Title

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Journal

Journal of California and Great Basin Anthropology, 38(1)

ISSN

0191-3557

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Publication Date

2018

Peer reviewed

Journal of California and Great Basin Anthropology | Vol. 38, No. 1 (2018) | pp. 51–73

Indigenous Persistence and Foodways at the Toms Point Trading Post (CA-MRN-202), Tomales Bay, California

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Native Californians collected and consumed wild plants and animals even as they encountered colonial programs. Persistent interaction with native plant and animal communities can usually be inferred from colonial documents or by their presence as archaeological remains collected at missions, ranchos, or other colonial sites. Growing interest in the archaeology of spaces beyond the walls of colonial sites encourages expanded perspectives on indigenous foodways and the natural environments that may have supported resilient traditions, even as both transformed. In this article, we assess the persistence of indigenous foodways at CA-MRN-202, the site of a mid-nineteenth century trading post on Toms Point in western Marin County. Analysis of zooarchaeological and paleoethnobotanical assemblages suggests native people continued to collect and consume wild foods. They also selectively incorporated new foods and new technologies, we argue, to maintain connections to meaningful places.

Archaeological studies of indigenous-colonial encounters in California explore a wide variety of theoretical issues, including research on identity, indigeneity, social memory, landscape, resistance, and more (e.g., Bernard 2008; Hull 2009; Lightfoot 2005, 2015; Nelson 2017; Panich 2013; Peelo 2010; Reddy 2015; Schneider 2015a; Silliman 2004, 2009; Voss 2008). In recent years, persistence (Panich 2013) and indigenous hinterland (Schneider 2015a) concepts have further enhanced research on colonialism by acknowledging both the simultaneous processes of change and continuity in indigenous cultural practices and identities, as well as the persistent places and sources of indigenous power that supported those resilient traditions and communities.

Continuing in this vein of research, we seek to deepen our understanding of indigenous places and practices that—in spite of their critical importance to native people confronting colonialism—have been undertheorized in California archaeology. Previous research on the Marin Peninsula of the San Francisco Bay region, for

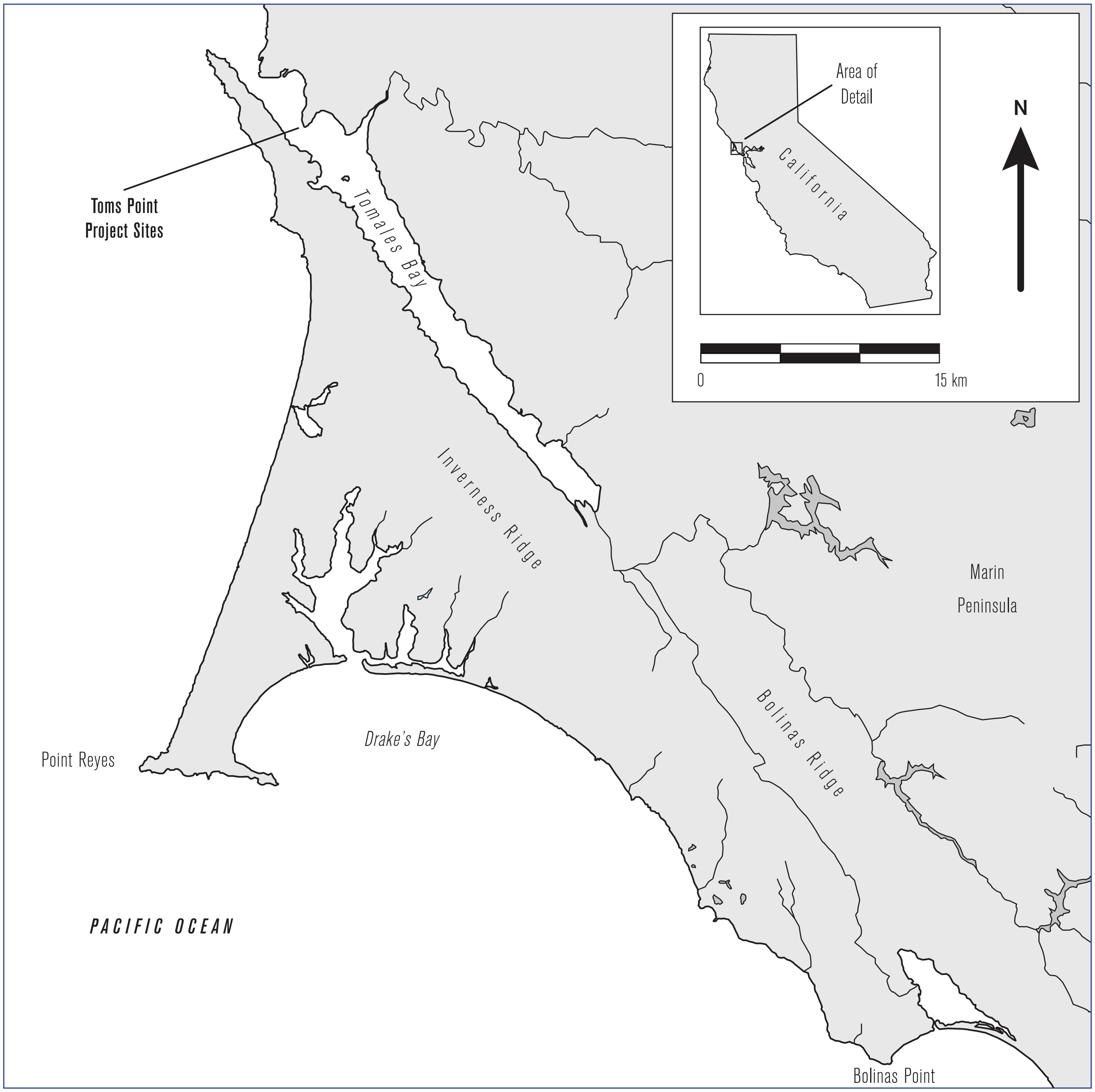

Figure 1. Location of Toms Point project sites on Tomales Bay in western Marin County, California. To protect vulnerable archaeological resources, we provide only limited locational data in the text and figures.

instance, suggested that places of indigenous continuity and change existed (e.g., Beardsley 1954; Moratto 1970); however, until recently (Schneider 2015a), very few archaeologists have addressed the value of such places for indigenous communities persisting during and following Spanish missionization. More often, the social, political, and economic decision-making of "historical" native peoples is interpreted through the lens of acculturation theory or from materials collected from within missions and other colonial sites. Indigenous places beyond the mission walls go largely unexplored, despite evidence from mission excavations—as lithic artifacts, shell beads, and (as we discuss below) the remains of native plants and animals—that suggests native people still interacted with extramural places and local plant, animal, and mineral resources.

The focus of our article is indigenous foodways—one facet of indigenous persistence visible in the zooarchaeological and paleoethnobotanical assemblages collected from CA-MRN-202, the site of a mid-nineteenth century trading post established on the shore of Tomales Bay in western Marin County, California (Fig. 1). Atalay and Hastorf (2006:283) define foodways as the "production and procurement, processing, cooking, [and] presentation" of food, as well as its consumption, disposal, and the multiple purposes of "food" resources for tools, medicines, and other materials. Here, we discuss foodways in the context of mission- and post-mission-era California (1770s–1870s) and as one framework for identifying and understanding the lives of native people who confronted colonialism, as well as the choices they made to keep certain traditions and connections to place even as those practices and relationships were transforming. Following a short overview of indigenous-colonial encounters in the San Francisco Bay area and an introduction to Toms Point, we summarize the vertebrate, invertebrate, and botanical assemblages from MRN-202 and then evaluate the significance of our findings relative to indigenous foodways and the persistence of native communities in colonial Marin County.

INDIGENOUS FOODWAYS, COLONIAL TIMES

Since time immemorial Coast Miwok-speaking hunter-gatherer-fisher peoples have called the Marin Peninsula home. The term "Coast Miwok" includes an assortment of unique language, or "tribelet," communities such as the *Olema*, *Tamal*, *Olompali*, and others (Milliken 2009). Mission-era baptismal records report that nearly 3,000 Coast Miwok and neighboring Southern Pomo peoples entered colonial missions in the San Francisco Bay area, beginning in 1783 with the baptism of a woman, man, and their daughter from a community at present-day Sausalito (Milliken 2009). Coast Miwok baptisms continued for the next 30 years, but they greatly accelerated after 1817 when native people completed the construction of Mission San Rafael in Coast Miwok homelands. Importantly, roughly two-thirds of all baptisms of people from the Tomales Bay region took place after 1817. Thus, the relatively late arrival of Franciscan missionaries to the Marin Peninsula 41 years after Mission San Francisco was constructed in 1776, the remote location of Tomales Bay and the Point Reyes Peninsula, and the dynamic international borderland that emerged between missions, interior ranches, and the Russian-American Company's mercantile outpost of Fort Ross (1812–1841), created a setting that contributed to the persistence of native people hailing from Tomales Bay during and especially after mission secularization in the 1830s.

Both changes and continuities in indigenous foodways within mission settings are supported by archaeological finds and documents. Quite often, the reports and letters produced by Franciscan missionaries describe native people's continued collection of local plants, animals, and minerals throughout the year, despite their residence at missions (e.g., Allen 1998). Indeed, missions frequently relied on hinterland resources—and indigenous knowledge of how best to access those resources—to supplement mission supplies, and the foodways choices of colonists also transformed alongside those taking place within indigenous communities (Popper 2016:19).

