FOMB Speaker Bios & Zoom Programs, 2021-2022

All talks 7:00pm at 2nd Wednesday of each month, October-May

Check www.fomb.org home page prior to each presentation for log in link detail.

October 13, 2021
Mega-Dams, Mega-Problems!
Roger Wheeler


Roger Wheeler

Roger Wheeler retired in 2017 after a lifetime working in public education. His interests in the environment were nurtured from early experiences visiting Sebago Lake during summers of the 1960's. Wheeler's father was a geologist so every walk along his great, great aunt's shoreline was a field trip where Roger developed his early appreciation for the powers of water, wind, and ice.

In the late 1980's, the SD Warren Paper Company changed their flow management of Sebago Lake. The shoreline protecting beach quickly eroded away from the new longer duration of higher average lake levels throughout the summer and fall. Shoreline residents complained of resulting lake degradation.

What happened next for Wheeler has been a 30 plus year learning experience about lake, river, coastal environments and the politics of water control. Roger helped the organization, Friends of Sebago Lake (FOSL), participate in regulatory actions that advocated restoration of historic natural lake/river flow regimes that more mimicked the seasonal cycle and he succeeded Steve Kasprzak as President of Friends of Sebago Lake in 1998.

FOSL asked questions about the impacts of Sebago's lake's new altered flows on fisheries, water quality, lake wetlands, and beaches. The group assembled volumes of information as part of the evidence record in the FERC file for the Eel Weir project, 2984. The FOSL team searched archival records for and retrieved the firsthand accounts of anadromous fish such as salmon,

shad, and alewives being present in the Sebago Lake watershed before Sebago Lake was dammed. This information was crucial in the unanimous decision of the US Supreme Court that required fish passage on Presumpscot River dams and other dams where these fish had been present. When FOSL began questioning impacts of the unnatural flow regulation on the riverine, estuarine, and coastal environments downstream from the now highly regulated Sebago Lake, Maine scientists and regulators were silent, oddly showed no interest, or were deflective in their statements.

Citing FOSL as being the sole concerned party, FERC refused to include impacts of flow regulation of coastal environments in Sebago Lake relicensing environmental impact statements. FOSL did not give up, and expanded their search. soon uncovering the works of Hans Neu, Michael Rozengurt and others who understood how dams can detrimentally affect the geosphere, atmosphere, hydrosphere, cryosphere and the biosphere and are altering our climate and devastating our marine fisheries. Wheeler assisted in the gathering of information for the books, Blue Deserts and Arctic Blue Deserts written by Steve Kasprzak and worked with a team including Friends of Merrymeeting Bay to hire a Canadian graduate student through the Quebec Labrador Foundation internship program to interview still living co-workers and descendants of Hans Neu and retrieve information not available on the internet. That effort was a stunning success.

Hydroelectric power, particularly involving the construction and operation of large or mega dams does not produce green energy. Building these monsters uses tons of fossil fuel creating plenty of greenhouse gases and then once built the large reservoirs or “blue deserts” continue discharging methane (and some CO2) for years as submerged vegetation decomposes. These blue deserts become relatively warmer bodies of water affecting local climate through their moderating meteorological effects. Impoundment flows tend to be released in the winter to make room for retaining spring snowmelt through dry summers. Natural flows however are highest in the spring freshet and this is when key nutrients like silica are flushed from the interior to the coast forming the nutrient menu for phytoplankton like diatoms, key primary producers for the entire marine food chain including commercial fisheries.

Relatively warm reservoir releases in winter however melt ice in their receiving waters, whether the Gulf of Maine, St. Lawrence River, James Bay, Hudson Bay or the Arctic Ocean. This decreases reflectivity or albedo, increasing oceanographic heat retention, greenhouse gas emissions, local climatic instability and larger scale climate warming. Because highest flows are now in winter, any nutrients delivered to the coast (those not impounded by the megadams), arrive at a useless time for the marine food chain, evolved to feed and grow primarily in response to the spring freshet.

