

BLACK OYSTERCATCHER LAND-BASED SURVEYS IN OREGON



BACKGROUND

The goal of the Black Oystercatcher Survey is to cover estimate the breeding population for this species of conservation concern in Oregon to help inform conservation efforts. We also are interested in estimating the population of oystercatcher's using Oregon's marine reserves/protected areas and conducting associated opportunistic outreach to the public. In order to accomplish this we enlist the help of many volunteers. In general, surveyors cover a particular area of the coast (site) and count the oystercatchers they see. We are targeting three surveys per site in mid-to-late May but two is adequate. Multiple surveys per site will help us get a more accurate population estimate. This protocol provides specific guidance so you can collect the best information possible. Please take the time to read it in its entirety.

Black Oystercatchers are considered a “species of high concern” by the U.S. and Canadian National Shorebird Conservation Plans (Brown et al. 2000¹), yet population numbers are uncertain and it is unclear whether the species is in decline. The Black Oystercatcher has a year-round range extending from Alaska to Baja California and total population size is estimated at 11,000 birds or fewer (Andres and Flaxa 1995²). Threats to persistence include human disturbance, habitat alteration, predators, oil spills, and climate change. This survey will be used to help assess the status of the species, its habitat, track population trends along the coast and adjacent to marine reserves/protected areas, and inform coastal management and protections.

Habitat types most commonly used by nesting oystercatchers in Oregon include near-shore rocks and islands, rocky shoreline, and headlands. Occasionally, dispersing or wandering individuals may be seen on jetties. Black oystercatchers forage exclusively on intertidal macroinvertebrates (e.g., limpets and mussels).

¹ Brown, S., C. Hickey, B. Gill, L. Gorman, C. Gratto-Trevor, S. Haig, B. Harrington, C. Hunter, G. Morrison, G. Page, P. Sanzenbacher, S. Skagen, and N. Warnock. 2000. National Shorebird Conservation Assessment: Shorebird Conservation Status, Conservation Units, Population Estimates, Population Targets, and Species Prioritization. Manomet Center for Conservation Sciences.

² Andres, B.A. and G.A. Flaxa. 1995. Black Oystercatcher (*Haematopus bachmani*). In *The Birds of North America*, No. 155 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

VOLUNTEER QUALIFICATIONS

- Surveyors need to have good vision and hearing.
- For some routes, it may be necessary to walk up to several miles on bumpy terrain. Surveyors should anticipate traveling on surfaces varying from flat hard sand beaches and well-maintained trails to steep, overgrown slopes made slippery by weather or loose rock. Some survey routes may include creek crossings.
- Familiarity with Black Oystercatcher calls and in identifying both adults and juveniles.

EQUIPMENT

- Binoculars (preferably with magnification of 8X or higher; e.g. 8 X 40, 10 X 50)
- Spotting Scope/tripod (at least 20X needed at most sites; if you do not own a scope contact the survey coordinator and we will try to provide you with one)
- Waterproof field notebook or clipboard and data sheets
- Local tide table
- Site map
- Pen or pencil
- Timepiece
- Appropriate clothing and footwear for adverse weather conditions
- Optional items: Global positioning device (GPS unit); digital camera; walking staff

SURVEY PERIOD

All sites are surveyed during a narrow time frame or “window” focused on the pre-nesting period when oystercatchers are easiest to detect, stay close to mates, and engage in loud aggressive encounters. **The window survey period** is an approximately 3-week period from the 2nd week of May until the end of May. **Contact the project coordinators for the survey period dates for the current season if you haven’t been notified.** Confining the count to this time also minimizes the chance of recounting birds moving between neighboring sites. The initial survey should be followed by at least **one additional survey (more if possible!)** with **5 days or more between survey replicates**. Weather conditions may preclude you from keeping surveys spaced out at least 5 days apart – do the best you can!

SURVEY CONDITIONS

Surveys should be conducted during good weather and high visibility. On sunny days, visibility is best early in the morning before backlighting makes it difficult to spot oystercatchers on off-shore rocks and islands. On an overcast day visibility is good at any hour. Rainy, foggy, or excessively windy conditions (15 mph or greater, whitecaps visible at sea) are not suitable for surveying, however a slight drizzle or strong breeze (5-10 mph) is acceptable. Early morning surveys may be preferred as winds can become very strong in the afternoon. Moreover, safety is a priority and no volunteer should conduct surveys during conditions in which they feel uncomfortable.

