

BLACK OYSTERCATCHER NESTS SUCCESS WITH CALIFORNIA LEAST TERNS IN THE SAN FRANCISCO BAY

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Abstract

“Tern Town”, located along the eastern side of the San Francisco Bay, provides island nesting habitat for three special status species. Since 2015, and for a total of six breeding seasons, the endangered California least tern (*Sternula antillarum brownii*), the threatened western snowy plover (*Charadrius alexandrinus nivosus*) and species of special concern the black skimmer (*Rynchops niger*) have nested successfully, in association with American avocet (*Recurvirostra americana*) and black-necked stilt (*Himantopus mexicanus*). On June 6, 2022, the black oystercatcher (*Haematopus bachmani*), which is uncommon within its range and is typically limited to the rocky intertidal, established a nest on the island. Black oystercatchers have been documented nesting near gulls and terns (*Sterna* spp.) and are known to use their bills to jab at other species chicks that wander into their territory. We witnessed no such incident, and this is the first documented occurrence of oystercatchers successfully nesting and fledging young with California least terns. Diet trend data showed the oystercatchers forage on, in decreasing order of abundance: Japanese little-necked clam, ribbed mussel, bent-nose clam, and limpet. This site-specific information on breeding black oystercatchers supports recovery plan tasks that are consistent with managing habitat for near California least tern, western snowy plover and black skimmer.



Figure 1 — Nesting black oystercatcher (*Haematopus bachmani*) at Hayward Regional Shoreline, California.



Left — Wildlife volunteer’s “Tern Town Team” patch is earned by helping to monitor, protect, and educate about these shorebirds.

The East Bay Regional Park District manages California least tern, western snowy plover and black skimmer nesting habitat at Hayward Regional Shoreline (37°37'47"N 122°8'46"W) located along the eastern shore of San Francisco Bay (Riensche 2007; Riensche et al. 2012b; Riensche et al. 2015). We conducted this study on Island Five (also known as “Tern Town”).

The black oystercatcher, which is uncommon within its range along the west coast of North America and is typically limited to the rocky intertidal, established a nest on June 6, 2022, on the eastern edge of the “Tern Town” island (Figure 1) and ultimately produced one fledgling. Their nesting habitat ranges from mixed sand and gravel beaches to exposed rocky headlands (Andres and Falxa 1995). The black oystercatcher is currently on Audubon’s Priority Birds 2021 list, and is particularly vulnerable to nest site disturbances or destruction, predators, and oil spills.

These birds which bring a taste of the rocky Pacific coastline are known to breed in just a few locations within the East Bay Regional Park District, which manages landholdings in Alameda and Contra Costa counties. The majority of identified nesting sites are located in the Central San Francisco Bay, which provides some similar habitat conditions to the rocky intertidal, including in the Richmond area of Contra Costa County at Bird Rock, a small rock adjacent to Brooks Island and the West Brother Island near Point San Pablo (Glover, 2009). Within Alameda County they have nested on the breakwater islands west of the USS Hornet at the former Alameda Naval Air Station, in Alameda’s Ballena Bay (Ramos personal communication, 2018), as well as along the Emeryville Crescent (Richmond et al. 2011). Black oystercatchers have been documented breeding at two locations in the South San Francisco Bay, which provides a very different habitat from the rocky intertidal, including at Eden Landing Ecological Reserve, a California Department of Fish and Wildlife property located directly south of Hayward Regional Shoreline. Since 2016 they have nested at Eden Landing on a small island near riprap that provides suitable foraging habitat, and were confirmed to fledge chicks in most years (Pearl personal communication).



