

The status, frequency and abundance of passerine passage migrants and seasonal visitors in Cyprus 2003–2013

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A great deal of work has been published on bird migration in Cyprus, especially since the formation of the Cyprus Ornithological Society in 1957. Subsequently as the society grew stronger, migration was well studied by WRP Bourne and others (Bourne 1959, 1960, Stagg 1967, Flint 1972), and is covered in a dedicated section on bird migration by Peter Flint and Peter Stewart in the second edition of their standard work of reference *The Birds of Cyprus* (Flint & Stewart 1992). This reference is still fairly accurate today for many species, although there have been changes in both the status and distribution of some species. The purpose of this paper is to present an up-to-date picture of current passerine migration and movements, based on an analysis of the results of my own regular observations, primarily in western Cyprus, without the visiting observer bias present in the annual *Cyprus Bird Report*. However a fuller picture of migration including earlier and later migrant timings and larger flock counts will undoubtedly be available in these reports.

METHODS

My birdwatching in Cyprus commenced in 1998 and after taking up full-time residence in Paphos in late 2003, my outings became almost daily over the ten years from late 2003 until late 2013, with every bird observation logged and the numbers of each species counted. Generally surveys covered a 2–4 hour period 7.00–12.00 h, with at least a one full day weekly outing. I logged 61 830 individual records, of which 36 850 were of passerines. A 'record' (or sighting) is a single data entry and includes the species, location, number of birds and date. It can refer to single or multiple birds, but is generally the result of one site visit, lasting any period of time on that date. I decided to use only my own sightings as a basis for the study to avoid seasonal observer bias, *ie* records from visiting birdwatchers, mostly in spring and autumn, give rise to a large increase in sightings of

Number of Days in the Field
December 2003 – November 2013 (2837 days in 10 years)

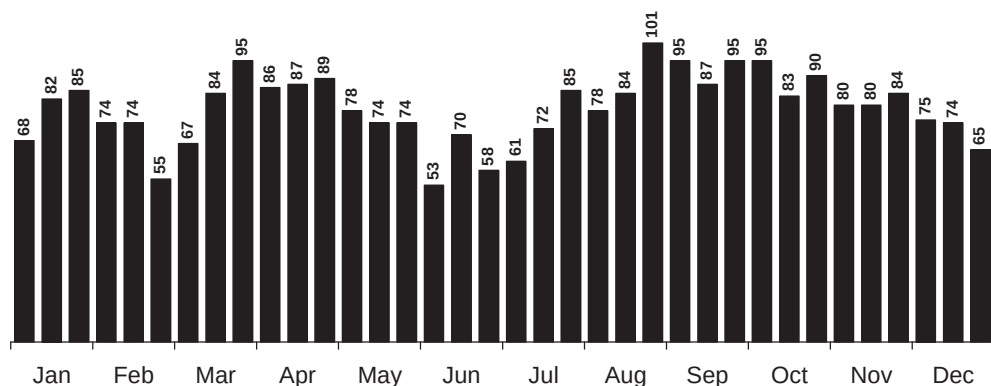


Figure 1. Number of days spent in the field, in thirds of a month, by the author. Lowest recording periods February, June–mid July and December–early January (times of low migration and little day-to-day species variation).

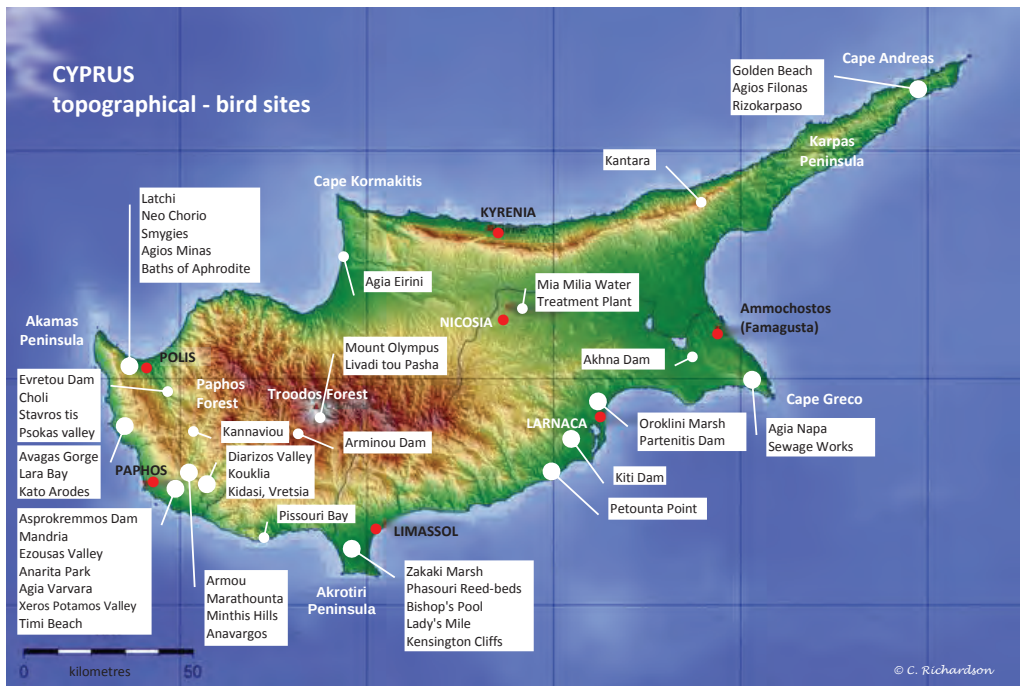


Figure 2. Topographic map of Cyprus showing location of some bird sites.

interesting migrants. For example, in Cyprus during the period 2005–2012 the average number of birdwatchers submitting their records in spring (Mar–May) was 44 per month, while in winter (Dec–Feb) this dropped to 25 per month (Richardson 2005–2012). My own observations are prolonged and fairly consistent throughout the year. Figure 1 shows the number of days/third of a month spent in the field over the period December 2003–November 2013

During the ten year period, I visited a total of 580 sites throughout the island (Figure 2) and counted all species at each. My largest number of observations were in the Paphos foothills at Armou (918 visits, Plates 1, 4), Marathounta (701 visits, Plates 2, 7, 8) and Minthis hills (437 visits). These three are part of a range of hills 400–550 m asl, and are located 8–15 km inland, east of the coastal town of Paphos. Regular visits were also made to top migration ‘hot-spots’, including a number of important bird areas (IBAs) (www.birdlifecyprus.org/en/news-296). They include the Asprokremmos dam (Xeros valley IBA, 420 visits, Plate 5), Mandria (Paphos plain IBA, 384 visits, Plate 6), the Paphos sewage works (306 visits), the Akrotiri peninsula IBA (259 visits) and the Kato Paphos lighthouse IBA (154 visits) (Plate 3). Migration varies to some extent across the island (Flint & Stewart 1992), so it should be noted that 78% of my observations were in the west of Cyprus (generally Paphos District, an administrative area which includes the Akamas peninsula, Paphos forest and a large area of foothills and coast up to the border with Limassol district, c25 km east of Paphos town). The other 22% included (in order of coverage) the Akrotiri peninsula, Larnaca, Troodos forest, Akhna dam, capes Greco and Kormakitis and the Karpas peninsula.

Many habitats were covered. In the Paphos District they are mostly low intensity, mixed agricultural farmland with grape vineyards and groves of Olive *Olea europaea*, Carob *Ceratonia siliqua* and Almond *Prunus amygdalus* bordered by Terebinth *Pistacia*



Plate 1. Typical farmed foothills at Armou, 450 m asl and 10 km inland from Paphos, Cyprus, with fields of winter barley, while groves of carob, olive and almond are bounded by gorse and terebinth bushes. The electric wires provide good vantage points for birds. © C Richardson

Plate 2. The Paphos hills near Marathounta, Cyprus, offer a variety of habitats including typical garrigue and maquis, comprising wild olive, carob, spiny gorse, spiny burnet and Mediterranean medlar. © C Richardson

Plate 3. The Kato Paphos lighthouse archaeological site, Cyprus, is protected from development by its UNESCO status. It is a major bird migrant hot-spot, characterised by open meadows of wild grasses, common asphodel, crown daisy and poppy, interspersed with stands of medlar and spiny gorse. © C Richardson

Plate 4. The Armou plateau, Cyprus, is a patchwork of vineyards and barley fields, bounded by stands of carob, olive, terebinth, medlar and almond. © C Richardson

(*terebinthus*) *palaestina* and Mediterranean Cypress *Cupressus sempervirens*, interspersed with cereal (mostly barley) fields and scattered bushes. The steeper, stony hillsides are covered with herbs, grasses and Mediterranean scrub. The latter, sometimes known as garrigue/phrygana (Polunin 1976), is an open scrubland plant community on a limestone base which on Minthis hills includes lower shrubs up to 0.5 m high such as Prickly Burnet *Sarcopoterium spinosum*, Common Thyme *Thymus vulgaris* and *Cistus* sp merging in places into maquis, with taller (2–4 m high) stands of Thorny Gorse *Genista sphacelata*, Thorny Broom *Calicotome villosa*, Mediterranean Medlar *Crataegus azarolus* and young Aleppo Pine *Pinus halepensis*. Dominant herbs and grasses include Fennel *Foeniculum vulgare*, Giant Fennel *Ferula communis*, Syrian Thistle *Notobasis syriaca*, Viscous Globe Thistle *Echinops spinosissimus* and Common Asphodel *Asphodelus microcarpus*.

The species

The Cyprus bird list comprises 393 species, of which c170 are passerines (Richardson 2007–2013, Stylianou 2013) and of these passerines c157 are migratory to some extent.



Plate 5. When the Asprokremmos dam, Cyprus, fills up, shallow reed beds of *Phragmites* and stands of tamarisk form at the dam wall. The distant mixed woodland at the amenity car park is a perfect complementary habitat for passerines. © C Richardson

Plate 6. The coast at Mandria, Cyprus, part of the Paphos plain, is an important migration staging point, where the mixed agricultural farmland and rocky coastline provide birds with a vital landmark and an abundant food supply. © C Richardson

Plate 7. The goat-grazed foothills 15 km inland from Paphos, Cyprus, are dotted with wind-sculptured carob, almond, ancient olive and Mediterranean medlar amongst the bare boulders and rocky outcrops. In early spring the ground is a forest of common asphodel. © C Richardson

Plate 8. In spring the 400 m foothills at Marathounta, near Paphos, Cyprus, are ideal for breeding Great Spotted Cuckoos, migrant warblers, shrikes and finches. Flowering medlar and giant fennel are evident while prickly burnet and wild thyme provide ground cover. Evergreen carob trees dominate the landscape throughout the year. © C Richardson

These include a number of resident species which are supplemented by passage migrants, winter visitors and/or breeding visitors *eg* Woodlark *Lullula arborea*, Spanish Sparrow *Passer hispaniolensis* and Common Chaffinch *Fringilla coelebs*. Localised or scarce breeders and infrequent passage migrants including Calandra Lark *Melanocorypha calandra* and Eurasian Crag Martin *Ptyonoprogne rupestris* are not included in this study, as insufficient data was obtained. I have included non-resident breeding species which also occur as passage migrants and/or winter visitors *eg* Masked Shrike *Lanius nubicus*, Barn Swallow *Hirundo rustica* and Spotted Flycatcher *Muscicapa striata*. Multiple statuses are covered in the species accounts. I have endeavoured to show their migration periods by frequently visiting and recording at known, mainly coastal, migration sites, where the species is not known to breed. Many passage migrants show different patterns in spring and autumn for a variety of reasons including geographical, food availability or seasonal weather conditions. Other species apparently take direct non-stop journeys and may simply

overfly Cyprus in autumn, while others perform loop migrations. Different spring and autumn migrations are well illustrated in some of the species histograms and are usually referred to in the species' texts.

Solely resident species *eg* Crested Lark *Galerida cristata*, Cetti's Warbler *Cettia cetti* and Eurasian Magpie *Pica pica* were not part of the study. Although fairly regular, but with less than five records per year in some cases, the following species are also omitted: Citrine Wagtail *Motacilla citreola*, Thrush Nightingale *Luscinia luscinia*, Desert Wheatear *Oenanthe deserti*, Rufous-tailed Rock Thrush *Monticola saxatilis*, Barred Warbler *Sylvia nisoria*, Garden Warbler *Sylvia borin*, Semi-collared Flycatcher *Ficedula semitorquata*, Western Cinereous Bunting *Emberiza cineracea* and Common Reed Bunting *Emberiza schoeniclus*. A full list of species included in the present study is shown in Table 1.

Table 1. A full list of species covered in the study

Species	Number of records	Number of birds	Notes
Red-backed Shrike	602	1322	
Lesser Grey Shrike	320	808	
Woodchat Shrike	183	257	
Masked Shrike	717	1973	includes breeding visitors
Eurasian Golden Oriole	123	271	
Eurasian Penduline Tit	23	86	
Sand Martin	280	6918	
Barn Swallow	1474	38 998	includes breeding visitors
Common House Martin	541	17 635	includes breeding visitors
Red-rumped Swallow	427	3041	includes breeding visitors
Greater Short-toed Lark	274	5653	includes breeding visitors
Woodlark	443	4644	includes residents
Eurasian Skylark	617	27 252	
Great Reed Warbler	108	145	
Moustached Warbler	103	212	
Sedge Warbler	119	231	
Eurasian Reed Warbler	277	838	includes breeding visitors
Eastern Olivaceous Warbler	423	1097	includes breeding visitors
Willow Warbler	551	3603	
Common Chiffchaff	845	3827	
Eastern Bonelli's Warbler	37	46	
Wood Warbler	42	62	
Eurasian Blackcap	605	1802	
Lesser Whitethroat	336	892	
Eastern Orphean Warbler	54	89	
Common Whitethroat	151	242	
Eastern Subalpine Warbler	55	72	
Sardinian Warbler	1289	3635	includes residents & breeding visitors
Rüppell's Warbler	63	126	
Cyprus Warbler	645	1191	resident and breeding visitor only
Common Starling	109	8178	
Eurasian Blackbird	274	524	includes residents

Song Thrush	479	2538	
European Robin	603	2185	
Bluethroat	99	162	
Common Nightingale	93	167	includes breeding visitors
Western Black Redstart	651	1433	
Common Redstart	114	153	
Whinchat	646	2150	
European Stonechat	1286	6770	
Isabelline Wheatear	379	1043	
Northern Wheatear	728	2529	
Cyprus Wheatear	919	2568	breeding visitor only
Eastern Black-eared Wheatear	298	596	
Finsch's Wheatear	237	502	
Blue Rock Thrush	133	157	includes residents
Spotted Flycatcher	468	1001	includes breeding visitors
Eurasian Pied Flycatcher	74	126	
Collared Flycatcher	53	171	
Spanish Sparrow	991	59 954	includes residents
Yellow Wagtail	1013	33 218	includes breeding visitors
Grey Wagtail	206	277	includes residents
White Wagtail	744	26 390	
Tawny Pipit	334	1084	
Meadow Pipit	874	17 217	
Tree Pipit	285	1133	
Red-throated Pipit	338	3234	
Water Pipit	194	635	
Common Chaffinch	821	15 442	includes residents
European Serin	583	13 384	includes residents
European Greenfinch	749	6113	includes residents
European Goldfinch	950	18 689	includes residents
Common Linnet	979	21 315	includes residents
Corn Bunting	956	14 639	includes residents
Ortolan Bunting	152	550	
Cretzschmar's Bunting	229	678	includes breeding visitors
Black-headed Bunting	138	271	includes breeding visitors

The histograms

The histograms show the timing, frequency and abundance of each species. Abundance is reflected by the number of individuals encountered, included as a single record, and can embrace single birds, a small party or a large flock. The histogram's heading gives the total number of records logged for the period of the study and each vertical bar indicates the total number of birds recorded. The first and middle thirds are each ten days for all months, but the last third of each month varies from 8–11 days. In particular, the last third of February is on average 1.7 days (17%) shorter than those adjacent to it (allowing for 3 leap years in 10 years). This manifests itself as an apparent dip in late February with some, but not all species. The 'Number of birds' shown in tables 1–3 combine all my observations, and where relevant the notes column refers to the species' multiple status while the text

includes analysis of their migration patterns. Spring passage for many species tends to be briefer and more concentrated, involving a more pronounced peak than in autumn (Flint & Stewart 1992) and this is displayed well in the histograms (Figures). This applies particularly to Sedge Warbler *Acrocephalus schoenobaenus*, Lesser Whitethroat *Sylvia curruca*, Northern Wheatear *Oenanthe oenanthe*, Spotted Flycatcher, Tree Pipit *Anthus trivialis* and Cretzschmar's Bunting *Emberiza caesia*. The reverse is also true and where contrasting spring and autumn migrations occur, I have tried to analyse the reasons for this where references are available. The 20 most frequently encountered and most abundant species are shown in Tables 2 and 3.

