TRANS-SAHARA RECOVERIES OF HOUSE MARTINS *DELICHON URBICA*, WITH DISCUSSION ON RINGING, ROOSTING AND SIGHTINGS IN AFRICA

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Introduction

House Martins are among the many migrating passerines that breed in Europe but spend the European winter (October-March) south of the Sahara Desert. Although a few breed on cliff faces, the great majority prefer houses and other man-made structures on which to build their nests; these are always built under overhangs such as eaves to give them some protection from the weather.

It is curious that although House Martins are common, widespread and universally well-known throughout their breeding range due to this commensal relationship with man, they remain birds of mystery (Hill 1995). Even in their breeding range it is not yet settled where they roost when not in their nests: Cramp (1988) states... "Aerial roosting not proven but thought to occur during breeding season."

The subjects discussed in this paper are the wintering quarters of the various European populations of House Martins and their roosting habits in these areas, since these also remain matters for conjecture.

Methods

A study was made of some of the relevant literature, and ringing organisations in Europe and Africa were contacted for information regarding numbers of House Martins ringed and details of trans-Sahara recoveries.

Correspondence was undertaken with several ornithological observers and ringers who have first hand experience of the African scene, and also with African Bird Safari companies, requesting information on House Martin sightings in Africa.

Since European Swifts *Apus apus* have several characteristics similar to House Martins, ringing and sub-Sahara recovery figures for this species (ringed in the UK and Ireland) were also ascertained, for comparison purposes.

Some relevant information on the other two common European hirundines, European Swallows *Hirundo rusticus* and Sand Martins *Riparia riparia,* was also obtained, for further comparisons.

Results

Numbers ringed, recoveries and roosting

The number of trans-Sahara recoveries is now at least twenty from House Martins ringed in Europe and Algeria, and one from those ringed in Africa south of the Sahara. The details of the recoveries are given in Table 1; the numbers of birds ringed up to end 1994 in the various European and African countries are given in Tables 2 and 3, totalling *c.* 1 030 000 and *c.* 300 respectively. From these figures, the overall trans-Sahara recovery factor for House Martins ringed in Europe is *c.* 1:51 000, and for those ringed in Africa *c.* 1:300. The ringing and recovery sites are indicated on the map of Europe and Africa (Figure 1).

House Martins and European Swifts have some similar characteristics in that both species have a commensal relationship with man in their breeding range; both are high level insectivores and both migrate south of the Sahara: also Swifts are known to roost aerially (D Bromhall 1980), while House Martins are suspected of doing so. Their sub-Sahara recovery factors are, however, very different in so far as UK-ringed birds are concerned; the numbers ringed and subSahara recoveries for

Table 1. Details of all trans-Sahara ringing recoveries of House Martins known to the author to date.

