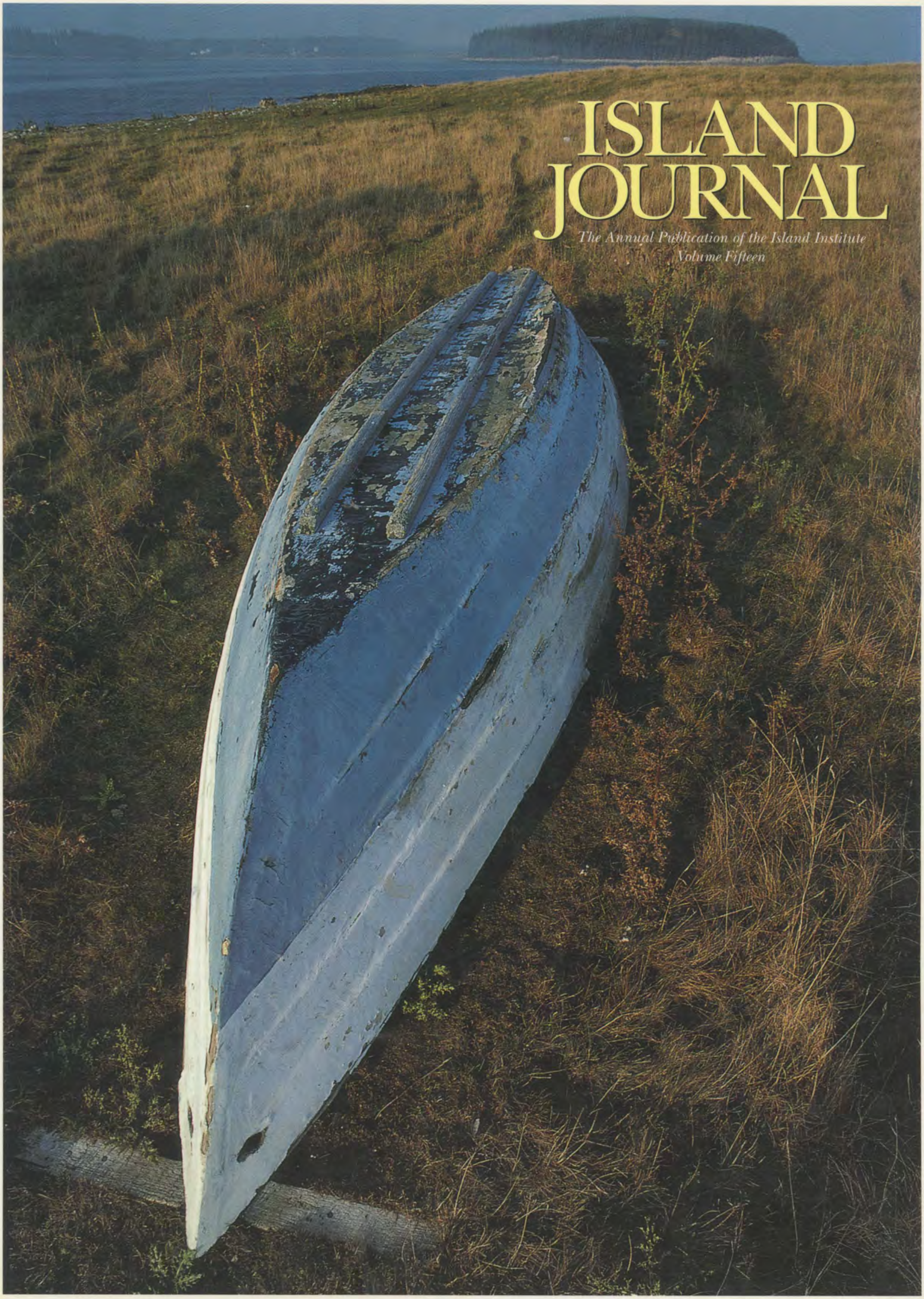

ISLAND JOURNAL

The Annual Publication of the Island Institute

Volume Fifteen

Jeff Dworsky

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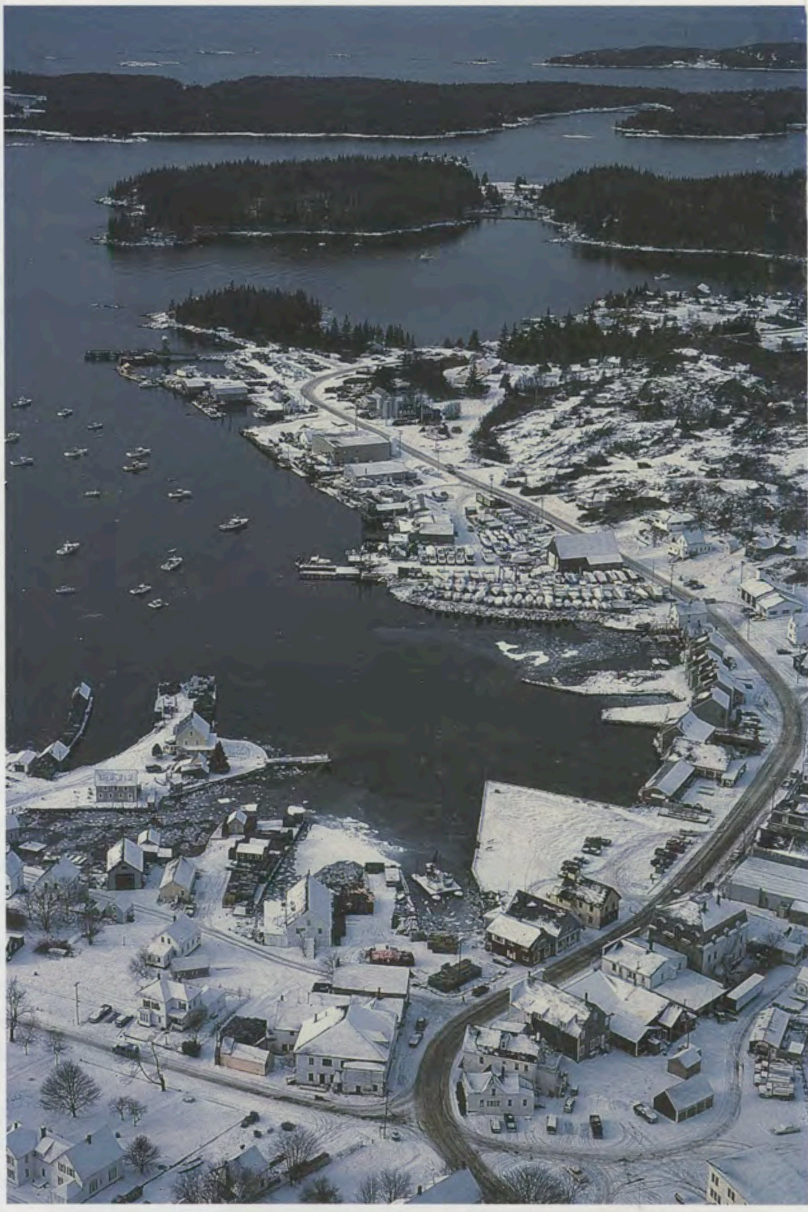
To our readers

For 15 years, *Island Journal* has celebrated island communities. The character of islands — their natural beauty, self-sufficiency, isolation and sense of shared destiny — has always made them and their residents different from their counterparts on the world's continental mainlands. An island that "gets it together" can make things happen. In a world so often paralyzed by confusion and conflict, that's worth celebrating indeed.

Yet we know how vulnerable an island can be. Changes half a world away can create or destroy someone's livelihood. The quality of an island's transportation links or communication system can spell the difference between prosperity and scraping by. The price of fish, lobsters or urchins is determined in Portland, Boston or even Tokyo, not on Vinalhaven or Monhegan. Decisions about ferry, phone or Internet service are made in Augusta and Washington, not on Cliff Island or Matinicus.

In this respect island communities and rural parts of the mainland are much alike: a potato farmer in Aroostook County and the owner of an island general store could find common ground in their experiences of isolation and powerlessness, as well as pride and purpose.

Once again, *Island Journal* swings its beacon in the direction of island communities of all kinds, searching out successes and tragedies in hopes that we all will learn from both. Maggie Fyffe tells how she and other residents of Eigg, a remote speck in the Outer Hebrides of Scotland, bought out their landlord and took control of their lives. Nancy Griffin describes what has befallen her birthplace, Newfoundland, since mismanagement brought about the collapse of the fishery that supported it for four centuries. We look at how three communities — two in Maine, one in Maritime Canada — weathered internal disputes that could have crippled them for generations. Turning to other kinds of communities, we consider the relationship that has developed in recent years between fishermen and scientists, and how that connection could improve the management of marine resources. We go exploring — up the Aleutian Island chain between Russia and Alaska in 1997 and a century earlier; down the Maine coast to Eastport and beyond with John James Audubon in 1833. We remember the rich history of the Maine coast, from the scholarly island researches of Charles McLane to the raffish era of drug smuggling less than 20 years ago.



Peter Ralston

Island Journal is an unusual publication, a book-like magazine published only once a year about topics that aren't always well understood by the general public. Yet to us it is a labor of love, an opportunity to refine and (with the help of many others) define a way of life that is of great and lasting value.

The Editors

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Volume Fifteen

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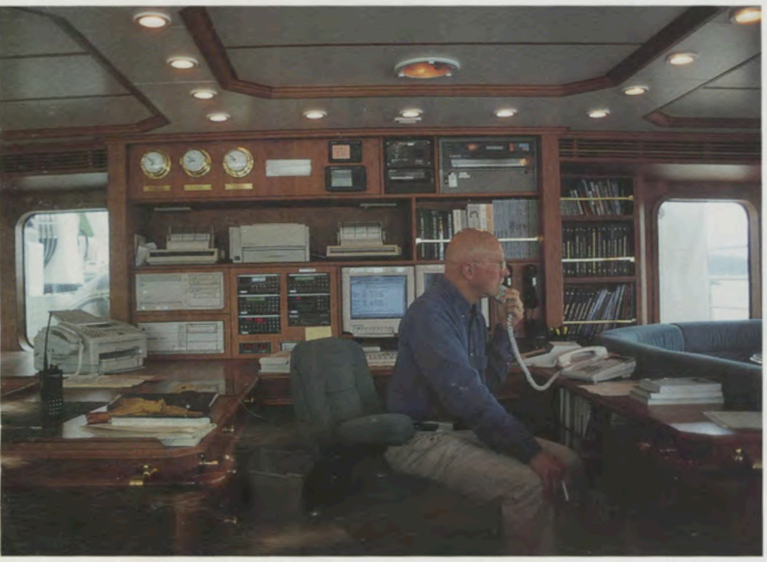

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Sustaining Islands and Their Communities

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Marge Kilkelly (left) and Ken Lantz of the Institute's community services department, aboard RAVEN. Bridget Besaw

EYE OF THE *RAVEN*

From the logs of the vessels of the Island Institute

PHILIP W. CONKLING

THE WINTER OF 1998 will be remembered decades hence as we retell our stories to our grandchildren, perhaps often enough to make us seem quaint and tiresome relics of a frontier life. Unless, of course, this is just the beginning of a period of more violent weather, as some climatologists believe, brought on by the atmospheric imbalances caused by global warming. The ice storm of January 1998, which drove not just Maine but also much of northern New England and New York to their knees under its terrifyingly beautiful weight, turned vast stretches of northern forests into eerie World War I landscapes of exploded fury. The Maine Forest Service estimates a million acres of forest were damaged, and a hundred thousand acres were "destroyed." But miraculously, most of the archipelago escaped serious damage. Shrieking easterly gales battered headlands and coves, but more rain fell than ice and snow.

So the winter grinds on in its ponderous way, with rosy, bruised dawn breaking like a shiner an eye-blink earlier each morn. The furious gales abate for a few days or a week before getting up on their hind legs again and battering their way across windswept pastures.

Not so the financial gales that have unrelentingly battered the Pacific rim. Among the many global repercussions from these storms, the demand (and price) for sea urchins, now Maine's second most valuable fishery, has fallen to an eight-year low, leaving hundreds of winter fishermen scraping underwater slopes for meager returns.

The winter of 1998 on Monhegan Island is a particularly dark and troubled time, not from brutal weather or plunging yen, but from the mounting pressures of fishermen from mainland towns who are campaigning to fish inside Monhegan's territorial waters. This deeply rooted conflict has flared and simmered for at least a generation, but reached a flashpoint this winter in the Maine Legislature. Nothing is simple or clear-cut on the water, but the facts are these: since 1907 when Monhegan lobstermen successfully petitioned the Legislature for a restricted, six-month winter season beginning in January, Monhegan lobstermen have fished a season harder on the body, but more rewarding for occurring the half year when prices are about twice what they are during the summer and fall, when everyone else is fishing. Monhegan's special territory and fishing season, the only one of its kind in all of New England, has been further restricted since 1976 by informal agreements among the island's lobstermen to limit their number to 12 and the number of traps each may fish to 600.

In a single paragraph, the 1907 legislation defined the six-month season along with a two-mile boundary around the island. Although Monhegan's traditional waters extended another six to eight miles offshore into federal waters, this seaward area was not at issue for most of this century because mainland boats were not big enough for offshore winter lobster fishing, leaving the seaward territorial limit to the south'ard undefined, but neither undisputed nor undefended by Monhegan's "law of the knife." Two years ago, six hard-working Friendship fishermen moved lobster gear into this no man's land to the south, just outside Monhegan's two-mile limit, asserting their rights as licensed fishermen to set gear anywhere within state waters where they were not prohibited. They sparked a dangerous confrontation, temporarily defused by Marine Resources commissioner Robin Alden, who brokered a settlement formalizing the Monhegan Island Conservation Area in 1995.

The bitterness of the confrontation between Monhegan and Friendship is much more than a local fight between two fishing communities. It is a confrontation between two different management philosophies both of which have deep roots in Maine.

The 1995 agreement, among other provisions, closed the southern boundary at three miles, while permitting anyone to fish inside Monhegan's traditional territory who agreed to the restricted season and 600-trap limit. When the five Friendship lobstermen applied for permits to fish inside the Monhegan Island Conservation Area, as is their undeniable right, all hell broke loose yet again.

The bitterness of the confrontation between Monhegan and Friendship is much more than a local fight between two fishing communities. It is a confrontation between two different management philosophies both of which have deep roots in Maine. Friendship represents the open access philosophy — the ocean is available for anyone to fish anywhere they can, to maximize individual return, and government's role is to set the rules (which fishermen have a well-deserved reputation for ingeniously evading). Monhegan, on the other hand, represents the other end of the fisheries management spectrum, where fishermen have evolved informal local rules developed by consensus that fishermen themselves enforce for their collective benefit.

•

Lobstering, of course, is not just an island occupation. It is also the cultural underpinning for 12 of Maine's 15 year-round island communities. It is for this reason that we have spent so much time in recent years trying to sort out fact from fiction in the long-running debates over the ecological health of this critical resource. This past fall, various members of the Island Institute's staff were involved with a unique lobster research project organized by Dr. Robert Steneck of the University of Maine's School of Marine Sciences. Steneck, who has collected lobster data off the Maine coast for the past 15 years, has been trying to uncover the details of the lobster's life history — where larvae settle, where the juvenile lobster grounds are located, where the broodstock is. This last question is critical because evidence is mounting that the broodstock "seeding" much of coastal Maine may be located in deeper waters beyond Maine's three-mile limit, where federal regulations do not protect "oversized" lobsters with the minimum and maximum size limits (the "double gauge") used in Maine waters. Steneck secured a grant to bring a research submarine to survey lobster populations during a series of dives along the inner edge of the Gulf of Maine. The expedition, which included equal numbers of lobstermen and scientists, searched for clues to the question of whether the lobster resource can sustain the intense fishing pressure and record catches of recent years.

Aboard the JOHNSON SEA LINK, October 29

"We have a seal, — we're airtight," radios Hugo to his counterpart in the front chamber of the four man submersible vessel, as we begin our descent to the bottom of the Gulf of Maine. And a good thing, too, since we will descend to a place 320 feet beneath the surface of Blue Hill Bay. Hugo, a technician from the Harbor Branch Oceanographic Institution, and I are in a submarine equipped with video cameras and a laser light measuring system to count and measure any lobsters we encounter in these deep waters, where information about Maine's lobster population can be collected.

The ballast tanks blow a silver stream of bubbles past my porthole as we begin our vertical descent. Soon the silvery light gives way to pale green and then quickly to an emerald green world of refracted light in the dense, plankton-rich water of Blue Hill Bay. At 80 feet, barely a quarter of the way to our destination, the rich green algal glow gives way to black-green and then to the inky darkness of the void. This particular dive is one of eight locations between South Bristol and German Bank, Nova Scotia, that the submersible will survey along the edge of the Gulf of Maine. Steneck's idea is to test whether these deep locations are refuges for large reproductive lobsters; this may explain the amazing resiliency of Maine's lobster population despite the intense fishing pressure to which it is annually subjected.

The JOHNSON SEA LINK, one of the earliest submersibles designed to travel through the far reaches of oceanic depths, resembles nothing so much as a lunar landing module, with thrusters mounted fore and aft and arrayed to provide mobility in the strange and alien world of the bathysphere, the lightless depths scientists have only begun to explore in the last decade or two. Up on the deck of the 181-foot mother vessel, EDWIN LINK, are a handful of lobstermen and their families who have been invited by Steneck to take the plunge to the bottom, in another unprecedented aspect of this project, which is part expedition, part classroom study, and almost pure thrill. Even those lobstermen who do not elect to make the dive themselves are nonetheless eager to view the videos that the SEA LINK brings to the surface showing the realm of the crustacean they have spent lifetimes chasing.

Bridget Besaw

Ken Lantz, Marge Kilkelly and Christine Johanson in the schools and community services office at the Island Institute.

For the four of us aboard, there is a feeling of near-weightlessness as we descend to this remote world, until we reach the bottom and the bright floodlights of the SEA LINK suddenly light up the void. A video monitor in our tight after-compartment shows us a picture of what the passengers in the front chamber see out of their large Plexiglas bubble. Planktonic particles drift by like snow and on the bottom are pink, encrusted mussels, sinuous starfishes and a crab prancing sideways out of sight.

The SEA LINK begins to make its way along a transect, its lights carving out a window of visibility six to eight feet ahead of our track as we hover a few feet off the soft bottom. We are only 319 feet below the surface, but many worlds removed from light and air. We soon see a whole field of sea anemones which are like a meadow of poppies, waving to and fro in the underwater currents. Here and there on this underwater plain are occasional boulders encrusted with filamentous algae and festooned with other thick-stemmed anemones. Little translucent shrimp skitter off the bottom as we approach.

In the forward compartment, the pilot changes the pitch and roll of the SEA LINK, the focal length of the video camera and the resolution of the picture, navigating by sonar as we begin the search for the ancient lobsters which first made their appearance in the fossil record 80 to 100 million years ago. It's like hunting with a little flashlight in the immense reaches of inter-galactic space.

At the second boulder we disturb our first lobster, which has probably not seen light since it was a tiny floating larvae many, many years ago, and it gathers itself up on its eight pairs of spindly legs and begins to move away from the SEA LINK. In profile the segmented joints of its unique body plan, like some creature put together by Legos, shows up eerily in the light. Pinpoints of red laser light get a measurement of the lobster's carapace. We have our first data of the dive, sending the news aloft in a sonar transmission that propagates through the water and is picked up in the pilothouse of the ship hovering somewhere above us.

Every once in a while during the two-hour dive, we hit bottom with a thump and must rise up a few feet and maneuver around the uneven surface. It is comforting to see so many translucent white anemones, soft-bodied animals that are the first to be destroyed when the bottom is dragged. Danny Lunt, a participating fishermen from Frenchboro, says it has been about a decade since scallop draggers cleaned out the beds here in this deep pocket of the bay. But for the most part we are looking at a seemingly benign, stable environment: no climate, no waves, just the conveyor belt of the currents sweeping food endlessly by these creatures adapted to an almost timeless life.

All my life I have dreamed of this, the bubble of air overhead shrinking away and disappearing as I descend into an entirely new world. Like Captain Nemo in Jules Verne's Mysterious Island, I feel I could stay here a long time. (In fact, Hugo carefully informed me at the beginning of the dive that we had enough food for five days and enough air to last us two weeks if ever we should become stranded.)

Alas, all too soon our time is up and we begin our ascent to the surface, but with a trove of pertinent data that Bob Steneck will share not just with his skeptical scientific colleagues, but with a broad cross section of the coastal public whose fortunes rise and fall with the health of the populations of lobsters hidden in the briny depths.

The Maine Legislature acted this spring to protect Monhegan's Conservation Area. Co-sponsored by Senator Marge Kilkelley (who also serves as the Institute's Community Service Director), the legislation establishes a two-year apprentice program for those who want to fish inside Monhegan's territory. The Friendship fishermen defiantly opposed the legislation, pointing out that it was carefully crafted to exclude them from the area by forcing them to start over as sternmen.

Monhegan presents a compelling picture of the lobster resource it has conservatively and successfully managed for the past 90 years. Against the backdrop of so many other marine resources that have been exploited to commercial extinction, this point hung ominously over the debate. What was at stake was not just an abstract principle - the right to fish where you choose in state waters - but the survival of an island culture of significance way beyond its small number of year-round residents.The loss of just one fishery from an island is like losing a piece of the community; and during a decade when we have seen dozens of fisheries disappear, we have also witnessed the very fabric of ecological and economic life tatter, fray and ultimately tear. Every time a piece of year-round community infrastructure disappears from an island community, what takes up the slack is seasonal residential development — certainly not a bad thing, unless the cumulative effect is to efface the qualities that draw visitors in the first place, beginning with independent and self-reliant individualists who fuse their identities in vibrant, traditional communities.

Islands as models of community

Over the past year, we have been developing a new long range plan. Its message is simple: we will use the resources of the Institute to reinforce the idea that Maine's island communities and their neighbors are unique, important and have relevance far beyond the Maine coast. They are, in a word, models of community.

As Marge Kilkelley puts it, "Schools of fish support island economies and schools of children support island communities. The community services and schools component of the Island Institute is essential to its mission of assisting and sustaining island communities, because without people there are no communities."

We are inclined to say that all of us are, in the ultimate sense, islanders; it is equally true that no island is an island unto itself. What islands deal with often comes from the mainland, for better or worse. A "system level" view, whether we're talking about people or the whole ecosystem, means appreciating this interdependence.

The Institute is committed to testing strategies, not just for protecting resources but for restoring them. Surrounded by world-class marine ecosystems, we recognize the need to look at what rivers bring to these waters. The plumes that come out of the Kennebec and Androscoggin rivers cycle into eastern Casco Bay, just as the Penobscot River is a major source of contaminants in Penobscot Bay. Coastal currents and rivers have large influences on the condition of the environment surrounding the islands. That environment, in turn, affects the threads of life that sustain communities.

How do we participate in the public discussion of the health of the fisheries, the lobsters and urchins on which most islands depend? What about the recent efforts to culture surf clams, blue mussels or nori? Can cultured scallops be used to enhance local stocks for traditional fishermen? We don't see the chasm between aquaculture and fisheries that some people do. Lobstermen, after all, store their catch in pounds, feeding them while they wait for the price to go up; if this isn't a form of aquaculture, what is it? Fisheries and aquaculture are part of a coastal and island continuum.

In the end it all comes down to communities — for the Island Institute, sustaining island communities. Most of the things that threaten island communities are motivated not by malice but by ignorance. The Institute provides information. When the time comes for us to pass on our stewardship to the next generation, we hope there won't be more island communities that have been strangled for lack of understanding.

The loss of just one fishery from an island is like losing a piece of the community; and during a decade when we have seen dozens of fisheries disappear, we have also witnessed the very fabric of ecological and economic life tatter, fray and ultimately tear.

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In addition to the debates and confrontations over island lobsters and territories, we have witnessed another island stand-off, in this case between the U.S. Postal Service and four tiny island post offices along the archipelago, particularly Cliff Island in outer Casco Bay. Here again, the tireless efforts of Marge Kilkelley in her dual roles as state senator and Institute Community Service Director, appear to have been decisive. At issue here is the newly privatized Postal Service's reasonable notion that absent some undefined level of stamp sales and postal activity, it is more cost effective to shut small post offices down and have their patrons get their mail further down the road. All well and good on the mainland perhaps — and good in theory but a horrific threat to places like Cliff, Matinicus, Frenchboro and the Cranberry Isles, where the next nearest post office may be separated from islanders by a great chasm of logistical nightmare. When you apply national standards to island communities, we have long known, you're likely to kill them.

Kilkelley has helped promote the stamps-by-mail program, used so successfully in recent years by Islesford postmaster Joy Sprague. The program gives mainlanders who want to help protect threatened island post offices a tangible way to do so, by purchasing their stamps through the mail.

We will go on providing such services, we hope, for the next 15 years. We believe our efforts will help pass on a less threatened archipelago, a less tattered and frayed Gulf of Maine, a more thoughtful, more inclusive dialogue over the long term. For it is truly the children of the archipelago who will pay for our failures. To that end, it is fitting to close with an entry from the "Log of the RAVEN," written monthly for *Inter-Island News* by Ken Lantz of the Institute's Schools and Community Services Program:

RAVEN started the month with an introductory trip to Islesboro School. Following that little adventure, we cruised on down to Vinalhaven. Armed to the teeth with donuts I met with the staff at Vinalhaven School discussing their concerns about a variety of issues. After that foray, RAVEN took a break while I took the ferry to Swan's Island. What a great little school! If the state needs a reminder why they should get back into the school building business, they need to look no further than this physical plant. After meeting with the staff, I was treated to a guided tour of Swan's ... Thanks, Gayle!

Our longest trip to date, Matinicus, was next on the agenda. Not being familiar with all the high tech navigational equipment aboard RAVEN, I plotted my course the night before. The next morning RAVEN bounded past the breakwater, made a slight, right-hand turn and headed for a fogbank that my calculations said surely must be Matinicus. Deviating off her compass course only to miss lobster gear, she continued towards her hazy destination. Just a few miles short of our target, the fog lifted showing RAVEN's bow pointing directly at No Mans Land Island. I grabbed a mooring, rowed ashore and headed for the school.

At this point I must stop and make an observation. I have been unable to walk the entire distance to any school from any harbor. As soon as I would get my bearings and start trucking, someone would always stop and offer me a ride to or from the school. Just another example of the generosity of island folks.

At Matinicus, not only did I get to meet some great kids and staff, I also got a sneak preview of a Christmas play written by one of the parents. Besides writing the play, she also composed three songs to go with it.

Isle au Haut was next on the agenda. As Yogi Berra used to say, it was déjà vu all over again. A great staff and wonderful kids practiced their version of A Christmas Carol. I wouldn't be surprised if a few of these aspiring actors and actresses hit the big time. What talent!!

RAVEN took the last visit of the month off, while I headed to Peaks Island. What a unique situation there — big-city sights and conveniences coupled with island living.

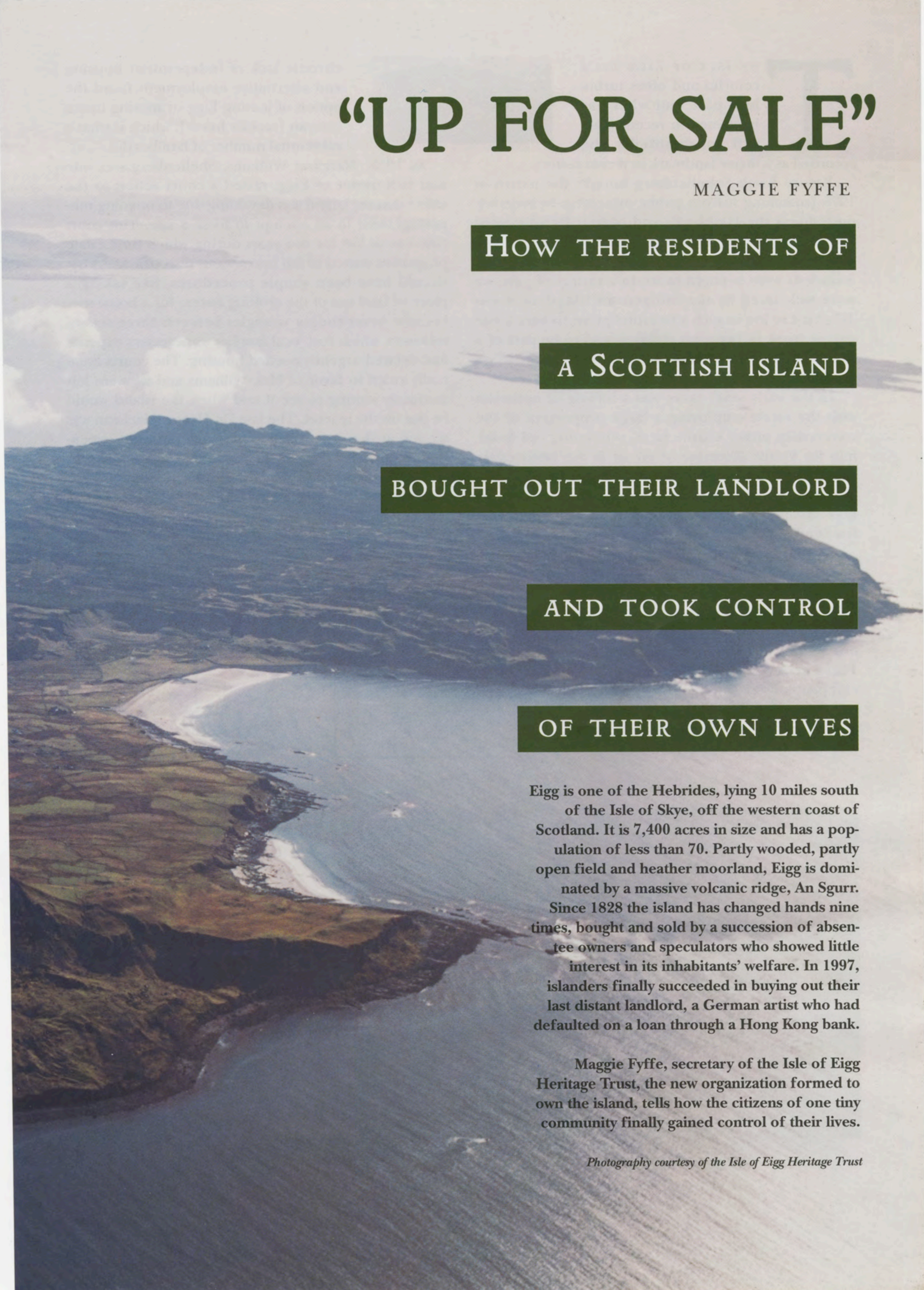
The mighty ship has also started to become a freight hauler. During this past month, she has been part of the distribution to the islands of 31 winter coats for kids, two boxes of children's novels, a set of Encyclopedia Britannica and a set of Compton's Encyclopedia as well as a variety of text books.

In the meantime, the unbelievable ice and snow of the winter show some signs of its long march to the equinox, and to the heady few days when summer's light seems nearly infinite.

“UP FOR SALE”

MAGGIE FYFFE

HOW THE RESIDENTS OF A SCOTTISH ISLAND BOUGHT OUT THEIR LANDLORD AND TOOK CONTROL OF THEIR OWN LIVES



Eigg is one of the Hebrides, lying 10 miles south of the Isle of Skye, off the western coast of Scotland. It is 7,400 acres in size and has a population of less than 70. Partly wooded, partly open field and heather moorland, Eigg is dominated by a massive volcanic ridge, An Sgurr. Since 1828 the island has changed hands nine times, bought and sold by a succession of absentee owners and speculators who showed little interest in its inhabitants’ welfare. In 1997, islanders finally succeeded in buying out their last distant landlord, a German artist who had defaulted on a loan through a Hong Kong bank.

Maggie Fyffe, secretary of the Isle of Eigg Heritage Trust, the new organization formed to own the island, tells how the citizens of one tiny community finally gained control of their lives.

Photography courtesy of the Isle of Eigg Heritage Trust

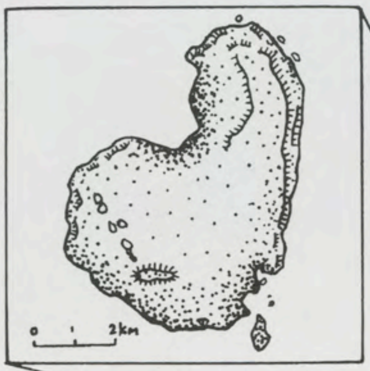
THE ISLE OF EIGG has a colorful and often turbulent past, but what has happened in recent years will undoubtedly be recorded as a major landmark in recent history.

Before Keith Schellenberg bought the island in 1975 (snatching it from public ownership by narrowly outbidding the Highlands and Islands Development Board), the population had dropped to a dangerously low level, so when several young families (ourselves included) were brought in to do a variety of jobs, we were welcomed by the indigenous islanders. I was delighted to live in such a beautiful place, to have a safe environment to bring up children and to be part of a small community — the politics of landlordism had yet to make an impression upon me.

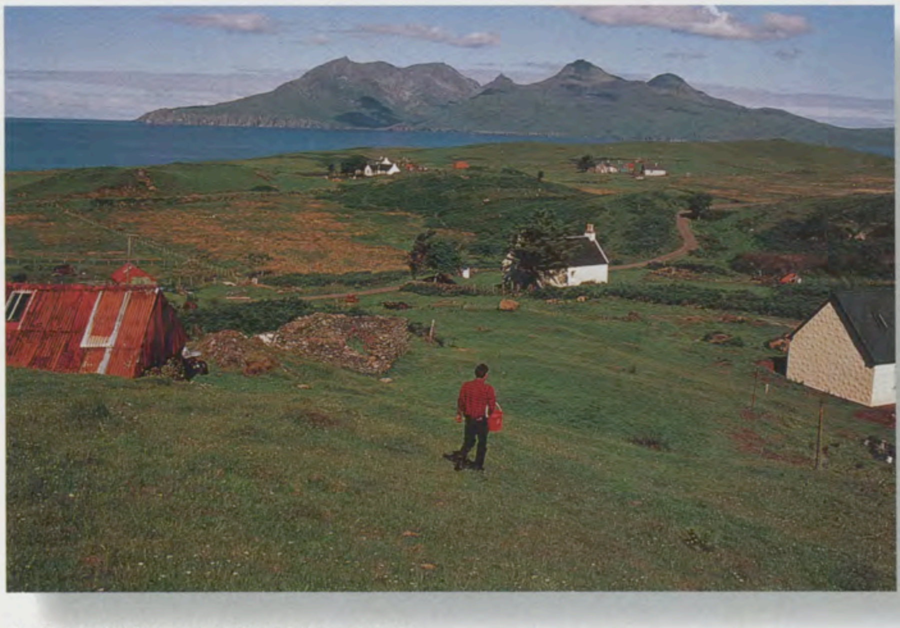
In the early years there was a feeling of optimism with the estate employing a large proportion of the community, either on the farm, renovating old buildings for tourist accommodation, or in the newly established Craft Centre. However, that feeling soon began to disappear to be replaced by a general air of insecurity — no one had a contract of employment and quite a few families lived in "tied" cottages.

By 1981, we were lucky enough to have bought a derelict cottage with attached croft tenancy and although it was a relief to have a secure place to live, it ironically coincided with my husband and several other local men being made redundant. There were constant injustices but in general people were unwilling to speak out in case it would jeopardize their house or job. Most people working for the estate felt they were being manipulated but due to a chronic lack of independent housing and alternative employment faced the option of leaving Eigg or moving into a caravan [mobile home], which is what a substantial number of families did.

In 1988, Margaret Williams, Shellenberg's ex-wife and half owner of Eigg, raised a court action to the effect that the island was devaluing due to ongoing mismanagement in an attempt to force a sale. This court case was to last for two years during which time estate properties started to fall into serious disrepair and what should have been simple procedures, like taking a piece of land out of the crofting system for a house-site, became never-ending wrangles between three sets of solicitors, which cost local families unnecessary expense and delayed urgently needed housing. The courts eventually ruled in favor of Mrs. Williams and we were left anxiously waiting to see if and when the island would be put on the market. The late Dr. Hector MacLean was quoted at the time: "Eigg is probably the most expensive piece of bracken in the world, but it has a charm and a magnetism all of its own and a resilient people who will put up with all weathers. This wrangle has worn even us down."



Map by Kate Fitzgerald



An Sgurr (399 meters) is Eigg's highest point.

Over this period there had been frequent discussions about the possibility of community ownership but there certainly wasn't the consensus or the confidence to put these ideas into practice until 1991, when a group of people concerned about land ownership in Scotland formed the Isle of Eigg Trust and brought their ideas to the island for our consideration. Many meetings later, the Eigg Residents Association, which consists of every adult member of the community, voted in favour of supporting their aims. It's interesting to note that at this stage we were still looking to others to take the lead.

In May 1992, Eigg was officially put on the open market. Interest had been shown by the Scottish Wildlife Trust (who had had a presence on the island for a number of years) and the Highland Council (our local authority) in trying to form a consortium with the community but time and funding were in short supply and we were unable to prevent Mr. Shellenberg from buying his ex-wife's share of the island. Our local newspaper carried the headline "Paradise Lost — Eigg is back in the hands of Emperor Schellenberg." Shortly afterwards, Radio Scotland's "Speaking Out" program featured Eigg in its discussions on land ownership — but not a single person from Eigg was prepared to speak on the air.

We made one final attempt at open communication. We held a public meeting that we invited Mr. Schellenberg to attend in an effort to discuss our concerns. Although famous for his prevarications, he did attend and agreed to sell or lease a piece of ground for a new community hall at a peppercorn rent — and yes, the leases drawn up at the time of the sale supposedly to protect existing tenants would be signed — and yes, he would cooperate with the signing over of a plot of land offered by a local crofter for a sheltered housing project. A lot of us were skeptical but because of the importance of all these projects we were willing to give him one last chance. During the course of the following year none of his promises were fulfilled — the manipulation continued and there was a total breakdown in communication. The one thing that did lift our spirits that year was the news that the Assynt Crofters Trust had been successful in their bid to buy their land. This was undoubtedly a turning point not only for the people of Eigg but for many other communities across the Highlands.

Nineteen hundred and ninety four was the year which things changed radically. We woke up one morning in January to learn that Shellenberg's vintage Rolls-Royce had been destroyed by a mysterious fire. The resulting press coverage with Schellenberg's numerous libelous statements and his insistence on differentiating between islanders and incomers angered the community considerably and led to the indigenous population issuing the following statement: "We who have been born & brought up on the island would like to refute utterly the ludicrous allegations about the community here. The island has a small but united population of local families and incomers who are between them struggling to develop a community with a long-term future against the apparent wishes of an owner who seems to want us to live in primitive conditions to satisfy his nostalgia for the 1920s. If the nature of the island has changed, it could be something to do with the fact that all the local men working for the estate during Schellenberg's first years have left, taking their indigenous way of life with them. The incoming islanders play an active caring part in the community. They help run the senior citizens lunch club, they drive the community minibus to enable those without transport to get to the shop or church and they have organised a Gaelic playgroup so that their chil-

Over half the island's population assembled for this picture!

"Eigg is probably the most expensive piece of bracken in the world, but it has a charm and a magnetism all of its own and a resilient people who will put up with all weathers."

dren will have a chance of learning Gaelic in order to preserve the traditional culture of the island."

This marked an important change in our relations with the media — we made sure from then on that our views were represented.

For a while it looked like the island would be put up for sale again — both the Scottish Wildlife Trust and the Highland Council renewed their interest in being involved but during a further "Speaking Out" program, recorded on the island, Schellenberg made it quite clear that he would never sell to any organization which in any way involved the community. Undeterred, we continued with our investigations, which included doing a full community appraisal. We used the technique of splitting up into small groups — a less intimidating atmosphere than a large public meeting — and encouraged everyone to contribute. Every aspect of life on Eigg and how we could best improve it was discussed and recorded in the hope that this could become the basis for a future business plan.

Our plans moved a step further when the original members of the Eigg Trust decided to resign and hand the Trust over to the people of Eigg. Shortly afterwards we launched an appeal for funds to enable us to explore our alternatives and the resulting flood of letters and donations left us in no doubt that land reform was an issue that concerned the majority of Scots.

The final straw came in October when Schellenberg issued two eviction notices — one to a local family with five children and the other to the resident wildlife warden — a story that again attracted major press coverage, this time giving us a far more positive image and gaining much public sympathy. It turned out to be the issue that totally united the community in its opposition to a system which could treat people with so little regard. The evictions never took place, but a feeling of insecurity and uncertainty affected everyone's life.

Over the course of the next few months, a variety of rumors were in constant circulation — Eigg was up for sale, was about to be sold, had been sold! Stubbornly I refused to believe the stories, convinced that if something so significant to the people of Eigg had happened, we would surely have been told. Not so. In March 1995, we learnt from the press that we had indeed "been sold" for £1.6 million to a mysterious German artist who called himself "Maruma." We issued a statement to say that we were relieved that the uncertainty and speculation of recent weeks was over, that we had felt restricted and suppressed by the previous management and that we looked forward to meeting Maruma, who we hoped shared our aims and ambitions.

Maruma arrived by helicopter one Sunday morning in April. He visited every household to introduce himself and although rather stunned we hastily arranged a residents' meeting for the following day. We presented him with a copy of our workshop results: Eigg as we saw it. We also raised the most pressing issues, i.e., lack of leases on both private and business premises and associated land and the urgent need to provide a site for a new community hall. He seemed to appreciate our concerns, promised to look into the matters we'd raised, talked vaguely about a concept for the island that would be formulated in consultation with the community and expressed a desire to be a part of the community and not to be seen as "owner." There was only one topic of conversation around each kitchen table that evening — could we believe him? He disappeared the following day and life went on, the day-to-day functions being carried out irrespective of who actualy owned the island. Maruma reappeared for a few days in July. The concept was still rather vague but he was working on the leases and agreed to sell us a hall site for a nominal sum. We felt sure we were making progress. That was to be short lived. In October Maruma hit the headlines again — he was being investigated by the public prosecutor in Stuttgart regarding irregularities in a £1.6-million loan from a German bank shortly after buying Eigg.

Piper Duncan Nicolson leads everyone up from the pier on June 12, 1997.

The *Sunday Times* also reported that Eigg had been used as security on a further loan of £220,000 from a businessman in Hong Kong and a similar amount from a company in Lichtenstein. We immediately faxed Maruma asking for clarification of the situation, but he chose not to reply. In fact he chose not to reply to any of the numerous faxes that were sent to him over the course of the coming months. It was obvious that we had to prepare for the eventuality of the island being put on the market once again. We took advice on the most suitable legal framework for ownership, which would include the community having a minimum of 50 percent representation, and work began on producing a business plan based on the results of our workshops.

In January 1996, the three remaining estate workers did not receive their wages, which led us to issue the following statement: "Since October last year there have been mounting doubts as to the financial credibility of Eigg Island Ltd. It now seems very doubtful whether there are sufficient funds for the day-to-day running of the island — January's wages are already overdue. It is intolerable in a community like this that people's livelihoods can be put in jeopardy by a third party based in Edinburgh or Stuttgart. The community has now lost confidence in Maruma. He has failed to fulfill any of his initial promises and there has been a complete lack of response to our many communications. There is a sense of deja-vu about this situation and the community is more than ever convinced that there is no future for the island under the landlord system. It is clear that the only way forward is through a community-led buy out."

Alarm bells started to ring in July when we had an unexpected visit from lands agents from Knight Frank, who informed us that they were looking at the extent of the dry rot in the main house. Somehow this didn't ring quite true as they were accompanied by a photographer busily taking aerial shots from a helicopter. We all came to the conclusion that a sales brochure was in production and that assumption proved right when a week later, after much interest from the media, Knight Frank was forced to announce that Eigg was indeed "Up for Sale" — with a price tag of £2 million!

Because most of the groundwork had already been done, we were able to move swiftly. On August 17, with journalists from every major newspaper in Britain in attendance, we launched our public appeal. That's when the hard work really started. We set up a database with as many names and addresses as we could think of and started to send out leaflets. Likewise the Highland Council distributed the leaflets through libraries and other public buildings and the Scottish Wildlife Trust produced a separate leaflet (with the emphasis more on conservation), which was sent out to members of all of the 47 wildlife trusts nationwide.

The response was totally overwhelming — letters of support and donations began to flood in from all over the world and the phones rang constantly. Not only was there total commitment from the people of Eigg but also from politicians who brought the matter up in Parliament, friends who organised fund raising events, and musicians who organized benefit ceilidhs all over Scotland and as far away as Detroit!

We had set ourselves the target of raising £800,000 through the public appeal; the rest of the funding was expected to come from the National Memorial Heritage Fund. It was a huge blow when they announced that they would like to support us in principle but were unable to do so unless our constitution was altered in favour of a majority for an

Dugald MacKinnon and Dolly Ferguson, Eigg's two oldest residents, unveil the commemorative plaque on June 12, 1997.

On August 17, with journalists from every major newspaper in Britain in attendance, we launched our public appeal. That's when the hard work really started.

appropriate conservation body, e.g., The National Trust.

Much debate followed. Were they really prevented from supporting our bid or had there been behind-the-scenes political pressure from a government opposed to land reform?

The Isle of Eigg Heritage Trust had by this time become a legally established company with charitable status comprising four elected representatives from the community, two from the Highland Council and two from the Scottish Wildlife Trust with an independent chairman. We felt unable to alter this structure mainly because (a) all partners were committed to its present form and (b) it was on this basis that the general public had responded so generously to our appeal. As the closing date for bids approached, salvation came in the form of an anonymous donor who wished to pledge £750,000!

