

ROWELL, T.A. 1988. (Ed.) *The Peatland Management Handbook*. Nature Conservancy Council, Research & Survey Series No. 14. (£6.00 incl. p&p from NCC, Northminster House, Peterborough, PE1 1UA). ISBN 0-86139-467-4.

There can be few terrestrial habitats where bird conservation does not involve some sort of practical management. In all too many cases, management practices are more of an art than a science. This recent volume from the NCC presents 'all you need to know' about peatland management and places the science of peatland management on a firm footing. It describes solutions to a range of practical conservation problems for peatlands ranging from blanket bogs to fens, which have been distilled from the experience of a very large number of peatland managers throughout Britain. Given the importance of peatland habitats for breeding waders, it deserves wide notice in ornithological circles.

The report is highly structured which makes it easy to extract information for specific problems. Each of the 15 sections is further divided into a series of sub-sections. It is written primarily for an audience of nature reserve managers and lays emphasis on a range of commonly encountered practical problems. The report specifically considers management of British peatlands, but given the range of international experience in this subject, it is to be hoped that the promised future updates will also incorporate input from peatland managers elsewhere.

Early sections deal with control of water levels on peatlands through dam and bund construction, and the manipulations of soil levels. Further

sections successively treat the restoration of degenerate and cut-over peatlands, control of gully erosion, access provision, mowing of vegetation, management of *Cladium mariscus* and *Phragmites*, the use of grazing and burning in peatland management, scrub control, evaluation of management techniques and monitoring of vegetation.

Each section starts with general consideration of relevant principles and then presents a range of management options for use under differing circumstances with details of potential pit-falls where these are known. Of particular value to harassed nature reserve wardens will be many details of suppliers of materials (eg for dam/ boardwalk construction).

Constant stress is made of the essential need to monitor results of management and a 'feed-back report form' is provided to aid with collation of further information on the efficacy of suggested procedures. Whilst the report is primarily aimed at management of peatland vegetation, the need for monitoring equally extends to effects on breeding wader populations. With the current paucity of well documented studies in this area, it is to be hoped that all opportunities to relate practical peatland management to changes in breeding wader populations are also fully exploited and recorded.

The term 'essential reading' is often over-used by reviewers. For anyone involved in having to make practical management decisions relating to the conservation of peatland habitats, this volume really is essential reading!

David A. Stroud

WADER RECOVERIES FROM EASTERN AFRICA

Gerhard Nikolaus, J. S. Ash, G. C. Backhurst & D. J. Pearson

The wader migration system between southern and eastern Africa and western Asia has been discussed by Summers *et al.* (1987), who have demonstrated the existence of what might be referred to as a "flyway". Very large populations of some species use this flyway, which is distinct from the East Atlantic flyway of West Africa. Evidence for the East African flyway is presented here from the results of ringing recoveries.

Wader ringing has been concentrated at several sites in Eastern Africa in the past 20 years, particularly in Kenya at Mida Creek (00° 22'S, 39° 58'E), Lake Nakuru (00° 20'S, 36° 06'E) and Lake Magadi (02° 00'S, 36° 10'E); in Ethiopia at some of the Rift Valley lakes, particularly Abiata (07° 36'N, 38° 40'E) and Koka (08° 24'N, 39° 02'E); in Sudan at Juba (04° 52'N, 31° 30'E), Khartoum (15° 35'N, 32° 30'E) and Suakin (19° 08'N, 37° 17'E). Since most of the birds involved originate from Eastern Europe and Asia where ringing intensity is generally low, the recovery rates are very low compared with those areas with waders of a more westerly European origin. The data available to 31 December 1987 from the following sources (Ash 1981; Backhurst 1969, 1970, 1971, 1972, 1974, 1977, 1981, 1988; Nikolaus & Backhurst 1982) are summarised in the Appendix. Any additional data will be welcomed by G.C. Backhurst.

The two most ringed species are Little Stints *Calidris minuta* and Ruffs *Philomachus pugnax* with totals of 15 000 and 7 600 respectively. It seems that inland migrating Little Stints are closely associated with the Rift Valley, flying via the Persian Gulf and Caspian Sea to their Siberian breeding grounds (Figure 1). It is not known if birds flying along the Nile Valley link up with birds using the Rift Valley en route to Southern Africa, nor where they enter the Sudan.

