

## Spawning Season at Deception Pass

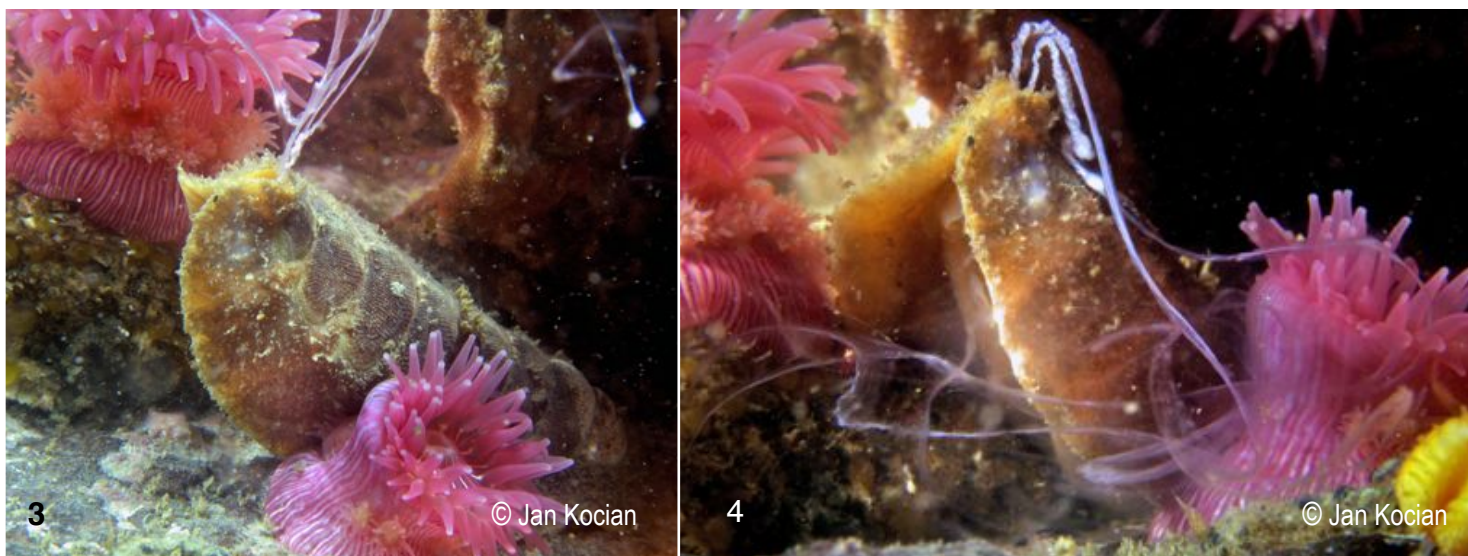
by Linda Schroeder and Jan Kocian

Spring is in the air, and underwater. On April 9th, member, Jan Kocian, was diving on the south side of Deception Pass in 40 ft of water when he witnessed several species of invertebrates spawning. He wrote me "I was diving at Deception Pass when I found myself in an area where spawning was underway in a big way. Many of the Red sea cucumbers and mainly sea stars were releasing gametes into the current and I was moving from place to place when I spotted what I thought was a chiton doing same. But only two individuals, one male and one female." He was able to capture the event with his camera. He commented that he returned the next day and saw different species of sea stars spawning but didn't find the chitons again.

I sent the photos to a few chiton experts to verify the species and spawning behavior. The consensus was that it is *Mopalia swanii* (Carpenter, 1864). Doug Ernisse noted that the female is releasing her eggs from an inverted position and this may possibly be to enhance dispersion of the eggs. Roger Clark indicated that it is quite common to see *M. swanii*



1. The female has just lifted most of its body up off the bottom and is arching backward as it begins [inset] to release its eggs. 2. The eggs can be seen dispersing in the water as the female releases them in a steady stream. 3. The male is arching its body upward at the same time as it begins releasing its sperm in long, ropy strings. 4. The strings of sperm dissolve quickly after being released and will form a milky white cloud around the the male. Of the thousands of eggs released by the female, only those eggs which pass though the cloud of sperm, might be fertilized. Most will just drift away and become food for other marine animals. Of the eggs which are fertilized, only a small number will reach adulthood. G.H



among the brooding anemone, *Epiactis prolifera* Verrill, 1869, and commented that this chiton is “ravenous” and “a rock scouring beast!”

Jan is an avid diver and photographer. He presents his fabulous photos in a unique way on his webpage on SmugMug. [www.jankocian.smugmug.com](http://www.jankocian.smugmug.com) His photo collages present various aspects of underwater life and are often illustrated with cartoons he draws, which help detail the experience. Interspersed with the photos he sometimes includes tidbits of information.

On a photo page he did in 2010, Jan summarizes chiton reproduction. “[Chitons have] separate sexes. Males deposit sperm into the water and females lay eggs in strings, clusters or spiral arrangements. Eggs may be free-floating single cells or enclosed in jelly-like capsules or strings.” This page captures a *Cryptochiton stelleri* spawning. Look for it in the photo gallery called “Tunicates & Sponges, clams etc.”. It is photo number 205.

For further information on chiton reproduction, visit the website A Snail’s Odyssey, done by Dr. Thomas Carefoot, Emeritus, Department of Zoology, UBC. [www.asnailsodyssey.com](http://www.asnailsodyssey.com) Look under Mollusca – Chiton – Reproduction. We’ve shared many of our website’s photos with his informative site. Both sites are included on the Links page of our club’s website.

A special thanks to Doug Eernisse, Roger Clark and Anthony Draeger for their input in identifying the chiton and clarifying some of its behavior.