



Friends of Merrymeeting Bay (FOMB) is a 501(c)(3) non-profit organization. Our mission is to preserve, protect, and improve the unique ecosystems of the Bay through:

Education

Conservation & Stewardship

Research & Advocacy

Member Events

Support comes from members' tax-deductible donations and gifts.

Merrymeeting News is published seasonally and is sent to FOMB members and other friends of the Bay. Article hyperlinks and color images are available online at: www.fomb.org

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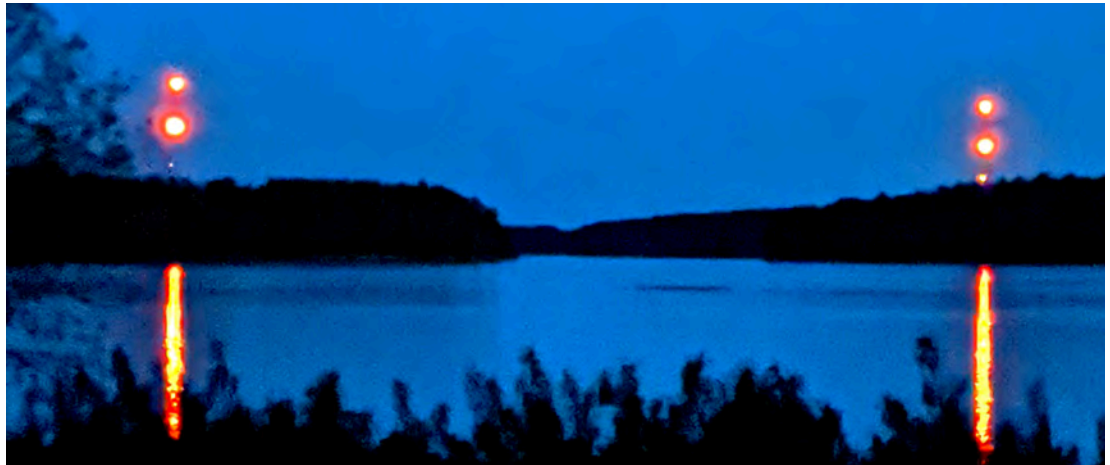


FOMB Files Nuisance Lawsuit against Central Maine Power

“Infecting and corrupting the air¹”

On July 21, 2020, Friends of Merrymeeting Bay (FOMB) filed a [nuisance lawsuit](#) against Central Maine Power (CMP) in Maine Superior Court, alleging the company's discretionary tower lighting and in-process radar facility at the Chops is harming and threatens to harm residents and wildlife in this unique natural area.

For 80 years towers stood at this power line crossing of the Kennebec River and were never lit to warn aircraft, even though air traffic in the area was higher in post WW II years than now. Neither were the lines themselves ever marked. In 2019, CMP replaced the towers and with no public notice or regulatory disclosure, the new towers were lit with three levels of strobing lights, white in the daytime and red at night.



Tower lights and reflections

Photo: Phil Hodgkins

FOMB and other residents claim the lights destroy the Bay's previously dark sky and may adversely impact, birds, bats, insects, and other important wildlife. Plaintiffs have no objection to the passive marking balls now installed on a wire between the towers.

“Unnecessary, poorly designed and misaimed light is responsible for about 80% of the US population being unable to see the Milky Way,” said Robert Burgess, President of [Southern Maine Astronomers](#). “Besides affecting human health and necessary habitat for innumerable nocturnal animals, light pollution robs us of the night sky and our cultural heritage of wonder and awe at the universe surrounding us. The degradation of night sky is incremental; light by light, by light,” Burgess said. “Any unnecessary lighting contributes to the problem, and be it an over-lit convenience store or flashing strobes, denies us our common resource of dark skies, is unwelcomed, and should be resisted.”

[Tower lighting is not required by the FAA](#), only recommended. But in any case, given the distance of these towers from Wiscasset, the closest qualifying airport, they would

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need to be 400' high to be considered a de facto obstruction to air navigation. The new towers are well below that at 240'. [Minimum safe altitudes](#) for airplanes are 1,000' above and 2,000' horizontally from the highest structures. The towers are also marked on aeronautical charts.

“CMP’s ten Chops tower lights flash 600 times per minute. They have destroyed Merrymeeting Bay’s previously dark sky. Neither lights nor in-process microwave transmitter are required by the FAA and given the nearly absolute lack of air traffic, both are needless,” said Colleen Moore one of the co-plaintiffs. “They are a ‘solution’ looking for a problem that doesn’t exist.”