On November 28, Mark Cherry, chairman of our residents' association, was followed by television cameras as he made his way to the office of Knight Frank in Edinburgh to hand in our bid of £1.2 million (well below the asking price but based on a professional valuation). Two days later we learnt that our bid had not been accepted as it failed to reach the highly inflated asking price of £2 million. Although obviously disappointed we were by no means dispirited — the fundraising continued, helped enormously by the continuing interest and support of the world's media.

By the beginning of March 1997, the Appeal had reached £1.5 million and we felt ready to put a second bid on the table. Weeks went by with no response and then the break we were needing finally happened. Hong Kong businessman Hans-Rainer Erhardt had obtained the legal right to take over the sale of the island as Maruma had defaulted on his loan. The island would have to be re-advertised but the sale would be concluded within one month. I can safely say that I embarked upon the longest and most nerve-wracking week of my life, but the moment we had worked towards for so long finally came at 4 p.m. on Friday, April 4, with a phone call to say our bid had been accepted! Within minutes everyone on Eigg had heard the news, a few minutes more so had the rest of the world — it was at least four hours before I managed to get off the phone and drink a toast to the future!

The minute the celebrations were over it was back to work. We had until the official hand-over date of June 12 to write to everyone who had made a pledge to send the money as soon as possible. We needn't have worried — the pledges flooded in and much more besides and the deal was concluded.

The official hand-over ceremony took place on June 12 and was certainly the biggest celebration Eigg had ever witnessed. Approximately 400 people from all over Britain braved the wind and rain to be with us as a commemorative plaque was unveiled by our two oldest residents. Politicians, councilors, conservationists and members of the community made emotional speeches,

Eigg and the Internet

Eigg's appeal for funds was greatly enhanced by a page on the World Wide Web, provided free of charge by the independent service provider "Pipex" which was the first in Europe to have a safe money transferral system. "The system enabled supporters to donate to our appeal via the Internet," says Maggie Fyffe. "The Web site undoubtedly spread the word of our appeal far wider than we could have hoped, with e-mail inquiries arriving from all over the world. At present our Web page is being updated to include more information about the island."

Stornoway

Sixty-four years' experience in community land ownership

FRANK RENNIE

Recent converts to community land ownership are often surprised to learn about the existence of the Stornoway Trust Estate. This estate comprises over 64,000 acres of land on the Isle of Lewis, including the main town of Stornoway and a considerable number of crofting townships in the eastern part of the island. The surprise is that this land has been held in community ownership since 1923 and is a pioneering example of community democracy relating to land ownership in Scotland.

In the period immediately after the First World War, the entire island of Lewis and Harris was in the possession of Lord Leverhulme, the English industrialist who built his fortune on Sunlight Soap and contributed to the foundation of the multinational company Unilever. Leverhulme had great plans for the island, and indeed he embarked on many ambitious schemes for local development, but land reform was not on his agenda.

His belief that the future for the development of the area lay in fishing and fish processing industries, however, was in direct contrast to the views of most of the local population. Newly returned from the war to find themselves still landless, on the verge of poverty, and with few employment prospects, crofters were less interested in benevolent schemes than in actual land reform. There was a great deal of land agitation throughout the Highlands and islands at this time, and the primary school children sang a Gaelic song and some of Scotland's best musicians entertained us well into the early hours. A day to remember.

The Isle of Eigg Heritage Trust has since established a mechanism for management with eight directors and the chairman meeting on a regular basis as well as spending long hours communicating by fax and phone. Most of the work done to date has been research on how best to proceed — every decision must be well thought out if it is to be of lasting benefit. We are in the process of negotiating leases on the three main farms, which has already enabled one young man to return to the island, to be followed soon by an indigenous family who have been living on the mainland for several years.

Suitable grazing levels are to be agreed upon to ensure appropriate management of environmentally sensitive areas. The Scottish Wildlife Trust is investigating the availability of funding towards a forestry project which would involve managing existing woodland, planting hardwoods and fencing to encourage natural regeneration. We have recently appointed a project officer who will be responsible for gathering all available information and producing development plans. She will begin by coordinating our first major development, in the form of a new building at the pier to house a grocery store/tea room/craft shop/toilets and information area. These are all important facilities that are at present being provided in dilapidated and unsuitable premises. We would also like to renovate some of the derelict properties to provide an appropriate increase in tourist accommodation but this will be in the future as and when funding is available.

The rebuilding of Eigg's infrastructure will be a long, slow process but with a feeling of security and stability beginning to return we are all looking forward to the challenges ahead. One thing we mustn't lose sight of is the fact that although we were successful, the land laws in Scotland haven't changed and many other communities are still suffering at the hands of unscrupulous owners. With a new government and a future Scottish Parliament we must make sure that the subject of land reform stays on the agenda until suitable legislation is introduced.

***Maggie Fyffe** is an elected member and administrative secretary of the Isle of Eigg Heritage Trust management committee.*

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in Lewis, as in other places, the agitation led to confrontations with the landowning establishment.

By 1923, Leverhulme had tired of his vision for the islands, and as a magnanimous parting gift, he offered the crofters free ownership of their crofts. To his disbelief and disappointment, the vast majority of the population turned his offer down completely. In essence it was not beneficial, financially or politically, for crofters to cease being tenants and become owners. Already they had the freedom to work the land as they wished, and coupled with the absolute security of tenure provided by the Crofting Act, there was no material advantage in accepting the burdens of ownership.

The Parish of Stornoway, containing the only sizable town of the island, was in a different situation and this resulted in the establishment of a community-owned trust to which the ownership of the land assets of the parish were transferred.

Since that time, trustees of the Stornoway Trust Estate have been elected to manage the company. Trustees are drawn from the community and are elected by secret ballot from the electoral roll of the areas administered by the Trust. The Trust employs a manager and other technical and administrative staff, all based in Stornoway.

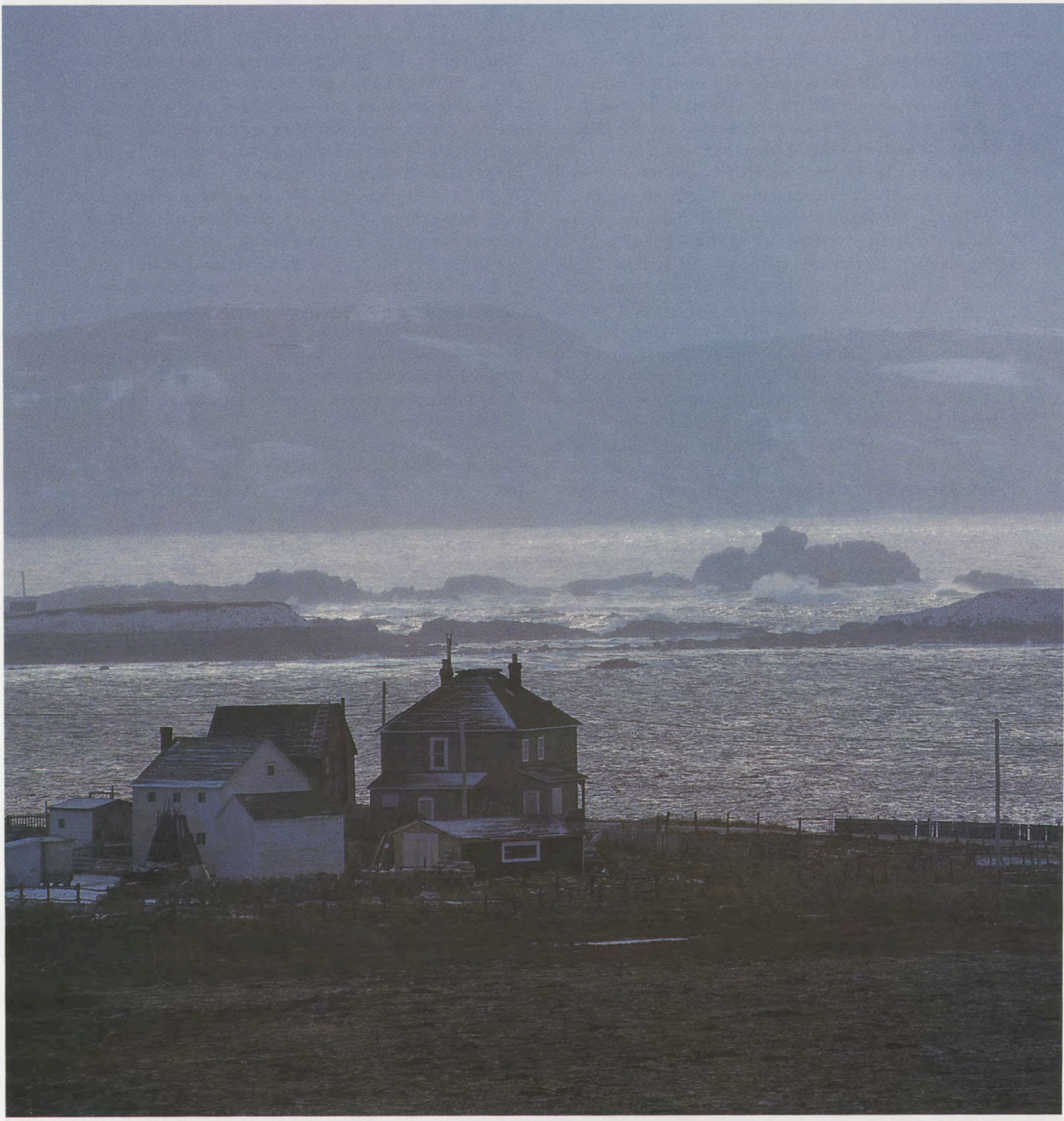
Today the Trust represents the interests of nearly 10,000 people, and has a wide range of commercial assets ranging from buildings and retail property in Stornoway to forestry, fish-farming and environmental concerns. Income is obtained from croft rents as well as from initiatives such as the lease of land to an oil industry construction company based just outside Stornoway harbor.

This position of being a croft tenant and a shareholder in the company that owns the land on which one is a tenant was unique until the recent successful community purchases of land by the communities in Assynt, Borve and Annishader, Eigg and most recently, Orbost in Skye. In recent years it has become widely recognized that community land ownership in Scotland offers an exciting new way, replacing the "options" of either the roulette of private land speculation or the "safeguard" of land nationalization.

For nearly 75 years, the Stornoway Trust Estate has been able to safeguard the interests of its community land assets and to exercise an influence in directing its communities' own future. This has not always been easy. The land is generally poor, marginal for agriculture and in many senses marginal to the economic mainstream of the country. At least, however, the estate and its community shareholders are able to proceed at their own pace, to make their own mistakes and to celebrate their own successes, without submitting to the vagaries of "independent" private landlords, who may not always share the same priorities as the resident community.

The enormous growth of interest in community land ownership throughout Scotland combined with new economic and managerial opportunities, such as the information technology revolution, are opening up new and innovative ways for the development of areas such as the Stornoway Trust Estate. Already there has been talk about the new community-owned estates sharing technical experience, skills and development expertise, and it is certain that the Stornoway Trust Estate has much to contribute.

***Frank Rennie** heads of the Rural Development and Communications Department at Lews Castle College, Isle of Lewis.*



When John Cabot arrived in Newfoundland 500 years ago, he probably saw Bonavista Bay first.

LOST

Founded to fish but frustrated by government,

NANCY GRIFFIN

Newfoundland's settlements cling to the shore around the island's many bays the way periwinkles cling to a rock — tenaciously and often at angles that appear haphazard, almost dangerous. But there was nothing haphazard about the siting of these "outports," as Newfoundland coastal villages are called. They were designed hundreds of years ago for cod fishing — designed for the men who fished dangerous seas in small, open boats and the people on shore who split, dried and salted the fish.

Houses were simple, small enough to heat with a minimum of firewood, hunkered down against the ever-present wind, set close enough to the sea for access and far enough back to avoid its ravages.

The fish flakes and stages have largely disappeared now, since refrigeration allowed the building of freezer plants and changed the fishery forever. Most outports survived and adapted to this and other changes in fishing, processing and economics through the years.

While outport people have survived hard times, hard weather and the sorrow of losing men to the sea, they may not survive the biggest blow ever — the cod moratorium.

Since the shutdown of the island's major economic resource more than five years ago, many thousands of reluctant Newfoundlanders have fled the outports for the mainland to find work. The exodus threatens the very existence of many small, closely knit communities since their future, the young people, are the first to go.

Optimists wait, however nervously, expecting or at least hoping the cod will return and the fishery and plants will reopen and save their communities. Skeptics look back to the 1960s, when a government-mandated program forced year-round residents off most of Newfoundland's islands. They read into present government policies a subtle, unstated sequel to the hated resettlement process, which broke the hearts of people forced to leave communities settled by their forebears generations before. Pessimists (some would say realists) clench their jaws and pack their bags.

GENERATION

Newfoundland's "outports" are going the way of the cod

Photography by Bridget Besaw

Many people have moved away from outports like Placentia, and those left behind have little to do. "It's hard on the Newfoundland people," said one man. "They're not used to laying around. They're not lazy people."

"We got hit hard," said Leo Bruce of Placentia. "It's hard when the young people leave."

Bruce, a retiree, is a member of the board that runs the town's Star of the Sea Hall, a Catholic non-profit club where most town events are held. During a regular Saturday night soiree in December, more than four dozen people of all ages danced to the music of Newfoundland and Ireland played by a local band.

"We used to get 300 people at this dance," said Bruce, looking around the darkened hall's large, uncrowded dance floor. "We'd have to lock the doors at 10 o'clock to stop letting people in. Another club in town has shut down."

This night, two of the dancers are "home" from Windsor Falls, Ontario, to celebrate their 25th wedding anniversary. No matter where they roam or how long they live away, Newfoundlanders always call The Rock home.

Another dancer, Cyril Stewart, moved to Placentia from Rushoon only a year before, but planned to move again in January, this time to Ontario to look for a job on the oil rigs.

"I'd sooner be here. It's my home," said Stewart, a displaced fisherman. "But I'm not alone. Everyone's going to have to go."

THE MORATORIUM

When a Newfoundlander says "fish," he means cod. Atlantic cod, *Gadus morhua,* caused the island to be settled and sustained its residents for centuries. On July 2, 1992, the 500-year-old fishery closed abruptly, in mid-season, when fisheries biologists announced they had overestimated stocks by more than 100 percent. Since then, unemployed fisheries workers have been supported by various programs colloquially dubbed "the package."

For centuries, the rocky, cold and windswept island's bountiful codfish supply provided subsistence for most residents and riches for a few. For decades before the moratorium, cod fishing and processing offered employment at decent wages for many. The reopening of a commercial cod fishery is not in sight and outports are emptying as workers head for the mainland, seeking stable, secure employment — something they fear they may never see again in Newfoundland.

All over the province, people talk about the town in Ontario that's now home to 30,000 emigrants who regularly attend clubs for Newfoundlanders to hear familiar music and accents from home. In all, 300,000 Newfoundlanders now live in Ontario. One Alberta town is populated almost entirely by Newfoundlanders. Expatriates work in the mines of Manitoba and the Northwest Territories. Others moved further west, to British Columbia — farther from home, but the jobs pay better. Some followed the route taken during the last big outmigration in the 1940s, to the "Boston States." Everyone knows "the package" must end someday soon, and with few prospects on the economic horizon, the exodus will grow larger still.

Critics say federal Department of Fisheries and Oceans (DFO) scientists ignored years of warnings from fishermen that cod coming inshore were smaller and fewer. Others say DFO buried a report from three of its own scientists warning stocks were overestimated, and that bureaucrats ignored the signs of imminent collapse in order to ensure the success of then Prime Minister Brian Mulroney's plan to privatize the province's largest seafood company. The president emeritus of Memorial University in St. John's, Dr. Leslie Harris, authored a report the year before the moratorium which accurately predicted the collapse.

Since former federal fisheries minister John Crosbie shut down the cod fishery, putting 20,000 Newfoundlanders immediately out of work, fishermen, scientists, newspaper columnists and others have called for a conclusive inquiry into the collapse to avert future mistakes. For now, government officials are brushing such pleas aside.

The reopening of a commercial cod fishery is not in sight and outports are emptying as workers head for the mainland, seeking stable, secure employment — something they fear they may never see again in Newfoundland.

Jim Malloy, his brother, Peter (right) and their friend Tony Finlay are among thousands of Newfoundland fishermen left without work by the cod moratorium.

EXODUS

Unemployment and outmigration are hardly new phenomena here, but Newfoundlanders are terrified by the scope of today's exodus and extraordinary lack of opportunities. Experts predict the population will decline by 60,000 to 500,000 within the next few years. But it's hard to track all the one-way U-Haul rentals and guess which ferry passengers won't buy a return ticket, so some observers believe the population has already dipped near or below that figure.

The signs are there. Songs about empty nets and survival of outports dominate the music scene. Provincial television shows air increasingly frequent stories about Newfoundlanders leaving home. "There's no question the face of rural Newfoundland will be altered, hardly recognizable in 10 years," said Jim Wellman, who retired last year as host of the nightly "Fisheries Broadcast." "The Broadcast," as islanders know the 47-year-old Canadian Broadcasting Company radio show, indicates the importance of fish to Newfoundland. It's the longest-running live daily radio show in North America.

The former host predicts the fishery will never be the same, even if the cod return. He believes bigger boats, not traps and open boats, will dominate the new cod fishery and this means fewer fishermen, fewer plants, fewer communities.

"I hate to see it," said Wellman. "The essence of what is Newfoundland is going to die, because economically it makes sense. I believe the politicians are finally beginning to realize what they have done."

Newfoundlanders are deeply involved with their culture. Outports represent the most overt symbol for this unique heritage, which includes an approach to life still dominated by a healthy dose of humor. Wellman participated in a "Kitchen Table" panel discussion convened by educators last fall in St. John's to discuss the current crisis. The title: "Whither Newfoundland Culture? The arse is out of 'er. She's gone by's, she's gone." Wellman said he would explain the title to mainlanders who don't speak the island lingo as, "The ethnographic exploration of the interplay between piscivorous and archipelagic factors in Newfoundland: a comprehensive inquiry."

As for the moratorium, many fishermen believe it was not a moratorium on cod fishing at all. They believe it was a moratorium on Newfoundlanders fishing for cod. Beyond the 200-mile limit, foreign vessels still fish for anything they can find. Inside the 200-mile limit, freezer trawlers from Canada and other countries fish for other species under agreements with Ottawa. Ten percent of their catch may be cod "bycatch." One trip's bycatch would sustain a small-boat, inshore fisherman for a year.

TONGUES
D CHEEKS
SH SALMON
FRESH
COD
FILLET

John Taylor of Fox Trap has been selling cooked lobster or salt cod since he was six years old. Inshore Newfoundland fishermen used to catch the cod he sold, but now it comes as bycatch from offshore vessels.

THE ROCK

In Newfoundland, "rural" means the same as "coastal" since few people live in the province's interior. Nearly half the island's residents live in and around the capital, St. John's. The other "livyers" reside in 1,600 tiny outports that dot the convoluted coastline. An outport, by definition, is a community settled by boat. Most outports remained accessible only by water for many years. In a speech at the Summit of the Sea conference in St. John's last fall, Dr. Harris described John Cabot's first glimpse of The Rock, probably at Bonavista, when the explorer claimed New Founde Lande for England:

"We can at least be certain that the coast he first encountered was a rugged one of beetling cliffs and torturously deformed ancient rock, pushed and crumpled and folded by continental collision, ancient vulcanism, and like titanic processes."

The essence of what is Newfoundland is going to die, because economically it makes sense.

Combined with those factors, "the action of the sea has created an incredibly indented coastline with coves and bays and bights and sounds and tickles and fiords in number almost beyond counting," said Harris.

It was in the tiny folds and pockets of these bays and tickles that outports grew, sustained and supported by the cod in their waters.

"The outport cannot survive without fish. Either there are fish, or the community dies. There is no middle ground," said Harris. "The handwriting is on the wall. The outport as it was has all but disappeared and will not be recalled. To deny the reality of change is as foolish as it is pointless."

BONAVISTA

Newfoundland waters host two distinct cod stocks. The Grand Banks cod come inshore on the southern coast of the island, while the northern cod ranges between the island and its mainland counterpart, Labrador, up around the Strait of Belle Isle, and into White, Notre Dame and Bonavista bays. Scientists say the southern stock shows signs of rebuilding but the northern cod does not.

A replica of Cabot's ship, MATTHEW, sailed from England to ports all around the island last summer to commemorate the 500th anniversary of his landing, attracting huge crowds in each place. One was the port Cabot first sighted, Bonavista, where northern cod used to be plentiful.

By December, the brief influx of tourists was a bittersweet memory. The reality of shuttered fish plants, the projected May ending of "the package" and their own dwindling numbers occupied the minds of the people.

Mayor Don Tremblett, 36, is angry about the cod's demise and the lack of prospects for provincial youth. A small-boat fisherman, in 1987 he fished briefly for turbot on large offshore trawlers.

"I never in my life saw the abundance of fish. You could see the grounds lit up like a carnival at night," said Tremblett. "The big draggers came and got on them and never stopped until they were gone. Since then, there's been no turbot fishery at all."

He believes the wasteful practices he observed on the large vessels were widespread and ended the cod fishery, too. "It would turn your stomach," he said.

Although Bonavista's population of 4,600 hasn't shrunk much yet, Tremblett predicts half the town will leave when The Atlantic Groundfish Strategy (TAGS) support program ends. Tremblett says some retraining programs offered to fisheries workers were useful, but that much of the $49 million spent was "pure waste." Already the town has set up a food bank and a crisis hotline. Tremblett hopes to ease the pain by convincing the government to forgive fishermen's boat loans.

Like many Newfoundlanders, Tremblett attended a university but went fishing because he loves it. Since the closure, he's fished a few of the underutilized species and taught a few courses in marine safety and navigation for the Marine Institute.

It's not enough to support him, but he has a plan. Although surveys by DFO scientists say no cod inhabit the northern bays, the fishermen and their fish finders say otherwise. Tremblett says he's going fishing for cod this spring whether the fishery is open or not. He expects to be joined by 700 locals and many others throughout the province. He also believes the provincial fisheries minister will support the move and allow workers to reopen small plants.

"I cannot see John Efford going against the thousands of fishermen in Newfoundland," said Tremblett. "We're not having civil disobedience, we're just enforcing our rights."

Doug Sweetland, 48, won't say if he'll join Tremblett in the bay, but he slams the scientists who refused fishermen's help with the surveys. "They don't want help that goes against their ideas, but they've been wrong before and they're wrong now," he said.

Offshore vessels, many foreign-registered, come into outports to sell fish the locals are no longer allowed to catch.

Through the offices of Bonavista employment counselors Fred Russell and Charmaine Ford pass a parade of disenchanted, discouraged, would-be workers fighting to find jobs that will keep them home. The pair anticipate no violence from their clients, but the government reinforced their office doors to protect against the outrage expected when TAGS ends.

"Everyone who comes here now realizes they'll have to go away," said Russell. "When the fishery closed, a quarter of a million dollars a week came out of the economy here. It makes a big difference."

One mainland-bound man said he planned to leave home at 3 a.m. When Russell reminded him the drive to the ferry didn't take that long, the man's eyes filled with tears. "I know," he told Russell. "But I can't pull out of my driveway and see my kids in the window waving good-bye."

Ford's son also lost the battle. "This was our first Christmas apart," she said. When TAGS ends, Russell and Ford could be out of work, too.

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Nearby Port Union once boasted the largest fish processing plant in North America, serving six Fisheries Products International offshore trawlers. Jobs were plentiful and a few clubs and hotels provided entertainment for locals and shelter for visitors arriving on fish business.

Paulette Canning summed up the feelings of the town when she blinked back tears while describing what the moratorium means to her. "There are no friends left," she said. "They are all gone." The 28-year-old is one of three employees at Seaport Inn, once staffed by 12. Since the plant closed, business has dropped by 75 percent. Twelve graduated in her nearby Melrose high school class. Two are left.

Her mother, Bride Murphy, is an activist arrested when a large group of displaced workers tried to see the Canadian premier to ask for a TAGS extension. The peaceful demonstrators never saw Jean Chretien, but they now face court charges. Canning's father missed "the package" because he was on sick leave when officials drew up the list of qualified plant workers.

These stories are matched by many others among the thousand displaced plant workers. They say TAGS money went to retired teachers for marginal retraining programs and to union leaders who can't account for it. They feel abandoned and attacked by the institutions designed to protect them.

"I saw a man interviewed on television who said, 'Take my house and my car and my boat. You took everything else six years ago. You took my dignity,' " said Canning. "In Ottawa they complain that we're costing them money, but no one ever complains about the money they've given Canadian farmers for years. No one cares that in the past few years, we've lost the equivalent of the population of Mount Pearl [a large city adjacent to St. John's]. And the worst thing is, they say we're lazy," said Canning, her tears escaping. "We're not lazy, but what are we going to work at?"

RESETTLEMENT

When cod were plentiful, communities like St. Shott's and Trepassey prospered. Now the older brothers of these boys have left for jobs on the mainland. If the fishery stays closed, more will leave.

Roads and other services were scarce until the island changed its status in 1949 from a British dominion to Canada's newest and largest province. Confederation was by no means a unanimous choice and some still believe joining Canada was a mistake.

By 1953, Joey Smallwood, the political leader who led Newfoundland to Confederation and became its first and longest-serving premier, decided delivering services would be easier if Newfoundlanders would congregate in fewer places. He thought 300 communities would be more manageable than 1,600 and started the wheels turning toward resettlement.

His plan began with financial incentives to leave, but only if an outport's entire population agreed to move. A few years later, Ottawa took charge of resettlement, offered higher subsidies and lowered the agreement rate to 80 percent. To encourage cooperation, the federal government curtailed services such as ferries and mail.

Resettlement did not work quite the way Ottawa expected. By 1970, more than 16,000 people had relocated to government-designated population centers, only to find no jobs there. The centers were rapidly depopulated.

Newfoundlanders still recall the heartbreak of seeing island communities dissolve, of watching stone-faced men in dories tow small wooden homes across the water on rafts. Strike up a conversation with people in St. John's and they'll quickly tell you which outport was their original home and, if their family was resettled, which island community they "belonged to" before that.

The current provincial fisheries minister, John Efford, runs the risk of "going down in history as the C. Max Lane of the 1990s, unless he watches his bobber a bit more closely," warned St. John's Telegram writer Bob Benson in a column last year. Fisheries minister under Smallwood, Lane signed the 1965 resettlement agreement with Ottawa, pitching it as a way to improve fisheries through more centralization.

Echoes of the old resettlement plan reverberate throughout the new, although the government acknowledges no intended connection. Plans under discussion will allow plant owners to sell licenses, but only to areas with few plants. Siting must be government approved to ensure work is evenly distributed. Meanwhile, funding to small town development councils is drying up, diverted to larger, regional organizations outport residents say will do little for their communities. These plans tell many fishermen they're being encouraged to leave — they don't fit into the new blueprint to streamline communities and fisheries.

THE ONCE AND FUTURE FISHERIES

Like many of his countrymen, fisheries minister John Efford, from the outport of Port de Grave, spent a few years working in Ontario.

"I left Toronto at 7 a.m. on a Wednesday," he remembers. "I'll never forget it. I looked around and said I'm going back to The Rock and I'll never leave." Efford was fortunate. "I made things happen for me, but everyone can't."

Efford is working tirelessly to improve opportunities for Newfoundland's fishermen by licensing plants to process new species and by singing the praises of ingenious, hardworking harvesters making a go of it without cod. He slams the Ottawa bureaucrats "who don't put a face on what's happening in Newfoundland. Some of it is prejudice against Newfoundland. They just look at the numbers, but the pain here is real."

On Efford's watch, fisheries for sea urchins, shrimp, Icelandic scallops, surf clams and lumpfish roe have grown. The formerly ignored snow crab has become a major catch with a good price to the boats. Former cod plants are reopening as crab plants. Crab's $2.50 a pound price tag made Newfoundland's 1995 landings surprisingly more valuable than any previous year's. The high price means fewer fishermen earning more money, and only fishermen with mid-sized boats can re-rig to harvest some species. The small open boats used by many inshore fishermen aren't always suitable.

Large offshore trawlers offload shrimp and other products regularly at a freezer facility in Harbour Grace for shipment to other points. While this Canadian vessel offloaded its catch, a Russian trawler waited in the harbor.

"It's for sure, the fishery of the future won't employ the same number of people as the fishery of the past," Efford said.

Some fishermen worry that shifting the emphasis from cod to previously underutilized species only means those species will be wiped out next. This might also eliminate the species that support cod. "Shrimp is one of the main foods for codfish. If you catch it all up, the fish will move on," said St. Shott's fisherman Gerald Hewitt. "Same as capelin. They're cod food."

For centuries, the small, herring-like capelin rolled into St. Shott's by the millions each spring like clockwork, filling every beach and cove here and all along the coast. Adults and children alike dipped them right off the shore or out of shallow water into wheelbarrows, horse-drawn carts or any conveyance that would carry them home.

THE SOUTHERN STOCKS

Trepassey, on the southern shore of the Avalon peninsula, was home to a fish plant so prosperous it attracted new people to town. When cod were plentiful and the future looked secure, residents built many new homes. Some even defied outport tradition and borrowed money from a bank.

At least 70 of those homes, facing the sea in Trepassey, are boarded up now, as is the town's fish plant. The owners, like nearly half the town's 1,500 residents, have moved away. But there's no one to buy the houses — at least not for what they're worth. No one's moving into Trepassey these days.

Kitchens are the center of life in Newfoundland, where the kettle is usually boiling. The warm and friendly kitchen in Cyril and Kathleen Ryan's house is no exception.

The Ryans have a son in the United States and two more still clinging to their outport lives. Cyril closed the town's first fish plant and opened the last one. His brother-in-law, Victor Pennell, 58, was a supervisor at the plant for 14 years and the last person to work in it. After the shutdown, Pennell attended retraining courses in computers and hotel and restaurant management. He sent resumes "all over the place," but found no work.

"I could get work in Alberta for $7 or $8 an hour," he said. "But it's impossible to keep a wife and a home here and live there for that money."

Trepassey was promised bottling, window and lighting factories and a cedar factory to manufacture jewelry boxes and other items. Few jobs ever materialized. Gerard Ryan, 36, traveled to Missouri for six weeks' training to work in the cedar plant, which opened and closed quickly. The former fish plant refrigeration engineer now works at the local ice-skating rink, but its future is also questionable.

"We almost didn't open at all this year. Last year we had 70 kids, this year it was 40," said Gerard. "If people keep leaving, the minor hockey leagues will disappear and the stadium won't open again. There were 48 grade-12 graduates last year. Forty are gone."

"Trepassey is going off the map," said Pennell.

Nearby St. Shott's sits at one edge of St. Mary's Bay. For centuries, the small, herring-like capelin rolled into St. Shott's by the millions each spring like clockwork, filling every beach and cove here and all along the coast. Adults and children alike dipped them right off the shore or out of shallow water into wheelbarrows, horse-drawn carts or any conveyance that would carry them home. Capelin are eaten fresh, salted, frozen or buried in garden hills for fertilizer. Behind them, sure as the seasons, the cod followed, chasing their favorite food inshore.

"There should never have been a capelin roe fishery. There's no capelin any more," said Gerald Hewitt, 57, deputy mayor of St. Shott's. Since 1961, he has gillnetted for cod from a 25-foot open boat. Since the closure, he's tried fishing lumpfish and crab, but with little success. He hopes the cod fishery will reopen. If not, he hopes the next round of programs for fishermen will include a retirement package for people like him, who are too old to move to Ontario for a $6-an-hour job and leave all they've worked for behind.

"I hates to give up fishing, because I loves to be at it," said Hewitt. He drives down to the point every day, checking the foghorn and looking out to where he used to fish. He remembers before the foghorn, when fishermen had no way of knowing where they were when the fog rolled in while they fished. Youngsters going out with their fathers learned at an early age to adjust for the drift of a current that would smash their boats into unseen rocks while compass readings remained deceptively constant.

Hewitt and his wife, Betty, have bid farewell to a daughter, now in Connecticut, and a son who headed for Aberdeen, Scotland, to spend his first Christmas away on an offshore oil rig.

Barry Bennett works on his boat in Trepassey. Bennett bought the 35-foot longliner in Harbour Grace and plans to start fishing for mussels, crab and, he hopes, cod.

"We are after losing everyone. There's no young people in St. Shott's because there's nothing for them to do," said Hewitt.

Small-boat fishermen are trapped by economics. The government canceled its boat loan program to fishermen and the banks won't look at them, but without bigger boats, little guys can't diversify. Some aren't interested in diversification, but they are interested in the abundant cod they now see in the bay.

"I see the fish breaching in the water just like when I was a kid," said fisherman Jim Molloy, 52.

"There's a lot of fish out there," agreed his brother, Peter, 49. "They should open it for us to make a living. If they open it for the big boats, they'll take as much in a trip as we'd catch in a summer. If they don't open the fishery and they cut us off, we'll go fishing anyway. We won't starve to death."

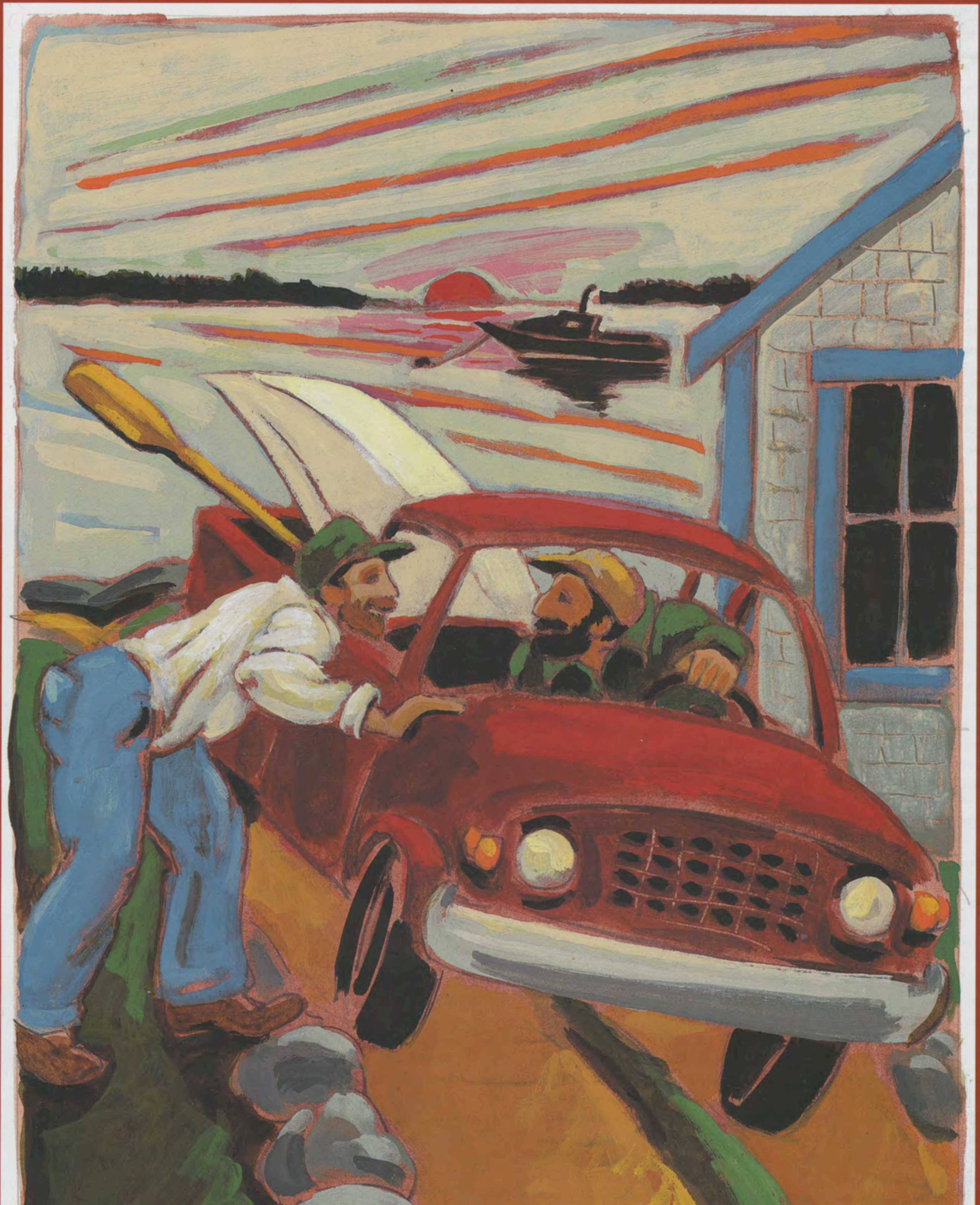
Jim laughed. "If they put us in jail, we won't starve to death either."

Gerald Hewitt's brother, Patrick, beat the odds and found ways to work on land. A few years back, he bought an experimental peat harvesting operation and turned it into a farm raising sod for the lawns of residences, businesses and commercial enterprises. "There are some opportunities, but in terms of replacing the number of people employed by the fishery, it would be terribly difficult," said Hewitt, the town's mayor. "The big fear is the numbers of people will get so low, communities won't be able to sustain themselves.

"I'm not overly optimistic about this community's ability to survive. It could, but rural Newfoundland can only survive if, when the cod come back, we return to a small boat, inshore fishery. A big-boat fishery will destroy us."

"I've been saying all along," Hewitt added. "This is just another form of resettlement. My generation could be the last one."

A native of Newfoundland living in Maine, ***Nancy Griffin*** *contributes regularly to Island Institute publications.* ***Bridget Besaw*** *is a staff photographer for the Bangor Daily News.*



Three Islands, Three Experiences

All communities endure conflict, but islanders have to live with each other after the battle ends.

DEBORAH DUBRULE

CHANGE. Some people long for and embrace it, others fight it like a nagging skin rash or a disease. What one sees as progress another sees as the backslide of civilization. Good or bad, change heralds uncertainty, pulling us from our moorings in unknown directions — by necessity or by choice — but away from the familiar. That tug of war between change and stability not only illuminates differing values among people, but can ignite powerful disputes.

Change, like conflict, may barely create a ripple within large towns or cities, but it can swell into a tidal wave capable of engulfing smaller, tightly knit enclaves, including island communities, places where events, like the weather, aren't viewed from the safety of a television screen, but are experienced firsthand. They are places where politics, livelihoods, economics and interpersonal relationships are deeply and intricately intertwined; where conformity to traditional norms and mores is as highly prized as a spirit of independence that seemingly teeters on anarchy; where self-sufficiency is valued as highly as interdependence within the community; where geographic limits mean fewer options — less room to march to a different drummer.

In isolated communities, layers of civility overlie a crazy quilt of social, genealogical and personal histories. Successes and failures are remembered as clearly as family and social connections stretching back generations, as well as who slighted whom, who came though when you needed a hand. Yet even today, while accounts of mainland violence continue to crowd newspaper pages, the most typical display that a dispute exists on an island is the failure of one person to wave to another when passing on the street. "It's the symbol of death," chuckles one islander.

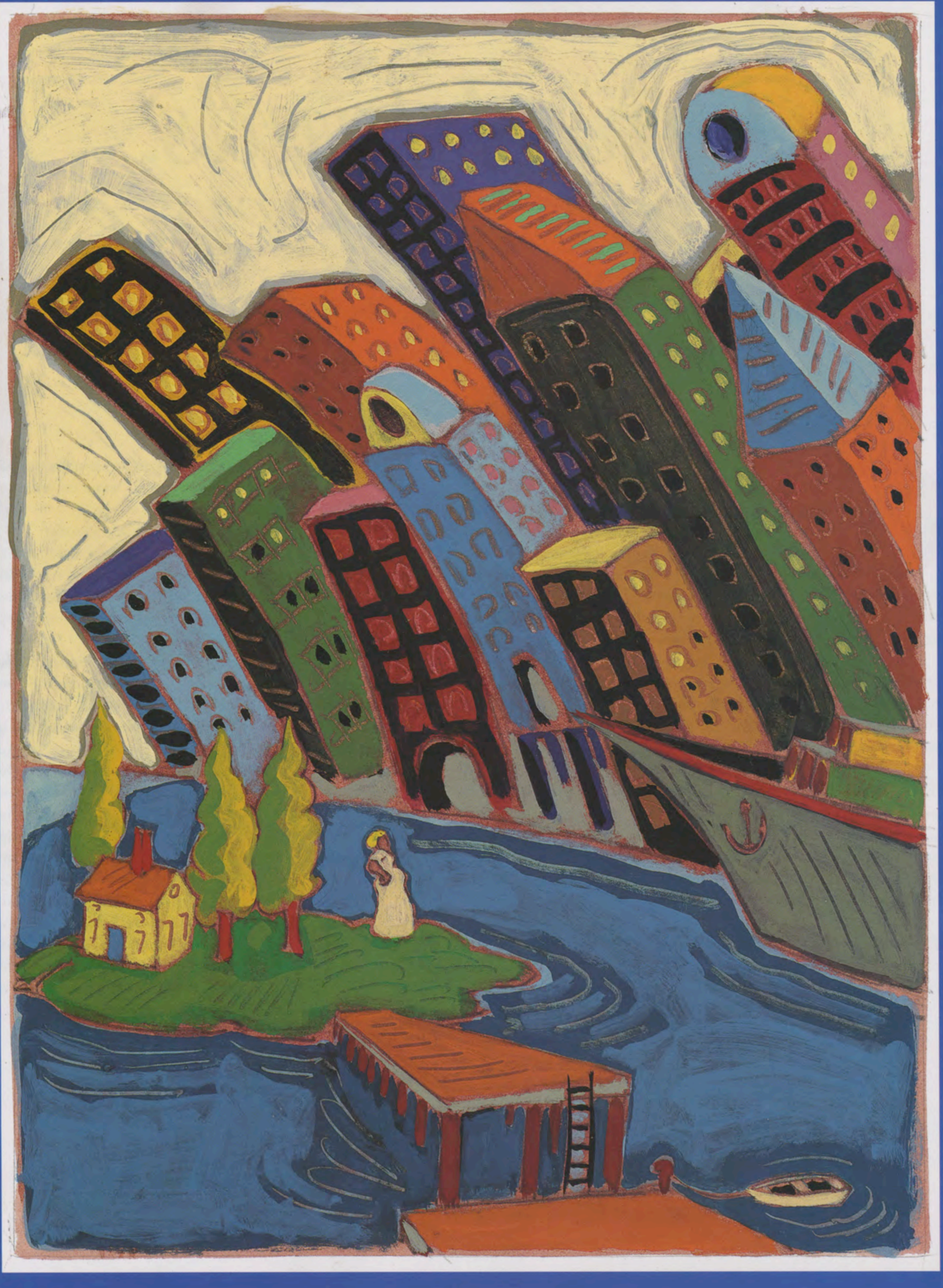
We try constantly to
emphasize that we're
all in the same boat.
If somebody tries to
start a mutiny, we're
all going to suffer.

DONNA DAMON,
CHEBEAGUE ISLAND

Most important, however, islands are places where people, despite their differences, remain united in choosing to live away from the mainstream on rocks peppered in the sea.

This past year we were reminded of the delicate social order of islanders and how quickly a division can tear a community apart as North Haven residents engaged in an uncivil war over an attempt to oust a popular principal and restructure the island's progressive school. However, two other island communities have weathered similarly intense disputes that were triggered by dynamic changes. A bridge completed in June has virtually altered the geography, and possibly the economic future, of Prince Edward Island. And Long Island's secession from the City of Portland has transformed not only the political power of islanders, but the ways in which people deal with each other.

Illustrations by Robert Shetterly



Long Island

The little island that could

On a winter's midnight in 1992, four people lowered a very pregnant Brenda Callan into the rescue boat tied below the Long Island pier. Strapped to a litter and lowered vertically, feet first, her contractions had quickened to one-and-one-half-minute intervals by the time Portland's fire boat navigated the 45-minute trek across Casco Bay.

"It wasn't even midtide, so the boat was about five feet down," recalls Callan. "Fortunately, the ocean was like glass that night."

For decades, Portland officials had told Long Islanders that winter weather conditions would destroy their float; city budget constraints justified its removal at the end of each summer, leaving medical evacuations like Callan's to the mercy of an often-icy wrought-iron ladder attached to the dock. The length of the patient's vertical journey into a fire boat was dictated by the whims of the tide. But islanders kept asking for a change, and finally they got their way.

"This is the fourth winter we've left that float in the water and we haven't had to replace it yet," explains Francis X. Murphy, chairman of the board of selectmen for the Town of Long Island, which cut its ties with Portland and became Maine's newest independent town (year-round population 180) in 1993. "To be lowered like that just to get into a rescue boat, which took another 45 minutes to get you to an ambulance, was ridiculous," says Murphy. "But that's what happens when you have people — an urban government — controlling things who have no idea about island life and the needs of islanders. Ninety percent of the [city] councilors had never set foot here."

Although several islands threatened secession from Portland in the early 1990s in reaction to the city's property revaluations, a 7.8 percent tax hike and few services reaching them across Casco Bay, only Long Island got away. In fact, since its successful split on July 1, 1993, the town has emerged as something of a "secession central" in the Northeast. Its government still fields how-to inquiries from other unhappy Maine communities, as well as more distant spots like New York's Staten Island.

Separation provoked unparalleled conflict within the community, but the 129-44 vote resolved the issue. Creating a new government prompted not only a sea change for residents who had grown accustomed to people "from away" calling the shots, but transformed the political landscape from islanders versus big city government to something much more personal.

