

Appendix 1

Palearctic migrants ringed at Ngulia Lodge during autumn (October - January¹), 1969-2012

Little Bittern <i>Ixobrychus m. minutus</i> [Palearctic race].....	8
Black-crowned Night Heron <i>Nycticorax nycticorax</i>	1
Eleonora's Falcon <i>Falco eleonora</i>	1
Eurasian Hobby <i>Falco subbuteo</i>	2
Levant Sparrowhawk <i>Accipiter brevipes</i>	1
Eurasian Sparrowhawk <i>Accipiter nisus</i>	5
Booted Eagle <i>Aquila pennata</i>	1
Corncrake <i>Crex crex</i>	12
Spotted Crake <i>Porzana porzana</i>	1
Great Snipe <i>Gallinago media</i>	1
Green Sandpiper <i>Tringa ochropus</i>	7
Wood Sandpiper <i>Tringa glareola</i>	13
Common Sandpiper <i>Actitis hypoleucos</i>	1
Common Cuckoo <i>Cuculus canorus</i>	16
Lesser Cuckoo <i>Cuculus poliocephalus</i>	15
Eurasian Scops Owl <i>Otus scops</i>	14
Eurasian Nightjar <i>Caprimulgus europaeus</i>	759
Common Swift <i>Apus apus</i>	2
Eurasian Roller <i>Coracias garrulus</i>	198
Eurasian Bee-eater <i>Merops apiaster</i>	4
Eurasian Wryneck <i>Jynx torquilla</i>	2
Red-backed Shrike <i>Lanius collurio</i>	5391
Isabelline Shrike <i>Lanius isabellinus</i>	2614
Eurasian Golden Oriole <i>Oriolus oriolus</i>	35
Sand Martin <i>Riparia riparia</i>	14
Barn Swallow <i>Hirundo rustica</i>	25 205
Common House Martin <i>Delichon urbicum</i>	600
Red-rumped Swallow <i>Cecropis daurica rufula</i> [Palearctic race].....	1
River Warbler <i>Locustella fluviatilis</i>	14 047
Savi's Warbler <i>Locustella luscinioides</i>	2
Basra Reed Warbler <i>Acrocephalus griseldis</i>	2533
Great Reed Warbler <i>Acrocephalus arundinaceus</i>	142
Sedge Warbler <i>Acrocephalus schoenobaenus</i>	258
Eurasian Reed Warbler <i>Acrocephalus scirpaceus</i>	204
Marsh Warbler <i>Acrocephalus palustris</i>	209 727
Olivaceous Warbler <i>Iduna pallida</i>	1394
Upcher's Warbler <i>Hippolais languida</i>	830
Olive-tree Warbler <i>Hippolais olivetorum</i>	2033
Icterine Warbler <i>Hippolais icterina</i>	11
Willow Warbler <i>Phylloscopus trochilus</i>	6367
Common Chiffchaff <i>Phylloscopus collybita</i>	2

¹ In 1974, eight Palearctic migrants (Garden Warbler 2, Barred Warbler 4 and Irania 2) were caught and ringed at the Lodge on 3 February; one of the Garden Warblers was subsequently recovered in Jordan, see p. 56.

Wood Warbler <i>Phylloscopus sibilatrix</i>	9
Blackcap <i>Sylvia atricapilla</i>	145
Garden Warbler <i>Sylvia borin</i>	1953
Barred Warbler <i>Sylvia nisoria</i>	2320
Common Whitethroat <i>Sylvia communis</i>	99 462
Thrush Nightingale <i>Luscinia luscinia</i>	105 734
Common Nightingale <i>Luscinia megarhynchos</i>	2388
Irania <i>Irania gutturalis</i>	9089
Rufous Scrub Robin <i>Cercotrichas galactotes</i>	1670
Common Redstart <i>Phoenicurus phoenicurus</i>	13
Whinchat <i>Saxicola rubetra</i>	4
Isabelline Wheatear <i>Oenanthe isabellina</i>	166
Northern Wheatear <i>Oenanthe oenanthe</i>	236
Pied Wheatear <i>Oenanthe pleschanka</i>	131
Common Rock Thrush <i>Monticola saxatilis</i>	553
Spotted Flycatcher <i>Muscicapa striata</i>	3178
Yellow Wagtail <i>Motacilla flava</i>	12
Tree Pipit <i>Anthus trivialis</i>	109
Red-throated Pipit <i>Anthus cervinus</i>	2
Ortolan Bunting <i>Emberiza hortulana</i>	2
Red-backed x Isabelline Shrike hybrid <i>Lanius collurio</i> x <i>L. isabellinus</i>	25
Barn Swallow x Common House Martin hybrid <i>Hirundo rustica</i> x <i>Delichon urbicum</i>	1
Blyth's Reed Warbler x Marsh Warbler hybrid <i>Acrocephalus dumetorum</i> x <i>A. palustris</i>	1
Number of species.....	61
Total.....	499 677

Appendix 2

Recoveries and controls of Palearctic birds involving Ngulia (to September 2013)

dates: the first is the ringing date, the second the recovery or control date;
 recoveries and controls are listed in ringing date order;
 km = Great Circle distance in kilometres between ringing and recovery sites;
 d = elapsed time in days between ringing and recovery or control;
 recovery = reported, found or killed by a member of the public;
 control = caught and released by another ringer;
 RG = Ringing Group.

Ngulia is at 3°00'S, 38°13'E

Abbreviations

Age when ringed or recovered (EURING codes for Palearctic migrants)

- 1 pullus, a young bird, unable to fly
- 2 fully grown, year of hatching quite unknown
- 3 hatched during calendar year of ringing
- 4 hatched before calendar year of ringing but exact year unknown
- 5 hatched during previous calendar year
- 6 hatched before previous calendar year but exact year unknown
- 7 definitely hatched two calendar years before ringing or recapture
- 8 hatched more than two calendar years before year of ringing or recapture

Sex

m male; f female

Condition at recovery

- X found dead
 XF found freshly dead or dying
 XL found dead (not recent)
 + shot or intentionally killed by man
 A alive and probably healthy — fate unknown
 R caught and released by a ringer — a control
 B caught and released by a ringer — a control of a breeding bird
 // condition on finding completely unknown

When the date of recovery is not accurate, “c.”, *circa*, is given before the date

When the date of a recovery reported by letter or email is unknown, the date of the letter or email is given in parentheses

When the date of recovery is completely unknown, the date is given by zeroes

When the ring number is in italics the number has been verified, either by the return of the ring or by a photograph.

***Caprimulgus europaeus* Eurasian Nightjar**

759 ringed: 2 found (1 recovery, 1 control); 1:379; 2 countries

<i>Stockholm</i>	13.11.93	3	Ngulia, 03:00 (Ngulia RG)
4338825	19.05.95	R = m	Chokpak Ornithological Station, Kazakhstan , 42°31'N, 70°38'E, 6015 km, 552 d (Edward Gavrilov)

*Chokpak is the most easterly proved recovery site of any Ngulia-ringed bird; also see the *Hirundo rustica* controls below.*

<i>Stockholm</i>	25.11.93	3	Ngulia, 05:30; the bird was of the nominate race (Ngulia RG)
4369213	1995–96	X car	Baft, Kerman Province, Iran , 29°12'N, 56°36'E, 4078 km (Parviz Abazari)

Coracias garrulus* Eurasian Roller*198 ringed: 1 recovery**

<i>Nairobi</i>	10.12.86	4	Ngulia, night (Ngulia RG)
H1332	01.05.89	+	Wadi Maheam, Samail, Oman , 23°18'N, 57°59'E, 3623 km, 873 d (per M. D. Gallagher)

Lanius collurio* Red-backed Shrike*5391 ringed: 2 recoveries; 1:2695; 2 countries**

<i>Stockholm</i>	19.11.95	4 m	Ngulia, 06:00 (Ngulia RG)
3403353	12.07.96	X	near Tbilisi, Georgia , 41°43'N, 44°48'E, 5013 km, 236 d; the finder thought it had been dead “for a couple of weeks” (Zaal Kokaia)
<i>Stockholm</i>	27.11.02	3	Ngulia, 06:00 (Ngulia RG, David Murdoch)
3501228	05.05.06	X cat	Tabriz, Iran , 38°05'N, 46°18'E 4640 km, 1255 d (M. Massoud)

These two recovery locations are only 373 km apart.

Lanius isabellinus* Red-tailed Shrike*2614 ringed: 2 recoveries; 1:1307, 1 country**

<i>Nairobi</i>	26.11.76	4 m	Ngulia (Ngulia RG)
A27566	13.04.79	+	15 km north of Kuwait City, Kuwait , 29°25'N, 48°00'E, 3750 km, 868 d (T. Abbas)
<i>Nairobi</i>	03.12.76	3	Ngulia (Ngulia RG)
A27841	19.04.77	+	near sea coast, Kuwait , c. 29°N, 48°E, c. 3706 km, 137 d (per Kuwait Science & Natural History Museum)

Both ringed in the same year, recovered in two different years, but both in Kuwait.

Hirundo rustica* Barn Swallow*25 205 ringed: 9 found (6 controls, 3 recoveries); 1:2800; 3* countries**

<i>Stockholm</i>	07.12.96	3	Ngulia, 09:00 (Ngulia RG)
BL44236	22.09.98	R	Chokpak Ornithological Station, Kazakhstan , 42°31'N, 70°38'E, 6015 km, 654 d (Edward Gavrilov)
<i>Ozzano</i>	07.09.99	3	Chokpak Ornithological Station, Kazakhstan , 42°31'N, 70°38'E, (Edward Gavrilov)
AE44605	09.12.99	R	Ngulia, 08:40, 6015 km, 93 d (Ngulia RG)
<i>Almaty</i>	29.09.00	3	Chokpak Ornithological Station, Kazakhstan , 42°31'N, 70°38'E, (Edward Gavrilov)
LA01884	04.12.00	R	Ngulia, 11:00, 6015 km, 66 d; the <i>Almaty</i> ring was damaged so re-ringed <i>Stockholm</i> BR48958 (Ngulia RG)
<i>Stockholm</i>	28.11.00	3	Ngulia, 13:00 (Ngulia RG, Janette Troop)
BR43277	26.04.02	R = 5m	Chokpak Ornithological Station, 15:00, Kazakhstan , 42°31'N, 70°38'E, 6015 km, 514 d (ring <i>Almaty</i> LA09437 added, Edward Gavrilov)
<i>Stockholm</i>	10.12.01	3	Ngulia, 11:15 (Ngulia RG, Norbert Roothaert)
BU55551	22.09.03	R = 6f	Chokpak Ornithological Station, Kazakhstan , 42°31'N, 70°38'E, 10:00, 6015 km, 651 d (ring <i>Almaty</i> LA20031 added, Edward Gavrilov)
<i>Stockholm</i>	01.12.05	4	Ngulia, 13:20 (Ngulia RG, Stuart Sharp)
CD60362	16.01.06	+ = f	Hombolo dam, Dodoma, Tanzania , 6°00'S, 35°55'E, 420 km, 46 d (Makondo Zachariah)
<i>Stockholm</i>	03.12.05	3	Ngulia, 10:00 (Ngulia RG, DP)
CD65119	00.12.05	X	Kisoba, near Tukuyu, Tanzania , c. 9°15'S, 33°40'E, 859 km. The ring and a handwritten note were taken to the Museum in Stockholm in May 2009 when the finding date was given as “in December 2005”, thus no elapsed time can be given.

<i>Stockholm</i>	04.12.05	3	Ngulia, 12:00 (Ngulia RG, Helen Leach)
CD65766	27.09.06	R = f	Chokpak Ornithological Station, Kazakhstan , 42°31'N, 70°38'E, 6015 km, 297 d (Andrey Gavrilov)
<i>Stockholm</i>	05.12.05	3	Ngulia, 12:00 (Ngulia RG, Bernard Amakobe)
CD67268	05.03.07	X	Satao Camp, Tsavo East National Park, Kenya , 94 km, 455 d, bird hit a table leg and died (Werner Bachman)

The last four were ringed on successive days in a year when over 3000 Barn Swallows were ringed.

**In addition, there have been controls at Ngulia of four Barn Swallows, provenance unknown, which had been marked with unconventional metal rings and fabric threads.*

***Locustella fluviatilis* River Warbler**

14 047 ringed: 3 found (1 recovery, 2 controls); 1:4682; 3 countries

<i>Praha</i>	22.05.94	7m	Piešťany, Trnava, Slovakia , 48°36'N, 17°49'E (P. Kaňuščák)
T741274	10.12.96	R	Ngulia, 06:30, 6064 km, 933 d (Ngulia RG)
<i>Stockholm</i>	17.11.95	3	Ngulia, 03:00 (Ngulia RG)
BH00064	08.05.98	X wires	Gagarin, Smolensk Oblast, Russia , 55°33'N, 35°00'E, 6513 km, 903 d (Moscow RC)
<i>Ljubljana</i>	30.07.00	3	Drava, Vurberk, Ptuj, Slovenia , 46°29'N, 15°47'E (Franc Bracko)
AE48827	02.12.00	R	Ngulia, 06:00, 5923 km, 125 d (Ngulia RG)

***Acrocephalus griseldis* Basra Reed Warbler**

2533 ringed: 1 recovery

<i>Stockholm</i>	16.12.93	4	Ngulia, 07:00 (Ngulia RG)
2KE99808	23.08.95	//	Wadi Wirat, Hawtat Sudayr, Saudi Arabia 180 km N of Riyadh, 26°20'N, 46°20'E, 3781 km, 615 d (Otham Ibrahim)

Killed on its return migration to Africa.