Consider the best tidal stage at which to conduct your survey. At some sites, surveying at high tide (\pm 2hrs) is ideal because oystercatchers are more likely to be at or near their nesting site. However, at most sites habitat may be more accessible or visible at low tide. **DO NOT attempt to survey during a high or rising tide if there is any chance your safety will be jeopardized** (i.e., difficult passage through a narrow or rocky region during incoming tide). If access is difficult, survey during a falling tide when safe passage is more certain. For questions about accessibility, please contact the survey coordinator prior to surveying.

METHODS

Record data in the **Abundance Survey Data Form** or in a waterproof notebook and transfer to data sheets immediately after the survey. Then enter core data into the on-line database (online data entry link: <https://goo.gl/forms/3rnLB1b0727t12zc2>) which includes **12 questions**: **1)** Observer name(s), **2)** email, **3)** phone number, **4)** survey map route name, **5)** date, **6)** total time spent actively surveying (not including travel time), **7)** wind (using Beaufort Scale), **8)** precipitation, **9)** total adults, pairs, nests, and young seen, **10)** number of observation points used (places you stopped and surveyed for >10min), **11)** outreach (number of public you talked to), and **12)** comments. For safety reasons and improving detection, it is best to have a 2-person survey team but 1 person can conduct surveys.

Survey Count: The main objective of the Black Oystercatcher survey is to obtain an accurate count of oystercatchers at each site by recording individual birds seen. Observations of birds, their locations, pair status, nests, and other variables should be recorded for each survey route using the following methods:

1. Using binoculars followed by a spotting scope, scan all potential habitat for Black Oystercatchers for **at least 30 minutes** within the survey area. Oystercatchers may be cryptic against dark rocks and are particularly difficult to distinguish if their brightly colored bills, eyes, and legs are not visible (i.e. facing away when incubating, roosting); be patient!
2. If all habitat is not visible from one observation point, spend **at least 10 minutes** at the first point then move a short distance to a new observation point. Continue moving to new observation points until all habitat visible from land has been scanned and you have surveyed for at least 30 minutes total. Sites may take up to two hours or more if you are unfamiliar with the area. Label survey **observation points using letters** (e.g. A, B, C, etc.).
3. For survey routes which include multiple coves or regions that are auditorily isolated (e.g., two rocky areas separated by a stretch of sandy beach), **spend at least 30 minutes surveying each area**.
4. If two observers are present, they should remain close enough to communicate throughout the survey period and both surveyors should scan all visible habitat.
5. When you see or hear an oystercatcher, **record the detection number in sequential order, the number of birds detected, and detection type. Mark the detection number corresponding to the bird(s) detected on your survey route map with an arrow.** Keep track of birds as they fly to and from the area in order to reduce double-counting.
6. Should you suspect a bird or group of birds is the same as seen earlier in the survey, indicate this on the datasheet and/or map and **do not include the duplicate birds in your total count**.
7. If oystercatchers are heard but are not visible, one observer should remain stationary while the other attempts to view additional birds by moving to a new vantage point. Calls are often indicative of a territorial dispute which may result in a flying chase. Therefore, the stationary observer should scan sky and nearby ocean as well as rocks.
8. If bird(s) are heard, but not seen, record as present but number unknown (unless two birds are calling to one another, and you can see one bird and not the other). Mark the detection location

on the map and indicate where calls came from. Only record birds based on audible responses if you are positive it is a Black Oystercatcher (e.g. a Pigeon Guillemot may be confused with a Black Oystercatcher).

9. Record behaviors observed (e.g. sleeping, standing, feeding, walking, preening, chasing, territorial display (head bowing) etc.).
10. Record information about breeding behavior including which birds appeared to be “paired” and what evidence you used to determine that. See section below on “**Pairs and sub-adults**” for more information.
11. On the map include the following: 1) draw line(s) along the shoreline or islands that indicate where you surveyed (what was visible to you); 2) mark a letter (e.g. A, B, C, etc.) for any observation points you stopped at to survey for birds; 3) location of detected birds with corresponding detect # and arrow. **See completed data sheet and map below for an example.**
12. If possible, take digital pictures of detected birds and/or nesting areas (from a distance).
13. Record end time before leaving the site.