"I opposed secession because I knew things would get personal," recalls Brenda Callan, who delivered a healthy son on that cold night in 1992 and now works in the town office. "It's different to go to city hall and fight for something or discuss issues with people you don't know. Now, we're dealing with friends, neighbors and family members and there can be bad feelings when something hasn't gone the way they'd hoped. It's hard to keep business business, and personal relationships personal."

Since the 1990 census, the percentage of fishermen has nearly doubled, from 12 to 20. Today, for the first time in the island's history, two fishermen, Steve Train and Michael Floyd, complete the town's three-member board of selectmen.

On the positive side, she adds, people enjoy coming into the town hall and seeing a friendly face. Islanders also have more control over their tax dollars and their futures.

City meetings, often scheduled in the evening and stretching well beyond the last ferry's departure for the island at 5:30 p.m., made it nearly impossible for islanders to control their own fate. "We had no political clout," reflects Murphy, a retired educator and school administrator.

"Trying to get Portland to do anything left us with a helpless feeling," explains town treasurer Nancy Jordan. "So, people kept to themselves or were inactive."

Domination by a government "from away" wasn't new to islanders. The U.S. government confiscated a third of the one-by-three-mile island during World War II, transforming it from a fishing village that hosted summer hotel guests to a refueling base for the North Atlantic Fleet.

Fishermen were cut off from their traditional fishing grounds. Warehouses, barracks, garages, a gymnasium, a bowling alley and a huge fuel tank farm replaced more than 60 cottages. Only one cottage stood when the Navy departed.

Sharon Marr, a minister who directs Changing Tides, a community outreach program, says many who lost homes had either died or bought homes elsewhere by the time the military left in 1962. "A number of military people stayed. All of it changed the complexion of the island. Before, we were considered a sleepy fishing village. People rarely left."

Since the 1990 census, the number of fishermen has nearly doubled, from 12 to 20. Today, for the first time in the island's history, two fishermen, Steve Train and Michael Floyd, complete the town's three-member board of selectmen.

"One of the best parts of the island's secession is giving political power to that segment of the community," says summer resident Christine McDuffie, a substitute teacher from Portland. "There is nothing in terms of policy that's not wholly respectful of the fishing industry. Everyone understands that's the core of the island's history and economy."

McDuffie added that the central communication tool on Long Island is the marine radio. "Communication is the core of healthy communities and now issues get discussed by the fishermen. Everyone listens in — it's instant, daily, responsive. It really beats cop shows."

On Long Island, differences based on native/non-native connections don't seem to surface. "It's not that we don't have the occasional red herring thrown in to divide people or to distract discussion away from an issue," Nancy Jordan observed.

Long Island lies only four and a half miles from the largest city in Maine, and before independence its population had been transient since World War II. "We were a part of Portland," explains Murphy. "The population is too cosmopolitan to engage in a class war. We share general goals, we care about the island, so when there's a disagreement, things are usually resolved very quickly by friends and neighbors."

Prior to independence, most Long Islanders hadn't developed political connections unless they had staged a revolution, such as their uprising over Portland's threat to close the island's K-5 school in 1975. After independence, Jordan noticed "a huge wave of volunteerism, people coming out of the woodwork, to help make the island a better place. Before, the best you could do was complain about the way Portland was doing things. If there's something you want done now, you can present the idea at a meeting. We can make things happen. It's in our hands, within our power now."

Today the town's new rescue boat makes Portland in 20 minutes, property taxes have dropped by 20 percent, roads have been paved, a neighborhood watch group has taken a bite out of crime, and the military buildings that greet visitors beyond the dock have received overhauls.

Still, the political road wasn't altogether smooth. Unaccustomed to heated, often personalized debate and the intricacies of forming and running a government, some islanders withdrew. Privately, several express feelings of alienation from decisions and voice fears of being labeled "troublemakers" when they disagree with the majority. A few worry about retribution.

"There's been no retribution as far as anyone speaking up other than an offhand remark or a nasty letter," said Cumberland County Deputy Sheriff Bradley Brown. Asked if vandalism had increased during the secession battle, as some residents claimed, Brown couldn't say. "Other than an officer on the island during the summer, there was no one to report those things to so there's no accurate record of any crime being up or down."

During the early stages of independence, Brown recalls, mistakes were made, "especially in communication and in understanding how a government this size is supposed to work. People, including myself, thought they weren't being listened to and were being labeled as troublemakers. They also felt that decisions were being made without their input. Let's face it, nobody had ever run a town before. We're still learning. We're such a small community that when somebody says something, it goes around the island like wildfire," adds Brown, who is a carpenter by trade, owns the propane gas dealership and also serves as the island's animal control officer.

"You can disagree positively or in a negative vein," Murphy says. "But some of the people who have continued to express criticism tend to take their concerns to the street or the store rather than talking with the selectmen or speaking up at meetings or getting involved on any of the committees we have."

Those who objected to secession said they wanted to keep the island the way it was. Some held city jobs on-island; some were accustomed to hunting without licenses, building without permits, driving cars without insurance or registration. "The law seldom came down here," said Marr. "There was also a fear that we'd turn into the Hatfields and the McCoys because there are so few of us living here."

"One of the nice things about the human structure is its adaptability," philosophizes Brenda Callan's husband, George, a merchant marine captain. A onetime secession opponent, he believes it has worked out better than he had imagined. "There's a part of me that likes to keep things the way they were. But, then again, I spend a bit of time on a cell phone calling my family when I'm away working on ships. A small society is just like a ship. If a boat's going down, you don't care how many differences you have — you have to work it out or you could die."

Prince Edward Island

Waiting to exhale

Conflicts and negative emotions don't heal in small communities, observes history professor David Weale at the University of Prince Edward Island. "They go underground," he continues. "It's why so many of us have heart attacks. It's as if it were an offense to verbally confront someone, be openly critical, or express complaint."

There are repercussions because things just don't blow away, Weale suggests. "Things can't be spoken bluntly because the risks are too great. You're running into the same people all the time, a lot of people are related on a small island, and things get back to people by the end of the day — that's the downside of living on a small island."

Weale thinks some islanders are still angry at him because of his vocal opposition to the eight-mile Confederation Bridge that now links Prince Edward Island to the mainland. "It's affected my life, my relationships; I've been tagged as anti-progressive," he says. Others who never spoke out "didn't want to pay the price — you get tagged and have to live with it the rest of your life."

The debate over the "fixed link" proposal started in the mid-1980s and ended only after the Supreme Court of Canada gave the project the green light, about four years ago.

Today, less than a year after its completion and despite a record-breaking tourist season, islanders including Weale say it's far too early to forecast the bridge's effects on the province. But all agree it has transformed 2,200-square mile Prince Edward Island.

Arguments pitted those who wanted to preserve the less tangible "island way of life" against those who favored the promise of "progress." The province's unemployment rate hovers around 14 percent.

The debate got emotional, recalls Harry Baglole, director of the Institute for Island Studies at the University of Prince Edward Island. "There were hurt feelings, families were divided about it. At this point, there's no real strong reaction. Grumbling about it is pointless," he says. Baglole opposed the project. "The ones who lost, did so gracefully. This is a big island with 130,000 people. If it were a small place, the differences would be taken more personally."

Some members of the resistance have boycotted the bridge while others have traveled it in order to shop on the mainland. The cost: $35 for a single car, compared to about $43 for the ferry.

"It's much cheaper to move product in and out of the province now," explains Jim Larkin, a seafood market and restaurant owner who chaired Islanders for a Better Tomorrow, a group of bridge supporters, for five years. "Companies needed two trucks to make runs because they had to wait for the ferry. Now, one truck can make two runs in a day and businesses don't have to pay a driver to sit around and wait for the ferry. I spent 15 hours waiting for the ferry just before Christmas last year." Pointing to public opinion polls, Larkin says support for the bridge has grown since islanders cast their ballots six years ago.

The rubber-tire connection to New Brunswick was initiated not by islanders, but by a group of off-island builders who proposed the link as a construction project. Canada's federal government, which heavily subsidized the 12 to 14 daily ferry trips, supported the idea and requested bids. Big business and the tourist industry advocated and promoted the project.

The link's critics felt that conquering the island's saltwater moat — a barrier that enhances cultural stability — would not only diffuse their identity, but make them more vulnerable to unknown influences from the mainland. The bridge would turn the island into a peninsula, argued Weale, thereby causing a loss of "islandness."

"Geography gives coherence," asserts Harry Baglole. "Take two communities that are otherwise the same. If one is surrounded by water, it will have a more coherent identity."

Suspicion of people "from away" enhances an island's ability to protect traditions and values. This characteristic is an important part of the island's history, according to Mark Lapping, a longtime student of the province who is an administrator at the University of Southern Maine. "The island was settled by absentee landowners, which retarded its economic development for years," he said. After the island joined the Canadian confederation, "the Canadian government had to buy out the absentee landlords." Even today, continued Lapping, who works with the Institute of Island Studies, other Canadians are restricted in the amount of land they can own, thereby ensuring that the land remains in the hands of islanders.

One seasonal ferry still operates at the eastern end of the island, but stops just before Christmas. "Once that ferry is gone, our only means of access will be the bridge," laments Betty Howatt, a bridge opponent whose family has lived on the island for over 100 years. "It was touted as year-round transport, but we'll still be at the whims of the weather," she says, noting the truck traffic that is occasionally prohibited from crossing because of high winds.

"We're very pragmatic people," Howatt continued. "In the past, we've had to put up with things in order to survive. It's like having an illness: you don't want it in the first place, but you have to go on and deal with it.

"Some of the ties in communities were strained, loosened, and what it will do to them in the long run I don't know. I think that perhaps people don't have strong ties to their communities anymore, but I believe that a closely knit community is more resilient.

North Haven

Desperately seeking resolution

Three days after North Haven's school board voted to terminate his contract for the 1997-98 school year, teaching principal Barney Hallowell discovered several classrooms nearly deserted when he arrived for work.

Rising at dawn, 23 of the island's 32 middle and high school students had ferried 12 miles across Penobscot Bay, piled into vehicles, and driven another 50 miles to the state capitol in Augusta. Somberly standing before TV cameras, reporters, legislators and onlookers in the rotunda, they pleaded for someone to listen to them. They asked for Hallowell's reinstatement, for islanders to stop fighting and to

return the community to what it had been: a safe place where people cared about each other and where, despite disagreements, people could count on each other to lend a hand in times of trouble.

"We want to be heard, heard by the community members and the school board of North Haven," explained 17-year-old Cecily Pingree, one of four students elected to speak at the podium. "We cast ourselves out to the whole state, because we don't know what else to do."

The North Haven Community School has weathered divisive disputes throughout its history, but none has been more public or more polarizing than the one that enveloped it and the 350-member island community last year. Residents spent much of 1997 embroiled in a near civil war over Hallowell's job, the future direction of the smallest K-12 school in the state, and the ethical conduct of some board members and their then-superintendent.

A Superior Court judge ended the battle over Hallowell's position last June when he issued a restraining order preventing directors from dismissing him or interfering with his duties during the school year. But the injunction failed to end the war that has continued to divide much of the community into two camps, one supporting Hallowell and the school's experiential learning programs, the other backing traditional teaching methods in the classroom.

At the 1998 town meeting, candidates backed by the supporters of hands-on learning won available seats on both the school board and the board of selectmen, erasing back-to-basics majorities on both boards.

No one disagrees that change in certain school policies or teaching methods might have been necessary or desirable. But the way in which the back-to-basics plan developed and surfaced, the inability of the plan's opponents to work out their differences with proponents and the ensuing attempt to execute the plan with little public discussion left both groups estranged from each other. Bucking long-standing island tradition, both sides hired lawyers.

On a deeper level, the dispute over the school highlighted conflicting ideas about how "empowered" island children should be, and how far they should reach beyond the community.

Empowerment

"We're doing what every school wants to do, ought to do: focus on the individual," explained Hallowell in an interview last year. "Instead of pigeon-holing students into little boxes labeled 'above and below average,' we're dealing with students as individuals, each with different strengths and weaknesses. Some people aren't comfortable with that or with our emphasis on leadership and empowerment. It doesn't mean we've sacrificed academics."

He added that eight students had missed a day of school to compete in the State Drama Festival after winning first place with Thornton Wilder's Happy Journey from Camden to Trenton in one-act regional competition. "Our kids can't receive these opportunities, these accolades, without activities like this," says Hallowell, who has taught history and social studies at North Haven Community School for 24 years, serving the last seven as teaching principal. "I can't imagine anything more academic than reading the work of an important American playwright, understanding the period in which it was written and the idea of interpretation and presenting it with poise and as an exercise in public speaking. What are we doing in English if not this?"

The North Haven Community School has weathered divisive disputes throughout its history, but none has been more public or more polarizing than the one that enveloped it and the 350-member island community last year.

Extending well beyond the familiar on the three-by-eight mile island, some residents felt that the accolades, as well as the academic field trips to Boston, New York, and Europe, canoeing on the St. Croix and hiking Bigelow Mountain were creating what David Weale of Prince Edward Island describes as "big feeling."

I think there's a leveling aspect of small town life that may discourage people from extending themselves beyond what's familiar in the community," Weale says. "It's difficult to be exceptional in a small, homogenous community. On one hand, there's considerable pride but on the other, a person who has accomplished something has to walk a very fine line. One of the worst things you can say about someone is that they have big feeling — it's said of someone who seems to be enjoying success too much."

On North Haven, some parents felt their kids were getting too independent and were arguing with them in front of teachers and community members at school board meetings, which embarrassed them. Hence part of the appeal of the back-to-basics plan: it would not only keep students on the island more, but return them to a more familiar, and traditional, course. Overwhelmingly, however, back-to-basics advocates believe the off-island trips, which sometimes cut into classroom time, are replacing basic curriculum.

Debates and tempers grew. Demands for resignations were countered with demands for Hallowell's dismissal. Public discussion time at school board meetings, if exercised, was limited to 10 minutes. People stopped waving or speaking to each other. Family clans disagreed with one another; opinions within families were sometimes sharply divided. Students joined adults in posting placards on the island and writing to newspaper editors. Requests for mediation from Hallowell's supporters were turned down. The dispute became unusually public, which heightened the stress, and discussions about education increasingly turned into debates about "transplants" and the influences of people from away. (Most of North Haven's students have at least one parent who is not a native.)

Normal teenager challenges to parental authority came to be viewed as anomalies sparked by the "new" people, some of whom have lived on the island for more than 20 years. Even the standard, "Suzy gets to stay out until midnight, why can't I?" prompted some parents to blame the liberal parental morality of transplants, rather than see it as a typical teenage push to negotiate boundaries.

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By the close of the 1996-97 school year, a group of eight islanders, supported by anonymous financial donors, had hired two facilitators from the mainland to help heal the community's wounds. But a scheduled series of meetings was delayed, so by winter no one was guessing how successful mediation would be.

"This group of eight people, from both sides, demonstrated tremendous courage in coming forward to do something about the problems that have divided the community," observes Art Gingold, one of the facilitators. "We're planning to start a series of dialogues that may help people see that even though there are differences about education or school policies or the principal, people can respect those differences. Everyone has a right to their own opinion, but it doesn't mean that differing opinions have to cleave the island in half or that people have to stop waving or talking to each other or have to shop at a different store."

Gingold said that the formula for mediation involves establishing a safe environment where people can talk about their feelings, finding areas of common ground, and moving forward "with a better sense of respect to find compromises.

"When people feel they're not being heard, it can be polarizing. But when people begin to listen to each other, they often find they're a lot closer on a number of issues than they thought. It's a pretty good bridge-builder."

People stopped waving or speaking to each other. Family clans disagreed with one another; opinions within families were sometimes sharply divided.

Tradition

In the 1800s, North Haven's fishermen tended the water, while its farmers tended the land. By the turn of the century, improved transportation and the disappearance of mackerel signaled a shift in the island's economy that included the appearance of wealthy summer rusticators. Farmers headed to the mainland for greener pastures, while others turned to boatbuilding and tending the summer folk. The shift resulted in an "upstairs-downstairs" relationship that continued unchanged until after World War II, when natives and non-natives began inter-marrying.

Carpentry, boatbuilding and caretaking still account for most of the island's employment. Only six to eight islanders fish for scallops and lobsters most of the year; 35 to 40 lay traps part-time, getting by, like the rest of the community, with an assortment of jobs.

By tradition, islanders settled disputes privately. "When it came to their own problems, they discussed things among themselves," recalled Dana Smith of Tenants Harbor, who served as teaching principal from 1954 to 1957.

"Of course, in town meetings in the old days, things weren't prepackaged," explained local historian Sam Beverage, 79, in an inverview a year ago. "There'd be a lot of hollering, rough talk, smoke-filled rooms. But they worked it out in town meetings or meetings of various school boards, among themselves." Usually, according to Beverage, the debates centered on budget issues. "No matter how much they argued, they always left the meetings as friends."

***Deborah DuBrule** contributes regularly to Island Institute publications.*

The Boat

To an island, the mailboat is an indispensible community institution

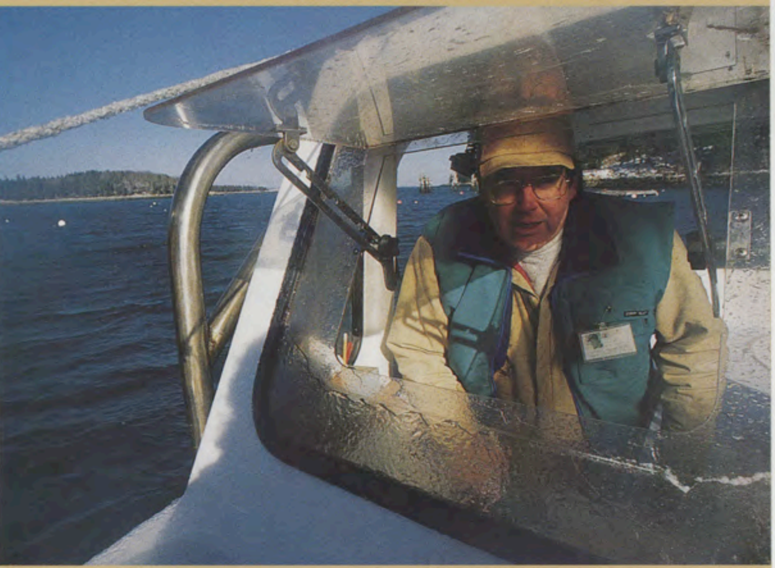
JANE DAY

The Mailboat

It's called the "mailboat" but I can't think why
Considering the cargo on its decks.
Its superstructure jack-strawed on the sky
Looks like the random salvage from six wrecks:
Two refrigerators; tall timbers; ply-
Wood panels braced against the wind by checks
Of someone's groceries and sacks of dry
Cow dung; cheeping hen-chicks (guaranteed sex);
Fish-nets; bed-springs; someone's maul and grapples;
Up-turned bike-wheels, spokes splintering the light
Breeze, turning like some innovative sail;
A sapling hung with more hope than apples;
Posies for the school's graduation night —

And if my count be true — one sack of mail.

CHARLES WADSWORTH
GREAT CRANBERRY ISLAND



Paul Joy, Frenchboro's mail carrier, picks up the island's mail bag at the Swan's Island post office, loads it onto his lobster boat and carries it across to Frenchboro. When he isn't delivering mail, he fishes for lobsters from Swan's Island, where he is also minister of the Church of God.

Photography by Bridget Besaw

THE COMMUNITY BOAT of the islands is the one that carries the mail. From Frenchman to Casco Bay, islanders count on the mailboat for everything from a trip ashore to a load of lumber. A mailboat earns its reputation by service and reliability; in all weather, year-round, it's the island supply route and lifeline, a waterborne depot for boatbuilders, fishermen, artists, kids with dogs, weathered islanders and visitors in city clothes.

Paul Joy, Frenchboro's mail carrier, lives on Swan's Island, where he is minister of the Church of God. The mail travels twice over water and once over land to reach Frenchboro, which has 50 year-round residents. Hopkins Freight of Southwest Harbor handles the first leg, from the mainland to Swan's. Joy picks up the Frenchboro mail bag from the Swan's Island post office, loads it aboard SPARROW, his 35-foot Duffy, & Duffy and speeds it across to the island.

"I lug it up over the hill and pick up their mail and carry it back to Swan's where Hopkins takes it to the mainland. The most dangerous part of the trip," Joy says modestly, "is rowing out to my own boat."

A native of Sullivan and resident of Swan's Island since 1983, Joy has always lived "close enough to the coast to smell the salt air." With nine children aged four to 23, he's often obliged to work two or more jobs. For a time he fished offshore on trawlers out of Portland. Now he lobsters year-round from Swan's. He delivers the mail Monday, Tuesday, Friday and Saturday. Wednesdays and Thursdays, mail goes direct by ferry from Bass Harbor.

Considering the weather and sea conditions that Maine island mailboats deal with, it's remarkable how seldom scheduled runs are canceled. Wilfred Bunker, operator of SEA QUEEN, the Cranberry Isles' mailboat for 60 years, says he has canceled only three or four times since 1948. One day last fall when the wind was stiff enough to toss some spray, a native islander aboard felt a bit queasy. This is "about normal" for November, says Wilfred, "but when it gets 60 miles an hour, it's rough. I've gone a lot of times when I shouldn't."

Aboard SEA QUEEN, which has carried mail and passengers to the Cranberry Isles for 60 years.

"I call the boat the 'aqua bus,' " says one captain. "Like a Mexican bus, we carry everything — dogs, chickens, cats, iguana, bikes, lumber."

"If they can see out a window, they will do the run," says Joy Sprague, who celebrated her 20th year as postmaster on Islesford in December. "Beal & Bunker [operators of SEA QUEEN] are definitely service-oriented. I don't know what we'd do without them."

In SEA QUEEN's cabin, a few boxes of toys and children's books are stowed under the center aisle bench for youngsters to play with. Passengers talk with people they've never seen as naturally as they would with island neighbors.

Mailboats are the daily grist of island lore. "Years ago," says the lifelong islander beside me, "we used to call meeting the boat 'hurry and wait, lug and tug' because of the number of times you lug groceries before getting them home." When she was a child on the island, she says, there were times when it was so rough, only men, no women or children, could take the boat.

Sue Hill has lived year-round on Islesford for 20 years, and summered there the 10 years before. "Beal & Bunker do a lot of good will, a lot they don't need to do," she says. "It's a mini-shopping service. We get everything delivered. I think it's amazing." Living all year on an island "can be confining," she admits. "Even if you have your own boat, the mailboat is the one that goes in bad weather. It's a lifeline to the island."

Great Cranberry's post office, housed in a small building on a dock next to the ferry landing, was once a fish freezer. "Well insulated," says Leigh Liebow, postmaster there for 12 years. It's a full service post office, open five days from 7:45 a.m. to 3:45 p.m. and four hours on Saturday when Stacey Wedge is the relief clerk. Islanders rent boxes and pick up mail anytime. Leigh could be called a Beal & Bunker alumna — she was the company's bookkeeper and office manager for 16 years, "with some overlapped time" in the post office.

"There's a lot of laughter," says Carl Little, a regular passenger to his summer home on Great Cranberry. "You meet all kinds of people on that boat."

The boat passes Sutton Island, where cottages are buttoned up for winter. In summer, the boat drops off mail in an ashcan on the float — "the world's smallest post office," says Rick Cegelis, a company boat captain for the past 12 years.

At the end of the run, Wilfred Bunker, a big, easygoing man, slides SEA QUEEN alongside the dock at Northeast Harbor. With agility belying his 77 years, he reaches over the side, grabs the lines and in a few swift moves makes the boat fast. He and his nephew Arthur Bunker, the deckhand, were finishing a game of cribbage as passengers arrived. Now they help with their bags and give them a hand as they step from boat to dock.

Wilfred Bunker was born on Great Cranberry Island and lived there 60 years. He was 16 when he got his first boat license — June 12, 1938 — and went to work with his brother on a mailboat. They ran from Seal Harbor, then Southwest Harbor, before coming to Northeast.

In 1950, Wilfred Bunker's father and Clarence Beal started Beal & Bunker. Wilfred and his son David operate three boats. SEA QUEEN is a 44-foot wooden boat built by Wilfred's brother Raymond Bunker of Bunker & Ellis in 1972. In 1984, they added DOUBLE B, a 38-foot wooden boat built in Bernard. CAPTAIN B, the smallest at 34 feet, is the only fiberglass boat.

DOUBLE B and CAPTAIN B carry passengers and special charters. They also are used to push the barge Wilfred's son David operates. SEA QUEEN carries the mail and up to 68 passengers. The company is on call 24 hours for emergencies. As Wilfred says, "Everybody works together on the islands." Island mailboats that provide regular passenger service rely heavily on fares. "We go in the hole in winter," says Wilfred. "From the first of November to May, it's a losing battle."

Beal & Bunker frequently makes special runs in addition to the regular daily schedule. Cegelis made five such runs ferrying a nurse around the islands on two consecutive days late last fall. The regular captain when Wilfred is away during the winter, Cegelis says he had to cancel only once during a blizzard a year ago. When bad weather is predicted, he gets the mail delivered and shortens the schedule. "On weather days, islanders know to call the office. There's one fellow who rides over and back on stormy days. He likes it. I call the boat the 'aqua bus.' Like a Mexican bus, we carry everything — dogs, chickens, cats, iguana, bikes, lumber." I love the work. I feel I'm part of the island communities."

FAMILY BUSINESS

For close to half a century, five summer islands in Penobscot Bay have been getting their mail through a service that can only be termed extended family. Edith Quinn of Sunset has reigned over mail delivery to Bear, Scrag, Great Spruce Head, Barred and Eagle islands since her husband, Jimmy Quinn, got the contract in 1949. When Jimmy died in 1975, her son Robert ran the boat. She holds the contract until 2000.

Edith's ties to these island families go back to 1935, when, as a registered nurse, she went to Eagle Island to care for an elderly resident. "The next morning, I saw Jimmy come in with two pails of milk. I said, 'That's the man I'm going to marry.'" They were married in October, four months later. They bought a place on the island and raised a big garden. "I put up 200 cans of stuff every winter. We'd go lobstering at 4 a.m., come in at eight o'clock and farm all day. All we bought was a hundred pounds of sugar and a barrel of flour. Every Saturday night in winter we'd get in the horse and sleigh, make ice cream and cake and have a social get-together. The whole island had Thanksgiving dinner in the schoolhouse, and Erland [Quinn, another relative] made scallop stew."

Children came over from Bear Island to go to the school, and people boarded students from other islands. When the school closed, families moved off the island. Edith and Jimmy had three boys by then and had to leave. "They moved things off in the scow and I sat there bawling. I said, 'I'm not going'. Those nine years on Eagle were the happiest in my life."

They returned when Jimmy got the mail contract and lived in Sylvester's Cove on Deer Isle. "We did everything for islands," Edith recalls. "Jimmy used to take people on special trips. I'd fill their grocery list at P. J. Eaton's store, make phone calls, go to Bangor to pick up people at the airport. We loved it. These are our friends. It's just like a big family in summer. Once we put up eight or nine people when it was too rough one fall."

A few days before her 87th birthday last December, about 100 island friends surprised Edith with a party at the Sunset post office. "It was the most wonderful thing that ever happened," she says. "They came from way down in New Jersey, all the people that have cottages from all the islands. They brought gifts, mementos, pictures of Jimmy. It was overwhelming." The occasion included Robert, who ran the mailboat for 20 years. He sold the boat and passenger service a year ago to Bob Quinn of Eagle Island, an alternate on the mailboat

A ramp can be steep, slippery or both, depending on the tide and the conditions.

since 1958 when Edith's husband ran it. He will subcontract to Edith until her contract runs out.

Bob and his wife, Helene, live year-round on Eagle, where both have family roots. Mailboat service to the island dates from about the 1890s. Helene's grandfather, Ed Howard, ran the mail before Jimmy Quinn, and Bob's father, Captain Erland Quinn, ran the boat for a time. The family connection with the mailboat has reached the fourth generation: their daughter, Treena, is being married in June and she and her husband plan to run the boat. Aside from the family homes, Eagle has 18 cottages and camps, occupied by summer residents.

KATHERINE, a 36-foot wooden boat built by Ronald Rich of Southwest Harbor, leaves Sylvester's Cove at 8:30 a.m. and makes the rounds of the islands six days a week from the first of June to the end of September. From October through May, the mail goes Tuesdays and Fridays. Helene Quinn says it's been customary for the boat to stop first at Eagle to pick up the orders for Spruce Head from her home bakery. Families from Bear and Scrag also get their mail at Spruce Head. The boat takes their outgoing mail and anyone who wants to go ashore. Then it heads for Barred Island.

Molly Schauffler, member of the third of four generations on Barred, says the mailboat is the high point of the day. All hands gather at the dock, where at low tide it's a long reach to hoist up packages and groceries from the boat. Molly recalls that her grandmother, Marnie Schauffler, would pin a note on the laundry bag with her orders for provisions she needed to feed a big family, guests and active youngsters who filled their island summers.

Neighbors are waiting on the wharf by the time the boat gets to Eagle. "It's the big event of the day," says Helene. The carrier sorts mail in a small building near the dock that serves for a post office. There's usually a lot of action at mail time. Baggage is loaded and unloaded as guests arrive and others say good-bye. Island families settle their debts for groceries and hand over lists for more. Kids scramble aboard after their parents, and the boat goes back to Sylvester's Cove. Then, the island folk head for Helene's to get a fresh baked muffin or loaf of bread on their way home.

Mail delivery is vital to island communities. Considering the weather and sea conditions, it's remarkable how seldom scheduled runs are canceled.

ISLE AU HAUT, MONHEGAN, CASCO BAY

In Stonington, a few miles south of Sunset, the Isle au Haut Company has the unique role of serving a quiet year-round population and a national park on the same island. The company carries mail, freight and passengers to Isle au Haut seven days a week all year. It operates two boats, MISS LIZZIE, a wooden boat built in 1967 on Great Cranberry Island, and MINK, a 46-foot Jarvis Newman hull finished by Malcolm Pettigrow. Mail is delivered to the town dock and carried about 100 yards to the island's small post office. The company's John Higgins says the boats make five runs a day from May to October when there's an influx of hikers and campers bound for Acadia National Park on the southern end of the island.

Boat day starts early on Monhegan, where for half the year mail comes three days a week. People hustle to get their mail ready before the boat arrives at 10:15 a.m. Pickup trucks rattle down to the dock to help unload. Others go on foot. "The mailboat is the heartbeat of the island in winter," says Raquel Boehmer, a year-round resident for more than 30 years. "Neighbors return the books they borrowed, or dishes from last night's potluck." When the boat docks, they help load freight — grocery supplies, packages, lobster traps on the pickups. The mail goes separately, trucked down and back by the store, which has the postal contract. "Boat day is a big thing," says Katy Boegel, a third-generation islander. Her two-year-old son and his friends "love to go down to see the boat unload."

The boat to Monhegan, farthest offshore of the mailboat islands, leaves Port Clyde at 9:30 a.m. Monday, Wednesday and Friday in winter. It makes three trips a day, seven days a week, in summer when the population quadruples.

Mail delivery to the island dates from the early years of the century. Jim Barstow, captain of the Monhegan Boat Line bought the service in 1976 from a man who had owned it for 70 years. Originally known as the Monhegan-Thomaston Boat Line, Barstow says "in the old days" it used to steam to Thomaston, Monhegan, New Harbor and other ports.

Supplies came by rail, and later by truck as far as Thomaston where Barstow met the truck until seven years ago. Now, two trucks arrive at Port Clyde direct from Boston at 5 a.m. Barstow forklifts food and supplies for the two island stores from truck to boat. "We service the islands," he says." Anything islanders ask for, we try to do. If they're sick, we get an ambulance ready. We get prescriptions and deliver them. We deliver everything except babies."

Barstow's wife, a partner in the business, handles the office and books. In summer, one of his daughters works as deckhand, the other manages the boat passenger parking lot beside the dock in Port Clyde. The company recently added a second Monhegan boat, ELIZABETH ANN. A 65-foot, 50-ton fiberglass boat, she joins the well-known LAURA B, which served during World War II as a gunboat in the Pacific. She's a 65-foot, 80-ton wooden boat, and handles heavy freight, firewood and coal as well as passengers.

"We make 290 trips a year," says Barstow. "We don't go when the wind's 40 miles an hour — about four or five times a year. Getting across is not so much the problem as getting to the dock." Anyone who has been to Monhegan knows the narrow passage between the island and Manana can kick up quite a sea. There's nothing beyond but the North Atlantic.

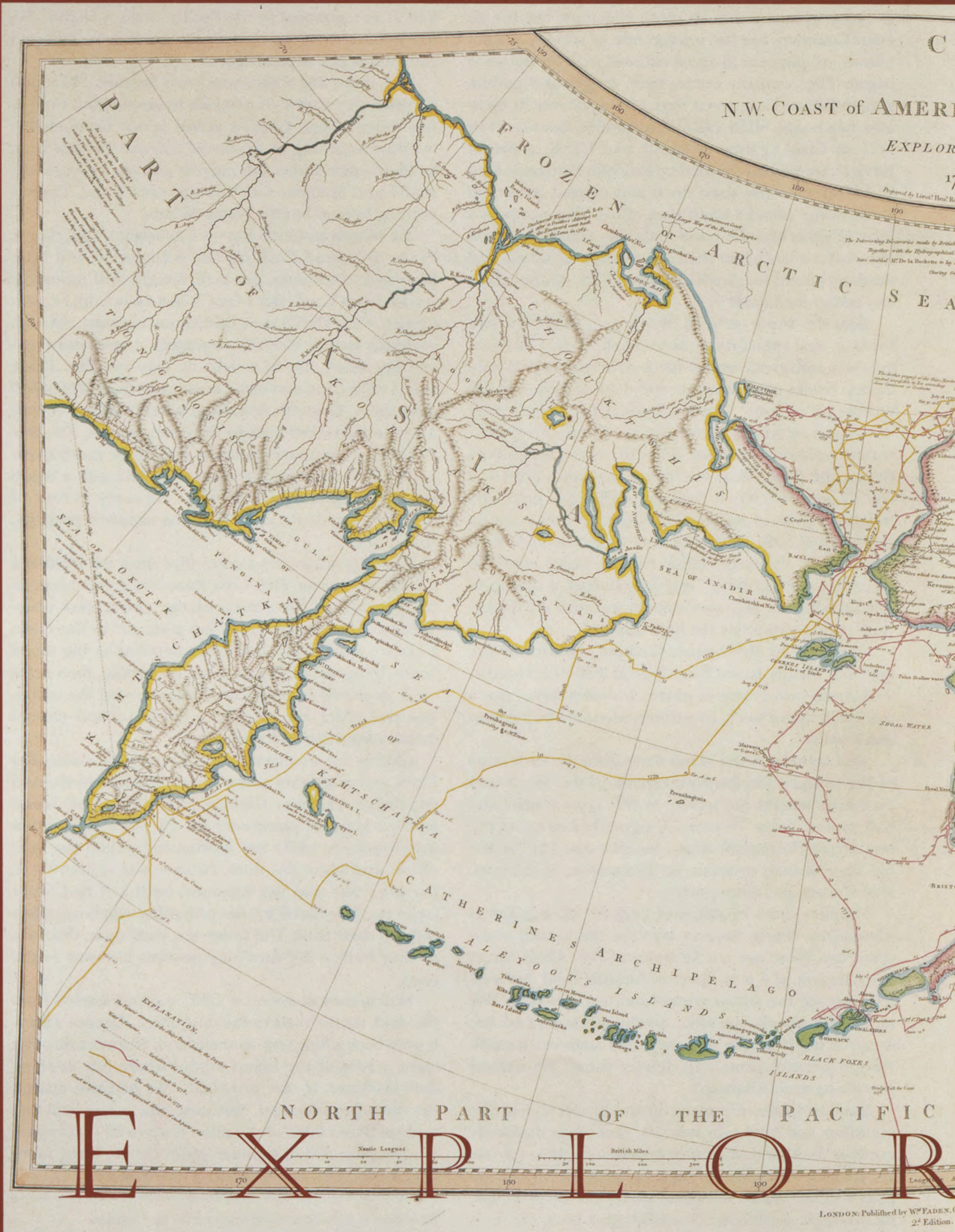
Six islands in Casco Bay — Chebeague, Cliff, Long, Peaks, Diamond Cove on Great Diamond and little Diamond in summer, get mail, freight and passenger service from Casco Bay Lines, a quasi-municipal transit district. Nick Mavodones, operations manager, says the company carries 800,000 passengers a year and operates five boats, two of which can take vehicles. These jaunty yellow, red and white boats carry from 299 to 400 passengers. They run seven days a week making 14 trips a day to Peaks and four to the other islands. The line employs six full-time captains and 20 or more deckhands. The company was formed in 1982 with a board largely composed of islanders. "We carry 18 tons of freight," Mavodones says, "building supplies, propane, cows, horses."

Chebeague has had a post office since the 1860s and a rural route since 1912. Gina Ross, officer in charge of the post office, has a rural carrier and a clerk when needed. The carrier drives her own car to the dock, picks up mail Casco Bay Lines deposits in big metal boxes, brings it to the post office for sorting, then delivers it to several hundred mailboxes around the island. The post office also provides a few boxes and general delivery for those who want them.

Cliff is the outermost island served by Casco Bay Lines, and more akin to the eastward islands in size and population. Eleanor Cushing grew up on Cliff Island and has been its postmaster for 35 years. She started working there while her mother-in-law had the post office, and when she died, Eleanor was appointed to the job. She and her husband built a 17-by-17-foot room on their house for the post office where islanders pick up their mail. The house sits back some distance, so they built a 300-foot-long wooden walkway to the road.

Mail arrives at noon on Cliff, and is delivered from the dock up the road to the post office. Eleanor's family goes back a long way on the Island. She went through eight grades at the island school where her nephew, Earl MacVane, is now principal. "We had two mails a day when I was younger," she says, "one, a late mail that came in about 6:30." Population is up to 80 year-round, but jumps to 300 in summer. More people bring more mail to sort. But, says Eleanor, "I like what I do."

***Jane Day** is a freelance writer who lives in Camden.*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SEA OF ANADIR
SEA OF KAMTSCHATKA
CATHERINES ARCHIPELAGO
ALEYOOTS ISLANDS
BLACK FOXES ISLANDS
SHOAL WATER
EXPLANATION
NORTH PART OF THE PACIFIC
Nautic Leagues
British Miles
LONDON: Published by Wm FADEN,
2d Edition

EXPLOR

ATIONS

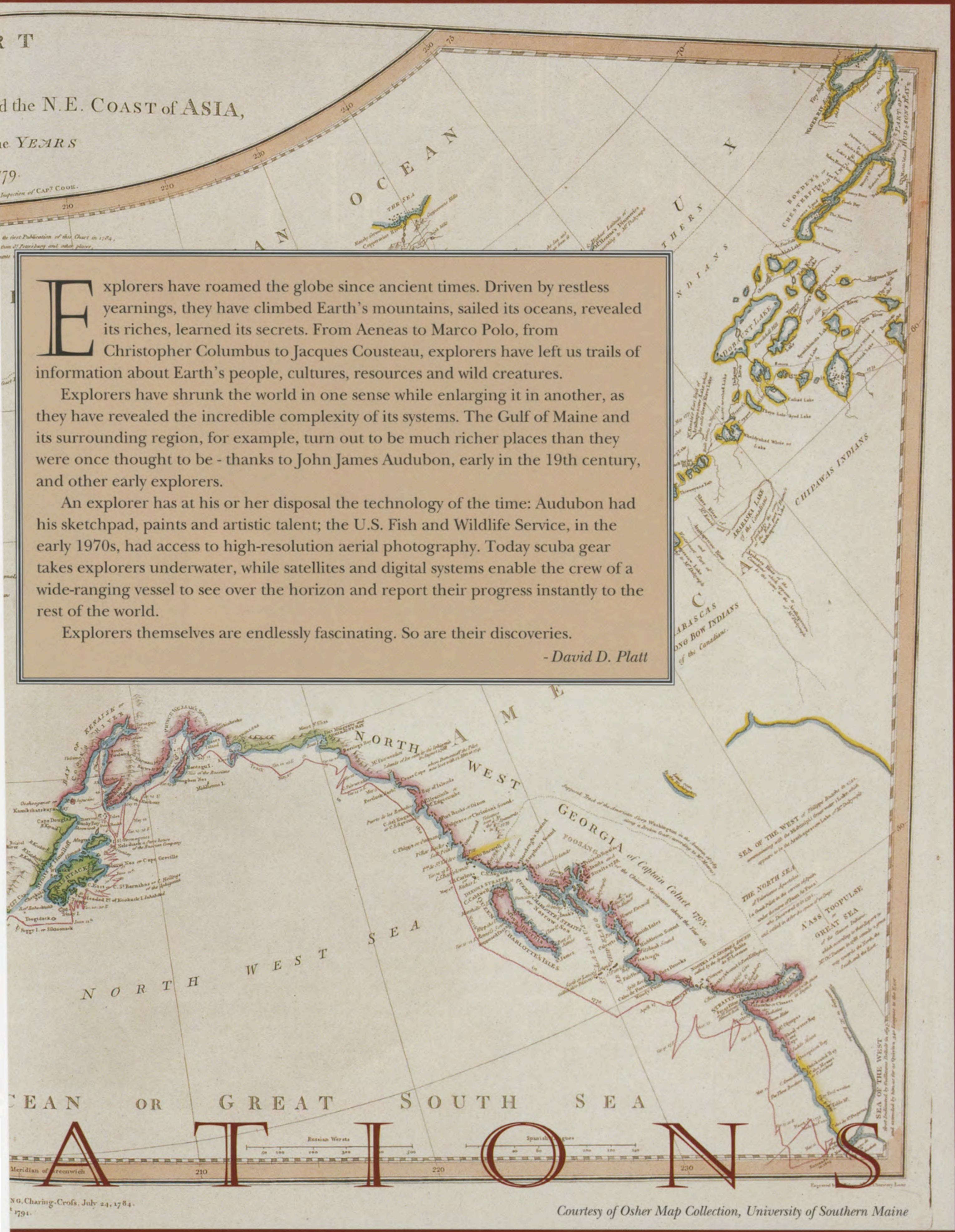
Explorers have roamed the globe since ancient times. Driven by restless yearnings, they have climbed Earth's mountains, sailed its oceans, revealed its riches, learned its secrets. From Aeneas to Marco Polo, from Christopher Columbus to Jacques Cousteau, explorers have left us trails of information about Earth's people, cultures, resources and wild creatures.

Explorers have shrunk the world in one sense while enlarging it in another, as they have revealed the incredible complexity of its systems. The Gulf of Maine and its surrounding region, for example, turn out to be much richer places than they were once thought to be - thanks to John James Audubon, early in the 19th century, and other early explorers.

An explorer has at his or her disposal the technology of the time: Audubon had his sketchpad, paints and artistic talent; the U.S. Fish and Wildlife Service, in the early 1970s, had access to high-resolution aerial photography. Today scuba gear takes explorers underwater, while satellites and digital systems enable the crew of a wide-ranging vessel to see over the horizon and report their progress instantly to the rest of the world.

Explorers themselves are endlessly fascinating. So are their discoveries.

- David D. Platt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NG, Charing-Cross, July 24, 1784.
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Courtesy of Osher Map Collection, University of Southern Maine

SEA TRANSIT

Retracing the voyage of Vitus Bering

PHILIP W. CONKLING

The bridge aboard TURMOIL

Gary Comer

WHO CAN REALLY SAY why the poles, north and south, tug so persistently at the edges of the imagination? Not everyone, of course, feels the anitpodal pull of icy fogs of high latitudes, nor the simple, frightening beauty of endless expanses of tundra, but for those whom such visions entrance, the compass has only one ordinal.

Gary Comer has had this affliction for many decades; he even named the company he founded after that mystical place where Lands (E)nd, where invisible currents transport us toward the far ends of the globe. A sailor ever since he started a club for racing dinghies at a public landing on Lake Michigan in downtown Chicago, Comer has explored oceans and islands of the north and south. Since stepping down as C.E.O. of his company, he has pursued his passion ever more intently.

I was invited last summer to join an expedition aboard Comer's vessel TURMOIL, retracing Vitus Bering's second voyage of discovery in 1741. It took only one breathless moment to say yes, thank you, yes.

I have not been away from the Gulf of Maine in August for now two decades, and never imagined being elsewhere last summer than within this ultimate archipelago of the North Atlantic. But around the Horn and across the continent is the North Pacific's own ultimate archipelago, where the Aleutians arc across the top of the world, where all the currents of that huge ocean converge and collide, where schools of Bering Sea cod still aggregate in their millions, and where seabirds and marine mammals congregate amid invisible gyres and eddies in a complex system where the hold of man has always been more tenuous than here. Finally, there was the Big Thrill of being somewhere totally apart, not known, new, different and still partly unexplored. Who were its people, who are the islanders now? How will this archipelago fare in the century ahead, compared to ours?