***Acrocephalus palustris* Marsh Warbler**

209 727 ringed: 142 found (68 recoveries, 74 controls); 1:1477; 28 countries

<i>Nairobi</i>	02.12.72	2	Ngulia (Ngulia RG, DP)
J80501	03.07.75	R = f	12 km NE of Schwedt/Oder, Brandenburg, Germany , 53°10'N, 14°22'E, 6626 km, 943 d (ring <i>Hiddensee</i> 9055153 added)
<i>Nairobi</i>	16.12.73	2	Ngulia (Ngulia RG, GB and Daphne Backhurst)
J76888	00.05.77	//	Al Artawiyah, Saudi Arabia , 26°31'N, 45°21'E, 3368 km, c. 1231 d (Neam Mohamed-Twala)
<i>Nairobi</i>	16.12.73	2	Ngulia, day (Ngulia RG, GB and Daphne Backhurst)
J76873	00.06.75	//	near Mekhel'ta, Dagestan, Russia , 42°47'N, 46°33'E, 5156 km, c. 531 d (Moscow RC)
<i>Nairobi</i>	20.11.74	2	Ngulia, day (Ngulia RG, GB and Daphne Backhurst)
J85739	23.05.77	R	Eching, Bayern, Germany , 48°30'N, 12°04'E, 6257 km, 915 d (Max Kasperek)
<i>Nairobi</i>	26.11.74	3	Ngulia (Ngulia RG, DP)
J93652	20.07.75	X	Klosters, Graubünden, Switzerland , 46°52'N, 9°53'E, 6195 km, 236 d (Stefan Jösler)
<i>Nairobi</i>	26.11.75	2	Ngulia (Ngulia RG, GB and DP)
J42665	01.12.75	+	Mulanje, Malawi , 16°05'S, 35°29'E, 1484 km, 5 d (<i>per</i> I. F. Kamesa)

The fastest movement of any Ngulia-ringed bird. It was killed by boys.

<i>Nairobi</i>	08.12.75	3	Ngulia, morning (Ngulia RG, GB and Daphne Backhurst)
X0667	03.08.78	+	Sanaw, Oman , 22°22'N, 58°01'E, 3545 km, 969 d (Mrs M. Issac)
<i>Praha</i>	30.07.76	3	Zahradky, Novozamecky Pond, Ceska Lipa, Czech Republic , 50°38'N, 14°32'E (Zd. Jon)
M707385	19.11.79	R	Ngulia, night, 6372 km, 1207 d (Ngulia RG)
<i>Nairobi</i>	03.12.76	3	Ngulia, night (Ngulia RG)
J118525	04.06.78	R = f	Ostrava-Hefmanice, Ostrava, Czech Republic , 49°52'N, 18°20'E, 6176 km, 548 d (A. Kubenka)

<i>Praha</i>	07.08.77	4	Razice, Rezabinec Pond, Pisek, Czech Republic , 49°15'N, 14°06'E (M. Strnad)
M615757	15.11.79	R	Ngulia, night, 6252 km, 830 d (Ngulia RG) <i>The first control of a foreign-ringed bird at Ngulia.</i>
<i>Nairobi</i>	12.12.77	3	Ngulia, night (Ngulia RG, GB, Anna Forbes-Watson, DP)
J124731	30.05.78	X	near Karabudakhkent, Dagestan, Russia , 42°43'N, 47°36'E, 5167 km, 169 d (Moscow RC)
<i>Nairobi</i>	12.12.77	3	Ngulia, night (Ngulia RG, GB, Anna Forbes-Watson, DP)
J124753	27.05.80	R	Praha-Jenerálka, Czech Republic , 50°07'N, 14°21'E, 6328 km, 897 d; also retrapped at the same place 27.06.80, 928 d (Prague RO)
<i>Nairobi</i>	18.12.77	3	Ngulia, night (Ngulia RG, GB, Anna Forbes-Watson, DP)
J126086	07.07.78	X	near St Petersburg, Leningrad Oblast, Russia , 59°55'N, 30°25'E, 7024 km, 201 d (Moscow RC)
<i>Nairobi</i>	23.11.84	4	Ngulia, night (Ngulia RG, GB, Anna Forbes-Watson, DP)
X31255	07.05.85	+	Salalah, Oman , 17°00'N, 54°04'E, 2822 km, 165 d (<i>per</i> S. B. Ajham)
<i>Nairobi</i>	16.12.85	4	Ngulia, night (Ngulia RG, GB and Anna Forbes-Watson)
X45411	01.04.89	X	Tshabuta, East Kasai, Democratic Republic of Congo , 7°01'S, 23°27'E, 1694 km, 1202 d (Albert Feys)
<i>Nairobi</i>	24.11.86	3	Ngulia, day (Ngulia RG)
X47326	17.08.89	+	Irq Banban, Riyadh, Saudi Arabia , 25°00'N, 46°46'E, 3245 km, 997 d (Khalid Ayedh Alhafi)
<i>Nairobi</i>	07.12.86	3	Ngulia, night (Ngulia RG)
X39701	08.08.87	R	Bierbeek, Brabant, Belgium , 50°50'N, 4°46'E, 6772 km, 244 d; re-ringed <i>Bruxelles</i> 2576394 (Marc Herremans, Belgian RO)
<i>Nairobi</i>	17.12.87	3	Ngulia, 03:00 (Ngulia RG)
X524845	00.05.91	XF	Salalah, Dhofar, Oman , 17°03'N, 54°11'E, 2834 km, <i>c.</i> 1245 d (Salim A. Sultan <i>via</i> Michael Gallagher and Gerhard Nikolaus)
<i>Bruxelles</i>	28.06.88	4	Eben-Emmal, Liège, Belgium , 50°48'N, 5°40'E (Gr. 13 Verviétos)
2980319	04.12.91	R	Ngulia, 03:30, 6730 km, 1254 d (Ngulia RG)
<i>Bruxelles</i>	06.08.88	3	Mariembourg, Namur, Belgium , 50°06'N, 4°31'E (Gr. 7 Cinclus)
3009008	30.11.89	R	Ngulia, 07:00, 6720 km, 481 d (Ngulia RG)
<i>Nairobi</i>	07.12.88	4	Ngulia, day time (Ngulia RG)
X59833	09.05.90	//	Sanaw, Oman , 22°22'N, 58°01'E, 3554 km, 518 d (<i>per</i> Isaac Zaki Youssef)
<i>Nairobi</i>	08.12.88	3	Ngulia, 05:00 (Ngulia RG)
X66411	(15.08.94)	+	Al-Ghat, Riyadh, Saudi Arabia , 24°39'N, 46°46'E, 3210 km, <i>c.</i> 2076 d (Ali Hasan Al Odaidan)
<i>Nairobi</i>	14.12.88	3	Ngulia, night (Ngulia RG)
X69055	12.05.90	+	Raysut, Oman , 16°56'N, 54°00'E, 2812 km, 514 d (Mohammed Alawi Al-Mrazah, <i>per</i> M.D. Gallagher)
<i>Radolfzell</i>	20.06.89	1 [4]	Schmellnricht, Kr. Neumarkt, Oberpfalz, Bayern, Germany , 49°08'N, 11°20'E (Dieter Franz)
BX27952	16.12.90	R	Ngulia, 09:00, 6345 km, 544 d (Ngulia RG)
<i>Bruxelles</i>	20.07.89	2	Ste. Marie S/Semois, Luxembourg, Belgium , 49°55'N, 5°27'E (Gr 17 Lorraine)
3008251	28.11.89	R = 3	Ngulia, 04:00, 6662 km, 131 d (Ngulia RG)
<i>Bruxelles</i>	05.08.89	4	Floriffoux, Namur, Belgium , 50°27'N, 4°46'E (Gr. 27 Namur-Sud)
3164483	01.12.89	R	Ngulia, 09:00, 6739 km, 118 d (Ngulia RG)
<i>Nairobi</i>	07.12.89	3	Ngulia, night (Ngulia RG)
X76897	(31.12.90)	+	Gokwe, Zimbabwe , 18°07'S, 28°58'E, 1959 km, 389 d (Gwande Dickens Chihota)
<i>Bruxelles</i>	30.07.90	3	Floriffoux, Namur, Belgium , 50°27'N, 4°46'E (Gr. 27 Namur-Sud)
3651199	26.11.90	R	Ngulia, 07:30, 6739 km, 119 d (Ngulia RG)
<i>Stockholm</i>	26.08.90	3	Sotemosse, Jordberga, Skåne, Sweden , 55°26'N, 13°25'E, (Bo Petersson)
AZ66200	25.11.90	R	Ngulia, 00:45, 6877 km, 91 d (Ngulia RG)

<i>Stockholm</i> BA56927	26.11.90 (15.05.91)	3 X <i>cat</i>	Ngulia, 04:00 (Ngulia RG) Ras Tanura, Saudi Arabia , 26°41'N, 50°11'E, 3540 km, <i>c.</i> 170 d (Alex Antoniou)
<i>Radolfzell</i> BZ90605	23.08.91 01.12.91	3 R	Karm, Kr Roth, Mittelfranken, Bayern, Germany , 49°09'N, 11°18'E (Dieter Franz) Ngulia, 09:00, 6348 km, 100 d (Ngulia RG)
<i>Stockholm</i> BA61700	13.11.91 17.07.93	4 R	Ngulia, 02:15 (Ngulia RG) Achères, Yvelines, France , 48°58'N, 2°04'E, 6740 km, 612 d (Philippe Gautier)
<i>Stockholm</i> BC35625	01.12.91 02.05.94	3 +	Ngulia, 06:00 (Ngulia RG) Mughasay, southern Oman , <i>c.</i> 16°53'N, 53°47'E, <i>c.</i> 2793 km, 883 d (<i>per</i> Ali bin Hassan bin Ali, <i>per</i> Michael Gallagher)
<i>Stockholm</i> BC35174	01.12.91 00.00.00	3 +	Ngulia, 03:45 (Ngulia RG) Kang'goma, Thyolo, Malawi , 16°30'S, 35°07'E, 1538 km; date reported by SAFRING as October 1991, over a month before the bird was ringed! "[caught] Alive and well. Held in captivity by a man whose hobby is catching birds." (<i>per</i> SAFRING)
<i>Stockholm</i> BC37141	06.12.91 14.08.93	3 +	Ngulia, 07:00 (Ngulia RG) Al-Artawe valley, 40 km from Az Zilfi, Saudi Arabia , 26°20'N, 45°00'E, 3340 km, 617 d (Farhoud Saleh Al-Farhoud, Zulfi Institute)
<i>Stockholm</i> BC39646	15.12.91 25.01.92	3 +	Ngulia, 01:00 (Ngulia RG) Kabwe, Zambia , 14°29'S, 28°25'E, 1668 km, 41 d (Chimizya Ng'andu)
<i>Radolfzell</i> BH37294	18.05.92 22.11.92	4 R	Dauka oasis, Dhofar, Oman , 08:00, 18°40'N, 54°04'E (Gerhard Nikolaus) Ngulia, 04:00, 2967 km, 188 d (Ngulia RG)
<i>Radolfzell</i> BZ37479	26.07.92 28.11.92	3 R	Hochstadt, Kr. Lichtenfels, Oberfranken, Bayern, Germany , 50°09'N, 11°10'E (Gerd Glätzer) Ngulia, 03:00, 6446 km, 125 d (Ngulia RG)
<i>Hiddensee</i> VA29954	20.06.93 24.11.97	6 R	Catharinau, Rudolstadt, Thüringen, 05:00, Germany , 50°41'N, 11°23'E (Buttig, Mankenbach) Ngulia, 04:00, 6488 km, 1618 d (Ngulia RG)
<i>Bruxelles</i> 4579336	21.07.93 05.12.94	3 R	Beerse, Antwerpen, Belgium , 51°19'N, 4°52'E (St. 9 Noorderkempen) Ngulia, 00:00 [midnight], 6810 km, 502 d (Ngulia RG)
<i>Praha</i> T716078	25.07.93 08.12.93	4 f R	Ražice, Nature Reserve Řežabinec Písek, Czech Republic , 49°15'N, 14°06'E (M. Jelínek) Ngulia, 03:00, 6252 km, 136 d (Ngulia RG)
<i>Stockholm</i> BC43985	15.11.93 08.07.95	4 R	Ngulia, 06:00 (Ngulia RG) Vrhnika, Slovenia , 45°58'N, 14°18'E, 5929 km, 600 d (T. Trilar)
<i>Stockholm</i> BC44633	19.11.93 02.05.96	4 R	Ngulia, 05:00 (Ngulia RG) Mušov, Břeclav, Czech Republic , 48°54'N, 16°36'E, 6120 km, 895 d; ring removed, replaced with <i>Praha</i> T824666; bird was sexed as male; note the extremely early date of arrival (J. Sviečka and František Zicha)
<i>Stockholm</i> BC46462	01.12.93 06.08.94	3 R	Ngulia, 10:00 (Ngulia RG) Alte Elbe, Bertingen, Wolmirstedt, Sachsen-Anhalt, Germany , 08:00, 52°21'N, 11°50'E, 6630 km, 248 d (Helmut Tauchnitz)
<i>Stockholm</i> BC49426	11.12.93 (15.02.94)	4 X	Ngulia, morning (Ngulia RG) Samfya, Lake Bangweulu, Zambia , 11°22'S, 29°34'E, 1331 km, <66 d (Tresford Lisa, <i>per</i> Swedish Embassy, Lusaka)
<i>Stockholm</i> BE18430	13.12.93 16.08.96	3 X	Ngulia, 05:00 (Ngulia RG) Buraydah, Saudi Arabia , 26°20'N, 43°59'E, 3318 km, 977 d (Abdul Aziz Alswagi)
<i>Stockholm</i> BE20960	17.12.93 19.06.95	3 B	Ngulia, 04:30 (Ngulia RG) Pratau, Wittenberg, Sachsen-Anhalt, Germany , 51°51'N, 12°39'E, 6554 km, 549 d (Manfred Schönfeld)

