



MR. STINKY - North Vancouver's Sabine Jessen holds 'Mr. Stinky' outside in her garden. The North Vancouver resident is pushing the government to protect all B.C.'s glass sponge reefs.

Rebecca Aldous photo

West Van's Jurassic park

Howe Sound's glass sponge reef deserves protection, Canadian Parks and Wilderness Society says.

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It took 10 minutes and suddenly Manfred Krautter was surrounded by a 200-million-year-old creature.

Two-hundred metres below the sea's surface in Hecate Strait, the submarine's spotlights found it in the darkness. It clung to the top of a glacier-cut rock, above streams of sediment whipped up by the ocean's currents.

For 20 years Krautter unearthed its fossils in Europe. He'd tracked it to Germany, Portugal, Spain and Switzerland. But here was the living thing, looming approximately eight storeys high in front of him; its white structure shining in the submarine's beams. At that moment the German paleontologist knew he was experiencing the highlight of his life.

What Krautter was peering at was a glass sponge reef, scientifically referred to as Hexactinellida. Scientists knew individual glass sponges existed, but considered glass sponge reefs to be extinct.

In the Jurassic era, the reefs were the dominant life form in the Tethyan Sea. A reef belt that reached along the Tethys and proto-Atlantic margins was perhaps the largest discontinuous belt of reefs to have ever existed on Earth, Krautter believes.

Then in the Cretaceous era, silica, which the sponges absorb as a dissolved nutrient in the water and use to build their skeletons, was consumed from the sea's surface by diatoms – an



TIME TRAVEL- German paleontologist Manfred Krautter holds a large piece of glass sponge. Krautter was studying fossilized glass sponge reefs when he came across a Canadian report on glass sponge reefs in B.C.'s waters. Submitted photo

algae. The glass sponges moved to deeper water, where they remained undiscovered until the late 1980s. It was at that point that the Geological Survey of Canada stumbled across these strange mounds on the ocean's floor while mapping the continental shelves.

Almost a decade later Krautter saw a report by Vancouver Island marine geoscientist Kim Conway on the reefs, at which time the science community realized exactly what they had discovered. By then approximately half of the delicate reefs had been inadvertently destroyed by commercial fishing trawlers.

These sponge reefs have been mapped in the Queen Charlotte Basin and most recently in Alaska. While not as large as the 700-square-kilometre reef in Hecate Strait, there are smaller reefs in the Georgia Basin, of which one of the largest is located off Lighthouse Park in between Bowen Island and West Vancouver.

Like most of B.C.'s glass sponge reefs, it's roughly 9,000 years old. But unlike the reefs in Hecate Strait/Queen Charlotte Strait, which Canada's Department of Fisheries and Oceans aims to have designated as marine protected areas under the Oceans Act by 2012, such measures aren't being sought after for the 14 reefs in the Strait of Georgia, including the one off the North Shore.

The reef is believed to be undamaged, states a research paper by Conway. And that's the way North Vancouver's Sabine Jessen is determined to keep it. As Canadian Parks and Wilderness Society's (CPAW) national manager of oceans and great freshwater lakes she's pushing for the government to place some form of protection on

the reef.

"We would at least like some fishing closures put on them," Jessen says.

Hooks, lines and traps can break the sponges if dragged along the ocean floor, she notes. The sponges are also sensitive to silt, which can smother them.

The live reefs are known to be good nursery habitat for juvenile rockfish, a fish that was once abundant along the shoreline of West Vancouver before being fished out.

"(The glass sponge reefs) are just this neat mystery of the deep."
Sabine Jessen
CPAW national manager of oceans and great freshwater lakes

after the advent of sport downrigger gear in the 1960s. Thanks to the efforts of the Vancouver Aquarium, signs are emerging that black rockfish transplants from the aquarium are establishing themselves at Larsen Bay and Point Atkinson. It's just one more reason for long-term protection of the reef, Jessen notes.

West Van council is backing CPAW's call for a preservation strategy. The Town of Gibsons signed on as well and last month the organization had a "positive" meeting with West Vancouver-Sunshine Coast -Sea-to-Sky MP

John Weston, Jessen says.

"(The glass sponge reefs) are just this neat mystery of the deep," she says.

DFO is aware of the sponge reefs in the Strait of Georgia and Howe Sound, but at this time the reefs haven't been singled out as possible marine protected areas, says Bruce Reid, the department's pacific region regional manager of oceans programs.

"I think it is just the need for additional information and whether it makes sense in those areas," he says.

The reefs in Hecate Strait are globally recognized, Reid adds. Their size and scale deemed them appropriate for such a designation, he says.

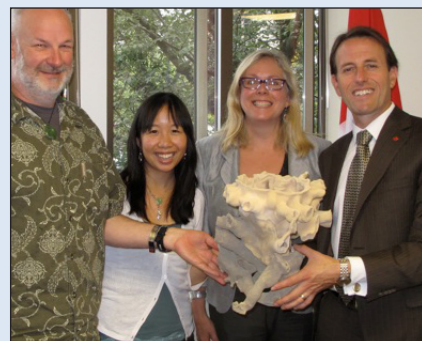
Back in Germany, Krautter has taken up glass blowing. The discovery of the reefs have unveiled more questions than answers, he says – like how they create their glass skeletons in the deep, cold waters and how they feed and reproduce.

The video from Krautter's initial submarine venture over a decade ago, remains some of the best footage the world has of the sponge reefs. The two scientists who helped uncover the Jurassic life forms are now good friends.

The reefs changed both their lives. And Krautter hopes they will be protected so they can inspire generations to come.

"If we found a large herd of dinosaurs in Alberta and a smaller herd of dinosaurs in Edmonton, we would not be talking about which ones to save," he says.

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And they call him Mr. Stinky

Mr. Stinky is the lovable (and not-so-fragrant) mascot for the 9,000-year-old glass sponge reefs in B.C. Canadian Parks and Wilderness Society have taken him to Ottawa, Victoria and all over Vancouver, to build awareness about the glass sponge reefs, as well as support for their protection. Mr. Stinky has his own fan club page on Facebook — Mr. Stinky's Fan Club — where one can learn more about the reefs and the society's continued efforts and initiatives. For more information visit www.cpawsbc.org.