

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

NATIONAL LEVEL

1. General information

1.1 Member State	GR
1.2 Species code	5276
1.3 Species scientific name	<i>Aphanius almiriensis</i>
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Zacharias Almyris

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2015
2.3 Distribution map	Yes
2.4 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.5 Additional maps	Yes

3. Information related to Annex V Species (Art. 14)

3.1 Is the species taken in the wild/exploited?	No	
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	No
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No
	c) regulation of the periods and/or methods of taking specimens	No
	d) application of hunting and fishing rules which take account of the conservation of such populations	No
	e) establishment of a system of licences for taking specimens or of quotas	No
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No
	g) breeding in captivity of animal species as well as artificial propagation of plant species	No
	h) other measures	No

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3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
Min. (raw, ie. not rounded)						
Max. (raw, ie. not rounded)						
Unknown	No	No	No	No	No	No

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

Mediterranean (MED)

4.2 Sources of information

Triantafyllidis A., Leonardos I., Bista I., Kyriazis I.D., Stoumboudi M.Th., Kappas I., Amat F. & Abatzopoulos T.J. (2007). Phylogeography and genetic structure of the Mediterranean killifish *Aphanius fasciatus* (Cyprinodontidae). *Marine Biology*, Vol. 152(5): 1159-1167.

Economou A.N., Giakoumi S., Vardakas L., Barbieri R., Stoumboudi M. & Zogaris S. (2007a). The freshwater ichthyofauna of Greece - an update based on a hydrographic basin survey. *Mediterranean Marine Science*, Vol. 8(1): 91-166.

Geiger M.F., Herder F., Monaghan M.T., Almada V., Barbieri R., Bariche M., Berrebi P., Bohlen J., Casal-Lopez M., Delmastro G.B., Denys G.P.J., Dettai A., Doadrio I., Kalogianni E., Kärst H., Kottelat M., Kovačić M., Laporte M., Lorenzoni M., Marčić M., Özuluğ M., Perdices A., Perea S., Persat H., Porcelotti S., Puzzi C., Robalo J., Šanda R., Schneider M., Šlechtová V., Stoumboudi M., Walter S. & Freyhof J. (2014). Spatial heterogeneity in the Mediterranean Biodiversity Hotspot affects barcoding accuracy of its freshwater fishes. *Molecular Ecology Resources* 2014.

5. Range

5.1 Surface area

13

5.2 Short-term trend Period

2007-2018

5.3 Short-term trend Direction

Stable (0)

5.4 Short-term trend Magnitude

a) Minimum

b) Maximum

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5.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
5.6 Long-term trend Period		
5.7 Long-term trend Direction		
5.8 Long-term trend Magnitude	a) Minimum	b) Maximum
5.9 Long-term trend Method used		
5.10 Favourable reference range	a) Area (km ²) b) Operator c) Unknown d) Method	Approximately equal to (≈) Basic assumption: Favourable Reference Range = Surface Area Range (current range)
5.11 Change and reason for change in surface area of range	No change The change is mainly due to:	
5.12 Additional information		

6. Population

6.1 Year or period	2015	
6.2 Population size (in reporting unit)	a) Unit b) Minimum c) Maximum d) Best single value	number of map 1x1 km grid cells (grids1x1) 13
6.3 Type of estimate	Best estimate	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit b) Minimum c) Maximum d) Best single value	
6.5 Type of estimate		
6.6 Population size Method used	Based mainly on extrapolation from a limited amount of data	
6.7 Short-term trend Period	2007-2018	
6.8 Short-term trend Direction	Decreasing (-)	
6.9 Short-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval	
6.10 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
6.11 Long-term trend Period		
6.12 Long-term trend Direction		
6.13 Long-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval	
6.14 Long-term trend Method used		

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6.15 Favourable reference population (using the unit in 6.2 or 6.4)

- a) Population size
- b) Operator Approximately equal to (\approx)
- c) Unknown
- d) Method Basic assumption: Favourable Reference Population = value extracted from Additional Range Map

6.16 Change and reason for change in population size

No change
The change is mainly due to:

6.17 Additional information

Few samples, making it difficult to extrapolate individuals or classes for reporting population unit.

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat

- a) Are area and quality of occupied habitat sufficient (for long-term survival)? No
- b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)? Unknown

7.2 Sufficiency of area and quality of occupied habitat Method used

Based mainly on extrapolation from a limited amount of data

7.3 Short-term trend Period

2007-2018

7.4 Short-term trend Direction

Decreasing (-)

7.5 Short-term trend Method used

Based mainly on extrapolation from a limited amount of data

7.6 Long-term trend Period

7.7 Long-term trend Direction

7.8 Long-term trend Method used

7.9 Additional information

The surface area of the habitat is estimated at 13 km² and its quality is bad.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	H
Application of synthetic (mineral) fertilisers on agricultural land (A20)	M
Use of plant protection chemicals in agriculture (A21)	M
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01)	M
Physical alteration of water bodies (K05)	H
Active abstractions from groundwater, surface water or mixed water for agriculture (A30)	H
Modification of hydrological flow (K04)	H

