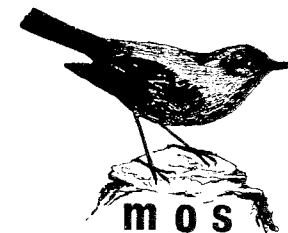


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## THE GIANT MALTESE CRANE

E. MARJORIE NORTHCOTE

The giant Maltese Crane *Grus melitensis* Lydekker, 1890 was about the size of the Sarus Crane *G. antigone* (L.), the largest living crane species (that weighs c. 7-8kg, Johnsgard 1983). It was sympatric with the Common Crane *G. grus* (L.) (Northcote 1982a) (that weighs c. 6kg, Cramp & Simmons 1980) and evidently widespread on Malta; remains of both cranes have been found in Pleistocene deposits at Żebbuġ, Tal-Gnien and Mnejdra.

Bones often occurred in river terrace, cave or fissure infillings (Adams 1870) but no precise dates are available for either sediments or fauna (Bosence, Pedley & Rose 1981, Zammit-Maempel 1981, Northcote 1982b). The crane bones were associated with giant Maltese Swans *Cygnus falconeri* Parker, 1865 and with *Elephas melitensis* Falconer, 1862 and/or *E. falconeri* Busk, 1867 (Northcote 1981-83). The elephants flourished on Sicily/Malta during a period equivalent to the Ipswichian (Eemian) Interglacial Stage (Sondaar & Boekschoten 1967 : 567, Sondaar 1971). Gasqoyne, Shwarcz & Ford (1983) define this period by the interval 114-135 years ago. This, then, may also be taken as the date of the cranes.

The following is an account of the Maltese Crane. Terminology follows Baumel (1979).

#### Cranium

A cranium fragment from Mnejdra (UMZC 252) comprising the caudal part of the fronto-parietal and most of the occipital plane resembles the corresponding area of the Sarus Crane in size and general morphology (Northcote 1982c).

#### Forelimb bones (?)

I have restudied the two bones that have been cited as appertaining to the forelimb (Northcote 1984). The dorsal half of a right coracoid BM(NH) 49365 was excavated at Żebbuġ (Fig.1). Lydekker (1890, 1891) described the 'head' (A, the dorsal tip) of this fossil as 'smaller and relatively narrower' compared to the Sarus Crane. Harrison & Cowles (1977) considered the 'head' too eroded for such comment and it is, indeed, too damaged for accurate measurement. Not only the dorsal tip, but the whole of the coracoid fragment is much smaller than in the Sarus Crane; its size and proportions closely resemble the Common Crane that is c. 2kg lighter. Bone diameter is proportional to weight<sup>0.575</sup> (Northcote 1982b); a 'relatively narrower head' is, therefore, to be expected. Lydekker (1890) made no comment concerning the rest of the bone. He named the coracoid as a type specimen of an extinct species he named the Maltese Crane *G. melitensis* (Lydekker 1890, 1891).

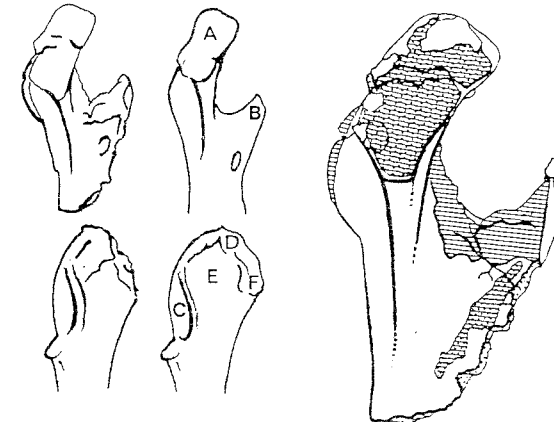


Fig.1. Dorsal part of right coracoid. Above - ventral view; below - lateral view.

Ventral view - left : Maltese Pleistocene British Museum (Natural History) BM(NH) 49365 (X1); right : Same specimen to show matrix (hatched) and erosion (stippled) (X2); and centre : Common Crane recent University Museum of Zoology, Cambridge UMZC 3445 (X1). Lateral view - left : BM(NH) 49365 (X1); and right : UMZC 3445 (X1). For labelling see text.

Harrison (1979) noted the size correspondence between the fossil coracoid and the Common Crane but he considered their morphology differed. First (p.14) he maintained that the processus procoracoideus (B) is 'proportionately longer and more curved' on the fossil than on the Common Crane. However, the processus on the fossil has a length (10.3mm) within the range (8.8-10.9mm, n=6) for Neolithic (UMZC and SMC) and recent Common Cranes. It appears 'more curved' because the lateral edge is eroded and the tip is cracked and buckled. In addition, the whole processus seems to have become detached at some time, then replaced in an unnatural position with adherent matrix at its base and this has altered its appearance. Secondly, Harrison (1979, p.15) stated that the area between the facies articularis humeralis (C) and the lateral edge of the processus acrocoracoideus (D) is narrower and deeper on the fossil coracoid than on the Common Crane. However, matrix adheres to the eroded lateral edges of both the facies and the processus on the fossil and this results in an apparent narrowing and deepening of this area. Thirdly, Harrison (1979, p.14) considered the surface of the sulcus m. supracoracoidei (E), particularly at the level of the medial part of the facies articularis clavicularis (F), to be dorso-ventrally narrower on the fossil coracoid than on the Common Crane. However, this area appears narrower on the fossil as a result of erosion of the ventral and medial corner of the sulcus and the adjoining part of the facies articularis clavicularis. Harrison & Cowles (1977, p.27) considered the fossil coracoid too 'slender' to belong to the Common Crane. However, only in ventral view does it appear to be more 'slender' and this results from erosion and chipping of the medial edge of the shaft at the base of the processus procoracoideus.

In summary, features that have been used for assigning coracoid BM(NH) 49365 to the Maltese Crane are the result of erosion, fossilisation and excavation. The size, proportions and morphology of this coracoid justify reassigning it to the Common Crane.

Among material from 1al-Ġnien was part of the distal extremity of a right crane humerus BM(NH) A5162 (Harrison 1979). It is much smaller than the corresponding part of a Sarus Crane; its size and morphology closely resemble the Common Crane (Fig.2). In particular, both have the epicondylus ventralis (A) rounded ventrally and confluent with the condylus ventralis (B). In both, also, the condylus lies at right angles to the shaft of the bone and its bulbous dorsal part is symmetrically shaped. Also, the angle between the condylus and the tuberculum supracondylare (C) is similar in form on the fossil and on the Common Crane. The proximal part of the tuberculum of the fossil is missing; its ventral surface compares well with the Common Crane.



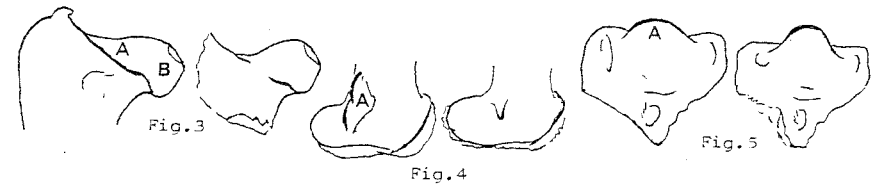
Fig.2. Distal extremity of right humerus, cranial view. Left - Sarus Crane UMZC 344H; centre - Maltese Pleistocene BM(NH) A5162; right - Common Crane recent UMZC 344S.

Harrison (1979, p.14) also observed this fossil humerus A5162 to be 'of similar size and character to that of the Common Crane', but he assigned the bone to the much larger Maltese Crane. However, its size, proportions and morphology justify reassigning this humerus to the Common Crane.

#### Hindlimb bones

Using material from Mnajdra UMZC 252a, I prepared three proximal femur fragments that though similar to the Sarus Crane in size and proportions, differ from it in the form of the head and trochanter (Northcote 1982c). In the Sarus Crane there is, caudally, a well-marked ridge that lies below the facies articularis antitrochanterica (Fig.3A) and is continuous with the lip on the facies articularis acetabularis (B) whereas in the Maltese Crane this ridge is absent. In addition, in the latter species, the angle between the facies articularis antitrochanterica and the head is smaller so that the head appears to be directed more proximally.

Numerous distal tibiotarsus fragments have been attributed to the Maltese Crane (Lydekker 1890, 1891, Mourer-Chauviré, Adrover & Pons 1975, Harrison & Cowles 1977, Northcote 1982c). Although Lydekker (1890, 1891) and Harrison & Cowles (1977) considered the distoproximal width of the supratendinal bridge to be narrower in the Maltese than in the Sarus Cranes, the range in bridge width of the fossils overlaps that in Sarus Cranes



Figs.3-5. Left : Sarus Crane UMZC 344H; right : Maltese Pleistocene UMZC 252a.  
Fig.3. Proximal extremity of left femur, caudal view.  
Fig.4. Distal extremity of right tibiotarsus, medial view.  
Fig.5. Proximal extremity of left tarsometatarsus, proximal view.

(Mourer-Chauviré, et al.1975, Northcote 1982c). It cannot, therefore, be used for diagnostic purposes. The general size and proportions of the tibiotarsi correspond to the Sarus Crane but their epicondyles differ (Fig.4). In the Sarus Crane the epicondyles are large and form a distoproximal ridge; the epicondylus medialis (A) is especially large. In the Maltese Crane, on the other hand, the epicondyles are small; the epicondylus lateralis is hardly distinguishable.

Proximal tarsometatarsus fragments were found at 1al-Ġnien (Harrison & Cowles 1977) and Mnajdra (Northcote 1982c). They are of the same general size as the Sarus Crane but the eminentia intercondylaris (Fig.5A) is more attenuated. (Northcote 1982c, Table 1, Plate 6d). Distal extremity fragments were recorded from Żebbuġ (Lydekker 1890, 1891) and Mnajdra (Northcote 1982c), (Fig.6). Lydekker (1890, 1891) considered the proportions and relationships of the trochleae to be the same as in the Sarus Crane. However, in the latter species the trochleae are close together and roughly parallel to one another, whereas in the Maltese Crane the intertrochlear notches are relatively wide (the incisura intertrochlearis medialis (A) measures c. 5mm cf. c. 4mm in Sarus Crane) and the trochleae for digits II and IV are curved away from that for digit III (Northcote 1982c). Lydekker (1890) considered the tarsometatarsus of Maltese Cranes to be larger overall than that of Sarus Cranes, but the greater distal width (32mm cf. 26mm in Sarus Cranes) results from the characteristic splaying of the trochleae.

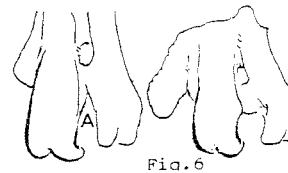


Fig.6. Distal extremity of left tarsometatarsus, cranial view. Left : Sarus Crane UMZC 344H; and right : Maltese Pleistocene BM(NH) 49358. All X1.

#### Discussion

Numerous hindlimb bones of the Maltese Crane have been found but Harrison & Cowles (1977) and Harrison (1979) knew of no forelimb bones large enough to support such a large crane in the air, nor hindlimb bones of a smaller crane that came from the Maltese Pleistocene. They therefore reasoned that the relatively small size of the two bones that they regarded as appertaining to the forelimb of the Maltese Crane indicates that it had reduced wings; Harrison & Cowles (1977, p.27) suggested that the bird had reduced power of flight. Doubt is cast upon this reasoning now that these bones have been reassigned to the Common Crane. This doubt is reinforced by the presence in the Maltese Pleistocene deposits of Common Crane remains (Northcote 1984), especially as these include hindlimb bones. It is more reasonable to assign the relatively small forelimb bones to the small and contemporaneous crane they resemble than to assign them to a much larger crane and postulate reduced flight ability to explain the resultant size disparity.

It is possible to correlate particular legbone characters with particular habits (Northcote 1981, 1982b). In comparison with the Sarus Crane, the smaller angle between the articular facet and the head of the femur in the Maltese Crane may have maintained the legs closer to the midline. The tibiotarsus epicondyles serve for the attachment of ankle ligaments. Their relatively small size in the Maltese Crane may indicate a less rigid ankle joint. The more attenuated eminentia intercondylaris of the tarsometatarsus is consistent with more efficient fore-and-aft movement of the foot and the greater spread of the trochleae may have provided a more stable base for the foot. All of these

features indicate that the Maltese Crane may have walked more elegantly than the Sarus Crane.

I wish to thank M.J. Ashby, G.S. Cowles, K.A. Joysey, C.A. Walker and G. Zammit-Maempel for their help in various ways.

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## ANALYSIS OF HONEY BUZZARD FLIGHT DIRECTIONS AT BUSKETT

M. A. THAKE

Analysis of autumn sightings of Honey Buzzard *Pernis apivorus* at Buskett made during the period 1974 - 1978 suggested the existence of a leading line effect in Honey Buzzard migration through Malta. It was hypothesised that more Honey Buzzards follow the south-western coast as the day progresses. In addition, there was evidence which suggested that southerly winds increase the proportion of Honey Buzzards which follows the coast, even if the southerly winds are of a purely local nature, generated by a sea breeze system (Thake 1980b & 1983).

In this paper, angular data accumulated during the 1974-78 study period and during sporadic observations in subsequent years (1980 - 1982) are analysed. A limited amount of supporting evidence for the above hypothesis is presented.

#### Methods

Detailed descriptions of the methods employed may be found in earlier papers (Thake 1977, 1980a & 1980b). The flight directions of Honey Buzzard flocks flying within 200 m of the observer were determined ( $\pm 10^\circ$ ) by reference to known compass points, represented by distant landmarks. A bearing compass was in use from 1978 onwards, allowing more accurate flight directions to be obtained when the birds flew directly overhead. Directional data were obtained most frequently in 1976.

Calculations were performed using ad hoc BASIC computer programs designed for use on the Casio FX 801p programmable calculator.

#### Results

In Fig.1, variation of the mean length of the resultant vector of flight directions is plotted against time of day. The mean length of the resultant vector is an index of the degree of scatter of the flight directions; the closer the mean length is to 1, the smaller the scatter of the flight directions. Fig. 1 clearly shows an increase in the scatter of flight directions as the day progresses. This is consistent with the interpretation that the Honey Buzzards' motivation to fly in a given compass direction decreases in the course of the day.

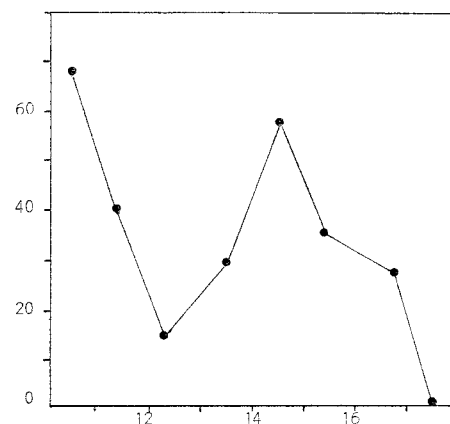


Fig.1. Variation of the length of the mean resultant vector with time of day. Angular data obtained during each hourly interval yielded the basic angular statistics. The mean length of the resultant vector (R) is plotted against time of day (C.E.T.). Correlation coefficient = -0.8980,  $p > .01$ .

Fig.2 depicts changes in the direction of the resultant vector with time of day. The few Honey Buzzards sighted before noon fly mostly south. The tendency to fly towards southeast increases towards mid-day, peaking between 12.00 and 13.00 C.E.T. As the afternoon progresses, the resultant vector shifts towards south until approximately 15.00, after which it returns to southeast. The following interpretation is offered: the thermal low over the islands is best developed around mid-day. This coincides with a tendency for the Honey Buzzards to follow the coast to a greater extent, and the resultant vector

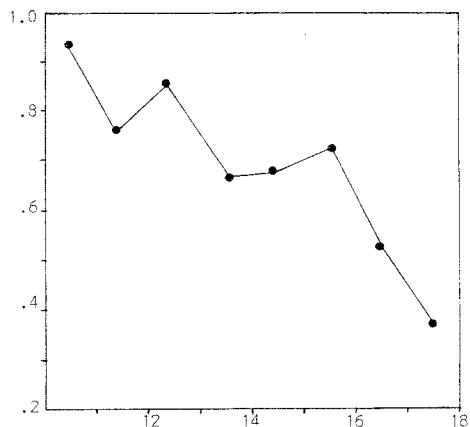


Fig.2. Variation of the direction of the resultant vector with time of day. The ordinates represent  $\theta - 135^\circ$ , where  $\theta$  is the direction of the resultant vector in degrees. Southwest lies above the top of the diagram; southeast at the bottom. South lies at  $45^\circ$  on the ordinates.

shifts towards the southeast. In the mid-afternoon, the weakening thermal low over Malta produces lighter winds which induce less coasting than at mid-day. Towards the late afternoon, the direction of the mean vector veers towards the southeast as the amount of coasting increases once again.

If coasting during contrary winds is an important factor in Honey Buzzard migration through Malta, one would expect an increase in the amount of coasting in moderate southerlies. Fig.3 presents appropriate data. Although there is an increase in the number of Honey Buzzard flocks flying southeast in moderate winds, the directional shift of the mean vector towards the southeast in diagram B is not significant (Watson and Williams two sample test:  $F_{1,78} = 2.13$ ,  $p > .05$ ). The decrease in scatter with moderate contrary winds is also consistent with the hypothesis, but again the effect is not significant (tested after Mardia 1972,  $p_{162} : F_{22,56} = 0.5185$ ,  $p > .05$ ).

Increased coasting in moderate southerlies would be expected to cause more flocking, giving rise to a higher mean flock size. This was found to be the case (see Table 1).

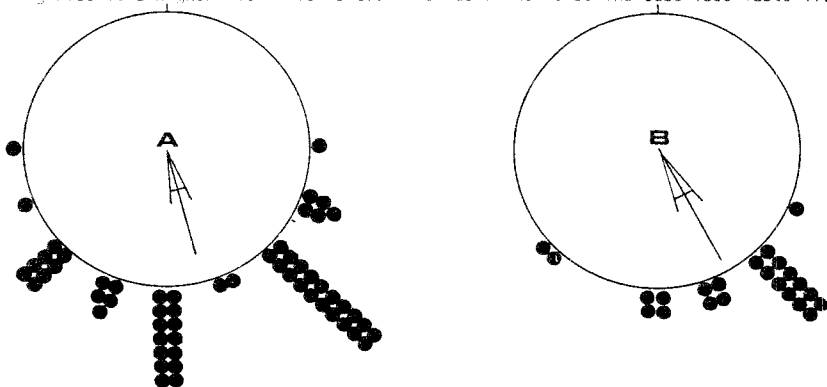


Fig.3. Scatter diagrams of flight directions of flocks sighted in light (A) and moderate (B) southerly winds. Southerlies (from east-southeast to west-southwest) were grouped according to wind strength as indicated in the table below.

Category	includes winds	R	$\theta$
Light (A)	3 to 7 knots	.7714	$165.47^\circ$
Moderate (B)	8 to 17 knots	.8846	$152.08^\circ$

The direction, length and 95% confidence limits of the mean resultant vector are shown on each diagram. The direction of geographical north is marked at the top of each diagram. Both scatter diagrams differ significantly from a uniform distribution (Rayleigh test:  $p < .001$ ).

TABLE 1 : Variation of mean flock size with wind strength

southerly wind strength category	mean flock size	sample standard deviation
Light	2.23	2.12
Moderate	4.70	5.68

Anova (Single classification) :  $F_{1,77} = 7.6736$ ;  $p > .01$ .

#### Conclusions

The results presented in this paper provide limited further support for the hypothesis of a leading line effect in Honey Buzzard migration through Malta. The tests described above should be repeated when a more extensive set of angular data becomes available.

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## MIGRATION OF THE SANDWICH TERN IN EAST SICILY

CARMELO IAPICHINO

The Sandwich Tern *Sterna sandvicensis* is a scarce autumn migrant to Malta (Sultana & Gauci 1982), with no autumn records in some years (Cachia Zammit & Attard Montalto 1980).

