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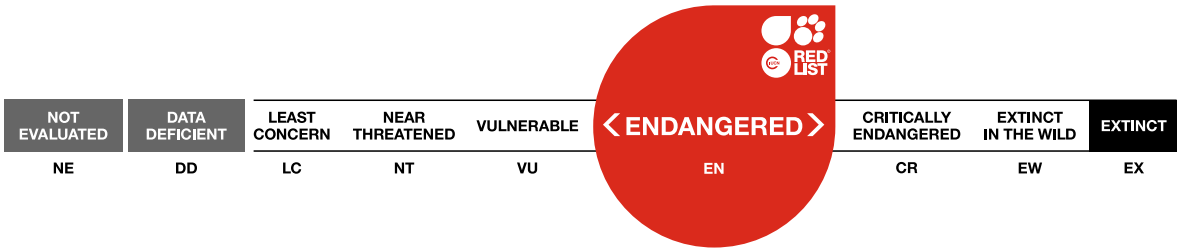
Lonchura oryzivora, Java Sparrow

Assessment by: BirdLife International



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Aves	Passeriformes	Estrildidae

Scientific Name: *Lonchura oryzivora* (Linnaeus, 1758)

Synonym(s):

- *Lonchura oryzivora* ssp. *oryzivora* — Dowsett and Forbes-Watson (1993)
- *Lonchura oryzivora* ssp. *oryzivora* — Christidis and Boles (1994)
- *Lonchura oryzivora* ssp. *oryzivora* — Christidis and Boles (2008)
- *Padda oryzivora* (Linnaeus, 1758)

Common Name(s):

- English: Java Sparrow
- French: Padda de Java, Spermète de Java

Taxonomic Source(s):

SACC. 2005 and updates. A classification of the bird species of South America. Available at: #http://www.museum.lsu.edu/~Remsen/SACCBaseline.htm#.

Christidis, L. and Boles, W.E. 2008. *Systematics and Taxonomy of Australian Birds*. CSIRO Publishing, Collingwood, Australia.

del Hoyo, J., Collar, N.J., Christie, D.A., Elliott, A., Fishpool, L.D.C., Boesman, P. and Kirwan, G.M. 2016. *HBW and BirdLife International Illustrated Checklist of the Birds of the World. Volume 2: Passerines*. Lynx Edicions and BirdLife International, Barcelona, Spain and Cambridge, UK.

Taxonomic Notes:

Lonchura oryzivora (del Hoyo and Collar 2016) was previously placed in the genus *Padda* following AOU (1998 & supplements); Christidis & Boles (2008); Dowsett & Forbes-Watson (1993); SACC (2005 & updates); Sibley & Monroe (1990, 1993).

Identification Information:

14-15 cm. Contrastingly patterned, open-country finch. Pearl-grey, becoming pinkish on belly and whitish towards vent, with a black head and conspicuous white cheeks. Black rump and tail. Massive pink bill. **Voice** Song begins with bell-like single notes, accelerating into a continuous trilling and clucking interspersed with high-pitched and deeper notes, sometimes ending with a drawn-out whistle. Also short, hard *tup*, chirrups and trills.

Assessment Information

Red List Category & Criteria: Endangered C2a(i) ver 3.1

Year Published: 2021

Date Assessed: August 31, 2020

Justification:

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The popularity of this finch as a cagebird has resulted in intense trapping activity, which is inferred to be causing drastic declines in the population. Unless stringent regulations are enforced, these declines are likely to continue. While the population size meets the threshold for Endangered, there is a lack of information on recent rates of population reduction, beyond the inferred continuing decline and suspicion that there are rapid declines occurring. As such the species is listed as Endangered.

Previously Published Red List Assessments

2018 – Endangered (EN)
https://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22719912A131809903.en

2017 – Vulnerable (VU)
https://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T22719912A117235076.en

2016 – Vulnerable (VU)
https://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22719912A94651401.en

2012 – Vulnerable (VU)
https://dx.doi.org/10.2305/IUCN.UK.2012-1.RLTS.T22719912A38461469.en

2008 – Vulnerable (VU)

2004 – Vulnerable (VU)

2000 – Vulnerable (VU)

1996 – Vulnerable (VU)

1994 – Vulnerable (VU)

1988 – Unknown (LR/LC)

Geographic Range

Range Description:

This species is a native endemic of the islands of Java, Bali, and probably Madura, **Indonesia**, although it has been widely introduced, with feral populations now established in many parts of the world. It was formerly widespread and abundant in its native range, but numbers crashed during the second half of the 20th Century (BirdLife International 2001). The majority of documented recent records within the native range derive from east Java and Bali, but it is now difficult to find, particularly on Java (N. Brickle *in litt*. 2012). A repeat survey of 64 former occupied sites located 109 individuals at 17 sites (Muchtar and Nurwatha 2001). This contraction of range appears to be continuing, with surveys in Yogyakarta in 2017-18 failing to find the species at 9 of 14 previously occupied sites (Rosyadi *et al.* 2019). In January 2020 the 'Big Month' community science event recorded the species in only 20 (0.25%) of the 7,935 tetrads (2 × 2 km squares) visited (T. Squires and S. Marsden *in litt.* 2020), despite a high level of participation and effort.
Feral populations (in Indonesia at least) have apparently declined precipitously. Information from elsewhere is insufficient to estimate its status as a feral species, and all conservation efforts should focus on its original native range.