<i>Stockholm</i> BE21401	18.12.93 03.06.94	3 R	Ngulia, 03:00 (Ngulia RG) Christiansø, Bornholm, Denmark , 55°19'N, 15°12'E, 6813 km, 167 d (Danish Ringing Office)
<i>Stockholm</i> BE22457	28.11.94 06.09.96	4 +	Ngulia, 11:30 (Ngulia RG) Majmaah, Saudi Arabia , 25°52'N, 45°26'E, 3300 km, 648 d (Turkey Al Turkey)
<i>Stockholm</i> BG94259	04.12.94 15.08.97	3 X	Ngulia, 01:00 (Ngulia RG) Buraydah, Saudi Arabia , 26°20'N, 43°59'E, 3318 km, 985 d (Mohamed S. Asail)
<i>Stockholm</i> BG96086	05.12.94 10.05.97	3 X window	Ngulia, 13:30 (Ngulia RG) Dubai, United Arab Emirates , 25°14'N, 55°17'E, 3637 km, 887 d (Ihab Salha via Margareta Herlin)
<i>Stockholm</i> BG97607	09.12.94 18.06.97	3 R = m	Ngulia, 03:00 (Ngulia RG) Hohenau/March, Gänserndorf, Niederösterreich, Austria , 08:00, 48°35'N, 16°55'E, 6709 km, 922 d; possibly breeding (Martin Rössler and Thomas Zuna-Kratky)
<i>Budapest</i> Y69160	01.07.95 26.11.95	4 R	Bélapusza, Komárom-Esztergom, 19:00, Hungary , 47°45'N, 18°12'E, (Tibor Krug) Ngulia 00:00 [midnight], 5966 km, 148 d, (Ngulia RG)
<i>Arnhem</i> F693435	29.07.95 17.11.96	3 R	Kromslootpark, Almere, IJsselmeerpoders, Netherlands , 08:00, 52°20'N, 5°10'E (C. J. Breek) Ngulia, 06:00, 6885 km, 477 d (Ngulia RG)
<i>Bruxelles</i> 5619190	06.08.95 18.12.95	3 R	Herve, Liège, Belgium , 50°38'N, 5°48'E, (ringer's name unreadable) Ngulia, 13:15, 6690 km, 134 d (Ngulia RG)
<i>Stockholm</i> BH00074	17.11.95 19.06.96	3 X	Ngulia, 03:00 (Ngulia RG) Nierstein, Rheinland-Pfalz, Germany , 49°53'N, 8°20'E, 6535 km, 215 d (Alban Arens)
<i>Stockholm</i> BH01969	19.11.95 14.06.97	4 R = f	Ngulia, 08:00 (Ngulia RG) Mydlovary, České Budějovice, Czech Republic , 49°05'N, 14°21'E, 6227 km, 573 d (Fr. Vitek)
<i>Stockholm</i> BH03807	22.11.95 17.08.96	4 X cat	Ngulia, 02:00, (Ngulia RG) Salzburg, Salzburg, Austria , 47°48'N, 13°03'E, 6152 km, 269 d (Peter Mödlhamer)
<i>Stockholm</i> BH04985	23.11.95 10.06.96	3 R	Ngulia, 02:30, (Ngulia RG) Vierde Kroonspolder, West Vlieland, Netherlands , 53°15'N, 4°57'E, 6974 km, 200 d (<i>per</i> Vogeltrekstation Arnhem; controlled by a ringer, but name not given)
<i>Stockholm</i> BJ42575	25.11.95 27.08.97	3 //	Ngulia, 06:00 (Ngulia RG) Julaygem, near Palmyra, Syria , 33°00'N, 38°20'E, 4000 km, 549 d (Muhammad Muhamad Al Husain)
<i>Stockholm</i> BL47630	11.12.96 forgotten	3 +	Ngulia, 06:00 (Ngulia RG) Hiski valley, Az Zolfi, Saudi Arabia , 28° 07'N 43° 32'E, 3504 km
<i>Stockholm</i> BL48028	12.12.96 18.05.97	3 X	Ngulia, 06:00 (Ngulia RG) Mezmaj, Apsheronsky District, Krasnodar, Russia , 44°12'N, 39°57'E, 5248 km, 157 d; the remains of this bird, and the ring, were found in the stomach of a Eurasian Sparrowhawk <i>Accipiter nisus</i> at an altitude of 1210 m in this West Caucasus locality (Romann Mnatzekanov and Moscow RC)
<i>Ljubjana</i> A902016	21.07.97 03.12.99	3 R	Vrhnika, Slovenia , 45°58'N, 14°18'E (Dare Sere and Jana Kus) Ngulia, 06:00, 5928 km, 864 d (Ngulia RG)
<i>Bruxelles</i> 6315178	22.07.97 24.11.98	3 R	Asse ter Heide, Brabant, Belgium , 50°55'N, 4°09'E (WG. 23 Trod- Dokkene) Ngulia, 03:45, 6807 km, 490 d (Ngulia RG)
<i>Bruxelles</i> 6354059	26.07.97 27.11.98	3 R	Wetteren, Oost-Vlaanderen, Belgium , 51°00'N, 3°53'E (St. 1 Alcedo) Ngulia, 01:45, 6826 km, 489 d (Ngulia RG)

<i>Ozzano</i>	03.08.97	3	Gera Lario, Como, Italy , 07:00, 46°10'N, 9°23'E (Walter Corti)
<i>AA47949</i>	22.11.98	X	Ngulia, night, 6154 km, 476 d (Ngulia RG)
			<i>This bird was found dead inside the Lodge having hit a wall during the night.</i>
<i>Stockholm</i>	27.11.97	4	Ngulia, 00:30, (Ngulia RG, Norbert Roothaert)
<i>BM19535</i>	00.07.00	X	Reinfeld, Schleswig-Holstein, Germany , 53°49'N, 10°29'E, 6816 km, c. 960 d (Bernd and Luciane Hammer)
<i>Stockholm</i>	28.11.97	4	Ngulia, 06:00 (Ngulia RG, Norbert Roothaert)
<i>BM20460</i>	15.08.00	+	Buraydah, Saudi Arabia , 26°20'N, 43°59'E, 3318 km, 991 d (Abdulkareem Al-Samani)
<i>Stockholm</i>	30.11.97	3	Ngulia, 09:30 (Ngulia RG, Phil Johnson)
<i>BM21985</i>	(08.08.99)	+	Buraydah, Saudi Arabia , 26°20'N, 43°59'E, 3318 km, c. 616 d (Khaled Al Shoudgay)
<i>Arnhem</i>	27.07.98	3	Drontermeer, Gelderland, Netherlands , 06:00, 52°28'N, 5°50'E (K. Terpstra)
<i>AA16403</i>	23.11.98	R	Ngulia, 23:30, 6869 km, 119 d (Ngulia RG)
<i>Bruxelles</i>	16.08.98	3	Retie, Antwerpen, Belgium , 51°16'N, 5°04'E (St. 9 Noorderkempen)
<i>6747983</i>	04.12.99	R	Ngulia, 02:30 (Ngulia RG), 6797 km, 475 d
<i>Stockholm</i>	24.11.98	4	Ngulia, 09:00 (Ngulia RG, Norbert Roothaert)
<i>BN51315</i>	23.08.99	XL	<i>outside</i> Riyadh, Saudi Arabia , 09:30, c. 26°14'N, 45°54'E, 3352 km, 272 d (Saleh Al-Eid)
<i>Stockholm</i>	25.11.98	4	Ngulia, 10:30 (Ngulia RG, Norbert Roothaert)
<i>BN51960</i>	05.05.01	XF	Al Salmi, 55 km W of Al Jahara, Kuwait , 29°10'N, 47°10'E, 3699 km, 892 d (Musaad Jasser Alsaleeh)
<i>Stockholm</i>	17.12.98	4	Ngulia, 06:00 (Ngulia RG, Joseph Oyugi)
<i>BN57617</i>	25.08.00	+	Ruonaibe, near Damascus, Syria , c. 33°30'N, 36°19'E, 4061 km, 617 d (finder's name only in Arabic)
<i>Stockholm</i>	18.12.98	4	Ngulia, 09:30 (Ngulia RG, Titus Imboma)
<i>BN58319</i>	29.05.99	R = f	Ventės Ragas Ornithological Station, Šilutė, Lithuania , 06:00, 55°21'N, 21°13'E, 6668 km, 162 d (L. Jezerskas)
<i>Bruxelles</i>	29.07.99	3	Retie, Antwerpen, Belgium , 51°16'N, 5°04'E (St. 9 Noorderkempen)
<i>7018243</i>	04.12.99	R	Ngulia, 04:00, 6797 km, 128 d (Ngulia RG)
<i>Bruxelles</i>	31.07.99	3	Bokrijk, Limburg, Belgium , 50°58'N, 5°25'E (WG. 4 Noord-Limburg)
<i>6980660</i>	22.11.00	R	Ngulia, 06:00, 6755 km, 480 d (Ngulia RG)
<i>Budapest</i>	29.08.99	3	Regöly-Pacsmag, Tolna, Hungary , 07:00, 46°35'N, 18°23'E (Z. Molnár)
<i>5Y8240</i>	11.12.99	R	Ngulia, 06:00, 5843 km, 104 d (Ngulia RG)
<i>Stockholm</i>	29.11.99	3	Ngulia, 06:00 (Ngulia RG, DP)
<i>BR23282</i>	00.04.00	X	Raysut Port, Oman , 16°56'N, 54°00'E, 2812 km, c. 130 d; found dead floating in the sea in the first half of April (H. Said Al-Sabty)
<i>Stockholm</i>	29.11.99	3	Ngulia, 06:00 (Ngulia RG, GB)
<i>BR23329</i>	01.08.00	R	Pepingen, Brabant, Belgium , 50°45'N, 4°09'E, 6792 km, 246 d; controlled as an <i>A. scirpaceus</i> (WG. 2 Halle)
<i>Stockholm</i>	07.12.99	4	Ngulia, 06:00 (Ngulia RG, Jerry Lewis)
<i>BR31445</i>	17.08.00	+	Buraydah, Saudi Arabia , 26°20'N, 43°59'E, 3326 km, 254 d (Majed Bani)
<i>Stockholm</i>	11.12.99	4	Ngulia, 06:00 (Ngulia RG, Leon Bennun)
<i>BR34504</i>	15.07.00	X car	between Aidlingen and Stuttgart, Baden-Württemberg, Germany , c. 48°40'N, 8°55'E, c. 6400 km, <217 d; found on the front of the finder's car (Ute Reichert)
<i>Stockholm</i>	21.11.00	3	Ngulia, 17:30 (Ngulia RG, Marc Hebbelinck)
<i>BR36249</i>	25.07.02	X cat	Søndersø, Odense, Fyn, Denmark , 55°29'N, 10°15'E, 6981 km, 611 d (Kit Petersen)
<i>Stockholm</i>	23.11.00	3	Ngulia, 07:00 (Ngulia RG, CJ)
<i>BR36809</i>	12.12.03	X	Mulanje, Malawi , 16°05'S, 35°25'E, 1486 km, 1114 d (Stewart Lane)

<i>Stockholm</i> BR46755	02.12.00 20.08.01	3 +	Ngulia, 06:00 (Ngulia RG, Ludo Roothaert) Ar'ar, Saudi Arabia , 13:30, 30°58'N, 41°03'E, 3783 km, 261 d (Farhan Kanaan al Anazy)
<i>Stockholm</i> BR47302	02.12.00 05.05.03	4 X	Ngulia, 10:00 (Ngulia RG, Brian Manton) Haswyl, Al Mahra, Hassween, Yemen , 15°35'N, 52°06'E, 2568 km, 884 d (Awadh Ali Saeed)
<i>Praha</i> S191273	05.07.01 19.11.01	3 R	Lomnice nad Lužnicí, Jindřichův Hradec, Czech Republic , 49°05'N, 14°43'E (Zicha František) Ngulia, 06:00, 6214 km, 137 d (Ngulia RG)
<i>Bruxelles</i> 7703888	18.07.01 15.11.01	3 R	Meersplas, Antwerpen, Belgium , 51°22'N, 4°52'E (St. 9 Noorderkempen) Ngulia, 03:45 (and also retrapped 06:00 on the same day), 6814 km, 120 d (Ngulia RG)
<i>Radolfzell</i> B1E8142	21.07.01 15.12.01	3 R	Wollsdorf, Steiermark, Austria , 47°07'N, 15°40'E (Otto Samwald) Ngulia, 06:00, 5989 km, 147 d (Ngulia RG)
<i>Praha</i> TX82397	31.07.01 24.11.03	3 R	Pavlov, Jihomoravsky, Breclav, Czech Republic , 48°52'N, 16°41'E (Holáň Vladimír) Ngulia, 03:30, 6125 km, 846 d (Ngulia RG)
<i>Bruxelles</i> 7814126	05.08.01 15.11.01	3 R	Uebersyren, Luxembourg , 49°38'N, 6°17'E (GdT. 33 Regulus) Ngulia, 06:00, 6601 km, 102 d (Ngulia RG)
<i>Stockholm</i> BS83627	24.11.01 24.06.02	4 X = m	Ngulia, 10:00 (Ngulia RG, GB) Lodeynoye Pole, Leningrad Oblast, Russia , 60°44'N, 33°11'E, 7095 km, 212 d (Moscow RC)
<i>Stockholm</i> BU53639	25.11.01 09.05.02	3 R	Ngulia, 11:00 (Ngulia RG, DP) Soltra Ringing Station, near Bandirma, Balikesir, Turkey , 40°21'N, 27°58'E, 4929 km, 165 d (Ozgür Kesaplı Didrickson; reported "tentative identification" as <i>A. scirpaceus</i>)
<i>The first foreign control at this newly set-up ringing station where only 700 birds had been ringed at the time!</i>			
<i>Stockholm</i> BU54791	09.12.01 28.12.01	3 R	Ngulia, 06:00 (Ngulia RG, Norbert Roothaert) Uapé, Gilé, Zambézia, Mozambique , 16°10'S, 38°17'E, 1463 km, 19 d (caught by a 16-yr-old boy in the 'traditional way' and said to have been released alive with ring intact; reported by Dr Pedro Lopes Murima who asked for 'royalties' for supplying the information)
<i>Bruxelles</i> 8042434	27.07.02 12.11.04	3 R	Uebersyren, Luxembourg , 49°38'N, 6°17'E (GdT. 33 Regulus) Ngulia, 06:00, 6601 km, 839 d (Ngulia RG)
<i>Stockholm</i> BU26289	05.08.02 04.12.03	3 R	Sotemosse, Jordberga, Skåne, Sweden , 55°26'N, 13°25'E (Bo Petersson) Ngulia, 06:00, 6880 km, 486 d (Ngulia RG)
<i>Hiddensee</i> ZB78495	18.07.03 11.11.04	3 R	Weißenberg, 21:00, 1 km E of Bautzen, Sachsen, Germany , 51°12'N, 14°41'E (name of ringer not given) Ngulia, 06:00, 642 km, 482 d (Ngulia RG)
<i>Helgoland</i> 9P13612	24.07.03 30.11.03	3 R	Rottebach-Niederung bei Nette, Hannover, Niedersachsen, Germany , 52°02'N, 10°05'E (Henning Kirschner) Ngulia, 02:00, 6680 km, 129 d (Ngulia RG)
<i>Stockholm</i> BZ83107	30.11.03 (18.01.04)	3 +	Ngulia, 09:30 (Ngulia RG, Marc Hebbelinck) Kalomo, Southern Province, Zambia , 17°02'S, 26°29'E, 2018 km, <49 d (Wesley S. Siakuba)
<i>Stockholm</i> BZ83715	01.12.03 26.06.07	3 4	Ngulia, 03:30 (Ngulia RG, CJ) Hastenbecker Bruch bei Hamein, Niedersachsen, Germany , 52°02'N, 9°24'E, 6694 km, 1303 d
<i>Stockholm</i> BZ83827	01.12.03 11.08.06	4 +	Ngulia, 05:00 (Ngulia RG, DP) Alhefnah, 100 km NE of Riyadh, Saudi Arabia , 25°30'N, 47°50'E, 3332 km, 984 d (M. A. Almasri)
<i>Stockholm</i> BZ87449	21.12.03 (21.06.04)	3 X	Ngulia, 09:30 (Ngulia RG, Bernard Amakobe) Chadiza, Zambia , 14°04'S, 32°27'E, 1383 km, <183 d (Aphete Henry Rhiri)

