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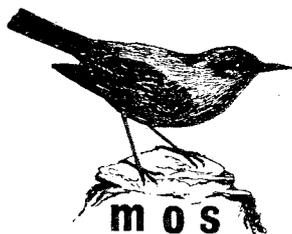


IL-MERILL - publication of THE ORNITHOLOGICAL SOCIETY  
 P.O.Box 498 Valletta MALTA

Union Press

# IL-MERILL

BULLETIN OF THE ORNITHOLOGICAL SOCIETY



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1981-83

No. 22

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# THE ORNITHOLOGICAL SOCIETY

P. O. BOX 498,

VALLETTA, MALTA

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## Marsh Harrier Migration through Malta in Autumn in Relation to Weather

M. A. THAKE

Marsh Harrier *Circus aeruginosus* migration in autumn was observed over five seasons (1974 - 1978) in the course of systematic watches made at Buskett, Malta. The results of this study are compared with those of earlier authors, and interpreted in terms of processes thought to operate in raptor migration.

### Methods

Observations were maintained by the author at Il-Wejba, Buskett. On a number of occasions, watches were made elsewhere in the islands while watches were maintained at Buskett by E. Curmi.

Details of the observation methods have already been published (Thake 1977, 1980). Data recorded in the field included flock size, height and direction of flight, time of sighting, as well as details of behaviour. Local weather was recorded at hourly intervals during the watch. Other meteorological data were taken from the records of RAF Qrendi and Luqa records published in 'The Times'. The Deutscher Wetterdienst supplied regional weather maps.

Coverage was most thorough in 1976, with watches being maintained daily from the second week of August to the third week of November. Only a few watches were missed. Watches in August and September lasted from 1000 to 1800 CET. About half of the remaining watches began at 1500 and ended at 1700 to 1800 CET. Observations in other years were less extensive, covering most of the period from late August to early October.

### Results

#### Seasonal totals and distribution

The total number of Marsh Harriers recorded in each season is given in Table 1. The totals from 1976 onwards (Table 1 and E. Curmi pers. comm.) are higher than those reported by previous authors. This coincided with the use of high powered binoculars (12 X 50, 16 X 50), and it seems likely that in previous years some distant birds were overlooked or erroneously identified. In view of the consistent results obtained from Buskett watches since 1976, there seem to be sufficient grounds for considering the Marsh Harrier as 'frequent' in autumn.

The results obtained over the study period support the statements of Beaman and Galea (1974) and Sultana and Gauci (1982) with regard to the distribution of sightings over the autumn migration season. This distribution showed a mean on the 27th September and a standard deviation of 8.42 days.

There was no significant difference between the mean time of appearance of males, and females and juveniles. This suggests that adults and juveniles migrate at similar times and at similar rates.

#### Flight style

Soaring was indulged in frequently, with birds often soaring to cloud-base. Such be-

TABLE 1 :

Year	Observations	Total sighted
1974	September	25
1975	Early Sept. - Early Oct.	15
1976	Mid Aug. - Late Nov.	100
1977	Mid Sept. - Mid Oct.	84
1978	Late Aug. - End Sept.	131

haviour. was sometimes observed in strong winds, when the birds drifted rapidly downwind. Typically the birds soared in thermals or slope lift, and glided out of the area of lift after having gained sufficient height. Marsh Harriers in the company of Honey Buzzards appeared to glide more rapidly than usual in order to keep up with the flock. Flapping flight was also employed intermittently, apparently in an attempt to increase speed. Under the same conditions, Marsh Harriers appeared to use flapping flight more frequently than Honey Buzzards.

#### Height and direction of flight

Marsh Harriers were usually sighted lower than Honey Buzzards, even when convective cloud-base was high. There was little variation with time of day. At dusk flocks appeared to fly lower and often circled over Buskett for long periods.

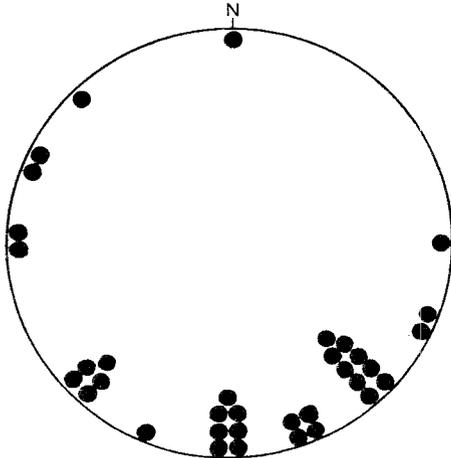


Fig.1. Headings of Marsh Harriers migrating over Buskett, Malta. The headings of all birds which passed within 100m of the watchpoint were estimated ( $\pm 10^\circ$ ) by reference to known compass points. Each unit represents a flock of one or more birds.

The scatter of headings of Marsh Harrier sightings at Buskett is illustrated in Figure 1. This scatter diagram shows birds heading southwards, but also many heading east of south. This is not consistent with the known south to south southwestward movement of Marsh Harriers across the central Mediterranean (Cramp and Simmons 1980; see also recoveries of Marsh Harriers listed in Sultana and Gauci 1982 which suggest a similar direction of migration). This feature of the scatter diagram, however, is readily interpretable in terms of a coasting movement by some of the Marsh Harriers sighted.

#### Variation with time of day

Figure 2 is a histogram illustrating the variation of the number of sightings with time of day. Histograms constructed for 1976, 1977, and 1978, all showed the following features: a small peak at around mid-day and a larger peak in the late afternoon. This histogram differs appreciably from that for the Honey Buzzard (Thake 1981). In particular, convergence on Buskett at dusk seems more prominent in the Marsh Harrier histogram. Figure 2 also shows a peak at around mid-day. Perhaps more Marsh Harriers are on migration at this time. Other interpretations are possible.

Figure 2 is misleading in that it suggests that Marsh Harrier migration through Buskett commences at around 1000 CET. The watches on which the present study is based started at 1000 CET. Sporadic early morning watches revealed some Marsh Harrier migration at these times. This feature was noted by Beaman and Galca (1974). It is not clear whether these are birds which roosted in the north of the islands and in Gozo, or whether they crossed the Sicilian channel early in the day.

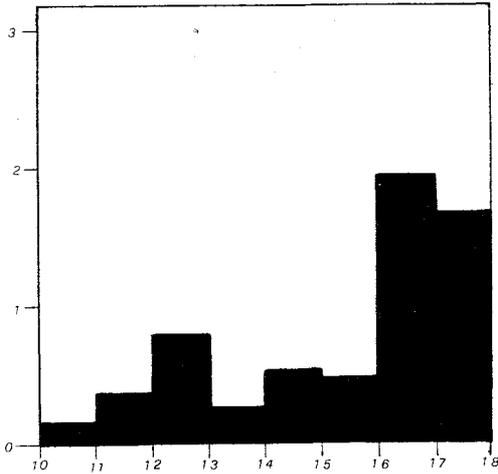


Fig.2. Distribution of sightings of Marsh Harriers over the day. Sightings made in 1976 were grouped in hourly intervals and the mean calculated over the watches during which that hourly interval was covered. The ordinates represent the mean number of Marsh Harriers sighted during the period in question. Time is recorded on the abscissa.

#### Flocking

Variation of the mean flock size with time of day is illustrated in Figure 3. During most of the day, Marsh Harriers migrated singly. In the late afternoon, the species became more gregarious, and flocks containing as many as 13 Marsh Harriers were sighted. This gregariousness was displayed preferentially towards other Marsh Harriers, and flocks of two birds contained only Marsh Harriers more often than would have been expected by chance. Nevertheless, Marsh Harriers sometimes flew in the company of other species, generally Honey Buzzards. Birds were also sometimes seen in the company of Black Kites *Milvus migrans*, smaller harriers *Circus* sp., Hobbys *Falco subbuteo*, Eleonora's Falcon *Falco eleonorae* and on one occasion a Booted Eagle *Hieraaetus pennatus*.

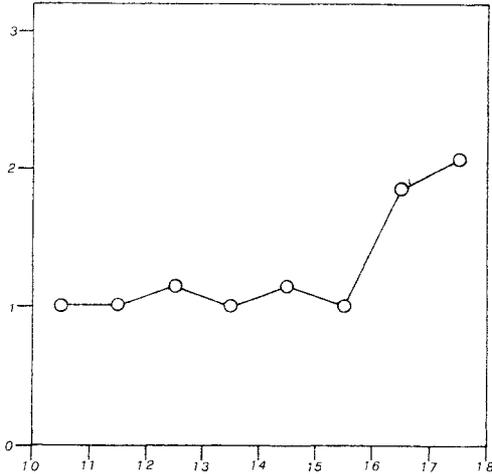


Fig.3. Variation of mean flock size of Marsh Harriers with time of day. The ordinates represent mean flock size.

### Correlation of sightings with weather variables

The results of some of the correlation analyses performed on the observational data are listed in Table 2. The pattern of correlations obtained is similar to that exhibited by the Honey Buzzard in that significant negative correlations were found with wind strength in the early morning and in the late afternoon. Correlation only approached significance at mid-day. Correlation was best with mean wind strength below 1500m, just as is the case with the Honey Buzzard.

TABLE 2 : Results of Correlation analyses of Marsh Harrier sightings with weather.

Weather variable	Correlation coefficient	Significance level
Pressure (1200)	+.358*	.1 > p > .05
Visibility (2000)	-.140	p > .1
Wind strength (surface)		
(0600)	-.593**	.01 > p
(1200)	-.328*	.1 > p > .05
(1800)	-.444**	.05 > p > .01
Wind strength (mean below 1500m) (0600)	-.630**	.01 > p
Southerly vector (1800)		
surface	+.167	p > .1
1500m	-.106	p > .1
5500m	-.261	p > .1
Easterly vector (1800)		
surface	+.262	p > .1
1500m	+.164	p > .1
5500m	+.139	p > .1
* Marginally significant		
**Significant		
Times quoted are local i.e. Central European Time.		

Some differences also emerge. Correlation with atmospheric pressure was poor and only weakly significant. An important difference is the absence of correlation with strength of the southerly vector of wind strength at all times of day and at all levels. The results of these correlation analyses are interpreted and discussed below.

### Discussion

A number of theories of raptor migration through Malta exist. Indeed, practically every ornithologist who wrote about the local avifauna had something to say about the effect of weather on daily totals. These statements were usually not supported by correlation analyses, or indeed by any quantitative analysis. The hypotheses of De Lucca (1969) and Beaman and Galea (1974) are worthy of note in that they provide a plausible framework within which raptor migration through Malta might be explained. These two hypotheses will be examined below with regard to Marsh Harrier migration through Malta.

DeLucca (1969) proposed that diurnal migrants travel in a concentrated stream to the west of the islands, and occur in numbers in Malta when westerly winds drift this stream over the islands. Most raptor migration over Malta occurs during light winds, when wind determined drift is expected to be slight. Moreover, correlation analyses on a number of raptor species, including Marsh Harriers, have failed to produce the positive correlation with westerly winds required by this hypothesis (see Table 2). The available evidence therefore runs counter to DeLucca's hypothesis.

Beaman and Galea (1974) interpreted raptor sightings in terms of weather induced vertical movements within a stream of migrants passing over the Maltese Islands. Their analyses considered the effects of weather on sightings of all raptor species combined. No attempt was made to isolate the effects of weather to the various species in turn. Inevitably, their findings were influenced by the numerical dominance of Honey Buzzards and the kestrels *Falco naumanni* and *Falco tinnunculus* in autumn totals. They concluded that

headwinds and bad weather induce raptors to migrate at lower levels where they can be seen. Convergence on the islands was also invoked to account for large totals (mostly kestrels) coinciding with the passage of depressions through the islands.

Beaman and Galea's (1974) hypothesis requires correlation to exist between the number of sightings and the strength of the southerly vector of the wind at upper levels. Marsh Harrier sightings were not correlated with southerlies at upper levels, or indeed at any level or time (see Table 2). Clearly, the hypothesis is not supported by these results.

The absence of positive correlation with visibility (Table 2) suggests that day to day changes in visibility are not responsible for the variation of Marsh Harrier daily totals. Convergence on the islands thus cannot be the principal factor determining the number sighted, but convergence on the islands, especially during bad weather, cannot be ruled out. The high total (36) recorded on 26/9/77 under an overcast sky might represent such 'fall' type convergence.

A leading line effect is thought to operate in Honey Buzzard migration through Malta. The fraction of birds following the direction of the coast is thought to increase with the approach of dusk and with the increasing strength of a contrary wind (Thake 1981). The scatter diagram illustrating the headings of Marsh Harrier flocks (Figure 1) shows some flocks heading east of south. These birds might have been following the coast. However, if an effect similar to that in Honey Buzzard operates in Marsh Harrier migration, its magnitude must necessarily be small and there is no evidence for it at present. The absence of a significant correlation with southerlies at low levels at any time of day (especially at noon) runs counter to expectation if a leading line effect were being induced by contrary winds. The fact that the greatest number of sightings per hour are made in the late afternoon rather than in the early afternoon (see Figure 2), again suggests that a leading line effect caused by contrary sea breezes is not as important in this species as it is thought to be in Honey Buzzard. In the Honey Buzzard, coasting increases as dusk approaches. No such effect is apparent in the Marsh Harrier. There was little difference (Watson and Williams two sample test  $p > .1$ ) between scatter diagrams of headings before 1500 and after 1600 CET. However, the sample size is small, and this analysis should be repeated when more extensive directional data become available.

The weight of evidence thus does not favour the hypothesis of a strong leading line effect in this species. In particular, one cannot invoke a leading line effect to account for the high numbers which occur over Buskett towards dusk. The absence of similar concentrations of Marsh Harriers elsewhere in the islands is not very convincing evidence as observations elsewhere are few. Marsh Harriers do not usually attempt to roost at Buskett (a fact which results in very few being shot there). Suitable reedbeds for roosting occur in the valleys of Girgenti nearby, and Buskett records late in the afternoon might refer to birds which are converging on Girgenti and soaring in the general vicinity.

Thus, Marsh Harrier migration over Buskett seems interpretable as follows. Marsh Harriers leave Sicily principally when wind strength in the early mornings is low, during anticyclonic weather. While a few birds do follow the coast, there is no evidence that local weather or time of day alter the fraction of birds which do so to such an extent as to affect daily totals. Marsh Harriers converge on the Buskett area in the late afternoon.

Comparison between the various raptor species whose sightings have been analysed is instructive. Honey Buzzards (Thake 1977), Hobbys (Thake 1978 a), and Marsh Harriers (this study) probably leave Sicily and Southern Italy during anticyclonic weather, when wind strength in the early morning is low. Hobbys converge on Buskett throughout the day, perhaps to hunt (Thake 1978 a, 1978 b). Marsh Harriers converge on Buskett in the late afternoon, perhaps to roost nearby. Honey Buzzards converge on Buskett for roosting purposes (Beaman and Galea 1974). Moreover, local weather, especially contrary winds, appears to alter the proportion of this species which follows the coast earlier in the day, resulting in higher totals at Buskett (Thake 1981). In contrast, the kestrels appear to leave east-central Europe on a long flight to the wintering grounds. This flight is probably initiated during fair weather, and is only interrupted towards dusk or during bad weather (Thake in prep). Southerlies at intermediate heights above the ground increased daily totals, either by increasing the fraction which attempted to roost, or by causing the birds to fly lower. Thus the kestrels may be the only species of raptor in which the effect postulated by Beaman and Galea (1974) operates.

Clearly, the effects of weather on the migration pattern of each species are different. These results suggest that analyses which deal with the effects of weather on a number of different species should be interpreted cautiously.

### Acknowledgements

I am grateful to E. Curmi for supplementing my observations on a number of occasions. Thanks are also due to Messrs. Pace and Wright for permission to examine meteorological records.

### Summary

Marsh Harriers were recorded at Buskett in autumn more frequently than in the recent past, possibly because the species was overlooked previously. The distribution of sightings over the day showed a peak in the late afternoon, which also coincided with greater gregariousness on the part of the birds. Marsh Harrier sightings were negatively correlated with wind strength, but significant correlations with other weather variables were few. Marsh Harriers appear to cross the Sicilian channel when wind strengths in the early mornings are low, during anticyclonic conditions. In the late afternoon, birds converge on the Buskett area.

### References

- BEAMAN, M. & GALEA, C. 1974. The visible migration of raptors over the Maltese Islands. *Ibis* 116:419-431.
- CRAMP, S. & SIMMONS, K.E.L. (eds.) 1980. The Birds of the Western Palearctic, Vol. II. Oxford University Press : Oxford.
- DE LUCCA, C. 1969. A Revised Checklist of the Birds of the Maltese Islands. Classey : Middlesex.
- SULTANA, J. & GAUCI, C. 1982. A New Guide to the Birds of Malta. The Ornithological Society: Valletta.
- THAKE, M.A. 1977. Synoptic scale weather and Honey Buzzard migration across the central Mediterranean. *II-Merill* 18:19-25.
- THAKE, M.A. 1978 a. Some aspects of Hobby migration over Buskett. *II-Merill* 19:1-4.
- THAKE, M.A. 1978 b. Raptors feeding while on migration over Buskett. *II-Merill* 19:7-8.
- THAKE, M.A. 1980. Gregarious behaviour among migrating Honey Buzzards. *Ibis* 122:500-505.
- THAKE, M.A. 1981. Autumn migration of the Honey Buzzard through Malta in relation to weather. *II-Merill* 21:31-17.
- THAKE, M.A. in prep. Kestrel migration through Malta in autumn in relation to weather. *Riv. Ital. Ornit.*

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## THE GIANT MALTESE SWAN

E. MARJORIE NORTHCOTE

The Maltese Swan *Cygnus falconeri* Parker was evidently widespread in Malta in the past. Remains of this bird have been recovered from Zebbug, Ghar Dalam, Mnajdra, Tal-Gnien and other localities (Parker 1865, 1869; Lydekker 1890, 1891; Bate 1916; Northcote 1982). They are stored in the British Museum (Natural History), London, University Museum of Zoology, Cambridge, England and the National Museum of Natural History, Mdina.

Adams (1870) described the excavation of a typical deposit containing these bones. Beneath a surface layer of earth was matrix containing remains of the Maltese Swan and other bird species, including the Maltese Crane *Grus melitensis*, one large and two pygmy species of elephant, a giant dormouse species and two species, one of them gigantic, of fresh water turtle (nearby, Adams found pygmy hippopotamus associated with this fauna). The ossiferous layer was only a few feet in depth and it appeared probable, as Adams considered, that all the bones were deposited within a short time-span. I could find no countable pollen in the deposit that could be used for dating purposes. Pygmy elephant bones have been found in Sicily, and Sondaar (1971) considered them to be characteristic of the Last Interglacial. Sicily was probably joined to Malta at that time, in which case the Maltese Swan, that was found associated with these elephants, should also be assigned to this Interglacial. Van der Hammen, Wilmstra & Zagwijn (1971) and Mangerud, Sonstegaard & Sejrup (1979) suggested dates c. 125000 ago for this period.

By comparing bones of Maltese Swans with those of recent swans, I have shown, elsewhere, that they were unlike those of Mute Swans *Cygnus olor* but resembled those of

scaled-up Whooper Swans *C.c.cygnus* or Bewick's Swans *C.c. bewickii* (Northcote 1982). Using this allometry, I employed carefully tested scaling formulae to estimate the weight and wing span of Maltese Swans based on tarsometatarsus measurements in them and in Whooper Swans. Since that study, further Maltese Swan specimens (collected by Bate, chiefly from tal-Gnien, in the 1930s, BM(NH) unregistered) have become available. New estimates incorporating these are given here.

McMahon's (1973, 1975) theory of elastic similarity predicts that bone length = a constant (K) x weight<sup>0.25</sup>. In Whooper Swans mean tarsometatarsus length = 118.18 mm and mean weight = 9.72 kg (Northcote 1981) so that K = 66.77. Mean length of this bone in Maltese Swans = 136.6 ± 3.30 mm; n = 6; range, 133.3 - 141.0 mm. Therefore, mean weight of Maltese Swans = 17.5 kg. McMahon's theory of elastic similarity also predicts that bone width = a constant (K) x weight<sup>0.375</sup>. In Whooper Swans mean tarsometatarsus width = 8.24 mm (Northcote 1981) so that K = 3.51. Mean width of this bone in Maltese Swans = 10.08 ± 0.48 mm; n = 17; range, 7.0 - 11.3 mm. Therefore, mean weight of Maltese Swans = 16.7 kg. Alexander (1971) showed that wing span = a constant (K) x weight<sup>0.39</sup>. In Whooper Swans wing span = 2.18 - 2.43 m (Cramp & Simmons 1977) so that K = 1. Therefore, wing span of Maltese Swans = 3.0 m.

A fragment of Maltese Swan cranium included the supraorbital depression that housed the salt gland (Northcote 1982). The size of this gland is directly related to the amount of salt imbibed with the food (Humphrey & Clark 1964). In Maltese Swans, the gland was evidently very small; certainly it was smaller than in other northern hemisphere swan species (Northcote 1982), all of which often feed on brackish water. Presumably, Maltese Swans regularly fed further inland than them and away from the sea. The ratio (length of middle digit of the toe (99 mm, Northcote 1982)/length of tarsometatarsus) in Maltese Swans = 0.72. This is much lower than in Whooper or Bewick's Swans (viz. 1.26 and 1.19 respectively). Relatively shorter toes suggest greater ease in walking (Charig 1972); other features of the leg of Maltese Swans also suggest this (Northcote 1982).

In summary, then, Maltese Swans weighed c. 17 kg, had c. 3 m wing span, fed inland and were more terrestrial in their habits than other swans. The 3 m wing span of Maltese Swans would have limited their manoeuvrability, indeed at c. 17 kg they were probably flightless since the largest flying birds such as Kori Bustard *Ardeotis kori* and Californian Condor *Gymnogyps californianus* have a maximum weight c. 14 kg. During the last Interglacial Malta supported a homogeneously lush flora and there were no large predators (Northcote 1982). Thus flight was unnecessary for feeding, mating or escaping. Furthermore reduced flight and larger size have the advantage of greater economy (Schmidt-Nielsen 1973).

Johnsgard (1974) considers that, in general, differences between Bewick's and Whooper Swans are predicatable results of allometric growth effects and I have shown that they conform to the same allometric scaling formulae (Northcote 1982). According to Johnsgard (1974), a Eurasian swan produced the smaller, more northern Bewick's and the larger, more southern Whooper Swan. I suggest that there was an even larger, even more southern form that evolved into Maltese Swan. (This must have happened comparatively recently; the area of which the Maltese islands are now a fragment became a land surface only during the Pliocene, Zammit-Maempel 1977). Allometric effects of large size would have obliged ancestors of Maltese Swans to become sedentary and this allowed selection processes to adapt them to exploit the inland flora. As inland grazers, Maltese Swans would have occupied a specialised niche. The end of the Interglacial brought rather rapid environmental changes (Charlesworth 1957; Starkel 1977). Their sedentary and specialised habits were probably the reason why Maltese Swans could not survive these changes and became extinct.

#### Acknowledgements

This work was carried out during the tenure of a Calouste Gulbenkian Fellowship. I wish to thank Dr H.J.B. Birks of the Cambridge Botany Department for carrying out pollen analyses and Dr G. Zammit-Maempel, and Messrs C.A. Walker and R.D. Norman for help concerning specimens. Dr K.A. Joysey helped in other ways.

#### References

- ADAMS, A.L. 1870. Notes of a naturalist in the Nile Valley and Malta. Edinburgh : Edmonston & Douglas.
- ALEXANDER, R.M. 1971. Size and shape. The Institute of Biology's Studies in Biology. 29. London : Edward Arnold.
- BATE, D.M.A. 1916. On a small collection of vertebrate remains from the Ghar Dalam cavern, Malta. *Proc. zool. Soc. Lond.* 28 : 421-430.

- CHARIG, A.J. 1972. The evolution of the archosaur pelvis and the hind-limb : an explanation in functional terms. In K.A. Joysey & T.S. Kemp (eds), *Studies in vertebrate evolution*. Edinburgh : Oliver & Boyd.
- CHARLESWORTH, J.K. 1957 *The Quaternary Era, with special reference to its glaciation*. London : Arnold.
- CRAMP, S. & SIMMONS, K.E.L. (EDS). 1977. *The birds of the Western Palearctic*. Vol. 1. Oxford : Oxford University Press.
- HUMPHREY, P.S. & CLARK, G.A. 1964. The anatomy of waterfowl. In J. Delacour, *Waterfowl of the World*. Vol. IV. London : Country Life.
- JOHNSGARD, P.A. 1974. The taxonomy and relationship of the northern swans. *Wildfowl* 25 : 155-160.
- LYDEKKER, R. 1890. On the remains of some large extinct birds from the cavern-deposits of Malta. *Proc. zool. Soc. Lond.* 28 : 403 - 411.
- LYDEKKER, R. 1891. Catalogue of the fossils birds in the British Museum (Natural History). London : British Museum.
- MCAHON, T.A. 1973. Size and shape in biology. *Science* 179 : 1201-1204.
- MCAHON, T.A. 1975. Using body size to understand the structural design of animals. *J. appl. Physiol.* 39 : 619-627.
- MANGERUD, J., SONSTEGAARD, E & SEJRUP, H-P. 1979. Correlation of the Eemian (interglacial) Stage and the deep-sea oxygen isotope stratigraphy. *Nature* 277 : 189 - 192.
- NORTHCOTE, E.M. 1981. Differences in weight and habit of Whooper *Cygnus cygnus cygnus* and Mute *C. olor* Swans in relation to differences in their long bones. *Bull. Br. Orn. Cl.* 101 : 266 - 267.
- NORTHCOTE, E.M. 1982. Size, form and habit of the extinct Maltese Swan *Cygnus falconeri*. *Ibis* 124 : 148 - 159.
- PARKER, W.K. 1865. Preliminary notes on some fossil birds from the Zebbug cave, Malta. *Proc. zool. Soc. Lond.* 1865 : 752 - 753.
- PARKER, W.K. 1869. On some fossil birds from the Zebbug Cave, Malta. *Trans. zool. Soc.* 6 : 119 - 124.
- SCHMIDT-NIELSEN, K. 1973. *How animals work*. Cambridge : Cambridge University Press.
- SONDAAR, P.Y. 1971. Paleozoogeography of the Pleistocene mammals from the Aegean. In A. Strid (ed.), *Evolution in the Aegean Opera Botanica* no. 30.
- STARCKEL, L. 1977. The palaeogeography of mid- and east Europe during the last cold stage, with west European comparisons. *Phil. Trans. R. Soc. Ser. B (Roy)*, 280 : 351 - 372.
- VAN DER HAMMEN, T., WIJMSTRA, T.A. & ZAGWIJN, W.H. 1971. The floral record of the Late Cenozoic of Europe. In K.K. Turekian (ed), *The late Cenozoic glacial ages*. Newhaven and London : Yale University Press.
- ZAMMIT-MAEMPEL, G. 1977. An outline of Maltese geology. Malta : Progress Press.