Recoveries of Ruffs ringed in Western Europe (Figure 2) do not extend eastwards beyond the Sudan, where the majority of recoveries are from Asia. The breeding grounds for Ruffs in western Siberia are north of 64° N, and north of 68° N in central and eastern Siberia. It is therefore unexpected that most recoveries are from south of this line, especially since recoveries occurred during the breeding season. Two Ruffs from India are puzzling: they may have resulted from a change of winter quarters or they may indicate that at least some Ruffs do not fly on a loop migration to the west of the Himalayas. Possibly some Ruffs wintering in eastern and southern Africa migrate directly across the Indian subcontinent and the extensive Indian Ocean.

The Common Sandpiper *Actitis hypoleucos*

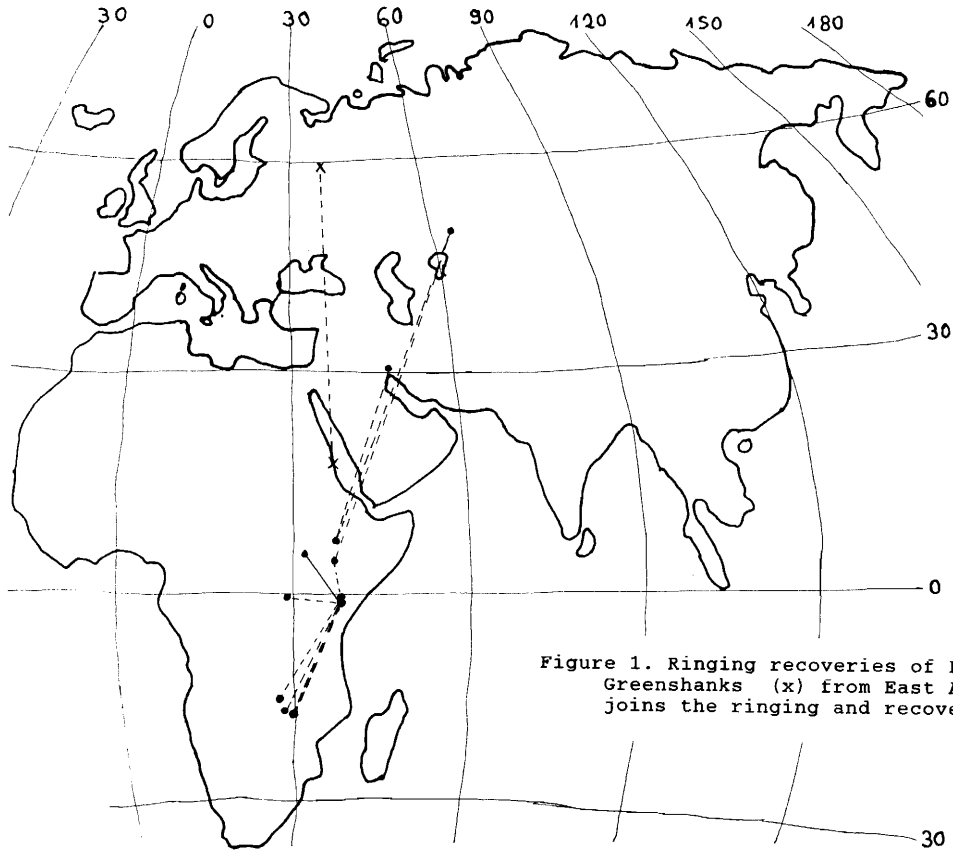


Figure 1. Ringing recoveries of Little Stints (●) and Greenshanks (x) from East Africa. Each dotted line joins the ringing and recovery sites of one bird.