Country Occurrence:

Native, Extant (resident): Indonesia

Extant & Introduced (resident): Brunei Darussalam; Christmas Island; Fiji; Malaysia; Mexico; Philippines; Puerto Rico; Sri Lanka; United States (Hawaiian Is.)

Population

The number of individuals has been estimated for about half of the global distribution, the central and eastern Java populations. These number 299-889 individuals, most likely not exceeding 1,000 individuals (Yuda 2008). Even though the potentially larger subpopulation on Bali is not included in this estimate, it is very likely that the global population does not exceed 1,500-3,750 individuals in total. The population size is therefore placed in the band of 1,000-2,499 mature individuals. Throughout its range, the population is highly fragmented.

Trend Justification

A rapid and on-going population decline is inferred on the basis of trapping pressure from the Asian songbird trade. The rate of the reduction is suspected to have been very rapid for a time between the 1960s and 1980s (BirdLife International 2001), and the species disappeared from many previously occupied sites during this period. Muchtar and Nurwatha (2001) revisited 64 known sites, finding the species still present at only 17. In Yogyarkarta province, surveys in 2017-18 of previously occupied sites revealed the loss of the species from 9/14 sites, several of which held the species at least as recently as 2005 (Rosyadi *et al.* 2019).

Yuda (2008) estimated that 38% of adults had been trapped in both 2004 and 2005 in central and eastern Java, a rate considered sufficient to drive rapid population reductions despite the species reasonably high fecundity. On Bali, rates of trapping are uncertain, as are the trends in trapping across the range. Many are bred in captivity and this makes estimating the scale and impact of trapping from the wild population highly uncertain. It is inferred that the current rates are sufficient to be driving a continuing population decline, but the rate of this decline is presently unknown.

Current Population Trend: Decreasing

Habitat and Ecology **(see Appendix for additional information)**

It is usually a lowland species, chiefly found below 500 m but occurring locally up to 1,500 m. It has been recorded in many habitats, including towns and villages (where it was formerly one of the most common species), cultivated land (particularly rice-growing areas), grassland, open woodland, tree savanna, beach forest and even mangroves. It is gregarious, especially outside the breeding season. Post-breeding flocks appear to make substantial short-distance movements in response to local food supplies: the loss of abundance may have resulted in considerable fragmentation of the remaining population however the extent to which this is the case is uncertain.

Systems: Terrestrial

Use and Trade

A popular species in the global pet bird trade. Intensive trapping from the wild due to demand for this trade is thought to have peaked initially in the 1960s and 1970s (BirdLife International 2001), however an estimated 38% of adults were being trapped annually in 2004 and 2005 in central and eastern Java (Yuda 2008). Large numbers are reared in captivity and the species has been domesticated in many stable plumage varieties. The global trade in the species is now thought to be primarily supplied through the captive-bred population, though there is also capture from feral wild-living populations introduced to various countries around the world. The current wild population within the native range is very small

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and is not believed to be capable of sustaining significant rates of harvest.
In addition the species may be trapped for food, though it is unlikely this practice continues to any significant level within the native range. The species was considered a pest of rice-fields when it was abundant and was routinely trapped.

Threats (see Appendix for additional information)

Trapping for the domestic and international cagebird trade has probably been occurring for centuries, peaking in the 1960s and 1970s, and is the main cause of the decline. In central and eastern Java, a survey suggested that up to 38% of adults were trapped each year in 2004-2005, which might rapidly drive these populations to extinction (Yuda 2008). However, there are no estimates of trapping rates over a longer period or for the population on Bali. Overall, the species is traded in large quantities, especially for the markets in Hong Kong, Thailand, Cambodia, Singapore and Malaysia (Gilbert *et al.* 2012, S. Chng *in litt*. 2016). Its flocking tendency, particularly at roost sites, renders it especially susceptible to mass trapping. Colonies found inside urban buildings (such as hotels and government buildings) may also be susceptible to damage due to renovations (Eaton *et al*. 2015). Ironically, even feral populations, originally introduced through trade, have subsequently been decimated for the same reason. Historically, it was regarded as a rice crop-pest, and consequently persecuted. Hunting for local consumption, possibly increased use of pesticides, and competition with the ecologically similar Tree Sparrow *Passer montanus,* are additional threats. The ongoing severe population decline has led to a very low genetic diversity, which renders the species vulnerable to stochastic events and adverse genetic effects (Yuda 2008). The species is prone to parasite infections, especially avian malaria (Yuda 2008).

