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## THE EUROPEAN SWIFT *APUS APUS* (LINNAEUS) IN THE SOUTHERN AFROTROPICS

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### SUMMARY

The highly migratory swift *Apus apus* of the Palaearctic winters wholly within the Afrotropics south of *c.* 9° S., and is currently considered to comprise only two moderately well-differentiated subspecies. A careful examination of specimens from south-central and southern Africa suggests that three subspecies should be now recognised in line with Hartert's arrangement of the species in his *Die Vögel der paläarktischen Fauna* of 1912, these being satisfactorily distinguishable on wintering material. The taxon *A. a. marwitzi*, described from Tanzania, is re-instated and its revised characters laid down.

### INTRODUCTION

The European Swift *Apus apus* breeds from the British Isles, western continental Europe and the Maghreb, east to about Lake Baikal in the U.S.S.R. and to Mongolia, Manchuria and northern China. In the east of its breeding range it extends south to Tsinghai, Kansu, Afghanistan, Pakistan and the Middle East. It winters entirely in the Afrotropics, south of about 9° S., where it is present between the months of mid-October and March. At the present time, two subspecies are currently admitted in this highly migratory species: the nominate subspecies with its restricted type-locality Sweden, and a xeric eastern race *A. a. pekinensis* (Swinhoe), described from Peking, China. In a fairly recent statement on the variation in the present swift, Vaurie (1965) describes it as "slight and clinal". While only two subspecies are currently admitted by specialists, others have been proposed, three of these being recognised for a time by Hartert (1912), these being *A. a. kollibayi* Tschusi, 1902, described from the Dalmatian coast, *A. a. carlo* Kollibay, 1905, named from Tunisia, and *A. a. marwitzi* Reichenow, 1906, described on migrants taken on the Wembere R. in

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central Tanzania. In 1908 Reichenow proposed *A. a. kalaharicus* on migrants of *pekinensis* taken in Botswana, while in 1911 Zarudny described a further xeric race from the central Palaearctic in *A. a. turkestanensis* from Russian Turkestan and Bokhara. The proposed taxa *kollibayi*, *carlo* and *marwitzi* were later reduced as synonyms of nominate *A. apus* by Hartert and Steinbacher in the *Ergänzungsband* to Hartert's *Vög. pal. Fauna* (1935), with *turkestanensis* being re-affirmed as a straight synonym of *pekinensis*, following Hartert (1922).

Variation of geographical import in the present species is relatively slight, affecting levels of saturation of the brownish black contour plumage, the clarity and extent of the white over the forethroat, the presence or absence of light scaling to the lower ventral surface, the colour of the wings and the degree of white edging to the under wing-coverts. There appears to be little or no size variation of moment. Despite what Vaurie has written, the variation is certainly not clinal in the accepted sense, tending to describe precipitation contours closely both on the breeding and wintering grounds. As this species is entirely aerial while outside the breeding range, material in collections taken in Africa tends to be limited.

In Africa the pallid *A. a. pekinensis* winters almost entirely within the confines of Chapin's South West Arid District, with the darker, more saturated, nominate subspecies present in the main to the north and east of it from Angola, Zambia, southern Zaïre (Shaba) to Malawi and south-western and southern Tanzania, south to northern Botswana, Zimbabwe and adjacent Mozambique. That a third, currently unrecognised race of *A. apus* occurs in south-eastern Africa was recently brought to my notice by the finding that two moulting examples from Durban and Ladysmith, Natal (December, 1980, and January, 1981), differ from the nominate race in being wholly colder and blacker over the head and body, lacking the coppery suffusion present in the said race. The throat patch in the two recent Natal birds is also whiter, and in the wings the inner primaries, secondaries and greater-coverts are lighter and less brownish in relation to the rest of the dorsal wing surfaces. On the under wing, the coverts are broadly fringed with off-white, in this approaching the condition present in *A. a. pekinensis*. In a recent short communication (Clancey (1981)), I associated the name *A. a. marwitzi* with this relatively blackish race with a prominent white throat patch.

*A. a. marwitzi* was named on material collected in central Tanzania by a Lieutenant Marwitz of the German Army in Tanganyika (German East Africa), and was one of several bird taxa named in his honour by Anton Reichenow. The type-locality of *marwitzi* is Mkalama at 4° 06' S., 34° 18' E. and lies well to the north of the established southern wintering range of *A. apus* subsp. in the Afrotropics, which lies largely to the south of 9° S., and the *Type* of the

taxon was clearly on south-bound passage when taken. When considering the case of *marwitzi* in 1908, Hartert associated birds from Ereğli, Turkey, Tbilisi (Tiflis), Georgia, Cyprus and the Middle East with it. He also so identified birds taken on passage in Egypt.

