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Longfin Dace

Other Related Name(s): *Rhinichthys chrysogaster* (Girard, 1856 [1857])**Related ITIS Name(s):** *Agosia chrysogaster* Girard, 1856 (TSN 163533)**Unique Identifier:** ELEMENT_GLOBAL.2.104658**Element Code:** AFCJB37150**Informal Taxonomy:** Animals, Vertebrates - Fishes - Bony Fishes - Minnows and Carps[Search for Images on Google](#)

Kingdom	Phylum	Class	Order	Family	Genus
Animalia	Craniata	Actinopterygii	Cypriniformes	Cyprinidae	Agosia

Check this box to expand all report sections: **Concept Reference** ?

Concept Reference: Woodman, D. A. 1992. Systematic relationships within the cyprinid genus RHINICHTHYS. Pages 374-391 in R. L. Mayden, editor. Systematics, historical ecology, and North American freshwater fishes. Stanford Univ. Press, Stanford, California. xxvi + 969 pp.

Concept Reference Code: A92WOO01NAUS**Name Used in Concept Reference:** *Rhinichthys chrysogaster*

Taxonomic Comments: This species was removed from the genus *Agosia* and placed in the genus *Rhinichthys* by Woodman (1992). Simons and Mayden (1999) recommended that the species be retained in the monotypic genus *Agosia* until its relationships are further clarified. Nelson et al. (2004) followed this recommendation.

Conservation Status ?**NatureServe Status****Global Status:** G4**Global Status Last Reviewed:** 08Jul1998**Global Status Last Changed:** 08Jul1998**Rounded Global Status:** G4 - Apparently Secure

Reasons: Fairly large range in southern Arizona, southern New Mexico, Sonora, and Sinaloa; trend of populations unclear, apparently naturally expanding in some areas while stable or declining in other locations; introduced into at least three new locations; threats are apparently widespread and ongoing; Mexican listing has changed from rare to threatened.

Nation: United States

National Status: N4

U.S. & Canada State/Province Status	
United States	Arizona (S3S4), New Mexico (SNA)

Other Statuses

NatureServe Conservation Status Factors

Population Size: 10,000 to >1,000,000 individuals

Population Size Comments: Based on dot maps prepared by TNHC (1996) and Lee et al. (1980) the author estimated over 250 miles of occupied stream. The New Mexico Department of Game and Fish (1997) considered the species to be locally abundant in small streams.

Estimated Number of Occurrences: 81 to >300

Estimated Number of Occurrences Comments: Occurrence information is not available range wide and has been extrapolated from a combination of natural heritage programs information and dot maps. Records are from approximately seven drainages with 100+ occurrences. The Arizona Natural Heritage Program recorded 127 occurrences all of which are believed to be extant (Sabra Schwartz, pers. comm., 1998). The Texas Natural History Collection index of North American freshwater fishes (TNHC 1996) mapped a total of 84 records from approximately seven drainages with 29 records from Mexico, seven records from New Mexico, and 48 records from Arizona. Lee et al. (1980) mapped about 165 records from approximately seven drainages with 47 records from Mexico, 18 records from New Mexico, and 100 records from Arizona. The difference in the numbers of records on the two maps may simply represent a combining of records on the TNHC map; the overall distributions are similar.

Global Short-term Trend: Stable (unchanged or within +/- 10% fluctuation in population, range, area occupied, and/or number or condition of occurrences)

Global Short-term Trend Comments: Information on the trend of populations is unclear and incomplete. Populations are expanding in some areas and stable or declining in other locations. Populations have expanded their range in the mountainous areas, are stable in the Gila Basin, and the Willcox Playa population has decreased and may be extinct (Arizona Game and Fish Department 1997). The U. S. Fish and Wildlife Service (1994) listed the trend as declining.

Global Inventory Needs: Determine the number of populations rangewide, abundance, populations trends, and the degree of threats.

Number of Protected and Managed Occurrences (Global): Unknown whether any occurrences are appropriately protected and managed

Global Protection Comments: In 1994, listed by the United States as a federal category 2 species; in 1996 the status changed to Species of Concern. The listing in Mexico changed from rare in 1991 to threatened in 1995 (New Mexico Department of Game and Fish 1997).