On the other hand, along the nearby south-east Sicilian coast it is a very common autumn visitor with a definite, and sometimes huge, southward movement. A good counting station along the east Sicilian coast is Capo Murro di Porco (135 km. north-west of Malta) near Syracuse, where large numbers of Sandwich Terns moving to the south are recorded every year from early August to late November, with peaks in the last ten days of October. In 1980 the author counted 348 birds during 18 observation hours from 8th October to 11th November; and in 1981, 397 from 23rd August to 22nd November during 22 observation hours. A more systematic count in 1982 totalled 1,403 during 81 observation hours from 1st September to 28th November, with peaks of 334 on 25th October during 150 observation minutes and 195 on 31st October during 140 observation minutes.

Table 1 includes all the 2,148 birds counted in the three autumns and shows the percentage of terns that passed singly or in flocks of different sizes (largest flock counted was of 63 birds).

Table 1	Flock size	1	2-10	11-20	21-30	31-63
	Percentage	2.33	51.23	24.09	10.52	11.80

No definite relation with weather was noted, but most of the largest counts were on days with clear sky, south or south-west light winds and smooth sea. Only a few wintering birds were recorded from late November.

Spring passage is not so well defined. In late February, but mostly from mid-March to early April, I recorded small flocks or single birds, most moving to the north, but some to the south (the last are probably terns that wintered in the Tyrrhenian Sea and that fly south before moving to the east, crossing the Messina strait). Spring passage is probably more marked well offshore and involves large flocks, like the one of 100+ recorded near Comino on 20 April 1969 (Sultana & Gauci 1982). Migrating Sandwich Terns generally pass very close to Capo Murro's cliff. It is unusual to record birds further offshore than 200-300 m. They fly low (below 20 m. above the sea) in loose flocks with the birds, at least one or two, calling incessantly. Sometimes, especially with strong side winds, they prefer to fly in compact line formations, very close to the surface of sea.

Sandwich Terns do not usually flock with other migrating sea-birds. In all the 144 flocks (comprising at least 3 birds) recorded in autumn 1982, the author recorded only four instances of Black-headed Gulls *Larus ridibundus* associated (one, two, one and three flocking respectively with 16, 9, 11 and 8 terns) and two of Mediterranean Gulls *Larus melanocephalus* (one and one flocking with 5 and 11 terns). In five instances large flocks of tens of gulls of both species and a few associated terns were recorded moving all together to the south, with the terns always at the head of the flock.

Sandwich Terns on passage in Sicily originate from Black Sea colonies as shown from recoveries of ringed birds and disperse to winter in the west and central Mediterranean (Bricchetti & Isenmann 1981, Isenmann & Czajkowski 1978). During westward movement they clearly closely follow the coastline of eastern and southern Sicily so that only a few are recorded from the Sicilian channel islands.

A similar pattern of autumn migration across the central Mediterranean, due to the leading line effect of the Sicilian coasts, occurs in other *Laridae* like the Mediterranean Gull and the Slender-billed Gull *Larus genei* whose autumn passages, respectively in October–November and August–September, are well marked in south-east Sicily but practically unrecorded in Malta.

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## THE ADVANTAGES OF MAJORITY DECISION MAKING

M.A. THAKE

Social interactions resulting in the formation of groups or flocks have been investigated extensively. Flocking is likely to convey several advantages, including lower susceptibility to predation (Kenward 1978), improved predator detection (Bertram 1980), increased accuracy of orientation (Wallraff 1978, Thake 1980), and transfer of information about feeding sites (Ward & Zahavi 1973, DeGroot 1980). There is another possible advantage, namely that decisions made in a social context might be more accurate.

Nearly two centuries ago, Condorcet (1785) showed that a majority decision made by a group of humans is more likely to be correct than the same decision made by a single individual. Recent extensive theoretical work in the social sciences has yielded many interesting theoretical results (excellent review in Grofman et al. 1982, and in press). Some time ago, Lorenz (1952) suggested that decisions made by flocks of animals might involve a consensus. Yet, social decision making in animals has remained largely uninvestigated, despite the fact that a great many decisions are made by the individual in a context which at a glance might be expected to allow that individual to take advantage of information available from other individuals. In this paper, the theoretical basis of majority decision making by animals is outlined and the adaptive significance of behaving in this way is stressed.

#### Majority decision making: a model

Consider a set of environmental conditions under which an individual performs behaviour "P" (some unspecified behaviour having biological significance) with probability  $p$ , and performs behaviour "Q" with probability  $q$ , such that  $p + q = 1$ . Membership of a flock of  $n$  individuals is assumed not to alter the values of  $p$  or  $q$  for the individuals. If so, the probabilities of various combinations of decisions are given by the terms in the expansion

$$(p + q)^n = 1.$$

For example, consider a flock of three individuals. There are four possibilities:  $p^3$  represents an unanimous decision to perform "P",  $p^2q$  representing the case where one in-

dividual prefers not to perform "P",  $pq^2$  where only one individual opts to perform "P", and  $q^3$  an unanimous decision not to act in this way but to perform "Q". The respective probabilities can be calculated from the terms in the expansion

$$p^3 + 3p^2q + 3pq^2 + q^3 = 1.$$

The principal requirement for this model is that fragmentation of the flock does not occur, and the individuals composing the flock all decide whether or not to perform "P" on a simple majority basis. Thus, cases  $p^3$  and  $p^2q$  will opt to perform "P", while cases  $pq^2$  and  $q^3$  will opt to perform "Q". If  $p$  lies between 0.5 and 1, the sum of the probabilities of those cases which should lead to behaviour "P" (i.e.  $p^3 + 3p^2q$ ) is greater than  $p$ , and increases with  $n$  (flock size). For example, if  $p = 0.9$ , the sum equals 0.972 for  $n = 3$ .

Table 1 shows the expectations of a decision "P" for flocks of various sizes, for various values of  $p$ . There is a general tendency for the probability of behaviour "P" to increase with increasing  $n$  if the initial probability for  $n = 1$  lies between 0.5 and 1.

If on the other hand, the initial probability lies between 0 and 0.5, the probability of "P" decreases with increasing  $n$ .

In general, for odd values of  $n$ , the probability of behaviour "P" being performed by a flock of  $n$  individuals deciding on a majority basis is given by

$$P_n = \sum_{h=m}^n \binom{n}{h} p^h \cdot q^{(n-h)}$$

where  $m = (n + 1)/2$ . For even values of  $n$ , the value of  $P_n$  is similar to that for  $P_{n-1}$  (Condorcet 1785).

TABLE 1: Variation of the probability of a decision to perform "P" with size of the flock or group ( $n$ )

	Flock size ( $n$ )								
	2	3	4	5	6	7	8	9	
$p$									
.1	.1	.028	.028	.00856	.00856	.00273	.00273	.000891	
.2	.2	.104	.104	.0579	.0579	.0333	.0333	.0196	
.3	.3	.216	.216	.163	.163	.126	.126	.0988	
.4	.4	.352	.352	.317	.317	.290	.290	.267	
.5	.5	.5	.5	.5	.5	.5	.5	.5	
.6	.6	.648	.648	.683	.683	.710	.710	.733	
.7	.7	.784	.784	.837	.837	.874	.874	.901	
.8	.8	.896	.896	.942	.942	.967	.967	.980	
.9	.9	.972	.972	.991	.991	.997	.997	.999	

The method of calculation is described in the text. In the case of flocks containing an even number of individuals, there are certain combinations of the decisions "P" and "Q" where an equal number of individuals favours each behaviour type. It is assumed that such combinations are as likely to make one decision as another, and the respective probability was halved and added to the set of decisions to perform "P".

#### Discussion

A wide variety of types of animal behaviour have been observed being performed simultaneously by several individuals constituting a flock or group (e.g. Birke 1974, Colgan et al. 1979, Dauphine and McClure 1974, Deputte 1979, Kisimoto et al. 1982, Kramer and Graham 1976, Mathieu 1970, Meixner and Shaw 1979, Richman 1978, Sambras 1973, Siegfried et al. 1975, Voisin 1976, Weidmann and Darley 1971). Most behaviour is adaptive, and one might expect a decision which is characterised by a high probability to be favoured. Decision making on a majority basis should thus be adaptive as it allows individuals to make the most likely decision (hence probably the correct one) with greater probability than if they were deciding individually.

Consider the following example. A migrant bird about to embark on a long sea crossing decides whether or not to migrate on a given day on the basis of perceived weather variables. Suppose that the correct decision is to migrate, and is made with probability 0.7; the bird decides wrongly not to migrate 30% of the time. If the same decision is made by a flock of nine birds, and the birds decide on a simple majority basis, the probability that their decision will be correct is 0.901, i.e. they are likely to be wrong less than 10% of the time.

A prerequisite for majority decision making is an ability for individuals to assess the intentions of other flock members. Intention movements or calls signalling the intentions of the caller might serve this purpose. There is evidence that communication is taking place when animals act simultaneously (e.g. Clifton 1979, Orcutt 1974, Siegfried

et al. 1975, Walker 1969). Much of the literature on socially facilitated behaviour is relevant to this problem, and Clayton (1978) provides a recent review of this topic.

Various decisions are made in a social context, and one might expect majority decision making to be frequent. However, there might well be occasions when it is not advantageous for an individual to act simply because a consensus has been reached. For instance, a bird which is not yet in breeding condition might suffer a decrement of fitness if it were to attempt to breed when a majority of conspecifics were doing so. The basic requirements for majority decision making are probably possessed by many vertebrates. The model outlined above suggests an adaptive significance for this behaviour which was previously unsuspected in Biology.

#### Summary

Flocks of animals might make decisions on a majority basis, with all flock members participating equally and deciding to act similarly to the majority of flock members. The probability of an erroneous decision being made on a majority basis decreases with flock size. Majority decision making should thus be adaptive in some contexts.

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## SHORT NOTES

### TWO NEW SPECIES FOR MALTA - RED-EYED VIREO AND CHESTNUT BUNTING.

Autumn 1983 produced interesting vagrants including two 'firsts' for Malta - Red-eyed Vireo *Vireo olivaceus* and a Chestnut Bunting *Emberiza rutila*.

While bird-ringing at Għajn Zejtuna, Mellieħa on 29th October 1983, Bro. Edmund found a curious-looking bird in his nets. The bird was later examined also by the authors and was identified as a Red-eyed Vireo. It had a rich bluish-grey crown and a white supercilium bordered with black stripes, the lower one going through its dark crimson eye. Its black beak looked relatively heavy with the tip of the upper mandible curved down. The tarsi were bluish. Its upperparts (back, neck, nape, rump and tail) were greenish, close to the colour of a dull Wood Warbler *Phylloscopus sibilatrix*. It had darker wings with the primaries and secondaries edged greyish-green. Its belly was white. The measurements in mm. were wing : 80; tail : 52; tarsus : 19.5; bill : 13.

The Red-eyed Vireo is a North American species which is accidental to Western Europe.

The male Chestnut Bunting was found on 12th November 1983 by John Grech and one of the authors while bird-ringing at Lunzjata, Gozo. The bird was first observed in the morning when it was feeding among grass in a very wet area at the bottom of the valley, below a line of trees, mainly White Poplar and Ash. While feeding in the grass it could not be seen properly although the sharp contrast between the chestnut head and breast and the yellow belly was quite noticeable. The first species which came to mind was Red-headed Bunting *Emberiza bruniceps* but when it flew up into a tree its rump was very dark and not yellow. Efforts to observe the bird properly proved fruitless and after a while it disappeared. On visiting the area in the afternoon the bird was again seen feeding in the same area. A net was set up further up the valley and when trying to set up another net where it was feeding the bird flew into the first net.

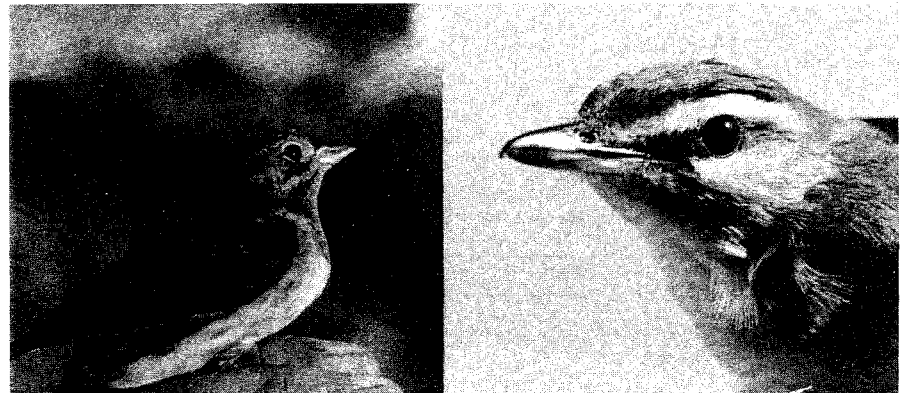
The following is a description of the bird in the hand : the head, throat, breast, back and rump were all deep chestnut, the throat and breast feathers faintly tipped whitish. The chestnut on its back was admixed with greenish grey. The lesser and median coverts were chestnut while the blackish greater coverts and tertials were edged chestnut. The tail was of a greenish black colour with a tinge of white on the outer web of the outer feathers. The belly, down to the under tail coverts, was of a light lemon yellow colour with the flanks streaked greenish grey.

The 3rd, 4th and 5th primaries (counting from the outermost primary) formed the wing-point and were emarginated. The measurements in mm. were wing : 76; tail : 58; tarsus : 20.5 ; bill : 12.0. Weight was 18.2 gm.

The Chestnut Bunting is an Eastern Asiatic species which is accidental to Central and Western Europe.

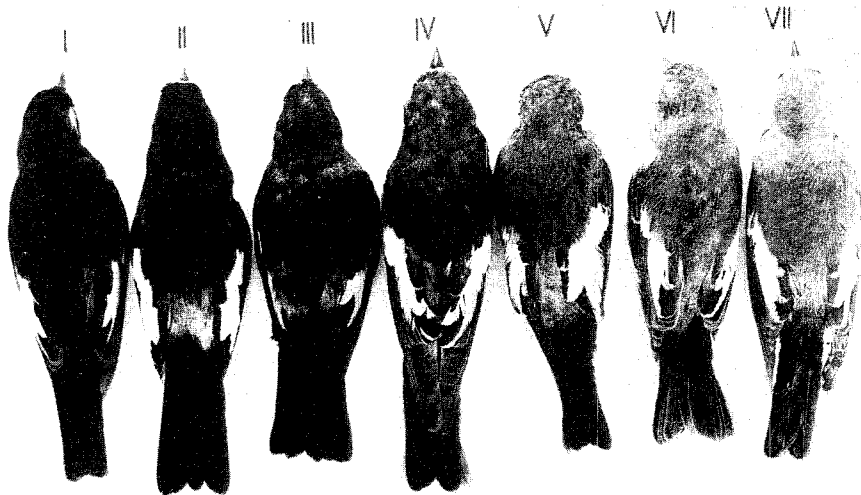
Joe Sultana & Charles Gauci

J.S. - 3 Sciberras Flats, Fleur-de-Lys Junction, B'Kara, Malta.  
C.G. - 'Skylark', Targa Gap Estate, Mosta, Malta.



Chestnut Bunting and Red-eyed Vireo photographed before release. (Photos : Joe Sultana)





Farbtypen des Trauerfliegenfänger=Männchens

R. Drost

COLOUR-CATEGORIES OF MALE PIED FLYCATCHERS IN SPRING.

Professor Rudolph Drost (Über das Brutkleid männlicher Trauerfliegenfänger, *Muscicapa hypoleuca*. - *Der Vogelzug* 6, p. 179-186. 1936) was the first to devote full attention to this theme. In the numerous male Pied Flycatchers *Ficedula hypoleuca* on spring migration on Heligoland the upperparts showed considerable variation in colour. While in some males the upperpart was black throughout, others lacked black almost completely. Drost examined 237 skins from North and Central Europe, and worked out 7 colour-categories for classification. At the same time he was aware of the fact that more or different categories might be chosen. However, in the meantime these 7 categories have been generally accepted and proved to be practical.

- Category I : Upperpart uniform black
- Category VII : Upperpart uniform grey or brown
- Categories II - VI : Intermediates

Examinations of northern birds show that old males belong to colour category I - IV (m 2.97) and males of the previous year to category II - VI (m 4.2). Birds (including migrants) collected in Central Europe belong to colour-categories II - VII (adult, m 4.56) and II - VII (juvenile, m 5.17) respectively.

Males trapped on Malta and Gozo for ringing should be classified according to the 7 categories (see photograph). Adults and juveniles have to be separated. The white colouring of the forehead as well as the intensity of the white on the underparts may also have to be examined. There are correlations in this respect.

As generally known the difference in the colour of the upperparts have not yet led to recognize the northern and central European Pied Flycatchers as different races.

Hans Bub

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UNUSUAL NUMBER OF EGGS IN A FAN-TAILED WARBLER'S NEST.

A nest of the Fan-tailed Warbler *Cisticola juncidis* containing seven eggs was found at Ghajn Rihana Valley on 25th April 1984. The female was incubating the eggs. The colour of the eggs was white with reddish spots. The nest was 20cm above the ground and it was rather deep from inside.

The nest was examined again on 30th April when it still contained the seven eggs. On visiting it again on 7th May, six one-day old pulli were present. One unhatched egg was

still in the nest. The nest was examined again on 12 May and the egg, presumed infertile, was still there.

There is a possibility that the female layed her first clutch (which included only one infertile egg) earlier in the season, and then re-layed her second clutch in the same nest (this time laying six eggs which all hatched). Another possibility is that the female layed a clutch of seven eggs one of which was infertile.

A case of a Fan-tailed Warbler's nest containing eight eggs comprising two clutches had been recorded previously (Gauci, C. & Sultana, J. 1980. Instances of birds re-laying in same nest containing infertile eggs. *IL-Merill* 21 : 21).

R.G. - 'Sunview', Potters Street, B'Kara, Malta.

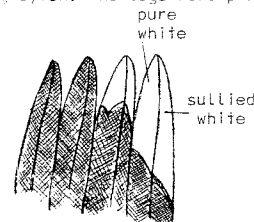
Raymond Galea

THE SECOND OCCURRENCE OF THE OLIVE-BACKED PIPIT IN MALTA.

An unusual pipit was mistnetted by the writer while bird-ringing at Xemxija on 2nd November 1983. On close examination the bird turned out to be an Olive-backed Pipit *Anthus hodgsoni*. The identification was also confirmed separately by John Borg and Charles Gauci; the latter had also seen the first specimen which was trapped and ringed at Ghadira on 30th October 1975 (Cilia, V. 1977-78. Olive-backed Pipit - an addition to the list of the birds of Malta. *IL-Merill* 19 : 11).

In size it was smaller than a Tree Pipit *Anthus trivialis*. Its overall colour was olive-green with darker streaks on the head and very faint streaking on nape and mantle. The rump was greenish and completely unstreaked. The wings and tail had greenish edges to the feathers. The ear coverts were dark, the chin white and the throat cream. The breast was creamy white with black spots, the belly was cream and the flanks were pale tawny buff with darker streaks. The axillaries and under-tail coverts were cream tinged yellow. The broad white superciliary stripe was quite unlike that of any other European pipit.

The bill was dark grey on top and pale underneath and the inside of the mouth was greyish. The legs were pinkish and the iris dark olive brown; the eye-ring was brown. White on the outer tail feathers was present as in the accompanying figure.



The biometrics in mm. were as follows : wing 78; tail 54; tarsus 32.2; bill 15; bill depth 3.5; bill width 4.2; and hind claw 8.8. The bird weighed 20.0 gm.