PLEASE ENTER DATA FROM YOUR HARD COPY FORMS INTO THE ON-LINE FORM.

You can access that here: <https://goo.gl/forms/3rnLB1b0727t12zc2>

Pairs and sub-adults: Black Oystercatchers do not breed until their third year. Hence, you may encounter birds that look like adults but are too young to breed. These sub-adults will not act in a territorial manner and they will generally be seen in small groups (3-5 individuals). Please try to determine pair status. Pay careful attention to the proximity of birds to each other and any interaction between birds to determine pair or sub-adult status:

- a) If two birds are less than 10 ft. apart and not acting aggressively toward each other, record them as a pair.
- b) Two birds acting aggressively toward a third adult or a second pair of adults (aerial or ground chasing, continuous counter-calling, jabbing), also indicates pair status.
- c) Groups of three or more birds feeding, preening, roosting, or flying quietly, are very likely sub-adults and are not paired. Any time three or more birds are seen in close proximity but are not acting aggressively, record status as “single” and make a note that they are likely sub-adults.
- d) If a bird is initially observed alone, try to keep an eye on it while continuing to survey for other birds. Often when second bird is observed it will be possible to determine the status of the first bird.

Breeding Observations: After the Survey Count is completed, volunteers are encouraged to spend additional time confirming pair status and searching for nests. Birds may not be nesting in the beginning of the survey window but could be detected nesting on follow-up surveys. Observations should be made from as great a distance as possible to minimize disturbance. Back away if any bird appears to be responding to your presence (e.g., flying overhead calling loudly). Remember, **DO NOT**

conduct breeding observations if your safety is jeopardized by a rising tide or changing weather conditions. If you have ample time to watch birds safely, use the following methods to determine nesting status:

1. Copulation or attempted copulation.
2. Nest building behavior and prospecting. Oystercatchers do not build true nests but they will toss rocks or small bits of shell over their shoulder or appear to rearrange the substrate below them (with bill down). Birds may also press their breast down, sit, or scrape (kicking their feet backwards with breast down). Often both members of the pair will take turns “trying out” a potential nest location.
3. Watch the behavior of single adults, particularly single birds standing near the top of a rock as the non-incubating member of a pair will stand “on watch” near it’s incubating mate.
4. Record any signs that there is an active nest. Pay close attention to any sitting bird. If you see any of the following, you have located a nest:
 - a. A sitting bird stands or flies off and eggs are visible (from a distance they appear white or cream colored).
 - b. A bird flies off from a sitting position, then returns to the exact same location and sits down again.
 - c. A second bird trades places with the first bird, and sits in the exact same location (both males and females take turns incubating)
5. If a nest is found, mark the location on a map and write a detailed description of nest location so that it can be relocated by another observer. Take photos if possible. Count any eggs that can be seen from a distance.
6. Record any suspected nests and make note of behaviors you observed.

Follow-up Survey: Make sure to complete **at least 1 follow-up survey**. Each follow-up survey should be performed **at least 5 days** after the previous survey count. The route and methods used during the follow-up survey should be exactly the same as during the initial survey count. Revisit all observation points, even if no birds were recorded in the vicinity during the initial survey count. Observation and total visit time may be shortened slightly if you are re-sighting birds seen in the same locations and are able to ascertain breeding status quickly.

Reporting instructions: **Notify the survey coordinator immediately after your survey if nests were located or suspected OR if you are unable to conduct the follow-up survey** so other potential observers may be notified.

Reproductive Study: If you are able to conduct weekly visits to monitor nests and young, please contact a survey coordinator. Reproductive surveys help gather important information about Black Oystercatcher reproductive success.

Outreach: If you are working in an area with members of the public present, be sure to carry the provided brochures to distribute if people are interested.

