

Short Communications

New Stone-Curlew *Burhinus oedicnemus* wintering site in central Italy

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Except in Spain and the Maghreb, where the species is largely sedentary, most Western Palearctic Stone-Curlew populations winter in North and sub-Saharan Africa (Cramp & Simmons 1983). In Italy the population is mainly migratory in the north but varying from partially migratory to resident in the centre and south and on the Italian islands (Meschini 2010). Although probably underestimated, the largest wintering population in Italy is in Sardinia where the most recent count was 188 (Nissardi & Zucca 2009). Other wintering populations occur in Sicily, Apulia and Tuscany (Tinarelli *et al.* 2009). The most recent estimate of the number of Stone-Curlews wintering in continental Italy is 130, mainly in Tuscany (Giovacchini *et al.* 2009) and Emilia-Romagna (Tinarelli *et al.* 2009).

In the 1990s, Stone-Curlews were very rare during winter in the centre-west region of Latium, with records of only single individuals most years (Biondi *et al.* 1999, Meschini in Boano *et al.* 1995). During the winter of 2007–2008, however, a small wintering population of about 13 was discovered in an area of arid semi-natural steppe meadowland and pastures about 60 km north-west of Rome near Tuscania and Monte Romano in the Latium Province of Viterbo (Meschini 2010; Fig. 1). Here we report the discovery of a new wintering site close to the coast near Rome.

Our observations were carried out during the winters 2008–2009 and 2009–2010 in the Le Vignole–Fiumicino area near Rome (41°49.165'N, 12°17.236'E; Fig. 1). The site extends to about 7 km² and is characterized by a mosaic of patchy anthropic habitats such as urban and industrial areas, abandoned or under construction. After a first casual sighting of 19 Stone-Curlews in Oct 2008, we started systematic weekly monitoring of the site, making a total of 44 visits during the 2008–2009 and 2009–2010 winter periods. Stone-Curlews were counted when they were roosting by day.

We recorded 19 Stone-Curlews for the first time at the end of Oct 2008 in an open uncultivated area with large rainwater puddles of about 20 ha. This first sighting followed a period of persistent heavy rain that had lasted several days. The birds stayed in this area until the end of Dec 2008 with a maximum count of 28 and a minimum of 16 (Fig. 2). Most of the variability in our weekly counts probably relates to the fact that Stone-Curlews are often motionless and can be difficult to see, even among quite sparse vegetation when they are roosting. Therefore, as it is likely that birds were frequently overlooked, we only report the monthly maxima.

During the 2009–2010 winter period, Stone-Curlew were detected from the end of September at a new roosting site at Piscina Gagliarda, 1.5 km from where they had been the

previous year. The maximum count was of 65 in both Dec 2009 and Jan 2010 (Fig. 2).

The 2009–2010 roost site was an area of uneven ground with freshwater ponds and sparse low vegetation (*Digitaria sanguinalis*, *Sinapsis arvensis*, *Plantago* spp., *Atriplex* spp. and *Carex* spp.). During Nov 2009 the birds usually left the roost 15–20 min before twilight, dispersing in small groups in various directions.

In addition to regular counts, during Nov 2009 and Jan 2010 we made observations of the birds' behaviour using the methods of Vaughan & Vaughan-Jennings (2005) to determine their daytime budget. We recorded the number of birds standing, sitting, walking or running, preening, wing-stretching, feeding, flying and calling. We made such observations during four periods of five minutes in each hour of daylight on one day in Nov 2009 and one day in Jan 2010. Observations were made from a hidden position or vehicle using binoculars and telescope from a minimum distance of 150 m. Each bird was observed for up to a minute to determine exactly what it was doing. Altogether these observations lasted for an aggregate of 360 minutes. The results show that by far the majority of observations were of birds that were either standing still or sitting on the ground (Fig. 3).



Fig. 1. Map showing location of the study area at Fiumicino, Italy, and other places mentioned in the text.