	Ringed				Recovered				
Ring	Country	Latitude	Longitude	Date	Age	Country	Latitude	Longitude	Date	
032401	Norway	61°45'N	11°00'E	26.07.48	3	South Africa	25°30'S	28°27'E	21.10.48	(1)
ZO 6614	Sweden	56°12'N	16°24'E	07.07.48	3	Zambia	14°16'S	30°21'E	07.01.49	(2)
4A 7820	Belgium	50°48'N	03°54'E	17.06.52	P	Nigeria	05°36'N	05°48'E	25.03.53	
ZAV1131	Sweden	67°29'N	21°09'E	23.07.54	3	South Africa	23°50'S	30°09'E	05.09.56	
Y 75911	Russia	55°12'N	20°46'E	07.07.59	P	South Africa	33°09'S	19°20'E	28.02.61	
X 84281	Belorussia	52°40'N	24°00'E	30.06.56	P	South Africa	24°15'S	28°58'E	18.01.61	(3)
H 529210	Germany	51°24'N	14°48'E	18.07.59	P	Zambia	15°26'S	28°28'E	19.07.62	(4)
80143953	Germany	52°31'N	10°16'E	12.06.62	2	Zaire	06°30'S	16°51'E	15.12.65	(5)
H 790595	Germany	48°14'N	11°41'E	17.06.65	2	Cameroon	05°52'N	09°46'E	29.03.66	
2233940	Sweden	55°38'N	13°07'E	14.09.66	3	South Africa	25°32'S	30°42'E	12.11.68	
835353	Algeria	36°12'N	01°18'E	05.09.67	2	Burkino Faso	12°30'N	03°24'W	10.04.71	(6)
2422646	Sweden	56°12'N	16°24'E	29.05.72	4	South Africa	24°32'S	28°36'E	18.10.73	(7)
J 043228	Finland	69°03'N	20°50'E	28.06.73	4	Zimbabwe	19°30'S	27°30'E	02.01.74	(8)
8151321	Norway	62°22'N	06°00'E	31.07.74	3	South Africa	33°29'S	19°41'E	20.02.80	(9)
BS 36014	Germany	48°35'N	09°11'E	27.06.80	P	Cameroon	07°20'N	13°35'E	23.10.80	(10)
81017187	Germany	52°26'N	10°42'E	22.06.79	P	Zambia	17°19'S	26°12'E	18.12.80	(11)
B 888531	England	51°47'N	00°00'E	10.09.83	3	Nigeria	06°05'N	08°06'E	26.02.84	(12)
9 1135829	Germany	52°49'N	13°49'E	22.06.85	P	Zaire	07°16'S	19°26'E	28.09.85	
W 347776	Finland	63°17'N	22°53'E	20.07.85	P	Zimbabwe	17°18'S	31°04'E	06.02.89	
X465425	Finland	61°00'N	23°51'E	10.07.95	P	South Africa	28°15'S	31°02'E	14.01.96	(13)
J 18869	Kenya	01°15'S	36°53'E	17.10.68	3	Russia	44°40'N	41°45'E	12.06.70	

Age Code: P = Pullus; 2 = Age unknown (first year or adult); 3 = first year; 4 = adult.

It is interesting to note that 13 out of 20 (65%) of the recoveries in Africa were of "living" birds:

1. Killed by cat
2. Caught: fate unknown
3. Killed by cat
4. "Swallow" found on table: warmed by fire; flew away" (not known if date was day of incident or the advisory letter)
5. Trapped alive: fate unknown
6. Could not fly: later died
7. Dying
8. Freshly dead after storm
9. Killed by cat
10. 'Entra dans ma chambre: libéré'
11. Shot
12. Found dying
13. Entered building:released

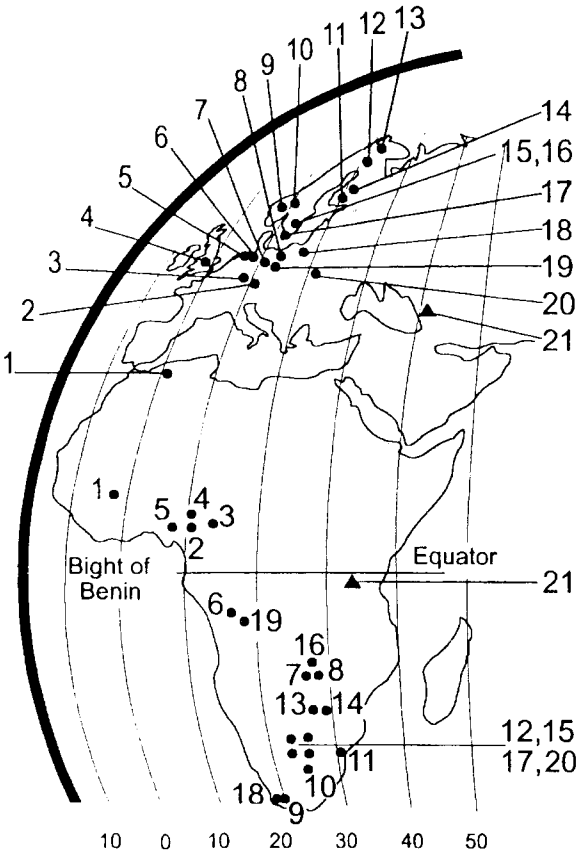

Figure 1. Ringing and recovery sites of House Martins *Delichon urbica* in Europe and Africa.

