

Eurasian Golden Plovers and Northern Lapwings wintering in Italy: January 2004 survey of non-wetland habitats

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Before this study the numbers of Eurasian Golden Plovers and Northern Lapwings wintering in Italy were unknown because most are found outside areas covered by traditional winter wetland counts. To fill this gap, in January of 2003 and 2004 we organised a survey of numbers and distribution of these species across Italy. In this paper, we present the results for January 2004 when totals of 9,117 golden plovers and 26,343 lapwings were counted. Both species occurred mostly in grassland below 200 m. Lapwings were found in both inland and coastal habitats, widely dispersed across the country from north to south. In contrast, apart from a concentration in the Po plain, golden plovers occurred mainly on the coastal plains of central and southern Italy. Data on altitudinal distribution suggests that some parts of the Po plain that were not surveyed could host large numbers of lapwings. Similarly a more extensive survey of the coastal plains in the south could reveal additional flocks of golden plovers. Combining the results of this survey with those of the International Waterbird Census suggests minimum wintering populations for Italy of 12,000 golden plovers and 75,000 lapwings.

INTRODUCTION

During winter, Eurasian Golden Plovers *Pluvialis apricaria* and Northern Lapwings *Vanellus vanellus* use terrestrial habitats often far from wetlands. Therefore the International Waterbird Census (IWC) which is centred on wetlands does not amount to a complete counting system for these species (Baccetti *et al.* 2002, Serra, 2001). Italian IWC data for 1993–2000 shows increasing trends for both species with a clear link between lapwing numbers and December temperature (Baccetti *et al.* 2002). No data are available for the years before 1993 to evaluate any change in numbers at the national level. However, on the basis of a sample survey of the Lombardia region conducted in the winters 1986/87 to 1990/91 it was estimated that the wintering population of that area was about 80,000 lapwings and 500–600 golden plovers (Fornasari 1992). Numbers of wintering lapwings in the Lombardia region have declined over the past 30 years due to the transformation of meadows and wet grassland into maize fields. Therefore the numbers estimated by Fornasari are probably no longer valid.

A winter survey of lapwings taken by hunters in the Puglia region of southern Italy during 1999/00 to 2003/04 showed a significant increase in the numbers shot, which could be a consequence of a southwards shift in winter distribution (Sorrenti & Nicoli in prep.).

Elsewhere in Europe, lapwings and golden plovers have been counted away from wetlands in Great Britain, The Netherlands, Denmark, Germany, and an International Survey took place in October 2003. A similar study is also being carried out in France (B. Trolliet pers. comm.). For golden plover, assessment of wintering numbers and distribution is particularly required, especially in the Mediterranean countries (Gillings 2003).

In January 2003, we started a survey of both species in terrestrial habitats outside wetlands. This showed 14,078 lapwings and 3,147 golden plovers at that time (Sorrenti & Musella, 2003). The 2003 survey was well supported and this led to even better support in January 2004. Here we present the results of the second winter survey of lapwings and golden plovers in Italy conducted in January 2004.

METHODS

Associazione Cacciatori Migratori Acquatici (ACMA) is an association of waterfowl hunters, a section of the largest hunters association in Italy, Federazione Italiana della Caccia. Its goals include the involvement of hunters in bird studies in order to improve their attitude towards conservation (Sorrenti & Concialini 1991). The hunting of Northern Lapwings is permitted, but hunting Eurasian Golden Plovers is not. However, the latter were hunted in the past and the hunting community retains a good knowledge of their habitat and identification. Altogether 320 people co-operate on a regular basis with ACMA studies. However, their distribution is not uniform across the country. The best coverage of our survey was obtained in Piemonte, Emilia Romagna, Toscana, and Lazio, while it was less good in Calabria, Sardegna and Sicilia regions where significant numbers of plovers are thought to occur, especially golden plovers. Also some areas of good lapwing habitat on the Po plain, Lombardia, were not counted.

