

Manusquan down to end of

Bay - polluted

Development along rivers & Bay

Septic tanks drain in rivers
& Bay

Swimming imperiled

Great amount of fill to build
developments

Kills all that grows in marshes
^{fish-}
grasses ~~Flora~~ & ~~wild life~~ of the
flowers etc Sea Rivers & Bay

Atomie Plant Oyster Creek -

Closes down & kills fish
lack of warm water -

Many living on boats - collecting
marina & rivers & Bay

Anti-Pollution War On at Camp Show in the Coliseum

Up until now, the reward for ecology-helpers has been meager—a few cents for salvaging a sack of aluminum cans, a couple of pennies for returning your bottles to the grocery, maybe a buck or so for a stack of old newspapers.

However, the Striper's Surf Club of Long Island, which opened a booth stressing conservation at the 40th annual New York International Sport, Camping, Vacation and Travel Show at the New York Coliseum, points the way for someone really to strike it rich in the anti-pollution war. The show opened yesterday and runs through next Sunday.

"There's a law that has been on the books since 1899 called the Federal Refuse Act," said Blaise Bookis, president of the Striper's Surf Club, which operates out of Franklin Square, L.I. "It gives a reward of up to 50 per cent of the fine for anybody who turns in a polluter."

Most Wanted Polluters

In an effort to make more people aware of the law, Bookis and his club are handing out "Wanted" posters for "Industrialist, Manufacturer John Q. Polluter." The posters have been drawn by Salem Tamer,

one of the club's members who happens to be a commercial artist.

Reaping rewards from enforcing the law could become lucrative. For example, if you had turned in a large industrial company such as Con Edison for "thermal pollution" at its Indian Point plant you might have made a fortune.

Recently that plant was shut down because more than 100,000 fish had been killed in less than a week. The Federal government, it is reported, could fine Con Edison as much as \$25 for each fish impaled on its screens. If you had been eligible for the reward the sum might have been anywhere from \$1.4-million to \$2.5-million. Now isn't that better than winning the lottery?

Protecting Striped Bass

"It's a shame that you have to give people a reward to make them aware of conservation, but if that's the only way that you have to do it," who is the 37-year-old Bookis, who is a social studies teacher in an East Harlem junior high school. "Otherwise the only alternative is to do nothing and stand by and watch all of our resources get wasted."

Naturally the Striper's Surf Club's particular interest in all of this is protecting the striped

bass, the specialty fish of its membership of 30 sportsmen. But Bookis hopes that a grass roots movement of sportsmen's clubs can put pressure on legislators and others to do something constructive for conservation.

Meanwhile, the poster passed out by club members gives advice on the steps to take to collect rewards:

❑Take as many photos as possible of the source of pollution on different days.

❑Take samples of the polluted water from its source (not from the stream) in quart jars on three different days.

❑Contact the United States Attorney's office in your area.

For Manhattan, the Bronx and other areas on both sides of the Hudson River up to Albany the address would be: The Honorable Whitney North Seymour Jr., United States Attorney, Attention: Ross Sandler, Assistant United States Attorney, Foley Square, New York, N.Y. 10007. Telephone: 264-6409.

For violations in Nassau, Suffolk, Brooklyn, Queens and Staten Island, phone or write The Honorable Robert A. Morse, United States Attorney, Attention: Bruce Smith, Assistant United States Attorney, 225 Cadman Plaza East, Brooklyn,

N.Y. 11201, Telephone: 596-3012.

What about his own club's activities? Some ecologists have charged outdoorsmen with being prime offenders in the spoiling of our natural resources through indiscriminate and needless killing of endangered species.

"I don't want to talk about other sportsmen because the area I know best is surf fishing," said Bookis, who was born in Greece, came to New York as a youngster, now lives in Queens with his wife and three children and has been surf fishing for 10 years. "In the majority of cases we do not keep more fish than we can eat on our table. The others we put back in the water."

Other government groups will also have information on conservation at the show in addition to other outdoor spectacles, such as the biggest round nose sturgeon ever caught, luxurious mobile homes, some that become sea craft in the water, or tent campers that turn into travel trailers in 90 seconds.

Show hours are 11 A.M. to 10 P.M. Saturday, 1 P.M. to 8 P.M. on Sundays, 1 P.M. to 10 P.M. Monday through Friday. Admission is \$2.50 for adults and \$1.50 for children under 12.

