

Marine Program Marketing:
The East/West Marine Biology Program

by

Thomas C. Zetkulic

Internship Report

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From September, 1984 through March, 1985, I worked as a Visiting Intern for the Division of Special Programs, College of Arts and Sciences, Northeastern University (NU). My position entailed the administration and promotion of university marine related projects. The Division of Special Programs is responsible for the development, implementation and management of unique academic programs and sponsors programs ranging from graduate business studies in Bolzano, Italy to one of the programs I was responsible for, a year long marine biological field study called the East/West Marine Biology Program.

This report is a summary of my internship experience. In six months at Northeastern University I gained practical knowledge in the areas of business management, marketing strategy, and marine education, and the experience was an important introduction to the business world.

While Visiting on the East Coast in the Spring of 1984, I was introduced to Dr. Richard Astro, Dean of the College of Arts and Sciences at Northeastern.¹ Dr. Astro's office was in the process of developing the East/West Marine Biology Program (E/W), a marine biology field study course which was to take place in Oregon, Jamaica and New England. Dr. Astro wondered whether I would be interested in fulfilling my internship at Northeastern, and needless to say, I was enthusiastic about the offer. The job would give me exposure to the business world, albeit in the academic realm. Also, I was interested in marine education (ever since my involvement with Sea Education Association).²

On September 17, 1984, I found myself sitting behind my own desk, in a private office overlooking the Boston skyline. I had just been handed a crate stuffed full of files labelled, "Marine Related". My first task as

"Visiting Intern" was to arrange a filing system for marine records. Leafing through this material gave me an introduction to the various programs and projects for which I was responsible. These included the East/West Marine Biology Program, a Sea Semester program, membership in the Massachusetts Bay Marine Consortium, an affiliation with the School For Field Studies, and promotion of activities planned for Northeastern University's Marine Science and Maritime Studies Center. It quickly became clear to me that my position required much responsibility. I do not believe my superiors originally planned to have me take on this responsibility so soon, but since a reorganization of personnel had recently occurred, and marine programs were left untended, I was a likely candidate to assume modest control.

I soon developed an idea of the "corporate culture" of the college. In graduate business courses I learned that every company has a unique culture identified with it. This culture serves to inform employees of accepted ways of behavior. For instance, the Hewlett-Packard employee works in an environment which promotes ideas. The culture at H-P shows workers that it is accepted behavior to devote time and energy to the development of new ideas. My impression of NU's culture was that it prompted staff employees to perform at some undefined but minimum acceptable output level. It also led employees to avoid behaving in a manner which would interfere with the normal operation of other university offices. This impression developed as I began dealing with other offices in the university during the course of my internship. For instance, many people were reluctant to provide me with much help on various projects.

The tendency for employees to have a low level of enthusiasm for their work is often a criticism voiced of government employment. Workers are

said to set job output at the minimum level necessary to receive the usual promotions based on seniority. While I believe this criticism applies in some cases, I also believe, or at least hope, that most government employees are competent people who enjoy their jobs and perform to their potential. As far as education is concerned, I wondered whether this tendency applied to academic institutions in general? I do not think so. Running a university is a quasi-business (administrators must meet the costs of running the school while offering education, research, and community service), and university administrators should promote innovation, reward employees by merit, and not make promotions simply based on seniority. My experience at NU, and in other jobs, has taught me the importance of upper management providing incentive to workers in order to lead employees to perform to their potential.

The NU culture, although in my view inconsistent with the above culture attribute, also often pushes university administrators to be profit minded. For example, consider the following: Northeastern is the largest cooperative education university in the world. Students enroll in a five year program in which they attend classes for three fifths of their college time and intern in a job related to their discipline for the remaining two fifths of their college education. In my experience at NU, I realized that university officials, while committed to excellence in teaching, research and community service, are forced by the system to also be highly profit oriented. New programs developed by my office required budget proposals to show at least a five percent profit margin. Otherwise, they would not even be considered for approval by the Provost's Office. Although never stated outright, the actual purpose of the Division of Special Programs was to set up educational programs which attracted attention to the university

and, therefore increased applications for enrollment to the normal five year undergraduate curriculum.

One of our office's past study programs was a Semester at Sea in which students studied and sailed aboard a schooner. The selling point of the program was obvious; many people are naturally attracted to the sea, and the hope of university officials was that potential incoming freshman would be attracted to a university which offered the prospect of studying aboard a sailing ship. It was no coincidence that a picture of the ship was situated prominently in the university catalog. The development of the program was a smart marketing strategy. This type of promotion is becoming increasingly important in other universities. Higher education institutions, faced with decreasing enrollment, are forced to extend their marketing efforts in order to maintain an acceptable level of freshman enrollment. This phenomenon has brought about a relatively new area of marketing. Oregon State University, for example, has resorted to television commercials which ask audiences to, "Discover Universality" at OSU.

Northeastern's profit making philosophy, in my opinion, takes nothing away from the excellent education available at the University. This point is supported by the fact that graduates, having the cooperative internship experience in their backgrounds, enjoy a job placement record well above the national average.

The success of a university, in a business sense, depends greatly upon its administration. The Division of Special Programs is under the auspices of the College of Arts and Sciences, headed by Dean Richard Astro. Dr. Astro's innovative approach (Dr. Astro promoted new ideas and their initiation) to the college's management increased freshman enrollment by 30% in the academic year I worked at Northeastern.

The Division of Special Programs is successful for many reasons, but I believe the most important reason is the leadership ability of Dr. Timothy Perkins. According to my observations and what I learned in business courses, Perkins exhibits the characteristics of a good leader: fluency of speech, ascendance, knowledge, emotional balance, originality, creativity, self confidence, desire to excel, drive, responsibility, interest in work, and participation in social exchange.³ But, a successful leader does not simply have certain required characteristics of the position. He must also behave in a manner so as to elicit good performance in his workers. A leader serves as a model and sets the standard of behavior. My academic experience taught me that there are basically two types of leadership behavior; initiation of structure and consideration.⁴ Initiation of structure means that actions are taken by leaders to "get the work out". Leaders make plans, formulate procedures, set standards, and communicate information to their subordinates to satisfy their own needs. Consideration oriented leaders make an honest and concerned attempt to be considerate to their subordinates.

Unfortunately, while the consideration method seems to promote the most appealing work environment, research indicates that the initiation of structure method promotes higher productivity of individuals and work groups. My impression was that a happy medium was reached between the two methods of leadership. Perkins was responsive to our needs and open communication was promoted in the office. In addition, Perkins always made it clear what he expected of us. He set deadlines and standards of productivity. His expectations included standards of quantity, time and quality. It was easy to follow directives, and the productivity level of the office reflected this fact. If a mailing deadline had to be met, for

instance, everyone in the office would sacrifice time from their specific program concerns to assist one another in meeting that deadline.

Dean Timothy Perkins, Coordinator of Special Programs and my immediate boss, contributed greatly to the college's success. His management style made for an enjoyable working atmosphere which produced the desired result of the development and implementation of sound educational programs which enhanced the university's reputation. Dean Perkins was easygoing but always communicated to his workers the standards he desired. I believe the success of the College of Arts and Sciences stemmed from the fact that it's heads, Deans Astro and Perkins, did not fit what I conceived to be the university's corporate culture. The programs developed did not adhere to the status quo, and although these programs often became the headache of other university offices, they were important in enhancing NU's reputation as a unique place to study.

East/West Marine Biology Program

My primary duty was the management and promotion of the East/West Marine Biology Program (to be referred to as E/W). E/W was in its first year with 19 students enrolled in the program. The project was designed for upperclass students of biology and related majors interested in complementing their education with a rigorous marine biological field study curriculum.

