



DEMONSTRATING his seaweed pudding at the Grand Manan Museum is University of New Brunswick lecturer Dr. Thierry Chopin. (Arlene Benham photo)

Sea Chanters to sing at Roosevelt park

The Sea Chanters Chorus, the United States Navy Band's official choir, will perform on the ocean side of the Roosevelt Cottage on Campobello on Saturday, August 9, at 11 a.m. Atlantic Time. The performance is part of the 50th anniversary celebration of Roosevelt Campobello International Park (RCIP).

The ensemble performs a variety of music ranging from traditional choral music, including sea chanteys and patriotic

fare, to opera, Broadway and contemporary music. At home in Washington, D.C., they perform for the president, vice president and congressional, military and foreign dignitaries.

The Sea Chanters Chorus will be on Campobello Island to honor the 50th anniversary of the park, the legacy of friendship between the U.S. and Canada, and Franklin D. Roosevelt. The concert is free and open to the public.

Grand opening of Fireside restaurant set

The Roosevelt Campobello International Park (RCIP) Commission will hold an official open house and informal tasting for the Fireside, the new restaurant at the park, on Friday, August 8, from 1 to 3 p.m. Atlantic Time. The restaurant opened to the public on May 24.

The event is free and open to the public. The open house will allow visitors an opportunity to sample items served at the new restaurant. Members of the Roosevelt and Adams families will cut the ribbon, officially opening the Fireside.

The Fireside restaurant was once the main lodge of the family compound of Frederick Adams, a cousin of Franklin Roosevelt. The park acquired the property in 2010 from the Province of New Brunswick. After three years of extensive renovation the lodge is now the home of RCIP's first public dining facility.

One of the main features of the old lodge was a massive fireplace situated in the middle of the facility. Time and weath-

er caused the fireplace to crack and begin to crumble. In an effort to be true to the Adamses' original design the old fireplace was taken down stone by stone and rebuilt on the front wall at the end of the building. On chilly foggy days visitors will enjoy the warmth of the fire just as members of the Adams family did nearly a century ago.

Frederick Adams' granddaughter, Ann Adams, will offer her memories of summers spent in the old lodge. Brief remarks from the park commission and special guests will round out the official portion of the event. Ginny Palmer and Borderline Jazz will provide music.

The Fireside is located at 610 Route 774, across from the park's main entrance and historic core.

The open house is part of the RCIP's 50th anniversary celebration week. The official anniversary celebration will be held on Saturday, August 9, at the Roosevelt Cottage.

Mothers' camp to be held on Campobello

The Edith Lank Memorial Christian Camp, which for decades has offered camping experiences for all age groups of children, will welcome all mothers and grandmothers to the annual mothers' camp, which will be held the week of August 4-8 on Campobello Island.

This daycamp experience has been created specifically for mothers, grandmothers and their children and grandchildren. Each day begins with a praise and worship time and ends with a home-cooked meal. Throughout the day the attendees

have separate schedules, both with Bible studies, games, crafts, kayaking and other activities. Mothers and their families come together for meals and swim time in the afternoon. The mothers' camp motto is: "Your greatest contribution to the kingdom of God may not be something you do but someone you raise."

For more information, call 506-752-2494, visit <www.edithlankcamp.com> or e-mail <info@edithlankcamp.com>.

UNB professor advocates shifting aquaculture to ecosystem approach

by Arlene Benham

Dr. Thierry Chopin would like to change the world — one salmon site at a time. The University of New Brunswick marine biology professor visited the Grand Manan Museum on July 15 to present a lecture on integrated multi-trophic aquaculture (IMTA). Chopin's project began in 1995, and he and his colleagues are now entering what he calls the "capital-C commercialization phase."

The premise is a simple one: shifting aquaculture practice from one species and one process giving one product, to an ecosystem approach that combines fed species, like fish or shrimp, with extractive species, like seaweed, which use inorganic dissolved nutrients and suspension and deposit feeders, like shellfish, which eat organic particulates. Waste from finfish culture is thus used to produce other crops with commercial value.