The eighteen missions participating in the 1813–1815 *interrogatorio* (questionnaire) support the idea that native people spent much of their lives outside the mission walls. The questionnaire contained 36 questions designed to elicit informative responses from the padres about their successes and shortcomings (Geiger and Meighan 1976). A tally of native plants, animals, and other local resources mentioned by the padres in their survey responses demonstrates a continued knowledge of resource collecting times and places, as well as protocols surrounding their collection and appropriate use in various aspects of daily life (Table 1). Padres at Mission Santa Clara, for instance, stated that "[pagan Indians] know nothing about agriculture nor do they need to practice it for they are satisfied to live on wild seeds, from the hunt and by fishing" (Geiger and Meighan 1976:26–27). At Mission Santa Cruz, native people crafted bundles of tobacco leaves as offerings at "nocturnal dances" (Geiger and Meighan 1976:50). To the south, indigenous residents at Mission San Fernando gathered red ochre for body painting and drank salt water to ensure successful deer hunts (Geiger and Meighan 1976:48). Undoubtedly, many of the blank spaces in our table could be filled with information from still other records and archaeological findings from mission sites (e.g., Allen 1998; Arkush 2011; Cuthrell et al. 2016; Popper 2016; Reddy 2015).

Table 1

SUMMARY OF MISSIONARY RESPONSES FROM THE 1813-1815 INTERROGATORIO WITH INFORMATION ABOUT NATIVE PLANTS, ANIMALS, AND OTHER RESOURCES (GEIGER AND MEIGHAN 1976)

	Plants		Mammals, Reptiles, and Birds		Fish & Shellfish		Other Resources	
Mission[a]	Food	Other Use	Food	Other Use	Food	Other Use	Food	Other use
San Diego	X	X		X				
San Luís Rey	X	X	X	X	X	X		X
San Juan Capistrano	X	X				X		
San Gabriel	X	X						X
San Fernando	X	X	X	X	X		X	X
San Buena Ventura	X	X	X	X	X	X		X
Santa Barbara	X	X	X	X	X	X		
Santa Inés	X	X		X		X		
San Luís Obispo	X	X						
San Miguel	X	X						X
San Antonio	X	X						
Soledad		X						X
San Carlos	X	X	X		X			X
San Juan Bautista	X	X	X	X	X			X
Santa Cruz		X	X		X			
Santa Clara	X	X	X	X	X			X
San José	X	X	X	X	X			X
San Francisco	X	X	X	X	X	X		X

[a] In 1813–1815, when the questionnaire circulated throughout California, missions San Rafael and San Francisco Solano had not yet been founded and Mission La Purísima was rebuilding after being destroyed by an earthquake in 1812.

Importantly, these same archival and archaeological sources detail the various ways California's diverse ecosystems swiftly deteriorated due to the introduction of domesticated animal and plant species and the spread of invasive weeds and free-ranging livestock (e.g., Allen 2010; Lightfoot et al. 2013; Preston 1998). Such insights also reflect how native diets and tastes transformed "dramatically and abruptly" to accommodate introduced plant foods and domesticated animals (Graham and Skowronek 2015:184). For instance, while padres observed that native people residing at Mission San Francisco ate wild foods, including "seeds which nature supplies them in the open country," they were also provided rations of "horsebeans, peas, wheat, barley, corn, and meat." (Geiger and Meighan 1976:88; see also Allen 2010:24–25). A recent analysis of *informes* (annual reports) prepared by padres at Mission Santa Clara over a thirty-year period suggests that grains (especially wheat), legumes, and beef formed a large part of native diets, enough to exceed minimal dietary energy requirements (Graham and Skowronek 2015:196). The same study also reflects on the unknown contribution of still other domesticated plants and animals (sheep and pigs) and wild foods to native diets, as well as unequal access to introduced foods in mission settings depending on gender, birthplace, social status, etc.—these key aspects usually go unreported (Graham and Skowronek 2015:198–99; Popper 2016:10–11; see also Peelo 2009).

In facing and overcoming threats posed by missionization, displacement, and the complete overhaul of indigenous cultures and languages within mission settings, native people likely balanced the pull of tradition with the daily reality of collecting and making a meal. Ultimately, the ways in which native people selectively took on cultural aspects introduced to them at missions and other colonial sites, we argue, should be carefully weighed against the continued opportunities they pursued beyond the confines of colonial settings. It is in this context, at Toms Point and other hinterland settings during the critical years after missionization, where we envision continued and productive research on post-contact indigenous foodways—one facet of indigenous persistence reflecting the survival of older traditions and tastes and the appearance and adoption of new ones.

The Toms Point Trading Post (CA-MRN-202)

Colonial missions, ranches, mercantile outposts, and other small-scale enterprises established on and around the Marin Peninsula between the 1770s and 1870s formed a multi-faceted and ever-changing field of constraints and opportunities for native people. To give a sense of the Marin landscape during this time, one account from Achille Schabelski characterizes the lands between Mission San Rafael and Fort Ross in 1822 as a region "entirely uninhabited by Europeans," but also home to the tents of "several unhappy fugitives from Mission San Rafael" and still other Indians "sent out… to capture [these] fugitives" (Farris 2012:111). Observations such as this suggest a landscape continually inhabited, resorted to, and re-imagined by native people—an idea that was not overlooked in early archaeological studies in western Marin County. Beardsley (1954:19) discussed Tomales Bay area as a refuge "for Indians unwilling to be converted" at Spanish missions and as a region where "survivors, or those who returned when the mission period ended, continued to live in modified aboriginal fashion." Moratto (1970:268) also described western Marin as an "attractive refugium" for native people evading or returning from missions. With some exceptions (Schneider 2015a), archaeologists have yet to fully explore the implications of such key places and themes.

Established after Spanish missions secularized in the 1830s, the community of Coast Miwok and other native and non-native people at the Toms Point trading post offers a window onto the creative choices indigenous people made, on the one hand, to anticipate and respond to adversity, and on the other hand, to remain rooted in familiar lands and cultural conventions. Located near the mouth of Tomales Bay in western Marin County, our archaeological investigations at Toms Point address three sites (CA-MRN-201, CA-MRN-202, and CA-MRN-363) that collectively reveal the story of native presence in the region from approximately 4,000 B.P. through to the present-day. MRN-202, the specific focus of this article and the site of our most extensive subsurface work, is believed to be the location of a nineteenth-century trading post established by George Thomas Wood. Wood, or "Tom Vaquero" as he was nicknamed, jumped ship off of the coast of California during the 1840s. Wood soon earned a reputation as a pioneer, entrepreneur, and the "business manager of the Indian tribes of Marin, Sonoma and Solano counties" (Lauff 2016[1916]:54; Munro-Fraser 1880:123–124). He married a Coast Miwok woman and then enlisted native people—including some arriving from former missions with skills in blacksmithing, ranching, and carpentry (Lauff 2016[1916]:54–55)—to work at Toms Point and other nearby ranches, farms, and mills.

Previous archaeology at Toms Point is described elsewhere (Panich et al. 2018:160); however, the most extensive work at MRN-202 was carried out in the 1960s by Agnes Gerkin (1967). An amateur archaeologist, Gerkin collected several hundred obsidian projectile points, groundstone tools, glass beads, porcelain, metal, and other items from the intertidal zone adjacent to MRN-202. Neither Gerkin nor anyone else before her evaluated their findings in light of the historic trading post at Toms Point; however, the artifacts she collected came from a portion of the MRN-202 site destroyed by coastal erosion and thus greatly enhance our findings from the remnant site.

With permission from Audubon Canyon Ranch and the Federated Indians of Graton Rancheria, we conducted archaeological investigations at Toms Point in 2015 and 2016. Fieldwork included digital mapping and surface artifact collection at MRN-201, MRN-202, and MRN-363, the excavation of one exploratory 1 × 1 m. unit at MRN-363, and a ground-penetrating radar survey and excavation of 11 m.^{2} at MRN-202 (Fig. 2). Given the likelihood of encountering glass beads, lithic and glass debitage, and other small finds, we used nested 1/4-inch and 1/8-inch hardware mesh screens, and we collected several soil samples for flotation analysis (see below). The MRN-202 deposits consist of approximately 50 cm. of loamy sand (sand dune) overlaying compacted silty loam; auger probes revealed deeply buried and discontinuous precontact cultural material at approximately two meters below the historic dune. No structural remains associated with the historic trading post were identified.

Figure 2. Students from U.C. Santa Cruz and Santa Clara University excavate at MRN-202 in 2016. Sandy unit in foreground is a backfilled unit from 2015 fieldwork.

The resulting artifact assemblage from MRN-202 includes faunal remains, chert and obsidian debitage and tools, metal fragments and hardware, iron stove parts, pottery, glass beads, and flaked bottle glass. Metal, glass, and ceramic artifacts were also collected from the surface of MRN-201; however, these items were restricted to the northern half of the site closest to MRN-202. Surface artifacts from the other half of MRN-201 consisted of obsidian and chert debitage and clam shell fragments—aspatial pattern we intend to confirm by AMS radiocarbon dating. The ground surface and a single excavation unit placed in MRN-363 also recovered obsidian and chert debitage, shellfish fragments, some faunal bone, and no metal, glass, or ceramic artifacts. Further analysis of the spatial and temporal patterning at Toms Point will be the focus of forthcoming publications; however, all three sites support a long-term picture of Toms Point as a persistent place inhabited during the Middle, Late, and Colonial periods. Unless noted otherwise, the following discussion treats findings from MRN-202 in aggregate.