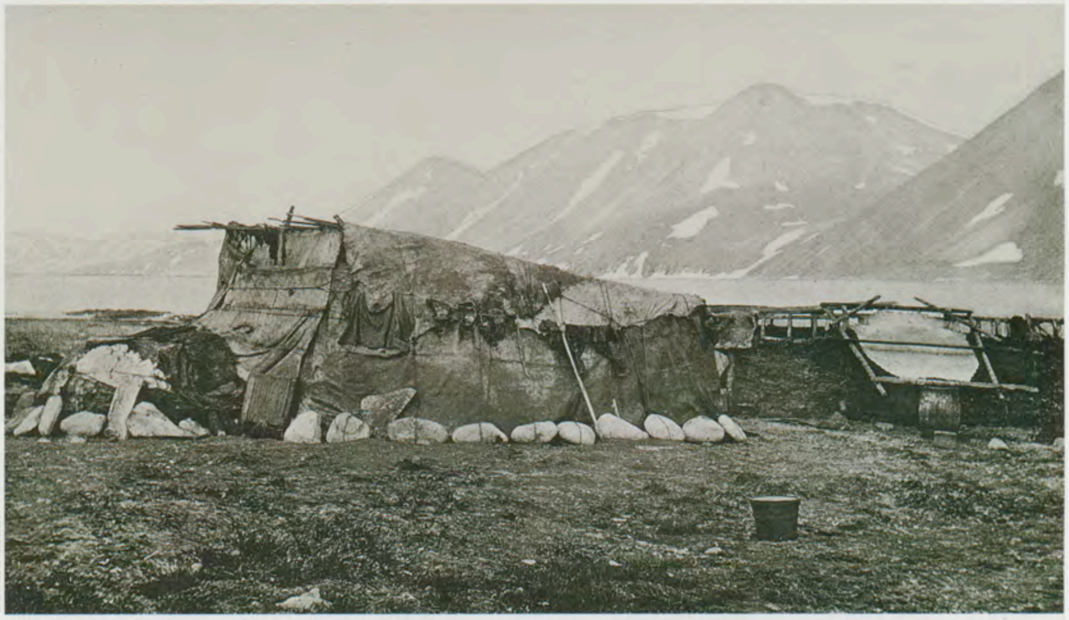
Before Bering could explore the North Pacific for Peter the Great, Tsar of Russia, he first had to cross Siberia by foot, find forests of trees big enough for ocean-going boats and then launch his vessels on the uninhabited shores of a river in Kamchatka in the Russian Far East. In 1734, he proceeded to sail north to chart the strait, later named for him, that separates the Asian Far East from North America.

Peter was reportedly unimpressed. But finding the Northwest Passage across the top of the world, connecting Russia on her frontier with the new frontier of the North Atlantic — now that was worthy of imperial support. So Bering re-crossed Siberia, and during his second expedition from Kamchatka, crossed more than a thousand miles of what would be known as the Bering Sea to discover the eastern reaches of Alaska's Aleutian Islands. This expedition had immense consequences for Russia, Alaska and the aboriginal inhabitants of that archipelago, the Aleuts, as well as for Bering himself, who died and was buried on a lonely island on the return voyage. But that's getting ahead of our story.

In the course of searching out background information on the remote places we might visit, I was impressed to discover that the region's relatively few visitors have left stunningly detailed written accounts, starting, of course, with Bering himself. As it happened, I didn't start with Bering's account, because Peter Quesada from South Freeport, Maine, another companion on the expedition with a keen interest in exploration literature, had undertaken this assignment. But I did come across *Harriman's Alaska Expedition*, the record of railroad magnate E. H. Harriman's sea-going voyage transiting the region west to east in 1899.

Harriman explained his purpose and assumptions in a simple preface to a series of volumes that were published during the succeeding decade:

> *Our comfort and safety required a large vessel and crew, and preparations for the voyage were consequently on a scale disproportionate to the size of the party. We decided, therefore, if opportunity offered, to include some guests who, while adding to the interest and pleasure of the expedition, would gather useful information and distribute it for the benefit of others.... The long voyage, made often in the midst of fog, through imperfectly charted waters, and along a treacherous coast unguarded by lighthouses or danger signals, was accomplished in safety and without serious accident.*



Edward Curtis

An islander's dwelling in the Aleutians, 1899

Harriman gathered aboard 40 of the nation's greatest naturalists, scientists, writers, artists and photographers for his expedition: C. Hart Merriman, chief of the U.S. Biological Survey; naturalists John Muir and John Burroughs; George Bird Grinnell, editor of *Field and Stream*; photographer Edward Curtis; artist Louis Agassiz Fuertes; paleontologist William Dall; along with zoologists, geologists, foresters, botanists, physicians, taxidermists, stenographers and a chaplain.

By these standards, TURMOIL traveled light, but with no less zeal. In addition to Gary Comer and Peter Quesada, our small company of explorers also consists of Henry Pollack, professor of geology (and volcanology) at the University of Michigan, and Isamu Tatsumo, internationally renowned Japanese mountain climber and businessman. We will not publish 17 volumes of detailed accounts that the Harriman Expedition ultimately produced, but we have tools at our disposal never dreamed of a century ago.

Near Kagalaska Pass, Aleutians

Philip Conkling

Gary Comer

TURMOIL in the Aleutians

TURMOIL, when we join her in Petropavalosk Harbor on the Kamchatka Peninsula, is a wonder to behold: a 151-foot trawler-type fishing vessel above decks, elegantly appointed below. The ship is designed for long distance travel, carrying enough fuel for 2,000 miles, fresh water from a reverse-osmosis desalination system, equipped with a freezer and coolers that made it nearly impossible to run out of food. She has stabilizers, rather than a heavy keel, to reduce motion at sea so she can get into shoal waters. The pilothouse is serenely reassuring, with deeply redundant navigational technology including a state-of-the-art digital chart display system interfaced with global positioning system (GPS) software from a company owned by Comer.

My first insight into one of the deeper meanings of this vessel and its owner, however, is found in the ship's library. Here are over a thousand volumes of virtually all of the world's greatest expedition literature, including the original accounts of such legendary polar and oceanic explorers as Drake, Cook, Vancouver, Darwin, Shackleton, Bering, Peary and Byrd, along with a truly wondrous contemporary collection of natural history guides and writings. Within its spacious walnut shelves, the library provides a series of classical and contemporary portholes through which we may view the intersecting worlds of geography, adventure, history, natural history, cultural anthropology, navigation and seamanship.

TURMOIL is well captained by Mike Moneyhan and his wife (and First Mate), Jo. The engine room and below decks systems are overseen by a chief engineer from New Zealand, assisted by an A.B. seawoman from Australia, and rounded out with a four star cook also from New Zealand, a cook's helper from Turkey and a steward, Pinkie, from the Philippines. With the addition of our Russian guide-translator (for the first half of the voyage) and Tatsuno, we are a floating United Nations.

Comer's goal is to see if we can get a picture and posting of sunrise aboard TURMOIL up on the World Wide Web, via a satellite link, the same day, with richer, more detailed accounts the day following. We decide to network the ship's three personal computers together, to be able to share files.

The entries that follow are condensed from narratives to which all members of the expedition contributed. They are interspersed with brief selections from books in the ship's library, principally *Harriman's Alaska Expedition*, that provide historical counterpoints.

As TURMOIL clears Petropvalask Harbor and steams out into the north Pacific, we feel like John Burroughs on Harriman's expedition, who wrote this memorable account of his first day:

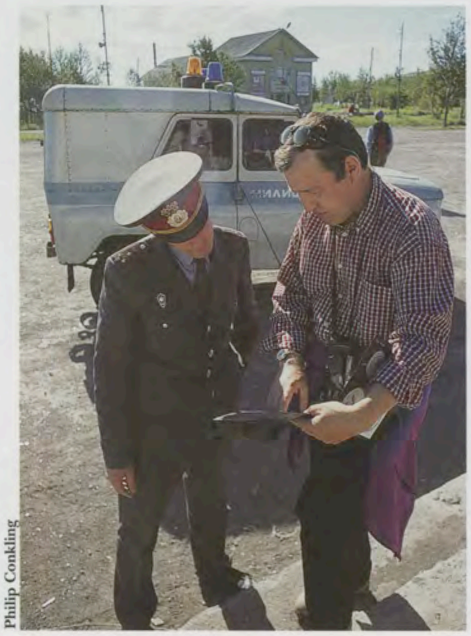
The albatross found us out and followed our ship when we had been but a few hours at sea, wheeling around us close to the water, coming and going, now on one side, now on the other, slanting and curving, and all on straight unbending wing. Its toilless, effortless flight and its air of absolute leisure were very curious, strange, solitary, weird — it seemed like the spirit of the deep taking visible form and seeking to weave some spell upon us or lure us away to destruction. Never before had I seen flying so easy and spontaneous — not an action, not a thought, not an effort, but a dream.

Boishaya River Delta, August 10: A call from the bridge summons us to the pilothouse just before sunrise. As we gather in the gray dawn, our attention is riveted by the sight of the sun's rosy fingers illuminating Kluchevskoi volcano floating on the horizon to the north. There is a sharp bite to the air that draws your breath in. This is the first day of a cloudless sky since arriving in Kamchatka, and the view of a perfectly symmetrical snow-capped volcanic cone rising over 13,000 feet in the sky and bathed in the pink, translucent glow of dawn is otherworldly. A glorious, glorious dawn over western Pacific creation.

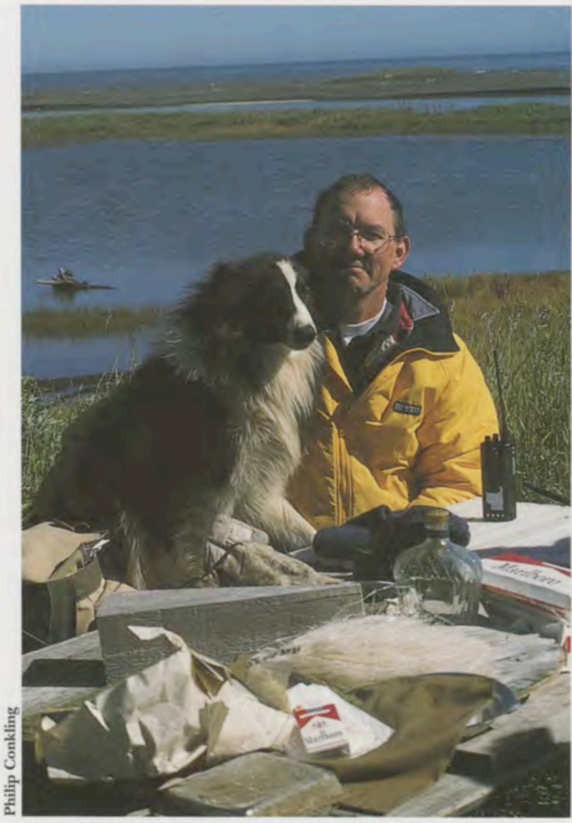
We are anchor a mile from shore where a river cascades down out of the volcanic highlands and then meanders through a grassy delta before breaking out through a thin strip of black sand beach to the sea. A line of white breakers marks the edge where the river spills into the sea. Gary and Mike swing the jet boat off the forward deck to prospect for landing sites. Underneath the verdant green hills a small cabin is barely visible through the binoculars, as this whole region is part of the vast Kronotsky Nature Preserve, which supports the largest grizzly bear wilderness area left in the world.

While we watch them navigate the breakers at the mouth of the river, an incredible scene unfolds. A pair of park guards saunter down to the beach with their dog as Gary and Mike arrive. But just as they do so, a large grizzly bear wades out into the river and snatches a salmon from the water and lumbers onto the beach. The grizzly attracts the attention of the dog, a black and white border collie type, which races down the beach directly at the bear, barking furiously and nipping at the bear's massive feet. It was hard to watch, so sure were we that with one huge swipe of the grizzly's paw would put a bloody end to the encounter. But the quickness of the dog eluded every swipe of the ursine claws. The grizzly, by now seriously annoyed at having its breakfast interrupted, drops the salmon to pursue the dog which proceeds to lead the bear on a chase away from the guards and the boat. Then the dog doubles back, grasps the bear's salmon and drags it down the beach past the outraged bear just beyond its reach. As the bear chases the dog lugging the salmon, it is clear that he is leading the bear away from his master — really an incredible display of intelligence, agility and something which in a human we might call courage.

When the rest of us arrive ashore, the guards, Yuri and Andrei, give us a warm welcome on the beach and lead us up to their cabin above the beach. Through Eugene, our interpreter, we learn that the park guards have been stationed here for several years. Yuri, older than Andrei by many decades, has a wonderfully calm expressive face of a Russian Cossack and a shock of pale blond hair that belies his age. We present them with a bottle of Jim Beam whiskey and a carton of Marlboros, hardly politically correct gifts, but deeply appreciated nonetheless, particularly since aside from a family letter or two, the only other package delivered contains a book on how to train dogs, which, Chukut has amply demonstrated, is the least necessary information the park authorities back home have to offer them. The guards clearly love this lonely wilderness post, even though they can get back to Petropavlovsk only once a year. Twice a year, in the spring and the fall, a helicopter flies in supplies. Otherwise they are almost completely on their own.


Philip Conkling

Tourism, Russian-style


Philip Conkling

Capt. Mike Moneyhan at the Boishaya River Delta

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Gary Comer

Walruses, Verkhoturova Island

Commander Islands, August 11: We have steamed all night across this part of the Pacific before reaching our landfall late at night at the Commander Islands, 120 miles from the shores of the Kamchatka peninsula. We are in a small anchorage in a bight on the northwest side of the largest island in the Commander archipelago, known as Bering Island. Named for the great 18th century explorer, Bering Island is the western terminus of the chain of Aleutian Islands that sweeps across the entire Pacific at high latitudes.

The first thing I see from my porthole this morning are three large sea otters rolling and cavorting in floating patches of immense red kelps. Several adults dive and return to the surface with shellfish that they eat rolled over on their backs with their flipper-like feet sticking straight out of the water. A pup crawls onto the belly of one of the adults and rolls on and off in what looks for all the world like a game any parent might play with his child. The pup is obviously enjoying itself immensely.

Philip Conkling

Seabird rookery, Verkhoturova Island

Edward Curtis

Fur seal colony, 1899

Off a mile or so from where TURMOIL is anchored is a low-lying island. Even though the wind is from a different direction, we can hear the high pitched sounds of a seabird rookery propagate eerily over the water in the morning air. The keening, pulsing sounds of tens of thousands of nesting seabirds are evidence of the summer in these latitudes, and of the productivity of the local waters, which are rich in marine life.

We are awaiting clearance to go ashore, although weeks of prior arrangements mean that word of our arrival has preceded us. Eugene and Mike have gone ashore to negotiate our disembarkation. When Mike offers to take the local military authorities out to TURMOIL in his launch, rather than bring their rusted launch raft alongside, a minor diplomatic incident ensues. After a mysterious delay of five hours, we are finally instructed to come ashore.

The little village of Nicolskei is perched at the end of an arcuate sandy beach, its houses arranged on the hillside overlooking the harbor. As one of the easternmost outposts staring out across the Pacific to America, Bering Island was of obvious strategic value, but in this brave new world of Perestroika, it is not obvious how you can "restructure" the rusting remains of the Cold War that litter the waterfront like the carcasses of extinct industrial beasts.

We head next for the north end of Bering Island, landing at a beach where we plan to walk the remaining two miles out to its tip to see a fur seal colony. We trek along the beach and then climb up onto a flat terrace where a path leads us north. Halfway there we pass a little cabin and meet a pair of researchers, Irina, a meteorologist, and her husband, Alexander, a biologist. Alexander has just returned from a mushroom hunting expedition and shows us a bandanna full. Irina and Alexander are extremely cheerful and friendly, and invite us to stop back on our return.

Before ascending the last large headland at the end of the island, we begin hearing the hoarse barking of the fur seal colony. When we finally peer over the rim of the headland, the beach at our feet is packed with fur seals — thousands and thousands of them. In the midst of each group of seal cows and their pups is a single large male, known as the "beachmaster," who patrols his beach in order to maintain the genetic integrity of his harem and to keep wandering bulls from cuckolding him. Other bulls constantly challenge these monstrous males, which weigh upwards of 800 pounds. The scene is one of constant activity, amid the incessant barking, squawking and squealing of fur sealdom. An inventory completed just last week determined there to be approximately 115,000 fur seals on Bering Island with a much larger number on nearby Copper Island — a total of 300,000 seals for this small archipelago. Last year, we later learn, was the end of fur seal harvests here that once took large (though controlled) numbers for the international fur trade.

When we return to the biologists' base in the early evening, Irina and Alexander have made tea for us. We spread ourselves out in the tall grass around the cabin as the sun slowly descends. Irina has even baked little cake-like breads to go with the tea, and we exchange impressions about the island and our travels, suffused with a warm feeling of comradeship. Tatsuno pulls out his tiny little bamboo flute and begins playing the most haunting tunes — it's as if a single spirit has crept into the interstices of our souls.

Vitus Bering memorial, Commander Islands

Philip Conkling

Bering Bay, Commander Islands, August 12: After a quiet night we head southwestward along 30 miles of uninhabited island coastline. Henry provides a short geology lecture about the faults and uplift of the deposits of volcanic ash that form the Commander Islands. Meanwhile, Tatsuno brings the sun up with his flute-playing, Gary downloads digital image files and Peter shares a passage from Bering's journal.

After a few hours of steaming, we round up in a broad shallow bay and drop the hook two miles offshore. After launching the shoal-draft jet boat, we pile in and head to shore to see if this is the bay where Bering was shipwrecked on his return voyage from the Aleutians. Large, eroded headlands flank the bay on either side and a small stream empties into the shallows at the northern end of the beach, just as depicted on the mural yesterday at the museum.

In the shallow waters are dense patches of red and brown kelps that wave their fronds in the gentle surge. As we approach the beach, large salmon leap out of the water and smaller fish, perhaps steelhead trout, also break the surface. At one point a little wave, backlit in the morning sun, illuminates a school of two dozen fish feeding in the shallows. The jet boat, drawing 18 inches, grounds out 100 feet from shore and we all wade the last stretch into the beach with cameras, shoes and pants held aloft; it's easy to imagine what happened to Bering here as he coasted these shoal shores.

Up on the hillside is a little cemetery with eight gravestones and a pair of crosses, one Russian Orthodox, one traditional Christian, set off from the other graves. Here lie Vitus Bering and his shipmates who did not survive that desperate winter of 1741. Following the shipwreck over half of them slowly perished from scurvy. Overhead, ravens, a northern, circumpolar talisman of death, flap and croak, a reminder of the destination of all of our life's journeys. Ironically, Georg Stellar knew that by eating certain plants Bering's crew could forestall the debilitating, fatal effects of scurvy. But Bering ignored his advice, apparently because he believed Stellar was merely looking for a pretext to wander about the countryside. Stellar, it turns out, may have been pretty hard to take for those around him. Although he survived the long winter on the island, he took sick the next year re-crossing Siberia on a dogsled, was left out overnight by his companions at a small village and was dead the following morning.

Verkhoturova Island, August 14: We have been told that Verkhoturova Island is a large and important seabird nesting colony. We have the necessary permits to visit. The tremendous abundance of seabirds we have seen diving in the waters and winging overhead have been such pleasing and diverting companions during our voyage that we anticipate viewing a colony where many of them are gathered in one spot.

As we approach, it is apparent that the cliffs are white, not from the color of the bedrock, but from the plumage and guano of the seabirds that are nesting on them. Black-legged kittiwakes and the larger black-backed Pacific gulls soar overhead as they wing in and out from their rocky fortress on Verkhoturova. They nest from the water's edge all the way up the green slopes toward the summit of the island.

At the southeast tip of Verkhoturova are a series of craggy sea stacks even whiter than the first sea cliffs we saw, and as we approach, tufted puffins, horned puffins and murres careen in over the water. Then a flock of brilliantly colored ducks fly by us just off the water, and it is not till they are out of sight that we realize we have just seen a flight of rare harlequin ducks, on migration from their nesting grounds far to the north.

Here and there scattered among the more numerous gull and murre nests are smaller colonies of jet black cormorants that flap laboriously onto and off their nests, which are generally located lower to the water. Beautiful, black-bodied tufted puffins with brilliant orange beaks and yellow eye tufts fly closely by, headed for burrows amid the rock scree, where they are safe from marauding gulls. The tufted puffins share their unusual nesting burrows with their close cousins, the horned puffins, frocked in black on top with white underneath. There is no counting the magnitude of this colony — even estimates are difficult to make, the eye is so dazzled by such abundance and diversity. But there are probably not ten seabird colonies of this magnitude in the Pacific; a quarter of a million birds may be wheeling, diving, feeding or nesting in this small dot in the North Pacific — a sight of nature's grandeur at once bounteous and profligate.

A little beach beckons and we land in the shadow of the cliffs. The steep face of this exposed beach suggests the fury of winter storms. On the slopes amid the tall grasses and forbs, an especially bright purple larkspur provides a brilliant splash of color. Bones are scattered on the beach from some enormous marine mammal, and at the far end of the beach, Mike hauls up a massive skull of what can only be a walrus which on later examination appears to have suffered a massive blow to its skull, as from a high-powered rifle slug.

We continue around the island, still awed by the stupendous number of animals here that send up a deafening din of shrieks and cries. Finally, we pass beyond these cliffs and the gentler topography of the backside of Verkhoturova comes into view. The waters shoal out from a point on the beach and we are picking our way carefully through the water when Peter calls out, "Walrus!" There, hauled out on the beach a short distance away, are the massive tan-colored bodies of four walruses, bewhiskered cheek by drooping jowl. They must be fast asleep, for they do not move as we maneuver amid the kelp-covered ledges for a closer look. As we approach within a few feet, one with a single tusk pokes his massive head up, and immediately the others stir to action. As they heave themselves around to get back in the water, they do not remind one of Russian ballet dancers. Their tusks gleaming like sabers, they charge off into the water, hurtling a bow wave toward our inflatable launch, which seems suddenly small and vulnerable. As we watch this spectacle, speechless and riveted in the excitement, the walruses torpedo underneath the boat, their bodies transformed suddenly into graceful, smooth shadows in this, their watery element. They say a polar bear fears a walrus in the water. Whatever more the near Arctic could show us on this voyage is hard to imagine.

The Aleutian Islands: From the portside windows, a shroud of low clouds and fog obscures most of the vertical elevation of Attu Island, our landfall at the extreme western tip of the Aleutians. Most of us have slept fitfully. But verdant green hills recall Burroughs' first sight of the Aleutians on the Harriman Expedition:

> *Never had I seen such beauty of greenness, because never before had I seen it from such a vantage ground of blue sea. At one point we passed near a large natural park. It looked as if a landscape gardener might have been employed to grade and shape the ground and plant it with grass and trees in just the right proportion.*

Shortly after daybreak, Mike picks our way carefully into Massacre Bay. Avoiding foaming ledges, we round up and drop the hook in a little cove, neatly protected from the most of the force of the southeasterly sea. This bay was named for an infamous incident during the last century when Russian fur traders rounded up the native Aleut inhabitants of Attu and proceeded to slaughter the defenseless men, women, and children.

Harriman's expedition, while primarily focused on natural history, also provided accounts by George Bird Grinnell of their encounters with the Aleut islanders, who were already sadly reduced in numbers and circumstance from their earlier pre-Western lives and culture:

> *At the present day the Aleuts are supposed to number less than 2,000 people, though the old navigators who discovered their existence gave them a population of from 25,000 to 30,000, which seems not unreasonable when we consider the conditions of their life in their primitive estate, and the abundance of their food supply. These people are of Eskimoan stock, but the separation of the two branches must have been long ago for they speak a language which the Eskimo do not understand. Their traditions are so similar to those of the Eskimo, and the implements which they used in primitive times so much the same, that there is no longer any doubt about their relationship.*
>
> *Away from the settlements, however, they still live somewhat in their old fashion, and at the remoter villages, such as Kashega, Chernofski, and Akutan, occupy the barabara, an oblong, rectangular house with vertical walls only two or three feet high, with a roof sloping up to a height of about six feet.*

Attu Island and Massacre Bay, August 17: Attu Island, a nearly treeless island 32 miles long and 15 miles wide, is now the site of a small U.S. Coast Guard station that beams out Loran C radio signals, part of an international grid used for navigation purposes. The station, built up on a hillside above our anchorage, is an easy walk from the beach and so we launch the jet boat for a visit.

In 1942, the Japanese landed 2,600 troops on Attu, not only because of its strategic value as a foothold on the North American continent, but also to divert American attention from their real goal of taking Midway Island in the middle of the Pacific. The Japanese dug into the hillsides of Attu, dug tunnels, established artillery positions and prepared for the inevitable counter-reaction from American forces. In 1943, 13,000 American troops landed in waves on three different beaches on the eastern end of Attu. The battle, which the military thought would take two to three days, lasted two weeks. The main battle took place in the hills, where both American and Japanese artillery was concentrated. Down to his last 800 men, the Japanese commander ordered a frontal assault up Engineer's Hill, the center of the American artillery position. Military historians recognize the charge for what it was: a suicidal assault which cut down virtually all of the brave Japanese who made the charge. Out of the 2,600 Japanese, only 26 survived, a fearful symmetry for the aptly named Massacre Bay.

We wend our way around the main harbor, its docks fallen into disuse now that everything Attu needs is delivered by C-130 cargo planes. The planes arrive twice a month, weather permitting, and are a big event. At the westernmost tip of Attu are another set of American wharves not 50 years old and already in the process of being reclaimed by the sea. Ashore, we begin the climb into Attu's green misty hills, dreamlike in the solitude.

Part way up the hill we stop at a collapsed building, once an interdenominational church for the island, its spire still intact. We are all enveloped in the quiet mood of this place. It seems entirely appropriate that of all the Arctic flowers surrounding this windswept spot, the most vivid should be a purple monkshood, which flutters in the raw easterly wind and combs out little droplets that are arranged like diamonds around its cowl.

Further up the hill we stop at a little plot of land with a stone marker and a bronze tablet. Near this spot Colonel Yamazaki, who led the Japanese force at Attu, was killed and this memorial was erected to commemorate his fierce and tragic bravery. Ben, like most of the Coast Guardsmen here, seems appreciative of the military history on the island and tells us that the final desperate charge of Yamazaki and his men ended here. Armed only with bayonets, with grenades strapped to their chests, they ran up the hill, Samurai style, to certain death.

Finally we reach a little plateau near the summit of the hills. To our delight, the clouds break a bit overhead, suffusing the scene of the beautiful valleys below in a silvery soft light. A large sculpture, like a metal starburst, erected by the Japanese government in cooperation with the government of the United States, overlooks these lonely hills. Its inscription reads: "To the memory of all those who sacrificed their lives in the islands and seas of the North Pacific during World War II and in dedication to world peace."

The inscription in both Japanese and English is etched in a special metallic alloy that acts like a prism separating the words into a variety of soft-hued primary colors, giving warmth to the cold, dead metal. And then something truly wonderful happens. A rainbow begins forming over the monument, at first tentative, half obscured in the highland fog, but gradually building and arcing overhead as the sun suffuses the uplifted cloud ceiling, until the rainbow is entire and complete unto itself: a semi-circle of primary colors attached to hallowed ground on both its ends. Tatsuno breaks out his flute and plays a lilting melody while no one dares to breathe or break the spell of benediction.

As we cluster around this little monument on a half-forgotten hillside, half a world away from everywhere, the symbolism of the place is hard to avoid. We came from the Philippines, from Japan, from New Zealand, from Australia, from Turkey and from the United States, to this place, as unlikely and unplanned an international convocation as could be imagined. One of us is the son of a Japanese samurai warrior, one of us is the son of a U.S. Air Force General; here we are gathered on

Nesting murres, Verkhoturova Island

Gary Comer

There are probably not ten seabird colonies of this magnitude in the Pacific; a quarter of a million birds may be wheeling, diving, feeding or nesting in this small dot in the North Pacific — a sight of nature's grandeur at once bounteous and profligate.

War memorial, Attu Island

Philip Conkling

this remote hillside, lost in private thoughts, but all of us for this one moment living the purest dream of peace.

Kagalaska Pass, August 19: Thinking we might encounter seals or seabirds, we elect to explore a very narrow passage between Adak Island and Kagaska Island, marked Kagalaska Pass on the charts. At the very least, it will be an interesting piece of water, so Mike puts the helm over after rounding the northeast point of Adak where a top secret U.S. Navy base built during the Cold War is about to be handed over to a Native Alaska Corporation.

Distances on the chart are very deceiving; what appears to be a modest passage, when actually measured, turns out to be a 14-mile-long strait that connects the Bering Sea with the North Pacific. A high craggy ridge looms out of the mist to starboard and the broad green shoulders of a volcanic cone guard the entrance to port.

Once inside the gates of this passageway, the tide is running at full flood against us. Water begins to boil up around TURMOIL as the tide spills into a 35-fathom-deep basin. We are all clustered on the bridge while the instruments begin telling their story: at the narrowest part of the passage, we are making 11 knots over the water but only 3 knots over the bottom, meaning that 8 knots of current are being driven through here. We have the sensation of going uphill. Boiling whirlpools form to port and starboard, drawing TURMOIL's bow first one way and then another as if some gigantic force field were bending our course through its gravity. Peter notices the remarkable temperature change in the water; in the space of a quarter of a mile it descends from 45 degrees to 34 degrees, indicating that frigid ocean bottom waters from great depths are drawn up through this pass. The dramatic difference in temperatures between water masses always concentrates feed in the oceanic environment, and in areas of vertical mixing and tidal gyres, the biological activity is increased immensely.

As if to prove the point, a dark-phased peregrine falcon swoops by the pilothouse, banks off to starboard and then stalls over a whirlpool. We hold our collective breath at the spectacle, the sheer beauty and power of the bird's presence. The peregrine flaps slowly a couple of wing beats in place and drops like a stone on a puffin surfacing in the whirlpool, grasps the heavy-bodied seabird in its talons and then flies slowly off to lunch. The pace of biological activity is almost palpable here. A pair of eagles sits on a ridge off to port; another to starboard, and two more appear after we turn around and begin picking up steam with the current. We decided it would be appropriate to rename Kagalaska "Five Eagle Pass."

Back out in the waters of Asuksak Pass, Jo spots the fin of an orca. Then another and another, then the fin of a minke whale and another. Soon we are literally surrounded by whales. A great surging feeding convocation. It's rare to see two species so close together and indicates that a great many fish are being chased through these waters. Three orcas swim so closely by TURMOIL's starboard side, we can clearly see the eye of the closest one.

Among all the special events of this voyage, no day has produced such a rich variety of wildlife — a great day scored for Bering Sea biodiversity.

The Harriman expedition described the Aleutian landscape as follows:

We sailed past high rolling green hills, cut squarely off by the sea, presenting cliffs seven or eight hundred feet high of soft reddish crumbling rock, a kind of clay porphyry of volcanic origin, touched here and there on the face with the tenderest green. It was as if some green fluid had been poured upon the tops of the hills and had run down and dripped off the rock eaves and been caught upon every shelf and projec-

tion. The color was deepest in all the wrinkles and folds of the slopes and in the valley bottoms. At one point we looked into a deep smooth valley or trough opening upon the sea, its shore line a complete half circle. Its bottom was nearly at the water level and as fresh and vivid as a lawn in spring.

Gary Comer

Near Vitus Bering's gravesite, Commander Islands

Islands of Four Mountains to Unalaska Bay, August 21-22: We have traversed 700 miles of the Aleutian chain and are on the final leg to Dutch Harbor on Unalaska Island. It's a good time to look back as well as ahead.

In our wake is an extraordinary collection of sights and impressions from our voyage along one of the world's longest, least traveled archipelagoes. How does one organize all these disparate impressions into a whole picture, and then roll that picture forward into the future, to ask what will happen here in the years and decades ahead?

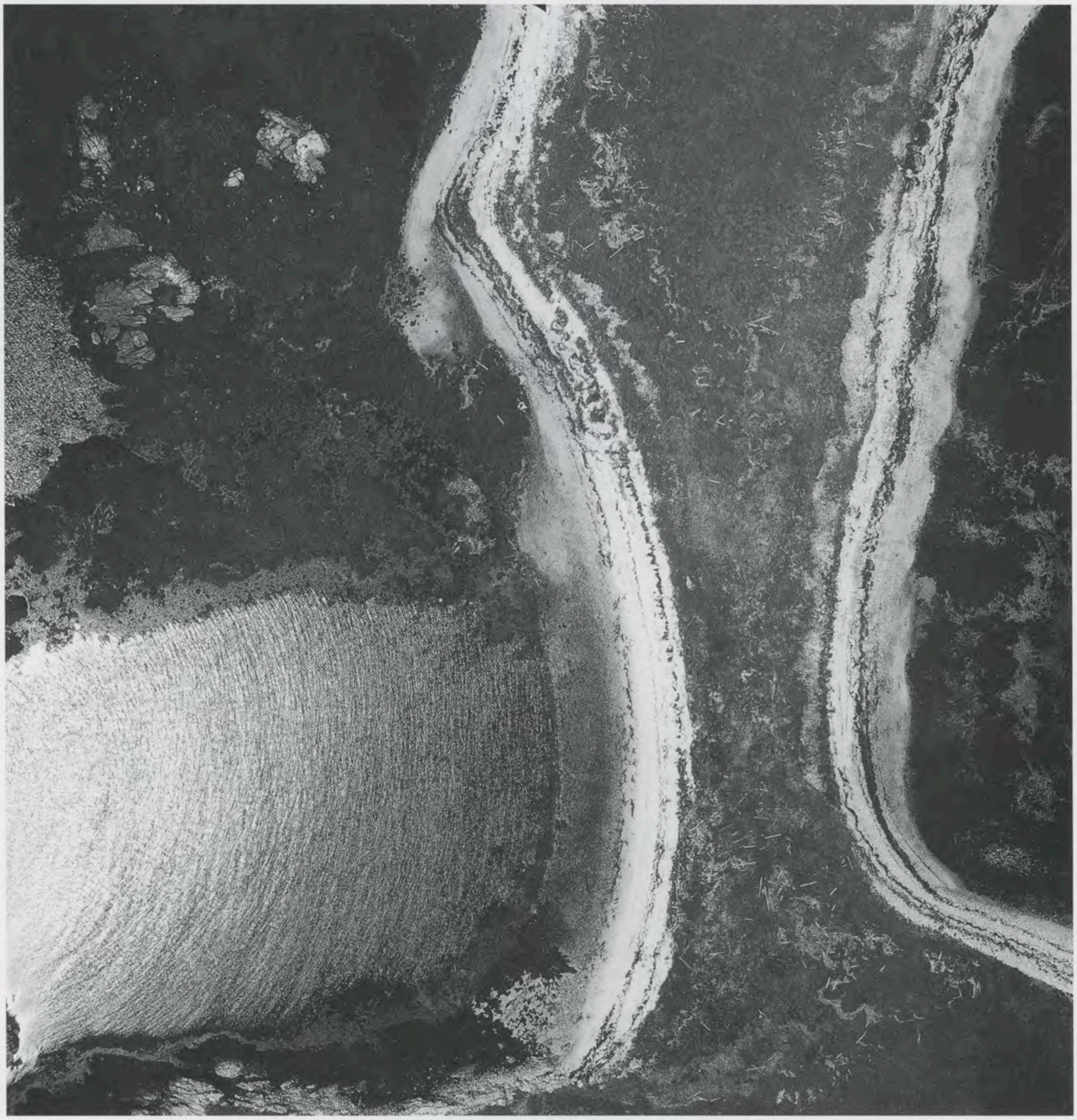
Backlit impressions: no words can adequately convey to first-time visitors the scale of this landscape. We tend to think of islands as miniature worlds, pieces of a continent that have slipped their moorings and drifted out to sea. But the Aleutian Islands quickly disabuse you of this notion. They are immense, towering volcanic mountains that rise gigantically out of the sea to tops that have either been blown off in later eruptions or endure as perfect cones mostly cloaked in mist and scudding sea cloud. Perhaps the sense of scale is distorted by the way mist and cloud obscure the peaks, even during good weather — and there is not much of that — leaving the imagination to play tricks on the mind. Or perhaps it is because the peaks and headlands rise directly out of the sea, with no foreground at all but the shadows cast by their hulking shoulders, which exaggerates the effect. The peaks, after all, range from only 4,000 to 8,000 feet (above sea level!), so how, you wonder, can they be so grand?

On sea charts the Aleutian archipelago looks like a chain of little pebbles and stones separating two of the world's great bodies of water — the North Pacific Ocean and the Bering Sea. The titanic interchange between these enormous reservoirs of seawater is of a scale nearly impossible to describe. Polar seawater coursing south out of the Arctic Ocean pours through the sieve of the Aleutians where it collides with the clockwise flow of the North Pacific. In the innumerable straits and passes between the Aleutians, where these northerly and southerly flows collide head-on, the effects are stupefying. Pilots indicate that during the spring, the tides run eight hours to the south out of the Bering Sea and then flood for four hours to the north. But in the fall, the flow is reversed, as the Pacific floods northward for eight hours into the Bering and then ebbs for four to the south. It's as if these internal forces are greater than the galactic pull of the moon. The narrower the channel, the more intense the effect, as we discovered in Kagalaska Pass. But the effects are apparent every time we traverse a cut in the island chain; standing waves of frothy white mark the shifting boundaries of these oceanic collisions. And in such places, biological activity is maximized.

When you think you have run out of places to go, when your tired imagination begins to believe there are no new places under the sun, when the lure of white sands and coral waters pales in the mind, the Aleutian islands await. Whole new worlds appear ahead and disappear, hull down, astern. Lush landscapes materialize out of thick mists, uninhabited and alluring. Waterfalls tumble white trails from the green hills. The islands are virgin, unapproachable.

The Aleutians are a landscape of stark contrasts the mind never tires of trying to balance: biting winds and susurrating breezes; jagged rocks and verdant wildflowers; depauperate island life amid astounding concentrations of sea life; remnants of the Aleuts alongside remnants of the Cold War. To those of us aboard TURMOIL who know Maine's coast and islands, these things are not unfamiliar; as we head homeward, we ponder them from a new point of view.

On sea charts the Aleutian archipelago looks like a chain of little pebbles and stones separating two of the world's great bodies of water — the North Pacific Ocean and the Bering Sea. The titanic interchange between these enormous reservoirs of seawater is of a scale nearly impossible to describe.



Fisherman Island, Washington County

Where seabirds nest

In 1978, a series of remarkable aerial photographs greatly enhanced our knowledge of Maine's island-nesting birds.

ALAN HUTCHINSON

With all the information available today about the islands and their natural resources, it's hard to believe how little we knew, not too long ago, about one of the most unique island resources: Maine's populations of nesting seabirds. As recently as the mid-1970s, we did not even know how many or which of Maine's islands where used by nesting seabirds; we didn't know which islands were the most important; we didn't have estimates of the size and trends of Maine's seabird populations. The missing information was crucial if Maine's unique island wildlife populations were to survive in the face of growing development and recreational pressure.

In 1976, the U.S. Fish and Wildlife Service, the Cooperative Wildlife Research Unit at the University of Maine and the Maine Department of Inland Fisheries and Wildlife joined forces to address this problem.

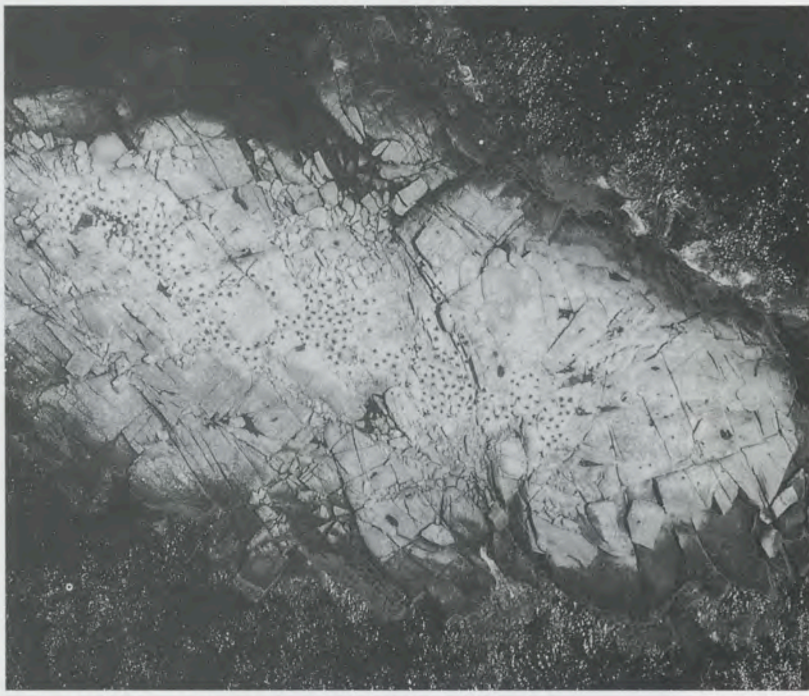
The three agencies set a goal: evaluate every island on the coast Maine for the presence of nesting seabirds and, if birds were present, determine which species were nesting and estimate how many birds there were. The logistics of the project were formidable. There are more than 3,000 islands and only about a six-week period each year when the birds would be present.

To accomplish the task efficiently, a number of different techniques were tested and used. One was aerial photography.

An aerial photograph can do two things. For highly visible species such as gulls and cormorants, photographs provide a means of estimating nesting populations, based on counts of individual birds. In addition, photographs give a clear record of the vegetation and habitats associated with each island.

Several different types of photography were used, with different formats and types of film found to work best for different purposes. As the project drew to a close in 1978, one special photographic survey was undertaken, with a high-resolution camera, to document the islands that the project found were used by nesting seabirds. The pictures on these pages were selected from that series.

The photographs were taken in June of 1978. The plane was provided by the U.S. Fish and Wildlife Service, Office of Migratory Bird Management, and piloted by Jim Goldsberry, that agency's pilot-biologist. A Cessna 180 was equipped with a belly-mounted, K-17 camera, a World War II vintage aerial reconnaissance camera that took high-resolution photos using rolls of 9-by-9-inch negatives. The photographs were taken at an altitude of about 1500 feet using a 12-inch lens and a shutter speed of 1/220 of a second. Jim flew and I navigated the flight line over each of the islands. The shutter was triggered from the cockpit.


Yellow Ridge Island, Knox County

From the developed rolls of negatives, I then made a complete set of high quality, 9-by-9-inch contact prints from each negative. Exposing, developing, washing, and drying each print, one by one, was a long and tedious job. What made that darkroom tedium bearable, however, was the magnificence of each island that presented itself in the developing tray. The beauty of the islands, captured on that film, struck me then, in those evenings in the darkroom, as it has struck me each time I have looked at one of the prints over the past 20 years.

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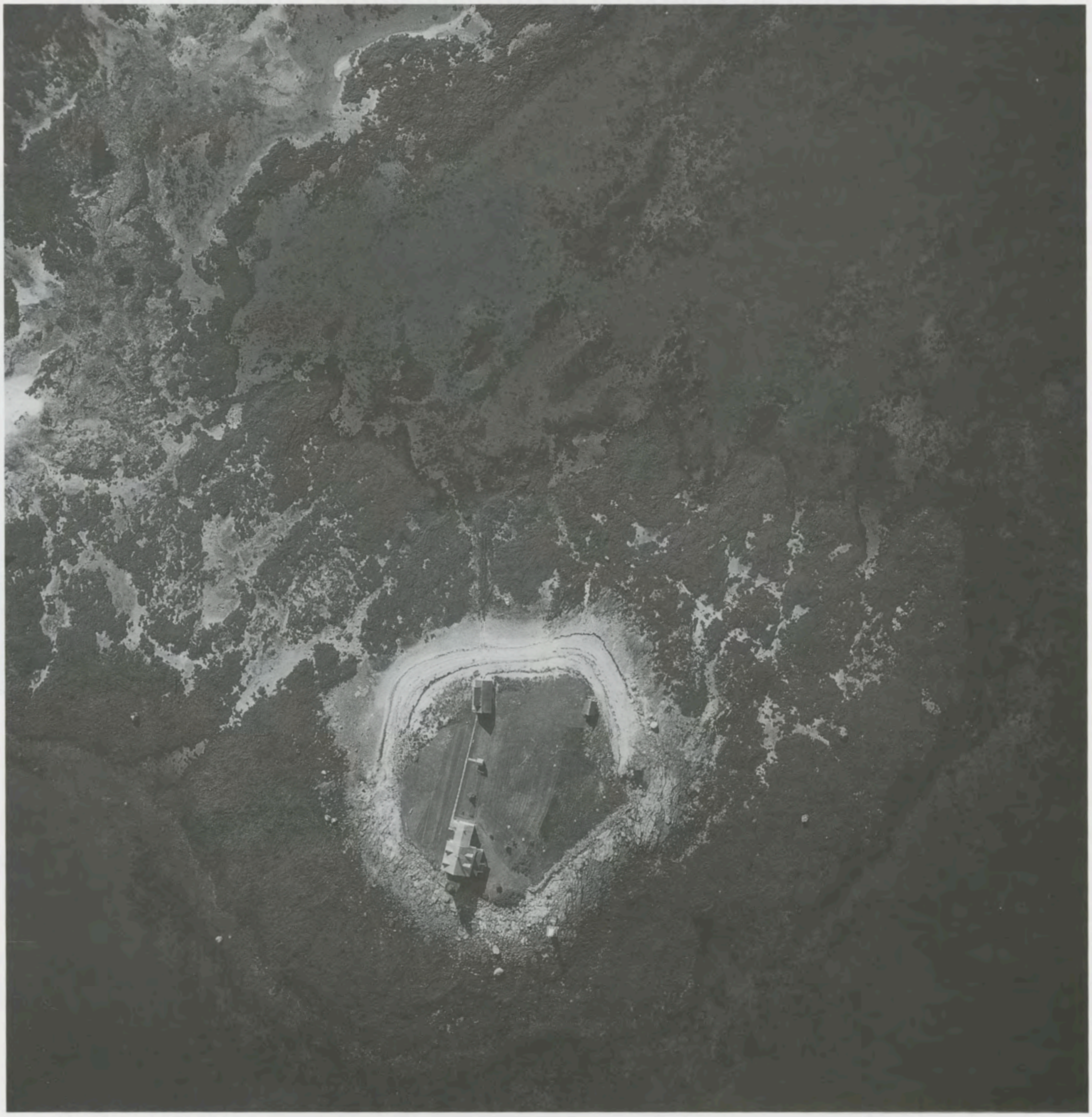
*Formerly coordinator of the endangered and nongame wildlife program for the Maine Department of Inland Fisheries and Wildlife, **Alan Hutchinson** is now the executive director of the Forest Society of Maine.*



Green Island, Hancock County

Other nations

A nesting island is a celebration of adaptation and the long reach of evolution.