While in the hand the bird called continuously a high pitched 'sip' similar to a call of the *Regulus* sp. On release its call was like a Tree Pipit's but higher pitched, a feature which was also reported by Cilia loc. cit.

This pipit is a vagrant from Asia to Europe.

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Eds. - Since the above occurrence another Olive-backed Pipit was trapped and ringed at Lunzjata, Gozo on 3rd November 1984.

SPECTACLED WARBLERS AT PLAY?

The incident reported here was observed at Ghadira Nature Reserve on 29th October 1983, at approximately 11.00 hrs. Several Spectacled Warblers *Sylvia conspicillata* were seen engaged in a social activity on the embankment which protects the south western fringe of the nature reserve. Observations were made from the road which skirts the southern border of the reserve, at a distance of from 20 to 25 metres from the birds. Powerful (16 X 50) binoculars were used.

At least three (perhaps five) Spectacled Warblers were seen chasing one another around an elevation of bare earth on the embankment. The birds followed a circular to oblong path around a ten metre stretch of embankment. At intervals, the birds perched on the bare earth to posture with cocked tail and vocalise. The behaviour was first detected by the frequent loud vocalisations produced by the interacting birds. The vocalisations consisted of snatches of song, interspersed with the churring 'alarm' call. At least two of the birds were seen carrying large (4-5 cm) green and black caterpillars in their bill. Circular chases were observed between birds which lacked caterpillars in their bill. In addition, a bird holding a caterpillar was seen being chased by another bird whose bill was empty. This behaviour was repeated at short intervals during the 10 minutes devoted to the observations. The behaviour was still in progress when observations were stopped.

Anthropomorphic interpretations of animal behaviour are risky, but the behaviour reported here was strongly suggestive of little children playing tag ! This seems to be an instance of social play in the Spectacled Warbler.

Martin A. Thake

#### SARDINIAN WARBLER : UNUSUAL FEEDING BEHAVIOUR.

On 10th January 1978, a single male Sardinian Warbler *Sylvia melanocephala* was seen pecking at a piece of bread. The bird flew away when approached without attempting to lift the bread. The item lay in the middle of Old Railway Road, in front of St. Aloysius College, B'Kara and had probably been dropped by one of the college students. Scraps dropped by students form an important part of the diet of Spanish Sparrows *Passer hispaniolensis* during the academic year. Similar behaviour was observed during winter 1982-83, but the date was not recorded.

In late January 1983, while on a country walk at Buskett, a single male Sardinian Warbler was seen foraging within one of the large barrels which serve as dust bins. It was not possible to determine whether the bird was feeding on flies or on food scraps among the rubbish.

Martin A. Thake

M.A.T. - 169 Fleur-de-Lys Road, B'Kara, Malta.

#### PURPLE HERON EATING A SKINK.

While bird-watching with some friends at Ghadira Nature Reserve on 9th April 1984, we noticed that a Purple Heron *Ardea purpurea* had caught a prey. The bird then flew a short distance to one of the islands in the reserve with its prey dangling in its beak.

The heron took several minutes to swallow its prey, during which time we could identify its food. The prey was a reptile and we all were in agreement that it was a skink. Only one species of skink is found in Malta, the Ocellated Skink *Chalcides ocellatus*, which is fairly common in the reserve. The skink was a fully grown specimen and seemed to be about 25 cm in length.

The heron held the skink by its neck, suffocating it to death and then succeeded to swallow it after several attempts, head first.

Purple Herons are rarely seen feeding in the Maltese Islands. They are very vulnerable to the local bird-shooters, when they are flying low or when they alight. Appropriate feeding areas are very scarce and these, with the exception of Ghadira, are regularly visited by bird-shooters.

During spring 1984 up to three Purple Herons were present at Ghadira for several days. Their main diet during their stay at the reserve consisted of killifish *Aphanius fasciatus* and Grey Mullet *Mugil sp.*

Denis Cachia

D.C. - 17 Gardenia Street, Santa Lucia, Malta.

#### AN UNSUCCESSFUL BREEDING ATTEMPT BY THE SHORT-EARED OWL.

During the nineteenth century odd pairs of Short-eared Owls *Asio flammeus* used to breed in the Maltese Islands ( Schembri, A. 1843. Catalogo Ornitologico del Gruppo di Malta. & Wright, C. 1864. List of the Birds observed in the islands of Malta and Gozo ). In the present century only two nests were found - one with 5 young in the vicinity of Siggiewi on 4th May 1906 and another with a clutch of 3 eggs at Wied Znuber on 18th May 1909 (Despott, G. 1917. Notes on the Ornithology of Malta ).

Since then there have been no other breeding records of this species; not surprising when considering the prevailing intense human interference and the ever shrinking adequate habitat. On 17th March 1983 an employee of the Department of Agriculture reported to us that he had flushed a large owl from a nest containing 5 eggs while on duty on the island of Comino which is a bird sanctuary. On visiting the locality on 24th March a Short-eared Owl was found incubating 5 eggs in a nest which was situated on the remnants of a base of a rubble wall which divided two uncultivated terraced fields. The nest had little material and was a shallow hollow, sheltered by vegetation. Unfortunately the nest was found destroyed a few days later. Only two cold eggs remained and the site appeared much disturbed. During the period in which the nest was under observation only one owl was seen and it is worth noting that a Short-eared Owl had been shot from a dinghy just off Comino in mid-March.

Joe Sultana & Charles Gauci

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

## SYSTEMATIC LIST FOR 1981 & 1982

compiled by

CHARLES GAUCI

Members who sent in records for the daily log kept by the society were: J. Attard Montalto, J. Borg, R. Cachia Zammit, A. Casha, V. Cilia, G. Davies, J. Doublet, N. Fenech, R. Galea, C. Gauci, M.V. Gauci, B.K. German, J. Grech, A.B. Heath, R. Ingram, D. Knight, H. Middleton, J. Middleton, C.A. Pomeroy, P. Portelli, G. Richards, D. Rushford, J. Sultana, M.A. Thake, J. Theuma, A. Vassallo and L. Vella. Other members may have contributed to the daily log kept at the Ghadira Nature Reserve, which records are subsequently added to the national daily and species logs.

The records for this two-year period were entered into the daily and species logs by J. Borg, R. Cachia Zammit and C. Gauci. The systematic list was compiled by C. Gauci.

Where only one of the two years is given in the systematic list, it is because there were no records in the other year.

LITTLE GREBE *Tachybaptus ruficollis* Blonġun Żghir

1981 : 1 at Ghadira on 14 Nov.

1982 : 1 at Ghadira on most days from 9-27 Nov. 1 at M'Xlokk on 6 Dec.

GREAT CRESTED GREBE *Podiceps cristatus* Blonġun Prim

1981 : Singles at Ta' Xbiex on 27 Nov and at Pietra' on 19-20 Dec.

BLACK-NECKED GREBE *Podiceps nigricollis* Blonġun Sekond

1981 : 1 at Ghadira on 10 Sep, then singles on 6th, 13th and 19-21st and 2 on 27 Dec, most at Ghadira.

1982 : 1 at Manoel Isle on 18 Jan, 1 at Ghadira on 11-16 Mar and 5 at M'Xlokk on 23 Mar. 1 at Ghadira from 27 Aug to 6 Sep, then present daily there from 2 Nov onwards with max of 5 on 18th and 21 Nov.

CORY'S SHEARWATER *Calonectris diomedea* Ċiefa

1981 : Breeding as usual. Recorded offshore between May and Aug. Highest count 2 rafts totalling ca.1650 birds off Dwejra, Gozo on 4 Aug.

1982 : First sighting on 14 Mar. Max count 2400 off Marsalforn on 17 Jul.

SOOTY SHEARWATER *Puffinus griseus* Ċiefa ta' L-Atlantiku

1982 : 1 shot outside territorial waters on 25 Nov.

MANX SHEARWATER *Puffinus puffinus* Garnija

1981 : No offshore records. Highest count ashore ca. 100 at L-Ahrax Pt. on 25 May.

1982 : 1 off Comino on 4 Apr only sighting. Ca.80 ashore at L-Ahrax Pt. on 24 May.

STORM PETREL *Hydrobates pelagicus* Kanġu ta' Filfla

1981 : Breeding in usual numbers on Filfla.

1982 : Recorded only from its breeding station on Filfla.

GANNET *Sula bassana* Sula

1981 : 1 immature off Comino on 26 Dec.

1982 : Singles offshore on 26 Oct, 25 Nov and 4 Dec.

CORMORANT *Phalacrocorax carbo* Margun

1981 : Singles over Xemxija on 29 Oct, over Ghadira on 7th and at Ghar Hasan on 13 Nov.

1982 : 1 at Delimara on 27 Jan. Singles on 19 Oct; 11th, 17th and 20 Nov, and on 29 Dec. 2 on 30 Dec.

BITTERN *Botaurus stellaris* Kappun

1981 : 1 near Buskett on 14 Feb.

LITTLE BITTERN *Ixobrychus minutus* Russett tas-Siġar

1981 : Singles on 6 days from 18 Apr to 19 May. 1 on 6 Oct.

1982 : 1 on 7-8 Apr, then daily from 29 Apr to 21 May with 10 at Lunzjata on 1st highest; most records from Ghadira and Lunzjata. 1 on 31 Oct.

NIGHT HERON *Nycticorax nycticorax* Kwakka

1981 : Recorded on 8 days from 20 Mar to 20 Apr in spring; no flocks seen, highest party of 4. In autumn on several days from 13 Aug to 7 Oct with 20 at Pietra' on 27 Sep highest. 1 on 5 Nov.

1982 : On 19 days from 16 Mar to 20 May; usually up to 6 but flock of ca.50 over Rabat on 21 Mar. 2 on 13 Aug, then 22 sightings on 17 days from 27 Aug to

3 Oct with flocks of 50, 27 and 40 on 2nd, 12th and 30 Sep respectively.  
15 on 2nd and 1 on 5 Nov.

**SQUACCO HERON** *Ardeola ralloides* Agrett Isfar  
1981 : 13 records of 1-2 birds on 11 days from 14 Apr to 30 May. Singles on 26 Aug and on 27 Oct.  
1982 : 1 on 16 Mar, then on 4 days from 3 Apr to 2 May with 4 on 7th highest.

**LITTLE EGRET** *Egretta garzetta* Agrett Abjad  
1981 : 1 on 4 Jan. 2 on 14th and 1 on 30 Mar, then on 15 days from 12 Apr to 21 May with max of 27 on 1 May. In autumn on 15 days from 31 Jul to 13 Sep; usually 1-8 birds but flock of 32 on 27 Aug.  
1982 : Up to 3 on most days at Ghadira from 15 Mar to 17 May and up to 9 on 4 days in other localities. 1 on 7 Jun. On 6 days from 31 Aug to 21 Sep, mostly flocks of 10-23, then singles, mostly at Ghadira, on 13 Oct, 11-15th and 19 Nov.

**GREAT WHITE EGRET** *Egretta alba* Russett Abjad  
1981 : 2 over Gozo on 14 Apr.

**GREY HERON** *Ardea cinerea* Russett Griz  
1981 : On 7 days from 8 Mar to 15 Apr with 20 on first day highest. 3 on 23 May and singles on 24 May and 28 Jul at Ghadira. In autumn on 15 days from 24 Aug to 2 Oct when flocks of 17-35 recorded seven times. 1 on 22 Oct.  
1982 : 1 on 19 Feb. 1-3 on 7 days from 7 Mar to 22 Apr, then up to 4, mainly at Ghadira, almost daily from 28 Apr to 29 May. Singles on 20 Jul and 23 Aug, then 26 sightings on 21 days from 13 Sep to 9 Nov. Mainly in single figures but flocks of 16-50 recorded three times.

**PURPLE HERON** *Ardea purpurea* Russett Ahmar  
1981 : 1 on 1 Mar was the only spring sighting. In autumn on 6 days from 24 Aug to 9 Sep with flock of 92 on 8th highest; then singles on 2nd, 4th and 9 Oct.  
1982 : On 12 days from 16 Mar to 1 May; flock of 40 on 8 Apr otherwise up to 5. In autumn on 7 days from 5 Sep to 10 Oct; mainly 1-2 but 9 on 13 Sep.

**BLACK STORK** *Ciconia nigra* Ćikonja Sewda  
1981 : 1 over Rabat and Buskett on 18th and 19 over St. Paul's Bay on 26 Sep; 1 at Ghadira and ca.5 over Buskett on 4 Oct.  
1982 : 2 over Ghadira on 3 Nov.

**WHITE STORK** *Ciconia ciconia* Ćikonja Bajda  
1981 : 3 over Qormi on 1 Sep.  
1982 : 1 over Buskett on 12 Sep and 2 at Delimara on 15 Oct.

**GLOSSY IBIS** *Plegadis falcinellus* Velleran  
1981 : 3 on 28 Mar and 6 on 14 Apr at Ghadira. Singles at Ghadira and Attard on 10 Nov.  
1982 : 1 on 1st and 2 on 4 Apr and 8 on 10 May. In autumn singles on 17 Aug and 10 Sep.

**SPOONBILL** *Platalea leucorodia* Paletta  
1981 : 1 on 3 Sep and 3 on 30-31 Oct at Ghadira.  
1982 : 2 near M'Xlokk on 23 Aug.

**GREATER FLAMINGO** *Phoenicopterus ruber* Fjamingu  
1982 : Reports of a flock at Delimara in late Feb and of 1 shot off Dragonara Pt. in mid-Dec.

**MUTE SWAN** *Cygnus olor* Ćinju mut  
1982 : 2 juveniles (1 shot) at Marsalforn Bay on 5 Dec.

'GREY' GEESE *Anser sp.* Wizz  
1981 : 10 over Ghadira on 17 Feb. 5 over Ghadira and 2 over Has-Saptan on 6 Dec.  
1982 : 2 over Qormi and 3 over Hal Far in mid-Dec.

**SHELDUCK** *Tadorna tadorna* Kuluvert tas-Salib  
1981: Singles on 17 Jan, 1st and 24 Mar. In Dec, 1 on 17th, 10 on 20th, 2 singles on 23rd and 4 on 24th.  
1982 : 1 shot in N. Comino Channel in early Mar. 1 on 13th and 6 on 27 Nov, and 2 on 19 Dec.

**WIGEON** *Anas penelope* Silfjun Ewropew  
1981 : 1 at Ia' Qali on 12 Jan. Single males on 8 Oct, 14-15 Nov and 3-9 Dec at Ghadira.  
1982 : 1-4 at Ghadira on 11-18 Nov.

**TEAL** *Anas crecca* Sarsella  
1981 : 1-4 on 5 days from 3rd to 13 Jan. 1 at Ghadira from 8th to 24 Oct.  
1982 : Singles on 18-21 Feb; 7th, 12-14th and 20 Mar; 5 Jun and 25 Aug. 1-6 at Ghadira from 6th to 30 Nov and up to 7 on 7-12 Dec.

**MALLARD** *Anas platyrhynchos* Kuluvert  
1982 : 1-2 on 9th and 12-15 Nov, and 5-8 Dec; most at Ghadira.

**PINTAIL** *Anas acuta* Silfjun  
1981 : Singles at Ghadira on 22 Feb and 12 Mar. Passage off south coast on 15 Mar when 30-50 flocks of up to 50 birds each sighted. 23 over Xemxija on 4th and 7 at Ghadira on 12 Nov.  
1982 : Heavy passages through N. Comino Channel on 5-6 Mar with ca.20,000 (including one flock of ca.1,000) and ca.5,000 respectively; then singles on 12th and 26-27 Mar. 1 on 30-31 Aug, 1-2 on 11-18 Nov and 1 on 9-12 Dec.

**GARGANEY** *Anas querquedula* Sarsella Hamra  
1981 : On 8 days from 21 Feb to 17 Mar with heavy passage off south coast on 15 Mar when 17 flocks of up to 50 birds each seen. 3 on 14th and 2 on 15 Apr. 1 on 10 Sep.  
1982 : Small passages daily through N. Comino Channel from 5-9 Mar and 1-3 at Ghadira on most days from 7th to 30 Mar. Large passage of ducks, probably involving this species, off south coast on 3 Apr, then 1 at Ghadira on 14-20 Apr. In autumn 1 on 1st and 5 on 22 Sep.

**SHOVELER** *Anas clypeata* Palettuna  
1981 : Singles on 30 Jan, 2nd and 17 Mar.  
1982 : 'Some' shot in North Comino Channel in early Mar. 1 on 13 Mar and 3 on 30 Sep.

**RED-CRESTED POCHARD** *Netta rufina* Brajmila tat-Lappu Ahmar  
1982 : 2 shot near M'Xlokk on 13 Nov.

**POCHARD** *Aythya ferina* Brajmila  
1982 : 1 at Salina on 8 Aug.

**FERRUGINOUS DUCK** *Aythya nyroca* Brajmila t'Ghajnja Bajda  
1981 : 2 off Cirkewwa on 15 Mar. 1 at Ghadira from 25 Apr to 6 May.  
1982 : 'Some' shot in N. Comino Channel in early Mar. 2 on 24-28th and 1 on 30 Nov at Ghadira.

**Unidentified DUCKS**  
1981 : Singles on 14 Apr and 10 May. On 6 days from 7-25 Aug, on 22 Sep, on 3 days between 18-24 Oct, 8 days from 6-29 Nov and on 1st and 5 Dec, often in flocks (highest of 120) off coasts.  
1982 : Some flocks off south coast on 14 Feb and ca.15,000 through N. Comino Channel on 5 Mar. On 12 days from 10 Sep to 27 Nov when flocks of 25 recorded twice.

**HONEY BUZZARD** *Pernis apivorus* Kuċċarda  
1981 : 3 on 14 Apr, 2 on 9th and 1 on 17 May. 3 on 29 Aug and 1 on 2 Sep, then on most days from 7 Sep to 15 Oct, with peak on 17-19 Sep when totals of 229, 514 and 85 respectively recorded (totals may be overestimated as some observation posts, e.g. Rabat and Buskett, quite close to each other). Singles on 22 Oct and 2 Nov.  
1982 : 1-4 on 8 scattered days from 29 Mar to 7 Jun. Autumn passage from 8 Sep to 8 Oct reaching double figures on 13 days. Best days were 13th and 29 Sep and 1 Oct with totals of 76, 77 and 64 respectively.

**BLACK KITE** *Milvus migrans* Astun Iswed  
1981 : Singles on 7th and 21 Apr. Flock of 14 on 26 Aug. Main autumn passage from 8th to 19 Sep when 1-9 recorded on 8 days, then 3 on 9th and 1 on 15 Oct.  
1982 : 44 on 27th and 14 on 31 Mar, then singles on 21st, 23rd and 30 Apr and 19 May. In autumn 1-3 on 6 days from 4 Sep to 1 Oct.

**RED KITE** *Milvus milvus* Astun Ahmar  
1981 : Singles at Buskett on 13th and over Rabat on 18 Sep.  
1982 : 1 at Buskett on 22 Sep.

**SHORT-TOED EAGLE** *Circus gallicus* Ajkla Bajda  
1982 : Singles at Has-Saptan on 26th and at Buskett on 29 Sep.

**MARSH HARRIER** *Circus aeruginosus* Bughadam Ahmar  
1981 : On 10 days from 4 Mar to 15 Apr; mostly 1-2 but 10+ on 19 Mar. 2 on 1 May. In autumn on 14 days from 3 Sep to 11 Oct with peaks on 17th, 18th and 27 Sep when 37, 26 and 20 respectively recorded. Singles on 2nd and 22 Nov.  
1982 : 34 sightings on 23 days from 7 Mar to 26 Apr; mainly low single figures with max. of 10 at Luqa on 24 Mar. On return passage seen on most days from 12 Sep to 5 Oct with a max. of 53 over Buskett on 13 Sep, otherwise up to 18. Singles at Luqa on 2nd and 7 Nov.