In focusing on MRN-202, we sought to explore the lives of native residents and laborers who made places like the Toms Point trading post both lucrative for colonial interests and simultaneously a place of indigenous persistence. Occupied during and following the Mission Period, or from 1767 to 1857 (Schneider 2018), MRN-202 also represents an ideal setting to track long-term trends in indigenous foodways and cultural resilience in remote settings during a time more often viewed as a period of indigenous loss and assimilation. Our work at Tomales Bay is thus an intentional effort to reframe some of the most common histories told about Toms Point, seeking to emphasize the lives and activities of the Coast Miwok rather than the historically-famed character of Tom Vaquero. As Van Bueren (2012:91) notes for the remote coast of Mendocino County, "it is only in more recent times…that dependence on purchased food from distant places had become the norm." Investigating persistent foodways is as much about identifying new foods and processing techniques for a people subsisting during uncertain times as it is identifying how those new choices were exercised in the company of preexisting and continually-changing traditions and resources.

TOMS POINT ZOOARCHAEOLOGY

CA-MRN-202 Vertebrates

MRN-202 yielded a diverse array of faunal remains, which provide evidence for native foodways choices and the continued importance of coastal resource use in the post-Mission period at Tomales Bay. The vertebrate faunal assemblage comprising wild and domestic terrestrial mammals, marine mammals, numerous species of seabirds and fowl, and fishes reflects the continuation of indigenous foodways in a landscape altered by colonial practices and the introduction of new species. The use of wild and domestic taxa as well as marine and terrestrial fauna involved a unique combination of species both traditionally exploited by indigenous Coast Miwok peoples as well as other species brought in by European and American colonizers.

With the expansion of colonial sites across California came an influx of domestic ungulates to support these colonial endeavors. Missions depended upon large herds of cattle, sheep, and goats to feed their populations (Burcham 1957; Greenwood 1989). Beyond providing sustenance, these animals generated a key source of income for frontier missions in the form of hides and tallow, and native Californians provided the majority of labor in managing livestock (Hackel 1997; Silliman 2004). Free-ranging livestock flourished on California's grasslands, and they provided new options in terms of subsistence. The faunal assemblage from MRN-202 clarifies how native peoples in the Tomales Bay region incorporated new species into their culinary repertoire. Here we present vertebrate fauna identified beyond the broadest taxonomic categories.

At MRN-202, domestic ungulates are more common than wild ungulate species. Caprines are rare, as are equids, with only one specimen recovered for each taxonomic group. Pigs are the most numerous domesticate, and nearly all parts of the skeleton are represented, including numerous cranial and dental fragments. These patterns suggest that pigs were likely slaughtered onsite, as cranial remains are commonly discarded first as carcasses are processed. The presence of very young individuals suggests that pigs were raised, and that Toms Point residents did not hunt feral animals. Cattle make up a much smaller percentage of the identifiable specimens. As seen in the faunal remains recovered from colonial sites, including mission and ranchos, hide and tallow production usually focused on cattle, and documentary evidence suggests that hide and tallow sales may have been an economic pursuit at Toms Point (Munro-Fraser 1880). The overall paucity of cattle at the site, however, does not support the production of these goods. In fact, the Toms Point assemblage stands in stark contrast to the pattern of beef consumption and tallow production at missions, which regularly yield substantial proportions of fragmented cattle bones. We concede that cattle may have been processed elsewhere, yet the three sites we investigated at Toms Point reveal little evidence to support onsite hide processing and tallow production.

Deer have been an important resource for native Californians for millennia, and were ubiquitous in the region historically (Wake and Simons 2000). However, excavations from MRN-202 recovered only one element identifiable as deer. Such low numbers may be attributable to at least three factors. First, deer may have been available, but simply were not harvested by people living at Toms Point. Second, deer may have been hunted, but their bones were so fragmented that they were not identifiable. Third, deer may have been rare in the region due to overhunting or habitat loss stemming from vegetation changes and the introduction of free-ranging livestock. Leporids are another common component of California faunal assemblages, and their presence at Toms Point may reflect their persistent role in native diets (e.g., Bernard 2008:281); however, we also note that the majority of elements appear to be from a single individual, discarded whole, from one unit.

Terrestrial carnivores are rare; mountain lion (*Puma concolor*) and bobcat (*Lynx rufus*) are each represented by only one phalanx. The absence of other parts of the skeleton from these taxa suggests the presence of pelts, as bones of the paws often remain attached to pelts. Pelts of both species were traditionally used by native Californians and may also have been another trade item (Lightfoot and Parrish 2009:248).

Among marine mammals, the remains of sea otter and harbor seal were recovered; however, each of these species is represented by a MNI of one. Sea otters were nearly extirpated in the nineteenth century as a consequence of the Russian-American Company enterprise at Fort

Ross, whose profits relied primarily on native Alaskan laborers who were highly skilled at hunting sea mammals from their lightweight skin boats (*baidarkas*). Native Californians and Americans were also involved in the maritime fur trade and the hunting of sea otters in Point Reyes, Tomales Bay, and Bodega Bay waters (Lightfoot et al. 2013). It is quite possible that the Toms Point occupants took part in these endeavors, though minimally, since Tomales Bay waters were likely emptied of sea otters at an early date (Lightfoot et al. 2013).

Bird bones recovered from MRN-202 are numerous, comprising a species-rich avifaunal assemblage. While chickens are present, the avifaunal assemblage includes mostly wild fowl and seabirds. Most ducks recovered belong to the genus *Anas*. These are dabbling ducks, such as mallards (*Anas platyrhynchos*), northern shovelers (*Anas clypeata*), and cinnamon teal (*Anas cyanoptera*). These taxa outnumber diving birds, including diving ducks, grebes, loons, and cormorants (Table 2). Dabbling ducks generally inhabit smaller bodies of water than do diving ducks, suggesting that such areas were targeted for hunting fowl, possibly with the use of nets (Collier and Thalman 1996:129). Similarly, birds like the pied-billed grebe (*Podilymbus podiceps*), which typically inhabit ponds and marshes, testify to the exploitation of smaller bodies of water. Other taxa such as pelicans and gulls were likely hunted using other methods. Only one raptor (*Buteo* sp.) element was recovered; this single wing bone (a carpometacarpus) suggests the animal may have been used for its feathers (e.g., Gifford 1967:18). Beyond clarifying hunting strategies, the avifaunal assemblage provides a window onto seasonal scheduling at Toms Point. The presence of scoter (*Melanitta* sp.), as well as other migratory bird species that winter in California, including the snow goose (*Anser caerulescens*), greater white-fronted goose (*Anser albifrons*), and canvasback (*Aythya valisineria*), point to a likely winter occupation at MRN-202 and the hunting of migratory waterfowl.

Finally, fishes recovered from MRN-202 generally point to nearshore fishing activities. Ichthyofaunal remains were identifiable to family only (Table 3). Most numerous are fishes belonging to the family Embiotocidae (surfperches), Clupeidae (sardines and herrings), and Atherinopsidae (neotropical silversides). The majority of identified specimens belong to small schooling taxa and would have been caught with nets. Pile perch (*Rhacochilus*

Table 2

TETRAPOD FAUNA FROM MRN-202

Taxon	Common Name	NISP	MNE	MNI
Aves				
Aechmophorus occidentalis	western grebe	2	2	1
Anas clypeata	northern shoveler	6	5	2
Anas cyanoptera	cinnamon teal	2	2	1
Anas platyrhynchos	mallard	5	5	2
Anas platyrhynchos (cf)	mallard (cf)	2		
Anas sp. (small)	small dabbling duck	1		
Anas sp. (medium)	medium dabbling duck	28		
Aythya valisineria	canvasback	1	1	1
Branta canadensis	Canada goose	2	2	1
Branta canadensis (cf)	Canada goose (cf)	1		
Anser caerulescens	snow goose	1	1	1
Anser albifrons	greater white-fronted goose	1	1	1
Anatidae (medium)	medium ducks, geese, swans	8		
Anatidae (large)	large ducks, geese, swans	1		
Anatidae (cf, large)	large ducks, geese, swans	1		
Buteo sp.	hawk	1	1	1
Podilymbus podiceps	pied-billed grebe	1	1	1
Melanitta sp.	scoter	2		
Phalacrocorax penicillatus	Brandt's cormorant	4	4	1
Phalacrocorax sp.	cormorant	2		
Gallus gallus	chicken	4	4	1
Gallus gallus (cf)	chicken (cf)	1		
Galliformes	chicken-like bird	1		
Gavia pacifica	Pacific loon	1	1	1
Gavia immer	common loon	1	1	1
Gavidae	loon	1		
Larus sp.	gull	1	1	1
Larus (cf)	gull (cf)	1		
Laridae	gull	1		
Pelecanus occidentalis	Brown pelican	1	1	1
Marine Mammals				
Phoca vitulina	harbor seal	14	10	1
Enhydra lutris	sea otter	4	1	1
Terrestrial Carnivores				
Lynx rufus	bobcat	1	1	1
Puma concolor	mountain lion	1	1	1
Ungulates				
Bos taurus	cattle	18	18	2
Bos taurus (cf)	cattle (cf)	2		
Caprinae	sheep/goat	1	1	1
Odocoileus hemionus	mule deer	1	1	1
Ruminant (medium)	medium ruminant	1		

