

Article type: Data Papers

Size, growth, and density data for shallow-water sea urchins from Mexico to the Aleutian Islands, Alaska, 1956–2016

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This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1002/ecy.2123](https://doi.org/10.1002/ecy.2123)

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Abstract.

Size, growth, and density have been studied for North American Pacific coast sea urchins *Strongylocentrotus purpuratus*, *S. droebachiensis*, *S. polyacanthus*, *Mesocentrotus (Strongylocentrotus) franciscanus*, *Lytechinus pictus*, *Centrostephanus coronatus*, and *Arbacia stellata* by various workers at diverse sites and for varying lengths of time from 1956 to present. Numerous peer-reviewed publications have used some of these data but some data have appeared only in graduate theses or the gray literature. There also are data that have never appeared outside original data sheets. Motivation for studies has included fisheries management and environmental monitoring of sewer and power plant outfalls as well as changes associated with disease epidemics. Studies also have focused on kelp restoration, community effects of sea otters, basic sea urchin biology, and monitoring. The data sets presented here are a historical record of size, density and growth for a common group of marine invertebrates in intertidal and nearshore environments that can be used to test hypotheses concerning future changes associated with fisheries practices, shifts of predator distributions, climate and ecosystem changes, and ocean acidification along the Pacific Coast of North America and islands of the north Pacific. No copyright restrictions apply. Please credit this paper when using the data.

Key words: North America; Pacific coast; sea urchins; size structure; growth; density; historical data; *Strongylocentrotus*; *Mesocentrotus*; *Lytechinus*; *Arbacia*; *Centrostephanus*

The complete data set is available online at: [to be completed at proof stage].

Manuscript received 21 August 2017; revised 29 October 2017; accepted 17 November 2017; final version received 11 December 2017. Corresponding Editor: W. K. Michener.

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