In November 2003, we sent a letter and information sheet describing the survey to ACMA observers all over Italy. We asked them to identify inland locations where wintering plover flocks occurred and to count the birds during 1–31 January 2004. Data on the area surveyed, date and habitat type were also requested. It was recommended that areas



should be chosen that were both away from wetlands and not covered by the IWC. It should be noted that the same observers also receive a letter about the IWC every year, and some of them cooperate with the IWC as well.

RESULTS

A total of 62 sites were surveyed by 50 observers who counted 26,343 lapwings and 9,117 golden plovers (Table 1). Not all observers recorded the area they had covered so that density could be measured, but those that did reported densities of lapwings ranging from 0.03 to 3.22 birds^{-ha} and of golden plovers ranging from 0.02 to 1.75 birds^{-ha} (Table 2). Apart from the greater numbers of lapwings, the distributions of both species are fairly similar being restricted to low-lying land and with concentrations on the Po plain in the north-west, on the coastal plains around Roma and on the Brindisi and Lecce peninsula in the south-east (Figs 1 & 2). Three quarters of all lapwings and golden plovers were found on grassland (44%) or ploughed land (27%) (Fig. 3).

DISCUSSION

Golden plovers are scarce or absent in inland northern Italy, except for the Po plain of Emilia Romagna and Veneto. There, most of the almost 1,800 birds were recorded on open grassland near the Po delta. It should be noted that we also received a report of about 5,000 golden plovers in the Ravenna district (c.50 km south of the Po delta). However, because of uncertainties about this information, we decided not to include it in our results.

Elsewhere, golden plovers appear to prefer coastal plains with grass or ploughed fields, particularly in the Lazio, Puglia, Veneto and Sardinia regions. Significant numbers were also reported from Calabria and Sicily.

Southern Italy appears to be the main area where better coverage may have located substantially more golden plovers. Future surveys should concentrate on this area, systematically covering the coastal plains of the Calabria, Basilicata and Puglia regions.

Table 1. Regional summary of survey coverage and counts of Eurasian Golden Plovers and Northern Lapwings in Italy in January 2004 (ordered approximately from north to south).

Region	Sites counted	Observers	Eurasian Golden Plovers	Northern Lapwings
Lombardia	3	4	2	528
Veneto	7	5	1,381	4,236
Emilia Romagna	13	5	401	2,942
Piemonte	8	8	37	466
Liguria	1	2	0	79
Toscana	4	4	2	543
Marche	3	3	3	540
Lazio	11	5	1,831	4,260
Campania	4	4	13	230
Puglia	5	3	3,900	6,022
Calabria	2	2	270	720
Sicilia	4	3	292	420
Sardegna	4	2	985	5,357
TOTALS	62	50	9,117	26,343

Table 2. Regional summary of counts of Eurasian Golden Plovers and Northern Lapwings in Italy in January 2004 at sites where the area surveyed was recorded so that density could be calculated.

Region	Sites	Area (ha)	Eurasian Golden Plovers		Northern Lapwings	
			Count	Density (birds ^{-ha})	Count	Density (birds ^{-ha})
Lombardia	0					
Veneto	7	1,315	1,381	1.05	4,236	3.22
Emilia Romagna	11	4,602	251	0.05	2,682	0.58
Piemonte	4	3,245	0		104	0.03
Liguria	0					
Toscana	2	115	0		126	1.10
Marche	3	1,270	3		540	0.43
Lazio	2	360	0		305	0.85
Campania	4	805	13	0.02	230	0.29
Puglia	4	400	700	1.75	222	0.56
Calabria	1	400	200	0.50	600	1.50
Sicilia	1	40	12	0.30	32	0.80
Sardegna	4	11,196	632	0.06	2,887	0.26
TOTALS (mean density)	43	23,748	3,192	(0.13)	11,964	(0.50)