Megadams also create the mega-problem of indigenous cultural genocide as valuable natural and cultural habitats are wiped out by rising waters and rivers no longer flow at all or possibly flow backwards. In Hydro Quebec territory the Inuit, Metis and Cree have all been adversely affected and displaced. The only thing green about hydro are the $100 dollar bills flying out of the turbines. Wheeler will explain all these effects providing little - seen Neu and Rozengurt research.

For more information:

Friends of Sebago Lake

FOMB Altered Flows Page

Buy a copy of **Blue Deserts** and support FOMB

Buy a copy of the new **Arctic Blue Deserts**

November 10, 2021

Neptune's Navy! Sea Shepherd on the Front Lines

Tamara Arenovich

Tamara Arenovich

Tamara Arenovich is an activist with Sea Shepherd Conservation Society. She has participated in 10 direct-action campaigns over the years, including Operation Milagro - Sea Shepherd's frontline efforts to prevent the extinction of the world's most endangered marine mammal. Her activism was most recently featured in the Netflix documentary Seaspiracy.

Driven by passion and a love for the ocean, Tamara transitioned into ocean conservation after a lengthy career in healthcare and academia. She currently lives in Mexico and oversees communications for Sea Shepherd Conservation Society.

What do we do when laws protecting our planet, the only one we have, are continuously ignored, when violence against nature becomes accepted as the norm and when the legislative and judicial systems fail and enforcement is scoffed at? In an effort to effectively grapple with and find a solution to these issues, Captain Paul Watson in 1977 founded Sea Shepherd, an international, non-profit, direct-action marine wildlife conservation organization specializing in aggressive, but non-violent, interventions against unlawful exploitation of ocean wildlife and habitats.

Sea Shepherd now has more than four decades of experience opposing illegal whaling, sealing, and fishing operations, and has established itself as the leading marine interventionist group in the world. Whether working in partnership with government agencies or operating in accordance with the provisions of the United Nations World Charter for Nature, Sea Shepherd is a tireless advocate for the enforcement of international treaties, laws, and regulations protecting marine species and their environment, and does not hesitate to enforce these legal charters as circumstances require.

The efforts of Watson's largely volunteer crews in Antarctica saving whales from Japanese whalers have been popularized by the acclaimed and often harrowing, Animal Planet television series *Whale Wars*. Lesser known, is that Sea Shepherd operations also have been successful

around the globe intercepting poachers in the Galapagos Islands, shutting down illegal whaling operations in numerous oceans, blockading sealing ships, rescuing dolphins in Japan, patrolling beaches in the Caribbean to stop turtle poaching, and confiscating illegal driftnets and longlines all over the world.

On May 8, 2012 FOMB had Captain Paul Watson here as part of this series and he spoke to a sold-out crowd filling the Maine Maritime Museum's Longreach Hall. Shortly thereafter on May 13, Captain Watson was arrested in Germany under a Costa Rican extradition warrant relating to an incident in 2002 when the boat he was piloting attempted to stop poachers illegally killing sharks. While innocent of the charges, Watson jumped bail in July of 2012 and spent the next 15 months at sea. On September 14, 2012 Costa Rica issued an Interpol Red Notice for his arrest. After his escape to sea, Watson ended up back in the US, settling in Vermont. In March, 2019, Costa Rica dropped the charges against him since video evidence supported his innocence.

The Watson arrest episode changed the structure and operations of Sea Shepherd somewhat. Tamara will be providing an update on their recent activities, active campaigns, and future directions. https://seashepherd.org/

December 08, 2021

King Philip's War: Impacts on Merrymeeting Bay

Bruce Bourque

Merrymeeting Bay Pioneer Founders
Top: (L-R) Bruce Bourque, Alan Bowes
Bottom: (L-R) Fred Koerber, Chris Gutscher

Bruce Bourque, now directing the Merrymeeting Bay Pioneers Project, is Chief Archaeologist, Maine State Museum, emeritus and also Senior Lecturer in Anthropology, Bates College, emeritus

Education
• Harvard University, 1971, Ph.D. (Anthropology)
• University of Colorado, 1967, M.A. (Anthropology)

• University of Massachusetts, 1965, B.A. (Anthropology)

Professional Activities
• Director, Fox Islands Archaeological Project (1970 - 2001): Basic goals of the project included the reconstruction of prehistoric cultural and environmental history of the Penobscot Bay region.
• Director, Merrymeeting Bay Archaeological Project (1975-2015): Basic goals were to assess the impact upon prehistoric human populations of sea level rise, including extensive investigations at eight large archaeological sites spanning most of the Holocene. (See Bourque, et al. 2002).

