

Pyrrhula murina -- Godman, 1866

ANIMALIA -- CHORDATA -- AVES -- PASSERIFORMES -- FRINGILLIDAE

Common names: Azores Bullfinch;

European Red List Assessment

European Red List Status

EN -- Endangered, (IUCN version 3.1)

Assessment Information

Year published:	2015
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Assessor(s):	BirdLife International
Reviewer(s):	Symes, A.
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Assessment Rationale

European regional assessment: Endangered (EN)

EU27 regional assessment: Endangered (EN)

This species, endemic to Europe and the EU27, is listed as Endangered as it occurs at only one locality and has a very small range, within which the quality of habitat is thought to be decreasing due the spread of invasive plant species. However, should the population continue to be stable or increase thanks to successful conservation action and despite the spread of invasives, the species may warrant downlisting in the near future.

Occurrence

Countries/Territories of Occurrence

Native:

Portugal

Population

The European population is estimated at 230-760 pairs, which equates to 450-1,500 mature individuals. The entire population is found in the EU27. For details of national estimates, see [Supplementary PDF](#).

Trend

The population size is estimated to be stable. For details of national estimates, see [Supplementary PDF](#).

Habitats and Ecology

This species appears to depend on the native laurissilva forest during the winter and spring, although seeds from the exotic *Clethra arborea* may be a critical food in December and January (Ceia et al. 2011b). In the summer and autumn (May–November) its habitat use is more conservative, and birds utilise bare ground, vegetation less than 2 m high and also forest margins. Exotic vegetation such as plantations of Japanese red cedar *Cryptomeria japonica* within 200 m of native forest is also used during summer (Ceia et al. 2009). Birds breed from mid-June to late August, with a clutch size of three eggs (Teodósio et al. 2009). The nest is a cup of twigs, dry grass, plant fibres and moss, placed up to 5 m above ground in conifer, usually cedar (Clement and Christie 2013). The diet comprises of at least 37 different plants of which 13 are known to be important (Ramos 1995). The species appears entirely dependent on native forest for food during many months of the year (Ramos 1995, Ceia et al. 2011). This species is resident but movements of up to 5.8 km between native forest patches have been recorded as birds move to feed on ripening seeds (Ceia 2008).

Habitats & Altitude		Importance	Occurrence
Habitat (level 1 - level 2)			
Artificial/Terrestrial - Plantations		suitable	non-breeding
Forest - Subtropical/Tropical Dry		major	resident
Shrubland - Mediterranean-type Shrubby Vegetation		suitable	resident
Altitude	max. 700 m	Occasional altitudinal limits	

Threats

The historical decline and its extremely small range are believed to be a consequence of the widespread clearance of native forest for forestry plantations and agriculture. The spread of alien invasive plant species (especially *Hedychium gardnerianum*, *Clethra arborea* and *Pittosporum undulatum*), which have largely overrun the remaining patches of natural vegetation, suppress the natural fruit, seed and bud food supply to the species (G. Hilton in litt. 2006). The species exhibits a preference for non-invaded laurel forest habitat (Ceia et al. 2011), and is entirely absent from highly invaded areas (e.g. *P. undulatum* copses (Ceia et al. 2009)). Food shortages are potentially a problem throughout the year, but are most severe in late winter (Ceia et al. 2011b). Random environmental and demographic factors can affect such small populations and inbreeding may reduce reproductive output. Predation by introduced rats and mustelids may also be affecting nesting success (G. Hilton in litt. 2006, Ceia 2008, Teodósio et al. 2009).

