

*Shellfish for the Celestial Empire: The Rise and Fall of Commercial Abalone Fishing in California.* TODD J. BRAJE. 2016. University of Utah Press, Salt Lake City. xiv + 242 pp., 57 figures. \$34.95 (paperback), ISBN 978-1-60781-496-2.

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In 2003, Todd Braje and a contingent of students initiated unprecedented research on the Northern Channel

Islands off of southern California: a survey/testing project that targeted commercial Chinese abalone fishing from the late nineteenth century. Sites representing this short-lived (ca. 40 years) enterprise were known from the islands, but this was one of the first projects to focus exclusively on this ethnic group on the northern islands. Nineteenth-century Chinese sites are, in general, common in California, especially from the gold-mining era, and their distinctive artifact assemblages are well documented, but Braje's project focused on a Chinese enterprise that probably few people are aware of. Goals of the project seem to have been twofold. First, the team sought to archaeologically confirm and further illuminate the history of this understudied ethnic industry. Fleshing out the histories of overlooked ethnic minorities has been a *raison d'être* for historical archaeology in California and elsewhere for many decades, and, in and of itself, this might not have been worthy of National Science Foundation funding. However, the second and more substantive goal of the project was one of historical ecology, the idea that archaeologists can provide deep time depth to modern ecological/environmental systems. The notion that archaeology can contribute to ecology in this way has also been bandied about for some time, but many studies espousing this goal have fallen short on substantive data. As such, the historical ecology approach may not have received the type of attention from biologists and other environmental scientists that its proponents hope for. Braje sought to improve this situation by investigating the nature and potential effects of Chinese commercial exploitation of black abalones in the nineteenth century. By identifying Chinese sites and measuring the size of the black abalone shells resulting from the harvest, and then comparing them with measurements from the preceding 11,500 years, Braje sought to provide a critical missing piece in the not fully understood ecological puzzle of kelp forests, abalone, sea otters, and humans.

With this book, Braje is partially successful in accomplishing these goals. Relying on recent and authoritative syntheses by others, he provides a well-written review of literature on the history of Chinese settlement and fishing in California. This contextual background makes up the bulk of the book. Braje's contribution to historical ecology is contained in a relatively small number of pages toward the back, where measurements from historic and prehistoric abalones are presented. These data, which are key findings from the study, show quite clearly that the average size of black abalones harvested by the Chinese from ca. 1858–1900 were significantly larger than those collected by Native people over the preceding years. Unfortunately Braje's interpretations of these measurements illustrate why biologists might be hesitant

to embrace archaeological contributions to ecology. The diachronic size differential seems to merit a fairly simple and straightforward conclusion—that Native Californian harvest depressed abalone sizes so that once sea otter and human predators were removed from the nearshore ecosystem (both were gone from the islands by the early nineteenth century), abalones grew larger. Chinese fishermen then had the good fortune to exploit a bonanza of large abalones when they began their commercial harvest. Driven by market forces, the Chinese most likely targeted the largest and easiest-to-find individuals in order to turn a modest profit in this challenging, risky enterprise. However, Braje does not endorse this interpretation. Rather, he weaves his findings into an ethnic/ecological morality tale of sorts, asserting that the selection of large abalones was not driven by market pressures, but that the Chinese, aware of the history of demographic collapse of abalone populations in their homeland, engaged in a conscious effort to exploit the fishery sustainably. Despite being subjected to horrendous racism and brutality in California and having only a tenuous foothold in this commercial fishery, the Chinese, according to this narrative, were motivated to harvest abalones with a conservation-oriented strategy. This alternative scenario essentially replaces the “ecological Indian” with “ecological Chinese,” despite no empirical basis for such a conclusion. Later, while discussing red abalones, Braje suggests that Native Californians during the early Holocene initiated a program to intentionally reduce sea otter populations in order to promote the growth of abalones. Unsupported by empirical evidence, this idea also detracts from the scientific findings that are a highlight of the book. Such an interpretation does little to bolster the credibility of archaeology, but instead portrays us as storytellers rather than scientists. This is an interesting book, the core of which is an important contribution to marine historical ecology, but its scientific values are lost amid attempts at sociopolitical moralizing.