Conservation Actions (see Appendix for additional information)

Conservation and Research Actions Underway

CITES Appendix II. An embargo was placed on the capture quota for Java and Bali in 1995. The species is bred widely in captivity but is heavily trapped, almost to extinction within the natural range. It occurs in only very few protected areas, with recent records from only four: Cikepuh Wildlife Reserve, Baluran and Meru Betiri National Parks on Java, and Bali Barat National Park on Bali. Nest box schemes have been established, particularly in temples such as Prambanan temple complex in Central Java, albeit lack of funding halts any sufficient progress (Eaton *et al*. 2015). **Conservation and Research Actions Proposed**

Investigate the relative importance of current threats (excessive trade, persecution, pesticides, competition). Decrease the level of trapping. Promote strict enforcement of trade restrictions in wild birds, and devise means of meeting market demands from captive breeding. Develop and initiate programmes to protect remaining populations.

Credits

Assessor(s):	BirdLife International
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Contributor(s):	Benstead, P., Brickle, N., Chng, S., Gilroy, J., Khwaja, N., Marsden, S., Squires, T., Symes, A., Taylor, J. & van Balen, B.S.
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Partner(s) and Institution(s): BirdLife International & IUCN SSC Asian Songbird Trade Specialist Group

Authority/Authorities: IUCN SSC Bird Red List Authority (BirdLife International)

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Rosyadi, I., Rudiyanto, A., Abdurrahman, H. S., & Pamuji, W. S. 2019. Conservation of Java Sparrow Lonchura oryzivora in Gn Sewu Geopark, Yogyakarta province, Java, Indonesia. *BirdingASIA* 32: 34–37.

Yuda, P. 2008. Conservation Genetics of the Java Sparrow (Padda oryzivora) and an analysis of its viability. School of Marine and Tropical Biology, James Cook University.

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)

Habitat	Season	Suitability	Major Importance?
2. Savanna -> 2.1. Savanna - Dry	Resident	Suitable	No
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	Resident	Suitable	No
4. Grassland -> 4.5. Grassland - Subtropical/Tropical Dry	Resident	Suitable	No
14. Artificial/Terrestrial -> 14.1. Artificial/Terrestrial - Arable Land	Resident	Suitable	No
14. Artificial/Terrestrial -> 14.4. Artificial/Terrestrial - Rural Gardens	Resident	Suitable	No
14. Artificial/Terrestrial -> 14.5. Artificial/Terrestrial - Urban Areas	Resident	Suitable	No

Use and Trade

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

End Use	Local	National	International
1. Food - human	Yes	Yes	No
13. Pets/display animals, horticulture	No	No	Yes
15. Sport hunting/specimen collecting	No	No	Yes

Threats

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

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.3. Persecution/control	Past, unlikely to return	Majority (50-90%)	Slow, significant declines	Past impact
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
8. Invasive and other problematic species, genes & diseases -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (Passer montanus)	Ongoing	Majority (50-90%)	Negligible declines	Low impact: 5
	Stresses:	2. Species Stresses -> 2.3. Indirect species effects		

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9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.4. Type Unknown/Unrecorded	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.3. Indirect species effects		

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: No
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
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: Yes
In-place education
Subject to recent education and awareness programmes: No
Included in international legislation: Yes
Subject to any international management / trade controls: Yes

Conservation Actions Needed

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

Conservation Action Needed
3. Species management -> 3.1. Species management -> 3.1.2. Trade management
3. Species management -> 3.2. Species recovery
3. Species management -> 3.4. Ex-situ conservation -> 3.4.1. Captive breeding/artificial propagation

Research Needed

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

Research Needed
1. Research -> 1.5. Threats

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): 148000
Continuing decline in extent of occurrence (EOO): Unknown
Extreme fluctuations in extent of occurrence (EOO): No
Number of Locations: 11-100
Continuing decline in number of locations: Yes
Extreme fluctuations in the number of locations: No
Lower elevation limit (m): 0
Upper elevation limit (m): 500
Population
Number of mature individuals: 1,000-2,499
Continuing decline of mature individuals: Yes
Extreme fluctuations: No
Population severely fragmented: Unknown
No. of subpopulations: 2-100
Continuing decline in subpopulations: Unknown
Extreme fluctuations in subpopulations: No
All individuals in one subpopulation: No
No. of individuals in largest subpopulation: 51-250
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Unknown
Generation Length (years): 2.95
Movement patterns: Not a Migrant

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The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

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