The program began in the fall on the coast of Oregon at the University of Oregon's Institute of Marine Biology. While living at the Lab, students studied basic marine botany and invertebrate and vertebrate zoology. These courses offered the students the opportunity to build a foundation for a better understanding of the comparative courses in tropical and east coast marine biology that followed.

In January, students moved to Jamaica to study tropical biology at the Hofstra University Marine Laboratory, located on the north coast of the island, near the town of Ocho Rios. The lab is within swimming distance of rich coral reefs and sandy bays interspersed with beds of turtle grass. Courses focused on the tropical environment, building on the comparative aspects of field biology by reminding students of their work in Oregon. Visits to the interior of the island and lectures on Jamaica's terrestrial biology were also incorporated into the study program.

In April, the study group travelled to Northeastern University for the final component of the program. Students lived in university housing in Boston but spent most of their time at the Marine Center. The laboratory is located on several acres of open space at the end of a rocky point extending into the Atlantic Ocean. Courses focused on the marine plants and animals of New England while emphasizing advanced and comparative aspects of marine biology. (For a complete description of the program refer to Appendix I, the brochure that I prepared for marketing purposes.)

E/W was designed for 30 students; 10 from the University of Oregon, 10 from NU, and 10 from "other" universities across the nation. U of O students paid normal "in state" tuition and NU and other students paid NU's tuition rate. The difference in tuition rates was extreme, and U of O students were getting a real bargain. For this reason, openings for U of O students were filled up quickly. NU officials would have liked the 20 remaining slots to be filled by outside students rather than NU students. In this way, NU would receive the most income from tuition fees (i.e., from 20 new students) because NU students registered on campus would be paying tuition anyway. Therefore, the marketing task was to enroll students from outside universities.

The Marketing Strategy

From readings on the subject of marketing, I realized that our promotion tactics for E/W followed those outlined in many introductory marketing textbooks. Philip Kotler, author of Marketing Management, identifies communicational marketing skills, or "promotools", consisting of advertising, personal selling, sales promotion and publicity. Kotler defines promotion as "the complex of persuasive communications designed to inform and motivate people into the desired marketing behavior".⁵ The four promotools are methods of communicating. The marketing manager's job is to develop the most effective blend of these alternative methods to sell a good or service.

Strategy for the promotion of E/W stressed the promotools of advertising, personal selling and publicity. Examples of each of these promotools are, respectively, the use of program posters at colleges across the nation, limited campus recruiting trips, and publication of the program announcement in Skin Diver Magazine. The category of sales promotion is not evident in our marketing strategy as its utility is best exemplified in product promotion. A product is defined as "a bundle of physical, and symbolic attributes designed to produce consumer want satisfaction"⁶, a tangible item. Services are intangible tasks that satisfy consumer and industrial user needs, and are efficiently developed and distributed to chosen market segments. E/W, then, is best categorized as a service.

Services have four key features with marketing implications: services are intangible, they are perishable, their standardization is difficult, and buyers are often involved in their development and distribution.⁷ As already mentioned, lack of tangible features makes many forms of sales promotion impossible. The quality of the service cannot be judged prior to

purchase. In other words, students interested in E/W would have to actually complete the program in order to know if it was worthwhile. This fact makes the start up of a program quite difficult because potential "buyers" would be unable to seek advice from alumni regarding the merits of that program (there were no graduates from the program). E/W was "perishable" in the sense that losses due to unfilled spaces in the 30 openings could never be recovered. The program was difficult to standardize. Just as two paint jobs from the same painter are not identical, no two years of the program would be identical. Since the premier year of E/W was not yet completed, potential consumers had no means of comparison. Finally, involvement of buyers is essential in the successful marketing of a service. In this sense, students play the essential role in making a successful program. E/W, again, suffered a set back at the onset because there was no one who had yet completed the program.

--The Mailings/Promotool-Advertising--

The initial marketing task was to make college students across the nation aware of the program. The Director of the Oregon component of the program, Mr. Michael Graybill, designed a poster (12" by 20") announcing the program. The poster briefly described the program and offered postage-paid response cards with which individuals could request further information. A small number of these posters were distributed to Oregon universities and the bulk (about 2500) were sent to me in Boston for distribution to colleges and universities across the nation.

Using a computer printout of the addresses of biology departments in all colleges across the nation, I sent out the posters with a letter to department chairman describing the benefits the program offered their

students and requesting they post the flyer on the department bulletin board. Mailing time of posters to universities with the purpose of soliciting students for study abroad projects was critical because material on bulletin boards or other posting areas are usually removed between academic terms. For this reason, although the posters were ready for mailing in early December, I waited until early January to contact biology chairman.

Within two weeks after mailing, response cards (about two to six per day) were returned to me in Boston. I had previously drafted a letter in response to interested students which expounded on the excellent opportunity offered by the program. The letter was on file on the office computer. The letter also contained various bookkeeping information, such as application deadlines, and an estimate of tuition cost. In general, the letter concentrated on how the student would benefit by being a part of the program.

Along with this letter was sent the program brochure (Appendix I). Much thought was given to the design and text of this brochure, for I believed it had the greatest potential as a marketing tool. The brochure was really the best and only way to contact students without directly visiting campuses, and funding limitations ruled out widespread campus recruiting measures. I hoped to make the brochure visually appealing to elicit a, "Hey, this looks like fun" response. The text would emphasize that the program was a legitimate learning experience. I relied upon photos to trigger the "wandering spirit"⁸ which makes many college students enroll in study abroad programs.

The brochure was 8 1/2" by 11" and was folded in half for mailing purposes. Its shape was ideal for two cover color photographs, an

underwater Caribbean dive shot and an Oregon Coast scene. Although I would have preferred all nine brochure photos to be in color, funds would not allow this luxury. Only the cover shots were color and it was difficult enough convincing my boss that the color photos were necessary to attract the attention of potential students. Once the photos sparked initial interest, it was up to students to read the brochure's text to realize the program's substance. It was important to stress that the academic year spent studying in the field was not all "fun in the sun".

--Skin Diver Magazine/Promotool-Publicity--

A second marketing effort to reach potential students was the contacting of the publisher of Skin Diver Magazine. Initially, I telephoned the advertising office of the magazine to inquire about advertising rates. Unfortunately, advertising fees were too expensive, even for a small listing in the magazine's classified section. Instead, I submitted a short narrative to the publisher of Skin Diver which highlighted the fact that S.C.U.B.A. was an important facet of the program. The piece was published in the January 7, 1985 issue and the response from readers was overwhelming (approximately 300 inquiries, via mail and telephone, were received) (see Appendix II). Letters requesting further information arrived at my office daily. Perhaps the best part was that the cost of the effort was simply my time in preparing the narrative.

--The Campus Visit/Promotool-Personal Selling--

Promotion funds were allocated for me to visit selected campuses nationwide in an effort to generate student interest. My first road trip was conducted in the New York/New Jersey/Pennsylvania area since I had already scheduled travel to Long Island and Hofstra University to negotiate the terms of renting the Jamaica lab facility. Prior to travel, I phoned a

number of universities in the area to set up appointments with faculty in the biology departments. Marketing efforts were directed toward private colleges with relatively high-priced tuitions because it was assumed students enrolled at this type of school would be better able to afford the cost of our program. My schedule only allowed me one and a half days to visit campuses and I succeeded in making arrangements to visit Princeton University, the University of Pennsylvania, Temple University and Swarthmore College. I was particularly happy to meet with a Princeton representative as that college requires students to conduct an independent research project in their junior year. E/W seemed an appropriate means to satisfy this need.

