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Dzihunia amudarjensis, Bukhara Stone Loach

Assessment by: Karimov, B.



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Taxonomy

| Kingdom | Phylum | Class | Order | Family |
|----------|----------|----------------|---------------|---------------|
| Animalia | Chordata | Actinopterygii | Cypriniformes | Nemacheilidae |

Scientific Name: Dzihunia amudarjensis (Rass, 1929)

Synonym(s):

• Nemacheilus amudarjensis Rass, 1929

Common Name(s):

- English: Bukhara Stone Loach
- Russian: Бухарский голец

Taxonomic Source(s):

Assessment Information

| Red List Category & Criteria: | Least Concern ver 3.1 | | |
|-------------------------------|-----------------------|--|--|
| Year Published: | 2020 | | |
| Date Assessed: | March 3, 2020 | | |

Justification:

This is a widely distributed species with no indications of any major population declines. It is therefore assessed as Least Concern.

Geographic Range

Range Description:

This species is a regional endemic and occurs in the Amu Darya, Surkhan Darya and Kashka Darya drainages in Uzbekistan, Turkmenistan and Afghanistan (Berg 1964, Salnikov, 2014, Coad 2015). It also occurs in irrigation networks (canals and reservoirs) fed by water from these rivers. It is also found in Kyrgyzstan in the Kyzylsu river, a tributary of the Vakhsh river which belongs to the Amu Darya river basin (Kustareva and Naseka 2015). Well documented places where this species occurs includes the Amu-Darya river near Termes (Uzbekistan: 37°13'N 67°17'E), near Tschardschui, Chardjui and Chardzhou, now Türkmenabat (Turkemenistan: 39°05'N 63°34'E) and its upper reaches, and the Amu-Darya estuary about 10 km from confluence of Taldyk (Kottelat 2012). It inhabits more than 1500 km of river and occurs in many more than 10 populations. There is a doubtful record of this species from the Syr Darya which needs confirmation.

Country Occurrence:

Native, Extant (resident): Afghanistan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan

Native, Presence Uncertain: Kazakhstan

Distribution Map



Legend

EXTANT (RESIDENT)
PRESENCE UNCERTAIN

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The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

Population

There is no information available on the population of this species, but it is not believed to have declined significantly within the last 10 years (corresponding to three generations). **Current Population Trend:** Unknown

Habitat and Ecology (see Appendix for additional information)

This rheophilic species preferentially inhabits turbid and flowing streams and rivers. It can also be found in irrigation networks including canals and reservoirs. Its biology is poorly studied (Berg 1964).

Systems: Freshwater (=Inland waters)

Use and Trade (see Appendix for additional information)

This species is not used or traded.

Threats (see Appendix for additional information)

Water extraction for agriculture and water pollution as well as hydroelectrical construction and alternation of the hydrological regime (flow, turbidity, temperature, salinity, etc.) are the main threats to species (Kamilov *et al.* 1994, Karimov *et al.* 2009, Karimov *et al.* 2017).

Conservation Actions (see Appendix for additional information)

There are no known conservation actions in place for this species. Research is needed into its population, distribution and ecology, alongside monitoring of population and habitat trends and habitat protection and restoration where threats occur.

Credits

| Assessor(s): | Karimov, B. |
|--------------|---|
| Reviewer(s): | Freyhof, J., Bogutskaya, N., Yuldashov, M.A. & Allayarov, S |

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External Resources

For <u>Supplementary Material</u>, and for <u>Images and External Links to Additional Information</u>, please see the Red List website.

Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

| Habitat | Season | Suitability | Major Importance? |
|---|----------|-------------|----------------------|
| 5. Wetlands (inland) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls) | Resident | Suitable | - |
| 5. Wetlands (inland) -> 5.13. Wetlands (inland) - Permanent Inland Deltas | Resident | Suitable | - |
| 15. Artificial/Aquatic & Marine -> 15.1. Artificial/Aquatic - Water Storage Areas (over 8ha) | - | Suitable | - |
| 15. Artificial/Aquatic & Marine -> 15.7. Artificial/Aquatic - Irrigated Land (includes irrigation channels) | - | Suitable | - |
| 15. Artificial/Aquatic & Marine -> 15.9. Artificial/Aquatic - Canals and Drainage Channels, Ditches | Resident | Suitable | - |

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

| Threat | Timing | Scope | Severity | Impact Score |
|---|-----------|--|-------------------------------------|---------------------|
| 7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.3. Abstraction of surface water (agricultural use) | Ongoing | Majority (50- 90%) | Causing/could cause fluctuations | Medium impact: 6 |
| | Stresses: | 2. Species Stress | es -> 2.2. Species distu | urbance |
| | | 2. Species Stress | es -> 2.3. Indirect spec | cies effects |
| 7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.11. Dams (size unknown) | Ongoing | Majority (50- 90%) | Causing/could cause fluctuations | Medium impact: 6 |
| | Stresses: | 2. Species Stress | es -> 2.3. Indirect spec | cies effects |
| 9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.3. Herbicides and pesticides | Ongoing | Majority (50- 90%) | Causing/could cause fluctuations | Medium impact: 6 |
| | Stresses: | 1. Ecosystem stre | esses -> 1.3. Indirect e | cosystem effects |
| | | 2. Species Stresses -> 2.1. Species mortality | | |
| | | 2. Species Stresses -> 2.3. Indirect species effects | | |

Conservation Actions in Place

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action in Place

In-place research and monitoring

Action Recovery Plan: No

Systematic monitoring scheme: No

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Conservation Action in Place
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In-place land/water protection

Conservation sites identified: No

Area based regional management plan: No

Occurs in at least one protected area: Yes

Conservation Actions Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action Needed

1. Land/water protection -> 1.2. Resource & habitat protection

2. Land/water management -> 2.3. Habitat & natural process restoration

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

| Research Needed |
|--|
| 1. Research -> 1.2. Population size, distribution & trends |
| 1. Research -> 1.3. Life history & ecology |
| 3. Monitoring -> 3.1. Population trends |
| 3. Monitoring -> 3.4. Habitat trends |

Additional Data Fields

| Distribution | |
|--|--|
| Continuing decline in area of occupancy (AOO): No | |
| Extreme fluctuations in area of occupancy (AOO): No | |
| Continuing decline in extent of occurrence (EOO): No | |
| Extreme fluctuations in extent of occurrence (EOO): No | |
| Continuing decline in number of locations: Unknown | |
| Extreme fluctuations in the number of locations: No | |
| Population | |
| Continuing decline of mature individuals: Unknown | |
| Extreme fluctuations: Unknown | |
| Population severely fragmented: No | |

Population

Continuing decline in subpopulations: Unknown

Extreme fluctuations in subpopulations: Unknown

Habitats and Ecology

Generation Length (years): 3

Movement patterns: Not a Migrant

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