

The Effect of an Oil Spill on Seaweeds - and All Levels of the Food Chain

by Amanda Swinimer and Christine Hopkins

Did you know that right here in the Pacific Northwest, we have among the richest diversity of seaweeds on the planet? With over 650 species, some still waiting to be discovered and at least one species having been named by Bamfield's own kelp expert, Dr. Louis Druehl, Ph.D., our foreshore invokes a jaw-dropping sense of awe to some of the world's leading phycologists.

Aside from the absolutely astonishing health benefits of seaweeds, such as their hyper-abundance of rare & essential minerals in bioavailable forms, their richness in most vitamins, their effectiveness in treating many chronic and acute illnesses and their promising preliminary results in the treatment and prevention of certain types of cancer, they are ecologically critical.

Most of the world's oxygen is produced by algae, and most of the world's carbon is fixed by algae. Algae is the primary source that feeds the world's oceans that cover two thirds of our planet. Here in the Pacific Northwest, countless species of invertebrates and vertebrates use the seaweed gardens as a nursery. The Kelp Forests are an oasis for a huge diversity of marine species and are among the most diverse ecosystems in the Pacific Ocean.

If you rely in any way on the ocean as part of your livelihood and lifestyle, then the health of seaweeds is even more significant to



you. With the government making decisions about whether to allow huge fleets of super tankers to transport oil from the proposed pipeline in Kitimat and also into terminals in Vancouver, we are deeply concerned. An oil spill on our west coast would smother the seaweeds and the micro-algae, making it impossible for them to photosynthesize and thus leading to mass die-offs of our ocean's primary source. Every level of the food chain would be affected, either directly or indirectly, by an oil spill. The seaweeds, the prawns, the crabs, the bivalves & univalves, the fish, the orcas and yes...our beloved salmon. Furthermore, the effects of an oil spill 'clean-up' could be almost equally catastrophic. Sometimes harsh chemicals unsafe for consumption are used as well as a new technique that disperses the oil into small particles that then cannot be collectively cleaned up and could continue to suffocate the single-celled algae that are responsible for producing most of the world's oxygen supply (the very air we breathe), for years to come.

With consistent, heavy tanker traffic in our dangerous, stormy, wild Northern waters, a significant oil spill is statistically an inevitability. As we have witnessed in the past, an oil spill in the ocean is devastating to any marine ecosystem. I believe a marine ecosystem as rich and diverse and abundant as ours deserves the utmost care and collective contemplation of the practices that we, as the people who live, work and play here, allow in our delicate and near-pristine ocean ecosystem. If a major oil spill happens on our coast, not only will our seaweeds disappear, but so will the species dependent upon them for food and shelter. So too, we fear, will the health & lifestyle of the west coaster.

Amanda Swinimer, BSc+ Marine Biology, is the Owner/Operator of Dakini Tidal Wilds. Amanda wild-harvests local edible seaweeds and teaches people about seaweeds via educational tours, workshops and at schools.

Christine Hopkins, registered aromatherapist, thalassotherapist, sells seaweed for therapeutic use in baths and for skin absorption, and teaches people about the amazing healing properties of seaweeds.

Learn more about seaweeds by visiting www.dakinitidalwilds.com. Amanda & Christine will be teaching classes on seaweeds at Royal Roads University in winter 2014/spring 2015.

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