While Hartert placed the breeding populations of the European Swift in Turkey, Transcaucasia, and, probably, northern Iran, south to Cyprus and Israel in *marwitzi*, later workers have been less assured in determining their racial status. Meinertzhagen (1922) placed them with *A. a. pekinensis*, in so doing synonymizing *marwitzi* with this pallid xeric race named from the far east of the Palaearctic. When Vaurie (1965) dealt with the said populations, he made no reference to the name *marwitzi* and its association by Hartert with Middle East *A. apus*, simply stating "The population of Asia Minor, Cyprus and the Near East south to Palestine are somewhat duller and less blackish than typical nominate *apus* of western Europe. They are called *pekinensis* by some authors, to which they show a tendency, but are much more similar to nominate *apus*." In other words, Vaurie considered the said elements to be *A. a. apus*, with *A. a. marwitzi* a synonym of nominate *apus* rather than *pekinensis*.

#### DISCUSSION

In his important study of the migration routes and wintering areas of *A. a. apus* and *A. a. pekinensis* in Africa, Brooke (1975) did not deal with subspeciation, though indicating that he considered *Apus unicolor* (Jardine), 1830, described from Madeira, conspecific with *apus*. Vaurie, in his Palaearctic work, treated *unicolor* as a separate polytypic species, comprising two races: nominate *unicolor* and *A. u. alexandri*. Hartert, 1901, described from the Cape Verde Islands, the latter believed to be a monotypic species by Brooke. I do not concede that anything is to be gained by considering nominate *A. unicolor* a race of *A. apus* and *A. (u.) alexandri* an isolated sedentary species confined to the Cape Verdes, and have followed Vaurie's arrangement.

As the distinctions between nominate *A. apus* and *A. a. pekinensis* are discussed at length in the literature and the two races are generally recognised, there is no need to cover the ground again in the present discussion, which will deal entirely with the question of the recognition of a third race under the name available for it (*A. a. marwitzi*).

Critical examination of European Swift material in the collections of the Transvaal Museum, Pretoria, the National Museum of Zimbabwe, Bulawayo, and the Durban Museum shows conclusively that birds appreciably colder and blacker than western European examples of *A. a. apus* and with some of the characters of *A. a. pekinensis*, i. e., whiter throat patch and prominent white fringing to the under wing-coverts, winter in south-eastern Africa to the east of the desertic *pekinensis* and in the main to the south-east of nominate *apus*. The occurrence of such birds in the South African Sub-Region eluded other workers for

reasons which are not clear. In working on wintering *A. apus* from Africa I took the precaution of degreasing much of the material, as most skins of *A. apus* in collections are to a greater or lesser degree affected by grease contamination. In studying these swifts, I found that the best results were to be had when the material was studied by natural light with the sky somewhat overcast.

Hartert (1912) described *A. a. marwitzi* as "In der Allgemeinfärbung wie *A. a. pekinensis*, aber die Stirn dunkler und die Kehle nicht so ausgedehnt weiss." In accepting *marwitzi*, Hartert examined two specimens from Tbilisi, Georgia, lent by Professor M. A. Menzbier of Moscow, two skins from Eregli, Turkey, in the Von Erlanger collection, utilized data on Cyprus birds (*ex* Von Madarász), and saw migrants taken in Egypt in the Brehm collection, as well as the *Type* of the taxon taken on the Wembere R. in central Tanzania (Zoologisches Museum, Berlin). While Hartert was of the view that *marwitzi* was in a sense an intermediate form between nominate *apus* and the eastern *pekinensis*, later authors have treated the populations as intergrades between the two said subspecies, the name now generally reposing in the synonymy of the latter (see Peters (1940)). In so far as the sample of specimens from the south-eastern African wintering grounds goes, there is no justification for the view that they are intermediate in their characters between nominate *apus* and *pekinensis*. While they show some affinity in two or more characters with *pekinensis*, only in their wholly darker facies do they incline towards nominate *apus*, though, interestingly enough, they are even blacker and not such a saturated bronzy brownish black than the latter. As far as one can assess the situation on wintering material, *marwitzi* is about as well-differentiated from *A. a. apus* and *A. a. pekinensis* as these two taxa are from one another. That we are dealing with a third recognisable race of *A. apus* and not just individual variants or vague population trends is lent support by a sample of four taken at the one time from Gatooma in Zimbabwe (Rhodesia) (undated) comprising only *marwitzi*. There is no indication that flocks of one race mix to any extent with like assemblages of other forms.

The European Swift should now be seen as a moderately polytypic species of three rather than two races. The breeding range of *A. a. marwitzi* can be accepted as laid down by Hartert in 1912, but careful examination of new Palaearctic material may well indicate a still wider breeding disposition. As already indicated, it winters to the east of *A. a. pekinensis* in the uplands of south-eastern Africa, in which region it appears to outnumber the nominate subspecies.

