From the Director:

At MML we have become increasingly aware of the dual responsibility of a marine research laboratory in today's world. MML's primary role, of course, is to contribute by our research efforts to a better understanding of marine phenomena and their relation to the ecosystem. This function is reflected in our series of scientific papers, monographs and books.

A second, rapidly increasing obligation is to share our knowledge with the non-scientist—who supports the research, either directly or indirectly, and who is eager for an informed understanding of the environment which is, ultimately, in his charge.

To this end, each year we conduct tours for more than 1,500 students of high school and college age from as far away as Iowa and New York State; hold "member briefings" on a regular basis for members and guests; give more than 100 lectures to professional, educational and civic groups; participate in countless radio and TV interviews. In addition, we have made six half-hour documentary films, featuring MML's research programs, for national and international distribution. All this has contributed to the image we presently enjoy, not only as a first-rate research institution, but as a cultural force in the community and the nation.

With the generous matching fund award from the William G. Selby and Marie Selby Foundation, we are now actively planning for the Marine Science Education Center at our new location on City Island. The Center will enable us to expand our educational services in marine sciences for members of the community as well as visitors to our area. Our goal is to match the Selby award by the end of 1977 and complete construction of the Marine Science Education Center by June 1978.

We envisage this Center as a meeting place for the scientist-citizen and the environmentally concerned citizen where each may learn from the other about the environmental problems and abilities which confront us today.

Perry W. Gilbert, Ph D.

---

**Marine Science Education Center Receives Matching Fund Award From Selby Foundation**

A $100,000 one-for-one matching grant by the William G. Selby and Marie Selby Foundation of Sarasota has been awarded to MML for the construction of a Marine Science Education Center at the new laboratory site on City Island.

The Center, designed to complement the architecture of the research laboratory building presently under construction, will include a reception room, exhibit area, and meeting room. It will be open to the public. The exhibit area will feature current MML research activities and house aquaria that display local marine species. The meeting room will be available to our contributing members and guests, and will also serve for classes and lectures to groups under our proposed adult education program.

As an important part of our expanded public services, the Laboratory plans to offer a series of short courses in the marine sciences. Such courses will not be intended to compete with courses offered at nearby educational institutions, but will be designed specifically for the interested adult, and will stress the kinds of environmental problems of concern to such adults. The global aspects of marine science will be considered when necessary as background to the understanding of the local area. The teaching will be done with small, informal groups, and will be directed by qualified professional staff from the MML roster.

Construction of the Center will begin as soon as matching funds of $100,000 are raised and a concerted effort to do this is now underway.

---

The planned MARINE SCIENCE EDUCATION CENTER will include a reception room, exhibit area and meeting room. The one-story, 4000 square foot building has been designed to complement the architecture of the main research building now under construction.
These mid—April photographs show the center portion, where offices and library will be located, with precast concrete walls and roof in place. The west wing nearest the holding pen will house laboratories on the second level and be open for water tables for smaller animals on the lower level. From the air, the east wing is not visible yet. The Marine Science Education Center will be constructed to the northeast of the main building, in the clearing in the upper right corner of the photograph.

Supplemental Award Received from Doherty Foundation for Building Program

The Henry L. and Grace Doherty Charitable Foundation of New York has awarded an additional $100,000 one-for-one matching grant to the MML building program. These funds will be used toward completion of the new research building. MML President William R. Mote, in accepting the award from Mrs. Donald McCall, President of the Doherty Foundation, noted that the Foundation’s initial pledge of $200,000 last year had provided the impetus for the new laboratory building and that “with this additional award we are within sight of meeting our construction costs for the main building.”

The award, when matched, will be used to equip 12 laboratory modules for staff scientists and visiting investigators as well as to provide ancillary services including the seawater system, experimental tanks and pools, and docking facilities for Laboratory vessels.