After nearly a year of complaints, CMP is now working on an active aircraft detection lighting system using radar to irradiate an area of over 2,000 square miles with microwaves in order to detect approaching aircraft and turn lights on only when planes are within 3.5 miles of the towers. The system cost is estimated at \$500,000. In 2011, the [World Health Organization classified this radiation as a possible human carcinogen](#), and in 2018 the National Institutes of Health [National Toxicology Program](#) found whole body exposure to this low-level radio frequency radiation (RFR) showed [clear evidence of heart tumors, some evidence of brain and adrenal tumors, and significant increases in DNA damage](#) to the frontal cortex of the brain in RFR-exposed male mice, the blood cells of female mice, and the hippocampus of male rats.

“Great efforts have been made to improve Merrymeeting Bay. Water quality has improved at great expense from industry and municipalities. Shoreline zoning has kept development from intruding upon wildlife. Maine governmental agencies and local environmental groups have purchased and protected valuable shorelines, wetlands, and islands as critical habitat. As one living on the shores of the Bay, I must act as a steward and try to protect the gift I’ve been given. Considering CMP’s indifference and incompetence, I will fight them,” said Jotham Trafton of Topsham.

In 2001 Merrymeeting Bay was designated a [Globally Important Bird Conservation Area](#) by the [American Bird Conservancy](#). The complaint cites various scientific studies detailing how both CMP’s Chops tower lighting and in-process microwave transmitter may be particularly egregious to the Bay’s vital bird, bat, and insect populations.

FOMB has suggested quite a few zero-impact and low- or no-cost alternatives to lighting and radar from just turning the lights off, to passive aircraft detection and/or pilot controlled lighting, but all have been rejected by CMP. For many, including Representative Seth Berry, this leads to an inescapable conclusion:

“Follow the money,” said Berry, whose district has been especially hard-hit by CMP’s project. “Utilities in Maine receive an essentially guaranteed rate of return on equity of 10–14%, paid for through rate increases. The bigger the project and the more bells and whistles, the more they like it. This fiasco at Merrymeeting Bay is another glaring example of Mainers being hurt by CMP and being charged for it at the same time.” Berry is House Chair of the Maine Legislature’s Joint Standing Committee on Energy, Utilities, and Technology, and is sponsor of [LD 1646](#) to make Maine the second state (after Nebraska) to convert its power utilities to not-for-profit consumer ownership.

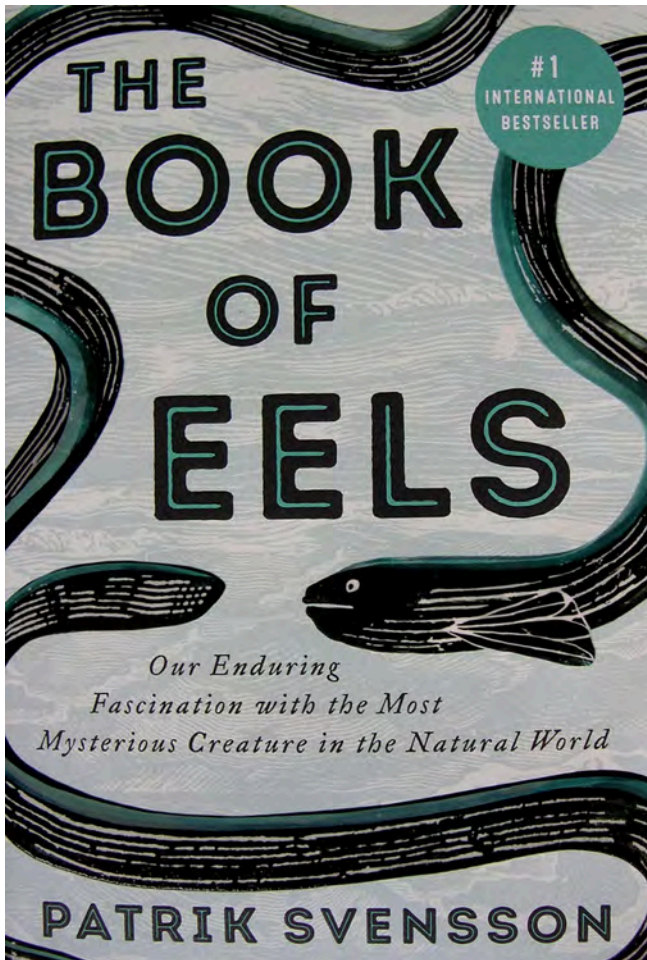
“Once again, CMP has seriously breached the public trust with this project, harmful to one of the world’s most unique natural resources,” said Ed Friedman, FOMB Chair and a local helicopter pilot who has seen the tower lights at night from Oxford, 35 miles away. Friedman, who has worked on environmental issues for 50 years, believes out-of-control expansion of low-level radiation exposure from wireless proliferation, including CMP’s aircraft detection radar system, is likely the most serious toxic threat of our time. “Seventy-five years of science show many adverse biological effects from electromagnetic radiation,” he said. “Balance likely harm to wildlife and to thousands of people from CMP’s threatened microwave and current lighting exposures with what, from the aviation safety standpoint, is entirely unnecessary and not FAA required, and you get discretionary abuse rising to the nuisance level and beyond.”