Cyprus Wheatear and Cyprus Warbler

The two Cyprus breeding endemic species are both migratory to different degrees, but Cyprus is their final breeding destination. However, their histograms show interesting movement patterns which are not fully understood. I have referred to this in each of their species' texts.

Although a summer breeding visitor, Cyprus Wheatear *Oenanthe cyprica* has very occasionally been recorded in winter months, most recently, two at St Hilarion castle in January 2010, two there December 2010, one at Tala February 2010 and one at Minthis hills January 2011 (D & J Walker, M Willis pers comms). They usually arrive in Cyprus from their African wintering grounds in March, occasionally earlier, and depart in October, with stragglers remaining to November some years. When the first arrivals make landfall, some are recorded at sites where they are not known to breed. These may then disperse to breeding territories, which can take up to two weeks following arrival (pers obs), while others arrive immediately on breeding territory (Randler *et al* 2010). After the breeding season fledged young and adults become unobtrusive and harder to find from late July–August. There is an obvious increase in sightings from early September prior to their departure from Cyprus, which commences in mid September and continues through October. At this time numbers appear to increase on low ground; probably some of the population from higher

Table 2. The 20 most frequently encountered species

	Species	Number of records
1	Barn Swallow	1474
2	Sardinian Warbler	1289
3	European Stonechat	1286
4	Yellow Wagtail	1013
5	Spanish Sparrow	991
6	Common Linnet	979
7	Corn Bunting	956
8	European Goldfinch	950
9	Cyprus Wheatear	919
10	Meadow Pipit	874
11	Common Chiffchaff	845
12	Common Chaffinch	821
13	European Greenfinch	749
14	White Wagtail	744
15	Northern Wheatear	728
16	Masked Shrike	717
17	Western Black Redstart	651
18	Whinchat	646
19	Cyprus Warbler	645
20	Eurasian Skylark	617

Table 3. The 20 most abundant species.

	Species	Number of birds
1	Spanish Sparrow	59 954
2	Barn Swallow	38 998
3	Yellow Wagtail	33 218
4	Eurasian Skylark	27 252
5	White Wagtail	26 390
6	Common Linnet	21 315
7	European Goldfinch	18 689
8	Common House Martin	17 635
9	Meadow Pipit	17 217
10	Common Chaffinch	15 442
11	Corn Bunting	14 639
12	European Serin	13 384
13	Common Starling	8178
14	Sand Martin	6918
15	European Stonechat	6770
16	European Greenfinch	6113
17	Greater Short-toed Lark	5653
18	Woodlark	4644
19	Common Chiffchaff	3827
20	Sardinian Warbler	3635

ground preparing to move south (Flint & Stewart 1992). There may also be some departure from upland forest areas at this time. The histogram reflects some of these movements.

Whilst some Cyprus Warblers *Sylvia melanothorax* are resident, a sizeable proportion departs Cyprus to winter in the Middle East and northeast Africa (Flint & McArthur 2014). These include many from areas above 1000 m asl (Flint & Stewart 1992). In spring, the number of records increases in March, as breeding visitors return and song is widely heard. Many are also recorded at this time at sites where they are not known to breed, presumably as arriving migrants make landfall (pers obs). They can be difficult to find July–early August, when singing ceases and the species becomes unobtrusive. Records increase in September, and although departure of migrants may start earlier, a distinct decline was noted annually from mid November onwards. Numbers are noted passing through Israel from late October increasing in November (Shirihai 1996, Shirihai *et al* 2001).

SYSTEMATIC LIST

The list follows the OSME Regional List taxonomic order and nomenclature (Blair *et al* 2011). The species' name is followed by reference to the relevant histogram. Each species account begins with a statement of its known status *in italics*, taken from the 2011 *Cyprus Bird Report* (Richardson 2005–2012), which largely follows Flint & Stewart (1992). DF desalination fields, GP gravel pits, RB reed-beds, SW sewage works, WTP water treatment plant.

Red-backed Shrike *Lanius collurio* (Figure 3). *Passage migrant, more common in autumn than spring. Occasional breeder.* Recorded mid April–May, late July–November. More common in autumn, when migration was more protracted than spring. Caused by a loop migration, many spring migrants simply passing east of Cyprus (Lefranc & Worfolk 1997). Spring passage (302 birds) was 30% that of autumn (1020 birds). Breeding last occurred June 1999 on the Akamas peninsula and no breeding has been confirmed since (Whaley & Dawes 2003). 48% of sightings of two or more birds in loose association. There were 602 records (1322 birds), mean 2.2 birds/record. The 25th most frequently recorded migrant and 32nd most abundant. **Spring:** earliest spring sighting 16 April 2006, latest 31 May 2009. Main passage late April. Largest counts, 57 Karpas peninsula 30 April 2013 and 17 Larnaca SW area 12 May 2007. **Autumn:** earliest record 21 July 2008, latest 24 November 2012. Peak passage early–mid September. Largest count 30 on 8 km road from cape Andreas to Golden beach, Karpas peninsula, 17 September 2009.

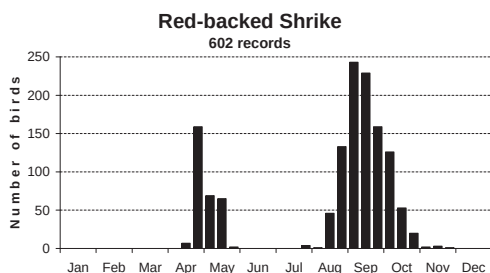
Lesser Grey Shrike *Lanius minor* (Figure 4). *Common passage migrant in autumn, rather scarce spring.* Recorded mid April–mid May, late July–mid October. Main passage late April and mid August–early September. A strong loop migration was evident. It was much more common in autumn, involving a more protracted passage, while most spring migrants probably pass further east (Lefranc & Worfolk 1997) including through the Arabian peninsula (pers obs, Richardson 1990) and probably through eastern Cyprus (eg cape Andreas). Spring passage (71 birds) was 10% that of autumn (737 birds). 52% of sightings were of two or more in loose association. There were 320 records (808 birds), mean 2.5 birds/record. The 36th most frequently recorded migrant and 41st most abundant. **Spring:** earliest spring sighting 16 April 2006, latest 13 May 2009. Largest number 10 cape Andreas 30 April 2013. Only singles observed in the west in spring. **Autumn:** earliest sighting 30 July 2010, latest 18 October 2010. Largest counts, 14 at Paphos SW 30 August 2007 and 26 in the Ezousas valley 20 August 2005.

Woodchat Shrike *Lanius senator* (Figure 5). *Widespread passage migrant in spring in variable numbers; rare autumn. Also an irregular and very scarce breeding visitor.* Recorded mid March–early June, late June–early September. Main spring passage mid–late April, while peak autumn passage, based on less than 20 records, appeared to be mid August. It occurred mainly in spring so probably overflies Cyprus in autumn, with many others passing further west during an anticlockwise loop migration (Bourne 1960, Lefranc & Worfolk 1997). Spring passage (241 birds) 15 times that of autumn passage (16 birds). 73% of sightings of singles, with only a few records of three or more together. There were 183 records (257 birds), mean 1.4 birds/record. The 45th most frequently recorded migrant and 50th most abundant. **Spring:** earliest record 20 March 2006, latest 17 May 2013 of a tired migrant on the coast at Paphos plain where no breeding has ever been recorded. Largest counts, six Armou 14 April 2010 and seven Karpas peninsula 24 April 2007. **Autumn:** earliest, either a dispersing juvenile or migrant, Marathounta 21 June 2009; latest 4 September 2010.

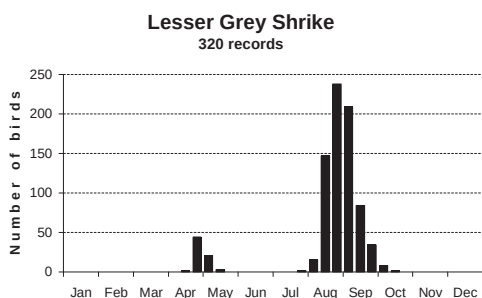
Masked Shrike *Lanius nubicus* (Figure 6, Plate 9). *Common breeding visitor and passage migrant.* Recorded mid March–mid October. Performs a loop migration, being very common in autumn and scarce in spring. Low spring numbers may consist mainly of arriving breeders, while most passage migrants probably pass further east, including through Israel, where it is much more common in spring than autumn (Shirihai 1996). Early spring sightings 11–20 March occurred five times 2003–2011 at cape Greco in eastern Cyprus (Gordon 2004, Richardson 2005–2012), suggesting a possible entry of migrants/breeding visitors from the east. I made very few visits to their forest breeding grounds, except occasionally late May–June. Large numbers were evident in the Paphos area from early July, becoming common island-wide late July–early September (Richardson 2005–2012). 62% of sightings of two or more, though 18% were of five or more together. There were 717 records (1973 birds), mean 2.7 birds/record. The 16th most frequently recorded migrant and 28th most abundant. **Spring:** earliest at a non-breeding site 18 March 2011 and latest at a non-breeding site 18



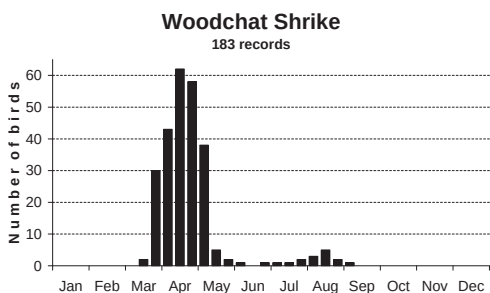
Plate 9. After breeding, Masked Shrike *Lanius nubicus* numbers reach a peak in mid August in Cyprus. This adult was at Asprokremmos dam 1 April 2011. © G Reszeter



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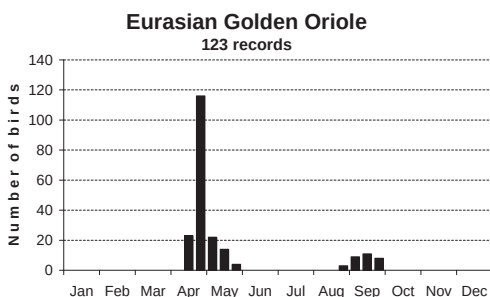
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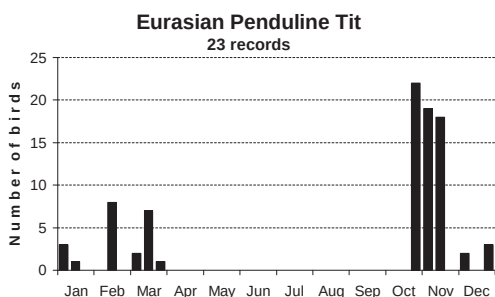
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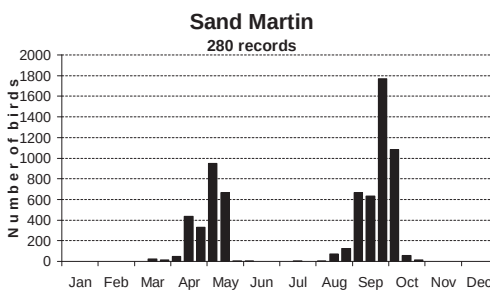
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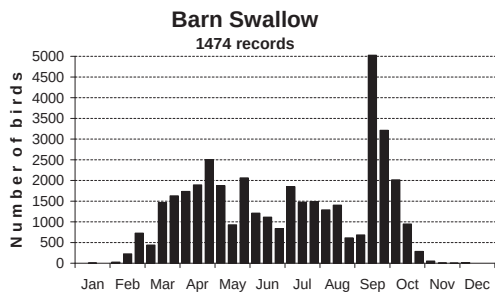
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Figures 3–10. Red-backed, Lesser Grey, Woodchat and Masked Shrike, Eurasian Golden Oriole and Penduline Tit, Sand Martin and Barn Swallow numbers, December 2003–November 2013.

May 2011. No obvious peak in spring. **Autumn:** earliest at a non-breeding site 13 June 2006, probably the beginning of post-breeding dispersal from forest breeding areas 20–60 km away. Latest autumn migrant 15 October 2005. Largest counts, 14 Armou 30 July 2012 with 13 there 1 August 2003 and 12 Marathounta 6 August 2012. I suspect these large counts are more likely to be of groups of passage migrants than departing breeders.

Eurasian Golden Oriole *Oriolus oriolus* (Figure 7). *Fairly common spring passage migrant, less so in autumn. Also regular, localised and rather elusive breeding visitor.* Recorded mid April–May, late August–September. Main spring passage late April. One of the latest spring migrants, many heard in song in May, but no other breeding activity was observed during the period of this study. Autumn passage, which peaked in September, was found to be very sparse as it is throughout the Mediterranean. In autumn many probably overfly the region at night (Mason & Allsop 2009) while others appear to undertake a loop migration passing east through mainland Middle East and the Arabian peninsula (Andrews 1995, Eriksen *et al* 2003). Spring passage (240 birds) nearly eight times greater than autumn passage (31 birds). 55% of observations of single birds, 30% three or more together. There were 123 records (271 birds), mean 2.2 birds/record. The 52nd most frequently recorded species and the 49th most abundant. **Spring:** earliest arrival 11 April 2007, latest 22 May 2010. Largest numbers, 10 at Armou 26 April 2005 and 30 April 2000 and 10 Agios Filonas, Karpas 29 April 2009. **Autumn:** earliest record 27 August 2013, latest 29 September 2008. Largest group 3 Paphos SW 29 September 2008.

Eurasian Penduline Tit *Remiz pendulinus* (Figure 8). *Annual winter visitor and passage migrant to the island's reed-beds in small numbers.* A small number of sightings from 2 or 3 regular sites. Regarded only as a winter visitor by Flint & Stewart (1992), but I found it to be more common as an autumn passage migrant, corroborated by the records published in Gordon (2004), Richardson (2005–2012) and the *Cyprus Ornithological Society* (1957) *Bird Report* series published 1971–2003. Earliest in autumn 27 October 2010, latest in spring 21 March 2008. Autumn migration peak late October–mid November with spring peaks mid February and mid March. Largest numbers, 11 Zakaki marsh 30 October 2010 and 10 Phasouri RB 13 November 2006. There were 23 records (86 birds), mean 3.7 birds/record. 67th most frequently recorded species and 64th most abundant.