SUSAN HAND SHETTERLY

Henry Beston, in *The Outermost House,* wrote about watching wheeling flights of shorebirds in the late fall along the great barrier beach near Nauset light on Cape Cod. He asked himself what makes individual birds suddenly coalesce into a flock, with its own volition, its own forward direction. Beston knew that it was order he was watching, not chaos.

He didn't know what the order consisted of, nor how it was achieved, but he understood enough to caution us to stay alert to the complexity and skill in lives of creatures who are not ourselves. Think of them, he directed, as other nations.

Nothing appears more chaotic than an island jammed with birds of various species at the height of their nesting season. But things are not always as they seem. Like Beston's flock of sanderlings, a nesting island is a model of order — a celebration of adaptation and the long reach of evolution.

More than 300 Maine islands are home to nesting seabirds in summer. Some, such as Machias Seal Island and Matinicus Rock, attract astonishing numbers. In the decades since Beston watched shorebirds dart along that vast, wild beach, biologists have learned a great deal about birds as individuals, as members of a species, and as members of a community consisting of various species.

Take, for instance, what we know about the coming of age of a puffling. A young Atlantic puffin steps out of its burrow on an island in the Gulf of Maine some time during a late summer night of its own choosing. Its parents are gone. It has never seen another puffling. All by itself, padding ahead in the dark, it trips over island cobble until it plunges straight down into the water. Most likely, it can't even see the water. Maybe it hears waves breaking along the rocks as it approaches, and the deep, wet sigh as they pull back.

Can a bird's fledgling be this precarious and at the same time, enormously successful? The answer is yes. Puffins, although once extirpated from Maine islands, are back — and are among the most numerous species of seabird in the world.

•

Islands in the Gulf of Maine, born out of volcanic explosions caused by the shifting of tectonic plates, have been sculpted by the heavy press of glacial ice and its slow meltback. Their bases are tough granites; their shores are fissured and cobbled. They look bare, newborn, but they are old and stubborn places, resisting the erosive action of water and wind. With the exception of coral reefs, nesting islands such as ours concentrate more vertebrate life than any other temperate habitat.

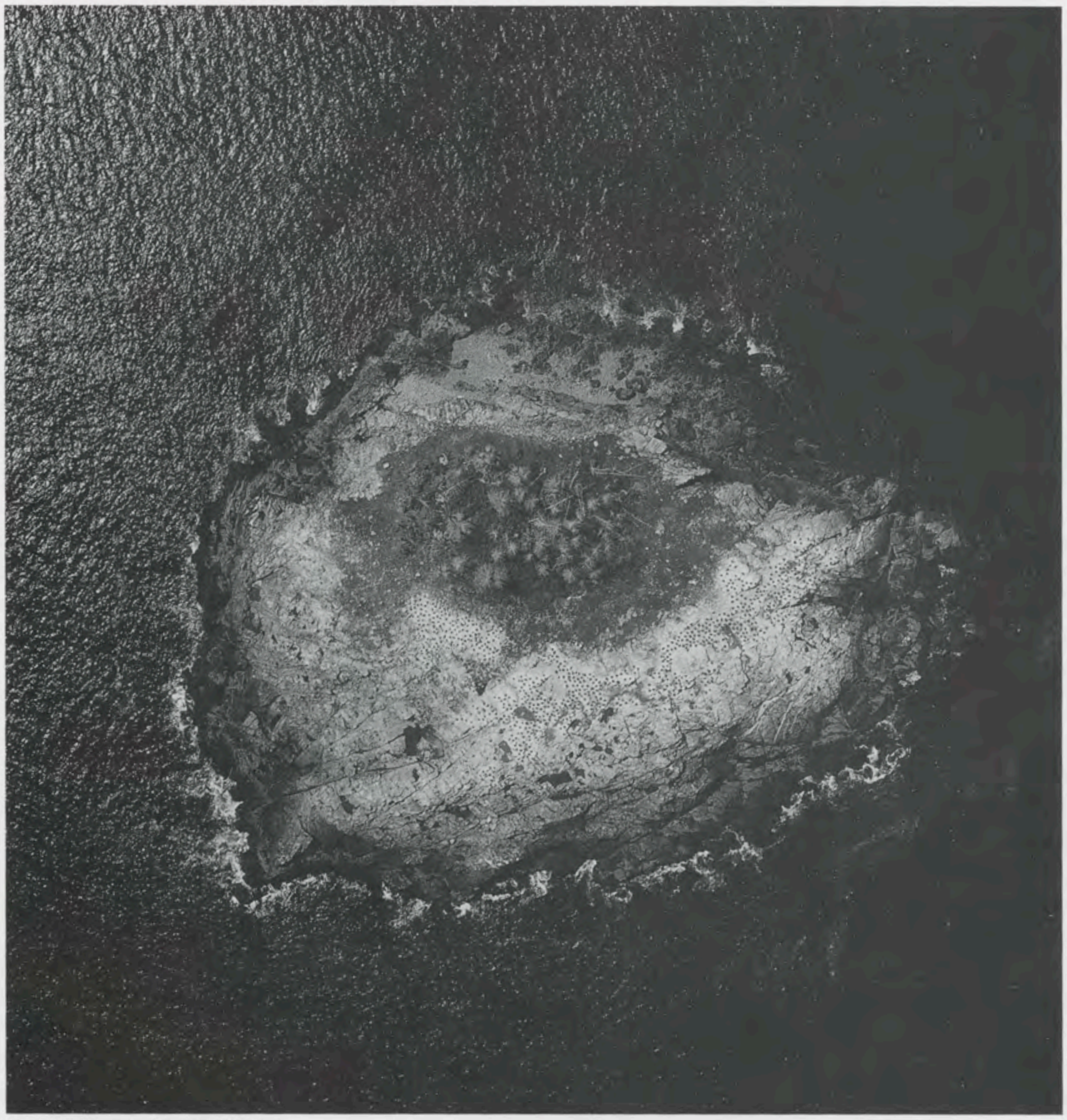
Four species of alcids nest on islands in the Gulf of Maine: the Atlantic puffin, the razorbill, the common murre and the black guillemot. Alcids are auks. They occupy the same niche in the cold seas of the northern hemisphere that penguins do in the Antarctic. But only the great auk, now extinct, was flightless.

Thick-bodied, black-and-white birds, alcids fly like giant bumblebees, or like small footballs with wings. Those wings are stubby and stiff, and they beat them fast to keep themselves airborne. Underwater they swim with the athletic grace of seals, and, like seals, steer with their feet.

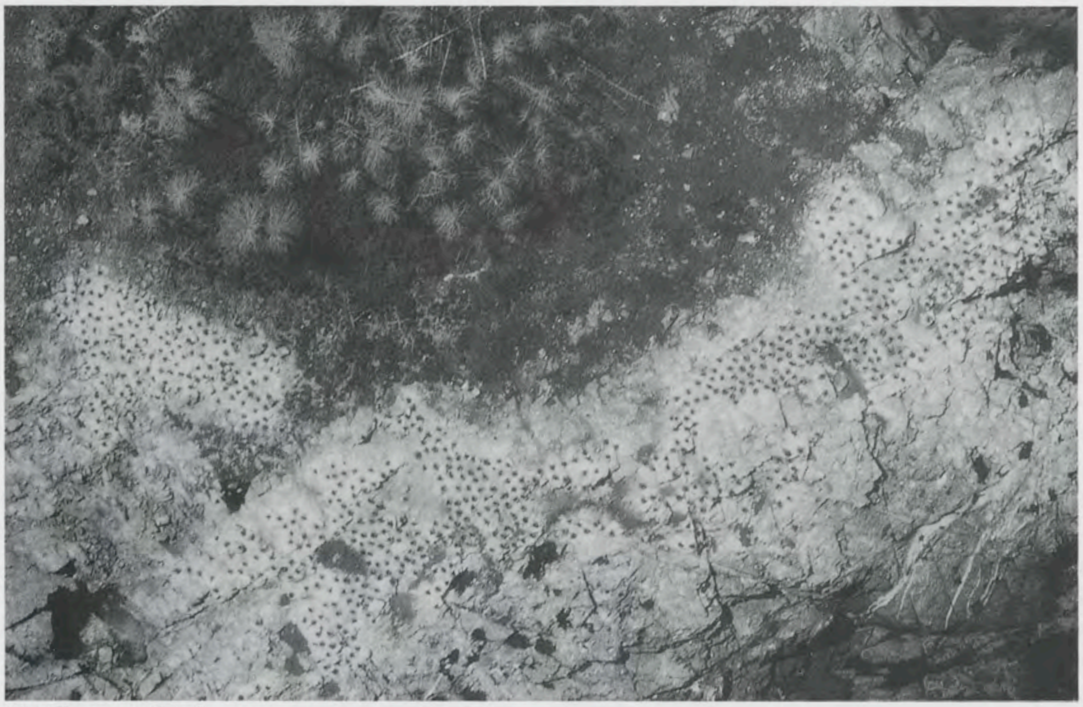
Puffins, razorbills and murres spend most of their lives at sea. If they could figure out how to lay an egg on water and incubate it, they'd have no reason to come to land. Black guillemots, the only species of alcid in the Gulf of Maine that spends the winters on inshore waters, visit their nesting islands in late February and early March. They sit on boulders close to the surf for a few hours each day before they fly off again. As the days get longer, they engage in frenzied courtship displays in the water below their chosen nest sites. Razorbills and puffins return to swim close to a nesting island before they summon the resolve to step ashore. A few pairs of common murres nest on islands in the Gulf of Maine, at the southern limit of their range.

These alcids move onto land reluctantly. Perhaps it feels as strange to them as walking on water might feel to us. Puffins tend to circle over the place where they want to come down, checking it out before they settle. When many puffins circle at once, the flights have been called "joy wheels," although biologists think the activity may have less to do with joy and more to do with the wind current and the alcid's ingrained uneasiness to come down on anything but water. But as the business of egg laying, brooding and feeding the chicks takes over, as well as the constant socializing of the colony, puffins fly in and out from dawn until dusk.

The great predator of island birds, other than man, is the herring gull. It begins patrolling the islands in early February. Other species of birds that come later have evolved strategies — such as night flights and burrow nesting and cryptic coloring of eggs and chicks — to deflect the rapaciousness of these gulls. One of the evolutionary movers on islands, their appetite for eggs



The Thrumcap, Hancock County



The Thrumcap (detail)

and chicks and even adult birds triggers adaptation — or extermination. But the species of island birds that become prey are quickly overrun if the population of predators — in this case, the gull — explodes. Herring gulls are bigger than most other island nesting birds here in the Gulf, with the exception of the greater black-backed gull, double crested cormorant and common eider, and, until recently, they have been the most numerous.

Buoyant in flight, excellent fishers at sea, terns on land are fierce but fragile birds. They do best when they nest in large numbers, for their clamorous flights — called "dreads" — can sometimes discourage plundering gulls, and their unremitting attacks on the backs of predators that invade the perimeters of their colonies are most successful when many birds participate. To flat, sparsely vegetated island tops, Arctic terns, the true pelagic wanderers, return. Common terns come back, as well as some roseates, making up a colony of mixed species. Tern eggs and chicks are speckled grey-brown, the color of granite flecked with grains of quartz and feldspar and mica. They blend with the pebbles and flotsam of the surrounding landscape.

People and herring gulls nearly obliterated tern nesting islands in the Gulf of Maine. The well-known history is a saga of beautiful hats and open septic systems; a tale of excess, showing how man's casual plundering nurtured the herring gull, and brutally affected other lives. But — and this carries its own bitter taste of irony — in the last few decades, gull control programs, in which the birds are killed at their nests with an avicide, have allowed space for a surprising and sudden rebirth of some of the tern colonies.

A nesting island can be diagrammed in concentric circles according to the preferences of each species. If you sit in a blind on an island, you will see a pattern emerge by watching where birds settle and where they feed their young. Although the lines may be somewhat blurred, you won't find a razorbill at the island's top, nor a tern brooding a chick down by the water's edge.

Terns choose bare open spots on the flat tops of islands; gulls choose island tops as well, but they prefer to build their nests in deep grasses. Leach's storm petrels, diminutive relatives of albatrosses, dig their burrows under the protection of night in loamy ground, often within stands of evergreens. When the ground is bare and loose and friable, puffins are also energetic nest diggers. They pickax with their beaks, kicking the dirt free with their clawed feet. But they will also nest in scree, finding safe tunnels through jumbles of rock. Razorbills nest on narrow ledges closer to the water, or they set their eggs within the shelter of an overhang. Black guillemots choose nest cavities at the edge, just above the high tide line. Often these pockets of rock are hidden by a curtain of island plants drooping over the entrance. It is thought that both the guillemots and the razorbills may be slowly altering their nesting patterns, seeking safer places, more like the deeper burrows of puffins, to protect their eggs and young from gulls.

Most seabird colonies do best in numbers because interactions between individuals tend to protect the whole. Many sentinels watching for predators is an advantage — within and between species. If a bird loses its mate, it will find a replacement quickly in a colony that often includes immature and unmated birds. Black guillemot parents, unlike most other island birds, feed neighboring chicks and thereby ensure a higher survival rate for the species. And there are other more subtle advantages in numbers, including the fact that individual birds tend to mimic the behaviors of their immediate neighbors, reinforcing aspects of mating and feeding and parenting.

But how can birds on a populous nesting island compete with each other to find enough to stay alive and to feed their young? In general, each species prefers a slightly different food spectrum, and each species hunts in a different manner — whether it is surface feeding or plunge diving, or chasing a school of fish in open water, or snatching a hiding fish out from under a rock. Only when fish school in huge numbers — a brief and quickly moving windfall — do many birds on an island exploit the same source.

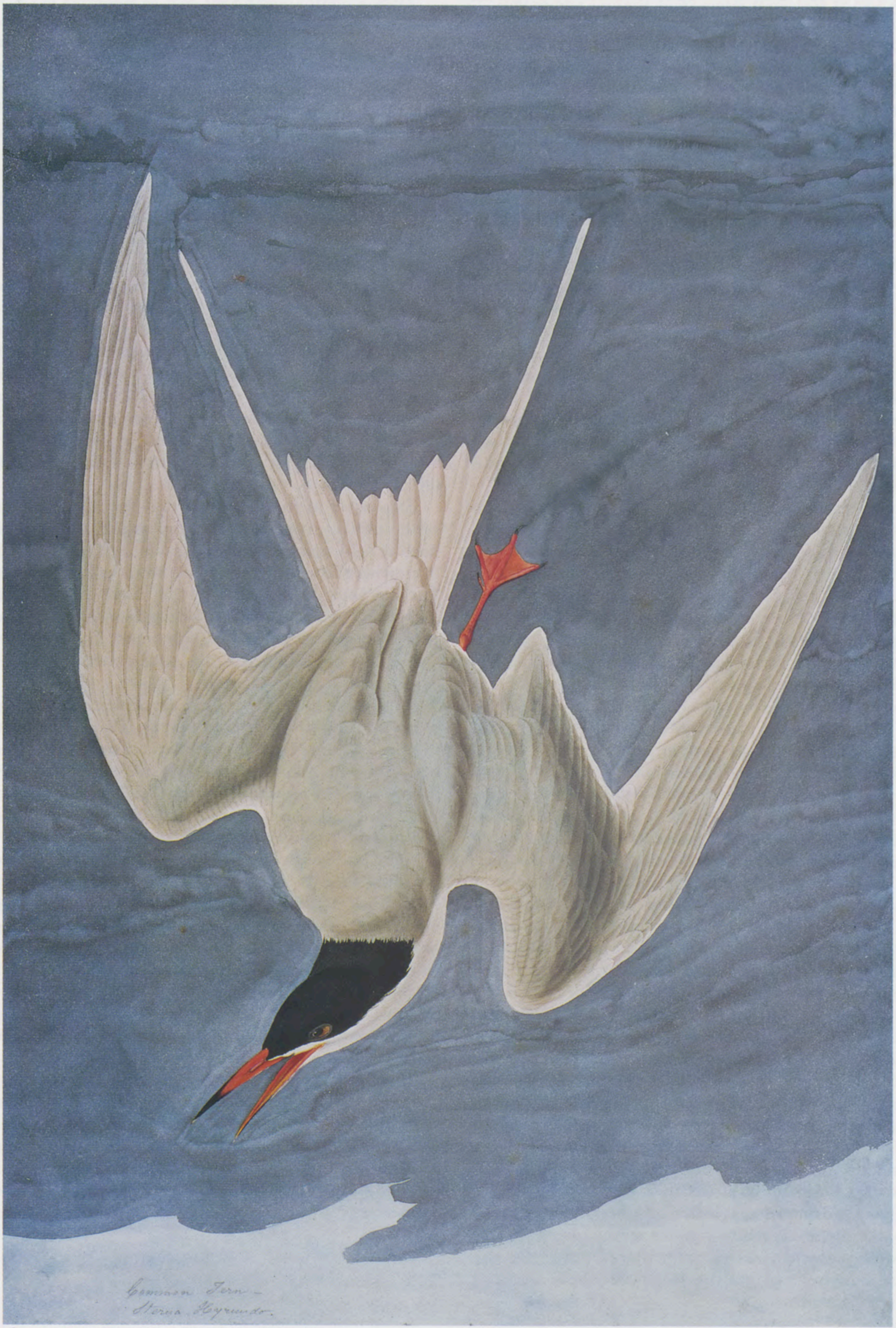
The water in the Gulf is turned over by tides and wind, and by currents that move across the uneven floor. A cold water mass with constant upwelling is rich in nutrients, feeding everything from krill to whales. But the Gulf doesn't spread that food throughout. Abundance tends to occur along seams where one mass comes up against another. A bird must sometimes fly over areas devoid of marine life, as if it were flying over desert toward an oasis.

Every spring, while we on shore wait for robins, other birds are flying toward islands. They come from southern waters, from inshore bays, from the pelagic reaches of the Atlantic, from the northern boreal seas, from the African coast. Their voices in late spring snort and growl and grunt and shriek as they claim nesting sites and re-establish mating bonds.

One can grow to love these island sounds — to love the islands themselves. For their astonishing profligacy. Their vigor. The sense they offer us of brevity and long time. Perhaps what we love best about these brimming places is the fact that the birds that thrive on them are so unlike ourselves. "They are not brethren," Henry Beston wrote. "They are not underlings; they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendor and travail of the earth."

In early autumn the fellow prisoner, the puffling, swims off into the darkness alone. It will not touch land again for two to three years. Other birds leave. Winter comes. The island is silent — except for the scouring wind, the rain, and the tick-tick of falling snow.

Susan Hand Shetterly *is author of* The New Year's Owl *and other books.*


Common Tern –
Sterna Hyrundo.

Common Tern. J.J. Audubon, The Birds of America

The making of a conservationist

An 1833 expedition to Maine and Labrador convinced John James Audubon of the threats facing North America's birds

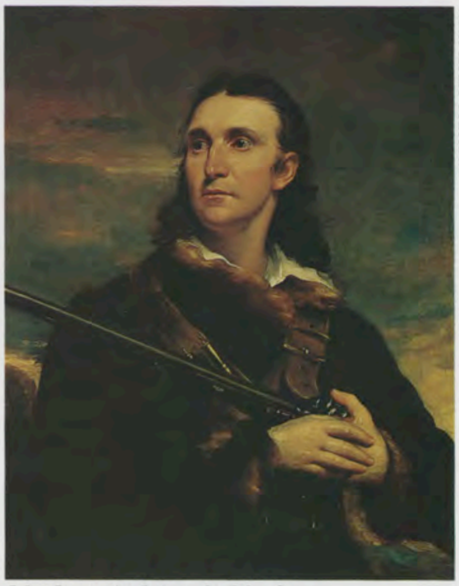
STEPHEN MAY

BY THE TIME John James Audubon (1785-1851) first visited Maine and later explored further north, the 47-year-old French émigré was well on his way to achieving international renown for his work as an ornithological artist and writer. He worked enormously hard and with great skill and courage to carry out his lifetime ambition. His sojourn down east exemplified his energy and determination.

Audubon's goal, spectacularly realized, was nothing less than to depict every species of American bird and disseminate prints of them in a large book. His expedition to Maine and beyond was crucial to completion of that now-celebrated volume, *The Birds of America.*

In pursuit of his magnificent obsession, for decades Audubon tramped around the new nation in all seasons and weather, observing birds in their natural habitats, traveled widely on both sides of the Atlantic to find backers for his project and utilized his keen eye and self-taught artistic skills to create a lasting legacy of ornithological likenesses.

In mid-August 1832, seeking new birds to depict, Audubon and his wife and two sons traveled from Boston to Portland to Eastport, aboard the steamer CONNECTICUT. "The climate was cold," he wrote in his journal, but he was pleased with the warm reception of the commander of the Eastport garrison and townspeople. "Every facility was afforded me in the prosecution of my researches," he reported. While it was too early for the fall migration of birds, Audubon collected and depicted two new species: the northern phalarope and the great black-backed gull.


White House Collection

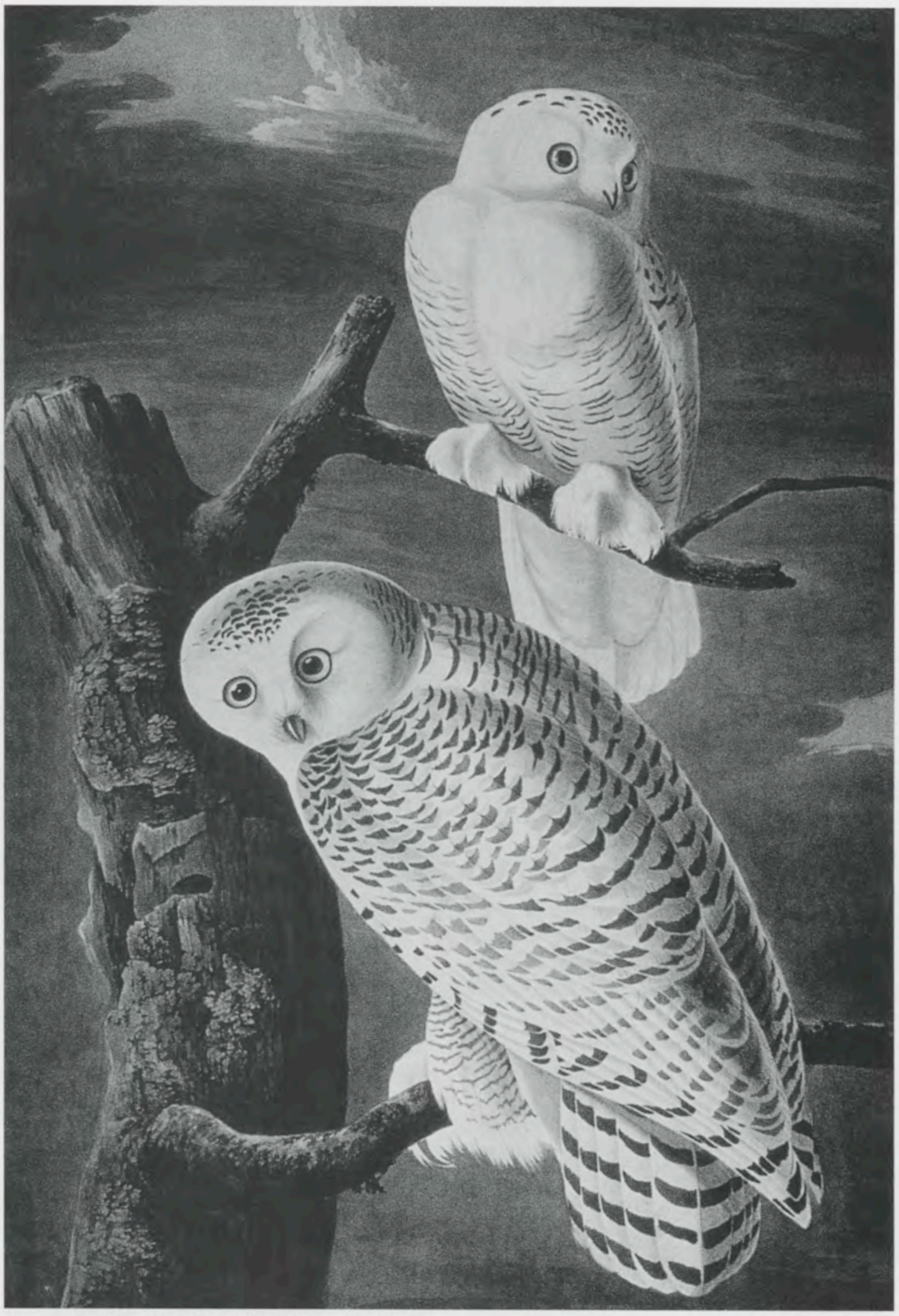
John James Audubon, by John Syme

In early September, the Audubons moved on to the thriving town of Dennysville, staying with the leading family, the Lincolns, distant relatives of the future President. Audubon, who enjoyed a nip now and then, was struck by the strong temperance views of local residents, as well as what he perceived to be the nobility of the area's lumberjacks.

He recorded in almost romantic prose his observations of Maine logging operations, such as the manner in which water released from dams helped break river logjams. Birding around Dennysville proved more fruitful than Eastport; he executed sketches of a house wren, red crossbill, spruce grouse and others.

In mid-September, the Audubons journeyed by horse-drawn cart to Fredericton, New Brunswick, then by boat up the Saint John River to Woodstock, and back across the border to Houlton. The latter was then a small frontier community consisting of 50 homesteads and a log fort with a military garrison. The soldiers had recently carved a rough road through thick forests all the way to Bangor. The Audubons soon traveled over it. In spite of heavy rain and muddy going, when the clouds cleared, Audubon waxed eloquent about what he saw:

Nature displayed all her loveliness, and Autumn with mellow tints, her glowing fruits, and her rich fields of corn smiled in placid beauty ... and as we came in view of the Penobscot River, our hearts thrilled with joy. Its broad, *"May God grant me life to see the last plate of my mammoth work finished."*



Snowy Owl. J.J. Audubon, The Birds of America

transparent waters here spread out their unruffled surfaces, there danced along the rapids, while canoes filled with Indians glided swiftly in every direction, raising before them the timorous waterfowl that had already flocked in from the north ... . Mountains reared their crests in the distance. .... All around was beautiful, and we gazed on the scene with delight.

Passing by Old Town, which he described as "a village of sawmills [that] looked like an island covered with manufactories," the Audubon family arrived in Bangor, heart of the state's booming timber industry. Audubon expressed concern about the intensity of timber-land speculation and the volume of wood harvested for the area's insatiable sawmills.

After a brief stay at "very comfortable lodgings in an excellent hotel" in Bangor, the Audubons took the mail coach to Boston. There the celebrated painter/naturalist was welcomed for the winter by the scientific and intellectual community and he sold a number of subscriptions to *The Birds of North America.*

Among those he met was the actress Fanny Kemble, who found Audubon "enchanting ... one of the great men of his country; he would have been a first-rate man all the world over." Senator Daniel Webster, a subscriber, brought a brace of ducks to be painted, and Audubon completed likenesses based on Maine specimens.

Meanwhile, he made plans for an ambitious expedition to Maine and Labrador, hoping to be the first to record previously undocumented seabirds in their summer plumage and northern habitats. "I hope to return with such a cargo as I brought back from the Floridas," he wrote in the spring of 1833, "I mean in bulk and novelty. If God grants us success and a safe return no man living will be able to compete with me in knowledge of the birds of our country."

Arriving with his son, John Woodhouse Audubon, in Eastport on May 7, 1833, the redoubtable traveler found it "shockingly cold," with snow on the ground and great chunks of ice blocking the harbor. While waiting for the ice further north to break, Audubon utilized a government revenue cutter for forays to Grand Manan and Whitehead Islands in the Bay of Fundy, where he observed bufflehead ducks, common eiders, black guillemots, purple sandpipers and scoters. During one run in rough seas he watched in admiration as the cutter's crew rescued three men from a capsized schooner and towed the vessel to shore. "Depend upon it the Yankees are the Lads for the Ocean," he wrote his wife. "They are firm, cool, considerate, human & generous when ever these qualities are called for."

A man of considerable tenacity and endurance himself, Audubon developed a healthy respect for the strength and stamina of Maine fishermen. "The work of these men is exceedingly hard," he wrote, "for, unless on Sunday, their allowance of rest in twenty-four hours seldom exceeds three." He described their 3 a.m. departures to sea, rowing or sailing to the banks, their techniques for baiting and hauling in fish, with "the operation continued until the boat is so laden that her gunwale is brought within a few inches of the surface, when they return to the vessel in the harbor, seldom distant more than eight miles from the banks." After depositing the load on deck, "counting the number... with a loud voice ... the boats instantly return to the fishing-ground, when, after anchoring, the men eat their dinner, and begin anew." When it became too dark to fish, Audubon observed, the men cleaned their catch until midnight, when they finally went to sleep, only to awaken three hours later to begin another grueling day at sea.

After some delay, the schooner commissioned by Audubon, the RIPLEY, finally arrived in Eastport under the command of Captain Henry Tilton Emery, "reputed to be a gentleman, as well as a good sailor." The schooner, Audubon wrote on May 31 to his son Victor in London, "is a new vessel, only a year old, of 106 tons, for which we pay three hundred and fifty dollars per month for the entire use of the vessel with the men, but we supply ourselves with provisions." (Audubon's daughter-in-law Maria later reported that the ship owners eventually supplied the provisions as well, "the whole outlay being about $1,500 for the entire trip.")

Describing the ship to Victor, Audubon noted that "The hold ... has been floored and our great table solidly fixed in a tolerably good light under the main hatch; it is my intention to draw whenever possible, and that will be many hours, for the daylight is with us nearly all the time in those latitudes and the fishermen say you can do with little sleep, the air is so pure."

"Our party," Audubon wrote, "consists of young Dr. George Shattuck of Boston, Thomas Lincoln of Dennysville, William Ingalls, son of Dr. Ingalls of Boston, Joseph Coolidge, John [Audubon], and myself." Continued Audubon:

> *We are well provided as to clothes, and strange figures indeed do we cut in our dresses, I promise you: fishermen's boots, the soles of which are all nailed to enable us to keep our footing on the sea-reeds, trousers of fearnought so coarse that our legs look like bears' legs, oiled jackets and over-trousers for rainy weather, and round, white wool hats with a piece of oil cloth dangling on our shoulders to prevent the rain from running down our necks. A coarse bag is strapped on the back to carry provisions on inland journeys, with our guns and hunting-knives; you can form an idea of us from this.*

On May 31, Audubon reported, "seven vessels sailed for the fishing-grounds, some of them not more than thirty tons' burden, for these hardy fishermen care not in what way they go; but I do, and, indeed, such a boat would be too small for us."

Coolidge, a 21-year-old from Eastport, later described Audubon as a "magnificent gray-haired" man, "childlike in his simplicity, kindhearted, noble souled, a lover of nature and lover of youth, a friend of humanity, and one whose religion was the golden rule."

A more traditional downeast description came from another member of the expedition, Tom Lincoln, son of Audubon's Dennysville host of the previous summer: "He was a nice man, but as Frenchy as thunder." A new species discovered on Labrador, a small, shy bird, was called Tom's Finch in young Lincoln's honor. Today it is known as Lincoln's sparrow or *Melospiza lincolnii.*

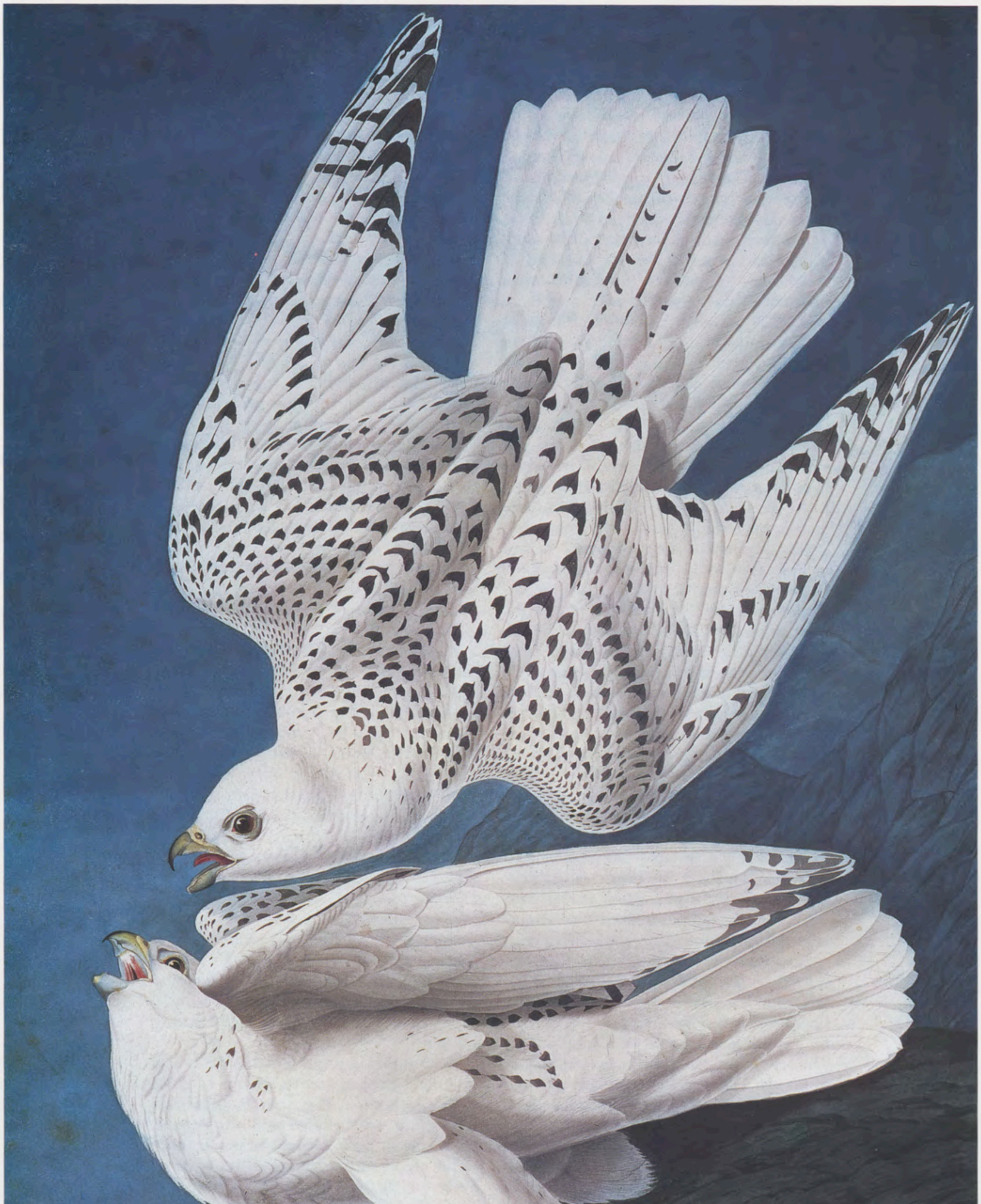
Eastport gave the Audubon party a rousing sendoff on June 6.

"Every one of the male population came to see the show, just as if no schooner the size of the RIPLEY had ever gone from this mighty port to Labrador," Audubon recorded. "The batteries of the fort and the cannon of the revenue cutter saluted us, each firing four loud, oft-echoing reports."

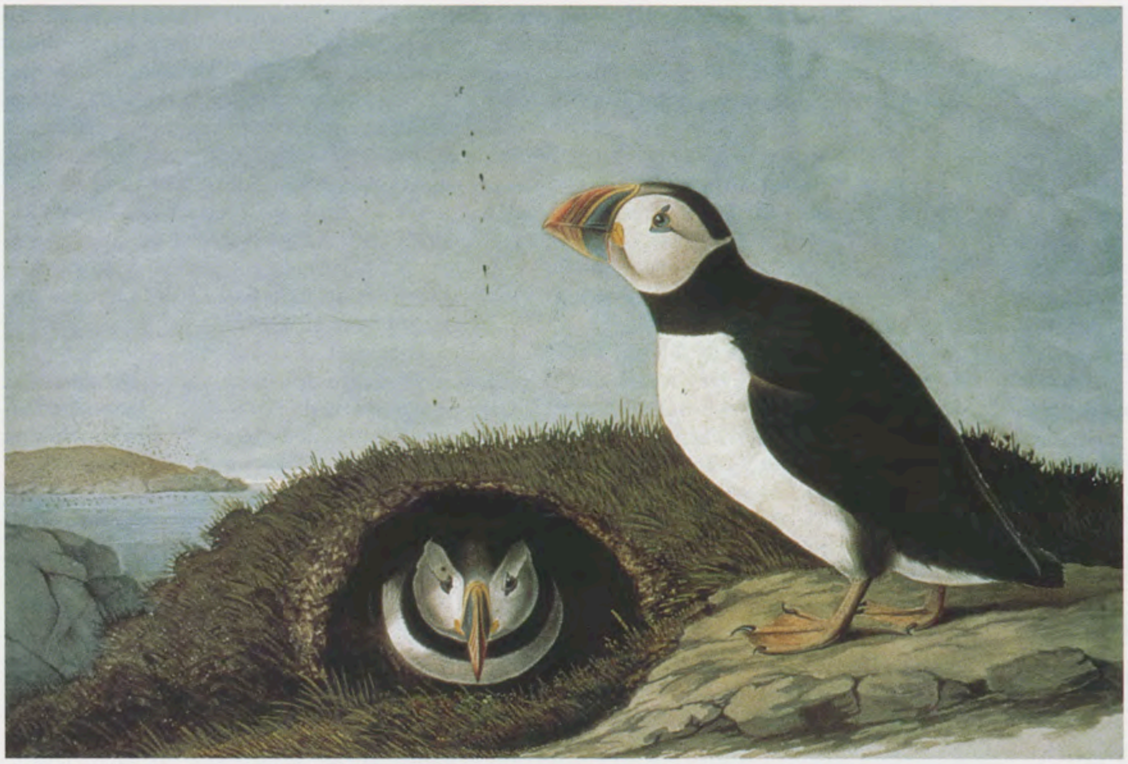
In detailed journal entries Audubon recounts a three-month ordeal of cold, wind, sleet, snow, fog, squalls, gales and rough seas, which lasted well into August. He seems to have devoted as much space to the rigors of the trip as to the birds he observed. "It felt," he wrote, "like the very heart of winter." The weather, he said, was "shocking, rainy, foggy, dark and cold," and all hands were constantly seasick. Although he was often wet, ill and miserable, the artist worked assiduously on drawings of species sighted along the way.

In a typical entry he wrote that "The night was spent in direful apprehensions of ill-luck; at midnight a smart squall decided in our favor, and when day broke on the morning of June 8 the wind was from the northeast, blowing fresh, and we were dancing on the waters, all shockingly sea-sick, crossing that worst of all dreadful

"The night was spent in direful apprehensions of ill-luck; at midnight a smart squall decided in our favor, and when day broke ... we were dancing on the waters, all shockingly sea-sick, crossing that worst of all dreadful bays, the Bay of Fundy."



Gyrfalcon. J.J. Audubon, The Birds of America



Atlantic puffin. J.J. Audubon, The Birds of America

Over a century and a half ago, Audubon noted the diminishing size of some puffin-breeding colonies.

bays, the Bay of Fundy." His spirits rose when he spotted stormy petrels on the Mud Islands, herring gulls on the Seal Islands and gannets and guillemots on Cape Sable. "The sea was dreadful," however, "and scarcely one of us was able to eat or drink this day," he concluded.

Exploring the coast of Nova Scotia, "a dreary, poor, and inhospitable-looking country," provided a little relief, with glimpses of bunting, finch, robins and sparrows. Back on board, they "supped on codfish," Audubon recorded.

"The remainder of our day," he wrote, "was spent in catching lobsters, of which we procured forty. They were secured simply by striking them in shallow water with a gaff-hook."

Scouring lively seabird nesting islands in the Gulf of St. Lawrence and on the bleak shores of Newfoundland, Nova Scotia and Labrador, Audubon had an opportunity to study new birds and also to make observations to complete depictions of migratory birds he had already sketched during winter stopovers in the south. In the harsh climate of the north he examined their plumage and saw how they adjusted to what he clearly considered an inhospitable region.

Audubon labored at his sketches under a glass-covered hatch or by candlelight below, "often seventeen hours a day," frequently in wet clothes and when he could hardly hold a pencil in chilled fingers. In warmer weather he was bedeviled by flies and mosquitoes.

"The fact is," he confided to his journal, "that I am growing old too fast; alas! I feel it — and yet work I will, and may God grant me life to see the last plate of my mammoth work finished." The depictions he created on his northern expedition, of strange birds in alien landscapes, were, of course, grand additions to his comprehensive trove of bird images. "I thank God that I did accomplish my task," he wrote toward the end of the trip, "my drawings are finished to the best of my ability."

Audubon's delightful Atlantic Puffin was based on numerous sightings during the voyage. On one island, he reported in *Ornithological Biography*, he found an "abundance of Puffins ... some flew past us with the speed of an arrow, others stood erect at the entrance of their burrows, while some ... withdrew to their holes." He posed one puffin frontally to demonstrate how they nest, while the other's profile emphasizes its stark black-and white feathers and large, colorful bill.

Aware of the curious and trusting nature of puffins, Audubon worried about their vulnerability to hunters and predators, such as hawks. Over a century and a half ago, he noted the diminishing size of some puffin-breeding colonies.

The common tern, which Audubon observed at sites from Texas to Labrador, was depicted diving straight down, presumably headed for a small fish. In Labrador he reported seeing terns "plunging after shrimps in every pool." In the artist's rendering, the white avian, with its pointed rings and deeply forked tail, is silhouetted against a gray sky, nearly filling the sheet with a graceful, balanced image.

Time after time Audubon reported seeing black guillemots ("rising like spirits"), razor-billed auks, cormorants, curlews, ducks, larks, peregrine falcons and various gulls. These chances to study birds helped the intrepid explorer forget the trying conditions: "The little Ring Plover rearing its delicate and tender young, the Eider Duck swimming man-of-war-like amid her

"If God grants us success and a safe return no man living will be able to compete with me in knowledge of the birds of our country."

floating brood, like the guard-ship of a most valuable convoy; ... the crowds of sea-birds in search of places wherein to repose or to feed — how beautiful is all this," he wrote.

Audubon was particularly intrigued with seals he spotted on the trip. They "rise to the surface of the water, erect the head to the full length of the neck, snuff [sniff] the air, and you also, and sink back to avoid any further acquaintance with you," he wrote in his journal.

Cod was a staple of the party's diet. On one occasion the day's cod catch "contained crabs of a curious sort, and some were filled with shrimps. One cod measured three feet six and a half inches, and weighed twenty-one pounds," he reported on June 15. Other times, "fine lobsters" were on the menu. In Newfoundland, his men caught 99 of this "valuable shell-fish," he wrote. "The Indians roast them in a fire of brushwood," he observed, "and devour them without salt or any other et ceteras."

In late July, stimulated by conversation with some officers of the British Royal Navy whom he encountered, "men of education and refined manners," Audubon ruminated in almost apocalyptic terms about the future of Labrador. As the conservationist-in-the-making recorded in his journal,

> *We talked of the country where we were, of the beings best fitted to live and prosper here, not only of our species, but of all species, and also of the enormous destruction of everything here, except the rocks; the aborigines themselves melting away before the encroachments of the white man, who looks without pity upon the decrease of the devoted Indian, from whom he rifles home, food, clothing, and life. For as the Deer, the Caribou, and all other game is killed for the dollar which its skin brings in, the Indian must search in vain over the devastated country for that on which he is accustomed to feed, till, worn out by sorrow, despair, and want, he either goes far from his early haunts to others, which in time will be similarly invaded, or he lies on the rocky seashore and dies. We are often told that rum kills the Indian; I think not; it is oftener the want of food, the loss of hope as he loses sight of all that was once abundant, before the white man intruded on his land and killed off the wild quadrupeds and birds with which he has fed and clothed himself since his creation. Nature herself seems perishing. Labrador must shortly be depeopled, not only of aboriginal man, but of all else having life, owing to man's cupidity. When no more fish, no more game, no more birds exist on her hills, along her coasts, and in her rivers, then she will be abandoned and deserted like a worn out field.*

Even with decades of experience behind him, Audubon found the task of precisely rendering each species a challenge. The loon, he noted after spending a day trying to draw one, is "a most difficult bird to imitate." One day Audubon's son and two companions shot male and female dark-phase gyrfalcons and brought them back to the RIPLEY, where the artist depicted them after much arduous effort. Several years later in England he based the final 1835-36 version on a white-phase specimen he saw in London. The largest of all falcons and perhaps the world's most efficient predator, the muscular legs, hooked beak and sharp talons carefully delineated by Audubon are ideal for taking birds and small mammals. Many consider the powerful gyrfalcon image — a masterful blend of pastel, watercolor, gouache, delicate washes and pencil — his most beautiful work.

A non-ornithological highlight of the voyage was spotting an iceberg which, Audubon said, "looks like a large man-of-war dressed in light green muslin, instead of canvas, and when the sun strikes it, it glitters with intense brilliancy."

Audubon considered Labrador "wonderfully grand, wild — aye, and terrific," but grew tired of its "dreariness." He admitted as the ship turned south for the return trip that "Seldom in my life have I left a country with as little regret." When bad weather prevented passage through the Strait of Canso, Audubon and his group left the ship at Pictou, Nova Scotia. Pleased to be back on dry land, Audubon proceeded by coach "through a fine tract of country, well wooded, well cultivated, and a wonderful relief to our eyes after the barren and desolate regions of rocks, snow, tempests, and storms."