Table 2 (*Continued*)

TETRAPOD FAUNA FROM MRN-202

Taxon	Common Name	NISP	MNE	MNI
Sus scrofa	pig	65	49	4
Artiodactyla indet. (medium)	medium artiodactyl	4		
Artiodactyla indet. (large)	large artiodactyl	13		
Equus sp.	horse/donkey	1	1	1
Small Mammals				
Sylvilagus bachmani	brush rabbit	3	3	1
Lepus californicus	black-tailed jackrabbit	7	7	1
Leporidae	rabbit indet.	40		
Ondatra zibethicus	muskrat	1	1	1
Thomomys sp.	northern pocket gopher	5	1	1
Peromyscus sp.	deer mouse	2		
Sciuridae	squirrel	1		
Scapanus latimanus	mole	3	3	1
Total		**273**		

Table 3

TETRAPOD FAUNA FROM MRN-202

Taxon	Common Name	Total NISP	MNI
Fish			
Chondrichthyes (cf)		1	
Myliobatis californica	bat ray	5	1
Myliobatis californica (cf)		3	
Chondrichthyes	cartilaginous fish	4	
Actinopterygii	ray-finned fish	97	
Atherinopsis californiensis	jacksmelt	4	
Atherinopsidae	neotropical silversides	80	
Atherinopsidae (cf)		1	
Clupea pallasii	Pacific herring	31	5
Clupea pallasi (cf)		1	
Sardinops sagax	South American pilchard	1	1
Clupeidae	sardines & herrings	140	
Clupeidae (cf)		2	
Archoplites interruptus (cf)	cf. Sacramento perch	1	
Stichaeidae	prickleback	1	
Rhacochilus vacca	pile perch	16	4
Scorpaenichthys marmoratus	cabezon	3	1
Sebastes sp.	rockfish	13	
Sebastes sp. (cf)		3	
Embiotocidae	surfperches	110	
Embiotocidae (cf)		12	
Porichthys notatus	plainfin midshipman	1	1
Platichthys stellatus	starry flounder	2	1
Pleuronectiformes	flatfish	1	
Total		**533**	

vacca) and cabezon (*Scorpaenichthys marmoratus*) inhabit rocky intertidal areas and kelp beds, indicating that these areas were also resorted to for fishing. Other specific identifications also point to nearshore fishing activities. While Pacific herring (*Clupea pallasii*) is found in a range of environments—including marine, freshwater, and/or brackish waters—large numbers of Pacific herring also spawn in the eelgrass beds of Tomales Bay each winter, including beds seen around Toms Point. Moreover, a recent study of Pacific herring, a "cultural keystone species" for indigenous societies of the Pacific Northwest, showed these to be an important source of healthy omega-3 fatty acids (Moss 2016).

CA-MRN-202 Invertebrates

The remains of marine invertebrates are one of the most pervasive elements of California coastal archaeological sites, and they constitute most of the zooarchaeological assemblage of MRN-202 by weight. Marine invertebrates collected from MRN-202 are summarized in Table 4. Although quantifying shell by weight can be problematic when making comparisons to other faunal remains and between shellfish species (Claassen 1998:107), it can also be a useful starting point to begin identifying the characteristics of the assemblage and drawing comparisons to other coastal archaeological sites dating to a similar time period. One noticeable feature of the MRN-202 shellfish assemblage is, quite simply, the large amount of shell at a historical site supposedly involved primarily in the business of hide and tallow production.

The invertebrate shell assemblage from MRN-202 is dominated by bivalves, specifically protected habitat clams (approximately 54% of the total assemblage) such as Pacific gaper clam (*Tresus nuttallii*), Washington clam (*Saxidomus nuttalli*), and littleneck clam (*Leukoma staminea*). Pacific gaper clams represent the majority of identified bivalves in the MRN-202 shellfish assemblage, and they are still collected between Toms Point and Sand Point to the northwest by clam diggers at low tide. *Mytilus* spp. (bay or California mussel) shells comprise approximately 39% of the total invertebrate assemblage. The smallest portion of the assemblage includes fragments of red abalone (*Haliotis rufescens*), Olympia oyster (*Ostrea lurida*), barnacle, and crab. Thus, the invertebrate assemblage is characterized by species belonging to soft mud-gravel and rocky substrates. This

Table 4

INVERTEBRATES BY WEIGHT (g.) FROM MRN-202

	2015 Excavation Unit Coordinates					2016 Excavation Unit Coordinates						
	1007N, 1009E	1007N, 1010E	1003N, 1007E	1003N, 1008E	1001N, 1005E	1000N, 1004E	1000N, 1005E	1001N, 1004E	1000N, 1001E	999N, 1001E	997N, 999E	
	Depth (cm.)					Depth (cm.)						
Shellfish	**70**	**100**	**70**	**80**	**60**	**55**	**35**	**55**	**50**	**50**	**50**	**Total**
abalone	...	...	...	...	112.14	123.25	33.99	5.11	62.96	54.08	43.16	434.69
barnacle	...	...	...	...	...	5.96	18.55	1.00	20.56	15.70	0.40	62.17
clam	103.61	138.86	272.38	176.59	313.23	450.87	256.58	185.74	907.06	1,001.11	533.62	4,339.65
crab	...	...	...	...	1.41	...	...	...	0.86	1.31	0.57	4.15
gastropod	...	...	...	...	...	31.86	...	...	...	...	...	31.86
mussel	36.56	71.76	159.28	243.2	295.42	363.12	110.06	127	908.43	766.96	131.21	3,213.00
oyster	0.15	...	...	...	...	...	...	...	...	...	...	0.15
UnID shell	...	...	0.08	1.48	8.19	...	1.28	...	3.62	...	3.43	18.08
Total	**140.32**	**210.62**	**431.74**	**421.27**	**730.39**	**976.81**	**421.46**	**319.22**	**1,903.49**	**1,839.16**	**712.39**	**8,106.87**

suggests that the intertidal zone around Toms Point and across Tomales Bay at Point Reyes offered residents a wide assortment of native foods.

Archaeologists have long looked to coastal resources and artifacts for evaluating past environments and the subsistence practices, social organization, and settlement patterns associated with indigenous peoples in California (Erlandson 1988; Moss 1993; Yesner 1980). With some exceptions (Hunter et al. 2014; Schneider 2015b), however, the archaeological study of shellfish and indigenous shell-fishing is not a typical focus of research investigating colonial encounters. Moreover, as Lepofsky et al. (2015) have argued for the Pacific Northwest, the study of intertidal resource management has been largely overlooked for a variety of intellectual and ecological reasons. Our investigations at Toms Point, where a modest assortment of invertebrate faunal remains was collected, are thus an important opportunity to address aspects of indigenous foodways beyond the typical scope of the archaeology of the colonial era. To this end, we have viewed the Toms Point shellfish assemblage as a unique window onto persistent shell-fishing practices at Tomales Bay, including the continuation of traditional techniques for managing ancestral tidelands and maintaining private clam beds.

According to Baker (1992), the Tomales Bay "clam gardens" were the focus of indigenous "conservation" methods that continued into the 1930s. Those methods included imposing limits on the numbers of clams harvested, as well as the purposeful collecting of adult clams to encourage the growth of juveniles—a technique also applied to terrestrial bulbs and corms to encourage a healthy population (Anderson 2005:297-300). "It was the act of harvesting…that was keeping the clam beds healthy" (Baker 1992:29; see also Deur et al. 2015). Lepofsky et al. (2015:241-242) note that indigenous communities of the Pacific Northwest regularly tilled rocky substrates in clam gardens to make them softer, easier to dig, and more supportive of young clams. In addition to aerating beds and culling adult clams, native people removed unwanted debris and incorporated "shell hash," or pulverized barnacle shells, to create a nurturing environment for clam larvae (Lepofsky et al. 2015:243, 245; see also Groesbeck et al. 2014, and Lepofsky and Caldwell 2013).

For California, we find it particularly intriguing that native communities along Tomales Bay appear to have continued to abide by protocols for managing, collecting, and privately owning clam beds (Collier and Thalman 1996:194), and it is relatively late in time—during the early twentieth century when Coast Miwok families were ultimately dispossessed of their shoreline homes—that we see the degradation of the Tomales Bay shellfish habitats. "When [Coast Miwok] stopped digging the way they used to, there was really a good bit of loss because the young clams had no room to grow" (Baker 1992:29). This perspective informs our efforts to understand indigenous persistence at Toms Point, a place known on occasion to host a "good old-fashioned clam bake" during warm summer evenings (Lauff 2016[1916]:55). What might intertidal resource management look like archaeologically, and could our findings be used one day to help revitalize Tomales Bay clam beds?