I also conducted a Midwest recruiting trip. An unusually high number of those who enlist in the United States Navy are raised in the central states, and most have never had personal contact with the sea. Herman Melville, in Moby Dick, elaborately describes this innate drive for humans to be close to the sea:

There now is your insular city of the Manhattoes...Look at the crowds of water-gazers there. Posted like silent sentinels all around the town, stand thousands upon thousands of mortal men fixed in ocean reveries. But all these are landsmen. (And) nothing will content them but the extremest limit of the land. They must get just as nigh the water as they possibly can without falling in. Inlanders all, they come from lanes and alleys, streets and avenues--north, east, south, and west. Yet here they all unite.⁹

Melville describes the rush of New Yorkers at lunch hour to the shores of the Hudson River. I think this innate desire to be close the the sea is within all of us. This tendency may account for why so many Midwesterners elect to serve in the Navy. Therefore, I believed it would be a good idea to make a recruiting trip to the Midwest to give students the opportunity to study the oceans. A small private college in Kansas, Southwestern

College, had three students enrolled in the first year's program due to the fact that their professor had taught at U of O's Charleston Lab. Dean Perkins agreed that a courtesy visit to Southwestern was in order, so I set up an appointment at that college and other schools in the area. This was not an easy task. I quickly discovered that there was very little in the area of Southwestern College, least of all institutions of higher learning. But, with five days to travel, I finally arranged visits to the University of Missouri-Kansas City, the University of Kansas, Kansas State University, Wichita State University, Southwestern College, Oklahoma State University, and Tulsa State University. The road trip took me through hundreds of miles of endless prairie as I travelled between campuses. I could not help but sense the irony of a future marine resource manager selling his wares so far from from the ocean.

The agenda of the campus visits was as follows: I met with one faculty member, usually the one responsible for student advising, from each university. After introducing myself and the usual pleasantries I briefly described the program and the benefits it offered his or her students. Promotion materials consisted of an "unfinished" program flyer and the announcement poster. I was sent on the recruiting mission before the new brochure was completed and my materials were scant indeed. Therefore, I relied heavily upon simply talking about the program. At first, I was uncomfortable in this situation. I felt like a vacuum cleaner salesman without a vacuum cleaner and was a bit annoyed with my boss for sending me on a recruiting trip without what I considered to be the proper promotion tools. After the first few meetings I felt more at ease. The visits went well. They averaged thirty to forty minutes long. Faculty wished to be convinced that E/W was in fact a legitimate learning experience. I believe

I was successful in illustrating this point.

One might note that an obvious shortcoming of the recruiting trip was the fact that no effort was made to contact students directly. My first trip to private universities in the east was unfortunately arranged on the spur on the moment and time did not allow me to set up a formal meeting with students. It was difficult enough to gain appointments with faculty. For the midwest trip, I was instructed to meet with faculty and again, time would not allow me to set up meetings with students. Our efforts centered on the hope that those faculty contacted would pass on information about E/W to interested students.

To overcome these problems, I recommended the following scheme for future recruiting trips: 1) a slide presentation depicting the three components of the program should be put together for marketing purposes. 2) selected universities and biology faculty, or study abroad representatives, should be contacted well in advance of the intended campus visit, and 3) an on campus representative should be contracted to post flyers announcing a "seminar" on a study abroad program for biology and related field majors. The slide show would be presented to interested students and efficiency would be maximized. This method of marketing would, in my opinion, reach the greatest number of students and would guarantee that information would reach those students most likely to enroll in the program. This proven form of recruitment is quite effective and used by many groups, including Sea Education Association, a private concern offering a Semester at Sea. An important point is that groups using this approach often rely heavily upon alumni assistance (in posting flyers, presenting seminars, etc.). E/W was in the infant stages of development and alumni did not exist. Nevertheless, it was evident to me that more

planning was needed to more effectively promote our program.

On my visits to campuses in the Northeast, I was initially impressed with faculty enthusiasm about E/W. But, at the close of my meetings, I had the feeling that my complimentary marketing materials would soon be filed in the circular filing cabinet. Realistically, one could not expect much more. Faculty contacted had no vested interest in the program. Had I mentioned that Northeastern was also seeking a teacher for the Jamaica component of the program, perhaps faculty would have been more responsive.

The midwest trip was similar in effect. Faculty were outwardly responsive, and very friendly, but no applications were received from those universities contacted. Although I had more time to plan this second trip, I had no more materials to present. Another drawback of the midwest trip was the fact that state universities were contacted and the average student at state schools would have a difficult time meeting tuition fees of E/W.

The midwest recruiting trip was not a total loss, for three Southwestern College students were enrolled in the premier running of E/W and there was a good chance more students would follow their lead. Also, my duties at NU often entailed telephoning faculty at Southwestern and it was desirable to meet the people I was frequently dealing with on the telephone. I wished to show the faculty at Southwestern that a competent person was watching out for their students' interests while they studied abroad with E/W.

Program Shortcomings and Further Recommendations

In my opinion, E/W suffers from two major shortcomings which together create an obstacle to student enrollment from schools other than U of O. First, tuition, room and board, and travel costs for three academic terms

was estimated to be in excess of \$12,500. For this reason, student participation was sought from private colleges with tuition costs well above the national average. This fact alone limited our marketing success and made it quite difficult to enroll students. Secondly, the program is quite lengthy. In my experience, students interested in study abroad programs seek a maximum of one semester of study for academic and financial reasons. Often, students are looking for a diversion from normal academic studies rather than a rigorous study program. E/W is a legitimate research undertaking and although the experience also offers a diversion from the usual college coursework, most students are unwilling or unable to commit a full year of their undergraduate experience to study abroad.

Another fact that hampered enrollment is that the only coursework offered was in biology. Bachelors degree programs allow a limited amount of credit transfer and require a good number of other liberal arts courses. E/W did not offer coursework in other disciplines and I recommended it do so. Coursework in maritime history, literature, anthropology, etc., would supplement the learning experience and benefit the students in satisfying liberal arts electives.

As mentioned earlier, NU's intent in running special academic programs was to draw attention to the university as a whole and increase freshmen enrollment. A shorter, less expensive but equally attractive marine biology program could be substituted for E/W. For example, both the U of O and NU run successful summer programs which take advantage of their respective marine laboratories.

I recommended NU discontinue the joint E/W program. In my opinion, NU's opportunity cost in running E/W was much more than that of the U of O. Also, many difficulties arise when a state university and private college

engage in a joint concern. Management difficulties arise simply because of the fact that the schools are located so far apart. My recommendation to NU was the substitution of a Caribbean based marine biology study project, held during winter quarter. A program of this nature would attract students interested in studying in an exotic place and the reduced number of credits received would more easily transfer back to a student's home institution.

NU officials did not take heed of my recommendation. Even if they had wanted to, I had spent six months recruiting students for the second year of E/W, and a number of students were expected to enroll in the program as outlined in the program brochure.

The present program (1985-86) has the same number of students participating (nineteen) as the first program. Therefore, my marketing efforts yielded a class size which would, on paper, break even financially (there were extra administrative costs not accounted for on the official budget). It can be assumed that marketing efforts did draw attention to the university, although no data are available to support this assumption. A survey of incoming students to NU could perhaps help determine how influential programs offered by the Division of Special Programs were regarding enrollment. Presently, E/W is managed by the Northeastern University Marine Science and Maritime Studies Center and not by the College of Arts and Sciences due to a change in command at Arts and Sciences. The new coordinator informs me that the program is running smoothly except for the usual administrative hassles, such as hiring, acquiring visas for teaching staff, deposits of tuition, registration of students, etc. I had to deal with similar problems as administrative assistant in the management of the program.