Sand Martin *Riparia riparia* (Figure 9). *Fairly common late spring passage migrant and very common autumn passage migrant.* Recorded all months mid March–October. Spring migration prolonged while autumn passage probably commenced late June, blurring transition between spring and autumn (Kephalas 2011). Main spring passage mid April–mid May, occasionally to early June. Some possibly remain as non-breeding summer visitors, as happens in Israel (Shirihai 1996). Main autumn passage late September–early October. Cramp (1988) refers to Russian populations (*R. r. riparia*), which breed much later than European populations, passing through eastern Mediterranean late April and early May. It is possible Cyprus experiences part of this movement. However, the large autumn passage through Cyprus appears to concur with the migration timing of more western European populations (Cramp 1988). Only 23% of sightings of singles, while 56% of four or more birds together. Spring passage (2484 birds) 56% that of autumn (4434 birds). There were 280 records (6918 birds), mean 25 birds/record. The 41st most common species recorded and 14th most abundant. **Spring:** earliest record 13 March 2011, latest 3 June 2013. Largest counts, 700 at Akrotiri RB 7 May 2009 and 500 at Koloni canal, Paphos, 7 May 2009. **Autumn:** earliest autumn migrants were possibly one Phasouri RB 23 June 2013, one

Akhna dam 30 June 2009 and five Zakaki marsh 11 July 2008. Latest, two Zakaki marsh 4 November 2007. Largest count 1000 Akrotiri peninsula 24 September 2004.

Barn Swallow *Hirundo rustica* (Figure 10). *Common passage migrant and breeding visitor, occasionally in winter.* Recorded all months, but mainly February–early November. Main spring passage mid March–early May. Numbers declined mid May, before increasing late May as number of fledged birds increased. Big roosts were noted from July, mostly juveniles. Autumn migration apparently also commenced July, peaking mid–late September, continuing most years to early November, occasionally early December. This closely matches country-wide records (Gordon 2004, Richardson 2005–2012). Movement pattern complicated and probably involves passage of several northern populations. In spring, breeding visitors probably first to arrive, mainly February, while it appears far northern breeding populations are latest to pass through, in mid May (Flint & Stewart 1992, Richardson 2005–2012). Local breeders fledge from mid–early May, with second broods noted July. Odd birds reported mid December–early January, supposedly lost or wandering individuals. Largest numbers, c1000 Golden beach–cape Andreas 17 September 2009 and c800 Mandria 28 September 2009. There were 1474 records (38 998 birds), mean 26+ birds/record. The most common species recorded and 2nd most abundant. **Spring:** earliest record four Zakaki marsh 12 January 2008 [this species arrives in mid January with some regularity. Other early records, in *Cyprus Bird Reports* 2000–2010, include one Polis flying north 19 January 1999, one Partenitis dam 14 January 2000, one Zakaki marsh 20 January 2001, two Oroklini marsh 18 January 2002 and two Zakaki marsh 18 January 2010]. Largest number c600 Agios Filonas preparing to head north across sea 29 April 2009. **Autumn:** latest record ten Armou 5 December 2008. One Phasouri RB 11 December 2006 may have been a late migrant or a wandering individual.

Common House Martin *Delichon urbicum* (Figure 11). *Common passage migrant and breeding visitor.* Recorded late January–early October. Main spring passage mid March–mid April. As with most hirundines, movement patterns of this species difficult to interpret. Generally in spring, breeding visitors are the first to arrive, mainly mid February. Local breeders fledge from mid–early May and many then appear to disperse and feed over the pine forests. 100s were in post-breeding flocks from mid June. Autumn migration appeared to commence in July, peaking in late August, coming to a halt rather suddenly mid September. This matched the wider pattern in the country (Gordon 2004, Richardson 2005–2012). Largest numbers were one group of 2000 on power lines in Diarizos valley 29 August 2008, 900 feeding over Paphos forest 19 June 2004 and 450 over mount Olympus 8 August 2011. There were 541 records (17 635 birds), mean 33 birds/record. 70% of records of five or more together. The 23rd most frequently recorded migrant and 8th most abundant. **Spring:** earliest spring migrant at a non-breeding site was 24 January 2011; latest spring migrant at a non-breeding site was probably mid May, although accurate timing obscured by large feeding range of local breeding birds. **Autumn:** 300 arriving from the north into Polis bay 22 July 2012, were the first obvious sign of autumn migration, with latest departure 7 October 2008.

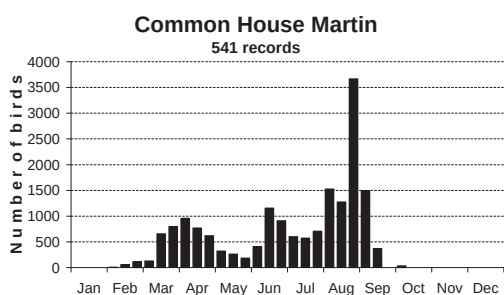
Red-rumped Swallow *Cecropis daurica* (Figure 12). *Fairly common passage migrant and breeding visitor.* Recorded early March–early November. Small numbers of passage migrants were noted early March, before breeding visitors arrived and started nest-prospecting mid March. Peak numbers late March–April. Autumn migration more difficult to interpret, with congregations of tens noted from early July. Many were locally breeding family parties, but numbers first observed widely at non-breeding sites from early August and assumed to be

migrants. Numbers seen in spring (c1460) almost equal to those in autumn (c1480). There were 427 records (3041 birds), mean 7.1 birds/record. The 30th most frequently recorded migrant and 23rd most abundant. 50% of sightings of three or more together. **Spring:** first recorded spring passage migrant 8 March 2009, the latest at a non-breeding site 10 May 2013. Largest numbers, 220 Mandria 24 March 2009, 150 passing Aphrodite Beach hotel, Latchi, at sunset 17 April 2010. **Autumn:** difficult to determine the earliest autumn migrant with certainty, but dispersal from mid June, with large numbers, probably including passage migrants, seen from early August peaking in early-mid September. Largest autumn number 79 going to roost Episkopi, Ezousas valley, 20 August 2009. Latest record 5 November 2010.

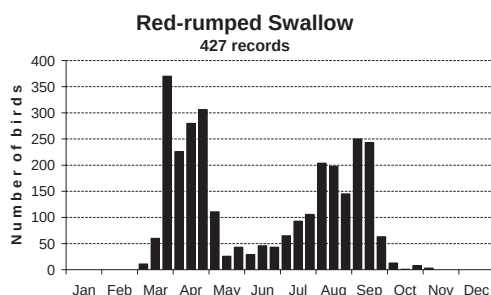
Greater Short-toed Lark *Calandrella brachydactyla* (Figure 13, Plate 10). *Common spring migrant, fewer autumn. Occasional breeding visitor.* Recorded March-late May, August-November. Main passages late March and mid-late September. In Larnaca DF up to four were seen on several occasions June and August and may have been nesting. Numbers in spring (4879) 6.4 times those in autumn (770). There were 274 records (5653 birds), mean 20+ birds/record. The 42nd most frequently recorded migrant and 17th most abundant. Gregarious, with 81% of sightings of two or more birds together. **Spring:** earliest arrival 7 March 2009, latest at a non-breeding site 21 May 2013. Largest numbers, 320 Mandria 27 March-4 April 2009, 300 Geroskipou sports club 25 March 2009, 290 Paphos SW 24 March



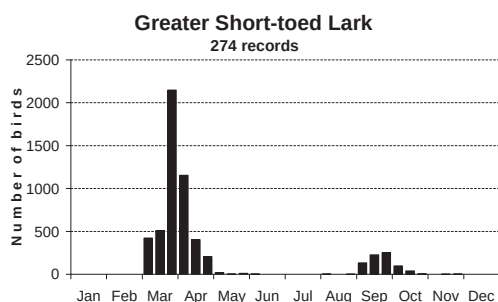
Plate 10. Seen here at Mandria 9 April 2011, Greater Short-toed Lark *Calandrella brachydactyla* is a common migrant and localised breeding visitor to Cyprus. © G Reszeter



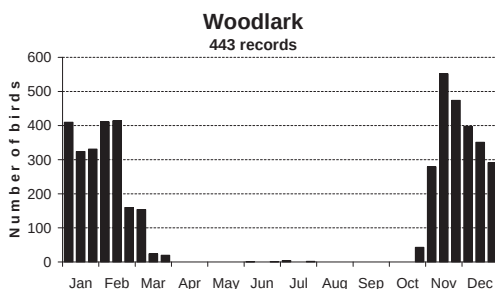
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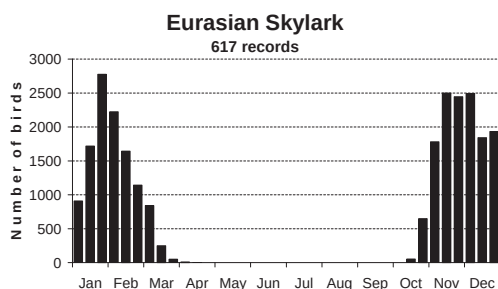
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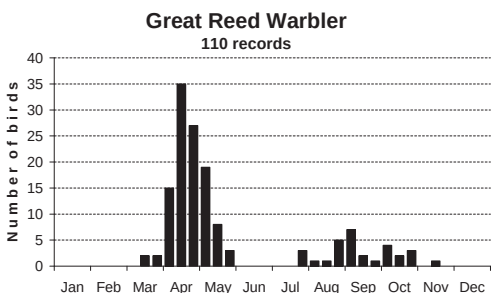
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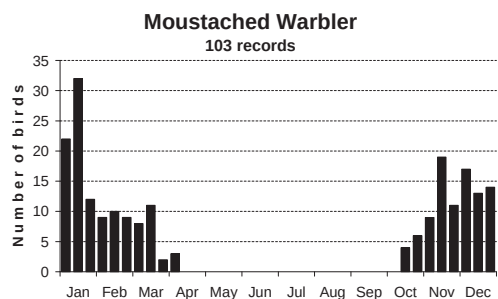
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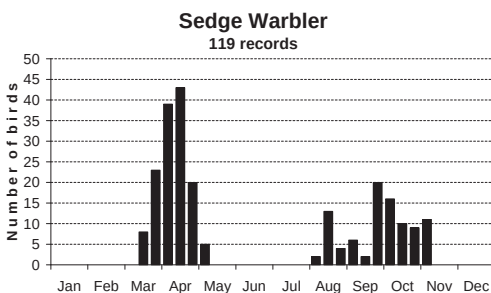
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Figures 11–18. Common House Martin, Red-rumped Swallow, Greater Short-toed Lark, Woodlark, Eurasian Skylark, Great Reed, Moustached and Sedge Warbler numbers, December 2003–November 2013.

2009 and 280 Mandria 9 March 2010. **Autumn:** earliest at a non-breeding site 24 August 2006, latest 24 November 2011. Largest numbers, 36 Mandria 7 September 2011 and 46 there 11 September 2004.

Woodlark *Lullula arborea* (Figure 14). *Localised resident breeding species in the mountains. Fairly widespread winter visitor to lower ground.* Migrants and winter visitors recorded late October–March. Autumn arrival consistently 25–29 October, with peak involving passage migrants mid November–early December. Numbers declined rapidly from late February and there was no perceptible spring passage. Earliest autumn arrival 25 October 2011; the latest spring departure 30 March 2004. One or two birds noted in Troodos forest breeding territories during my irregular visits there June and July. Gregarious in winter, with 90% of records of two or more birds together. The largest groups recorded Armou hills, with 61 there 19 February 2011, 60 on 20 November 2012, 47 on 13 November 2011 and 44 on 7 February 2011. There were 443 records (4644 birds), mean 10+ birds/record. The 28th most frequently recorded migrant and 18th most abundant.

Eurasian Skylark *Alauda arvensis* (Figure 15). *Very common passage migrant and winter visitor.* Recorded October–mid April. Autumn arrival mid–late October and an autumn peak mid November–early December, possibly of passage migrants. A decline early–mid January, a distinct peak late January, followed by a steady departure of winter visitors throughout February and March. All departed by late March, except for odd stragglers remaining to early April in 2008 and mid April in 2010. Earliest autumn sighting 6 October 2010; latest in spring 19 April 2010. Gregarious in winter, with 90% of records of two or more birds together. Largest counts, 520 Paphos SW 12 November 2010, 500 Mandria 8 February 2009 and 450 there 4 December 2009. There were 617 records (27 252 birds), mean 44 birds/record. The 20th most frequently recorded migrant and 4th most abundant.

Great Reed Warbler *Acrocephalus arundinaceus* (Figure 16). *Fairly common passage migrant. Has bred, last in 1985.* Recorded mid March–May, late July–mid November. Main spring passage mid–late April. There was an almost imperceptible autumn migration peak late August–early September. Much more common in spring than autumn. According to Lemke *et al* (2013) it makes frequent and long stopovers in spring during northbound migration to Eurasia, while in autumn many simply overfly the Mediterranean sea without stopping (M Tarka pers comm). Spring passage (111 birds) just over 3 times greater than in autumn (34 birds). 77% of sightings of singles. There were 108 records (145 birds), mean 1.3 birds/record. The 54th most frequently recorded migrant and 58th most abundant. **Spring:** earliest record 18 March 2013, latest 24 May 2013. Largest numbers, five Phasouri RB 11 April 2013 and five Agia Varvara 19 April 2007. **Autumn:** earliest record 31 July 2007, latest 11 November 2011, with a maximum of 3 seen.

Moustached Warbler *Acrocephalus melanopogon* (Figure 17). *Scarce to fairly common winter visitor.* Recorded mid October–early April. This localised winter visitor only associated with active reed-beds during present study. Numbers varied annually with most winter visitors arriving late October and remaining to mid March. Sightings in late March and early April only occurred 2006, 2008 and 2012 and may have involved passage migrants. Earliest autumn arrival 17 October (2008 and 2012), latest departure 6 April 2012. Largest numbers, six Asprokremmos dam pools 4 December 2003 and 15 January 2006, five there 28 January 2004 and five Phasouri RB 22 February 2006. 51% of sightings of 2 or more birds. There were 103 records (212 birds), mean 2+ birds/record. The 57th most frequently recorded migrant and 54th most abundant.

Sedge Warbler *Acrocephalus schoenobaenus* (Figure 18). *Common passage migrant*. Recorded mid March–early May, August–early November. Main spring passage early–mid April and main autumn passage late September–early October. More common in spring than autumn and very rarely found away from wetlands, which were not visited so frequently as other sites. Spring passage (138 birds) was 1.5 times that of autumn (93 birds) when most wetlands are dry. 60% of sightings of singles. There were 119 records (231 birds), mean nearly 2 birds/record. The 53rd most frequently recorded migrant and 52nd most abundant. **Spring**: earliest record 11 March 2006, latest 3 May 2013. Largest numbers, 20 Phasouri RB 5 April 2006, nine there 11 April 2013 and nine Xeros Potamos pools 24 April 2004. **Autumn**: earliest record 10 August 2012, latest 9 November 2010. No more than five were reported together at any one site in autumn.

Eurasian Reed Warbler *Acrocephalus scirpaceus* (Figure 19). *Common breeding visitor (race fuscus) and passage migrant*. Recorded mid March–November. Peak spring passage mid April, but autumn migration imperceptible. During this study recorded only at reed-beds, which were visited irregularly. Uneven appearance of the histogram reflects this to some extent. Earliest spring arrival 11 March 2012, latest autumn departure 21 November 2006. 68% of sightings of two or more. Largest numbers, 20 Phasouri RB 21 May 2007, 19 there 31 July and 10 August 2007, and 17 Mia Milia WTP 24 March 2010. There were 277 records (838 birds), mean 3 birds/record. The 39th most frequently recorded migrant and 40th most abundant.

Eastern Olivaceous Warbler *Iduna pallida* (Figure 20). *Very common breeding visitor and passage migrant*. Recorded late March–mid October. Very vocal passage migrant and breeding visitor. Seasonal peak numbers recorded late May, when local breeders in full song, and mid–late August, which were probably mostly passage migrants. The earliest spring arrival 25 March 2013; the latest autumn sighting 15 October 2005. 57% of sightings of two or more together. Spring (March–June) numbers (593 birds) slightly outnumbered autumn (July–October) numbers (503 birds). Largest counts, 50 (mostly heard singing) Kannaviou forest 31 May 2008, 20 Livadi tou Pasha 5 June 2012, 20 Kelefos bridge, Paphos forest, 16 June 2008 and 20 Akhna dam 20 August 2013. There were 423 records (1097 birds), mean 2.6 birds/record. The 31st most frequently recorded migrant and 35th most abundant.

