BLACK OYSTERCATCHER

TAXONOMY

Scientific name: *Haematopus bachmani* (Audubon, 1838)
Common name: Black Oystercatcher
Family: Haematopodidae

Taxonomic comments:
H. palliates, the American Oystercatcher, and *H. bachmani* are closely related and considered conspecific by some authors; they co-occur in a hybrid zone about 200 miles in width in central Baja California (AOU 1983). *H. bachmani* and *H. palliatus* were regarded as distinct species by Jehl (1984) and Sibley and Monroe (1990); see DeBenedictis 1990 for contrary view.

DESCRIPTION

Basic description: A large shorebird.

General description:
A relatively large, all-black shorebird, with a heavy, bright-red bill typical of oystercatchers. Bright yellow iris with orange-red orbital ring in adults; sturdy, pale pink legs. Females have longer, narrower bills and heavier bodies (Andres and Falxa 1995).
Length (cm): 45
Weight (g): 689

Reproduction:
Eggs laid late May-early July (generally early to mid-June) in Alaska, mid-May to late June (generally mid-June) in Washington/Oregon, early May-late June (generally late May) in southern California (L'Hyver and Miller 1991). Clutch size ranges from 1-4 (usually 2-3). Incubation 26-27 days, by both sexes. Nestlings precocial but dependent on parental feeding for several weeks (both sexes feed young). Chicks begin to fly at 35+ days. Long-term mate fidelity. See Terres (1980), Groves (1984), Purdy and Miller (1988).

Ecology:
Winter flocks seldom range more than 30 miles from nesting sites (Terres 1980), except in northern populations (Andres and Falxa 1995). Obligate users of intertidal zone year-round. Period from hatching until time of first flight is critical life-history stage (Groves 1984).

Migration:
Although birds in the southern portion of the range generally remain near nesting areas throughout the year, individuals in northern populations probably undertake migrations (Andres and Falxa 1995), although little is understood about their seasonal movements. Over 75% of Black Oystercatchers breeding in Prince William Sound, Alaska, migrate out of the sound to spend the

winter, although their wintering destination is unknown (Andres 1998). Small flocks, usually less than 25 birds, have been recorded migrating in spring and fall along the outer coast of Alaska (Andres and Falxa 1995).

In Alaska, flocks that consist of nonbreeders and failed breeders increase in size throughout July and August and depart in September (Andres and Falxa 1995). In British Columbia, flocks build throughout September and October, reaching peak numbers in late October, early November (Campbell et al. 1990). Spring movements probably occur during March; birds reoccupy vacated territories during March and April (Purdy 1985, Andres and Falxa 1995). One individual, banded at Bodega Bay, CA, was sighted 340 km to the north in July, and then returned to banding site in September (Falxa 1992, Andres and Falxa 1995).

Food:
Feeds on mollusks (e.g., pries open mussels and limpets), probes sand for marine worms.

Habitat:
Global habitat:
Breeding: Habitat is exclusively associated with the high tide margin of the inter-tidal zone, and includes mixed sand and gravel beaches, cobble and gravel beaches, exposed rocky headlands, rocky islets, and tidewater glacial moraines. The southern limit of their range coincides with a change of rocky shores to sandy beaches (Jehl 1985). Breeding territories are usually in close proximity to dense mussel beds. Avoids brushy and forested habitats. Breeding density is generally greatest on non-forested islands and islets. Nest is a shallow circular depression on the ground (e.g., scrape on beach of broken shell) or on a rock (Groves 1984). The retreat of glaciers, which expose gravel moraines, and uplift from earthquakes can create new oystercatcher nesting habitat (Lentfer and Maier 1995, Gill et al. 2004).

Non-breeding: In winter, flocks concentrate on protected, ice-free tidal flats with dense mussel beds (Hartwick and Blaylock 1979).

State habitat:
In Alaska, highest breeding densities occur on non-forested islands dominated by sloping beaches of shell or gravel (Andres 1998). Also see Global breeding and non-breeding habitat comments above.

STATUS

Global rank: G5 (1996-11-25)

State rank: S3S4B, S3?N (2004-07-29)
State rank reasons:
Over 60% of global population resides in Alaska; population is small, between 4,500 and 7,000 individuals. Population apparently stable, with substantial increases noted at Middleton Island over the past 20 years. Majority of breeding population is clustered in southcentral Alaska; migration and wintering distribution poorly understood. Due to species dependence on inter-tidal habitats, it is vulnerable to oils spills year-round. Concern also due to increasing commercial and recreational

vessel traffic and growing recreational use at breeding sites. Egg and chick predation by mammals and other birds is substantial.