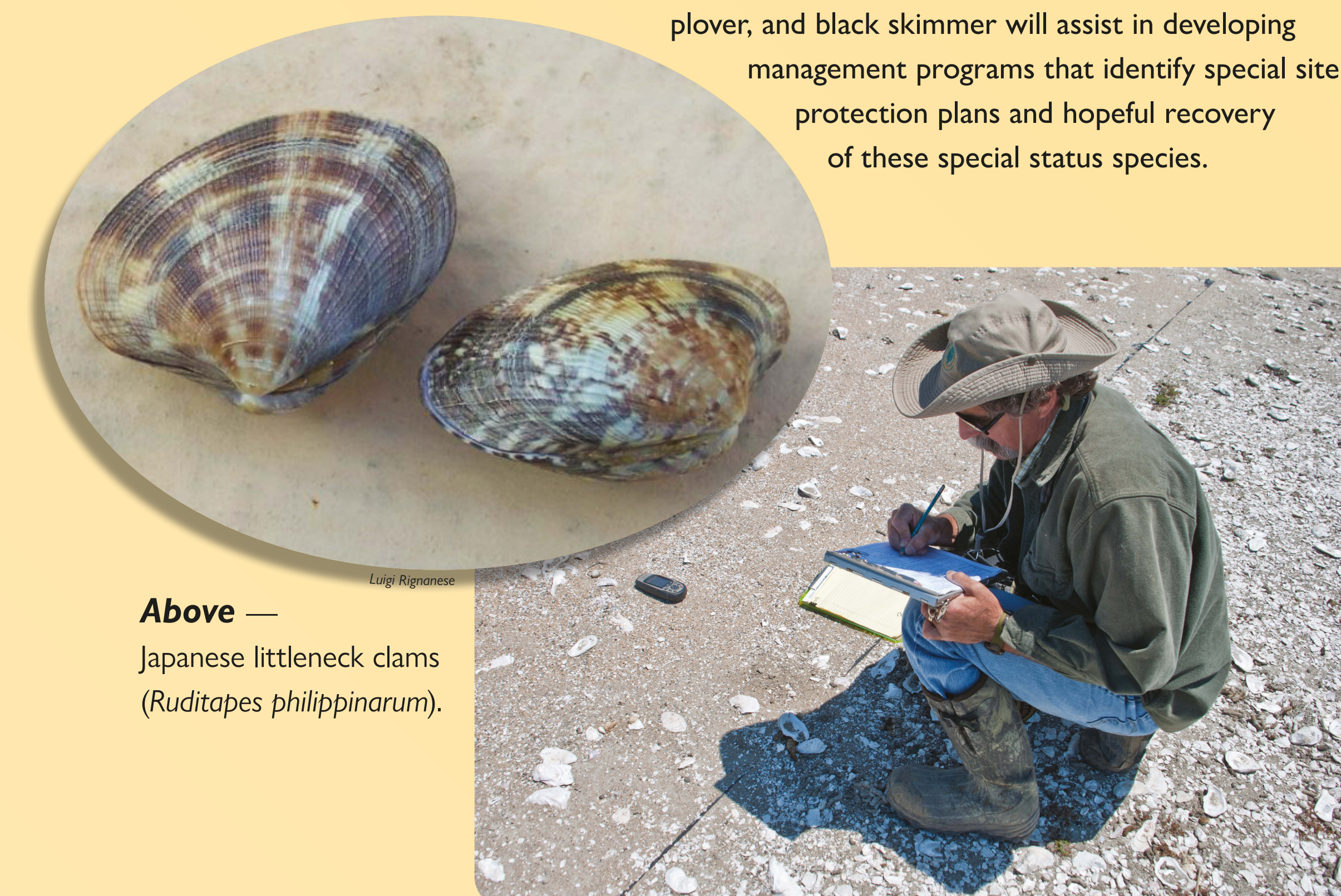
Figure 2 — Black oystercatcher adult with camouflaged chick resting (*Haematopus bachmani*) at Hayward Regional Shoreline, California.

In central California more than 90 percent of black oystercatcher foraging habitat is washed occasionally by waves; wave-splashed mussels’ gape more frequently and thus are more susceptible to oystercatcher attacks (Hartwick 1976, Falxa 1992). Oystercatchers frequently forage where sea mussel (*Mytilus californianus*) and bay mussel (*M. Trossulus*) are dense (Grove 1982, Falxa 1992). The nesting pair of black oystercatcher at “Tern Town” used the detachment method (Andres and Falxa 1995) to carry whole mollusks from a breakwater area, ranging from 334 to 712 meters away to feed their young (Figure 2). The diet trend data, gathered by collecting dropped bivalves at their island nest site, showed that the percentage of prey feed to their offspring was composed of Japanese little-necked clam, ribbed mussel, bent-nose clam, limpet sp., and bay mussel (Table 1).