**HEN HARRIER** *Circus cyaneus* Bughadam Abjad Prim  
1982 : A male at Luqa in late Mar and a female shot on 21 Apr.

- PALLID HARRIER *Circus macrourus* Bughadam Abjad  
1981 : 1 at Ghadira on 21 Apr.  
1982 : 3 on 23rd, 1 on 24th and 2 on 28 Mar were all males.
- MONTAGU'S HARRIER *Circus pygargus* Bughadam Griž  
1981 : 2 at Luqa on 20 Apr and 1 at Buskett on 3 Sep.  
1982 : Passage on 21 Apr when 'several' reported along SE coast and 5 others from nearby areas. A male estimated to have been dead for about one week was found at Sta. Lucia, Gozo on 8 Jul. 1 at Buskett on 13 Sep.
- RINGTAILS *Circus sp.* Bughadam  
1981 : Ca.120 reported shot at Delimara on 18 Mar probably included many *C. aeruginosus*. On 7 days from 3 Apr to 3 May; mainly singles but 7 at Luqa on 16th. 1-2 on 6 days from 3 Sep to 4 Oct.  
1982 : Singles on 12 days from 18 Feb to 19 May and 1-2 on 4 days from 13th to 30 Sep.
- SPARROWHAWK *Accipiter nisus* Sparvier  
1981 : 2 at Buskett on 17th and singles at Ghadira and at Buskett on 18 Sep.  
1982 : Male at Delimara on 2 Apr. Singles at Buskett on 28 Sep, 1st and 5 Oct.
- BUZZARD *Buteo buteo* Kuccarda Prima  
1981 : 1 at Buskett on 20 Oct.  
1982 : 1 at Buskett on 24 Sep. 1, probably this species, at Gharb on 31 Oct.
- LESSER SPOTTED EAGLE *Aquila pomarina* Ajkla tat-Tikki  
1982 : 1 over Ghadira on 30 Oct.
- BOOTED EAGLE *Hieraeetus pennatus* Ajkla tal-Kalzetti  
1982 : A light phase bird flew over Ghadira on 27 Sep.
- OSPREY *Pandion haliaetus* Arpa  
1981 : Passage on 16 Sep when singles at Buskett and Nadur and 2 at il-Qaws, then singles on 19 Sep and 8 Oct.  
1982 : Singles on 2nd, 20th, 28th and 29 Apr. In autumn, 2 on 13 Sep then singles on 2nd and 10 Oct and on 2 Nov.
- LESSER KESTREL *Falco naumanni* Spanjulett Sekond  
1981 : Singles on 4 days from 7 Mar to 2 Apr. In autumn on 7 days from 13th to 27 Sep with max of 12 on 18th and 9 on 16th.  
1982 : 2 on 15th and 1 on 16 Apr. In Sep on 6 days at Buskett from 19th to 29th with max on 4 on 26 Sep.
- KESTREL *Falco tinnunculus* Spanjulett  
1981 : Recorded on 23 days from 8 Mar to 13 Jun with no clear peak. Always singles or twos. Autumn passage from 3 Sep to 13 Nov with a peak in latter half of Sep (max 17 at Buskett on 27th). 5 singles on 4 days from 29 Nov to 30 Dec.  
1982 : Spring passage from 26 Feb to 4 Jun with peaks from 4-17 Apr and 9-16 May when recorded on most days. Single figures with max of 6 on 15 Apr. From 12 Sep to 3 Nov in autumn with 13 at Buskett on first day highest. Singles on 9 days from 15 Nov to 31 Dec probably involved 5 wintering individuals.
- 'KESTREL sp.' *Falco tinnunculus/naumanni*  
1981 : 1 on 24 Apr. 1-9 on 11 days from 7 Sep to 31 Oct.  
1982 : 1-4 at Buskett on 8 days from 12 Sep to 1 Oct.
- RED-FOOTED FALCON *Falco vespertinus* Żumbrell  
1981 : Singles on 17 Apr, 14th and 22 May.  
1982 : Heavy passage - no numbers supplied - along south east shores on 28 Apr, otherwise 1-2 on 6 days from 22 Apr to 9 May. 1 probable on 6 Oct.
- MERLIN *Falco columbarius* Seġer ta' Denbu  
1982 : a male at St. Thomas Bay on 14 Mar and 1 shot (locality unknown) on 5 Nov.
- HOBBY *Falco subbuteo* Seġer tal-Hannieqa  
1981 : On 6 days from 12th to 29 Apr with max on 10 at Attard on 14th. In Sep on 11 days from 3rd to 27th; double figures on 3 days, max 18 at Buskett on 16th. Singles on 10th, 15th and 25 Oct.  
1982 : Singles on 14-16 Apr, 7th and 11 May. 1 on 27 Aug, then on 16 days from 11 Sep to 5 Oct. Double figures on 3 days with max of 31 on 13 Sep.
- ELEONORA'S FALCON *Falco eleonorae* Bies tar-Reġina  
1981 : Singles on 23 May, 23 Jun and 27 Aug. 6 (5 at Buskett) on 16th and 1 on 18 Sep.  
1982 : 1 on 29 Apr, 2 on 18 May and 1 on 17 Jul. In Sep, 2 on 12th, 3 on 13th and singles on 15th, 26th, 29th and 30th. Singles on 2nd and 5 Oct.
- PEREGRINE FALCON *Falco peregrinus* Bies  
1981 : 1 at Dwejra, Gozo on 5 Aug.  
1982 : 1 at San Blas on 13 Apr and 2 over Buskett on 18 Sep.
- QUAIL *Coturnix coturnix* Summienna  
1981 : Singles on 20 Apr, 3rd and 6 May were the only records.  
1982 : On 10 days from 9 Mar to 26 Apr. Passage (numbers not given) reported on last day, otherwise 1-2. 1 on 30 Sep; 2 on 2nd and singles on 11th and 14 Nov.
- WATER RAIL *Rallus aquaticus* Gallozz tax-Xitwa  
1981 : 1 at Lunzjafa on 11 Nov and 1-2 on 10 days at Ghadira from 21 Nov to 21 Dec.  
1982 : One frequently seen at Ghadira in Jan-Mar to 12th.
- SPOTTED CRAKE *Porzana porzana* Gallozz tat-Tikki  
1981 : Singles on 11 Mar, 25 Apr and 3 Oct.  
1982 : Singles on 9 May, 4 Sep, 12-13th and 17 Nov. 1 probable on 22 Dec.
- LITTLE CRAKE *Porzana parva* Gallozz Żghir  
1981 : A female found freshly dead at Ghadira on 3 Mar.
- MOORHEN *Gallinula chloropus* Gallozz Iswed  
1981 : 1 at Ghadira on 3 Jan and 27 Feb. Singles on 8th, 11th and 19 Mar, then 1-6 on most days from 5th to 26 Apr. Singles on 11 Oct, 4 Nov and 25 Dec.  
1982 : 1 on 13 Feb, then singles on 7 days from 27 Mar to 17 May and on 9 days from 7 Aug to 17 Oct. Up to 5 at Ghadira from 7 Nov onwards and occasional records of up to 3 from other places.
- COOT *Fulica atra* Iiġieġa tal-Bahar  
1981 : Singles at Ghadira on 10-25 Oct, 21st and 27-28 Nov.  
1982 : 1 at Ghadira on 30 Mar-4 Apr and 1 at M'Xlokk on 4 Sep. Then, at Ghadira, singles on 3rd and 15 Oct followed by 4 on 3 Nov increasing daily to a max of 27 on 25th after which numbers decimated by shooting. 14 remained till year end.
- CRANE *Grus grus* Grawwa  
1981 : Singles on 11th, 21st, 22nd and 30 Oct. 6 on 4 Nov.  
1982 : 20 at Luqa Airfield on 21 Oct, followed by 1 there on 23rd and 27-29th.
- OYSTERCATCHER *Haematopus ostralegus* Gallina tal-Bahar  
1982 : Singles at M'Xlokk on 23 Mar and 29 Apr. 4 at Mista on 4 Sep.
- BLACK-WINGED STILL *Himantopus himantopus* Fras-servjent  
1981 : 1 from 12th to 21 May; 3 on 14-16th and 1 on 17-19th June; 3 on 2-5th, 1 on 6th and 2 on 8 Jul, all at Ghadira.  
1982 : 16 at Ghadira on 13th and flock of 20+ near M'Xlokk on 31 Mar; 1 at Ghadira from 9th to 29 Apr (but 2 on 11-12th) and on 10 May. 17 at the same place on 10 Aug and 3 at Sliema on 18 Sep.
- AVOCET *Recurvirostra avosetta* Xifa  
1981 : 1 at Ghadira on 4 Apr.  
1982 : Singles at Ghadira on 14-15 May and on 20 Nov.
- STONE CURLEW *Burhinus oedicnemus* Jellerita  
1981 : Singles on 6 Apr and on 3 Nov.  
1982 : Singles on 11th and 20 Apr, and on 6th and 17 Oct.
- PRAIRINCOLE *Glareola pratincola* Pernicjotta  
1981 : 1 over Buskett on 20 May.
- LITTLE RINGED PLOVER *Charadrius dubius* Monakella  
1981 : Almost daily, mainly at Ghadira, from 5 Mar to 8 Jun. Usually single figures but up to 10 on 7 days. In same numbers again from 18 Jul to 30 Aug, 1 on 14th and 1-5 from 21 Sep to 19 Oct. Singles on 6 days from 10 Nov to 11 Dec.  
1982 : 1 on 21 Feb then on most days from 12 Mar to end of Apr and less regular till 27 May. Usually up to 10 but 15 on 27 Mar. 1 on 13 Jun, then up to 5 (except for 10 on 11 Sep) on several days from 10 Jul to 11 Nov.
- RINGED PLOVER *Charadrius hiaticula* Monakella Prima  
1981 : 1-2 on 19-26 Mar and on several days from 18 Apr to 22 May. 1 on 4 Jul, then on 9 days from 2 Aug to 2 Oct; always singles except for 2 on 27 Sep.  
1982 : 1 on 3 Apr then up to 10 almost daily at Ghadira from 21 Apr to 22 May. In autumn 1-4 on 5 days from 28 Aug to 12 Sep.
- KENTISH PLOVER *Charadrius alexandrinus* Monakella Saqajha Suwed  
1981 : 1-2 on 6 May, 6 Jul, 13-14th and 18-21 Sep; 11th and 18-19 Oct; and 9th and 15 Dec. All at Ghadira.

1982 : Singles on 12th and 22 Sep and 2 on 21 Nov.

**GREATER SAND PLOVER** *Charadrius leschenaultii* Birwina tad-Dežert  
1981 : 1 at Salina on 17 Aug.  
1982 : 1, probably this species, at Ghadira on 26 Aug.

**DOTTIEREL** *Charadrius morinellus* Birwina  
1981 : Singles on 5th and 7 Sep; 2 on 5th and 1 on 11 Nov.  
1982 : Singles on 4 Aug; 5th, 9th and 15 Sep; and on 8th and 17 Oct.

**GOLDEN PLOVER** *Pluvialis apricaria* Pluviera  
1981 : 7 on 6th and 2 on 10 Nov at Affard and singles at Ghadira on 18 Nov and 16 Dec.  
1982 : 1 on 17 Jan. Passages on 7-8th, 11th and 14 Nov with 40+ at Fiddien on 8th highest. 6 on 4 Dec.

**GREY PLOVER** *Pluvialis squatarola* Pluviera Pastarda  
1981 : 1 at Ghadira on 16 May.

**LAPWING** *Vanellus vanellus* Venewwa  
1981 : On 19 days from 3 Jan to 9 Feb; mainly single figures at Luqa but 17 at 1a' Gali on 9th, 16 at Ghadira on 10th and 27 at Luqa on 25 Jan. Singles on 22nd and 27 Oct, then on 13 days from 5 Nov to 17 Dec; single figures but 15 at Luqa on 5th and 50+ at Has-Saptan on 6 Dec.  
1982 : 1-12 on 4 days at Luqa from 4 Jan to 9 Feb. Unusual birds on 12 May and 10 Aug. 3 on 28 Oct then daily from 7th to 17 Nov with 20 at Salina on 9th highest.

**SANDERLING** *Calidris alba* Pisisella Bajda  
1981 : 1 on 23-26 Apr then 1-6 from 10th to 27 May, at Ghadira.

**LITTLE STINT** *Calidris minuta* Tertuxa  
1981 : 1-2 on 19th, 21st and 24 Mar then daily from 30 Mar to 8 Jun and from 20 Jul to 31 Dec. In spring double figures from 14 Apr to 20 May with max of 50 on 6 May. Autumn max of 30 on several days in early Sep.  
1982 : 1-3 at Ghadira on 1-10 Jan. Daily from 24 Mar to 20 Jun with low double figures on most days, highest 45 on 19 May. Mainly single figures in autumn when daily from 18 Jul to 10 Oct, then 1-3 on 9 days to 28 Nov.

**TEMMINCK'S STINT** *Calidris temminckii* Tertuxa Griža  
1981 : 1-2 on 24 Apr and on 6 days from 1st to 13 May. 1 on 15-16 Jul then almost daily from 27 Jul to 13 Sep with 5 on 25-27 Aug highest. All records from Ghadira.  
1982 : Singles on 8 days from 22 Apr to 22 May; 2 on 28 Jul and 1-2 on 18th, 21st and 25 Sep.

**PECTORAL SANDPIPER** *Calidris melanotos* Beggazzina Amerikana  
1982 : 1 at M'Xlokk on 1-2 May. (11-Merell 22: 19).

**CURLREW SANDPIPER** *Calidris ferruginea* Beggazzina Hamra  
1981 : On most days from 11 Apr to 27 May with double figures from 6-19 May, max 28 on first date. 1 from 1st to 14 Jun. In autumn 1-3 on 6 days from 27 Jul to 15 Aug, then up to 6 daily from 26 Aug to 30 Sep.  
1982 : Almost daily from 7 Apr to 29 May reaching double figures on 12 days with a max of 20 on 2-3 May. Singles on 28-30 Jul and on 26-28 Aug, then on 16 days from 5th to 27 Sep; 5 on 14th, otherwise singles.

**DUNLIN** *Calidris alpina* Beggazzina fat-lizz  
1981 : Singles on 8th and 19 Apr. On most days from 19 Jul to 1 Nov with highest numbers in mid-Sep to mid-Oct with a max of 10 on 28 Sep. 1 on 30-31 Dec.  
1982 : Singles on 1st-3rd and 21-23 Jan; 1st and 5 Apr and 7 May. 1 on 17 Jul, then from 30 Jul to 12 Dec, though irregularly after mid-Oct. Always low single figures, highest 5 on 25-26 Sep.

**RUFF-BREASTED SANDPIPER** *Tryngites subruficollis* Girwiel Amerikan  
1982 : 1 at Hal Far on 28 Apr.

**RUFF** *Philomachus pugnax* Girwiel  
1981 : Almost daily from 7 Mar to 27 May, then 1 on 7 days till 17 Jun. Usually medium to high single figures but up to 15 on a few days. In autumn daily from 7 Aug to 11 Oct with max of 10 on 9 Sep.  
1982 : Singles on 4 days from 18th to 27 Feb, then on most days from 6 Mar to 23 May and 1-2 on 5 days to 27 Jun. up to 40 at Luqa on several days but mainly single figures at Ghadira and elsewhere. 1 on 8 Jul, then 1-7 on 10 days from 18 Aug to 13 Sep.

**JACK SNIFE** *Lymnocyrtus minimus* Ćinkonja  
1981 : 1 on 6 Jan; 3 on 15th and singles on 17th and 26 Feb and on 17-21 Apr. 1 on

23 Sep then 1-3 on 22 days from 2 Nov to 21 Dec.

1982 : Singles on 9 Jan, 8 Apr, 20 Nov and 24 Dec.

**SNIFE** *Gallinago gallinago* Bekkaċċ  
1981 : Singles on 5 days from 2 Jan to 13 Feb, then 1-2 on several days from 1 Mar to 27 Apr. 1 on 12th and 2 on 15 May. Daily from 18 Sep to year end with max of 6 at Ghadira on 25 Nov.  
1982 : Singles at Ghadira on 1-3rd, 17th and 23 Jan, and on 28 Feb, then 1-3 on 7 days from 15 Mar to 28 Apr. Singles on 18th, 26th and 30 Aug followed by 22 sightings on 20 days from 19 Sep to 6 Dec. Always 1-3 but flock of 15 at Fiddien on 29 Oct.

**GREAT SNIFE** *Gallinago media* Bekkaċċ ta' Mejju  
1981 : 4 singles in Apr: at Ghadira on 1st, 6th and 15th and at Lunzjata on 16th.  
1982 : Singles at Lunzjata on 29 Apr and at Ghadira on 3 Oct.

**WOODCOCK** *Scolopax rusticola* Gallina  
1981 : 1-5 on 5 days from 4 Nov to 6 Dec.  
1982 : 1 on 4 Mar. 1-2 on 6 days from 29 Oct to 20 Nov.

**BLACK-TAILED GODWIT** *Limosa limosa* Girwiel Prim  
1981 : Singles at Ghadira on 15 Apr, 28 Jul and 15 Aug.  
1982 : 1-2 on 3 days from 4th to 28 Mar. Singles at Salina on 26 Jun and on 28-29 Aug.

**WHIMBREL** *Numenius phaeopus* Gurlin Zghir  
1981 : 1 flew over Ghadira on 24 Aug.  
1982 : 5 off Delimara Pt. on 3 Apr.

**CURLREW** *Numenius arguata* Gurlin  
1981 : Singles at Ghadira on 29 Jul and at Dwejra on 8 Sep.  
1982 : 1 at Ghadira on 1 Apr.

**SPOTTED REDSHANK** *Tringa erythropus* Ćuvett  
1981 : Singles at Ghadira on 24-29 Jun and on 29 Jul.  
1982 : Recorded at Ghadira on 5-15 Apr; 28 Apr - 7 May; 24 Aug; 9-11 Sep; and 19 Oct. Always singles except for 2 on 29-30 Apr.

**REDSHANK** *Tringa totanus* Pluverott  
1981 : Singles on 10-11 Jan; 12 Mar; 7-9th and 24 Apr and 2 on 11 May. 1 on 12th, then on most days at Ghadira from 23 Jun to 30 Jul; mainly up to 5 but a flock of ca.100 flew over on 17 Jul. 1 on 15 Aug, then 1-2 daily from 3rd to 19 Sep, 2 on 8 Oct and 1 on 28 Dec.  
1982 : Recorded in all months of the year: singles on 1 day each in Jan and Feb, 2 days in Mar, 4 days in Apr and 3 days in May. Up to 8, mainly at Ghadira, on several days from 12 Jun to 12 Dec but less regular between mid-Sep and late Oct.

**MARSH SANDPIPER** *Tringa stagnatilis* Ćewċewwa Żghira  
1981 : 2-3 at Ghadira from 6th to 15 Apr.  
1982 : Singles on 13th and 21 Mar; 7-8th, 21st and 30 Apr; 17th and 28 Aug, all at Ghadira.

**GREENSHANK** *Tringa nebularia* Ćewċewwa  
1981 : 2 on 17-22 Mar, then 1-4 daily from 4 Apr to 21 May. Singles on 4 days from 8th to 22 Sep.  
1982 : On most days from 8 Apr to 6 May; usually 1-4 but 7 at Ghadira on 29 Apr. In autumn 1-2 on 15 days from 4 Jul to 10 Aug and 1-4 on 5 days from 29 Aug to 13 Sep.

**GREEN SANDPIPER** *Tringa ochropus* Swejda  
1981 : 1-2 on 20 days from 6 Mar to 22 Apr. Autumn passage from 2 Jul to 25 Oct with most in Aug. There were 38 sightings, all of 1-3 birds.  
1982 : 1 on 18 Feb, then 23 sightings of 1-3 birds from 10 Mar to 13 May, with most in late Mar to mid-Apr. Singles on 16th and 27 Jun, 1-4 on 4 days from 1-23 Jul, then on several days from 30 Jul to 26 Sep with max on 4 on 3 days. 2 on 5th and 17th and 1 on 30 Oct, then singles on 7th and 10-13 Nov.

