

## News

### Sea Squirt Celebrity

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Dr. James Dalby, a research and development officer in the Policy & Industry Competitiveness Branch, AGRI, holds an interesting and multi-faceted job. He monitors and reviews scientific studies on aquaculture, performs statistical analyses of agriculture economic data, and provides statistical advice to biologists in ENV.

Sounds good, but what about [sea squirts](#)?

#### Sea squirts need better press

For his doctoral research, James was interested in studying things that live on the seabed, so sea squirts were a natural choice. Sea squirts are so named because, surprise, they squirt water when you poke them – they're filter feeders (basically, underwater vacuum cleaners.)

Here are some interesting facts about this prolific but largely unappreciated creature:

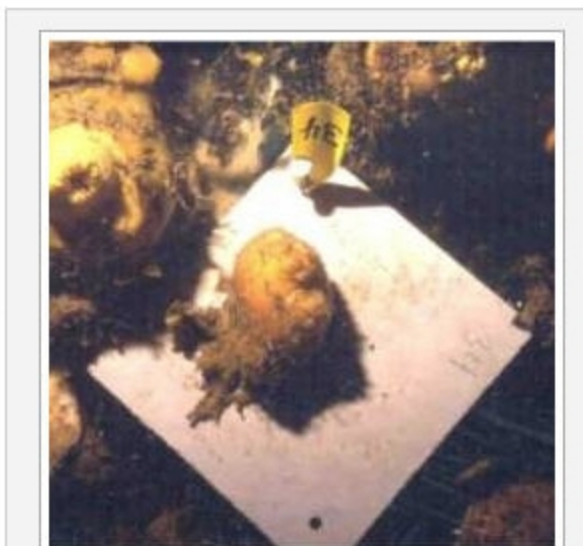
- They're common in every harbour in the world, including the B.C. coastline. Look for them attached to the pilings of wharfs.
- Sea squirts get around. They attach to boat hulls and get into ballast tanks and are transported around the world. P.E.I. has a serious problem with introduced sea squirts destroying their mussel industry.
- They're farmed and eaten in Japan and Korea and eaten in Chile, France, Italy and Greece. But as James says, "So far we've had no appetite for them in Canada."
- And, strange but true, sea squirts are our closest invertebrate relatives. This is due partly to their pharyngeal slits, which humans also have at an early stage of embryonic development.

#### The Dalby discovery

For his Ph.D., James wanted to know if sea squirts' appearance was a product of genetics or the environment. At the time, he believed he was studying two different environmental forms of the same species, but by the end of his research, he concluded he was actually dealing with two distinct species.

James completed his thesis in 1994, deciding that someone else could formally describe and name the new species if they wished. Seventeen years later, someone did. Two researchers studying sea squirts published a [scientific paper in Zootaxa](#) stating they'd named the new species after James.

"WE NAME THE NEW SPECIES PYURA DALBYI AFTER DR. J.E. DALBY JR. WHO REPORTED DISTRIBUTIONAL, MORPHOMETRIC AND ECOLOGICAL DIFFERENCES BETWEEN THIS SPECIES AND P. PRAEPUTIALIS."



Individual of *Pyura dalbyi* (sea squirt) on settling plate Williamstown Breakwater Pier, 1990

"It's a great honour," says James. "When it happened, I asked myself when in my career have I ever met someone who's had a species named after them? There was no one. Usually it's just people who've died and are famous in their field."

Congratulations, James! Thanks to your pioneering research, your sea squirt friends now have a name, and yours will live on in them.

#### Say what?

"Ontogeny recapitulates phylogeny." This famous phrase by biologist [Ernst Haeckel](#) states the hypothesis that in developing from embryo to adult, animals go through stages resembling successive stages in the evolution of their remote ancestors. In biology, there are several examples of embryonic stages showing features of ancestral organisms, but the concept has largely been discredited. (Which means you don't need to invite sea squirts to your next family reunion.)

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#### Marine Man

Before joining the BC Public Service in 2000, James was a marine researcher. He did his master's degree at Florida State University in Tallahassee, his Ph.D. at Melbourne University in Australia, and two post-doctoral fellowships, all in the field of marine ecology. He eventually dropped anchor in Edmonton, where he taught biology and statistics before joining us.



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