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Other human intrusions and disturbance not mentioned above (H08)	M
Other invasive alien species (other than species of Union concern) (I02)	H
Threat	Ranking
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	H
Application of synthetic (mineral) fertilisers on agricultural land (A20)	M
Use of plant protection chemicals in agriculture (A21)	M
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01)	M
Physical alteration of water bodies (K05)	H
Active abstractions from groundwater, surface water or mixed water for agriculture (A30)	H
Modification of hydrological flow (K04)	H
Other human intrusions and disturbance not mentioned above (H08)	M
Other invasive alien species (other than species of Union concern) (I02)	H

8.2 Sources of information

PRESSURES: Mainly based on expert judgement and other data.
THREATS: Based on expert opinion.

8.3 Additional information

IAS: *Gambusia holbrooki*

9. Conservation measures

9.1 Status of measures

- a) Are measures needed? Yes
- b) Indicate the status of measures Measures identified, but none yet taken

9.2 Main purpose of the measures taken

9.3 Location of the measures taken

9.4 Response to the measures

9.5 List of main conservation measures

- Habitat restoration of areas impacted by transport (CE06)
- Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production (CA09)
- Manage conversion of land for construction and development of infrastructure (CF01)
- Restore habitats impacted by multi-purpose hydrological changes (CJ03)
- Manage drainage and irrigation operations and infrastructures in agriculture (CA15)
- Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities (CF02)

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Reduce impact of multi-purpose hydrological changes (CJ02)

Reduce impact of other specific human actions (CH03)

Management, control or eradication of other invasive alien species (CI03)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters	a) Range	Good
	b) Population	Poor
	c) Habitat of the species	Bad

10.2 Additional information

11. Conclusions

11.1. Range	Favourable (FV)
11.2. Population	Unfavourable - Inadequate (U1)
11.3. Habitat for the species	Unfavourable - Bad (U2)
11.4. Future prospects	Unfavourable - Bad (U2)
11.5 Overall assessment of Conservation Status	Unfavourable - Bad (U2)
11.6 Overall trend in Conservation Status	Deteriorating (-)
11.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status
	No change
	The change is mainly due to:
	b) Overall trend in conservation status
No change	
The change is mainly due to:	
11.8 Additional information	

12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	6
12.2 Type of estimate	Best estimate	
12.3 Population size inside the network Method used	Based mainly on extrapolation from a limited amount of data	
12.4 Short-term trend of population size within the network Direction	Stable (0)	

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12.5 Short-term trend of population size within the network Method used

Based mainly on extrapolation from a limited amount of data

12.6 Additional information

13. Complementary information

13.1 Justification of % thresholds for trends

The % threshold could not be used for the assessment since: a) a different method for assessing range was employed, compared to the 2nd Reporting Period or b) no data were reported in the 2nd Reporting Period

13.2 Trans-boundary assessment

13.3 Other relevant Information

1. Identified as endemic to two wetlands in northeastern Peloponnese, first located at a spring-fed wetland near Kato Almiri village (type locality) and at Moustos Lagoon (eastern Peloponnese). The species is presumed extinct in its type locality, allegedly due to anthropogenic changes in the spring's hydrological regime. Despite repeated survey attempts, the last specimens were caught at Kato Almiri in 2003. Genetic analyses of *Aphanius fasciatus* populations of the Aegean basins show very close relationships to *Aphanius almiriensis*. Although *A. almiriensis* is currently a valid species, more research is needed to verify the identity of some *Aphanius* populations that are currently considered *Aphanius fasciatus* but genetically very closely related to *Aphanius almiriensis* (Geiger et al. 2014). The new data may change the conservation status of this range-restricted species.
2. Population assessment took into account, besides Favourable Reference Population (relative grid), population structure and reproduction trends. Short-term trend took into account population structure and reproduction trends. In several samplings, only very few specimens were sampled.
3. Basic Assumptions:
 - i) "Surface Area Range" (field 5.1) = value extracted from "Range Map" (field 2.5).
 - ii) "Favourable Reference Range" (field 5.10a) = a) "Surface Area Range" (field 5.1) OR b) value extracted from "Additional Reference Range Map" (provided). Depends on whether the Favourable range is equal or larger than actual species range.
 - iii) "Population Size" (field 6.2 or 6.4) = value extracted from "Distribution Map" (field 2.3) or "Additional Distribution Map" (field 2.5) (when provided).
 - iv) "Favourable Reference Population" (field 6.15a) = a) "Population Size" (field 6.2 or 6.4) OR b) value extracted from "Additional Reference Range Map" (provided). Depends on whether the Favourable population is equal or larger than actual species population.
 - v) Habitat "Area Estimation" (field 7.9) = "Distribution Map" (field 2.3) or "Additional Distribution Map" (field 2.5) (when provided).