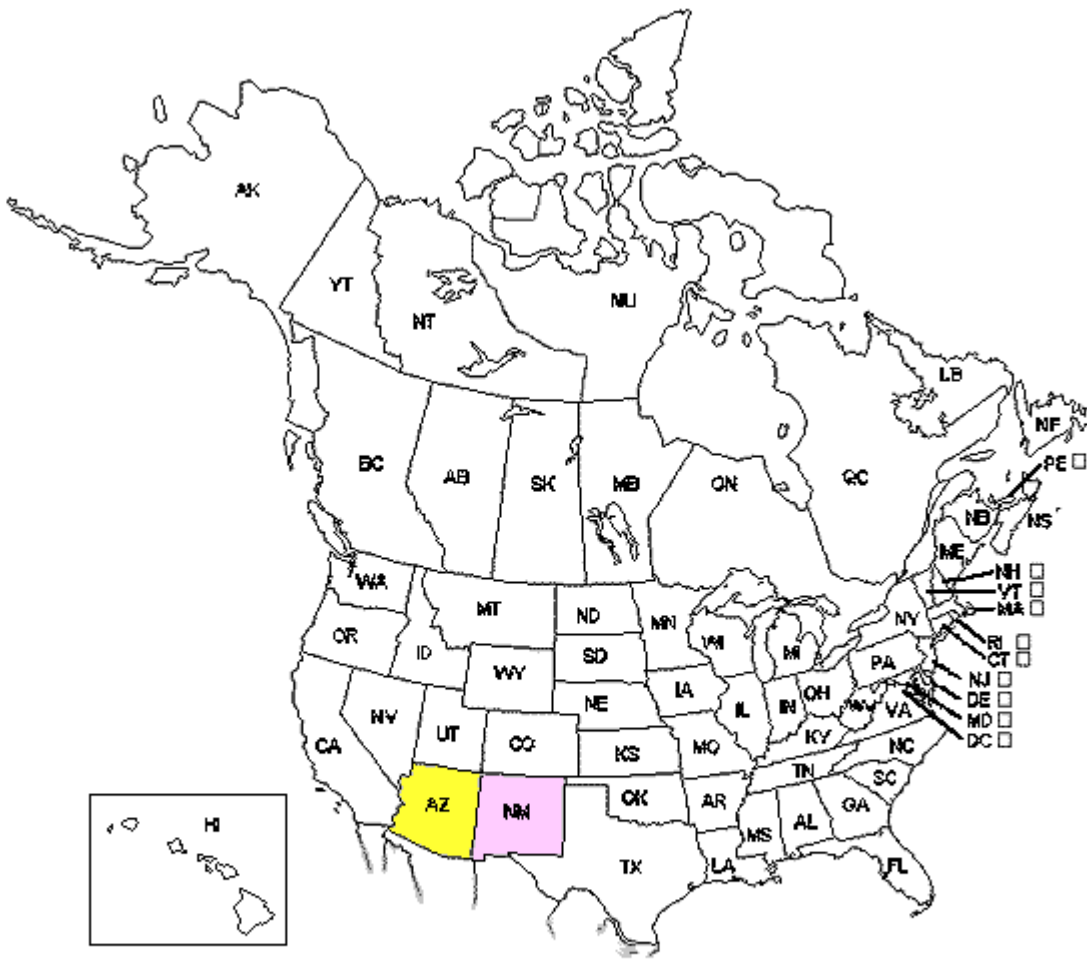
Overall Threat Impact Comments: Threatened by habitat alterations and interactions with non-native fish species. Large areas of habitat have been destroyed by dewatering, stream diversion, groundwater pumping, dam construction, channel and watershed erosion, and other factors. Additional water development and ongoing watershed damage threaten large portions of the remaining range (U.S. Fish and Wildlife Service 1994). In the Aravaipa Creek Canyon area populations are threatened by over appropriation of aquifer water and the invasion of non-native fishes. The red shiner is present in the Gila River and has been suggested as a potential competitor for native species (New Mexico Department of Game and Fish 1997). The listing priority form of the U. S. Fish and Wildlife Service (1994) considered the degree of threat to be moderate to low.

