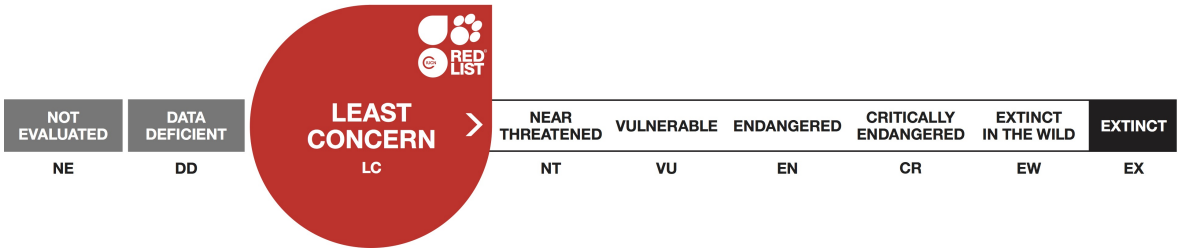
*The IUCN Red List of Threatened Species™*
ISSN 2307-8235 (online)
IUCN 2008: T39426A45204213

# *Galidia elegans,* Ring-tailed Vontsira

**Assessment by: Hawkins, F.**

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**Citation:** Hawkins, F. 2015. *Galidia elegans. The IUCN Red List of Threatened Species 2015*: e.T39426A45204213. http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T39426A45204213.en

# Taxonomy

| Kingdom | Phylum | Class | Order | Family |
|---|---|---|---|---|
| Animalia | Chordata | Mammalia | Carnivora | Eupleridae |

**Taxon Name:** *Galidia elegans* I. Geoffroy Saint-Hilaire, 1837

**Common Name(s):**

- English: Ring-tailed Vontsira, Malagasy Ring-tailed Mongoose, Ring-tailed Mongoose

**Taxonomic Notes:**

There are three described subspecies: an eastern race (*G. e. elegans*) found in the eastern rainforests; a western race (*G. e. occidentalis*) found in deciduous forests in the central western parts; and a northern race (*G. e. dambrensis*) in the north.

# Assessment Information

**Red List Category & Criteria:** Least Concern ver 3.1

**Year Published:** 2015

**Date Assessed:** March 2, 2015

**Justification:**

Ring-tailed Vontsira is listed as Least Concern. It is close to listing as Near Threatened because over the course of the next three generations (taken as 20 years), it is likely that the population will drop by more than than 15% (and possibly much more) mainly because of widespread hunting, persecution and the effects of introduced carnivores. The rate of hunting has increased significantly recently because of the breakdown of governance since the coup d'etat in 2009, leading to increased artisanal mining in forest areas, increased hunting, and increased opportunistic rosewood cutting throughout the species's range. If this deteriorates yet further, it is likely that a Near Threatened listing will be warranted.

**Previously Published Red List Assessments**

2008 – Least Concern (LC) – http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T39426A10237125.en

2000 – Vulnerable (VU)

1996 – Lower Risk/least concern (LR/lc)

# Geographic Range

**Range Description:**

Ring-tailed Vontsira is restricted to Madagascar. It occurs from Montagne d'Ambre in the north down the eastern side, including in littoral forests, and to 1,950 m asl, to Andohahela in the southeast. It is absent from most of the west, except in limestone massifs and adjacent forests around Namoroka and Bemaraha (Goodman 2012).