#### THE SUBSPECIES OF *APUS APUS*

##### (a) *Apus apus apus* (Linnaeus)

*Hirundo Apus* Linnaeus, *Syst. Nat.*, ed. 10, part i, 1758, p. 192: Europe, restricted to Sweden.

*Apus apus kollibayi* Tschusi, *Ornith. Jahrb.*, vol. xiii, 1902, p. 234: Vallegrande, Curzola I., Dalmatia.

*Apus apus carlo* Kollibay, *Journ. f. Ornith.*, vol. liii, 1905, p. 302: Camp de la Santé, Thalah, Seggi and Bir Mrabat, Tunisia.

Dorsum saturated Olive-Brown/Clove Brown (Ridgway (1912), pl.xl) with pronounced coppery tinge and blackish overlay, especially over the mantle. Below, closely similar, but chin and centre of the fore-throat greyish or brownish white, often with some fine dusky streaks. Under wing-coverts with suppressed lighter edgings. Wings with pronounced coppery sheen, and primaries, secondaries and greater-coverts more or less uniform with rest of wing surface though inclined to be warmer brown.

Wings of 31 ♂♀ 165 - 182 (173,1), SD 4,28, tails (of 28) 71,5 - 79,5 (74,6), SD 2,43 mm.

*Material examined*: 34 (*Zimbabwe*: Malugwe Pan (Gona-re-zhou), Salisbury, Selukwe, Umvukwes, Umfuli R., Nyamandhlovu (Bulawayo); *Botswana*: 93 km W. of Nata, Mumpswe (Nata), Kedia, L. Ngami; *Namibia*: "Quickborn", Okahandja; *Zambia*: Ngitwa (Kasama), Karungwishi R. at 90° 31' S., 29° 40' E. (14 January), 48 km E.S.E. of Mporokoso, Chilanga; *Malawi*: Chinteche). Also Europe (Yugoslavia, Romania, Italy, West Germany, Denmark and Sweden (3)).

*Range*: In the South African Sub-Region appears to winter in the main to the north and north-east of the main concentrations of *A. a. pekinensis* in northern and north-eastern Botswana and northern and eastern Zimbabwe. North of present limits winters Angola, southern Shaba, Zaïre, Zambia, Malawi and south-western and southern Tanzania, but northern limits of wintering centrum uncertain. Vaurie (1965) considered the wintering range to be southern Africa south of c. 10° S., but Brooke (1975) takes it almost to the Equator in East Africa and to Cameroun further to the west. Breeds from the British Isles, western continental Europe and the Maghreb to about 69° N., east north of the Mediterranean (including the islands to the west of Cyprus) to European Russia, including the northern Caspian region, eastwards to Siberia in L. Baikal region (c. 110° E.) of the U.S.S.R. In the east of the range, south to the southern Kirghiz Steppes, the Altai and north-western Mongolia. Said by Vaurie to intergrade with *A. a. pekinensis* in parts of the south-east of the stated breeding range.

*Remarks*: Saturated brownish black colouration with coppery nuance to the entire plumage, small off-white throat patch variably suffused brown or greyish, and more or less uniform dorsal wing surface distinguish this race.

While the corpus of wintering material of this and other races of *A. apus* is admittedly very limited at this stage, it provides little evidence of the existence of much in the nature of intergradation

between *A. a. apus* and *A. a. pekinensis* (cf. Vaurie (1965)). This latter author mentions these two subspecies as intergrading from the Zaliv Kara Bogas Gol, eastern Caspian, and the lower Syr Daria, Aral Sea, to the Tarbagatai and north-western Mongolia. One may enquire in which collections sufficient material exists for such a critical assessment of the zone of contact.

*A. a. kollibayi* was described on an allegedly longer wing character resulting from the use of small population samples. Balkan birds are not longer winged than western European birds, north as far as Denmark and Sweden. In the case of *A. a. carlo*, described from the Maghreb, the taxon appears to have been proposed on material affected by environmental factors, such as aridity.

(b) **Apus apus marwitzi** Reichenow

*Apus apus marwitzi* Reichenow, *Ornith. Monatsber.*, vol. xiv, 1906, p. 171: Mkalama (Makalama), Tanzania, at 4° 06' S., 34° 38' E.

Similar to nominate *A. apus*, as defined above, but distinguishable in largely lacking the coppery nuance to the entire body plumage, being colder and on the whole blacker throughout. Mantle with ground about Chaetura Drab (pl.xlvi), with variable blue-black overlay. Face and sides of head blacker and throat whiter. Under wing-coverts more broadly edged white. Wings colder, rather blacker, the sheen green rather than coppery, and with the inner primaries, secondaries and greater-coverts much less brownish, but edged paler.