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## EVIDENCE FOR THE EXISTENCE OF A LEADING LINE EFFECT IN HONEY BUZZARD MIGRATION THROUGH MALTA

M. A. THAKE

The effect of leading lines in raptor migration is well known, and is thought to be one reason for the large concentrations of raptors which occur at the narrows at both seasons. Recent analyses of the extensive observations carried out at Falsterbo has led to the elaboration of a model which relates the leading line effect to weather phenomena, especially wind (Alerstam 1978). Honey Buzzard *Fernis apivovus* migration through Malta in autumn is thought to be subject to similar leading line effects, albeit on a much smaller scale (Thake 1981). The effect is thought to increase in strength as the afternoon progresses. Increasing strength of the southerly (contrary) component of surface wind strength is also thought to induce more birds to follow the coast rather than commence migration over the sea immediately. Some evidence for the existence of a leading line effect in Malta is presented below.

## Methods

Data obtained in 1976 provide the material on which this paper is based. The observation methods were described elsewhere (Thake 1977, 1980). The observations were made several years before the present hypothesis was conceived and could not have been in any way influenced by expectation.

## Results and discussion

If Honey Buzzards choose between migrating over the sea immediately and following the coast, the scatter of headings is expected to be bimodal. Figure 1 shows some birds heading out to sea due SW - S, and others following the coast by heading SE. The scatter diagram of headings of single birds shows the expected bimodality, but no satisfactory statistical test of this could be devised.

A coasting movement due SE should increase the rate at which flocks of Honey Buzzards are encountered, as the birds in question are flying obliquely to the stream of migrants, and flocking is expected to occur more frequently. Hence, larger flocks are expected to show a more pronounced tendency to fly SE. This is depicted in Figure 2.

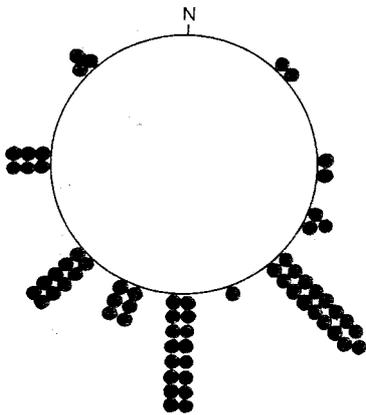


Fig.1. Scatter diagram of headings of single Honey Buzzards. Headings of birds sighted before 1700 CET were estimated ( $\pm 10^\circ$ ) by reference to known compass points.  $R = .6165$ ;  $\theta = 174.36^\circ$

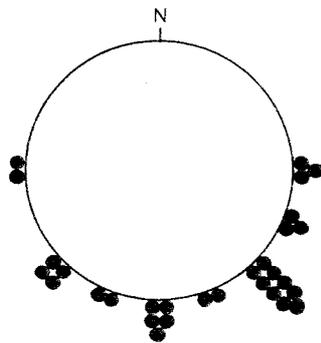


Fig.2. Scatter diagram of headings of flocks of four or more Honey Buzzards.  $R' = .6797$ ;  $\theta = 159.00^\circ$   
The direction of the resultant vector for singles (Fig.1) lies outside the 95% confidence limits for  $\theta'$ . The more rigorous Watson and Williams two sample test is not applicable because the two concentration coefficients differ significantly ( $p < .05$ ).

These results strongly suggest that some Honey Buzzards follow the coast. Direct evidence that contrary winds increase the fraction following the coast would only be obtainable from a much larger sample of directional data than that at my disposal.

## References

- ALERSTAM, T. 1978. Analysis and theory of visible bird migration. *Oikos* 30 : 273-349.  
THAKE, M.A. 1977. Synoptic scale weather and Honey Buzzard migration across the central Mediterranean. *Il-Merill* 18 : 19-25.  
THAKE, M.A. 1980. Gregarious behaviour among migrating Honey Buzzards. *Ibis* 122 : 500-505.  
THAKE, M.A. 1980. Autumn migration of the Honey Buzzard through Malta in relation to weather. *Il-Merill* 21 : 13-17.

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## COLD FRONTS AND HONEY BUZZARD MIGRATION ACROSS LARGE BODIES OF WATER

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Some unusually large falls of Honey Buzzard *Pernis apivovus* have coincided with the approach of fronts. Such situations are discussed below.

Following observations in Malta by Gibb (1951), Brown and Amadon (1969) suggested that Honey Buzzards might utilise the thermals which precede fronts in order to cross the Mediterranean. In relation to this hypothesis, the use of frontal thermals by a single White Stork *Ciconia ciconia* is of interest. This bird was seen utilising thermals below convective cloud in a very weak front which crossed the islands on the 2nd September 1976. The bird drifted downwind as it proceeded along the front. The regular use of fronts by migrant soaring birds attempting to cross the Mediterranean is unlikely. The dangers of using an active front have been pointed out elsewhere (Thake 1977). Moreover, the birds in question would be drifted several hundred kilometres eastward, as they would be unable to correct for drift while using the front.

Recent observations in Malta have produced three separate instances where approach of a frontal system was associated with unusually high totals (1/10/73, 19/9/74, 11/9/76). A few other less marked cases occur. In each case, the raptors were seen well before the arrival of the front. On each of these occasions, the highest totals were logged at Buskett, as usual. A characteristic of such falls however, was the fact that sizable totals were also recorded elsewhere, principally on the higher ground of west Malta but also further north.

A synoptic chart for one of these dates is shown in Figure 1, which illustrates the approach of a front on the 1st October 1973, when 410+ raptors (including 320+ Honey Buzzards) were recorded. The front was very slow moving and was slowed down still further by the development of frontal waves. Anticyclonic conditions over the Central Mediterranean were replaced by Sirocco (Xlokk) conditions later in the day due to the development of a lee depression on the front, south of the Atlas mountains. Thus on the 1st October the sea breezes which were prevalent in the morning were gradually supplanted by a south south easterly gradient wind which increased in strength throughout the day. The position of the front did not change appreciably in the course of the day.

The interpretation of these high totals remains unclear. Basically, the high totals could be due to some effect of the southerly winds generated by the approach of the front, or to the birds' fear of the approaching front. Four distinct possibilities exist. It should be noted that these possibilities are not mutually exclusive and all may occur to a certain extent.

(1) Honey Buzzards respond to the increased strength of the contrary wind by following the coast to a greater extent than usual. The large totals at Buskett would thus be due to an accentuated leading line effect. The fact that many Honey Buzzards are also seen in the north of Malta on such occasions seems to contradict this hypothesis.

(2) A contrary gradient wind over the Sicilian channel slows down the stream of migrants, which arrive in the vicinity of Malta later in the day, when they are less willing to embark on a second sea crossing. An implicit assumption in this argument is that the distribution of intensity of migration with time of day is shifted earlier with respect to the distribution of sightings at Buskett. This assumption is reasonable but there is no evidence to support it.

(3) A contrary wind over the Sicilian channel increases the proportion of Honey Buzzards which converge on the islands. Very little is known about convergence on the islands. There is some evidence that differential convergence is not responsible for the day to day variation of totals (Thake 1981). Convergence might, however, occur on a scale small enough not to be affected by day to day changes in visibility.

(4) Honey Buzzards recognise approaching fronts by the presence of a cloud bank due west, accompanied by a southerly wind which is increasing in strength. It would be uneconomical of both time and energy for Honey Buzzards to flee from every cloud bank which appears on the horizon. Having established that a front is approaching, they make for the nearest land. This hypothesis is weakened by the fact that in some cases (see Fig.1) the front in question was probably too distant to be seen by the birds.

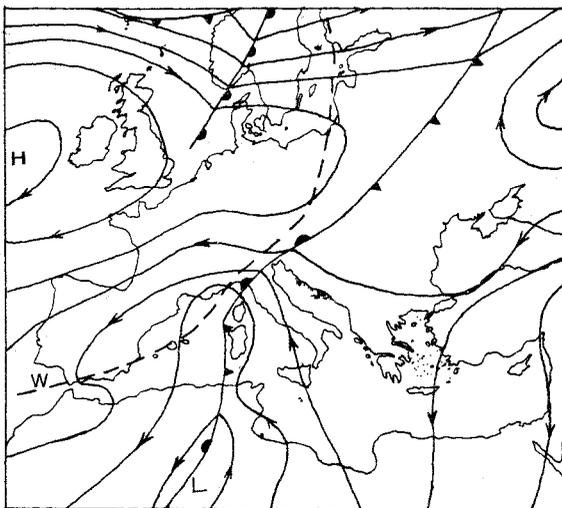


Fig.1. Synoptic chart for 0000 GMT on the 2nd October 1973, approximately 7 hours after the end of a large passage of Honey Buzzards. The dashed line shows the position of the principal front at 0000 GMT on the 30th September. Drawn from the Täglicher Wetterbericht kindly supplied by the Deutscher Wetterdienst.

According to a recent model of flocking (Thake 1980) a decrease in the motivation to migrate should result in an increased flock size due to increased flocking. All the above possibilities envisage a reduction in the motivation to migrate and increased flocking would be expected to occur, if the model is realistic. The anomalously high flock size observed on such occasions is difficult to explain in any other way. The explanation offered in a previous paper (Thake 1977) cannot account for the other cases under discussion.

Further observations are required in spring, when the southerlies ahead of the approaching front would be tail winds. If high totals are also recorded in such situations, this would represent a response to the front and not to contrary winds. Malta is perhaps unsuitable for such an investigation because of the meagre spring passage. Observation from Pantelleria covering several spring migrations are clearly required, preferably in conjunction with observations at Cap Bon. Pantelleria experiences a much more intense spring passage than Malta.

Our present knowledge might be summarised as follows : When a cold front approaches a well developed anticyclone over the central Mediterranean at around mid-day, high totals of Honey Buzzards are recorded. Although there is evidence that normal migration is being disrupted, it is not clear whether this is due to discovery of the front by the birds, or to some effect of the southerly winds which precede the front.

#### References

- BROWN, L.H. & AMADON, D. 1969. Eagles, Hawks and Falcons of the world. Country Life : London.
- GIBB, J. 1951. The birds of the Maltese Islands. *Ibis* 93 : 109-127.
- THAKE, M.A. 1977. Synoptic scale weather and Honey Buzzard migration across the central Mediterranean. *II-Merill* 18 : 19-25.
- THAKE, M.A. 1980. Gregarious behaviour among migrating Honey Buzzards. *Ibis* 122 : 500-505.
- THAKE, M.A. 1981. Autumn migration of the Honey Buzzard through Malta in relation to weather. *II-Merill* 21 : 13-17.

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# MOULT AND BIOMETRICS OF CORN BUNTINGS IN MALTA

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## Introduction and Methods

Corn Buntings *Miliaria calandra* are rather difficult birds to capture by mist-netting. The terrain which they frequent is usually exposed providing no cover to the nets. Even when they are netted many birds fly out of the small mesh nets employed in Malta.

While in England relatively large numbers have been captured in winter, either at roosts (e.g. Boddy and Blackburn 1978) or during hard weather (e.g. Follows 1969), in Malta the best trapping time is in June, July and August when Corn Buntings congregate near water-holes to drink. At this time of year Corn Buntings, both adults and birds of the year, are in moult and 53 moult cards have been filled between 1977 and 1981. Most birds were caught at Wied il-Luq, Buskett on hot days with low humidity when dew was absent. On such occasions birds started arriving about half an hour after sunrise. Corn Buntings are always very wary and catches were always very small - usually one to four birds, occasionally six. Much fewer birds have been caught at other times of the year but in 1980, 34 Corn Buntings were caught at Ghadira between mid-September and mid-November when the birds appeared to be feeding on the seeds of *Salsola soda*.

Most birds caught had their wing length measured (maximum chord) to the nearest 0.5mm and were weighed to the nearest 0.1 g on Pesola balances. Most wing lengths have been recorded by four ringers and a few short-term retraps indicate a degree of accuracy in measurement to within  $\pm 1$  mm. Moults were recorded in the standard way (Snow 1967).

## Wing-length and Weight

Svensson (1975) has concluded that wing-length is extremely helpful in sexing Corn Buntings, giving ranges of 96.5 - 105 mm (n=27) for males and 88 - 96 (n=9) for females. Follows (1969), who measured and weighed 103 Corn Buntings caught in a single day, suggested that birds with wing-lengths  $> 95$  mm and weight  $> 45$  g were males and birds with wing-length  $< 95$  mm and weight  $< 45$  g were females. However, 116 birds measured in Portugal by Mead (Svensson 1975) did not fall into two clear categories. Prys-Jones (1976), who compared published data on Corn Buntings from a variety of sources, agreed with Follows and thought that the belief that a considerable overlap existed in wing-length between the sexes was due to wrongly sexed specimens. Boddy and Blackburn (1978) have measured and weighed nearly 300 birds over a five-year period at a Nottinghamshire roost in winter and obtained very similar results to Follows'. They proposed that birds with wing-lengths  $> 97$  mm or with wing-lengths between 95 and 97 mm and a weight of 54 g or more were males, and birds with wing-lengths  $< 95$  mm or with wing-lengths between 95 and 97 mm and a weight of 44 g or less were females.

Birds measured and weighed in Malta have been divided into three categories : a. Juveniles (April - September); b. breeding adults (March - mid-June); and c. full-grown birds other than juveniles (mid-June - February). Wing-lengths (sexes not differentiated but sex ratios appeared uniform in the three groups) are given in Table 1.

	Sample	Mean	Range	sd
juveniles	39	85.3	78 - 94	4.25
adults	38	91.8	81 - 101	4.61
full-grown	45	92.5	85.5- 105	4.69

Wing-lengths of breeding birds were slightly shorter than those of full-grown birds but there was no statistical difference ( $t=0.681$ , NS). The slight difference is almost certainly due to feather abrasion. Juvenile wing-lengths were significantly shorter than wing-lengths of full-grown birds ( $t=7.385$ ,  $P<0.001$ ).

The distribution of wing-length and weight in the three categories is shown in Figs. 1-3. In all three categories weight was positively correlated with wing-length showing

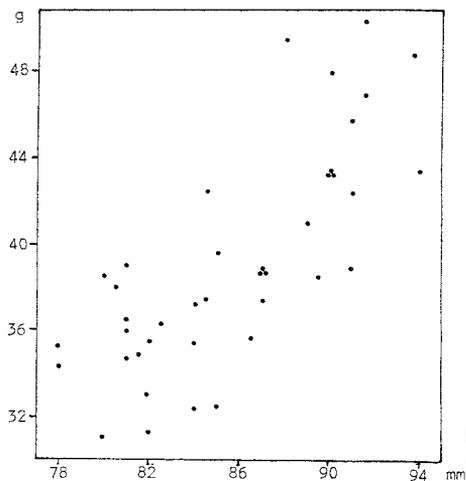


Fig.1. Wing-lengths and weights of juvenile Corn Buntings.

that sexes differ in mean weight in all age classes :

juveniles :  $r=0.7020$ ,  $P<0.001$

full-grown :  $r=0.7644$ ,  $P<0.001$

adults :  $r=0.7587$ ,  $P<0.001$

Wing-length distribution in post-juveniles and adults (Fig. 4) is broadly similar to those published by Follows (1969) and Boddy and Blackburn (1978) though overall wing-lengths of local birds appear to be somewhat shorter. The 'female' median, at 91 mm, is 1 mm shorter than in the two studies cited, the intermodal point (96 mm) agrees exactly with Boddy and Blackburn, and the 'male' median is 2 mm and 3 mm shorter respectively. The

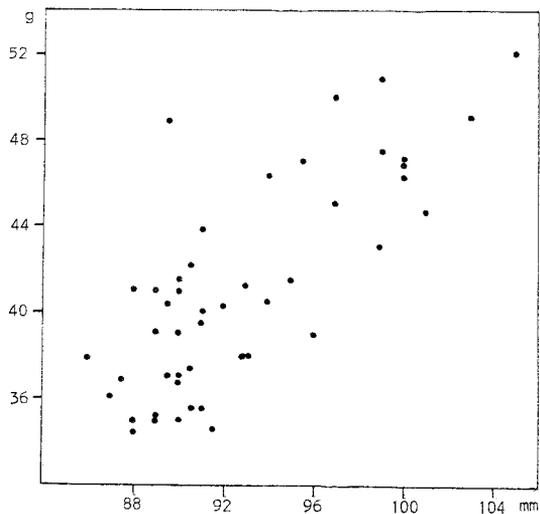


Fig.2. Wing-lengths and weights of post-nuptial adult and post-juvenile Corn Bunting.

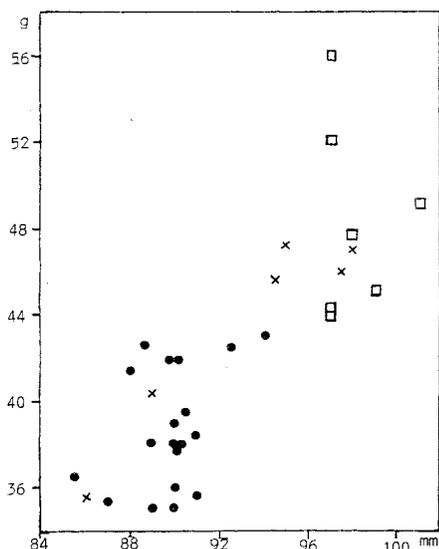


Fig.3. Wing-lengths and weights of breeding Corn Buntings. Circles show females, squares males, and crosses unsexed birds.

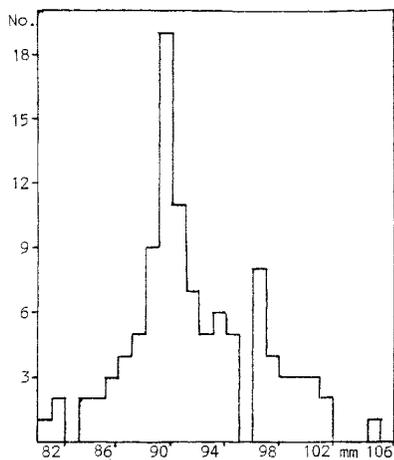


Fig.4. Wing-length distribution of 105 post-moult Corn Buntings measured in Malta.

larger amount of 'females' in the sample is probably more due to the fact that 'males' tend to free themselves more easily from mist-nets, than to polygamy, though at Ghadira, where many of the birds were trapped, a male often has up to three females breeding on its territory (Sultana & Gauci 1982).

The pattern of weights (Fig. 5) shows no clear cut sexual distinction. Local birds are also substantially lighter than British birds.

#### Sexual Identification

Based on wing-lengths and weights of breeding adults (many of which were sexed on account of the presence of an incubation patch) it is suggested that the following criteria be used for sexing post-juvenile Corn Buntings in Malta:

Males : Birds with wing-length > 94 mm and weight > 44 g.

Females : Birds with wing-length < 94 mm and weight < 44 g.

This study has shown that though juvenile male Corn Buntings have longer wing-lengths and a proportionally heavier weight than juvenile females, the distinction is less clear than in adults and post-juveniles. On the data available it appears that from April to early September (i.e. up to the termination of moult) juveniles can be sexed thus:

Male : Any bird with a wing-length of or greater than 88 mm and weighing over 40 g.

Female : Any bird with a wing-length of 87 mm or less and weighing less than 40 g.

The small proportion of both juvenile and post-juvenile birds falling into the intermediate region should not be sexed.

#### Moult

Corn Buntings belong to the group of passerines in which first year birds undergo a complete post-juvenile moult. Flight feathers are moulted in the usual passerine pattern - primaries descendantly and secondaries ascendantly. Of 53 moulting birds examined 10 were adults, 33 juveniles and 10 could not be aged. Only one (a juvenile) was retrapped during the course of its moult and the time elapsed between ringing and retrap was of only seven days. When scoring primary moult, the minute outer (10th) primary was ignored, so that score 45 indicated completed primary moult.

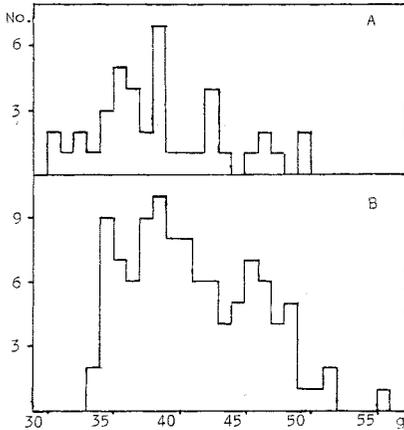


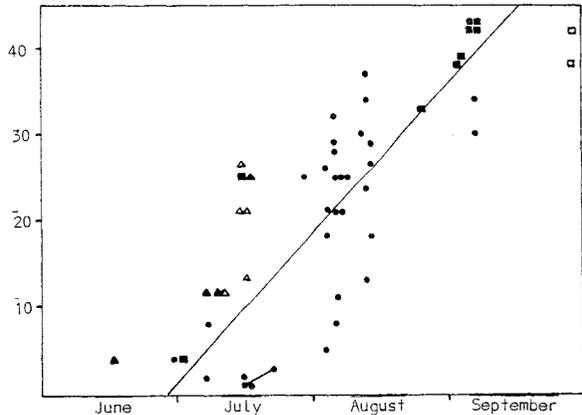
Fig.5. Weight distribution of Corn Buntings in Malta. A : juveniles; B : post-juveniles and adults. (Weights rounded to the nearest 1 g).

Primary scores are plotted against date in Fig.6. The data indicate that adults are the first to start moult, moult commencing in June, probably immediately following the termination of breeding. Onset of moult in juveniles appears to be spread over a period of about 40 days from late June to early August but moult scores are fairly compactly grouped. A regression analysis of juvenile moult scores therefore provides a reasonable measure of the mean duration of moult. This analysis estimates a mean daily increase of score of 0.57 per day and a duration of 79 days assuming that, overall, moult score increases more or less linearly with time. An analysis of the ten adult moult scores gives a closely similar mean daily increase of score of 0.58 per day and a duration of 77.5 days. Most Corn Buntings have finished moulting by mid-September and very few will still be in moult at the end of that month.

#### Acknowledgements

Thanks are due to those ringers who netted and measured Corn Buntings.

Fig.6. Primary score v date for Corn Buntings caught in moult. Triangles show adult birds (solid triangles = males, open triangles = females), circles show juveniles and squares unaged birds. The two open squares as well as all adults have been omitted from the regression analysis. The small line joins a retrap of the same individual. Fitted equation  $S=0.57T - 15.95$ , day 1 = 1 June.  $r=0.83$ .



## Summary

This study shows that juvenile Corn Buntings have statistically significant shorter wing-lengths than adults. Males are larger at all ages. A large number of birds can be sexed on wing-length and weight. Corn Buntings complete moult in an average of 79 days between June and September.

## References

- BODDY, M. & A. C. BLACKBURN. 1978. Ringing studies at a Nottinghamshire Corn Bunting roost. *Ringing and Migration* 2:27-33.
- FOLLOWS, G. 1969. Weights and measurements of Corn Buntings. *Ringers' Bulletin* 3(5):11-12.
- PRYS-JONES, R. 1976. Wing-length in the Corn Bunting. *Bird Study* 23(4):294.
- SNOW, D. W. 1967. A Guide to Molt in British Birds. B.T.O.: Tring.
- SULTANA, J. & C. GAUCI. 1982. A New Guide to the Birds of Malta. The Ornithological Society: Valletta.
- SVENSSON, L. 1975. Identification Guide to European Passerines (2nd ed.). Naturhistoriska Riksmuseet: Stockholm.

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## SHORT NOTES

### OCCURRENCE OF A HYBRID SWALLOW X HOUSE MARTIN.

A strange looking hirundine showing some characteristics of a Swallow *Hirundo rustica* as well as some of a House Martin *Delichon urbica* was trapped while ringing hirundines at Lunzjata Valley, Gozo on 9th May 1982.

The bird had a House Martin's tail but which was more deeply forked. The forehead and throat were similar to those of a Swallow but the general shape of the head suggested a House Martin. The white belly was washed with a warm pinkish colour while the mantle and back were metallic blue. Its white rump was half the size of a House Martin's and had some brownish-black blotches. The tarsi were covered with white feathers but not as thickly as in a normal House Martin. The wing length (maximum chord) was 117 mm and the weight 16.8g.

C. Vansteenwegen, who recorded a similar hybrid paired and breeding with a normal female Swallow in Brabant Wallon (Belgium) in 1980, cites 30 instances where similar hybrids had been recorded, the first in 1869. (Nidification d'un hybride présumé entre l'Hirondelle de Feneire *Delichon urbica* et l'Hirondelle de Cheminée *Hirundo rustica*. *Le Gerfaut* 71 : 611-615. 1981). Besides these, two more have been recorded : one in the Federal Republic of Germany (N.J. Ungeahnte Seitensprünge. *Vogel* 7(2) : 23. 1975) and the other on 7th June 1981 at Køge, south of Copenhagen, Denmark (*Fugle* 2(3) : 47. 1982). Not all birds were identical but most agreed with the description of the bird ringed at Lunzjata.

Photos of the hybrid occurring on migration in Malta were shown to various ornithologists including H.E. Axell, R. Ertel and K. Hansen as well as to the members of *Il-Merill*'s Editorial board. R. Ertel and K. Hansen kindly brought to the attention of the editorial board the two last mentioned overseas records.

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#### BLACK-EARED WHEATEAR - NEW BREEDING RECORD FOR MALTA.

On 4th July 1982 we visited Ta' Zuta to check a report by Joe Grima, who had seen a pair of *Oenanthe* sp. there on 26th June.

On arriving on the edge of the cliff overlooking Fawwara, above a large sloping area covered with boulders of mixed sizes, a white-throated male of the eastern race of the Black-eared Wheatear *Oenanthe hispanica melanoleuca* started calling alarmingly, flying about excitedly, while carrying food in its beak. The alarm calls increased as we climbed down towards the rubble slope. We went further down below the slope from where we could see the male bringing food from the rocky area above the cliffs. It was carrying food to at least two spots amongst the boulders which made us realise that it had fledged young. At one time one was heard calling from beneath a boulder at the approach of the male with food.

Next day (5th July) we visited the area again. We soon discovered why we had only seen the male the previous day. We found the corpse of the female which had been dead for at least five days. The bird had been shot, one lead pellet having penetrated the skull. The male and young had moved to about 300 m away. The male was seen carrying food to three different spots suggesting that it was accompanied by three fledged young.

Joe Grima reported again to us that on 22nd July he saw a male and two full grown young at il-Qaws, 5 km to the NW of Fawwara.

The Black-eared Wheatear is generally a scarce spring migrant, seen up to mid-May with occasional records in June. It is scarcer in autumn. Both the nominate race and *melanoleuca* occur.

