Barn Swallow *Hirundo rustica* ringing in Bloemfontein, South Africa

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SUMMARY

A total of 27 ringing sessions at a Barn Swallow *Hirundo rustica* roost in trees in a suburban garden in Bloemfontein, South Africa, during the summers of 1998, 1999 and 2000 have resulted in the ringing of 7408 adult and first year swallows. This effort has produced 23 controls of foreign-ringed birds: from the United Kingdom (15), Norway (5), Denmark (1), Finland (1) and Italy (1). South African-ringed birds have been controlled/recovered in the United Kingdom (6) and in Sweden (1). At least 11 birds, ringed at the Bloemfontein roost, have been controlled at the same site a year later. Same-season controls indicate that some birds have presumably used the roost for at least 56 days. The presence of this roost, and the spectacle of an estimated 40 000–50 000 swallows gathering each evening, has provided an opportunity to increase an awareness of birds and particularly of the migratory Barn Swallow. Numerous articles have been written for local newspapers and an overseas magazine, and inserts have been aired on national television news. The latter, in particular, has had a marked influence on the number of visitors to the area of the roost site.

INTRODUCTION

Barn Swallows *Hirundo rustica* were first noticed roosting in trees in a suburban garden in Bloemfontein, Free State Province, South Africa in January 1997. An estimated 2000–3000 swallows gathered to roost in three or four trees (three to five metres tall) on three consecutive evenings.

In early February 1998, a large, dispersed flock of swallows, numbering an estimated 10 000 birds, was discovered roosting in the same area, a few kilometres from the site mentioned above. The roost was again in trees, in a single garden in the suburb of Universitas, Bloemfontein, adjacent to a shopping centre and bordering on a busy street. According to the owners of the property, the swallows had used this site as a roost for the previous four summers, arriving in early January and departing in mid-March. Numbers of birds using the roost from mid-February to mid-March were estimated at 40 000–50 000 swallows.

Staff from the Ornithology Department, National Museum, Bloemfontein, together with qualified ringers from the Free State Bird Club decided to initiate a swallow-ringing project at this roost.

Interest in this project by a group of Norwegian swallow ringers, led by Stein Byrkjeland, who had visited the Bloemfontein area in December 1997 (when the location of the roost was as yet unknown), and the control of two Norwegian-ringed swallows in the 1999 season, resulted in the sponsorship by this group of rings used in the 1999 and 2000 seasons. Without this generous support, the project would not have achieved the successes that it has had so far.

STUDY SITE AND METHODS

Roost site

Most of the swallows roost in four or five of the larger trees within the garden. Two and sometimes three other trees on the sidewalk adjacent to the garden are also used. All trees are three to five metres tall and have a well-foliaged, dense canopy until late March, when the deciduous trees in the garden start to drop their leaves. Trees preferred for roosting all have a comparatively dense array of small branches or twigs, providing suitable perches for the swallows.

Netting the birds

A 'flag-hoisting' technique has been devised to raise two sets of 'stacked' (one on top of the other) mistnets (a 12 m and a 9 m set) to a height of 8 m above the ground. Details of this technique and equipment used will be published elsewhere, but can also be viewed at http://nasmus.co.za/ornithol/swallow1.html. The nets are easily erected on areas of open lawn, and the 'flag-hoisting' technique enables the two sets of nets to be raised and lowered easily and quickly; this is essential considering that the timing particularly of raising the nets is important in ensuring a good catch of swallows.

Swallows are trapped as they descend to the roost shortly after sunset. Once the roosting birds have settled, the nets are carefully lowered and cleared one shelf at a time. After removal from the nets, the swallows are placed in holding boxes, with each compartment comfortably holding about 50 birds.

Processing of trapped birds

Once all the swallows have been removed from the nets, these are furled, and the holding boxes are moved to the ringing station nearby, where the birds are processed. If possible, birds are aged and sexed, and, depending on the numbers of birds caught, a certain proportion (usually every 5th bird) have their primary moult scores noted and are weighed. Birds are released immediately after ringing.

RESULTS AND DISCUSSION

Numbers of swallows ringed

Details of numbers of birds ringed, together with proportions of the different age classes, and the number of ringing sessions, are shown in Table 1. A total of 3062 birds have been ringed so far during the 2000 season (data included up to 1 March 2000).

Although the distinction between adult and first year birds on plumage features becomes more difficult as the season progresses (mid- to late- March), almost equal numbers of adults and first-year birds were caught during the 1999 season. The data for the 2000 season are quite different, however. This can be explained by the fact that more ringing sessions were carried out earlier in the 2000 season than in 1999; at this time (late January/early February) first-year birds comprise the vast majority of the catch.