**WOOD SANDPIPER** *Tringa glareola* Pespup tal-Bahar  
1981 : Odd singles from 8 Mar, then practically daily from 26 Mar to 2 Jun. Up to 10 on most days but 20 at Ghadira on 19 Apr. Singles on 6th, 8th and 11 Jul, then daily from 30 Jul to 26 Sep; single figures except for 14 on 13th and 32 on 24 Aug. 1-3 at Ghadira on 16-27 Oct.  
1982 : Present on most days in several places from 5 Apr to 22 May with max of 15 at Ghadira on 28 Apr. Singles on 2-4th and 9 Jun. In autumn on several days from 8 Jul to 1 Sep; mainly up to 10 but 25 at Salina on 21 Jul and 20 at Ghadira on 2 Aug. Then 1-2 on 13-18 Sep and singles on 17-19 Oct and on 4 Nov.

COMMON SANDPIPER *Actitis hypoleucos* Beggazzina tar-Rokka  
 1981 : 1-2 on 6 days from 15th to 29 Mar, then single figures almost daily from 6 Apr to 27 May. 1 on 27 Jun and 2 on 5 Jul, then daily in single figures from 18 Jul to 7 Oct. 1 on 25 Oct.  
 1982 : Daily at several places from 27 Mar to 22 May, then singles on 3 days to 3 Jun. Highest numbers recorded from 28 Apr to 3 May with max of 25 on 29 Apr. In autumn almost daily from 8 Jul to 22 Sep, then on 5 days to 7 Nov. Autumn max 15 at Salina on 18th and 29 Aug.

TURNSTONE *Arenaria interpres* Monakella Imperjali  
 1981 : 1 at Ghadira on 16 May.  
 1982 : 1 at Ghadira on 9-10th and 3 near Delimara on 14 May.

ARCTIC SKUA *Stercorarius parasiticus* Ċiefa ta' l-Artiku  
 1981 : 1 at Delimara on 21 Apr.

MEDITERRANEAN GULL *Larus melanocephalus* Gawwija Rasha Sewda  
 1981 : 4 records in Jan-Mar to 24th with max of 15 at Marsa on 17 Jan. 1 on 20th and 5 on 26 Dec at Pietà'.  
 1982 : Singles on 10th and 24 Jan, 23 Nov and 27 Dec were the only identified.

LITTLE GULL *Larus minutus* Gawwija Żghira  
 1981 : Singles on 20-21 Feb and on 8 Dec.  
 1982 : Singles on 28 Feb; 8th, 20th, 23-24th and 30-31 Mar; 18th, 25th and 27 Dec.

BLACK-HEADED GULL *Larus ridibundus* Gawwija Rasha Kannella  
 1981 : Present in harbours in Jan-Mar to 15th. Double to treble figures on several days in Jan-Feb with max of 300 at Sliema Creek on 20 Jan. Singles at Ghadira on 31 Mar; 21-29 Apr; and 31 May-2 Jun. 2 on 25 Oct and 1 on 4 Nov, then daily from 13 Nov onwards with 200-300 on several days in Dec.  
 1982 : Double to low treble figures daily in Jan-early Mar, then in dwindling numbers till early Apr, but up to 3 at Ghadira till 28th. 3 on 8 Oct then from 5 Nov, daily in Dec. Mainly double figures except for last week, max 350 on 27th.

SLENDER-BILLED GULL *Larus genei* Gawwija Geddumha Rqiq  
 1981 : Singles at Ghadira and Bahar ic-Caghaq on 28 Jul, 11 at Ghadira on 30 Oct, and 2 at Msida on 8 Dec.  
 1982 : 1 at Ghadira on 6 Sep.

LESSER BLACK-BACKED GULL *Larus fuscus* Gawwija Daharha Iswed  
 1981 : 1 at Ghadira on 16 May.  
 1982 : Singles on 11 Apr, 6 Oct and 22 Dec.

HERRING GULL *Larus argentatus* Gawwija Prima  
 1981 : No high concentrations recorded in winter months. As usual breeding mainly on Filfla and at Ta' Cenc.  
 1982 : Highest count away from breeding areas was 34 at Sliema on 27 Nov.

GULL-BILLED TERN *Gelochelidon nilotica* Ċirlewwa Geddumha Ohxon  
 1981 : Singles at Ghadira on 30 Mar and at Sliema on 7 Jul.  
 1982 : Singles at Bahar ic-Caghaq on 30 Oct and at Manoel Isle on 27 Dec.

CASPIAN TERN *Sterna caspia* Ċirlewwa Prima  
 1981 : 11 over Ghadira on 18 Oct.  
 1982 : 1 at Ghadira on 2 Nov.

SANDWICH TERN *Sterna sandvicensis* Ċirlewwa tax-Xitwa  
 1981 : 2 on 29 Aug; 2 on 27 Nov; 4 on 5th and 1 on 10 Dec.  
 1982 : Singles on 28 Nov and on 30-31 Dec.

COMMON TERN *Sterna hirundo* Ċirlewwa tal-Bahar  
 1981 : 1 was shot offshore on 17 Oct.

LITTLE TERN *Sterna albifrons* Ċirlewwa Żghira  
 1981 : 1 at Ghadira on 3 May and 2 at Sliema on 11 Nov.  
 1982 : 4 on 10th and 1 on 17 Aug at Ghadira.

WHISKERED TERN *Chlidonias hybridus* Ċirlewwa bil-Mustaċċi  
 1982 : 1 off M'Xlokk on 2 May.

BLACK TERN *Chlidonias niger* Ċirlewwa Sewca  
 1981 : Singles on 6 May, 31 Jul, 19 Aug, 30 Sep, and 1-4 Oct.  
 1982 : Singles on 2nd and 3 May; then on 9 days from 6 Aug to 8 Sep; singles except for 2 on 25 Aug.

WHITE-WINGED BLACK TERN *Chlidonias leucopterus* Ċirlewwa tal-Ġewnah Abjad  
 1982 : Singles on 29-30 Apr, 12th and 19-23 May.

PUFFIN *Fratercula arctica* Purċinell tal-Bahar  
 1982 : 1 shot off Comino on 12 Mar.

ROCK DOVE *Columba livia* Tudun tal-Ġebel  
 1981 : 1 at Blue Grotto on 24 May.  
 1982 : 6 birds with typical plumage of wild stock at Mtaheb on 25 Jul.

TURTLE DOVE *Streptopelia turtur* Gamiema  
 1981 : Few from 9 Apr then daily from 16th and throughout most of May with max of 600 on 22 Apr. A few (up to 10 at Buskett) recorded regularly throughout Jun, Jul and early Aug when seen also in display flight. Smaller numbers in autumn from 27 Aug to 26 Sep with max of 40 at Buskett on 8 Sep. 1-2 on 11th and 17 Oct.  
 1982 : On most days from 8 Apr to 1 Jun with 300 on 12 May highest. 1-2 on 6 days from 4 Jun to 24 Jul. Autumn passage from 25 Aug to 2 Oct when usually single to low double figures on most days. Heavier passages on 15th and 17 Sep with ca. 550 and 400 respectively.

CUCKOO *Cuculus canorus* Daquqa Kahla  
 1981 : 13 records of 1-2 birds on 9 days from 14 Apr to 22 May. 2 on 22 Jul and 1 on 4 Oct.  
 1982 : Singles on 13 days from 22 Mar to 30 May; on 29 Jun, and on 8th and 15 Sep.

BARN OWL *Tyto alba* Barbaġann  
 1981 : Recorded only from one site in Gozo during the breeding season.  
 1982 : Singles at Hal Far on 11 Feb and at Ghadira on 22 Jun. In July 1 sighted at the previous year's breeding site and fragments of a long dead bird were found at a previously used site.

SCOPS OWL *Otus scops* Kokka  
 1981 : 1 on 17 Jan then 1-2 on 6 days from 6 Mar to 8 May. In autumn up to 3 at Buskett from 15th to 29 Oct.  
 1982 : Singles on 9 days from 19 Mar to 13 Apr. 1 on 17 Oct.

LONG-EARED OWL *Asio otus* Gattus  
 1981 : 1 at il-Qaws on 26 Oct.

SHORT-EARED OWL *Asio flammeus* Kokka tax-Xaghri  
 1981 : 1 released on Comino on 15 Apr. 5 singles seen shot on 12 Nov.  
 1982 : Singles at Buskett on 5 Mar and at Hal Far on 17 Oct.

NIGHTJAR *Caprimulgus europaeus* Buqrajq  
 1981 : Influx on 8-10 Apr with max of 10 at Buskett on last day, then singles on 4 days to 9 May. 1 on 15th and 2 on 17 Oct.  
 1982 : Sightings on 5 days in spring from 10 Apr to 19 May with max of 5 at Buskett on last date. In autumn 7 records of 1-2 between 14 Sep and 17 Oct.

SWIFT *Apus apus* Rundun  
 1981 : Single figures irregularly from 19 Mar, then larger numbers almost daily from late Apr to 13 Sep. Max 200 at Dingli on 17 May. 1 on 3 Oct.  
 1982 : On most days from 28 Mar until late Jun, then less regular till 15 Sep. Mainly in double figures but with max of 250 at Mosta on 12 Aug.

PALLID SWIFT *Apus pallidus* Rundun Kannelli  
 1982 : Singles at Ghar Hasan on 27 Jul and at Buskett on 7 Oct.

ALPINE SWIFT *Apus melba* Rundun Żaggu Bajda  
 1981 : Main passage in Apr with 6 records of up to 7 birds from 1st to 28th. Then 3 on 11 Jul, 1 on 16 Aug and 2 on 5 Oct.  
 1982 : 1-2 on 5 days from 24 Mar to 26 Apr. Singles on 25 Jun and 13 Jul, then up to 6 on 4 days from 17 Sep to 1 Oct.

KINGFISHER *Alcedo atthis* Ghasfur ta' San Martin  
 1981 : 1-4 daily at Ghadira from 15 Aug to 31 Dec. Occasional records from other areas during same period.  
 1982 : 1-2 on most days at Ghadira from 1 Jan to 30 Mar and again from 17 Aug onwards, but not seen between 1-17 Dec. Only 4 other sightings outside Ghadira.

BEE-EATER *Merops apiaster* Qerd in-Nahal  
 1981 : On 7 days from 11 May to 19 Jun with double figures on 3 days, max 30 at Dingli on 4 Jun.  
 1982 : 2 on 31 Mar and 5 on 12 Apr, then 1-3 on 5 days from 9 May to 2 Jun. 15 on 1 Jul. In autumn influx on 10-13 Sep when small parties recorded in several places with a total of 50 on 11th.

ROLLER *Coracias garrulus* Farruġ  
 1981 : Singles on 9th and 12 May and on 5 Jun.

1982 : 5 at Misra on 1 May and 1 at Chadwick Lakes on 16 Sep.

HOOPOE *Upupa epops* Daqquqa tat-Toppu

1981 : Singles on 7 days from 19 Mar to 14 Apr and on 5 days from 16 Aug to 3 Sep.

1982 : On most days from 19 Mar to 11 Apr with sightings (mainly of 1-3 birds) in several areas. Highest total 15 on 8 Apr. Singles on 1 May and 2 Jul, then 8 singles on 6 days from 19 Aug to 1 Oct.

WRYNECK *Jynx torquilla* Bulebbiet

1981 : 1 at Luqa on 25 Jan. 1 at Buskett in late Feb-early Mar was probably wintering.

Spring passage very poor with only 7 singles between 21 Mar and 9 May, most in late Mar. 1 on 29 Aug then regular records of 1-3 birds from various areas from 7 Sep to 22 Nov. In Dec singles recorded at Buskett and Lunzjata.

1982 : In Jan-Feb recorded at Buskett, Lunzjata and Has-Saptan. Spring passage from 14 Mar to 1 May with most between 30 Mar and 13 Apr when there were 25 sightings of 1-3 birds. In autumn regular sightings from 5 Sep to 20 Nov with max of 4 at Buskett on 10 Oct. In end-Nov and Dec recorded from 4 areas.

BAR-TAILED DESERT LARK *Ammomanes cincturus* Alwetfa Qastnija

1982 : 1 was shot at Delimara on 5 Sep.

SHORT-TOED LARK *Calandrella brachydactyla* Bilbla

1981 : First sighting on 31 Mar with double figures by mid-Apr. Post-breeding flocks of up to 100 in some areas. Last of regular sightings on 23 Sep followed by 4 on 8 Oct.

1982 : First arrivals noted on 3 Apr and last on 26 Sep, then 2 on 17 Oct. Bred in usual numbers.

WOODLARK *Lullula arborea* Ćuqlajta

1981 : 1 at Ghadira on 5 Dec.

1982 : 1 at Wied il-Ghasri on 2 Nov.

SKYLARK *Alauda arvensis* Alwetfa

1981 : Single figures wintering in a few areas in Jan-Mar to 9th, then singles on 20 Mar and 19 Apr. Almost daily from 9 Oct to year end; highest numbers in late Oct-early Nov. Mainly double figures but 'heavy passage' reported at Ghajn Iuffieha on 27 Oct.

1982 : Wintering birds reported from several areas with max of 20 at Ghadira. Small numbers on return passage between mid-Mar and 14 Apr. 2 on 25 Sep then daily from 17 Oct to 28 Nov; only double figures. Single figures, mostly at Ghadira, from 15-31 Dec.

SAND MARTIN *Riparia riparia* Hawwiefax-Xtut

1981 : Spring passage from 6 Mar to 17 May; rarely in double figures before mid-Apr. Max 1,000 at Lunzjata on 30 Apr. 1 on 27 Jul and 2 on 8 Aug, then from 26 Aug to 24 Oct; in much smaller numbers than in spring and not daily. Max 20 at Buskett on various days in Oct.

1982 : Few from 15 Mar then almost daily from 3 Apr to 27 May. Highest numbers in early May with max of 2,000 at Ghajn Rihana on 11th. In autumn on most days from 10 Sep to 18 Oct with up to 200 on several days. Late influx in Nov with 10 on 3rd and singles on 3 days to 18th.

SWALLOW *Hirundo rustica* Huttafa

1981 : Singles on 21st and 28 Feb then single figures on most days from 3 Mar, becoming daily in increasing numbers by 29th. Max was 3,000 at Lunzjata on 30 Apr.

Numbers much reduced after mid-May with last sighting on 14 Jun. In autumn 1-2 on 3 days from 21-29 Aug and daily from 3 Sep to 12 Nov, then 1 on 22nd. Mainly double figures with max of 100 on several days.

1982 : Few from 9 Mar then daily from 20th and until 23 May after which 1-3 on 8 days to 20 Jun. Treble figures frequent. Max was 2,000 at Ghajn Rihana on 11 May. Singles on 2nd and 6 Jul and daily from 25 Aug to 5 Nov then irregularly to 24th. Usually double or low treble figures but up to 500 on 3 days. 1 was present at Lunzjata during the latter half of Dec.

RED-RUMPED SWALLOW *Hirundo daurica* Reġina tal-Huttaf

1981 : 1-3 on 7 days from 16 Apr to 20 May.

1982 : Singles on 10th and 16 Apr. 2 on 30 Oct.

HOUSE MARTIN *Delichon urbica* Hawwiefax

1981 : Single to low double figures irregularly from 19 Feb then daily from 14 Apr to 20 May with a few irregularly to 21 Jun. Max was 1,000 at Lunzjata on 1 May, otherwise usually double figures. 2 pairs bred at Mosta, both fledging young in late Aug. Single to low double figures in autumn from 1 Sep to

2 Nov but there were several days with no sightings. Max was 100 at Buskett on 3 Oct.

1982 : 1 on 20 Feb, then on most days from 14 Mar to 9 Jun. Double or treble figures, with max of 500 at Chadwick Lakes on 20 Apr. Single pairs bred at Mdina and on Filfla. As usual irregularly seen in autumn from 11 Sep to 24 Oct, then small influx on 17-20 Nov. Max 20 at Buskett on 7 Oct.

RICHARD'S PIPIT *Anthus novaeseelandae* Bilblun Prim

1981 : 1 at Ghadira on 31 Oct.

TAWNY PIPIT *Anthus campestris* Bilblun

1981 : Singles on 5 days from 12 Apr to 17 May. In autumn 11 sightings of 1-5 birds on 9 days from 20 Aug to 3 Oct.

1982 : 1-5 on 5 days from 26 Mar to 8 May. 13 sightings of up to 8 birds on 10 days from 2-29 Sep, then 3 on 30 Oct and 1 on 14 Nov.

TREE PIPIT *Anthus trivialis* Diżż

1981 : 1 on 6 Mar then from 21 Mar to 18 May when low double figures on most days.

Heavy passage over Gozo on 13 Apr when 'thousands' were seen continually passing over in flocks. In autumn single to low double figures (up to 30) on most days from 24 Aug to 11 Oct then again in single figures from 25 Oct to 7 Nov.

1982 : Spring passage from 8 Mar to 21 May, daily from late Mar to early May. An exceptionally heavy passage was witnessed over Ghadira on 8 Apr when ca.20,000 moved north in the first 3 hours after dawn. Smaller numbers were seen in other areas. Max flock size was 200. Mainly single to medium double figures on other days. In autumn on most days from 28 Aug to 7 Nov; only single to low double figures, max 20. 1 on 27 Dec.

MEADOW PIPIT *Anthus pratensis* Pespup

1981 : Up to 20 in most areas in Jan-Mar then single figures to 14 Apr. Again from 15 Oct onwards; higher numbers (up to 70) in Oct-Nov.

1982 : In usual numbers in Jan-Mar with 50 at Lunzjata on 13 Feb highest, then few till 12 Apr. A very late bird on 24 May. 1 on 17th then from 22 Oct onwards in slightly smaller numbers than before.

RED-THROATED PIPIT *Anthus cervinus* Diżż Ahmar

1981 : Low single figures on 13 days from 29 Mar to 8 May. 1 on 26 Sep then 1-5 on 11 days from 17 Oct to 7 Nov.

1982 : Singles on 10 Jan and 15 Mar, then 1-5 on several days from 31 Mar to 12 May. In autumn 1-3 on 7 days from 17 Oct to 8 Nov.

ROCK/WATER PIPIT *Anthus spinoletta* Diżż ta' l-Ilma

1981 : 1 at Ghadira on 11-13 Nov.

1982 : 1 at Ghadira on 14th and 21 Nov.

YELLOW WAGTAIL *Motacilla flava* Isfar

1981 : On most days from 8 Mar to 24 May; mainly in double figures, occasionally up to 100. 1 on 2 Jun. 1 on 6th, then almost daily from 11 Aug to 1 Nov, mainly in single to low double figures. 1 on 11-12 Nov.

1982 : Spring passage from 15 Mar to 30 May with max of 1,000 at Ghajn Rihana on 9-10 May. Singles regularly in Jun-early Aug, mainly at Ghadira, Salina and Ghajn Rihana. In autumn from 7 Aug to 3 Nov; single to medium double figures on most days. 4 on 20 Nov.

GREY WAGTAIL *Motacilla cinerea* Zakak tad-Dell

1981 : 1-3 in several areas in Jan-Mar to 21st. 1 on 25 Apr. Singles on 4 days in Sep from 19th then daily from 1 Oct onwards with up to 6 in suitable areas.

1982 : Up to 5 in usual places in Jan-Mar to 21st. 1 on 19 Sep, then from 25 Sep onwards with max of 15 at Lunzjata on 29 Oct.