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#### HOUSE MARTIN - NEW BREEDING SPECIES FOR MALTA.

The House Martin *Delichon urbica* is a common migrant in spring and autumn with a few birds sometimes occurring during the rest of the year, particularly in winter.

Throughout the day, on 7th June 1981, 3 House Martins were noted prospecting for a nesting site under the balcony of a villa at Attard. Although they were not seen there the following day, 6 birds were found prospecting for nesting sites at buildings in the main square of Mosta. The prospecting continued until the 13th June when the birds disappeared. However, 4 birds returned a week later and 2 nests were built under one of the balconies of the building facing Mosta Church. In early August each nest contained 3 young. Adults and young deserted the area by the 3rd week of August. On 15th August, the day when the village feast is celebrated, the birds suffered from great disturbance when fireworks were let off even from the balcony where they were resting.

The following year the birds did not return at Mosta but on 7th June 1982 3 House Martins were seen chasing each other in the square in front of the Cathedral at Mdina. One of the birds was also seen frequently settling beneath the clock on the right side of the Cathedral's facade. Later in the day 2 birds started building a nest at the same spot. Two days later the nest was nearly complete. The mud was being collected from a reservoir which was dug amongst fields ca. 300 m to the east of the Mdina Bastions. On 15th June another pair, one of which had 1 to 2 primaries missing on the right wing, was noted prospecting under the other clock, but both birds deserted the area two days later. However, the third unmated House Martin was still frequently seen about. By the end of the following month at least two young had left the nest which was used again to raise a second brood. On 19th September both adults, as well as two other juveniles from the second brood were seen on the wing together and in the evening all four were noted going in the nest to roost. At least two birds were still using the nest to roost on 3rd October.

Meanwhile on a visit to the islet of Filfla on 7th August 1982 a pair of House Martins were seen flying about. Surprisingly they were found breeding. The nest was in a small round hole, possibly made by a rocket when Filfla was used for bombing practices, in a

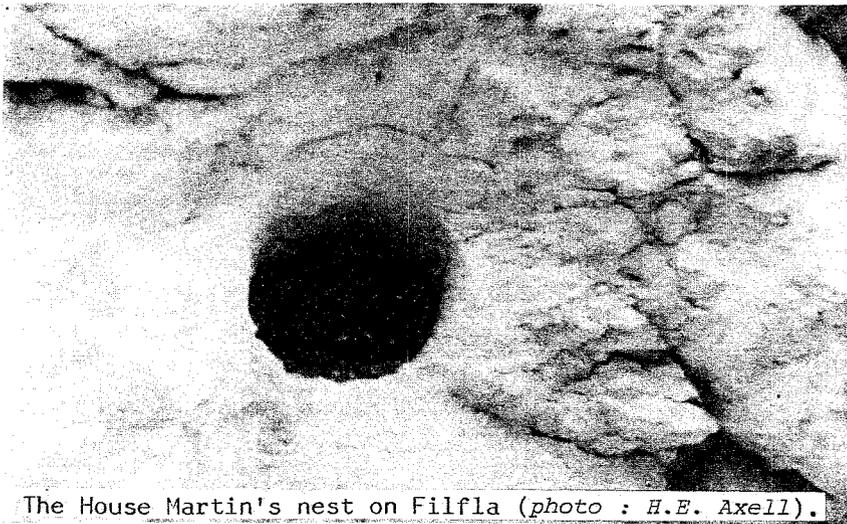
huge boulder. The birds partly blocked the hole by clay as in a form of balcony (see photo below). It was 3 metres above the ground and ca. 10 metres away from the seawater's edge. It contained a young bird and an added egg. Incidentally one of the adult birds had two of its primaries on its right wing damaged, similar to the one noted at Mdina on 15th June.

Our thanks are due to Mario V. Gauci who found the House Martins at Mdina in 1982 and who kept regular observations on the pair breeding there. A report on the first two pairs breeding at Mosta in 1981 has already appeared in 'A New Guide to the Birds of Malta' (1982) by the same writers.

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The House Martin's nest on Filfla (photo : H.E. Axell).

#### FAN-TAILED WARBLER ATTACKING A WEASEL.

A note on the aggressive behaviour of the Fan-Tailed Warbler *Cisticola juncidis* has appeared in *Il-Merill* No. 19 p.19 (1977-78). It included an incident when a female was seen attacking a snake *Coluber viridiflavus*.

At 0800 hrs on 5th July 1981, at Wied il-Lud, a female Fan-tailed Warbler was seen carrying a small dragonfly in its beak and from its antics it indicated that it had a nest with young or fledged young in the vicinity. After perching on a fennel stalk about 1.5 m above the ground, it suddenly took off uttering scolding notes, and repeatedly dived amongst the low vegetation on the ground as if attacking something. Three fledged young were noted scattering in all directions and a weasel *Mustela nivalis* was seen running about trying to catch them.

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#### PINE BUNTING - AN ADDITION TO THE LIST OF THE BIRDS OF MALTA.

In the span of one week, two first-year male Pine Buntings *Emberiza leucocephala*, a species which had not been previously recorded in Malta, occurred in autumn 1982; the first at Mizieb on 31st October and the other at Bahrija on 5th November. They were taken by a shooter and a trapper respectively.

The writers were requested to identify the specimens. Both birds had white crown feathers which were partly concealed by dark brown central streaks. The cheeks were white surrounded by a chestnut mask. The chin and throat feathers were chestnut-brown with white tips. The underparts were white with the breast and flanks streaked brown. The upperparts, including the wings, were chestnut streaked black and dark brown. The chestnut rump feathers were tipped white. The tail was dark brown with the outer tail feathers having a white V pattern on the inner web. Their wing-lengths were 89 mm and 95 mm respectively.

The Pine Bunting has an eastern and central Asiatic range, which in central and western Siberia overlaps with the eastern breeding range of the Yellowhammer *Emberiza citrinella*. Where they overlap hybridization between these two species occurs. While the Yellowhammer is mainly sedentary, the east Asiatic Pine Bunting is a migrant, wintering from Iran to China (Voous, K.H. Atlas of European Birds - 1960).

The Maltese name chosen is Durrajša Rasha Bajda.

Raymond Testa, Natalino Fenech & Raymond Galea

R.T. - Blk. B, Flat 4, Corradino Rd., Paola, Malta.

N.F. - 35 Main St., Attard, Malta.

R.G. - Sunview, Pope Urbanus VIII St., B'Kara, Malta.

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#### THE PECTORAL SANDPIPER - NEW RECORD TO MALTA.

The Pectoral Sandpiper *Calidris melanotos* is an accidental visitor from North America to Europe and N.W. Africa. In recent years it has been recorded annually in the Azores, Ireland and Britain (Cramp, S. & Simmons, K.E.L. (eds) (1981) The Birds of the Western Palearctic Vol. III).

In Malta it made its first appearance on 1st May 1982 when one was sighted in the vicinity of Marsaxlokk Bay. The bird was quite tame. When it was approached closely it looked like an overgrown Dunlin *Calpina* in winter plumage and in flight it was reminiscent of a Reeve *Philomachus pugnax*. The bird, a male, was shot on the following morning when it was still in the same area.

On close examination the specimen had a white chin and a heavily mottled breast which terminates abruptly to leave a pure white belly. The under tail coverts were also white and it had some fine streaking on the flanks. A faint eye-stripe is noticeable on the slightly mottled whitish face. The crown was mottled blackish-brown but the almost similar back was a little more brownish. The wings were dark with brownish coverts and the centre of the rump black with white on both sides. The sharply pointed tail had blackish-brown central feathers with the rest being dark grey.

Measurements : Wing 134 mm; bill (to feathering) 29 mm; and tarsus 33 mm. The Maltese name chosen is Begazzina Amerikanà.

Although the bird was first sighted in the afternoon one must assume that it had arrived in the morning when we had an exceptional migration of waders, turtle doves and falcons, especially Kestrels. The day had dawned with a moderate NNE wind with an overcast sky.

Alfred Vassallo

A.V. - Fredor, Giuzeppina Curmi St., Zejtun, Malta.

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#### MARSH HARRIERS ROOSTING IN TREES.

The Marsh Harrier *Circus aeruginosus*, like other *Circus* spp., always spends the night on the ground, often roosting communally (Cramp, S. & Simmons, K.E.L. (eds) (1979) The Birds of the Western Palearctic Vol. II).

While watching migrating birds of prey on the afternoon of the 27th September 1981 the wind (force 3-4) veered from south east to south west. The general prevailing conditions that day were misty with low clouds. A total of 29 Marsh Harriers was observed on the move after 1730 hrs.

At 1800 hrs an adult male, out of a flock of ten, circled down above the wood and when a few metres away flapped to an Aleppo Pine where it settled to roost. The rest of the flock moved away, probably due to disturbance from gun-shots in other parts of the Buskett area. About ten minutes later another 9 Marsh Harriers appeared and another individual descended in a similar manner as the previous bird to roost in a different Aleppo Pine grove. The other birds kept circling above the grove but were not always visible due to the poor light conditions. Whether or not the rest of the flock descended to roost in the trees could not be ascertained.

Saviour Balzan & Natalino Fenech

S.B. - Villa Strakham, Scythe St., Misrah Kola, Attard, Malta.

N.F. - 35, Main St., Attard, Malta.

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#### CORY'S SHEARWATER FEEDING ON DOGFISH'S LIVER.

While out at sea with some fishermen on 7th March 1981 we caught a large Great Spotted Dogfish *Scyliorhinus stellaris*. We decided to cook the fish and after cleaning it we threw the liver overboard. There were no shearwaters in sight at that particular moment but very shortly about a dozen Cory's Shearwaters *Calonectris diomedea* were spotted flying in line towards us flapping their wings continuously. The first to arrive swallowed the first piece of liver, which must have been at least 20 cm in length, and in no time at all the remaining pieces were all taken by some of the other birds. By this time other Cory's Shearwaters were flying towards the area from every direction. It is surprising how quickly the oily liver was detected, either by smell or by sight.

The north Atlantic race *borealis* is said to scavenge offal, particularly oily substances from fishing vessels (Cramp, S. & Simmons, K.E.L. (eds) (1977) The Birds of the Western Palearctic Vol 1).

The writer was informed by the same fishermen that they never witnessed shearwaters taking fishing bait which consisted of dead fish. Occasionally the writer has seen Cory's Shearwaters unsuccessfully chasing flying fish *Cypselurus heterurus* while they fly out of the water.

Alfred Vassallo

A.V. - Fredor, Giuzeppina Curmi St., Zejtun, Malta.

Ed. Note : A fisherman has informed us that both the Cory's Shearwater, as well as the Manx Shearwater *Puffinus puffinus* regularly take fish offal.

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#### FAN-TAILED WARBLER PATROL CALLS.

While bird-watching in Sicily at the Ganzirri (Messina) on the 7th May, 1983, at the Simeo and on the outskirts of Catania on the 9th May, 1983, it was noted that the patrol calls of the Fan-tailed Warbler *Cisticola juncidis* were much more frequent and of a lower pitch than those of the Fan-tailed Warbler found in Malta. However, no difference was noted in the alarm calls of the birds. On all occasions the birds were observed quite closely.

It would be interesting if more comparative studies are made on this subject.

Alfred E. Baldacchino & Natalino Fenech

A.E.B. - Kestrel in Melita House, Notary Zarb St., Attard, Malta.

N.F. - 35, Main St., Attard, Malta.

SOME NOTES ON BREEDING SPECIES FOR 1982.

1982 turned out to be quite remarkable for breeding records of certain species as well as for the absence of others. Apart from the two pairs of House Martins *Delichon urbica* and the new breeding record of the Black-eared Wheatear *Oenanthe hispanica* (both reported elsewhere in this issue) other scarce species were also recorded nesting.

Three pairs of Spotted Flycatchers *Muscicapa striata* bred at Buskett, each raising two broods and fledging a total of 12 young. In previous years only up to two pairs had been recorded in one season. The Woodchat Shrike *Lanius senator* bred at 2 localities. A pair nested in a carob tree at Ghaxaq and raised 4 young which fledged in the third week of July. A female with 3 fledged young was also present in early July at Burmarrad. Two pairs of Serins *Serinus serinus* bred at Buskett and at least one pair raised three young. The adults were seen feeding 3 fledged young with *Ulmus* sp. seeds on 7th May.

On the other hand Ta' Cenc Cliffs lost its pair of Peregrine Falcons *Falco peregrinus*. The birds were not seen there in spring and we were later informed that both birds were shot in February from a seacraft from below the cliffs. The Barn Owl *Tyto alba*, too, has not been recorded breeding. Although a pair was noted present in late July and early August in one locality there has been no sign of breeding. In fact none were seen or heard when the locality was visited twice at night in mid-August. Another pair was shot by rabbit hunters at Fomm-ir-Rih during summer.

The Spectacled Warbler *Sylvia conspicillata*, a fairly common breeding resident, has recently declined drastically. The start of the decline coincided with the relatively severe winter of 1980/81 though this cannot be the cause of the decline as the species has shown no sign of recovering. The following Table shows the number of nests located in five selected areas which were regularly under observation throughout the five-years period 1978 - 1982.

Spectacled Warbler's nests

	1978	1979	1980	1981	1982
Wied l-Isperanza	7	4	4	none	none
Nr. Chadwick Lakes	4	3	none	none	none
Rabat/Mtarfa	4	1	11	none	none
Ghajn Rihana	4	10	none	none	none
Ta' Qali	no obs.	48	44	16	6
Total	19	66	59	16	6

Joe Sultana & Charles Gauci

J.S. - Sciberras Flats / 3, Fleur-de-Lys Junction, P'Kara, Malta.

C.G. - Skylark, Targa Gap Estate, Mosta, Malta.

## Systematic List for 1979 & 1980

compiled by

RICHARD CACHIA ZAMMIT

The two years covered by this systematic list were relatively quiet, with a few small falls occasionally during both migrations. In this respect, 1980 was better since spring migration in 1979 was very poor while in 1980 there were at least two good days when quite a good number of migrants were grounded.

232 species were recorded during the period under review, some of which are very rare or vagrant to the Maltese Islands. Waders were plentiful at Ghadira in 1980 when compared to those recorded in 1979, but bird of prey migration was better covered in 1979 than in 1980. Again no proper sea-bird watches were made. No new breeding species was recorded during these years.

The regular contributors to the following two year list were : J. Attard Montalto, J. Borg, D. Cachia, R. Cachia Zammit, V. Cilia, N. Fenech, R. Galea, S. Gatt, C. Gauci, J. Grima, J. Sultana and A. Vassallo.

Other contributors were : J. Azzopardi, A.E. Baldacchino, S. Balzan, G. & L. Blidberg, G. Bonett, A. Fenech, C. Fenech, M.V. Gauci, B.K. German, J. Grech, D. Hanford, A.B. Heath, E. Manqani, J. Perry, P. Portelli, D. Rushforth, R. Testa, M. Thake, S. Thompson, M. Tulloch, F. Vassallo and L. Vella.

LITTLE GREBE *Tachybaptus ruficollis* Blongun Żgħir

1979 : 1 at Marsa on 7 Oct.

GREAT CRESTED GREBE *Podiceps cristatus* Blongun Prim

1979 : 1 in full breeding plumage taken off S.W. coast on 8 Mar.

1980 : Exceptionally heavy passage off N.E. coast of Malta on 22-23 Nov, with 100+ recorded on 22nd, and 22 (1 flock) on 23rd.

BLACK-NECKED GREBE *Podiceps nigricollis* Blongun Sekond

1979 : 1 in breeding plumage at Benghisa Pt. on 1 May. 1-3 in Nov from 9th-21st.

1980 : 1 at Ghadira from 1-25 Nov when shot; then 1 on 12th and 2 on 18 Dec.

CORY'S SHEARWATER *Calonectris diomedea* Ċiefa

1979 : First seen on 25 Feb. Breeding along cliffs in usual numbers until Oct, when a first year bird was last seen leaving its burrow on 23rd.

1980 : Not recorded until 8 Apr when 30+ off Comino, but colonies were not visited in Mar. Bred in usual numbers.

SOOTY SHEARWATER *Puffinus griseus* Garnija ta' l-Atlantiku

1979 : 1 taken offshore on 12 Nov.

MANX SHEARWATER *Puffinus puffinus* Garnija

1979 : Breeding in usual colonies from Feb to July.

1980 : Large numbers already visiting colonies by 6 Feb. Bred in usual numbers.

STORM PETREL *Hydrobates pelagicus* Kanġu ta' Filfla

1979-80 : Breeding only on Filfla in usual numbers.

GANNET *Sula bassana* Sula

1979 : Singles on 5 days in Jan from 7th to 23rd.

1980 : Up to 5 on 3 days in Jan; 1 found dead on 10 Feb and 1 off Gozo on 19 Mar. Singles on 22-24 Oct, 4 on 5 Dec and singles on 27th and 30 Dec.

CORMORANT *Phalacrocorax carbo* Margun

1979 : Singles on 9th and 14 Jan and on 10 Nov and 23 Dec.

1980 : 1 on 30 Jan and on 6 Apr. In autumn, 1-2 on 4 days in Oct from 5th, on 3 days in Nov and once in Dec.

BITTERN *Botaurus stellaris* Kappun

1979 : 1 at Xadira on 19 Apr.

1980 : 1 taken off S.W. coast on 2 Apr.

- LITTLE BITTERN *Ixobrychus minutus* Russett fas-Sigar  
 1979 : 1 on 12th, 5+ on 25th and again 1 on 28th, all in Apr. Only 1 autumn record:  
 1 at Girgenti on 4 Sep.  
 1980 : Very few scattered sightings of single birds from 8 Apr to 19 May.
- NIGHT HERON *Nycticorax nycticorax* Kwakka  
 1979 : First 2 on 4 Mar, then on 2 more days from 9-25 Mar. Almost daily from  
 28 Mar to 12 Apr, with highest flock of 40+ on 10 Apr; then on 5 days from  
 20 Apr to 12 May, mainly single figures but 36 on 1 May. In autumn on 11 days  
 from 19 Aug to 8 Oct, always in single or very low double figures - highest  
 40+ on 7 Sep.  
 1980 : On 6 days from 19 Mar to 16 Apr; single figures but 10+ on 30 Mar. Singles  
 on 11 May and 6 Jul, and 2 on 16 Jul. In autumn on 7 days from 21 Aug to 8 Sep,  
 highest 80+ from 2 localities on 5 Sep, otherwise single to very low double  
 figures recorded. Flock of 85+ over Buskett on 27 Sep, 3 on 21 Oct and 2 on  
 2 Nov.
- SQUACCO HERON *Ardeola ralloides* Agrett Isfar  
 1979 : Recorded only in spring; on 8 days from 1 Apr to 1 May, most records in last  
 week of Apr. Single figures, highest 5 on 24 Apr.  
 1980 : Sightings only in Apr: on 4 days from 7th to 19th, singles except for 4 on 13th.
- LITTLE EGRET *Egretta garzetta* Agrett abjad  
 1979 : Singles on 23rd and 29 Mar, then daily from 1-4 Apr, always in single figures.  
 1 on 12 Apr, then again seen frequently from 20 Apr to 1 May. Largest flock  
 was of 60+ on 24 Apr. Only 3 autumn records : 10+ on 24th and 16 on 30 Aug and  
 1 on 3 Oct.  
 1980 : Daily from 31 Mar to 7 Apr, highest being c.70 recorded from 6 localities  
 on 6th, otherwise never exceeding a total of 15. 1-2 from 18-20 Apr and 1 on  
 11 May. On 5 scattered days in autumn from 30 Aug to 23 Oct, with longest gap  
 from 14 Sep to 10 Oct. Largest flock was of 21 on 4 Sep.
- GREAT WHITE EGRET *Egretta alba* Russett Abjad  
 1980 : 1 shot at Mellieħa on 2 Apr.
- GREY HERON *Ardea cinerea* Russett Griž  
 1979 : Recorded frequently from 1 Mar to 13 Apr; mainly singles, otherwise never more  
 than 7. In May 1 on 1st and 2 on 19th. On autumn migration, first 1 on 31 Jul,  
 then on 12 days from 29 Aug to 4 Nov; highest 38 on 29 Aug, otherwise never  
 more than 5.  
 1980 : Frequently seen from 13 Mar to 19 Apr; single figures except 30+ on 6 Apr. In  
 autumn on 4 days from 23 Aug to 11 Sep. 1-2 recorded but 5 on 11 Sep.  
 Singles on 2 Nov and 8 Dec.
- PURPLE HERON *Ardea purpurea* Russett Aħmar  
 1979 : 1-2 almost daily from 28 Mar to 13 Apr, then singles on 29 Apr and 1 May. 1-2  
 on 3 days in Aug from 18th to 27th and 1 on 15 Sep.  
 1980 : 7 on 31 Mar, then daily from 3-7 Apr. Heavy passage on 6 Apr with flocks of up  
 to 100 recorded from some localities. Highest 250+ seen from Sarraflu/Dwejra.  
 1-7 on 5 days from 16-26 Apr. Only two autumn records: singles on 4th and 28 Sep.
- BLACK STORK *Ciconia nigra* Ćikonja Sewda  
 1979 : 3 on 19th and 2 on 20 Sep over Buskett, and 1 over Sta. Venera on 15 Oct.  
 1980 : 1 seen in several places on 16 Mar.
- WHITE STORK *Ciconia ciconia* Ćikonja Bajda  
 1979 : 1 seen in various localities on 28-29 Apr. 1 at Attard on 3 May and 4 at  
 Buskett on 6 Oct.  
 1980 : Singles at Delimara on 9 Mar and at Xrobb L-Għagin on 2 Sep.
- GLOSSY IBIS *Plegadis falcinellus* Velleran  
 1979 : 3 singles from different localities on 2 Apr were the only spring records for  
 this year. In autumn: 1 on 27th and 3 on 29 Sep, and 1 on 21 Oct.  
 1980 : 1 on 4th and 5 on 31 Mar. Exceptional heavy passage, with flocks of up to 49  
 birds, on 6 Apr, when a total of about 540 birds counted; then 16 on 14th and 4 on  
 15th, and singles on 23rd and 27 April. Only one autumn record: 3 at Għadira on  
 29 Sep.
- SPOONBILL *Platalea leucorodia* Paletta  
 1979 : Singles at Bengħisa Pt. on 20 Feb, at L'Aħrax on 22 Apr and at Sliema on 6 Oct.

GREATER FLAMINGO *Phoenicopterus ruber* Fjamingu  
 1979 : 3 over Ghadira on 12 Apr and singles shot at Dwejra and at Delimara in Nov.  
 1980 : 4 at M'Scala on 3 Mar, and singles at M'Xlokk on 5 Apr and at Pieta' on 6 Apr.  
 Flock of 27 over Ghadira Bay on 24 Nov.

MUTE SWAN *Cygnus olor* Ċinju Mutu  
 1979 : 1 shot at B'Buġia on 12 Jan.

GREY LAG GOOSE *Anser anser* Wiżża Griża  
 1980 : 1 at Delimara on 7 Dec.

RUDDY SHELDUCK *Tadorna ferruginea* Kuluvert Afmar  
 1980 : 1 at Bengħisa on 13 Dec.

SHELDUCK *Tadorna tadorna* Kuluvert tas-Salib  
 1979 : Singles off M'Xlokk on 15-16 Jan. 1 juv. in M'Xlokk Bay in mid-Jul and 10 at same place on 12 Aug. On 7 days in Nov from 8th to 29th; single figures except for 20+ on 26 Nov. 2 flocks of c.40 each off Mellieħa Bay on 19 Dec.  
 1980 : 1 in South Comino Channel on 27 Mar. In Nov, 1-4 on 4 days from 22nd to 30th. 1 on 1 Dec and up to 3 almost daily at Ghadira from 10-16 Dec, but 9 on 13 Dec.

WIGEON *Anas penelope* Silfjun Ewropew  
 1979 : Recorded only in Nov from 4th to 11th; 1-3 except for 70+ at Ghadira on 7 Nov.  
 1980 : Singles at Ghadira on 25-26 Oct and on 29-30 Nov.

FALCATED DUCK *Anas falcata* Silfjun Asjaħiku  
 1979 : Imm. male shot at B'Buġia Bay on 10 Oct.

TEAL *Anas crecca* Sarsella  
 1979 : Flock of 100+ in South Comino Channel on 11 Feb. In autumn, 3 on 27 Oct, 25+ on 13 Nov and 1 on 1 Dec.  
 1980 : 1 at M'Xlokk on 6 Sep, then up to 5 frequently recorded at Ghadira from 23 Nov to 14 Dec. Also 6 at Buskeħt on 8 Dec and 1 at Ta' Qali on 17 Dec.

MALLARD *Anas platyrhynchos* Kuluvert  
 1979 : Singles on 30 Apr, 8 Nov and 1 Dec.  
 1980 : 1 on 24 Aug and 16 on 22 Nov. Daily in Dec from 11th to 15th, with up to 3 recorded. Most records from Ghadira.

PINTAIL *Anas acuta* Silfjun  
 1979 : Flock of 20+ on 3 Jan and 15 'large' flocks out at sea on 11 Feb; 13 other flocks seen offshore on 9 Mar. In autumn, first 6 on 3 Sep and 11 on 14 Oct. Seen frequently from 4-12 Nov, with up to 50 on first day. Singles on 29 Nov and 26 Dec. All autumn records from Ghadira.  
 1980 : Single males on 22nd and 24 Feb and 1 on 11 Mar. Passage observed out at sea on 31 Mar (numbers not given). In autumn first c.35 on 29 Oct. Heavy passage on 22 Nov involving thousands of ducks (2500+ seen off the N.E. coast of Malta by one observer); treble figures seen next day. In Dec, 6 on 6th and 27 on 11th.

GARGANEY *Anas querquedula* Sarsella Mamra  
 1979 : 15 large flocks, accompanied by Pintails, seen out at sea on 11 Feb, and passage observed offshore on 10 Mar. 1 on 2 Apr. In autumn: 8 on 4th and 3 on 29 Sep; both records from Ghadira.  
 1980 : 1 on 5 Mar, then almost daily from 29 Mar to 6 Apr, with heavy passage from 29-31 Mar and on 6 Apr; most seen offshore. Largest flock of 200+ in North Comino Channel on 29 Mar. Single male at Ghadira on 19 Apr. Only two autumn records: 1 on 15 Aug and 4 on 13 Sep, both at Ghadira.

SHOVELER *Anas clypeata* Paleħtuna  
 1979 : 4 off S.W. coast on 9 Mar and 1 at M'Xlokk on 6 Nov.

POCHARD *Aythya ferina* Brajmla  
 1979 : Small influx on 7 Nov with 6 birds recorded from 3 localities.  
 1980 : 1 at Msida on 20 Dec.