Administration/Management

Administration of E/W entailed the usual amount of "busy work", such as answering mail and telephone inquiries, ordering supplies, presenting information and update sessions on the program to NU faculty and staff, managing the budget, etc. Some duties were out of the ordinary, and it was these tasks which taught me the most and which I enjoyed most doing:

--Conducting Business Abroad--

In December of 1984 I was sent to Jamaica to help set up the Hofstra Marine Laboratory. The importance of the trip was to make sure \$125,000 worth of microscopes and other equipment arrived safely at the lab. Customs clearance in Jamaica is not easy and equipment that could be remotely connected with the drug trade is strictly monitored.

Before the microscopes were sent, it was necessary to register them with U.S. Customs in order to allow their duty free return. The seemingly simple transport of eight microscopes taught me much about import and export regulations. A simple rule of thumb is to have as much documentation as possible on hand when transporting goods to and from foreign countries.

I arrived in Jamaica safely, but unfortunately the microscopes did not arrive with me. Before embarking, I suggested to NU officials that they insure the microscopes against theft and damage, but spendthrift officials did not agree. My first three days in Jamaica were spent developing an ulcer until Air Jamaica contacted me and informed me of the arrival of my cargo. Customs clearance proved to be quite simple because customs officials assumed I was affiliated with the more famous Discovery Bay Marine Laboratory, located ten miles from Hofstra's lab.¹⁰

Once the equipment arrived, I had time to assist Dr. Eugene Kaplan in

setting up the lab. Dr. Kaplan, biology professor at Hofstra Univeristy, is a specialist in tropical marine biology, and established the lab in Jamaica in order to give Hofstra students the opportunity to study tropical biology. The lab is available to private research groups between December and July. Rental fees fund Hofstra University and support a small "family" of Jamaicans who run the dormitory and dive shop located on the lab grounds. A few days with Dr. Kaplan convinced me that if he had not chosen academics as a career he would have done well to pursue a career in business. Managing the lab was an exercise in business administration. Dr. Kaplan taught me some points about how to conduct business in Jamaica. At NU I had taken a course in "Cultural Aspects of International Business" which examined the cultural barriers between nations that must be bridged in order to perform successful business transactions between groups with different backgrounds. The chief concern in doing business abroad is to make an effort to understand your counterpart's point of view. There are simple rules, unique to every nation, to follow when doing business with foreigners. These rules are based on common sense and courtesy, and if followed, can prevent one from making mistakes in the business situation.

When conducting business in Jamaica, and I believe in any foreign nation, it is important not to take on the "Ugly American" profile. Jamaica is very dependent upon U.S. tourism. Tourists do not often make the best ambassadors. Jamaicans, in serving the needs of American tourists are, unfortunately, often exposed to people exemplifying an aloof attitude toward the islanders. This tendency makes Jamaicans wary of U.S. business enterprise on their island. It is therefore important not to act in a manner which may be construed by Jamaicans as a "snobby" attitude toward them. This is a common sense practice. One must find out the proper mode

of behavior before conducting business in a culture different than that common to the visiting businessman.

--Negotiation--

I met Dr. Kaplan in October of 1984 to negotiate the contract between NU and Hofstra University for use of the lab. I accompanied my boss, Tim Perkins. The experience taught me about the negotiating process, and gave me the chance to compare negotiation theory, which I had studied, with actual practice.

Our meeting was held over lunch in the faculty center, hardly neutral ground. I had been taught that negotiation is a cooperative enterprise where two parties each have something the other one desires. In our case, Dr. Kaplan wanted NU money for lab rental and we wanted rental of the facility. Kaplan was aware that he had a distinct advantage in the bargaining game as it was late October, and students, already studying in Oregon, needed a place to attend in January. It was either Jamaica or no where, so our goal was to agree on a fair (hopefully inexpensive) fee. Our advantage was that Kaplan wanted our business in the future. Usually, private groups would use the lab for perhaps one week a year. Our group would be staying for three months and Kaplan wanted that income. Perkins mentioned incidently that NU was considering the use of a Virgin Island lab in the future, and Kaplan assured us that his facilities were far superior to others in the Caribbean. He realized, I think, that we wanted a fair first year price if we were to consider his lab for future use. The lunch/negotiation became a give and take affair. We broke the services of the lab down into separate units, such as room and board, transportation, boat rental, S.C.U.B.A. gear rental, etc., and agreed on the price for each. We made sure an understanding was reached regarding each service,

i.e., we wanted to make sure, for instance, exactly how many S.C.U.B.A. tanks would be included and at what price. As Perkins and Kaplan "haggled", I wrote down the agreed upon exchanges and later wrote up a formal letter/contract with specific stipulations about the agreement.

The negotiation process had four major components or aspects: non task related aspects, task related aspects, persuasion, and concession and agreement.¹¹ Non task related aspects entailed small talk, touring the campus, etc. This period is where you get to know your "opponent". Task related points are the actual setting down of the intended agreements. Persuasion included the bargaining. Kaplan would propose one price and Perkins would respond with a counter offer. Finally, concessions on issues were made and a final agreement was reached.

Both parties came out ahead in the negotiation. This is the desirable result. NU achieved rental of the lab facility within our budget and Kaplan saved time and money by contracting a research group to rent the lab for a long period of time. It is good business when both parties of a negotiation win. Negotiated solutions are longer lasting when each party has gained and therefore has a stake in maintaining the arrived upon agreement.

Other Duties as Intern-Administrative

--Sea Semester--

During the year before I arrived at NU, the College of Arts and Sciences sponsored a "Semester at Sea" program in which students studied tropical marine biology and maritime history and literature aboard the sailing schooner, Harvey Gamage. The program was unsuccessful due to the lack of enrollment and ran only one three month trip. My job entailed

handling the records of the fifteen students graduated from the program. Students' grades were never properly transferred to the registrar's office at NU and much confusion resulted when students attempted to transfer credit to their colleges. For this reason, one of my duties was to take the flack from upset students via telephone conversation. I was also responsible for dealing with the registrar to rectify the credit problem.

I was amazed at the degree of difficulty which seemingly simple tasks, such as the credit problem, took on. On one occasion, I was to transfer grades for students in the E/W program to the registrar's office. All interoffice business was to be conducted by memo, but, putting trust in memos did not seem like such a good idea so I visited the registrar personally. This action was not appreciated by the overworked registrar's personnel and I was instructed to again send a memo describing the situation. I cannot count how many memos I sent "describing" this situation and that situation. An important lesson in patience was learned and I guess all managers must deal with at least some level of red tape.

--The School For Field Studies--

A month after arriving at NU I was invited to attend the Annual Meeting of the School For Field Studies (SFS), a private environmental research group offering college level courses for various field study projects. NU was the accredited university which handled the processing of credit for students. Later I attended a meeting with the director of SFS. The intention of the meeting was to set up a joint effort between NU and SFS for biological study in the Caribbean. Tim Perkins wanted me at the meeting because of my experience with Sea Education Association. The SFS director was interested in my opinion of why college students enroll in marine related study abroad programs. I told him that many students wish

to study abroad for three reasons: 1) they are drawn to marine studies through popularization by the media (the "Jaques Cousteau" syndrome), 2) they are bored with the usual courses at college and, 3) they wish to travel to exotic places. In my opinion, marketers should emphasize those aspects of a program which respond to a student's desire to visit exotic places. But, academics should never be sacrificed because programs must be recognized by colleges accepting transfer credit.