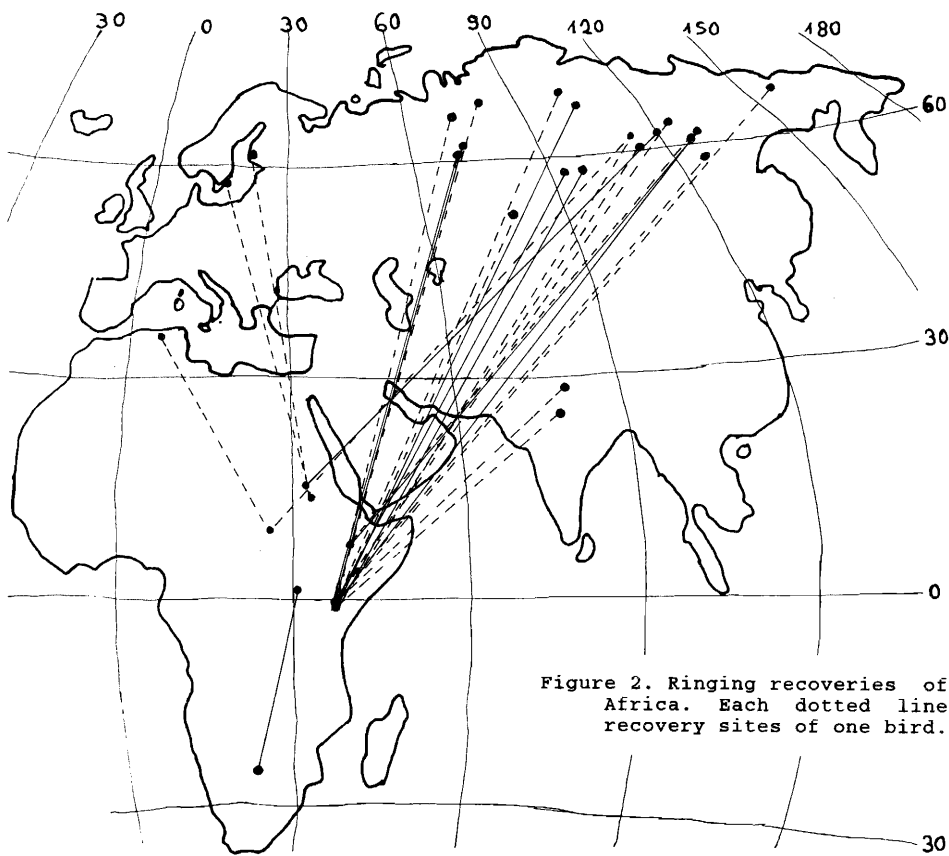


Figure 2. Ringing recoveries of Ruffs (●) from East Africa. Each dotted line joins the ringing and recovery sites of one bird.