Friends of Merrymeeting Bay is represented by the Law Offices of Bruce M. Merrill and the Law Office of William Most. <https://www.mostlawoffice.com/>.

1. Some of the earliest nuisance cases involve light. “The leading pre-Revolutionary nuisance decision was William Aldred’s Case in 1611. The plaintiff brought an action on the case against the defendant for erecting a hog sty near the plaintiff’s house. The court established two major principles. First, in holding that an action lay for blocking the light and ‘infecting and corrupting the air’ and second for articulating interference with essential uses of personal property, the rule of *sic utere tuo tuo ut alienum non laedas* (“so use your own as not to injure that of another”), indicating that even a lawful trade would be strictly liable for depriving a householder of light and air. (Jeff L. Lewin, “*The Silent Revolution in West Virginia’s Law of Nuisance*,” 92 *W. Va. L. Rev.* [1990].)

Recommended Reading

The Book of Eels is a wonderful first book by Patrik Svensson, an arts and culture journalist for Sweden's *Sydsvenskan* newspaper. Originally published in 2019, the English version, superbly translated by Agnes Broomk, was released in May of this year.



As most of our long-time members know, FOMB has championed the American eel for quite a few years, often in conjunction with Doug Watts who, with his brother Tim, petitioned to have the eel listed as an endangered species.

A catadromous species spending most of its life in our freshwater rivers, after 20–50 years, eels undertake an incredible migration to the Sargasso Sea where they spawn and die. Details are fuzzy.

As Svensson notes:

In other words, more than two thousand years after Aristotle, the eel remains something of a scientific enigma, and in many ways, it has become a symbol of what is sometimes referred to as the metaphysical.

No one has ever seen an eel breed in the wild nor observed them at birth. We don't even know for sure that the Sargasso is where they spawn and/or if it is the only site for American and European eels.

Writes Svensson:

I like to think that's why the eel has continued to be a source of fascination, because that intersection between knowledge and faith, where knowledge is incomplete and therefore allowed to contain both fact and traces of myth and imagination, is compelling. Because even people who trust in science and an orderly world sometimes want to leave a small, small opening

for the unknowable. If you are of the opinion that the eel should be allowed to remain an eel, it follows that you have to allow it to remain a mystery, to some degree. For now at least.

Svensson's debut integrates growing up in working-class Sweden with his father, including time spent fishing for the elusive eels, with a natural history of this incredible fish. Many of us know the larval stage of an eel, the leptocephalus, drifts along the east coast until it gets a whiff of a river it likes. But how many of us knew that a 19-year-old student, Sigmund Freud, was dispatched to Trieste in 1876 by his professor, where he spent an intensive month in a lab, scalpel in hand, attempting to solve the age-old question of eel sexes.

Svensson continues:

Despite the concerted efforts of the young Freud, the mystery of the eel's reproduction remained unsolved for a while longer. In 1879, a German marine biologist, Leopold Jacoby, wrote, somewhat dejectedly, in a report for the US Commission of Fish and Fisheries:

"To a person not acquainted with the circumstances of the case, it must seem astonishing, and it is certainly somewhat humiliating to men of science, that a fish which is commoner in many parts of the world than any other fish...which is daily seen at the market and on the table, has been able, in spite of the powerful aid of modern science, to shroud the manner of its propagation, its birth, and its death in darkness, which even to the present day has not been dispelled. There has been an eel question ever since the existence of natural science."