An example would involve adding mussel and seaweed cultivation to a salmon site. Other invertebrates like lobsters, urchins or sea cucumbers could also be placed on the bottom. Chopin contrasts this to "polyculture" in which two or more species of fish are raised together; the fish all occupy the same place in the food chain, whereas IMTA is "not different than a typical food chain in the environment — we're just reproducing it." The shellfish and seaweed are placed down-current from the fish enclosure to maximize nutrient use, the species have complimentary functions and all have economic value.

It's not a new idea. Chopin describes a Chinese document dating from 2200-2100 B.C. that details the integration of fish and aquatic plants. While it's not well known in North America, the practice is more widespread in Asia, where over 90% of all seaweed aquaculture is concentrated in six countries that produce 96% of the world's seaweed supply — leaving wild harvest of dulse and rockweed among the remaining 4%.

With IMTA, Chopin argues, a food-producing farm has no need for fertilizer or land and can even be part of ecosystem restoration. The seaweeds produce oxygen and sequester carbon dioxide, which

can help slow ocean acidification. "We are so obsessed with animal aquaculture, we don't understand what seaweeds can do," he says. "It's all about recycling. [Recycling] is okay in hotel rooms, offices, gardens, agriculture, so why not at sea? We need to change our mentality" about the value of nutrients. He acknowledges that regulators are not yet convinced, "because they don't know much about seaweed."

Another change in perception involves mussels, which, when they accumulate on salmon cage nets, are seen as "biofouling" and scraped off. Chopin's team collects the spats for cultivation. He points out that since one mussel can filter four liters of water per hour, it's a valuable product which also cleans the water.

He wants the industry to "rethink" aquaculture sites. "Bay management areas are not just between four buoys, since the origin of the nutrients doesn't matter." He showed aerial photos of large sites in China and South Korea, as well as maps of test sites in the L'Etete area. There is also the potential of using fishing exclusion zones around offshore wind farms for open-ocean farms. A proper ratio of organisms is required; some of the Chinese examples have generated "green tides" of algae because of imbalances in the nutrient system.

"There is no ultimate IMTA," Chopin notes, explaining that the point is to work with local species and conditions. In L'Etete, he and his students and colleagues are partnering with Cooke Aquaculture to modify some sites. They collect spores from two species of seaweed — he notes that one frond can produce 80 million spores — which are put in tanks to germinate and grow. Placed out at the aquaculture site, the seaweeds can grow a centimeter per day from March through May and then be harvested in the summer. They are working with some local restaurants which use some of their products, as well as cosmetic companies which use seaweed extracts.

Experiments are also testing salmon feed based on seaweed with a reduced percentage of fish meal.

Some challenges remain, from dealing with Bay of Fundy weather to working with industry and regulators. "All these things will take time," Chopin admits, likening his early work to "preaching in the desert."

He says, "Science and society need time to evolve." He sees IMTA as a more efficient food production method for the world's growing population, and his efforts to spread his message to different audiences range from academic papers to inspiring a performance by Ontario's Motus O Dance Theatre troupe.

While on Grand Manan, he conducted an afternoon workshop for youth which was attended by 16 participants aged six to 15; they learned about IMTA, created some art and made seaweed pudding. Although the lab currently has no test sites at Grand Manan, he is working on the idea and would like to see it eventually become part of a larger bay management area.

For more information, please see <<http://www2.unb.ca/chopinlab/index.html>>.

CAMPOBELLO

by Dorinda Davis
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QUILT SHOW

The St. Anne's Anglican Church Guild on North Road, Campobello, will present its 10th biennial quilt show on Thursday, August 7, from 11 a.m. to 5 p.m. and Friday, August 8, from 11 a.m. to 3 p.m.

HIGH TEA

The St. Anne's Anglican Church Guild will host its 24th annual high tea at the church hall on Thursday, August 7, from 2 to 3 p.m. The tea has been called "the most gracious high tea in the province" and includes sandwiches, fruit and a variety of sweets served in the English tradition.

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