



SPECIES CONSERVATION ASSESSMENT & ACTION PLAN

Seychelles (bare-legged) scops owl

Syer

Otus insularis

SUMMARY CONSERVATION ASSESSMENT & ACTION PLAN GOAL AND OBJECTIVE	
IUCN Threat Status	<i>Critical D1</i>
Range	<i>21-39km²</i>
Population estimate	<i>180-380</i>
Population trend	<i>Unknown</i>
Altitude	<i>250-600m</i>
Habitats	<i>Upland forest</i>
Threats	<i>Habitat loss</i>
GOAL	<i>To maintain and enhance current range and population</i>
OBJECTIVE	<i>Increase and improve protection of habitats and reduce data deficiencies</i>

Authorship

Dave Currie and Rodney Fanchette prepared this Action Plan with the assistance of Mike Hill and James Millett.

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1. INTRODUCTION

The scops owl is currently only known from the upland forests (above c.200m) on the 152 km² island of Mahé¹⁻⁴. First described at the end of the 19th century⁵, it was presumed extinct by the middle of the 20th century⁶, only to be re-discovered in 1960⁷. It is currently, listed as critically endangered⁸ with a recent population estimate of 80-160 territories⁴. The owl's distinctive repeated *waugh* call is the origin of its Creole name Syer, meaning the sawyer or cutter of wood. Due to its nocturnal habitats and difficult mountainous terrain there are few quantitative data on its breeding and feeding ecology. Limited data suggests that diet consists of insects and lizards^{9,10}. The first nest was found in 1999 and contained a single egg¹¹. Copulations and solitary fledglings have been observed April-June and October-November indicating that individuals may breed twice a year¹. A monitoring program was set up in 1996/97⁴, and a two-year project studying its ecology and habitat requirements was conducted in 1999-2001¹². Outputs from this project are expected 2001-2002.

Status and level of biological knowledge (Not known, 1-poor, 2-adequate, 3-good)		
Population	Size Trend, numbers Trend, range	2 Not known Not known
Knowledge of	Status Trends Conservation Requirements	2 Not known 1

2. FAMILY & GENUS

Family: Strigidae, Genus: Otus

There are 68 currently recognised *Otus* species¹³. Twenty-seven are documented as having restricted ranges, the majority of which are island endemics. Nine *Otus* species are globally threatened, seven of which are restricted to montaine forest¹⁴. The genus is widespread, occurring in both Old and New World and across a variety of habitats¹³. Few intensive ecological studies have been conducted on other threatened *Otus* species, however, the principal threat to many appears to be habitat loss⁸.

3. IDENTIFICATION

A small owl (20-22cm in length¹⁵; c.130g¹⁶) with unfeathered tarsi and small ear tufts. The latter are usually only seen raised while roosting¹. There is only one colour morph: grey-brown with rufous on under-parts and facial disc, with large yellow eyes⁵. Young fledglings have fluffy appearance, a barred chest, and yellow eyes¹. The bird is rarely seen, but may be recognised by its distinctive call.

Voice - Characteristic rhythmically repeated low *waugh* call (300-1500Hz¹⁷). Typically heard calling soon after dusk and just before dawn^{1,4}. Less common calls include a variety of quacking and gurgling calls, usually heard when the pair duet. Copulations, heard after intense bouts of duetting, are characterised by a high pitched whistling call³. Fledglings produce a repeated *whsstt* call^{1,3}.

4. RANGE AND POPULATION

Currently only known from Mahé. Reports from Praslin and Félicité¹⁸, and Silhouette have not been confirmed by recent surveys^{3,19}. An early population estimate suggested c.20 individuals concentrated around the central highlands of Mahé²⁰. However, the owl was almost certainly under-recorded until the first recordings of calls were made and subsequently used in censusing. Systematic and more extensive research using playback in the 1970s around the Sans Souci Road area resulted in a minimum population estimate of at least 75-80 pairs². Additional work in 1996/97 showed a widespread distribution mid-north Mahé^{4,21}. Current population estimate of 80-160 territories^{3,4}, within a supposed 21-39km² range⁸. A random point survey providing the first baseline data on its distribution on Mahé was conducted in 2000-2001²².

Its current listing (critically endangered⁸) on the basis of both small population and range appears to be conservative, and it would be more correct to list the Seychelles scops owl (under IUCN criteria⁸) as endangered.