FERRUGINOUS DUCK *Aythya nyroca* Brajmla t'Għajnhħ Bajda  
 1979 : 1 at Ghadira on 26 Dec.

TUFTED DUCK *Aythya fuligula* Brajmla tat-Toppu  
 1979 : 8 (2 shot) at St. Paul's Bay in Dec.  
 1980 : 1 taken at Ta' Qali on 1 Apr and 1 at Għajn Tuffieħħ in late autumn.

COMMON SCOTER *Melanitta nigra* Borka Sewda

1980 : 1 at Delimara on 4 Dec.

HONEY BUZZARD *Pernis apivorus* Kuččarda

1979 : 5 on 13 Apr, then frequent from 20 Apr to 29 May with larger passage on 7 May, when a total of c.60 recorded and low double figures seen the day after as roosting birds left the Islands. Otherwise always in single figures. Unusual late passage on 17 Jun when low double figures, max. 30+ S.E. Malta, and then single figures on 18 Jun. On autumn passage : 1 on 14 Aug; single to low double figures almost daily at Buskett from 3 Sep to 13 Oct, but in low treble figures from 18 to 21 Sep. Highest 131 at Buskett on 19 Sep. Only in single figures from other places except areas in the vicinity of Buskett. Last 2 on 20 Oct.

1980 : Poor spring passage: early bird on 14 Mar and 1 on 7 Apr. Then 1-2 on 4 days from 27 Apr to 17 May and 3 on 24 Jun. On autumn passage almost daily in Sep from 3rd. In single to low double figures, treble figures reached only on 27 Sep, with 113 counted over Buskett. Only 3 records of 1-2 in Oct from 4-27th.

BLACK KITE *Milvus migrans* Astun Iswed

1979 : Good spring passage: 1 on 31 Mar and almost daily from 18-29 Apr; usually 1-2 but exceptional flock of 32 near M'Xlokk on 19 Apr. In autumn, 1 on 14 Aug, then 5-6 on 11-12 Sep and singles on 13th, 16th and 19 Sep. Most autumn records from Buskett.

1980 : On 6 days from 31 Mar to 13 Apr; never more than 4 in one area. Singles on 27th and 29 Apr. In autumn singles on 23 Aug and on 4 scattered days in Sep from 3rd to 27th.

EGYPTIAN VULTURE *Neophron percnopterus* Avultun Abjad

1979 : 1 seen at a taxidermist in Oct.

1980 : Good year, with 5 records, 4 of which in Sep: 2 at Buskett on 17th and 1 also there on 19th. Singles at Hal Far on 26th and again at Buskett on 28th. 1 in Oct seen at Buskett and at Delimara on 5th.

SHORT-TOED EAGLE *Circaetus gallicus* Ajkla bajda

1979 : Singles at Buskett on 12th and 14 Sep and on 5 Oct, and at Ghadira on 12 Oct.

1980 : Singles at Buskett on 18 Sep and near Mosta on 8 Oct.

MARSH HARRIER *Circus aeruginosus* Bugħadam Ahmar

1979 : 1 on 11 Mar. Then frequently recorded in single figures from 18 Mar to 16 Apr with max. of 9 over Attard on 13 Apr. Singles on 3 more days from 26 Apr to 7 May. Almost daily autumn sightings, mainly over Buskett, from 4 Sep to 5 Oct. In single to low double figures, with highest count there being of 29 on 19 Sep.

1980 : Single figures on most days from 6 Mar to 15 Apr, best day being 6 Apr with a total of 12 from 5 areas. Then on 3 more days from 20 Apr to 4 May with small passage on 29 Apr when 15+ recorded at Għarb, Gozo. Poor autumn passage: recorded on 11 days in Sep from 3-27th. Single figures, except on 3 days, max. 16 on 18-19th. All autumn records from Buskett. Unusual late bird at Gwara on 30 Nov.

HEN HARRIER *Circus cyaneus* Bugħadam Abjad Prim

1979 : 1 at Hal Far on 25 Oct.

1980 : 1 at Tas-Salib on 19 Apr.

PALLID HARRIER *Circus macrourus* Bugħadam Abjad

1979 : Singles at M'Xlokk on 2nd and at Delimara on 9 Apr. 1 at Dwejra, Gozo on 30 Aug.

1980 : 1 at Mellieħa in Apr.

MONTAGU'S HARRIER *Circus pygargus* Bugħadam Griż

1979 : Singles at Hal Far on 12th and at M'Xlokk on 22 Apr.

1980 : Singles at Marfa Ridge on 13 Mar, at Ta'Gali on 11 Apr and at Hal Far in May.

'RING-TAIL' Harriers *Circus sp.* Bugħadam

1979 : Passage at Delimara on 16th, 2 on 17th and on 24 Mar. Then more frequently in Apr from 1st-27th but never more than 4 on one day. 1 on 4 May. 1-3 in autumn on 8 days from 9-29 Sep. 1 on 1 Nov.

1980 : 1 on 4 Mar. Then on 9 days from 16 Mar to 29 Apr. Max. 8 at Għarb, Gozo on last date. 1 on 17 May. Up to 4, mainly at Buskett, from 3-6 Sep; 2 on 19 Sep and 1 on 24 Oct.

SPARROWHAWK *Accipiter nisus* Sparvier

1979 : 1 at Żejtun on 14 May. In autumn 1-2 at Buskett on 3 days in Oct from 12-18th.

1980 : Singles at Marfa on 13 Apr, at Wardija on 18th and at Buskett on 19 Oct.

- BUZZARD** *Buteo buteo* Kucc'arda Prima  
 1979 : Singles at Delimara on 10 May and at Buskett on 29 Sep. Then one at Buskett was of the race *B.b.vulpinus*.  
 1980 : Singles at Buskett on 20 Nov and at Delimara on 4 Dec.
- BOOTED EAGLE** *Hieraaetus pennatus* Ajkla tal-Kalzetti  
 1979 : 1 at Bahrija on 11 Oct. (One seen at taxidermist in Oct could be same bird).
- OSPREY** *Pandion haliaetus* Arpa  
 1979 : In spring 1-2 on 4 scattered days from 24 Mar to 23 Apr. More frequently in autumn with 10 records of up to 3 from 7 Sep to 13 Oct; most records from Buskett.  
 1980 : Singles on 5 days in Apr from 3-17th. Late bird at Ta'Qali in 3rd week of Jun. In autumn singles on 3rd and 6 Sep and 1-2 on 6 more days from 17 Sept to 1 Oct. 1 at Ghadira on 6 Nov.
- LESSER KESTREL** *Falco naumanni* Spanjulett Sekond  
 1979 : Singles in spring on 3 days from 24 Mar to 11 Apr. Up to 7 frequently at Buskett from 8 Sep to 1 Oct, most till 21 Sep.  
 1980 : Poor year with singles on 4 Apr, 18th and 20 May in spring. In autumn 1 on 4 Sep, 2 on 18-19 Sep, and 1 on 2 Nov.
- KESTREL** *Falco tinnunculus* Spanjulett  
 1979 : 1-2 occasionally in Jan and Feb. Spring passage almost daily from 3 Mar to 29 Apr, but never more than 3 in one locality. On 3 days in May from 6-21st, max. 8 at B'Kara on 6th. In autumn first on 17 Aug, then recorded frequently from 31 Aug to 28 Oct. Usually in single figures with occasional low double figures. Max. c.13 at Ta'-Virtu' on 18 Sep. 1 on 9 Dec.  
 1980 : Singles recorded once in Jan and on 3 days in Feb. Single figures commonly from 5 Mar to 20 Apr, max. 6 at B'Kara on 18 Mar. Singles on 3 days in May from 9-25th. Singles on 9 Aug and 13 Sep. Up to 6 on 5 days from 21-30 Sep. Small break in sightings till 11 Oct, then 1-3 on 8 more days till 24 Oct. Singles on 4th and 13 Nov.
- RED-FOOTED FALCON** *Falco vespertinus* Żumbrell  
 1979 : 1 at Attard on 29 Apr and 3 at Ta'Qali and 1 at Marsalforn on 6 May.  
 1980 : 1 at Bahrija on 14 Apr.
- MERLIN** *Falco columbarius* Seqer ta' Denbu  
 1979 : Juv. male taken on 1 Nov (Locality unknown).
- HOBBY** *Falco subbuteo* Seqer tal-Mannieqa  
 1979 : Up to 3 frequently from 3-19 Apr and singles on 5 days in May from 1-29th. Single to low double figures in Sep with max. of 21 at Buskett on 18 Sep. In Oct, 8 on 5th and 4 on 13th. Most autumn records from Buskett.  
 1980 : Very poor spring migration. Small passage on 6 Apr with c.8 recorded from 3 localities and singles on 13 Apr and 11 May. In autumn, singles on 3-4 Sep, then up to 10 at Buskett on 9 days from 14-27 Sep.
- ELEONORA'S FALCON** *Falco eleonorae* Bies tar-Regina  
 1979 : Singles in Apr on 12th and 20th, on 4 days in May from 6-20th, on 2 days in Jun and 4 days in Aug. 1-2 recorded frequently, mainly at Buskett in Sep to 29th.  
 1980 : Singles in summer on 19-20 Jul and 29 Aug. Up to 3 on 6 days at Buskett from 3-27 Sep.
- SAKER FALCON** *Falco cherrug* Bies Rasu Bajda  
 1979 : Singles at M'Scala on 24 Sep and at Żabbar in Nov.  
 1980 : 1 over Dingli on 27 Sep.
- PEREGRINE FALCON** *Falco peregrinus* Bies  
 1979 : Pair in Gozo seen with 3 juv. on 5 May. Juv. at Delimara Pt. on 18th and at Filfla on 23 Jun could be the young of this pair dispersing. 1 at Buskett on 18 Sep.  
 1980 : Singles at Manikata on 14 Jan, in Gozo on 30 Mar and 4 Apr, on Comino on 13 Apr, at Ghadira on 12 May, at Marsalforn on 17 Aug and at Buskett on 19 Sep.
- QUAIL** *Coturnix coturnix* Summiena  
 1979 : On 13 days from 3 Mar to 1 May. Low single figures except on 15 Apr, when 15+ recorded from Gozo. 1 on 27 Oct.  
 1980 : Very poor migration. Singles on 24 Feb and on 1st, 13th and 31 Mar and 17 Apr. 1 on 9 Nov.

- WATER RAIL *Rallus aquaticus* Gallozz tax-Xitwa  
 1979 : On 6 days in Nov from 10th to 24th; mainly singles but up to 4 on 17 Nov. Singles also on 26th and 29 Dec. All records from Għadira and Ġirgenti.  
 1980 : 1 at Lunzjata on 4-5 Jan and another at Ġirgenti on 12 Jan. In autumn recorded only on 3 days in Nov from 6th to 23rd, always singles.
- SPOTTED CRAKE *Porzana porzana* Gallozz taf-Tikki  
 1979 : 1 at Lunzjata on 29 Mar.  
 1980 : Singles on 24th and 27 Mar and on 15th and 21 Oct. 1 at Għadira on 9-11 Nov.
- LITTLE CRAKE *Porzana parva* Gallozz Żgħir  
 1979 : 1 at Marsa on 28 Apr.
- CORNCRAKE *Crex crex* Gallozz Ahmar  
 1979 : 1 near Delimara on 7 May.  
 1980 : 1 at Delimara on 23 Apr.
- MOORHEN *Gallinula chloropus* Gallozz Iswed  
 1979 : 1 on 27 Jan. 1-2 on 13 days from 3 Mar to 30 Apr; then 1 on 25 May. In autumn singles on 5th and 25 Aug and 2 Sep; then 1-2 on 8 days from 23 Sep to 21 Oct. In Nov, 1 on 3rd and 3 on 17th.  
 1980 : Singles on 2nd and 10 Jan, 1-2 on 17 Feb and on 28 Mar, then up to 3 on 12 days from 13 Apr to 8 May. Only singles recorded in autumn: on 8th and 27 Sep, on 29 Oct, 4th and 16 Nov and on 6th, 14th and 26 Dec.
- COOT *Fulica atra* Tiġieġa tal-Baħar  
 1979 : Singles at Balluta on 26 Oct and at Pietà' on 1 Nov.  
 1980 : 1 on 4-8 Nov and 1-2 on 10-16 Dec at Għadira, and 1 at M'Xlokk on 17 Dec.
- CRANE *Grus grus* Grawwa  
 1979 : 2 on 4 Jan. Singles on 6-7 Oct and 9 were shot from a flock of 22 in Gozo in the beginning of Oct. Another flock of 24 over Gozo on 23 Oct and 11 on 24 Oct from 5 different places. A flock of 5 recorded from 3 localities on 3 Nov, could be same. 3 on 5 Nov and 1 roosted at Rabat on 24 Dec and seen leaving roost the day after.  
 1980 : 4 over Rabat on 20th, and 2 flocks of 13 and 14 off Mtaħleb on 29 Oct.
- OYSTERCATCHER *Haematopus ostralegus* Gallina tal-Baħar  
 1979 : Flock of 20 at M'Xlokk Bay on 2 Apr and singles at M'Scala on 18 Aug and at Munxar Pt. on 27 Sep.  
 1980 : 13 at Għadira Bay on 2 Aug.
- BLACK-WINGED STILT *Himantopus himantopus* Fras-servjent  
 1979 : Singles at M'Xlokk Bay on 22 Mar and 3 Apr. 4 at Sliema on 24 Jun and 3 at Salina on 19 Jul.  
 1980 : 8 seen crossing Grand Harbour on 18 Mar, then singles at Għadira on 19 Mar, on 5 days in Apr from 6th to 29th and on 4 Aug.
- AVOCET *Recurvirostra avosetta* Xifa  
 1979 : Flock of c.20 over Għadira on 8 Nov.
- STONE CURLEW *Burhinus oediacnemus* Tellerita  
 1979 : In spring first on 28 Mar, then on 3 days in Apr from 6th to 11th and on 29 Jun, all involving single birds. Recorded on 3 days in autumn: 4 on 20 Oct and 2 each on 1st and 10 Nov.
- CREAM-COLOURED COURSER *Cursorius cursor* Nankina  
 1979 : Single birds offshore on 13 Jun and at Hal Far on 20 Jun.
- LITTLE RINGED PLOVER *Charadrius dubius* Monakella  
 1979 : Singles on 11th and 20th and 3 on 31 Mar; more frequent from 7th to 29 Apr though numbers never exceeded 5 in one place. Singles on 4 days in May from 1st to 28th. 1-2 on 2nd and 15 Jun. In autumn first on 5 Jul, then quite common till 20 Oct; always in single figures except for 20+ at Luqa on 18 Aug. 1 on 9 Nov.  
 1980 : Present daily at Għadira from 5 Mar to 29 Apr, when only recorded occasionally from other localities. Seen mainly in single to low double figures, highest being 32 on 5 Apr. In May up to 3 recorded on 9 days from 1st to 24th. Less common in autumn: 1-2 daily in Jul from 27th, on 5 days in Aug (up to 4), and 1-2 on scattered days from 17 Sep to 11 Oct. 1 on 6 Nov.

- RINGED PLOVER** *Charadrius hiaticula* Monakella Prima  
 1979 : 1 on 18 Mar, then singles on 3 days in May from 1st to 7th. In autumn singles on 19 Jul and on 14th and 25 Sep; 2 on 18th and 1 on 21 Oct.  
 1980 : Singles on 4 days in Apr from 15th-26th. More frequently in May with up to 6 recorded almost daily from 1st-24th (most records from Ghadira). Only two autumn records: 2 on 29 Jul and 1 on 28 Aug.
- KENTISH PLOVER** *Charadrius alexandrinus* Monakella Saqajha Suwed  
 1979 : Singles at Hal Far on 14 Mar, at Ghadira on 11 May and at M'Xlokk on 25 May.  
 1980 : 6 at L'Ahrax Pt. on 6 Feb, 1 at Hal Far on 10 Mar and 1 at Ghadira on 3-5 May. In autumn recorded only at Ghadira: 1 on 31 Aug, then 1-2 daily from 24 Oct to 7 Dec.
- DOTTEREL** *Charadrius morinellus* Birwina  
 1979 : Singles on 10th and 16th, and 7 on 29 Sep; then singles on 4 scattered days in Oct from 1st-27th. On 3 days in Nov till 4th; single figures except for 11 on 1st.  
 1980 : First 1 on 30 Aug, then recorded frequently from 1-7 Sep, highest being 10 from two localities on last date. 1 at Dingli on 17 Dec.
- GOLDEN PLOVER** *Pluvialis apricaria* Pluviera  
 1979 : 1-2 recorded on 2 days each in Jan-Feb to 24th. 1 at Hal Far in Apr. In autumn 3 on 27 Oct, 5 on 3rd and 2 on 18 Nov. Recorded on 5 days in Dec, mostly from Luqa Airport, where up to 25 wintered.  
 1980 : Singles on 13th and 21 Jan. Autumn migration very poor with only 3 records: 4 on 13 Nov and singles on 22 Nov and 6 Dec.
- GREY PLOVER** *Pluvialis squatarola* Pluviera Pastarda  
 1980 : Single birds at Delimara on 1 May, at Ghadira on 10 May and again at Delimara on 1 Sep.
- LAPWING** *Vanellus vanellus* Venewwa  
 1979 : 1 at L'Ahrax on 27 Jan. Recorded on 7 days from 20 Oct to 10 Nov, highest total being 50 from 4 localities on 27 Oct. Recorded again in Dec from 1st-20th, always in single figures except for c.40 at Ghadira on 1st.  
 1980 : 1-2 on 19-20 Jan. In autumn 1-3 on 4 days from 29 Oct to 5 Nov and 1 on 21 Nov. Good numbers recorded in Dec from 5th with peak on 10th, when a total of 168 was recorded from 6 localities. Up to 17 wintered at Luqa Airport.
- SANDERLING** *Calidris alba* Pispisella Bajda  
 1979 : 2 at Salina on 6 Aug.  
 1980 : Singles at Ghadira on 9-13 May and on 15 Aug.
- LITTLE STINT** *Calidris minuta* Tertuxa  
 1979 : Single figures recorded frequently at Ghadira and a few other places from 1 Apr to 20 May, and low double figures recorded only on 3 days from 23-28 May, highest 18 on last date. 5 on 2 Jun. In autumn, single to low double figures almost daily from 27 Jul to 8 Aug. 1-2 at Ghadira on 4 days in Sep and up to 8 recorded daily from 1 Oct to 19 Nov, always at Ghadira where singles were also recorded on 1st and 3 Dec.  
 1980 : Up to 4 on 6 days from 12-30 Mar, then daily at Ghadira from 6 Apr to 31 May; double figures from 13 Apr to 24 May, highest c.70 on 10 May. In autumn single figures daily from 27 Jul to 2 Aug, then single to low double figures till 20 Sep, max. 30+ on most days. Single figures again from 21 Sep to 24 Nov.
- TEMMINCK'S STINT** *Calidris temminckii* Tertuxa Griža  
 1979 : Singles at Ghadira on 29 Apr and 1 May were the only spring records. 1 at M'Xlokk on 20th and at Manoel Island on 27 Aug.  
 1980 : Singles at Ghadira on 7th and 10 May. In autumn 1-2 from 27-30 Jul, then single bird frequently recorded at Ghadira from 30 Aug to 21 Sep.
- CURLREW SANDPIPER** *Calidris ferruginea* Beggazzina Mamra  
 1979 : Recorded only in May from 1st to 26th, with most during first two weeks; single to low double figures, highest 18 at Ghadira on 8th.  
 1980 : Recorded frequently at Ghadira in single figures from 14 Apr to 8 May. Low double figures from 9-12 May, highest 15+ at Ghadira on 10 May. Then in single figures on 2 more days till 19 May. Autumn migration: 1-2 from 4 Aug to 23 Sep, most records from mid-Sep.
- DUNLIN** *Calidris alpina* Beggazzina tal-Tizz  
 1979 : No spring records. In autumn up to 6 on 4 scattered days from 12 Aug to 14 Oct,

- then 1-4 almost daily at Ghadira from 17 Oct to 29 Nov.
- 1980 : In spring singles on 22 Mar and 12-13 Apr, then 1-2 daily at Ghadira from 26 Apr to 1 May. In autumn first 1 on 2 Aug, then up to 5 almost daily at Ghadira from 13 Aug to 16 Dec.
- BROAD-BILLED SANDPIPER *Limicola falcinellus* Beggazzina ta' Munqarha  
1980 : 1 at M'Xlokk on 31 Jul.
- RUFF *Philomachus pugnax* Girwiel  
1979 : Double to low treble figures at Luqa from 2-8 Apr, max 200+ on first date; then 1-4 on 5 days from 9 Apr to 4 May. In autumn 1 on 19 Jul, 1-3 on 3 days in Aug and singles on 1 day in Sep and on 3 days in Oct to 12th.  
1980 : Singles at Ghadira on 22 Feb and 22 Mar, then daily in single figures from 4th to 20 Apr but 30+ at Luqa on 6th. 4 on 26th and 3 on 28 Apr were the last spring records. 1 on 3 days in Jul from 17th and 1-2 on 22-24 Aug, followed by 1-2 almost daily at Ghadira from 17 Sep to 5 Oct.
- JACK SNIPE *Lymnocyrtus minimus* Ćinkonja  
1979 : 1 on 3 Oct, then up to 4 recorded frequently, mainly at Ghadira, from 4 Nov to 5 Dec. Singles on 26th and 28 Dec.  
1980 : Three singles recorded in Jan-Mar to 2nd. In autumn single birds on 3 days from 2-10 Nov.
- SNIPE *Gallinago gallinago* Bekkaċċ  
1979 : Singles on 25 Feb and on 5 scattered days from 14 Mar to 8 Apr, then 1 on 19 May. In autumn first 1 on 23 Sep, then low single figures recorded frequently from 1 Oct to 2 Dec, but 10+ at Ghadira on 16 Nov. 1-2 on 8th and 26 Dec.  
1980 : On two days in Jan. More frequently from 17 Feb to 22 Mar, but always recorded in single figures, max. 7 at Ghadira on 16 Mar. Up to 3 daily in Apr to 19th. Autumn migration poor with single birds on 13th and 30 Aug, almost daily from 6-27 Sep and on 30 Oct. 1-3 on 20-21 Nov, and on 11th and 14 Dec.
- GREAT SNIPE *Gallinago media* Bekkaċċ ta' Mejju  
1979 : 1-2 on 3 days in Apr from 8th to 25th. Singles on 29 Sep and 12 Oct.  
1980 : Singles on 3 days in Apr from 2nd to 19th.
- WOODCOCK *Scolopax rusticola* Gallina  
1979 : 1 on 7 Jan and on 20 Oct. 5+ on 3 Nov and up to 6 on 4 days from 26 Nov to 2 Dec.  
1980 : In Jan, 1 on 13th and 3 on 19th. In autumn 1 on 27th and 8 on 31 Oct, 5+ and 10+ on 21st and 22 Nov respectively and 1-2 from 6-9 Dec.
- BLACK-TAILED GODWIT *Limosa limosa* Girwiel Prim  
1979 : Singles at Ghadira on 23 Apr and at Salina on 6 Aug.  
1980 : 1 at M'Xlokk on 23 Feb and 3-4 at Ghadira on 31 Mar to 1 Apr.
- BAR-TAILED GODWIT *Limosa lapponica* Girwiel Denbu bl-Istrixxi  
1979 : 1 at Munxar Pt. on 2 Sep.
- WHIMBREL *Numenius phaeopus* Gurlin Żgħir  
1979 : 1 at Delimara on 20 Aug.
- CURLEW *Numenius arquata* Gurlin  
1979 : 1 at Fiddien on 7 Nov.  
1980 : Single birds at St.Thomas Bay on 28 Jul and off Delimara on 12 Nov.
- SPOTTED REDSHANK *Tringa erythropus* Ćuvett  
1980 : Singles at Ghadira on 7th and 12 Apr and at Salina and at Sta.Lucia on 1 May. In autumn first on 10 Jul, then 1-2 daily at Ghadira from 30 Aug to 3 Sep. 1 from 15-19 Nov and on 23 Nov, 6th and 10 Dec, also at Ghadira.
- REDSHANK *Tringa totanus* Pluverott  
1979 : Only 1 spring record: 1 at Ghadira on 31 Mar. In autumn singles on 13 Jul, 21 Nov and 26 Dec.  
1980 : Singles on 9th and 12 Mar followed by up to 3 daily from 6-8 Apr, then again singles on two more days in Apr to 26th. Singles at Ghadira on 20-21 Jun and at Baħar iċ-Ċaġħao on 29 Jun. 1 on 5th and 23rd and 4 on 30 Jul, and singles on two days in Aug, on 7 days in Sep, on two days in Oct, and on 6 Nov.
- MARSH SANDPIPER *Tringa stagnatilis* Ćewċewwa Żgħira  
1979 : 3 at Hal Far on 2 Apr.  
1980 : 1 on 15 Apr and 2 daily from 19-21 Apr, all at Ghadira.

