

Western Toad

Anaxyrus boreas

Class: Amphibia
Order: Anura
Family: Bufonidae

CONSERVATION STATUS & CLASSIFICATION

ESA: No status

USFS:

Region 1: Sensitive

Region 4: Sensitive

BLM: Type 2

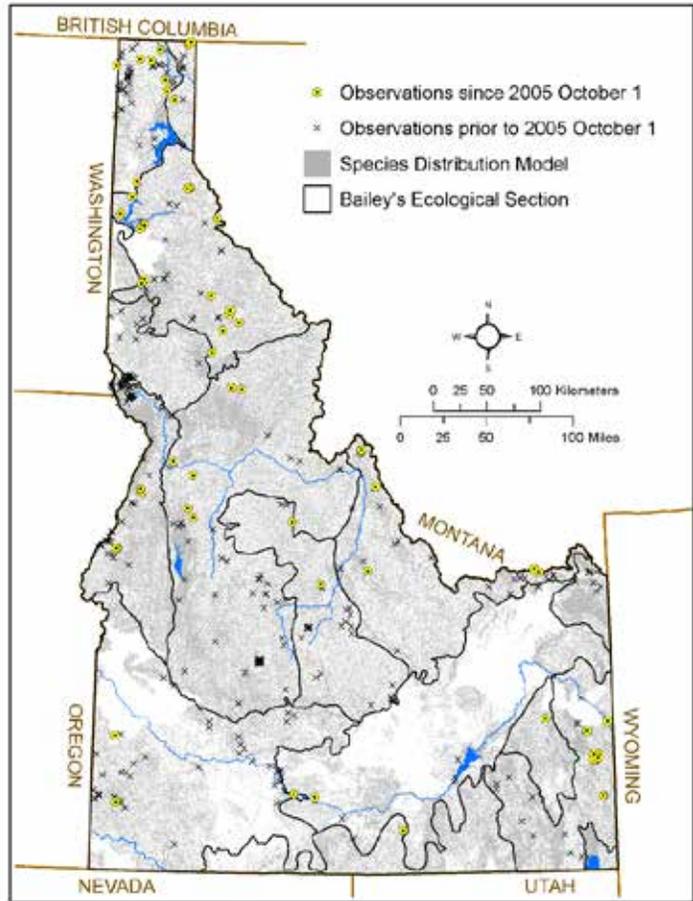
IDAPA: Protected Nongame Species

G-rank: G4

S-rank: S2

SGCN TIER: 2

Rationale: Significant declines



DISTRIBUTION & ABUNDANCE

Range Extent in Idaho: 204,000 km² (~78,800 mi²)

Key Ecological Sections: Bear Lake, Beaverhead Mountains, Bitterroot Mountains, Challis Volcanics, Flathead Valley, Idaho Batholith, Northwestern Basin and Range, Okanogan Highlands, Overthrust Mountains, Owyhee Uplands, Palouse Prairie, Snake River Basalts, Yellowstone Highlands

Population Size in Idaho: Unknown

Description: The Western Toad is widespread across the western US and Canada, including most of Idaho. Although it can be found in appropriate habitat throughout much of the state, populations south of the Snake River are disjunct and isolated. The species is still common across much of its range, but has experienced locally dramatic declines in many areas including southeastern Idaho. The total population size in Idaho is unknown.

HABITAT & ECOLOGY

Environmental Specificity: Moderate: Generalist—some key requirements are scarce.

Description: The Western Toad occurs in a wide variety of habitats, generally within proximity to water, and is found across Idaho from mountain meadows to low elevation deserts. Although primarily terrestrial, breeding occurs in quiet waters including beaver ponds, reservoirs, lakes, streams, marshes, and wet meadows. In Idaho, breeding sites tend to be sparse in some areas, suggesting that environmental tolerances and habitat preferences are limiting.

POPULATION TREND

Short-term Trend: Decline 10–30%

Long-term Trend: Unknown

Description: Significant declines have occurred in multiple areas across the species range, including Colorado, British Columbia, Wyoming, Montana, Yellowstone National Park, and Grand Teton National Park. This species could be experiencing similar declines in Idaho, although recent surveys indicate it is more abundant in some areas of the state than others (e.g., Okanogan Highlands).