On the way to Halifax, they passed Green Lake, which "forms part of the channel which was intended to be cut for connecting by canal the Atlantic, the Bay of Fundy, and the Gulf of St. Lawrence, at Bay Verte." According to Audubon, "Ninety thousand pounds have been expended, but the canal is not finished, and probably never will be; for we are told the government will not assist the company by which it was undertaken, and private spirit is slumbering."

The road from Halifax to Windsor was "macadamized and good," the coach covering 45 miles with one pair of horses at six and a half miles an hour. "The whole country is miserably poor," Audubon concluded, "yet much cultivation is seen all the way."

After viewing "the tide waters of the Bay of Fundy rise sixty-five feet," Audubon traveled from Windsor to Saint John, New Brunswick, on the steamer MAID OF THE MIST, and then on to Eastport, arriving on August 31. A week later the painter/naturalist was in New York.

Weather aside, Audubon's journey downeast was a success. "I have collected a good deal of most valuable information," he wrote his wife, Lucy, "which no one else possesses either in America or in Europe." Having studied a number of birds that had previously eluded him, he executed 23 drawings. They were crucial additions to his record of the continent's birds.

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A word about Audubon as an avid hunter and the current association of his name with the protection of wildlife and the natural environment. In keeping with the attitudes of his time, Audubon assumed that the North American continent was so bountiful that it could never run out of resources. He shot many, many birds in his day and enjoyed demonstrating and bragging about his skill as a marksman. As a man of his era and place, Audubon shot birds to eat, to examine and draw, as well as for sport.

As he grew older, however, Audubon showed less and less interest in killing birds for sport, along with increased kinship for wild creatures and a sense of responsibility about their wanton destruction and devastation of their habitats. The trip to the north reinforced his growing concern about threats to his beloved birds.

He was appalled by the activities of "eggers" he encountered on the way, men who made their living by stealing eggs from nests and selling them. "A party of four men from Halifax took last spring nearly forty thousand eggs," he wrote at one point. Moreover, although hardly innocent with regard to killing birds, Audubon objected to the "rascally way" in which the eggers went about their work.

In the long run, Audubon's journals, monographs and letters suggest that he became an early and informed American conservationist, concerned about the widespread extermination of birds and other wildlife and about the inroads of civilization into the wilderness he cherished.

In Labrador, for example, he decried the "cupidity and ... love of gold" of the Hudson Bay Company, whose agents were rapidly diminishing the already "scarce" supply of fur animals in the region. "Where," he asked, "can I go now, and visit nature undisturbed?"

A number of the birds so beautifully rendered by Audubon are endangered today, and at least three are extinct: the Carolina parakeet, the passenger pigeon and the great auk. The latter, a clumsy, tame species once common on North Atlantic coastal islands, was slaughtered for feathers and food. Sadly, the last sighting of this appealing bird was in Iceland in 1844.

Audubon's brilliantly implemented mission revolutionized the art of bird illustration and ensured his place in history. While recording physical attributes with precise accuracy, he incorporated narrative elements and aesthetic touches that made his subjects come alive in their natural habitats. Never one to downplay his achievements, he wrote that "My work will be a standard for ages to come." Time has proved him right.

Bird artists of great accuracy are commonplace today, and needless to say they have the added advantages of photography, high-resolution binoculars and other modern technology. But the work of none has equaled the narrative appeal, lively animation and sheer beauty of Audubon's glorious 19th-century images.

Uniting entrepreneurship with the technical demands of scientific illustration and the inventive and aesthetic qualities of fine art, Audubon created a rich and timeless legacy. His trips downeast and to the north contributed much to the realization of his magnificent obsession.

***Stephen May** is an independent scholar and writer about American art and history who divides his time between Washington, D.C., and Union, Maine.*

"I admire the Raven, because I see much in him calculated to excite our wonder"

The raven, subject of poetry by Edgar Allen Poe and paintings by Jamie Wyeth, popular but mysterious resident of islands in the Gulf of Maine and subject of speculation in *Island Journal* ("A Stirring of Ravens" by Susan Hand Shetterly, 1996), was a bird of considerable interest to John James Audubon.

He sighted ravens frequently in his travels, from the Carolinas to Labrador, and for *The Birds of America* he depicted a glossy black specimen, its beak open, perched on the branch of a hickory tree. In his *Ornithological Biography*, the painter/naturalist wrote at length of his admiration for the "noble" raven.

Audubon emphasized that the "cunning and wary bird" is constantly on the alert against potential enemies. Seeking security, he explained, they migrate to mountains, steep riverbanks, rocky lake shores and "the cliffs of thinly-peopled or deserted islands." They locate their nests and rear their young in "the most inaccessible part of rocks that can be found," he wrote.

Typically, Audubon observed, island ravens will "rear the dearly cherished fruits of their connubial love" in "some shelving ledge" elevated above where "wave after wave dashes in foam against the impregnable sides of the rocky tower." In so doing, they hope to find "freedom from the dread of their most dangerous enemy, the lord of creation," as well as the "remorseless claws" of peregrine falcons, gyrfalcons and other predators.

Ravens are, as Audubon observed, "vigilant, industrious, and, when the safety of their young or nest is at stake, courageous, driving away hawks and eagles whenever they happen to come near, although in no case do they venture to attack man. Indeed, it is extremely difficult to get within shot of an old [mature] Raven."

Based on his extended observations of ravens, Audubon commented on their powerful flight, omnivorous eating habits, exceedingly accurate sight and "stately manner" of walking on the ground.

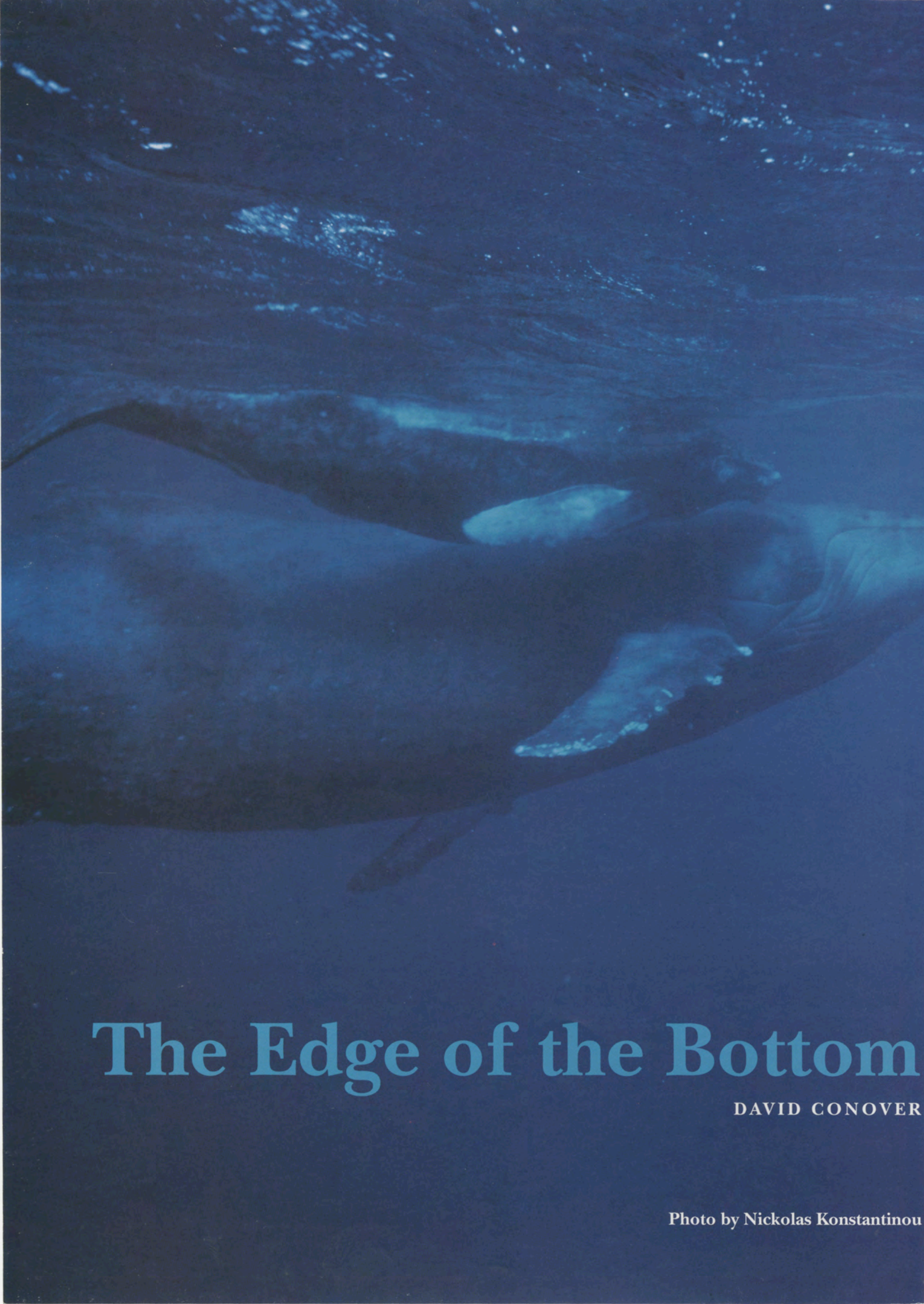
In discussing the raven's "social disposition," Audubon observed that "When domesticated, and treated with kindness, it becomes attached to its owner, and will follow him about with all the familiarity of a confiding friend. It is capable of imitating the human voice, so that individuals have sometimes been taught to enunciate a few words with great distinctiveness."

Decrying ways in which man forgets the usefulness of ravens, he noted that "whenever he presents himself he is shot at, because from time immemorial ignorance, prejudice, and destructiveness have operated in the mind of man to his detriment. Men will peril their lives to reach his nest, assisted by ropes and poles, alleging merely that he has killed one of their numerous sheep or lambs. Some say they destroy the Raven because he is black; others, because his croaking is unpleasant and ominous."

Writing "I admire the Raven, because I see much in him calculated to excite our wonder," Audubon continued:

> It is true that he may sometimes hasten the death of a half-starved sheep, or destroy a weakly lamb; he may eat the eggs of other birds, or occasionally steal from the farmer some of those which he calls his own; young fowls also afford precious morsels to himself and his progeny, — but how many sheep, lambs, and fowls, are saved through his agency! The more intelligent of our farmers are well aware that the Raven destroys numberless insects, grubs, and worms; that he kills mice, moles, and rats, whenever he can find them; that he will seize the weasel, the young opossum, and the skunk; that, with the perseverance of a cat, he will watch the burrows of foxes, and pounce on the cubs; our farmers also are fully aware that he apprises them of the wolf's prowlings around their yard, and that he never intrudes on their corn fields except to benefit them, — yes, good reader, the farmer knows all this well, but he also knows his power, and, interfere as you may, with tale of pity or of truth, the bird is a Raven....

— S. M.



The Edge of the Bottom

DAVID CONOVER

Photo by Nickolas Konstantinou

NO ENGINEERING or design obstacle stands in the way of building a solid window bottom into every boat that goes to sea. Yet no one does it. Why?

"Fear," says a marine architect friend. "It's psychological. We don't want to really see what is on the other side of that wall."

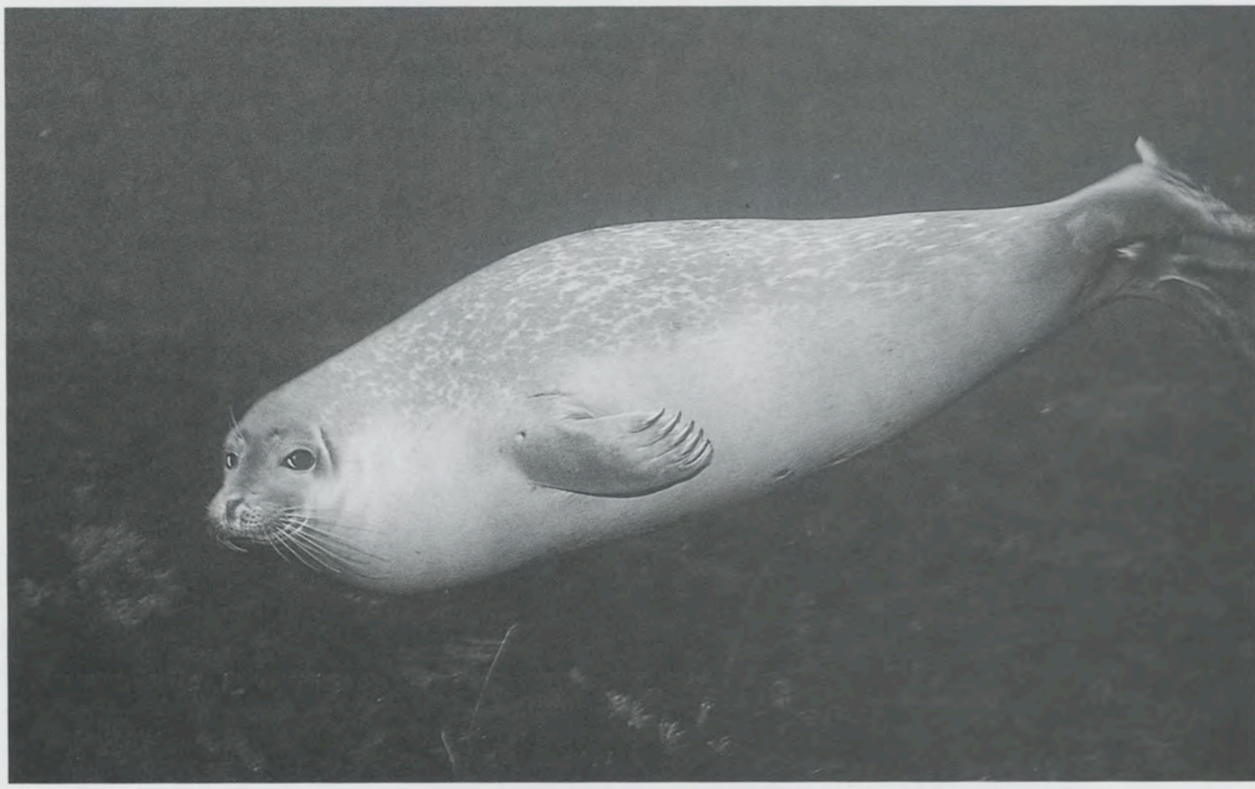
Until a few years ago I didn't want to really see, either. Blame it on the physical facts of the situation — in the Gulf of Maine, the water column can become fogged during the explosion of life that occurs when heavy, oxygenated cold water is warmed by the summer sun. Storms and river runoff can stir up the water. Sea water does have a tenacious ability to absorb light.

My reservations were also based on a barrier less physical, more mental. Perhaps it was fear. Of drowning? Of the cold? Claustrophobia? Or was it, as my marine architect friend suggested, a fear of actually seeing something there? My mental block was clearly not a lack of interest in underwater life. Witness the 30-gallon aquarium with five goldfish that was given to my family. Too tired to read and without a TV, I've often found myself sitting in front of the tank at night, watching these four fish (one died) for longer than I'd care to admit.

EXPLORATIONS

I'm not alone here. Public aquariums are booming nationwide. People are fascinated by underwater life. But aquariums are different than the open sea. They're neatly walled off, a smaller unit more psychologically approachable.

The image that best hinted at my reservations ran along a different line than simple lack of interest. I imagine myself at sea at night in the boat with the picture window. My watch is over. Dog-tired, I go down below, crawl into a bunk and lie back. Instead of a cozy, dark cubby, I'm flying through the night sky. Something is out there: phosphorescent streaks reveal ripples, eddies, ledges and passing creatures both large and small. They all stretch far out and well down into the depths, far beyond the simple order of the navigation station on board, far beyond the dividers next to the parallel rules. Eventually, thoroughly exhausted, I lose consciousness. In the daylight, I awake, unrefreshed. Looking out the hatch, every seabird and every shadow of clouds above is joined by fish and the shadow of rocks below. A picture window in a boat? I couldn't live with it.


Harbor Seal

Several years ago I began producing films about commercial fishing and marine science. I began to play with the possibilities of what could be learned if attention at sea was expressly directed downward. What if every boat were fitted with as many instruments aimed downwards as are aimed upwards to the sky and outwards to the horizon. What if lookouts also looked down? What could we know?

Harvesters of the sea already focus their attention downward. They analyze their sounders, side-scan sonar, fish finders, draw on a lifetime of experience. "Water, water, everywhere" may be the popular view at the surface, but geology doesn't end at the water's edge. A fisherman will talk with you about underwater terrain in familiar terms like "valley" or "plain," terms borrowed from the landscape. Ever observe two fishermen on deck, talking about what lies out there? They point and gesture to indicate the places that they know. I look and see nothing. The Gulf of Maine has the Outer Falls and Jeffreys. Fifty-Fathom Ledge runs the length of the entire coast, attracting broodstock lobster and congregations of fish. I've heard fishermen call this ledge, with understated poetic beauty, the Edge of the Bottom.

Photography by
Nick Caloyianis

Yet because most harvesters are physically located on the surface, their vision is ultimately incomplete. It arrives piece by piece, a catch dangling from a hook, spilling from a net, crawling out of a trap. Inevitably, for all of us surface dwellers, the knowledge is conditioned by acts of removal, both deliberate and accidental. A full view of life underwater as it is, intact and whole in itself, remains distant.

The best hope of seeing the wholeness of the underwater world is to descend and enter it on its own terms. About three years ago I had the opportunity to begin a three-part film series on the Gulf of Maine fishery. To work close to home was a real pleasure and I was excited about diving in, so to speak. The first shoot was underwater with some marine ecologists in a highly productive area referred to as the Thread of Life, off Damariscotta. Given sunlight and calm seas, the success of the shoot would depend entirely on the skills of two underwater cinematographers, whom I had never met. I'd be on the surface.

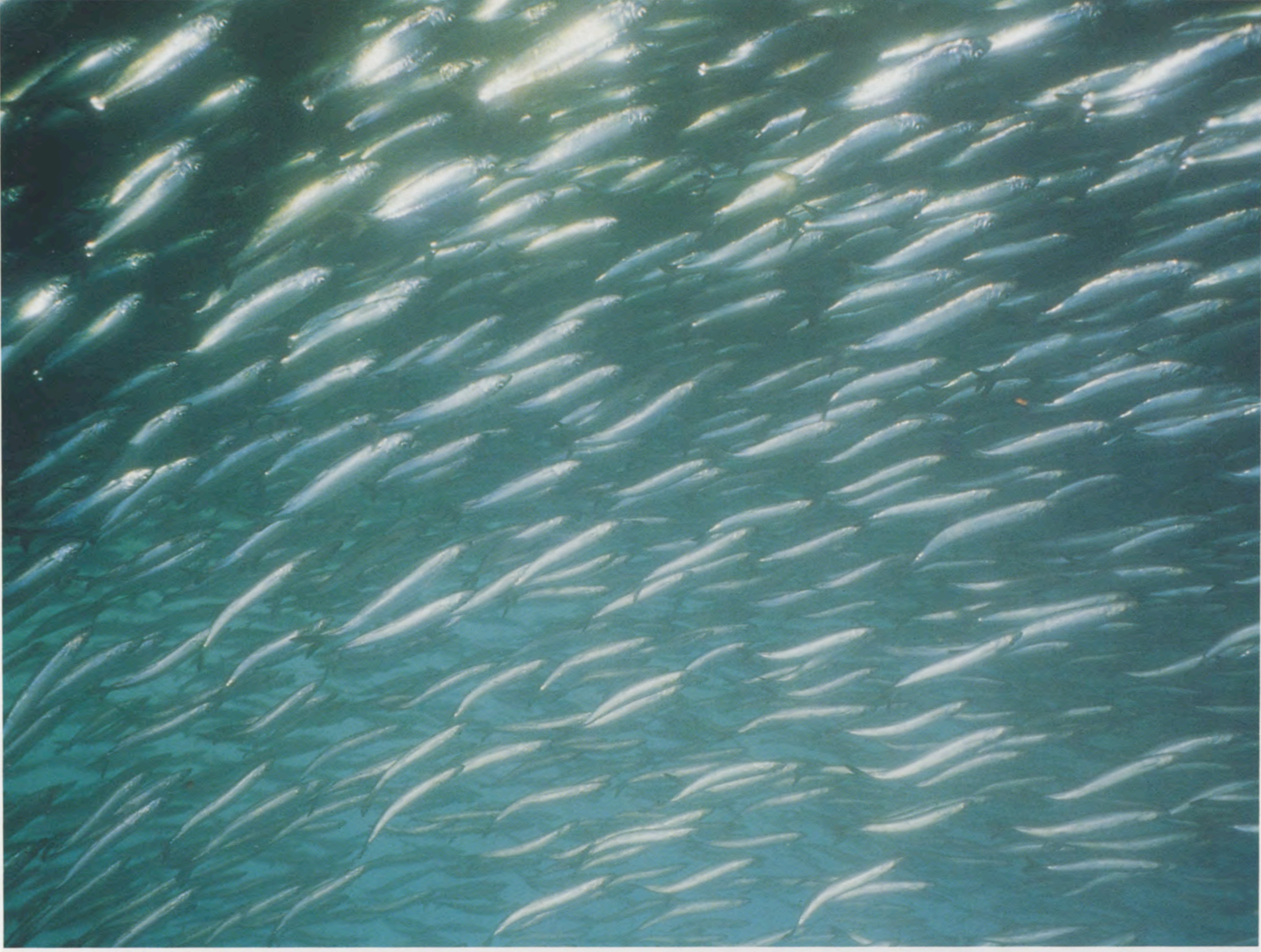
Preparing to dive, Nick Caloyianis suited up quietly, patiently selecting and organizing items of gear from several watertight containers that had been loaded onto the shoot boat. Clarita Berger, his long-time diving partner, would handle duties on deck. A second diver was responsible for the underwater lights. I described the type of shots I imagined, but fully expected Nick to act on his judgment of what he actually saw. Over the side they went, out of sight. The frustration of seeing only bubbles and vague shadows below was enormous. We waited. Later, looking at the footage back in the studio, I was stunned. I couldn't believe that the beauty I saw in the footage was just below where we'd been floating.

It was Nick and Clarita's first trip to these waters. Nick recalls, "It looked dark on the surface, but it was surprisingly colorful underwater. I had never before seen such big lobsters crawling in 15 feet of water. The kelp seemed like a mini-forest. The ecosystem was much richer than I had imagined."

Wolf Fish

A diver with a camera has access, but, as I learned from Nick, Clarita and others, this access is subject to the many conditions of the sea water column. Sea water acts as a giant lens, focusing and swallowing the light and heat of the sun. Most light never makes it past the first three feet or so, where all the ultraviolet and infrared wavelengths are absorbed. Thereafter the water column absorbs progressively more light as you descend. The rate and variability of change is heavily dependent on factors such as turbidity of the water column, whether the surface is calm or choppy, or whether the sun is directly overhead or angled. In Maine, these detailed factors vary wildly.

There are some general rules, however. Appearances change with descent or ascent. Going down, the first to disappear are these longer wavelengths, the reds. These are the comforting warm colors. Then the oranges, then yellow. At 30 to 60 feet down everything appears mostly blue-green. Eventually these go, too. At anywhere from 200 to 500 feet down, light ends. This is the end of the "euphotic" or reasonably well-lit zone, and it corresponds, roughly, with the theoretical barrier for air-breathing creatures div-



Herring

ing down without scuba tanks. Below this, few survive. Is this common limit an accident? Probably not. Humans can see most of the wavelengths that are apparent within this range of sea water depth. Our eyesight appears to be tuned by this range. Perhaps, some researchers have suggested, this tuning is an evolutionary residue of an aquatic past.

For me, Nick and Clarita's diving and photographic work has opened the borders to a whole new nation. In bits and pieces, their images from the Gulf of Maine have appeared in several productions. But the bulk of their work is building towards a comprehensive one hour underwater natural history film of these waters that will certainly reach beyond anything that has yet been produced.

"The Gulf of Maine is like a window," says Nick. "When it's open you see a beautiful place. But it's not open every day. Those who need to hit visual pay dirt right away can't wait. They should go to the paradise of the tropics. It's a different kind of paradise here." Working with the right guides is important. Over several years, Nick and Clarita have put in the time to develop ties with the fishermen and scientists who know these waters.

Bottom flora and fauna

A second secret is how to read the light at different depths and differentiating appearances. With the big tidal range in Maine, an object at low tide appears to be more red than the same object at high tide. A sea star found at 30 feet may appear dull purplish. Carried up the column into shallower water and the sunlight of longer wavelengths, it suddenly becomes vividly red. Taking powered artificial lights and filters to the blue-green zone, conversely, greatly expands the color spectrum that our eyes pick up. The visual richness is profoundly deepened. The change is as dramatic as going into an IMAX theater for the first time after years of traditional cinema.

The underwater world in Maine has also been explored and photographed by various kinds of submersibles, with greater depth capabilities than a scuba diver. The Harbor Branch Oceanographic four-person submarine has been used by Rick Wahle of Bigelow Lab and by Bob Steneck of the University of Maine marine science program. Passengers up front sit in a transparent sphere, from which they operate lights, robotic arms and cameras. The vessel can reach the deepest points of the Gulf of Maine. Further south on Stellwagen Bank, Peter Auster of the National Undersea Research Center carries on his work with both manned subs and remotely operated vehicles (ROVs), tethered craft controlled from the surface with a joystick and viewed on a video monitor. An ROV is expected in Penobscot Bay this spring, under the research plan of geologist Joe Kelley.

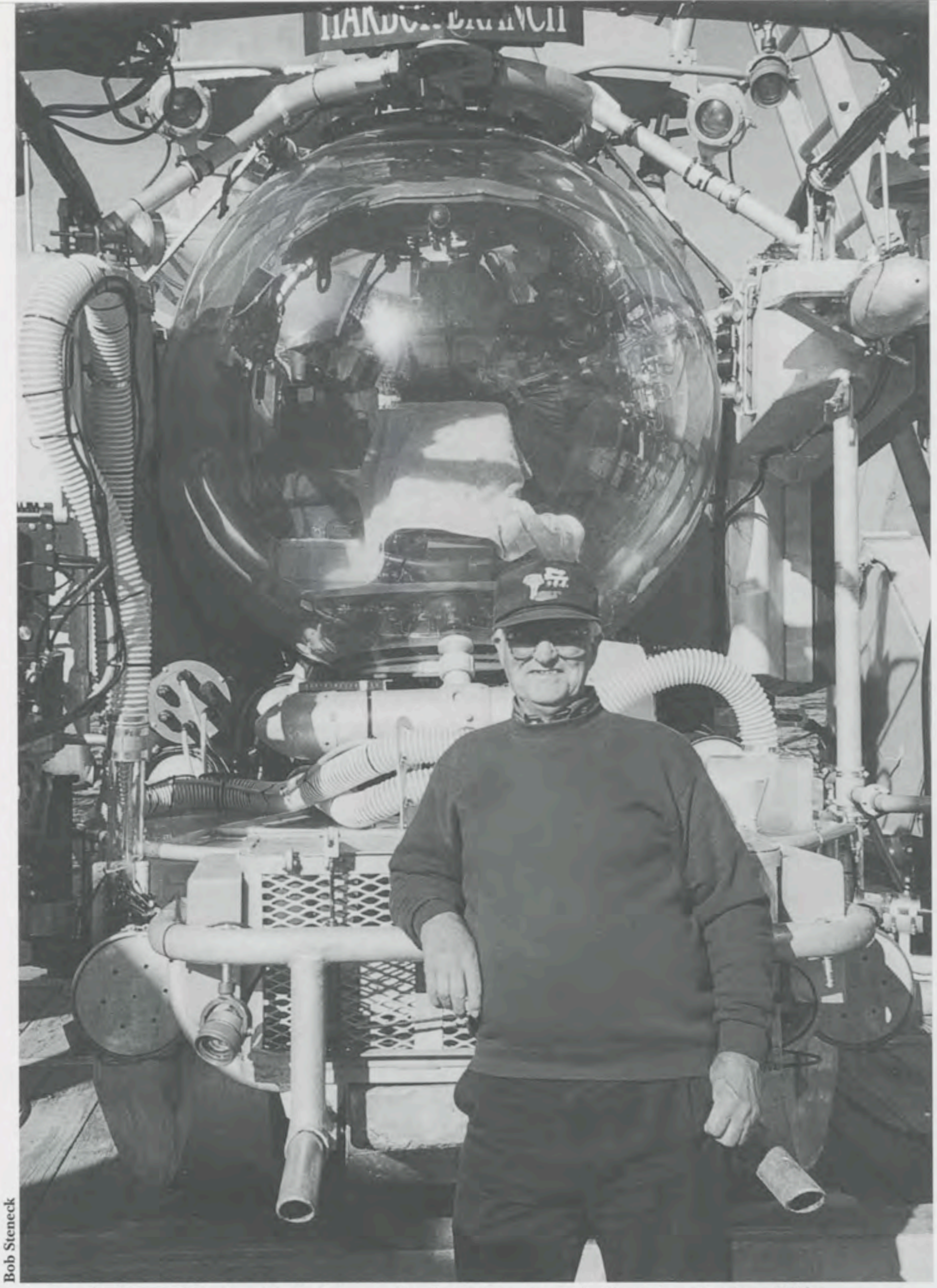
The rewards of all these direct observations are many-fold. Satellite imagery is authenticated with details. Behavior, distribution and abundance of underwater life are observed and understood in context. The impact of fishing activity on broad underwater habitat can be better understood. Knowledge of underwater life and terrain can influence harvesting strategies and improve the less-than-perfect art of fishery management.

Another reward is simply that of reaching below the surface to witness beauty. Not everyone can do this as directly as a diver or sub passenger, but captured images can be shared. In and of themselves, these images have great value. They are the windows we otherwise fear to build into our boats.

David Conover *is a documentary filmmaker living in Camden, Maine.*

Red Rock Crabs, mating.

Lobster and urchins



Bob Steneck

Junior Bachman of Beals with the Johnson Sea-Link experimental submarine, October, 1997.

NEEDING EACH OTHER

Fishermen and scientists share a history of conflict, but peace could be breaking out

JIM ACHESON

I FIRST BEGAN GATHERING data from lobster fishermen along the central Maine coast in the late 1960s. Compared to the Purepeche communities in highland Mexico, where I had previously worked, the field work was easy. Everyone spoke English; the roads were paved; the water was drinkable; there were police in every town; no one had a gun. The anthropological work I was doing was generally non-threatening, and I had no trouble getting interviews.

I became fascinated with the territorial system of the lobster industry and the implications of this system for conservation. I was only vaguely aware of the rift that existed between the fishing community and scientists who work for federal and state fisheries management agencies.

In the mid 1970s I worked for the National Marine Fisheries Service in Washington, D.C., where I came in contact with many of their scientists. I saw things from their point of view. In particular, I was horrified to learn of stock assessments coming out of the agency's Woods Hole laboratory predicting a lobster "crash" due to excess effort and inadequate attention to conservation.

Several different fishermen, meanwhile, told me they thought that the fishery was sound and that current legislation was working well. Still, I was a believer in science, and so I spread the word of the impending disaster to all who would listen.

When several years went by without the predicted disaster having materialized, I began to wonder. The 1990s have seen my skepticism grow, as lobster catches have achieved levels not seen for a century, while the best biologists have continued to predict calamity.

I am now convinced, along with many fishermen, that some of the predictions of scientists are not based on the best information — and that the predictions of fish-

CLASH OF CULTURES

The relationship between fishermen and scientists has been marked by ill-will, lack of cooperation, disrespect and in some cases, outright conflict. Members of these two groups advocate different measures to conserve marine resources. At times they have sabotaged each others' conservation plans and policies.

In a regulatory environment where no proposed solution has overwhelming support, administrators, politicians and legislators feel obliged to come up with compromise measures. When the result is a less-than-popular regulation, it can result in massive evasion.

Fishermen, for their part, have long been skeptical of scientists' prescriptions, and are increasingly wary of the science on which policy recommendations are based. Their sense of frustration is palpable.

It is increasingly clear that the relationship between fishermen and scientists is an impediment to developing effective conservation legislation. With many of the world's fisheries in crisis, the need for cooperation between these two groups is greater than ever.

At least three Maine fisheries — soft-shell clams, American shad and lobsters — provide heartening examples of cooperation between scientists and fishermen.

ermen are buttressed by far more than folklore.

In 1995, I got a call from a reporter from the *San Francisco Chronicle*, asking if I would like to make a statement on the causes of the sharp decline in lobster catches. Over half an hour I tried to convince him that lobster catches had never been higher. The reporter kept saying, quite correctly, that there had been several newspaper stories stating that the lobster industry was in dire straits. I told him they were wrong. He said they were based on facts from the scientific community.

I finally resorted to telling him that if he was determined to do another disaster story, he should call one of several state and federal biologists and they would give him one. I don't know if he contributed to the lobster disaster literature or not.

Different interests

Fishermen and scientists, in their worst moments, tend to vilify each other, but I am convinced that the fisheries problem cannot be reduced to a morality play with one side representing evil and falsehood and the other virtue and truth. On one level, these two groups have very different interests: fishermen need to catch fish, while fisheries managers are employed by regulatory agencies whose job it is to enforce laws designed to curb fishing effort.

There's more to it, of course. Fishermen and biologists have very different views of the ocean, marine resources and the motivations of the humans who exploit them. They come from different cultures; they have different experiences, live in different occupational organizations. Most important, they interact largely among themselves. Over the course of time, out of the same ocean, they have constructed two different worlds.

Robin Alden, former commissioner of the Maine Department of Marine Resources, made much the same point in a 1996 speech at the University of Maine when she said fishermen and scientists are two groups of people with very high respect for their own knowledge, and little understanding of what the other knows. Biologists strongly believe that marine resources are the property of the public, not the fishermen, and that scientists, as agents of the public, are responsible for managing these resources for the common good. Their agencies, they know, may have to enforce the law, using what one scientist characterized as "forceful and undemocratic" tactics. They expect little cooperation from the fishing community.

These attitudes have been given a good deal of intellectual respectability by the theory of common property resources, the notion that resources not under private ownership (parks, rivers, oceans, air, for example) may be used by anyone, but are subjected to escalating abuse, because those who use them are strongly motivated to over-exploit them. Why should a skipper conserve a school of herring when it will just be taken by the next person who encounters it? Only rules imposed by government can avert disaster.

Fishermen will often describe fisheries as going in "natural cycles" with fish stocks rising and falling, suddenly and unpredictably. Some of them will say that the factors controlling the size of fish stocks are so complex that humans have difficulty understanding what is happening. The idea that humans can control the size of fish stocks by controlling a single variable, such as fishing effort, seems ludicrous to many fishermen, to say the least.

Typically, people who live from the sea know a great deal about the life cycles of the species they exploit, including spawning behavior, nursery grounds, migration routes, growth rates and predation. The most important variables, in their view, are natural phenomena such as changes in water temperature or predation by other fish. Human behavior can affect these life-cycle processes, but usually in a less important way. (This point of view coincides with that of some academic biologists trained in ecology.)

Fishermen typically have very fine-grained knowledge of what influences the stocks of fish in the areas where they fish. They know that certain life-cycle processes of a species may exist over its entire range; other species may be strongly affected by variables in a small area. It follows that many rules need to be highly localized in nature.

Fishermen are convinced that stocks vary because of changes in factors affecting the life cycle. They regard rules designed to maintain life-cycle processes as effective, and they are much more likely to obey such rules since they believe it's in their own interest to do so.

A University of Maine biologist and I recently looked at the explanations fisheries biologists and fishermen have given for the marked changes in lobster catches seen in the 20th century. (In the lobster "bust" of the 1920s and 1930s, lobster catches were one-eighth of what they have been in the "boom" years of the 1990s).

The biologists tended to explain changes in lobster catches in terms of fishing effort (e.g. number of traps) and water temperature. The fishermen explained them in terms of types of fishing practices and environmental factors. Fishermen's favorite explanation for the "bust" was massive violation of the conservation laws and the so called "poverty gauge," the large legal minimum size gauge which made it illegal to keep most of the lobsters caught.

The most popular explanation for the boom of the 1990s is the absence of predation by groundfish, which are currently at low stock levels. Other explanations include the oversize law, which makes it illegal to take lobsters over five inches on the carapace, and the v-notch law. (Fishermen may not take female lobsters with eggs. Voluntarily, they mark "egged" females with a notch in the tail. Such v-notched lobsters may never be taken.) These laws, fishermen believe, are very effective in protecting the broodstock, which, in their view, is the secret to a healthy fishery.

But neither side in this debate had a premium on truth. The data buttress some of the ideas of both fishermen and scientists about the causes of the changes in lobster stock sizes; other explanations are clearly fallacious. This situation, in the Maine lobster industry, does little to build bridges of confidence between fishermen and biologists.

Yet there are hopeful signs. Among academic scientists and some in the management community, there is a resurgence of interest in ecology and studies of the life cycles of fish. Scientists of this persuasion will find it much easier to communicate with the fishing community, since both groups have a more similar view of what controls fish stocks and management goals.

Virtually all traditional tribal and peasant societies in which people exploit marine resources have rules to conserve those resources. To be sure, many traditional conservation rules have eroded under the influences of modernization. But no maritime societies, even those with no scientists, permit the unrestrained destruction of the marine resources on which their livelihood depends.

It is much easier to generate effective legislation if fishermen and scientists are inclined to cooperate. In this regard, the history of Maine lobster legislation is instructive. Most lobster legislation was initially suggested by scientists concerned with conservation, but passed into law only after powerful factions in the industry came to the conclusion these rules would benefit them economically. The minimum size measure and the prohibition on taking egged lobsters came about in this way.

In 1979 the escape vent law came into being by a completely different process. It passed through the legislature with unusual speed due to the strong support of the Maine Lobstermen's Association and the Department of Marine Resources. Several months of discussion involving fishermen, scientists and legislators led to a consensus that allowing undersized lobsters to escape from traps would reduce the mortality of juvenile lobsters. Everyone agreed it would be good for both conservation and efficiency.

The rapid passage of the escape vent law suggests what might be possible if the goals of fishermen coincided with those of scientists. When the two groups are able to communicate and broaden their perspectives, the opportunity for effective regulations grows accordingly.

James M. Acheson *teaches in the Department of Anthropology at the University of Maine. He is author of* Lobster Gangs of Maine.

CLAMS, COMMUNITIES AND SCIENTISTS

On the flats, cooperation is essential.

ANNETTE S. NAEGEL

The traditional image of the solitary clammer bent over the flat with hoe and hod to collect a day's pay is now shadowed by a complementary image: groups of fishermen and biologists sitting together in meetings, collectively, voluntarily managing the resource.

According to Sherman Hoyt, who coordinates the Georges River Clam Project, clammers would rather be out digging clams — but they realize a healthy flat is critical to their fishery. Clamming is the only fishery in Maine managed, at least in part, by local government. The critical question is how to integrate public accessibility with local control.

It has been difficult to manage clams while satisfying all the interested parties: fishermen, shellfish buyers, competing harvesters, municipalities, clam biologists, the Department of Marine Resources, state legislators, the federal government.

Yet Maine's experience with clams is not a story of doom and gloom. Years of experimental local management, in fact, have taught everyone what doesn't work, as well as lessons for the future. Declines in landings across the state over the last 20 years have raised concern among fishermen and scientists. Hancock and Washington counties, traditionally Maine's largest suppliers of clams, have lost 20 to 75 percent of their clams, and no one is sure exactly why.

The story of a single estuary, the St. George River, unfolds in two parts. First, a water quality monitoring effort by the Georges River Tidewater Association brought together the data to identify and monitor flats; then management by the Georges River Shellfish Committee and others was designed to ensure that the clam flats would remain open. In both monitoring and management, the collaboration of scientists, harvesters, state and local government and community members was of paramount importance.

A thousand acres of clam flats in the St. George River estuary were closed in 1987, either because of pollution or insufficient data to approve them for open harvesting. Like others up and down the coast, these closures were largely the result of stricter federal shellfish safety standards passed in the late 1980s, requiring all states to engage in water quality sampling to keep flats open. The Georges River Tidewater Association, working with biologists from the University of Maine Cooperative Extension Service, initiated a program of volunteer monitoring to supplement the work of biologists at the Maine Department of Marine Resources. By 1994, the association had provided enough information to show the flats were clean enough to re-open. Hoyt, a former lobsterman in western Penobscot Bay, feared a "gold rush" once the flats were marked for reopening.

Courtesy of Friends of Casco Bay

Eager to test community-based management, Hoyt convened an advisory group of clammers, conservationists and state biologists in 1995. The Georges River Clam Fisheries Restoration Project set out to develop a new kind of management approach, based on the ecological setting — the estuary — and involving clammers as well as their governments. The five towns that rim the tidal portions of the Georges River watershed — Warren at the head of tide, Thomaston in the upper bay, South Thomaston and St. George along the river's eastern shore and Cushing on the opposite shore — came to the table to develop what would become the first interlocal clam management agreement in the state. The idea of towns sharing management responsibility had not previously been tried. In fact, municipal ordinances had seldom been designed to do more than exclude non-residents.

The cooperating towns set up a joint board consisting of local elected officials, as well as a citizen-based shellfish management committee. The committee would design the plans with input from clammers and other local committee members; the joint board would approve them. A clammers association, consisting of nearly 50 commercial and recreational diggers, was also established as an informal group to provide this group with a shared identity and members for the shellfish management committee.

In addition to making sure the flats stay open, the shellfish committee and association members became involved in conservation efforts, along with state biologists.

One such effort occurred in Maple Juice Cove, a large area in the St. George estuary that was harvested intensely the first season it opened. The shellfish management committee recommended closure for conservation. Ron Aho, a state biologist, prepared a re-seeding experiment to determine how successfully clams establish themselves under natural conditions.

Re-seeding entails moving juveniles from an overcrowded area to a conservation area in hopes of replenishing the stock. This method was not completely untried, but it had not been tested scientifically in an effort with local diggers. Fishermen in Phippsburg and Damariscotta, as part of their conservation time (required for a commercial town license) regularly picked undersized clams from one flat and then "broadcast" them to another flat on a rising tide — tossing them over the sterns of their boats in hopes the clams would make it to the bottom, successfully burrow before being taken by a predator, and grow to marketable size.

Using a method he developed in consultation with others in the academic community, Aho and a group of local clammers compared sites in Maple Juice Cove that were re-seeded with those that were not, as well as sites protected with nets vs. those that were not . In all cases the goal was to determine how well re-seeding efforts actually worked. The initial experiment showed inconclusive results, but it was a first attempt to answer questions of importance to the clammer, the biologist and the local municipality.

The work of the community, the scientists and the management bodies (both local and state) continues. How many licenses to grant, which flats to close for conservation, when to open for the season, how many re-seeding efforts to conduct and where, whether to conduct population surveys — the various groups will grapple with all these questions. But they will do so collectively with information, expertise and interest they share. The traditional locally based management of the clam fishery has a new twist: a commitment to engage the fishermen along with the scientists to develop a truly stewardship-based model.

__Annette S. Naegel__ is Community Science Director at the Island Institute.

HERRING

Fishermen and biologists are working side by side.

SCOTT DICKERSON

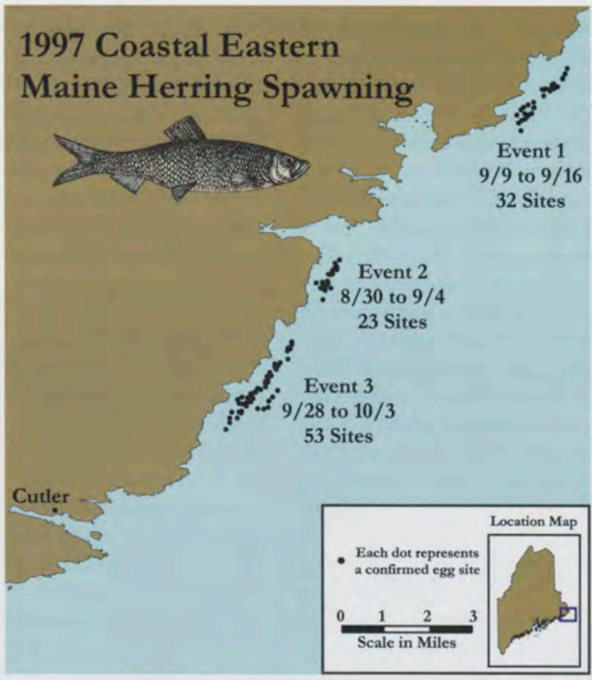
"We've been following each other around for the past week — I guess we're fishing on the same herring," says Stillman Fitzhenry as the minke whale crests off the stern of the lobsterboat and blows vapor. The minke is fishing on spawning herring for sustenance; Fitzhenry is fishing for information on the second herring spawning event of the season, off Boot Head along the coast of eastern Maine.

The area is the center of herring spawning activity in Maine waters. Historically, adult Atlantic herring return in August and September to the same areas of the coast of eastern Maine, releasing eggs and sperm in the cold, nutrient-rich currents that flow along the so-called "Bold Coast."

In strong years spawning produces a thick mat of adhesive eggs, covering parts of the sea floor. Using bottom grab samplers and a hand-held differential global positioning system (GPS) unit, Fitzhenry and his grandson Allan haul up small pieces of the sea floor and the egg mat, using what they learn from the samples to map the size of the spawning area, tabulate the thickness of the egg mat and describe the kind of bottom the eggs were on. The elder Fitzhenry usually tends a lobster wharf in Cutler and Allan usually works as a fisherman, but for this project they are working side-by-side with marine biologists to collect information that will be incorporated in the management of an important marine resource: herring.

