Alectoris rufa, Red-legged Partridge

Assessment by: BirdLife International

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**Taxonomy**

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum</th>
<th>Class</th>
<th>Order</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animalia</td>
<td>Chordata</td>
<td>Aves</td>
<td>Galliformes</td>
<td>Phasianidae</td>
</tr>
</tbody>
</table>

**Scientific Name:** *Alectoris rufa* (Linnaeus, 1758)

**Regional Assessments:**
- Europe

**Common Name(s):**
- English: Red-legged Partridge

**Taxonomic Source(s):**

**Assessment Information**

**Red List Category & Criteria:** Near Threatened A2bcde+3bcde+4bcde ver 3.1

**Year Published:** 2020

**Date Assessed:** August 28, 2020

**Justification:**

Red-legged Partridge populations have been estimated to be declining at a rate of between 40-45% over the past 10 years, based on data reported by EU Member States to the European Commission under Article 12 of the EU Birds Directive. This rate of decline is matched by that reported under the Pan-European Common Bird Monitoring Scheme, which shows a steep decline since 2008. Threats from intensive agriculture, insecticides, hybridisation and ecological consequences for wild populations from contact with released birds are all documented to impact varying proportions of the wild global population. However, it is acknowledged that a significant and potentially more stable proportion of the population occurs on private land inaccessible to surveyors for these schemes in the species's core range in Spain.

As such, it is inferred that the rate of population reduction has approached the thresholds for listing as Vulnerable over the past ten years but is not, as yet, believed to have exceeded this threshold. The species is therefore assessed as Near Threatened, as nearly meeting the thresholds for Vulnerable under...
Criterion A2bcde +A3bcde + A4bcde.

It is important that there is greater collaboration between those monitoring the trend of the wild population and those involved in conserving sustainable populations to maintain the viability of hunting, to increase the precision of the trend estimate for future assessments.

Previously Published Red List Assessments
2018 – Least Concern (LC)
https://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22678711A131873456.en

2016 – Least Concern (LC)
https://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22678711A85911062.en

2012 – Least Concern (LC)
https://dx.doi.org/10.2305/IUCN.UK.2012-1.RLTS.T22678711A40086544.en

2009 – Least Concern (LC)

2008 – Least Concern (LC)

2004 – Least Concern (LC)

2000 – Unknown (LR/LC)

1994 – Unknown (LR/LC)

1988 – Unknown (LR/LC)

Geographic Range

Range Description:
Red-legged Partridge is a western European endemic, resident in Spain (including the Balearic Islands), Portugal, France and extending into NW Italy and Corsica. The majority occur in Spain, where the population is estimated at 4,900,000 pairs (BirdLife International in prep.). Portugal is estimated to hold between 500,000 and 1,000,000 pairs, France between 130,000 and 300,000 pairs and Italy between 1,000-1,500 pairs (BirdLife International in prep.). Declines are considered to be occurring throughout.

Country Occurrence:
Native, Extant (resident): Andorra; France; Germany; Italy; Portugal; Spain

Extant & Introduced (resident): Algeria; Greece; United Kingdom

Extant & Introduced (breeding): Ireland; New Zealand

Extant & Vagrant (non-breeding): Belgium; Luxembourg; Netherlands; Switzerland
Population

The breeding population, which is confined to Europe, is estimated at 4,975,000-6,850,000 pairs, which equates to 9,950,000-13,700,000 mature individuals (BirdLife International in prep.).

Trend Justification

The population is believed to have declined at a rate of 20-29% over ten years (the species’s generation length is 2.1 years; Bird et al. 2020), due to the effects of agricultural intensification, habitat conversion, over-hunting and the effects of high volume release of farm-reared birds, many of which proved to be hybrid A. chukar x A. rufa (Blanco-Aguiar et al. 2008, Barbanera et al. 2010). This is a lower rate of population reduction than the 40-45% in ten years reported by EU Member States to the European Commission under Article 12 of the EU Birds Directive (BirdLife International in prep.), or the 44% in ten years since 2008 reported under the Pan-European Common Bird Monitoring Scheme. There is a high likelihood that population monitoring in the core range of the species was incomplete, as this species is managed for hunting on large privately-owned estates that were inaccessible to the surveyors. Red-legged Partridge is the most economically important small-game species in central Spain, and 87% of hunting estates, holding a large proportion of the population, are privately owned (Díaz-Fernández et al. 2012).

