

Brooklyn Students' Data Used at Wetland Hearings



Photo by C. K. Bart

Taking a Close Look — Students at John Dewey High School use professional-quality equipment to make their ecological analyses of tidal wetlands. Microscopes and a pH meter (below, right) are standard working equipment for the students.

Marine science teachers at Brooklyn's John Dewey High School have a recipe for environmental education: gather a wealth of precise data on the marine environment; analyze it using the sophisticated equipment that one would find in a working laboratory; think about what the results mean; then present your findings, in comprehensive and comprehensible form, to city, state and federal decision-makers. The result will often be a change in public policy which will benefit the marine environment.

Students at John Dewey, working under the direction of teachers Lou Siegel and Harold Silverstein, have been following the recipe since 1971. It has kept them interested and involved in preserving wetlands in Brooklyn and Queens and has established a demand for their skills as far east as Long Island's Hamptons and as far north as Massachusetts.

In the past two years classes have submitted two briefs evaluating an Army Corps of Engineers erosion control

program and have participated in two hearings defending wetlands against encroachment by the city. They have also submitted data to the federal Environmental Protection Agency which helped establish standards for oil run-off into Jamaica Bay.

The classes' latest foray into public process involved a two-day presentation before DEC on the value of a Brooklyn wetland known as Fresh Creek. The Fresh Creek study is the students' most comprehensive investigation of a wetland ecosystem to date and cost them nearly \$1000 — most of it derived from student candy sales. No decision has yet been reached in the case.

Siegel and Silverstein justify their action-oriented program as a way to sustain "the excitement of learning and the wonder of laboratory investigations." They emphasize that because class activities often influence public policy every effort is made to ensure that the classes' basic research is meticulously carried out. Checks on John Dewey data by local colleges and laboratories have substantiated the classes' findings, they said.

"I once thought the ecological approach to learning was just for bird and bee lovers," admitted Silverstein, "but now I'm convinced that it is the best way to develop real understanding of the environment."

The ecological approach to learning fits in well with the flexible time schedule at John Dewey High School. The school day, which runs eight hours, is arranged in time blocks which allow teachers to vary the length of lessons and budget more time for field trips.

During the first seven weeks of the marine ecology course students learn the basic laboratory skills required for the rest of the year — how to titrate, pipette, use clinical centrifuges and microscopes, and how to culture amoeba, paramecia, spirogyra and other organisms.

For the next 28 weeks the approach of the course is phylogenetic — students study

the evolution of marine organisms, supplementing textbook exercises with examinations of live organisms available locally. As the weather warms the classes do more experimentation at a near-by beach — collecting and identifying marsh and dune plants, benthic (organisms of the depths of a body of water) and microscopic organisms, and determining ecosystem productivity.

Siegel and Silverstein recognize, however, that any school is an insulated environment which can present an unrealistic view of the world. The net effect, they say, is dilution of sustained interest and learning of subject matter.

To counteract the negative influences of the school environment they encourage students to participate in real-world learning activities on weekends, holidays and during independent study projects.

Students have served as volunteer guides and lecturers at the New York Aquarium and at Gateway National Park. Advanced students have worked in professional laboratories and hospitals, assisting senior scientists in biochemical analyses and embryology studies. Classes are also allowed time aboard the City College research vessel "Commonwealth."

By the time students are ready to put forth recommendations on a proposed alteration of the marine environment, Siegel and Silverstein feel, they have gained the necessary laboratory training, textbook knowledge and grasp of the marine ecology profession to ensure correct interpretation of their results.

Siegel and Silverstein's approach to teaching marine biology recently received national attention during a convention of the National Association of Biology Teachers. For more information on their unusual program write to them in care of John Dewey High School, 50 Avenue X, Brooklyn, N.Y., 11223.

Fight Inflation—

Ski Down DEC's Mountains

Fees at state operated ski centers will not be increased during the 1974 winter season.

The rates for state operated ski centers at Gore and

Whiteface Mountains in the Adirondacks and at Belleayre in the Catskills are as follows:

Adult season tickets, honored at all three centers, will be \$175 after December 15. If purchased

before that date, they will cost \$150.

