



Sea Duck Information Series

Harlequin Duck (*Histrionicus histrionicus*)

French: *Arlequin plogeur*

Description

Harlequin ducks are small diving sea ducks. Males weigh about 650 g (1.4 lbs); females about 575 g (1.3 lbs).

Males are striking, with a slate blue body, white bands and collars bordered by black lines on chest and neck, and a large crescent in front of the eye. They have a white spot behind eye and a white stripe along their neck. A black streak bordered by white and chestnut run along the top of the head, and the flanks are chestnut brown. Their wings are dark brown with an iridescent blue patch on the trailing inner edge and a few white spots or stripes close to the body.

Females have a mostly brown body with a white belly, white patch behind ear, and white patches in front of eye. Occasionally they have white streaks on the back of the head. Their wings are entirely dark gray to black. Immature males have a mix of male and female plumage characteristics.

Harlequin ducks are quite vocal. Their most common call is a mouselike squeek. Their wings make a soft whistling noise at close range.

Range

There are two distinct populations of harlequin ducks in North America – a western population and an eastern population. The western population breeds along rivers throughout most of interior and southcoastal Alaska, Yukon Territory, British Columbia, east into southwest Alberta, and south to the Rocky and Cascade Mountain regions of Oregon, Washington, Idaho, and western Montana and Wyoming. The western population winters coastally from the Aleutians south into coastal Oregon.

Most harlequins that breed in the Rocky and Cascade Mountain ranges migrate west and spend the winter in British Columbia and Washington. Movements of birds between Alaska wintering areas and breeding areas are not well known. Satellite telemetry studies indicate some birds wintering in Alaska breed in the Russian Far East; the



Photo: Tom Rothe

Harlequin Ducks: male, left; female, right

extent to which this occurs is poorly documented.

The eastern North America population breeds from northern Quebec and Labrador south into Newfoundland and northern New Brunswick. This population contains two distinct segments based on wintering location.

Birds breeding in northern Quebec and Labrador molt and winter primarily along the southwest coast of Greenland. Of birds breeding further south, males molt along the southwest Labrador coast and females molt from Labrador to Maine. The southern population winters from southern Newfoundland and the Maritime provinces and New England states, mostly in Maine in the area of Penobscot and Jericho Bays.

Habitat and Habits

Pairs form after birds arrive on wintering areas. They often reunite in subsequent years, and both males and females often return to the same breeding area each year. Females first breed when they are at least two years old.

Harlequin ducks use clear, fast-flowing rivers and streams during the breeding season. These may be coastal or inland. Pairs migrate coastally then along rivers to breeding areas. On the west coast, harlequin ducks will often congregate at herring

spawning areas prior to migration, where they feast on herring eggs.

Females scout for suitable nest sites and begin building nests shortly after arrival on breeding areas. Nests may be on the ground, on small cliff ledges, in tree cavities, or on stumps. Nests are well concealed by vegetation or other overhead cover. They often nest on islands in streams.

The female lays 5-6 eggs in a down-lined nest bowl. She incubates eggs for about 29 days. Young are able to feed themselves immediately after hatching, and are able to fly when 45-55 days old.

Males depart breeding areas shortly after female begins incubation and fly to molting areas. They are rendered flightless for 25-30 days while they shed their flight feathers and grow new ones. Females molt at the same locations as males, but 4-8 weeks later. Individuals use the same molting areas year after year.

Harlequin ducks are agile and swift swimmers in turbulent water. During the breeding season, they feed by diving to the river bottom to pick larval insects from rocky substrates.

On coastal wintering areas, harlequin ducks forage close to shore in intertidal or subtidal rocky areas. They have a varied diet of amphipods, snails, crabs, fish eggs, and other small animal foods. They typically forage by diving in water less than 10

meters or by dabbling along the tide line.

Population Size and Status

There are no comprehensive estimates of harlequin duck numbers or trends for western North America. Their riverine breeding habitats are difficult or impractical to survey, as is much of their wintering range. Despite the paucity of data, the western population is believed to be stable.

The western population is much larger than the eastern population. Rough estimates range from 150,000 to 250,000 birds. The bulk of the western population (>100,000) apparently winters in the Aleutian Islands.