THREATS

Overall Threat Impact: High

Intrinsic Vulnerability: Moderately vulnerable

Description: Amphibians, in general, are susceptible to pathogens, climate change, environmental pollution, ultraviolet-b exposure, and invasive species. The major threats to this species in Idaho are believed to be amphibian chytridiomycosis, a disease caused by a fungal pathogen, *Batrachochytrium dendrobatidis* (*Bd*), and habitat loss and degradation. As part of an amphibian assessment of IDFG's Southeast, Upper Snake, and Salmon regions, 10 swab samples were analyzed for *Bd* in August 2013 and one sample from Buster Lake in the Garden Creek subwatershed of Custer County tested positive.

CONSERVATION ACTIONS

Conservation issues and management actions are described in the appropriate section plans. In short, the conservation strategies for this species include determining the status of chytrid fungus in populations, developing a disease monitoring program, managing water quality and quantity, conserving habitats, and monitoring micro-climates (particularly in relation to disease).

ADDITIONAL COMMENTS

None.

Information Sources: Hammerson, G., G. Santos-Barrera, E. Muths. 2004. *Anaxyrus boreas*. The IUCN Red List of Threatened Species. Version 2014.2. <www.iucnredlist.org>. Downloaded on 26 September 2014; McGee, M. and D. Keinath. 2004. Species Assessment for Boreal Toad.; Bartelt, P. E., R. W. Klaver, and W. P. Porter. 2010. Modeling amphibian energetics, habitat suitability, and movements of western toads, *Anaxyrus* (=Bufo) *boreas*, across present and future landscapes. Ecological Modelling 221:2675-2686; Idaho Department of Fish and Game. 2015. Southeast Idaho Northern Leopard Frog and Western Toad Status. Final Performance Report, Project F11AP00710. Idaho Department of Fish and Game, Boise, ID.

Map Sources: Idaho Department of Fish and Game. Idaho Fish and Wildlife Information System, Species Diversity Database, accessed August 14, 2015; USGS Gap Analysis Program predicted year-round distribution model.

Woodhouse's Toad

Anaxyrus woodhousii

Class: Amphibia
Order: Anura
Family: Bufonidae

CONSERVATION STATUS & CLASSIFICATION

ESA: No status

USFS:

Region 1: No status

Region 4: No status

BLM: Type 2

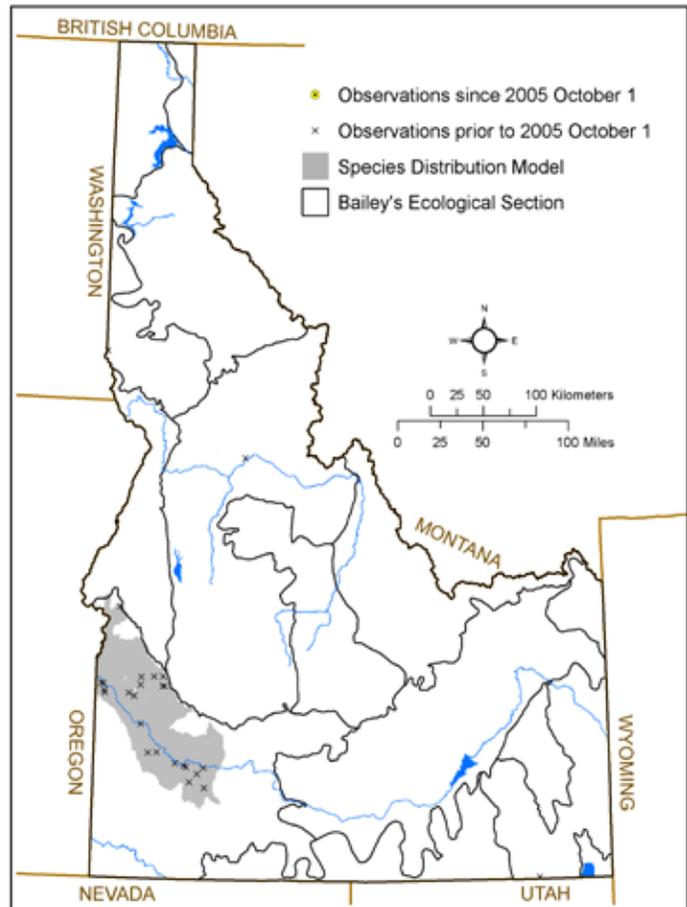
IDAPA: Protected Nongame Species

G-rank: G5

S-rank: S2

SGCN TIER: 2

Rationale: Several threats, imperiled, limited range.