Relevant Publications
• 2012 Bruce J. Bourque. The Swordfish Hunters: The History and Ecology of an Ancient American Sea People. Bunker Hill Publishing, Piermont, NH.
• 2006 Lotze, Hieke K, Hunter S. Lenihan, Bruce J. Bourque, Roger Bradbury, Richard G. Cooke, Matthew C. Kay, Susan M. Kidwell, Michael X. Kirby, Charles S. Petersen and Jeremy B. Jackson. Depletion, Degradation, and Recovery Potential of Estuaries and Coastal Seas. Science 312, No 5781:1806-1809.
• 2006 Bourque, Bruce J., Steven L. Cox and Robert A. Lewis. The Archaic Period of the Merrymeeting Bay Region, South Central Maine. The Archaic of the Northeast. University of Maine Press, Orono, pp. 307-342.
• 2001 Jackson, J., M. Kirby, W. Berger, K Bjorndahl, L. Botford, B. J. Bourque, R. Bradbury, R. Cooke, J. Erlandson, J. Estes, T. Hughes, S. Kidwell, C. Lange, H. Lenihan, J. Pandolfi, C. Peterson, R. Steneck, M. Tegner, R. Warner. “Historical Overfishing and the Recent Collapse of Coastal Ecosystems.” Science 293:629-638.

King Philip’s War—also known as the First Indian War, the Great Narragansett War or Metacom’s Rebellion—took place in southern New England from 1675 to 1676. It was the Native Americans' last-ditch effort to avoid recognizing English authority and stop English settlement on their native lands. The war is named after the Wampanoag chief Metacom, later known as Philip or King Philip, who led the fourteen-month bloody rebellion.

The Merrymeeting Bay Pioneer Project founded by Bourque, Alan Bowes, Chris Gutsher and Fred Koerber, focuses on learning more about early English settlers in or around Merrymeeting Bay during this turbulent time of the 17th century, as well as later English and Scots-Irish (Ulster Scots) pioneers who settled in the area during the first three-quarters of the 18th century, when the Pejepscot Proprietors were a primary influence in the settlement and development of the Bay area.

English settlement in Maine during the 1600s is sparsely documented and poorly understood. Only a few of the sites where the pioneers lived and worked have been located and studied. The exact locations of most of the others have been lost over the centuries. Carrying out a careful, systematic investigation of these forgotten sites could yield a wealth of information about the lives of those earliest English pioneers, their interactions with the local Indians, and the effects they had upon the area’s ecosystem over time.

There are also gaps in our knowledge about subsequent area settlement efforts taking place in the 1700s. Many English and Scots-Irish settled in the Bay area under the auspices of the Pejepscot Proprietors and their massive land development activities. The Pejepscot Proprietors were a key factor in the area's development, particularly during the period from 1714 and into the 1760s. A large number of pioneer sites from this period still remain to be discovered and studied, which should also provide valuable data relating to the area's history and ecology within this time frame.

January 12, 2022
Don’t Be a Nuisance! FOMB vs CMP
William Most


William Most

William Most graduated from Harvard College in 2005 and obtained a law degree from the U.C. Berkeley School of Law in 2011.

He practiced at the California law firm of Briscoe Ivester & Bazel LLP before moving to New Orleans and founding the Law Office of William Most. He is licensed to practice in Louisiana and California.

Mr. Most has represented individuals, businesses, non-profits, municipalities, state agencies, regional planning agencies, California tribes, activists, journalists, artists, students, prisoners, farmers, tenants, developers, family trusts, private landowners, and utilities. He has experience in trial and appellate courts, and sits on several advisory boards.

He has been an editor of the Climate Change Law and Policy Reporter, a member of the San Francisco Urban Forestry Council, and a Court Appointed Special Advocate (CASA) for foster youth. He holds a Certificate of Specialization in Environmental Law. Prior to becoming a lawyer, Most was a fisheries biologist and worked for the Atlantic States Marine Fisheries Commission.