A drive is now underway to meet not only this challenge award from Doherty but also the Selby award for the Marine Science Education Center. Although neither award has a time limit, it is anticipated that funding can be secured by the end of 1977. The construction costs will be appreciably lower since the Center can be started as soon as the main laboratory construction is finished.
With us again for the month of January was Dr. Seymour Zigman from the Ophthalmology Research Laboratory of the University of Rochester, N. Y. During past periods of research at MML, Dr. Zigman has studied the effects of near-ultra violet (NUV) light on eye tissues — specifically retinal damage and lens cataract formation. In addition to this research, he has been studying the benefits of a yellow pigment found in the senses of most diurnal animals, including man. Dr. Zigman has found that some sharks possess this yellow lens pigment while others lack it and that its presence or absence may well be correlated with the shark's habitat and predatory activities.

Sharks that dwell near the surface or in shallow water where the sun's rays are more intense possess the yellow pigment. According to Dr. Zigman, this pigmentation provides for sharper vision (through the elimination of chromatic aberration due to NUV light) as well as protection against photochemical damage of the vitreous humor and the retina from exposure to NUV light.

NIH investigators Robert Berger (National Heart Institute) and E. G. Trams (National Institute for Neurological and Communicative Diseases and Stroke) worked at their NIH trailer lab during January. Dr. Berger, a biophysicist and Dr. Trams, a neurochemist, worked with sharks, rays, pelicans, turtles and snakes in their studies of blood cell plasma membranes.

The winter monthly series of Member Briefings was well attended this year, averaging 75 members and guests. Since the briefings began eight years ago, bad weather, for the first time, prevented an outdoor briefing in January. Guests, however, cheerfully crowded into the library to hear lectures by staff and visiting scientists. At the April briefing (left), Dr. Dave Baldridge discussed the Red Tide program of which he is project manager.

Members at the April briefing were intrigued by the 11-foot sawfish swimming in the main tank with nurse, brown and lemon sharks. The large shark and ray collection which was depleted by the sustained cold weather in January has now been replenished as collecting efforts have returned to normal.

Report prepared by Paul Zeph, Student Intern, Rollins College
Ad Hoc Advisory Group Helps Plan for Move To City Island

Ad Hoc group members gathered with MML scientific staff and Board members for an informal photograph: (1st row) W. R. Mote (MML), Dr. Bairdi, Dr. Cronin, staff members M. Heyl, W. Tavolga and P. Bird, Dr. Aron; (2nd row) D. G. C. Clark and L. Freeberg (MML), Dr. Galler, H. D. Baldridge (MML), Mr. Reed, Dr. Costlow, Dr. Smith and P. W. Gilbert (MML).

At the invitation of the Mote Scientific Foundation, a blue ribbon group of marine scientists and environmentalists met at the Lab on March 17-18 to review MML's research programs and administration, and to offer their recommendations for the Laboratory's future direction at the new City Island location. The first day was spent with MML staff reviewing current research programs, and a visit to the new site. The following day the group met with the officers of the Laboratory to discuss administrative research and educational operations.

Members of the group were:
- Dr. William Aron, Office of Ecology and Environmental Conservation, NOAA, Department of Commerce
- Dr. John C. Baiardi, Director, New York Ocean Science Laboratory, Montauk, New York
- Dr. John Costlow, Director, Duke University Marine Laboratory, Beaufort, N. C.
- Dr. Eugene Cronin, Director, Chesapeake Biological Laboratory, Solomons, Md.
- Dr. S. R. Galler, Deputy Assistant Secretary for Environmental Affairs, Department of Commerce
- Mr. Nathaniel Reed, former Assistant Secretary for Fish, Wildlife and Parks, Department of the Interior
- Dr. Robert E. Smith, Florida Institute of Oceanography, St. Petersburg, Fl.

Development of programs for the new Marine Science Education Center was a major topic of discussion and many of the group's recommendations will be incorporated into the Laboratory's expanding public service role.