Willow Warbler *Phylloscopus trochilus* (Figure 21). *Very common autumn passage migrant, uncommon spring*. Recorded late March–mid May, mid August–early November. Peak passages late April and September–early October. Considerably more common autumn than spring. Undertakes a strong loop migration, with concentrated numbers passing further east over Israel, the Arabian peninsula and other parts of the Middle East in spring where numbers exceed those recorded in autumn, contrary to the pattern occurring in Cyprus (Shirihai 1996, Eriksen *et al* 2003, Gregory 2005, Richardson 1990). In autumn closely associated with long stalks of Fennel from which it takes small insects and often found in large numbers where the plants were concentrated. Spring passage (86 birds) was 2.7% that of autumn (3158 birds). 75% of sightings of two or more birds. There were 551 records (3603 birds), mean 6.5 birds/record. The 26th most frequently recorded migrant and 21st most abundant. **Spring**: earliest sighting 28 March 2010, latest 17 May 2013. Largest number 20 beside the Neo Chorio–Smygies road 22 April 2004. **Autumn**: earliest record 12 August 2005, latest 13 November 2007. Largest numbers, 150 Evretou dam 22 September 2005, 55 Paphos SW 18 October 2006 and 45 Minthis hills 10 September 2007.

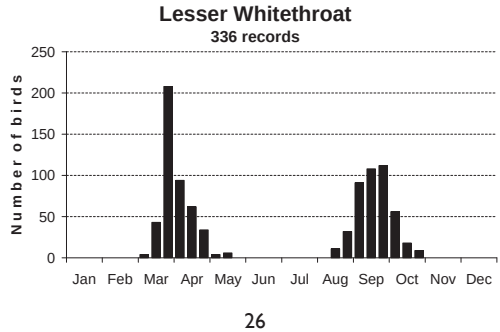
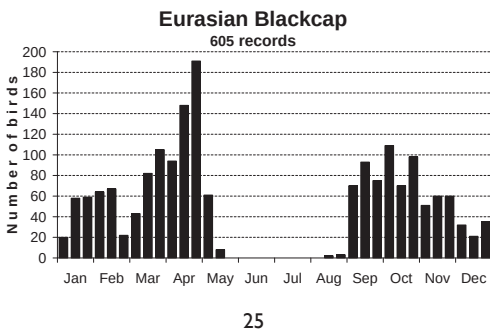
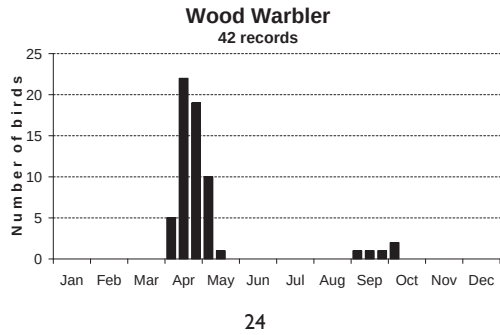
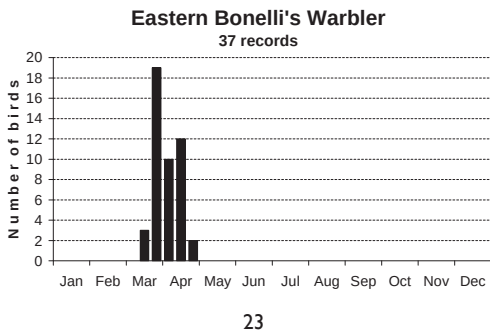
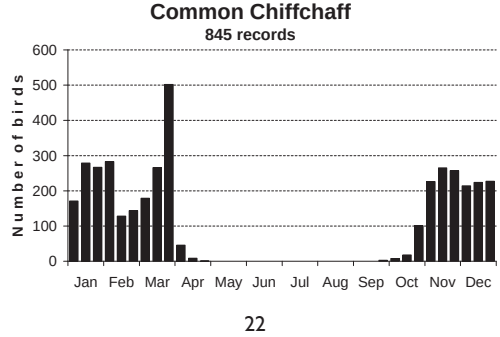
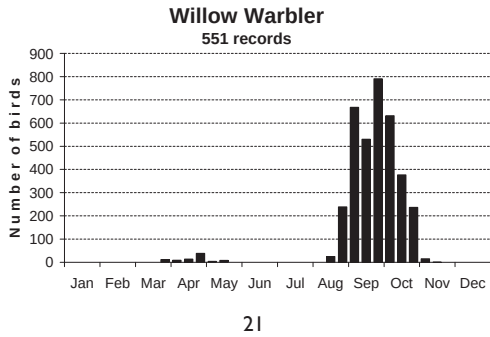
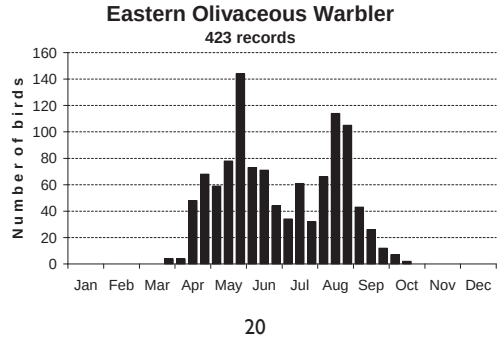
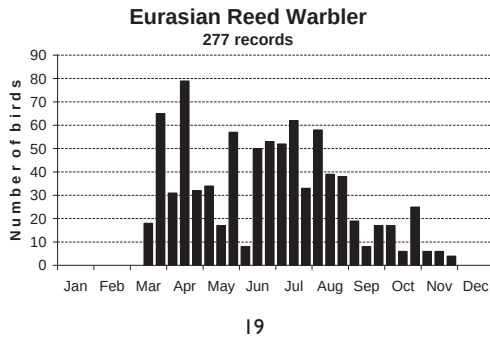
Common Chiffchaff *Phylloscopus collybita* (Figure 22). *Very common passage migrant and winter visitor*. Recorded late September–April. Most occurred late October–March, with a

spring migration peak late March. A small peak in November probably refers to passage migrants, but this is uncertain. A number of different migrant races were detected, separable by their contact calls. The most common passage migrant and winter visitor was *abietinus* November–early April and *collybita*, in smaller numbers, mostly passage October and March, which were predominant during the mid–late March peak. This matches closely Flint & Stewart (1992). *P.c. tristis* was not recorded with certainty. A loop migration may occur with one or more of these races. Earliest autumn arrival 28 September 2007, latest spring departure 20 April 2008. Largest counts, 120 Paphos lighthouse area 23 March 2009, 100 Geroskipou 25 March 2009, 50 Agios Minas 29 March 2009 and 50 Baths of Aphrodite 29 March 2009. 75% of records of two or more birds together. There were 845 records (3827 birds), mean 4.5 birds/record. The 11th most frequently recorded migrant and 19th most abundant.

Eastern Bonelli's Warbler *Phylloscopus orientalis* (Figure 23). *Uncommon, although regular spring passage migrant. Rare autumn.* Observed mid March–late April, main passage late March. Not recorded in autumn during this study, corroborating status in Flint & Stewart (1992). Only 6 singles recorded Cyprus mid July–mid October 1993–2012 (*Cyprus Bird Report* 1993–2012, Stylianou 2013). Its near absence in autumn may be due to the Turkish breeding population overflying the island in autumn while most of the Balkan population is likely to pass west of Cyprus at this time (Cramp 1992). Earliest spring sighting 16 March 2010, latest 30 April 2009. Largest number recorded seven Baths of Aphrodite 29 March 2009. There were 37 records (46 birds), mean 1.2 birds/record. The 66th most frequently recorded migrant and 67th most abundant.

Wood Warbler *Phylloscopus sibilatrix* (Figure 24). *Fairly common spring passage migrant, uncommon autumn.* Regularly recorded April–mid May and rather less so September–early October. Spring migration peaked mid–late April. No obvious peak was noted in autumn from such a small sample, but most were seen in the upland pine forests where numbers may be passing unnoticed. Spring passage (57 birds) 11 times larger than autumn (5 birds). 32% of sightings of two or more birds. Largest numbers, five Neo Chorio, Akamas, 1 May 2010 and four Kiti dam 12 April 2012. There were 42 records (62 birds), mean 1.5 birds/record. The 65th most frequently recorded migrant and 66th most abundant. **Spring:** earliest 1 April 2007, latest 16 May 2012. **Autumn:** earliest 4 September 2012, latest 9 October 2011.

Eurasian Blackcap *Sylvia atricapilla* (Figure 25). *Very common passage migrant spring and autumn; winter visitor in variable numbers.* Passage migrant and winter visitor mid August–mid May. Spring migration apparent mid March–mid May, peak mid–late April, a time when most were in sub-song with much calling and chasing occurring. In autumn, there appeared to be multiple peaks—probably as different populations moved through—particularly mid September, early then late October. This pattern supported by sightings at cape Greco autumn 2005 (Roth 2008). Several European populations also occur Israel, where northern European and nearer populations both recorded on migration (Shirihai 1996, Shirihai *et al* 2001). More common spring than autumn, which corroborates its status island-wide (Gordon 2004, Richardson 2005–2012). Flint & Stewart (1992) considered Eurasian Blackcap to be more numerous in autumn, mainly because of earlier very high daily totals in the southeast, but autumn numbers passing there are now apparently much lower (*eg* Roth 2008). Earliest autumn sighting 17 August 2008, latest spring 15 May 2011. Largest groups, 35 Akrotiri GP 25 April 2013, 35 Agia Napa SW 4 September 2009 and 27 Armou hills 25 September 2008. 59% of records of two or more birds together. There were



Figures 19–26. Eurasian Reed, Eastern Olivaceous, Willow Warbler, Common Chiffchaff, Eastern Bonelli's, Wood Warbler, Eurasian Blackcap and Lesser Whitethroat numbers, December 2003–November 2013.

605 records (1802 birds), mean 3 birds/record. The 21st most frequently recorded migrant and 30th most abundant.

Lesser Whitethroat *Sylvia minula* (Figure 26). *Common spring and autumn migrant*. Passage migrants March–mid May, mid August–October. Main passage late March and mid–late September. Spring passage numbers (455 birds) were very similar to autumn (437 birds) though autumn migration lacked an obvious peak. 54% of sightings of two or more birds. There were 336 records (892 birds), mean 2.6 birds/record. The 34th most frequently recorded migrant and 39th most abundant. **Spring**: earliest 8 March 2012, latest 13 May 2007. Largest numbers, 30 Paphos lighthouse 29 March 2007 and 25 there 23 March 2009. **Autumn**: earliest 16 August 2012, latest 28 October 2008. Largest number 35 Agia Napa SW 4 September 2009.

Eastern Orphean Warbler *Sylvia crassirostris* (Figure 27). *Common spring migrant, scarce autumn*. Recorded mid March–early May, late July–mid September. Main passages late March and August. Not common but in this study larger numbers were seen in autumn than spring contrary to Flint & Stewart (1992). However recent *Cyprus Bird Reports* (Gordon 2004, Richardson 2005–2012) indicate that records from all island observers are fairly equal in spring and autumn. There were 54 records (89 birds), mean 1.6 birds/record. The 64th most frequently recorded migrant and 63rd most abundant. Spring passage (34 birds) 62% of autumn (55 birds). 70% of sightings single birds. **Spring**: earliest 12 March 2010, latest 7 May 2010. Maximum of two seen at any one site. **Autumn**: earliest 24 July 2011, latest 15 September 2002. Largest numbers at Agia Napa SW with 12 on 10 August 2012, five 20 August 2013 and four 11 September 2009; and three Marathounta hills 15 August 2012.

Common Whitethroat *Sylvia communis* (Figure 28). *Common spring migrant, less common autumn*. Passage migrants mid March–mid May, mid August–late October. Peak passage mid April and early September. Spring passage (138 birds) 1.3 times that of autumn (104 birds). 68% of sightings single birds. There were 151 records (242 birds), mean 1.6 birds/record. The 49th most frequently recorded migrant and 53rd most abundant. **Spring**: earliest 13 March 2009, latest 12 May 2007. Largest number nine Paphos lighthouse 14 April 2009. **Autumn**: earliest 12 August 2013, latest 27 October 2002. Largest number 10 Armou 1 September 2004.

Eastern Subalpine Warbler *Sylvia albistriata* (Figure 29). *Spring passage migrant in variable numbers, rare autumn*. Passage migrants March–early May and, rarely, September–early October. Peak passage late March. In spring, on departing Africa, many appear to follow the upper Nile valley and Red sea coast (pers obs) heading north, some following the mainland through the Levant countries and/or crossing the eastern Mediterranean including Cyprus on a broad front (Shirihai 1996). It performs a loop migration. In autumn their absence appears to be due to most post-breeding migrants departing their breeding grounds, which lie mainly west and northwest of Cyprus, in a more southwestward direction towards the African coast (Shirihai *et al* 2001). Spring passage (67 birds) 13 times larger than autumn (five birds). 80% of sightings single birds. There were 51 records (72 birds), mean 1.4 birds/record. The 63rd most frequently recorded migrant and 65th most abundant. **Spring**: earliest 7 March 2010, latest 9 May 2012. Largest numbers, seven Paphos lighthouse area 26 March 2009 and four there 20 March 2009. **Autumn**: earliest 7 September 2012, latest 3 October 2011.

Sardinian Warbler *Sylvia melanocephala* (Figure 30, Plate 11). *Fairly common or common winter visitor in variable numbers*. This species' status has changed since 1992. Breeders

have colonised at least the northern Kyrenia range, the north coast, and the west including most of Paphos District. It is now very common and appears to be mainly resident and continues to extend its range (eg Frost 1995, Cozens *et al* 2000, Pomeroy & Walsh 2000, Jones 2006, Radford 2009, Richardson 2011, Flint & McArthur 2014). Apparent passage migration and/or arrival/departure of local breeders evident spring and autumn, with numbers recorded at sites where they are not known to breed. Winter visitors were not noted during the present study (although winter visitors are often recorded by others, especially in the southeast of the island from late October to mid March (Richardson 2005–2012)). Main movements probably mid–late March, possibly to early April (but partly obscured by resident breeding activity) and late September–early November (peaking in October at sites where no residents occur). The early October peak in the histogram coincides with a survey undertaken in 2013 and inflates the figures, so passage probably peaks in late October based on sightings in areas where it is not known to breed (A Tye pers comm). This concurs with Shirihai *et al* (2001) and Flint & Stewart (1992). Numbers are swollen late April–late May due to post-breeding presence of family parties. The summer dip matches the period of least activity followed by a peak in activity in autumn when territories are re-established (pers obs). Largest numbers, 20 Choli 27 April 2003, 20 Lara point, Akamas, 5 May 2003 and 15 Minthis hills 15 October 2011. 22 territories were counted at Marathounta in a 2 km transect 26 May 2013. There were 1289 records (3635 birds), mean 2.8 birds/record. The 2nd most frequently recorded migrant, and 20th most abundant.



Plate 11. Sardinian Warbler *Sylvia melanocephala* is a passage migrant, winter visitor and successful colonising breeding species in Cyprus. This male was at Paphos sewage plant 25 March 2013. © G Reszeter

Rüppell's Warbler *Sylvia rueppelli* (Figure 31, Plate 12). Fairly common spring passage migrant, rare autumn. Passage migrants observed late February–mid April, mid August–mid September. Peak passage late March. It performs a loop migration, similar in pattern to Eastern Subalpine Warbler (above). In spring its passage is across the eastern Mediterranean (including Cyprus) and the Levant heading for breeding grounds north and northwest of Cyprus. In autumn it heads south/southwestward over the Mediterranean sea to the African coast, thus passing west of Cyprus (Shirihai *et al* 2001). Spring passage (121 birds) 24 times that of autumn (5 birds). 71% of sightings single birds. There were 63 records (126 birds), mean 2 birds/record. The 61st most frequently recorded migrant and 61st most abundant. **Spring:** earliest 28 February 2006, latest 14 April 2010. Largest numbers, 14 Marathounta 24 March 2011, 13 Paphos lighthouse 26 March 2009 (eight still



Plate 12. A regular and fairly common spring migrant in Cyprus, Rüppell's Warbler *Sylvia rueppelli* is at its passage peak in late March. This male was at Asprokremmos dam 28 March 2012. © G Reszeter

present 31 March) and six Marathounta 29 March 2011. **Autumn:** earliest 20 August 2011, latest 11 September 2007.