Mr. Most is also Of Counsel to the ATA Law Group, a California-based law firm. He serves as a board member of the National Police Accountability Project.

Mr. Most was selected to the 2020 and 2021 Louisiana Rising Stars lists published by Thomson Reuters.

Bar Admissions

- State of Louisiana
- State of California
- United States Court of Appeals for the Fifth District
- United States Court of Appeals for the Ninth Circuit
- United States District Court for the Eastern District of Louisiana
- United States District Court for the Middle District of Louisiana
- United States District Court for the Western District of Louisiana
- United States District Court for the Northern District of California
- United States District Court for the Eastern District of California

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

"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 and in fact the FAA cited their lighting "advisory only" status as an excuse in rejecting FOMB requests for environmental review of the project.

After about a year of complaints, CMP partially ameliorated their original lighting nuisance with the installation of an active radar aircraft detection system designed to turn lights on only when aircraft are within a certain distance of the towers. Radar emits radiofrequency microwave radiation classified as a possible human carcinogen by the World Health Organization in 2011 and was found to show clear evidence of cancer and other biological effects in a ten year study by the National Toxicology Program, part of NIH, completed in 2018. Thus CMP substituted one nuisance with another.

Nuisance law is some the oldest existing law and 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].)

February 09, 202

Restoring the Lower Androscoggin River

Steve Heinz, Trout Unlimited, Maine Chapter

Steve Heinz

Steve Heinz earned a bachelor's degree in Psychology and a Navy commission from the University of Louisville in 1970 through its NROTC program. After a productive career as a naval flight officer, he retired with the rank of commander in 1990. The Navy bought Steve to Maine where he has lived and worked since 1988.

He became active in Trout Unlimited over seventeen years ago. Steve's serious involvement in conservation began when he organized volunteer support for a Maine Department of Inland Fisheries and Wildlife (MDIFW) Level 2 Stream Survey of Martin Stream in Turner in 2005. For ten years, he served as Conservation Chair for the Sebago Chapter Board of Directors and spearheaded a number of volunteer efforts including fish passage impediment surveys and Trout Unlimited Embrace-A-Stream grant projects, highlighted by his coordination of two dam removals that were executed in July of 2013. In 2015, he worked with the Wells National Estuarine Research Reserve to remove a third dam in Arundel, Maine. In 2016, working with the U. S. Fish and Wildlife Service and a number of other government agencies and non-profits, he organized and coordinated a series of proposals that resulted in nearly $500,000 in grant money for five habitat restoration projects from sources that included TU Embrace-A-Stream, Maine Community Foundation, the Maine Water Bond, and the National Fish and Wildlife Foundation.

In December of 2013, Steve was awarded an MDIFW Commissioner's Recognition Print for his efforts. The following year, his TU chapter received the Gold Trout award as the chapter with the greatest success in conservation projects that protect and restore habitat in their area. He continues to serve Trout Unlimited on the Maine Council as FERC Action Coordinator, and is currently working a number of FERC relicensings in Maine. Steve is also an active member of the Royal River Alliance; his most recent project was to produce an online fishing guide for the watershed.

Steve and his wife (of 50 years) Cathy reside in Cumberland Foreside, Maine.

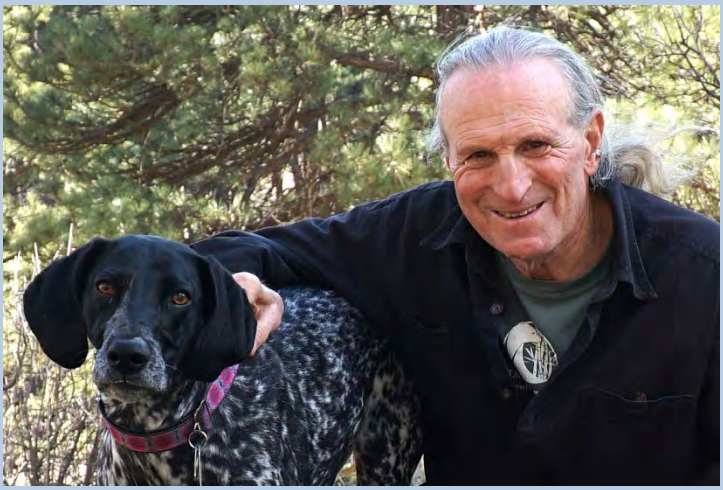
Restoring the Lower Androscoggin River describes the watershed below Lewiston Falls and including the Little Androscoggin. Much of the presentation material will be directly from the MDMR/MDIFW Draft Fisheries Management Plan. Heinz will then cover actions in progress on

