

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	6293
1.3 Species scientific name	<i>Knipowitschia milleri</i>
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Acheronogovios

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

Kottelat M. & Freyhof J. (2007). Handbook of European freshwater fishes. Publications Kottelat, Cornol, Switzerland.

Economidis, P.S. & Chrysopolitou V. (2009). *Knipowitschia milleri*. In Red Data Book of threatened Animals of Greece. Legakis A. & Maragou P. (eds). Hellenic Zoological Society, Athens.

Zogaris, S., Konstantinis, A. & Giakoumi, S. (2011). Wetland drainage at Acheron Delta: Its not only the Acheron Goby that is threatened. I *Physi* (Bulletin of the Hellenic Society for the Protection of Nature)(134):17-20 .

Vanhove M.P.M., Economou A.N., Zogaris S., Larmuseau M.H.D., Giakoumi S., Kalogianni E., Volckaert F.A.M. & Huyse T. (2012). Phylogenetics and biogeography of the Balkan 'sand gobies' (Teleostei: Gobiidae): vulnerable species in need of taxonomic revision. *Biological Journal of the Linnean Society*, Vol. 105: 73–91.

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.

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6.7 Short-term trend Period	2007-2018	
6.8 Short-term trend Direction	Stable (0)	
6.9 Short-term trend Magnitude	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> a) Minimum b) Maximum c) Confidence interval 	
6.14 Long-term trend Method used		
6.15 Favourable reference population (using the unit in 6.2 or 6.4)	<ul style="list-style-type: none"> a) Population size b) Operator c) Unknown d) Method 	<p>Approximately equal to (≈)</p> <p>Basic assumption: Favourable Reference Population = value extracted from Additional Range Map</p>
6.16 Change and reason for change in population size	<p>No change</p> <p>The change is mainly due to:</p>	
6.17 Additional information	<p>Most data are described as semi-quantitative or qualitative. Few quantitative data. Too much variability between existing samples, especially between different river basins, making it difficult to extrapolate a number or a class for reporting population unit.</p>	

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	Unknown (x)	
7.5 Short-term trend Method used	Insufficient or no data available	
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 128 km ² and its quality is bad.	

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8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Modification of hydrological flow (K04)	M
Other human intrusions and disturbance not mentioned above (H08)	H
Physical alteration of water bodies (K05)	H
Active abstractions from groundwater, surface water or mixed water for agriculture (A30)	H
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Drainage for use as agricultural land (A31)	H
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M
Threat	Ranking
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01)	M
Modification of hydrological flow (K04)	M
Other human intrusions and disturbance not mentioned above (H08)	H
Physical alteration of water bodies (K05)	H
Active abstractions from groundwater, surface water or mixed water for agriculture (A30)	H
Construction or modification (e.g. of housing and settlements) in existing urban or recreational areas (F02)	H
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Drainage for use as agricultural land (A31)	H
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M

8.2 Sources of information

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

8.3 Additional information

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

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9.4 Response to the measures

9.5 List of main conservation measures

Restore habitats impacted by multi-purpose hydrological changes (CJ03)

Reduce impact of multi-purpose hydrological changes (CJ02)

Reduce impact of other specific human actions (CH03)

Manage drainage and irrigation operations and infrastructures in agriculture (CA15)

Habitat restoration of areas impacted by transport (CE06)

Reduce impact of hydropower operation and infrastructure (CC04)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters

a) Range	Good
b) Population	Good
c) Habitat of the species	Poor

10.2 Additional information

11. Conclusions

11.1. Range

Favourable (FV)

11.2. Population

Favourable (FV)

11.3. Habitat for the species

Unfavourable - Bad (U2)

11.4. Future prospects

Unfavourable - Inadequate (U1)

11.5 Overall assessment of Conservation Status

Unfavourable - Bad (U2)

11.6 Overall trend in Conservation Status

Unknown (x)

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)

- Unit
- Minimum
- Maximum
- Best single value

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12.2 Type of estimate

12.3 Population size inside the network Method used

12.4 Short-term trend of population size within the network Direction

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

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. Known to be endemic to the Acheron river drainage. Other Knipowitschia gobies of the Ionian ecoregion are genetically and morphologically very similar to this species and this has promoted an unofficial 'lumping' of formerly unnamed or erroneously named fishes into a provisional Knipowitschia cf. milleri species complex (Vanhove et al. 2012). The genetic similarity between Acheron and Trichonis fishes was also confirmed in Geiger et al. (2014). Here we treat Knipowitschia from the Acheron as distinct until further taxonomic work clarifies and confirms these assumptions. These dwarf gobies inhabit lowland lotic and lentic waters with abundant submerged vegetation on sandy to muddy substrates; often also found in slightly brackish waters in coastal lagoons and salt marshes.

2. 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).

3. The two Greek Knipowitschia gobies (*K. goerneri* and *K. milleri*) are rather recently described and poorly studied species that are related to the *Pomatoschistus* sand gobies (Vanhove et al. 2012). Due to these relationships Economidis et al. (1996) placed them under the *Pomatoschistus canestrini* species name and we insist that this was a proper course of action; since so little was known at the time about species systematics among these poorly studied

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species.