- GREENSHANK *Tringa nebularia* Ćewċewwa  
 1979 : On 4 days in Apr from 3rd - 13th, max. 4 on first day, otherwise singles.  
 In autumn 1-3 on 2 days in Jul from 19th, 1-2 on two dates in Aug and singles on  
 1 day in Sep and on 3 days in Oct to 21st.  
 1980 : Up to 4 almost daily at Għadira from 4-21 Apr, then 1 on 27th. 1 on 30 Jul, then  
 1-2 on 14 days from 10 Aug to 27 Sep. Most from end Aug to mid-Sep.
- GREEN SANDPIPER *Tringa ochropus* Swejda  
 1979 : 1-2 recorded on 8 scattered days from 4 Mar to 20 Apr. In autumn 1 on 13 Jul,  
 then up to 6 on 10 days in Aug, and 3 on 1 Sep. 1 on 27 Oct.  
 1980 : Up to 5 frequently from 15-25 Mar, then again 1-3 almost daily from 4-24 Apr.  
 1 on 4 May. In autumn recorded on 17 days from 28 Jun to 15 Sep, all singles  
 except for 2 on 13 Sep. 1 on 2 Nov.
- WOOD SANDPIPER *Tringa glareola* Pespup tal-Baħar  
 1979 : Passage on 2 Apr (numbers not given) and up to 6 on 12 days from 9 Apr to  
 20 May. Singles on 7-8 Jun. In autumn singles on 3 days in Jul from 13th and up  
 to 5 on 8 days from 6 Aug to 4 Sep, then 2 on 29 Sep and singles on 20 Oct and  
 18 Nov.  
 1980 : 1-2 daily from 20-24 Mar, then almost daily from 3 Apr to 13 May; recorded main-  
 ly in low double figures in Apr, followed by single figures in May. Highest 50+  
 on 3 days from 16-19 Apr. Singles on 6 days from 13 Jul to 10 Aug, then up to 4  
 frequently from 13 Aug to 29 Sep. 1 at Għadira from 14 Nov to 3 Dec.
- COMMON SANDPIPER *Actitis hypoleucos* Beggazzina tar-Rokka  
 1979 : On 18 days from 1 Apr to 25 May, most in end of Apr; single figures, max. 9 on  
 28 Apr. Singles on 3 days from 7-13 Jul, then single to low double figures almost  
 daily from 24 Jul to 30 Aug. 3 on 8th and 2 on 29 Sep.  
 1980 : Single figures on 13 days from 9 Mar to 15 Apr. Low double figures daily from  
 16-21 Apr, highest being c.35 on 18-19 Apr; then again in single figures on 12  
 days from 22 Apr to 24 May. 1 on 30 Jun. In autumn single figures almost daily  
 from 9 Jul to 16 Dec, but 11 on first date and 10+ on 8th and 30 Aug.
- TURNSTONE *Arenaria interpres* Monakella Mperjali  
 1979 : 1 in early May (locality unknown) and 2 at Salina on 6 Aug.  
 1980 : 1 at M'Xlokk on 30 Apr and 2 at Bengħisa on 18 May.
- POMARINE SKUA *Stercorarius pomarinus* Ćiefa ta' Denbha  
 1979 : Singles off S.E. coast on 4 May and offshore on 1 Oct.
- GREAT SKUA *Stercorarius skua* Ćiefa Kbira  
 1979 : 1 and 2 offshore on 12 Feb and 9 Mar respectively and singles off Marsalforn  
 in Apr and off Bengħisa on 18 Dec.
- MEDITERRANEAN GULL *Larus melanocephalus* Gawwiċja Rasha Sewda  
 1979 : 1-2 seen sporadically in Jan-Mar to 9th. 3 at Sliema on 20 Nov.  
 1980 : 1 on 4th, 2 on 21st and c.5 on 25th, all in Dec.
- LITTLE GULL *Larus minutus* Gawwiċja Żgħira  
 1979 : Singles at Sliema on 23 Feb and in Comino Channel on 23 Apr.  
 1980 : 1 off S.E. coast on 11 Mar and an imm. at Sliema on 24 Dec.
- BLACK-HEADED GULL *Larus ridibundus* Gawwiċja Rasha Kannella  
 1979 : Double to low treble figures daily in Jan-Feb. Low double figures in Mar to 25th,  
 then single figures till 28th. 1 on 19 Apr. In autumn 1 on 21 Oct, then single  
 to double figures from 7 Nov till year end.  
 1980 : Single to double figures daily in Jan-Feb till 1 Mar, but 600+ in Grand Harbour  
 on 13 Feb. Single figures on 12 days from 2-27 Mar. 1 on 8 Sep and 30+ on 9th  
 and 2 on 21 Oct. Daily in double figures from 29 Nov, with occasional treble  
 figures recorded.
- SLENDER-BILLED GULL *Larus genei* Gawwiċja Geddumha Rqiq  
 1979 : 2 off Munxar Pt. on 9 Mar.  
 1980 : 1 taken offshore on 10 Jan, 2 off S.E. coast on 11 Mar and 1 at Għadira on 3 Aug.
- AUDOUIN'S GULL *Larus audouinii* Gawwiċja Geddumha Aħmar  
 1979 : Two singles offshore in Oct, one of them on 17th.  
 1980 : 1 off S.W. coast on 13 Mar.
- LESSER BLACK-BACKED GULL *Larus fuscus* Gawwiċja Dabarha Iswed  
 1979 : Singles on 21 Jan, 31 Mar and 5 Apr. Singles also on 7th, 15th and 20 Nov and  
 16 Dec.

1980 : Singles in Jan on 7th and 28th, in Feb on 5th, 13th and 22nd and in May on 1st.  
1 on 12 Dec.

HERRING GULL *Larus argentatus* Gawwija Prima  
1979 : Recorded throughout the year, numbers higher in winter months due to non-resident birds, but 80+ at Grand Harbour on 18 Apr was highest count apart from breeding colonies. Small flocks occasionally cross Island and this is most evident in Apr.  
1980 : Present around coast and in harbours throughout the year. Double figures in harbours only in winter months. No apparent changes in breeding colonies.

KITTIWAKE *Rissa tridactyla* Gawwija ta' l-Ingiltterra  
1980 : 1 taken offshore on 10 Jan and 2 on 8 Dec.

GULL-BILLED TERN *Gelochelidon nilotica* Ġirlewwa Gedduhma Oħxon  
1979 : Singles on 26 Apr and 2 Aug, 2 on 8 Oct and 3 on 7 Nov.  
1980 : 2 in South Comino Channel on 1 Apr and 4 at Sliema on 16 Oct.

CASPIAN TERN *Sterna caspia* Ġirlewwa Prima  
1980 : 2 at Lunzjata on 1 Sep.

SANDWICH TERN *Sterna sandvicensis* Ġirlewwa tax-Xitwa  
1979 : 1 offshore on 31 Mar and 3 at Paradise Bay on 20-21 Apr.  
1980 : 1 at Delimara on 30 Mar, and up to 6 in the Grand Harbour on 31 Oct to 1 Nov.  
In Dec 2 at Sliema on 21st, and 1 at Salina on 27th.

COMMON TERN *Sterna hirundo* Ġirlewwa tal-Baħar  
1979 : Two records in Jun: 1 at M'Xlokk Bay on 9th and 1 offshore on 12th.  
1980 : 1 taken off M'Xlokk Bay on 1 Sep.

BLACK TERN *Chlidonias niger* Ġirlewwa Sewda  
1979 : 2 each at Għadira and Grand Harbour on 12 May. In Aug 3 at Manoel Isle on 17th and 2 in Grand Harbour on 22nd.  
1980 : Recorded only in Aug: 1 at Manoel Isle on 18th and 14 over Għadira on 28th.

PUFFIN *Fratercula arctica* Purċinell tal-Baħar  
1980 : Singles taken by fishermen on 5th and 10 Jan.

WOODPIGEON *Columba palumbus* Tudun  
1979 : 2 records in Nov: 1 near Għaxaq on 2nd and 3 at Buskett on 3rd.

TURTLE DOVE *Streptopelia turtur* Gamiema  
1979 : Single figures from 7-16 Apr, then double figures daily with treble figures on 5 days from 17 Apr to 1 May, max. total of 930+ on last date. Low double to single figures from then on till 28 May. Up to 4 frequently in Jun and singles on 3 days in Jul, most sightings from Buskett. In autumn single figures from 3-30 Aug, then mainly in low double figures, treble figures reached on 2 days in Sep. Single figures again from 18 Sep to 12 Oct, but 80+ on 25 Sep. 1 on 27 Oct.  
1980 : 1 on 2 Mar could be an escaped bird. Single to double figures from 6 Apr to 25 May, with treble figures on 29 Apr, 4th and 9 May. Up to 5 in Jun and Jul, mostly at Buskett where one was seen in display flight on 2 Jul. Poor autumn migration, with single figures frequently from 19 Aug to 24 Sep; low double figures reached only on 3 dates. Highest 30+ at Buskett on 5 Sep. 1 on 12 Oct.

LAUGHING DOVE *Streptopelia senegalensis* Gamiema ta' l-Ilwien  
1980 : 1 shot at B'Buġia on 5 May.

GREAT SPOTTED CUCKOO *Clamator glandarius* Sultan il-Gamiem tat-Toppu  
1979 : 1 at Bingemma on 30 Mar.  
1980 : 1 at Baħar iċ-Ċagħaq on 15 Mar and 1 taken at Delimara in Apr.

CUCKOO *Cuculus canorus* Daqquqa Kaħla  
1979 : 1 on 31 Mar, then almost daily from 12-30 Apr. Recorded in single figures except for 11 on 18 Apr. 1 taken in Apr belonged to the race *C.c.bangsi*.  
1-2 recorded on 8 scattered days from 1 Aug to 30 Sep.  
1980 : Poor migration in both seasons. In spring up to 3 seen on 9 days from 13 Apr to 31 May. In autumn singles recorded on 4 days from 31 Jul to 6 Sep.

BARN OWL *Tyto alba* Barbaġann  
1979 : Singles seen on 12 Apr, 7 Jul and 12 Aug and 1 at a taxidermist in Sep.  
1980 : Pair raised at least two young in Jul. Other records of single birds on 25 May, 15 Aug and 9 Sep.

- SCOPS OWL *Otus scops* Kokka  
 1979 : Singles on 2 days each in Jan and Feb. Poor spring migration with only two records of single birds on 28 Mar and 6 Apr. In autumn up to 4 on 22-23 Sep, 5 on 13 Oct and up to 3 on 3rd and 10 Nov, and 1st and 26 Dec (most records from Buskett/Girgenti area).  
 1980 : 1-2 on 2 days in Jan and singles on 3 days in Feb. Singles also on 2 Mar, 23rd and 27 Apr. Only 3 records in autumn: singles on 7 Sep and on 21 Oct and 3 on 18 Nov.
- LONG-EARED OWL *Asio otus* Gattus  
 1979 : 1 at Buskett on 6 Oct.
- SHORT-EARED OWL *Asio flammeus* Kokka tax-Xagħri  
 1979 : Singles on 4 days from 8 Mar to 3 Apr and on 10 Nov.  
 1980 : 2 on 15 Mar was the only record for this year.
- NIGHTJAR *Caprimulgus europaeus* Bugrajq  
 1979 : Singles on 4 days from 8-22 Apr and 4 on 26 Apr. In autumn 15+ at Buskett on 15 Sep, then recorded only in single figures on 8 days from 19 Sep to 13 Oct (most records in Sep).  
 1980 : Small influx on 14-16 Apr, max. of 10+ at Buskett on 14 Apr, then singles on 25 Apr, 7th and 17 May. 1 at Girgenti on 27 Oct was the only autumn record.
- SWIFT *Apus apus* Rundun  
 1979 : Almost continuous passage from 25 Mar to 5 Sep with a noticeable lull in migration in Jul, when recorded only on 3 days. Mostly seen in double figures but treble figures on 3 Apr, 15th and 31 May, and 5th, 6th and 26 Aug. Highest count of 230+ on 26 Aug.  
 1980 : Almost daily from 23 Mar to 17 Sep. Mainly seen in single to low double figures reaching treble figures only on 1 day in Apr and on 2 days in Aug, max. of 250+ over Buskett on 25 Apr.
- ALPINE SWIFT *Apus melba* Rundun Żaqqu Bajda  
 1979 : 1-2 on 1st and 8 Apr, 7 on 11th and 1 on 15 May and 10+ on 28 Jun. Singles in autumn on 12 Jul, 15 Aug and 23rd, 29th and 30 Sep.  
 1980 : Up to 2 on 5 days from 23 Mar to 21 Apr. 1-2 at Buskett from 15-17 Sep.
- PALLID SWIFT *Apus pallidus* Rundun Kannelli  
 1979 : 2 at Mtaħleb on 20 Jun, then on 4 days in Aug: 2 at Rabat on 4th, 2 at Tal-Virtu on 14th, and singles at Marsa on 18th and at il-Qaws on 22nd.  
 1980 : Singles at Delimara on 23 Mar, at Għadira on 3 Apr and at Buskett on 16 Sep.
- LITTLE SWIFT *Apus affinis* Rundun Żgħir  
 1980 : 1 at M'Xlokk on 1 May.
- KINGFISHER *Alcedo atthis* Għasfur ta' San Martin  
 1979 : On 2 days in Aug from 19th, on 1 day in Sep, on 2 days in Oct and on 3 days in Nov to 17th; all singles.  
 1980 : 1 at Marsa on 30 Jun. Then 1-2 almost daily at Għadira from 15 Aug to 4 Nov. Up to 2 occasionally recorded from 4 other localities.
- BEE-EATER *Merops apiaster* Qerd in-Naħal  
 1979 : On 8 days from 8 Apr to 31 May; single figures but 10 at Madliena on 17 May. Most records in May. In autumn 1 on 3 Jul, 14 on 23 Aug and 1 on 9th and 4 on 15 Sep.  
 1980 : Poor year with only 3 records: 1 on 27 Apr, 5+ on 25 May and 1 on 7 Jun.
- ROLLER *Coracias garrulus* Farruġ  
 1979 : 1 at B'Kara and 'some' at Selmun on 7 May. 1 at Buskett on 5 Sep.  
 1980 : Singles at Fiddien on 27 Apr and at Comino on 11 May.
- HOOPOE *Upupa epops* Daqquqa tat-Toppu  
 1979 : Up to 3 on 12 days from 11 Mar to 11 Apr. In autumn singles recorded frequently from 17 Aug to 14 Sep.  
 1980 : On 14 days from 2 Mar to 8 Apr, mainly in single figures but 20+ on 15 Mar at Baħar iċ-Ċagħaq and a total of 14 from 3 places on 2 Apr. 3 singles in autumn: on 26th and 29 Aug and on 4 Sep.
- WRYNECK *Jynx torquilla* Bulebbiet  
 1979 : Up to 2 wintering in Jan-Feb to 4th. On migration almost daily from 24 Mar to 28 Apr. Never more than 3 in one day and most records from end of Mar to mid-Apr. Up to 4 frequently from 10 Sep to 29 Nov, and singles on 5-6 Dec.

- 1980 : Singles on 2 days in Jan and on 9 Feb. Poor spring migration with singles on 3 Mar, on 2nd and 27 Apr and on 1 May. Singles on 31 Aug, 11th and 28 Sep. 1-2 almost daily from 5 Oct to 27 Nov, most from mid-Oct onwards. 1 on 26 Dec.
- HOOPOE LARK *Alaemon alaudipes* Alwetta Bumunqar  
1980 : 2 records in Oct: 1 at Qajjenza on 4th and 1 at Benghisa on 13th.
- CALANDRA LARK *Melanocorypha calandra* Kalandra  
1979 : 1 taken in Nov (locality and date unknown).
- SHORT-TOED LARK *Calandrella brachydactyla* Bilbla  
1979 : First on 3 Mar; in single figures till 6 Apr, from then on in double to low treble figures. Highest 200+ at Ta' Ġenċ on 5 May. Bred in usual numbers. Last recorded on 23 Sep.
- 1980 : Low double figures daily from 2 Apr to 26 Aug, highest for one locality: 50+ at Luqa on 4 May. Bred in usual numbers. Single figures frequently from 27 Aug to 2 Oct.
- WOODLARK *Lullula arborea* Ċuqlajta  
1979 : 2 records in Oct: 1 at Binġemma on 15th and 10+ at Baħrija on 20th.
- SKYLARK *Alauda arvensis* Alwetta  
1979 : 1-2 wintered till 12 Mar. Small return passage in Apr with up to 12 recorded on 5 days from 7th to 17th. Single figures on 30 Sep and 7 Oct. Double to low treble figures daily from 11 Oct onwards with peak migration from mid-Oct to mid-Nov. Max. c.200 on 11 Oct.
- 1980 : Single figures in Jan-Feb, but 55+ on 26 Jan. Return passage very evident in Mar when recorded almost daily, very frequently in double figures, reaching treble figures on 1st and 15 Mar. Highest 430+ from 3 localities on 15 Mar. 1-3 on 4 days in Apr to 13th. In autumn, up to 5 on 5th and 17 Oct, then daily in double figures to 7 Dec, highest being 80+ at Ghadira on 8 Nov. Single figures from 11 Dec till year end.
- SAND MARTIN *Riparia riparia* Hawwiefia iax-Xtut  
1979 : On 8 days from 4 Mar to 1 Apr, single figures but 50+ on 18 Mar. Then almost daily from 6 Apr to 19 May, mainly in double figures but treble figures on 27-29 Apr and 9 May. Highest for one locality was 700+ at Salina on 9 May. Up to 4 in Jun to 7th. Recorded frequently in single figures from 24 Aug to 5 Sep, then double figures almost daily from 7 Sep to 23 Oct, max. 50+ at Lunzjata on 7 Oct.
- 1980 : First 4 on 29 Feb. Seen in single or low double figures commonly from 24 Mar to 26 Apr. High double to low treble figures daily from 27 Apr to 4 May, max. 200+ from two localities on 27 Apr. Again in low double figures till 24 May. Very few in autumn. First 1 on 25 Aug, then on 7 days in Sep and on 4 days in Oct to 17th, never exceeding 20 in one place. 1 on 4 Nov.
- CRAG MARTIN *Ptyonoprogne rupestris* Hawwiefia tal-Blat  
1979 : 1 at M'Xlokk on 9 Apr.  
1980 : 1 at Anchor Bay on 13 Mar.
- SWALLOW *Hirundo rustica* Muttafa  
1979 : 1-2 on 18th and 25 Feb. Daily from 11 Mar to 9 Jun, very frequently in treble figures from 1 Apr to mid-May, max. 800+ at Salina on 9 May. 1 on 15 Jun, up to 4 on 4th and 9 Jul and 1 on 1 Aug. Daily from 26 Aug to 17 Nov, often in treble figures from 18 Sep to 27 Oct. Max. 1,000+ at Rabat on 22 Sep.
- 1980 : Singles on 8th and 25 Feb. From 8 Mar to 31 May, mainly in double figures from 22 Mar to 25 May, treble figures only on 6th and 27 Apr and on 1-2 May. Max. c.200 at Ghadira on 1 May. Singles on 8th and 14 Jun. 3 on 2 Jul. In autumn single figures from 29 Aug to 8 Sep, but 26 on 3 Sep, then double to low treble figures daily from 15 Sep to 30 Oct. Largest concentrations at Buskett where up to 200+ frequently recorded. Up to 5 on 6 days in Nov to 18th.
- RED-RUMPED SWALLOW *Hirundo daurica* Reġina tal-Muttaf  
1979 : Singles at Ramla Valley on 5 May and at Buskett on 26 Sep.  
1980 : Singles at Hemsija on 24 Mar, at Ghadira on 6 Apr and at Lunzjata on 4 Sep.
- HOUSE MARTIN *Delichon urbica* Hawwiefia  
1979 : 3 on 9 Feb and 1 on 3 Mar. Single figures frequently from 12-23 Mar, then in double figures from 29 Mar to 9 Jun with peaks on 27-29 Apr and 9 May. Best day being 28 Apr when recorded in treble figures from many places, max. for one area being 800+ at Ramla Valley. Single figures on 3 days from 10-18 Jun. Very poor autumn migration: first on 30 Aug, then on 11 days from 3 Sep to 3 Nov, with most records in Sep. Highest c.50 at Buskett on 30th.

- 1980 : Single figures on 9 days from 24 Feb to 23 Mar, then double figures almost daily from 30 Mar to 24 May; treble figures only on 6 Apr and on 1st and 7 May; max. for one place 150+ at Ghadira on 7 May. 1 on 20 Jun. In autumn on 12 days from 27 Sep to 18 Nov, with most in Oct. Never more than 40 in one locality.
- RICHARD'S PIPIT *Anthus novaeseelandiae*** Bilblun Prim  
 1979 : 1 nr. B'Buđia on 6 Oct.  
 1980 : 1 at Hal Far on 30 Oct.
- TAWNY PIPIT *Anthus campestris*** Bilblun  
 1979 : On 6 scattered days in spring from 4 Mar to 27 Apr with most in Apr. Highest 6 on 30 Mar. 4 also in May (date not given). In autumn 1 on 19 Aug, up to 4 recorded frequently from 30 Aug to 23 Sep, and 1 on 21 Oct.  
 1980 : 3 on 2nd and 6 on 7 Apr, then singles on 3 other days in Apr and on 3 May. Autumn migration first 3 on 5 Sep, then singles on 4 more days till 5 Oct.
- TREE PIPIT *Anthus trivialis*** Dizz  
 1979 : Recorded in single figures frequently from 6-26 Mar, then double figures daily from 28 Mar to 1 May, max. 60+ at Ghajn Rihana on 11 Apr. 1-2 on 7th and 13 May. 1 on 23 Jul. In single figures from 25 Aug to 5 Sep, low double figures commonly from 6 Sep to 7 Oct, never exceeding 20+ in one area. Single figures again from 10th to 21 Oct. 1 on 1 Nov.  
 1980 : Up to 8 on 10 days from 15 Mar to 5 Apr. Passage on 6 Apr, with double figures recorded from many localities and 200+ from Sarraflu/Dwejra. In low double figures from then on till 10 May and singles on 11 May. Seen frequently from 26 Aug to 2 Nov, mainly in single figures, never exceeding 10+ in one place.
- MEADOW PIPIT *Anthus pratensis*** Pespup  
 1979 : Low double figures recorded wintering in many localities till 31 Mar. Single figures in Apr to 28th. Single figures on 4 days from 10-20 Oct. In double figures from then on till end of year, highest 60+ at Lunzjata on 3 Nov.  
 1980 : Up to 20 in many places in Jan-Feb to 23rd. Return passage evident from 24 Feb to 23 Mar, when higher numbers recorded, max. 60+ at Ghadira on 1 Mar. Then in single figures from 25 Mar to 7 Apr. Single figures on 3 days in autumn from 14-19 Oct. In double figures from then on, highest 80+ at Ghadira on 21 Oct, otherwise never more than 50+ in Nov and 40+ in Dec.
- RED-THROATED PIPIT *Anthus cervinus*** Dizz Aħmar  
 1979 : Up to 6 on 7 days in Apr from 4th and 3 on 6 May. In autumn, singles on 3 days in Sep from 10th and on 6 Oct. Then up to 3 on 6 days from 21 Oct to 17 Nov, most from end Oct to early Nov.  
 1980 : Singles occasionally in Apr from 9th and 3 on 4 May. 3 on 5th and 1 on 12 Oct. Up to 4 almost daily from 18 Oct to 26 Nov. Most autumn records from Ghadira.
- WATER/ROCK PIPIT *Anthus spinoletta*** Dizz ta' l-Ilma  
 1979 : Singles at Ghadira on 4th and 10 Nov.  
 1980 : 1 at Ghadira on 14-15 Nov.
- YELLOW WAGTAIL *Motacilla flava*** Isfar  
 1979 : 1-2 on 3 days from 12-17 Mar and 10 on 18 Mar. Almost daily from 23 Mar to 20 May; usually never more than 50 from one locality but 200+ at Mrieħel on 3 Apr and 1,000+ at Salina on 9 May. Up to 7 at Lunzjata in Jun from 7-10th. Single figures frequently from 9 Jul to 29 Aug, and double figures almost daily from then on to 20 Oct with up to 100+ roosting at Lunzjata during that period. Single figures again on 7 days from 21 Oct to 19 Nov.  
 1980 : Very common from 10 Mar to 25 May, most from last week of Mar to first week of May. Double figures on many days though never exceeding 50+ in one area. Singles on 3 days in Jun from 20th to 28th. Up to 5 frequently from 4 Jul to 2 Sep, but c.10 on 22nd and c.16 on 25 Aug, both at roosts. Double figures daily from 3 Sep to 25 Oct, max. 80+ at Ghadira on 17 Sep. Single figures from then on till 8 Nov.
- GREY WAGTAIL *Motacilla cinerea*** Zakak tad-Dell  
 1979 : Up to 5 wintering in suitable localities till 16 Mar but 10 at Manoel Isle and 6+ at Żejtun on 17 Feb. Unusual birds on 24th and 30 Jun. In autumn first on 18 Sep, then daily from 22nd till year end; never more than 10+ in one place.  
 1980 : Single figures till 19 Mar and 1 on 4 Apr. In autumn 1 on 7 Sep, then up to 10 frequently from 18th till year end.

WHITE WAGTAIL *Motacilla alba* Zakak Abjad

- 1979 : Single to low double figures in Jan-Mar, larger numbers only at roosts, though no proper counts were made except for 70+ roosting at Ghajnsielem, Gozo on 2 Jan. 1 on 7 Apr. Singles on 8th and 15 Aug were unusual birds. Autumn passage first 1 on 29 Sep. In single figures from 3-10 Oct, then low double figures daily from 12 Oct to 31 Dec, but 80+ at Marsa on 27 Oct.
- 1980 : Mainly single figures in Jan-Feb, but 30+ at Manoel Isle on 6 Feb. 500+ roosting at Victoria, Gozo, on 9 Feb was the only roost count. Small return passage evident in Mar to 16th, when recorded more frequently in low double figures in various places. Subsequently in single figures to 25 Apr. 1 on 1 May. In Sep, 1 on 24th, then up to 3 on 4-5 Oct and low double figures from 11 Oct till year end, never more than 50+ counted in one place, except at the Victoria roost where c.300 were counted on 29 Dec.

WREN *Troglodytes troglodytes* Bumistur

- 1979 : 1 at Salina on 9 Dec.
- 1980 : Singles at Ghadira on 2 Nov and at Ghajn Żejtuna on 26 Dec.

DUNNOCK *Fringilla monticola* Żiemel

- 1979 : Single figures wintering in various localities but low double figures at Buskett in Jan-Mar and at Miżieb in Jan. Highest 30+ at Buskett in many days in Jan and Feb to 17th, then never more than 20+ till 24 Mar. 1-2 on 20 Oct, then single to low double figures almost daily from next day till year end. Max. 45+ from 3 localities on 3 Nov.
- 1980 : Recorded wintering till 28 Mar, highest counts for the period Jan-Mar being 30+, 20+ and 5+ respectively, all at Buskett. Single figures from 21 to 30 Oct; single to low double figures from 1-27 Nov, max. 40+ at Buskett on last date, then never more than 10+, even at Buskett, till year end.

ALPINE ACCENTOR *Fringilla collaris* Żiemel ta' l-Alpi

- 1979 : 3 at Nadur, Gozo on 30 Oct and 1 at Benghisa on 15 Dec.

RUFIOUS BUSH CHAT *Cercotrichas galactotes* Rożinjol tax-Xagfiri

- 1979 : 1 at Xemxija on 12 May.

ROBIN *Erithacus rubecula* Pitiross

- 1979 : Treble figures at Buskett in Jan-Mar to 10th, with max. of 200+ there, otherwise low double figures in other places. Numbers reduced to low double figures from 11-24 Mar, then single figures till 14 Apr. 1 at Buskett in Jun-Aug and other singles from few other places occasionally in Jul-Aug, but up to 5 at Girgenti in Aug from 5th. Single figures throughout Sep till 20th, then mainly in double figures from 22 Sep, with peaks from 2nd week of Oct - 2nd week of Nov, max. 300+ at Buskett on 23 Oct and 3 Nov. Numbers reduced to single to low double figures from then on till end of year.
- 1980 : Very common in Jan-Mar and in smaller numbers down to scattered singles by end of Apr. Monthly max. at Buskett were 150+ on 26 Jan, 150+ on 16 Feb and 200+ on 2 Mar, suggesting a return passage. Singles on 5th and 24 May. Up to 3 at Buskett in Jul-Sep and a few singles in other areas. Single figures till 14 Oct, then low double figures daily but treble figures at Buskett from 15 Oct to 27 Nov, where max. of 300+ on last date. Numbers reduced in Dec, highest 30+ at Miżieb on 13th.