the Andy and Little Andy including. FERC relicensing challenges and opportunities and the proposed upgrade to water quality classification of the lower river. Much of what happens in the Little Androscoggin depends on the Lower Barker dams. Steve will close with challenges, areas needing support, calls to action, etc.

March 09, 2022

Are Dogs Really Our Best friends & Love Muffins?

Marc Bekoff



Marc Bekoff & Minnie. Photo: Tom Gordon

Marc Bekoff is professor emeritus of Ecology and Evolutionary Biology at the University of Colorado, Boulder. He has published 31 books, won many awards for his research on animal behavior, animal emotions (cognitive ethology), compassionate conservation, and animal protection, has worked closely with Jane Goodall, and is a former Guggenheim Fellow. He also works closely with inmates at the Boulder County Jail. Marc's latest books are *The Animals' Agenda: Freedom, Compassion, and Coexistence in the Human Age* (with Jessica Pierce), *Canine Confidential: Why Dogs Do What They Do*, and *Unleashing Your Dog: A Field Guide to Giving Your Canine Companion the Best Life Possible* (with Jessica Pierce) and he also publishes regularly for *Psychology Today*. Marc and Jessica have a new book called *A Dog's World: Imagining the Lives of Dogs in a World Without Humans* that will be published by Princeton University Press in fall 2021. In 1986 Marc won the Master's age-graded Tour de France. His homepage is marcbekoff.com.

The behavior of domestic dogs is all too often misrepresented mainly in mainstream media--newspapers, magazines, TV, and radio, and on occasion by so-called "experts." Myths, often cute but incorrect, are presented as facts when, in fact, the science doesn't support them. I'll talk about a number of these myths and easily dispel them, and also about the perils of mislabeling and normalizing the behavior of domestic dogs. There is no 'universal dog' and a little-known fact is that around 75% of the billion or so dogs on Earth are free-ranging or feral. Using "homed" dogs and dogs studied in laboratories to explain dog behavior is misleading, as are the claims that dogs are our best friends and unconditional lovers. This is where a discussion of our recent book, *A Dog's World: Imagining the Lives of Dogs in a World Without Humans*, enters the scene. It's a win-win for dogs and humans when we are fluent in dog or dog literate. This will be a fun and informative time for all.

April 13, 2022

American Shad

Nate Gray, Fisheries Biologist, Maine Department of Marine Resources

Nate Gray

Nate Gray is project leader for the Kennebec Hydropower Developers Group (KHDG) program through the Maine Department of Marine Resources, Bureau of Sea Run Fisheries and Habitat (BSRFH). He is also on the Board of FOMB. Nate has worked extensively on the Kennebec River and its tributaries since 1992 and been involved in virtually all aspects of the restoration program. He witnessed the removal of Edwards Dam in Augusta in 1999 and has seen the populations of river herring rise from a hundred thousand to over three million with the installation of multiple fish passages and the opening of thousands of acres of historical habitat in the Kennebec drainage. Nate has also worked extensively on American shad restoration in the Kennebec River and was actively involved in the Waldoboro Shad Hatchery from 1992-2007.

American Shad *Alosa sapidissima* is an anadromous species requiring connectivity between marine and freshwater habitats to complete their lifecycle. They are dark blue to green above with paler sides and a silvery underbelly. Shad are the largest members of the true herring family and can grow to 30 inches in length and weigh over 9 lbs. This species is highly sought after as a sportfish because of their feisty nature and their ability to leap. Almost every major river along the Atlantic seaboard historically supported a spawning population of American shad but their numbers continue to drop.

