

FIRST RECORDS OF WINTER REPRODUCTION OF LONG-EARED OWL IN ITALY

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Long-eared Owl (*Asio otus*) breeding occurs between middle February and early June and remarkably little variation in breeding timing is observed across the holarctic range (Cramp 1985, *The birds of the western palearctic*, Vol. 4, Oxford University Press, Oxford, U.K).

In Italy, Long-eared Owl reproduction occurs in northern regions and in localized areas of central and southern Italy (Canova 1985, *Suppl. Ric. Biol. Selvaggina* XX:150). Nesting is more common in plains areas but breeding has been recorded in mountainous areas up to 1840 m (Mingozzi and Boano 1988 in Mingozzi et al. [EDS.], *Atlante degli uccelli nidificanti in Piemonte e Valle d'Aosta. Mus. Reg. Sci. Nat. Boll. Monogr.* VIII, Torino, Italy).

On 18 January 2005, three Long-eared Owl nestlings were found in Campobasso province (41°34'N, 14°40'E; Molise region, central Italy), and were brought to the local Recovery Center of Campobasso. These chicks were 2–3 wk old.

According to data from the Hydrographic and Micrographic Service of the Abruzzo region, the average temperature in Campobasso province during the month of November 2004 was 9.2°C, while in December it was 7.6°C. The mean November temperature from 1975–2003 in Campobasso province was 9.6°C ± 1.6 SD, while in December it was 6.2°C ± 2.2 SD (V. Varani pers. comm.).

On 19 January 2005 a single Long-eared Owl nestling, age 3–4 wk, was found near Valderice in Trapani province (38°10'N, 12°32'E; Sicily region, south Italy). The mean temperature in Trapani during November 2004 was 16.3°C, while in December it was 14.0°C. The mean November temperature from 1975–2003 in Trapani province was 16.9°C ± 2.4 SD, while in December was 13.7°C ± 2.1 (Regional Hydrographic Office of Sicilian, www.uirsicilia.it).

Taking into account that egg incubation in Long-eared Owl lasts 25–30 d (Cramp 1985, *The birds of the western palearctic*, Vol. 4, Oxford University Press, Oxford, U.K), the eggs likely were laid in late November–early December in

Table 1. Earliest dates Long-eared Owl nestlings were brought to the Recovery Centres (RC) of LIPU (Italian League of Protection Birds), 1995–2005.

| YEAR | RC ROME | RC LA FAGIANA (MI) | RC FLORENCE | RC CASACALENDA (CB) | RC LIVORNO |
|------|----------|--------------------|-------------|---------------------|------------|
| 1995 | — | — | — | — | 18 April |
| 1996 | — | — | — | — | 12 May |
| 1997 | — | — | — | — | — |
| 1998 | 26 April | — | — | — | 25 June |
| 1999 | 16 May | 18 May | 24 May | — | 14 June |
| 2000 | 23 April | 29 April | 24 May | — | 24 May |
| 2001 | — | 21 April | 25 May | — | 20 May |
| 2002 | 8 June | 23 April | — | 2 July | — |
| 2003 | 22 April | 24 June | 10 May | — | 26 June |
| 2004 | — | 4 May | — | 25 July | — |
| 2005 | 20 June | 28 April | — | 18 January | 18 April |

the two areas. In Italy, nesting of this owl in mid-winter has not been previously documented. With the exception of the records reported here, the earliest hatch dates for Long-eared Owls in Italy occurred in April, May, or June, 1995–2005 (Table 1). Consistent with these observations, data from the British Trust for Ornithology (BTO) showed a trend for several species in the U.K. to start breeding earlier over the past 25 yr, although such trend was not observed in Long-eared Owl (Crick et al. 1997, *Nature* 388:526).

Mean November–December 2004 temperatures did not vary consistently from the 25-yr means in the two regions. Therefore, our data do not support the conclusion that early breeding of Long-eared Owls was related to warmer temperatures. Continued observations on date of nest initiation in Long-eared Owls along with temperature records are needed to determine if early nest initiation dates represent a changing pattern.

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