SFS had recently acquired a 65' schooner and was interested in using it for a semester long Caribbean based biology program. Enrollment had to be between 25 to 30 students in order to break even financially (SFS is a nonprofit organization and from a financial point of view was only interested in covering costs). My recommendations were as follows:

- 1) acquire the use of a Caribbean lab, such as the Virgin Island Research Station (SFS already sponsored a short two week study project at this location and was therefore familiar with its advantages and disadvantages).
- 2) count on enrollment of 25 to 30 students and break the group into three study units (a 65' yacht can accommodate no more than 15 passengers and crew, and 3) the semester should then be broken down into one unit of land based (2/3 time) marine biology, carried out at the lab site, and a unit of sea study aboard the boat (1/3 time). Study groups would share ship time.

SFS representatives liked the proposal and inquired if NU could guarantee enrollment of half the class. I recommended to Perkins that he not commit NU to the joint proposal because competition for semester at sea type programs was too keen and it would be difficult to guarantee that number of students. NU had recently suffered the demise of its own semester at sea program and Perkins agreed not to contract with SFS.

--Massachusetts Bay Marine Consortium--

The Massachusetts Bay Marine Consortium is a private, nonprofit organization comprised of a number of colleges devoted to marine and maritime concerns in the Bay area. Affiliated universities included Northeastern University, the Massachusetts Institute of Technology, Harvard University, Boston University, Tufts University, Boston College, and Boston College. The consortium facilitates the offering of marine oriented courses to students of member colleges. As Coordinator of Marine Programs, I was responsible for keeping the director of MBMC abreast of NU's marine related activities and course offerings. This entailed, among other things compiling a list of all university courses and workshops related to marine studies.

--On Campus Duties--

It was my responsibility to keep NU faculty and staff informed as to the activities and progress of E/W. I contacted faculty in many departments at NU and requested they mention E/W to their students. Also, I visited many of the larger biology classes and gave a brief description of the program in hopes of eliciting NU student interest. I also met with the NU's Admission Committee to update them on the progress of the current E/W program and applications to the upcoming year's project.

The Value of My Internship

At the present time, my career directive is to join a private marine related firm in an entry level sales, management, or consulting capacity. A management training position in sales, for instance, would offer me the opportunity to prove myself and give me the chance to advance in the company. My internship experience has given me the opportunity to observe and participate in some administrative functions and management decision-

making. It has introduced me to the workings of the office environment. Most importantly, it has enhanced my communication skills and has given me practice in dealing with potential customers or clients.

Working at NU was an enlightening experience in the sense that I was directly exposed to the conflicts that arise in the office environment, and especially in the university community overall. Before my stint at NU, I held the naive belief that academics was, or at least should be, immune to influences of politics and political maneuvering. During my employment at NU there was a power struggle for the Provost's seat in the University. A member of my office was in contention for the position. For this reason, representatives of the College of Arts and Sciences were made aware that their actions reflected upon the entire college and that these actions could possibly influence the decision as to who was appointed Provost. It was often uncomfortable working under these conditions.

One of the candidates for Provost, already holding an influential position in the University, was able to make our task of developing new programs quite difficult. Program budget approval, essential in development of a project, was often stalled or denied. It took some time accepting the level of self interest evident in the University community. Politics seemed to be rampant. I realize I will likely be exposed to this situation time and again in whatever career I pursue and hope my experience at NU will help me deal with the problem. Upon reflection, perhaps some level of political maneuvering is healthy in the growth of a company.

The internship also introduced me to marketing and sales techniques. Marketing strategy is based on common sense reasoning, such as not mailing out posters at a time when bulletin boards are likely to be cleared. My

efforts in promoting E/W showed me the importance of making efforts to understand all the angles involved in selling a good or service.

I achieved the greatest utility from my internship in the realization that I am comfortable and successful in a management/sales environment. My experience at Northeastern University has served to direct me, for the time being, toward a career in the business end of marine resource management.

Endnotes and Notes

¹ The process by which I came to work for NU was a bit unusual. I travelled to Boston to visit my fiancée, MaryGrace Maresca. While attending Boston College, MaryGrace occasionally babysat for the Astro family. Dr. Astro had taught at OSU and wished to meet me to discuss what was happening in Corvallis. The conversation during our meeting eventually turned to the MRM program and I explained to him the internship aspect of NRM and my search for an appropriate opportunity. It so happened that his office was developing E/W and he wondered whether I would be interested in a job. In business, as in many things, success is often dependent on being in the right place at the right time.

² Sea Education Association offers a semester at sea program. I completed SEA in the Spring of 1981 and I am presently a member of the Alumni Representative Board. Board members assist in the development of new SEA activities and interview prospective students.

³ Stogdill, R. M., Handbook of Leadership, Macmillan/Free Press, 1974.

⁴ Stogdill, R. M. and A. E. Coons. "Leader Behavior: Its Description and Measurement". Research Monograph No. 88, Ohio State University, 1957.

⁵ Kotler, Philip, Marketing Management, Englewood Cliffs, NJ: Prentice-Hall, Inc., 1980.

⁶ Boone, L. E. and D. Kurtz, Contemporary Marketing, The Dryden Press, NY, 1983.

⁷ Boone, 1983.

⁸ The "wandering spirit" refers to one's desire to travel. Many college students, including myself, experience this feeling and see study abroad programs as a means to satisfy their desire to wander at the same time as receiving college credit.

⁹ Melville, Herman, Moby Dick, University of California Press, Los Angeles, 1979.

¹⁰ The 1985-86 E/W Winter component utilized the Discovery Bay Marine Laboratory instead of Hofstra's Lab because one of the instructors had worked at this lab in the past.

¹¹ Even though NU officials would have preferred all available openings to be filled by "other" students, ten openings were available to Northeastern students and a modest recruiting effort was made to reach on campus students.



East/West Marine Biology Program

Northeastern University
Marine Science and Maritime
Studies Center
East Point
Nahant, Massachusetts 01908

University of Oregon
Oregon Institute of Marine
Biology
Charleston, Oregon 97420



Students of biology who wish to move beyond the confines of the traditional campus may spend an exciting year of field study in three very different locations in the United States and the West Indies. The East/West Marine Biology Program, limited to thirty advanced biology students, focuses on topics in west coast marine biology, tropical biology, and east coast marine biology. A unique opportunity for biology students to live and work in their environments of study, the East/West Marine Biology Program will appeal to those undergraduate and graduate students eager to broaden their basic and applied knowledge of marine biology.

The Program

The East/West Marine Biology Program begins in the fall on the rugged coast of Oregon, well noted for its large algae, stunning marine invertebrates, and numerous fish, birds, and marine mammals. While living at the Oregon Institute of Marine Biology, students study basic marine botany and invertebrate and vertebrate zoology. These courses offer students the opportunity to build a foundation for a better understanding of the comparative courses in tropical and east coast marine biology that follow.

In January students move to Jamaica to study tropical biology at a small marine laboratory on the north coast of the island, near the town of Ocho Rios. The lab is located on the beach within walking and swimming distances of rich coral reefs and sandy bays interspersed with beds of turtle grass. Courses focus on the tropical environment while building on the comparative aspects of field biology by reminding students of their work in Oregon. Visits to the interior of the island and lectures on its terrestrial aspects are an important part of the program.