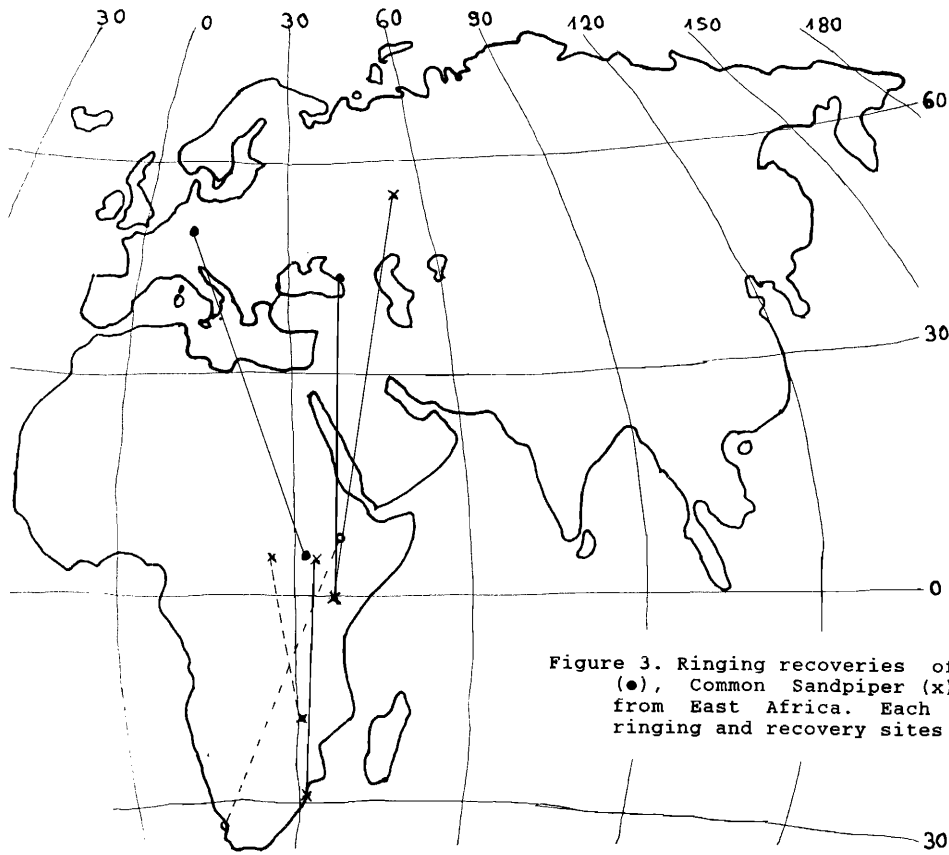


Figure 3. Ringing recoveries of Little Ringed Plover (●), Common Sandpiper (x) and Terek Sandpiper (○) from East Africa. Each dotted line joins the ringing and recovery sites of one bird.

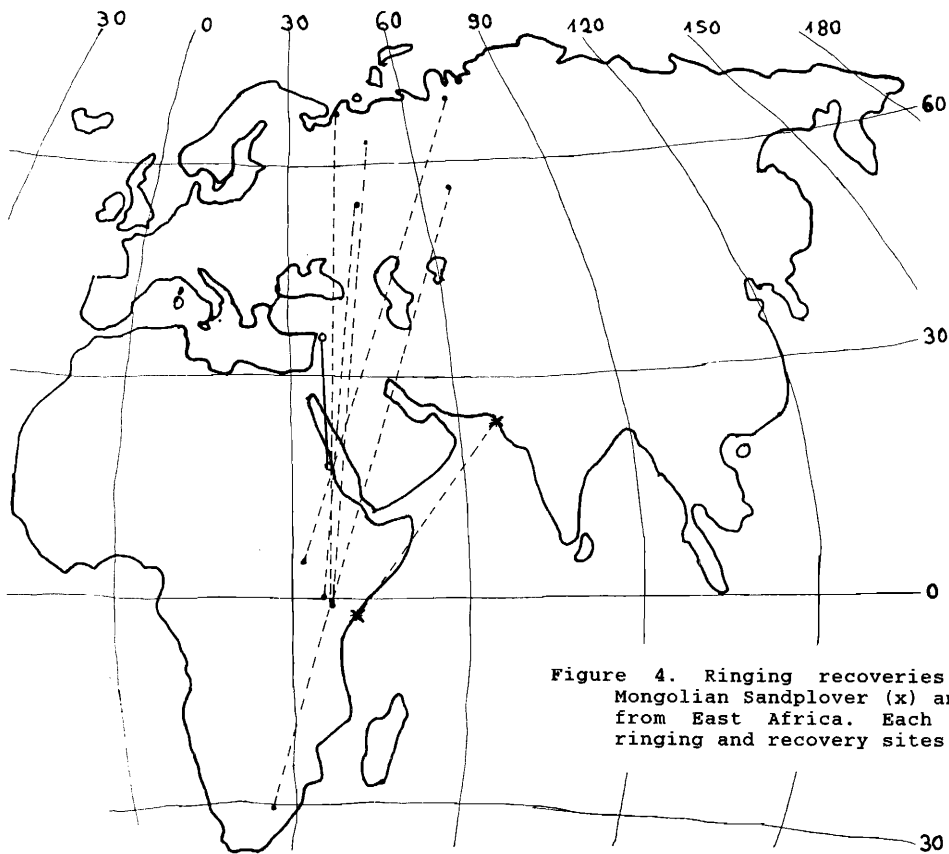


Figure 4. Ringing recoveries of Wood Sandpiper (●), Mongolian Sandplover (x) and Greater Sandplover (○) from East Africa. Each dotted line joins the ringing and recovery sites of one bird.