Moreau (1972) calculated that the numbers of the common hirundines moving south from Europe into Africa each autumn were: Sand Martins 375 million; European Swallows 220 million; House Martins 90 million. It is well known that the first two species roost in very large numbers in reedbeds or low bushes in Africa: ringers in South Africa and ringing expeditions to Botswana, Nigeria, Senegal, etc., have been able to catch and ring many tens of thousands of these birds at such roosts. Since both species are also ringed in large numbers in Europe, information from the many resulting recoveries and controls has led to considerable knowledge of their movements and the wintering areas of various populations.

It seems unlikely, however, that House Martins have ever been seen to roost terrestrially in Africa. Cramp (1988) refers to three reports, written in 1941, 1952 and 1963, of House Martins roosting in reedbeds, but he continues ... "In Africa, reports of *D. urbica* roosting in reedbeds thought possibly to have concerned Grey-rumped Swallows *Pseudhirundo griseophyga*; *D. urbica* never seen to roost in reed beds thus, and believed to roost on the wing."

birds from the UK and Ireland up to end 1991 (Mead & Clark 1993) are given below, together with the calculated recovery factors:

	Ringed	Recov'd	Factor
House Martins	248 084	1	1:248 000
European Swifts	158 036	33	1:4 800

The House Martin recovery was in Nigeria (Table 1). The swift recoveries were: Congo Rep. 4; Zaire 12; South Africa 1; Zimbabwe 1; Mozambique 1; Malawi 11; Tanzania 2; Zambia 1.

Most of the few House Martins that have been ringed in Africa (Table 3), have been caught when feeding close to the ground during inclement weather, often at sewage works (Backhurst 1971).

The author has been advised recently of very large numbers of European hirundines, including House Martin, seen flying at dawn from a reedbed between Lakes Bogoria and Baringo in Kenya; this occurred while the BBC Natural History Unit was filming "Flamingo Watch" during January and February of 1995. The observer (C Packham pers. comm.) wrote

Table 2. Number of House Martins ringed in European and North African countries to the end of 1994 and number of sub-Sahara recoveries.

Country	Ringed	Recoveries
Algeria	450	1
Belgium	81 528	1
Bulgaria	1 000	
Channel Isles	1 595	
Croatia	9 735	-
Cyprus	298	
Czech Republic	1 000	
Denmark	11 863	-
Estonia	5 000	
Finland	25 444	3
France	100 013	-
Germany (Radolfzell)	99 319	3
Germany (Helgoland)	103 987	2
Germany (Hiddensee)	49 920	1
Greece	39	-
Hungary °	25 000	-
Italy *	15 000	
Latvia	8 264	-
Lithuania	17 680	-
Malta	8 420	-
Netherlands	22 000	
Norway	10 643	2
Poland	21 168	-
Portugal °	1 000	-
Romania *	5 000	
Russia (St.Petersburg)	7 864	1
Russia (Moscow) °	2 000	1
Slovenia	1 000	
Spain	23 948	
Sweden	47 852	4
Switzerland	47 871	
United Kingdom	273 209	1
	1 029 107	20

* Author's estimate
° Best estimate

..."I did visit the marsh at dawn on a couple of occasions... and witnessed an eruption of hirundines from the reeds... it was fair to say that the air was black with these birds, so many (European) Swallows, Sand Martins and House Martins darkened the sky." He did not actually see any House Martins literally perched in the reeds but continued"...There was no doubt that House Martins were indeed roosting in the area. They moved along the lake shore in the morning at a lower altitude than the other species... they were not seen throughout the course of the hot days... returned at dusk at a high altitude... streaming overhead as they passed back to their marshland roost."

It must also be noted however, that few if any House Martins have been reported by ringers and other ornithologists at swallow and Sand Martin roosts: e.g. in Botswana (B van den Brink pers. comm.); in Ethiopia (T P Appleton pers. comm.); in Transvaal (E Robson pers. comm.); in Senegal (S. Rumsey pers. comm.); in Nigeria (J Ash. see *BTO News* No. 200 1995).

Other Sightings

The Zambian Ornithological Society Newsletter has consistently recorded sightings in every winter month, and in virtually every 30 km square in the country, but usually in small groups and flying very high, often only just within binocular vision (D Aspinwall pers. comm.).