SIZE AND LOCATION OF POPULATIONS		
Location	Estimated population size (territorial pairs)	Year of most recent estimate
Mahé	90-180	1996/97 ⁴

5. ECOLOGY

Nocturnal, inhabiting upland forests, in particular those in valleys above c.200m often associated with boulder fields. The bird is found in both secondary forest dominated by introduced broad-leaved tree species (e.g. *Cinnamomum verum* and *Paraserianthes falcataria*) and relics of mature primary forest at higher altitudes (e.g. *Dillenia ferruginea*, *Northea hornei*) and endemic palms (e.g. *Phoenicophorium borsigianum*, *Nephrosperma vanhoutteanum* and *Verschaffeltia splendida*). No confirmed records below 100 m. Observed throughout vegetation strata from ground to high canopy. Recent evidence indicates that the owl is predominantly insectivorous²³, although small reptiles and amphibians may also be taken. It appears to be a tree cavity nester. One egg is laid¹¹, incubation lasts about one month, the fledging period lasts four to six weeks, and sex roles during breeding appear similar to that in other owl species²⁴. Individuals can breed throughout the year, but there appears to be two distinct peaks in breeding activity which correspond with the change in seasons (March-May) and (September– November)^{1,24}.

6. SOCIO-ECONOMIC CONTEXT

Since human settlement of Seychelles in 1770s, the scops owl almost certainly experienced a contraction in its range due to the large-scale forest clearing in the late 19th and early 20th century. As a result much of its current distribution is dominated by mature secondary forest. The cessation of cinnamon and other forest product harvesting in the mid 20th century, and the subsequent maturation of secondary forest reduced the immediate threat of habitat loss, and may in turn have provided an opportunity to recover some of its previous range.

The mountainous terrain means that, with the exception of one or two areas, there is little direct interaction with humans. Forestry workers were probably familiar with its call, hence its name. However, the suggestion that it was regarded as a bird of bad luck²⁵ is probably false and may result from confusion with the Seychelles Kestrel *Falco araea*. Anecdotal evidence suggests widespread confusion between this species and the barn owl *Tyto alba affinis* (introduced to Seychelles in early 1950s to control rats¹⁸). The latter is now regarded as a pest species and carries a 30 SR bounty. Confusion between these two owl species has led to several scops owls being killed in error²⁶.

A small number of eco-tourists (particularly those on birding tours) are interested in seeing the owl, and several individuals on Mahé offer the opportunity to see the owl using tape playback to attract birds. Currently this is done on an *ad hoc* and uncontrolled basis.

7. THREATS

Since the cessation of extensive forest clearing and harvesting activities, there are currently no immediate major threats to its habitat: the majority of its range is included in the Morne Seychellois National Park and a proposed second protected area south of the MSNP (c.1000 ha)^{4,22}. However, territories at lower altitudes on the periphery of, or outside, the National Park are under threat from development. Forestry practices, ecotourism and development, for example trail management and proposed control of *Paraserianthes falcataria*, as well as excessive use of tape play back within National Park may also cause localised disturbance for a few pairs²⁴. The impact of introduced potential mammalian and avian predators on nest and adult survival is unknown, although nest depredation by *Rattus rattus* is known to occur¹¹. Possible confusion with the introduced Barn owl *Tyto alba affinis* has resulted in a few scops owl being killed in error.

THREAT TYPE	DESCRIPTION	IMPORTANCE (Critical, High, Medium Low/Immediate or Potential)
Direct threats	Nest/adult de-predation by introduced alien mammalian and avian species	H/P
	Human interference and disturbance: excessive noise, confusion with barn owl	L/I
	Nest site competition with introduced Indian mynah	M/P
	Excessive use of playback	L/P
Indirect threats	Habitat loss	H/P

8. CONSERVATION ACTION TO DATE

Policy & Legislative

The owl is listed in CITES Appendix II to which Seychelles is a signatory, while within the Seychelles it is protected under the Wild Animals and Bird Protection Act, Wild Bird Protection Act, Section 2.

Site Safeguard

Approximately 60% of the owl's range is within the Morne Seychellois National Park (and therefore its habitat is protected under the National Parks and Nature Conservancy Act)²².

The proposed creation of a second protected area (c.1000 ha) south of the national park including Varigault and Grand Bois would encompass the majority of its current range (c.80% of territories)²².

Species Management & Protection

The ecological requirements of the owl have remained poorly studied until recently. As a result, with the exception of a monitoring program established in 1996/97⁴, no specific conservation actions have been taken to protect it.