Apodaca (2017) recently attempted to identify traditional ecological knowledge of intertidal resource management in the MRN-202 clamshell assemblage. This work mirrored recent efforts to develop a statistically reliable technique for estimating the sizes of whole mussels based on fragmented archaeological specimens (Campbell and Braje 2015; Singh and McKechnie 2015). Accordingly, length, width, and height measurements were taken on the umbones of modern *Tresus* clams collected from Tomales Bay and Elkhorn Slough Reserve (Apodaca 2017:35). Bivariate regression analysis and a one-way analysis of variance (ANOVA) of these data suggest umbo length to be a statistically reliable measure for predicting the sizes of past clam valves (Apodaca 2017:40). Using the modern shell metrics as a proxy for evaluating clam valve size, it seems that fewer juvenile clams than adults appear in the MRN-202 sample. We posit that this patterning may reflect the routine, selective harvesting practices of Toms Point residents, perhaps especially Coast Miwok people abiding by traditional knowledge of clam-bed management. Additional research on increasing shell size, morphology, and size and age profiles is underway (Apodaca 2017:49–51). However, our preliminary results invite new questions about the development, mechanics, and resilience of terrestrial *and* intertidal resource management, their relevance to present-day habitat restoration projects, as well as the gendered nature of critical food collecting and tending activities in the colonized homelands of coastal hunter-gatherer-fisher peoples.

TOMS POINT PALEOETHNOBOTANY

Recent archaeological research on indigenous persistence in California has begun to include discussions of hinterlands into analyses of the Spanish mission period, looking beyond conventional sites of colonialism (e.g., missions, forts, etc.) to incorporate native villages and broader landscapes occupied before, during, and following the colonial period (Panich and Schneider 2015). However, archaeobotanical analyses of the post-contact period are published infrequently, and they almost exclusively pertain to missions and forts rather than broader cultural landscapes, effectively highlighting the need for ethnobotanical studies of hinterland spaces (Allen 1998; Cuthrell et al. 2016; Reddy 2015; Schneider 2015a).

As Seetha Reddy (2015) noted in her examination of traditional Native American lifeways along the coast of Southern California, the study of food plants and meal preparation techniques reveals the persistence of indigenous traditions, demonstrating how native communities actively and intentionally selected food plants of both native and Old World varieties to negotiate tribal identity during a period of rapid change (see also Graesch et al. 2010:235–236). Such studies highlight the complexity and agency of indigenous communities in their responses to colonial entanglement and changing subsistence options. In addition to studies of foodways and choice, post-contact archaeobotanical studies can further clarify the timeline of landscape change following the colonization in California. While the introduction of Old World fauna and flora had an overwhelming impact on the landscapes of the California coast (Allen 2010; Diekmann et al. 2007; Lightfoot 2005; Preston 1998), the precise timing and speed of changes in landscapes have not been fruitfully examined (Reddy 2015). Moreover, many authors have described the impact of exotic plant invasion in mission landscapes during the early colonial period, yet the pace of environmental impacts in non-mission and post-mission settings leaves the story of California's hinterland landscapes open to further study.

In this section, we present the results of analyses of nine flotation samples recovered from MRN-202 in order to explore how this class of material can improve our understanding of indigenous foodways choices, cultural practices, and landscape composition. Our approach aims to contribute to a potentially rich area for future research, expanding historical-period archaeobotany beyond colonial sites to include native places of persistence and refuge, and integrating hinterland landscapes and foodways into conversations on colonialism (Panich and Schneider 2015).

Methods

Nine flotation samples were collected from MRN-202 in 2015 (n=4) and 2016 (n=5). Contexts were selected randomly for flotation sampling, and soil sample volumes ranged from 1.5 to 10.0 liters. In 2015, we emphasized the collection of larger bulk soil samples; in 2016, we implemented a scatter sampling strategy intended to more accurately and efficiently characterize context average values using slightly smaller soil samples.

Flotation samples were processed at the Archaeological Research Facility at UC Berkeley using an SMAP-type flotation tank constructed by R. Cuthrell (Pearsall 2000). The heavy fraction mesh was window screen ca. 1.0 mm. in aperture size, and the light fraction mesh was chiffon ca. 0.2 mm. in aperture size. Prior to flotation, samples were soaked in a ca. 0.1% solution of sodium hexametaphosphate for several hours to deflocculate. To test recovery rates, 50 poppy (*Papaver somniferum*) seeds were added to three flotation samples (Flot #1–3) prior to processing. Immediately after flotation separation of light and heavy fractions, the light fraction was gently agitated in a solution of ca. 0.1% sodium hexametaphosphate, followed by a water rinse in order to remove as much adhering sediment from charred botanical remains as possible.

The light fraction was separated into the following size classes using USGS standard sieve series: >2 mm., 1–2 mm., 0.5–1.0 mm., 0.3–0.5 mm., and <0.3 mm. Materials <0.3 mm. in size were not analyzed. Wood charcoal, geophytes, parenchyma, and clinker (i.e., vitrified material) were quantified from the >2 mm. fraction only. Nutshell was quantified from the 1–2 mm. and >2 mm. fractions. Charred seeds were quantified from all analyzed size fractions. All size fractions were sorted fully except for the 0.3–0.5 mm. size fraction, from which a 50% subsample was often sorted (Flots #1, 2, 3, 5, 7, 8, and 9). In cases where the 0.3–0.5 mm. size fraction was subsampled, the number of recovered specimens from this size fraction was multiplied by the inverse of the subsample proportion to estimate total specimens recovered. Macrobotanical remains were analyzed in the McCown Archaeobotany Laboratory at UC Berkeley, and specimens were identified using physical and online reference collections (Calflora 2017; DiTomaso 2007; MacDonald 2017). Ecological data on plant habitats was synthesized from Baldwin et al. (2012), Calflora (2017), and DiTomaso (2007). Information about indigenous cultural uses of plants was synthesized from Anderson (2005), Lightfoot and Parrish (2009), and Moerman (2017).

Results

The results of macrobotanical analysis are presented in Table 5, reporting total number of recovered specimens, and Table 6, reporting densities. Poppy seed recovery rate tests on Flot #1–3 yielded rates of 94%, 94%, and 96% recovery, respectively, indicating that the flotation system recovered almost all unbound macrobotanical remains. A total of 9,662 specimens were identified to the taxonomic level of family or genus (Table 5).

Eight of the nine flotation samples were collected from historical deposits at MRN-202. Among these samples, the density of macrobotanical remains was high, ranging from 63.6–512.8 n/l. (specimens per liter), and density of wood charcoal was moderate, ranging from 89.0–806.5 mg./l. Generally, the overwhelming majority of macrobotanical remains recovered originate from herbaceous grassland taxa that would not have been used for food. The most abundant taxon, comprising over half of the assemblage, was bedstraw (*Galium* sp., with many cf. *G. aparine*, ca. 60%), representing annual or perennial herbs of uncertain nativity tolerant to open grasslands and/or shade. Other taxa comprising substantial proportions of the assemblage included the exotic ruderal herb mallow (*Malva* sp., ca. 18%), grasses (Poaceae, ca. 9%), and exotic annual ruderal herbs in the pink family (Caryophyllaceae, including *Stellaria* sp., ca. 8%). Together, these categories comprised ca. 95% of the macrobotanical assemblage.

Although present in low densities, a number of other taxa have significant interpretive value (Table 7). A variety of edible nuts, including oak (*Quercus* sp.), tanoak (*Notholithocarpus* sp.), hazelnut (*Corylus cornuta* ssp. *californica*), and California bay (*Umbellularia californica*) were recovered. These are unlikely to have grown in the sandy soils that characterize the MRN-202 vicinity and therefore likely represent cultural use of the taxa as food. The remaining taxon in the “Nutshell” category, wild cucumber (*Marah* sp.), is represented by the large seed of a long-lived geophyte vine. This seed is inedible, but it was widely used for medicinal purposes by native people in California and is commonly recovered from archaeological sites (Martin 2009).

One grain of wheat (*Triticum* sp.) and several examples of probable Old World domesticated grains (or alternatively, exotic wild oats, *Avena* sp.) were also recovered, along with a portion of rachis (i.e., seed head)

Table 5

QUANTITIES OF MACROBOTANICAL REMAINS RECOVERED FROM MRN-202 (WEIGHTS IN MG.)