Other Considerations: Has a high tolerance for elevated temperatures and reduced oxygen and is commonly the only native species at the terminus of desert streams where surface flows disappear (Lowe et al. 1967, cited by New Mexico Department of Game and Fish 1997). Also has the capability to disperse into new habitats appearing a few hours or days after flow reestablishes in a formerly dry stream (Rinne and Minckley 1991). Can suffer massive mortalities but has the ability to recover numbers rapidly (Arizona Game and Fish Department 1997).

Distribution



U.S. States and Canadian Provinces



State/Province Conservation Status

- SX: Presumed Extirpated
- SH: Possibly Extirpated
- S1: Critically Imperiled
- S2: Imperiled
- S3: Vulnerable
- S4: Apparently Secure
- S5: Secure
- Not Ranked/Under Review (SNR/SU)

Conservation Status Not Applicable (SNA)

- Exotic
- Hybrid without Conservation Value

Endemism: occurs (regularly, as a native taxon) in multiple nations

U.S. & Canada State/Province Distribution	
United States	AZ, NM

Range Map
No map available.

Global Range Comments: Lower Colorado River drainage (primarily Gila and Bill Williams river systems), New Mexico and Arizona, and south through southern Arizona and Pacific drainages of western Mexico to at least the Rio Sinaloa, Mexico. Introduced and established in Mimbres River, Rio Grande basin (below Elephant Butte Reservoir; localized) and Rio Hondo (local), New Mexico; recorded but apparently not established in the Virgin River, Zuni River, and a few other places (Sublette et al. 1990).

Natural heritage records exist for the following U.S. counties ?	
State	County Name (FIPS Code)
AZ	Cochise (04003), Gila (04007), Graham (04009), Greenlee (04011), Maricopa (04013), Mohave (04015), Pima (04019), Pinal (04021), Santa Cruz (04023), Yavapai (04025)
NM	Catron (35003), Grant (35017), Hidalgo (35023), Lincoln (35027), Luna (35029), Sierra (35051)