Advocacy

The following conservation, monitoring and research activities have been recommended⁴:

- (i) Protection of remaining habitat outside the Morne Seychellois National Park;
- (ii) Extension of Morne Seychellois National Park;
- (iii) Produce management plan for the Morne Seychellois National Park;
- (iv) Control tape-luring activities; and
- (v) Monitoring and ecological research.

GEF/World bank two-year project 1999-2001¹² implemented the ecological research. A management plan is currently being prepared for the National Park. The proposed extension to the national park is due to be written into law in the near future. Translocation of individuals to Silhouette has also been suggested³, although the population is likely to be relatively small and there will be difficulties in reliably monitoring adult survivorship and breeding success.

Research & Monitoring

1961	Re-discovered ⁷
1976	First recordings of calls and ecological research ^{1,2}

1996-97	Monitoring program set up ⁴
1999-2001	Project investigating habitat requirements, breeding and feeding ecology, and current distribution ¹²
1999	First nest found ¹¹
2000	Island wide random point survey on Mahé ²²

Education & Awareness

The owl was first photographed in 1972²⁷. It subsequently appeared on two sets of stamps (1972 and 1985)²⁸. Its profile has increased markedly since 1999 with the start of the GEF/World bank project¹², and there have been numerous mentions in the local and international media (television, radio, newspapers, and bird and scientific journals)²⁹⁻³³. Local interest has increased and MoET conducted a very popular owl prowl to show Seychellois nationals the owl during Seychelles Environment Week (June 2000). Similar events are planned in the future.

Co-operation & Participation

To date, there has been no systematic work using participatory techniques to assist with the conservation of the scops owl. Improved co-operation between Forestry, National Parks, Seychelles Marketing Board (who manage tea plantations in the National Park) and conservation bodies is required to ensure work in the National Park does not disturb important sites.

Resources

The monitoring regime set up in 1996/97⁴ was funded by EU and BirdLife International, while the recent two year project examining the ecology of the scops owl¹² was funded by the GEF/World Bank.

9. ACTION PLAN REVIEW

This Action Plan should be reviewed every 5 years.

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10. ACKNOWLEDGEMENTS

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SEYCHELLES SCOPS OWL ACTION PLAN

OVERALL GOAL

TO MAINTAIN AND ENHANCE CURRENT RANGE AND POPULATION

OBJECTIVE

Increase and improve protection of habitats and reduce data deficiencies by 2006

ACTIVITY	TIMETABLE	INDICATORS	LEAD RESP.	PRIORITY (CHML)
POLICY & LEGISLATIVE				
Increase proportion of range under protection	2001-6	Gazetted	MoET	Critical
Code of conduct and licensing for use of playback	2006	Controls implemented	MoET	Medium
SITE SAFEGUARD				
Management plan for MSNP to include prescriptions for scops owl conservation	2001-3	Plan produced	MoET	High
Management plan for new protected area to include prescriptions for scops owl conservation	2001-6	Plan written	MoET	Critical
Control and manage cinnamon coppicing in range	2003-6	Control operational	MoET	High
Reduce negative anthropogenic impacts in MSNP	2001-6	Development limited	MoET	High
SPECIES MANAGEMENT & PROTECTION				
Design conservation programme based on research findings	2002	Programme stakeholder agreed	BLS MoET	High
Implement conservation programme	2003-6	Programme objectives agreed	MoET	High
ADVOCACY				
RESOURCES				
Seek funding for on going conservation/restoration project	on going	Funding sourced	MoET BLS	High
RESEARCH & MONITORING				
Periodic and standardized survey of territories to determine occupancy and distribution	2006	Reports produced	MoET BLS	High
Consideration given to developing methods to investigate breeding success and adult survivorship	2003-6	Project implemented	MoET BLS	High
Re-assess presence on Silhouette and Praslin	2001-2	Reports produced	BLS	Medium

EDUCATION & AWARENESS				
Information regarding distinction between two owl species – TV and radio	2001-06	Programmes broadcast	BLS	Medium
Owl prowls for nationals – environment week	2001-06	Carried out	MoET	Medium
COOPERATION & PARTICIPATION				
Joint approach between relevant departments in MoET and between other stakeholders regarding activities and development in MSNP.	2001-6	Meetings arranged	MoET	High
Cooperation between agencies to agree on overlap between protected area system and scops owl habitat	2002	Maps produced and habitats incorporated	MoET BLS	High