AL HARVIN.

WETLANDS OF NEW JERSEY

March 1972
M^cCabe,
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Ave
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Ecology as defined in the American College Dictionary is 1: The division of biology that treats as of the relations between organisms and their environment; also called bionomics. 2: Sociological definition - The study of human population in terms of physical environment, spatial distribution and cultural characteristics.

New Jersey has had a bad press when it comes to describing some of the marshlands around Newark Bay, the Hackensack marshes etc. These regions seem incapable of sustaining life other than human beings whose capacity to stand sterile surroundings and to breathe poisoned air seems fantastic. In reality, of course, nature saves us all, up to a point. The water can be relatively purified, the oxygen gets to our lungs along with the waste matter, and we survive. And seemingly ruined areas like the marshes and water courses near the big cities still contain a surprising amount of life.

In the marshlands along Newark Bay the tall ~~phragmites~~ phragmites grass plumes in the wind; black ducks fly up, muskrats tunnel into grimy shores, and killifish, tolerant of low oxygen and polluted waters, manage to make a reasonably good living, as do eels and crabs. But saltwater fish rarely reach these inland wetlands since they have to swim through heavily polluted Newark Bay to get there, and it lacks enough oxygen to sustain them.

Marshes have had another kind of bad press from people who think they are smelly, useless for anything but mosquitoes and should be filled in. Scientists are only beginning to be aware of how great a role their diversity plays in the great productive interaction between land and sea, but in many parts of urbanized N. J. diversity has been all but forgotten. The Hackensack Meadows, for example, have been filled in at a rate of 30,000 tons a week in recent years. As if to show on which side the scales are weighed, N. J.'s ~~marshes~~ marsh areas have been valued at the exorbitant sum of \$70,000 an acre, not as life systems for

themselves alone, but as landfill. In other words, organic material from salt marshes is being used to destroy these.

If one looks at a road map, you can see first of all that N. J.'s coastal plains occupy more than half of it. A large part of the state, aside from its hills and lakes to the north, is invested by the sea. Wide marshes border its low shores; streams, tidal rivers, inlets and estuaries lace it like the veins in your hand, and it is the ~~ak~~ kind of region where you can find a wide variety of natural food for Man. Such wetlands are one of the most productive environments on Earth.

As one continues to look at a road map or out the window of one's car as one ~~xxx~~ speeds along another giant turnpike, one can also see the evidence that N. J. is the most densely populated state in the Union, with 953 people per square mile. It is evident that a city like New York, one of the most heavily concentrated knots of human power and effort ever known to civilization, exerts enormous pressure on the lands ~~xyxond~~ beyond it, and the same is true to a lesser extent of the Philadelphia, Camden and Chester areas. The wetlands are being subjected to a squeeze.

The cities press and push, and money sometimes talks louder than the landscape. The real estate business claims to speak for the people and progress, an agreement against which undeveloped wetlands ~~x~~ have not had enough defenders. There may be up to 400,000 or 500,000 acres of marshland in the State, and though only 10% may have been destroyed so far, the pressure against the remainder continues to build. N. J. is a dredge and fill state where the developers have been able to use methods fairly economical to them in ~~fox~~ order to destroy salt marshes and make a clear profit. Fortunately, ~~not~~ the state ~~had~~ ^{now} ^{has} a new Wetlands Act, ^e [^] ~~bing~~ seriously and conscientiously implemented.

If one were to drive to Great Bay which is south of Tuckerton in ^{Ocean} ~~Oxxx~~ County one would see ~~x~~ what a salt marsh could really be. These marshes ~~stretch~~ stretch away for miles between the shore and sea horizon.

The marshes of Great Bay (Barnegat Bay) are for the most part without beaches, except those which are man-made. ~~1~~ Out on their far edges the sea laps and pushes against low shelves and lips of peat held by sportina grass and periodically floods and meadows behind them, back toward the lift of the shore.

The marine plants that make up the marsh and its great ~~hordes~~ bodies of peat are salt tolerant and are variously adapted to being flooded by the tides. Cordgrass can stand being half or totally submerged for many hours; it is the pioneer plant in building of marshes, growing the farthest out toward the sea. Salt hay grass and spike grass grow in slightly higher, drier, less saline levels. Mixed in with these grasses and other flowering plants, and fleshy glassworts grow there with a salty taste to their jointed stems. Just naming a few plants gives no idea of the dynamic way they create shelter, a stability in an essentially hostile zone open to the sun, the tides and the sea winds.