This very well-written book deserves your attention!

Sierra Club v. Morton and the Douglas Dissent

Sierra Club v. Morton, 405 U.S. 727 (1972), is a [Supreme Court of the United States](#) case on the issue of [standing](#) under the [Administrative Procedure Act](#). The Court rejected a lawsuit by the [Sierra Club](#) seeking to block the development of a ski resort at [Mineral King](#) valley in the [Sierra Nevada Mountains](#) because the club had not alleged any injury. Rogers Morton was Secretary of the Interior under President Nixon at the time (and later Commerce under President Ford).



Justice William O. Douglas

Photo: Harris & Ewing Collection, Library of Congress

The case prompted a famous dissent by Justice [William O. Douglas](#) suggesting that in response to ecological concerns, environmental objects (such as a valley, an alpine meadow, a river, or a lake) should be granted legal [personhood](#) by the public. An excerpt from his dissent follows:

“The critical question of “standing” would be simplified and also put neatly in focus if we fashioned a federal rule that allowed environmental issues to be litigated before federal agencies or federal courts in the name of the inanimate object about to be despoiled, defaced, or invaded by roads and bulldozers and where injury is the subject of public outrage. Contemporary public concern for protecting nature’s ecological equilibrium should lead to the conferral of standing upon environmental objects to sue for their own preservation. This suit would therefore be more properly labeled as *Mineral King v. Morton*.

Inanimate objects are sometimes parties in litigation. A ship has a legal personality, a fiction found useful for maritime purposes. The [corporation sole](#)—a creature of [ecclesiastical law](#)—is an acceptable adversary and large fortunes ride on its cases. The ordinary corporation is a “person” for purposes of the adjudicatory processes, whether it represents proprietary, spiritual, aesthetic, or charitable causes.

So it should be as respects valleys, alpine meadows, rivers, lakes, estuaries, beaches, ridges, groves of trees, swampland, or even air that feels the destructive pressures of modern technology and modern life. The river, for example, is the living symbol of all the life it sustains or nourishes—fish, aquatic insects, [water ouzels](#), otter, fisher, deer, elk, bear, and all other animals, including man, who are dependent on it or who enjoy it for its sight, its sound, or its life. The river as plaintiff speaks for the ecological unit of life that is part of it. Those people who have a meaningful relation to that body of water—whether it be a fisherman, a canoeist, a zoologist, or a logger—must be able to speak for the values which the river represents and which are threatened with destruction....

The voice of the inanimate object, therefore, should not be stilled. That does not mean that the judiciary takes over the managerial functions from the federal agency. It merely means that before these priceless bits of Americana (such as a valley, an alpine meadow, a river, or a lake) are forever lost or are so transformed as to be reduced to the eventual rubble of our urban environment, the voice of the existing beneficiaries of these environmental wonders should be heard.

Those people who have a meaningful relation to that body of water...must be able to speak for the values which the river represents and which are threatened with destruction...

Perhaps they will not win. Perhaps the bulldozers of “progress” will plow under all the aesthetic wonders of this beautiful land. That is not the present question. The sole question is, who has standing to be heard?”

The federal agencies of which I speak are not venal or corrupt. But they are notoriously under the control of powerful interests who manipulate them...

On June 23, 1972 the Sierra Club amended its complaint to allege that club outings in the valley would be harmed by a massive ski resort, added several [natural persons](#) as plaintiffs, and added a new claim for relief under the [National Environmental Policy Act](#).^[17] On September 12, Judge Sweigert then allowed the case to proceed to [discovery](#).^[17] In August 1972 Governor Reagan withdrew his support of the project, now arguing the new highway would be too expensive.^[4]

Although the Sierra Club lost the case, as a practical matter they won the war. To assert standing in a natural resource matter, environmental groups simply need to find among their membership a single person with a particularized interest (e.g., one who hikes, hunts, fishes, or camps in or near the affected area). Mineral King was ultimately never developed and was absorbed into Sequoia National Park.