However, these populations are not considered immune to the declines occurring throughout the rest of the range, and while there is scope for good management to maintain viable populations with a hunting surplus, it is suspected that these populations are also undergoing a moderate population reduction.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The species is found in open habitats ranging from Mediterranean to humid temperate zones but not in boreal, oceanic or arid zones (Tucker and Heath 1994, McGowan et al. 2013). It prefers lowland areas and avoids forest and wet areas if possible. It uses habitats with a wide variety of soils and land uses including dry hilly land with scattered bushes up to about 1,300 m (occasionally up to 2,000 m) in montane foothills, inhospitable dry terrain on lower mountain slopes and marginal cultivation, cropland, orchards or woodland (McGowan et al. 2013). Over most of its range it is associated with arable farming, using low-intensity cropping with a mixture of cultivated, fallow and uncultivated ground (Tucker and Heath 1994). Laying dates vary between countries; April to early May in Portugal, late April to May in England and May to mid-June in France. The nest is a scrape in the ground lined with a few pieces of vegetation. Clutch sizes average 11.2–12.7 eggs. It feeds on seeds, leaves and roots with grasses and legumes particularly important in winter. It will also eat insects. The species is mostly sedentary but may descend to lower ground during the winter (McGowan et al. 2013).

Systems: Terrestrial

Threats (see Appendix for additional information)

The disappearance of uncultivated land due to changes in agricultural practice has resulted in the loss of nesting cover and chick food and is directly linked to rapid declines in farmland bird populations in Spain (Traba and Morales 2019). In pastoral areas, pastures have been agriculturally improved and areas of low, herb-rich scrub converted to grassland and further habitat loss has occurred through the loss of arable farming from open hill areas, if livestock are removed (leading to encroachment of tall scrub and
forest) (Tucker and Heath 1994). Urbanization and agricultural expansion have also caused habitat fragmentation.

Over-hunting is likely to have played a role in the decline of the species: over 60% of estimated potential population may be shot each year (McGowan and Kirwan 2013). The species status as a gamebird of high socioeconomic value means that there is a considerable effort to maintain a huntable surplus, which is eminently achievable with good habitat management: there is some evidence that hunting mortality is compensatory to natural mortality (Soucher et al. 2018). One approach to achieving this has been to release captive-reared birds shortly prior to the hunting season, a practice that increased rapidly from the end of the 20th century (Casas et al. 2016) and upwards of 3-6 million farm-bred partridges are now released annually (Díaz-Fernández et al. 2012). Ensuring hunting bag limits are sustainable is dependent on an accurate assessment of abundance prior to the season, but it was found that in intensive estates where large numbers of birds are released, harvest depended only on release intensity (Díaz-Fernández et al. 2012). The presence of released birds can also increases estimates from field assessments of abundance, but as their survival rate is very low (<0.05 to the next spring: [Souchay et al. 2018]) this adjustment results in larger numbers of 'wild' individuals (birds that have bred) being taken (Casas et al. 2016).

The actual stock that is released is also a threat: 63% of farmed birds had mtDNA lineages from Chukar (A. chukar), but more alarmingly so did 45% of wild Red-legged Partridges (Blanco-Aguiar et al. 2008), potentially undermining the genetic distinctiveness of the species. Also illegal importations of A. graeca and A. chukar may also be causing problems through hybridization and competition (Tucker and Heath 1994, McGowan and Kirwan 2013).

**Conservation Actions** (see Appendix for additional information)

**Conservation Actions Underway**

EU Birds Directive Annex II and III. In 1993, the release of any Alectoris species other than A. rufa was discontinued in the U.K. (Tucker and Heath 1994). Most conservation actions implemented to increase densities are carried out by those engaged with hunting, most obviously through the retention of a large extent of land on which suitable habitat for the species is retained or enhanced, but also through generalist predator control and the provision of water sources and supplemental feeders (Arroyo 2012, Caro et al. 2014, Sánchez-García et al. 2017). These techniques can increase densities (Sánchez-García et al. 2017), although there appears to be a level of compensatory mortality or dispersal in the absence of hunting (Soucher et al. 2018).

**Conservation Actions Proposed**

The promotion of low-level agriculture in the lowlands and the maintenance of traditional farming practices in marginal hill areas should be put in place. Releases of other Alectoris species should be stopped in the rest of Europe. Sustainable hunting practices should be developed and adopted and promoted by hunting organisations and their members (Tucker and Heath 1994). Alternatives to large-scale releases of captive-bred Red-legged Partridge should be implemented where wild populations are present at expected densities, e.g. 2 pairs/km². Stock that is released must be genetically certified as appropriate to the region of release. Release of any Alectoris should be subject to greater restriction, especially where large numbers are involved and the frequency of releases is high. Reared birds for release should be marked with closed rings to improve the monitoring of hunting mortality of the wild population.

Collaborations between those managing hunting interests and those seeking improved conservation status should focus on shared ground in maintaining secure populations with sufficient surplus for...
hunting through developing regional management best practice and a centralised resource for monitoring wild populations.