Foreign controls caught at the Universitas roost

A total of 23 foreign-ringed swallows have

Table 1. Barn Swallows ringed at the Universitas, Bloemfontein, roost (1y: first-year birds).

Year	Total	adults	1y	% adults	% 1y	Sessions
1998	411	?	?	?	?	3
1999	3935	1952	1983	49.6	50.4	15
2000	3062	475	2587	15.5	84.5	9

been controlled during the last three seasons (1998, 1999 and 2000 to date) (Table 2).

British-ringed birds predominate, although a number of Scandinavian-ringed swallows have also been controlled.

Table 2. Foreign controls at the Universitas, Bloemfontein, roost.

Country	Year			Total
	1998	1999	2000	
UK	1	8	6	15
Norway		2	3	5
Italy		1		1
Denmark			1	1
Finland			1	1

Table 3. Controls/recoveries of 'Universitas' swallows elsewhere.

Country	Year		Total
	1998	1999	
UK	2?	4	6?
Sweden		1	1

Table 4. SAFRING controls at the Universitas, Bloemfontein, roost.

Year	n	Date ringed	Locality
1999	1	12/1997	Vredefort/Parys, FS
	2	02/1998	Universitas, Bfn, FS
2000	9	02–03/1999	Universitas, Bfn, FS

Table 5. Same-season controls, Universitas, Bloemfontein.

Year	n	range (time interval)	n > 20 days
1999	47	1–56 days	13
2000	18	1– ? days	?

Controls/recoveries of 'Universitas' swallows elsewhere

At least seven swallows from the 1998 and 1999 seasons have been recovered or controlled in parts of Europe (Table 3). Six of these birds have been reported from the UK

SAFRING swallows controlled at the Universitas, Bloemfontein, roost

A total of 12 birds, ringed in South Africa, have been controlled at the Universitas roost (Table 4). Eleven of these were ringed at the Universitas roost during either the 1998 or 1999 season, while a single bird, controlled during the 1999 season, was ringed in the Vredefort/Parys area, north-western Free State Province, South Africa, by Kobie Raijmakers in December 1997.

Same-season controls at the Universitas, Bloemfontein, roost

A total of 47 swallows, ringed at the roost during the 1999 season, were controlled at the same site before the end of the same season (Table 5). The longest time interval between initial and last capture was 56 days. Eighteen 'same-season' swallows have already been controlled during the 2000 season.

Media and other publicity

The spectacle of many thousands of swallows gathering over the Universitas roost can and should be used to create a greater awareness not only of birds, but also of migration and the conservation of birds.

A number of articles have appeared in local newspapers during the 1999 and 2000 'swallow seasons'. There have also been two inserts during national television evening news broadcasts (SABC TV News and e-TV News). The first of these television inserts was on the evening of 3 March 1999; the effect on the numbers of visitors to the area of the swallow roost was dramatic (Fig. 1).

Details of the swallow-ringing project have also been published in *Vår Fuglefauna*,

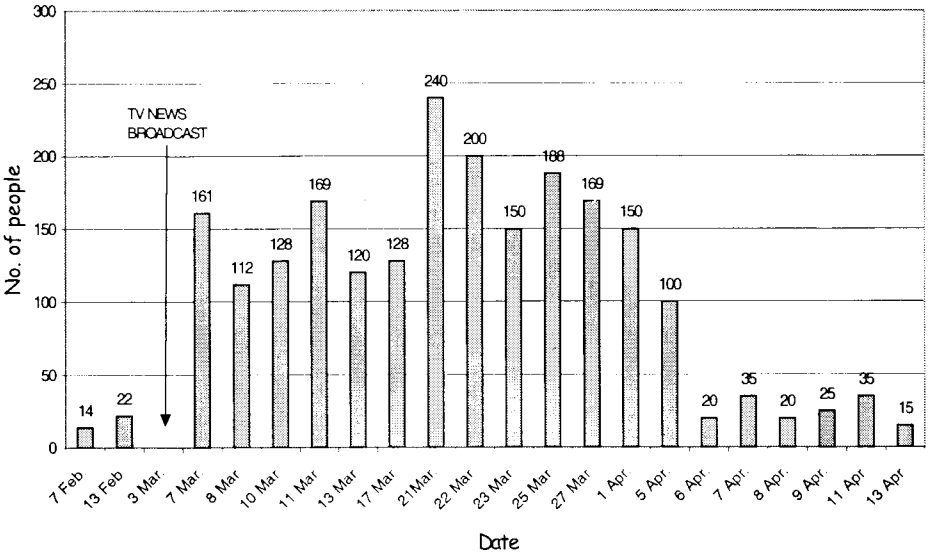

Fig. 1. Number of spectators counted at the Universitas, Bloemfontein, swallow roost (February–April 1999).