	Unit Coordinates		**1007N, 1009E**	**1001N, 1005E**	**1003N, 1008E**	**1000N, 1005E**	**999N, 1001E**	**1001N, 1004E**	**999N, 1001E**	**1000N, 1004E**	**997N, 999E**	**Totals**
	Context				Ctx 1		Ctx 2		Ctx 2	Ctx 2		
	Depth		60–70	40–50	60–70	30–end	20–30	30–end	30–40	30–40	180–200	
	Flot #		1	2	3	4	5	7	8	9	10	
	Volume (l)		9	10	8	1.4	2.5	4	3	3.5	4	
	Charcoal wt.		4,294.80	2,852.60	712.3	607.2	1,305.30	1,237.80	804.7	2,822.80	573.1	**15,211**
Taxon	**Common Name**	**Nativity**										
Nutshell												
Corylus ct.	hazelnut	native	–	–	–	–	–	1	–	2	–	**3**
Corylus wt.			–	–	–	–	–	33.8	–	17.2	–	**51**
Marah ct.	wild cucumber	native	17	3	41	2	1	2	2	2	2	**72**
Marah wt.			32.9	6.3	70.1	3.2	2	1.1	2.7	11.1	1.3	**131**
Notholithocarpus ct.	tanoak	native	–	–	–	1	1	4	1	–	–	**7**
Notholithocarpus wt.			–	–	–	1.5	1.1	4	0.3	v	–	**7**
Quercus ct.	oak	native	4	1	3	–	–	–	–	1	–	**9**
Quercus wt.			5.6	0.7	1.5	–	–	–	–	0.6	–	**8**
Umbellularia ct.	California bay	native	1	1	2	–	–	1	2	–	–	**7**
Umbellularia wt.			1.1	2.3	1.3	–	–	0.4	2.5	–	–	**8**
Seeds (Genus)												
Amsinckia ct.	fiddleneck	native	–	5	5	3	1	–	3	1	–	**18**
Cirsium (cf) ct.	thistle	exotic	–	2	4	–	–	–	–	–	–	**6**
Cryptantha ct.	cryptantha	native	–	–	–	–	–	–	–	–	1	**1**
Erodium ct.	filaree	exotic	–	1	1	–	1	–	–	–	–	**3**
Galium ct.	bedstraw	indet.	973	515	3,477	58	122	77	163	289	51	**5,725**
Malva ct.	mallow	exotic	–	551	2	4	118	217	63	790	–	**1,745**
Phacelia ct.	phacelia	native	58	30	62	2	13	4	20	18	2	**209**
Plantago ct.	plantain	indet.	–	–	–	–	–	1	–	–	–	**1**
Rubus ct.	blackberry	native	–	–	1	–	–	–	–	–	–	**1**
Rumex ct.	dock	indet.	–	–	1	–	1	1	1	1	–	**5**
Scrophularia ct.	figwort	native	–	1	16	–	–	–	–	–	–	**17**
Silene ct.	catchfly	indet.	–	–	–	–	1	–	–	–	–	**1**
Silybum ct.	milk thistle	exotic	–	8	–	–	–	–	–	1	–	**9**
Solanum ct.	nightshade	indet.	–	2	–	–	–	–	–	–	–	**2**
Spergularia ct.	spurry	native	3	1	1	–	–	–	–	2	–	**7**
Stellaria ct.	starwort	exotic	22	28	3	1	–	4	5	198	–	**261**
Trifolium ct.	clover	indet.	1	3	–	–	–	–	–	1	–	**5**
Seeds (Family)												
Asteraceae ct.	sunflower fam.	indet.	1	10	25	2	2	5	–	2	1	**48**
Boraginaceae ct.	borage fam.	indet.	–	–	–	–	–	–	2	–	–	**2**
Brassicaceae ct.	mustard fam.	indet.	–	–	–	–	–	–	1	3	–	**4**
Brassicaceae (cf) ct.	mustard fam.	indet.	–	–	–	–	2	–	3	17	–	**22**
Caryophyllaceae ct.	pink fam.	indet.	12	56	–	4	38	56	22	291	–	**479**
Chenopodiaceae/ Montiaceae ct.	goosefoot/ miner's lettuce	indet.	2	7	4	–	13	2	3	8	3	**42**
Cyperaceae ct.	sedge fam.	native	1	–	1	–	–	–	–	–	–	**2**

Table 5 (*Continued*)

QUANTITIES OF MACROBOTANICAL REMAINS RECOVERED FROM MRN-202 (WEIGHTS IN mg.)

	Unit Coordinates		1007N, 1009E	1001N, 1005E	1003N, 1008E	1000N, 1005E	999N, 1001E	1001N, 1004E	999N, 1001E	1000N, 1004E	997N, 999E	Totals
	Context				Ctx 1		Ctx 2		Ctx 2	Ctx 2		
	Depth		60–70	40–50	60–70	30–end	20–30	30–end	30–40	30–40	180–200	
	Flot #		1	2	3	4	5	7	8	9	10	
	Volume (l)		9	10	8	1.4	2.5	4	3	3.5	4	
	Charcoal wt.		4,294.80	2,852.60	712.3	607.2	1,305.30	1,237.80	804.7	2,822.80	573.1	**15,211**
Taxon	**Common Name**	**Nativity**										
Poaceae ct.	grass fam.	indet.	117	147	453	12	40	33	25	49	8	**884**
Solanaceae ct.	nightshade fam.	indet.	–	–	–	–	–	–	–	3	–	**3**
Rosaceae ct.	rose fam.	indet.	–	1	–	–	–	–	–	1	–	**2**
Domesticates[a]												
Triticum ct.	wheat	exotic	–	–	–	–	1	–	–	–	–	**1**
OWDP/Avena ct.	grain/oat	exotic	6	–	–	–	–	–	–	–	–	**6**
OWDP (cf) ct.	grain	exotic	–	–	–	–	–	–	1	–	–	**1**
OWDP rachis ct.	grain	exotic	–	–	–	–	–	2	–	–	–	**2**
Total Identified			**1,218**	**1,373**	**4,102**	**89**	**355**	**410**	**317**	**1,680**	**68**	**9,612**
Unidentified/Other												
Identifiable seed ct.			18	42	50	3	5	7	4	10	5	**144**
Unidentified seed ct.			221	346	289	32	141	172	82	283	33	**1,599**
Unidentified other ct.			13	31	102	7	14	11	3	32	6	**219**
Unidentified nutshell ct.			6	6	1	3	2	5	2	–	–	**25**
UnID shell wt.			6.1	11.8	0.6	4.3	4.2	4.4	2.2	–	–	**34**
Geophyte ct.	bulb/corm	indet.	–	–	–	–	–	1	–	–	–	**1**
Geophyte wt.			–	–	–	–	–	3.8	–	–	–	**4**
Parenchyma ct.			–	10	–	3	5	1	4	1	2	**26**
Parenchyma wt.			–	103	–	66.8	30.3	6.1	36.8	2.5	6.3	**252**
Clinker ct.			1	–	–	–	–	2	–	–	7	**10**
Clinker wt.			3.1	–	–	–	–	7.2	–	–	19.2	**30**

[a] "OWDP" = Old World domesticated Poaceae.

from an Old World domesticated grain (OWDP). These could represent the consumption of domesticated grain or the use of domesticated grain for fodder.

The seeds of non-domesticated grasses and other grassland forbs (e.g., *Rumex* sp., *Trifolium* sp., and Asteraceae) could have been used for food; however, the densities of non-domesticated grass seeds and other edible forb seeds recovered were generally low. Grass seed density typically ranged from 2.0 to 16.0 n/l., and the density of other potentially edible grassland forbs was typically <1.0 n/l. for each taxon. These low densities of potentially edible seeds could have resulted from the incidental charring of seeds stored in soil seed banks, seeds blown into proximity of fires by wind, or the incidental burning of grassland vegetation as kindling. Clear cultural use of grassland seeds as food requires consistent observation of moderate to high densities (ca. 50 to >100 n/l.) of edible grassland seeds across most contexts (e.g., Cuthrell 2013:367–370; Wohlgemuth 2004). One sample contained a density of grass seeds high enough to indicate a possible cultural association with food preparation (Flot #3, 56.6 n/l). Notably, this sample also contained an extremely high density of bedstraw seeds (434.6 n/l.) and the lowest observed density of wood charcoal (89.0 mg./l.). This context could therefore represent the intentional burning of specifically herbaceous vegetation. Due to the lack of a consistent representation of moderate to high densities of edible

Table 6

DENSITIES OF MACROBOTANICAL REMAINS RECOVERED FROM MRN-202 (WEIGHTS IN mg.)