Credits

Assessor(s): BirdLife International
Reviewer(s): Hermes, C.
Facilitator(s) and Compiler(s): Martin, R.
Partner(s) and Institution(s): BirdLife International & IUCN SSC Galliforme Specialist Group
Authority/Authorities: IUCN SSC Bird Red List Authority (BirdLife International)
Bibliography


Citation


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**External Resources**

For Supplementary Material, and for Images and External Links to Additional Information, please see the Red List website.
Appendix

Habitats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Season</th>
<th>Suitability</th>
<th>Major Importance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Shrubland - Temperate</td>
<td>Resident</td>
<td>Suitable</td>
<td>No</td>
</tr>
<tr>
<td>3. Shrubland - Mediterranean-type Shrubby Vegetation</td>
<td>Resident</td>
<td>Suitable</td>
<td>No</td>
</tr>
<tr>
<td>4. Grassland - Temperate</td>
<td>Resident</td>
<td>Suitable</td>
<td>No</td>
</tr>
<tr>
<td>14. Artificial/Terrestrial - Arable Land</td>
<td>Resident</td>
<td>Suitable</td>
<td>No</td>
</tr>
</tbody>
</table>

Use and Trade
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>End Use</th>
<th>Local</th>
<th>National</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport hunting/specimen collecting</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Food - human</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Pets/display animals, horticulture</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Threats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>Threat</th>
<th>Timing</th>
<th>Scope</th>
<th>Severity</th>
<th>Impact Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stresses:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Species Stresses -&gt; 2.3. Indirect species effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Agriculture &amp; aquaculture -&gt; 2.3. Livestock farming &amp; ranching -&gt; 2.3.3. Agro-industry grazing, ranching or farming</td>
<td>Ongoing</td>
<td>Minority (50%)</td>
<td>Slow, significant declines</td>
<td>Low impact: 5</td>
</tr>
<tr>
<td>Stresses:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
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<tr>
<td>2. Species Stresses -&gt; 2.3. Indirect species effects</td>
<td></td>
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</tr>
<tr>
<td>5. Biological resource use -&gt; 5.1. Hunting &amp; trapping terrestrial animals -&gt; 5.1.1. Intentional use (species is the target)</td>
<td>Ongoing</td>
<td>Majority (50-90%)</td>
<td>Causing/could cause fluctuations</td>
<td>Medium impact: 6</td>
</tr>
<tr>
<td>Stresses:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Species Stresses -&gt; 2.1. Species mortality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Invasive and other problematic species, genes &amp; diseases -&gt; 8.3. Introduced genetic material</td>
<td>Ongoing</td>
<td>Minority (50%)</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>Stresses:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Species Stresses -&gt; 2.3. Indirect species effects</td>
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</tbody>
</table>
Conservation Actions in Place
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action in Place

- In-place research and monitoring
  - Action Recovery Plan: No
  - Systematic monitoring scheme: Yes

In-place land/water protection

- Conservation sites identified: Yes, over entire range
- Occurs in at least one protected area: Yes
- Invasive species control or prevention: No

In-place species management

- Harvest management plan: No
- Successfully reintroduced or introduced benignly: No
- Subject to ex-situ conservation: No

In-place education

- Subject to recent education and awareness programmes: No
- Included in international legislation: Yes
- Subject to any international management / trade controls: No

Conservation Actions Needed
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action Needed

1. Land/water management -> 2. Site/area management
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.2. Invasive/problematic species control
2. Land/water management -> 2.3. Habitat & natural process restoration

Research Needed
(http://www.iucnredlist.org/technical-documents/classification-schemes)
**Research Needed**

1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.4. Harvest, use & livelihoods

## Additional Data Fields

### Distribution
- Continuing decline in area of occupancy (AOO): Unknown
- Extreme fluctuations in area of occupancy (AOO): No
- Estimated extent of occurrence (EOO) (km²): 1710000
- Continuing decline in extent of occurrence (EOO): Unknown
- Extreme fluctuations in extent of occurrence (EOO): No
- Continuing decline in number of locations: Unknown
- Extreme fluctuations in the number of locations: No
- Upper elevation limit (m): 2,000

### Population
- Number of mature individuals: 9,950,000-13,700,000
- Continuing decline of mature individuals: Yes
- Extreme fluctuations: No
- Population severely fragmented: No
- Continuing decline in subpopulations: Unknown
- Extreme fluctuations in subpopulations: No
- All individuals in one subpopulation: No

### Habitats and Ecology
- Continuing decline in area, extent and/or quality of habitat: Unknown
- Generation Length (years): 2.1
- Movement patterns: Not a Migrant
The IUCN Red List Partnership

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The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.