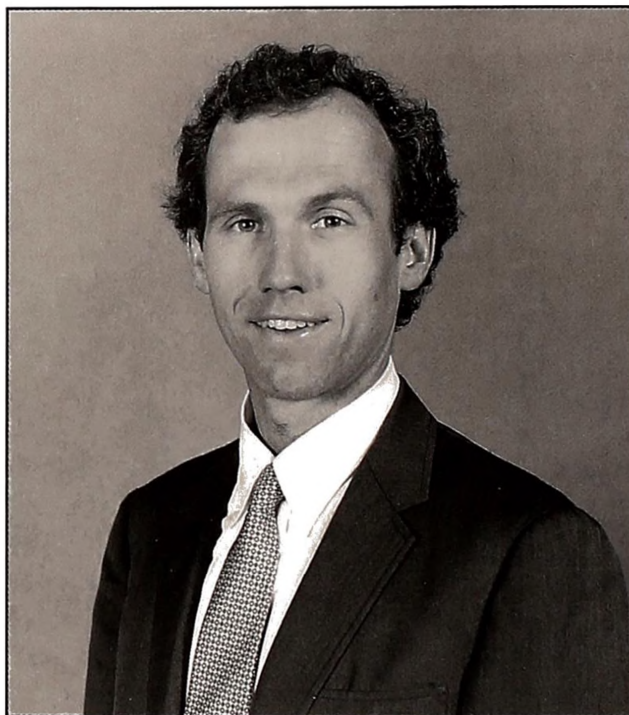
This spring, more than 63,000 of our alumni received a mailing announcing the publication of our all-new directory and, more importantly, asking for their input. We've heard from so many of you already that we're sure this will be the most up-to-date directory we've ever published. But, we haven't heard from everyone — so, please be sure to return your questionnaire today.

RESERVE YOUR COPY WHEN YOU VERIFY YOUR LISTING.

Starting in July our publisher, Harris Publishing, will begin contacting all UMaine alumni by phone, giving you the opportunity to verify the information to be included in your listing. At the same time, Harris will be taking reservations for the 1995 University of Maine Alumni Directory. Aside from the comprehensive biographical listings in the Alphabetical Section, you'll be able to find old friends and classmates by class year, geographic location and occupation. This valuable reference and keepsake will be printed only for alumni who order prior to publication — so, be sure to take advantage of this special opportunity. If you do, finding the nearest University of Maine alumnus or alumna will be as easy as turning a page!

MEMBERSHIP MATTERS

"I became a member because I believe in the Alumni Association's efforts to support the university."



Dan Warren

Class of 1979

Partner in the law firm of Jones & Warren,
Scarborough, Maine

As a graduate of UMaine and the University of Maine Law School, Dan Warren knows how important public higher education is to people of the state. And as a lawyer he knows how important it is to advocate for the university's interests. That's one of the reasons he joined the General Alumni Association. Our advocacy committee and advocacy network respond quickly to the critical issues that could affect the quality of education at UMaine. Those efforts can be very effective in Augusta and with our alumni body.

Address Correction Requested

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