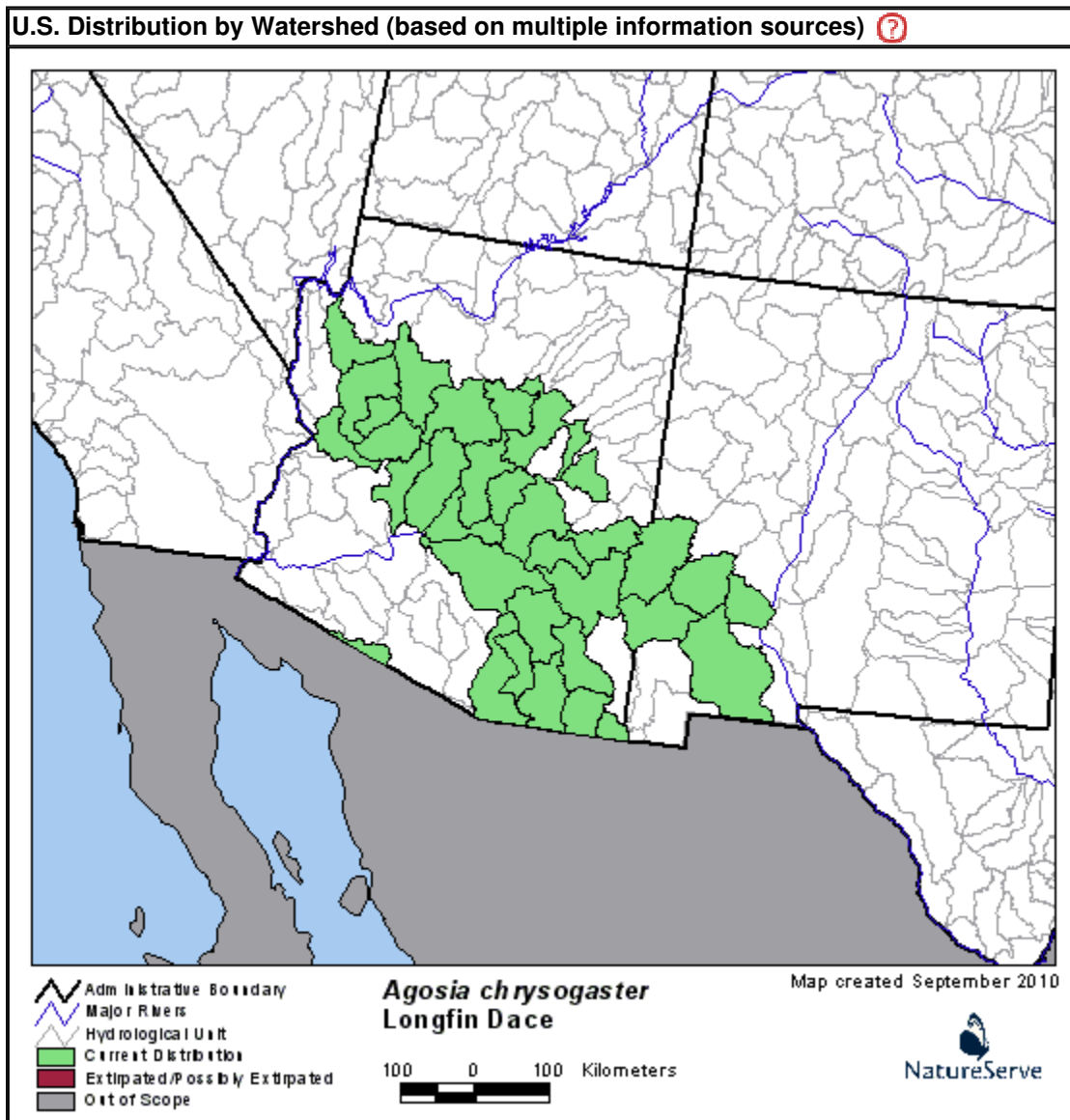
* Extirpated/possibly extirpated

U.S. Distribution by Watershed (based on available natural heritage records) ?

Watershed Region ?	Watershed Name (Watershed Code)
13	Plains of San Agustin (13020208)+, Caballo (13030101)+, Mimbres (13030202)+, Rio Hondo (13060008)+
15	Hualapai Wash (15010007)+, Carrizo Wash (15020003)+, Middle Little Colorado (15020008), Canyon Diablo (15020015), Big Sandy (15030201)+, Burro (15030202)+, Santa Maria (15030203)+, Bill Williams (15030204), Upper Gila (15040001)+, Upper Gila-Mangas (15040002)+, San Francisco (15040004)+, Upper Gila-San Carlos Reservoir (15040005)+, San Carlos (15040007), Middle Gila (15050100)+, Willcox Playa (15050201)+, Upper San Pedro (15050202)+, Lower San Pedro (15050203)+, Upper Santa Cruz (15050301)+, Rillito (15050302)+, Black (15060101), Upper Salt (15060103)+, Tonto (15060105)+, Lower Salt (15060106)+, Big Chino-Williamson Valley (15060201), Upper Verde (15060202)+, Lower Verde (15060203)+, Agua Fria (15070102)+, Hassayampa (15070103)+, Rio Sonoyta (15080102), Whitewater Draw (15080301)+, San Bernardino Valley (15080302)+

+ Natural heritage record(s) exist for this watershed

* Extirpated/possibly extirpated



Ecology & Life History

Basic Description: A small fish (dace) that reaches a maximum length of about 10 cm.

Reproduction Comments: Spawns reportedly year-round, or December-July with peak in April (Sublette et al. 1990). During summer young hatch in less than 4 days. Lifespan rarely is longer than 3 years (Sublette et al. 1990).

Habitat Type: Freshwater

Non-Migrant: Y

Locally Migrant: N

Long Distance Migrant: N

Riverine Habitat(s): CREEK, MEDIUM RIVER, Moderate gradient, Pool

Habitat Comments: Streams from deserts to lower mountains, generally below 1500 m in north but ranging to 2000 m in south (Lee et al. 1980). Typically in shallow water with sand substrate and moderate current; eddys, pools near overhanging banks or other cover. Shallow sandy and rocky runs; flowing pools of creeks and small to medium rivers; often near cover (Page and Burr 1991). During low water may take refuge in moist detritus and algal mats (Sublette et al. 1990). Tolerant of high temperatures and low dissolved oxygen.

Spawns in shallow depressions in fine sand along shoreline at depths of 5-20 cm; eggs are buried by the spawning act (Johnston and Page 1992). Young remain in nest until yolk sac is mostly absorbed before moving to stream edge.