Intermediate season tickets, available to those 16 and 17 years of age, will be \$150, with an early purchase price of \$125.

Season tickets for juniors, skiers 15 years and under, will cost \$125 after December 15 and \$100 before that date.

Maximum family rate for the season is \$500 if purchased after December 15, with early season purchasers able to pick them up for \$400.

The adult day rate for all-lift use will be \$8 on weekends and holidays, \$7 on weekdays. The corresponding rates for juniors are \$6 and \$5.

For weekend and holiday skiers, afternoon rates will be available. Adult all-lift tickets will cost \$7 and junior tickets \$5. No weekday afternoon tickets will be available.

Tickets for lifts on the lower mountain areas will be available again this season at Gore and Whiteface. Purchasers may use the J-bar, T-bar and novice chairlifts.

Adult all-day price is \$6 for weekends and holidays, \$5 for weekdays. The junior price is \$4 at all times. Afternoon rates will not be offered this season for lower mountain skiers, although single ride tickets will be available at one price to all. It is \$2 for Gore's gondola lift and \$1 for chairlifts.

The 5-day lift ticket will be \$30 and the 5-day Learn-to-Ski Week tickets will be \$35. Both are available only for weekdays. Area use tickets are \$3.

Additional information on state-operated ski centers is available at the centers or by writing to the Bureau of Forest Recreation, Division of Lands and Forests, Department of Environmental Conservation, Albany, N.Y. 12233.

Nassau Co. EMC's Plan Will Guide Development

The Nassau County Environmental Management Council's recently completed environmental management plan, which took two years and over 300 pages to develop, contains a wealth of suggestions for preserving and enhancing the land, air, water and other resources of the county. Among the plan's major points are:

- Stabilization of population growth in the county through municipal zoning;
- Environmental review of county projects;
- Reduction of county and local real property taxes for owners of environmentally important lands;
- A ban on the sale of non-returnable beverage containers;
- A change in county and local government purchasing procedures to require greater use of recycled materials;
- Acquisition by county and local governments of all ecologically important wetlands now in private hands and of various open space areas;
- A ban on all activities which would alter the county's shoreline;
- A ban on aerial pesticide spraying;
- A ban on private incinerators except those at hospitals;

- A ban on cigarette smoking in public places and in many business concerns;
- Encouragement of underground utility lines, beautification of gas stations and stronger anti-litter laws.

The plan is not a "master plan" in the sense of a 50-year program proposal, according to EMC executive director William Botwinik, but it is an "action plan" for the next few years. Botwinik said that the council attempted to make the plan "as tough and realistic as possible" while avoiding one "that would lock you in cement."

The Nassau plan was prepared in cooperation with DEC utilizing state financial assistance which, under Article 47 of the Environmental Conservation Law, provides for up to 50 per cent of the operating expenses of EMC's. Thirty-three counties in the state have established EMC's as vehicles for concerted county government and citizen action on the environment. Additional information on environmental management councils can be obtained from DEC's Bureau of Community Assistance, Albany, N.Y. 12233.

Copies of the Nassau County Environmental Plan are available from the Nassau County Environmental Management Council, 1505 Kellum Place, Mineola, N.Y. 11501.

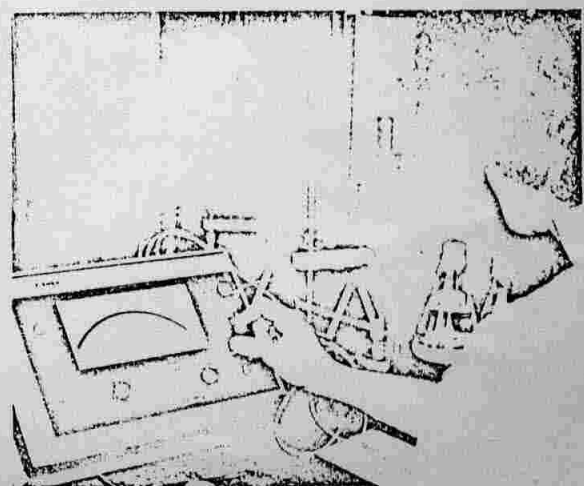


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