



A list of all the exotic species found during our April 5th shoot in the field.

| Scientific Name | Common Name ^[1] | Fruitvale Bridge | Crown Beach | Coast Guard Island | Mention ^[2] | Status ^[3] | Origin if Exotic | Comments |
|---|---|------------------|-------------|--------------------|------------------------|-----------------------|-----------------------|--|
| FRUITVALE BRIDGE | | | | | | | | |
| BAIT BOX AT TOP OF SLOPE | | | | | | | | |
| Ascophyllum nodosum | rockweed (brown seaweed), Knotted Wrack | X | | | CAM | E | Maine | in baitworm box - not established in Bay |
| Nereis virens | pile worm | X | | | CAM | E | Maine | in baitworm box - not established in Bay |
| AT BASE OF SLOPE | | | | | | | | |
| Spartina alternifolia/foliosa | cordgrass | X | | X | CAM | EH | Northwestern Atlantic | |
| Diadumene lineata | Orange-lined Anemone | X | | | CAM | E | Japan, China | |
| Pseudosphaeroma campbellensis | isopod | X | | | CAM | E | New Zealand | |
| Halacarid mite | mite | X | | | CAM? | ? | ? | unidentified white mites |
| IN HOLE DUG BY AMY | | | | | | | | |
| Mya arenaria | Eastern Soft-shell Clam | X | | | CAM | E | Northwestern Atlantic | |
| NEAR HOLE DUG BY AMY | | | | | | | | |
| Spartina alternifolia/foliosa | cordgrass | X | | X | CAM | EH | Northwestern Atlantic | |
| Halichondria bowerbanki | Crust of Bread Sponge | X | | X | CAM | E | North Atlantic | |
| Pinauay crocea | hydroid | X | | | CAM | E | Northwestern Atlantic | |

| | | | | | | | | | |
|-------------------|---|---|---|---|---|------|------------|---------------------------------|-----------|
| | Venerupis philippinarum | Manila Clam, Japanese Littleneck Clam | X | X | | M | E | Japan, Korea, China | a shell |
| ON ROCK | Mytilus galloprovincialis/trossulus | Bay Mussel | X | X | X | CAM | EH | Mediterranean | |
| | Balanus glandula | Acorn Barnacle | X | X | X | N | N | – | |
| | Ulva lactuca | Sea Lettuce (green seaweed) | X | X | | NM | C | ? | |
| UNDER ROCK | Cirolana cf. japonica | isopod | X | | X | CAM | probably E | Japan | |
| | Haliclona loosanoffi | sponge | X | | | CAM | E | North Atlantic | |
| | Cryptosula pallasiana | bryozoan | X | | | CAM | E | North Atlantic | |
| | Botrylloides violaceus | colonial sea squirt | X | | | CAM | E | Southern Siberia to China | |
| | Ammothella hilgendorfi | sea spider | X | X | | CAM | N | – | |
| | Ficopomatus enigmaticus | tube worm | X | | | CAM | E | Indian Ocean | |
| | Ostrea conchaphila | Olympia Oyster | X | | X | CAM | N | – | live spat |
| | Bugula stolonifera | bryozoan | X | | | CAM | E | Northwestern Atlantic | |
| | Gnorimosphaeroma oregonense | isopod | X | | | CAM? | N | – | |
| | Harmothoe praeclara | scale worm | X | | X | CAM | E | Australia | |
| | Haminoea japonica & egg cases | bubble snail | X | X | | CAM | E | Japan | |
| | Molgula manhattan | sea squirt | ? | X | | CAM | E | Northwestern Atlantic | |
| | Ampithoe valida | amphipod | X | | | NM | E | Northwestern Atlantic | |

| | | | | | | | | | |
|--|---|------------------------------|---|---|---|------|----|------------------------|--------------|
| | Corophiid amphipod | <i>amphipod</i> | ? | ? | | CAM? | E | ? | |
| IN WOOD OF BORED LOG | | | | | | | | | |
| | Teredo sp. | <i>ship worm</i> | X | | | CAM? | E | ? | borings only |
| | Diadumene leucolena | <i>anemone</i> | X | | | CAM? | E | Northwestern Atlantic | |
| | Sphaeroma quoiana | <i>isopod</i> | X | | | CAM? | E | Australia, New Zealand | |
| ON PILINGS & UNDER FISHING PIER | | | | | | | | | |
| | Mytilus galloprovincialis/trussulus | <i>Bay Mussel</i> | X | X | X | NM | EH | Mediterranean | |
| | Musculista senhousia | <i>Green Bagmussel</i> | X | X | | NM | E | Northwestern Pacific | |
| | Halichondria bowerbanki | <i>Crust of Bread Sponge</i> | X | | X | NM | E | North Atlantic | |

CROWN BRIDGE

WALKING OUT

| | | | | | | | | | |
|--|---------------------------------------|----------------------|--|---|--|-----|------------|---------------------------|------------------------------------|
| | Abarenicola egg cases | <i>lug worm</i> | | X | | M | probably E | ? | not a sponge, jellyfish or mollusk |
| | Zostera marina | <i>eelgrass</i> | | X | | NM | N | – | |
| | Corbula amurensis | <i>Overbite Clam</i> | | X | | CAM | E | Southern Siberia to China | shell only |