THRUSH NIGHTINGALE *Luscinia luscinia* Rożinjol Prim

- 1979 : 1 ringed at Ghadira on 29 Sep, stayed there till 7 Oct.

NIGHTINGALE *Luscinia megarhynchos* Rożinjol

- 1979 : Almost daily from 24 Mar to 30 Apr, never more than 8 in one place but 20+ at Dwejra and at Buskett on 1st and 6 Apr respectively. 1-2 in May on 5th and 13th. 1 at Buskett on 16-17 Jun. In autumn, single figures from 24-27 Aug, then low double figures daily till 30 Sep, mainly at Buskett/Girgenti area. Max. 40+ at Buskett on 23 Sep. Up to 3 on 3 days in Oct to 21st.
- 1980 : Frequently recorded in single figures from 21 Mar to 4 May; usually never more than 5 in one place, except for 15+ at Dwejra - Gozo, on 6 Apr. 1 on 25 May and 1 at Buskett on 15th and 22 Jun. 1-2 on 5 days from 6 Aug, and up to 20 at Buskett in Sep to 12th. 1-2 occasionally from then on till 21 Oct.

BLUETHROAT *Luscinia svecica* Kudirross Blu

- 1979 : Singles at Dragonara on 7 Jan and 4 Mar, at Girgenti on 7 Sep, at Ghadira on 18 Sep, and at Marsa on 21 Oct.
- 1980 : Singles at Ghadira on 9 Mar and 2 Apr, and at Lunzjata on 12 Oct.

- BLACK REDSTART *Phoenicurus ochruros* Kudirross Iswed  
 1979 : Up to 10 wintering, mainly in rocky areas, till 18 Mar. Again from 1 Oct onwards, always in single figures.  
 1980 : Present in Jan and Feb to 10th, never more than 8 in one locality. Then a cap till 1 Mar when 1-3 recorded on 6 days to 13th, suggesting a small return passage. 1 on 22 Mar. In autumn 1-2 from 1 Nov till year end, most records in Nov.
- REDSTART *Phoenicurus phoenicurus* Kudirross  
 1979 : 1 on 23 Mar, then single figures frequently from 1 Apr to 13 May; highest for one locality: 6 at Dwejra on 14 Apr. In autumn mainly in single figures from 1 Sep, but up to 10 at Buskett/Girgenti area from 30 Sep to 7 Oct. Again in single figures till 23 Oct. 1 on 1 Nov.  
 1980 : Poor migration in both seasons. In spring 2 on 6th and 1 on 19 Apr. Then up to 4 on 15 days from 26 Apr to 31 May. On autumn migration on 17 days from 8 Sep to 24 Oct; never more than 2 in one place.
- WHINCHAT *Saxicola rubetra* Buċaqq tas-Silla  
 1979 : 1 on 20 Feb, then up to 5 commonly from 1 Apr to 16 May, but 10+ at Ta' Ġent on 5 May. In autumn, 1-2 on 5 days from 18-29 Sep.  
 1980 : Singles on 12-13 Mar and on 4 Apr, then single to low double figures daily from 6 Apr to 11 May, max. 30+ at Għadira on 27 Apr. Singles on 8 Sep and 15th and 25 Oct were the only autumn records.
- STONECHAT *Saxicola torquata* Buċaqq tax-Xitwa  
 1979 : Single figures in various localities from Jan till 17 Mar. In autumn singles on 25th and 29 Sep, followed by low double figures daily from 3 Oct onwards. Highest for one place were 50+ at Marsa on 27 Oct.  
 1980 : Up to 10 wintering in many areas till 1 Mar, after which numbers reduced to 1-3, but return passage very evident from 16-20 Mar, when low double figures were recorded, max. 50+ at Għadira on 16-17 Mar. Last seen on 21 Mar. Singles on 27-28 Sep, then double figures daily from 10 Oct, max. 40+ at Għadira on 25 Oct. Less numerous after first week of Nov, and never more than 10 in one locality in Dec.
- ISABELLINE WHEATEAR *Oenanthe isabellina* Kuda l'Isabellina  
 1980 : 1 at Għadira on 21 Mar.
- WHEATEAR *Oenanthe oenanthe* Kuda  
 1979 : Spring passage from 12 Mar to 5 May. Seen in single figures, low double figures recorded only from Luqa Airport where max. of c.20 on 8 Apr. Most records from third week of Mar to mid-Apr. In autumn, single figures from 16 Aug to 21 Oct, most in Sep. Max. of 6 at Għadira on 21 Sep. 1 at Luqa Airport on 2 Dec.  
 1980 : 2 on 23rd and 1 on 28 Feb. Single figures on 10 days in Mar. Passage on 2 Apr with c.200 at Mellieħa, then again single figures till 19 Apr. Singles on 4 May and 8 Jun. On autumn migration, again mainly in single figures, on 18 days from 20 Aug to 16 Oct with 15+ at Luqa Airport on 26 Sep highest.
- BLACK-EARED WHEATEAR *Oenanthe hispanica* Kuda Dumnikana  
 1979 : Singles on 7th and 23 Apr and 3 on 9 Sep.  
 1980 : Singles on 26 Apr and 17 Sep.
- ROCK THRUSH *Monticola saxatilis* Ġanbublu  
 1979 : In spring, singles on 4th and 15 Apr and 1 May. Singles also in autumn on 9th and 11 Sep.  
 1980 : 1 at Mellieħa in Apr.
- BLUE ROCK THRUSH *Monticola solitarius* Merill  
 1979-80 : Breeding resident mainly along coastal cliffs but a few pairs also inland.
- RING OUZEL *Turdus torquatus* Malvizz tas-Sidra Bajda  
 1979 : Singles at Buskett on 24 Mar and in Gozo on 7 Nov.  
 1980 : Singles at Attard on 18 Oct and at St. Thomas Bay on 17 Nov.
- BLACKBIRD *Turdus merula* Malvizz Iswed  
 1979 : 1-2 on 5 days in Jan and singles on 11th and 23 Feb. Most records from Buskett. In autumn 1-4 on 6 days from 20 Oct to 9 Nov, then singles on 29 Nov and 26 Dec.  
 1980 : Up to 4 in Jan and singles at Buskett in Feb and Mar to 8th; then singles on 7 days from 29 Oct to 12 Nov, and on 13 Dec.
- FIELDFARE *Turdus pilaris* Malvizzun tal-Ot'ajja'  
 1979 : 1 at Għadira on 1 Nov.  
 1980 : 4 at Buskett on 16 Feb and 1 at Luqa on 28 Dec.

SONG THRUSH *Turdus philomelos* Malvizz

1979 : Up to 15 wintering at Buskett and Mizieb in Jan-Feb, otherwise single figures from other localities. Small return passage from 4-14 Mar when 30+ recorded at Buskett on 2 occasions, then numbers again reduced to single figures till 6 Apr. Singles on 27th and 30 Apr. 1 at Buskett on 30 Sep. In single figures from 6-19 Oct, double to treble figures from then on till 12 Nov, with peak from mid-Oct to the first week of Nov; max. for one locality 500+ at Buskett on 3 Nov. Single figures again from 14 Nov till year end.

1980 : 1-10 in Jan-Mar to 14th; small return passage on 15 Mar with 30+ from two localities. Single figures from then on till 6 Apr. 1 at Buskett on 15th and 22 Jun. Very poor autumn migration. 1 on 28 Sep and 1-2 on 5th and 12 Oct. Single to low double figures daily from 14 Oct to 10 Nov, but never more than 50 in one area. Single figures from then on, except for 15+ at Buskett on 18 Nov.

REDWING *Turdus iliacus* Malvizz Afmar

1979 : Recorded frequently, mainly at Buskett, during first 3 months, the last on 17 Mar. Max. of 20+ at Buskett on 4 Mar. In autumn singles on 2-3 Nov and 3 days in Dec.

1980 : On 7 days in Jan, once in Feb and on 3 days in Mar till 15th; always in single figures except for 16 at Buskett on 13 Jan. Autumn passage: 1-2 on 27 Oct, 1st and 11 Nov, then 1-3 on 6 days from 15-24 Nov. 1 on 14th and 3 on 27 Dec.

MISTLE THRUSH *Turdus viscivorus* Malvizzun Prim

1979 : Singles at Bahrija on 20 Oct, at Buskett on 21 Oct and at Delimara on 3 Nov.

1980 : Singles at Buskett on 19 Jan, at M'Xlokk on 5 Nov and again at Buskett on 27 Dec.

CETTI'S WARBLER *Cettia cetti* Bagħal tal-Għolliq

1979-80 : Breeding in suitable localities in Malta and Gozo.

FAN-TAILED WARBLER *Cisticola juncidis* Bagħal ta' l-Imrewħa

1979-80 : Breeding almost throughout Malta but spreading very slowly in Gozo and no records from Comino.

GRASSHOPPER WARBLER *Locustella naevia* Bagħal tal-Ġurati

1980 : 1 trapped and ringed at Wied il-Luq on 5 Sep.

SAVI'S WARBLER *Locustella luscinioides* Bagħal Afmar

1979 : Singles at Lunzjata on 26 Feb, at Buskett on 3 Aug, at Chadwick Lakes on 17 Aug, at Ġirgenti on 25 Aug and 15 Sep, and at Għadira on 19-20 Oct.

MOUSTACHED WARBLER *Acrocephalus melanopogon* Bagħal Qasni

1979 : Singles at Għadira on 6 days from 10 Nov to 8 Dec.

1980 : Singles at Għadira on 3 days from 25 Oct to 1 Nov and at Salina on 22 Dec.

EDGE WARBLER *Acrocephalus schoenobaenus* Bagħal tas-Simar

1979 : Single figures frequently from 9 Mar to 20 May with 10+ at Lunzjata on 4 May highest. 1 at Buskett on 3 Jun. 1-2 on 5 scattered days from 10 Aug to 15 Sep, then up to 5 on 5 more days from 29 Sep to 7 Oct. 1 at Għadira from 5-11 Nov.

1980 : 1 on 17th and 3 on 24 Feb were exceptionally early. Single figures on 20 days from 1 Mar to 24 May, most in Apr. Max. 6+ at Għadira on 10 May. In autumn singles recorded on 6 days from 25 Aug to 30 Sep.

MARSH WARBLER *Acrocephalus palustris* Bagħal ta' l-Agħdajjar

1979 : Singles ringed at Chadwick Lakes on 27 Aug and at Wied il-Luq on 30 Sep.

REED WARBLER *Acrocephalus scirpaceus* Bagħal tal-Qasab

1979 : In spring, singles on 25 Mar, 17 Apr, 12th and 20 May and 2-3 Jun. In autumn first 1 on 14 Jul followed by 1-2 on 24th, 26th and 28th, then single figures almost daily from 5 Aug to 27 Oct, with 10+ at Buskett on 1 Sep. Most autumn records from Buskett/Ġirgenti area.

1980 : Singles at Għadira in May on 3rd, 7th and 10th and at Buskett on 15 Jun. In autumn on 23 days from 9 Aug to 20 Oct; never more than 5 in one locality. Most records from first date to mid-Sep.

GREAT REED WARBLER *Acrocephalus arundinaceus* Bagħal Prim

1979 : 1-3 on 22 days from 24 Mar to 20 May. On autumn migration in single figures, max. 5, almost daily from 3 Aug to 20 Oct.

1980 : Recorded frequently from 13 Apr to 1 Jun, though most records from mid-Apr to first week of May. Max. 6 at Lunzjata on 1 May. In autumn 1-3 on 7 days from 15 Aug to 7 Sep.

- OLIVACEOUS WARBLER *Hippolais pallida* Bekkafik Griž  
 1979 : 1 ringed at Buskett on 16 Jun.  
 1980 : 1-singing at Buskett on 15 Jun.
- ICTERINE WARBLER *Hippolais icterina* Bekkafik Isfar  
 1979 : Singles on 16th, 28-29 Apr and up to 5 on 8 days in May to 28th. In autumn, 1-3 on 17 days from 24 Aug to 7 Oct.  
 1980 : 1 on 27 Apr, then almost daily in May to 25th; usually in single figures but 20+ at Ghadira on 10th and 10+ at Wied Bufula on 18th. Singles on 17th and 19 Aug and on 23 Sep.
- MELODIOUS WARBLER *Hippolais polyglotta* Bekkafik ta' L-Għana  
 1980 : 1 trapped and ringed at Lunzjata on 26 Aug.
- DARTFORD WARBLER *Sylvia undata* Bufula tax-Xagħri  
 1979 : Singles at Ghadira on 20th and 27 Jan and at Sliema on 27 Dec.  
 1980 : Singles at Miżieb on 26 Jan, 9 Feb and 1 Mar and at Ghadira on 13th and 23 Nov and on 26-28 Dec.
- SPECTACLED WARBLER *Sylvia conspicillata* Bufula Mamra  
 1979-80 : Common breeding resident mainly in open areas.
- SUBALPINE WARBLER *Sylvia cantillans* Bufula Passajra  
 1979 : Singles on 17-18 Mar, then up to 10 almost daily from 23 Mar to 16 Apr. Singles again on 8 more days from 21 Apr to 16 May but 3+ on 5 May. In autumn, singles on 24-25 Jul, then double figures daily in suitable feeding areas from 26th on to 23 Sep. Largest concentrations at Buskett with max. of 60+ on 28 Aug. Last were 1-2 on 3 days from 29 Sep to 7 Oct.  
 1980 : In spring, single figures in many localities almost daily from 16 Mar to 29 Apr, but low double figures on 3 days at Dwejra-Gozo. Max. there of 40+ on 13 Apr. 1-2 on 4 days in May and 1 singing at Buskett on 15 Jun. 2 on 5 Jul, then single figures frequently from 20 Jul to 5 Aug increasing to low double figures daily from 6 Aug to 12 Sep. Highest at Buskett: 60+ on 5th and 8 Sep. Up to 5 on 10 more days from then on till 17 Oct.
- SARDINIAN WARBLER *Sylvia melanocephala* Bufula Sewda  
 1979-80 : Very common breeding resident in most localities. No clear evidence of migration.
- LESSER WHITETHROAT *Sylvia curruca* Bekkafik Irmiedi  
 1979 : Singles at Rabat on 3 days from 7-17 Sep and 1-3 at Ghadira on 4 days from 18 Sep to 2 Oct.  
 1980 : 1 at Rabat on 4 Sep.
- WHITETHROAT *Sylvia communis* Bekkafik Aġmar  
 1979 : In spring, 1-2 on 6 days from 7-17 Apr, then single figures commonly from 27 Apr to 20 May. Max. 15+ at Ghadira on 1 May. Autumn passage: singles on 6th and 14-15 Sep, 2 on 29 Sep and c.5 on 3 Oct.  
 1980 : 1-2 on 6th and 12 Apr, then almost daily from 18 Apr to 25 May; mainly single figures, low double figures occasionally from a few places. Highest were 15+ at Ghadira on 27 Apr. Singles in Jun on 1st and 7th. 3 singles in autumn, all in Sep on 4th, 14th and 21st.
- GARDEN WARBLER *Sylvia borin* Bekkafik  
 1979 : 1-2 almost daily from 14-25 Apr, then low double figures frequently to 16 May, max. 20+ at Ghadira on 1st. Up to 5 from then on till 20 May. In autumn singles on 5 days from 15-25 Aug, then daily double figures, mainly at Buskett till 30 Sep. Max. 60+ at Buskett on many days in Sep. Single figures in Oct to 23rd. 1 on 3 Nov.  
 1980 : Single figures almost daily from 6-26 Apr, then also in occasional low double figures till 18 May with max. of 40+ at Ghadira on 10 May. Single figures again till 28 May. On autumn migration, in single figures on 9 days from 15 Aug to 2 Sep, daily in low double figures from 4-12 Sep, highest 40+ at Buskett on 8th and 12th, and then again single figures on 9 days from 14 Sep to 28 Oct.
- BLACKCAP *Sylvia atricapilla* Kapinera  
 1979 : Treble figures at Rabat/Buskett and single to low double figures elsewhere in first 3 months. Monthly peaks at Buskett: 200+ on 7 Jan, 500+ on 10th and 17 Feb and 800+ on 14 Mar. Single to low double figures in Apr to 16th. In Sep, singles on 20th and 23rd. Single figures frequently from 6 Oct till year end, never more than 8 in one place.

1980 : Gradual increase at Buskett in Jan-Mar, from 100+ on 5 Jan to 800+ on 15 Mar. Mainly single figures in other areas except for 100+ at Rabat on 19 Mar. Numbers reduced to low double figures at Buskett by 8 Apr, followed by single figures till 21st. Singles on 6 days from 18 Oct to 8 Nov, numbers increasing at Buskett to c.40 by 27 Nov and remaining stable till year end. Occasional singles in other places, but 30+ at Ghajn Żejtuna on 26 Dec.

YELLOW-BROWED WARBLER *Phylloscopus inornatus* Vjolin tal-Faxx

1979 : 1 trapped and ringed at Ghadira on 3 Dec.

BONELLI'S WARBLER *Phylloscopus bonelli* Vjolin Bajdani

1979 : On 5 days from 28 Mar to 28 Apr, never more than 3 on one day.

1980 : Singles at Ghadira on 26th and 28 Apr and on 3-4 May.

WOOD WARBLER *Phylloscopus sibilatrix* Vjolin Madrani

1979 : in spring, single figures frequently from 31 Mar to 9 Apr, then daily low double figures in many places from 11 Apr to 13 May, max. 50+ at Salina on 28 Apr. Then up to 3 till 19 May. 1-2 on 6 days from 14 Aug to 1 Sep and up to 5 frequently from 5-23 Sep, followed by low double figures almost daily from 29 Sep to 7 Oct, highest 40+ at Girgenti on 29th. Single figures on two more days till 16 Oct.

1980 : Spring passage from 1 Apr to 25 May, single figures from first date to 6 Apr followed by double figures daily till 18 May, with peak from 25 Apr to 1 May. Max. for one locality: 60+ at Ghadira on 27 Apr. Poor autumn migration with 2 records in Sep: 1 on 1st and 2 on 8th.

CHIFFCHAFF *Phylloscopus collybita* Vjolin tax-Xitwa

1979 : Low double figures in many areas from Jan to 16 Mar. Max. 50+ near Chadwick Lakes on 2nd and 10 Jan. In single figures from 17-25 Mar, then only singles on 4 days from 28 Mar to 7 Apr and on 21 Apr. A most unusual bird at Chadwick Lakes on 23 Jun was singing continuously and also seen displaying to a bewildered Juv. Sardinian Warbler. In autumn single figures on 17th and 20 Oct. Daily low double figures from then on till year end, never more than 50+ in one area.

1980 : Double figures in Jan-Feb to 17th. Return passage evident from last week of Feb to mid-Mar, with numbers increasing in many localities. Highest were 100+ at Ghadira on 24 Feb. Mainly in single figures from 18-31 Mar and 1-3 on 9 days in Apr to 13th. Singles at Ghadira on 6th and 3 May. First in autumn were singles on 3 days from 11-18 Oct and up to 5 on 20-21 Oct, then low double figures daily from 24 Oct to 31 Dec, but 250+ at Lunzjata on 28-29 Dec. Otherwise never more than 50+ in any other place.

WILLOW WARBLER *Phylloscopus trochilus* Vjolin Pastard

1979 : 1-2 on 6 days from 18-30 Mar, then up to 5 commonly from 31 Mar to 29 Apr and 1-3 on 5 more days in May to 16th. In autumn single figures daily from 13 Aug to 16 Sep, low double figures frequently from 18 Sep to 3 Oct with max. of 20+ at Ghadira on 18th and 29-30 Sep, and single figures again from then on till 20 Oct. 1 on 1st and 2 on 3 Nov.

1980 : Singles on 16th and 21 Mar. In low double figures from 22-31 Mar, with 30+ at Ghadira on 22 Mar highest. Single figures almost daily from 1-23 Apr increasing to low double figures again from 26 Apr to 1 May (max. of 30+ again at Ghadira on 27 Apr). Single figures on 3 more days in May to 11th. Single figures almost daily, mainly at Ghadira, from 21 Aug to 21 Oct, double figures reached only on two days, on 23 Sep and 21 Oct. Max. c.15 at Ghadira on first date.

GOLDCREST *Regulus regulus* Bufula tal-Qamar

1979 : 4 at Miżieb on 4 Jan were the only birds identified.

1980 : in Oct, singles on 25th and 29th, then up to 5 on 3 days in Nov and 1-2 on 2 days in Dec.

FIRECREST *Regulus ignicapillus* Bufula tal-Toppu Ahmar

1979 : 4 at Miżieb and 4 at Buskett on 10th and 13 Jan, respectively. Singles at Buskett on 4 Mar and at Dwejra-Gozo on 8 Apr.

1980 : 1-2 recorded on 1 day in Jan and on two days each in Feb and Mar to 29th. 2 on 20 Dec.

GOLD/FIRECREST *Regulus regulus/ignicapillus*

1979 : Recorded frequently from coniferous areas, mainly Buskett and Miżieb, during first 3 months. Monthly maxima: 30+ at Miżieb on 21 Jan, 5+ on 3 days in Feb and 15+ at Miżieb on 10 Mar. This slight increase in Mar suggests a small return passage. Last recorded on 25 Mar. In autumn only 1 record of 2 at Buskett on 23 Oct.

1980 : In suitable areas from Jan-22 Mar; low double figures only from Mižieb, max. of 20+ there on 5 Jan. In autumn singles on 4th and 9 Nov, then low double figures at Buskett and Mižieb from end of Nov till year end. Highest for each area were 15+ on 27 Nov and 20+ on 13 Dec respectively.

SPOTTED FLYCATCHER *Muscicapa striata* Žanžarell tat-Tikki

1979 : 1-2 on 3 days from 14-21 Apr and daily in single figures from 27 Apr to 20 May, with 10+ at Ramla Valley on 5 May highest. 1 at Buskett on 3 Jun. Singles on 19th and 23 Aug, followed by single figures almost daily from 28 Aug to 14 Sep and then occasionally reaching low double figures from 15-30 Sep, but never more than 10+ in one place. 1-2 on 7th and 17 Oct.

1980 : Singles on 4 days from 6-16 Apr, then up to 6 frequently till 8 May reaching low double figures from 9-18 May (max. 25 at Wied Bufula on last date); then only 1-5 till 25 May. 1-2 at Buskett in Jun-Jul. Poor autumn passage with singles on 24 Aug, 10th and 26 Sep and 2 on 19 Oct.

RED-BREASTED FLYCATCHER *Ficedula parva* Žanžarell Sidru Afmar

1979 : Singles on 24 Aug, on 29 Sep, on 3 days in Oct from 13-23rd and on 4 Nov.

1980 : Singles at Buskett on 22 Sep, at Marsa on 12th and at Sta.Lucia on 14 Oct.

COLLARED FLYCATCHER *Ficedula albicollis* Žanžarell tat-Kullar

1979 : 1-4 daily from 9-21 Apr and 1-2 on 28 Apr and 1 May.

1980 : 1-3 on 11 days from 2 Apr to 11 May; most records in first week of Apr.

PIED FLYCATCHER *Ficedula hypoleuca* Žanžarell Iswed

1979 : Single figures daily from 1 Apr to 1 May, max. 6+ at Għadira on 28 Apr. Then 1-2 on 4 days from 6-13 May. In autumn singles on 6 days from 31 Aug to 25 Sep and 1-2 on 7th and 16 Oct.

1980 : Single figures almost daily from 2-26 Apr, increasing on 27-29 Apr, when low double figures recorded from many areas. Max. 30+ at Chadwick Lakes on 27th. Single figures again from 30 Apr to 11 May. In autumn singles at Lunzjata on 19 Aug, 1 Sep and 18 Oct.

GOLDEN ORIOLE *Oriolus oriolus* Tajra Safra

1979 : Up to 5 frequently from 8-21 Apr then also in occasional low double figures till 3 May. Highest 25 at Madliena on 3 May. In single figures again from 6-21 May; 2 on 30 May and on 5 Jun. Autumn migration: single figures almost daily from 1-15 Sep; never more than 8 in one locality. Then singles on 3 more days in Sep till 30th.

1980 : 1 on 31 Mar, then single figures frequently from 12 Apr to 27 May but 20+ at Għala, Gozo on 29 Apr and 15+ roosting at San Anton Gardens on 19 May. In autumn 1-2 on 8 days from 21 Aug to 8 Sep.

RED-BACKED SHRIKE *Lanius collurio* Kaččamendula Hamra

1979 : 1-2, mainly at Buskett, on 15 days from 19 Aug to 30 Sep, and 1 on 13 Oct.

1980 : 2 on 17 Aug, then 1-2 on 5 days from 4-21 Sep, and 1 on 11 Oct. Late bird at Għadira on 24 Nov.

WOODCHAT SHRIKE *Lanius senator* Kaččamendula

1979 : 1 on 1 Apr, then almost daily from 6 Apr to 8 May; in single figures but 14+ at L'Ahrax on 25 Apr. 1-2 on 2 more days in May till 28th and 1 at Għadira on 18 Jun. In autumn singles on 6th and 31 Jul and up to 3 on 9 days from 15 Aug to 10 Sep.

1980 : Spring migration: 1-2 on 3 days from 28 Mar to 14 Apr. More frequently recorded from 25 Apr to 19 May, but always in single figures, max. c.8 at Pietà' on 25 Apr. 1 on 6 Aug and up to 2 on 7 days from 24 Aug to 21 Sep.

ROOK *Corvus frugilegus* Korvu

1979 : 1 at Hal Far on 13 Apr.

STARLING *Sturnus vulgaris* Sturnell

1979 : Double to treble figures in first three months till 11 Mar. Higher numbers at roosts, with max. of 2,000+ roosting at B'Kara on 7 Jan. 1 on 18 Mar and up to 5 on 4 days in Apr to 8th. In autumn single figures on 4 days from 11-17 Oct, then from 19 Oct onwards with largest flocks recorded at Luqa Airport. Highest for last three months there: c.4,000 on 30th, 2500+ on 1 Nov and 5,000+ on 9 Dec.

1980 : Treble figures in Jan-Feb to 17th. Numbers reduced considerably from then on and only single to low double figures recorded from any one place till 19 Mar. Singles on 21-22 Apr and 1 May and on 12-13 Jul, 1st, 5th, 21st and 23 Aug. Autumn migration: 1 on 29 Sep and 6 on 1 Oct. Almost daily from 9 Oct till year end but

number of wintering birds was relatively low. Treble figures recorded occasionally and flocks of up to c.3,000 only at roosts.

SPANISH SPARROW *Passer hispaniolensis* Għammieł tał-Bejt

1979-80 : Abundant breeding resident.