*http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T39426A45204213.en*

**Country Occurrence:**

**Native:** Madagascar


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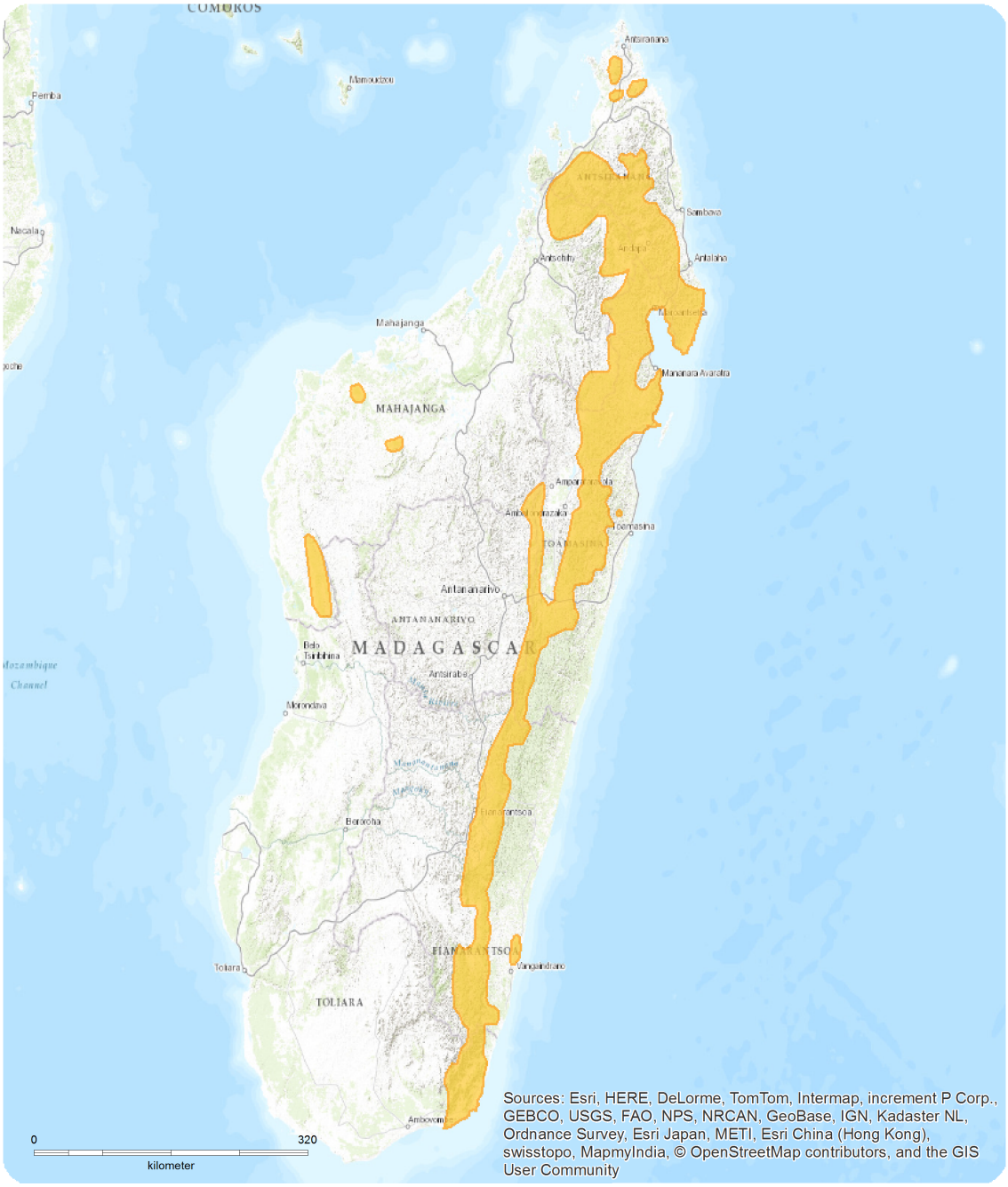
# Distribution Map



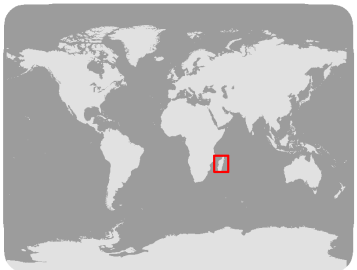

*Galidia elegans*

Range

Extant (resident)

Compiled by:
IUCN (International Union for Conservation of Nature)

NE DD LC LEAST CONCERN NT VU EN CR EW EX



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.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## Population

The available information suggests that Ring-tailed Vontsira is common. Gerber *et al*. (2012) recorded it in 100% of camera-traps in intact and logged forest around Ranomafana National Park, in 77% (± 10%) in fragments less than 2.5 km from intact forest, in 19% (± 12%) of forest matrix around these fragments, in 77% (±10%) of fragments more than 15 km from intact forest, and in 19% (± 12%) of forest matrix around these forest fragment sites. Similarly, in the Masoala-Makira landscape, Ring-tailed Vontsira was detected in all degraded, fragmented sites surveyed (Z. Farris pers. comm. 2014).