WHITE WAGTAIL *Motacilla alba* Zakak Abjad

1981 : Singles in Jan-Mar to 26th. 1 on 12 Apr. Singles from 4 Oct increasing from 15th with max of 80 at Ghadira on 30th. Smaller numbers in Dec.

1982 : Up to 10 in most areas in Jan-Mar and 1-2 to 8 Apr. 1 on 17 Sep, then from 13 Oct onwards. Max of 200 at Lunzjata on 31 Oct-1 Nov. Ca.300 were roosting at Victoria in Dec.

WREN *Troglodytes troglodytes* Bumistur

1982 : 1 at Ghadira Bay on 29-31 Dec.

DUNNOCK *Prunella modularis* Żiemel

1981 : Small numbers (up to 10 at Buskett) in Jan-Mar to 26th and from 15 Oct onwards.

1982 : Up to 10 in several areas in Jan-Mar to 13th. 1 on 16-17th, then from 23 Oct onwards with 20 at Buskett on 5 Nov highest.

- RUFOUS BUSH CHAT** *Cercotrichas galactotes* Rožinjol tax-Kaghri  
 1981 : Singles at Sta. Lucia on 13th and at Ghadira on 22 May.  
 1982 : 1 at Sarraflu on 26 Apr.
- ROBIN** *Eritachus rubecula* Pitiross  
 1981 : Double figures in Jan-Mar to 26th. Higher numbers at Buskett in Mar with max of 100 on 14th. Few till 12 Apr. 1-2 in various areas in Jun-Sep. First autumn migrants from 18 Sep, daily from 8 Oct onwards. High double figures in most places in Oct-Nov and up to 300 at Buskett.  
 1982 : Low double figures in Jan-Mar with higher numbers at Buskett where max of 100 on 21 Feb. 1-3 on 13 days from 2 Apr to 5 May. 1-2 at Buskett in Jun-Aug. Up to 3 in a few areas in Sep from 5th then daily from 2 Oct onwards. Main passage from early Oct to mid-Nov when high double figures in most places. Max 150 at Buskett on 19 Oct.
- THRUSH NIGHTINGALE** *Luscinia luscinia* Rožinjol Prim  
 1981 : 1 at Dwejra, Gozo on 8 Sep.
- NIGHTINGALE** *Luscinia megarhynchos* Rožinjol  
 1981 : Spring passage from 7 Apr to 13 May when single figures on most days. In slightly larger numbers from 23 Aug to 4 Oct with up to 10 at Buskett on several days.  
 1982 : 1-2 on 6 days from 20-31 Mar, then daily from 3 April to 1 May with double figures from 7th to 12 Apr when max of 50 in various places. 3 on 16th and 1 on 19 May. Singles at Buskett on 6 Jun and 25 Jul. From 29 Aug to 17 Oct in autumn, only single figures though up to 10 in some places on several days.
- BLUETHROAT** *Luscinia svecica* Kudirross Blu  
 1981 : 2 at Ghadira on 10th and 1 at Buskett on 15 Oct, and 1 at Lunzjata on 10 Nov.  
 1982 : Singles at Lunzjata on 11-13th and 24 Sep, and at Ghadira on 6 Oct.
- BLACK REDSTART** *Phoenicurus ochruros* Kudirross Iswed  
 1981 : 1-3 in scattered places in Jan-Mar to 22nd. Late bird on 4 Apr. 1 on 20 Oct, then from 31 Oct onwards. Highest numbers in Nov with 10 at Manoel Isle on 25th highest.  
 1982 : Singles in several places in Jan-Mar to 24th. First in autumn on 17 Oct, then from 28th onwards; never more than 3 in any one place.
- REDSTART** *Phoenicurus phoenicurus* Kudirross  
 1981 : Very early mate on 2 Mar, then on 21 days from 31 Mar to 16 May. 20 at Attard on 3 May, otherwise never more than 3. In autumn from 29 Aug to 29 Oct; high single figures on some days, max 10 at Buskett on 4 Oct.  
 1982 : Spring passage from 2 Apr to 7 May with marked influx on 8-9 Apr when 20 at Dwejra, Gozo. Otherwise never more than 5. In autumn, on several days from 9 Sep to 3 Nov with max of 20 at Buskett on 10 Oct.
- MOUSSIER'S REDSTART** *Phoenicurus moussieri* Kudirross tat-Tunežija  
 1982 : 3 at Dwejra, Gozo on 7 Apr.
- WHINCHAT** *Saxicola rubetra* Bučaqq tas-Silla  
 1981 : 1-2 irregularly from 31 Mar, then on most days, mainly in single figures, from 3 Apr to 16 May. Max 15 at Sta. Lucia on 9 May. Singles on 26th and 30 Aug and on 14 Sep.  
 1982 : Spring passage from 25 Mar to 23 May, most in Apr and early May. Single figures with up to 10 on a few days. Smaller autumn passage with 1-4 on most days from 11 Sep to 1 Oct, then on 3 days to 18 Oct.
- STONECHAT** *Saxicola torquata* Bučaqq tax-Xitwa  
 1981 : Single figures, occasionally up to 15, in Jan-early Mar, then scattered sightings to 26 Mar. 1 on 27-28 Sep then from 3 Oct onwards. Low double figures (max 25) in Oct to mid-Nov, then single figures.  
 1982 : Single figures in Jan-Mar to 28th. In autumn from 30 Sep onwards. Double figures, max 40 on several days, from early Oct to mid-Nov.
- ISABELLINE WHEATEAR** *Oenanthe isabellina* Kuda l-Isabellina  
 1982 : 1 at M'Xlokk on 19 Feb.
- WHEATEAR** *Oenanthe oenanthe* Kuda  
 1981 : Spring passage from 21 Mar to 1 May with 1-3 on several days. In autumn from 21 Aug to 7 Nov but most in Sep when 1-3 in most places almost daily.  
 1982 : On most days from 21 Mar to 5 May then 1-2 on 3 days till 22nd. Most in early to mid-Apr with max of 50 at Dwejra on 8th. In autumn single figures on most days from 20 Aug to 3 Oct, then 1-2 on 4 days to 17 Nov.
- BLACK-EARED WHEATEAR** *Oenanthe hispanica* Kuda Dumnikana  
 1981 : The only birds identified were single males on 1st and 10 Apr and a juv. at 1a' Cenc on 27-28 Jun.  
 1982 : 19 sightings of 1-2 birds on 14 days from 1 Apr to 16 May. A pair which bred at 1a' Zuta was first discovered on 26 Jun. The female was later found shot but three young fledged successfully (IL-Merill 22: 17). 2 juvs. accompanied by a male at il-Qaws on 22 Jul could have been the same birds.
- ROCK THRUSH** *Monticola saxatilis* Ġanbublu  
 1981 : 1 on 8th and 3 on 26 Apr.  
 1982 : Singles on 31 Mar, 11 Apr and 17 Sep.
- BLUE ROCK THRUSH** *Monticola solitarius* Merill  
 1981 : Breeding in usual haunts. Highest count 12 at 1a' Cenc on 24 May. A few non-breeding birds in other areas, especially in Sep-Dec.  
 1982 : Highest count 15 at 1a' Cenc on 16 May. Seen also away from usual places in Jan-Mar and Sep-Dec.
- RING OUZEL** *Turdus torquatus* Malvizz tas-Sidra Bajda  
 1981 : 3 at Attard on 3 Nov.
- BLACKBIRD** *Turdus merula* Malvizz Iswed  
 1981 : 2 on 31 Jan and singles on 9th and 22 Mar. 1 at Ghadira on 13-26 Sep, then singles on 9 days from 15 Oct to 30 Dec.  
 1982 : 1-2 on 4 days from 30 Jan to 14 Mar and singles on 31 Oct and 14 Nov.
- FIELDFARE** *Turdus pilaris* Malvizzun tal-Ġfajja'  
 1981 : 5 sightings of 1-3 birds on 4 days from 30 Oct to 6 Dec.  
 1982 : Singles on 2 Jan and 14 Mar.
- SONG THRUSH** *Turdus philomelos* Malvizz  
 1981 : Low single figures in Jan-Mar to 26th, with slightly higher numbers in Mar. Singles on 16 Apr and on 2 Aug. From 8 Oct in autumn with double figures till mid-Nov. Highest 50 in various places on several days.  
 1982 : Single figures in Jan-Mar to 28th but up to 10 on some days at Buskett and Has-Sapta in Mar. 1 at Sta. Lucia on 23 May and 1 frequently seen at Buskett between 30 May and 19 Sep. Few singles from 2 Oct reaching double figures, max 50, on 16th. Only single figures after late Nov.
- REDWING** *Turdus iliacus* Malvizz Ahmar  
 1981 : 5 records of 1-4 birds from 30 Jan to 1 May, then 1-3 on 9 days from 19 Nov to 28 Dec.  
 1982 : 2-3 at Buskett on 2nd and 3 Jan.
- MISTLE THRUSH** *Turdus viscivorus* Malvizzun Prim  
 1981 : Singles on 24 Oct and 6th and 21 Nov. 2 on 5 Dec.
- CEITTI'S WARBLER** *Cettia cetti* Bagħal tal-Ġhollieq  
 1981 : Breeding in usual areas. Few in other areas in Sep-Dec. Highest count 15 at Wied il-Luq on several days in Jul-Sep.  
 1982 : Highest count 30+ at Wied il-Luq on 30 May. Only occasionally found in non-breeding areas.
- FAN-TAILED WARBLER** *Cisticola juncidis* Bagħal ta' l-Imrewħa  
 1981 : Breeding everywhere; song audible even in centre of built up areas. Double figures, often up to 40, in several feeding and roosting areas in Jul-Oct, then mainly single figures.  
 1982 : Further apparent increase in numbers. Max count 50 at Chadwick Lakes on 27 Jul.
- SAVI'S WARBLER** *Locustella luscinioides* Bagħal Ahmar  
 1981 : Singles at Ghadira on 7 Mar, at Lunzjata on 16 Apr and at Mtaħleb on 28 Aug.
- MOUSTACHED WARBLER** *Acrocephalus melanopogon* Bagħal Qasfi  
 1981 : 1 at Ramla Bay on 21 Nov.  
 1982 : Singles on 6 days from 13th to 30 Nov. Recorded in 5 different localities.
- SEDGE WARBLER** *Acrocephalus schoenobaenus* Bagħal tas-Simar  
 1981 : Singles on 7th and 19 Mar, then on several days from 4 Apr to 25 May. Mainly low single figures but up to 10 on a few days. In autumn 1-2 on 4 days from 22nd to 30 Aug and 1 on 30 Sep.  
 1982 : 2 on 20 Mar, then from 31 Mar to 30 May. Always in single figures, almost daily in Apr but less frequent in May. Singles on 6 days from 6-30 Sep, on 31 Oct and on 2 Nov.
- REED WARBLER** *Acrocephalus scirpaceus* Bagħal tal-Qasab  
 1981 : 1-2 on 9 days from 8 Apr to 17 Jun. In autumn singles on 16th and 29 Jul, then



- single figures on several days from 8 Aug to 25 Sep. Singles on 4 days in Oct to 27th.
- 1982 : Singles on 7 days from 14 Apr to 11 Jun. Single figures, occasionally up to 10, on several days from 8 Aug to 24 Oct. Singles at Lunzjata on 1st and 5 Nov, and on 3 Dec.
- GREAT REED WARBLER *Acrocephalus arundinaceus* Baghal Prim  
1981 : 1 on 7 Mar, then from 11 Apr to 10 Jun but with several gaps between sightings. Max 5 at Xemxija on 14 May. 1 on 9 Aug, then 1-2 on 7 days from 23 Aug to 11 Sep and 1 on 18 Oct.
- 1982 : Low single figures on several days from 7 Apr to 19 May with max of 5 at Lunzjata on 28 Apr. In autumn on 11 scattered days from 22 Aug to 11 Nov.
- ICTERINE WARBLER *Hippolais icterina* Bekkafik Isfar  
1981 : Up to 5 in various areas almost daily from 1st to 23 May. Singles on 4 days from 13 Aug to 11 Sep.
- 1982 : Up to 5 on several days from 5th to 30 May, then 1 on 6 Jun. In autumn singles on 15th and 24 Aug, 10 sightings of 1-2 on 6 days from 9th to 19 Sep, 2 on 1-2 Oct, and one on 28 Oct-3 Nov.
- MELODIOUS WARBLER *Hippolais polyglotta* Bekkafik ta' l-Ghana  
1982 : 1 in full song at Rabat on 23 Apr.
- DARTFORD WARBLER *Sylvia undata* Bufula tax-Xaqhri  
1981 : 1 at Ghadira on 1-6 Jan.
- SPECTACLED WARBLER *Sylvia conspicillata* Bufula Hamra  
1981 : Marked decline, disappearing from various favourite haunts. Highest count 10 at Ja' Qali on 7 Jul.
- 1982 : Numbers still very low. Never more than 6 in any one place.
- SUBALPINE WARBLER *Sylvia cantillans* Bufula Passajra  
1981 : 1-3 on several days from 15 Mar to 2 May, then singles on 19th and 23 May. Almost daily from 5 Jul to 4 Oct with double figures frequent between 9 Aug and 14 Sep. Max 50 at Buskett on 4 Sep.
- 1982 : 1 on 17 Mar, then almost daily from 27 Mar to 3 May with a marked influx on 8-12 Apr when up to 20 recorded. 2 on 15th and 4 on 16 May. Autumn passage from 25 Jul to 4 Oct when almost daily. Usually low single figures with max of 25 at Rabat on 7 Sep. Late bird on 26 Oct.
- SARDINIAN WARBLER *Sylvia melanocephala* Bufula Sewda  
1981 : Common and widespread, breeding also in small gardens in urban areas.  
1982 : Common as usual. No apparent change in numbers.
- RUPPELL'S WARBLER *Sylvia rueppelli* Bufula tat-Pavalor  
1982 : Singles at M'Xlokk and at Dwejra, Gozo on 8 Apr.
- DESERT WARBLER *Sylvia nana* Bufula tad-Dežert  
1982 : Singles at Kuncizzjoni on 13th and at M'Xlokk on 19 Apr.
- LESSER WHITETHROAT *Sylvia curruca* Bekkafik Irmiedi  
1981 : Singles at Ghadira on 4 Aug and 19 Oct.  
1982 : 1 at Paradise Bay on 5 Apr. Singles at Rabat on 8-19 Sep, and at Ghadira on 21 Sep and on 30 Sep-1 Oct.
- WHITETHROAT *Sylvia communis* Bekkafik Ahmar  
1981 : Up to 4 on several days from 8 Apr to 24 May. Singles on 25 Aug, 11th and 21 Sep.  
1982 : Single figures on several days from 3 Apr to 19 May with max of 10 at Dwejra on 26 Apr. Singles on 29-30 May and on 16 Jul. In autumn 8 sightings of single birds on 5 days from 11th to 26 Sep.
- GARDEN WARBLER *Sylvia borin* Bekkafik  
1981 : Spring passage from 12 Apr to 29 May when present on several days; mainly single figures but 20 at Buskett on 8 May. 1 on 3rd and 3 on 9 Aug, then almost daily from 21 Aug to 1 Nov. Double figures between late Aug and early Oct with a max of 100 at Buskett on 4th and 11 Sep.
- 1982 : On most days from 10 Apr to 30 May, max 15 at Ghadira on 4 May. 1 on 15th then on most days from 22 Aug to 3 Nov. Double figures frequent in late Aug and Sep with max of 50 at Buskett on 19th. An injured bird on 17 Nov.
- BLACKCAP *Sylvia atricapilla* Kapinera  
1981 : As usual, mainly restricted to areas with ivy in Jan-Mar. Max was 500 at Buskett on 22 Mar. Last seen on 11 Apr. A male was singing at Buskett on 2 Jul. Again from 4 Oct onwards but very few outside Buskett; single figures in Oct-Nov increasing to ca.30 by mid-Dec.  
1982 : Double figures in Jan and early Feb, then increasing, reaching max of 300 at Buskett on 14 Mar. High numbers also elsewhere, e.g. 100 at Has-Saptan on 21 Mar. Single figures in Apr to 17th. Singles on 10th and 26 Sep, then from 2 Oct onwards. Low double figures in several places from mid-Oct.
- YELLOW-BROWED WARBLER *Phylloscopus inornatus* Vjolin tal-Faxx  
1981 : 2 at Lunzjata on 10th and 1 at Ghadira on 16 Nov, then different singles at Lunzjata on 26th and 28 Dec.
- BONELLI'S WARBLER *Phylloscopus bonelli* Vjolin Bajdani  
1981 : Singles at Xemxija on 20 Apr, at Ghadira on 31 Aug-1 Sep, and again at Xemxija on 20 Sep.  
1982 : 1 on 20 Mar, then up to 5 daily in various places from 7th to 17 April, then 1 on 20th.
- WOOD WARBLER *Phylloscopus sibilatrix* Vjolin Hadrani  
1981 : On most days from 3 Apr to 17 May, then 1 on 24th. Single figures in several places and double figures from 15-19 Apr, max 30 at Lunzjata. In autumn singles on 8-10 Aug, then 1-5 on 9 days from 29 Aug to 3 Oct.  
1982 : 1-3 on 5 days from 25 Mar to 4 Apr, then daily from 6 Apr to 21 May with double figures on most days, max 40 at Ghadira on first day. From 29 Aug to 10 Oct in autumn (almost daily from 12 Sep to 3 Oct). Double figures in period 15-19 Sep with 40 at Ghadira on 16th highest. Late small influx on 29-31 Oct when 1-5 daily.
- CHIFFCHAFF *Phylloscopus collybita* Vjolin tax-Xitwa  
1981 : Except for 250 at Lunzjata on 2 Jan, low double figures in several places in Jan to mid-Mar, then single figures to 31st. An unusual bird was ringed at Buskett on 18 Jul. Again from 12 Oct onwards reaching double figures by 29th. Up to 150 at Lunzjata from 26 Dec.  
1982 : Up to 100 at Lunzjata in early Jan; single or low double figures in other areas. Evident increase in mid-Mar when numbers at Lunzjata reached 150. Then sharp decrease after 18th, though present daily to 31st. 1-2 on 7 days between 3 Apr and 2 May. In autumn from 17 Oct onwards. Double figures on 25th. Up to 500 were at Lunzjata during the last days of Dec.
- WILLOW WARBLER *Phylloscopus trochilus* Vjolin Pastard  
1981 : On most days from 25 Mar to 1 May then singles on 3 days till 15th. Mainly single figures but up to 10 on a few days. 1 on 30 Jul. Heavier passage in autumn when recorded on most days from 15 Aug to 12 Oct and then singles on 9 days to 7 Nov. Often in low double figures with max on 20 on 17 Sep and 3 Oct.  
1982 : On most days from 20 Mar to 3 May, then 1-2 on 9 days to 22 May. Low double figures on several days and 50 at Dwejra on 14 Apr. Occasional from 14 Aug, then daily from 24 Aug to 19 Oct with a few singles till 3 Nov. Max was 25 at Ghadira on 16 Sep, otherwise up to 15.
- GOLDCREST *Regulus regulus* Bufula tal-Qamar  
1981 : 1 on 31 Jan. Up to 5 in areas with tamarisk or pine trees from 29 Oct onwards.  
1982 : 1-5 on 4 days from 16 Nov to 30 Dec.
- FIRECREST *Regulus ignicapillus* Bufula tat-Toppu Ahmar  
1981 : 1 on 31 Jan. Low single figures from 29 Oct with max of 5 at Mizieb on 12 Dec.  
1982 : 1 on 3 Jan. Up to 5 at Mizieb from 20 Nov.
- GOLD/FIRECREST *Regulus regulus/ignicapillus*  
1981 : Regularly recorded in Jan-Mar to 15th with up to 10 at Buskett in Jan. Again from 21 Oct onwards with max of 20 at Mizieb on 14 Nov.  
1982 : Regularly seen, mainly at Buskett where up to 5 present, in Jan-Mar to 28th. 1 on 18 Sep, then from 15 Nov onwards with max on 35 at Mizieb on 6 Dec.
- SPOTTED FLYCATCHER *Muscicapa striata* Żanżarell taf-Likki  
1981 : 1 on 15th and 2 on 22nd, then on most days from 28 Apr to 23 May; mainly up to 15 but ca.30 each at Buskett and Attard on 8 May. A pair was at Ghajn Rihana on 29-30 May and another bred at Buskett, fledging two young in late Jun. 1 on 6 Aug, then 1-6 on several days from 29 Aug to 4 Oct.  
1982 : Spring passage from 22 Apr to 4 Jun when single or low double figures (max 20) on most days. Two pairs bred at Buskett, one raising two broods. 1 on 13 Aug and 3 on 5 Sep followed by influx on 15-19 Sep with max of 10 at Buskett on last date; then 1-5 on most days from 26 Sep to 3 Nov.
- RED-BREASTED FLYCATCHER *Ficedula parva* Żanżarell Sidru Ahmar  
1981 : 1 at Buskett on 20 Oct.  
1982 : Singles at Buskett on 12th and 19 Oct.
- SEMI-COLLARED FLYCATCHER *Ficedula semitorquata* Żanżarell tal-Lvant  
1982 : 1 ringed at Lunzjata on 16 Sep.