Cyprus Warbler *Sylvia melanothorax* (Figures 32 & 33, Plates 13 & 14). This Cyprus endemic is a common resident breeder and breeding visitor. Cyprus Warbler undertakes complicated migratory movements, which are difficult to interpret. An unknown but apparently substantial proportion of the breeding population leave the island in winter (Flint & Stewart 1992, Shirihaï *et al* 2001). Sightings in Israel suggest numbers depart Cyprus from early November (Shirihaï 1996), which might explain the dip in November. Summer visitors apparently return from early March (*eg* five Minthis hills 6 March 2007 were probably returning migrants). Sightings increased late March and early April, a period of peak singing and territorial activity. 51% of sightings singles, 17% of 3 or more birds. Largest numbers, 16 Paphos forest 19 June 2004, 15 Pissouri bay gorge 2 January 2007 and eight Minthis hills 22 June 2005. There were 645 records (1191 birds), mean 1.8 birds/record. The 19th most frequently recorded migrant and 33rd most abundant. The population is showing a worrying decline in

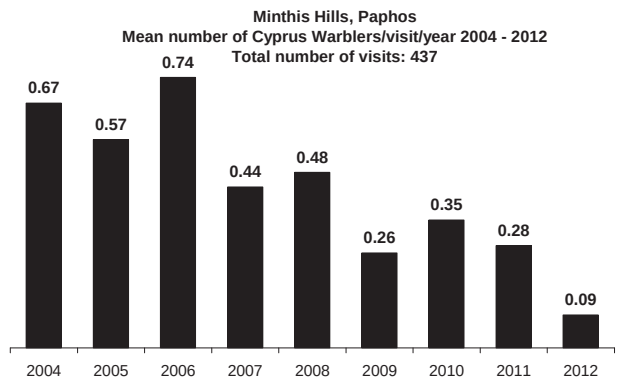
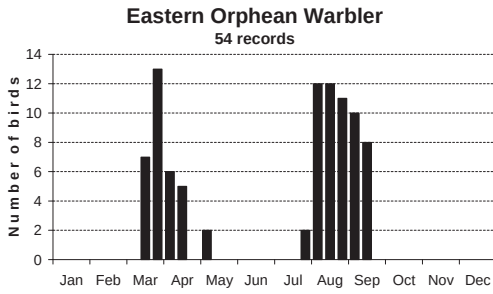
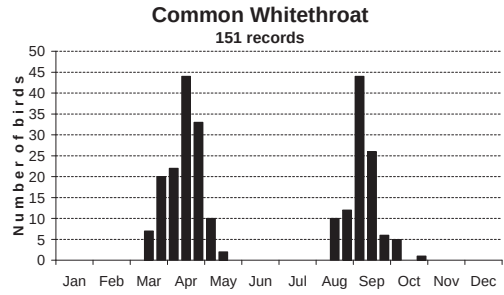


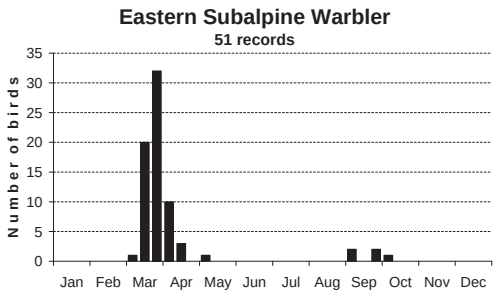
Figure 33. There is increasing evidence of a decline of the breeding population of Cyprus Warbler in many areas, but particularly in the southwest of the island. A large proportion of bird records in this survey were obtained from Minthis hills and near surrounds. This histogram indicates a decline of the species there during the period 2004–2012.



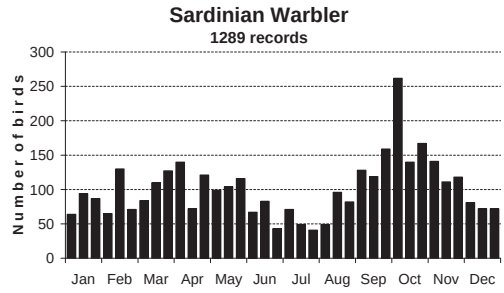
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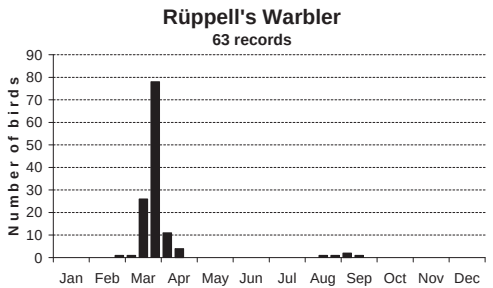
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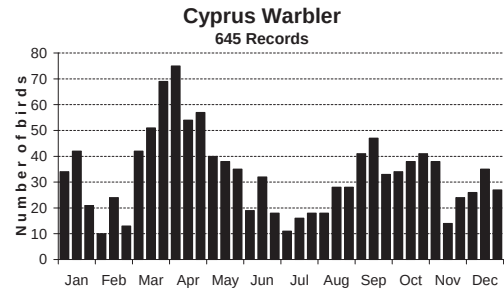
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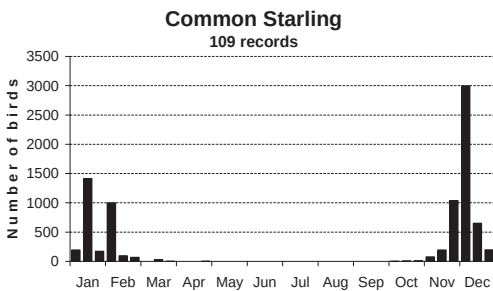
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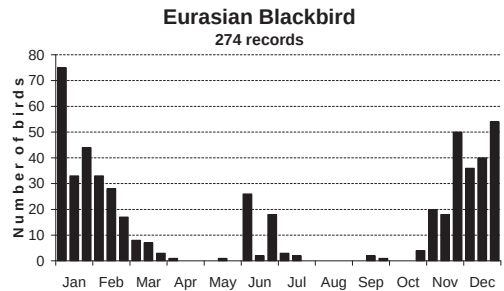
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Figures 27–35 (not Figure 33). Eastern Orphean Warbler, Common Whitethroat, Eastern Subalpine, Sardinian, Rüppell's and Cyprus Warbler, Common Starling and Eurasian Blackbird numbers, December 2003–November 2013.



Plate 13. Under pressure, the endemic Cyprus Warbler *Sylvia melanothorax* is declining in many areas of the country. This male was at Asprokremmos dam 28 March 2012. © G Reszeter



Plate 14. Even female Cyprus Warblers *Sylvia melanothorax* are jaunty and distinctive. This bird was at Anarita, near Paphos, 30 March 2012. © G Reszeter

western and other parts of Cyprus (Pomeroy & Walsh 2000, 2002, Jones 2006, Richardson 2011, Flint & McArthur 2014)

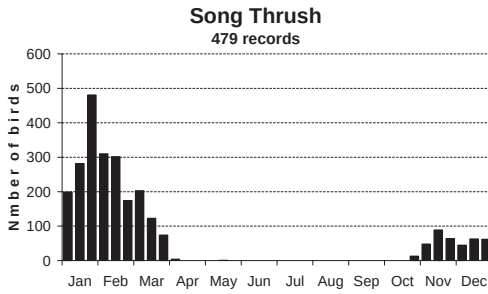
Common Starling *Sturnus vulgaris* (Figure 34). *Fairly common winter visitor and passage migrant.* Recorded all months October–May. Distinct peak early December, apparently a mid winter high, before numbers declined to mid March. Systematic lists in the Cyprus Ornithological Society (1957) reports 1990–2003, Gordon (2004) and Richardson (2005–2012) detail flocks of up to 2000 birds concentrating at wetlands in the Larnaca, Akrotiri and Famagusta areas and at roost sites in Nicosia city centre late November–early January, numbers peaking early December. Erratic peaks late winter are probably due to patchy observations and chance sightings of large flocks at wetlands. Earliest autumn sighting 9 October 2013, latest, in spring, 9 May 2011. Records after 11 March were only of ones and twos and probably relate to passage migrants. Otherwise spring passage imperceptible. 59% of records of 10 or more birds together. Largest groups, 1900 Larnaca SW 10 December 2011 and 1200 Phasouri RB 14 January 2005. There were 109 records (8178 birds), mean 75 birds/record. The 56th most frequently recorded migrant and 13th most abundant.

Eurasian Blackbird *Turdus merula* (Figure 35). *Fairly common winter visitor, irregular passage migrant and localised breeding resident in the upland forests.* Winter visitors recorded late October–late March. In summer seen or heard during my visits to the Troodos and Paphos forests where it is a breeding resident. No perceptible autumn peak and histogram fluctuations late November–January probably reflect random visits to areas of high occurrence (see largest numbers below). Although spring passage was imperceptible, reports in the Cyprus Ornithological Society and Birdlife Cyprus bird reports 1993–2012 of singles seen in non-breeding areas 13 times between 11 Apr and 4 May probably refer to passage migrants. Earliest autumn sighting at a non-breeding site 29 October 2006, latest spring sighting 23 March 2006. Largest numbers, 21 Avagas gorge 4 January 2007 and 10 Oreites forest, Kouklia, 10 January 2007. 54% of records singles. There were 274 records (524 birds), mean 1.9 birds/record. The 38th most frequently recorded migrant and 46th most abundant.

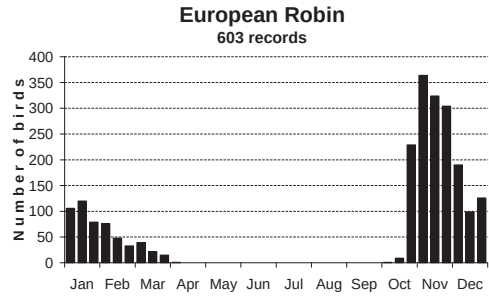
Song Thrush *Turdus philomelos* (Figure 36). *Common winter visitor and scarce passage migrant.* Recorded all months October–May. Almost indiscernible peak mid November suggests a small movement of passage migrants. Greatest numbers occurred late January, a probable result of its eruptive nature when harsh weather conditions in Europe force birds south. Numbers declined steadily throughout spring until all but a few had departed by late March. There appeared to be some passage mid February–early March, corroborated by Flint & Stewart (1992) but this was obscured by the departure of winter visitors. One ringed Egypt 12 November 1969 and found shot in Cyprus 5 November 1972, also confirms passage migration (Flint & Stewart 1992). Earliest autumn sighting 27 October 2012, latest spring sighting 9 April 2012 though one isolated bird Phasouri RB 14 May 2007. Largest numbers, 58 Armou hills 17 February 2007, 51 Armou hills 8 March 2010, 45 Akhna dam 27 February 2010, 43 Marathounta 14 January 2008 and 40 Armou hills 21 January 2008. 69% of records of 2 or more birds. There were 479 records (2538 birds), mean 5.3 birds/record. The 27th most frequently recorded migrant and 25th most abundant.

European Robin *Erithacus rubecula* (Figure 37). *Very common passage migrant and winter visitor.* Recorded October–early April. Autumn peak early November. Spring passage negligible and obscured by departure of winter visitors. Earliest autumn sighting 7 October 2006, latest in spring 1 April 2007. Largest numbers, 30 Ezousas valley, Episkopi, 5 November 2009 and 30 Avagas gorge 5 December 2003 and 25 November 2005. 66% of records of 2 or more birds. Autumn numbers (1421 recorded October–early December) 20 times greater than spring (77 recorded March–April). There were 603 records (2185 birds), mean 3.6 birds/record. The 24th most frequently recorded migrant and 27th most abundant.

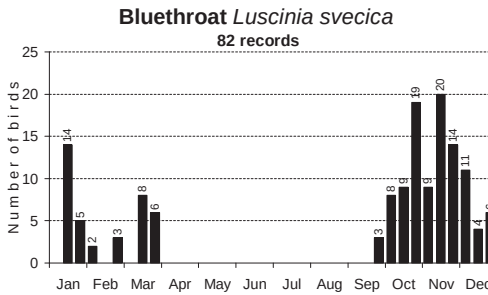
Bluethroat *Luscinia svecica* (Figure 38). *Fairly common autumn passage migrant and winter visitor.* Most birds were recorded during infrequent visits to wetland sites; the irregularities in the histogram probably reflect this. Earliest autumn sighting 28 September 2011, latest in spring 29 March 2013. Sightings mid–late March probably passage migrants, confirmed by the systematic lists in Gordon (2004) and Richardson (2005–2012), which detail instances of spring passage mid March–mid April. Autumn passage probably late October–early December, although timings obscured by arrival of winter visitors. Spring numbers (16, February–March) were 14% of autumn's (116, late September–early December). Largest numbers, five Phasouri RB 12 October 2011 and five Zakaki marsh 27 October 2010. 63% of records single birds. There were 99 records (162 birds), mean 1.6 birds/record. The 59th most frequently recorded migrant and 60th most abundant.



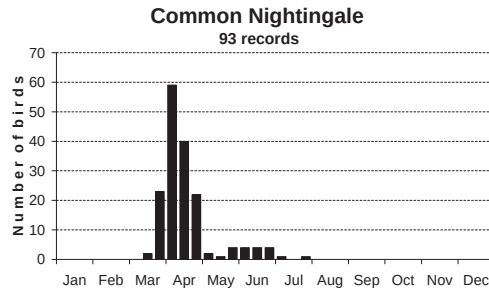
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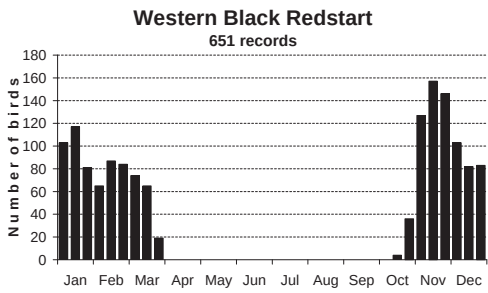
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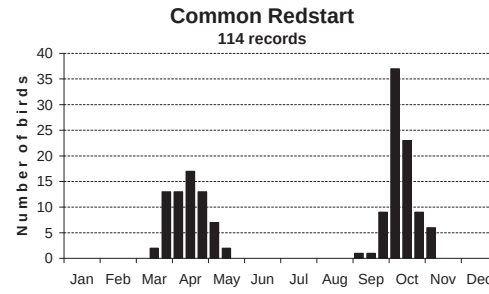
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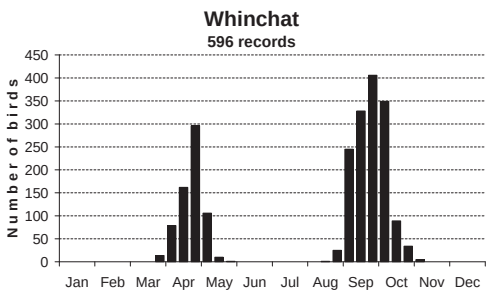
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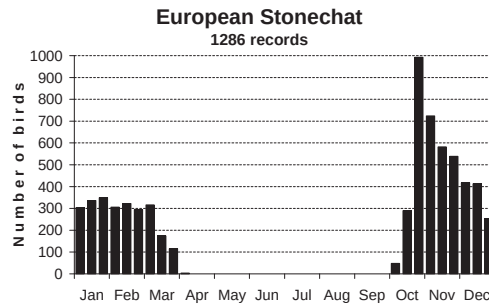
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Figures 36–43. Song Thrush, European Robin, Bluethroat, Common Nightingale, Western Black and Common Redstart, Whinchat and European Stonechat numbers, December 2003–November 2013.