Students who have lived and worked together in Oregon and Jamaica travel for the third and final phase of the program to Northeastern University. Students live in University housing but spend most of their time at the Marine Science and Maritime Studies Center at East Point, Nahant, just north of Boston. The laboratory is located on several acres of open space at the end of a rocky point extending into the Atlantic Ocean, with a view to the north of Marblehead and Gloucester and to the south of the Boston skyline. Courses here focus on the marine plants and animals of New England while emphasizing advanced and comparative aspects of marine biology.

Oregon/Fall

Facilities

The Oregon Institute of Marine Biology is located on the southern coast of Oregon at the entrance to the Coos Bay estuary. The institute's buildings are clustered at the edge of the bay and include four teaching laboratories, a research building, library, auditorium, faculty residences, dormitories, kitchen and dining areas, and a maintenance shop. All labs are supplied with running sea water and are well equipped with microscopes, dissecting scopes, and instrumentation for the collection of field data. Students have access to small boats for bay work and a larger boat for offshore collecting and bird and whale watching. Surrounding the buildings are 107 acres of wildlife reserve. The coastline to the north is a large sand system with exposed beaches and well-developed sand dunes. To the south are extensive cliffs and rocky intertidal habitats. The Coos Bay estuary is the largest within the state of Oregon, boasting rich and varied biota.

Accommodations

Dormitories are located within the institute complex. Men sleep in barracks, and women occupy individual or two-person rooms. In addition to serving three excellent meals a day, the kitchen and dining room create the "hearth" for students and staff alike - a meeting place for informal socializing.

Courses

Students may take up to 21 quarter hours of credit.

BI 360 Coastal Biology

A field, lecture, and seminar course introducing students to the wide range of environments on the Oregon coast. Exploration of ocean, rocky intertidal, sandy beach, and estuarine environments. Topics include the physical aspects of the nearshore ocean, vertebrates and invertebrates, beach and dune formation, and salt marsh community structure. Rudy. 4 quarter hours credit

BI 458G Biology of Sea Birds and Marine Mammals

Introduction to the systematics, evolution, morphology, and physiology of sea birds and marine mammals. Lectures review taxonomy, phylogeny, and zoogeography and stress - through a comparative approach to terrestrial vertebrates - the anatomical and physiological adjustments that have been made for locomotion, reproduction, sensory orientation, and communication in aquatic environments. Lab sessions utilize fresh specimens. Includes field and boat trips. Graybill. 4 quarter hours credit



Students research a salt marsh near the Oregon Institute of Marine Biology.

BI 461G Invertebrate Zoology

Introduction to the morphology, systematics, life history, behavior, and ecology of marine invertebrates. Includes lectures, field trips, and boat trips within the nearshore environment. Terwilliger. 5 quarter hours credit

BI 401, 501 Research

Students undertake individual research projects on some aspect of the marine environment. Staff assist students in the design and completion of their research projects. Undergraduates register for 401; graduates for 501. Pass/fail only. Credit to be arranged with staff.

BI 407, 507 Seminar: Topics in Marine Biology

Guest speakers discuss their research projects with students and staff. Lectures cover a wide range of topics and provide students with the opportunity to explore areas outside their own fields of interest. Undergraduates register for 407; graduates for 507. Pass/fail only. 2 quarter hours credit

BI 408G Laboratory Projects

Students undertake independent laboratory projects of their own choosing. Credit to be arranged with staff.

BI 478G Marine Ecology

A field and lecture course on the characteristics of marine habitats and organisms, with emphasis on primary and secondary productivity and community structure and dynamics. 4 - 8 quarter hours credit

Schedule

Fall 1985

First day of classes: September 23
Thanksgiving vacation: November 21-24
Last day of classes: December 6
Final examination week: December 9-13
During the fall quarter, address all mail care of:
Oregon Institute of Marine Biology
Charleston, Oregon 97420

Telephone: 503-888-9936 (student)
503-888-5534 (office)



A part of Oregon's coastline near the Coos Bay Estuary.

Jamaica/Winter

Facilities

The Jamaica laboratory is located on the north coast of the island in St. Ann's Bay, a few miles west of the town of Ocho Rios. The laboratory, dormitories, kitchen, and dive shop overlook palm trees, a sandy beach, and protected bay. An off-shore fringing coral reef provides superb diving opportunities. Pontoon boats are available for diving trips, and local buses provide transportation to other parts of the island. Jamaica has many fine representations of tropical terrestrial ecosystems and interesting mix of volcanic ranges and uplifted coral reefs. The island, with mountains reaching an elevation of 7,402 feet, is completely within the tropics. Air temperatures will be in the 70- to 80-degree range during the winter.

Accommodations

Beachfront apartments are located on well-kept grounds planted with palm trees and other tropical vegetation. Each apartment accommodates two students. Three hearty, family-style meals are served in the dining room each day.

Courses

Courses yield two to five quarter hours of credit and include field trips, lectures, and laboratory work. Students may also participate in individual research projects on some aspect of marine biology.

BIO 1471 Coastal Biology II.

A field, lecture and laboratory course designed to introduce students to a wide range of tropical environments. Coral reefs, turtlegrass beds, sandy beaches, mangrove swamps, and nearshore waters are examples of topics covered. 4 quarter hours. Instructor, TBA.

BIO 1477 The Biology of Corals.

A field, lecture and laboratory course which concentrates on tropical Cnidaria. Systematics, anatomy, physiology, and ecology of this group of animals which assume such an important role in tropical marine ecosystems are studied. 5 quarter hours. Instructor, TBA.



Students' quarters on the grounds of Hofstra's Marine Laboratory in Jamaica.

BIO 1411 Tropical Terrestrial Ecosystems

A field and lecture course to introduce students to the plants, animals, and ecosystems of terrestrial Jamaica. 3 quarter hours. Instructor, TBA.

BIO 3692 Special Investigation in Biology.

Students undertake individual research projects on tropical biological topics. 1 to 5 quarter hours. Instructor, TBA.

BIO 1478 The Biology of Fishes.

A field, lecture and laboratory course that examines the systematics, anatomy, behavior, and ecology of fishes. Tropical forms are emphasized. 5 quarter hours. Instructor, TBA.

Schedule

Winter 1986

First day of classes: January 6

Last day of classes: March 7

Final examination week: March 10-14

During the winter quarter, address all mail care of:

Columbus Beach Cottages, Ltd.

PO Box 90

St. Ann's Bay

Jamaica, West Indies

Telephone: St. Ann's Bay 972-2519



An observation deck overlooks St. Ann's Bay in Jamaica.

Faculty

Joseph Ayers, PhD (University of California, Santa Cruz), Assistant Professor of Biology, Northeastern University.

Donald Cheney, PhD (University of Southern Florida), Assistant Professor of Biology, Northeastern University.

Peter W. Frank, PhD (University of Chicago), Professor of Biology, University of Oregon.

