

Podiceps auritus

This species is complete.

June 23, 2014 by Amber Lankford

Author(s) Expertise:

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Sensitivity Factor	Sensitivity 1 - 7 (one being least sensitive, seven being most sensitive)	Confidence 1 - 5 (one being least sensitive, five being most sensitive)
Generalist/Specialist	3 Medium	3 Fair
Physiology	2 Medium-Low	3 Fair
Life History	4 Medium-High	4 Good
Habitat	7 Extremely High	5 Very Good
Dispersal Ability	2 Medium-Low	2 Poor
Disturbance Regimes	3 Medium	2 Poor
Ecology	2 Medium-Low	2 Poor
Non-Climatic	3 Medium	3 Fair
Other (weight)		

Sensitivity Score : 46 Medium

Sensitivity Score

$100 * [(0.5 * (\text{Dispersal Distance} + \text{Dispersal Barriers}) + \text{Disturbance Regimes} + (0.5 * \text{Generalist/Specialist}) + \text{Physiology} + (0.5 * \text{Life History}) + \text{Sensitive Habitats} + \text{Ecology} + \text{Non-Climatic Stressors} + (\text{Other} * \text{Weight}) / 49 + (7 * \text{Weight})]$

Note: if Sensitive Habitats are identified, this factor automatically gets a value of seven, otherwise it remains zero.

Confidence Score : 2 Poor

Confidence Score

The Confidence Score is an average of the Confidence column above.

Overall User Ranking: 3 Medium

Common Name:

Horned grebe

Is this Species completed:

Yes

Taxonomy

This is a description of the whole group

Scientific Name:

Podiceps auritus

Geography:

North America

Realm:

Freshwater

Marine

Estuary

Kingdom:

Animal

Phylum:

Chordata

Class:

Aves

Order:

Podicipediformes

Family:

Podicipedidae

Genus:

Podiceps

Global Rank:

G5 (1996)

Rounded Global Rank:

G5 - Secure

IUCN:

Least Concern ver 3.1 - 2012

US Endangered Species Act Code:

Not listed

Species Element Code:

ABNCA03010

Generalist/Specialist

Broadly, where does this species fall on the spectrum of generalist to specialist? :

3

Confidence in your assessment of the degree to which the species is a generalist or specialist:

3 Fair

Please specify which factors, if any, make the species more of a specialist:

phenology dependency

Please further describe the relationships that make the species more of a specialist:

Sensitive to the timing of ice break up and freezing in fall for migration timing both to and from breeding habitats

Comments:

Feeds mainly on small fishes and invertebrates; also amphibians, leeches. Summer diet is predominately aquatic insects, fish and crustaceans predominate in winter.

Citations:

Hammerson, G. 2014. Podiceps auritus: horned grebe. NatureServe Explorer: An online encyclopedia of life. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. Accessed 23 June 2014. --- Stedman, Stephen J. 2000. Horned Grebe (Podiceps auritus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/505>

Physiology

Species' physiological sensitivity:

2

Confidence in how physiologically sensitive the species is to climate change:

3 Fair

Please specify whether or not this species is physiologically sensitive to one or more of the following:

temperature

precipitation

Please describe any specific physiological sensitivities:

Hatchlings are sensitive to low temperatures particularly the first few days after hatching. Inclement weather (freezing rain, blizzards) also lead to mortality

Citations:

Stedman, Stephen J. 2000. Horned Grebe (*Podiceps auritus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/505>

Life History**Species' reproductive strategy:**

4

Confidence in your assessment of the species' reproductive strategy:

4 Good

Is the species polycyclic, iteroparous, or semelparous?:

Iteroparous (reproduces in successive cycles--characteristic of K-strategists)

Average length of time to reproductive maturity:

1 year

How many surviving young can an individual produce during a single reproductive event under optimal conditions?:

5-7

How many reproductive events can an individual undergo in a single year under optimal conditions?:

1

Comments:

Solitary nester. Young are precocial

Citations:

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Sensitive Habitats**Depends on the following sensitive habitat types:**

Coastal Lowlands/Marshes/Estuaries/Beaches

Wetlands/Vernal Pools

Confidence in whether the species depends on the listed sensitive habitat types:

5 Very Good

Comments:

Breeding habitat: Small freshwater ponds and lake inlets with a mixture of emergent vegetation and open water. Nests are floating platforms usually anchored to emergent vegetation. Spring/Fall migration: along coasts and large bodies of water (rivers, lakes)
Non-breeding habitat: winters primarily in coastal estuaries from Alaska to California and along the Atlantic and Gulf coasts. Inland wintering locations include lakes, rivers, and reservoirs

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— Dispersal Ability —

Maximum annual dispersal distance:

>100 km

Confidence in maximum annual dispersal distance:

3 Fair

Within the context of dispersal distance above, do barriers to dispersal exist?:

3

Confidence in barriers to dispersal exists:

2 Poor

Please select the types of barriers relevant to dispersal:

Mountains

Geologic Features

Comments:

Dispersal/Migration may be limited by topography.

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— Disturbance Regimes —

How sensitive is this species to one or more disturbance regimes:

3 somewhat sensitive

Confidence in how sensitive is this species on one or more disturbance regimes:

2 Poor

Please check all disturbance regimes upon which the species is sensitive:

Flooding

Drought

Pollution

— Ecological Relationships —

Please specify which of the following (if any) are sensitive to climate change for this species:

forage

habitat

Confidence in how sensitive the species is to other effects of climate change on its ecology:

2 Poor

Which types of climate and climate-driven changes in the environment affect these aspects of the species' ecology?:

precipitation

How sensitive is this species? ecological relationships to the effects of climate change?:

2

Interacting non-climatic stressors

To what degree do other, non-climate-related threats, to the species make it more sensitive to climate change?:

3

Confidence in the degree to which non-climate-related threats affect the species' sensitivity to climate change:

3 Fair

Please check all of the stressors that make the species more sensitive to climate change:

habitat loss or degradation

pollution

Comments:

Oil spills and pesticide accumulation are the most serious threats to winter range, largely as a result of agricultural activities

Overall User Ranking

In your opinion, how would you rank the overall sensitivity of this species to climate change?:

3

Confidence in your overall assessment of the sensitivity of this species to climate change:

3 Fair

Comments:

The breeding distribution across North America appears to be contracting northward.

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Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/505>

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[1] <http://climatechangesensitivity.org/printpdf/975>