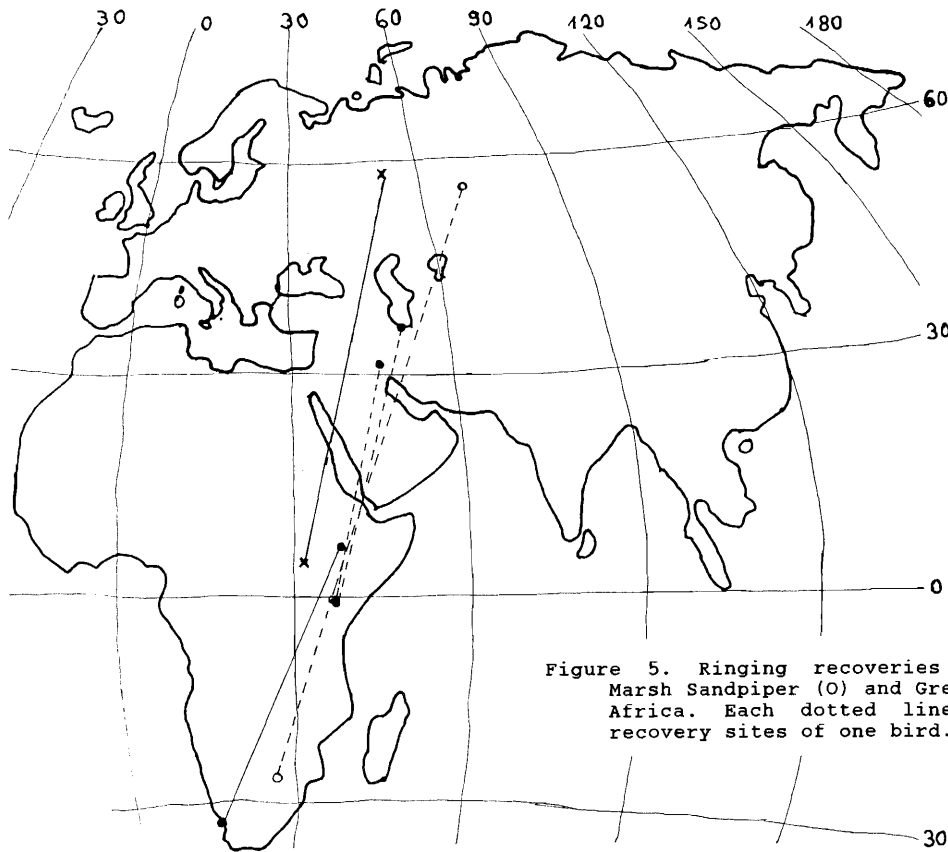


Figure 5. Ringing recoveries of Curlew Sandpiper (●), Marsh Sandpiper (○) and Great Snipe (x) from East Africa. Each dotted line joins the ringing and recovery sites of one bird.

migrates in a broad front overland in Africa. The few recoveries and observations indicate that southern African birds at least stopover in suitable habitat around the equator on spring migration.

The origins of Dunlins *Calidris alpina* wintering in north-east Africa and of Kentish Plovers *Charadrius alexandrinus* in the Nile Valley around Khartoum are still unknown.

There is no information on the migration movements of Palearctic populations of the Spur-winged Plover *Vanellus spinosus*, Kittlitz's Sandplover *Charadrius pecuarius* and Black-winged Stilt *Himantopus himantopus*.

The small number of recoveries of Greenshanks *Tringa nebularia*, Little Ringed Plovers *Charadrius dubius*, Terek Sandpipers *Tringa terek*, Wood Sandpipers *Tringa glareola*, Mongolian Sandpipers *Charadrius mongolus*, Great Sandpipers *Charadrius leschenaulti*, Curlew Sandpipers *Calidris ferruginea*, Marsh Sandpipers *Tringa stagnatilis* and Great Snipe *Gallinago media* are shown in Figures 1, 2, 4 and 5.

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APPENDIX

WADER RECOVERIES FROM EASTERN AFRICA

compiled for Ethiopia by J.S. Ash, Sudan by G. Nikolaus, East Africa by G.C. Backhurst and D.J. Pearson (Kenya, Tanzania, Uganda)

Black-winged Stilt *Himantopus himantopus*

H1470 4 05.01.72 Lake Nakuru, Kenya 00° 20'S 36°06'E v Lake Bogoria, Kenya 00°15'N 36°06'E 27.10.73

Blacksmith Plover *Vanellus armatus*

C1615 Ad 20.10.70 Naivasha, Kenya 00°43'S 36°25'E ? Lake Ol Bolossat, Kenya 00°09'S 36°26'E 00.00.77

Kitlitz's Sandplover *Charadrius pecuarius*

A3416 2 20.04.68 Lake Nakuru, Kenya ? Lake Elmenteita, Kenya 00°27'S 36°15'E 06.04.69