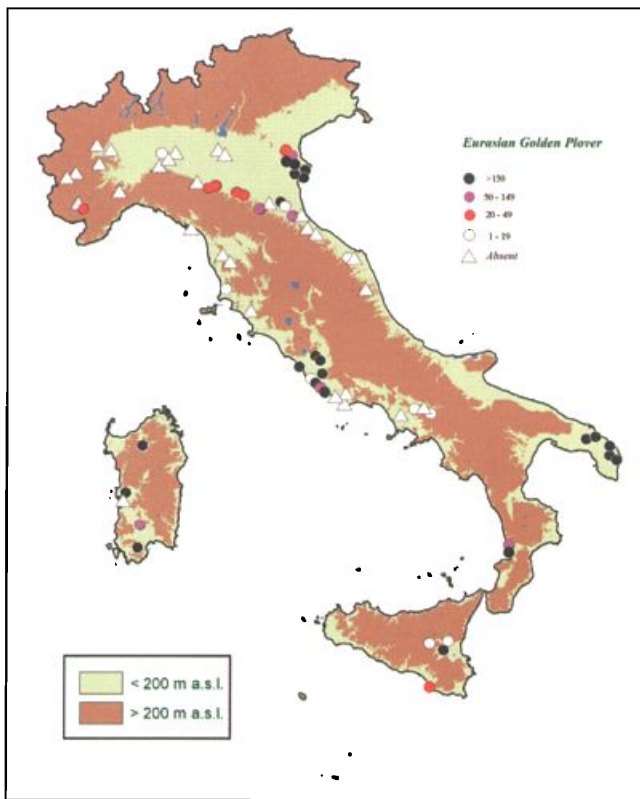


Fig. 1. The distribution of Eurasian Golden Plovers in Italy in January 2004.

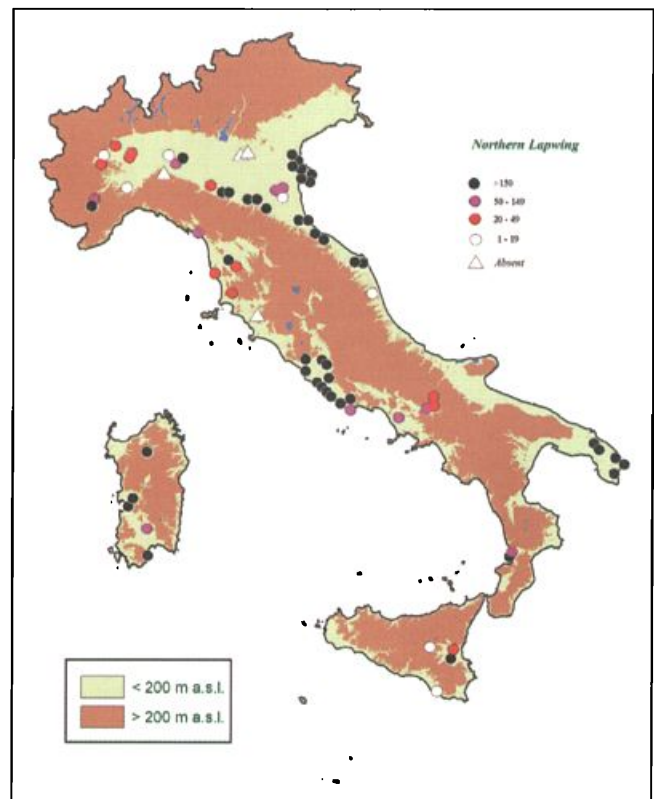


Fig. 2. The distribution of Northern Lapwings in Italy in January 2004.

During 1996–2000 the IWC recorded an annual average of 3,017 golden plovers wintering in Italian wetlands (Baccetti *et al.* 2002). Therefore, from the available data, the minimum wintering population of Italy can be estimated as around 12,000 (our figure of 9,117 plus the IWC average).

For lapwings, the Po delta region is also the most important area in northern Italy. Lapwings appear to be both more dispersed and more common in northern Italy in comparison with golden plovers. We therefore consider that that is where better survey coverage would have located larger numbers of lapwings, especially on the Po plain. However, apart from places where traditional cattle feeding is continued for the production of Parmigiano Reggiano cheese (such as Emilia

Romagna and southern Lombardia), this is also an area where grassland is being lost because of a switch to growing maize.