Wings of 18 ♂♀ 166,5 - 182 (173,0), SD 4,29, tails (of 16) 72,5 - 83,5 (75,4), SD 3,27 mm.

*Material examined*: 18 (*Natal*: Durban, Ladysmith; *Transvaal*: Wakkerstroom; *Zimbabwe*: Birchenough Bridge, Makwiro (17° 57' S., 30° 26' E.), Gatooma, Bindura, Murumbini (Sabi/Lundi confluence), Ntabasinduna (Bulawayo), Matopos Hills, Wankie Game Reserve; *Botswana*: Sehitwa, L. Ngami; *Zambia*: 48 km E.S.E. of Mporokoso; *Malawi*: Wedza).

*Range*: Winters allohiemally east of the range of the xeric *A. a. pekinensis* in south-eastern Africa from Zimbabwe, south to the Transvaal and Natal. Taken in northern Botswana and probably occurs western Mozambique. Shot on south-bound passage in central Tanzania (Mkalama) and north-eastern Zambia (Mporokoso; 22 October). Breeding range uncertain, but apparently south of that of *A. a. apus* and south-west of that of *A. a. pekinensis* from Asia Minor and Transcaucasia to northern Iran, south in the west to Cyprus and Israel. Examples identified as *marwitzi* are recorded as having been obtained on passage in Egypt.

*Remarks*: The colder and blacker, less bronzy, brown of the body plumage, the purer white throat, and darker wings with greener sheen compared with *A. a. apus* distinguish the present race.

(c) **Apus apus pekinensis** (Swinhoe)

*Cypselus pekinensis* Swinhoe, *Proc.Zool.Soc.London*, 1870, p. 435: Peking, China.

*Apus apus kalaharicus* Reichenow, *Ornith.Monatsber.*, vol. xvi, 1908, p. 81: Kalahari Desert, Botswana; *Type* from Lehututu.

*Apus apus turkestanensis* Zarudny, *Ornith.Mittel.*, vol. ii, 1911, pp. 142, 143: Russian Turkestan and Bokhara, U.S.S.R.

Dorsum colder and less saturated dark, warm or cupreous brown than in *A. a. apus*, the forehead often fading or wearing to almost whitish. Face paler, more whitish distally. Below, entire fore-throat more extensively and clearer white; rest of venter much less saturated and coppery brown, and with the lower ventral feathers edged buffy white; under tail-coverts paler and more greyed. Under wing-coverts broadly fringed with white. In wings, inner primaries, secondaries and greater-coverts markedly paler than the adjacent surfaces. Size the same, though prepared skins usually appear smaller.

Wings of 30 ♂♀ 162,5 - 182 (170,0), SD 4,51, tails (of 27) 65 - 80 (71,6), SD 3,97 mm.

*Material examined*: 30. (South West Africa (Namibia): "Quickborn", Okahandja, Okaukuejo, Etosha; Botswana: Ramutsamusa-Nata road at 20° 25' S., 26° 10' E., Nata-Maun road at 20° 12' S., 26° 10' E., 93 and 114 km W. of Nata, Chanokha Drift, Botletle R., 8 km N. of Artesia, Kedia, 12,5 km E. of Lake Dow, 64 km N.W. of Serowe, Sekhuma Pan (W. of Kanye), 40 km E. of Sekhuma Pan, 95,5 km W. of Kanye, 51,5 km W. of Kanye; N. Cape: Vryburg; O.F.S.: Excelsior; Transvaal: Modderfontein; Zimbabwe: Nyakasikana (Rukomeshe R.) at 16° 05' S., 29° 22' E., Headlands.)

*Range*: Winters in the South West Arid District of the Afrotropics from southern Angola and South West Africa (Namibia), east to the northern Cape, western Orange Free State, western Transvaal, and, probably, western Zimbabwe (the only two definite *pekinensis* are as listed above). Western breeding limits are probably parts of xeric eastern Iran, and western and northern Pakistan, north to Afghanistan, and Kazakhstan south of *A. a. apus* in the U.S.S.R., east to Mongolia, parts of Manchuria, northern China, Inner Mongolia, Kansu (south to about Lan-Chou) and Tsinghai. Recorded on passage in tropical Africa from eastern Zaïre and Kenya, but strangely enough, neither from Tanzania nor Zambia.

*Remarks*: Weights of the present subspecies on the wintering grounds range from 37,7 - 44 g.

Rather lighter and less saturated and bronzed brown venter with light scaling to the lower under-parts, purer and more expansive white throat surface, and paler inner remiges and greater-coverts are diagnostic of this largely desertic race.

Earliest date for an identified *pekinensis* in the South African Sub-Region is (27 October (Brooke 1975)) 11 November, and the latest 3 March.

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