- COLLARED FLYCATCHER** *Ficedula albicollis* Żanžarell tal-Kullar  
1981 : Recorded from 2 Apr to 1 May; influx between 11-17 Apr when 1-5 in several areas, otherwise 1-2 on 7 other days. 1 on 4 Sep.  
1982 : 17 sightings of 1-2 birds on 12 days from 3 Apr to 15 May with most in period 7-12 Apr. In autumn singles on 18 Sep and 23 Oct.
- PIED FLYCATCHER** *Ficedula hypoleuca* Żanžarell Iswed  
1981 : Daily from 10 Apr to 4 May then irregular to 15th; up to 10 in most areas, with 12 at Buskett on 28 Apr highest. In autumn 1-5 on 8 days from 29 Aug to 4 Oct.  
1982 : 1 on 28 Mar, then on most days from 3 Apr to 19 May. Low single figures except for 28-29 Apr when 20 at Dwejra and 50 at Buskett. In autumn 10 records of 1-5 on 8 days from 24 Aug to 2 Oct.
- GOLDEN ORIOLE** *Oriolus oriolus* Tajra Safra  
1981 : Spring passage from 11 Apr to 25 May when single figures on several days. In Jun, singles on 1st, 14th, 21st and 27th. Then singles on 7 days from 30 Aug to 23 Sep.  
1982 : Singles on 9th and 18 Apr then on most days from 22 Apr to 30 May when mainly in single figures. 1 on 20 Jun. In autumn 1-5 on 6 days from 4-22 Sep.
- RED-BACKED SHRIKE** *Lanius collurio* Kaččamendula Hamra  
1981 : 1 at Ghadira on 18 May. Singles on 6 days from 6 Sep to 4 Oct.  
1982 : 1 at Ta' Qati on 9 May. Singles on 6 days from 4 Sep to 2 Oct.
- GREY SHRIKE** *Lanius excubitor* Kaččamendula Griza Prima  
1981 : 1 at Ghadira on 1 Mar.
- WOODCHAT SHRIKE** *Lanius senator* Kaččamendula  
1981 : 1 on 31 Mar then on several days from 14 Apr to 24 May. Never more than 2 in any place. 1 at Xomxija on 14 Jun. In autumn 9 sightings of 1-2 on 5 days from 10 Aug to 11 Sep.  
1982 : 1-2 in most areas on several days from 3 Apr to 27 May. Single pairs bred at Ghaxaq and Burmarrad fledging 4 and 3 young respectively in mid-Jul. 2 on 15 Sep was the only autumn record.
- STARLING** *Sturnus vulgaris* Sturnell  
1981 : Treble figures in Jan reducing to double figures after mid-Feb. Last on 26 Mar. Late singles on 14th and 18-19 Apr. 1 on 21st and 2 on 27-28 Jul. In autumn 1 on 22 Sep then from 7 Oct onwards. Highest numbers in late Oct to mid-Nov with max of 2,000 at Luqa on 30 Oct.  
1982 : Treble figures in Jan-Feb with up to 500 at Luqa, then much smaller numbers in Mar to 31st. 1 on 23 May. 1 on 14 Sep then from 30 Sep onwards reaching treble figures by 20 Oct. Max 1,000 at Luqa on several days.
- SPANISH SPARROW** *Passer hispaniolensis* Ghammiel tal-Bejt  
1981 : Very common everywhere.  
1982 : Breeding in usual numbers in all areas.
- REEF SPARROW** *Passer montanus* Ghammiel tas-Siġar  
1981 : Breeding in various places. Highest counts ca.20 each at Chadwick Lakes and at Lunzjata in Jul-Aug. Slightly higher numbers in Oct probably due to migrants.  
1982 : Highest count 30 at Rabat on 19 Sep. Small numbers recorded in most places.
- CHAFFINCH** *Fringilla coelebs* Sponsun  
1981 : Up to 10 in several areas in Jan-Feb then slightly higher numbers in Mar. Few singles in Apr-May. In Jun-Sep recorded at Buskett (up to 10), Chadwick Lakes, Miria and Ghadira. On most days from 4 Oct onwards with highest numbers in late Oct, max 100 at Buskett on 30th.  
1982 : Single figures in Jan-Apr to 20th with max of 15 at Buskett on 4 Mar. Up to 7 at Buskett in May-Sep and scattered singles in other areas in same period. In autumn from 11 Oct onwards; low double figures in several places in mid-Oct to late Nov.
- SPRING SPARROW** *Fringilla montifringilla* Sponsun Selvaġ  
1982 : Singles trapped near Rabat in early Nov and in mid-Dec.
- SERIN** *Serinus serinus* Apparell  
1981 : Up to 30 in several areas in Jan to mid-Mar. Recorded from several areas in Apr-Sep and several pairs probably bred; fledged young seen at Buskett on 16 Apr. On 11 days from 12 Oct to 22 Nov then daily from 5 Dec onwards with 20 at Buskett on 13 Dec highest.  
1982 : Up to 10 in most places in Jan-Feb, then low single figures to mid-Apr. At least 2 pairs bred at Buskett. Very few in autumn: 1-2 on 4 days from 28 Oct to 26 Dec, then 13 at Mizieb on 30 Dec.
- GREENFINCH** *Carduelis chloris* Verdun  
1981 : Singles on 29 Jan, 28 Feb, 14 May, 1 Jul and 16 Sep, then 1-4 on several days from 1 Oct to 28 Dec with most sightings in Oct to mid-Nov.  
1982 : 1 on 3 Jan and singles on 5 days from 13 Mar to 25 Apr. Singles on 5 days in May from 19th to 31st, but in 3 different places on 27th. Then 1 on 2 Jun and 14 Jul. Up to 10 on several days from 1 Oct to year end, almost daily in late Oct and in Nov.
- GOLDFINCH** *Carduelis carduelis* Gardell  
1981 : 1 on 3 Jan and on 15 Mar. Passage over Gozo on 6 Apr when ca.1,000 counted. Singles on 30 Apr; 1st and 3 May; 29th and 31 Aug; 1st and 10 Sep; and 1-2 Oct. Then single figures on 12 days from 25 Oct to 13 Dec.  
1982 : 1-2 on 2-3 Jan. Small passage on 28 Mar when 11 at Ghadira and 1 at Zabbar. Singles on 11 Apr and 27 Jun. 2 on 30 Oct and on 13 Nov were the only in autumn.
- SISKIN** *Carduelis spinus* Ekr  
1981 : Small influx in Nov from 1st to 14th, with max of 5 at Ghadira. In Dec recorded on 6-7th, 13th and 30-31st. Passage reported on 7th but no numbers given, otherwise 1-6.  
1982 : 5 records of 1-2 on 4 days from 2 Jan to 21 Feb; 1 on 29-30 May and 5 at Buskett on 24 Oct.
- LINNET** *Carduelis cannabina* Ġojjin  
1981 : Single to low double figures in most places in Jan-Apr to 19th then scattered singles or pairs all through summer. First autumn migrants on 22 Sep becoming daily from 13 Oct onwards. Double to low treble figures on several days, mainly in mid-Oct to mid-Nov.  
1982 : Single to low double figures in Jan to mid-Mar then higher numbers on passage till late Apr with max of 300 at Dwejra on 21 Mar. Scattered singles or pairs in May-Sep. Only a few in Oct from 1st, numbers sharply increasing in early Nov with max of 500 at Buskett on 3rd. Only single figures after mid-Nov.
- SCARLET ROSEFINCH** *Carpodacus erythrinus* Bumunqar  
1982 : Adult male at Lunzjata on 25 Sep.
- HAWFINCH** *Coccothraustes coccothraustes* Taż-Żebbuġ  
1981 : Singles on 5th, 20th and 21 Nov.  
1982 : Singles on 30 Oct and on 1 Nov.
- PINE BUNTING** *Emberiza leucocephala* Durrajsa Rasha Bajda  
1982 : Single males trapped at Mizieb on 31 Oct and at Bahrija on 5 Nov. (11-Merill 22: 19).
- YELLOWHAMMER** *Emberiza citrinella* Durrajsa Safra  
1982 : 1 near Delimara on 3 Nov.
- LITTLE BUNTING** *Emberiza pusilla* Durrajsa Ġerqija  
1981 : 1 at Ghadira on 18 Nov.  
1982 : 1 at Lunzjata on 24 Oct.
- ORTOLAN BUNTING** *Emberiza hortulana* Ortolan  
1981 : 2 at Xadhra on 14-15th and 1 at Lunzjata on 15 Mar.  
1982 : Recorded on 4 days in Apr: 7 at Iorri Falca and others reported trapped elsewhere on 8th, 1 on 11th, passage - no numbers quoted - on 20th, and 1 on 26th.
- REED BUNTING** *Emberiza schoeniclus* Durrajsa tal-Qasab  
1981 : 1-3 at Ghadira in Jan-Feb to 15th then 1 there from 30 Oct to 21 Nov, but 2 on 17th.  
1982 : 1 at Ghadira on 3 days from 6-21 Feb. 1-2 on 11 days, mostly at Ghadira, from 25 Oct to 20 Nov, then 1 on 26 Dec.
- CORN BUNTING** *Miliaria calandra* Durrajsa  
1981 : Small numbers breeding in several areas with highest concentration at Ghadira where up to 20 present. Large flocks at 'drinking stations' in Jul-Sep with ca.200 each at Ramla Valley and Dwejra in Gozo highest. Highest winter concentration 40 at Ghadira on 21 Nov.  
1982 : No apparent change in breeding numbers. Highest flocks were of ca.250 at Dwejra on 4th and of 100 at Buskett on 9 Sep.

## RINGING REPORT FOR 1982 & 1983

This report covers the two-year period 1982-83, during which a total of 17,983 birds were ringed, representing an increase of 1,768 birds over the previous two-year period.

The number of birds ringed in 1982 amounted to 8,872 of 85 species. This number is slightly higher than that of the previous year, when 8,734 were ringed, and it was the second year running that an increase was registered. There was a further increase in 1983 when 9,111 birds of 87 species were ringed, bringing the grand total of birds ringed since 1965 to 132,688 of 148 species.

By the end of 1983, the species which occupied the 15 top places of birds ringed before the two-year period under review, remained the same. However, the Swallow moved from 4th to 3rd place in front of the Storm Petrel (this was due to good catches of Swallows during both years, especially during 1982 when it topped the list of birds ringed) and the Blackcap shifted its place from 9th to 8th, in front of the Garden Warbler.

The period under review produced some record annual totals. The ones reached in 1982 which were not bettered in 1983 were Wryneck (30), Red-throated Pipit (21), Tree Sparrow (31) and Chaffinch (25). Record annual totals in 1983 were Cory's Shearwater (244), Herring Gull (51), White Wagtail (74), Dunnock (138), Black Redstart (14), Cetti's Warbler (84), Willow Warbler (358), Goldcrest (60) and Reed Bunting (32).

Five new species have been added to the ringing list. These were Black-necked Grebe and Sandwich Tern in 1982, and Red-eyed Vireo, Hawfinch and Chestnut Bunting in 1983. The Red-eyed Vireo and the Chestnut Bunting were also new additions to the list of the birds of Malta. A new hybrid (Swallow X House Martin) was also ringed in 1982.

This report consists of a list of ringing and recovery totals to the end of 1983; a section which deals with birds ringed in Malta and recovered at least 5km away from the ringing site during the two year period under review; and another section dealing with locally recovered foreign ringed birds.

13 of the 25 recoveries of locally ringed birds were recovered abroad. As in previous years hirundines figure prominently in recoveries abroad with single Swallows recovered in Czechoslovakia, Yugoslavia, East Germany and England respectively, and Sand Martins in Czechoslovakia and Yugoslavia. The 4th foreign recovery of a Manx Shearwater turned up from nearby Sicily, the 1st foreign recovery of a Herring Gull in Libya, while a Robin was reported for the first time from Bulgaria. Our 2nd recovery of a Great Reed Warbler turned up in Hungary a month later in spring 1982 while a Redstart ringed in spring on its northward journey was recovered in Algeria in the following autumn on its southward journey. A Chiffchaff was recovered in Austria, our second in that country and our third abroad. Of the local movements those of the Cetti's Warbler are the most interesting.

The recoveries of foreign ringed birds hail from Czechoslovakia (5), Hungary (5), Ukraine (USSR) (3), Finland (3), West Germany (1), East Germany (1), Sweden (1), Yugoslavia (1), Switzerland (1), Italy (1) and South Africa (1). The species which have been recovered for the first time in Malta are a Shelduck from Ukraine (USSR) and a Garganey from West Germany. Interesting recoveries are a Curlew Sandpiper from South Africa, the first Kestrel from Sweden, the fifth Honey Buzzard from Finland and the third Sandwich Tern from the Black Sea region. Two Sand Martins from Finland brought up a total of 5 from that country and a total of 25 hailing from 14 countries (13 European and 1 North African), while the first Swallow from Hungary brought up the total to 17 from Europe. There is also the first House Martin from East Germany and the first White Wagtail from Czechoslovakia. No fewer than 7 finches (2 Serins, 1 Greenfinch and 4 Linnets) hail from Eastern Europe.

During the two year period (1982-83) the ringing scheme started with thirteen ringing permit-holders - J.Attard Montalto, S.Balzan, J.Borg, D.Cachia, R.Cachia Zammit, V.Cilia, R.Galea, C.Gauci, M.V.Gauci, B.K.German, J.Grech, J.Sultana and R.Lesta. The period ended with 14 when Bro. Edmund, a British Trust for Ornithology permit holder, returned from U.K. in September. During 1983 the scheme had eleven different rings, bearing the MOS Valletta address, in use covering all species likely to be ringed in Malta. The only BTO rings still in use are those special ones used for Kingfisher and Swift, the number of which ringed is so small that it does not warrant ordering Valletta addressed rings.

C. Gauci, the Ringing Secretary, has been responsible, as in previous years, for recording and filing all the ringing and recovery data, as well as for the issue of a bi-monthly ringing newsletter for ringers.

Joe Sultana & Charles Gauci  
Ringing Officer Ringing Secretary

## RINGING AND RECOVERY TOTALS TO 31.12.83

Species	Ringed	Ringed	Grand Total ringed 1965-1983	Recovered	
	in 1982	in 1983		1982-83	Grand Total
Little Grebe <i>Tachybaptus ruficollis</i>	-	-	1	-	-
Black-necked Grebe <i>Podiceps nigricollis</i>	1	-	1	-	-
Cory's Shearwater <i>Calonectris diomedea</i>	21	244	1,038	-	20
Manx Shearwater <i>Puffinus puffinus</i>	15	26	421	1	4
Storm Petrel <i>Hydrobates pelagicus</i>	269	431	12,563	1	24
Little Bittern <i>Ixobrychus minutus</i>	8	3	33	-	1
Night Heron <i>Nycticorax nycticorax</i>	1	-	2	-	-
Kestrel <i>Falco tinnunculus</i>	-	-	9	-	1
Hobby <i>Falco subbuteo</i>	-	-	1	-	-
Quail <i>Coturnix coturnix</i>	1	-	5	-	-
Water Rail <i>Rallus aquaticus</i>	-	1	21	-	1
Spotted Crake <i>Porzana porzana</i>	-	-	8	-	1
Little Crake <i>Porzana parva</i>	-	-	5	-	-
Baillon's Crake <i>Porzana pusilla</i>	-	-	1	-	-
Moorhen <i>Gallinula chloropus</i>	2	3	46	-	2
Coot <i>Fulica atra</i>	-	-	1	-	-
Stone Curlew <i>Burhinus oedicnemus</i>	-	-	1	-	-
Little Ringed Plover <i>Charadrius dubius</i>	-	-	37	-	1
Ringed Plover <i>Charadrius hiaticula</i>	-	-	4	-	-
Lapwing <i>Vanellus vanellus</i>	-	-	1	-	-
Little Stint <i>Calidris minuta</i>	4	9	350	-	4
Temminck's Stint <i>Calidris temminckii</i>	-	3	23	-	-
Curlew Sandpiper <i>Calidris ferruginea</i>	1	2	32	-	3
Dunlin <i>Calidris alpina</i>	3	2	29	-	-
Ruff <i>Philomachus pugnax</i>	-	-	32	-	1
Jack Snipe <i>Lymnocyptes minimus</i>	-	-	16	-	1
Snipe <i>Gallinago gallinago</i>	3	-	31	1	3
Great Snipe <i>Gallinago media</i>	1	-	6	-	1
Spotted Redshank <i>Tringa erythropus</i>	-	-	1	-	-
Redshank <i>Tringa totanus</i>	-	-	2	-	-
Marsh Sandpiper <i>Tringa stagnatilis</i>	-	-	1	-	-

Greenshank <i>Tringa nebularia</i>	-	-	1	-	-
Green Sandpiper <i>Tringa ochropus</i>	-	1	19	-	3
Wood Sandpiper <i>Tringa glareola</i>	6	2	84	1	8
Common Sandpiper <i>Actitis hypoleucos</i>	20	3	135	-	-
Mediterranean Gull <i>Larus melanocephalus</i>	-	-	1	-	-
Black-headed Gull <i>Larus ridibundus</i>	-	-	1	-	1
Herring Gull <i>Larus argentatus</i>	25	51	98	-	2
Sandwich Tern <i>Sterna sandvicensis</i>	1	-	1	-	-
Turtle Dove <i>Streptopelia turtur</i>	3	4	39	-	4
Cuckoo <i>Cuculus canorus</i>	-	-	17	-	-
Scops Owl <i>Otus scops</i>	8	2	95	-	5
Short-eared Owl <i>Asio flammeus</i>	-	-	1	-	-
Nightjar <i>Caprimulgus europaeus</i>	1	-	12	-	1
Swift <i>Apus apus</i>	-	-	3	-	-
Kingfisher <i>Alcedo atthis</i>	4	8	65	-	7
Hoopoe <i>Upupa epops</i>	-	1	8	-	-
Wryneck <i>Jynx torquilla</i>	30	13	261	-	1
Short-toed Lark <i>Calandrella brachydactyla</i>	3	2	134	-	1
Woodlark <i>Lullula arborea</i>	-	-	2	-	-
Skylark <i>Alauda arvensis</i>	-	-	25	-	4
Sand Martin <i>Riparia riparia</i>	632	388	6,782	3	31
Swallow <i>Hirundo rustica</i>	1,726	845	14,081	6	81
Red-rumped Swallow <i>Hirundo daurica</i>	-	2	32	-	1
House Martin <i>Delichon urbica</i>	259	239	4,305	-	12
Swallow X House Martin <i>Hirundo rustica</i> X <i>Delichon urbica</i>	1	-	1	-	-
Richard's Pipit <i>Anthus novaeseelandiae</i>	-	-	1	-	-
Tawny Pipit <i>Anthus campestris</i>	-	1	9	-	-
Olive-backed Pipit <i>Anthus hodgsoni</i>	-	1	2	-	-
Tree Pipit <i>Anthus trivialis</i>	63	45	831	-	1
Meadow Pipit <i>Anthus pratensis</i>	37	54	811	1	7
Red-throated Pipit <i>Anthus cervinus</i>	21	6	45	-	-
Water Pipit <i>Anthus spinoletta</i>	1	4	10	-	-
Yellow Wagtail <i>Motacilla flava</i>	180	144	2,234	-	19
Grey Wagtail <i>Motacilla cinerea</i>	22	32	485	-	7