TREE SPARROW *Passer montanus* Għammieł tał-Siġar

1979-80 : Small colonies scattered in Malta and Gozo. In small flocks of up to 50 occasionally in Aug and Sep, especially near water holes. Evidence of migration only in 1980, especially in first week of Nov with up to 30 at Għadira on 1-2nd.

CHAFFINCH *Fringilla coelebs* Sponsun

1979 : Single to low double figures wintering in many areas. Highest 20+ at Buskett on 4th and 17 Feb. In single figures only from 11-24 Mar and then singles on 3 more days in Mar, 6 days in Apr and 4 days in May to 13th. Up to 5 at Buskett from 16 Jun to 30 Sep and up to 6 at Ġirgenti during Aug. Singles from a few other localities during the summer months. First true autumn migrants from 20 Oct. In low double figures from then on till 9 Nov, with small influxes on 21 Oct and 1 Nov, max. 45+ at Għadira on 21 Oct. Single figures from then on with occasional low double figures from few areas till year end.

1980 : Double figures daily in Jan but numbers greatly reduced in Feb and Mar. Highest monthly totals for first three months: 50+ on 26 Jan, 15+ on 23 Feb and 20+ on 2 Mar, all at Buskett. Singles on 6 days in Apr and on 3 days in May to 24th. 1 at Għadira on 7 Jun and up to 5 at Buskett from 9 Jun to 2 Oct. Autumn migration from 21 Oct. In low double figures till 7 Nov, highest 50+ at Ġirgenti on 27 Oct. Single figures from then on but low double figures only at Buskett till year end.

BRAMBLING *Fringilla montifringilla* Sponsun Selvaġġ

1979 : 1 at Delimara on 3 Dec.

1980 : 1 at Għadira from 19 Jan to 30 Mar.

SERIN *Serinus serinus* Apparell

1979 : Up to 5 wintering in various places in Jan-Mar to 10th. Singles on 14th and 26 Apr and on 16 Jun, 8th and 24-25 Jul, one of which was a juvenile bird. Very poor autumn migration: 1-3 on 3 days in Nov from 3-24th. Small influx in last week of Dec with 30+ at Xagħra on 26 Dec.

1980 : Heavy passage in Jan with double figures daily from 5 Jan to 22 Mar, though in smaller numbers after 24 Feb. Max. 80+ at Buskett on 6th and 26 Jan. Single figures from late Mar till 29 Apr. Up to 3 at Buskett and a few singles from some other areas in May-Sep to 5th. Autumn passage in single figures on 9 days from 27 Oct to 22 Nov. Small passage in Dec with peak on 10th, max. c.20 at Għadira on that date. Only in single figures from 15 Dec onwards.

GREENFINCH *Carduelis chloris* Verdun

1979 : 1-2 on 6th and 21 Jan. Return passage almost non-existent with only 4 records of 1-3 birds from 16 Mar to 9 Apr. On autumn migration from 13 Oct, with an influx in Gozo on 1 Nov and single to low double figures till 29 Nov, with max. of 15+ at Għadira on 24 Nov. 1-3 occasionally in Dec.

1980 : Up to 5, mostly at Buskett, in Jan-Mar and up to 50+ roosting at Senglea on 31 Jan to 1 Feb. 1-2 on 4 days in Apr to 13th. Singles in May on 3rd, 6th and 18th, in Jul on 26th, in Aug on 29th and in Sep on 9th, 11th and 20th. First true migrants probably on 5 Oct. Small passage from 27 Oct to 9 Nov, never more than 6 in one place. Up to 5 on 3 more days from 22-29 Nov and 1 on 13 Dec.

GOLDFINCH *Carduelis carduelis* Gardell

1979 : 2 on 8th and 12 Mar and singles on 16 Jun and 28 Aug. In autumn up to 3 on 8 days from 21 Oct to 25 Nov.

1980 : 1-2 on 4 days from 15-22 Mar. Singles on 9 Jun and 6th and 8 Aug. In autumn on 5 widely scattered dates from 30 Oct to 25 Dec, max. 7 at Buskett on 27 Nov.

SISKIN *Carduelis spinus* Ekrū

1979 : Small influx on 20 Oct, then 1-2 on 31 Oct and 3 Nov.

1980 : 1 at Luqa on 3 Feb.

LINNET *Carduelis cannabina* Ġoġġin

1979 : Double figures from Jan to mid-Mar, max. 60+ at Ta' Qali on 18 Feb. 4 newly fledged young were seen in Gozo on 12 Mar. Heavy passage on 20 Mar with continuous large flocks seen passing along Ta' Ċenċ. Single to low double figures

from then on till 16 Apr. Singles on 5th and 31 Aug and on 2nd and 30 Sep. Autumn migration from 17 Oct with peak in first two weeks of Nov, max. 40+ on 3rd to 4th. Mainly in single figures from then on but c.20 at Ghadira on 24 Nov and 10+ at Ta' Gali on 2 Dec.

1980 : Single figures at first in Jan but large influxes occurred in mid-Jan. Treble figures frequently from then on till 2 Mar. Largest concentrations at roosts, with max. of 400+ at Ta' Gali on 27 Jan and 2 Feb. Single to double figures daily in Mar and Apr to 22nd. 1-2 in May to 11th. In Jun recorded on 3 days, but 7 at Mosta on 28th suggests breeding. Up to 5 occasionally in Jul-Sep to 21st, mainly in Gozo. Autumn passage: 1-3 on 3 days from 12-19 Oct followed by double figures from 26 Oct till year end, but 100+ at Buskett on 28 Oct and at San Anton on 26 Dec.

CROSSBILL *Loxia curvirostra* Kruċjat

1979 : Some reported at Buskett on 8 Jul.

SCARLET ROSEFINCH *Carpodacus erythrinus* Bumunqar

1979 : Singles at Girgenti on 22 Sep, near Victoria on 22 Oct and at St. Thomas Bay on 28 Oct.

1980 : 1 at Lunzjata in Nov.

HAWFINCH *Coccothraustes coccothraustes* Taż-Żebbuġ

1979 : 1 on 26 Jan and 1-3 on 5 days from 20 Oct to 10 Nov.

1980 : 1 at Lunzjata on 9 Jan and small influx with up to 4 in Gozo, on 6 Apr.

YELLOWHAMMER *Emberiza citrinella* Durrajsa Safra

1979 : 1 trapped at Kalkara on 8 Nov.

ORTOLAN BUNTING *Emberiza hortulana* Ortolan

1979 : Up to 5 on 3 days from 10-17 Apr.

RUSTIC BUNTING *Emberiza rustica* Durrajsa Qasiniġa

1979 : 1 at Lunzjata on 29 Nov.

LITTLE BUNTING *Emberiza pusilla* Durrajsa Qerqniġa

1979 : 1 was trapped at San Lawrence, Gozo at the end of Oct.

REED BUNTING *Emberiza schoeniclus* Durrajsa tal-Qasab

1979 : 1 on 11 Mar. In autumn single figures almost daily at Ghadira from 12 Oct till year end with max of 8+ on 5th and 16 Nov.

1980 : Up to 3 at Ghadira from Jan till 1 Mar. Autumn passage : first 1 on 9 Oct, then daily single figures from 29 Oct till year end, highest 8+ on 11 Dec. All records from Ghadira.

CORN BUNTING *Miliaria calandra* Durrajsa

1979-80 : Common breeding resident in open areas. Large flocks gather near water holes in summer, mainly from Aug to mid-Sep. Max 50+ at Buskett in Malta and 250+ at Dwejra in Gozo.

ROSE-BREASTED GROSBEAK *Pheucticus ludovicianus* Bumunqar Amerikan

1979 : 1 trapped at Delimara on 31 Oct.

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#### ERRATA:

Systematic list for 1974 - II-Merill No. 16 (July-December 1975)

SCOPS OWL *Otus scops*

Heavy passage on 10th Oct should read on 12th.

SWALLOW *Hirundo rustica*

4 pulli fledged successfully on 1 Aug. 1 Aug should read 2 Aug.

Systematic list for 1977-78 - II-Merill No. 21, 1980

GREAT SKUA *Stercorarius skua*

1978 : A ringed bird was recovered 14 km, east of Malta on 23 Jul. 23 Jul should read 23 Feb.

SCOPS OWL *Otus scops*

1977 : 1 at L-Ahrax on 10 Jul was unusual. This record was of a Short-eared Owl.

SHORT-EARED OWL *Asio flammeus*

1977 : add: 1 at L-Ahrax on 10 Jul was unusual.

## Ringing Report for 1979-81

JOE SULTANA & CHARLES GAUCI

This report covers a three-year period, 1979-1981, during which a total of 25,613 birds was ringed. This represents a decrease of 8,837 birds when compared to the previous three-year period (1976-1978). The decrease is mainly due to the fact that several ringers were actively engaged on the Ghadira project from mid-1980. Thus the ringing activity of some of the most active ringers was greatly reduced. The relatively poor migration of autumn 1979 and, in particular, of both spring and autumn of 1980 also contributed to this decrease. By the end of 1981 the grand total of birds ringed stood at 114,706 of 143 species.

The number of birds ringed in 1979 was 9,398 of 85 species; a decrease of 2,032 from the previous year's total. The slump continued in 1980 when 7,481 birds of 88 species were ringed. In 1981 a slight increase was registered as 8,734 birds of 98 species figured in the totals list.

By the end of the three-year period under review the same species occupying the 15 top places of birds ringed retained the same position except for the Sardinian Warbler, which moved into 6th place in front of the Sand Martin (this was due to the increase in ringed Sardinian Warbler pulli and the poor catches of Sand Martin in 1979 and 1980) and the Wood Warbler which moved up in front of the Yellow Wagtail. The following table shows these 15 top species ringed since 1965, with the annual totals for the 6 years 1976-1981. From it one can deduce which species have contributed towards the decrease in totals for the year 1980 as compared to the total number of 1977 which, at 13,511, was the highest for any one year since ringing started in 1965.

	1976	1977	1978	1979	1980	1981	1965-1981
Robin	1381	1843	1586	989	676	1140	14515
Chiffchaff	1108	2689	984	719	787	674	12938
Storm Petrel	460	578	1285	809	791	463	11863
Swallow	840	901	1727	824	755	1265	11512
Spanish Sparrow	820	812	694	817	562	661	8062
Sardinian Warbler	531	675	691	829	591	581	5868
Sand Martin	272	1112	538	380	181	909	5862
Garden Warbler	486	283	271	412	250	254	4519
Blackcap	252	625	551	643	285	228	4446
House Martin	359	406	272	282	111	348	3807
Subalpine Warbler	346	218	238	230	279	160	2846
Wood Warbler	348	305	145	248	255	114	2153
Yellow Wagtail	111	157	257	125	48	96	1910
Willow Warbler	139	174	248	136	158	121	1758
Redstart	153	155	128	95	30	63	1525

Although the totals ringed in the year 1979-81 are much less than the previous corresponding three years, the period under review also produced some annual records. Those for 1979 were Cetti's Warbler (60), Fan-tailed Warbler (233), Reed Warbler (122), Spectacled Warbler (255), Sardinian Warbler (829) and Blackcap (643). The record annual totals for 1980 were Little Stint (80), Common Sandpiper (44), Fan-tailed Warbler (362) and Corn Bunting (65). Those for 1981 were Little Stint (103), Ruff (18), Meadow Pipit (209), Cetti's Warbler (62) and Tree Sparrow (26). The records of Cetti's Warbler, Fan-tailed Warbler, Spectacled Warbler and Sardinian Warbler reflect the increase in pulli ringing. The record totals of waders result from the habitat management at Ghadira where since 1980, water has been present also in summer and early autumn. The record catch of Meadow Pipits in 1981 was achieved due to larger numbers present during winter, producing good catches, mainly at Lunzjata.

Eleven new species have been added to the ringing list during the period under review. These were Little Grebe and Yellow-browed Warbler in 1979; Coot, Spotted Redshank, Redshank, Marsh Sandpiper and Greenshank in 1980; and Night Heron, Stone Curlew, Short-eared Owl and Little Bunting in 1981. These have brought the number of species ringed since autumn 1965 to 143 and 1 hybrid.

Following this preamble the report consists of a list of ringing and recovery totals to 31.12.81, a ringing-recoveries section which deals with 62 recoveries of 20 species oc-

curing during 1979-81, and another section dealing with locally-recovered foreign ringed birds (52 recoveries of 28 species). As usual this last section includes birds which were recovered in earlier years but which came to our notice during the current period.

The 62 recoveries of Malta-ringed birds included in this report are those which occurred at least 5 km away from the ringing site. 32 of these were recovered abroad. As in previous years the hirundines and the Robin produced the highest number of foreign recoveries. 10 Swallows, 3 Sand Martins and 1 House Martin were found in various European countries, while 5 Robins were reported from Sweden, Finland, Italy and Tunisia (2). A White-throat ringed on spring migration at Lunzjata and recovered on its southern journey the following autumn in Egypt was the scheme's first recovery of this species. The 2nd recovery of a Nightingale turned out in Czechoslovakia. A 2nd Snipe in Italy (recovered after only 4 days in autumn!) is amongst other species figuring in the List. The local movements of 6 Cetti's Warblers and 8 Fan-tailed Warblers controlled during this period are most interesting.

The recoveries of foreign ringed birds hail from Czechoslovakia (11), U.S.S.R. (9), Sweden (5), Finland (4), France (3), Great Britain (3), Hungary (2), Austria (2), Italy (2), Holland (2), Poland (2), Denmark (1), Belgium (1), West Germany (1), East Germany (1), Greece (1), Eire (1) and S.W. Africa (1). The species which have been recovered for the first time are an Avocet from Ukraine (USSR) and a Little Stint from England. There are several other interesting recoveries including a Turnstone from S.W. Africa, a Swedish Temminck's Stint controlled a fortnight after being ringed, the first Nightjar from Sweden the first Swift from Finland, the first Chaffinch from U.S.S.R. (Kiev), and the first Sedge Warbler from Holland. Three Ospreys, two from Finland and one from Sweden, brought the total of recoveries of this species to 14 and 12 from these countries respectively. The first Marsh Harrier from Latvia SSR and the first Honey Buzzard from Hungary are two other raptors which figure in this section. The 5th Great Skua to be recovered also hailed from the Shetlands, as did the previous four birds. The hirundines, with 7 Sand Martins and 4 Swallows, top the List of recoveries.

At the beginning of the three-year period under review the ringing permit holders were J. Attard Montalto, J. Azzopardi, D. Cachia, R. Cachia Zammit, V. Cilia, E. Curmi, R. Galea, C. Gauci, M.V. Gauci, I. Gauci, B.K. German, J. Grech, M. Grima, R.M. Holman, V. Sammut, J. Sultana and R. Testa. D. Cachia and R. Galea acquired the ringing permit at the beginning of 1979. R.M. Holman left the islands in March 1979. However, at the same time J.W. Perry qualified as a ringer. During 1980 the number of ringers remained the same as in the previous year with, however, E. Curmi, M.V. Gauci and J.W. Perry being away from the islands for most of the year. During 1981 the permits of J. Azzopardi and J.W. Perry were withdrawn due to their emigration from the islands, while E. Curmi was again away for most of the year. M.V. Gauci returned from his studies abroad in July while 2 new ringers, S. Balzan and J. Borg, joined the group on attaining the required standard after a period of training.

In January 1979 the Government accorded official recognition to the MOS bird ringing scheme. An agreement between Miss A. Barbara, then Minister responsible for Culture, and the MOS was signed. The scheme was called the Valletta Bird Ringing Scheme and is to be run by a Committee appointed by the MOS and two Government representatives.

The Committee for the three-year period was composed of J. Sultana (Ringing Officer), C. Gauci (Ringing Secretary), B.K. German (Treasurer), J. Azzopardi (Committee's Secretary) and A.E. Baldacchino (Member). The representatives of the Ministry of Culture were E. Schembri and J. Vella Gaffiero. In 1981 R. Galea replaced J. Azzopardi as Committee's Secretary.

C. Gauci, Ringing Secretary, was responsible for recording and filing all the ringing and recovery data.

## RINGING AND RECOVERY TOTALS TO 31.12.81

Species	Ringed in 1979	Ringed in 1980	Ringed in 1981	Grand Total ringed 1965-1981	Grand Total recovered 1965-1981
Little Grebe <i>Tachybaptus ruficollis</i>	1	-	-	1	-
Cory's Shearwater <i>Calonectris diomedea</i>	51	23	59	773	20
Manx Shearwater <i>Puffinus puffinus</i>	64	28	22	380	3
Storm Petrel <i>Hydrobates pelagicus</i>	809	791	463	11,863	23
Little Bittern <i>Ixobrychus minutus</i>	2	-	1	22	1
Night Heron <i>Nycticorax nycticorax</i>	-	-	1	1	-
Kestrel <i>Falco tinnunculus</i>	-	-	1	9	1
Hobby <i>Falco subbuteo</i>	-	-	-	1	-
Quail <i>Coturnix coturnix</i>	1	-	-	4	-
Water Rail <i>Rallus aquaticus</i>	-	2	1	20	1
Spotted Crake <i>Porzana porzana</i>	1	-	-	8	1
Little Crake <i>Porzana parva</i>	-	-	-	5	-
Baillon's Crake <i>Porzana pusilla</i>	-	-	-	1	-
Moorhen <i>Gallinula chloropus</i>	4	1	5	41	2
Coot <i>Fulica atra</i>	-	1	-	1	-
Stone Curlew <i>Burhinus oedicephalus</i>	-	-	1	1	-
Little Ringed Plover <i>Charadrius dubius</i>	-	7	2	37	1
Ringed Plover <i>Charadrius hiaticula</i>	-	-	-	4	-
Lapwing <i>Vanellus vanellus</i>	-	-	-	1	-
Little Stint <i>Calidris minuta</i>	7	80	103	337	4
Temminck's Stint <i>Calidris temminckii</i>	-	2	9	20	-
Curlew Sandpiper <i>Calidris ferruginea</i>	4	2	6	29	3
Dunlin <i>Calidris alpina</i>	2	5	10	24	-
Ruff <i>Philomachus pugnax</i>	-	1	18	32	1
Jack Snipe <i>Lymnocyptes minimus</i>	5	2	4	16	1
Snipe <i>Gallinago gallinago</i>	3	3	10	28	2
Great Snipe <i>Gallinago media</i>	2	-	1	5	1
Spotted Redshank <i>Tringa erythropus</i>	-	1	-	1	-
Redshank <i>Tringa totanus</i>	-	1	1	2	-
Marsh Sandpiper <i>Tringa stagnatilis</i>	-	1	-	1	-

Greenshank <i>Tringa nebularia</i>	-	1	-	1	-
Green Sandpiper <i>Tringa ochropus</i>	-	1	1	18	3
Wood Sandpiper <i>Tringa glareola</i>	1	12	14	76	7
Common Sandpiper <i>Actitis hypoleucos</i>	6	44	29	112	-
Mediterranean Gull <i>Larus melanocephalus</i>	-	-	-	1	-
Black-headed Gull <i>Larus ridibundus</i>	-	-	-	1	1
Herring Gull <i>Larus argentatus</i>	4	2	2	22	2
Turtle Dove <i>Streptopelia turtur</i>	4	2	3	32	4
Cuckoo <i>Cuculus canorus</i>	1	1	1	17	-
Scops Owl <i>Otus scops</i>	2	3	1	85	5
Short-eared Owl <i>Asio flammeus</i>	-	-	1	1	-
Nightjar <i>Caprimulgus europaeus</i>	-	-	-	11	1
Swift <i>Apus apus</i>	-	-	1	3	-
Kingfisher <i>Alcedo atthis</i>	2	7	7	53	7
Hoopoe <i>Upupa epops</i>	-	-	-	7	-
Wryneck <i>Jynx torquilla</i>	20	7	8	218	1
Short-toed Lark <i>Calandrella brachydactyla</i>	3	7	27	129	1
Woodlark <i>Lullula arborea</i>	-	-	-	2	-
Skylark <i>Alauda arvensis</i>	-	-	-	26	4
Sand Martin <i>Riparia riparia</i>	380	181	909	5,862	28
Swallow <i>Hirundo rustica</i>	824	755	1,265	11,512	76
Red-rumped Swallow <i>Hirundo daurica</i>	-	-	5	30	1
House Martin <i>Delichon urbica</i>	282	111	348	3,807	12
Richard's Pipit <i>Anthus novaeseelandiae</i>	-	-	-	1	-
Tawny Pipit <i>Anthus campestris</i>	-	-	1	8	-
Olive-backed Pipit <i>Anthus hodgsoni</i>	-	-	-	1	-
Tree Pipit <i>Anthus trivialis</i>	34	15	39	723	1
Meadow Pipit <i>Anthus pratensis</i>	18	18	209	720	6
Red-throated Pipit <i>Anthus cervinus</i>	-	1	1	18	-
Water Pipit <i>Anthus spinoletta</i>	-	-	-	5	-
Yellow Wagtail <i>Motacilla flava</i>	125	48	96	1,910	19
Grey Wagtail <i>Motacilla cinerea</i>	14	16	21	431	7
White Wagtail <i>Motacilla alba</i>	6	8	27	302	5

Wren <i>Troglodytes troglodytes</i>	-	2	-	17	-
Dunnock <i>Prunella modularis</i>	75	58	33	739	4
Rufous Bush Chat <i>Cercotrichas galactotes</i>	1	-	1	5	-
Robin <i>Erithacus rubecula</i>	989	676	1,140	14,515	143
Thrush Nightingale <i>Luscinia luscinia</i>	1	-	1	4	-
Nightingale <i>Luscinia megarynchos</i>	90	33	33	995	2
Bluethroat <i>Luscinia svecica</i>	3	2	4	42	-
Black Redstart <i>Phoenicurus ochruros</i>	-	2	15	62	1
Redstart <i>Phoenicurus phoenicurus</i>	95	30	63	1,525	2
Whinchat <i>Saxicola rubetra</i>	17	35	9	304	-
Stonechat <i>Saxicola torquata</i>	95	65	87	817	2
Isabelline Wheatear <i>Oenanthe isabellina</i>	-	-	-	1	-
Wheatear <i>Oenanthe oenanthe</i>	13	3	2	109	1
Black-eared Wheatear <i>Oenanthe hispanica</i>	-	-	-	2	-
Rock Thrush <i>Monticola saxatilis</i>	-	-	-	3	-
Blue Rock Thrush <i>Monticola solitarius</i>	1	5	4	52	3
Ring Ouzel <i>Turdus torquatus</i>	-	-	-	3	-
Blackbird <i>Turdus merula</i>	5	3	3	135	12
Fieldfare <i>Turdus pilaris</i>	-	-	1	2	-
Song Thrush <i>Turdus philomelos</i>	41	31	26	529	27
Redwing <i>Turdus iliacus</i>	-	-	-	24	-
Cetti's Warbler <i>Cettia cetti</i>	60	50	62	424	12
Fan-tailed Warbler <i>Cisticola juncidis</i>	233	362	168	1,203	25
Grasshopper Warbler <i>Locustella naevia</i>	-	1	-	3	-
River Warbler <i>Locustella fluviatilis</i>	-	-	-	1	-
Savi's Warbler <i>Locustella luscinioides</i>	6	-	2	31	-
Moustached Warbler <i>Acrocephalus melanopogon</i>	3	2	1	51	1
Sedge Warbler <i>Acrocephalus schoenobaenus</i>	103	25	68	1,144	1
Marsh Warbler <i>Acrocephalus palustris</i>	2	-	-	5	-
Reed Warbler <i>Acrocephalus scirpaceus</i>	122	35	44	858	-
Great Reed Warbler <i>Acrocephalus arundinaceus</i>	62	31	15	745	2
Olivaceous Warbler <i>Hippolais pallida</i>	1	-	-	3	-
Icterine Warbler <i>Hippolais icterina</i>	41	47	18	582	-

Melodious Warbler <i>Hippolais polyglotta</i>	-	1	-	2	-
Dartford Warbler <i>Sylvia undata</i>	-	2	1	35	-
Spectacled Warbler <i>Sylvia conspicillata</i>	255	221	65	1,113	2
Subalpine Warbler <i>Sylvia cantillans</i>	230	279	160	2,846	-
Sardinian Warbler <i>Sylvia melanocephala</i>	829	591	681	5,868	25
Ruppell's Warbler <i>Sylvia rueppelli</i>	-	-	-	2	-
Orphean Warbler <i>Sylvia hortensis</i>	-	-	-	4	-
Barred Warbler <i>Sylvia nisoria</i>	-	-	-	1	-
Lesser Whitethroat <i>Sylvia curruca</i>	5	-	3	29	-
Whitethroat <i>Sylvia communis</i>	72	44	16	1,124	1
Garden Warbler <i>Sylvia borin</i>	412	250	254	4,519	8
Blackcap <i>Sylvia atricapilla</i>	643	285	228	4,446	11
Yellow-browed Warbler <i>Phylloscopus inornatus</i>	1	-	5	6	-
Bonelli's Warbler <i>Phylloscopus bonelli</i>	4	2	3	71	-
Wood Warbler <i>Phylloscopus sibilatrix</i>	248	255	114	2,153	-
Chiffchaff <i>Phylloscopus collybita</i>	719	787	674	12,938	32
Willow Warbler <i>Phylloscopus trochilus</i>	136	158	121	1,758	1
Goldcrest <i>Regulus regulus</i>	4	4	14	71	-
Firecrest <i>Regulus ignicapillus</i>	12	7	10	174	1
Spotted Flycatcher <i>Muscicapa striata</i>	52	58	19	749	3
Red-breasted Flycatcher <i>Ficedula parva</i>	3	1	1	38	-
Semi-collared Flycatcher <i>Ficedula semitorquata</i>	-	-	-	3	-
Collared Flycatcher <i>Ficedula albicollis</i>	13	7	12	182	-
Pied Flycatcher <i>Ficedula hypoleuca</i>	74	111	39	1,247	2
Penduline Tit <i>Remiz pendulinus</i>	-	-	-	2	1
Golden Oriole <i>Oriolus oriolus</i>	9	11	4	101	6
Red-backed Shrike <i>Lanius collurio</i>	6	5	-	68	-
Woodchat Shrike <i>Lanius senator</i>	7	6	10	117	-
Starling <i>Sturnus vulgaris</i>	3	1	2	62	6
Spanish Sparrow <i>Passer hispaniolensis</i>	817	562	661	8,061	100
Tree Sparrow <i>Passer montanus</i>	16	24	26	162	1
Tree Sparrow x Spanish Sparrow <i>Passer montanus x hispaniolensis</i>	-	-	-	1	1
Chaffinch <i>Fringilla coelebs</i>	29	15	29	345	6

Brambling <i>Fringilla montifringilla</i>	-	1	-	4	-
Serín <i>Serinus serinus</i>	1	26	13	187	4
Greenfinch <i>Carduelis chloris</i>	1	-	2	258	18
Goldfinch <i>Carduelis carduelis</i>	1	-	1	13	1
Siskin <i>Carduelis spinus</i>	-	-	1	6	-
Linnet <i>Carduelis cannabina</i>	-	10	7	886	53
Scarlet Rosefinch <i>Carpodacus erythrinus</i>	1	-	-	2	-
Lapland Bunting <i>Calciarius lapponicus</i>	-	-	-	1	-
Yellowhammer <i>Emberiza citrinella</i>	-	-	-	1	-
Ortolan Bunting <i>Emberiza hortulana</i>	-	-	-	2	-
Rustic Bunting <i>Emberiza rustica</i>	-	-	-	4	1
Little Bunting <i>Emberiza pusilla</i>	-	-	1	1	-
Yellow-breasted Bunting <i>Emberiza aureola</i>	-	-	-	1	-
Reed Bunting <i>Emberiza schoeniclus</i>	17	3	4	59	-
Corn Bunting <i>Miliaria calandra</i>	38	65	19	235	5
Totals	9,398	7,481	8,734	114,706	783

#### RINGING RECOVERIES

This section deals with 62 recoveries of 20 species occurring during 1979-81. Only those recovered at least 5 km away from the ringing site are included. For local recoveries the approximate distance covered and direction are given. The co-ordinates of localities are given once when these are first mentioned.