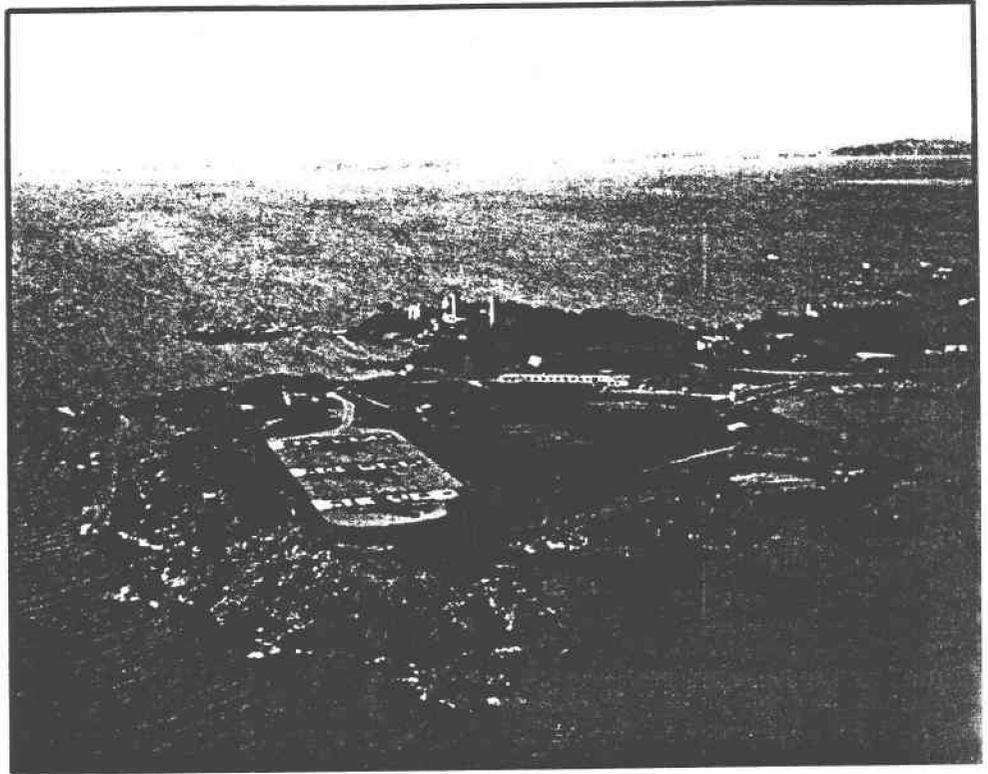
Michael Graybill, MS (University of Oregon), Visiting Assistant Professor of Biology, University of Oregon.

Rachel Mertz, PhD (University of Chicago), Research Associate and Marine Science Lecturer, Northeastern University.

M. Patricia Morse, PhD (University of New Hampshire), Professor of Biology, Northeastern University.

Paul Rudy, PhD (University of California, Davis), Director, Oregon Institute of Marine Biology; Professor of Biology, University of Oregon.

Robert Terwilliger, PhD (Boston University), Assistant Director, Oregon Institute of Marine Biology; Professor of Biology, University of Oregon.



An aerial view of Northeastern University's Marine Science and Maritime Studies Center.

Insurance

Medical insurance coverage is required of all students, whether under a student's own policy, a family policy, Northeastern University's, or University of Oregon's student group plan. Each student is responsible for being certain that his or her policy covers all three academic quarters.

Registration

Course registration is by mail through Northeastern University. Successful applicants will receive registration forms before the beginning of each quarter. Upon acceptance into the program, students should make arrangements with their home institutions for securing a leave of absence. For Northeastern University students, this would entail consulting the appropriate dean's office. Credits earned in the program are transferable to most institutions of higher education. Four quarter-hour credits equal three semester-hour credits.

Expenses and Financial Aid

Students from the University of Oregon pay their home institution's tuition for all three quarters. Northeastern University and all other students pay Northeastern University's tuition for the fall and spring quarters and tuition comparable to Northeastern's for the winter quarter. Expenses for the 1984-85 program for Northeastern University and other students were \$11,525. This figure includes tuition, room and board for Fall, Winter and Spring Quarters. For planning purposes, students should expect approximately a 5% increase in the cost of the 1985-86 program. Further information on expenses will be forwarded to students upon request from the College of Arts & Sciences, Northeastern University.

Most of the financial aid students now receive may be applied to this program. Students should inquire *early* to meet deadlines.

Application

To apply to the East/West Marine Biology Program, students should complete and return the attached application form along with a \$50 application fee. Two letters of recommendation are required from people who are well acquainted with applicants and are willing to comment on their suitability for this program. Recommendation forms are provided with this brochure. Also, applicants should include a copy of their academic transcript with the application.

For further information, please call the College of Arts and Sciences, Northeastern University, (617) 437-3980.

Tuition rates, all fees, rules and regulations, and course schedules and content are subject to revision by the President and Board of Trustees of Northeastern University at any time.

Northeastern University is an equal opportunity/affirmative action educational institution and employer.

Northeastern University is accredited by the New England Association of Schools and Colleges, Inc.

Massachusetts/Spring

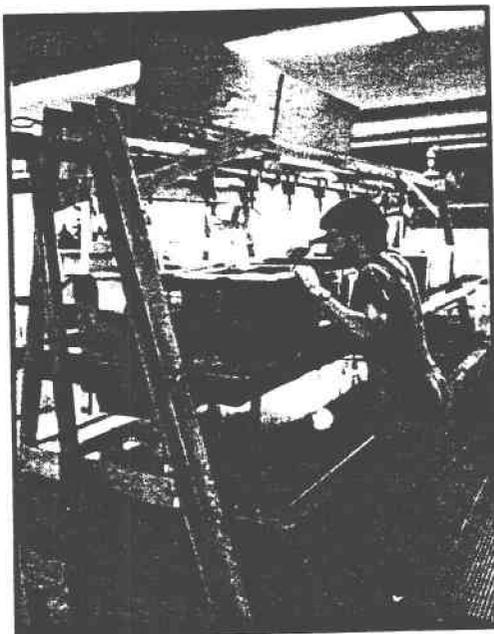
Facilities

Northeastern University's Marine Science and Maritime Studies Center is located in Nahant, Massachusetts, on a unique rocky promontory approximately twenty miles northeast of Boston. The laboratory contains a flow-through sea water system, library, stockroom, darkroom, cold and culture rooms, and light (fluorescent, phase) and electron microscopes. Analytical chemical instrumentation (HPLC, AA), histological and neurobiology labs, and an interactive minicomputer system are also maintained. In addition the lab operates a thirty-eight-foot, trawler-style research vessel, the *Baron IV*, and a sixteen-foot Boston Whaler. All classes are held at the center, and lunch as well as transportation to and from the main campus is provided.

The shoreline adjacent to the laboratory consists of coarse sand and pebble beaches and large expanses of bold, rocky outcroppings. East Point is near the southern limit of rocky shoreline on the Atlantic coast and receives a wide range of wave exposure. Its large tidal amplitude (9.5 feet, mean), high-quality water, and undisturbed shoreline provide a rich variety of inter- and subtidal communities that are ideally suited for marine biological investigation.

Accommodations

Students reside in dormitories on the main campus of Northeastern University. Most rooms are furnished and designed to accommodate two students. Each residence has a full- or part-time resident director and lounge and recreational facilities. Students will be issued meal passes for meals served in University dining rooms.



Student at work in the lab at Northeastern University's Marine Science and Maritime Studies Center.



Divers prepare for a research dive off Nahant, Massachusetts.

Courses

Students may earn up to sixteen quarter hours of credit at Northeastern. Courses include field trips, lectures, and laboratory work. In addition, through directed study, students have the opportunity to perform individual research on a particular aspect of marine biology, chosen with the guidance of a faculty member.

BIO 1472 Coastal Biology III.

A field, lecture and laboratory course designed to introduce students to a wide range of New England coastal environments. Examples of topics to be covered will include salt marshes, sandy shores, rocky cliffs, mudflats, cobble beaches and estuaries. 4 quarter hours. Instructor, TBA.

BIO 1479 Adaptations of Aquatic Organisms.

An exploration of aquatic organisms through a study of their evolutionary responses to the aquatic habitat. The physical properties of water create physical constraints that have affected form, function and behavior of all aquatic organisms. Density, viscosity, diffusion rates, pressure effects, and elementary fluid mechanics will be used to explain such characteristics as the body shape of larvae, hearing and sound production, suspension feeding and buoyancy. Course includes lectures, laboratories, demonstrations, and individual research projects. 4 quarter hours. Instructor, Merz.