Food Comments: Opportunistic. Feeds primarily on detritus, also zooplankton, filamentous algae, and aquatic insects (Sublette et al. 1990).

Length: 10 centimeters

Economic Attributes



Management Summary



Monitoring Requirements: See Gori (1995) for a monitoring plan for this and other native fishes at Patagonia-Sonoita Creek Preserve.

Population/Occurrence Delineation



Group Name: Small Cyprinids

Use Class: Not applicable

Minimum Criteria for an Occurrence: Occurrences are based on evidence of historical presence, or current and likely recurring presence, at a given location. Such evidence minimally includes collection or reliable observation and documentation of one or more individuals (including eggs and larvae) in appropriate habitat.

Separation Barriers: Dam lacking a suitable fishway; high waterfall; upland habitat. For some species (e.g., slender chub), an impoundment may constitute a barrier. For others (e.g., flame chub) a stream larger than 4th order may be a barrier.

Separation Distance for Unsuitable Habitat: 10 km

Separation Distance for Suitable Habitat: 10 km

Separation Justification: Data on dispersal and other movements generally are not available. In some species, individuals may migrate variable distances between spawning areas and nonspawning habitats.

Separation distances (in aquatic kilometers) for cyprinids are arbitrary but reflect the presumption that movements and appropriate separation distances generally should increase with fish size. Hence small, medium, and large cyprinids, respectively, have increasingly large separation distances. Separation distance reflects the likely low probability that two occupied locations separated by less than several kilometers of aquatic habitat would represent truly independent populations over the long term.

Because of the difficulty in defining suitable versus unsuitable habitat, especially with respect to dispersal, and to simplify the delineation of occurrences, a single separation distance is used regardless of habitat quality.

Occupied locations that are separated by a gap of 10 km or more of any aquatic habitat that is not known to be

occupied represent different occurrences. However, it is important to evaluate seasonal changes in habitat to ensure that an occupied habitat occurrence for a particular population does not artificially separate spawning areas and nonspawning areas as different occurrences simply because there have been no collections/observations in an intervening area that may exceed the separation distance.

Date: 21Sep2004

Author: Hammerson, G.

Population/Occurrence Viability

Justification: [Use the Generic Element Occurrence Rank Specifications \(2008\).](#)
[Key for Ranking Species Element Occurrences Using the Generic Approach \(2008\).](#)

U.S. Invasive Species Impact Rank (I-Rank)

Authors/Contributors

NatureServe Conservation Status Factors Edition Date: 08Jul1998

NatureServe Conservation Status Factors Author: Clausen, M. K.

Element Ecology & Life History Edition Date: 16Oct1995

Element Ecology & Life History Author(s): Hammerson, G.

Zoological data developed by NatureServe and its network of natural heritage programs (see [Local Programs](#)) and other contributors and cooperators (see [Sources](#)).

References

- Arizona Game and Fish Department. 1997. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Arizona. 3 pp.
- Gori, D. 1995. Monitoring plan for native fish at Paragonia-Sonoita Creek Preserve. 20 pp + 3 figures + 19 tables.
- Johnston, C. E., and L. M. Page. 1992. The evolution of complex reproductive strategies in North American minnows (Cyprinidae). Pages 600-621 in R. L. Mayden, editor. Systematics, historical ecology, and North American freshwater fishes. Stanford Univ. Press, Stanford, California. xxvi + 969 pp.
- Koster, W. J. 1957. Guide to the fishes of New Mexico. University of New Mexico Press, Albuquerque. 116 pp.
- Minckley, W. L. 1973. Fishes of Arizona. Arizona Game and Fish Department, Phoenix, Arizona. 293 pp.
- Nelson, J. S., E. J. Crossman, H. Espinosa-Perez, L. T. Findley, C. R. Gilbert, R. N. Lea, and J. D. Williams. 2004. Common and scientific names of fishes from the United States, Canada, and Mexico. American Fisheries Society, Special Publication 29, Bethesda, Maryland. 386 pp.
- New Mexico Department of Game and Fish. 1997. Fish and Wildlife Information Exchange--VA Tech. Online. Available: <http://www.fw.vt.edu/fishex/nm.htm>. Accessed 14 April 1998, last update 29 October 1997.
- Page, L. M., and B. M. Burr. 1991. A field guide to freshwater fishes: North America north of Mexico. Houghton Mifflin Company, Boston, Massachusetts. 432 pp.
- Rinne, J. L. and W. L. Minckley. 1991. Native fishes of arid lands: A dwindling resource of the desert southwest. U.S. Department of Agriculture, Forest Service, General Technical Report RM-206. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. 45 pages.
- Robins, C.R., R.M. Bailey, C.E. Bond, J.R. Brooker, E.A. Lachner, R.N. Lea, and W.B. Scott. 1991. Common and scientific names of fishes from the United States and Canada. American Fisheries Society, Special Publishing 20. 183 pp.
- Simons, A. M., and R. L. Mayden. 1999. Phylogenetic relationships of North American cyprinids and assessment of homology of the open posterior myodome. Copeia 1999:13-21.

