Aphanius richardsoni

Region: 1

Taxonomic Authority: (Boulenger 1907)

Synonyms:

Common Names:

Order: Cyprinodontiformes

Family: Cyprinodontidae

Notes on taxonomy:

General Information

Biome
☐ Terrestrial   ☑ Freshwater   ☐ Marine

Geographic Range of species:

Occurs in the Dead Sea region. The species inhabits streams and springs west and south of the lake, from Enot Zuqim (En Fashkha) in the north to Ne'ot Ha'Kikar in the south. Also found in some streams in the Jordanian side.

Habitat and Ecology Information:

Streams and pools on a variety of foundations.

Conservation Measures:

In order for this species to survive, it is necessary to rehabilitate some of the natural landscapes in this area and regularly manage and monitor them. The impact of groundwater pumping on the flow of Enot Zuqim, Enot Samar and Enot Qaneh should be monitored.

Threats:

Exploitation of spring waters. In the Ne'ot Ha'Kikar region where natural habitats were destroyed, the species only survives in the drainage channels of cultivated areas and in the Dead Sea Works collecting channel. Increased water exploitation may lead to complete extinction of this fish in the Ne'ot Ha'Kikar region. The situation in the area of Enot Zuqim is unclear. Intensified water pumping from the aquifer could be detrimental to the springs and the fish inhabiting them. Introduction of invasive species such as Gambusia, Cichlids and other exotic species also pose a threat to the species.

Species population information:

In the Ne'ot Ha'Kikar region, the population is in the thousands, but is given to extreme fluctuations due to human activity. At Enot Zuqim, population is also in the thousands. In other sites, dozens are present. Population size has decreased drastically in Israel in the past 50 years. There is no connection between populations of the Ne'ot Ha'Kikar springs close to those in the northern Dead Sea area springs. There is no continuous link between the Enot Zuqim population and that of Enot Qaneh and Enot Samar, but there is a possibility that at times of strong floods, a temporary layer of fresh water is formed in the Dead Sea that allows fish passage between populations via the Dead Sea.

Country Distribution

	Native - Presence Confirmed	Native - Presence Possible	Extinct	Reintroduced	Introduced	Vagrant
Israel	☑	☐	☐	☐	☐	☐
Jordan	☑	☐	☐	☐	☐	☐

Upper Level Habitat Preferences

		Score
5.1	Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	1
5.7	Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)	1

Lower Level Habitat Preferences

	Score

Major threats

Code	Description of threat	Past	Present	Future
1	Habitat Loss/Degradation (human induced)	☑	☑	☑
1.3	Extraction	☑	☑	☑
1.3.6	Groundwater extraction	☑	☑	☑
2	Invasive alien species (directly affecting the species)	☑	☑	☑

Conservation Measures

Code	Conservation measures	In place	Needed
4	Habitat and site-based actions	☐	☑
4.1	Maintenance/Conservation	☐	☑
4.2	Restoration	☐	☑

Utilisation of Species

Purpose/Type of Use	Subsistence		National	International		*Other purpose:*
Primary forms removed from the wild	100%	>75%	51-75%	26-50%	<25%	*Other forms removed from the wild:*
Source of specimens in commercial trade	100%	>75%	51-75%	26-50%	<25%	*Other source of specimens:*

Trend in wild offtake/harvest in relation to total wild population numbers over last five years:

Trend in offtake/harvest produced through domestication/cultivation over last five years:

CITES:

Red Listing

Red List Assessment: Critically Endangered (CR)   ☐ Possibly Extinct

Red List Criteria: B2ab(i,ii,iii,iv)c(i)

Rationale for the Red List Assessment: This species occurs in three main areas. Area of occupancy is estimated as less than 10 km². The population is naturally fragmented broken into 3 locations. There is continuing decline in area of occupancy and population size. The range of the species and number of mature individuals are subject to extreme fluctuation as a result of human activities affecting the habitat.

Current Population Trend: Decreasing

Date of Assessment: 14/12/2004

Current Population Trend: Decreasing   **Date of Assessment:**   11/12/2004

Assessor(s):   M. Goren

Evaluator: N. Bogutskaya, A. Karatash & F. Erk'akan

Notes on Red listing:

Bibliography

, 2002, , , The Red Data Book of Threatened Vertebrates in Israel, Dolev, A. and Perevolotsky, A., , , Israel Nature and National Parks Protection Authority and Society for the Protection of Nature in Israel, Jerusalem