<i>Stockholm</i> BZ86816	23.12.03 (27.08.07)	3 +	Ngulia, 02:00 (Ngulia RG, CJ) Zulfi, 220 km north of Riyadh, Saudi Arabia , 26°20'N, 44°50'E, 3336 km, c. 1358 d (Abdul)
<i>Praha</i>	15.06.04	4 f	Zeměchy, c. 18 km north of Prague, Czech Republic , 50°14'N, 14°16' E (Pavel Kolman)
S270005	24.11.04	R	Ngulia, 06:00, 6342 km, 162 d (Ngulia RG)
<i>Bruxelles</i>	24.07.04	3	Bambrugge, Oost-Vlaanderen, Belgium , 50°55'N, 3°56'E (WG. 18 Dender-Leie)
8698864	12.11.04	R	Ngulia, 06:00, 6816 km, 111 d (Ngulia RG)
<i>Stockholm</i> BZ91103	12.11.04 17.07.05	4 R	Ngulia, 11:00 (Ngulia RG, Brian Manton) Herrétang, Saint-Laurent-du-Pont, Isère, France , 45°23'N, 5°44'E, 6259 km, 612 d (Gérard Goujon)
<i>Stockholm</i> BZ90955	14.11.04 30.05.06	4 B = m	Ngulia, 06:30 (Ngulia RG, Patrik Wildjang) Marcaria, Mántova, Italy , 45°07'N, 10°32'E, 6007 km, 562 d (Adriano Talamelli); also controlled at the same place on 31.05.06
<i>Stockholm</i> CB72714	23.11.04 02.05.06	3 R	Ngulia, 04:00 (Ngulia RG, DP) Zehunsky pond, Zehun, Nymburk, Czech Republic , 50°08'N, 15°18' E, 6297 km, 525 d (Miroslav Jelinek)
<i>Stockholm</i> CB74687	24.11.04 20.07.05	3 R	Ngulia, 07:00 (Ngulia RG, Patrik Wildjang) Rybachiy, Zelenogradskiy District, Kaliningrad Oblast, Russia , 55°09'N, 20°51'E, 6655 km, 238 d; ring <i>Moskwa</i> XY08658 added (Moscow RC)
<i>Stockholm</i> CB85115	26.11.05 03.08.07	3 R	Ngulia, 06:00 (Ngulia RG, John Cranfield) Hamme Sint Anna, Oost Vlaanderen, Belgium , 51°06'N, 04°09'E, 6822 km, 615 d (Marc Hebbelinck)
<i>Stockholm</i> CD64279	04.12.05 15.05.07	3 +	Ngulia, 06:00 (Ngulia RG, Nick Ward) Al Faydamih, near Al Ghaydah, Yemen , 16°25'N, 52°26'E, 2663 km, 527 d (<i>per</i> Jacky Judas and the BTO)
<i>Stockholm</i> CD63907	05.12.05 01.08.10	4 X = f	Ngulia, 06:00 (Ngulia RG, CJ) 40 km N of Al'ar, Northern Province, Saudi Arabia , 31°24'N, 41°02' E, 3840 km, 1709 d
<i>Nairobi</i> K64254	11.12.05 02.06.07	4 4 = m	Ngulia, 08:00 (Ngulia RG, John Cranfield) Ócsa, AH, Pest, Hungary , 47°18'N, 19°13'E, 5889 km, 538 d (Privigyei Csaba)
<i>Praha</i> TE69322	28.07.06 26.11.06	3 R	Vidlatá Seč, Czech Republic , 47°48'N, 13°03' E (Václav Jelinek) Ngulia, 03:00, 6208 km, 121 d
<i>Stockholm</i> CG02229	25.11.06 19.05.07	3 4	Ngulia, 06:00 (Ngulia RG, Marc Hebbelinck) Pragersko, Slovenia , 46°23'N, 15°40'E, 5917 km, 175 d (Iztok Vres)
<i>Stockholm</i> CG06157	29.11.06 02.06.08	3 X <i>cat</i>	Ngulia, 06:00 (Ngulia RG, Walter Roggerman) Mutzschen, Sachsen, Germany , 51°15'N, 12°53'E, 6488 km, 551 d (unknown finder)
<i>Stockholm</i> CG07010	30.11.06 12.06.08	3 R	Ngulia, 06:00 (Ngulia RG, Trevor Squire) Kreischa, Weißeritzkreis, Sachsen, Germany , 50°57'N, 13°46'E, 6429 km, 560 d (Steffen Rüdiger)
	17.05.09	R	Kreischa, 899 d
<i>Stockholm</i> CG05151	30.11.06 25.05.09	3 R	Ngulia, 06:00 (Ngulia RG, Janette Troop) Luznice, Jindřichov Hradec, Czech Republic , 49°04'N, 14°45'E, 6212 km, 907 d
<i>Budapest</i> A640456	21.07.07 10.12.07	3 4	Keszthely-Fenékpuszta, Zala, Hungary , 46°43'N, 17°15'E (Kancsal Béla) Ngulia, 02:00, 5894 km, 142 d (Ngulia RG)
<i>Praha</i> S365585	07.08.07 11.12.07	3 R	Velké Poříčí, Náchod, Czech Republic , 50°28'N, 16°12'E (Kult Jíří) Ngulia, 06:00, 5894 km, 126 d (Ngulia RG)
<i>Paris</i> 5081578	11.08.07 30.11.08	3 R	Lanchères, Somme, France , 50°09'N, 01°33' E (Jean-Paul Marcq) Ngulia, 01:00, 6863 km, 477 d (Ngulia RG)

The most westerly control (or recovery) of any Ngulia-ringed bird.

<i>Ljubljana</i>	14.08.07	3	Vrhnika, Slovenia , 45°58'N, 14°18'E (J. Gracner and R. Tekavcic)
KR53363	13.12.07	R	Ngulia, 06:00, 5928 km, 121 d (Ngulia RG)
<i>Stockholm</i>	09.12.07	3	Ngulia, 04:00 (Ngulia RG, DP)
CG13153	03.06.09	X <i>cat</i>	Bol'shaya Kaldala, Ulyanov'sk, Russia , 54°33'N, 49°21'E, 6477 km, 542 d (Vasilii G. Romanov and Lidija O. Sytnova)
<i>Stockholm</i>	10.12.07	3	Ngulia, 00:00 [midnight] (Ngulia RG, Gerhard Nikolaus)
CG13715	01.09.10	A	Buraydah, Al Kassim, Saudi Arabia , 26°20'N, 43°59'E, 3319 km, 1008 d (Omar Hamad)
<i>Ljubljana</i>	01.08.08	3	Hauptmance, Ljublansko barje, Slovenia , 45°59'N, 14°31'E (J. Bricelj)
KR62473	07.12.08	R	Ngulia, 5922 km, 128 d (Ngulia RG)
<i>Stockholm</i>	26.11.08	4	Ngulia, 06:00 (Ngulia RG, Daphne Watson)
CL02600	29.08.09	X	Buraydah, Al Kassim, Saudi Arabia , 26°20'N, 43°59'E, 3319 km, 266 d (Bandr Saud Al Harby)
<i>Stockholm</i>	28.11.08	3	Ngulia, 06:00 (Ngulia RG, DP)
CL06014	12.08.13	+	Qubh, Al Kassim, Saudi Arabia , 27°20'N, 45°10'E, 4889 km, 1718 d (Bander Alharby)
<i>Stockholm</i>	29.11.08	3	Ngulia, 01:00 (Ngulia RG, Nicodemus Nalyanya)
CL07374	(13.08.12)	+	? locality, Al Kassim, Saudi Arabia , c. 26°00'N, 44°00'E, 4836 km, 1352 d (Abdurhman)
<i>Stockholm</i>	06.12.08	3	Ngulia, 06:00 (Ngulia RG, Raimond Barth)
CL15568	30.06.09	R = f	Kirillovskii Dist., Vologda Oblast, Russia , 59°46'N, 38°22'E, 6986 km, 206 d, <i>Moskwa</i> XG34301 added (<i>per</i> Irina Kharitonova, Russian Ringing Centre)
<i>Stockholm</i>	16.12.09	4	Ngulia, 10:00 (Ngulia RG, Phil Jones)
CP71142	12.08.11	A	Al Kassim, Saudi Arabia , c. 26°N, 44°E, 3287 km, 614 d (Omar Hamad)
<i>Stockholm</i>	06.12.10	4	Ngulia, 02:00 (Ngulia RG, DP)
CP81775	31.08.11	+	near Jeraab, Riyadh, Saudi Arabia , 26°54'N, 45°06'E, 3409 km, 268 d (Hussain A. Al-Ojan)
<i>Stockholm</i>	08.12.10	4	Ngulia, 00:00 [midnight] (Ngulia RG, Inka Veltheim)
CP84685	07.08.12	+	Riyadh, Saudi Arabia , 24°39'N, 46°46'E, 3409 km, 607 d
<i>Stockholm</i>	12.12.10	4	Ngulia, 06:00 (Ngulia RG, Yotam Lenhardt)
CP87420	(13.09.11)	//	Saudi Arabia ; apart from the ring number and email date the finder only wrote, "I have ring bird in saudi arabia"
<i>Stockholm</i>	12.12.10	3	Ngulia, 06:00 (Ngulia RG, Yotam Lenhardt)
CP87500	11.06.13	XF	Næstved, Sjælland, Denmark , 55°12'N, 11°45'E, 6904 km and 912 d (Jens Kresten Sand)
<i>Stockholm</i>	28.11.11	3	Ngulia, 06:00 (Ngulia RG, CJ)
CP94071	28.03.12	A	Vwaza wildlife reserve, Rumphi, Malawi , 11°01'S, 33°27'E, 1034 km, 121 d (Andrew M.H. Kataya)
<i>Gdansk</i>	20.06.12	4B = m	Obra river valley, Bledzew, Poland , 52°31'N, 15°25'E (Bartłomiej Sklepowicz)
K276884	13.12.12	R	Ngulia, 01:00, 6533 km, 176 d (Ngulia RG)
<i>Stockholm</i>	19.11.12	3	Ngulia, 06:00 (Ngulia RG, GB)
XA01698	13.08.13	+	Locality?, Northern Province, Saudi Arabia , 267 d (Abdul Rahman, no further information could be obtained)
<i>Stockholm</i>	03.12.12	4	Ngulia, 08:00 (Ngulia RG, DP)
XA08740	11.05.13	+	Algaydah, Almahrah, Yemen , 16°13'N, 52°10'E, 4183 km, 159 d
<i>Stockholm</i>	09.12.12	4	Ngulia, 06:00 (Ngulia RG, DP)
XA06720	10.08.13	+	Ar'ar, Northern Province, Saudi Arabia , 30°59'N, 41°02'E, 5150 km, 244 d
<i>Stockholm</i>	18.12.12	3	Ngulia, 07:00 (Ngulia RG, Peter Kennerley)
XA11175	14.08.13	+	Ar'ar, Northern Province, Saudi Arabia , 30°59'N, 41°02'E, 5150 km, 238 d

Hippolais olivetorum* Olive-tree Warbler*2033 ringed: 2 found (1 recovery, 1 control); 1:1016; 2 countries**

Stockholm 20.11.95 4 Ngulia, 10:00 (Ngulia RG)
 2KG51995 12.03.97 + Caia District, **Mozambique**, 17°50'S, 35°21'E, 1678 km, 478 d
 (per Eng Roberto Zolho)

Maybe the first recovery of this species anywhere.