Common Nightingale *Luscinia megarhynchos* (Figure 39). *Common spring passage migrant and breeding visitor to the mountain forests. Rare autumn.* Recorded mid March–July. Peak spring passage early April. Recorded in breeding habitat mid May–July, but other breeding details were not covered in this study. Not recorded in autumn and rare elsewhere in the region at this time (Shirihai 1996) when its favoured lush, damp habitat is largely absent. 62% of sightings singles or ‘heard only’ birds. There were 93 records (167 birds), mean 1.8 birds/record. The 58th most frequently recorded migrant and 56th most abundant. **Spring:** earliest at a non-breeding site 19 March 2013; latest 5 May 2012. Largest numbers were 12 Anavargos 6 April 2013 and nine Paphos lighthouse 7 April 2006.

Western Black Redstart *Phoenicuroides ochruros* (Figure 40). *Common and widespread winter visitor and passage migrant.* Recorded mid October–March. Earliest autumn sighting 14 October 2006, latest spring departure 31 March 2009. Winter visitors remained in good numbers into late February–early March with a rapid departure thereafter, obscuring any spring passage. Newly arrived birds late October–November often briefly occurred in large concentrations, matching Flint & Stewart (1992). This may partly explain the peak then, but some passage migrants may also be involved. 50% of records two or more birds. Largest numbers, 30 Anarita mast 19 November 2004, 22 Paphos lighthouse 25 February 2012, 20 Avagas gorge 28 December 2008 and 16 there, around the car park, 6 January 2009. There were 651 records (1433 birds), mean 2.2 birds/record. The 17th most frequently recorded migrant and 31st most abundant.

Common Redstart *Phoenicurus phoenicurus* (Figure 41). *Common passage migrant.* Recorded mid March–mid May and September–early November in irregular numbers annually. Less common than in former times, confirming decline across its European breeding range. The reasons for this are complex but include desert encroachment on its sub-Saharan wintering grounds (Porkert & Jiří 2005, Zwarts *et al* 2009). The nominate race predominated, while singles of ‘white-winged’ *samamiscus* seen 18 March 2011 and 7 October 2013. 84% of sightings single birds. Spring passage (67 birds) 78% that of autumn (86 birds). There were 114 records (153 birds), mean 1.3 birds/record. The 55th most frequently recorded migrant and 59th most abundant. **Spring:** earliest, of the *samamiscus* race, 18 March 2011 (this race is usually the first to occur in spring), latest 12 May 2010. Main passage late March–April, apparent peak mid April. Only ones and twos recorded spring. **Autumn:** earliest 6 September 2004, latest 6 November 2013. Peak passage early October. Largest numbers, 11 Neo Chorio 7 October 2013, seven Neo Chorio 4 October 2008 and five Agios Filonas, Karpas, 15 October 2005.

Whinchat *Saxicola rubetra* (Figure 42). *Common passage migrant.* Recorded late March–May, mid August–early November. Larger numbers recorded autumn than spring contra Flint & Stewart (1992). Similar pattern found in Gordon (2004) and Richardson (2005–2012). Numbers may be struggling to survive the winter south of the Sahara, where the desert is encroaching on their habitat (Porkert & Jiří 2005, Zwarts *et al* 2009), while in autumn their numbers appear to be bouncing back as if following successful breeding in Europe. Spring passage (668 birds) 54% that of autumn (1252 birds). 64% of sightings of 2 or more together. There were 646 records (2150 birds), mean 3.3 birds/record. The 18th most frequently recorded migrant and 29th most abundant. **Spring:** earliest 21 March 2006, latest 22 May 2012. Main passage late April. Largest counts included 16 Anarita park 2 April 2007 and 13 at numerous locations mid April–early May. **Autumn:** earliest 12 August 2012, latest 9 November 2010. Main passage mid September–early October with apparent peak late

September. Largest numbers, 26 Mandria 17 September 2005, 21 Mandria 1 October 2007 and 20 Marathounta 2 October 2008.

European Stonechat *Saxicola (torquatus) rubicola* (Figure 43). *Very common winter visitor and passage migrant*. Recorded October–early April. Winter visitors remained in good numbers until early March, with rapid departure thereafter. Some passage occurred from mid March but it was obscured by the simultaneous departure of winter visitors (two sightings of male Siberian Stonechats *S.(t.) maurus*, 23 April 2007 and 31 March 2009, not included in the present study). Autumn peak late October. Most common autumn, possibly due to southbound migrants, when reaching the southern Turkish coast heading over Cyprus only 65 km to the south, while in spring after leaving Africa via the Nile valley the more obvious course is to pass over the Levant, east of Cyprus (Bourne 1960, Flint & Stewart 1992). Earliest autumn sighting 1 October 2005, latest in spring 6 April 2009. Largest numbers, 34 Marathounta hills 4 November 2010, 30 Anarita park 25 October 2006, 30 cape Kormakitis 28 October 2006 and 30 Choletria 12 December 2002. Males and females shared territories in winter appearing as ‘pairs’ with 90% of records of 2 or more birds together. There were 1286 records (6770 birds), mean 5.3 birds/record. The third most frequently recorded migrant and 15th most abundant.

Isabelline Wheatear *Oenanthe isabellinus* (Figure 44). *Common passage migrant*. Recorded late January–mid May, late August–mid November. Spring passage (908 birds) 7 times greater than autumn (123 birds). In autumn this species may take non-stop flights over the Mediterranean sea (Cramp 1988) or pass further east through Arabia and the Middle East where passage is more concentrated (Richardson 1990, Shirihai 1996). 51% of sightings of 2 or more together. There were 379 records (1043 birds), mean 2.7 birds/record. The 32nd most frequently recorded migrant and 37th most abundant. **Spring**: earliest spring sighting 24 January 2009, latest 12 May 2011. Main passage mid–late March. Largest numbers, 51 cape Andreas 23 March 2010, 48 Mandria, Paphos, 9 March 2010, 34 Timi beach and picnic area 9 March 2010, 26 Mazotos, Petountas, 12 March 2009 and 26 Mandria, Paphos, 20 March 2011. **Autumn**: earliest 22 August 2013, latest 12 November 2012. Peak passage early September. In autumn, no counts exceeded four birds together.

Northern Wheatear *Oenanthe oenanthe* (Figure 45). *Very common passage migrant*. Recorded late February–mid May, late August–mid November. Peak passage periods late March–early April, mid September–late October. Spring passage (1472 birds) was 1.4 times autumn’s (1057 birds). 61% of sightings of 2 or more together. There were 728 records (2529 birds), mean 3.5 birds/record. The 15th most frequently recorded migrant and 26th most abundant. **Spring**: earliest 27 February 2006, latest 14 May 2005. Largest numbers, 30 Mandria, Paphos, 2 April 2011 and 27 there 6 April 2012, and 25 cape Greco 21 March 2008. **Autumn**: earliest 28 August 2005, latest 16 November 2011. Largest numbers, 62 Agia Eirini beach 27 October 2006, 38 Minthis hills 26 September 2006 and 29 cape Greco 14 September 2001.

Cyprus Wheatear *Oenanthe cyprica* (Figure 46, Plate 15). *Common endemic breeding visitor*. Recorded mid March–early December. Peak numbers recorded late March (coinciding with the main arrival of breeders) and late April (coinciding with peak breeding activity). In autumn, peak numbers early September. The dip in early August is hard to explain but could be due to the species’ inactivity during the hottest period of summer, or shyness during moult (the earliest fresh-plumaged adult 7 August 2013). The increase in September might be due to birds moving to low ground as they move south (Flint & Stewart 1992); note large numbers in south Karpas peninsula, below, thought to be a departure point.



Plate 15. Cyprus Wheatear *Oenanthe cyprica* is easy to find April–September. This recently arrived male was at Asprokremmos dam 10 April 2011. © G Reszeter

There were 919 records (2568 birds), mean 2.8 birds/record. The 9th most frequently recorded migrant and 24th most abundant. 60% of sightings were two or more together. Earliest spring sighting at a non-breeding site was one at Mandria 11 March 2012, the latest at a non-breeding site one at Anarita park 14 November 2006. Largest numbers, 82 south Karpas peninsula 7 September 2004, 31 cape Andreas 23 March 2010, 22 Diarizos valley 29 August 2008 and 20 Giant Black Pine, Troodos, 10 July 2010. One seen Troodos forest 2 December 2006 suggests occasional over-wintering.

Eastern Black-eared Wheatear *Oenanthe melanoleuca* (Figure 47, Plate 16). *Common spring passage migrant, scarce autumn.* Recorded mid March–early May (one early June), late August–mid October. As with several other migrant wheatears, many probably overfly the Mediterranean sea in autumn (Cramp 1988), but during a 2005 autumn survey at cape Greco it was found to be quite common (Roth 2008), suggesting many pass over the eastern capes at that time. Spring passage (560 birds) 15.5 times

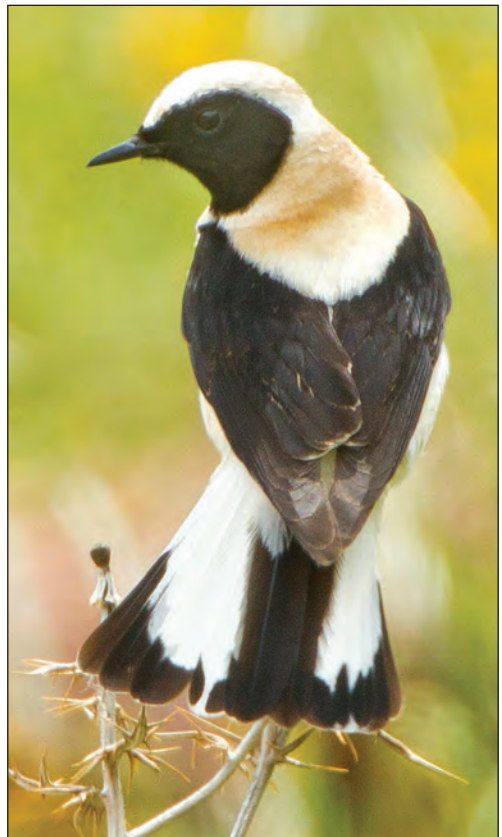


Plate 16. Male Eastern Black-eared Wheatear *Oenanthe melanoleuca* is distinctive and its passage peaks in late March on Cyprus. This dark-throated form was at Anarita 7 April 2011. © G Reszeter

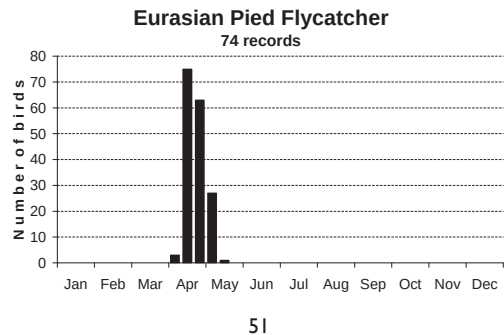
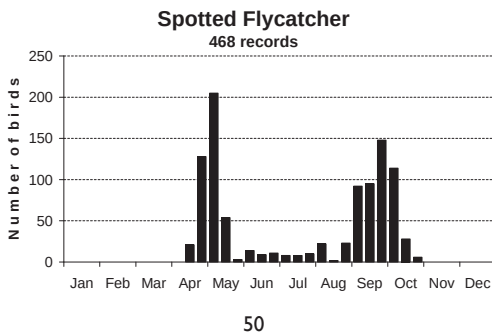
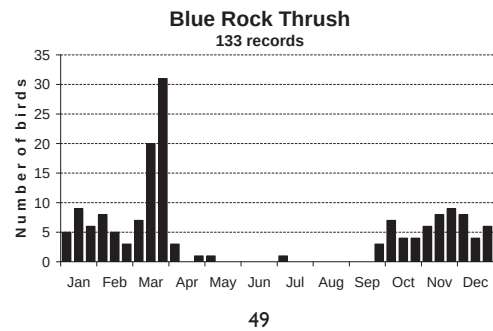
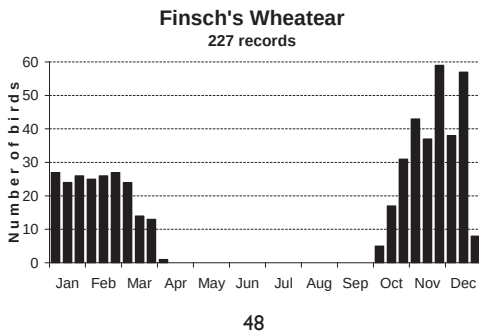
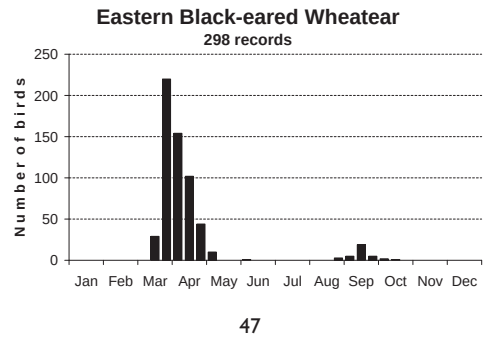
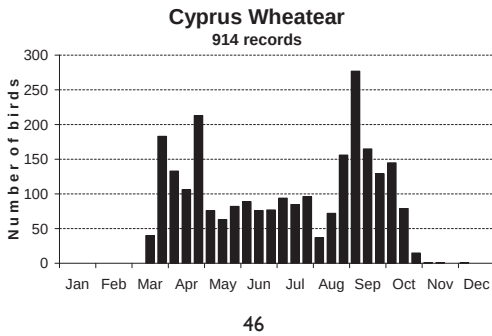
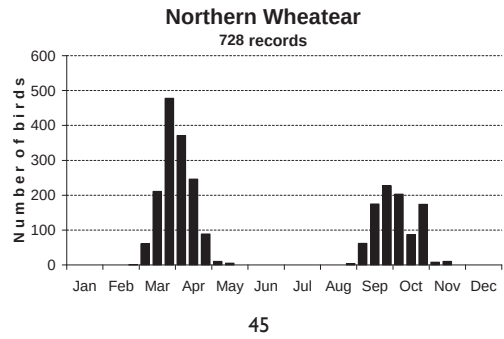
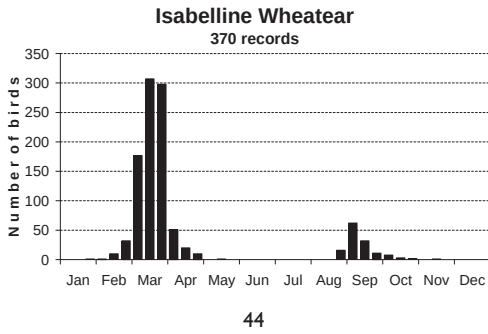
greater than autumn's (36 birds). 56% of sightings singles. There were 298 records (596 birds), mean 2 birds/record. The 37th most frequently recorded migrant and 43rd most abundant. **Spring:** earliest 11 March 2010, latest was one Agia Varvara 1 June 2012. Peak passage late March. Largest numbers, 18 Mandria 7 April 2007, 10 Anarita park 26 March 2007, 10 Asprokremmos dam pools 26 March 2007 and 10 Akrotiri GP 6 April 2008. **Autumn:** earliest 23 August 2008, latest 11 October 2009. Peak passage mid September. Only ones and twos autumn.

Finsch's Wheatear *Oenanthe finschii* (Figure 48). *Fairly common winter visitor and scarce passage migrant.* Recorded October–early April. Peaks recorded late November and mid December. Earliest autumn arrival 5 October 2010, latest in spring 1 April 2006. The only spring passage migrant at a non-wintering site was one at Mandria 21 March 2012; no passage migrants were seen at non-wintering sites in autumn (their habitat was less-visited in late December, accounting for the dip at this time). Largest numbers, eight Asprokremmos dam 7 November 2009, seven Choletria 12 December 2002, six Anarita park 21 January 2009, six Kidasi 23 February 2007 and six Marathounta 21 November 2010. 54% of records of two or more birds. There were 237 records (502 birds), mean 2.1 birds/record. The 44th most frequently recorded migrant and 47th most abundant.