	Unit Coordinates		**1007N, 1009E**	**1001N, 1005E**	**1003N, 1008E**	**1000N, 1005E**	**999N, 1001E**	**1001N, 1004E**	**999N, 1001E**	**1000N, 1004E**	**997N, 999E**
	Context				Ctx 1		Ctx 2		Ctx 2	Ctx 2	
	Depth		60–70	40–50	60–70	30–end	20–30	30–end	30–40	30–40	180–200
	Flot #		1	2	3	4	5	7	8	9	10
	Volume (l)		9	10	8	1.4	2.5	4	3	3.5	4
	Charcoal wt.		477.2	285.26	89.04	433.71	522.12	309.45	268.23	806.51	143.28
Taxon	**Common Name**	**Nativity**									
Nutshell											
Corylus ct.	hazelnut	native	–	–	–	–	–	0.25	–	0.57	–
Corylus wt.			–	–	–	–	–	8.45	–	4.91	–
Marah ct.	wild cucumber	native	1.89	0.3	5.13	1.43	0.4	0.5	0.67	0.57	0.5
Marah wt.			3.66	0.63	8.76	2.29	0.8	0.28	0.9	3.17	0.33
Notholithocarpus ct.	tanoak	native	–	–	–	0.71	0.4	1	0.33	–	–
Notholithocarpus wt.			–	–	–	1.07	0.44	1	0.1	–	–
Quercus ct.	oak	native	0.44	0.1	0.38	-	-	-	-	0.29	–
Quercus wt.			0.62	0.07	0.19	–	–	–	–	0.17	–
Umbellularia ct.	California bay	native	0.11	0.1	0.25	–	–	0.25	0.67	–	–
Umbellularia wt.			0.12	0.23	0.16	–	–	0.1	0.83	–	–
Seeds (Genus)											
Amsinckia ct.	fiddleneck	native	–	0.5	0.63	2.14	0.4	–	1	0.29	–
Cirsium (cf) ct.	thistle	exotic	–	0.2	0.5	–	–	–	–	–	–
Cryptantha ct.	cryptantha	native	–	–	–	–	–	–	–	–	0.25
Erodium ct.	filaree	exotic	–	0.1	0.13	–	0.4	–	–	–	–
Galium ct.	bedstraw	indet.	108.11	51.5	434.63	41.43	48.8	19.25	54.33	82.57	12.75
Malva ct.	mallow	exotic	–	55.1	0.25	2.86	47.2	54.25	21	225.71	–
Phacelia ct.	phacelia	native	6.44	3	7.75	1.43	5.2	1	6.67	5.14	0.5
Plantago ct.	plantain	indet.	–	–	–	–	–	0.25	–	–	–
Rubus ct.	blackberry	native	–	–	0.13	–	–	–	–	–	–
Rumex ct.	dock	indet.	–	–	0.13	–	0.4	0.25	0.33	0.29	–
Scrophularia ct.	figwort	native	–	0.1	2	–	–	–	–	–	–
Silene ct.	catchfly	indet.	–	–	–	–	0.4	–	–	–	–
Silybum ct.	milk thistle	exotic	–	0.8	–	–	–	–	–	0.29	–
Solanum ct.	nightshade	indet.	–	0.2	–	–	–	–	–	–	–
Spergularia ct.	spurry	native	0.33	0.1	0.13	–	–	–	–	0.57	–
Stellaria ct.	starwort	exotic	2.44	2.8	0.38	0.71	–	1	1.67	56.57	–
Trifolium ct.	clover	indet.	0.11	0.3	–	–	–	–	–	0.29	–
Seeds (Family)											
Asteraceae ct.	sunflower fam.	indet.	0.11	1	3.13	1.43	0.8	1.25	–	0.57	0.25
Boraginaceae ct.	borage fam.	indet.	–	–	–	–	–	–	0.67	–	–
Brassicaceae ct.	mustard fam.	indet.	–	–	–	–	–	–	0.33	0.86	–
Brassicaceae (cf) ct.	mustard fam.	indet.	–	–	–	–	0.8	–	1	4.86	–
Caryophyllaceae ct.	pink fam.	indet.	1.33	5.6	–	2.86	15.2	14	7.33	83.14	–
Chenopodiaceae/ Montiaceae ct.	goosefoot/ miner's lettuce	indet.	0.22	0.7	0.5	–	5.2	0.5	1	2.29	0.75
Cyperaceae ct.	sedge fam.	native	0.11	–	0.13	–	–	–	–	–	–

Table 6 (*Continued*)

DENSITIES OF MACROBOTANICAL REMAINS RECOVERED FROM MRN-202 (WEIGHTS IN mg.)

	Unit Coordinates		**1007N, 1009E**	**1001N, 1005E**	**1003N, 1008E**	**1000N, 1005E**	**999N, 1001E**	**1001N, 1004E**	**999N, 1001E**	**1000N, 1004E**	**997N, 999E**
	Context				Ctx 1		Ctx 2		Ctx 2	Ctx 2	
	Depth		60–70	40–50	60–70	30–end	20–30	30–end	30–40	30–40	180–200
	Flot #		1	2	3	4	5	7	8	9	10
	Volume (l)		9	10	8	1.4	2.5	4	3	3.5	4
	Charcoal wt.		477.2	285.26	89.04	433.71	522.12	309.45	268.23	806.51	143.28
Taxon	**Common Name**	**Nativity**									
Poaceae ct.	grass fam.	indet.	13	14.7	56.63	8.57	16	8.25	8.33	14	2
Solanaceae ct.	nightshade fam.	indet.	–	–	–	–	–	–	–	0.86	–
Rosaceae ct.	rose fam.	indet.	–	0.1	–	–	–	–	–	0.29	–
Domesticates[a]											
Triticum ct.	wheat	exotic	–	–	–	–	0.4	–	–	–	–
OWDP/Avena ct.	grain/oat	exotic	0.67	–	–	–	–	–	–	–	–
OWDP (cf) ct.	grain	exotic	–	–	–	–	–	–	0.33	–	–
OWDP rachis ct.	grain	exotic	–	–	–	–	–	0.5	–	–	–
Total Identified			**135.33**	**137.3**	**512.75**	**63.57**	**142**	**102.5**	**105.67**	**480**	**17**
Unidentified/Other											
Identifiable seed ct.			2	4.2	6.25	2.14	2	1.75	1.33	2.86	1.25
Unidentified seed ct.			24.56	34.6	36.13	22.86	56.4	43	27.33	80.86	8.25
Unidentified other ct.			1.44	3.1	12.75	5	5.6	2.75	1	9.14	1.5
Unidentified nutshell ct.			0.67	0.6	0.13	2.14	0.8	1.25	0.67	–	–
UnID shell wt.			0.68	1.18	0.08	3.07	1.68	1.1	0.73	–	–
Geophyte ct.	bulb/corm	indet.	–	–	–	–	–	0.25	–	–	–
Geophyte wt.			–	–	–	–	–	0.95	–	–	–
Parenchyma ct.			–	1	–	2.14	2	0.25	1.33	0.29	0.5
Parenchyma wt.			–	10.3	–	47.71	12.12	1.53	12.27	0.71	1.58
Clinker ct.			0.11	–	–	–	–	0.5	–	–	1.75
Clinker wt.			0.34	–	–	–	–	1.8	–	–	4.8

[a] "OWDP" = Old World domesticated Poaceae.

grassland seed foods among samples, their use as food is not evident.

DISCUSSION

Research at the Toms Point trading post (MRN-202) seeks in part to characterize the persistence of indigenous identities in the mission- and post-mission era as well as where native people altered and asserted those practices. Our study of indigenous foodways offers one productive avenue of inquiry for understanding the resilience of Coast Miwok communities confronting colonial programs and the creative choices people made to recalibrate their lives in the decades following missionization. Here, foodway choices—what people eat, but also how foods are managed, collected, processed, prepared, consumed, stored, and disposed of—are examined through the lens of the MRN-202 zooarchaeological and paleoethnobotanical assemblage. As a setting of a long-term indigenous presence spanning the Middle and Late periods (ca. 2,500 to 500 B.P.) and 100 years of missionary, mercantile, and settler colonialism (1770s to the 1870s), we have focused our analysis and discussion in this article on the types of foods consumed at only one site, as a starting point for exploring other aspects of the social lives and decision-making of Toms Point residents.

The mammal and avian faunal assemblages from Toms Point demonstrate the long-term use of wild fauna

Table 7

POSSIBLE ETHNOGRAPHIC USES OF MRN-202 PLANT TAXA BY DENSITY[a,b]

Taxon	Common Name	Reported Ethnographic Uses
Nuts		
Corylus	hazelnut	Food: nuts eaten; Crafts: stems used for making baskets and other tools
Marah	wild cucumber	Fishing: root used for fish poison; Medicinal uses
Notholithocarpus	tanoak	Food: acorns eaten
Quercus	oak	Food: acorns eaten; Crafts: branches used for arrows
Umbellularia	California bay	Food: kernels ground into flour, fruits toasted or eaten raw
Seeds (Genus)		
Amsinckia	fiddleneck	Use as food or medicine uncertain
Cirsium	thistle	Food: stalks eaten; Medicinal uses
Erodium	filaree	Food: stems eaten; Medicinal uses
Galium	bedstraw	Medicinal uses
Malva	mallow	Medicinal uses
Phacelia	phacelia	Medicinal uses
Plantago	plantain	Medicinal uses
Rubus	blackberry	Food: berries eaten raw or cooked; Medicinal uses
Rumex	dock / sorrel	Food: seeds and leaves eaten; Medicinal uses
Scrophularia	figwort	Medicinal uses
Solanum	nightshade	Food: berries eaten; Medicinal uses
Trifolium	clover	Food: leaves and sprouts eaten raw or steamed, seeds possibly eaten; Medicinal uses
Seeds (Family)		
Asteraceae	sunflower family	Food: seeds of many taxa eaten, stems sometimes eaten; Medicinal uses
Chenopodiaceae/Montiaceae	Goosefoot / miner's lettuce family	Food: seeds of many taxa eaten, stems and leaves sometimes eaten; Medicinal uses
Cyperaceae	sedge family	Crafts: Stems and leaves of many taxa used for crafting and construction
Poaceae	grass family	Food: seeds of many taxa eaten
Rosaceae	rose family	Food: fruits of many taxa eaten; Medicinal uses

[a] Synthesized from Anderson (2005), Lightfoot and Parrish (2009), and Moerman (2017).