DISTRIBUTION & ABUNDANCE

Range Extent in Idaho: 14,100 km² (~5,400 mi²)

Key Ecological Sections: Owyhee Uplands

Population Size in Idaho: Unknown

Description: Woodhouse's Toad occurs across much of the southwestern and central US and into northern Mexico. The isolated and disjunct populations of the species in parts of the Columbia and Snake River drainages represent the northern extent of its range. Idaho populations occur at a few locations along the western Snake River Plain from approximately Bruneau to Weiser, and are isolated from populations in Nevada and Utah by more than 230 km (126 mi). A single historical record from Lewiston suggests that populations along the upper Columbia River of Oregon and Washington formerly extended to the lower reach of the Snake River. The species is rarely encountered in Idaho.

HABITAT & ECOLOGY

Environmental Specificity: Moderate: Generalist—some key requirements are scarce.

Description: Woodhouse's Toad requires proximity to shallow-water breeding habitat in shallow quiet water bodies, including marshes, rain pools, ponds, lakes, reservoirs, and flooded areas. When not breeding, adults inhabit a variety of upland habitats, including relatively dry grassland and shrubland cover types, but more typically mesic river valleys and floodplains, and agricultural areas. Breeding season is variable, and the timing of breeding depends in part on water availability and sometimes occurs in response to rain events.

POPULATION TREND

Short-term Trend: Unknown

Long-term Trend: Unknown

Description: Population trends have not been documented.

THREATS

Overall Threat Impact: High

Intrinsic Vulnerability: Moderately vulnerable

Description: The primary threat for this species is habitat loss or degradation caused by reduction of floodplain wetlands from river regulation, reclamation of wetlands for development, and modification of wetlands for agricultural, industrial, and residential purposes. Breeding is dependent on the presence and persistence of surface water throughout the breeding and larval periods. The American Bullfrog is a well-established invasive species in this system, and bullfrog populations can compete with Woodhouse's Toad, prey on tadpoles and juveniles, and carry pathogens, such as *Batrachochytrium dendrobatidis* (*Bd*) that causes amphibian chytridiomycosis.

CONSERVATION ACTIONS

Conservation issues and management actions are described in the Owyhee Ecological Section Plan. Management priorities include efforts to maintain or improve ecological function of wetlands existing in riparian and floodplain habitats in managed river systems, evaluating the prevalence of amphibian diseases and seeking opportunities to manage their effects, and controlling invasive aquatic organisms, including the American Bullfrog. Supporting activities include assessing the status of southwest Idaho populations to aid land- and water-use decisions and to support habitat management prioritization.

ADDITIONAL COMMENTS

None.

Information Sources: Hammerson, G and G Santos-Barrera 2004. *Anaxyrus woodhousii*. The IUCN Red List of Threatened Species. Version 2014.2. <www.iucnredlist.org>. Downloaded on 29 August 2014.; Idaho CWCS 2005

Map Sources: Idaho Department of Fish and Game. Idaho Fish and Wildlife Information System, Species Diversity Database, accessed August 14, 2015; USGS Gap Analysis Program predicted year-round distribution model.

Northern Leopard Frog

Lithobates pipiens

Class: Amphibia

Order: Anura

Family: Ranidae

CONSERVATION STATUS & CLASSIFICATION

ESA: No status

USFS:

Region 1: No status

Region 4: No status

BLM: Type 2

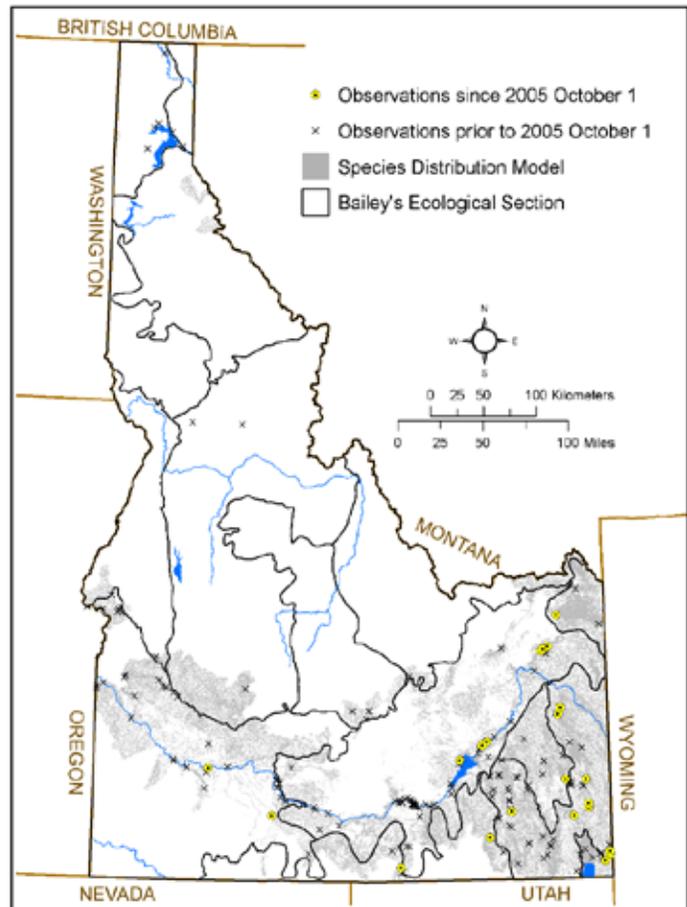
IDAPA: Protected Nongame Species

G-rank: G5

S-rank: S2

SGCN TIER: 2

Rationale: Significant long term declines, multiple threats



DISTRIBUTION & ABUNDANCE

Range Extent in Idaho: 79,800 km² (~30,800 mi²)

Key Ecological Sections: Bear Lake, Bitterroot Mountains, Flathead Valley, Northwestern Basin and Range, Okanogan Highlands, Overthrust Mountains, Owyhee Uplands, Snake River Basalts, Yellowstone Highlands

Population Size in Idaho: Unknown

Description: The Northern Leopard Frog is widely distributed across much of northern and central North America, but populations in the western US are sparse. In northern Idaho, it was found in the Kootenai, Pend Oreille, and Clark Fork rivers prior to 1955, but is now considered extirpated from this region. In southern Idaho, Northern Leopard Frogs were last documented on the Payette and Boise Rivers during the 1970s, and the last specimen or literature records on the Snake River below Grandview were also documented during that decade. However, incidental sightings in the Grandview and Bruneau vicinities along the Snake River were reported during 2004-2006, suggesting that remnant populations could persist in the mid-Snake drainage. Few incidental observations have been made in south-central Idaho since 2005, and several amphibian surveys in the BLM Four Rivers, Jarbidge and Shoshone Field Offices have yielded no new sightings or observations in historically-occupied habitats. In southeast Idaho, Northern Leopard Frogs occupied 23 of 116 (19.8%) subwatersheds surveyed during an amphibian assessment of IDFG's Southeast, Upper Snake, and Salmon regions. Surveyors documented adult, juvenile, larvae, and egg mass life stages at occupied sites in 2012 and 2014.

HABITAT & ECOLOGY

Environmental Specificity: Moderate: Generalist—some key requirements are scarce.

Description: Northern Leopard Frogs occur in springs, slow streams, marshes, bogs, ponds, canals, floodplains, reservoirs, and lakes; usually permanent water with rooted aquatic vegetation. In summer, this species commonly inhabits wet meadows and fields and usually overwinters underwater. Key habitats along the Snake River include the Bruneau Dunes ponds and adjacent aquatic habitats.

POPULATION TREND

Short-term Trend: Unknown

Long-term Trend: Decline 30–50%

Description: Significant population declines for this species have been documented rangewide. In Idaho, large-scale population extirpations have been documented in the Panhandle and the southwest, extending up the Snake River drainage to perhaps Hagerman.

THREATS

Overall Threat Impact: Very High

Intrinsic Vulnerability: Moderately vulnerable

Description: Primary threats for this species include the loss and degradation of wetland and riparian habitats, disease (i.e., chytridiomycosis, a disease caused by a fungal pathogen, *Batrachochytrium dendrobatidis*), and nonnative bullfrogs. Much of the Idaho range is in areas where wetlands are lost or affected by urban and agricultural development. Introduction of pathogens and population-level effects of disease are potentially related to habitat conditions or to changing climate conditions.