Blue Rock Thrush *Monticola solitarius* (Figure 49). *Fairly common winter visitor, passage migrant and localised breeding resident.* Recorded late September–early May, with one on breeding territory in early July. Small numbers nest in rocky areas in the mountains, but no useful data was obtained of their movements at that time. Peak spring passage probably mid–late March. However no autumn passage discernable. Systematic lists in Gordon (2004) and Richardson (2005–2012) suggest that breeding dispersal starts late August, with possible migration and/or arrival of wintering birds increasing from late September through October. Earliest autumn sighting at a non-breeding site was 23 September 2007, latest spring sighting at a non-breeding site 5 May 2012. Largest numbers, three cape Greco 5 February 2011 and three Agia Napa SW 21 March 2009. 84% of records singles. There were 133 records (157 birds), mean 1.2 birds/record. The 51st most frequently recorded migrant and 57th most abundant.

Spotted Flycatcher *Muscicapa striata* (Figure 50). *Common passage migrant and breeding visitor.* Recorded mid April–late October. Peaks early May and late September. All records between 30 May and 8 August were of birds on breeding territory. Spring passage (411 birds) was 80% of autumn's (509 birds). There were 468 records (1001 birds), mean 2.1 birds/record. The 29th most frequently recorded migrant and 38th most abundant. 54% of sightings of singles. **Spring:** earliest at a non-breeding site 12 April 2008, latest 29 May 2002. Largest numbers (away from breeding sites), 17 Neo Chorio, Akamas, 1 May 2010 and 15 Akrotiri salt lake 2 May 2005. **Autumn:** earliest at a non-breeding site 10 August 2006, latest 27 October 2005. Largest numbers, 16 Marathounta 2 October 2008 and 11 Kantara 3 September 2010.

Eurasian Pied Flycatcher *Ficedula hypoleuca* (Figure 51). *Fairly common spring passage migrant, rare autumn.* Recorded April–mid May, largest numbers seen mid–late April, peaking mid April. Occurred in variable numbers annually. There were 74 records (126 birds), mean 1.7 birds/record. The 60th most frequently recorded migrant and 62nd most abundant. 62% of sightings singles. **Spring:** earliest 11 April 2007, latest 14 May 2012. Largest numbers, 18 Armou 20 April 2005 and 13 Neo Chorio–Smygies 22 April 2004. **Autumn:** not recorded in autumn in this study.



Figures 44–51. Isabelline, Northern, Cyprus, Eastern Black-eared and Finsch's Wheatear, Blue Rock Thrush, Spotted and Eurasian Pied Flycatcher numbers, December 2003–November 2013.



Plate 17. Collared Flycatcher *Ficedula albicollis* is a fairly common spring migrant from April to early May in Cyprus. This male was at Asprokremmos dam 10 April 2011. © G Reszeter

Collared Flycatcher *Ficedula albicollis* (Figure 52, Plate 17). *Fairly common spring passage migrant, rare autumn.* Recorded late March–early May. Passage and numbers more evenly spread over the period than Eurasian Pied Flycatcher's, although both show passage peak mid April. There were 53 records (171 birds), mean 3.2 birds/record. The 62nd most frequently recorded migrant and 55th most abundant. 50% of sightings singles, 24% of 3 or more. **Spring:** earliest 26 March 2010, latest 6 May 2010. Largest numbers, 13 Neo Chorio, Akamas, 1 May 2010, nine Asprokremmos dam car park area 30 April 2010 and eight Bishop's pool 18 April 2009. **Autumn:** not recorded in autumn in this study. [*Ficedula* flycatchers choose a southwesterly direction in autumn thus avoiding the eastern Mediterranean (Moreau 1972, Shirihi 1996); some may overfly Cyprus (Flint & Stewart 1992) resulting in the lack of records at that season.]

Spanish Sparrow *Passer hispaniolensis* (Figure 53). *Very common passage migrant, winter visitor and breeding resident.* Recorded throughout the year. First arrival dates of spring migrants confused by presence of large numbers of winter visitors. Although main spring migration appeared to be mid March–mid April, there were occasional early influxes (of mostly males) from mid February: 270 Paphos SW 18 February 2010 and 150 on foreshore at Mandria beach 18 February 2013. These are about three times the wintering numbers counted at these sites. Decline noted late April, but the date of last migrant departure was confused by remaining breeders, and some breeding visitors may also occur. A histogram peak early–mid August was caused by observations of roost numbers, mostly post-breeding flocks, at Armou: 1900 going to roost Armou hills 7 August 2009 and 600 there 14 August 2009. In autumn, first migrants seen from mid September (eg 300 Armou hills 12 September 2006, 350 Marathounta hills 13 September 2009), with main passage early–mid October, and last migrants probably early November (although again movements confused by residents and winter visitors). As in nearby Israel several populations may be involved (Shirihi 1996). Largest numbers, 2200 Paphos SW 12 October 2006, 1500 Paphos SW 28

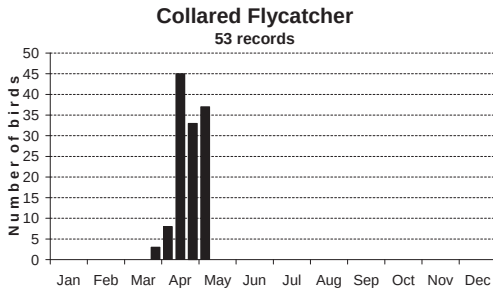
October 2009 and 1500 in one migrating flock Mandria 14 October 2013. 70% of sightings of 10 or more birds. There were 991 records (59 954 birds), mean 60 birds/record. The 5th most frequently recorded migrant and the most abundant.

Yellow Wagtail *Motacilla flava* (Figure 54). *Very common passage migrant and localised breeding visitor*. Recorded in all months. Passage March–mid May, peaking early April, and August–mid November, peaking September–early October. Not showing up on the histogram, single birds were also found at Paphos SW fields 12 January 2007, Paphos lighthouse 20 February 2013, Paphos SW fields 23 November 2006 and on 9 occasions at 5 different sites in December. Most of these mid winter individuals were of indeterminate race, appeared to be immatures and generally did not overwinter. One *cinereocapilla* at Spiros pool and beach 21 February 2012, where it was seen by others and remained until April 2012. Spring passage (7767 birds) 30% of autumn passage (25 220 birds). There were 1013 records (33 218 birds), mean 33 birds/record. The 4th most frequently recorded migrant and third most abundant. 50% of sightings of four or more birds, 28% of single birds. **Spring**: earliest at a non-breeding site was probably one at Paphos lighthouse 20 February 2013, latest 14 May in four different years. Largest numbers (away from breeding sites) include 760 Mandria 8 April 2009, 290 Phasouri RB 18 March 2013 and 220 Paphos lighthouse 1 April 2007. **Autumn**: earliest away from known breeding sites, two at cape Greco 4 August 2000, latest 19 November 2011. Largest numbers (away from breeding sites), 2300 in cut alfalfa field Mandria 9 September 2007, 2200 Paphos SW fields 29 September 2008 and 1100 Paphos SW fields 29 September 2006. Several subspecies seen, but records in present study treated collectively.

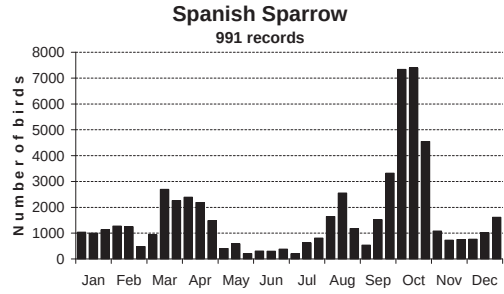
Grey Wagtail *Motacilla cinerea* (Figure 55). *Common winter visitor and passage migrant and localised breeding resident*. Recorded regularly mid September–mid March. June and July histogram bars probably refer to breeding records and the late August bird may refer to a dispersing local breeder. Autumn passage appeared to peak October–November, before numbers declined steadily early March. No perceptible spring migration. One observed visiting my garden swimming pool to take insects 2004–2013, present most days 17 October–25 February. Earliest autumn sighting away from known breeding areas 30 August 2012; next earliest 11 September 2004 and latest in spring 13 March 2009. Largest numbers on the Asprokremmos dam–Mandria canal with seven 26 November 2005 and five 29 January 2005. There were 206 records (277 birds), mean 1.3 birds/record. The 46th most frequently recorded migrant and 51st most abundant. 74% of records single birds. Although breeding was first suspected in 1968 (Flint & Stewart 1992) it was not confirmed until 2013 when two adults were found feeding two juveniles at Platres 29 June 2013 (J Honold pers comm).

White Wagtail *Motacilla alba* (Figure 56). *Very common winter visitor and passage migrant*. Recorded late September–mid May. A relatively small spring migration mid–late March. Autumn peak in mid October. A pinnacle early December was due to a large roost count. Earliest autumn sighting 15 September 2009, latest spring sighting 20 May 2005 (plus one Evretou dam 24 July 2007). Largest numbers, 2600 Paphos SW 18–20 Oct 2006 and 2500 at pre-roost Paphos Carrefour supermarket car park 10 December 2009. 53% of records of five or more together. Autumn–early winter numbers (21 855 birds) 4.8 times late winter/spring numbers (4535 birds). There were 744 records (26 390 birds), mean 35 birds/record. The 14th most frequently recorded migrant and 5th most abundant.

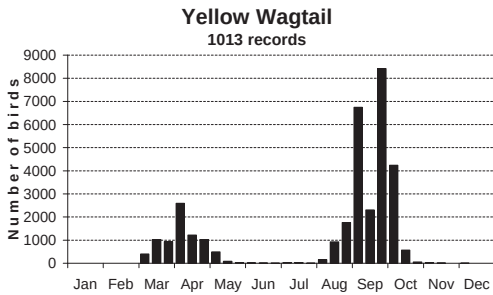
Tawny Pipit *Anthus campestris* (Figure 57). *Fairly common spring and autumn passage migrant*. Recorded late August–mid May. Peak migration late March–early April, late September–early October. Up to three birds wintered 2004/2005, 2006/2007 and 2011/2012.



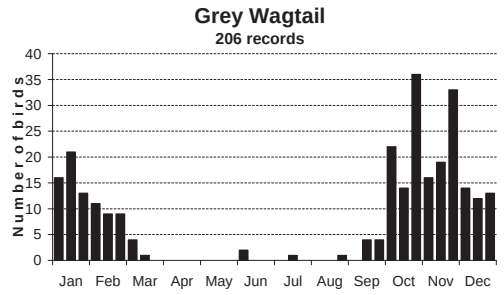
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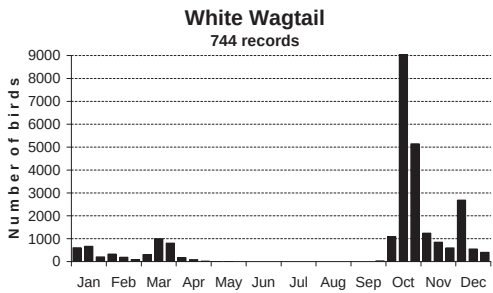
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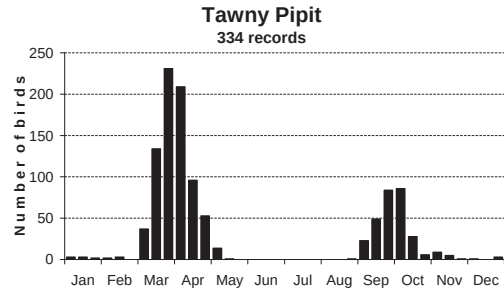
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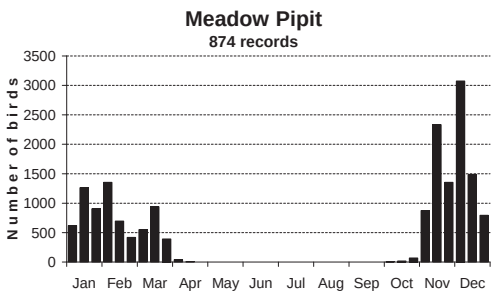
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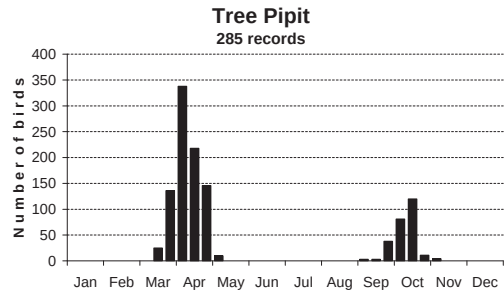
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Figures 52–59. Collared Flycatcher, Spanish Sparrow, Yellow, Grey and White Wagtail, Tawny, Meadow and Tree Pipit numbers, December 2003–November 2013

In autumn undertakes a broad-front migration taking a more easterly track (Cramp *et al* 1988), explaining the smaller numbers then, indeed very common in Arabia late October–November 1984–2004 (pers obs). 65% of sightings of two or more. Spring passage (775 birds) 2.7 times autumn's (284 birds). There were 334 records (1084 birds), mean 3.2 birds/record. The 33rd most frequently recorded migrant and 36th most abundant. **Spring:** earliest 6 March 2011, latest 12 May 2011. Largest numbers, 20 Mandria 9 March 2010, 20 Anarita park 5 April 2008 and 26 March 2013. **Autumn:** earliest 29 August 2010, latest 17 November 2010. Largest numbers, 10 cape Andreas 16 September 2009, 10 Kidasi 5 October 2010 and 10 cape Kormakitis 10 October 2012.

Meadow Pipit *Anthus pratensis* (Figure 58). *Common winter visitor and passage migrant.* Recorded October–mid April. Spring passage migration peak confused by departure of winter visitors, but there may have been a small passage March, and an apparently much larger autumn passage mid November–early December. Earliest autumn sighting 10 October 2011, latest spring departure 12 April 2010. Largest numbers at Paphos SW fields with 870 on 9 December 2010, 600 on 3 February 2008 and up to 390 13 November–9 December 2007; 250 Mandria 8 December 2011. 66% of records of five or more birds together. Winter/spring numbers 72% autumn/winter's. There were 874 records (17 217 birds), mean 20 birds/record. The 10th most frequently recorded migrant and 9th most abundant.

Tree Pipit *Anthus trivialis* (Figure 59). *Common spring passage migrant, less frequent autumn.* Recorded mid March–early May, September–early November. Main migration April (peaking early April) and early–mid October (peaking mid October). Spring passage (873 birds) 3.4 times that of autumn (260 birds). There were 285 records (1133 birds), mean 4 birds/record. The 40th most frequently recorded migrant and 34th most abundant. 61% of sightings of two or more birds. **Spring:** earliest 11 March 2010, latest 9 May 2010. Largest numbers, 70 Mandria 8 April 2009, 40 Asprokremmos dam pools 30 March 2008 and 25 Evretou dam 1 April 2008. **Autumn:** earliest 3 September 2010, latest 3 November 2010. Largest number 25 Mandria 15 October 2006.

Red-throated Pipit *Anthus cervinus* (Figure 60, Plate 18). *Common passage migrant and localised winter visitor.* Recorded late September–May. Although confused by departure of winter visitors, spring passage probably late March–early May, peaking in April. Autumn migration mainly October–mid November, peaking mid October, with only a few over-wintering birds remaining late December. Earliest autumn sighting 29 September 2008, latest in spring 24 May 2013. Apparent spring migrants appeared from mid February (16 Mandria 15 February 2010, 11 Paphos SW 18 February 2010), with main spring passage in April (eg 37 Anarita park 2 April 2007). In wet springs large numbers were present at the Larnaca airport pools and salt flats (Richardson 2005–2011), which were only visited infrequently.