Historically, populations of American shad supported recreational, subsistence, and commercial fisheries along the Atlantic coastal waters of North America with annual landings ranging in the millions of pounds. Overfishing, pollution, and habitat loss resulting from dams, restricted passage, and human development have reduced populations and subsequently total landings. Many state and federal agencies have prioritized the management of American shad by supporting research and monitoring programs aimed at conserving and restoring populations.

Dams threaten anadromous fish populations by severing the migration of populations between marine and freshwater habitats. Additionally, dams can impose migration delays and exert negative effects on survival and fitness. The construction of fishways at dams is one approach used to mitigate obstructions to migrating fish but it is a poor substitute for unimpaired passage.

Shad are very nervous fish and don't take kindly to working their way up a fish ladder or jamming into a fish lift. Knowing this, dam owners often with complicit agencie, have been masters at designating shad as the trigger species in their dam licensing for when fish passage must be installed at the next dam upstream. Put another way, many licenses state when X number of shad are counted in fishway A (at the first dam on the river), then construction must begin on the fishway B at the next dam upstream. Of course if shad won't enter the lower-most fishway or not enough do, the trigger is never pulled on further fish passage. Another trigger species used to prevent fish passage is blueback herring, which are quite difficult to distinguish from alewives and typically occur in smaller numbers. If fish passage based on demonstrated need were the goal, the trigger would be a more general "river herring", a collective term for all three herring species.

May 11, 2022

To Bee or Not To Bee

Jon Mirin & Laura Josephs

Laura Josephs & Jon Mirin. Photo: Isaac Harrell

Having gradually replaced his diverse crops with corn in order to fill a growing corporate demand for corn by-products, Farmer James has lost his bees, there's only gruel to eat and now the townspeople (the audience) have arrived to protest, chanting "*There's no good food, we're in a bad mood*." To Bee tells James' comic, tragic and ultimately hopeful story – complete with puppetry, clowning, dance, live music and lots of audience participation. Piti created the show to raise awareness about the honeybee's plight and gives children and adults tools for helping bees thrive in their communities. This is a great show for all ages but especially kids ages 5 to 10 years old! More at ptco.org/tour

The Music:
Northampton, MA singer/songwriter Carrie Ferguson wrote the music and collaborated with Piti's Jonathan Mirin on lyrics for the production. She plays the Piano Lady in the show. Carrie's work with Piti has been honored by an Iguana Grant from Club Passim in Cambridge, MA.

The Piti Theatre Company, based in Shelburne Falls, MA and Switzerland, created the show to raise awareness about the honeybee's plight, and give children and adults tools for helping pollinators thrive in their communities. The performance connects to a real-world grassroots

campaign called 10% For the Bees which encourages replanting of 10% of lawns with bee friendly habitat and transitioning to organic lawn care methods.

10% For the Bees Campaign:
One of the major challenges facing honeybees (and many other species around the globe) aside from pesticide use is loss of habitat. Honeybees in many parts of the U.S. simply "don't have enough to eat." Local beekeeper and Friends of Merrymeeting Bay Chair Ed Friedman notes two additional threats, radiofrequency radiation from wireless devices and climate change. "*Experiments show bees fail to return to their hives when a transmitting wireless device is in the immediate vicinity and ambient levels of this environmental toxin are rising with the widespread installation of smart electric meters and growing use of 5G wireless technology*" Friedman said, adding, "*With the extended warmth of longer summers, hives remain active after nectar and pollen sources have gone by, forcing the bees to use valuable winter stores sooner and at a greater rate than normal. There is no longer enough bee forage, particularly late in the season and then increasingly common winter temperature fluctuations also are bee-killers.*" Piti's co-Artistic Director Jonathan Mirin emphasized, "C*ollaborating with a local environmental group like Friends of Merrymeeting Bay and a beekeeper like Friedman is an ideal situation for a performance like this one*." Piti's 10% For the Bees Campaign also encourages audiences to let nature plant 10% of their lawn – or plant a bee garden. https://ptco.org/shows/to-bee-or-not-to-bee/

The End

Thanks for Coming!