CONSERVATION ACTIONS

Conservation issues and management actions are described in the appropriate section plans. In short, the conservation strategies for this species include managing bullfrogs, assessing potential recovery options in areas where the species has been extirpated, developing a disease monitoring program, managing water quality and quantity, conserving habitats, and monitoring micro-climates (particularly in relation to disease).

ADDITIONAL COMMENTS

The Northern Leopard Frog was petitioned for listing under the ESA in 2011, but was determined to be not warranted by the USFWS.

Information Sources: Hammerson, G., F. Solís, R. Ibáñez, C. Jaramillo, and Q. Fuenmayor. 2004. *Lithobates pipiens*. The IUCN Red List of Threatened Species. Version 2014.2. <www.iucnredlist.org>. Downloaded on 03 September 2014; Makela, P. D. 1998. A Survey for Northern Leopard Frogs (*Rana pipiens*) in the Snake River Resource Area; 1997. Technical Bulletin 1998-08.; Idaho CWCS 2005; Idaho Department of Fish and Game. 2015. Southeast Idaho Northern Leopard Frog and Western Toad Status. Final Performance Report, Project F11AP00710. Idaho Department of Fish and Game, Boise, ID.

Map Sources: Idaho Department of Fish and Game. Idaho Fish and Wildlife Information System, Species Diversity Database, accessed August 14, 2015; USGS Gap Analysis Program predicted year-round distribution model.

Columbia Spotted Frog [Great Basin DPS]

Rana luteiventris pop. 3

Class: Amphibia
Order: Anura
Family: Ranidae

CONSERVATION STATUS & CLASSIFICATION

ESA: No status

USFS:

Region 1: No status

Region 4: Sensitive

BLM: Type 2

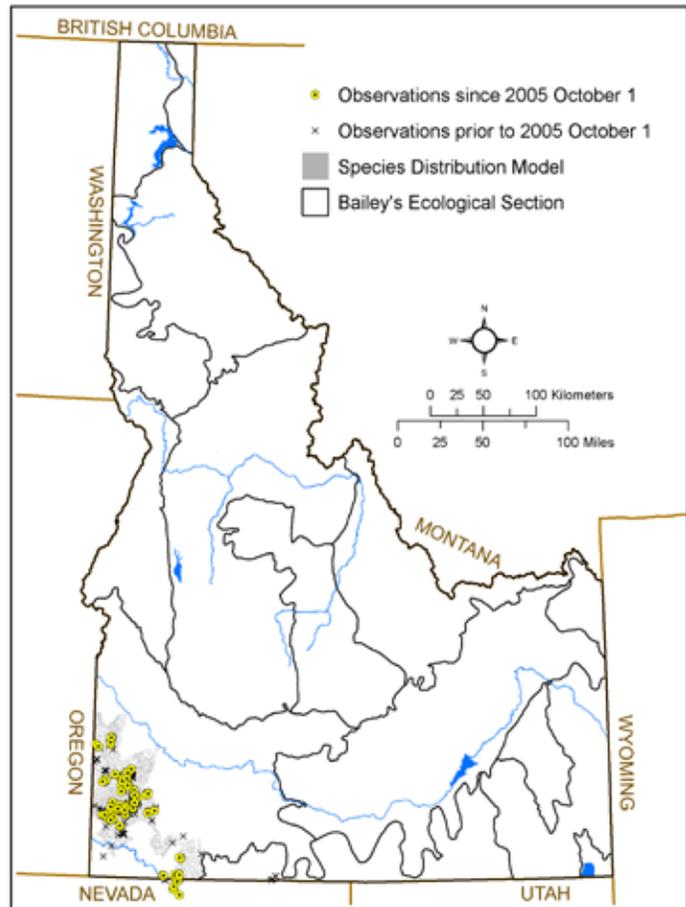
IDAPA: Protected Nongame Species

G-rank: G4T2T3Q

S-rank: S2

SGCN TIER: 1

Rationale: Distinct population segment, multiple threats



DISTRIBUTION & ABUNDANCE

Range Extent in Idaho: 6,600 km² (~2,500 mi²)

Key Ecological Sections: Owyhee Uplands

Population Size in Idaho: Unknown

Description: The Columbia Spotted Frog is distributed across northwestern North America from British Columbia and southern Alaska south to central Nevada and Utah. In Idaho, populations south of the Snake River in Owyhee and Twin Falls counties are disjunct, isolated from neighboring populations by extensive areas of unoccupied and unsuitable habitat. The USFWS included this portion of the species' range in the Great Basin Distinct Population Segment, which was designated a Candidate for listing under the ESA. Total population size in Idaho is not precisely known, as some populations occur on private land and are not monitored.