##### Key to symbols and terms used in the recovery list

- Arrangement of entry : recoveries are arranged by species, and within the species usually by date of recovery. Ringing details are given on the first line and recovery data on the second.
- Ring number : where this is followed by an asterisk (\*) the ring has been returned.
- Age code : 1 = pullus; young bird ringed in the nest.  
 1J = fledged; but flying so weakly that it is obviously incapable of having travelled far from the nest.  
 2 = fully grown; year of hatching quite unknown.  
 3 = definitely hatched during current calendar year.  
 3J = definitely hatched during current calendar year and still partly or completely in juvenile body plumage.  
 4 = hatched before current calendar year; exact year unknown.  
 5 = definitely hatched during last calendar year.  
 6 = hatched before last calendar year; exact year unknown.  
 (a number in brackets beside the age code indicates the size of the brood).
- Sex : M = male.  
 F = female.

Manner of recovery : v = caught or trapped, and released with ring.  
 + = shot or killed by man.  
 x = found dead or dying.  
 () = caught or trapped alive and not released, or released but with ring removed.  
 /?/ = manner of recovery unknown.

Date of recovery : where this is unknown the date of the reporting letter is given instead and is shown in brackets. An 00 in the date indicates that the exact day or month are unknown.

Cory's Shearwater *Calonectris diomedea*

FV05.274 4 18.06.77 Filfla : 35.47 N, 14.25 E.  
 + 27.03.79 nr. Syracuse : 37.04 N, 15.18 E, Sicily, ITALY.  
 FV05.003 4 07.06.75 Filfla.  
 x 28.02.80 (off Sta. Lucia)  
 (found shot - with several others floating in the sea)  
 FV05.289 4 10.06.78 Filfla  
 v 20.03.80 nr. Ta' Cenc, N. Comino Channel (28 km SW).  
 FV05.286\* 4 10.06.78 Filfla.  
 /?/ 07.03.81 nr. Monastir : 35.21 N, 10.10 E, TUNISIA.

Storm Petrel *Hydrobates pelagicus*

220.6646 4 01.07.78 Filfla.  
 + 07.04.79 nr. Syracuse : 37.04 N, 15.18 E, Sicily, ITALY.

Snipe *Gallinago gallinago*

CC81.618\* 3 26.09.81 Ghadira : 35.58 N, 14.21 E.  
 + 30.09.81 River Aniene, nr. Tivoli : 41.58 N, 12.48 E, (Rome), ITALY.

Herring Gull *Larus argentatus*

GP27.665 1 26.05.79 Filfla.  
 x (07.01.80) Gudja (12 km NE).

Kingfisher *Alcedo atthis*

SE28.442 3F 29.09.77 Mellieha : 35.58 N, 14.22 E.  
 + (01.07.78) Mosta (7 km NNE).

Sand Martin *Riparia riparia*

KH83.361\* 4 21.04.77 Lunzjata Valley : 36.03 N, 14.14 E. (Gozo).  
 v 03.06.79 Mehelnic, nr. Sumperek : 49.47 N, 16.55 E, (Olomouc)  
 (re-ringed Praha T149.760) CZECHOSLOVAKIA.  
 A033.070 4 29.04.78 Lunzjata.  
 v(colony) 08.07.79 Hordaland : 60.12 N, 05.27 E, NORWAY.  
 A033.316\* 4 29.04.78 Lunzjata Valley.  
 x 25.07.80 nr. Loyev, Gomel : 51.53 N, 30.39 E, U.S.S.R.  
 17.027\* 4 01.05.81 Lunzjata Valley.  
 + 06.05.81 Ghajn Rihana (17 km SE).

Swallow *Hirundo rustica*

KH84.238 4M 10.05.77 Lunzjata Valley.  
 v 17.06.77 nr. Balakleya, Kharkov : 49.32 N, 36.51 E, U.S.S.R.  
 Mdina 4 02.05.78 Lunzjata Valley.  
 B9.533 x(cat) 29.05.78 Dabel, Kr. Sternberg : 53.40 N, 11.54 E, Bez Schuearin,  
 E. GERMANY.  
 Mdina 4F 29.04.78 Lunzjata Valley.  
 B9.097 v 21.07.78 Prosečné : 50.34 N, 15.41 E (Trutnov), CZECHOSLOVAKIA.

KC28.359	4M	16.03.79	Lunzjata Valley.
	+	23.03.79	Ia' Gali (22 km SE).
A036.364	4F	28.04.79	Lunzjata Valley.
	/?/	09.05.79	Tarriak : 43.28 N, 24.03 E, Knezha (Vratsa), BULGARIA.
Mdina	4M	09.04.78	Salina : 35.55 N, 14.25 E.
B7.903	x	09.06.79	Höllviksnäs : 55.25 N, 12.56 E, (Skåne), SWEDEN.
A036.673	4F	08.05.79	Lunzjata Valley.
	v(breeding)	21.06.79	Komea : 61.23 N, 26.13 E, Heinola, Mikkelä, FINLAND.
KP65.272*	4M	08.04.78	Lunzjata Valley.
	x (cat)	20.08.79	Pordenone : 45.47 N, 12.39 E, (Gorizia & Udine), ITALY.
KP66.325	4F	16.04.78	Lunzjata Valley.
	x	(07.01.80)	Gudja (34 km SE).
A036.952	3	07.10.79	Lunzjata Valley.
	x (car)	(05.06.80)	Kleinwaltersdorf : 50.55 N, 13.18 E, (Karl-Marx-Stadt) E. GERMANY.
Mdina	4	29.04.78	Lunzjata Valley.
B9.081	x	28.06.80	St. Michaelisdonn : 53.59 N, 09.07 E, (Schleswig-Holstein) W. GERMANY.
18.106*	4M	15.05.81	Lunzjata Valley.
	x	08.11.81	Istres : 43.31 N, 04.59 E, Bouches-du-Rhone, FRANCE.
House Martin <i>Delichon urbica</i>			
KH84.409*	4	11.05.77	Lunzjata Valley.
	x	16.05.80	Zhuvintas Reserve : 54.28 N, 23.38 E, (Alytus), LITHUANIAN S.S.R.
Robin <i>Erithacus rubecula</i>			
00.284*	2	04.12.76	Marsa : 35.53 N, 14.30 E.
	x	(05.04.78)	Dogna : 46.27 N, 13.19 E, (Udine), ITALY.
A036.001*	4	07.04.79	Ghajh Rihana : 35.54 N, 14.25 E.
	x	28.02.80	Bou Ficha : 36.18 N, 10.28 E, TUNISIA.
Mdina	6	28.01.78	Has-Saptan : 35.50 N, 14.31 E.
B6.811	v	20.04.81	Offenby : 56.12 N, 16.24 E (Öland), SWEDEN.
A034.605*	3	09.12.78	Buskett : 35.51 N, 14.25 E.
	x (car)	09.06.81	Ala-Vuokki : 64.43 N, 29.30 E, (Oulu), FINLAND.
18.248	3	09.10.81	Lunzjata Valley.
	v	22.10.81	Buskett (26 km SE).
18.936*	3	31.10.81	Ghadira.
	+	22.11.81	Bou Thadi, TUNISIA.
Nightingale <i>Luscinia megarhynchos</i>			
03.261	4	31.03.79	Salina.
	x	05.05.79	Cheb : 50.06 N, 12.22 E, (Eger), CZECHOSLOVAKIA.
Song Thrush <i>Turdus philomelos</i>			
XA99.238	6	13.03.77	Buskett.
	()	(02.03.79)	Palmi : 38.21 N, 15.51 E, (Reggio Calabria), ITALY.
Cetti's Warbler <i>Cettia cetti</i>			
07.384	3M	27.07.79	Wied il-Luq (Buskett).
	v	12.09.79	loco.
	v	02.11.79	Bahar ic-Caqhaq (10 km NE).
KP64.867	1(4/4)	22.04.79	Wied il-Luq (Buskett).
	v=F	27.01.80	Ghajh Zejtuna (Mellieha) (12 km NNW).

05.382	2F	16.11.80	Xemxija : 35.57 N, 14.23 E.
	v	11.03.81	Rabat (7 km SSE).
	v	20.09.81	Xemxija.
17.715	2F	11.06.81	Ghadira.
	v	09.08.81	Wied il-Luq (Buskett) (13 km SE).
15.135	1(4/4)	06.05.81	Xemxija.
	v	20.09.81	Wied il-Luq (Buskett) (9 km SSE).
14.082	3F	23.08.81	Wied il-Luq (Buskett).
	v	11.11.81	Lunzjata Valley (26 km NW).

Fan-tailed Warbler *Cisticola juncidis*

952.121	2	04.08.76	Ghajj Rihana.
	v	21.08.78	Ghadira (8 km NW).
	v(breeding)F	15.07.79	Ghajj Rihana.
	v	31.07.79	Ghadira.
A3.057	4F	08.07.79	Wied il-Luq (Buskett).
	v	31.07.79	Ghadira (13 km NW).
1A8.164	1(6/6)	17.06.77	Ghajj Rihana.
	v	25.08.77	Marsa (9 km ESE)
	v	10.09.77	Marsa.
	x	15.09.79	Marsa.
962.494	4F	02.07.79	Chadwick Lakes : 35.54 N, 14.23 E.
	v	12.09.79	Lunzjata Valley (21 km NW).
1A8.786	3	30.09.78	Girgenti Valley : 35.51 N, 14.26 E.
	v=F	25.06.80	Ghadira (14 km NW).
A1.878	3	27.07.78	Chadwick Lakes.
	v	24.09.80	Marsa (10 km ESE).
A4.906	1(5/5)	25.06.80	Ghadira.
	v	30.09.80	Birzebbuga (21 km SE).
A5.392	1(6/6)	05.06.81	Ghajj Rihana.
	v=F	02.11.81	Ghadira (8 km NW).

Sardinian Warbler *Sylvia melanocephala*

A035.870	1(4/4)	31.05.79	Ta' Gali : 35.53 N, 14.26 E.
	v	19.01.80	Ghadira (11 km NW).
06.700	3J	04.07.79	Ta' Gali.
	v=4F	05.07.81	Wied il-Luq (Buskett) (5 km SW).
14.051	3J M	19.08.81	Wied il-Luq (Buskett).
	v	03.11.81	Ghadira (13 km NW).

Whitethroat *Sylvia communis*

16.823	4	01.05.81	Lunzjata Valley.
	/?/	10.09.81	Marsa Matruh : 31.19 N, 27.15 E, EGYPT.

Garden Warbler *Sylvia borin*

KC27.491	4	10.04.76	Wied Znuber : 35.49 N, 14.31 E.
	v	28.07.79	Diosjeno : 47.55 N, 19.02 E, (Nograd), HUNGARY.
06.639*	4	20.05.79	Ghadira.
	+	20.08.79	Monzanbano : 45.09 N, 10.51 E, (Mantova), ITALY.
07.799*	3	13.09.79	Wied il-Luq (Buskett).
	+	(01.09.80)	Supersano : 40.21 N, 18.10 E, (Lecce), ITALY.

Blackcap *Sylvia atricapilla*

09.237*	4M	22.03.80	Buskett.
	x	04.05.80	Lidangen, Almnas, 6 km S.Hjo : 58.15 N, 14.16 E (Vastergotland), SWEDEN.
KH82.144*	4M	26.03.77	Luqa : 35.52 N, 14.29 E.
	+	(30.09.80)	Genoni, Nuoro : 39.42 N, 09.06 E, (Sardinia), ITALY.

Chiffchaff *Phylloscopus collybita*

A2.236	4	28.01.79	Salina.
	v	12.12.80	Sirte : 31.10 N, 16.30 E, (Tripoli), LIBYA.

Spanish Sparrow *Passer hispaniolensis*

BR80.387	3J	08.06.75	Rabat : 35.53 N, 14.24 E.
	v=4M	21.10.79	Ghadira (10 km NW).
NC47.471*	2M	14.10.78	Xemxija.
	x(cat)	24.01.80	San Gwann (10 km ESE).
NA49.532	2M	28.12.79	Mtarfa : 35.53 N, 14.24 E.
	v	03.04.80	Ghadira (10 km NW).

Corn Bunting *Miliaria calandra*

NC47.586	3	15.07.78	Wied il-Luq (Buskett).
	v	17.03.79	Kirkop (7 km E).
BV52.155	1J	07.04.79	Ta' Qali.
	v	11.08.79	Wied il-Luq (5 km SW).

FOREIGN RINGED BIRDS RECOVERED IN MALTA

This section deals with 52 foreign ringed birds of 26 species recovered in Malta. Some of these were recovered previous to the three-year period (1979-81) covered by this report but they only came to our notice lately. The symbols and terms used are the same as those which appeared in the Ringing Recoveries.

Gannet *Sula bassana*

London	1	01.07.80	Great Saltee : 52.07 N, 06.38 W, (Wexford), EIRE.
1.151.068	+	10.12.81	off south coast : ca. 35.47 N, 14.30 E.

Cormorant *Phalacrocorax carbo*

Copenhagen	1	06.06.81	Braendegårds Sø, Fyn : 55.08 N, 10.24 E, DENMARK.
5.607	+	18.10.81	Marsaxlokk : 35.49 N, 14.33 E.

Purple Heron *Ardea purpurea*

Moskwa	1	13.06.73	Krasnodar Region : 40.03 N, 38.09 E, nr. Primorsko-
B-102.774			Akhtarsk, U.S.S.R.
	+	27.03.79	Ta' Qali : 35.54 N, 14.26 E.
Budapest	1	29.05.79	Pálmonostora : 46.37 N, 19.26 E, HUNGARY.
501.444	+	08.10.79	Gozo : ca. 36.02 N, 14.16 E.

Honey Buzzard *Pernis apivorus*

Budapest	1	18.07.81	Bélmegyer : 46.53 N, 21.13 E, HUNGARY.
504.879	+	18.09.81	Gudja : 35.51 N, 14.30 E.
			(reported as trapped and released !).

Marsh Harrier *Circus aeruginosus*

Praha	1(2/2)	19.06.77	Sezemice : 50.04 N, 15.52 E, (Pardubice), CZECHOSLOVAKIA.
D62.562	+	21.03.80	Gozo : ca. 36.01 N, 14.14 E.
Riga	2F	08.05.79	Engure Lake : 57.15 N, 23.07 E, Takums, (Latvia), U.S.S.R.
C12.531	+	08.10.81	Lunzjata Valley : 36.03 N, 14.14 E.

Osprey *Pandion haliaetus*

Helsinki	1	22.06.80	Porvoo, Uudenmaan, (Lääni), FINLAND.
M-13.899	+	21.09.80	Buskett : 35.51 N, 14.25 E.
Helsinki	1	10.08.81	Murmo, Vaasan, (Lääni), FINLAND.
D-85.226	+	15.10.81	Buskett : 35.51 N, 14.25 E.
Stockholm	1	08.08.81	Melsliden, Norsjö : 64.42 N, 20.00 E, (Västerbotten), SWEDEN.
9.204.928	+	(13.11.81)	Ghar Lepsi : 35.52 N, 14.30 E.

Kestrel *Falco tinnunculus*

Praha	1	18.06.74	Sázava nad Sázavou : 49.52 N, 14.54 E, (Kutná hora), CZECHOSLOVAKIA.
D56.343	+	11.10.76	Kercem : 36.02 N, 14.12 E (Gozo).
Paris	1(5/5)	27.06.76	Bassecourt : 47.20 N, 07.14 E, (Jura), FRANCE.
K20.902	+	00.03.78	Attard : 35.53 N, 14.27 E.

Avocet *Recurvirostra avosetta*

Moskwa	1	19.06.76	Nizovia, Tiligula : 46.40 N, 31.09 E, (Ukraine), U.S.S.R.
E-937.135	+	27.11.76	Marsaxlokk : 35.50 N, 14.33 E.

Little Stint *Calidris minuta*

London	4	12.09.78	Walcot, Wellington : 52.42 N, 02.35 W, (Saloo), ENGLAND.
BV69.310	()	(23.04.80)	nr. Ghaxaq : 35.51 N, 14.31 E.

Temminck's Stint *Calidris temminckii*

Stockholm	3	22.08.81	Ottenby : 56.12 N, 16.24 E, (Öland), SWEDEN.
2.835.012	v	06.09.81	Ghadira : 35.58 N, 14.21 E.

Wood Sandpiper *Tringa glareola*

Praha	4	16.07.75	Křenovice : 48.59 N, 14.21 E, "Yyšatov" pond, (České Budějovice), CZECHOSLOVAKIA.
K298.255	+	19.04.77	Xewkija : 36.02 N, 14.15 E (Gozo).

Turnstone *Arenaria interpres*

Pretoria	2	22.09.77	Walvis Bay : 22.52 S, 14.31 E, S.W. AFRICA.
450.441	+	09.05.82	Marsaxlokk : 35.50 N, 14.32 E.

Great Skua *Stercorarius skua*

London	1	15.07.78	Foula : 60.08 N, 02.05 W, (Shetland), Scotland.
HW76.875*	x	(04.04.79)	Marsalforn Bay : 36.04 N, 14.16 E, (Gozo).

Mediterranean Gull *Larus melanocephalus*

Moskwa	1	19.06.80	Smalenyi Isl. : 46.15 N, 32.00 E, (Kherson Region), (Ukraine), U.S.S.R.
M-514.430	+	17.11.80	10 km off Marsalforn : 36.05 N, 14.19 E, (Gozo).

Black-headed Gull *Larus ridibundus*

Moskwa	1	19.05.76	Ryazan Region : 54.33 N, 40.44 E, (nr. Izhevskoe), U.S.S.R.
M-110.518	+	00.12.76	Marsa : 35.53 N, 14.30 E.
Gdansk	1	26.05.79	"Kaczy staw", Kokotec : 50.36 N, 18.42 E, (Czestochowa),
FB33.520	+	00.11.80	POLAND. Luqa : 35.52 N, 14.30 E.
Helgoland	3	20.09.80	Kiel : 54.20 N, 10.08 E (Schleswig Holstein), W. GERMANY.
5.229.369	+	15.12.80	Malta : 35.53 N, 14.30 E.

Slender-billed Gull *Larus genei*

Moskwa	1	10.06.80	Orlov Isles : 46.17 N, 31.45 E, (Ukraine), U.S.S.R.
M513.637	+	09.10.81	Marsaxlokk : 35.50 N, 14.33 E.

Turtle Dove *Streptopelia turtur*

Radolfzell	4	21.04.79	Inzing : 47.16 N, 11.12 E, Bez. Innsbruck (Tirol), AUSTRIA.
ET3.501	+	09.04.80	Birzebbuga : 35.50 N, 14.32 E.
Bologna	4	01.05.77	Valle Branega, Pra' : 44.26 N, 08.47 E, (Genoa), ITALY.
T3.839	+	25.04.81	Bidnija : 35.55 N, 14.24 E.

Cuckoo *Cuculus canorus*

Moskwa	4	07.05.75	nr. Rybachiy : 55.11 N, 20.49 E, (Kaliningrad), U.S.S.R.
P381.780	+	21.04.79	St. Andrew's : 35.55 N, 14.27 E.

Nightjar *Caprimulgus europaeus*

Stockholm	4F	21.05.76	Ottenby : 56.12, 16.24 E, (Oland), SWEDEN.
4.133.416	+	02.05.79	Bingemma : 35.55 N, 14.22 E.

Swift *Apus apus*

Helsinki	4M	28.07.76	Lammi : 61.12 N, 25.07 E, Hämeen, (Lääni), FINLAND.
A-297.283	+	15.09.76	Tal-Handaq : 35.52 N, 14.28 E.

Sand Martin *Riparia riparia*

Hiddensee	4F	11.07.78	Brettin : 52.25 N, 12.10 E, (Genthin), E. GERMANY.
90.860.584*	v	28.04.79	Ghajn Rihana : 35.54 N, 14.24 E.
London	3	30.08.75	Lake Koronia : 40.40 N, 23.13 E, (Makedonia), GREECE.
KE49.975*	+	29.04.79	Luqa : 35.52 N, 14.29 E.
Gdansk	4F	28.05.78	Pruszcz Gdański : 54.16 N, 18.38 E, (Gdańsk), POLAND.
KA75.219	v	05.04.80	Marsalforn : 36.02 N, 14.16 E, (Gozo).
Bruxelles	4	21.07.78	Comblain : 50.28 N, 05.35 E, (Liège), BELGIUM.
702.885	()	25.04.80	Santa Lucia : 35.52 N, 14.31 E.
Praha	3	27.07.79	Sedlec, Nesyt pond : 48.47 N, 16.42 E, (Břeclav),
T163.982	()	27.04.80	CZECHOSLOVAKIA Santa Lucia : 35.52 N, 14.31 E.
Helsinki	4M	28.06.80	Hattula : 61.03 N, 24.15 E, Hämeen (Lääni), FINLAND.
J-745.101	v	22.04.81	Lunzjata Valley : 36.04 N, 14.14 E.
London	3J	02.07.80	Hurst Green, Whalley : 50.50 N, 02.28 W, (Lancashire),
A781.749	v	22.04.81	ENGLAND. Lunzjata Valley : 36.04 N, 14.14 E.

Swallow *Hirundo rustica*

Arnhem	3	02.08.77	Elburg : 52.27 N, 05.50 E, (Gelderland), HOLLAND.
A139.665	+	00.04.79	Mriehe! : 35.53 N, 14.28 E.
Paris	3	31.08.76	Nothern : 48.56 N, 08.09 E, (Bas-Rhin), FRANCE.
2.455.479	+	00.04.79	Siggiewi : 35.51 N, 14.26 E.
Paris	3	25.09.78	Étang la Cotille : 45.39 N, 04.07 E, (Loire)
2.398.541			rel. St. Etienne : 45.26 N, 04.24 E, (Loire), FRANCE.
	v	12.05.79	Ghadira : 35.58 N, 14.21 E.
Stockholm	3	08.08.78	Falsterbo : 55.23 N, 12.50 E, (Skane), SWEDEN
AA61.090	v	14.05.79	Lunzjata Valley : 36.03 N, 14.14 E.

Robin *Erithacus rubecula*

Moskwa	2	14.10.78	Zmeinyi Isl. : 45.11 N, 30.14 E, Black Sea, (Ukraine), U.S.S.R.
XA548.215			Hal Far : 35.49 N, 14.31 E.
	v	12.03.80	
Stockholm	2	03.09.81	Reningsverket : 58.45 N, 17.05 E, Nyköping, (Södermanland) SWEDEN.
AC68.907			Rabat : 35.53 N, 14.24 E.
	()	31.10.81	

Sedge Warbler *Acrocephalus schoenobaenus*

Arnhem	4	18.06.78	Rohel : 52.55 N, 05.50 E, (Haskerland), HOLLAND.
A174.212	v	07.04.79	Lunzjata Valley : 36.03 N, 14.14 E.

Garden Warbler *Sylvia borin*

Bologna	2	03.11.77	Montecristo, Portoferraio (Livorno), ITALY.
L873.336	v	30.04.78	Salina : 35.55 N, 14.25 E.
Radolfzell	3	26.08.77	Molzbichl : 46.46 N, 13.34 E, Bez. Spittal/Drau, (Käffnten), AUSTRIA.
CC75.256			Ghadira : 35.58 N, 14.21 E.
	v	03.05.79	

Blackcap *Sylvia atricapilla*

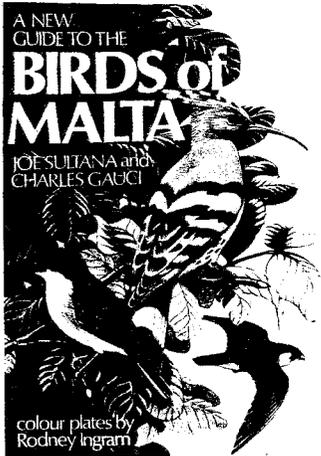
Praha	3	05.08.77	Sedlec : 48.47 N, 16.42 E, (Breclav), CZECHOSLOVAKIA.
M764.536	v=4M	18.03.79	Rabat : 35.53 N, 14.24 E.

Chaffinch *Fringilla coelebs*

Moskwa	4F	01.10.80	Lebedivka : 50.40 N, 30.30 E, (Kiev), U.S.S.R.
XA-478.579	()	13.03.81	Gharb : 36.00 N, 14.14 E, (Gozo).

Linnet *Carduelis cannabina*

Praha	1	13.05.74	Piešťany : 48.36 N, 17.49 E (Trnava), CZECHOSLOVAKIA.
Z500.291	()	04.01.77	Kercem : 36.02 N, 14.12 E, (Gozo).
Praha	3	24.09.77	ibidem.
580.825	()	11.11.78	Zurrieq : 35.50 N, 14.29 E.
Praha	1	26.05.78	Horná Streda : 48.39 N, 17.51 E, (Trenčín), CZECHOSLOVAKIA.
M744.526			Hal Far : 35.49 N, 14.31 E.
	()=M	11.03.79	
Praha	3F	26.09.79	Štúrovo : 47.48 N, 18.43 E (Nové Zámky), CZECHOSLOVAKIA.
T123.300	()	00.12.79	Hal Far : 35.49 N, 14.31 E.
Praha	3M	05.09.79	Sedlec : 48.47 N, 16.42 E, (Břec!av), CZECHOSLOVAKIA.
T143.403	()	17.01.80	Gudja : 35.51 N, 14.31 E.
Praha	3	01.09.79	ibidem.
M837.940	()	00.01.80	Bidnija 35.54 N, 14.23 E.



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