In northeast Madagascar, camera trap surveys (Farris *et al*. in review a, Z. Farris pers. comm. 2014) revealed a moderate probability of occupancy (defined as the probability that a site/forest is occupied by the species of interest while taking into account the variation in detectability of the species across the various sites) of 0.48 SE ± 0.08 for this carnivore across the Masoala-Makira landscape, although this estimate is likely to have been biased by survey efforts being highest in forest habitat located far from habitation, where Ring-tailed Vontsira is less likely to be detected.

Over a six-year period at one site, camera-trap success (number of captures divided by camera-trap nights multiplied by 100) changed from 1.37 in 2008 to 0.35 in 2013. At a different site, trap success was relatively consistent: 3.78 in 2011 to 3.62 in 2013 (Z. Farris pers. comm. 2014).

In both Ranomafana and Makira, Ring-tailed Vontsira presence was strongly negatively correlated with feral/wild cat occupancy, which is highest near villages (Farris and Kelly 2011, Gerber *et al*. 2012, Farris *et al*. in review a).

**Current Population Trend:** Decreasing

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

This largely terrestrial, diurnal species is present in tropical humid lowland and montane forest, and tropical dry deciduous forest in the west of its range. An agile climber, it has occassionally been seen in trees, and it is also an adept swimmer. It has been recorded preying on crayfish in freshwater (Dunham 1997). It is recorded from secondary forests, although only where immediately adjacent to primary forest, and can be found at the forest edge, close to areas of slash-and-burn cultivation.

Ring-tailed Vontsira was more active and had a higher probability of occupancy in degraded forest sites; however, occupancy diminished closer to villages. This negative association with villages may be a reflection of intense hunting pressure (Farris and Kelly 2011, Farris *et al*. 2012, Farris *et al*. in review a).

In one survey area, Ring-tailed Vontsira was primarily camera-trapped in duos. It was primarily diurnal, with some crepuscular and limited nocturnal activity perhaps related to seasonal changes (Farris *et al*. in review b).

This species is known to scavenge regularly in human refuse in primary forest camps. Animals typically spend the night in burrows in the forest. Although sometimes solitary, it is a social species usually found in pairs with up to three offspring (Dunham 1998). The gestation period is unclear, but it appears to be between 52 and 90 days, after which a single young is born (Goodman 2003). Sexual maturity is attained at about two years.


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**Systems:** Terrestrial

# Use and Trade

It is hunted for bushmeat (Golden *et al.* in press) and certain parts of the animal (e.g. the tail) are used for cultural purposes by some tribal groups (Goodman 2003).

## Threats (see Appendix for additional information)

Ring-tailed Vontsira remains widespread, occurs in a number of protected areas and even persists in forest fragments. As with most forest-dwelling animals in Madagascar, deforestation to cultivated land, hunting and negative effect of introduced carnivores are the most important threats.

Deforestation and forest disturbance across its range has increased significantly since 2009. R. Rajaonson (pers. comm. 2014) estimates that deforestation in eastern forest increased from 0.5% per annum in 2005-2010 to 0.94% per annum in 2010-2013. Allnut *et al*. (2009) estimated that in Masoala National Park, annual rates of deforestation in the studied area increased to 1.27% per annum in 2011. High levels of illegal settlement in protected areas, especially around the Bay of Antongil, are linked to artisanal mining (for quartz) and logging of rosewood, and hunting for food using dogs has increased greatly in these areas as a result. Some villages have seen increases in populations of between 200 and 300% (C. Golden pers. comm. 2014).

This species is persecuted for raiding local poultry (Golden 2005) and is killed by dogs accompanying hunters in the forest. Hunting and/or bushmeat consumption presents a serious concern for Ring-tailed Vontsira across the eastern rainforest. Golden *et al*. (in press) reported 21 Ring-tailed Vontsiras hunted in one year at Betampona Strict Nature Reserve. In the Makira landscape a total of 169 Ring-tailed Vontsiras were consumed within four villages (144 households) from 2005 to 2011 near the Makira Natural Park. Hunting rates were positively associated with Ring-tailed Vontsira occupancy, meaning hunters appear to be focusing their efforts in non-degraded forest where it is most abundant. In addition, Ring-tailed Vontsira consistently was the most purchased and most trapped small carnivore across the landscape, which is likely to reflect its overall apparent abundance and higher level of activity in and around anthropogenic areas (Farris *et al*. in review a).