Three-banded Plover *Charadrius tricollaris*

A8125 4 08.03.70 Naivasha, Kenya v Lake Nakuru, Kenya 04.10.70

Little Ringed Plover *Charadrius dubius*

80509160 3 13.08.78 Helmestausee, DR Germany 51°27'N 11°01'E v Juba, Sudan 04°52'N 31°30'E 13.11.78
A3194 3 Lake Nakuru, Kenya x Sukhumi, USSR 43°00'N 41°01'E 26.05.68

Great Sandplover *Charadrius leschenaultii*

A42779 4 07.09.81 Suakin, Sudan 19°08'N 37°17'E + Habara, Syria 35°40'N 37°45'E 03.04.82

Mongolian Sandplover *Charadrius mongolus*

A43250 4 21.12.82 Mida Creek, Kenya 03°22'S 39°58'E v Pasni, Pakistan 25°13'N 63°30'E 03.09.82

Little Stint *Calidris minuta*

60144231 ? 01.12.66 Kafue Flats, Zambia 15°27'S 27°24'E v Lake Nakuru, Kenya 25.03.-06.04.68
A0773 4 03.03.67 Lake Nakuru, Kenya v Naivasha, Kenya 01.01.69
J24353 4 15.03.69 Naivasha, Kenya v Lake Nakuru, Kenya 10.10.70
J69424 4 13.04.72 Lake Turkana, Kenya 03°31'N 35°55'E v Lake Magadi, Kenya 02°00'S 36°10'E 12.05.73
K0042 4 14.01.73 Lake Naivasha, Kenya v Lake Magadi, Kenya 03.03.73
K0536 4 05.05.73 Lake Magadi, Kenya v Baie de Mwiga, Zaire 00°41'S 29°23'E 05.11.73
K2611 4 20.05.73 Lake Magadi, Kenya v Lake Bogoria, Kenya 27.10.73
K1402 3 26.11.73 Lake Naivasha, Kenya v Lake Nakuru, Kenya 04.05.74
A93916 4 20.02.73 Lake Kariba 17°00'S 28°00'E v Lake Magadi, Kenya 06.10.73
K2400 4 09.02.74 Lake Bogoria, Kenya v Lake Magadi, Kenya 23.09.74
K5161 4 22.04.76 Lake Turkana, Kenya + Irgiz-Tourgai Depr., USSR 48°28'N 62°09'E 08.08.76
AA37396 4 13.10.74 Rainham Dam, Zimbabwe 17°46'S 30°53'E v Lake Magadi, Kenya 03.10.76
K5308 2 13.11.78 Juba, Sudan v Lake Magadi, Kenya 20.01.79
K7001 4 07.12.82 Jebel Aulia Dam, Sudan 15°15'N 32°28'E v Khartoum, Sudan 15°35'N 32°20'E 09.03.83
BP61799 2 22.01.76 Lake Langano, Ethiopia 07°34'N 38°51'E v Lake Airkol, USSR 48°28'N 62°09'E 17.07.76
BP60178 2 21.10.74 Lake Koka, Ethiopia 08°27'N 39°06'E + Sug Ash Shuyukh, Iraq 30°53'N 46°28'E 01.01.79
K3237 4 06.09.75 Lake Nakuru, Kenya v Darwendale Dam, Zimbabwe 17°52'S 30°51'E 23.08.78
AA80372 4 22.10.78 Salisbury Dis., Zimbabwe 17°52'S 31°05'E v Lake Magadi, Kenya 16.08.80
AA80557 5 18.03.79 Crowborough, Zimbabwe 17°52'S 30°54'E v Lake Magadi, Kenya 23.08.79
AA36208 2 13.01.82 Darwendale, Zimbabwe v Lake Magadi, Kenya 14.05.83

Curler Sandpiper *Calidris ferruginea*

A5652 6 03.05.69 Lake Nakuru, Kenya v Lake Magadi, Kenya 15.10.72
A6413 2 20.10.69 Lake Nakuru, Kenya v Lake Magadi, Kenya 01.10.72
A10371 2 26.09.70 Lake Nakuru, Kenya v Lake Magadi, Kenya 10.09.72
A10858 4 01.05.71 Lake Nakuru, Kenya + Uruk, Iraq 31°18'N 45°40'E 21.05.74
A18852 5 24.03.73 Lake Magadi, Kenya + Saged Mahalleh, Iran 36°44'N 53°01'E 16.03.76
A12748 2 29.12.73 Lake Magadi, Kenya v Lake Nakuru, Kenya 30.08.75
5 01-04.76 Langebaan, South Africa 33°05'S 18°02'E v Lake Abiata, Ethiopia 07°34'N 38°51'E 14.06.76