DISTRIBUTION AND ABUNDANCE

Range:

Global range:

Resident along Pacific Coast from Kiska Island, Aleutians, Alaska, south to Baja California, Mexico. Most breed between south-coastal Alaska and coastal British Columbia (Andres and Falxa 1995, Morrison et al. 2001).

State range:

In western Alaska, common throughout Aleutian Archipelago west to Kiska Island and locally in northern Bristol Bay (Eley 1976, Niven and McClellen 1987, Andres and Falxa 1995). Most of the population occurs in southcentral Alaska where they are common throughout the Kodiak Archipelago and east to Kenai Fjords National Park and eastern Prince William Sound (Andres and Falxa 1995). Recent colonization of Middleton Island in the Gulf of Alaska (Gill et al. 2004). Regular along outer coast of southeastern Alaska. Occasionally found on the Pribilof Islands in winter (Rodstrom 1984). Two sightings have been reported at Westchester Lagoon, Anchorage, AK; one individual in June 1986, another individual in June 1999 (Scher 1999).

Abundance:

Global abundance:

Morrison et al. (2001) estimated the total population at 8,900, representing the approximate midpoint of the range 6,900-10,800 given by Andres and Falxa (1995).

State abundance:

About 60% of global population (4,500 - 7,000) thought to reside in Alaska, mostly within the Kodiak Archipelago, throughout Prince William Sound, and southeast Alaska (Andres and Falxa 1995).

Trends:

Global trend:

Morrison (1993/1994) categorized the population trend in Canada as "stable?" Thought to be stable, but data is limited.

State trend:

Thought to be stable, but survey data is limited, and trend data virtually nonexistent. Within Prince William Sound, numbers of pairs increased or remained constant between 1991 and 1998 (Murphy and Mabee 1999). On Middleton Island, the total number of birds increased from two in 1976 to 718 in 2002 (Gill et al. 2004). Possibly extirpated from islands around Sitka, Alaska, where breeding numbers declined from 102 individuals in 1940 to 4 individuals in 1985 (Andres 1998). A 2003 survey of Glacier Bay National Park found 262 territorial adults (non-territorial birds were not censused) throughout the entire park, but in the area of greatest nest density (the only area in the park previously censused), the Beardslee Islands, the number of territorial adults had fallen from 118 in 1995 to 56 (Arimitsu et al. 2004). No other census data from Alaska are currently available.

EXISTING PROTECTION

Global protection:
Classified as a species of "high concern" within the United States (Brown et al. 2001), Canadian (Donaldson et al. 2001), and Alaska Shorebird Conservation Plans (Alaska Shorebird Working Group 2004). Listed as a U.S. Fish and Wildlife Service bird of conservation concern within national regions' 1 and 7 (Alaska).

State protection:
Classified as a species of "high concern" within the Alaska Shorebird Conservation Plan (Alaska Shorebird Working Group 2004). Listed as a U.S. Fish and Wildlife Service bird of conservation concern within region 7 (Alaska). Included in the Alaska Audubon Watch List.

In Prince William Sound, about 1,400 miles of shoreline, much of it rated high for oystercatcher habitat, has been protected by the *Exxon Valdez* Oil Spill Trustee Council, including Sheep Bay, Two Moon Bay, Bligh Island, and Chenega Island (Andres 1998). Shoreline habitat around Kodiak Island is protected in Kodiak National Wildlife Refuge. Elsewhere, habitat is protected where species occurs in Kenai Fjords, Glacier Bay, and Katmai National Parks, and in Maritime and Alaska Peninsula/Becharof National Wildlife Refuges.

CHALLENGES

Global challenges:
The Black Oystercatcher's small population size and complete dependence upon a narrow coastal band throughout their life cycle places this species at risk to human and other mammalian disturbance (Andres and Falxa 1995). Scientific collecting, human disturbance, and mammalian predation are responsible for the extirpation of breeding pairs on small islands off the coast of Baja California (Jehl 1985). On Channel Island, CA, human disturbance and feral cat predation caused breeding pairs to abandon nest sites (Warheit et al. 1984). Human-induced habitat alteration may have been responsible for local extirpation from islands around Sitka, AK, where numbers declined from 102 birds in 1940 to 4 birds in 1985 (Andres and Falxa 1995). Oystercatchers have reestablished themselves in areas shortly after disturbance is removed. For example, 20 breeding pairs were reestablished within 5-7 years after major disturbances by humans and domesticated animals were removed on South Farallon Island, CA (Ainley and Lewis 1974 in Andres and Falxa 1995). Similarly, breeding pairs increased within 7 years after lighthouse automation on Destruction Island, WA (Nysewander 1977 in Andres and Falxa 1995). Eradication of foxes on several Aleutian islands, AK, resulted in recolonization by this species (Byrd 1988, Byrd et al. 1997).
Also see State challenges.