Justice Douglas’ dissent^[16] included his concern that regulatory agencies become too favorable with their regulated industries ([regulatory capture](#)):

“Yet the pressures on agencies for favorable action one way or the other are enormous. The suggestion that Congress can stop action which is undesirable is true in theory; yet even Congress is too remote to give meaningful direction and its machinery is too ponderous to use very often. The federal agencies of which I speak are not venal or corrupt. But they are notoriously under the control of powerful interests who manipulate them through advisory committees, or friendly working relations, or who have that natural affinity with the agency which in time develops between the regulator and the regulated. As early as 1894, Attorney General Olney predicted that regulatory agencies might become ‘industry-minded,’ as illustrated by his forecast concerning the Interstate Commerce Commission:

The Commission ... is, or can be made, of great use to the railroads. It satisfies the popular clamor for a government supervision of railroads, at the same time that that supervision is almost entirely nominal. Further, the older such a commission gets to be, the more inclined it will be found to take the business and railroad view of things.
(M. Josephson, *The Politicos* 526 [1938].)

Years later a court of appeals observed, ‘the recurring question which has plagued public regulation of industry [is] whether the regulatory agency is unduly oriented toward the interests of the industry it is designed to regulate, rather than the public interest it is designed to protect.’ (*Moss v. CAB*, 139 U.S. App. D.C. 150, 152, 430 F.2d 891, 893).”
https://en.wikipedia.org/wiki/Sierra_Club_v._Morton

In our case against CMP, approval of the tower radar system comes from the Federal Communications Commission (FCC), an agency so compromised by the telecommunications industry that it merited an in-depth report by Norm Alster, published by the Edmond J. Safra Center for Ethics at Harvard University: [Captured Agency: How the Federal Communications Industry is Dominated by the Industries It Presumably Regulates](#).

Most every current environmental lawsuit brought by organizations includes names of a few members and cites *Sierra Club v. Morton* as precedent for their standing to bring the action.



Microscopic Invasion: Microplastics in Fish (and Other Challenges)

Whether we realize it's happening or not, we can expose ourselves to environmental pollution hundreds of times a day, whether by air, water, or land. These pollutants have numerous health effects, many of which are still unknown. Researchers are currently trying to determine potential health effects related to [microplastics](#), or microscopic plastic fragments, which have become a ubiquitous form of pollution. We breathe and absorb these plastics through [the food we eat](#) and the [air we breathe](#). Plastic microbeads found in exfoliants and cosmetics and microfibers found in synthetic clothing are common sources of plastic pollution. Scientists estimate that as many as [100,000 microbeads](#) can be flushed down the drain during just one shower. Additionally, thousands of microfibers are released every time a synthetic garment is washed. Much of this plastic is too small to be caught by sewage treatment plants. As a result, there is a growing concern regarding the effects of plastic on aquatic organisms that may be [consuming them](#).



Black bass

Photo: Fishbio

The potential impact of microplastics on [entire food webs](#) is a needed area of study, but little research has been conducted on the biological and physiological exposure effects of these plastics. Scientists attempting to evaluate the seriousness and prevalence of this issue have discovered a high prevalence of plastic contamination in fish species. A recent study published in *Limnology and Oceanography Letters* investigated the effects of microplastics in freshwater lakes ([Hurt et al. 2020](#)). The researchers examined microplastic concentrations in 72 gizzard shad and 24 largemouth bass from two agricultural reservoirs located in the midwestern United States. Stunningly, microplastics were found in 100 percent of the fish, with between 1–49 identified plastic particles detected in each. Bass were found to have higher concentrations overall, and microplastics were more concentrated in the gut for bass, compared to more concentrated in the gills for shad. This finding suggests different species of fish may accumulate microplastics differently based on how they feed. While urban waterways have long been suspected to be prone to microplastic pollution, the authors of this study highlight that aquatic ecosystems in agricultural areas may be just as susceptible.

Another recent paper published in the same issue examines the major research challenges and solutions for determining the presence and effects of microplastics ([Granek et al. 2020](#)). As plastics in the environment continue to degrade, their particle size decreases, resulting in the further breakdown of microplastics into even smaller nanoplastics. As a result, more organisms can ingest these plastics and they can persist higher into the food web. While there are many difficulties in studying microplastics, one of the major concerns is that the size range of debris that researchers need

Continued on next page

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to detect and quantify continues to get smaller; meanwhile, more microplastics keep entering the environment. As a result, the cost of detecting smaller sized plastics becomes almost unrealistic, paired with the fact that there are limited trained personnel with knowledge of the diverse array of species and food webs to properly account for all microplastic contamination. These issues are exacerbated by a lack of standardized methodologies for scientists to utilize.