The herring stocks that spawn along the eastern Maine coast once supported strong stop-seine and weir fisheries that annually yielded 60,000 to 70,000 metric tons. The herring that came out of those fishing efforts primarily went into the canneries to become sardines, a staple in American lunchboxes for generations. As the lobster fishery expanded and the American appetite for sardines diminished, the larger portion of the herring catch went into lobster bait, and herring now provide nearly all of the bait for the Maine lobster fishery.

From the perspective of the ecosystem as a whole, the spawning success and subsequent abundance of juvenile herring are critical to the survival of many fish, including Atlantic salmon, bluefish, and striped bass, as well as sea birds and marine mammals.



Chris Brehme, Island Institute

Herring spawning in eastern coastal Maine has been described in historical records from at least the late 1800s. During the mid-1980s, David Stevenson of the Maine Department of Marine Resources (DMR) conducted research to determine the extent of the spawning activities at that time. Through field sampling and interviews with fishermen, he determined that spawning had occurred at 24 sites in eastern Maine between 1983 and 1988, ranging from five to 11 events per year. Sampled egg mats were up to one inch thick, covering an area of 198 acres of bottom that had a gravel/shell substrate, in depths of 66 to 115 feet. In the spawning event that was most completely evaluated, Stevenson estimated that between 32 and 62 million herring had deposited approximately two trillion eggs.

In recent years lobster fishermen have reported a substantial decline in herring spawning in the region. Neither the fishermen nor marine biologists knew how great the decline had been, or why it had occurred. So the Downeast Lobstermen's Association, Maine Lobstermen's Association, Maine Sardine Council, Island Institute and DMR launched a cooperative effort to update the data from the 1980s and to document the actual extent of current herring spawning. Stillman Fitzhenry was selected to conduct the field sampling and interview fishermen for the new project. He assembled a reporting network consisting of approximately 60 lobstermen fishing the coast from Lubec to Jonesport-Beals.

Herring eggs are sticky, and when spawning occurs the egg mat coats whatever is on the sea floor, including lobster traps. Fishermen seeing this evidence of spawning activity as they hauled their traps were asked to report it to Fitzhenry. Since the eggs lie on the bottom for ten days before hatching, Fitzhenry can go to the reported site and collect multiple samples across the bottom. Using this information he can determine the boundaries of the spawning area.

In 1997 lobstermen reported only three spawning events. All sites were sampled, and each consisted of a relatively thin deposit of eggs that in many areas didn't form a coherent mat. In no areas was it thicker than a half-inch. The average area of the spawning events was 227 acres, a marked reduction from spawning events reported historically. Following completion of the field sampling, Fitzhenry began interviewing fishermen to obtain information on where and when herring eggs had been observed on lobster traps during the ten years since the last herring survey.

The egg and bottom samples collected by Fitzhenry will be examined and processed at the DMR Laboratory in Boothbay Harbor. Information on spawning locations, egg mat thickness and bottom type will be compiled and processed at the Island Institute to create a geographic information system (GIS) layer, a computer file which combines the information with a map of the spawning events. In this form, the spawning information can be analyzed in combination with other natural resource information to evaluate management approaches.

The information from Stevenson's work in the 1980s and Fitzhenry's interviews will be converted to GIS layers as well. The result will be historic and current maps of herring spawning areas for the eastern coastal Maine stock. Developed by a collaboration between fishermen, processors, resource managers, and scientists, this information resource will be available to improve the utilization and management of Atlantic herring, a critical element of the Gulf of Maine marine ecosystem.

***Scott Dickerson** directs the Coastal Mountains Land Trust.*

Funding for mapping herring spawning areas was provided by the Maine Outdoor Heritage Fund and the Eastern Maine Conservation Initiative.

NEEDING EACH OTHER

SAM CHAPMAN, SHAD MAN

A fisheries "expert" who slogs through the mud in his waders

STEVE CARTWRIGHT

Sam Chapman grew up among fishermen in Waldoboro, where generations of local people have dug clams from the flats, trapped lobsters in the bay, dipped alewives from the river and fished smelts through the ice.

He knows the fishermen and they know him, as neighbor, as member of the town shellfish committee, as a fisheries "expert" who slogs through the mud in his waders. That's because Chapman, 51, keeps one foot in academic and bureaucratic affairs; the other foot squarely in the local fishery. He knows full well the traditional mistrust of officialdom; he also knows that without wise management, there may not be any fish left at all.

Courtesy of Sam Chapman

Not one to sit back and watch things decline, Chapman has latched onto a shad restoration project, using the former settling pools of an old cannery. He is determined to bring back this once-plentiful member of the herring family, which has potential for sport fishing and commercial uses.

The Waldoboro-bred shad are already being stocked in the Medomak River, as well as the Kennebec River at Augusta. Chapman's shad hatchery is the only one of its kind in the state, and he and his wife, Carolyn, partner in the nonprofit enterprise, have creatively put together state and local grants for a budget which this year topped $130,000.

In six years, the couple has transformed the former Medomak Canning Company property into an efficient shad-producing operation, located on land where truckloads of squash were once delivered from local farms to become "One Pie" brand pie filling.

Shad, which grow up to 30 inches in a six-year life cycle, were once plentiful in Maine's rivers and estuaries. But heavy pollution and dam construction virtually exterminated the species in Maine. Shad were once as common as alewives and salmon — species that have seen serious decline as well. The shad were the first to disappear.

To Sam Chapman, shad are not an isolated species or a solitary restoration project. If they return, as he is confident they will, then their fry (or young) may help restore Atlantic salmon and striped bass to the rivers. "I think the shad and the river herring family are much more important than people realize in the ecology of a river, because they are such a forage fish. Shad become the feed base for so many species. If the shad can do what they need to do, other things will be taken care of."

Chapman thinks in terms of food chains, ecosystems, and preserving the marine, estuarine and inland river environment. For him, this is not sentimental dreaming. He hopes that fishermen will come to see that their livelihood depends on understanding, on having a stake in the preservation of species.

At the hatchery, Chapman acknowledged that "we've still got growing pains." Yet his efforts have won praise from state Department of Marine Resources officials, and interest from as far away as the Penobscot Nation at Indian Island, Old Town. The local hatchery has been procuring shad eggs from a Connecticut River hatchery in Holyoke, Massachusetts, but has also produced eggs in Waldoboro, using adult shad taken from the Saco River.

"We're on a steep learning curve. Egg acquisition is the big bottleneck in the whole thing," said Chapman, who started his hatchery in his garage in 1991. "There are things we think we know. A lot of things we don't know."

The hatchery, with its recycled pools and buildings, may not look like much to the passerby. But the operation can produce thousands and thousands of fingerlings (young shad), three to five inches long.

By 1998, one full growth cycle of shad will have occurred since the first stocking in rivers, and adults which originated at the Waldoboro hatchery could return for the first time from Atlantic waters where they spend years reaching maturity. After swimming up and down the coast, shad return to their native rivers to spawn. They don't necessarily die after that, and some shad spawn two or three times, living as long as 10 years.

"We're definitely gaining ground," Chapman said. "The proof of the pudding is going to come when we look at the shad population on the Kennebec and Medomak rivers over the next few years."

Chapman can talk fishing by the hour. As a boy, he would head out on Damariscotta Lake in a three-horsepower outboard skiff and "get lost." He is a shellfish expert, having seeded clams on the flats of his native Waldoboro, an area which has suffered from pollution and intensive digging.

A University of Maine botany major, Chapman now works with the Maine Aquaculture Innovation Center in Brewer, and is helping develop a high school curriculum focusing on aquaculture. Chapman is also well-versed on lobsters, having worked for the University of Maine's Darling Center in Walpole.

He serves on a design team for the Bowdoin College marine laboratory at Orrs Island. He also has long been involved with the Beals Island Community Clam Program, a "labor of love" in an area where clamming has fallen off by 80 percent, costing hundreds of jobs.

"There are people who know what I'm doing, but it's peripheral to their lives. Things get frustrating," Chapman said, "but that's no reason to give up. The water might be just below the pump."

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*A freelance writer, **Steve Cartwright** lives in Waldoboro.*

LOBSTERS

At last, researchers are asking the right questions.

DAVID CONOVER

"I've spent too much time on top of the water to think about going under it," exclaimed Arnie Gamage, just before squeezing through the submarine's hatch. Despite his misgivings, Arnie was heading for the depths. He'd sent countless traps overboard in his twenty years of harvesting lobsters. Now, curiosity prevailed. It was his turn.

The purpose of this submarine dive was to search for large egg-bearing lobsters, the latest effort in several years of cooperative work between harvesters and scientists. Since the late 1980s, Gamage, Brian MacLane and others of the South Bristol Lobster Cooperative have worked with researchers from the nearby Darling Center at University of Maine. The goal was to learn about lobster biology. The first operation cordoned off a section of productive fishing ground and measured changes in the diet, movement, and growth of lobsters. Over 70 fishermen pulled their traps from the chosen control area. Other cooperative experiments followed, leading up to this submarine research. Twenty more dives were scheduled along a 10-day research cruise. Deep water, nearshore locations from Pemaquid to Jonesport and beyond would be searched. Many of the dive sites were selected because data for that area existed, data collected with the help of local lobstermen.

"I could go out there and just plunk down the sub anywhere." said Bob Steneck, the University of Maine researcher in charge of the project, "but the stories and local knowledge of each harvester help orient us with greater effect. We gather these observations, and then make a surgical strike using the best scientific tools available." A marine ecologist, Steneck takes an "eco-systemic" view. Harvesters themselves are part of the system. What they see and do is highly relevant to what happens in the system.

Each day during the cruise, they'd steam out to rendezvous with the 125-foot R/V EDWIN LINK, the carrier of the sub. Each day they crawled through the hatch, curious and eager to explore bottom they knew only by what they saw on their fathometer and in their traps. Last-minute adaptations were made on the basis of conditions for that day. The sub was launched; a scientist recorded sightings; the harvester observed. Besides the shared desire to find broodstock lobster, each had his own viewpoint. "So that's why my bait bags are so torn up!" said Brian McClane when he saw a school of tiny fish hitting at a trap nearby.

Relations between scientists and lobstermen had not always been so smooth. "For years it was either [the scientists'] way or the highway," says David Cousens, President of the Maine Lobstermen's Association. "Our anecdotal information was not plugged into the scientific equation."

To a large extent this gap was an issue of scale. The harvester's view was very local because that was the scale of the fishing. Scientific and management overview was broader, on the scale of state and federal policy. The gap was also one of culture and perception. "Let's be honest," says Walter Rich of Bass Harbor, "a guy sitting behind a desk don't know what's going on out here on the ocean."

> ***"The scientists smartened up and began to work with fishermen, explained Junior Bachman of Beals Island, "and fishermen smartened up and began to work with scientists."***

In 1995, with the arrival of a data collection program directly dependent on harvester help, this perception significantly changed. The goal of the program was to better understand the lobster life cycle and to create a model for accurately predicting population trends in specific areas. The first need was lots of field data, local information best gathered from traps and the decks of lobster boats. Steneck and his team contacted a growing list of lobstermen wishing to participate, building and expanding earlier relationships. Each year dozens of interns, graduate students, and professors went to sea with harvesters in selected areas along the coast, spending an entire day with each. They measured the size of lobsters caught, tracked locations fished and recorded gender, the number of "v-notched" lobsters, and water depths. They also heard a lot of anecdotes.

Scuttlebutt among lobstermen was that Steneck's group was asking the right questions. Last summer, the third year of the program, 61 different fishermen hosted trips. "When we asked them for help, nearly all said yes." said Carl Wilson, a graduate student working as the liaison with the lobster industry.

"The scientists smartened up and began to work with fishermen, explained Junior Bachman of Beals Island, "and fishermen smartened up and began to work with scientists." The results, not always the expected ones, nonetheless made sense. Mutual respect grew. The field input mattered to Steneck and his team. And, as one pointed out, "managers listened to us more when we worked with scientists."

The work was initially funded with the help of the Sea Grant program of Rhode Island, New Hampshire and Maine. The lobster industry also put its money behind its interest, allocating a research surcharge from each lobster license issued. Support from the Kendall Foundation and others played a supportive role.

Steneck and his team also needed time underwater to quantify different bottom types (sediment, cobble, boulder fields, etc.) and to calibrate their estimates (from traps) of lobster abundance and distribution. For shallow areas, scuba diving was enough. But for the deeper water, this access could only be through the use of submarines, outfitted with a laser beam measurement system.

"Looks a little cramped, but we'll make it all right," laughed David Cousens, as he poked his head into the after area. His input, and that of his fellow lobstermen was primarily focused on site selection at the surface. Steneck invited them to come down in the sub anyway. "It's payback for their years of help with the sea sampling," says Steneck. "and it's clear that they are really interested in seeing what's there. They also get more of a sense of our scientific method." Economists, anthropologists, journalists, and fishing families were also invited on board the EDWIN LINK, creating a forum for information exchange throughout the trip.

The last year of the Sea Grant sea sampling program is complete. More work remains to be done. Steneck and his team hope others will step in to support this cooperative effort. They currently have the largest database on Maine lobster ever assembled. Predictive capabilities are emerging, and knowledge of where broodstock are will hopefully yield a sense of how to best protect them.

An "unpretentious exercise"

How Charles and Carol McLane re-invented the study of island history

DAVID D. PLATT

On a summer weekend in the mid-1970s, Charles McLane placed telephone calls in search of three elderly former islanders, in hopes of arranging interviews with each. Their recollections, he knew, would add to his understanding of Maine island communities, whose history he planned to research and publish when he retired from the political science faculty at Dartmouth College.

The phone calls brought disappointment. All three of the hoped-for informants had died within the past month; their knowledge of and insights into a particular way of life were lost.

Losses can become lessons, however, and this one would have a positive effect on McLane's island-history research project. "At a certain point," he wrote in the preface to his first volume of *Islands of the Mid-Maine Coast*, published in 1982, "the idea of piecing together the history of these islands acquired an urgency" — because the living record, at least, was slipping away with the lives of the islands' older residents; because McLane was himself near retirement age and facing a project he knew would take him years to complete. "The study," he had realized by 1982, "would not wait until the illusory 'retirement.' It had to be done now."

What McLane and his wife, Carol, called their "unpretentious exercise" for retirement quickly evolved into something much more ambitious: a definitive history of three centuries of island habitation and use, covering hundreds of islands that lie along the Maine coast, all the way from the Kennebec River to Machias Bay.

The project took 20 years to complete. Undeterred by the deaths of those three former islanders they had hoped to interview in the 1970s, the McLanes went on to speak with scores of other island elders, incorporating their memories into the histories of the islands where they or their families had lived. More significant in terms of historical technique, however, was the McLanes' recognition that much valuable material lay forgotten in the records of towns and counties along the Maine coast — registries of deeds, court and tax records, town meeting reports — and in the statistics gathered each decade since 1790 for the U.S. Census.

History, like much of science, is largely an exercise in focus and perspective. How one looks at the available

Photographs courtesy of Charles McLane facts — how one assembles and analyzes them — is fully as important as the facts themselves. What Charles and Carol Evarts McLane learned through interviews, or ferreted out of family records and registries of deeds, wasn't particularly startling, revealing or surprising; what was new was the way the McLanes used the available facts to tell a story that had not been told before.

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A hale 78 today, Charles McLane can look back on a long and productive career, including stints in the U.S. Foreign Service and nearly 30 years teaching political science at Dartmouth. He and his wife raised six children, living for several years in Moscow at the height of the Cold War — "we had lots of Russian friends," he recalls with a laugh; "they were all KGB." He learned Russian and spoke it then, he recalls, better than he does today. Much of his time in Moscow was spent acquiring Russian technical books for the Library of Congress.

Professionally, McLane was a political scientist, not a historian; in the 1970s he researched and wrote a series of volumes on Soviet foreign policy. "My field was utterly the Soviet Union," McLane explains. "I was interested in the politics of how the place ran. There was a time when I knew a great deal more about how the power structure of the Soviet Union ran than I did about the United States, even though I was fairly interested in politics here." His studies in Soviet foreign policy took him to Southeast Asia, Latin America, China and many Third World countries.

The family acquired a summer house in Brooklin, Maine, on the eastern shore of Penobscot Bay, in 1963. "I wouldn't say there was anything in my background that led me to Maine islands," McLane responds when asked if the Kremlin might have in some way informed his island studies. "It was simply being on the coast of Maine in summer, once we got a house down there and began to sail. I know very little about colonial history."

Piquing the McLanes' interest in island history, of course, was the region's curious combination of wildness (not "wilderness") and human settlement. Like others, they wanted to know who had settled and worked the land in the past — who had built the stone walls, dug the cellar holes, cleared the grown-in fields and worked the abandoned quarries they encountered on the islands they explored.

By the early 1970s the McLanes were thinking seriously about an island history project. "There wasn't much history of the islands," Charles recalls. "We really had the feeling we were in uncharted territory. How do you do it?"

The first thing to do, of course, was to consult a real expert. McLane sought out Samuel Eliot Morison, an old family friend. Retired from Harvard but still regarded as the dean of American naval historians, Admiral Morison spent summers in Northeast Harbor and had written, among many other books, an excellent history of Mount Desert. They spoke about McLane's proposed project on two occasions. "I got intrigued with how quickly he could put things together," McLane says. "He pointed out some sources; he talked about the Maine and Massachusetts historical societies; he talked particularly about a man who was the chief archivist at the Massachusetts archives, who had written a very elegant book about Bar Harbor." (McLane offers one other Morison anecdote from an earlier era: as a boy of 14, he had gone sailing with the great man, who had been, McLane remembers, "a pretty severe captain.")

On Morison's advice, McLane visited the archivist in Boston, learning for the first time what was available in the Massachusetts archives. From there it was on to the National Archives in Washington, D.C. "I was really interested initially in pre-revolutionary settlement along the Maine coast," McLane remembers. "I discovered that there was awfully little before the Revolution — in short, the British at the end of the Revolution had taken all their records, and they were all in London at the Public Records Office." Not a problem, as it turned out: finding himself in London on an academic assignment a year later, McLane "spent quite a bit of time at the Public Records Office, simply poking through the old, pre-1776 records of what the different Governors of Massachusetts had had to say about Maine. Of course the islands themselves figured only inconsequentially, but [the records] sometimes might list the islands and give some kind of account of what was going on."

The records McLane studied in Boston and London were political in nature — reports by governors and other public officials to their governments, to Parliament, to the crown — concerning commerce among various colonial ports and with London. Dry stuff for the most part, apart from the occasional list of islands or reference to an event such as the Indian massacre on Matinicus in the 1750s. But they did contain a certain amount of information about land ownership, a topic which was to become the centerpiece of the McLane series and would — because the later record is so rich — shift the project's research focus from archives to town offices and county registries of deeds.

"If your focus is on who lives where," McLane says, "the land record is of use to you because of the phrase 'the land on which he lived' — if you get that in a document that hasn't changed or been tampered with over two or three hundred years, you know that you're talking about somebody who was there."

The deeds and tax records revealed a pattern of development that was closely tied to the region's political fortunes. Until the 1760s, except for fishing or trading settlements like Monhegan or Damariscove, there was relatively little European settlement on the land anywhere on the Maine coast. To the east, Maritime Canada was in the hands of the French — hostile to settlers from the English colonies to the west, friendly with the Indians, who also had little use for Englishmen. In those days, Maine's bays and their islands lay in enemy territory.

After the Treaty of Paris in 1763, this picture changed dramatically. "The French had lost," McLane says. Except for the vast region to the west of the 13 original colonies that would one day become the Louisiana Purchase, "the French were out as a force in the North American continent. After Penobscot Bay opened to settlement with the signing of the treaty, "it was amazing how fast it went — you had unbelievable growth in Maine in the 1760s — I'm sure everybody had been waiting to move in."

They moved onto islands, the records showed, because such places were relatively secure from Indian attack, because they were more accessible than mainland sites (mainland roads wouldn't be worthy of the name for decades to come), because there was timber, access to fishing and even in some places good farmland. Islesboro, Swan's Island, the Fox Islands and Deer Isle all gained their first permanent settlers in the 1760s.

"The success of an island community," says Charles McLane, "depends on who you're dealing with — the chemistry of who is on an island at what age, vitality, health, makes a lot of difference."

The pace of settlement may have led to a land-rush mentality, which in turn led to speculation and — wonderful luck for the researcher — legal sparring over property. "You begin to get litigation almost immediately," McLane says. "Islesboro, for example, was settled in the 1760s — there were 25 or 30 settlers there — and the question was who owned it. The original owner's claim never stood up at all." Early owners, in many cases, had themselves been land speculators or wealthy individuals who had acquired huge areas, including islands, as royal grants. "You had a lot of squatting," McLane says, "a lot of fake deeds, all kinds of big, fancy deals to hold onto land." Over time, the farmers and fishermen who came to live on islands with their families displaced an earlier generation of largely absentee owners.

Security became less important once the French and their Indian allies were gone, and some island settlers or their children moved to the mainland. But as the 19th century progressed, the McLanes discovered through another source, the U.S. Census, population pressure tended to keep islands occupied. "If you're farming 100 acres you can't always divide up your property," McLane notes, referring to mainland families that were reluctant to divide their farms among their children. "Up until the Civil War you get something of a repopulation of the islands, with third, fourth and fifth sons needing property." Islands, at the time, were "selling for a song."

The Civil War changed everything on islands, as it did in much of the rest of Maine. The state's sons signed up in large numbers to fight, and following the war, a lack of opportunities at home and the opening of new land in the west tended to lure away the younger generation. Maine lost population, and the pattern of "removal" from islands began in earnest. The pattern would persist for a century, during which the number of islands with year-round communities would fall from 300 to less than 15.

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Why islanders "remove" continued to fascinate the McLanes as they dug into the archives. The question has multiple answers, and those answers will vary with the times: in 1900, islanders left when their children were required to attend high school or when motors had made it possible to "commute" to the fishing grounds from the mainland; earlier, they had left when they no longer needed security from Indian attack or as roads and other amenities developed on the mainland; industrialization would play a role from the 1860s to the Depression.

"You have to wonder why they removed," Charles McLane says, "the way they romanticized their life on islands — what led them to leave in such large numbers, so quickly." Whatever the reason for "removal," the McLanes documented it through a wide variety of records. On Arrowsic near the mouth of the Kennebec River, for example, they used school enrollment figures, which between 1841 and 1959 provide "dramatic evidence of the steep decline in the township's population ... in the decade after the Civil War." Accompanying their text is a graph whose plunging line depicts school population on the island over a century.

"Why?" they ask, suggesting a few possibilities: "The deepening of the Industrial Revolution and consequent urbanization siphoned off younger people from traditional frontier communities. The opening of the West attracted others. Some migrated only a few miles — say, to the shipyards at Bath or Damariscotta — but they left the native farms. Meanwhile the gradual transition at sea from sail to power, from wooden to steel hulls, began a disorientation that affected the entire coast."

In the introduction to the third volume of the series, McLane paints a different picture for the islands at the mouth of the St. George River. A pattern of impermanent settlement there, he suggests, reflects “the nature of the prevailing occupations of the islanders: they were primarily fishermen ... there was farming — even smaller islands like Stone and Teel had viable farms — but farming developed because these island communities already existed, not because of the natural productivity of the land. In short, where the predominant occupation is fishing, stability and permanence are not the normal characteristics of settlement.”

Researching population trends gets easier as the 19th century proceeds, McLane points out, because of the increasing sophistication of the U.S. Census. “Up to about 1820 you get only head of household,” he explains. From then on, however, the historian finds “not clear sailing, but something really solid to work on.” By 1850 (“that was a heck of a good census,” McLane says), records include every single child, their ages and even disabilities, such as blindness or smallpox. Records are strong after that, except for 1890, when most were destroyed by a fire in Washington, D.C. “There’s nothing from 1880 to 1900,” McLane says. “That was a shocker, and an awful loss for us.”

Carol Evarts McLane died in the fall of 1996 as a revised and expanded edition of Volume I went to press. “We worked very much together on the research,” Charles McLane says of his wife’s role in the project. “Right from the beginning, I tended to do the writing, but I would often turn it over to Carol to edit. We worked together on research in libraries — in London, Boston or Portland, as well as at the historical societies.” They kept two kinds of research materials, a card file and a vertical file in boxes including correspondence with island owners. A particularly helpful correspondent was Tom Cabot, the wealthy Bostonian who bought numerous islands to preserve them.

Over time, the project evolved. “Our techniques got better,” McLane recalls. “We had thought it was not possible to get all the town records,” believing they had either not survived or been sufficiently detailed. But tax records for towns such as Tenants Harbor, they found, accounted for “every cow — by getting into those and figuring out how to use them, you can see what happened [to the economy] before and after the Civil War.”

Searching the records became more productive as the McLanes learned what they contained. What got more sparse, of course, was the living testimony of older people. “By the time we were through with the first volume, they were all gone,” McLane says. Except for occasional probate records, the personal histories of early islanders are largely lost. “It wasn’t as though they couldn’t write,” he says. “They just didn’t keep records.” Through the 19th century, at least, letters and diaries relating to islands are scarce.

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The coming of “rusticators” at the end of the 1800s changed everything, and in most cases the McLanes ended their study when islands were sold to buyers “from away.” It seemed a logical place to stop, Charles McLane says, but he also recognizes that seasonal ownership, in many instances, has now continued longer than that of the farmers and fishermen who once lived on the islands year-round.

“If I were advising somebody where to go on island research I’d say don’t be as skittish as Carol and I were on the rusticators,” McLane says. “I think that when we started this thing, even though we were rusticators ourselves, summer people, our sympathies, and sources and contacts were invariably with the people at the very end of residence — people who were either descended from or themselves, as children, had been brought up on these islands, so that when we came to a rusticator, we kind of said, ‘Ah, well.’

“Now I appreciate that not only has time changed things — the life of summer settlers on islands exceeds in almost all cases the native residence — but secondly, the rusticators are famous for keeping diaries. They keep enormous records of what they did, people they encounter, work with, to get their homes built. It’s not a record of indigenous settlers, which has a romance all its own, but it has magnificent history potential. The sources are better than anything we had.”

After 20 years of research, Charles McLane can generalize, just a little. “Islanders,” he says, “have an innate capacity to submerge their differences in order to get along.” The success of an island community “depends on who you’re dealing with — the chemistry of who is on an island at what age, vitality, health, makes a lot of difference. What makes for success or failure on an island would be a damned good study.” Near the end of his eighth decade, the political-scientist-turned-historian is still looking ahead.

***David D. Platt** is Publications Director at the Island Institute.*

The Fund for Maine Island Education

Carol Evarts McLane, who died in 1996, admired the strong communities islanders created to soften the hardship of living in isolation. In her memory, the Evarts and McLane families have established the Fund for Maine Island Education.

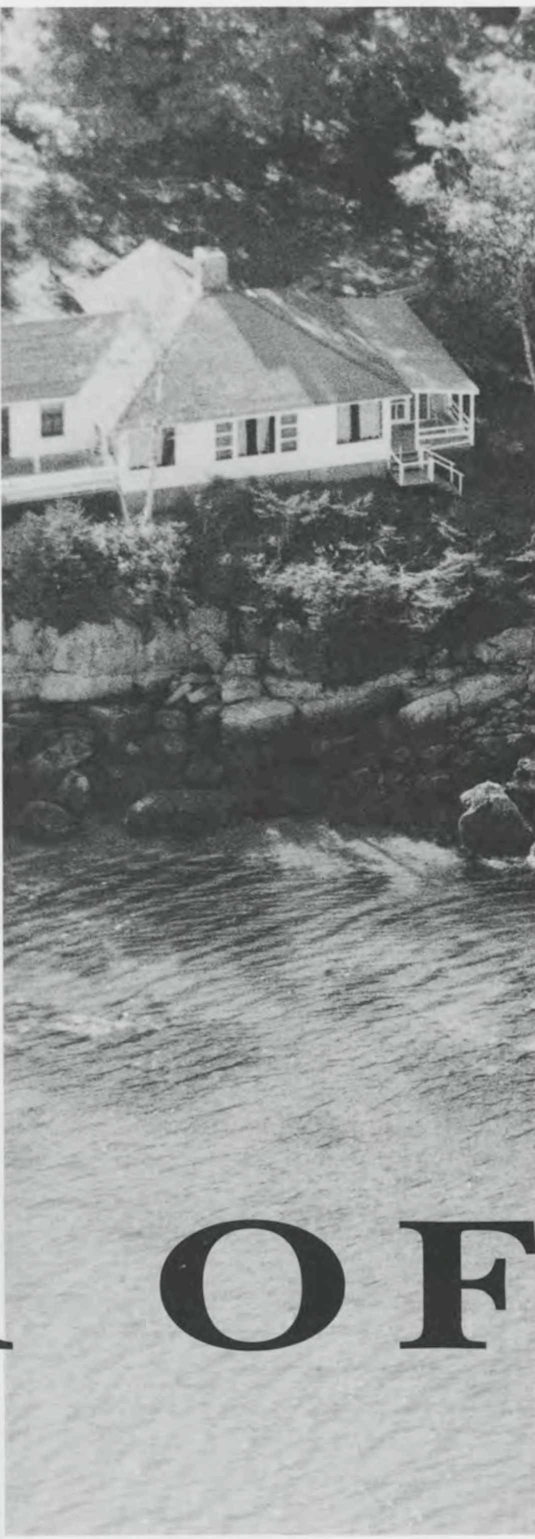
Housed at the Maine Community Foundation and administered by the Island Institute, the fund seeks to broaden opportunities in Maine’s 15 year-round island communities. It will enhance the scholarship program of the Island Institute, increasing the Institute’s traditional scholarships and expanding its support of other aspects of education including training programs at vocational and technical schools, refresher courses, correspondence and Interactive Television (ITV) programs offered by the University of Maine as well as workshops, internships and study for post-graduate degrees. For the 11 islands without high schools, the fund will also provide assistance to families facing the added expense of sending children off-island to high school.

Contributions to the fund may be made through the Island Institute.

A SEA OF

Smugglers tried a lot of tricks along the Maine coast, and sometimes they got away...

EDGAR M. BOYD



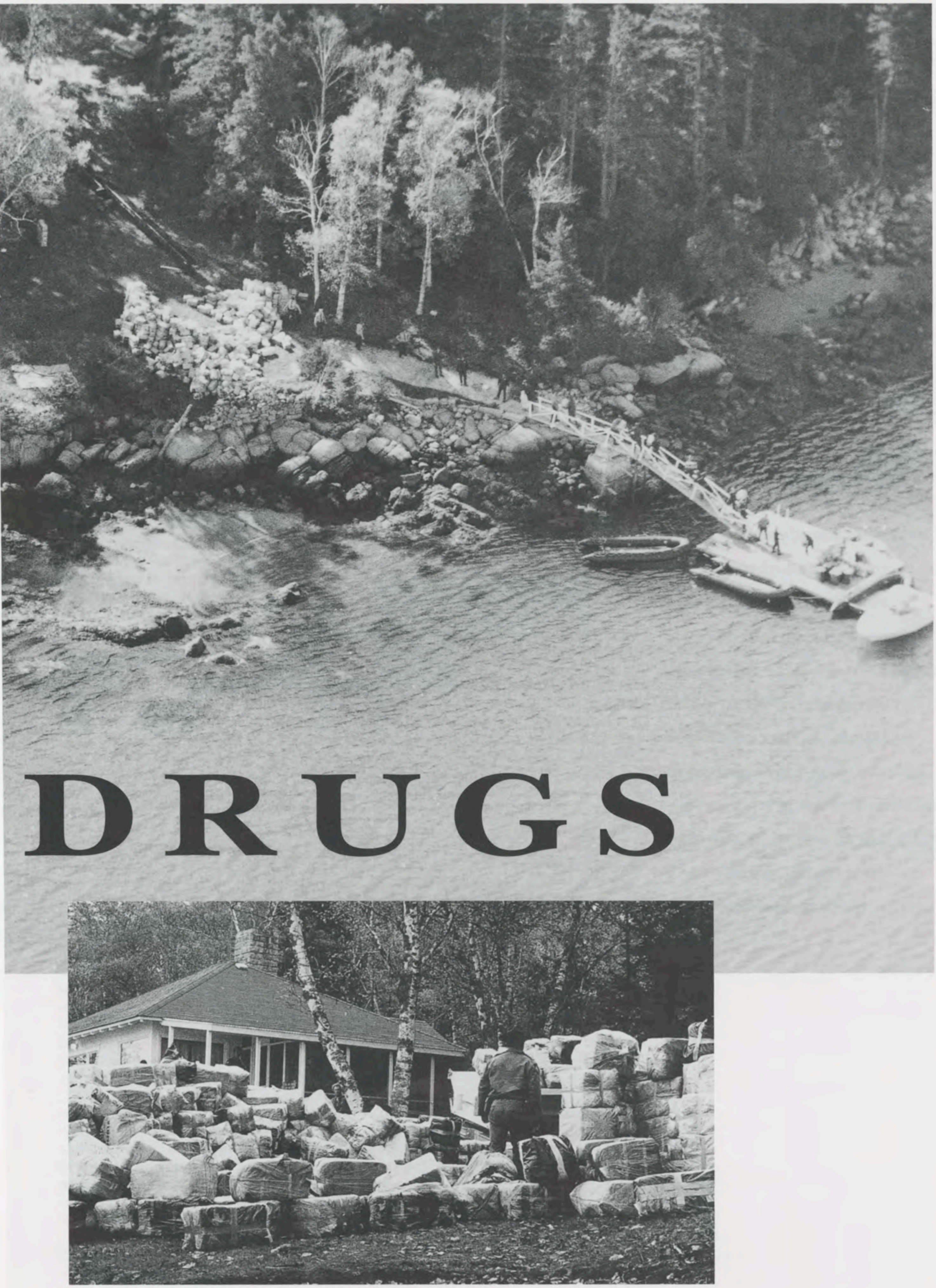
In early May of 1977, a 38-foot cabin cruiser from Massachusetts named COLD DUCK wound its way up the Sheepscot River, passed through Goose Rock Passage into Knubble Bay and on into Hockomock Bay, only three miles from the city of Bath. There, at a house on Mill Island in Arrowsic, the captain, a 25-year-old from Massachusetts, and his helpers unloaded 65 burlap bags containing three thousand pounds of high-grade Colombian marijuana with a street value of two million dollars. He then took his boat down to Robinhood Marina and left it on a mooring. Bearing evidence of its contraband cargo, the boat drew outside attention only because it fouled its mooring lines in a storm and had to be boarded. Earlier smuggling operations have subsequently come to light, but this was the first case reported in the press of drugs being smuggled into Maine by boat.

By the admission of the federal Drug Enforcement Agency (DEA), the occurrences of smuggling about which the public knows are but the tip of the iceberg. If the first reported cases of smuggling along the coast of Maine appeared in the press in 1977, we can assume it actually began several years earlier, perhaps the late 1960s. If it's true, as estimated, that we know of only one-tenth of the smuggling activity in Maine, then it's safe to assume that the closets of the smuggling world are still crammed full of skeletons. By 1973, the DEA had established a permanent presence in Portland. By 1974, the U.S. Customs regional office had begun increasing its patrols of the coast. The DEA noted in 1973, in fact, that in the preceding three years at least half a dozen major drug importers had taken up residence in Maine, and that the economics of drug smuggling were compelling: marijuana and hashish bought in the Bahamas, Colombia, Mexico or Jamaica for $20 a pound sold to Maine wholesalers for $200 a pound. A ton bought for $40,000 sold to the dealers for $400,000, and so a shipment of, say, 20 tons would gross over $7 million. That's just to the shippers. Those same 20 tons of marijuana would have a street value of between $15 and $25 million, depending on its quality.

As of 1973 the coast of Maine was but one area where smuggling had become a concern. Illegal drugs had begun moving across the border with Mexico in the 1960s. They were being smuggled via direct sea and air routes from certain Latin American countries, most notably Colombia, or through transshipment points in the Caribbean and Bahamas. As the border with Mexico became more carefully scrutinized and patrolled, as interdiction efforts and successes increased along coastal Florida, Georgia, and the Carolinas, and as the demand for marijuana grew in the large urban areas of the Northeast, drug merchants and those in a position to exploit the market forces of the trade looked increasingly to the north Atlantic coast.

That the concentration of smuggling activity — mostly marijuana, but occasion-

DRUGS



Photographs courtesy of the Bangor Daily News ally hashish and Quaalude — fell on the Maine coast is not surprising. The coast has over 3,000 miles of convoluted coastline; islands as places for concealment or transfer; a relatively thin population density; and a myriad of other assets known best to privateers, rum-runners, and any other boatmen who at one time or another might have paused to make note of the privacy or special sense of seclusion afforded by a small cove here or a hidden entrance there. One other factor proved to be pivotal: the presence and sometime availability of individuals known to be especially skillful, independent, resourceful, inventive and, at the time, economically hard-pressed: fishermen.

> **That the concentration of smuggling activity — mostly marijuana, but occasionally hashish and Quaalude — fell on the Maine coast is not surprising. The coast has over 3,000 miles of convoluted coastline; islands as places for concealment or transfer; a relatively thin population density; and a myriad of other assets known best to privateers, rum-runners, and any other boatmen who at one time or another might have paused to make note of the privacy or special sense of seclusion afforded by a small cove here or a hidden entrance there.**

Initially, with laws against drug smuggling relatively light and the cash value of smuggled drugs enormous, smuggling was not particularly risky. Often, intercepted smuggling operations seemed ill-planned and carelessly executed.

Such carelessness was never more evident than with the attempt to smuggle drugs aboard the 83-foot cabin cruiser ONALAY near Boothbay Harbor in April 1978. The luxury yacht, not familiar to anyone in the area and huge by most local standards, moved up the Damariscotta River at night into a normally deserted cove, docked at a recently purchased waterside home with a specially built new dock equipped with a conveyor belt and a new pickup truck alongside. Long before the ONALAY arrived, the assertive and too-obvious handling of the real estate transaction involving the house and dock had caused the DEA to be alerted, and so they lay in wait when the boat pulled alongside. Thirty-one persons were arrested and 20 tons of marijuana seized. Firearms were aboard the vessel. Subsequent investigation connected the operation with traditional organized crime groups in Brooklyn, New York and Ft. Lauderdale, Florida.

The DEA and local law enforcement officials had made it a priority to watch for unusual waterfront real estate transactions. One such tip-off led to the Coast Guard boarding and seizing the SOUTHERN BELLE, a 55-foot schooner out of Wilmington, North Carolina, carrying six tons of marijuana in May 1978. She was seized near Monhegan Island, about 45 miles east of Portland, and the seizure was followed almost simultaneously by the arrest of 16 persons at a secluded Mt. Desert Island home, at Seal Cove in West Tremont, where the boat was to have been offloaded. The arrested group was found to have been based on the North Shore of Boston.

Another real estate lead resulted in the seizure of 1,200 pounds of Pakistani hashish and an oceangoing tugboat near a waterfront home in Cutler in December 1978. The remainder of the six-ton drug shipment had been jettisoned while the tug followed the Coast Guard boat from a cove that was adjacent to the suspected offload site. It was subsequently determined that this was one of a series of drug smuggling operations conducted by a well-known group based in Southern California.

The Coast Guard had begun increasing its surveillance and patrols of the Maine coast in the late 1970s, and one of its early successes occurred in June 1978 when a Coast Guard cutter trailed a 61-foot ketch, TRAVELER III, for two hours off Petit Manan Island, 15 miles from Jonesport. Minutes before the Coast Guard was able to board the ketch, the crew scuttled her, sending her to the bottom of Pigeon Hill Bay. The four crew members maintained their innocence for several months, until two 40-pound bales of marijuana were brought up from the boat by a Navy salvage crew. The total marijuana cargo was never retrieved.

In May 1979, a mother ship from South America was offloaded in the north Atlantic by three smaller boats, one of which went to Greenleaf Cove on Westport Island bearing 15 tons of marijuana, while the other two vessels brought 15 tons each to Portsmouth, New Hampshire. Twelve defendants were ultimately charged, including the Colombian supplier and members of a traditional organized crime group based in Boston. This case included one of the first incidents of drug-related violence in Maine; one of the suspects reportedly broke the arm of another during a kidnapping incident. Subsequent investigation of the leads in this and another case led to the murder of a witness in Florida in 1986.

By 1980, the DEA estimated that smuggling activity along the coast of Maine was at least ten times what was actually being intercepted. Three separate incidents in that year brought home to midcoast Mainers both the immediacy of the problem and its dangers.

In March, 1980, 17 suspects were charged in connection with a smuggling attempt in Stonington at an old quarry area called The Settlement. Thirty-two tons of Colombian marijuana were eventually seized from a ship that was to have been offloaded at the site. Several local people had knowledge of the operation and were among those arrested. The incident's most ominous aspect, however, was the kidnapping of six teenagers who wandered into the transfer site and were held against their will in a van for a brief period of time before being given some money and told to keep quiet about what they had seen.

Another potentially violent situation occurred in June when a Coast Guard cutter seized about 18 tons of marijuana while it was enroute to an offloading site in Tenants Harbor. The offloading operation was managed by a group of Vietnam veterans who used military commando methods and firearms.

And in October of that year, almost 25 tons were seized at an Oceanville estate just a few miles from Stonington as the drugs were being put ashore at Whitmore Neck. Twenty-seven suspects were charged in the operation, which was organized by the Ethiopian Zion Coptic Church, a cult-like group based in Florida and Jamaica that claimed the use of marijuana was part of its religious practice. DEA agents noted the sophistication of the equipment used: 16-foot inflatable rubber rafts with electric motors, each capable of holding 60 bales, a motorized conveyor belt and a truck with one of the most sophisticated, built-in compartments the DEA agent in charge had ever seen. This case was noteworthy also because of the cooperation between participating law enforcement agencies. About 40 personnel were involved in the bust, including the state police, U.S. Customs Service, DEA, U.S. Coast Guard, Maine State Warden Service and local police.

There are stories to be told about each one of these incidents, but what may be most significant is the fact that by the end of 1980 a public awareness of the extent and the dangers of drug smuggling along the coast had begun to sink in. Legends were developing about almost all the major islands, and about many of the smaller ones as well. There were reported landings on lakes, para-drops onto islands, huge amounts of marijuana supposedly suspended by buoys and camouflaged as fishing gear.

Myth? The DEA believes that much of it was. But, also certainly, at the core of it was fact. Asked about the likelihood of night-time drug transfers and fog-shrouded offloadings in hidden coves or behind small islands, or the use of light signals and secret radio transmissions from prominent points on islands and ashore, DEA personnel confirmed that, yes indeed, all of these things were part of the picture at one time or another.

No one is known to have been killed along the Maine coast in connection with drug smuggling up to this time, but there was a growing realization that violence would escalate. It worried solitary fishermen who might round a point of land and happen upon smugglers. Witnesses were probably expendable — what if, instead of six young people happening upon the landing site in Stonington there had been only one? Many doubted that a single witness would have been let go unharmed.

By the end of 1980, it was a fact that many fishermen had become involved in the traffic. Some had done so with great assurance and even a sense of adventure, while others had doubts about how long they could keep it up without being caught. Many were now thinking twice about their safety. Thinning margins of profit from fishing created a sense of urgency, and smuggling was simply too good, or at least too tempting, an opportunity for many fishermen to put aside. As they became involved, suspicions arose between fishermen, and between fishing families. The new pickup truck in a fisherman's driveway became almost emblematic of smuggling money, and it is a testimonial to the strength of some coastal communities that neighbors coexisted with neighbors despite the sure knowledge that one family's gains were ill-gotten while another family continued to abide by the law. One of the best-kept secrets of those times was — and continues to be — who smuggled and who did not.

For one or two summers in the early 1980s, a climate of apprehension hung over much of coastal Maine. Fishermen kept their radios on, "just in case," and people passed out advice to each other about the dangers of travel among the islands while alone. It took two or more summers for such gnawing doubts to go away.

Often, intercepted smuggling operations seemed ill-planned and carelessly executed.

By the early 1980s, the failed attempts by smugglers and the successes of law enforcement efforts had caused an evolution in smugglers' methods and approaches. There were fewer obvious mistakes such as highly visible real estate transfers and out-of-season waterfront construction by strangers who had no clear or known need for it. Colombian organizers attempted to exert tighter control on smuggling operations, and started showing up in Maine in greater numbers. Increasingly, Maine fishermen rather than out-of-staters were used to organize the offloading of mother ships and the transporting of drugs to safe locations.

Smuggling seemed so easy. Many fishermen took on the trip more than once. Experience was rewarded with greater responsibility and, of course, a greater payoff. Successful organizers who provided a boat often made $200,000 or $300,000 per trip, while a handler or crewmen could expect $20,000 or more for a night's work.

As a consequence of the smugglers' evolving modus operandi, it became necessary to use new, counteractive law enforcement methods, such as reverse undercover investigations, increased Coast Guard patrols to intercept yachts and mother ships, and the application of federal conspiracy law. Agents began posing as large-scale marijuana smugglers in order to penetrate operations. They began running intelligence operations against the organizers and operatives at all levels.

Too-obvious real estate purchases, new trucks and shoreline conveyor belts alerted authorities to upcoming operations.

