Scotophilus viridis – Green House Bat

Assessment Rationale
Listed as Least Concern in view of its wide distribution (estimated extent of occurrence is 461,101 km²) within the assessment region, its presumed large population due to it being a common species, its occurrence in several protected areas (including Kruger National Park), its ability to utilise artificial habitats, and because there are no major identified threats that could cause widespread population decline. The conservation and protection of large trees used for roosting sites, such as Leadwood (Combretum imberbe) and Mopane (Colophospermum mopane) trees, is a recommended management practice for sustaining this species.

Regional population effects: Habitat between regions is contiguous and its range is likely more extensive in neighbouring countries that currently documented. Thus we infer rescue effects are possible.

Distribution
This species is widespread in sub-Saharan Africa, ranging from Senegal and The Gambia in West Africa, to northern Cameroon and Central African Republic, from there into Sudan and Ethiopia, and then south through much of East Africa and southeastern Africa, occurring as far south as eastern South Africa and Swaziland (Skinner & Chimimba 2005). Within the assessment region, they are restricted to eastern South Africa and Swaziland, extending from KwaZulu-Natal through Kruger National Park and into Mozambique. It is under-sampled and will probably be shown to be more widespread in the subtropical eastern and northern parts of the region (Monadjem et al. 2010b). The estimated extent of occurrence within the assessment region is 461,101 km².

Population
This is a common species (ACR 2015), although its population has not been studied in detail. It is not well represented in museums, with only 41 records examined in Monadjem et al. (2010b). Where it does occur, it is often more abundant than S. dinganii; for example, in Swaziland and Mozambique (A. Monadjem unpubl. data).

Current population trend: Stable

Continuing decline in mature individuals: No

Number of mature individuals in population: Unknown

Number of mature individuals in largest subpopulation: Unknown

Number of subpopulations: Unknown

Severely fragmented: No

Habitats and Ecology
The Green House Bat is considered a savannah woodland species and has been recorded from both dry and moist wooded and bushveld habitats, typically in areas with a


The Green House Bat is the smallest yellow house bat to occur within the subregion (Skinner & Chimimba 2005).
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Figure 1. Distribution records for Green House Bat (Scotophilus viridis) within the assessment region

mean annual rainfall of > 500 mm (Skinner & Chimimba 2005). It is restricted to low-lying, hot savannahs and avoids open habitats such as grasslands (Monadjem et al. 2010b), possibly due to the absence of roosting sites. In the assessment region, the species is recorded from the Upper Karoo, Dry Highveld Grassland, Central Bushveld, Mopane Bioregion, Lowveld, Indian Ocean Coastal Belt, Drakensberg Grassland, Sub-Escarpment Savanna and Sub-Escarpment Grassland.

This is not a well-studied species, with very little known about their habits. It roosts in small colonies in a variety of shelters (Monadjem et al. 2010a, 2010b), such as buildings and hollow trees (Cotterill & Giddings 1987). Roofs of houses are often selected as roosting sites (Jacobs et al. 2007; Jacobs & Barclay 2009). In Kruger National Park, it was found to favour hollow Mopane Trees found along the sides and tops of ridges (Fenton et al. 1985). In Swaziland, they were recorded roosting predominantly in Leadwood and Knob Thorn (Acacia nigrescens) trees (Monadjem et al. 2010a). Like other house bats, the Green House Bat is insectivorous (Skinner & Chimimba 2005), existing on a diet of mainly Coleoptera, Lepidoptera and Hemiptera (Monadjem et al. 2010b).

Ecosystem and cultural services: As this species is insectivorous, it may contribute to controlling insect populations (Boyles et al. 2011; Kunz et al. 2011). Bats often prey on the insect species which destroy crops (Boyles et al. 2011; Kunz et al. 2011), and thus sustaining a healthy population of insectivorous bats can decrease the need for pesticides.

Use and Trade

There is no evidence to suggest that the species is traded or utilised in any form.

Threats

There are no major threats to this species. However, the loss of large trees used for roosting from fuelwood harvesting and agricultural expansion may result in local declines. Key roosting trees, such as C. imberbe, are slow-growing and vulnerable to be over-utilised for fuelwood (sensu Wessels et al. 2013).

Current habitat trend: Stable. The Savannah Biome is well protected within the assessment region (Driver et al. 2012). However, recent land-cover analysis reveals that natural habitat in KwaZulu-Natal is being lost at a rate of 1.2% per annum since 1994 primarily due to agricultural expansion (Jewitt et al. 2015); and 20% of forest and

Table 1. Countries of occurrence within southern Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>Presence</th>
<th>Origin</th>
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<tbody>
<tr>
<td>Botswana</td>
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<tr>
<td>Lesotho</td>
<td>Absent</td>
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<tr>
<td>Mozambique</td>
<td>Extant</td>
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<td>Namibia</td>
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<tr>
<td>South Africa</td>
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<td>Native</td>
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<tr>
<td>Swaziland</td>
<td>Possibly extant</td>
<td>Native</td>
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<tr>
<td>Zimbabwe</td>
<td>Extant</td>
<td>Native</td>
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</tbody>
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Table 1. Countries of occurrence within southern Africa
woodland cover was lost from 1990 to 2006 in South Africa's Soutpansberg Mountain region due to logging, residential expansion and pine/eucalyptus plantations (Munyati & Kabanda 2009). Similar threats could be occurring within the range of the species.

### Conservation

In the assessment region, the species is recorded from several protected areas, including Kruger National Park, Hans Merensky Nature Reserve, Ndumo Game Reserve, Tembe Elephant Park, iSimangaliso Wetland Park, Pongolapoort Nature Reserve, Hluhluwe-iMfolozi Park and Mlawula Nature Reserve in Swaziland. No direct conservation interventions are necessary for this species, but it will benefit from protection of key roost sites, particularly large trees such as Combretum imberbe, Colophospermum mopane and Acacia nigrescens (Fenton et al. 1985; Monadjem et al. 2010a). The conservation of such roosting trees may be critical to the continued persistence of cavity-nesting insectivorous bats in African savannahs (Monadjem et al. 2010a).

### Recommendations for land managers and practitioners:

- The conservation and protection of large trees used for roosting sites is a recommended management practice for this species.
- Reduce pesticide use in agricultural landscapes.

### Research priorities:

- Surveys to determine population size, trend and distribution of additional colonies.
- Taxonomic resolutions through sampling from a broader geographical area (including southern, eastern, central and West Africa) using both molecular and morphological datasets (Monadjem et al. 2010b).

### Encouraged citizen actions:

- Limit disturbance to roost sites.
- Citizens can assist the conservation of the species by reporting sightings on virtual museum platforms (for example, iSpot and MammalMAP), and therefore contribute to an understanding of the species distribution.

### References


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Details of the methods used to make this assessment can be found in *Mammal Red List 2016: Introduction and Methodology.*