[b] Genus level taxa not listed in the table have indeterminate ethnographic use or no recorded ethnographic use. Family level taxa not listed in the table may contain genera with various medicinal or indeterminate uses.

from California's rich coastal environments. MRN-202's diverse vertebrate faunal assemblage reflects a constellation of foodway choices, including indigenous hunting practices, as well as the incorporation of new species introduced by European and American colonizers. Native people appear to have included domestic fauna into their diets, but they seem to have done so in very specific ways and with a special focus on pigs. For a place involved in the hide and tallow trade, the bones of cattle make up a small portion of identified specimens. Large quantities of butchered pig bone might reflect a preference for pork—a pattern that contrasts with the strong distaste for pork and a preference for beef reported at Fort Ross (Wake 1997:288). During an expedition around Tomales Bay in 1793, Felipe Goycoechea observed that "chickens and pigs" had been left for him in the vicinity of Toms Point by another Spanish expedition (Wagner 1931:344), indicating a long history of domesticated animals in the region and quite possibly a well-established taste among the indigenous Coast Miwok for these introduced proteins. Importantly, as Silverman (2003:514) suggests, we must also consider the possibility that native people were keeping livestock as a "quiet strategy" for enhancing customs and claiming land (see also Lapeña and Acabado 2017). Moreover, even with access to domestic livestock, wild fauna (particularly waterfowl, fish, and shellfish) remained an important part of the diet of the Toms Point residents, testifying to the persistent use of coastal resources before, during, and after the Mission Period.

Exploring the invertebrate assemblage from MRN-202, we observed that people at Toms Point maintained a taste for shellfish, especially clams and mussels. That many of the shellfish remains were found in association with the butchered remains of domesticated animals makes it easy to imagine a well-established taste for surf-and-turf—the epitome of the persistence, or "changing continuities" (Ferris 2009), theme in indigenous foodways. Even more intriguing than the protracted histories of shell-fishing in post-mission times are the enduring resource management practices that appear to have encouraged the continued productivity of gaper and Washington clam beds. Analysis of fragmented clamshell suggests larger, mature clams were selected for harvesting and consumption (Apodaca 2017). We believe that such selective harvesting reflects traditional ecological knowledge of intertidal clam-bed management involving the periodic culling of mature clams to encourage younger clams to grow, tilling, and possibly also the private ownership of premier clam "gardens." To further assess the persistence and possible seasonality of intertidal resource management amid the demands of the trading post operation, we are currently engaged in a stable isotope study. Considering the foodways theme, continued access to a well-maintained mollusk habitat transcended dietary importance, and clam and abalone shells were also important sources among Coast Miwok people for bead money and ornamentation (Collier and Thalman 1996). Clams, in this case, were sources of sustenance and livelihood, and maintaining healthy clam beds ensured a steady meal as well as social and economic connections to kin and non-kin increasingly dispersed across colonized homelands.

In all, zooarchaeological remains suggest that economic endeavors at Toms Point during the late nineteenth century appear to have been varied, rather than exclusively focused on the hide and tallow trade as historical accounts attest. The likely presence of terrestrial carnivore pelts, as well as otter remains, allude to the varied economic endeavors of the site inhabitants. It is possible that the indigenous occupants of this "trading post" maintained multifaceted interests, suggestive of numerous creative outlets for communities seeking to remain relevant and connected to each other and to their homes during subsequent phases of colonization. Even small amounts of abalone shell from MRN-202—a pattern that contrasts sharply with the gastropod-heavy shellfish assemblage from Fort Ross (Schiff 1997:329)—challenge historical accounts of George Wood's enterprising behavior and the trading post as a major hub for international ship traffic. "French traders, especially, bought all the abalone shells they could find. By the aid of his Indians Tom Vaquero gathered these shells in large quantities, and was driving a profitable trade with the small French coasters that put in at Tomales periodically" (Munro-Fraser 1880:123). To us, this excerpt speaks more to persistent indigenous knowledge of where to collect abalone, how to process them, and how best to translate a skillset and traditional resources into a productive and ongoing pursuit "by the aid of" an extractive colonial endeavor (Schneider 2018). The faunal remains recovered during excavations thus lend a more nuanced view on native Californian contributions during the colonial era and their decisions regarding subsistence practices and foodways in a changing landscape.

Turning to the botanical assemblage from MRN-202, we see persistence less in the particular wild foods that are being consumed than in the ways indigenous people continued to engage with the natural environment. Again, a strict hide and tallow characterization of Toms Point belies other ongoing indigenous pursuits for maintaining increasingly tenuous connections to ancestral places, home communities, and cultural practices. Like our understanding of persistent shell-fishing and intertidal resource management at Toms Point, charred paleoethnobotanical remains might be related to traditional plant stewardship techniques. Since natural fires are rare in the study area, with likely fire return intervals on the order of 50 to 100 years or more (Cuthrell 2013), high densities of charred seeds and moderate densities of wood charcoal indicate cultural burning activities at MRN-202. However, due to the lack of spatial integrity in the archaeological deposits, interpretations about the type of burning and the cultural purposes of burning are uncertain. The macrobotanical assemblage—overwhelmingly dominated by grassland-associated non-food taxa, including a strong representation of exotic ruderals—could originate in part from regular prescribed burning of grasslands in the vicinity of the site, perhaps even before the establishment of the Toms Point settlement. However, it is unclear whether burning of landscape vegetation could result in the preservation of such high densities of seeds as were observed, generally ranging from ca. 100 to 500 n/l. Charcoal identification could bring additional information to bear on whether site inhabitants were burning fire-susceptible or fire-adapted woody plants gathered from the broader landscape (e.g., DeAntoni 2015). Alternatively, the assemblage could originate from the intentional burning of fine herbaceous fuels collected as tinder or the intentional disposal of herbaceous material en masse through burning. For example, the strikingly high density of bedstraw seeds in Flot #3 could represent the intentional burning of bedding material at the end of its use life. We also expect that seeds from ruderals growing in the vicinity of the site would be incorporated into the archaeobotanical assemblage incidentally through means described earlier in this paper. The relative contributions of any or all of these practices to the formation of the archaeobotanical assemblage is uncertain.

The overall lack of macrobotanical food plants, either traditional native plant foods or introduced domesticates, indicates that the assemblage probably does not originate primarily from food preparation activities, or that food was being prepared using methods unlikely to result in the preservation of macrobotanical remains (e.g., enclosed stoves inside wood-floored houses). Despite these ambiguities, it is evident that site inhabitants brought traditional edible nut foods to the site, most likely for consumption. The macrobotanical assemblage also provides valuable ecological information about vegetation in the vicinity of the site. A strong representation of exotic ruderals such as mallows, pink family plants, and mustard family plants (Brassicaceae), along with the overall dominance of herbaceous grassland plants, attests to a high-intensity vegetation disturbance regime. The ubiquity of phacelia (*Phacelia* sp.) is also notable because some species of this taxon are fire-followers, but elsewhere in the region it has been observed as uncommon or absent in locations where disturbing factors have been removed (Cuthrell 2013:362–3). Vegetation disturbances could include foot traffic, animal grazing or corralling, tilling, and/or prescribed burning.

CONCLUSIONS

This study has highlighted how the zooarchaeological and paleoethnobotanical assemblages from MRN-202 reflect the persistence of Coast Miwok people in a hinterland setting beyond the confines of colonial missions and mercantile operations. Immersed in the logic and extractive forces of free market capitalism characterizing nineteenth-century California, indigenous residents at Toms Point continued to manage, collect, and consume wild foods. In this sense, the foodways choices of native people in this particular setting suggest creative ways of continuing tried-and-true hunting, gathering, fishing, and tending methods, as well as a reframing of introduced foods and other practices within longstanding indigenous logics. Persistence, in other words, is reflected in a constant reality that native people "must change *and* remain the same" (Silliman 2009:226, emphasis in original).

Ongoing research of still other facets of the three Toms Point sites and assemblages—including analysis of glass beads, ceramics, flaked glass, lithic debitage, stable isotope analysis, radiometric dating, and x-ray fluorescence spectrometry—will add important detail to the picture of persistence as reflected in our findings and discussion. Additionally, although this study focuses exclusively on faunal and floral remains collected from a single archaeological site to help tell the story of foodways choices and indigenous persistence, we also understand that countless other places—including two more sites on Toms Point, other sites ringing Tomales Bay, and still others that have yet to be identified—were places of refuge and redirection for Coast Miwok families. In aggregate, the collection of village sites, gathering areas, trading posts, ranches, and farms—and the indigenous agency and traditions of subsistence and mobility that sustained ancestral sites and made still other newer places like Toms Point possible—ultimately supported the autonomy, or "freedom of action," of indigenous peoples within the imposed constraints of settler colonialism (Panich and Schneider 2015:49). Taking the long view of Toms Point, since approximately 2,500 B.P. indigenous people had been responding to environmental and social change, and they were already well-versed in altering aspects of their diets, technologies, and families if it meant keeping a foot on familiar land.

ACKNOWLEDGEMENTS

Archaeological investigations at Toms Point were approved by the Federated Indians of Graton Rancheria and Audubon Canyon Ranch. Field and laboratory research for this project was funded by a grant from the American Philosophical Society and grants from the National Science Foundation (BCS 1558987, 1559666) awarded to Lee Panich (Santa Clara University) and Tsim Schneider. This work was also supported in part by a National Science Foundation grant awarded to Rob Cuthrell (CHE 1314073). We are grateful to students from U.C. Santa Cruz and Santa Clara University who assisted with fieldwork at Toms Point, student volunteers in the "Laboratory for the Study of California Pasts" at U.C. Santa Cruz, Cristie Boone (Albion Environmental, Inc.) who conducted the ichthyofaunal identifications, and two reviewers for their helpful comments.

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