Stockholm 28.11.03 2(4) Ngulia, 08:30 (Ngulia RG, Mick Townsend)
 2KK81022 13.01.05 R 30 km south of Francistown, **Botswana**, 21°25'S, 27°28'E,
 2353 km, 412 d (Peter d'Arcy)

*The most southerly control (or recovery) of any Ngulia-ringed bird and the first Olive-tree Warbler
 Peter d'Arcy had ever caught!*

Sylvia borin* Garden Warbler*1953 ringed: 1 recovery**

Nairobi 03.02.74 4 Ngulia (Ngulia RG, GB and Daphne Backhurst) [Note: ringed in the
 1973–74 season.]
 J78946 24.08.75 + El Hassa, **Jordan**, 30°49'N, 35°58'E, 3765 km, 567 d (M. S.
 Alayyan)

Sylvia nisoria* Barred Warbler*2320 ringed: 1 recovery**

Nairobi 28.11.72 4 Ngulia (Ngulia RG, GB and Daphne Backhurst)
 A19053 19.09.73 + Al-Meznab, near Unayzah, **Saudi Arabia**, 25°55'N, 44°15'E,
 3278 km, 295 d (M. Abood and R.S. Shamsan)

*The first Ngulia recovery. Only 36 Barred Warblers had been ringed at that time! Now a further 2284 have been
 ringed, but there have been no more recoveries — yet.*

Sylvia communis* Common Whitethroat*99 462 ringed: 12 recoveries; 1:8289; 7 countries**

Nairobi 25.11.79 3 Ngulia, morning (Ngulia RG)
 J137043 autumn 81 X Arskiy region, Tartastan, **Russia**, 56°02'N, 49°51'E, 6645 km, c.
 645 d (Moscow RC)

Nairobi 13.12.79 4 Ngulia, 02:00 (Ngulia RG)
 J148425 (05.05.86) + Al-Fedmi, Al-Mahrah, **Yemen**, c. 17°N, 51°E, c. 2600 km, c. 2628 d
 (A. Abdulah Alif)

Nairobi 07.12.83 3 Ngulia, morning (Ngulia RG)
 X33962 00.08.87 X Masyāf, **Syria**, c. 35°04'N, 36°21'E, 4234 km, c. 1347 d (R. Atfé)

Nairobi 07.12.88 3 Ngulia, 02:00 (Ngulia RG)
 X64186 00.05.90 // near Mirbat, Dhofar, **Oman**, c. 17°00'N, 54°41'E, c. 2865 km,
 >509 d (via HE The Wali of Dhofar, per Michael Gallagher and the
 BTO)

Stockholm 22.11.90 3 Ngulia, 05:00 (Ngulia RG)
 BA53268 23.06.91 X car Neftegorsk, near Kuybyshev, Samara Oblast, **Russia**, 52°40'N,
 51°13'E, 6305 km, 213 d (Yuri Zuev); this was the first recovery
 affecting Ngulia of a bird from the (then) USSR to be notified
 directly to the ringing office by the finder; normally all recoveries
 from this enormous former country were channelled through the
 Moscow RC

Stockholm 12.11.91 4 Ngulia, 05:30 (Ngulia RG)
 BA61617 07.09.92 + Riyadh, **Saudi Arabia**, 24°39'N, 46°46'E, 3208 km, 300 d (Khalid
 A. Al-Hafi)

Stockholm 19.12.93 3 Ngulia, morning (Ngulia RG)
 BE21936 (20.09.94) + Iringa, **Tanzania**, 7°49'S, 35°39'E, 585 km, (no elapsed time given:
 it's likely that the bird was found in the previous northern winter;
 September is impossibly early for this species to be in Tanzania.
 Caught by boys, per Jörgen Wiklund)

<i>Stockholm</i> BH00143	17.11.95 mid-04.98	3 //	Ngulia, 06:00 (Ngulia RG) 350 km south-southeast of Jeddah, Saudi Arabia , 19°09'N, 41°30'E, 2487 km, c. 880 d; ring removed but photos of the living bird supplied by the finder; whether the bird was released or not is not clear (reported by Hamad Abo Talib Alámri)
<i>Stockholm</i> BH01365	19.11.95 04.09.96	4 +	Ngulia, 03:00 (Ngulia RG) Sakaka, Saudi Arabia , 29°59'N, 40°06'E, 3671 km, 290 d (Abdullah Shokhaier Al-Anzy)
<i>Stockholm</i> CB80346	13.12.04 22.08.05	4 = m XF	Ngulia, 10:30 (Ngulia RG, CJ) Pakai, South Waziristan, Pakistan , 32°24'N, 69°50'E, 5153 km, 252 d (Faizaan Muhammad)
<i>Stockholm</i> CD60476	08.12.05 29.07.09	3 +	Ngulia, 06:00 (Ngulia RG, GB) Hiski valley, near Az-Zolfi, Saudi Arabia , 28°07'N, 43°32'E, 3504 km, 1329 d (Abdullah Alsuhaibany)
<i>Stockholm</i> CP93809	28.11.11 06.09.13	3 +	Ngulia, 06:00 (Ngulia RG, Ian Kerton) Dawadmi, Riyadh, Saudi Arabia , 24°35'N, 44°15'E, 4705 km, 648 d (Musharaf Al-hayan)

Luscinia luscinia Thrush Nightingale

105 734 ringed: 45 found (30 recoveries, 15 controls); 1:2350; 15 countries

<i>Nairobi</i> J118369	03.12.76 13.04.77	3 +	Ngulia, night (Ngulia RG) Dik el Mehdi, near Beirut, Lebanon , 33°55'N, 35°35'E, 4111 km, 131 d (Lévon Guzelian)
<i>Nairobi</i> J135563	08.12.78 20.04.80	3 //	Ngulia (Ngulia RG) Arne, Mt Hérmón, Syria , 33°15'N, 35°50'E, 4036 km, 499 d (Dr A. Abdallah)
<i>Nairobi</i> J154398	14.11.80 12.06.86	3 X	Ngulia, day (Ngulia RG) Kursk, Kursk Oblast, Russia , 51°48'N, 36°05'E, 6093 km, 2036 d (Moscow RC)
<i>Nairobi</i> J159577	10.12.80 02.07.81	3 X	Ngulia, night (Ngulia RG) Reutinest, Krolevetskiy, Sumyi Oblast, Ukraine , 51°35'N, 33°17'E, 6083 km, 204 d (Moscow RC)
<i>Nairobi</i> J167990	25.11.81 10.06.82	3 B	Ngulia, night (Ngulia RG) Soskua, Lappeenranta, Kymi, Finland , 61°03'N, 28°23'E, 7167 km, 197 d (T. Pyyhtiä)

The most northerly recovery (or control) of any Ngulia-ringed bird.

<i>Nairobi</i> A45171	13.11.82 28.04.86	3 X	Ngulia, night (Ngulia RG) Dalia, Israel , 35°35'N, 35°05'E, 4300 km, 1262 d (Y. Fitelson)
<i>Nairobi</i> X42769	13.12.85 03.09.86	3 +	Ngulia, night (Ngulia RG) Ras Ba'albek, Beqa'a, Lebanon , 34°00'N, 36°12'E, 4117 km, 264 d (M. A. Khoudari)
<i>Nairobi</i> X58986	05.12.88 00.00.00	3 //	Ngulia, 03:00 (Ngulia RG) Gumma Island, Farsan Islands, Red Sea, Saudi Arabia , 16°39'N, 42°02'E, 2223 km; the bird had been caught an indeterminate time before but the ring number had been written down by a child (<i>per</i> Gerhard Nikolaus and John Ash)
<i>Nairobi</i> X74155	28.11.89 21.04.90	4 +	Ngulia, day (Ngulia RG) Zawarib, Lebanon , 34°34'N, 36°00'E, 4181 km, 144 d (Elios Habib)
<i>Stockholm</i> 2KC97086	23.11.90 (31.05.00)	4 +	Ngulia, 06:00 (Ngulia RG) Chuchimbili, Mozambique , 12°06'S, 34°50'E, 1078 km; no elapsed time estimate is possible: the bird had been caught and eaten some time before and its leg, with ring, kept in a matchbox (Chief Mtaia of Chikaya, <i>per</i> Patrick Simkin)

<i>Stockholm</i> 2KE95677	09.12.91 00.04.92	3 +	Ngulia, 05:00 (Ngulia RG) Israel border area, Lebanon , c. 33°10'N, 35°20'E, c. 4030 km, >113 d (Nabih El Dada)
<i>Stockholm</i> 2KE96493	22.11.92 (13.09.97)	3 //	Ngulia, 04:00 (Ngulia RG) El Taloul, North Sinai, Egypt , 31°02'N, 33°08'E, 3820 km, c. 1756 d (Nayif Salama Hassan)
<i>Stockholm</i> 2KG97869	17.11.95 20.08.98	3 *	Ngulia, 05:00 (Ngulia RG) Roda village, North Sinai, Egypt , 31°03'N, 33°17'E, 3820 km, 997 d (Khaled el Said Mahmoud el Katatny; *the finder said he found the bird in a trapper's mist net, removed the ring, and released the bird)
<i>Stockholm</i> 2KG51039	20.11.95 09.09.97	3 +	Ngulia, 02:00 (Ngulia RG) El Kharruba, North Sinai, Egypt , 31°11'N, 33°57'E, 3825 km, 659 d (Mohamed Ibrahim Arada)
<i>Stockholm</i> 2KG04874	20.11.95 22.08.99	4 +	Ngulia, 03:30 (Ngulia RG) Alexandria, Egypt , 31°13'N, 29°55'E, 3902 km, 1371 d (Najj Mehany Mohamed)
<i>Stockholm</i> 2KG52317	21.11.95 00.04.98	3 //	Ngulia, 04:00 (Ngulia RG) Jablah, near Lattakia, Syria , 35°22'N, 35°56'E, 4270 km, >860 d (per Swedish Embassy, Damascus)
<i>Stockholm</i> 2KG96436	24.11.95 13.09.97	3 +	Ngulia, 06:00 (Ngulia RG) Ber El Abd, North Sinai, Egypt , 11:00, 31°01'N, 33°00'E, 3820 km, 659 d (Ramadan Moganam Gimmy Moganam)
<i>Stockholm</i> 3252915	09.07.96 26.11.98	3 R	Rynningeviken, Örebo, Lake Hjälmaren, Närke, Sweden , 59°17'N, 15°15'E; bird probably hatched at ringing place (Leif Sandgren) Ngulia, 06:00, 7208 km, 870 d (Ngulia RG)
<i>Stockholm</i> 2KJ00071	12.11.96 (10.07.97)	3 X cat	Ngulia, 07:00 (Ngulia RG) Belchanskiy, Pavlovskiy District, Krasnodar, Russia , 46°08'N, 39°48'E, 5462 km, <240 d (Moscow RC)
<i>Stockholm</i> 2KJ03114	06.12.96 18.05.97	3 X cat	Ngulia, 06:00 (Ngulia RG) Kriushi, Ul'yanovsk Oblast, Russia , 54°05'N, 48°30'E, 6414 km, 163 d (Moscow RC)
<i>Stockholm</i> 2KJ03541	08.12.96 13.09.99	3 XF	Ngulia, 08:15 (Ngulia RG) Nigila, North Sinai, 07:30, Egypt , c. 31°00'N, 33°10'E, c. 3816 km, 1009 d (Abd El-Karim Ali Salim)
<i>Stockholm</i> 2KJ24985	28.11.97 (00.02.02)	3 +	Ngulia, 12:15 (Ngulia RG, Peter Njoroge) North Sinai, Egypt , c. 31°00'N, 33°10'E, c. 3816 km, <1526 d (Nayif Salama Hassan)
<i>Stockholm</i> 2KJ28579	24.11.98 02.05.99	3 R	Ngulia, 10:00 (Ngulia RG, Ludo Roothaert) Eilat, Israel , morning, 29°33'N, 34°57'E, 3634 km, 159 d; bird and ring photographed before release (Reuven Yosef)
<i>Stockholm</i> 2KH68225	25.11.98 24.10.99	3 +	Ngulia, 08:00 (Ngulia RG, CJ) Anger Shenkora, Belo Jegonfoy, 20 km south of Soge, western Ethiopia , 9°22'N, 36°11'E, 1395 km, 333 d (Keno Sima, reported by Christoff Herrmann)
<i>The only recovery of any Ngulia-ringed Palaearctic species in the Afrotropics north of Ngulia, to the presumed first wintering area of the species.</i>			
<i>Stockholm</i> 2KH71880	18.11.99 21.05.04	4 R = m	Ngulia, 03:15 (Ngulia RG, DP) Rynningeviken, Lake Hjälmaren, Örebo, Närke, Sweden , 59°17'N, 15°15'E, 7208 km, 1646 d (Leif Sandgren)
<i>Stockholm</i> 2KH73088	22.11.99 17.06.00	3 B = f	Ngulia, 08:00 (Ngulia RG, Patrik Rhönstadt) Frankfurt an der Oder, Brandenburg, Germany , 11:00, 52°19'N, 14°35'E, 6535 km, 208 d; breeding, with 5 pulli in its nest (Joachim Becker)
<i>Stockholm</i> 2KH73452	28.11.99 15.06.03	3 X car	Ngulia, 02:45 (Ngulia RG, Norbert Roothaert) Komorove, Volyn' Oblast, Ukraine , 51°09'N, 25°45'E, 6132 km, 1295 d (Gorod Anatolij Ivanovich)

