

# Charleston institute examines the sea

Have you ever seen a sea gull yawn?

Wallace Strom, a participant in the University Institute of Marine Biology at Charleston this summer, says he has.

Strom, a professor from a Michigan community college, is one of 100 students who studied gulls and other marine life, conducted censuses of marine organisms, and worked on environmental problems while attending the Institute.

Strom figures he spent several dozen hours watching sea gulls. He's taking 120 color slides of gulls and other marine life back to Michigan to show his students at Alpena Community College. The professor says he came to Charleston because he had heard so much about the University Institute.

Irene Harris, another Institute student, also observed gull behavior, focusing particularly on a nesting colony near Bandon. Harris, who is about to begin graduate work in zoology, points out that the summer work helped her to get an idea about "what behavior is like generally."

The University Marine Biology Station is located only a few feet from the bay at Charleston, so students are able to watch marine life right on the grounds or close by.

The Institute is particularly well suited to small group projects by students, according to Paul Rudy, director.

One summer class, called "Environmental Projects," was strictly a field course without formal lectures. Members focused on pollution sources, water quality and its biological implications.

One group of students examined the effluent from a local pulp mill and its effect on marine life.

The University's Marine Station has offered summer courses for more than 30 years. The 1972 session continued this tradition with courses in invertebrate zoology, physiology, environmental projects, biology of fishes and marine birds and mammals. Individual research projects and seminars were also offered.

The station is ideally situated for the study of marine organisms as many different marine environments are close to the laboratories. The Coos Bay estuary contains interesting rock, mud, sand, eelgrass and piling communities. The open coast has an exceptionally rich rocky intertidal area as well as long stretches of sandy beaches. The laboratories are close to the harbor entrance and station boats can collect open ocean organisms within minutes of leaving the dock.

The station has about 85 acres of property along Coos Bay at Coos Head where native vegetation and animal life have been preserved as far as possible. The



Director Paul Rudy

buildings are located on a tract on the bay side of the property close to the post office and stores of Charleston, a small fishing village. The station is eight miles from Coos Bay and eight from North Bend.

Coos Bay and the surrounding region are of particular biological interest. The foothills of the Coast Range are forested with Douglas fir, Sitka spruce, and Port Orford cedar, with maple and alder along the streams.

These trees and the luxuriant undergrowth are typical associations of the coastal belt of the Pacific Northwest. A number of coastal lakes bordered by active or ancient sand dunes are readily accessible.

The region abounds with varied bird life, including many aquatic species which breed in the vicinity or are visitors during their migrations. Small mammals are

abundant and deer are seen occasionally. A colony of sea lions lives on nearby Shell Island.

Coos Bay and its inlets afford a wide range of aquatic environments with differences in salinity, temperature and character of the bottom, which are reflected in the life of these waters. The Coos River and numerous streams emptying into Coos Bay support an additional varied fish fauna and are spawning grounds for several migratory fishes.

The ocean frontage between Coos Head and Cape Arago is rugged, with rocky promontories, small bays, and long sandy beaches. Across from Coos Head are the long ocean and bay beaches of North Spit with their different faunas and floras. The ancient life of the region is represented in the rocky exposures along the ocean front and in coal-bearing rocks dating as far back as the Eocene.

## Open to students this spring

# Marine biology station to offer first regular quarter

University students this year will get a chance to study man and his environmental problems for an entire term in an informal lecture-field situation 120 miles from the campus.

The occasion will be the University's first regular quarter, other than summer session, at its Marine Biology station at Charleston, where a full term of multi-disciplinary courses will be offered this spring.

The classes, which will be heavily field-oriented, will take advantage of the surrounding environment, according to Paul Rudy, director of the Oregon Institute of Marine Biology at Charleston.

"This region is a natural field station for observing various social problems," explains Rudy, pointing to social-environmental problems reflected in high unemployment, poor land usage and declining fish and timber stocks.

The curriculum has been planned so that a student may carry a full term of integrated coursework, including geography, biology, landscape architecture and sociology. The courses are designed to be taken together, to complement one another and center around the field experience.

Rudy and the other four faculty who will teach the spring quarter say that they are looking forward to an intense learning experience for students and staff.

Faculty and students both will live on the Institute grounds, which are only a few hundred feet from the ocean channel and the boat basin at Charleston.

Rudy explains that the spring quarter was prompted partly by the success of the informal learning atmosphere present during summer institutes at the marine biology station.

The Institute's buildings provide dormitories, dining hall, kitchen, classrooms and laboratories.

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Enrollment will be limited by the available dormitory space to 60, and the quota is expected to be filled this fall. Students may apply for the quarter through the departments offering courses. Material describing the offerings will be available at registration.

Room and board charges will be \$30 a week. Students accompanied by dependents must arrange for housing off the Institute grounds.

The University faculty at Charleston this spring will be Rudy, who is an associate professor of biology; Robert Terwilliger, assistant professor of biology and assistant director of the Institute; Jerome Diethelm, associate professor of architecture and chairman of the department of Landscape Architecture; Ronald Faich, assistant professor of sociology; and William Loy, assistant professor of geography.

The courses are as follows:  
Geography 407, Coastal Problems: 3 hours. Diethelm, Faich, Loy, Rudy, Terwilliger. A seminar designed to coordinate the course offerings. Local representatives of industry and elected officials will participate.

Geography 481, Geomorphology. 3 hours. Loy. A systematic study of land-forming processes in the physical landscape with emphasis on coastal processes. Maps and air photos will be primary tools of geomorphic investigations.

Biology 478, Marine Ecology, 3 hours. Rudy, Terwilliger. An examination of interrelations between organisms and physical environment with emphasis on man's modifications of the coastal environment.

Landscape Design 589, Advanced Landscape Design. 1-10 hours. Diethelm. Advanced problems in landscape architecture with emphasis on coastal problems and integration with architecture.



Summer session students

Landscape Architecture 407-507, Seminar in Planning and Landscape Architecture. 3 hours. Diethelm. A seminar designed to inform non-majors of the methods and ideas in planning and landscape architecture.

Sociology 326, Quantitative Methods in Sociology. 3 hours. Faich. A course on construction and interpretation of tables and graphs, descriptive statistics,

measures of association and contingency relationships, basic ideas of probability and elementary statistical inference applied to non-experimental research.

Sociology 407-507, Seminar in Sociological Methods. 3 hours. Faich. Seminar designed to discuss the ideas and methods of sociology and their relationships to other disciplines and to the coastal zone.