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White Wagtail <i>Motacilla alba</i>	34	74	410	-	5
Wren <i>Troglodytes troglodytes</i>	-	-	17	-	-
Dunnock <i>Prunella modularis</i>	20	138	897	1	5
Rufous Bush Chat <i>Cercotrichas galactotes</i>	1	1	7	-	-
Robin <i>Erithacus rubecula</i>	1,204	1,040	16,759	5	148
Thrush Nightingale <i>Luscinia luscinia</i>	-	-	4	-	-
Nightingale <i>Luscinia megarhynchos</i>	74	54	1,123	-	2
Bluethroat <i>Luscinia svecica</i>	3	2	47	-	-
Black Redstart <i>Phoenicurus ochruros</i>	9	14	85	-	1
Redstart <i>Phoenicurus phoenicurus</i>	71	45	1,649	1	3
Whinchat <i>Saxicola rubetra</i>	28	30	362	-	-
Stonechat <i>Saxicola torquata</i>	63	104	984	-	2
Isabelline Wheatear <i>Oenanthe isabellina</i>	-	-	1	-	-
Wheatear <i>Oenanthe oenanthe</i>	5	5	119	-	1
Black-eared Wheatear <i>Oenanthe hispanica</i>	-	-	2	-	-
Rock Thrush <i>Monticola saxatilis</i>	-	-	3	-	-
Blue Rock Thrush <i>Monticola solitarius</i>	5	2	59	-	3
Ring Ouzel <i>Turdus torquatus</i>	-	-	3	-	-
Blackbird <i>Turdus merula</i>	-	4	139	-	12
Fieldfare <i>Turdus pilaris</i>	-	-	2	-	-
Song Thrush <i>Turdus philomelos</i>	18	24	571	-	28
Redwing <i>Turdus iliacus</i>	-	-	24	-	-
Cetti's Warbler <i>Cettia cetti</i>	53	84	561	3	19
Fan-tailed Warbler <i>Cisticola juncidis</i>	117	279	1,599	-	26
Grasshopper Warbler <i>Locustella naevia</i>	-	-	3	-	-
River Warbler <i>Locustella fluviatilis</i>	-	-	1	-	-
Savi's Warbler <i>Locustella luscinioides</i>	-	1	32	-	-
Moustached Warbler <i>Acrocephalus melanopogon</i>	4	4	59	-	1
Sedge Warbler <i>Acrocephalus schoenobaenus</i>	49	121	1,314	-	1
Marsh Warbler <i>Acrocephalus palustris</i>	-	2	7	-	-
Reed Warbler <i>Acrocephalus scirpaceus</i>	43	62	963	-	-
Great Reed Warbler <i>Acrocephalus arundinaceus</i>	34	36	815	1	3
Olivaceous Warbler <i>Hippolais pallida</i>	-	-	3	-	-
Icterine Warbler <i>Hippolais icterina</i>	38	46	666	-	-

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Melodious Warbler <i>Hippolais polyglotta</i>	-	-	2	-	-
Dartford Warbler <i>Sylvia undata</i>	-	-	35	-	-
Spectacled Warbler <i>Sylvia conspicillata</i>	41	18	1,172	-	2
Subalpine Warbler <i>Sylvia cantillans</i>	145	238	3,229	-	-
Sardinian Warbler <i>Sylvia melanocephala</i>	654	666	7,187	4	29
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>	3	4	36	-	-
Whitethroat <i>Sylvia communis</i>	56	44	1,224	-	1
Garden Warbler <i>Sylvia borin</i>	274	232	5,025	-	8
Blackcap <i>Sylvia atricapilla</i>	525	648	5,619	3	13
Yellow-browed Warbler <i>Phylloscopus inornatus</i>	-	-	6	-	-
Bonelli's Warbler <i>Phylloscopus bonelli</i>	34	2	107	-	-
Wood Warbler <i>Phylloscopus sibilatrix</i>	255	350	2,758	-	-
Chiffchaff <i>Phylloscopus collybita</i>	761	879	14,578	6	38
Willow Warbler <i>Phylloscopus trochilus</i>	216	358	2,152	1	2
Goldcrest <i>Regulus regulus</i>	11	60	142	-	-
Firecrest <i>Regulus ignicapillus</i>	6	10	190	-	1
Spotted Flycatcher <i>Muscicapa striata</i>	56	24	829	-	3
Red-breasted Flycatcher <i>Ficedula parva</i>	2	1	41	-	-
Semi-collared Flycatcher <i>Ficedula semitorquata</i>	1	-	4	-	-
Collared Flycatcher <i>Ficedula albicollis</i>	3	11	196	-	-
Pied Flycatcher <i>Ficedula hypoleuca</i>	76	92	1,415	-	2
Penduline Tit <i>Remiz pendulinus</i>	-	2	4	1	2
Golden Oriole <i>Oriolus oriolus</i>	3	5	109	-	6
Red-backed Shrike <i>Lanius collurio</i>	1	-	69	-	-
Woodchat Shrike <i>Lanius senator</i>	13	5	135	-	-
Starling <i>Sturnus vulgaris</i>	2	1	65	-	6
Spanish Sparrow <i>Passer hispaniolensis</i>	490	596	9,047	4	106
Tree Sparrow <i>Passer montanus</i>	31	23	216	-	1
Tree Sparrow x Spanish Sparrow <i>Passer montanus x hispaniolensis</i>	-	-	1	-	1
Red-eyed Vireo <i>Vireo olivaceus</i>	-	1	1	-	-
Chaffinch <i>Fringilla coelebs</i>	25	17	387	-	6

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Brambling <i>Fringilla montifringilla</i>	-	-	4	-	-
Serim <i>Serinus serinus</i>	7	-	194	-	4
Greenfinch <i>Carduelis chloris</i>	2	6	266	-	18
Goldfinch <i>Carduelis carduelis</i>	1	-	14	-	1
Siskin <i>Carduelis spinus</i>	-	-	6	-	-
Linnet <i>Carduelis cannabina</i>	2	6	894	-	53
Scarlet Rosefinch <i>Carpodacus erythrinus</i>	1	-	3	-	-
Hawfinch <i>Coccothraustes coccothraustes</i>	-	1	1	-	-
Lapland Bunting <i>Calcarius lapponicus</i>	-	-	1	-	-
Yellowhammer <i>Emberiza citrinella</i>	-	-	1	-	-
Ortolan Bunting <i>Emberiza hortulana</i>	-	-	2	-	-
Rustic Bunting <i>Emberiza rustica</i>	-	1	5	-	1
Little Bunting <i>Emberiza pusilla</i>	1	-	2	-	-
Chestnut Bunting <i>Emberiza rutila</i>	-	1	1	-	-
Yellow-breasted Bunting <i>Emberiza aureola</i>	-	-	1	-	-
Reed Bunting <i>Emberiza schoeniclus</i>	2	32	93	-	-
Corn Bunting <i>Miliaria calandra</i>	18	35	288	-	5
<b>totals</b>	<b>8,872</b>	<b>9,111</b>	<b>132,688</b>	<b>44</b>	<b>833</b>

## RINGING RECOVERIES

This section deals with 25 recoveries of 12 species occurring during 1982-83. Only those recovered at least 5km away from the ringing site are included. 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 1 indicates the size of the brood).
- Sex : M = male.  
F = female.
- 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.

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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.

Manx Shearwater *Puffinus puffinus*

ED79.619 4 22.05.79 L-Ahrax Pt. : 35.58 N, 14.22 E.  
 x (17.06.82) between Avola and Cassibile : (Sicily), ITALY.

Herring Gull *Larus argentatus*

GP27.648 1 30.05.83 Filfla : 35.47 N, 14.25 E.  
 /?/ (05.12.83) Homs : 32.39 N, 14.15 E, LIBYA.

Sand Martin *Riparia riparia*

19.409 4 09.05.82 Ghajn Rihana : 35.54 N, 14.25 E.  
 v = F 09.08.82 Gbely : 48.43 N, 17.08 E (Senica), CZECHOSLOVAKIA.  
 13.388 4 27.04.82 Santa Lucia : 35.52 N, 14.30 E.  
 v = F 29.06.83 Piešťany : 48.36 N, 17.49 E (Trnava), CZECHOSLOVAKIA.  
 31.076 4 21.04.83 Ramla Valley : 36.03 N, 14.17 E, Gozo.  
 v 26.08.83 Skoflijska - Ig/Ljubljana : 45.58 N, 14 34 E (Slovenija)  
 YUGOSLAVIA.

Swallow *Hirundo rustica*

20.310 4 21.03.82 Ghadira : 35.58 N, 14.21 E.  
 v 21.03.82 Lunzjata Valley : 36.03 N, 14.14 E, Gozo.  
 24.075 4M 07.04.82 Lunzjata Valley.  
 v 12.04.82 Osijek : 45.33 N, 18.40 E (Hrvatska), YUGOSLAVIA.  
 14.679\* 4 01.05.81 Lunzjata Valley.  
 x 15.05.82 Maly Bor : 49.20 N, 13.39 E (Klatovy), CZECHOSLOVAKIA.  
 20.920 4M 14.04.82 Lunzjata Valley.  
 v 20.08.82 Starbottom, Skipton : 54.10 N, 02.05 W (North Yorkshire)  
 ENGLAND.  
 05.360 3 12.10.80 Xemxija, St. Paul's Bay : 35.57 N, 14.23 E.  
 x end 04.83 Barenklan (Oranienburg), Bezirk : 52.43 N, 13.09 E,  
 Potsdam, EAST GERMANY.

Meadow Pipit *Anthus pratensis*

19.895 2 22.11.81 Ghadira.  
 + 10.01.82 Girgenti : 35.51 N, 14.25 E.

Robin *Erithacus rubecula*

A034488 3 11.11.78 Buskett : 35.51 N, 14.25 E.  
 /?/ (14.02.82) Simi Rid : 42.50 N, 27.25 E (Burgas), BULGARIA.  
 17.194 3 25.11.81 Xemxija, St. Paul's Bay.  
 v 03.03.82 Buskett.  
 11.957 6 08.03.81 Buskett.  
 v 29.01.83 Santa Lucia.  
 20.482 3 02.10.83 Ghadira.  
 v 06.10.83 Rabat : 35.53 N, 14.24 E.

Redstart *Phoenicurus phoenicurus*

21.046\* 4F 18.04.82 Rabat.  
 x 25.10.82 El-Atia-Nord : 34.53 N, 05.47 E (Biskra), ALGERIA.

Cetti's Warbler *Cettia cetti*

18.501 2M 28.12.81 Ramla Bay : 36.04 N, 14.17 E, Gozo.  
 v 10.01.83 Ghajn Zejtuna : 35.58 N, 14.21 E.  
 14.046 3F 09.08.81 Wied il-Lug, Buskett.  
 v 02.10.83 Mtahleb : 35.52 N, 14.21 E.

11.113 2M 01.11.81 Xemxija.  
 v 15.11.81 loco.  
 v 01.01.82 loco.  
 v 05.09.82 Rabat.  
 v 25.11.82 loco.  
 v 29.01.83 loco.  
 v 21.02.83 loco.  
 v 24.02.83 loco.  
 v 04.03.83 loco.

Great Reed Warbler *Acrocephalus arundinaceus*

B03.057 4 08.04.82 Lunzjata Valley.  
 v 02.05.82 Fülöpháza : 46.53 N, 19.28 E, HUNGARY.

Blackcap *Sylvia atricapilla*

23.092 3M 06.12.82 Has-Saptan : 35.50 N, 14.31 E.  
 v 09.02.83 Rabat.

21.638 2M 11.12.82 Zabbar : 35.52 N, 14.32 E.  
 v 12.03.83 Rabat.

Chiffchaff *Phylloscopus collybita*

A7.962 2 31.12.82 Lunzjata Valley.  
 v 29.03.83 Ghadira.

A8.086\* 2 31.12.82 Lunzjata Valley  
 x 00.08.83 Niederösterreich : 48.15 N, 15.30 E (Linz), AUSTRIA.

Willow Warbler *Phylloscopus trochilus*

A8.811 4 29.04.83 Lunzjata Valley.  
 v 30.04.83 Ghadira.  
 (ringed at 1800 hrs and controlled at 0740 hrs).

FOREIGN RINGED BIRDS RECOVERED IN MALTA

This section deals with 23 foreign ringed birds of 16 species recovered in Malta. Some of these were recovered previous to the two-year period 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.

Shelduck *Tadorna tadorna*

Moskwa 4 18.06.80 Orlov Isles, Kherson Region, Black Sea : 46.17 N, 31.45 E  
 C-370.498 (Ukraine), U.S.S.R.  
 + 19.01.81 Kalkara : 35.53 N, 14.32 E.

Garganey *Anas querquedula*

Helgoland 5M 28.08.78 Rieselfelder Muenster : 52.02 N, 07.39 E (Muenster),  
 5.046.508 WEST GERMANY.  
 + 02.03.83 South Comino Channel : 35.59 N, 14.19 E.

Honey Buzzard *Pernis apivorus*

Helsinki 1 11.08.76 Karjaa, Karis, Uudenmann : 60.05 N, 23.45 E (Lääni),  
 D-57.287 FINLAND.  
 + 15.10.77 Lunzjata Valley.

Kestrel *Falco tinnunculus*

Stockholm 1 28.06.80 Brännberg, W Boden : 65.47 N, 21.13 E (Norbotten), SWEDEN.  
 7.060.094 + 14.10.82 Żebbuq : 35.52 N, 14.27 E.

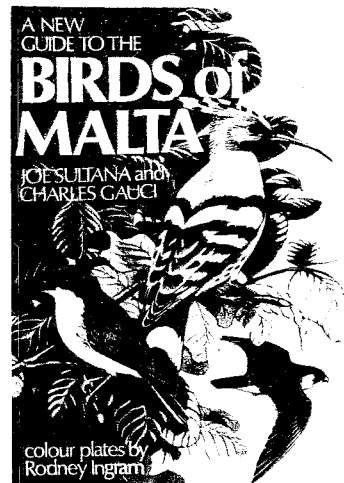
Curlew Sandpiper *Calidris ferruginea*

Pretoria 2 10.10.77 Olifants River Mouth : 31.42 S, 18.11 E (Cape),  
 BB21.720 SOUTH AFRICA.  
 + 00.10.80 Bahar ic-Caghaq : 35.56 N, 14.28 E.

Sandwich Tern *Sterna sandvicensis*

Moskwa 1 19.06.79 Orlov Isles, Kherson Region, Black Sea : 46.17 N,  
 P-647.511 31.45 E (Ukraine), U.S.S.R.  
 + 00.01.80 Kalkara.

Moskwa PB-006.352	1 x	25.06.82 00.11.82	i Kalanchakskiy, Skadovsk, Kherson Region : 46.07 N, 32.54 E (Ukraine), U.S.S.R. Ghadira.
<b>Turtle Dove <i>Streptopelia turtur</i></b>			
Budapest 302.826	4 +	01.05.76 29.04.77	Gödöllő : 47.34 N, 19.22 E, HUNGARY. Gudja : 35.51 N, 14.31 E.
<b>Sand Martin <i>Riparia riparia</i></b>			
Helsinki J221.065	3 v	23.07.80 01.05.81	Järvenpää, Uudenmann : 60.29 N, 25.08 E (Lääni), FINLAND Lunzjata Valley.
Helsinki V031.121	3 v	04.08.82 12.05.83	Kylmäkoski, Hämeen : 61.07 N, 23.45 E (Lääni), FINLAND. Ghajn Rihana.
<b>Swallow <i>Hirundo rustica</i></b>			
Budapest 820.790	2 v=4M	12.08.79 31.03.83	Fülöpháza : 46.53 N, 19.28 E, HUNGARY. Lunzjata Valley.
<b>House Martin <i>Delichon urbica</i></b>			
Hiddensee 90.926.753	4 v	01.08.79 29.04.82	Pappendorf : 50.59 N, 13.07 E (Hainichen), EAST GERMANY. Lunzjata Valley.
<b>White Wagtail <i>Motacilla alba</i></b>			
Praha M867.479	3 x	29.08.83 00.11.83	Podolí : 49.02 N, 17.32 E (Uherské Hradiště), CZECHOSLOVAKIA. Zabbar.
<b>Robin <i>Erithacus rubecula</i></b>			
Bologna K05.068	2 v=3	26.10.82 14.12.82	Longastrino, Alfonsine : 44.35 N, 12.00 E (Ravenna), ITALY. Ghajn Zejtuna.
<b>Blackcap <i>Sylvia atricapilla</i></b>			
Ljubljana P2.166	3 v=4M	06.09.81 06.02.83	Dolenje Jezero : 45.47 N, 14.22 E, Cerkniškojezero- Slovenija, YUGOSLAVIA. Rabat.
Sempach E882.210	2F v	26.09.82 20.02.83	La Corbière, Gde. Estavayer-le-Lac : 46.52 N, 06.52 E (Fribourg), SWITZERLAND. Buskoff.
<b>Serin <i>Serinus serinus</i></b>			
Budapest 703.572	3 ( )	26.09.76 04.01.77	Budapest : 47.29 N, 19.03 E, HUNGARY. Sannat : 36.01 N, 14.14 E (Gozo). (identified by trapper as <i>Carduelis cannabina</i> ).
Praha 1136.919	2F ( )	23.07.79 13.02.80	Lomnička : 49.22 N, 16.26 E (Brno), CZECHOSLOVAKIA. Victoria : 36.03 N, 14.14 E (Gozo).
<b>Greenfinch <i>Carduelis chloris</i></b>			
Praha Z621.472	3M ( )	07.10.83 04.11.83	Piešťany : 48.36 N, 17.49 E (Trnava) CZECHOSLOVAKIA. Delimara : 35.49 N, 14.34 E.
<b>Linnet <i>Carduelis cannabina</i></b>			
Budapest 703.750	2F ( )	21.07.76 20.01.77	Budapest : 47.29 N, 19.03 E, HUNGARY. Munzar : 36.01 N, 14.13 E (Gozo).
Praha 1286.689	4M ( )	16.03.83 00.10.83	Leština : 49.52 N, 16.56 E (Súperk), CZECHOSLOVAKIA. 'Malta' : ca. 35.54 N, 14.25 E.
Praha 1325.283	3F ( )	03.10.83 05.11.83	Piešťany : 48.36 N, 17.49 E (Trnava), CZECHOSLOVAKIA. Mriehel : 35.53 N, 14.28 E.
Budapest 913.823	3M ( )	28.08.83 19.11.83	Pomáz : 47.39 N, 19.02 E, HUNGARY. 'Gozo' : ca. 36.01 N, 14.14 E.



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ERRATA :

I1-MERILL No. 22 (1981-1983)

page 50 : Recovery place of Swallow (Mdina B9.533) should read Sternberg, Bezirk, Schwerin.

page 54 : Osprey (Helsinki D-85226) should read Honey Buzzard.

page 54 : Kestrel (Paris K20.902) - Paris should read Sempach and France should read Switzerland (country of ringing).

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