<i>Stockholm</i> 2KH73861	28.11.99 15.06.07	3 X car	Ngulia, 05:30 (Ngulia RG, GB) Röda Grind, Kungälv, Bohuslän, Sweden , 57°52'N, 12°01'E, 7155 km, 2756 d (Stig Carlsson)
<i>Stockholm</i> 2KJ61620	04.12.99 15.05.00	3 X cat	Ngulia, 06:00 (Ngulia RG, Leon Bennun) Aleksandrov-Gay, Saratov Oblast, Russia , 50°08'N, 48°32'E, 5986 km, 163 d; the finding place in southwestern Russia is only about 15 km from the Kazakhstan border (Moscow RC)
<i>Helsinki</i> P458402	20.08.00 22.11.01	4 R	Helsinki, Uusimaa, Finland , 06:00, 60°13'N, 25°00'E (Pekka Seppälä) Ngulia, 06:00, 7118 km, 459 d (Ngulia RG)
<i>Stockholm</i> 1EK16345	26.11.00 09.05.01	3 B = m	Ngulia, 01:00 (Ngulia RG, CJ) Pansio, Turko and Pori, Finland , 60°26'N, 22°11'E, 7184 km, 164 d; and controlled again, breeding 30.05.01 (Multala Vesa)
<i>Stockholm</i> 2KJ71722	02.12.00 30.04.09	3 R*	Ngulia, 03:00 (Ngulia RG, Norbert Roothaert) Sapir Park, Arava Desert, Israel , 30°37'N, 35°11'E, 3749 km, 3071 d (*the bird was caught by a ringer in a weak state and it subsequently died; Bruria Gal)
<i>So far the oldest Ngulia recovery/control at 8 years 4 months 28 days between ringing and recovery.</i>			
<i>Stavanger</i> 2E44123	07.08.01 21.11.01	2 R	Borrevatnet, Vestfold, Norway , 08:00, 59°25'N, 10°26'E (Borre RG) Ngulia, 06:00, 7338 km, 106 d (Ngulia RG)
<i>The longest movement of any Ngulia recovery or control.</i>			
<i>Stockholm</i> 2KK05094	16.11.01 (30.07.03)	3 X car	Ngulia, 07:30 (Ngulia RG, Malcolm Wilson) Baranovo, Smolensk Oblast, Russia , c. 55°07'N, 33°17'E, 6474 km, <621 d (Moscow RC)
<i>Stockholm</i> 2KK38960	12.12.01 spring 02	4 +	Ngulia, 06:00 (Ngulia RG, Janette Troop) Souk el Gharb, Mt Lebanon, near Aley, Lebanon , c. 33°48'N, 35°37'E, 4098 km (Georges Abourrage)
<i>Stockholm</i> 2KK39466	15.12.01 22.08.02	4 +	Ngulia, 04:00 (Ngulia RG, Norbert Roothaert) Alnigehah, 11:00, c. 250 km W of Alexandria, Egypt , 31°21'N, 27°14'E, c. 3990 km, 250 d (netted by Gadel Moula Mohammed)
<i>Stockholm</i> 2KK41921	10.12.02 28.08.03	3 +	Ngulia, 07:15 (Ngulia RG, Janette Troop) Masfaq village, North Sinai, Egypt , c. 30°50'N, 33°00'E, c. 3800 km, 261 d (Esmail Mahmoud Said)
<i>Stockholm</i> 2KK42606	24.11.03 22.05.04	4 R	Ngulia, 04:30 (Ngulia RG, Mick Townsend) Jurmo, Korppoo, Turko and Pori, Finland , 07:00, 59°50'N, 21°37'E, 7131 km, 180 d (Rolf Karlson)
<i>Stockholm</i> 2KK79010	26.11.03 23.05.04	3 R	Ngulia, 04:00 (Ngulia RG, CJ) Rybachiy, Zelenogradskiy District, Kaliningrad Oblast, Russia , 55°09'N, 20°51'E, 6655 km, 179 d; ring <i>Moskwa</i> XL-96661 added (Moscow RC)
<i>Stockholm</i> 2KL91112	11.12.04 05.05.06	4 X cat	Ngulia, 11:45 (Ngulia RG, GB) Germanovichy village, Sharkovshchina District, Vitebsk, Belarus , 55°23'N, 27°47'E, 6557 km, 510 d (V. Kovalenok)
<i>Praha</i> N444693	24.08.05 27.11.05	3 R	Zlič, Náchod, Czech Republic , 50°24'N, 16°04'E (Kuly Jiří, Ing. [457]) Ngulia, 02:00, 6299 km, 95 d (Ngulia RG)
<i>Stockholm</i> 2KL82760	23.11.05 01.05.10	3 R	Ngulia, 06:00 (Ngulia RG, DP) Babai, Kharkiv Oblast, Ukraine , 42°52'N, 36°11'E, 5109 km, 1620 d (<i>per</i> Anatoliy Poluda, Ukrainian RC)
<i>Stockholm</i> 2KN38352	08.12.05 01.05.07	4 +	Ngulia, 05:30 (Ngulia RG, CJ) Zmeinyy, Odesa Oblast, Ukraine , 45°11'N, 30°14'E, 5412 km, 512 d. Zmeinyy is a small island in the Black Sea 40 km east of the Ukraine–Romania border (<i>per</i> Anatoliy Poluda, Ukrainian RC)
<i>Tbilisi</i> V00385	15.08.12 20.11.12	3 R	Chorokhti delta <i>near</i> Batumi, Georgia , 41°36'N, 41°35'E (Batumi Ringing Team, Joost Martens) Ngulia, 03:00, 4971 km, 97 d (Ngulia RG)

Stockholm 09.12.12 3 Ngulia, 07:15 (Ngulia RG, Ian Kerton)
 2XH2183 07.09.13 R Ramat Hamadiv, Israel, 32°33'N, 34°56'E, 5323 km, 272 d
 (Samech Darawshi)

Appendix 3

Winglengths (mm) of autumn migrants at Ngulia; data from 1972 to 2008

	race, moult, age, sex	abrasion*	range	mean	s.d.	n
Corncrake	1, 2	u	138 – 147	143.3	3.7	11
Common Cuckoo	1	u				
Lesser Cuckoo	1	u				
Eurasian Scops Owl	1, 2	u	155 – 167	160.7	3.6	11
Eurasian Nightjar	all races, 1, 2	w	166 – 204	184.2	7.0	725
Eurasian Nightjar	all races, 1	w	167 – 204	183.7	6.6	288
Eurasian Nightjar	all races, 2M	w	179 – 202	189.5	5.8	36
Eurasian Nightjar	<i>europaeus</i> , 1, 2	w	166 – 204	186.3	7.7	157
Eurasian Nightjar	<i>unwini</i> , 1, 2	w	166 – 198	182.1	6.2	129
Eurasian Nightjar	<i>sarudnyi</i> , 1, 2	w	174 – 195	182.2	6.4	19
Eurasian Nightjar	<i>plumipes</i> , 1, 2	w	174 – 196	184.7	6.3	18
Eurasian Roller	1	u-w	183 – 212	195.3	5.6	113
Eurasian Roller	2	w	179 – 212	195.6	7.3	44
Red-backed Shrike	1	u	84 – 100	91.8	2.2	3547
Red-backed Shrike	2F	w	85 – 99	92.4	2.3	388
Red-backed Shrike	2M	w	86 – 99	92.7	2.2	422
Red-tailed Shrike	all races, 1	u-w	86 – 100	92.5	2.2	777
Red-tailed Shrike	all races, 2F	w	86 – 100	92.1	2.1	281
Red-tailed Shrike	all races, 2M	w	88 – 99	92.8	2.1	307
Red-tailed Shrike	<i>phoenicuroides</i> , 2M	w	88 – 99	92.9	2.3	141
Red-tailed Shrike	<i>isabellinus</i> , 2M	w	89 – 96	92.5	1.8	45
Red-tailed Shrike	<i>karelini</i> , 2M	w	90 – 96	92.3	1.7	12
Golden Oriole	1, 2	u-w	143 – 157	150.4	3.8	27
Barn Swallow	1	u	112 – 132	121.8	3.1	774
Barn Swallow	2	w	115 – 132	123.2	3.0	256
Barn Swallow	2F	w	116 – 128	122.3	2.8	37
Barn Swallow	2M	w	117 – 132	124.2	2.4	53
Common House Martin	1	u	101 – 118	109.9	2.3	323
Common House Martin	2	w	109 – 113	111.0	–	3
River Warbler	1	u	67 – 82	75.0	2.1	4650
River Warbler	2	f	67 – 82	75.5	2.1	2172
Basra Reed W	unmoulted, 1	w	73 – 87	79.5	2.7	184
Basra Reed W	unmoulted, 2	w	76 – 88	80.7	3.8	25
Basra Reed W	moulted	f	76 – 90	83.1	2.4	1201
Great Reed Warbler	moulted	f	89 – 102	97.1	3.0	115
Sedge Warbler	unmoulted	w	62 – 71	66.7	1.7	182
Sedge Warbler	moulted	f	64 – 72	68.0	2.0	27
Reed Warbler	unmoulted	w	63 – 74	69.4	1.9	148
Reed Warbler	moulted	f	67 – 74	71.3	1.8	26
Marsh Warbler	1	u-w	62 – 75	68.1	1.7	8882
Marsh Warbler	2	w	62 – 75	68.2	1.7	5408
Olivaceous Warbler	unmoulted	w	60 – 72	65.9	1.8	1074

*abrasion: primary abrasion where f = fresh; u = unworn; w = worn; u-w = some birds unworn, some worn;
 age: 1 = first-year, 2 = adult.

	race, moult, age, sex	abrasion*	range	mean	s.d.	n
Olivaceous Warbler	moulted	f	62 – 72	66.8	2.0	69
Upcher's Warbler	unmoulted	w	67 – 82	75.7	2.4	646
Upcher's Warbler	moulted	f	69 – 82	77.3	2.7	38
Olive-tree Warbler	1	w	72 – 93	83.9	2.6	727
Olive-tree Warbler	2	w	76 – 93	85.9	2.5	608
Icterine Warbler	1, 2	u-w	71 – 80	75.4	2.8	10
Willow Warbler	all races, 1	u-w	60 – 75	67.5	2.9	3055
Willow Warbler	all races, 2	u	62 – 75	68.5	3.1	1222
Willow Warbler	<i>yakutensis</i> , 2	u	62 – 75	68.6	3.2	154
Wood Warbler	1, 2	u-w	70 – 78	74.8	2.5	8
Blackcap	1, 2F	u	72 – 80	76.6	2.1	48
Blackcap	1, 2M	u	73 – 82	77.3	2.0	75
Garden Warbler	1	u	74 – 87	80.2	1.9	999
Garden Warbler	2	w	74 – 86	80.6	2.0	598
Barred Warbler	1	u	81 – 97	88.2	2.2	1006
Barred Warbler	2F	u	82 – 96	89.2	2.3	286
Barred Warbler	2M	u	84 – 96	90.6	2.3	360
Common Whitethroat	1	u-w	67 – 81	74.0	2.0	4637
Common Whitethroat	unmoulted, 2	w	67 – 82	74.6	2.1	2934
Common Whitethroat	unmoulted, 2F	w	68 – 81	74.1	2.0	531
Common Whitethroat	unmoulted, 2M	w	68 – 81	75.2	2.1	630
Common Whitethroat	moulted, 2	f	69 – 82	74.8	2.0	472
Common Whitethroat	moulted, 2F	f	69 – 81	74.3	2.1	67
Common Whitethroat	moulted, 2M	f	70 – 82	75.0	2.0	112
Thrush Nightingale	1	u	83 – 99	88.8	2.2	5122
Thrush Nightingale	2	u	83 – 99	90.4	2.4	2234
Common Nightingale	all races, 1	u	80 – 99	88.3	3.3	1348
Common Nightingale	all races, 2	u	81 – 100	88.2	2.9	482
Common Nightingale	<i>africana</i> , 1, 2	u	80 – 97	87.4	2.7	951
Common Nightingale	<i>golzi</i> , 1, 2	u	81 – 100	91.1	3.3	304
Common Nightingale	<i>africana</i> / <i>golzi</i> , 1, 2	u	83 – 98	89.0	3.3	141
Irania	1F	u	83 – 100	93.0	2.2	795
Irania	1M	u	83 – 104	94.6	2.3	807
Irania	2F	u	84 – 102	94.8	2.3	1347
Irania	2M	u	87 – 104	97.1	2.4	1483
Rufous Scrub Robin	1	u-w	78 – 94	84.8	2.3	387
Rufous Scrub Robin	2	w	79 – 91	85.4	2.5	191
Redstart	1, 2	u	78 – 84	81.1	1.7	10
Isabelline Wheatear	1, 2	u	94 – 108	99.8	2.5	150
Northern Wheatear	1	u	91 – 102	96.9	2.5	143
Northern Wheatear	2F	u	90 – 100	96.1	2.6	20
Northern Wheatear	2M	u	91 – 105	99.6	2.5	34
Pied Wheatear	1	u	88 – 99	92.3	2.2	99
Pied Wheatear	1F	u	88 – 95	91.3	1.8	48
Pied Wheatear	1M	u	90 – 99	93.3	2.2	51
Pied Wheatear	2	u	89 – 100	94.7	2.8	13
Rock Thrush	1, 2F	u	113 – 129	120.5	3.1	200
Rock Thrush	1, 2M	u	117 – 131	123.6	2.8	237
Rock Thrush	1M	u	117 – 130	123.2	2.6	99
Rock Thrush	2M	u	119 – 131	124.2	2.7	84
Spotted Flycatcher	1	u	79 – 95	87.8	2.2	1437
Spotted Flycatcher	2	w	80 – 95	87.5	2.2	671
Tree Pipit	1, 2	u	85 – 93	88.8	2.3	104

Appendix 4

Autumn weights (g) of *Ngulia* Palaearctic migrants, lean weights (LW*) and percentages of birds with high weights and fat scores; data from 1972 to 2008