Plate 18. In breeding plumage, this Red-throated Pipit *Anthus cervinus* was at Mandria, Cyprus, 5 April 2012. © G Reszeter

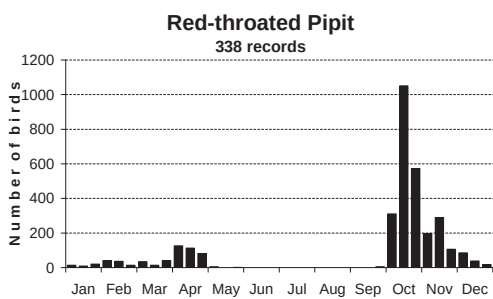
Autumn passage (2660 birds) 5.6 times spring's (470 birds). Largest numbers, 235 Paphos SW 18 October 2006 and 130 there 22 October 2006, and 125 Mandria 20 October 2006. 68% of records of two or more birds. There were 338 records (3234 birds), mean 9.6 birds/record. The 35th most frequently recorded migrant and 22nd most abundant.

Water Pipit *Anthus spinoletta* (Figure 61). *Fairly common passage migrant and winter visitor.* Recorded mid October–mid April. Spring passage could not be identified with certainty but appeared to be mainly mid–late March, while autumn passage was mainly early–mid November. Numbers appeared to decline after mid January. Peak passage late March and early November. It was found to be 2.7 times more common in autumn (c250 birds) than spring (c90 birds), contra Flint & Stewart (1992). This apparently follows migratory pattern in Israel (Shirihai 1996). Earliest autumn sighting 16 October 2013, latest in spring 19 April 2012. Largest numbers, 25 Paphos SW 19 December 2007, 21 Akrotiri salt lake east 16 January 2013 and 19 Akhna dam 12 November 2013. 57% of records single birds. There were 195 records (635 birds), mean 3.3 birds/record. The 47th most frequently recorded migrant and 44th most abundant.

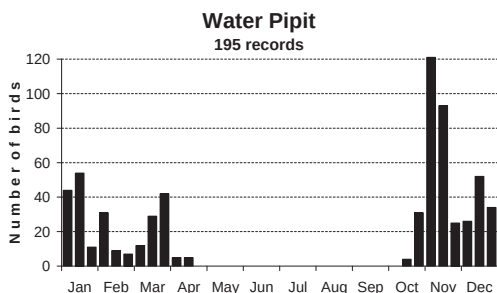
Common Chaffinch *Fringilla coelebs* (Figure 62). *Very common winter visitor, passage migrant and local breeding resident.* Residents recorded throughout year, with passage migrants and winter visitors present late October–early April. Peak early February probably represented spring passage. Few passage migrants/winter visitors remained after mid March. All sightings mid April–September probably of breeding residents. Earliest autumn arrival at a non-breeding site 12 October 2007, latest spring sighting at a non-breeding site 7 April 2013. 53% of records of 10 or more birds while only 10% singles. Largest numbers, 700 flying east at Kensington cliffs 5 December 2012, 280 Stavros tis Psokas valley 1 February 2010 and 230 Evretou dam 31 January 2012. There were 821 records (15 442 birds), mean 18.8 birds/record. The 12th most frequently recorded migrant and 10th most abundant.

European Serin *Serinus serinus* (Figure 63). *Common winter visitor, passage migrant and local breeding resident.* Recorded all months, but mainly as a passage migrant and winter visitor late October–early April. All sightings mid April–September at least of breeding birds. Spring migration was apparent mid February and early March, when 100s occurred in fodder fields and meadows along Paphos coast. There was little or no autumn migration and winter numbers erratic suggesting flocks moving within or even out of Cyprus. Earliest autumn migrant at a non-breeding site 18 October 2013, latest in spring 5 April 2011. Largest numbers: up to 380 Paphos SW 12–28 February 2011 with 820 there 6 March, 340 Paphos SW 20 January 2013, 230 Mandria 1 March 2012 and 210 Armou hills 1 March 2011. Winter/spring numbers four times autumn/winter's. 54% of records of six or more birds. There were 583 records (13 384 birds), mean 23 birds/record. The 22nd most frequently recorded migrant and 12th most abundant.

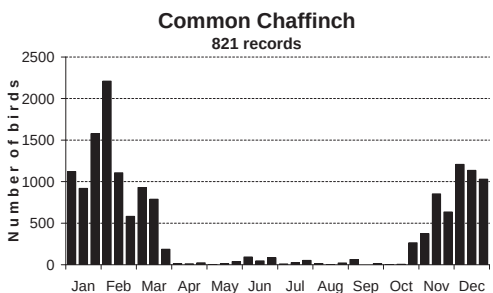
European Greenfinch *Carduelis chloris* (Figure 64). *Common passage migrant, winter visitor and breeding resident.* Present all year. Numbers increased from late January (including 107 on coast at Mandria 23 January 2012), suggesting winter movement on and off island, caused by weather and food availability (Flint & Stewart 1992). Many large flocks seen at known coastal migrant hot-spots, such as Mandria and Paphos lighthouse, throughout February and March, with peak mid March and large decline in early April, probably relating to passage migrants. In autumn, sightings peaked mid September–late October and again in mid December possibly representing passage migrants or waves of arriving winter visitors. There was no clear autumn peak or departure period. Largest numbers, 250 Akrotiri GP 22 February 2013, 200 Paphos lighthouse 27 October 2002 and 160 Mandria



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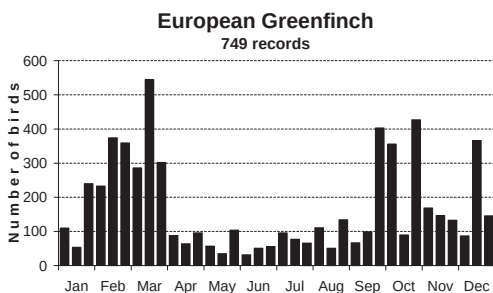
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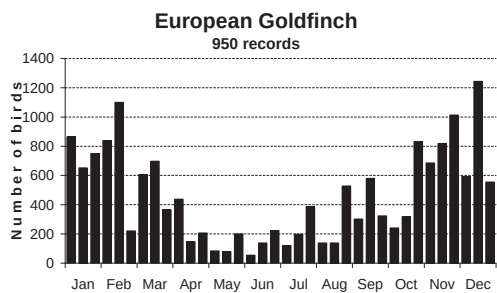
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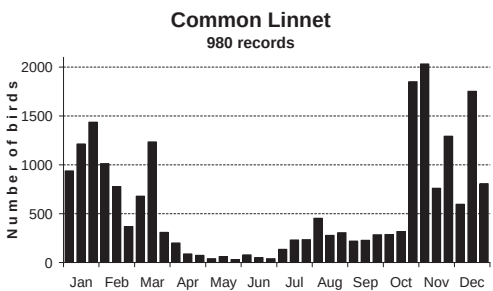
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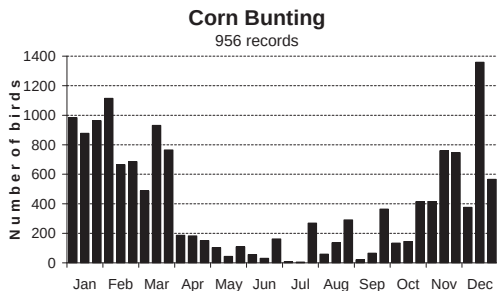
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Figures 60–67. Red-throated and Water Pipit, Common Chaffinch, European Serin, Greenfinch and Goldfinch, Common Linnet and Corn Bunting numbers, December 2003–November 2013.

9 February 2012. 60% of sightings of groups of 2–10 birds. There were 749 records (6113 birds), mean 8.2 birds/record. The 13th most frequently recorded migrant and 16th most abundant.

European Goldfinch *Carduelis carduelis* (Figure 65). *Common passage migrant, winter visitor and breeding resident*. Present all year. Sightings increased from late January and there were many flocks of 100+ February–mid March, with peaks in mid February and mid March and a decline in mid April, presumably when migrants/winter visitors departed. In autumn, sightings away from breeding sites increased notably in late August, mid September and late October, suggesting waves of migrants or arriving winter visitors. The erratic nature of the histogram may also be a result of the species often occurring in mobile flocks, which were usually encountered by chance. Largest numbers, 300 Ezousas valley, Episkopi, 14 September 2006, 230 Choletria 12 December 2002, 200 came off sea at Mandria 8 April 2005 and 200 Paphos lighthouse 27 October 2002. 52% of sightings of groups of 10 or more birds. There were 950 records (18 689 birds), mean 20 birds/record. The 8th most frequently recorded migrant and 7th most abundant.

Common Linnet *Carduelis cannabina* (Figure 66). *Very common passage migrant, winter visitor and breeding resident*. Present all year. There was a complicated movement pattern. High counts mid January–early February, of 100s at coastal and inland sites mainly in the west, peaking in late January, closely matched counts by observers at other sites in the south of the island (Gordon 2004, Richardson 2005–2012) and may be attributed to passage migrants. The timing matches departure of winter visitors from Israel (Shirihai 1996) (and possibly the Nile delta and northern Egypt). A further wave of passage migrants moved through in March and April, peaking mid March. Generally only breeding birds present May–September. Numbers increased locally at Armou and Minthis hills mid July–August, peaking early August and being mostly immatures were probably dispersing local breeders, which corroborates Flint & Stewart (1992). There was a large influx of migrants and winter visitors late October–early November, with some further peaks late November and late December, confirming the general pattern from other observers (Gordon 2004, Richardson 2005–2012) and which might have been due to the arrival of passage migrants or winter visitors from different European populations (Clement *et al* 1993). Largest numbers, 700 Armou hills 26–28 Oct 2010, 390 Mandria 11 January 2006, 320 Timi beach, Paphos airport, 16 March 2008 and 240 Armou hills 21 January 2011. 60% of sightings of six or more birds (only 9% singles). There were 979 records (21 315 birds), mean 21.8 birds/record. The 6th most frequently recorded migrant and 6th most abundant.

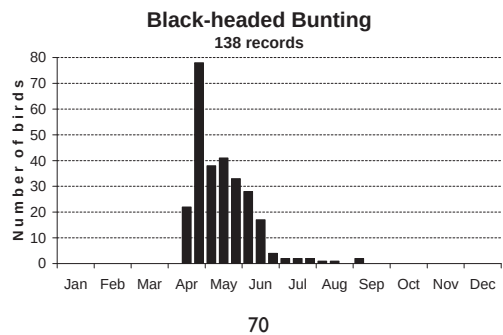
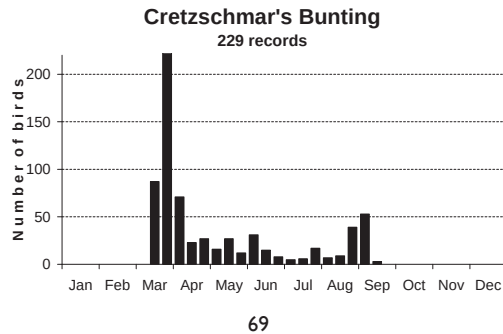
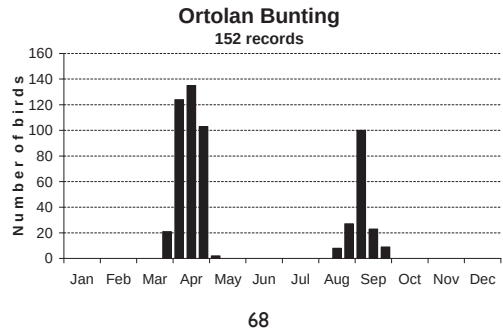
Corn Bunting *Emberiza calandra* (Figure 67). *Common and widespread breeding resident, winter visitor and passage migrant*. Present all year. Winter numbers apparently declined by early March, followed by a small surge of migration mid–late March. Recorded peaks early February (when in full song), with further peak mid March. Most migrants and winter visitors departed by early April and during this study flocks of post-breeding groups of residents (or breeding visitors) were found mainly at dams and wetland areas (including Evretou and Akhna dams) June–early September. Autumn arrival of passage migrants and winter visitors commenced mid September, steadily building to a November peak. The mid December peak was due to large winter flocks encountered in the Paphos foothills including 160 at Marathounta hills 14 December 2012, 148 at Minthis hills 16 December 2009 and 130 at Kato Arodes 12 December 2012. Such large groups are rather localised though not unusual in winter. This species' complex movement pattern is apparently similar to that in Israel (Shirihai 1996). Other large numbers include 190 Upper Xeros Potamos

valley 20 December 2002, 180 Armou hills 27 January 2003 and 170 Marathounta hills 15 January 2010. 50% of sightings of five or more birds together. There were 956 records (14 639 birds), mean 15.3 birds/record. The 7th most frequently recorded migrant and 11th most abundant.

Ortolan Bunting *Emberiza hortulana* (Figure 68). *Common spring passage migrant, less frequent autumn.* Recorded late March–early May, mid August–September. A concentrated spring passage in April, with slight peak mid month. Main autumn passage briefer and more concentrated, with pronounced peak early September. Spring passage (385 birds) more than double autumn passage (165 birds). 61% of sightings of two or more birds. There were 152 records (550 birds), mean 3.6 birds/record. The 48th most frequently recorded migrant and 45th most abundant. **Spring:** earliest 25 March 2013, latest 6 May 2004. Largest numbers, 25 Koloni, Paphos, 6 April 2005 and 25 Akrotiri GP 25 April 2013. **Autumn:** earliest 12 August 2012, latest 22 September 2007. Largest number 40 near Rizokarpaso 8 September 2008.

Cretzschmar's Bunting *Emberiza caesia* (Figure 69, Plate 19). *Common passage migrant and breeding visitor.* Recorded mid March–mid September. A spring peak late March, while autumn peak late August–early September. Post-breeding family parties seen drinking at perennial streams mid July–end August. Lower numbers recorded in autumn match that of Israel (Shirihai 1996) and suggest many overfly or bypass the region at this time. First spring sighting at a non-breeding site 12 March 2008, latest at a non-breeding site 30 April 2003. First autumn sighting away from known breeding areas, Aspro dam pools 3 August 2006, latest 15 September 2009 at cape Andreas. Largest numbers recorded 47 Marathounta hills 24 March 2011, 25 there 29 March 2011, 20 Agia Varvara 19 March 2005 and 20 Minthis hills 1 September 2009. Spring passage (430) almost four times that of autumn (114). 57% of sightings of 2 or more together. There were 229 records (678 birds), mean 3 birds/record. The 43rd most frequently recorded migrant and 42nd most abundant.

Black-headed Bunting *Emberiza melanocephala* (Figure 70). *Late spring passage migrant and breeding visitor.* Recorded late April–early September. Peak spring numbers late April,



Figures 68–70. Ortolan, Cretzschmar's and Black-headed Bunting numbers, December 2003–November 2013.



Plate 19. Cretzschmar's Bunting *Emberiza caesia*, a breeding visitor to Cyprus, was regularly encountered mid March–early September. This male was at Asprokremmos dam 5 April 2011. © G Reszeter

when many birds arrived and immediately started singing. Apart from one spring sighting at Akrotiri (see below) there was no obvious spring passage, although the presence of breeding visitors may have obscured this. Post-breeding departure very early, with very few records after June and autumn migration insignificant or mostly absent. The earliest spring sightings were on the Karpas and Akamas peninsulas 15 April 2006 and 15 April 2010 respectively, where they are known to breed. There was one sighting of a migrant at a non-breeding site, at Akrotiri GP 25 April 2013. The latest in autumn was 6 September 2004. Largest counts, seven Koilinia–Vretsia 4 June 2007, six Rizokarpaso–Golden beach 29 April 2013 and six Evretou 3 May 2006. 51% of sightings singles. There were 138 records (271 birds), mean 2 birds/record. The 50th most frequently recorded migrant and 48th most abundant.

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