---

CORNELL STUDENTS AT MML

CORNELL STUDENTS at MML. In early April 18 students worked at the Placida station under the direction of Dr. Ruth Buskirk, Cornell Department of Neurobiology and Behavior (kneeling, second right). Their field studies on the population dynamics of the local species of fiddler crabs were supplemented by an introduction to the local bird life of the area by MML ornithologist O. H. Hewitt. This year's Cornell group was especially pleased to have John Christy with them as Dr. Buskirk's research assistant. John has spent the past three summers at our Placida station working on his thesis on fiddler crab behavior.
Summer '77 ...our last one at Siesta Key
BUILDING PROGRAM PROGRESS REPORT
on MML’S new facility on City Island

RESEARCH BUILDING

Construction of the research building is proceeding on schedule, with completion scheduled for early November, 1977. Permits and authorizations for the large natural pen and docking area have been received from the regulatory agencies, and a program of mangrove maintenance will be undertaken at the request of the Army Corps of Engineers. Bids are now going out for furnishing the laboratories, library and offices.

Funds for construction of the main building are in hand, with $300,000 received to match the Henry L. and Grace Doherty Charitable Foundation’s matching fund grant, for a total of $600,000 raised to date for the main building. A recent major contributor to the matching fund drive was Mr. Carl Weller of Venice, Florida whose gift of a 34-foot Striker aluminumboat to the Laboratory was sold to help meet the matching fund goal.

SELBY MARINE SCIENCE EDUCATION CENTER

Efforts are now directed toward raising $100,000 to meet the construction matching fund award from the William G. Selby and Marie Selby Foundation, plus additional funds to equip and furnish the Center.

Moving day has still not been definitely set. The Siesta Key site is available until June 1978, provided erosion to the south, at Midnight Pass, does not precipitate an earlier move. The move will not take place until it can be done in a 5-day period in order to minimize disruption of on-going programs.

PREPARING TO MOVE

The sperm whale skull in front of the main building which has greeted Laboratory visitors for 14 years will continue to do so at our new location. The skull, weighing 900 pounds, was found on a shoal near Marathon, Florida in July 1963. The Lab research vessel, RHINCODON, then on its initial field trip to the Dry Tortugas, brought it back to the Lab. Some well-deserved cosmetic surgery is planned prior to installing it at the new Laboratory.
DAVIS LIBRARY

Mrs. Ricky Wylie, MML volunteer librarian, plans the layout of the new library with Dr. Gilbert and Project Engineer Alan Shaw. The new, 20 x 42 library will comfortably house our present holdings, half of which are now in storage because of space problems. Mrs. Wylie's interest in marine research laboratories is a family affair. With her late husband, the well known author, Philip Wylie, she was closely associated with the Lerner Marine Laboratory in Bimini and the Sea Life Park and Oceanic Institute of Hawaii. Her daughter, Karen, is presently serving as a marine mammal consultant to the tuna industry. The library is named for its donor, the Arthur Vining Davis Foundations of Florida.

COURTYARD

In the U-shaped courtyard of the new research building, MML President William R. Mote and Lab Manager Pat Morrissey note the location of the four circular 15-foot holding pools. To the rear, the open work area on the ground floor is next to the aquarium room and walk-in freezer. Laboratories and offices are on the second level. In addition to the pools in the courtyard, two foot pools will be located adjacent to the Selby Marine Science Education Center. The large natural pen will be located at water's edge to facilitate transfer of large specimens.

CHEMISTRY LABORATORY

Safety exit locations from the chemistry lab are checked by Alan Shaw and Michael Heyl, MML chemist. The west wing of the building will house nine laboratories, instrumentation room, constant temperature rooms and darkroom. The east wing will remain uncompleted for future expansion needs. Mr. Shaw, a mechanical engineer, has volunteered countless hours supervising all aspects of the building project from the width of door frames to installation of the water and sewer lines.