Survey Coordinators:

Amelia O'Connor Audubon Society of Portland 6330 Nellie Ave Otter Rock, OR Cell: (406) 546-5797 asopcoastalbirds@gmail.com	Joe Liebezeit Audubon Society of Portland 5151 NW Cornell Road Portland, OR 97210 jliebezeit@audubonportland.org Phone: (971) 222-6121; Cell: (503) 329-6026
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Beaufort Wind Scale¹

Beaufort Number	Wind Speed (mph)	WMO Description	Ocean Appearance- beyond break zone	Effects on Land	Should I Survey?
0	under 1	Calm	like glass	none	yes
1	1-3	Light Air	light ripples	smoke drifts	yes
2	4-6	Light Breeze	very small waves (< 1.0 ft) with glassy appearance	can feel wind on face, leaves rustle	yes
3	7-10	Gentle Breeze	waves increasing in size and scattered whitecaps	leaves and twigs in constant motion	yes
4	11-16	Moderate Breeze	larger waves and numerous whitecaps	small branches move, dust blows	not ideal
5	17-21	Fresh Breeze	waves 6-8 ft, many whitecaps, and some spray	small trees begin to sway	occasional gusts OK, but otherwise no
6	22-27	Strong Breeze	whitecaps everywhere, more spray	large branches in motion, whistling may be heard	no
7	28-33	Near Gale	white foam from breaking waves is blown in streaks, sea heaps up	larger trees in motion, walking is difficult	no

¹Some classes with high Beaufort Numbers are not included in this table

**THE FOLLOWING SECTION INCLUDES AN
EXAMPLE OF A COMPLETED DATA SHEET AND MAP**

Black Oystercatcher Abundance Survey Data Form

- 1) Observer Name: Amelia O'Connor 2) Email: ASOPCoastalBirds@gmail.com 3) Phone: (406) 546-5797
- 4) Survey Route Map Name: South Yachats 5) Date: 5/20/2018 Start time: 7:30 End time: 11:15
- 6) Total time in minutes spent actively observing, not including travel to or between surveyed areas: 120
- 7) Wind (see Beaufort scale): 2 8) Circle any of the following conditions that occurred during the survey: Fog, Rain, Both
- 9) Total number seen: # Oystercatchers: 5 # Pairs*: 1 # Nests: 0 # Young: 0

IMPORTANT!! – Please mark oystercatcher locations corresponding to Detect # with an arrow and the Detect # on your map. Also mark your surveyed areas with a line(s) and any spot you stopped for >10 min to survey (observation point) with a unique letter (A, B, C...) on the map. See example map in protocol for help. Please email Amelia, asopcoastalbirds@gmail.com, within 48 hours if a nest is seen.

Detect #	Obs. Letter	Response Type ¹	# Oystercatchers	P/S ²	# Young	Repro Status ³	Behavior (i.e., aggressive calls, chasing, preening, foraging, standing, flying). Please make a note of any repeat detections (if you are not sure that it is a new bird do not include in total count!).
1	A	B	1	S	0	UN	standing on beach
2	B	B	2	P	0	UN	pair chased single from D#1, aggressive calls and heads low
3	E	V	2	S	0	UN	preening on rock, not aggressive to D#4
4	E	V	1	S	0	UN	flaw in joined D#3, maybe D#1 bird, all flew N together
5							
6							

¹ Response Type: V=visual, A=audible, B=both

² P/S: P=pair; S=single

³ Repro Status: YG = young, NE = nest w/ eggs, NT = nesting (no eggs seen), NS = nesting suspected, CP = copulating, UN = unknown

*two adult BLOY paired together are considered 1 pair

See next page for additional rows and questions

Detect #	Obs. Letter	Response Type ¹	# Adults	P/S ²	# Young	Repro Status ³	Behavior
7							
8							
9							
10							
11							
12							

10) Total number of observation points used (places you stopped at for >10 min to survey, mark with a letter on your map): 5

11) Outreach (total number of people you spoke to about the survey, seabirds, marine reserves or conservation issues): 11

12) COMMENTS (e.g., description of nesting behavior/locations, disturbance, predators, other shorebirds/seabirds, other comments):