Law enforcement now had the means to put together the pieces of earlier smuggling operations in Maine, while learning about plans for the future. They were able to indict a New Jersey man in 1982, for example, in connection with a conspiracy to import 30 tons of marijuana into Moxie Cove in Bristol aboard a 60-foot vessel, the NUTRI I, back in 1976. In 1984, they indicted a Florida psychiatrist and two accomplices for smuggling more than two tons of marijuana into Deer Isle five years earlier, when the psychiatrist's evidence-laden sailboat had been found abandoned in Castine harbor. Evidence linked that same individual and his accomplices with 1980 and 1981 smuggling incidents on Deer Isle and Little Deer Isle. Similarly, new intelligence resulted in the indictment of 15 suspects for importing about 20 tons of hashish at Carter's Landing on Dutch Neck in Waldoboro in May 1981. In that case the defendants included a group of coastal fishermen who had begun to contract with drug smugglers to compensate for falling fishing profits. Their arrest was a warning, in effect, to other fishermen contemplating this sort of activity.

The Coast Guard's stepped-up activity netted the 46-foot sloop RELENTLESS, seized off Matinicus Rock in July 1982 carrying more than five tons of marijuana. In October of the same year a U.S. Navy aircraft spotted the fishing vessel GULF KING 4 loading marijuana from the freighter LAGO ISABEL a mere 25 miles off Portland. Twenty-five suspects were arrested.

And then, in November 1983, a major smuggling attempt right at the lobster pier in the town of Bremen was busted by DEA agents who had foreknowledge of the event based on information from a cooperating individual. Thirty-eight suspects were ultimately charged, including two international marijuana smugglers who were already fugitives. This was the first instance in which Colombian nationals had been arrested in Maine on a smuggling charge.

Only a month later, the DEA initiated another major undercover operation based on information from a fugitive from the Bremen case who had surrendered and agreed to cooperate. The agents arranged to seize 25 tons of marijuana from a mother ship in the Gulf of Maine, then arrested the offloading crew in Rockland. That case involved fishermen from several different parts of the coast.

With the Colombian organizers at least partially penetrated by law enforcement intelligence, with fishermen now compromised or acting as informants and with local police now more competent at handling smuggling issues, Maine had become a risky place to smuggle drugs. The number of 25-ton marijuana landings in Maine diminished in the mid-1980s, although they were certainly not entirely gone. Indeed, the trend in the past dozen years has been toward smaller marijuana deliveries, two to six tons, utilizing smaller boats and more flexible offloading sites. The DEA estimates that the frequency of coastal smuggling attempts has scarcely diminished at all, however. They have simply become smaller and more spread out.

Most of the known smuggling attempts in the last 10 years have been in midcoast Maine, with the majority of them being around Mt. Desert Island. In a typical attempt, a sailboat was used to transport about two and a half tons of marijuana in 1989 from a Colombian mother ship offloaded near St. Maarten in the Caribbean. The landing site was near Pretty Marsh on Mt. Desert Island, where a rented cottage was used as a command post. Most of the crew members received about $5,000 for their participation. Authorities believe there have been at least two dozen such small-scale operations over the past ten years, perhaps twice that number.

In recent years, law enforcement officials in eastern Canada have become aware of significant new drug smuggling action. Historically, hashish has been a drug of choice in Canada, and there have been some sensational hashish smuggling incidents along the Canadian border. In July 1991, about 47 tons were seized from a vessel in the St. Lawrence Seaway, and in August 1993, about 27 tons were discovered in a hidden compartment of a another vessel that had traveled through the seaway. But the largest smuggling activity, they believe, is in the Maritime Provinces, and at least some of those drugs are then being shipped by boat to the Maine coast.

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If the larger marijuana smuggling operations of the 1970s and 1980s have slowed down, it is partly because of effective countermeasures by law enforcement agencies, but it is also a function of the changing nature of drug trafficking. Cocaine, believed to be the most potent stimulant of natural origin, has occasionally been smuggled by boat, but due to its much higher value per pound, it has most often been smuggled overland or by air in small hidden compartments. Again, eastern Canada has apparently served as a transfer point for large cocaine shipments ultimately destined for the United States. A vessel containing a large cocaine shipment is known to have been crushed by ice off the coast of Newfoundland in April 1991. Several seizures of cocaine have involved boats offloading in Montreal, and a ship containing cocaine was intercepted near the coast of Prince Edward Island in 1993. Only once has cocaine smuggled into Canada been directly connected to Maine, but authorities believe Maritime cocaine smuggling from Canada into Maine has already occurred, or will in the near future. The traffic in cocaine into Maine (particularly of crack cocaine) seems to have occasioned an increase in murder and other violence, perhaps because of its higher value, the necessity for more cash transactions, and the need for a more complex distribution system.

One of the most tragic aspects of Maine's drug smuggling era is the involvement of Maine fishermen. Some were responding to dire economic circumstances; others were tempted by the promise of action and excitement. Some, usually those who confined themselves to one smuggling attempt, were never detected or prosecuted and live today in their hometowns as if nothing had ever happened. Others were imprisoned, most often for sentences of five years but sometimes for as many as ten; most have now returned to their former communities. Law enforcement and punishment concerned with coastal smuggling is generally regarded to have been reasonable, even compassionate.

Some fishermen entered the drug trade more willingly than others. One Portland-area man became an important player in multiple smuggling incidents, fled the country and was a fugitive for ten years, spending time in such countries as Sweden, Australia, Surinam, Trinidad and Brazil. He became a trusted lieutenant in the ranks of smugglers, engaged at first not really out of financial need, but for the adventure and wildcat profiteering.

Another fisherman, from a small mid-coast community, also became involved in smuggling for excitement as well as for profit, at first flaunting his money. He became more deeply involved as his reputation spread and the profits grew. Finally, after organizing some large operations, he sensed his inevitable undoing and became an informant for the DEA, enabling agents to bust a major smuggling operation in Rockland, from the Colombian organizers down to the deckhands aboard the participating fishing boats. The evidence he gave was so incriminating that he required the safekeeping of the federal witness protection plan.

Two other fishermen's stories spell a different sort of downward spiral. Perhaps Maine's most notorious drug smuggler was one Harvey Prager — not a fisherman at all, but a Bowdoin College graduate and quasi-art dealer of considerable charm and means. After running large smuggling operations for a number of years, Prager was caught, avoided prison by setting up a program to care for AIDS patients, studied law and eventually was a clerk for a justice of the Maine Supreme Judicial Court. Yet the focus here is on a fisherman of much lesser means who worked briefly as a smuggler for him, and while Prager served no prison time, the fisherman, despite a long record of community service, served a 10-year jail term and was divorced by his wife. Today he is working to become a teacher and is happy to be able to be of service to others once again.

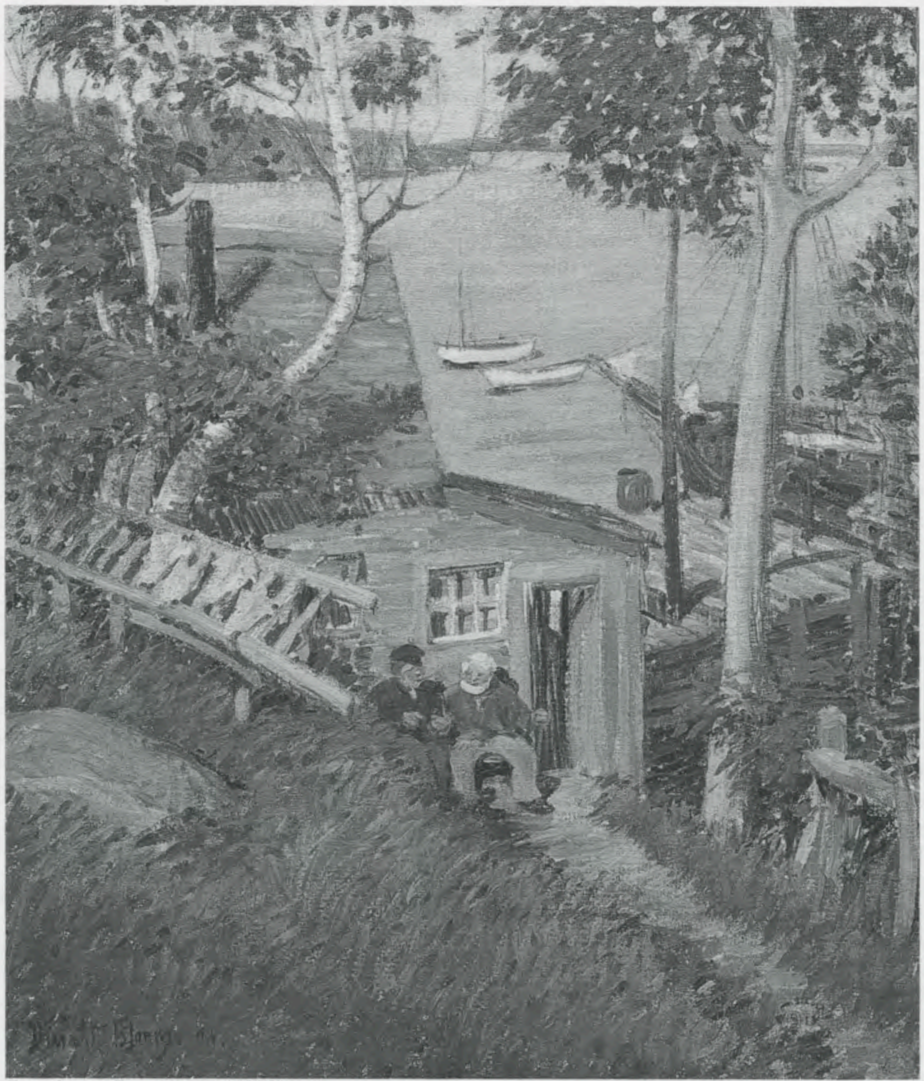
One last example. A fisherman caught smuggling marijuana in the Bremen operation was sentenced to five years at a federal prison camp in Pennsylvania, hundreds of miles from his family. He was released after two years because of the hardship it had caused his wife, mother and stepson. Indeed, imprisonment visited hardship on all the families of fishermen who got caught smuggling.

Smuggling eras — Prohibition is the best example — tend to develop large and mythic reputations over time, but Maine's drug-smuggling era may be an exception to the rule. There certainly were never any heroes. The few names that achieved prominence in the papers and survive today are the those of individuals whose lives are still in a state of repair.

If the larger marijuana smuggling operations of the 1970s and 1980s have slowed down, it is partly because of effective countermeasures by law enforcement agencies, but it is also a function of the changing nature of drug trafficking.

Edgar M. Boyd *writes and builds boats in Yarmouth.*

The author notes with appreciation the documents and time given to him by members and staff of the United States Drug Enforcement Agency and the United States Attorney's Offices in Bangor and Portland.



Frenchman Bay, Maine (1903)

DWIGHT BLANEY, IRONBOUND ARTIST

CARL LITTLE

In *Maine and Its Role in American Art* (1963), the standard text on the subject, the artist Dwight Blaney (1865-1944) is given short shrift. His name appears in the text and a couple of captions, but only on account of the role he played in bringing the renowned painter John Singer Sargent to Maine, to his home on Ironbound Island in Frenchman Bay. While two of Sargent's watercolors are reproduced, no Blaney painting is included, despite the fact that some of his finest work was related to his life on Ironbound and that he had a far greater claim to inclusion in a book on Maine art than did his celebrated guest.

Like Carroll Sargent Tyson (1878-1956), who painted on nearby Mount Desert Island, Blaney has often been described as a "gentleman painter." Indeed, his biographical entry in the catalogue for the exhibition "The Bostonians" at the Museum of Fine Arts in Boston in 1986 begins, "Gentleman painter of landscapes and seascapes in oil and watercolor."

Such a designation tends to remove an artist from serious consideration in the annals of art history. Like the so-called "Sunday painters," these gentlemen are commonly dismissed as part-time brush pushers, worthy of notice, perhaps, but rarely singled out for critical appraisal.

As recorded in the surveys of American art, the painters of Blaney's time attained their fame through a variety of fairly set criteria. Some were known for breaking aesthetic ground, others for virtuoso styles and a few for their portraiture. With notable exceptions, landscape painters often were relegated to the lower rungs of the artistic hierarchy.

Yet Blaney and Tyson, both skilled at rendering the world around them, were taken seriously by their art-world brethren. Tyson went on painting excursions with the likes of John Marin and Arthur B. Carles, while Blaney painted side by side with Sargent, Childe Hassam, Ross Sterling Turner and many others. That master of the hunting print, Frank W. Benson, ranked among his oldest friends.

Blaney and Tyson were also collectors of note, each of them acquiring canvases by Claude Monet, for example, before that became fashionable. In addition, Blaney was a connoisseur of American antiques and was a founding member of the Walpole Society, a collectors club.

The standard curriculum vitae for Blaney goes something like this. Educated at the Chauncy Hall School in Boston, he worked for a time in a tombstone-maker's shop. His skills as a draftsman led to a position with architects Peabody and Stearns. On a trip to Europe in 1892, he met his future wife, Edith Hill, of Brookline, Massachusetts, whose family owned the Eastern Steamship Company. This marriage provided the financial wherewithal to allow Blaney to focus more of his attention on painting.

In his lifetime, Blaney exhibited in some of the best Boston galleries as well as in such prestigious venues as the Carnegie Institute, the Corcoran Gallery, the National Gallery of Art and the Pennsylvania Academy of Fine Arts. He won a bronze medal at the Panama-Pacific Exposition in 1915.

It has been noted that Blaney's aesthetic evolved from a rather rigorous style, influenced by architectural training, into a freer approach inspired by French Impressionism. What hasn't been fully acknowledged is the impact an island in Maine had on his painting. Many an artist has had to shift gears when confronted with the rugged country of the pointed firs.

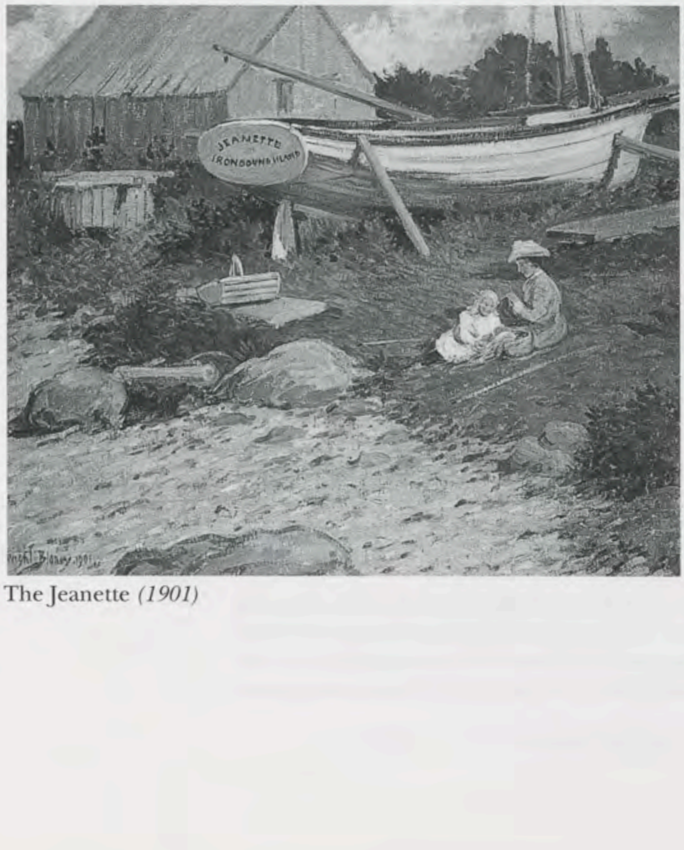
A large island by Maine standards, roughly three miles long by two miles wide, Ironbound lies in the middle of Frenchman Bay, about midway between Bar and Winter Harbors.

The island was inhabited as early as the 1790s. In Volume II of his monumental *Islands of the Mid-Maine Coast*, Charles B. McLane recounts the comings and goings of islanders over the 200 or so years of its occupation. Livelihoods included farming, shipbuilding and fishing, and once upon a time there was a silver mine on the island — "presumably no more profitable than other mines throughout the bay," notes McLane.

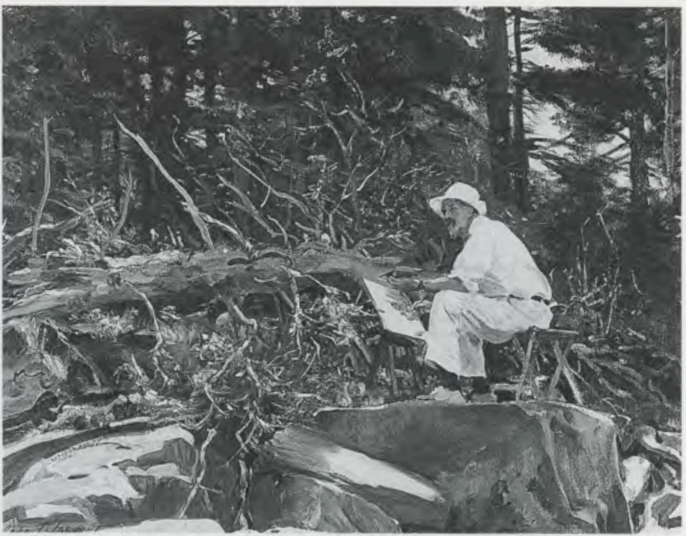
The first rusticators — summer folk — arrived around the time of the Civil War, a number of them, like Blaney, hailing from Brookline. Following an initial purchase of island property in 1894, Blaney bought several more parcels. By 1899, he and his family owned 426 acres, including the old John Smith farm at the center of the island.

It was there that Blaney maintained a summer studio and hosted artist friends, among them, Sargent, Hassam and Turner (the latter had married his eldest sister, Louise, in 1885). According to Trevor Fairbrother of the Boston Museum of Fine Arts, the family was known to entertain lavishly on Ironbound, "serving good local fare at their farm; guests included a steady stream of Boston friends and such notables as the Kneisel Quartet in 1905...." Blarney Castle, as the family referred to the main cottage, burned to the ground in 1944, the year of Blaney's death.

If one were to assemble a large group of Blaney's island watercolors and oils, they would provide a portrait of Ironbound and its surroundings. He painted the coves and headlands, the wharves and boats. The checklist for a show of his work at the Jesup Memorial Library in Bar Harbor in 1924 records the range of subject matter. Aside from a few Cape Cod pictures, the exhibition consisted primarily of Maine coast motifs: *Dory and Lobster Traps, Through the Fog, Frenchman's Bay in Winter, Ledges,* etc.


Farnsworth Art Museum

The Jeanette *(1901)*


Rhode Island School of Design

In Sargent's 1922 portrait of Blaney, the painter is shown working en plein air, *at his easel on Ironbound.*

Watercolor was Blaney's forte. Like Marin, William Zorach, Andrew Wyeth and others, he found this medium perfectly suited to capturing the brilliant blues and greens, the boughs of spruce, the expanses of water. A painting like Seal Cove, Ironbound, 1930, testifies to his ability to render the scene, the textures of rocks and trees, a light and atmosphere specific to Maine islands. In Sargent's portrait of Blaney, the painter is shown working *en plein air*, at his easel on Ironbound. His eyes are focused on some element of the scraggly milieu that surrounds him — glacial outcroppings, a gnarly downed tree, thick spruce forest. One hand holds a palette, the other, a brush. Shirt sleeves rolled up, Blaney means business.

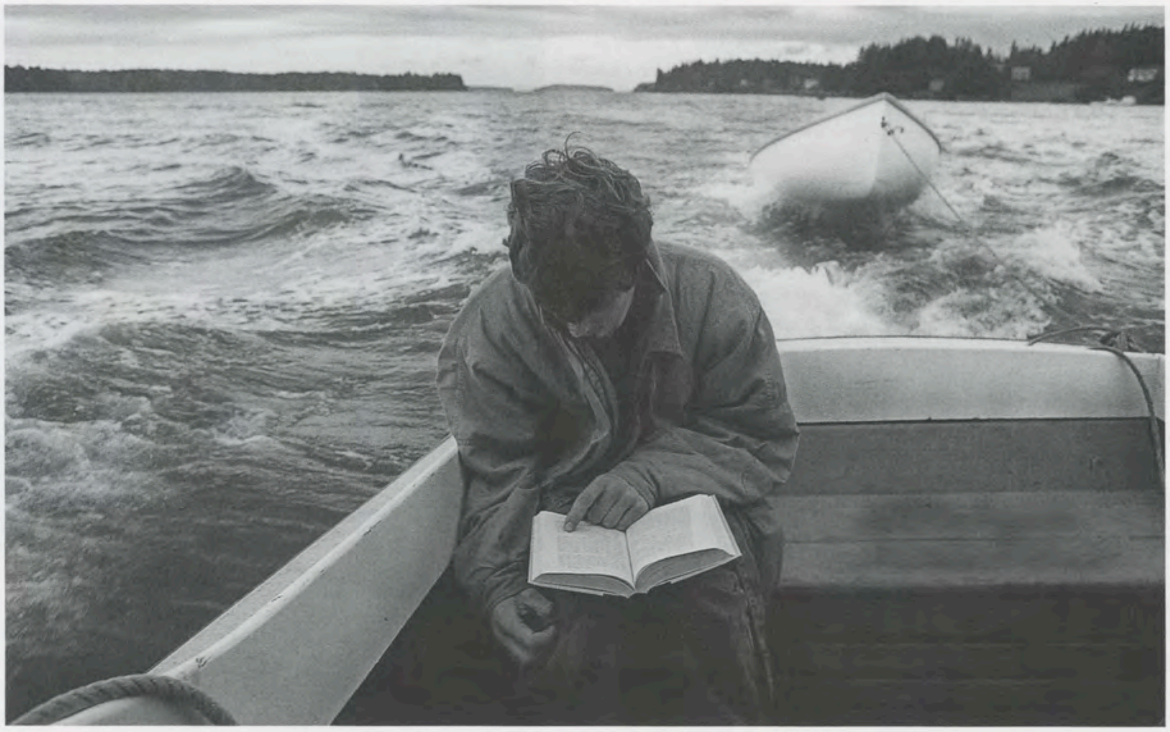
These days, Blaney's star would appear to be on the ascendancy. His inclusion in the "Bostonians" exhibition spurred interest in his work. The oil reproduced in the catalogue, *Brookline Village in Snow* (1895) brings to mind the winter canvases of any number of American impressionist painters, from Guy Wiggins to Childe Hassam, the surface a veritable flurry of paint strokes. (The exhibition also featured a portrait of his daughter Elizabeth by William Paxton.)

Last year, the Farnsworth Art Museum in Rockland had on display Blaney's *The Jeanette* (1901), an oil that came to the museum through the marvelous bequest of the late Elizabeth Noyce. The painting evokes the charm of summer island life in another era, a mother and daughter happily whiling away the hours by the shore. Nearby, the sloop Jeanette sits high and dry, its provenance, "Ironbound Island," writ on its stern.

Another sign of Blaney's resurgence is his appearance in artworld cyberspace. Look him up on the Internet and you will find several works of his for sale. It seems somewhat extraordinary to think of this upstanding member of the Boston School having his art shown to the world by virtue of electronic impulses — not unlike the many dabs of paints that he and his Impressionist colleagues sent winging across the canvas.

It is only a matter of time, one hopes, until a museum mounts a substantial exhibition of Dwight Blaney's work. Such a presentation would allow a fuller appreciation of this artist and his Ironbound art.

Carl Little *is the author of* Art of the Maine Islands *(Down East). He is director of public affairs at the College of the Atlantic in Bar Harbor, Maine.*



HITTING BOTTOM ON THE ROCK

KAREN ROBERTS JACKSON

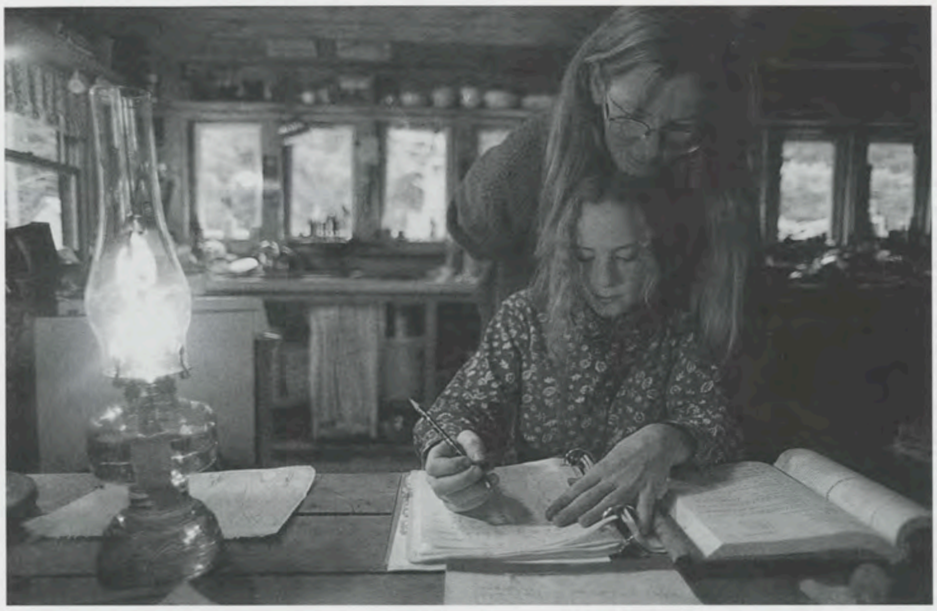
Many years ago, when I was a young mother swimming in a sea of small children, I had an older woman friend who was a "healer." I would call upon her often for advice on earaches and fevers, she would dowse with a small crystal pendulum and then advise me to keep the child away from dairy, or suggest soothing teas. More often than not, she would simply get a cup of tea into me, listen sympathetically to my outpourings about my childhood and child-rearing and set me on my feet again. I felt nurtured and safe in her presence.

Then one day she threw me a whammy. Essentially she told me that I would never move forward in my life until I took the time to face my demons. She insisted that I had no choice but to "hit rock bottom," the sooner the better, as if prescribing the lancing of a boil. I left her kitchen in a rage; furious, betrayed, confused. I have never seen her again. But, if I happened to pass her on the street tomorrow, I would tell her she had been right. After several more years of diversionary tactics, the birth of another child and our family's move to an island, my demons caught up with me. I hit my rock bottom on pure granite ledge.

Not long ago my husband repeated to me a conversation he had had with a friend on a neighboring island. They had been discussing a couple who had come to the island, built a fine home and hoped the repair the damages of their mutual divorces. They were expressing some doubts and disillusionment; the island wasn't quite living up to their dreams. My husband's friend said that in his 20 years on the island he had seen a lot of couples come and go, that they had come here hoping the island could heal huge holes in themselves. It was his assumption that the island only served to make the holes more apparent, and that the healing had to come from the individual. In some ways I wish someone had shared that astute wisdom with me eight years ago when we came to our little island, but if they had, I would probably have responded with the same fury I felt in my friend's kitchen.

In starting to write this piece, I have had to recall what I was running from, what my motivations were for finally moving to our land on the island. We had bought the land years before, basically sight unseen, on our first week in Maine. We had agreed to be tenants-in-common with a group of people we had never met before. The land, overgrown

Photography by Bridget Besaw



and swampy, sat on the back burner of our minds as we found jobs to pay for it, birthed those last two kids, and built the boats we would need as vehicles for this far-off vision. I would like to tell you that all that effort, those birthings of babies and boats, had strengthened our resolve and our relationship. Mostly we were a pair of bone-headed people who, for our own reasons, seemed to thrive on adversity. When we made the decision to up and move to the middle of Penobscot Bay, I was acting on old habits honed keen by a fairly rough upbringing. The island offered two survival tactics that suited me well: a chance for a clean break and a chance to prove once again how tough I was, a trait that I believed my husband found particularly endearing.

We began those first few months on the island with an infant in diapers, a four-, seven- and nine-year-old, living intensely, in tents. While my husband, many friends, and our island neighbors helped to build our 20-by-20 foot cabin, I created an illusion for myself. I survived our first winter by dreaming of a tenacious community, physically and spiritually, and of raising our children in a "free" environment with a group of what seemed to be like-minded people. We were part of a young, hearty, idealistic community. Each of us had plunked down on the island's shores with all our accumulated wisdom and naiveté. We believed we could fell trees, haul stone and love one another through the harshest winters. Fumbling and striving, we made it our Eden, and at times, our Alcatraz. We wandered through the experiences of homesteading, island living, parenting, community building; with great love, hope, joy, sorrow, jealousy, fear, judgmentalism and occasional mean-spiritedness. We hauled beams and stones together, we also got in each other's faces and overstepped each other's boundaries. Over the years, our backs have gotten a little weaker and our boundaries have gotten a little stronger. We have learned that we each possess, individually, as couples and as families, very different styles, priorities, values and histories. We each had our own holes that needed healing.

Like ourselves, we have seen many people become drawn to the islands, fascinated by their drama, the beauty and severity. Some are sensitive to and curious about the depth of fortitude required to survive here. "Survival" is a relative term, as many of us who are willing to brave this life could not or would not cope in another setting. Quite often those that lean toward an intellectual and philosophical point of view utter the analogy that "islands are a microcosm." If indeed it is true that islanders reflect on an intense scale the nuances of humanity, then I sometimes wonder if we don't use that idea as an excuse for our behavior. I have sometimes felt as if that reflection was beaming back from a carnival mirror, our true selves often distorted, both flatteringly and grotesque. As willing participants in this social experiment we have moved through many phases; wide-eyed innocence, bitterness and rebellion, and lately into that almost eerie phase of peace and contentment. Our life on

the island has been a fairy tale that has taken some grim and frightening turns from time to time. It is beginning to feel as if the potential is here for a happy ending.

When we first bought our land, there were roughly 35 people with vested interest in a 400-acre island in Penobscot Bay. Since that time the island community has doubled. A recent tally comes to 71 persons who either live on the island, make their homes and work there, or (on the other end of the scale) hold it in their minds for succor and occasional sanctuary when their off-island lives allow. In our entirety, we are an amazing bunch of people; multi-talented, well-traveled, well-schooled, well-meaning. Among the island's landowners are three doctors, one dentist, a midwife, ship captains, an architect, an ornithologist, a retired professor, two retired teachers, an award-winning science teacher, conservationists, fishermen, many skilled artists and artisans in several mediums, writers, dancers, gardeners, cooks, carpenters, boatbuilders, computer designers, and many who possess a mingling of these skills. Collectively, we have the makings of a utopian society, but collectively, we are also human, with all the frailties, pettiness and dysfunction common to our species and the times.

Of that population of 70 that I described, nearly half that number are our kids. I could not possibly list all of their skills and what they add to our community. They are artists, playwrights, boatbuilders, fort builders, poets, dancers, jugglers, stilt-walkers, fishermen and fisherwomen. They can skin eels and install solar panels, quarry stone, haul beams, split firewood and fetch a stray dinghy with nothing more than a chunk of Styrofoam and a broken piece of oar. More than all their talents, their greatest gift is their trust, their belief in us less-than-perfect adults. They bring out the best in us, they force us to rise above our foolishness. With an uncanny sixth sense they know where to go for fresh baked bread on Sunday morning. They know who will fix their kite, fix their bike, mend their sails, staunch a wound, throw a tea party. They cause us to hold onto our ideals, uphold our rituals and continue our celebrations. Through them we are learning to be respectful and accepting of one another.

In recent years we have entered the phase where "the children" are beginning to leave home, leave the island. We stand there stunned and slack-jawed because we truly believed that everything we were doing, our entire lifestyle, had to do with them, our dreams for their future. The truth is, it was their innocence and exuberance, their sense of wonder that held us to this place. The work, the effort, the sometimes-crazed ambitions were something we needed, attempts to fill a void, make a mark, sink our teeth into something tangible, something real. As our children begin to leave, hopefully to return home; as the cycles of life continue, certain things become obvious. The same holes, the same insatiable hunger for belonging, still exist — island or no island. The difference is that on the island there is no place left to run, ultimately no escape from yourself, only beauty and hardship and an opportunity to know one's deepest longings. When my own children were younger, it was imperative for me that they saw me rise above fear and adversity, that they saw me as tough, capable. As they grew older, full of ideas, full of questions and desires that they have no words for, it has become imperative to me that they see me overcome pettiness, criticalness, my need to control what I can't control. They see me become a whole person at ease in my environment.

As the years drift by and our community eases into maturity, we don't think about the land as a piece of real estate to leave our children, or as an escape from the outside world. We hope they will see the homes their parents built, the gardens, the fruit trees, the island itself, as a sanctuary, a holy place, a safe haven should they ever need to hit rock bottom.

REVIEWS

Our painted islands

Art of the Maine Islands
by Carl Little; picture editor Arnold Skolnick
Camden, Maine: Down East Books, 1997
96 pages (hardcover), $30

Reviewed by Edgar Allen Beem

Carl Little and Arnold Skolnick have become a potent team of regional art popularizers, collaborating on a series of illustrated chapbooks that are essentially little exhibitions you can hold in your hands. Since the publication of *Paintings in Maine* in 1991, Little, a poet and art critic from Somesville, and Skolnick, a picture editor and book packager from Chesterfield, Massachusetts, have collaborated on *Paintings of New England, Winslow Homer and the Sea, Edward Hopper's New England* and now *Art of the Maine Islands*

Art of the Maine Islan
By Carl Little · Picture Editor, Arnold Skolnick

Each of the Little-Skolnick publications provides an intelligent introduction to its subject featuring a clear, concise essay by Little and a thoughtful display of high quality reproductions of art works selected jointly by Skolnick and Little. In *Art of the Maine Islands,* Little and Skolnick cover the coast in a geographically arranged essay and a colorful array of 70 full-color and five black-and-white reproductions by 65 different artists.

"It seemed as if every island in Maine had captured the heart of an artist," writes Little in his introduction, "making the task of selection all the more daunting."

Carl Little is ideally suited to the task of limning the art of island Maine. Not only does he live on Mount Desert Island (where, by day, he serves as public information director for the College of the Atlantic), but he is also a respected art critic, the brother of artist David Little and the nephew of the late William Kienbusch, from whom he inherited an island home on Great Cranberry Island.

In narrating the colorful tale of Maine's painted islands, Little begins on Appledore in the Isles of Shoals where American impressionist Childe Hassam celebrated the flora and proceeds from there all the way down east to where American modernists John Marin and Marsden Hartley found inspiration in the waters around Cape Split and Corea, respectively. Along the way, Little stops at all the island art hot spots — the art colony of Monhegan where Rockwell Kent, George Bellows, Edward Hopper, Robert Henri and Jamie Wyeth painted; the North Haven of Eric Hopkins; Fairfield Porter's Great Spruce Head Island; the Deer Isle of Karl Schrag, Alfred Chadbourn, Jill Hoy and Jonathan Imber; and, of course, Mount Desert and the Cranberries. In order to include Maine's most famous landscape painter Neil Welliver, Little even comes ashore to investigate a pair of little freshwater islets in the Allagash.

Art of the Maine Islands is heavy on representational landscapes — as is Maine art as a whole, but this focus may have caused Little and Skolnick to overlook Maine's most important island artist. Pop art legend Robert Indiana is not mentioned in the book despite having been a year-round resident of Vinalhaven for 20 years and having produced a series of prints memorializing his life on the island. Indeed, the tough-minded art of Vinalhaven — the prints of the Vinalhaven Press and the paintings of artists such as Charles Hewitt, Tom Lieber and John Wulp — are missing from this island art appraisal.

Perhaps the most egregious omission, however, is the book's failure to include any paintings by Andrew Wyeth, America's most famous artist and a summer resident of Maine. There are three reproductions of paintings by Wyeth's son Jamie and one of a painting by his father N.C., but none by the master himself. (Asked about this gap, Little said he had been unable to secure reproduction rights for the paintings he wanted.)

Leaving out Wyeth and Indiana may be the result of Little's passion for avoiding the obvious in favor of discovering the unknown. On the Cranberry Isles, the aesthetic terrain he knows best, *Art of the Maine Islands* brings the reader pictures by lesser-known painters such as Carl Nelson, Dorothy Eisner and Dan Fernald but nothing by the Cranberries' most accomplished painter, John Heliker.

This Little penchant for ferreting out the unknown and unseen reaps rewards, however, when he is able to bring to light rarities such as photorealist Richard Estes's Maine seascapes. Estes, a Northeast Harbor summer resident, is internationally known for his complex urban landscapes but few people have ever seen the handful of Maine paintings he has done.

"The things that please me the most," says Carl Little, "are the surprises, trying to present artists who are not as well known, artists nobody knows about off the beaten track."

Ultimately, the value of Art of the Maine Islands is not comprehensive sweep nor analytic depth, but the personal idiosyncracies, the partiality of Little and Skolnick to their chosen subject. This book is, like most of the their collaborations, a colorful entrée into a topic that bears longer and deeper scrutiny.

***Edgar Allen Beem** is author of* Maine Art Now.

History for the general public

A Day's Work
A Sampler of Historic Maine Photographs
Part I: 1860-1920
Annotated and compiled by W. H. Bunting
Gardiner, Maine: Tilbury House, 1997
$55 hard cover, $35 paperback

Reviewed by Richard S. Morehouse

The ice-cutting photograph on the cover of this splendid Maine book is enough to make you hoist it from the bookstore shelf.

It's a bright day on Chickawaukee Lake and the cut ice is being hauled up beneath a guyed, three-legged contraption by a heavily blanketed horse. That much you can see. Now read the words and learn that E. L. Marsh cut 4,000 tons of ice here in 1888 and beneath that horse blanket was "a looped 'choker,' to be drawn tight should the animal fall in. A cinched choker kept the lungs inflated, quieted the horse's struggles, and gave the rescuers purchase." By this time you are are sure you must own the book.

Inside, the photograph on page one will all but splash you with cold West Branch Penobscot River water as seven woodsmen manage eight peaveys in a spring logjam. A hopeless situation? All in a day's work.

The cooperage shop page 68 has the seven-man workforce on display out front, as if George Caleb Bingham had posed them front-on. Look too at the two ship carvers in the upper door with their newly finished cherub pointing skyward.

By now you are hooked. Do you leaf through the 180-odd pages of black and white photographs lusting to fly backward 100 years to the Island Falls Brick Yard (page 118) or do you read the marvelous text accompanying the photos as you go? You must do both, hand and eye.

As one reads Bunting's meaty testimonies, deductions and conclusions, his 20 years of research seem a splendid pact with Maine history. The infatuation with — no, dedication to — to amplifying these photographs with detail is a blessing.

Page 44, Logging Camp Bunkhouse. Wool shirts and galluses. Visitor George Kephart at a camp near Nicatous Lake. "George was not enthusiastic about sharing a filthy double spread with bed bugs and a stranger. He wrote that when the air became too overpowering, you could pull some caulking from between the logs for a charge of cold, fresh air, provided your bunkmate didn't object."

Apparently a mother lode of source material for Bunting was the *Industrial Journal*, published in Bangor. But I also imagine Bunting is a good customer in a used-book store and a patient listener to a 90-year-old coastal deckhand-emeritus.

Photographers labored long over a single shot in 1890. "Now ma'm, please don't tie your dog to my tripod ... and hold it a long, deep breath, gentlemen." The results in many cases are wonderfully affecting posed tableaus, and thus we see straightened headgear, prominent watch chains, no-nonsense miens. At the same time (thanks to small f-stops, slow film and long exposures) we get crystal-clear images of the 1871 funnel-stacked A. D. Lockwood steam locomotive, fresh from the Portland Company shops, truly glistening in its newness; Captain Lincoln Colcord's quarters on the vessel STATE OF MAINE with its birdcage, gilded post capitals and potted plant and himself flaked out in his stocking feet on his mohair sofa; alewife netting on the Medomak River (below) with 35 Waldoboro citizens turned out in their unlikely Sunday best; seven painters-cum-brushes atop the porch of Belfast's Windsor Hotel, ladders and hoists at the ready; and a broadside shot of the schooner EDWARD B. WINSLOW, six masts, four jibs and no freeboard apparent amidships.

Bunting's satisfaction with and admiration of the Vickery brothers, who collected the photographs up until the 1990s, is kindly laid out in an untitled dedication. He describes Jim Vickery as the best-read farmhand in the state of Maine. "Eric, like Jim, was a man of great intelligence and curiosity, and observed the human comedy and tragedy with a sharp eye tempered by a large heart."

For Bunting to collate, clean up, enlarge and research each shot must have taken a loving commitment (the author says 20 years) with a resolution to match. He writes, "There can be no greater goal for historians than to present history — particularly economic history — in ways that engage the curiosity of the general public. Academic historians primarily write for each other. Historical writing, unlike brain surgery, is open to anyone: indeed, one great advantage to being an amateur historian — I am a bulldozer operator — is freedom from peer view." Walt Whitman would have loved this. It calls to mind his words, "I hear America singing."

Be not dismayed at turning the last page: Part II on paper, pulp, cotton and axe manufacturing is in the works.

Yet another effort of historical interest will be *An Eye for the Coast: The Maritime and Monhegan Island Photographs of Eric Hudson*, by Earle G. Shettleworth, Jr., and W. H. Bunting. Tilbury House is the publisher; the book is due out in the spring of 1998.

*An architect, **Richard S. Morehouse** is a summer resident of Vinalhaven.*

ISLAND INSTITUTE

Sustaining Islands and Their Communities

The Island Institute is a non-profit organization that serves as a voice for the balanced future of the islands and waters of the Gulf of Maine. We are guided by an island ethic which recognizes the strength and fragility of Maine's island communities and the finite nature of Gulf of Maine ecosystems.

Along the Maine coast, the Island Institute seeks to

- support the islands' year round communities
- conserve Maine's island and marine biodiversity for future generations
- develop model solutions that balance the needs of the coast's cultural and natural communities
- provide opportunities for discussion over responsible use of finite resources, and provide information to assist competing interests in arriving at constructive solutions

The Island Institute is the sole organization focusing its programs and resources wholly on Maine's islands, their people and the waters that surround them. Programs are for year-round islanders, fishermen, students and teachers, scientists and resource managers, summer residents, island property owners, coastal communities, state and municipal agencies, boat owners and island visitors.

The **Institute's Schools and Community Services** department helps island communities remain viable through:

- special economic development projects
- long-range planning
- information resources
- island schools (conferences, technical assistance, scholarships)
- legislative action

The **Community Science** department links island towns, property owners and state and federal resource agencies on a variety of issues, including:

- Tree Growth and Open Space tax laws
- solid waste regulations
- transportation
- water quality
- natural resource inventories and development of a comprehensive island database, including natural resource data collected from satellite imagery

The **Marine Resources** program provides information regarding the challenges and opportunities facing fisheries, aquaculture and working waterfronts. The program staff:

- collects critical marine habitat data
- monitors marine conservation legislation
- helps manage a groundfish stock enhancement effort
- operates an experimental shellfish hatchery and grow-out program
- helps manage a community-based salmon aquaculture operation

Through its **Publications** program, the Institute produces *Island Journal* as well as *Working Waterfront* and *Inter-Island News*. Published in island and mainland versions, these newspapers address issues which directly affect people who depend on the coast and marine environment for their livelihoods while linking the 14 year-round island communities. The Institute also publishes books on a regular basis. Significant titles include *Rim of the Gulf: Restoring Estuaries in the Gulf of Maine; Penobscot: The Forest, River and Bay; From Cape Cod to the Bay of Fundy: An Environmental Atlas of the Gulf of Maine* (with MIT Press); *Killick Stones*, a collection of island stories; and Charles and Carol McLane's series on the islands of Maine (with Tilbury House).

Conceived by the Institute in 1994 and signed into law by President Clinton in October of 1986, the **Maine Lights** program grew out of concern for preserving an endangered and important part of the Maine coast's cultural history. The program ensures that Maine's lighthouses find appropriate "caregivers" and remain accessible to the public. The Institute is helping to place lighthouse properties in the hands of non-profit, municipal and state government agencies. Potential recipients are screened by a federally-approved panel.

Twenty-four percent of the Institute's FY 97-98 operating budget of approximately $2.5 million is expected to come from annual membership dues and personal and corporate donations, 46 percent from foundations and 30 percent from earned income (publications, conferences, consultations, service contracts, etc.). The Institute's earned income is substantially greater this year because it recently entered into a one-year contractual agreement to provide marine-resource research services in Penobscot Bay. This project is supported by source funding from NOAA/NESDIS. The Institute's annual report, listing members and presenting the its financial picture in detail, is available to members or upon request.

Membership participation from a variety of people is the only way to sustain a balanced organization, and we welcome your involvement in any capacity. Become a member — or call, write, or stop in to ask for further details regarding our island programs or how you can help through donations or volunteering.

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BOAT DONATIONS

Over the years, the occasional donation of vessels has significantly enhanced our boat operations. Such gifts result either in boats we keep and use, or boats we convert into the funds necessary to run our existing fleet. Either way, should you be in a position to consider such a gift, we'd like to hear from you.

PLANNED GIVING

Planned giving is an increasingly important method of supporting non-profit organizations. Through proper planning, organizations are made stronger and donors receive substantial tax benefits. Call your attorney, financial advisor or the Island Institute's development office for more information on how you can support the Institute while financially benefiting yourself and your heirs. Whatever the size of your estate, you can leave a lasting legacy in support of Maine's islands and their communities.

Peter Ralston

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Jeff Dworsky

FOR A NEW YEAR'S MORNING

Sun-swell down and east
from Great Pond Mountain
is an ocean of coming up light. Night
an ebbing tide with shoresong
sure as any. Our woodlot-top a coast

to an inland miraging sea. Day a rising bay
so fluid lobster boats could haul traps from it
on lines dripping with freezing salt.
That black fir spire could be a steeple
crackling over a town tucked around ice-

bound cove. Those flat-bottomed clouds: islands
fast as Mount Desert under snow. See
how first light gives new dreams
through old growth pine. An ocean
needs only to be wished for; conjured,

any sea can be. Dawn washes
the waking pasture flooding on
to become its own day. You'd never know
the Atlantic breaks outback each sunreach
unless as I do, you believe.

- PATRICIA RANZONI

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