



The
SeaDoc
Society

November 2006 Research Update

A Marine Ecosystem Health Program



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Dear SeaDoc Society Supporter:

Many people have been concerned that a burgeoning harbor seal population is responsible for the declines in bottomfish like rockfish, lingcod and greenlings, but nobody has the data to show if this is true or not. If seals are eating large numbers of bottomfish, it's important to know so we can make good decisions about where to locate bottomfish protection areas.

Filling a critical science gap, the SeaDoc Society funded Steve Jeffries and Monique Lance to determine harbor seal diet in rocky areas where bottomfish occur, and the first year of data from this two-year project are very interesting. Of 507 harbor seal scats collected and analyzed from 18 different sites in 2005 and early 2006, rockfish remains like vertebrae and ear bones (otoliths) were only found in 4 samples and greenling were only found in 3 samples. No lingcod remains were found in any of the samples examined.

Instead of bottomfish, it appears that seals in rocky habitats prefer to eat adult salmonids and small schooling fish. In fact, 80% of the scat samples collected during the summer and fall contained adult salmon (mostly pink salmon) and 70% of the samples collected in winter and spring contained Pacific herring. Other fish that made up a large part of the seals' diet included Walleye pollock, Pacific sand lance, Northern anchovy, and spiny dogfish. It appears that when salmon, herring, and other favored species are available, seals prefer to eat them over rockfish and suggests that having robust numbers of forage fish is important for rockfish recovery. Some species of rockfish feed on forage fish and having adequate forage fish around also might protect them from predation from seals. After all, why eat a single spiny, poisonous rockfish when you can eat from a school of fatty forage fish?

This unique SeaDoc-funded science is continuing through 2006 and with no run of pink salmon this year (they only run in odd years here), it will be interesting to see what harbor seals prefer to eat in the summer and fall. These data also are being shared with people who manage bottomfish populations, set quota for herring, dogfish and other harvested species, work on marine protected areas, and work on understanding food webs in the Puget Sound Georgia Basin. Understanding and working to restore an ecosystem under pressure is not simple and relies on solid information. Your donations to the SeaDoc Society have made this important work possible and we thank you for your continued support. For more information on this and other SeaDoc Society-sponsored research visit our website: www.seadocsociety.org.

With Thanks,

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