	Range	Mean	s.d.	n	LW	Percentages LW+ LW+ LW+			Percentages ≥ f 3 ≥ f 4	
						15%	20%	25%		
Corncrake	104 – 158	128.5	17.7	11						
Common Cuckoo	77 – 120	88.2	13.2	13						
Lesser Cuckoo	33 – 48	44.1	3.9	14						
Scops Owl	67 – 85.5	77.3	5.8	12						
Eurasian Nightjar	42 – 86	59.8	7.9	698						
Eurasian Roller	90 – 189	128.4	15.3	171						
Red-backed Shrike	19.4 – 38.5	26.4	2.5	4465	24.7	21	11	5	23	9
Isabelline Shrike	19.4 – 32.1	25.0	1.9	2274	24.3	7	3	1	8	1
Eurasian Golden Oriole	59 – 87	71.0	7.9	27						
Barn Swallow	13.2 – 23.4	16.8	1.6	1196						
House Martin	13.3 – 21.8	18.1	1.3	324						
River Warbler	11.9 – 23.5	16.1	1.3	10 564	15.2	14	7	3	27	9
Basra Reed Warbler	13.0 – 24.0	16.6	1.7	2200	15.4	23	14	8	28	8
Great Reed Warbler	21.7 – 43.2	27.7	3.0	132						
Sedge Warbler	8.5 – 14.3	10.7	1.2	230						
Eurasian Reed Warbler	8.8 – 15.0	10.9	1.0	170						
Marsh Warbler	8.0 – 18.8	11.2	1.3	15 904	10.4	25	17	11	37	19
Olivaceous Warbler	6.6 – 11.8	9.1	0.7	1200	8.9	7	2	1	8	0
Upcher's Warbler	9.9 – 15.6	12.0	0.8	740	11.8	4	0	0	4	0
Olive-tree Warbler	13.3 – 25.2	17.8	1.9	1769	16.1	35	22	14	45	19
Willow Warbler	5.9 – 12.5	8.4	1.0	4819	7.7	27	16	10	31	10
Blackcap	14.2 – 22.8	17.7	1.5	133						
Garden Warbler	13.5 – 25.2	18.2	1.6	1688	16.9	20	11	5	34	14
Barred Warbler	17.7 – 33.4	22.7	1.9	2022	21.4	16	7	3	26	8
Common Whitethroat	10.3 – 21.2	14.5	1.6	7921	13.1	32	21	13	44	25
Thrush Nightingale	16.2 – 33.4	22.7	2.0	7397	21.3	18	9	4	27	8
Common Nightingale	15.6 – 28.1	20.3	1.8	2031	19.3	15	7	3	15	3
Irania	16.2 – 29.9	21.7	1.6	5520	21.2	7	2	0	4	1
Rufous Scrub Robin	15.4 – 24.0	19.5	1.4	903	19.0	6	2	0	5	1
Isabelline Wheatear	20.2 – 32.4	25.9	2.5	147						
Northern Wheatear	18.2 – 28.7	21.1	1.0	233						
Pied Wheatear	13.5 – 21.1	16.8	1.5	123						
Common Rock Thrush	29.5 – 68	47.5	4.6	491						
Spotted Flycatcher	10.8 – 20.2	14.0	1.3	2252	13.3	16	9	4	11	3
Tree Pipit	18.2 – 26.5	21.5	1.6	104						

*lean weight: a fat score (Kaiser 1993) of *f* 0.

Appendix 5

Mean daily catch size on misty moonless dates. For each pentad, beginning at 27 October, the mean daily catch (bold) and its standard error are given for the number of dates shown; data from 1972 to 2010

Pentad	Oct 1	Nov 2	Nov 3	Nov 4	Nov 5	Nov 6	Nov 7	Dec 8	Dec 9	Dec 10	Dec 11	Dec 12	Dec 13	Jan 14	Jan 15
Number of dates	5	6	8	37	46	59	77	66	72	50	48	34	34	21	10
Eurasian Nightjar	0.2 0.2	0.8 0.3	4.4 1.7	4.6 1.5	4.6 1.1	2.6 0.7	0.7 0.2	0.3 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
Eurasian Roller	0 0.0	0 0.0	0 0.0	0.1 0.1	0.3 0.1	0.4 0.1	0.5 0.2	0.4 0.1	0.7 0.4	0.2 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
Red-backed Shrike	3.0 1.3	2.5 1.3	8.3 1.4	12.7 2.0	17.0 4.1	13.3 2.0	14.2 2.5	6.5 1.0	2.9 0.4	1.7 0.4	0.7 0.1	0.4 0.1	0.2 0.1	0.1 0.1	0.2 0.1
Isabelline Shrike	0.4 0.4	0.7 0.5	1.5 0.5	5.8 1.2	10.7 2.6	6.3 1.0	6.1 1.0	2.8 0.4	2.3 0.5	1.6 0.3	1.9 0.5	2.6 0.6	1.2 0.6	0.8 0.3	0.1 0.1
River Warbler	0 0	0.7 0.4	2.3 1.0	2.7 0.6	8.9 1.8	23.7 3.4	23.4 3.1	24.4 2.9	33.3 4.1	26.6 3.7	18.5 3.1	15.9 2.6	8.9 1.7	4.2 1.2	2.3 0.7
Basra Reed Warbler	0 0	0.8 0.5	0.3 0.2	2.1 0.6	4.0 1.1	4.2 0.6	4.6 0.7	4.9 0.9	4.6 0.6	4.9 0.9	4.0 0.8	2.0 0.6	0.5 0.2	0.1 0.1	0.6 0.4
Marsh Warbler	2 1	15 8	12 3	90 17	163 27	280 37	371 46	366 41	363 37	367 36	240 32	120 16	84 15	54 15	30 5
Olivaceous Warbler	0.8 0.4	2.5 1.4	3.0 1.5	5.6 0.8	3.7 0.6	3.5 0.6	2.4 0.4	1.3 0.2	1.3 0.2	1.4 0.3	0.6 0.1	1.3 0.2	0.5 0.2	0.2 0.2	0.4 0.2
Upcher's Warbler	0.2 0.2	0.2 0.2	0.4 0.2	0.9 0.2	1.2 0.3	1.7 0.3	1.4 0.2	1.5 0.3	1.6 0.3	1.2 0.2	0.9 0.2	1.0 0.2	0.9 0.2	0.8 0.2	0.9 0.5
Olive-tree Warbler	0.4 0.4	0.8 0.5	2.9 1.6	7.5 1.8	7.4 1.8	6.7 1.0	5.6 1.1	1.8 0.4	0.8 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0 0	0 0	0 0
Willow Warbler	3.0 1.9	4.0 1.7	5.4 1.6	5.5 1.0	8.9 1.9	9.4 1.3	9.7 1.4	8.9 1.1	11.4 1.2	13.0 2.8	8.5 1.7	7.9 1.7	3.6 1.7	1.6 1.8	1.3 1.8
Garden Warbler	0.2 0.2	1.0 0.4	0.5 0.3	1.4 0.4	1.6 0.3	2.5 0.3	2.5 0.3	2.4 0.4	3.1 0.4	2.8 0.4	3.3 0.5	2.8 0.5	3.2 0.5	2.6 0.5	3.1 0.4
Barred Warbler	1.0 0.8	2.0 1.6	1.6 0.5	3.9 0.8	4.7 1.0	5.1 0.8	4.6 0.7	3.6 0.5	2.7 0.4	2.4 0.5	1.8 0.3	2.9 0.6	1.6 0.3	1.0 0.3	1.6 0.6
Common Whitethroat	9 4	35 12	58 16	135 21	145 25	204 22	236 20	167 19	154 14	151 15	112 15	98 14	55 8	39 13	23 4
Thrush Nightingale	9 6	50 19	101 38	143 36	153 33	207 3	203 26	188 25	149 17	159 22	87 17	26 4	17 4	8 3	2 0
Common Nightingale	1.4 0.9	2.0 0.7	10.1 2.3	10.2 2.3	6.0 1.5	5.0 0.7	3.8 0.5	2.0 0.3	1.9 0.3	2.2 0.4	1.1 0.2	0.6 0.2	0.3 0.1	0.4 0.1	0.1 0.1
Irania	1.6 1.2	3.2 2.4	4.6 1.5	7.6 1.9	16.8 5.8	21.9 4.2	19.6 3.7	13.1 2.0	13.5 2.1	16.7 3.4	11.9 2.6	14.2 4.3	4.5 1.1	1.6 0.5	1.8 0.3
Rufous Scrub Robin	2.2 1.2	5.3 4.4	17.8 4.8	6.9 1.6	9.1 2.2	5.2 1.2	2.3 0.4	0.8 0.1	0.5 0.1	0.5 0.1	0.3 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0 0
Spotted Flycatcher	13.2 10.4	5.5 2.8	24.1 9.6	14.2 2.7	14.1 3.4	11.3 2.3	5.1 1.0	1.7 0.3	0.9 0.2	0.7 0.2	0.4 0.1	0.2 0.1	0.1 0.2	0 0	0 0

Appendix 6

Seasonal change in age proportions. Percentages of first-year birds in samples aged between the dates given (sample size in brackets); data from 1974 to 2008

Species	21/10–15/11	16/11–30/11	1/12–15/12	16/12–10/1
Red-backed Shrike	63 (917)	83 (3038)	92 (808)	
Isabelline Shrike	37 (225)	51 (1365)	69 (443)	69 (244)
River Warbler	68 (133)	68 (3668)	70 (5876)	74 (1670)
Basra Reed Warbler	41 (59)	41 (561)	53 (577)	62 (153)
Marsh Warbler	41 (1396)	57 (8927)	71 (9610)	70 (5322)
Olive-tree Warbler	32 (244)	57 (1017)	79 (174)	–
Willow Warbler	42 (284)	69 (1533)	72 (2096)	74 (619)
Barred Warbler	31 (227)	56 (916)	63 (566)	39 (226)
Common Whitethroat	42 (993)	51 (2990)	65 (2450)	68 (1993)
Thrush Nightingale	58 (854)	73 (3591)	71 (2573)	61 (943)
Irania	50 (332)	46 (2650)	43 (2151)	42 (1072)
Spotted Flycatcher	66 (658)	68 (1363)	69 (144)	

Appendix 7

Mean weights (g, in bold) with their standard errors, given for 10-day periods from 22 October; data from 1972 to 2008

10-d period beginning	22 Oct	1 Nov	11 Nov	21 Nov	1 Dec	11 Dec	21 Dec	31 Dec
Red-backed Shrike	25.33 0.53	25.75 0.22	25.94 0.07	26.65 0.05	26.51 0.11	26.26 0.23	25.53 0.50	0.16
River Warbler		15.14 0.16	15.84 0.06	15.90 0.02	15.97 0.02	16.24 0.03	16.68 0.05	16.72 0.16
Basra Reed Warbler		15.40 0.29	16.56 0.11	16.72 0.07	16.54 0.06	16.39 0.08	16.75 0.14	17.83 0.31
Marsh Warbler	10.62 0.14	10.74 0.06	11.06 0.02	11.19 0.01	11.14 0.02	11.12 0.02	11.68 0.03	11.72 0.05
Willow Warbler	7.71 0.15	8.45 0.12	8.51 0.04	8.40 0.03	8.33 0.03	8.29 0.03	8.26 0.05	7.71 0.12
Common Whitethroat	12.87 0.17	13.80 0.08	14.33 0.04	14.64 0.04	14.54 0.04	14.42 0.05	14.69 0.04	14.57 0.05
Thrush Nightingale	21.62 0.34	21.92 0.10	22.37 0.05	22.80 0.04	22.81 0.05	22.81 0.07	22.80 0.09	23.20 0.17

Appendix 8a

Annual mean weights (g) with standard errors

	Marsh Warbler		River Warbler	
	mean	s.e.	mean	s.e.
1972	11.51	0.04	16.79	0.10
1973	10.91	0.04	15.92	0.08
1974	10.69	0.03	15.75	0.08
1975	10.91	0.04	15.69	0.10
1976	10.94	0.04	16.23	0.11
1977	11.58	0.06	16.37	0.16
1978	11.09	0.05	16.02	0.10
1979	11.60	0.06	16.38	0.09
1980	11.27	0.05	16.42	0.11
1981	11.00	0.06	16.07	0.08
1982	11.14	0.05	16.08	0.10
1983	11.15	0.09	16.36	0.13
1984	11.45	0.05	16.46	0.16
1985	10.63	0.05	15.69	0.09
1986	10.75	0.06	16.05	0.10
1987	10.64	0.07	15.81	0.22
1988	10.69	0.05	16.00	0.09
1989	11.36	0.05	16.42	0.13
1990	11.10	0.04	16.12	0.07
1991	11.02	0.04	16.11	0.11
1992	11.02	0.06	15.94	0.08
1993	11.27	0.03	16.03	0.07
1994	11.53	0.04	16.37	0.10
1995	10.95	0.04	15.99	0.05
1996	10.51	0.04	15.72	0.06
1997	12.32	0.04	16.70	0.09
1998	11.03	0.04	15.84	0.05
1999	11.72	0.04	16.41	0.08
2000	11.02	0.04	15.85	0.04
2001	11.05	0.04	16.10	0.08
2002	11.08	0.05	16.22	0.06
2003	11.35	0.04	16.52	0.07
2004	11.29	0.04	16.42	0.06
2005	10.78	0.04	15.56	0.04
2006	11.11	0.04	16.17	0.09
2007	10.87	0.04	16.01	0.06
2008	10.76	0.03	15.85	0.06
2009	11.43	0.04	16.90	0.10
2010	10.54	0.03	15.77	0.07
2011	11.19	0.03	16.03	0.12

Appendix 8b

Annual mean weights (g) with standard errors

	Olive-tree Warbler		Common Whitethroat		Thrush Nightingale		Irania	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
1991	18.14	0.21	14.06	0.06	22.51	0.10	21.94	0.12
1992	17.52	0.33	14.08	0.11	22.18	0.10	21.46	0.23
1993	18.42	0.32	14.46	0.06	22.68	0.10	22.05	0.14
1994	18.47	0.34	15.33	0.08	23.93	0.11	22.93	0.18
1995	17.48	0.12	14.25	0.08	22.22	0.08	21.63	0.10
1996	18.42	0.19	13.95	0.06	22.40	0.12	21.61	0.14
1997	17.95	0.16	15.04	0.04	23.39	0.09	22.80	0.12
1998	17.37	0.15	14.22	0.06	22.09	0.08	21.44	0.07
1999	18.08	0.37	14.82	0.07	23.52	0.07	22.29	0.14
2000	18.73	0.36	14.26	0.09	22.94	0.09	21.72	0.10
2001	18.26	0.30	14.64	0.08	22.45	0.10	21.39	0.18
2002	17.30	0.25	14.42	0.10	22.62	0.11	21.77	0.12
2003	18.09	0.16	14.91	0.09	22.86	0.09	21.92	0.07
2004	18.28	0.15	14.41	0.08	22.44	0.11	21.85	0.10
2005	17.55	0.15	14.32	0.08	22.24	0.10	21.38	0.06
2006	18.47	0.31	14.49	0.10	22.71	0.08	22.15	0.28
2007	17.73	0.41	14.18	0.11	22.51	0.13	21.87	0.16
2008	17.66	0.23	13.96	0.08	21.41	0.11	21.05	0.09
2009	18.05	0.45	14.85	0.11	22.81	0.12	22.01	0.14
2010	16.67	0.48	13.84	0.11	21.38	0.11	21.32	0.07
2011	18.22	0.33	14.48	0.10	23.07	0.08	22.35	0.33