Threats & Impacts					
Threat (level 1)	Threat (level 2)	Impact and Stresses			
Agriculture & aquaculture	Annual & perennial non-timber crops (scale unknown/unrecorded)	Timing	Scope	Severity	Impact
		Past, Unlikely to Return	Majority (50-90%)	Slow, Significant Declines	Past Impact
		Stresses			
Ecosystem conversion; Ecosystem degradation					
Agriculture & aquaculture	Wood & pulp plantations (scale unknown/unrecorded)	Timing	Scope	Severity	Impact
		Past, Unlikely to Return	Majority (50-90%)	Slow, Significant Declines	Past Impact
		Stresses			
Ecosystem conversion; Ecosystem degradation					
Biological resource use	Hunting & trapping terrestrial animals (intentional use - species is the target)	Timing	Scope	Severity	Impact
		Past, Unlikely to Return	Majority (50-90%)	Unknown	Past Impact
		Stresses			
Species mortality					
Invasive and other problematic species, genes & diseases	Domestic Cat (<i>Felis catus</i>)	Timing	Scope	Severity	Impact
		Ongoing	Majority (50-90%)	Unknown	Unknown
		Stresses			
Species mortality					
Invasive and other problematic species, genes & diseases	Japanese Cryptomeria (<i>Cryptomeria japonica</i>)	Timing	Scope	Severity	Impact
		Ongoing	Whole (>90%)	No decline	Medium Impact
		Stresses			
Ecosystem degradation					
Invasive and other problematic species, genes & diseases	Kahili Ginger (<i>Hedychium gardnerianum</i>)	Timing	Scope	Severity	Impact
		Ongoing	Whole (>90%)	No decline	Medium Impact
		Stresses			
Ecosystem degradation					
Invasive and other problematic species, genes & diseases	Lily of the Valley Tree (<i>Clethra arborea</i>)	Timing	Scope	Severity	Impact
		Ongoing	Whole (>90%)	No decline	Medium Impact
		Stresses			
Ecosystem degradation					
Invasive and other problematic species, genes & diseases	Mock Orange (<i>Pittosporum undulatum</i>)	Timing	Scope	Severity	Impact
		Ongoing	Whole (>90%)	No decline	Medium Impact
		Stresses			
Ecosystem degradation					
Invasive and other problematic species, genes & diseases	Unspecified rats (<i>Rattus</i> spp.)	Timing	Scope	Severity	Impact
		Ongoing	Majority (50-90%)	Unknown	Unknown
		Stresses			
Reduced reproductive success					

Conservation

Conservation Actions Underway

The species is protected under Portuguese law. Pico da Vara/Ribeira do Guilherme has been designated as a Special Protected Area, and this was enlarged to 6,067 ha in 2005 (LIFE Priolo Project 2007). Ecological research was conducted during 1991-1993 and habitat management began in 1995. A short booklet on the

species has been distributed to schools in São Miguel. A species action plan was published in 1996, and a second action plan was produced in 2009 (Teodósio et al. 2009). A number of actions have already been implemented as part of an ongoing EU LIFE-Nature project for the species, including the development of a management plan for the SPA, the clearance of invasive plant species and replanting with native species in over 70 ha in the core of the species's range and the planting of traditional fruit trees at lower altitudes (Teodósio 2005; Teodósio 2006, LIFE Priolo Project 2007). During 2005-2007, 156 individuals were captured and colour-ringed (Ceia 2008), and 'visual recapture' monitoring of these birds continues (SPEA 2009). As part of the BirdLife International Preventing Extinctions programme Species Guardian, SPEA (Sociedade Portuguesa para o Estudo das Aves), are implementing the following actions (SPEA 2009): habitat management including the creation of fruit tree orchards, clearance of alien invasive plant species and planting native species in the core area and buffer zones; raising public awareness through production of a website, CD-ROM, brochures and school kits, and through collaboration with the regional Ministry of Tourism on nature trails and tourist information; evaluating the economic benefits of the project and analysing the ecosystem services offered by the protected area; establishing an interactive Environmental Interpretation Centre with displays about the species, native laurel forest and the threats both face; and researching and monitoring population size, distribution and habitat quality. The first complete census took place in 2008, involving 48 volunteers surveying all suitable habitat in a single day (SPEA 2009). The São Miguel Natural Park, including Pico de Vara SPA, was classified in July 2008, and a management plan is to be developed by the regional government. In September 2006, recently fledged juveniles were seen at Salto do Cavalo (R. Ceia in litt. 2012).

