

Salamandra infraimaculata

Taxonomic Authority: (Mertens, 1948)

Region: 10

Synonyms:

Salamandra semenovi Nesterov, 1916
 Salamandra salamandra infraimma Mertens, 1948

Common Names:

Arouss Al Ayn English

Order: Caudata

Family: Salamandridae

Notes on taxonomy: This account follows the suggested Salamandra monophyletic Group distribution presented in Steinfartz et al. (2000).

General Information

Biome Terrestrial Freshwater Marine

Geographic Range of species:

This species is present in southeastern and eastern parts of Anatolia, Turkey; northwestern Iran; northern Iraq; Lebanon and northern Israel (Ten Dan; the Upper and Western Galilee and Mount Carmel). There is little information available on the distribution of the species in Syria and Iraq. It is unclear which species of Salamandra have been recorded from western Anatolia, and further investigation to identify these populations (which are not included here) is needed. The altitudinal range in the south of this species range is known to be approximately 180 - 2,000m asl (Taurus Mountains).

Habitat and Ecology Information:

The terrestrial habitat of the species varies across range. In Iran it is known from an area of arid sparse cork forest. In Turkey and Lebanon it has been found to inhabit damp forests and groves in mountainous or hilly regions, and shelters under leaves, roots or stones not far from water. Isolated populations of this salamander are found around breeding pools (often temporary in nature) and slow-flowing spring fed streams; during the breeding season (winter through to early Spring) adults inhabit these waterbodies. The species forages nocturnally, but may be seen in the daytime during wet weather. It produces live young (larvae with gills that need to metamorphose) (Degani, 1996). This species may persist in formerly forested habitats, although further studies are needed.

Conservation Measures:

This species is protected by national legislation in Israel and is listed in the National Red List for Israel. It is present in the Mount Hermon, Mount Carmel and Tel-Dan Natur protected areas in Israel and has been recorded in the Arz El-Shouf, Horj Ehden and Ammiq marshes protected areas of Lebanon. The active creation of breeding habitat is taking place in the Nature Reserve within Mount Carmel, Israel. Further fieldwork into the biology, habitat and distribution over much of the species range is needed.

Threats:

It is threatened in Israel and Lebanon (and possibly Syria) by human development of the species' habitat (especially breeding habitat) and aquatic pollution (eg. pesticides), and is possibly threatened in Iran and is threatened in Lebanon by habitat loss (including lowering of the water table). In Lebanon introduced fish is also a problem. In Israel large numbers of this salamander are killed on roads. The species is probably in decline in Turkey (and presumably in parts of the Middle East) through the damming of breeding streams, aquatic pollution, and an increase in ground water abstraction resulting from the rapid expansion of irrigation schemes for agriculture. It is not known as to whether it is threatened in Iraq.

Species population information:

It is generally locally common in suitable habitat. The species is considered to be rare within Iran, and populations in Israel are small but generally stable, however the number of populations are declining. In Lebanon it is considered to be widespread, but localised and probably not abundant.

Country Distribution

	Native - Presence Confirmed	Native - Presence Possible	Extinct	Reintroduced	Introduced	Vagrant
Iraq	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Islamic Republic of Iran	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Israel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lebanon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Syrian Arab Republic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turkey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FAO Marine Habitats

Native - Presence Confirmed Native - Presence Possible Extinct Reintroduced Introduced

Major Lakes

Major Rivers

Upper Level Habitat Preferences

	Score
3.5 Shrubland - Subtropical/Tropical Dry	1
5.1 Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	1
5.9 Wetlands (inland) - Freshwater Springs and Oases	1

Lower Level Habitat Preferences

	Score
Cool Grasses and Shrubs	1
Dry Woody Scrub	1
Hot and Mild Grasses and Shrubs	1

Mediterranean Scrub	1
Shrub Evergreen	1
Succulent and Thorn Scrub	1

Major threats

Code	Description of threat	Past	Present	Future
1	Habitat Loss/Degradation (human induced)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1	Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.1	Crops	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.1.2	Small-holder farming	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.4	Infrastructure development	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.4.2	Human settlement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Invasive alien species (directly affecting the species)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2	Predators	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Accidental mortality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.2	Collision	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.2.2	Vehicle collision	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Pollution (affecting habitat and/or species)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3	Water pollution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3.1	Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Conservation Measures

Code	Conservation measures	In place	Needed
1	Policy-based actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2	Legislation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1	Development	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1.2	National level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2	Implementation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2.2	National level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Research actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2	Population numbers and range	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.3	Biology and Ecology	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.4	Habitat status	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.5	Threats	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.8	Conservation measures	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.9	Trends/Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Habitat and site-based actions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.1	Maintenance/Conservation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.2	Restoration	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.4	Protected areas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.2	Establishment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.4.3	Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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% <i>Other forms removed from the wild:</i>
Source of specimens in commercial trade	100%	>75%	51-75%	26-50% <25% <i>Other source of specimens:</i>

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: Not listed

Red Listing

Red List Assessment: Near Threatened (NT) Possibly Extinct

Red List Criteria:

Rationale for the Red List Assessment: Listed as Near Threatened since the species depends on areas of water for reproduction in generally arid or dry areas, and so its Area of Occupancy is probably not much greater than 2,000 km², and the extent and quality of its habitat is declining, thus making the species close to qualifying for Vulnerable.

Current Population Trend: Decreasing Date of Assessment: 12/17/2004

Assessor(s): Theodore Papenfuss, Ahmad Disi, Nasrullah Rastegar-Pouyani, Gad Degani, Ismail Ugurtas, Max Sparreboom, Sergius Kuzmin,

Notes on Red listing:

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