Appendix 9

Hourly mean weights (g) with standard errors; data from 1997 to 2010

Caught during hour beginning	River Warbler		Marsh Warbler		Common Whitethroat		Thrush Nightingale	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
22:00	16.59	0.28	12.21	0.11	15.52	0.35	23.45	0.37
23:00	16.44	0.16	11.50	0.07	14.99	0.15	23.17	0.22
00:00	16.30	0.08	11.37	0.05	14.74	0.09	22.87	0.11
01:00	16.19	0.06	11.20	0.04	14.63	0.07	22.55	0.08
02:00	16.13	0.05	11.26	0.03	14.37	0.06	22.47	0.07
03:00	15.96	0.06	11.15	0.04	14.30	0.06	22.39	0.06
04:00	16.07	0.05	11.00	0.03	14.37	0.08	22.55	0.07
05:00	15.95	0.08	11.02	0.07	14.34	0.13	22.67	0.17
06:00	15.84	0.02	11.21	0.02	14.46	0.03	22.69	0.04
07:00	15.96	0.06	11.33	0.04	14.57	0.06	22.92	0.11
08:00	16.17	0.09	11.30	0.06	14.60	0.10	23.15	0.16
09:00	16.47	0.22	11.44	0.07	14.84	0.14	23.14	0.21
10:00	16.21	0.26	11.73	0.09	15.12	0.15	23.86	0.21
11:00	16.55	0.25	11.69	0.11	15.28	0.20	24.03	0.37
12:00	16.69	0.44	11.98	0.18	15.64	0.28	24.19	0.37
13:00	16.80	0.49	11.86	0.14	15.08	0.31	23.90	0.29
14:00	–	–	12.22	0.15	15.66	0.23	24.11	0.36
15:00	16.92	0.22	12.13	0.09	15.51	0.18	23.82	0.29
16:00	16.81	0.37	11.88	0.12	14.97	0.25	24.41	0.36
17:00	16.86	0.16	11.98	0.11	15.01	0.22	24.02	–

Appendix 10

**Percentage of day catch taken during three morning periods;
data from 1994 to 1998 are combined**

	Total day catch	% caught Before 07:00	%caught 07:00 – 09:00	%caught 09:00 – 11:00
Marsh Warbler	23 923	73.7	15.9	6.3
Common Whitethroat	12 073	72.0	17.3	6.8
Thrush Nightingale	8655	66.3	19.3	6.9
River Warbler	1694	66.3	20.7	9.4
Irania	1127	50.7	21.8	16.9
Willow Warbler	502	82.9	10.6	5.0
Red-backed Shrike	967	27.4	28.5	21.5
Isabelline Shrike	684	29.8	33.8	23.7
Spotted Flycatcher	378	71.2	18.8	6.1
Basra Reed Warbler	304	57.2	20.1	8.6
Barred Warbler	651	54.4	22.6	15.2
Common Nightingale	159	64.2	22.0	8.2
Garden Warbler	426	51.9	26.3	16.0
Olive-tree Warbler	528	30.5	28.6	24.4
Upcher's Warbler	101	76.2	13.8	6.9
Olivaceous Warbler	178	51.1	23.0	18.0
Rufous Scrub Robin	155	24.5	25.8	32.2
Common Rock Thrush	123	39.0	19.5	22.8

Photographic section

Scenes from the early days



© Graeme Backhurst

The newly-opened Lodge, from the southwest, 12 December 1969, showing the extent of the adjacent bush. The 1.5 kW floodlight that caused so much carnage was sited on the highest point of the north-facing wall (see p. 4)



© David Pearson

Leafless netting bush south of the Lodge, before the rains broke, 11 November 1973



© David Pearson

Large game animals were frequent in the southern netting area in the early years; after spring rain, 25 April 1973,



© David Pearson

and at the end of the dry season, 25 October 1974



© David Pearson

Ringing in the southern bush, 27 November 1979. L-R: Pete Jennings, GB, Anna Forbes-Watson



© David Pearson

Ringing below the 'cliff', 14 November 1991. L-R: Lyndon Roberts, Jerry Lewis, GB, Anna Forbes-Watson



© David Pearson

The Lodge from the west, 17 November 1982, showing the reduced areas of netting bush below the cliff and beside the entrance track. Clearance was to make a football pitch for staff matches. Compare with the first photo on p. 69

Ngulia scenes



© Graeme Backhurst

The Ngulia range from the plains to the northeast (now a rhinoceros sanctuary), 26 October 1984, before the rains. The Taita Hills are in the distance, to the southeast

© Graeme Backhurst



The Lodge from the north after a particularly severe drought, 12 October 2009; from the corner of the 'L'

© Colin Jackson



The Lodge from the north again, 25 November 2003. This shows how thick and lush the bush had become before being much reduced by elephants in the drought year of 2011

© Graeme Backhurst



A heavy afternoon shower approaching the Lodge, 30 November 1997

© Graeme Backhurst



The shrub *Thunbergia holstii*, which flowers after the rains have begun, is an attractive feature of the Ngulia area; 3 December 2008



© Graeme Backhurst

Heavy rain and mist persisted well into the afternoon on 15 December 1985, a day when only four-wheel drive vehicles could reach the Lodge



© Marc Hebbelink

Large numbers of Barn Swallows *Hirundo rustica* perching on trees is a common sight in Tsavo, 21 November 2009



© Franziska Hillig

Raptor observation is often possible. On 27 November 2011 an estimated 26 000 Amur Falcons *Falco amurensis* flew over the Lodge; there are over 200 in this photo. The species has yet to be caught and ringed



© David Pearson

Wonderful sunrises are often a feature of Ngulia, 2 December 2008, after a mist-free night

Night-time activities



© Michel Laplace-Toulouse

Small passerines, Eurasian Rollers *Coracias garrulus* and Cattle Egrets *Bubulcus ibis* perched in the acacia tree on a misty night, 29 November 2008



© Michel Laplace-Toulouse

Extracting birds in mist below the floodlights, 28 November 2008, looking towards the Lodge and the lights



© Michel Laplace-Toulouse

Extracting birds from the nets below the floodlights, 28 November 2008



© John Cranfield

Ringling at night: insect mayhem, 5 December 2005. L-R: CJ, Mick Townsend, DP

© Michel Laplace-Toulouse



Extracting birds in swirling mist; most of the illumination comes from one of our 1 kW lamps, seen on its tripod, bottom right; 29 November 2008

© Michel Laplace-Toulouse



Bagged migrants awaiting ringing, 29 November 2008. Each bag contains three small birds and they are arranged on the labelled poles in strict catching order so that they can be ringed with the minimum delay. All night-caught birds are ringed and released before 06:00. Standing, L-R: DP, unknown, Alain Jacot

© Franziska Hillig



Ringed on a quieter night, with very few insects, 8 December 2012. L-R: Peter Kennerley, Richard Seddon, DP

© David Pearson



Mercy Njeri checking the wing formula of an Isabelline Shrike *Lanius isabellinus*, 12 December 2012

Daytime activities

© Michel Laplace-Toulouse



Extracting birds after dawn from the 'L' set of nets, 30 November 2008, a day when almost 2500 migrants were ringed

© Michel Laplace-Toulouse



Nearing the end of a morning session, 29 November 2008. Robyn Boyd scribing for Bernard Amakobe

© David Pearson



The start of a morning's ringing session, showing the bags conveniently suspended from bamboo poles in the old poolside shelter and from one of the ringing tables, 27 November 2005. L-R: GB, Leif Sandgren, Mick Townsend

© Bennie van den Brink



Common House Martins *Delichon urbicum* have occasionally been seen to rest in numbers on the Lodge roof or, as in this case, the acacia in front when they were attracted by taped House Martin calls, 24 November 2006

© Colin Jackson



Poolside ringing, 9 December 2004. L-R: Wanyioke Wamiti, Simon Valle, Francis Argyle, Titus Imboma (back view), Moses Kinuthia, Jonathan Baya

Some winter moulting birds



© David Pearson

Adult Marsh Warbler *Acrocephalus palustris* showing worn wing- and tail-feathers, 13 December 2009,



© Peter Kennerley

Adult male Common Whitethroat *Sylvia communis*, 16 December 2012. A typical *icterops* which has renewed only a few inner primaries



© David Pearson

First-winter Olive-tree Warbler *Hippolais olivetorum*, 16 December 2009 showing old flight feathers with moult beginning in the inner primaries



© David Pearson

Adult male Red-backed Shrike *Lanius collurio*, 19 November 2006



© John Cranfield

A typical first-winter River Warbler *Locustella fluviatilis*, 20 November 2005. The plumage appears unworn although moult is due during January to March

Summer moulting birds



© Peter Kennerley

First-winter Thrush Nightingale *Luscinia luscinia*, 6 December 2012. The unworn plumage would not be replaced until the following July



© John Cranfield

First-winter Common Nightingale *Luscinia megarhynchos* of the distinctive and larger eastern race *golzi*, 8 December 2005



© Peter Kennerley

Adult male *Irania Irania gutturalis* of the normal orange-rufous colour phase, 8 December 2012



© Peter Kennerley

First-winter male *Irania Irania gutturalis*; an example of the unusual white morph, 18 December 2012. The worn, brown wing feathers would not be replaced until the following summer

Autumn moulting birds



© David Pearson

First-winter Great Reed Warbler *Acrocephalus arundinaceus*, 21 December 2009. This young bird has recently completed moult in Africa



© Vincent van der Spek

Adult Basra Reed Warbler *Acrocephalus griseldis*, 20 November 2012. This bird has renewed its entire plumage shortly before reaching Ngulia, probably in Ethiopia



© David Pearson

Upcher's Warbler *Hippolais languida*, 5 December 2013, showing a typical partial moult of the primaries and tail feathers, initiated in autumn

© Janette Troop



Some ageing features



© John Cranfield

Adult male Barred Warbler *Sylvia nisoria*, 10 December 2005. Adults show a diagnostic clear yellow eye

Adult Marsh Warbler *Acrocephalus palustris*, 5 December 2003. The contrast between old, greyer wing and tail feathers and the newer olive-brown upperpart plumage is a useful ageing character

© John Cranfield



First-winter Eurasian Roller *Coracias garrulus*, 4 December 2005. Young birds show unmoulted primaries and a short rounded outer tail feather

© David Pearson



Adult River Warbler *Locustella fluviatilis*, 17 December 2009, showing newer outer primaries recently grown in Ethiopia — a valuable ageing character

Some scarcer Palearctic migrants and other birds of interest

© Graeme Backhurst



Little Bittern *Ixobrychus minutus* of the nominate race *minutus*, 7 December 1980; only eight have been ringed

© Janette Troop



Only five Eurasian Sparrowhawks *Accipiter nisus* have been ringed; this one was on 2 December 2005

© Graeme Backhurst



The only Levant Sparrowhawk *Accipiter brevipes* to be caught and ringed, 15 November 2012; this bird is a first-winter

© Janette Troop



Only the second Eurasian Hobby *Falco subbuteo* to be ringed, 2 December 2005



© Franziska Hillig

Just 15 Lesser Cuckoos *Cuculus poliocephalus* have been ringed; this one was on 24 November 2011



© Graeme Backhurst

The Eurasian Reed Warbler *Acrocephalus scirpaceus* is a scarce migrant at Ngulia; all belong to the eastern race *fiscus*. In the period under review 204 have been ringed; this newly moulted bird was on 7 December 1986



© Graeme Backhurst

Only nine Wood Warblers *Phylloscopus sibilatrix* have been ringed in the period under review; this was the fourth, on 7 December 1989



© David Pearson

Apparent Blyth's Reed x Marsh Warbler *Acrocephalus dumetorum* x *A. palustris* hybrid, 17 December 2009. This bird, an adult, had recently moulted



© David Pearson

Eurasian Scops Owl *Otus scops*, 17 November 1995; only 14 have been ringed



© David Pearson

The first Common Chiffchaff *Phylloscopus collybita* to be ringed, 7 December 1988. An adult Willow Warbler *P. trochilus* of the grey eastern race *yakutensis* is shown below for comparison, 8 December 2012



© Peter Kennerley



© Janette Troop

A hybrid Barn Swallow x Common House Martin *Hirundo rustica* x *Delichon urbicum*, 23 November 2009



© David Pearson

The first Palearctic Red-rumped Swallow *Cecropis daurica rufula* to be ringed at Ngulia, 12 December 2009, was also the first record for Kenya. The Afrotropical race *emini* breeds at the Lodge



© Graeme Backhurst

The first Savi's Warbler *Locustella luscinioides* to be caught and ringed, together with a River Warbler *L. fluviatilis* (right) for comparison, 6 December 1975; only one other Savi's has been ringed at Ngulia (20 December 1987) and these are the sole Kenya records



© David Pearson

This Marsh Warbler *Acrocephalus palustris* was the first Polish-ringed bird controlled at the Lodge, 13 December 2012; it had been well-studied on its breeding ground (see p. 55)



© Graeme Backhurst

Only the second Ortolan Bunting *Emberiza hortulana* to be ringed, 21 November 2012; the first had been on 28 November 2005



© Graeme Backhurst

Only 35 Eurasian Golden Orioles *Oriolus oriolus* have been ringed; this adult male was on 30 November 1989



© David Pearson

Part of a remarkable dawn catch of 30 Eurasian Rollers *Coracias garrulus*, 10 December 1993. L-R: Sergei Yerokhov, Brige Staub, Dave Kelly, Jerry Lewis, Nigel Cleere