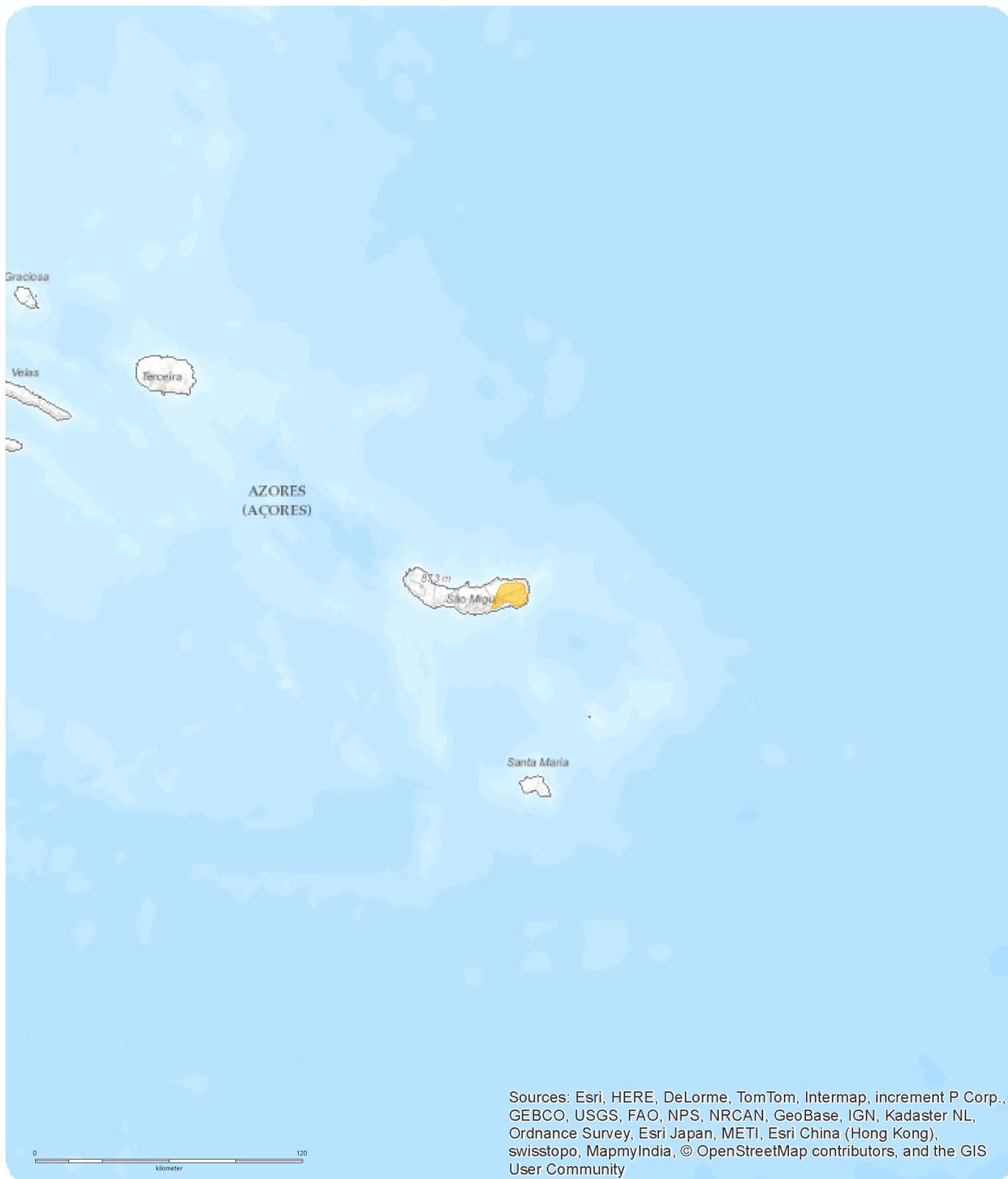
Conservation Actions Proposed

Continue and expand the population monitoring scheme. Investigate the possibility of breeding at Salto do Cavalo. Continue the removal and exclusion of exotic flora. Continue the replanting of native vegetation (particularly key food plants). Monitor the species's response to ongoing habitat restoration. Promote land use changes in the buffer areas around the SPA. Investigate the impact of rat predation on nesting success.

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European Regional Assessment



Pyrrhula murina

Range

■ Extant (resident)

Citation:
BirdLife International (2015)
European Red List of Birds



Map created 05/12/2015



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