State challenges:
The 1989 *Exxon Valdez* oil spill in Prince William Sound (PWS), Alaska, severely impacted breeding oystercatchers: 20% of the population in the spill area was directly killed by the spill (Andres 1994); breeding activity was disrupted in 39% of oystercatcher pairs attempting to nest on the heavily oiled shorelines (Sharp 1990, Andres 1997); and survival of chicks was reduced (Andres 1997). Clean-up activities disrupted breeding birds into 1990 (Andres and Falxa 1995).

Four years after the spill, the presence of elevated hydrocarbon concentrations was detected in feces of chicks, indicating that birds were exposed to oil persisting on shorelines of PWS into 1993 (Andres 1997). Transport of oil by tankers in areas inhabited by oystercatchers is a continual risk to breeding and non-breeding populations. Furthermore, increased recreational activity can affect shorelines through low-level contamination of diesel fuel and gas.

There is also growing concern that pressure from recreational activities in and around breeding areas could have deleterious effects. Increasing pressure from the tourist industry in the form of growing visitation by cruise ships, sightseeing vessels, water taxis and private boats raises the likelihood that nests will be flooded by large wakes, especially during periods of high-high tides. Increased human presence by campers, kayakers, and fishermen in remote coastal areas could interfere with parental care and foraging, may result in nest abandonment, and increases the likelihood that nests and eggs will be inadvertently trampled.

Predation is the major cause of mortality to eggs and chicks; chicks are most vulnerable during the first 2 weeks after hatching (Andres and Falxa 1995). Clutches of chicks are regularly lost to high tides or storm surges (< 10% of all losses; Andres and Falxa 1995). Eradication of foxes on several Aleutian islands resulted in recolonization by Black Oystercatchers (Byrd 1988, Byrd et al. 1997). Decreased reproductive success in oystercatchers has been attributed to disturbance by pinnipeds, forcing adults to leave nest sites during incubation or brooding and by the actual crushing of eggs and chicks when hauling out (Warheit et al. 1984). Subsistence harvest of either breeding adults or eggs is a potential threat to some local populations.

RESEARCH AND INVENTORY NEEDS

Global research needs:
Research initiatives should focus on factors affecting productivity in different areas throughout the range, with an emphasis on nest and chick survival (Murphy and Mabee 1999). Research is also needed on wintering ecology, including identification of wintering concentrations and migratory behavior. Effects of shoreline development and disturbance need study.

State research needs:
Research initiatives should focus on factors affecting productivity, with an emphasis on nest and chick survival (Murphy and Mabee 1999). Research is also needed on wintering ecology of this species, including identification of important wintering concentrations and on seasonal movements between breeding and wintering areas. Effects of shoreline disturbance and effects of increasing vessel traffic need study.

Global inventory needs:
Coordinated surveys needed range-wide to determine accurate population assessment. Long-term monitoring of selected populations, especially within current conservation units is needed to assess population trends and viability.

State inventory needs:
Coordinated surveys needed range-wide to determine accurate population assessment. This includes implementing rigorously designed protocols for monitoring status and trends (Andres and

Gill 2000, Alaska Shorebird Working Group 2004). Long-term monitoring of selected populations needed to assess population trends and viability. Winter surveys needed in Southeast Alaska to determine what proportion of the population utilizes this area.

CONSERVATION AND MANAGEMENT NEEDS

Global conservation and management needs:
Due to species' limited population size, habitats hosting high densities of oystercatchers during breeding, stopover/staging, and wintering periods should be protected from disturbance. About 7% of the worlds and 36-48% of southcentral Alaska's Black Oystercatcher population reside on Middleton Island during summer (Gill et al. 2004). This island, and other important habitats like it, should be included as regional sites within the Western Hemisphere Shorebird Reserve Network (WHSRN; Gill et al. 2004). Identify habitats prone to land development activities and human disturbance and develop mitigation prescriptions to reduce negative influences on them (Andres and Gill 2000, Alaska Shorebird Working Group 2004). During the non-breeding season, buffer zones that reduce human and boat traffic in sensitive areas should be established around feeding and roosting concentrations (Andres and Falxa 1995).

This species forages exclusively on marine invertebrates and other marine food items. Water quality in feeding areas to ensure healthy prey populations is also an important conservation issue. In areas at risk to large scale environmental perturbations, such as oil spills, baseline information should be collected on breeding density and productivity, prey abundance and quality, and size of non-breeding populations (Andres and Falxa 1995).

State conservation and management needs:
In Alaska, most current conservation management for this species occurs at a local level, i.e. removal of introduced predators from nesting islands (Byrd 1998). Monitoring and eradication of invasive species (foxes and rats) on nesting islands in the Aleutians should be continued.
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