Household interviews conducted by Madagasikara Voakajy (pers. comm. 2014) in the Moramanga region of eastern Madagascar in 2008-2009 suggested that 385 (24%) of 1,631 respondents interviewed in 129 villages had eaten Ring-tailed Vontsira in the preceding year. Certain parts of the animal (e.g. the tail) are used for cultural purposes by some tribal groups (Goodman 2003). Competition with the introduced Small Indian Civet *Viverricula indica* and feral cats and dogs may threaten this species in parts of its range. Ring-tailed Vontsira had very strong temporal activity overlap with dogs and moderate overlap with feral/wild cats, revealing the potential for increased interactions and competition (Farris *et al*. in review b).

Co-occurrence models demonstrate that the Vontsira does not occur at sites where Small Indian Civet activity is very high, and that Vontsira probability of occupancy is greatly decreased in the presence of Small Indian Civets (Farris *et al*. in review c).

## Conservation Actions (see Appendix for additional information)


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Ring-tailed Vontsira is present in many protected areas including Ranomafana, Mantadia, Marojejy, Montagne d'Ambre and Bemaraha National Parks, and Analamazaotra Special Reserve. Further field research on the taxonomic distinction of both the northern and western subspecies from the eastern nominate subspecies would be useful.

# Credits

**Assessor(s):** Hawkins, F.

**Reviewer(s):** Duckworth, J.W.

**Contributor(s):** Golden, C., Jenkins, R.K.B., Jones, J.P.G. & Farris, Z.J.


*http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T39426A45204213.en*

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## External Resources

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? |
|---|---|---|---|
| 1. Forest -> 1.5. Forest - Subtropical/Tropical Dry | - | Suitable | - |
| 1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland | - | Suitable | - |
| 1. Forest -> 1.9. Forest - Subtropical/Tropical Moist Montane | - | Suitable | - |
| 14. Artificial/Terrestrial -> 14.1. Artificial/Terrestrial - Arable Land | - | Marginal | - |
| 14. Artificial/Terrestrial -> 14.4. Artificial/Terrestrial - Rural Gardens | - | Marginal | - |

## Threats

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

| Threat | Timing | Scope | Severity | Impact Score |
|---|---|---|---|---|
| 2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.1. Shifting agriculture | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion<br>1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 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 | | |
| 8. Invasive & other problematic species & genes -> 8.1. Invasive non-native/alien species -> 8.1.1. Unspecified species | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion<br>2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.2. Species disturbance<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.2. Competition | | |
| 8. Invasive & other problematic species & genes -> 8.1. Invasive non-native/alien species -> 8.1.2. Named species (Felis catus) | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 2. Species Stresses -> 2.3. Indirect species effects -> 2.3.2. Competition | | |
| 8. Invasive & other problematic species & genes -> 8.1. Invasive non-native/alien species -> 8.1.2. Named species (Viverricula indica) | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 2. Species Stresses -> 2.3. Indirect species effects -> 2.3.2. Competition | | |

| | | | | |
|---|---|---|---|---|
| 8. Invasive & other problematic species & genes -> 8.1. Invasive non-native/alien species -> 8.1.2. Named species (Canis familiaris) | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.2. Competition | | |

# Conservation Actions in Place

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

| **Conservation Actions in Place** |
|---|
| In-Place Land/Water Protection and Management |
| Occur in at least one PA: Yes |

# Conservation Actions Needed

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

| **Conservation Actions Needed** |
|---|
| 2. Land/water management -> 2.1. Site/area management |

# Research Needed

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

| **Research Needed** |
|---|
| 1. Research -> 1.1. Taxonomy |
| 3. Monitoring -> 3.1. Population trends |

# Additional Data Fields

| **Distribution** |
|---|
| Lower elevation limit (m): 0 |
| Upper elevation limit (m): 1950 |
| **Population** |
| Continuing decline of mature individuals: Yes |
| Population severely fragmented: No |
| All individuals in one subpopulation: No |
| **Habitats and Ecology** |
| Generation Length (years): 6.7 |

| Habitats and Ecology |
| --- |
| Movement patterns: Not a Migrant |

# The IUCN Red List Partnership


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