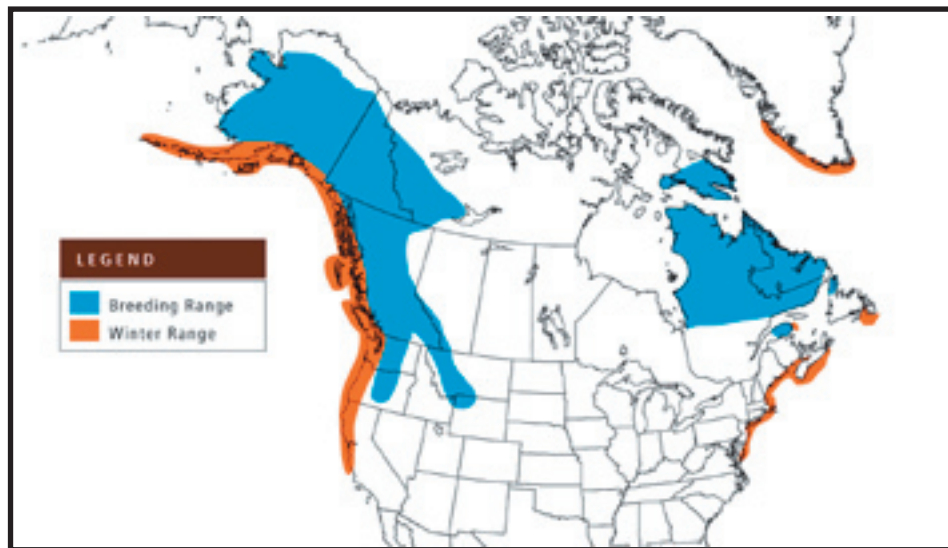
Harlequin ducks that breed in northern Quebec and Labrador and winter in Greenland are considered a distinct population from those that breed and winter further south in eastern North America. Their abundance is uncertain, but may be about 10,000 birds; trends are largely unknown.

The population that winters in eastern North America has declined from historic levels but has shown a slight upward trend since the early 1990s, currently numbering about 1800-2000 birds. Both eastern populations were downlisted from endangered to "species of concern" in Canada.

Management and Conservation

For management purposes, eastern and western populations are considered distinct and, as noted above, there are two eastern populations recognized based on wintering location. Based on banding and telemetry, there appears to be little or no mixing of Alaska birds with those from the conterminous states and provinces.

Harlequin ducks are hunted throughout western North America, under restricted regulations in



Distribution of Harlequin Duck in North America

most areas. However, estimates of harvest are poor because sea duck hunters are undersampled in harvest surveys. Probably fewer than 1000 are harvested along the west coast by sport hunters annually, and subsistence harvest in Alaska may number 2500 birds. Better information on harvest is needed.

Hunting for harlequin ducks in eastern North America is prohibited, and numbers of birds have apparently increased in response.

Harlequin ducks are relatively tame, use near-shore habitats, and have high site-fidelity, hence local wintering aggregations are highly susceptible to hunting mortality.

Inland populations are subject to disturbance from recreation (boaters) and land use changes (forestry, introduction of fish, hydro-developments) that may affect water quality and nesting habitat.

Harlequin ducks are particularly vulnerable to oil spills because they are linked closely to the intertidal habitats where oil washes up. Oil spilled by the wreck of the Exxon Valdez in 1989 in Prince William

Sound, Alaska, killed an estimated 1400 birds and continues to affect the population of harlequins there through ongoing exposure, resulting in reduced survival.

Satellite telemetry has provided insights into how breeding and wintering populations are related, as well as migration pathways. These research efforts are continuing, along with studies of breeding ecology and the effects of human disturbance.

References and Resources

Robertson, G. J., and R. I. Goudie. 1999. Harlequin Duck (*Histrionicus histrionicus*). In *The Birds of North America*, No. 466 (A. F. Poole and F. B. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Seaduckjv.org – the website for the Sea Duck Joint Venture.



The Sea Duck Joint Venture is a conservation partnership under the North American Waterfowl Management Plan

To learn more about the Sea Duck Joint Venture (SDJV), visit seaduckjv.org or contact:

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