BIO 1440 Advanced Invertebrate Zoology.

A lecture, field and laboratory course that concentrates on one or two phyla. Subject varies from year to year, depending on area of expertise of faculty. An individual research project is required. 4 quarter hours. Instructor, Morse.

BIO 3691 Special Topics in Biology. Particular subject matter chosen according to expertise of faculty. Topics may include interstitial and bivalve molluscs, algae, bionomics, polychaetes, fishes of New England and lamprey regeneration. Several topics may be covered in the same course. 1 to 4 quarter hours. Instructor, TBA.

BIO 3690 Biology Seminar.

Invited speakers discuss various topics in marine biology. 1 quarter hour.

Schedule

Spring 1986

First day of classes: March 31

Last day of classes: June 6

Final examination week June 9-13

During the spring quarter, address all mail care of:

Marine Science and
Maritime Studies Center
East Point

Nahant, Massachusetts 01908

Telephone: 617-581-7370

East/West Marine Biology Program Application

Please complete and return this application and a \$50 non-refundable application fee by May 15 to the East/West Marine Biology Program, Northeastern University, College of Arts and Sciences, 400 Meserve Hall, 360 Huntington Avenue, Boston, MA 02115. (617) 437-3980. A duplicate is provided for a friend.

Academic year for which application is made _____

Name _____
Last First Middle Initial

Male _____ Female _____ Age _____ Social Security Number _____

How did you learn about this program? _____

Mailing Address _____
Street City State Zip Code

Permanent Home Address _____
Street City State Zip Code

Telephone Number () _____ Major field of study _____

Currently a student at _____ Year in school _____

List names and addresses of two people who will provide letters of recommendation in your behalf.

Name _____ Name _____

Street _____ Street _____

City State Zip Code City State Zip Code

Signature of Applicant _____ Date _____ Signature of Parent/Guardian (for students under 21) _____ Date _____

East/West Marine Biology Program Application

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Street City State Zip Code

Permanent Home Address _____
Street City State Zip Code

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Name _____ Name _____

Street _____ Street _____

City State Zip Code City State Zip Code

Signature of Applicant _____ Date _____ Signature of Parent/Guardian (for students under 21) _____ Date _____

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FOREMOST AUTHORITY IN ITS FIELD JANUARY 1985

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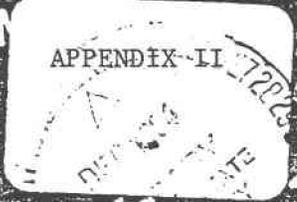
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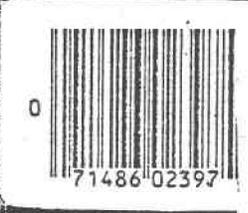
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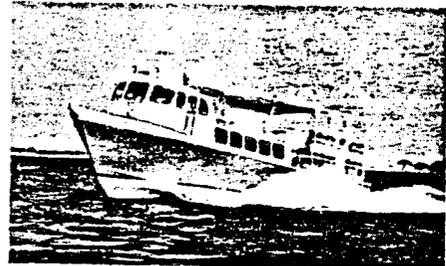
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M/V DEEP DIVER

Pisces Divers of North Miami, Florida has acquired a 50 foot custom built dive boat, the *Deep Diver*. Equipped with the latest in marine electronics, including radar, the *Deep Diver* also has a galley, head, freshwater shower, air conditioned wheelhouse and saloon. It is Coast Guard certified for 29 people but Captain Rick Smith's policy is to limit the number of passengers to about 18 to keep the boat



as comfortable as possible. Smith is a U.S. Coast Guard certified captain. He employs a full time first mate, four instructors (including himself) and two assistant instructors, two or more of whom are always onboard to ensure safety and comfort and to give each diver plenty of personal attention. In addition to diving some of the most spectacular wrecks in the U.S., the *Deep Diver* also makes two and three day Bimini trips, sleeping eight passengers and three crew. *Deep Diver* is docked at Miami Beach Marina. For more information contact Pisces Divers. ➤

CAYMAN VIDEO COURSES

Ron Kipp and the Cayman Diving Lodge now offer an U/W video course which includes working on an actual TV production. This course will be available on a regularly scheduled basis during 1985. One week courses are scheduled for February, April and June.

The courses are designed for both the beginning and advanced student. During each session students will become members of a TV crew and work on underwater locations.

The week is filled with lectures, practical experience and at least two, one tank video dives each day. Students will participate in all phases of U/W video production and post production.

The course director is film/TV producer/U/W cinematographer Eric Heidl. He has traveled the world producing TV shows and returns yearly to the Cayman Islands to work with students in the art of U/W video techniques.

Tuition includes lectures, critique and use of all necessary equipment. The course fee is in addition to the regular dive package at Cayman Diving Lodge. The course is limited to 12 students.

For more information contact Airtour Universal. ➤

NY RELICS

The September issue of SDM featured an article entitled Diving Western New York. In it the waters around Fort Niagara were described as a location where cannonballs and other military relics can be found.

Two regulations which pertain to the area should be noted: (1) The use of "artificial swimming aids" is prohibited within the boundaries of New York State Parks. (The boundaries of Fort Niagara State Park extend 1,000 feet into Lake Ontario.) (2) All New York State-owned land is protected by the State Education Law under Paragraph Four, Article Five, Title I. This law prohibits the appropriation of any object of archaeological interest without written permission of the Commissioner of Education.

The Niagara Frontier State Parks Police enforce both regulations. ➤

ROCKY MOUNTAIN DIVERS ASSOCIATION

An association to better meet the needs of scuba and skin divers in the Northern Rocky Mountain region has been formed. Winter sports enthusiasts, especially in Rocky Mountain ski areas, are frequently drawn to diving as a warm weather alternative, but their diving needs are not well met.

The newly formed club, based in Sun Valley, Idaho, sponsors diving certification courses; maintains information on Mexican and Caribbean dive packages, as well as close-to-home mountain diving opportunities; publishes a quarterly newsletter; and offers club members discounts on all club sponsored dive packages. Membership is \$10 per year.

For more information or membership applications, write to RMDA c/o Epic Expeditions, P.O. Box 209, Sun Valley, ID 83353. ➤

MARINE BIOLOGY PROGRAM

Students of biology and related fields of study who wish to move beyond the confines of the traditional campus may spend an exciting year of field study in three very different locations: the Oregon coast, Jamaica and coastal New England. The East/West Marine Biology Program, a joint effort by Northeastern University and the University of Oregon, focuses on topics in West Coast, tropical and East Coast marine biology and includes scuba diving in all three locations. A unique opportunity for students to live and work in their environments of study, the program is open to both undergraduate and graduate students.

For further information contact the College of Arts and Sciences, 400 Meserve Hall, Northeastern University, 360 Huntington Ave., Boston, MA 02115. ➤

There

That's important, because eight weeks or more of amount of money to be professional, you need to consider how that time and money will be spent. If it's spent at PADI International College PADI Headquarters itself learning from the very same retail management acknowledged systems of education, industry expand and grow. You'll have a chance to meet dive-industry career and magazine publishers and other here in the Los Angeles/C industry's largest system spent at a facility designed are working so hard at a comfortable, air-conditioned facility on site; and more. After hours, you can relax in the many places to go and When you compare facilities only one choice — PADI!

Discover how you can train at PADI's own training Call Jim Williams, our Inside California

PADI

1243 E. Warner Ave. • San

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