

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

0.1 Member State	GR
0.2.1 Species code	1852
0.2.2 Species name	<i>Fritillaria obliqua</i>
0.2.3 Alternative species scientific name	<i>Fritillaria obliqua</i> Ker-Gawl. subsp. <i>Obliqua</i>
0.2.4 Common name	N/A

1. National Level

1.1 Maps

1.1.1 Distribution Map	Yes
1.1.1a Sensitive species	No
1.1.2 Method used - map	Complete survey/Complete survey or a statistically robust estimate (3)
1.1.3 Year or period	2007-2012
1.1.4 Additional map	Yes
1.1.5 Range map	Yes

2. Biogeographical Or Marine Level

2.1 Biogeographical Region

Mediterranean (MED)

2.2 Published sources

Καμάρη Γ., Ανδριόπουλος Π., Αριανούτσου Μ. 2009. *Fritillaria obliqua* subsp. *obliqua*. Στο: Φοίτος Δ., Κωνσταντινίδης Θ., Καμάρη Γ. (Επιμ. Εκδ.). Βιβλίο Ερυθρών Δεδομένων των Σπάνιων και Απειλούμενων Φυτών της Ελλάδας. Τόμος Δεύτερος, σελ. 42-45

Zaharof-Pourpoutidi, E. 1987: Biometric and karyological study of the genus *Fritillaria* L. from Greece [In Greek]. – Thessaloniki: Ph.D. Thesis, Aristotle University of Thessaloniki, 238 pp.

Strid A. 1988-2014. Flora Hellenica Database. Copenhagen

2.3 Range

2.3.1 Surface area - Range (km ²)	812
2.3.2 Method - Range surface area	Estimate based on partial data with some extrapolation and/or modelling (2)
2.3.3 Short-term trend period	2001-2012
2.3.4 Short-term trend direction	unknown (x)
2.3.5 Short-term trend magnitude	min max
2.3.6 Long-term trend period	
2.3.7 Long-term trend direction	N/A
2.3.8 Long-term trend magnitude	min max
2.3.9 Favourable reference range	area (km ²) operator approximately equal to (≈) unkown No method Favourable reference range was based on the sum of the historic and current distribution of the species. Four localities of <i>F. obliqua</i> subsp. <i>obliqua</i> in Attiki (Ymittos, Lykavittos, Merenta, Dekeleia) which are either doubtful or recorded in the 19th century and not confirmed since were excluded. Also, localities of <i>F. obliqua</i> subsp. <i>tuntasia</i> on the islands of Kea, Folegandros and the islet of Piperi where the presence of the species requires confirmation (due to confusion with <i>Fritillaria graeca</i>) were excluded
2.3.10 Reason for change	Improved knowledge/more accurate dataUse of different method

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2.4 Population

2.4.1 Population size (individuals or agreed exception)	Unit	number of individuals (i)		
	min	7800	max	17000
2.4.2 Population size (other than individuals)	Unit	N/A		
	min		max	
2.4.3 Additional information	Definition of locality Conversion method Problems			
2.4.4 Year or period	2007-2012			
2.4.5 Method – population size	Estimate based on partial data with some extrapolation and/or modelling (2)			
2.4.6 Short-term trend period				
2.4.7 Short term trend direction	unknown (x)			
2.4.8 Short-term trend magnitude	min		max	confidence interval
2.4.9 Short-term trend method	Absent data (0)			
2.4.10 Long-term trend period				
2.4.11 Long term trend direction	N/A			
2.4.12 Long-term trend magnitude	min		max	confidence interval
2.4.13 Long-term trend method	N/A			
2.4.14 Favourable reference population	number			
	operator	more than (>)		
	unknown	No		
	method	The favourable reference population was set as the estimated minimum value of the current population and corresponds to mature, nonconsumed individuals.		
2.4.15 Reason for change	Improved knowledge/more accurate data Use of different method			

2.5 Habitat for the Species

2.5.1 Surface area - Habitat (km ²)	1,7
2.5.2 Year or period	2007-2012
2.5.3 Method used - habitat	Estimate based on partial data with some extrapolation and/or modelling (2)
2.5.4 a) Quality of habitat	Moderate
2.5.4 b) Quality of habitat - method	The habitat of <i>F. obliqua</i> subsp. <i>obliqua</i> is mediterranean medium height and tall shrub (for example, <i>Juniperus phoenicea</i> or <i>Quercus coccifera</i> shrub) with small openings on usually rocky sites. The subspecies cannot survive in forest (for example pine forest) and it may be stressed in very low and very open shrub. The quality of the habitat assessed as vegetation structure and composition (typical species) and as threats to the habitat (fire, overgrazing) is good at 45% of the species' distribution, moderate in 30% and bad in 25%. The habitat of <i>F. obliqua</i> subsp. <i>tuntasia</i> is mediterranean low shrub (<i>phrygana</i>) and mediterranean medium height, open shrub. The species cannot survive in thick and tall shrub. The quality of the habitat assessed as vegetation structure and composition (typical species) and as threats to the habitat (fire, overgrazing) is good at most of the subspecies' distribution area.
2.5.5 Short term trend period	2001-2012
2.5.6 Short term trend direction	decrease (-)
2.5.7 Long-term trend period	
2.5.8 Long term trend direction	N/A
2.5.9 Area of suitable habitat (km ²)	560