A marsh is a region of great subtle strength and elasticity; it reaches in, it reaches out, and one only has to meet a few of the life forms there to realize just how much it accommodates. Grass shrimp dart between the stems of reeds or grasses along a muddy bank. One can catch sight of a blue crab slicing edge-wise through the water, or a terrapin swimming hurriedly away. There are piles of empty oyster and clam shells along one bank of a tidal creek where it passes a small fishing settlement. One may hear a low "wugk wuhk" from a surprised bittern that flies up out of its hiding place in the reeds.

The salt marshes are a vast nursery for the young of such fish as weakfish and bluefish so much prized by the sportsmen. It is estimated that young bluefish grow as much as an inch a week on the food of the ~~est~~ estuaries, protected from predators. Americans who depend more on hamburgers than fish may not ^{be} expected fully to appreciate it, but some 70% of the species of our Atlantic fish depend on the ~~x~~ estuarine zones for some part of their existence.

One could think of these great marshes not only in terms of their productivity, but their timing. They and their brown creeks with waters running blue-hued from

the sky take the year to themselves. Even in winter they serve as a refuge for some species of fish and for thousands of waterfowl. Life is never entirely absent in these wetlands that serve as meeting places between the land and the more temperate sea. From spring until fall there is a gradual change in growth and color in their plants and grasses, from one week to another.

N. J.'s great width of salt meadows, with their waving, coarse-bladed grasses, seem more blended with the land behind them than ~~th~~ with many similar regions to the north. They seem quiet, almost domestic. Their waterways move easily into low shores. Though there are definite transition zones between one type of vegetation and another, so that one can define the area of a marsh fairly readily, even the areas miles inland from it seem like comfortable partners.

From a highway a marsh may look flat and featureless, but when one is down in its inner meanderings it seems endless and full of unexpected turns. In some areas one can see a new section of marsh building up where the fine tips and stems ~~of~~ of the tough cordgrasses wave above the water offshore. And then one can follow coiling and curving inlets back toward the land, past banks where fishermen, for generations, have driven in their posts for mooring boats or for use as small landing docks.

Now and then one sees a boat lying along a creek bank like a weary animal. Islands up an estuary may ~~be~~ have a house or two on them. The older fishing settlements along the shore have the kind of gray shacks built on stilts that accommodate rather than impose. Land and sea have a companionship here and the results, when allowed, show in an easy, rhythmic diversity. One could eat well and live well here and find oneself a part of both intimate locality and ample space. No wonder the Lenni-Lenape Indians who lived in these coastal regions of N/ J. were reputed to be a peaceable and well-settled people.

The Indians lived with ~~these~~ these complex life communities without taking away anything essential to them, but we wielders of the bulldozer, the dredge and the crane not only add destructive material that pollute the environment, but we are also able to change it so drastically as to destroy its capacity to regenerate.

⊙ Off on the horizon, beyond the waving marine grasses, there is another great section of marsh replaced by promontories of glaring sand, divided by channels and covered with small one-story ~~g~~ houses. They are called lagoon developments and are particularly thick from Barnegat south to Tuckerton and even north to the head of the bay which is, of course, Bay Head. Each row of houses ^{has} ~~had~~ its ditch or channel, made ~~gx~~ by dividing the claimed marshland into a grid. None of the original plant life is left on the former marsh level where the houses are built; there is not even very much grass.

Inland, behind the developments, patches of unaltered woodland stand out dark with cedar, oak and pitch pine. The higher trees have an undergrowth of holly and blueberry, laurel and shadblow, or service berry, with blossoms starting out white and lacy in airy spring days. The natural woodland and marsh is dark and glossy, a repository of light and shadow. The man-made land stands out bright, gray and dry under the sun.

One would wonder whether these people, getting away from the city's pressures and troubles for a while, deserve their houses for rest and company? The answer is, that of course they do, but perhaps they also deserve a far less sterile relationship to the land they live in. Reclaiming the organic environment is a dead-^{end} ~~road~~ street; there is a point at which it will sustain no more people.

Dery Bennett, director of the American Littoral Society of Sandy Hook, who has been testifying about the ecological value of marshlands in court cases involving them says: "Those who are trying to restrain the developers are not much against them as against their methods."

