

Chapter 9C9. Focal Taxonomic Collections: Echinoderms

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Results

Echinoderm collections over the two years of field sampling included 4 species of holothuroid, 1 species of ophiuroid, 6 species of asteroid, and 1 species ophiurioid (Table 9C9.1). No crinoid species were collected. All of these species are reported as native to Alaska. However, *Asterias amurensis*, a northwest Pacific seastar, was found at Homer spit of Kachemak Bay, off Cook Inlet. This is a range extension from the Shumagin Islands (Fisher 1930) and from the Kodiak Shelf and Izhut Bay, Kodiak Island, and Bering and Chukchi Seas, where it was found by Jewett and Feder (1981). Specimens of *A. amurensis* are not represented in the University of Alaska Museum's collections for trawl surveys in either the Gulf of Alaska (Foster, 1999 pers. comm.) or Cook Inlet (Feder and Paul 1981, Feder et al. 1981). The survey of Cook Inlet also included scuba surveys. It would have been very unusual for such collections to miss a large conspicuous sea star (30 cm from ray tip to ray tip). Prior experienced naturalists working in Kachemak Bay reported the sudden recent appearance of this species. This species is an invasive species in Tasmania, where it was probably introduced by ballast water (it has a long-lived planktotrophic larva). In Tasmania it is having adverse impacts on native bivalves and is considered to be a serious pest. We consider this species to be cryptogenic in Cook Inlet, with characteristics that are very suspicious of an NIS. Because it is a voracious predator, it could have a major impact on benthic communities.

References

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- Fisher, W.K. 1930. Asteroidea of the North Pacific and Adjacent Waters. Part 3. Forcipulata (concluded). Smithsonian Institution. U. S. Nat. Mus. Bull 76. 245 pp.
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Table 9C9.1. Echinoderms 1998, 1999

	Homer	Seward	Whittier	Growler Island	Sawmill Bay	Port Valdez	Rockey Point	Busby Island	Tatitlek	Cloudman Bay	Cordova	Constantine Harbor	Port Chalmers	Green Island	Chenega	Northwest Bay	Main Bay
<i>Eupentacta pseudoquesemita</i>	X																
<i>Cucumaria frondosa japonica</i>	X																
<i>Psolus chitonoides</i>							X	X									
<i>Cucumaria vegae</i>								X									
<i>Ophiopholis aculeata</i>							X	X					X				
<i>Pycnopodia helianthoides</i>	X			X	X	X	X	X	X		X		X	X	X	X	X
<i>Evasterias troschelii</i>	X	X		X				X	X						X		
<i>Pisaster ochraceus</i>						X		X	X								
<i>Asterias amurensis</i>	X																
<i>Dermasterias imbricata</i>								X	X				X	X			
<i>Leptasterias sp.</i>								X	X					X			
<i>Strongylocentrotus droebachiensis</i>								X			X		X				