The average IWC lapwing count for 1996–2000 was 48,739 so, adding our figure of 26,343, we estimate the total

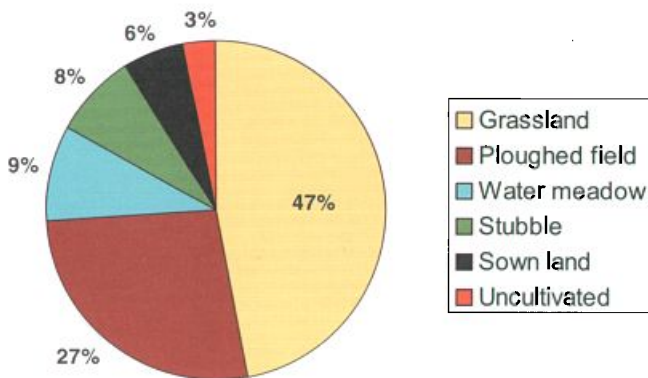


Fig. 3. Non-wetland habitats reported by observers to be occupied by flocks (of all sizes) of Eurasian Golden Plovers and/or Northern Lapwings in Italy in January 2004 (N = 121 flocks).

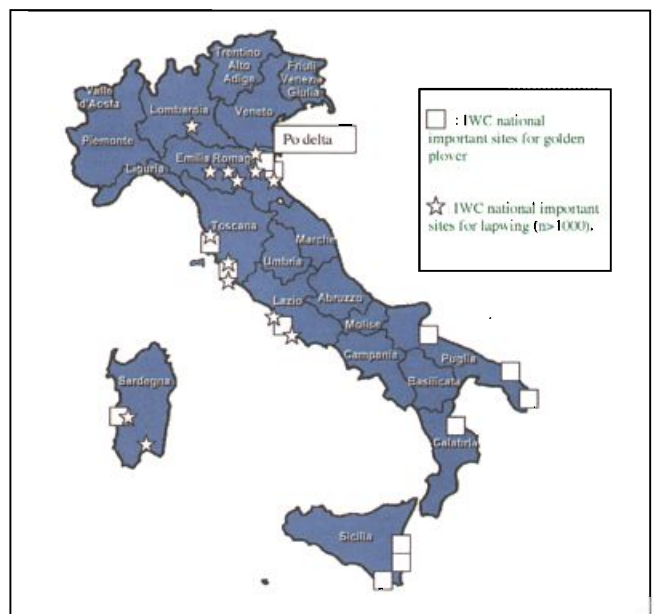


Fig. 4. Italian regions and sites monitored by the International Waterbird Census supporting nationally important populations of Eurasian Golden Plovers and Northern Lapwings (based on Baccetti *et al.* 2002).



wintering population at not less than 75,000 birds.

When the important wetland wintering areas of lapwings and golden plovers located by the IWC (Fig. 4) are compared with our data (Figs 1 & 2) it can be seen that some important IWC wetlands are close to the major sites located in our survey (e.g. in the regions of Sardegna, Puglia and Emilia Romagna) while others were not (e.g. in Toscana). Because both species are quite mobile, we cannot exclude the possibility that some flocks were also counted in IWC wetlands. However, we do not consider that this happened to any significant extent. It should be noted that grasslands suitable for these species are often close to wetlands, but outside the census boundaries prepared by Istituto Nazionale Fauna Selvatica for the IWC. This means that plovers counted by the IWC are only a part of the flocks present in the general area of each wetland. Further studies comparing the two datasets as well as future co-ordinated counts will clarify to what extent double counting occurs.

Our results clearly demonstrate that lapwings and golden plovers in Italy are almost entirely restricted to land below 200 m (Figs 1 & 2). Therefore in our next survey planned for January 2005 we intend to expand coverage of the lowlands, and, to avoid possible double-counting, to restrict the counting period and co-ordinate our counts with those of the IWC. We are particularly looking for extra observers so that we can increase our coverage, especially of important areas, like the Po plain for lapwings, and other parts of the coastal plains for golden plovers.

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