Ruff *Philomachus pugnax*

CN35959 2f 31.10.70 Lake Abiata, Ethiopia + 26km from Yakuttsk, USSR 62°19'N 129°50'E 17.05.71
CN35992 2f 01.11.70 Lake Abiata, Ethiopia ? Lake Koka, Ethiopia (17.02.72)
DA10905 3 06.10.76 Lake Koka, Ethiopia + Nizhiy-Bestyakh, USSR 61°09'N 128°46'E 20.05.79
B11883 3f 02.09.78 Aweil, Sudan 08°46'N 27°24'E ? Setif, Algeria 36°11'N 05°24'E 23.04.79
C2933 3m 31.08.78 Aweil, Sudan + Toybokhoy, USSR 62°08'N 116°51'E 22.05.84
C5324 3m 06.12.80 Khartoum, Sudan x Sennar, Sudan 13°31'N 33°38'E 14.02.81
B27080 6f 22.08.81 Kosti, Sudan 13°10'N 32°40'E + Manaquil, Sudan 14°15'N 32°50'E 20.11.81
C2137 3m 03.11.82 Hasaheisa, Sudan 14°25'N 33°20'E + Rahad Scheme, Sudan 13°00'N 34°00'E
B27267 6f 16.01.83 Khartoum, Sudan + Verkhnovilyyski, USSR 63°23'N 120°19'E 22.05.83
B38672 1 28.07.62 Pori, Finland 61°32'N 21°35'E + Sennar, Sudan 04.11.63
5051917 3f 10.08.65 Oland, Sweden 56°24'N 16°24'E x Wad Medani, Sudan 14°24'N 33°30'E 10.11.66
C0466 4m 25.03.68 Lake Nakuru, Kenya + Tyumen Reg., USSR 62°50'N 73°00'E 17.05.68
B0900 4f 06.04.68 Lake Nakuru, Kenya Krasnoyarsk, USSR 57°38'N 32°15'E 31.05.68

Ruff (cont.....)

B0617	4f	06.05.68	Lake Nakuru, Kenya	? Lake Baringo, Kenya 00°40'N 36°00'E	00.10.68
B2822	4f	23.11.68	Lake Nakuru, Kenya	+ Neryuktei, USSR 60°41'N 116°27'E	19.05.70
B5553	6f	08.02.69	Lake Nakuru, Kenya	+ Berdigestyakh, USSR 62°07'N 126°39'E	20.05.69
B2920	4f	10.10.69	Naivasha, Kenya	v Lake Nakuru, Kenya	24.01.71
C1760	6m	04.04.69	Naivasha, Kenya	+ Dudinka, USSR 69°24'N 80°17'E	05.06.71
B2511	6f	08.02.69	Lake Nakuru, Kenya	+ Vilyuisk, USSR 63°45'N 121°37'E	19.05.72
B4166	6f	10.05.70	Lake Nakuru, Kenya	+ Nadym, USSR 65°37'N 72°48'E	15.04.71
B7853	4f	16.01.71	Lake Nakuru, Kenya	v Lake Bogoria, Kenya	27.01.71
B7853	4f	16.01.71	Lake Nakuru, Kenya	v Lake Nakuru, Kenya	16.10.71
B7162	5f	22.02.71	Lake Nakuru, Kenya	+ Surgut, USSR 61°18'N 73°22'E	20.05.71
B5649	6f	12.04.69	Lake Nakuru, Kenya	+ Meerut, India 29°00'N 77°40'E	16.02.73
B5837	2f	08.11.69	Lake Nakuru, Kenya	v Lake Bogoria, Kenya	09.02.74
C1486	4m	26.09.70	Lake Nakuru, Kenya	v Lake Naivasha, Kenya	25.02.73
C2329	3m	06.11.71	Lake Nakuru, Kenya	v Lake Naivasha, Kenya	25.02.73
B12836	4f	20.08.72	Lake Nakuru, Kenya	v Lake Naivasha, Kenya	08.12.73
64305856	4m	07.09.72	BarbersPan, South Africa 26°33'S 25°36'E	v Butiaba, Uganda 01°49'N 31°19'E	24.04.73
C3116	6m	02.01.71	Lake Nakuru, Kenya	+ Sredne, USSR 67°25'N 153°40'E	03.06.75
B9700	3f	11.09.71	Lake Nakuru, Kenya	? Aldam, USSR 58°37'N 125°24'E	05.05.75
B11727	5f	02.02.74	Lake Naivasha, Kenya	+ Lake Magadi, Kenya	04.01.75
B15404	4f	24.10.76	Lake Magadi, Kenya	+ Olenek River, USSR 68°28'N 113°00'E	20.05.77
C3474	3m	27.10.73	Lake Bogoria, Kenya	x Vilyuisk, USSR	03.07.77
C2527	4m	27.09.75	Lake Magadi, Kenya	+ Khatanga, USSR 72°00'N 102°15'E	00.06.79
C2558	5m	20.03.76	Lake Magadi, Kenya	v Rubtsovsk, USSR 51°30'N 81°13'E	09.06.79
B12444	5f	24.01.76	Lake Magadi, Kenya	x Lake Nakuru, Kenya	02.07.81
C1684	6m	16.01.82	Lake Magadi, Kenya	+ Motyginiski, USSR 58°11'N 94°36'E	16.05.82
B16688	4f	02.12.78	Lake Magadi, Kenya	x Vilyuy River, USSR 62°08'N 117°05'E	19.05.85
B50481	4f	16.09.82	BharatPur, Rajasthan, India 27°15'N 77°30'E	+ Mwea, Kenya 01°17'S 36°50'E	27.01.84