ON OR UNDER ROCK

| | | | | | | | | | |
|--|---|------------------------------------|---|---|---|------|----|----------------|-------------------|
| | Mytilus galloprovincialis/trussulus | <i>Bay Mussel</i> | X | X | X | CAM | EH | Mediterranean | |
| | Balanus glandula | <i>barnacle</i> | X | X | X | N | N | – | |
| | Ulva lactuca | <i>Sea Lettuce (green seaweed)</i> | X | X | | NM | C | ? | |
| | Hemigrapsus oregonensis | <i>Yellow Shore Crab</i> | | X | | CAM? | N | – | in mud under rock |
| | Neanthes succinea | <i>pile worm</i> | | X | | NM | | North Atlantic | in mud under rock |
| | Mopalia muscosa | <i>Mossy Chiton</i> | | X | | CAM | N | – | |
| | Discosolenia burchami | <i>flatworm</i> | | X | | CAM | N | – | |

| | | | | | | | | |
|-------------------|--|--|---|---|------|---|------------------------------------|-------------------------------------|
| | Jassa marmorata | <i>amphipod</i> | | X | CAM | E | Northwestern Atlantic | |
| | Alcyonidium polyoum | <i>bryozoan</i> | | X | CAM | E | Northwestern Atlantic | |
| | Conopeum tenuissimum | <i>bryozoan</i> | | X | CAM | E | Northwestern Atlantic | |
| | Haminoea japonica | <i>bubble snail</i> | X | X | CAM | E | Japan | |
| | cases | | | | | | | |
| | Ammothella hilgendorfi | <i>sea spider</i> | X | X | CAM | N | – | |
| | Molgula manhattan | <i>sea squirt</i> | X | X | CAM | E | Northwestern Atlantic | |
| | Corophiid amphipod | <i>amphipod</i> | ? | ? | CAM? | E | ? | |
| WALKING IN | Musculista senhousia | <i>Green Bagmussel</i> | X | X | NM | E | Northwestern Pacific | |
| | Philine auriformis | <i>sea slug (Tortellini Slug)</i> | | X | M | E | New Zealand | |
| | Venerupis philipinarum | <i>Manila Clam, Japanese Littleneck Clam</i> | X | X | NM | E | Japan, Korea, 1 live China | |
| IN SIEVE | Gemma gemma | <i>Atlantic Gem Clam</i> | | X | CAM | E | Northwestern Atlantic | |
| IN POOL | Gracilaria sp. | <i>red seaweed</i> | | X | NM | N | – | Haminoea eggs were attached to this |
| ON BEACH | Venerupis philipinarum | <i>Manila Clam, Japanese Littleneck Clam</i> | X | X | M | E | Japan, Korea, 1 paired shell China | |
| | Nucella lamellosa | <i>Frilled Dogwinkle</i> | | X | NM | N | – | shell fragments on beach |

COAST GUARD ISLAND
ON MUD NEXT TO THE DOCK

| | | | | | | | | | |
|------------------------|---|-----------------------------|---|---|---|-----|------------|---------------------------|-------------------------|
| | Spartina alternifolia/foliosa | cordgrass | X | | X | CAM | EH | Northwestern Atlantic | |
| | Littorina saxatilis | Rough Periwinkle | | | X | M | E | North Atlantic | |
| ON PILINGS | Balanus glandula | barnacle | X | X | X | N | N | – | intertidally on pilings |
| ON SIDE OF DOCK | Clathria prolifera | Dead Man's Fingers (sponge) | | | X | CAM | E | Northwestern Atlantic | |
| | Halichondria bowerbanki | Crust of Bread Sponge | X | | X | CAM | E | North Atlantic | |
| | Harmothoe praeclara | scale worm | X | | X | CAM | E | Australia | |
| | Ostrea conchaphila | Olympia Oyster | X | | X | CAM | N | – | empty shell |
| | Mytilus galloprovincialis/trossulus | Bay Mussel | X | X | X | CAM | EH | Mediterranean | |
| | Amphibalanus improvisus | barnacle | | | X | CAM | E | North Atlantic | on Mytilus |
| | Cirolana cf. japonica | isopod | X | | X | CAM | probably E | Japan | |
| | Ascidia zara | sea squirt | | | X | CAM | E | Northwestern Pacific | |
| | Botryllus schlosseri | colonial sea squirt | | | X | CAM | E | Northeastern Atlantic | |
| | Styela clava | sea squirt | | | X | CAM | E | Southern Siberia to China | |

[1] Name for the general type of organism if in lowercase; name for that species if in uppercase.

[2] CAM = mentioned on camera; M = mentioned, but not on camera; NM = I saw it but didn't mention it.

[3] N = native species

E = exotic species;

EH = probable hybrids of exotic and native species are present in bay

C = cryptogenic species, that is, not known if native or exotic

Data collected by: Dr. Andy Cohen, Environmental Scientist, San Francisco Estuary Institute's Biological Invasions Research Institute