The method of destroying a marshland is to build bulkheads and sod dikes and then dredge out peat ~~and~~ and estuarial mud to fill in behind and, when this material dries out, of course, its ~~na~~ organic capacity is dead. The gridlike pattern of lagoons, especially where it comes closer to inland banks and higher land, is beyond reach of the continual flushing action of the tides, which means that these artificial channels become too high in nutrients, their waters become loaded with algae and deficient in oxygen.

The developers' methods result in putting a life-~~giver~~ giving, nourishing, circulatory system out of business, and since it has been profitable for them, they move on to new areas wherever these can be bought up. Until recent years ~~at~~ at least, they have ~~been~~ able to do so almost without restraint. They were obligated to get permits from the N. J. Dept. of Conservation and Economic Development, but the department's general policy seems to have been to keep leases, grants and permits from ~~not~~ piling up on its desks.

Nevertheless, it had become evident in N. J., as in several other eastern states before it, that unless some positive restrictions and definitions ^{were} ~~xxx~~ established with respect to laws and regulations governing the use of coastal wetlands, they would ~~be~~ eventually be destroyed. Under Gov. Wm. T. Cahill, the Department of Conservation and Economic Development was broken up so that the responsibilities of economic development were given to the Labor Department, and a new Department of Environmental Protection was formed, with Richard J. Sullivan as commissioner.

✧ In November 1970, the legislature passed a Wetlands Act which declared the ~~the~~ vital importance of the estuarine zones of the state in protecting the land from the force of the sea, in moderating the weather, in providing a home for waterfowl, ~~and~~ fish and shellfish. The act ordered the Commissioner of Environmental Protection to make an inventory and maps of the wetlands by the end of 1972. In addition, it authorized him to make regulations restricting or ~~or~~ prohibiting dredging, filling, removing or polluting the wetlands. The act provided fines for violators and makes them liable for the cost of restoring wetlands in so far as possible to their previous condition.

The new law defines coastal wetlands in general as lowlands subject to tidal action along ^eouter shores and inland waterways, streams and estuaries that are subject to tidal reach. Specifically this refers to land flooded to an elevation of one foot above the line of extreme local high water, and this is to be defined as exactly as possible in terms of the vegetation growing there. All the tidal lands below that as far as mean ~~high~~ high water are now subject to regulation by the state. Previous to that they ~~had~~ had only been subject to home rule or local restrictions.

To establish ~~xx~~ these tidal lines by means of their vegetation clearly means very careful mapping. The state would not be able to enforce regulations based on cloudy, incomplete or poorly designed inventories and boundries. Nor do officials of the commission, based on past information, know where all the wetlands are. Therefore aerial mapping is now being undertaken with color and infrared photography with the help of a satellite. Base maps are at an image scale of one to 12,000 (one inch equals 1,000 feet) and are of the dimentions to fit overlays of tax-plan maps.

In Sept. 1971, the state issued its first maps and regulations in two test areas, to be followed by a public hearing as required by law. One of these was in Tuckerton, with about 30 sq. miles of coastal marsh. This is an area where development has dredged thousands of acres and where thousands more are threatened. The Mystic Development Corp. ~~xx~~ had already been enjoined by the state to stop its dredging and ~~xxxxxx~~ restore the land to its prior condition, as far as possible.

~~Clam~~ Clam shells are piled along the bank and raodways where one could talk to local clammers and fishermen who know the wetlands intimately, even patriotically. The clammer could show you a rig called a "shinnecock," a scoop with rake-like teeth, having a handle that could be extended to 30 feet to drag the bottom for clams.

The fisherman's feeling about wetlands is in effect very much like that of some officials, the conservationists, other fishermen and local inhabitants who respect~~ed~~ their environment for its own sake.

He feels that the ~~develop~~ developers are taking almost everything. He also feels that if enough local people who really value the coast and the living it provides them could always be on the alert for violations, things might be better.

& Land and intimate human use should not be divided. Seen through local eyes, respectful through long acquaintance with all the details in the landscape, the marshes, the estuaries, the creeks and inlets, the grasses, birds and salt pools are a tremendous resource worth far more than billions of dollars. Compared to

such a resource, the value of speculative "growth", ruining what ~~is~~ it feeds upon, amounts to no more than a gutted clam shell tossed into the sea.

~~The xxxxxxxx wind xp~~