HABITAT & ECOLOGY

Environmental Specificity: Moderate: Generalist—some key requirements are scarce.

Description: Populations in southern Idaho typically occur in patches of wetland habitat that exist in a matrix of semi-desert xeric habitat. Wetland habitat is associated with ponds and reservoirs, flooded meadows, small streams, and riparian habitat, including both perennial and seasonally ephemeral systems. Adjacent upland habitat includes sagebrush steppe and other shrubland habitat, juniper woodland, and stands of aspen. Breeding occurs in shallow water in ponds or other quiet waters.

POPULATION TREND

Short-term Trend: Relatively Stable (<=10% change)

Long-term Trend: Decline 10–30%

Description: Extensive surveys in Idaho began in 1996 with monitoring of breeding sites beginning in ca. 2000. Since 2000, breeding site occupancy, total population size, and productivity have fluctuated at monitored sites. Evidence of extirpations have been infrequent, and these events rather localized. Rangelwide long-term trend for this population appears downward, particularly in Oregon and Nevada, where occupancy rates at historical sites are estimated at 53% and 60%, respectively. Interpretation of historical data is admittedly problematic.

THREATS

Overall Threat Impact: High

Intrinsic Vulnerability: Moderately vulnerable

Description: Nonnative species, such as Bullfrog and predatory fish (e.g., Brook Trout, bass, etc.), as well as amphibian pathogens have been identified as threats to the persistence of Columbia Spotted Frog populations. Diseases having the potential to cause population decline include ranaviruses and amphibian chytridiomycosis, which is caused by a fungal pathogen, *Batrachochytrium dendrobatidis* (Bd). Mortality from chytridiomycosis has been detected in the Great Basin population, but population-level implications are unknown. Reduction of key habitat elements, such as beaver ponds and riparian floodplain wetlands, may be affecting population densities and movement corridors, limiting genetic variability.

CONSERVATION ACTIONS

Conservation issues and management actions are described in the 2010 draft Columbia Spotted Frog Great Basin Population Conservation Strategy and in the Owyhee Uplands Ecological Section Plan. In short, the conservation strategies for this species include evaluating and managing disease, managing the introduction and spread of nonnative competitors and predators, and improving habitat conditions. American Beaver populations are currently being assessed, and restoration of beaver populations may be an important restoration tool in some areas.

ADDITIONAL COMMENTS

In October 2015, following completion of a status review, the USFWS found that this species no longer warranted listing under the ESA as a result of collaborative conservation efforts and removed it from the ESA Candidate List.

Information Sources: IDFG. 2010. The Columbia Spotted Frog (*Rana luteiventris*) Great Basin Population Conservation Strategy DRAFT. Idaho Department of Fish and Game, Boise, ID; USFWS 2009.

Map Sources: Idaho Department of Fish and Game. Idaho Fish and Wildlife Information System, Species Diversity Database, accessed August 14, 2015; USGS Gap Analysis Program predicted year-round distribution model.

Great Basin Collared Lizard

Crotaphytus bicinctores

Class: Reptilia
Order: Squamata
Family: Crotaphytidae

CONSERVATION STATUS & CLASSIFICATION

ESA: No status

USFS:

Region 1: No status

Region 4: No status

BLM: Type 2

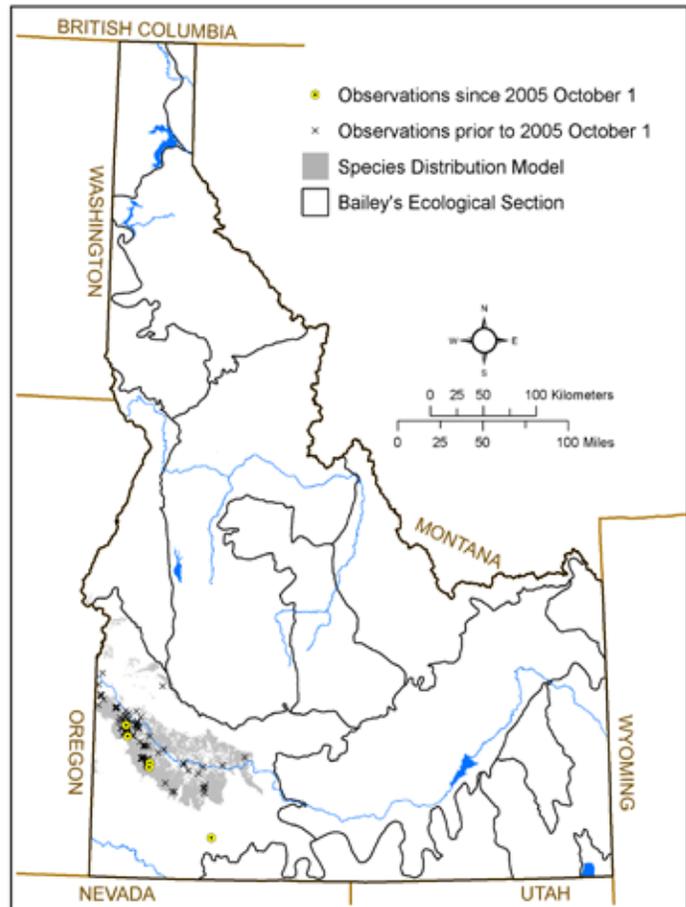
IDAPA: Protected Nongame Species

G-rank: G5

S-rank: S2

SGCN TIER: 3

Rationale: Critical conservation needs, multiple threats to habitat



DISTRIBUTION & ABUNDANCE

Range Extent in Idaho: 11,600 km² (~4,500 mi²)

Key Ecological Sections: Owyhee Uplands

Population Size in Idaho: Unknown

Description: The Great Basin Collared Lizard occurs from southwest Idaho and eastern Oregon south across the Great Basin to northern Arizona and southeastern California. Idaho populations occur at lower elevations along the Snake River, primarily in Owyhee County south of the Snake River. Individuals are typically sparsely distributed within occupied habitat. Density from 0.27 to 4.47 individuals per hectare has been estimated at four sample sites south of Nampa, Idaho.

HABITAT & ECOLOGY

Environmental Specificity: Narrow: Specialist—key requirements are common.

Description: This lizard occurs in rocky, sparsely vegetated habitat with sagebrush, saltbush and bunchgrasses as dominant cover types. Scattered rocks are a characteristic habitat component. Collared lizard population density increases with rock cover, and rock sizes in occupied habitat are typically 0.25-1.00m in diameter. Prey consists of large arthropods and lizards.

POPULATION TREND

Short-term Trend: Unknown

Long-term Trend: Unknown

Description: Population trends have not been documented.

THREATS

Overall Threat Impact: High

Intrinsic Vulnerability: Not intrinsically vulnerable

Description: The primary threats to this species include loss or alteration of suitable habitat by nonnative plants. Habitat changes may affect physical structure of the habitat (such as availability of open, unvegetated patches) and prey availability. Mortality and displacement by off-road vehicles and commercial and noncommercial collecting for the pet trade are sources of mortality (or removal from the population in the case of collection) that have unknown implications for population viability. Similarly, rock quarrying may affect habitat in some localized areas but has unknown effects on habitat suitability or occupancy.

CONSERVATION ACTIONS

Conservation issues and management actions are described in the Owyhee Uplands Ecological Section Plan. The management priority for Great Basin Collared Lizard habitat is management of cheatgrass and other invasive plants and noxious weeds. These plants reduce habitat quality because collared lizards are adapted to sparsely vegetated habitat, but cheatgrass and other invasive annuals tend to grow in dense stands. Invasive annuals may also have negative consequences for prey abundance and affect fire cycles, which has implications for vegetation composition and structure in post-fire regenerated habitat.

ADDITIONAL COMMENTS

None.

Information Sources: CWCS; Cossel Jr., J., K. Oelrich, K. Thoren, and J. Butler-Dawson. 2004. Habitat use, home range size and relative abundance of the Great Basin Collared Lizard (*Crotaphytus bicinctores*) in southwestern Idaho. Final Report, WCRP Program, Idaho Department of Fish and Game. 40 pp.

Map Sources: Idaho Department of Fish and Game. Idaho Fish and Wildlife Information System, Species Diversity Database, accessed August 14, 2015; USGS Gap Analysis Program predicted year-round distribution model.