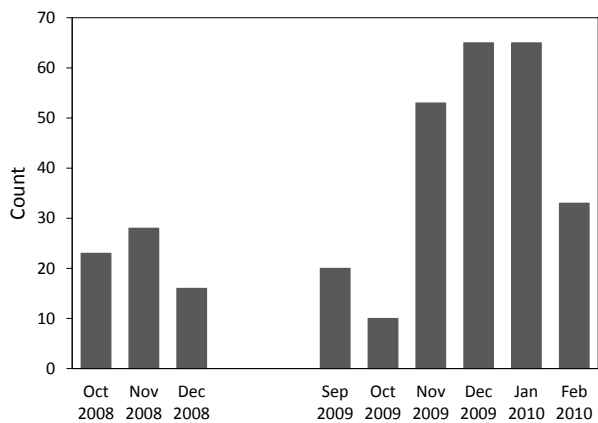


Fig. 2. Maximum monthly count of roosting Stone-Curlews during the 2008–2009 and 2009–2010 winters at Le Vignole, near Fiumicino, Latium region, Italy.

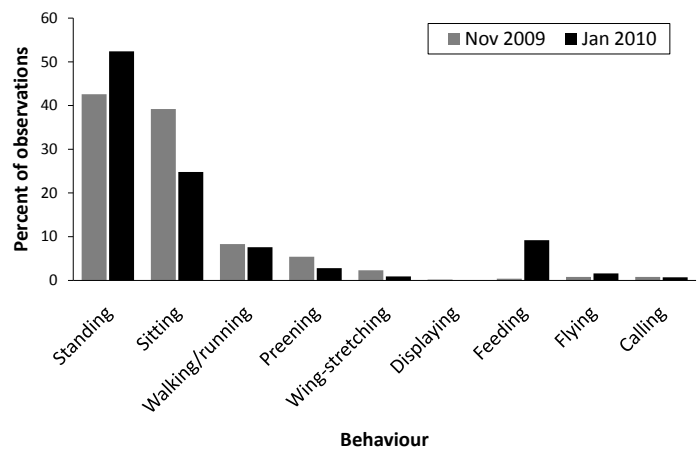


Fig. 3. Daytime behaviour of Stone-Curlews during four 5-minute observation sessions per hour on one day in Nov 2009 and one day in Jan 2010.

However, significantly fewer birds were recorded sitting than standing in January compared with November ($\chi^2 = 19.8$, $df = 1$, $p < 0.001$, other behaviours not included). Just less than 10% of observations were of birds walking or running and there was no difference between November and January. There were proportionately more observations of preening in November (22/408) than in January (16/562; $\chi^2 = 101$, $df = 1$, $p = 0.044$), but more of feeding in January (52/562) than in November (2/408; $\chi^2 = 34.5$, $df = 1$, $p < 0.001$). The other behaviours monitored – wing-stretching, displaying, flying and calling – were only rarely recorded and showed no difference between November and January (Fig. 3).

Less sitting in January than November could be related to a wetter substrate, with the birds being more reluctant to soil their plumage by sitting on mud. The reduced preening in January is a little surprising because feather maintenance is important year round and is kept up even under stressful conditions (Swennen *et al.* 1989); perhaps it relates to less active moult in winter compared to autumn. More birds feeding in winter probably relates to the higher energy requirement for thermoregulation. Although winters are quite mild in the study area the mean minimum temperature drops from 8.3°C in November to 4.2°C in January.

In the context of Stone-Curlews wintering in mainland Italy, our peak count of 65 is very high. The only other places where comparable numbers occur are in Tuscany, Emilia-Romagna and occasionally Apulia.

The area the Stone-Curlews used near Fiumicino suffers from considerable disturbance by people and domestic pets as well as natural predators. The birds were clearly habituated to disturbance and were never affected by our presence. Nevertheless they were often disturbed and sometimes left the roosting area altogether. On these occasions they would sometimes move 1–3 km to cultivated, industrial and other open habitats near the main Rome (Leonardo da Vinci) airport.

In 2009, three pairs of Stone-Curlews nested near the 2008–2009 winter roost site, the first breeding record for the area since the 1930s. However, we have no means of knowing whether the breeding birds were from the Fiumicino wintering population.

The new breeding and wintering site near Fiumicino suggests that the Stone-Curlew is expanding in Italy, and is beginning to re-colonize areas from which it has been absent for more than half a century. However, much more extensive surveys will be needed to establish whether this is true.

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