Great Snipe *Gallinago media*

B13584	2	14.11.78	Juba, Sudan	+ Kirov, USSR 58°19'N 51°00'E	30.08.78
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Redshank *Tringa totanus*

CJ05566	2	19.10.71	Lake Abiata, Ethiopia	v Lake Koka, Ethiopia	19.12.71
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Marsh Sandpiper *Tringa stagnatilis*

B11757	2	06.10.73	Lake Magadi, Kenya	v Lake Naivasha, Kenya	26.11.73
B11838	2	12.10.75	Lake Magadi, Kenya	v Lake Manyara, Tanzania 03°35'S 35°50'E	27.01.79
B8716	4	15.04.72	Lake Nakuru, Kenya	x Roolwal Sewerage Pan, South Africa 27°18'S 27°32'E	13.10.75
B8256	2	04.10.74	Lake Nakuru, Kenya	? Vagai, USSR 56°27'N 67°21'E	03.09.75

Greenshank *Tringa nebularia*

C5313	4	06.11.80	Suakin, Sudan 19°08'N 37°17'E	+ Kaduysky, USSR 59°15'N 37°11'E	02.05.86
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Wood Sandpiper *Tringa glareola*

B5638	6	12.04.68	Lake Nakuru, Kenya	? Mezen, USSR 65°50'N 44°17'E	00.09.69
B1980	2	21.10.68	Lake Nakuru, Kenya	? Turinskaya, USSR 57°38'N 64°27'E	11.07.71
B4537	4	07.11.69	Athi River, Kenya 01°26'S 36°59'E	+ Koslan, USSR 63°28'N 48°58'E	18.05.72
B6103	2	12.10.69	Bunjala Rice Proj., Kenya 00°05'N 34°02'E	x Semenov, USSR 56°48'N 44°33'E	16.05.74
A25054	2	21.10.78	Juba, Sudan	+ Yamal, USSR 66°30'N 70°38'E	01.06.80
B9642	3	11.09.71	Lake Nakuru, Kenya	x NorvalsPoint, South Africa 30°38'S 25°27'E	20.11.80

Terek Sandpiper *Xenus cinereus*

2-48356	6	25.02.73	Langebaan, South Africa	v Lake Koka, Ethiopia	21.04.76
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Common Sandpiper *Actitis hypoleucos*

A4997	4	14.04.68	Lake Nakuru, Kenya	+ Chaikovskii, USSR 56°46'N 54°08'E	28.05.68
BB14909	2	03.12.77	Durban, South Africa 29°42'S 31°04'E	+ Torit, Sudan 04°25'N 32°35'E	06.04.78
BB41704	2	15.02.81	Harare, Zimbabwe 17°40'S	+ Yambio, Sudan 04°30'N 28°15'E	20.03.83