- Texas Natural History Collection. 1996. Sept. 9 last update. Index to North American freshwater fishes (fish images, maps, and information). Online. Available: <http://www.utexas.edu/depts/tnhc/na/naindex.html>.
- U.S. Fish and Wildlife Service (USFWS). 1994. Unpublished Listing Priority Number Assignment Form. Dated 15 April 1994. Arizona Ecological Services Office.
- Woodman, D. A. 1992. Systematic relationships within the cyprinid genus RHINICHTHYS. Pages 374-391 in R. L. Mayden, editor. Systematics, historical ecology, and North American freshwater fishes. Stanford Univ. Press, Stanford, California. xxvi + 969 pp.

References for Watershed Distribution Map

- Lee, D. S., C. R. Gilbert, C. H. Hocutt, R. E. Jenkins, D. E. McAllister, and J. R. Stauffer, Jr. 1980 et seq. Atlas of North American Freshwater Fishes. North Carolina State Museum of Natural History, Raleigh, North Carolina. i-x + 854 pp.
- Sublette, J. E., M. D Hatch, and M. Sublette. 1990. The fishes of New Mexico. University New Mexico Press, Albuquerque, New Mexico. 393 pp.

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Note: This report was printed on **August 29, 2011**

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Citation for data on website including State Distribution, Watershed, and Reptile Range maps:

NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: August 29, 2011).

Citation for Bird Range Maps of North America:

Ridgely, R.S., T.F. Allnutt, T. Brooks, D.K. McNicol, D.W. Mehlman, B.E. Young, and J.R. Zook. 2003. Digital Distribution Maps of the Birds of the Western Hemisphere, version 1.0. NatureServe, Arlington, Virginia, USA.

Acknowledgement Statement for Bird Range Maps of North America:

"Data provided by NatureServe in collaboration with Robert Ridgely, James Zook, The Nature Conservancy - Migratory Bird Program, Conservation International - CABS, World Wildlife Fund - US, and Environment Canada - WILDSPACE."

Citation for Mammal Range Maps of North America:

Patterson, B.D., G. Ceballos, W. Sechrest, M.F. Tognelli, T. Brooks, L. Luna, P. Ortega, I. Salazar, and B.E. Young. 2003. Digital Distribution Maps of the Mammals of the Western Hemisphere, version 1.0. NatureServe, Arlington, Virginia, USA.

Not yet assessed**Acknowledgement Statement for Mammal Range Maps of North America:**

"Data provided by NatureServe in collaboration with Bruce Patterson, Wes Sechrest, Marcelo Tognelli, Gerardo Ceballos, The Nature Conservancy-Migratory Bird Program, Conservation International-CABS, World Wildlife Fund-US, and Environment Canada-WILDSPACE."

Citation for Amphibian Range Maps of the Western Hemisphere:

IUCN, Conservation International, and NatureServe. 2004. Global Amphibian Assessment. IUCN, Conservation International, and NatureServe, Washington, DC and Arlington, Virginia, USA.

Acknowledgement Statement for Amphibian Range Maps of the Western Hemisphere:

"Data developed as part of the Global Amphibian Assessment and provided by IUCN-World Conservation Union, Conservation International and NatureServe."

NOTE: Full metadata for the Bird Range Maps of North America is available at: <http://www.natureserve.org/library/birdDistributionmapsmetadatav1.pdf>.

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