PREY SPECIES	SAMPLE NUMBER	PERCENTAGE OF DIET	AVERAGE SIZE
Japanese Littleneck Clam <i>Ruditapes philippinarum</i>	34	46.5	39.97 mm
Ribbed Mussel <i>Geukensia demissa</i>	23	31.5	61.74 mm
Bent-Nosed Clam <i>Macoma nasuta</i>	9	12	50.67 mm
Limpet <i>Patellogastropoda</i> sp.	5	.06	20.6 mm
Bay Mussel <i>Mytilus edulis</i>	2	.02	36 mm

Table 1 — Percentage of prey, determined from collections of used shells, in diet of Black Oystercatcher (*Haematopus bachmani*) pair breeding in a California Least Tern Colony at Hayward Regional Shoreline, California, 2022.

While black oystercatchers are known to nest near gulls and terns (*Sterna* spp.), occasionally less than three meters away (Andres and Falxa 1995, Vermeer et al. 1992b), this is the first documented occurrence within an active California least tern colony. Adult oystercatchers are known to use their bills to jab at gull or tern chicks that wander too close to their territory (Andres and Falxa 1995, Vermeer et al. 1992b), yet we witnessed no such incident. This site-specific information on breeding black oystercatchers near California least tern, western snowy plover, and black skimmer will assist in developing management programs that identify special site protection plans and hopeful recovery of these special status species.



Above — Japanese littleneck clams (*Ruditapes philippinarum*).

Literature Cited

- Audubon’s Priority Birds 2021**, https://nasnationalprod.s3.amazonaws.com/prioritybirdsreport_final.pdf
- Andres, B.A., and G.A. Falxa.** 1995. Black Oystercatcher (*Haematopus bachmani*). In *The Birds of North America*, N. 155 (A. Poole and F. Gill, eds.), The Academy of Natural Science, Philadelphia, and The American Ornithologists’ Union, Washington, D.C.
- Falxa, G. A.** 1992. Prey choice and habitat use by foraging Black Oystercatchers: interactions between prey quality, habitat availability, and age of bird. Ph.D. diss., University of California Davis.
- Glover, S. A.** 2009. Breeding Bird Atlas of Contra Costa County. Mount Diablo Audubon Society. Walnut Creek, California. 260 p.
- Groves, S.** 1982. Aspects of foraging in Black Oystercatchers (Aves: Haematopodidae). Ph.D. diss., University of British Columbia, Vancouver.
- Hartwick, E.B.** 1976. Foraging Strategy of the Black Oystercatcher (*Haematopus bachmani* Audubon). *Canadian Journal of Zoology* 54: 142-155
- Hazlitt, S.L. and R.W. Butler.** 2001. Site Fidelity and Reproductive Success of Black Oystercatchers in British Columbia. *Waterbirds: The International Journal of Waterbird Biology*, Vol. 24, No. 2: 203-207
- Kersten, M. and A. Brenninkmeijer.** 1995. Growth, fledging success and post-fledging survival of juvenile Oystercatchers *Haematopus ostralegus*. *IBIS* 137: 396-404
- Richmond, B., H. Green and D.C. Rice.** 2011. Alameda County Breeding Bird Atlas. Golden Gate Audubon Society, Berkeley, California. 219 p.
- Riensche, D.L.** 2007. California Least Tern habitat enhancement and nesting in the East Bay Regional Park District, California. *Transactions of the Western Section of the Wildlife Society* 43:62-71.
- Riensche, D.L., S.C. Gidre, N.A. Beadle, and S.K. Riensche.** 2015. Western Snowy Plover nest site selection and oyster shell enhancement. *Western Wildlife* 2:38-43.
- Riensche, D.L., M.L. Elliott, and S.H. Euing.** 2012b. Breeding status, nesting densities and diet trends of two endangered California Least Tern colonies. *Journal of Environmental Science and Engineering* 1:1135-1145.
- Vermeer, K., K.H. Morgan, and G.E. Smith.** 1992b. Black Oystercatcher habitat selection, reproductive success, and their relationship with Glaucous-winged Gulls. *Colonial Waterbirds* 15: 14-23