the magazine of the Norwegian Ornithological Association (Byrkjeland, S. 1999. Låvesvale-prosjektet: Samarbeid med Sør-Afrika gir resultater. *Vår Fuglefauna* 22(2): 53–55), and a promotional 2000 calendar, illustrating swallow migration and giving information on swallow-ringing in Norway and South Africa, has also been produced by Stein Byrkjeland. Among other things it depicted one of the Norwegian swallows controlled at the Universitas roost in 1999. A report on the Universitas project was also submitted for inclusion in the EURING Swallow Project Newsletter in mid-1999.

THE WAY FORWARD

The main advantage of the Universitas roost is the ease with which it can be 'worked' by ringers. It is easily accessible, and in a safe area; consideration of personal safety of ringers is a major concern, and has resulted in a number of otherwise suitable swallow roosts elsewhere in South Africa being abandoned as ringing sites. Bearing this in mind, it is essential to make the most of the ringing opportunities provided by the Bloemfontein roost.

There has been some discussion concerning the establishment of a **Southern African Swallow Working Group**, operating under the SAFRING banner. It is envisaged that this Working Group will facilitate and stimulate co-ordinated mass swallow-ringing in South and southern Africa, and that it will establish a natural liaison with the EURING Swallow Project. In so doing, it is hoped that standardised data may be collected for the benefit of this inter-continental project, which aims ultimately to identify the factors responsible for the decline of the Barn Swallow, a flagship migratory species.

ACKNOWLEDGEMENTS

Sincere thanks to Stein Byrkjeland and his swallow-ringing colleagues: without their support, in a private capacity, this project would not be possible. Mario and Riette Gonsior, who own the property where the swallows roost, have always been extremely hospitable towards those ringing swallows in their garden. A number of qualified ringers, both local and from overseas, have assisted with the netting and processing of swallows

at the Universitas roost: Gerrie Grobler, Frik Conradie, Johan Kok, Dawie de Swardt and Johan van Niekerk (Free State, South Africa); André Botha (Mpumalanga, South Africa); Stein Byrkjeland, Ingvar Grastveit and Håvard Bjordal (Norway) and Andy Pierce (United Kingdom). Thanks also to the many non-ringers who have helped with the erection and dismantling of mistnets and other equipment.

Warblers of reedbeds, marshes and bush

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Numerous 'reedbed warblers' were caught in and at the edge of reed mace *Typha* beds at Phakalane Sewage Ponds near Gaborone between 1996 and 2000. Three species of resident/partial migrant and five species of Palaearctic migrants were caught. This paper gives some pointers towards the identification, ageing and sexing of several species that inhabit reeds and marsh vegetation.

1. *Bradypterus baboecala*, the Little Rush (African Sedge) Warbler
2. *Locustella fluviatilis*, the River Warbler
3. *Acrocephalus* warblers: slender, mainly brown, birds with flattened heads. They inhabit

The wing formula is very important in identification of 'reed' warblers. Particularly important features are the presence or absence of emargination on any primary feathers and of any notch; the length of the first and second primary feathers in relation to the primary coverts and wing tip; and the shape of the wing as shown by the difference between each primary feather and the longest feather.

1. *BRADYPTERUS BABOECALA*

- ❑ Dark brown upperparts
- ❑ Broad tail feathers, strongly graduated very long tail
- ❑ Rounded wing (length 56–61 mm)
- ❑ Faintly spotted/streaked breast
- ❑ Immature has yellowish wash and three good tongue spots; adult has black gape.

2. *LOCUSTELLA FLUVIATILIS*

- ❑ Olive brown upperparts
- ❑ Graduated tail with under tail coverts broadly tipped white
- ❑ Wing formula. Very small first primary, no emargination on primaries, pointed wing, wing length 69–79 mm
- ❑ Spotted/streaked breast.

3. *ACROCEPHALUS* WARBLERS

A. schoenobaenus European Sedge Warbler

- ❑ Conspicuous yellow/white supercilium (no crown stripe; compare with Aquatic Warbler *A. paludicola*)
- ❑ Rufous-tinged yellow/brown rump
- ❑ Moderately rounded tail
- ❑ Pointed wings (63–72 mm), first primary <primary covert, tip = third primary (or second)
- ❑ Young birds have streaked/speckled breast.

A. baeticatus African Reed Warbler

Also known as African Marsh Warbler but most closely related to the Eurasian Reed