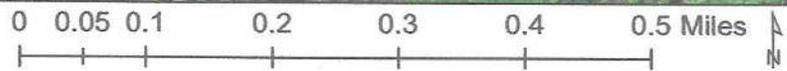
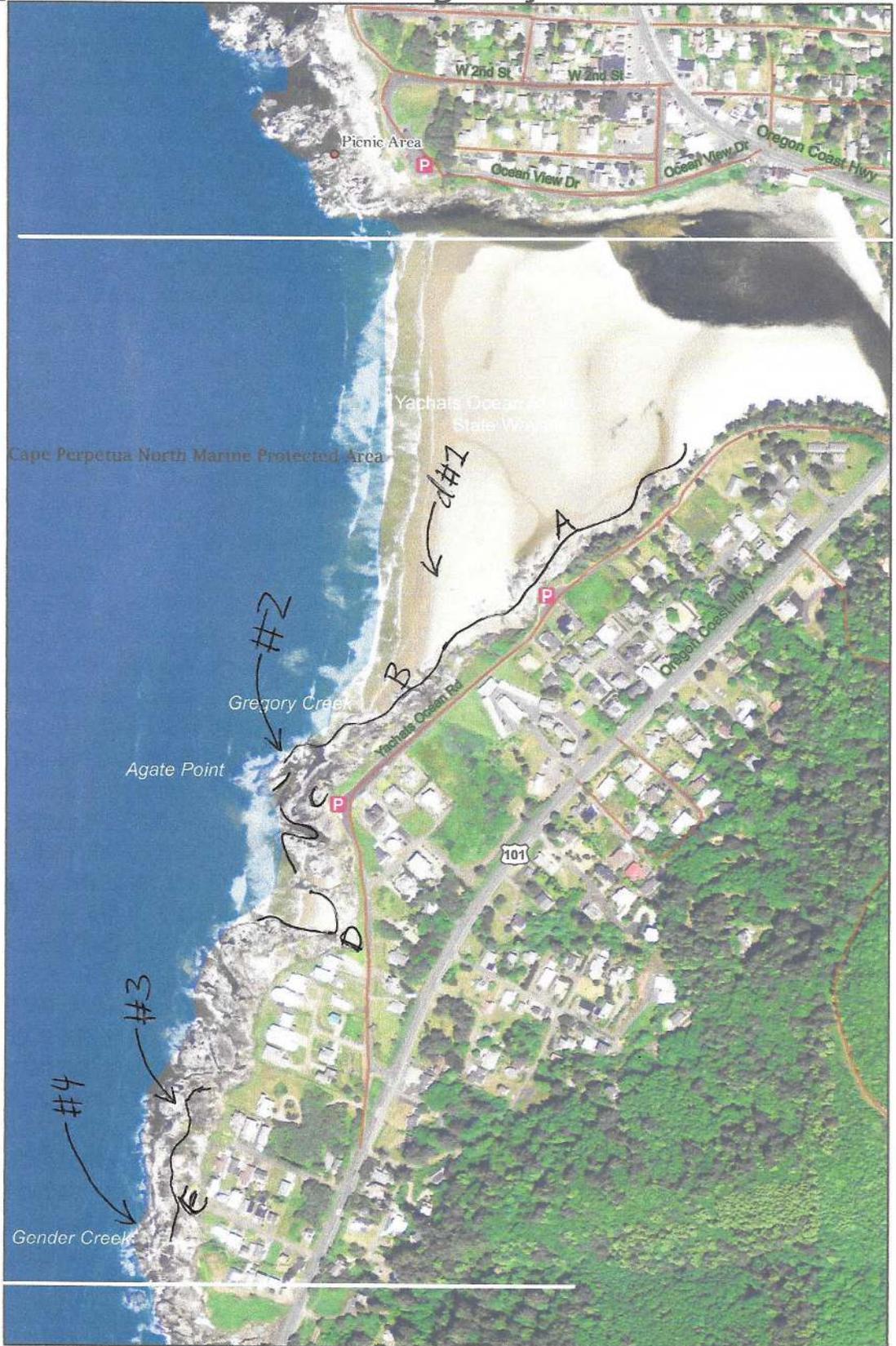
No nesting behavior observed. One bald eagle on tree inland and two dog walkers on beach, no disturbances observed. Two western gulls and a few cormorants on rocks/in water, ~20 shorebirds on beach at waters edge. Fog was dense offshore but did not affect survey.

After you complete your survey please:

- 1) Enter the numbered questions on the online data form at: <https://goo.gl/forms/3rnLB1b0727t12zc2> (we will email you this link)
- 2) Scan (or take a picture of) and email Amelia O'Connor a copy of your original data sheet and map at asopcoastalbirds@gmail.com or mail to 6330 Nellie Ave, Otter Rock, OR 97369. Thank You!

Black Oystercatchers Monitoring Project: South Yachats

- P Parking Lots
- Roads
- Highways
- *habitat surveyed*



Map created April 22, 2016