In light of these challenges, the authors suggest several solutions, including prioritizing open access data and partnerships among interested groups, such as the newly created [Pacific Northwest Consortium on Plastics](#). These approaches can help address the current lack of standardization in research, as well as challenges with data collection and analysis. The importance of collecting comparable data on microplastic contamination is increasingly becoming evident with the urgent need to determine how plastic pollution threatens aquatic organisms. Ever since the 1997 discovery of the Great Pacific Garbage Patch, a floating patch of plastic twice the size of Texas in the Pacific Ocean, researchers around the world have been working to evaluate the effects of such a large presence of synthetic material on ecosystems. Going forward, such findings should stimulate new and more extensive research on the persistence and effects of microplastics, and inform efforts to keep the issue from growing even further. On an individual level, doing our part to limit [single-use plastics](#) and products that contain synthetic fabrics and exfoliants is one small step to reduce the amount of microfibers entering the environment and, ultimately, our own bodies.

This story was written by Jade Godbehere for an internship with FISHBIO through the UC Santa Cruz Environmental Studies Department. March 9, 2020

<https://fishbio.com/field-notes/the-fish-report/microscopic-invasion-microplastics-fish-challenges>

WE NEED YOU! PLEASE SUPPORT OUR IMPORTANT WORK

FOMB Leadership

Our accomplishments are due to the hard work of dedicated volunteers, especially those who serve on our committees. If you want to get involved and serve, please contact the committee chair or Ed Friedman. We always welcome member input and we'd love for you to join us!

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\$7 Enclosed (optional) for a copy of Conservation Options: A Guide for Maine Land Owners [\$5 for book, \$2 for postage].



Thanks to Rebecca Bowes for newsletter layout.



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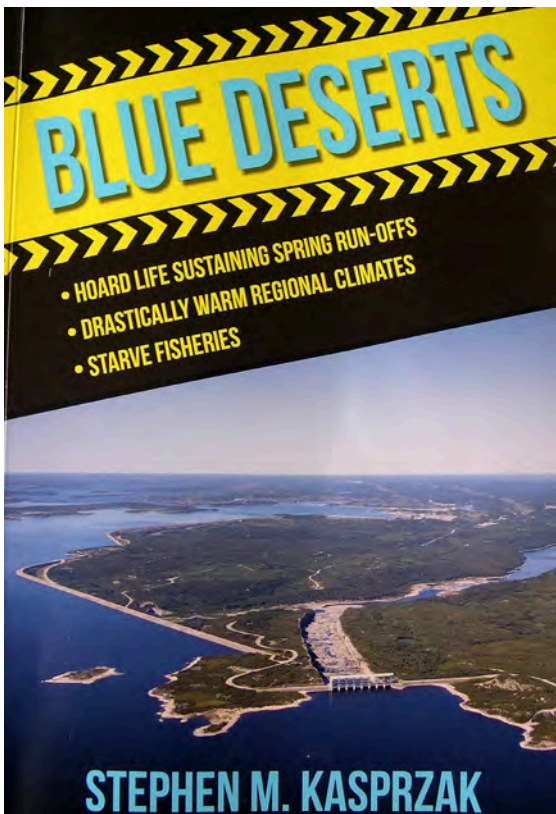
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Blue Deserts

The goal of this book is educating the public on the profound ecological damage caused by damming the world's rivers, in particular by mega-dams at high latitudes. Hoarding of massive water volumes creates blue deserts behind the dams, but also makes previously fertile estuaries, gulfs, and coastal waters relatively barren, as nutrients from spring runoff, vital to the food chain, are withheld during the short natural growing season. Water hoarding has destroyed the ocean's most biologically productive regions and the culture and economies of many indigenous peoples. The only things "green" about big hydro are the \$100 dollar bills coming out of dam turbines. Hydro Quebec is a prime example. Unnatural flows may also be helping to drive climate change.

To grow awareness of this important and timely subject and to help FOMB's work, author Steve Kasprzak from Friends of Sebago Lake is allowing us to sell his book.

If you would like a copy, send \$20.00 to FOMB at **P.O. Box 233, Richmond, ME 04357**, and write "book" on your memo line. Be sure to include your mailing address.

Thanks, Steve!!!

"All other perceived ills: pollution, overfishing, and, yes, even global warming, are secondary in importance to fundamental change brought by dewatering our global rivers." —Dr. M.A. Rozengurt, Russian oceanographer ("Agonizing Coastal Sea Ecosystems: Understanding the Cause; Placing the Blame!" October 2003).