In Malawi, the Wildlife Society Journal *Nyala* has occasionally recorded groups of up to 200 birds during the winter months; also "...hundreds seen moving steadily northward over Nyika Plateau between 17 and 20 April 1992". (R D Medland pers. comm.). In Tanzania, they are seen fairly frequently, but again usually in small numbers, except during bad weather, or just prior to northward migration e.g. "..hundreds seen among tens of thousands of European Swallows and Swifts feeding in front of a tremendous storm in the Southern Highlands in February 1982", and "...*c.* 400 on the 220 Kv lines near Mtera Reservoir for several days end March early April 1994" (N. Baker pers. comm.).

The birds are also sometimes seen "at rest" in the south, long before preparing for northward migration in March/April, but only while sheltering from bad weather e.g. *c.* 400 perching on cliff ledges on a *kopje* during a storm in Zambia in December 1983 (J Auburn pers. comm.).

Discussion

Although the number of trans-Sahara recoveries shown on the map of Europe and Africa (Figure 1) is small, the indications are that Baltic and Scandinavian populations winter in the Zambia, Zimbabwe, South Africa area, while the westerly populations of Europe winter in the West African countries bordering the Bight of Benin. The single "reverse" recovery, of the bird ringed in Kenya and recovered by the Black Sea, fits in with the general pattern of the north/south migrational routes.

House Martins in central and northern Europe do not normally start flight feather moult until they reach their winter quarters (Jenni & Winkler 1994); however, in southern Spain all the adults and early-brood juveniles not only start but some adults virtually complete flight feather moult before leaving their breeding colonies (Hill 1992). Also the birds are absent from their colonies for four months only (mid October – early February) with laying of first clutches starting in early March. These two facts point to the possibility that southern European populations winter in the Sahel region. Since the great majority of birds are in active flight feather moult when they leave their breeding sites, there is even a possibility that some may winter in *north* Africa!

The paucity of trans-Sahara recoveries is directly linked to the numbers or rather lack of numbers, ringed in Africa. The recovery rate for African-ringed birds of a species which breeds not only near human habitations, but actually *on* them, must be very high indeed, probably better than that for European Swallows: according to Mead (1970) "...The recovery rate in Great Britain of British Swallows ringed in South Africa is about 5,2 per 1 000."

Large numbers of House Martins have been caught at ringing stations in the UK by tape-luring the birds during daylight hours on autumn migration; the author has obtained figures from two such stations: *c.* 22 000 ringed at St Alban's Head (Dorset) between 1983-91, mainly in the month of September (A J Martin pers. comm.); and *c.*15,000 at Sandwich Bay Bird Observatory (Kent) between 1986-91 (R Morton pers. comm.). For reasons unknown to the author, almost all the House Martins caught by this system are juveniles.

No tape-luring, or "artificial induction of landfall", of House Martins has been attempted in Africa. It has been tried for other species, but mainly at night when many species migrate,

Table 3. Number of House Martins known to have been ringed in east, west and southern Africa to end of 1994, with number of recoveries north of the Sahara.

Area	No. ringed	Recoveries	Remarks
East Africa (Kenya rings)	49	1	Kenya, Sudan, Zambia, Tanzania, Somalia, Rwanda, Ethiopia
Southern Africa (South African rings)	232	–	South Africa, Botswana, Namibia, Zimbabwe, Malawi, Angola
West Africa (French and UK rings)	21	–	Senegal, Gambia
	302	1	

and with limited success (Herremans 1993). Since the evidence so far leads to the conclusion that House Martins roost aerially in Africa, it would be interesting if ringers in Africa could experiment with tape-luring in order to obtain experience of the right weather conditions etc., for success. If it should prove successful, it might be the only way to catch the birds in sufficient numbers to lead to additional information on their movements.

The comparison of sub-Sahara recovery rates between European Swifts and House Martins ringed in the UK is of interest. One reason for the Swift recovery rate being so much better is the fact that dead Swifts are easier to see, being twice as large as House Martins; another could be that the ring on a dead House Martin is difficult to see as its legs are feathered to the toes; another that British Swifts tend to winter in more populated countries, such as Malawi: and of those House Martins that were recovered, at least 65% were not actually dead when found (Table 1).

It is also interesting to note that only seven European Swifts have been ringed in southern Africa to date (T B Oatley pers. comm.).

The author hopes that this article may help in bringing to the attention of a wide range of people who are interested in birds that the mystery of where House Martins roost while in Africa has still not been solved.

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