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2.5.10 Reason for change

Improved knowledge/more accurate data

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
continuous urbanisation (E01.01)	high importance (H)	N/A
discontinuous urbanisation (E01.02)	high importance (H)	N/A
dispersed habitation (E01.03)	high importance (H)	N/A
damage by herbivores (including game species) (K04.05)	high importance (H)	N/A
wind energy production (C03.03)	high importance (H)	N/A
non intensive grazing (A04.02)	medium importance (M)	N/A
burning down (J01.01)	medium importance (M)	N/A
hand collection (F04.02.02)	low importance (L)	N/A
Cultivation (A01)	low importance (L)	N/A

2.6.1 Method used – pressures

based exclusively or to a larger extent on real data from sites/occurrences or other

2.7 Main Threats

Threat	ranking	pollution qualifier(s)
dispersed habitation (E01.03)	high importance (H)	N/A
damage by herbivores (including game species) (K04.05)	high importance (H)	N/A
non intensive grazing (A04.02)	medium importance (M)	N/A
burning down (J01.01)	medium importance (M)	N/A
hand collection (F04.02.02)	low importance (L)	N/A
Cultivation (A01)	low importance (L)	N/A
wind energy production (C03.03)	low importance (L)	N/A
continuous urbanisation (E01.01)	low importance (L)	N/A
discontinuous urbanisation (E01.02)	low importance (L)	N/A

2.7.1 Method used – threats

expert opinion (1)

2.8 Complementary Information

2.8.1 Justification of % thresholds for trends

2.8.2 Other relevant Information

The species *Fritillaria obliqua* includes two subspecies *F. obliqua* subsp. *obliqua* (Attiki & Evvoia Island) and *F. obliqua* subsp. *tuntasia* (Kyklades Islands) with distinct distribution, different habitat and different conservation status.

a) For *F. obliqua* subsp. *obliqua* (6356) the overall assessment of Conservation Status was estimated Bad (U2) with overall trend Unknown(x).

b) For *F. obliqua* subsp. *Tuntasia* (6357) the overall assessment of conservation status was estimated Inadequate (U1) with the overall trend Unknown (x).

Note on 2.4.1. population size was estimated in the period 2007-2014 in 13 out of 14 cells of the species' distribution (including 11 cells on Kythnos island which is the main distribution area of the species). At 15 localities on Kythnos there is an exact population estimation of 2908 mature individuals (ranging from 2 to 1284 individuals per locality) and 353 rosettes. Population size is reported as 245 individuals at 3 localities on Serifos island, and as 10-20 individuals at 2 localities

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on Kythnos (Kamari et al. 2009), but this is quite probably an underestimation of the real number. Moreover, it is almost certain that the species occurs at more localities on Kythnos island and it is quite probable that it occurs at more localities on Serifos island. The above counts correspond to c. 3170 individuals and this number is reported as minimum population number. Maximum population number (including 3 localities with unknown population and several possible localities where the species may well occur) cannot be estimated based on the available data since plant density varies widely. A rough and not reliable maximum population number can be estimated by assigning the maximum of 1200 individuals to the 3 unknown localities, and this value (c. 7000) individuals is reported as maximum population number. The values reported as minimum and maximum population values correspond to the sums of the respective minimum and maximum population values estimations of the two subspecies. Note on 2.5.5. In the short term period, the quality of the habitat has decreased due to the establishment of wind turbines and antennas (S Evvoia) and due to fire (Attiki). The species has suffered habitat loss in the last 50 years due to urbanisation (Athens) and due to the expansion of housing estates (area of Marathonas-Schoinias). Since the 19th century the species has lost even more localities in the area of Athens (Ymittos, Lykavittos, probably Parnitha).

Note on 2.6. For *F. obliqua* subsp. *Obliqua*, consumption of the plant peduncles by the insect *Liliocercis lili* and of the whole flowering stem by goats results in a loss of at least 35% of the reproductive units (ranging from 20 to 54%). For *F. obliqua* subsp. *Tuntasia*, consumption of the plant peduncles by the insect *Liliocercis lili* and of the whole flowering stem by goats results in a loss of at least 10% of the reproductive units (ranging from 3 to 45%). In both cases, most plants are consumed by the insect. It must be noted that the above losses were estimated during field work in the middle of the flowering period of the plant and more flowers may have been consumed after the field work.

Note on 2.9.2. The species is a long-lived perennial and each mature plant produces flowers every year (on nearly so), so the results of population degradation due to reduced sexual reproduction are not easy to estimate.

2.8.3 Trans-boundary assessment

2.9 Conclusions (assessment of conservation status at end of reporting period)

2.9.1 Range	assessment Inadequate (U1) qualifiers unknown (x)
2.9.2. Population	assessment Inadequate (U1) qualifiers unknown (x)
2.9.3. Habitat	assessment Inadequate (U1) qualifiers declining (-)
2.9.4. Future prospects	assessment Bad (U2) qualifiers unknown (x)
2.9.5 Overall assessment of Conservation Status	Bad (U2)
2.9.5 Overall trend in Conservation Status	unknown (x)

3. Natura 2000 coverage and conservation measures - Annex II species

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3.1 Population

3.1.1 Population Size	Unit	N/A	
	min		max
3.1.2 Method used	N/A		
3.1.3 Trend of population size within	N/A		

3.2 Conservation Measures