



# MONITORING OF SWALLOW *HIRUNDO RUSTICA* ROOSTS ALONG THE CENTRAL PORTUGAL COASTLINE: YEARS 1998 TO 2000

MONITORIZAÇÃO DE DORMITÓRIOS DE ANDORINHA-DAS-CHAMINÉS *HIRUNDO RUSTICA* NA REGIÃO CENTRO-LITORAL DE PORTUGAL - ANOS 1998 A 2000

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The Swallow *Hirundo rustica* is known to form large pre-migratory roosts at the end of the breeding season, when birds concentrate in reedbeds. These roosts are only abandoned after the birds have completed body moult and accumulated fat reserves, in preparation for their return to the wintering areas in Africa (Pilastro *et al* 1998). The present work intends to quantify the population of Swallows that uses some reedbeds along the central Portugal coastline. The data were collected from 1998 to 2000, in the framework of our participation in the “Euring Swallow Project” promoted by EURING - European Ringing Association.

The study areas were three reedbeds in Barra de Mira, Pedrogão do Pranto (destroyed in 1999) and Mondego Estuary (in 1998 only), and the fresh-water marshes of Taipal and Madriz.

Between June and October, birds were captured weekly in Barra de Mira, both marshes and in the Pedrogão do Pranto roosts. During 1998, captures were made in the reedbed of Pedrogão do Pranto because swallows were not observed in the estuary and this reedbed

was the nearest to the estuary. After 1999, Swallow observations in the area ceased because it was destroyed.

One hour before sunset, tapes with swallow calls were used to attract them to capture places. At the same time the number of birds using the area was estimated. During this period, several counts were performed estimating the total number of individuals present in the reedbeds. When all birds stayed in the roost, the highest count was considered. If birds were observed leaving the roost area, only the birds that landed were counted.

## Counts

During 1998 the total number of birds using the roosts reached a maximum of  $\pm 30.000$  birds in the Taipal Marsh. The concentration in only one pre-migratory group, started in late July and reached a peak during August. Between late August and early September, numbers reduced to almost zero in all roosts, thereafter there was an increase in Mira (Tenreiro *et al.* 1999) (Figure 1).

The counts made during 1999 showed a change in the location of the main roost; the

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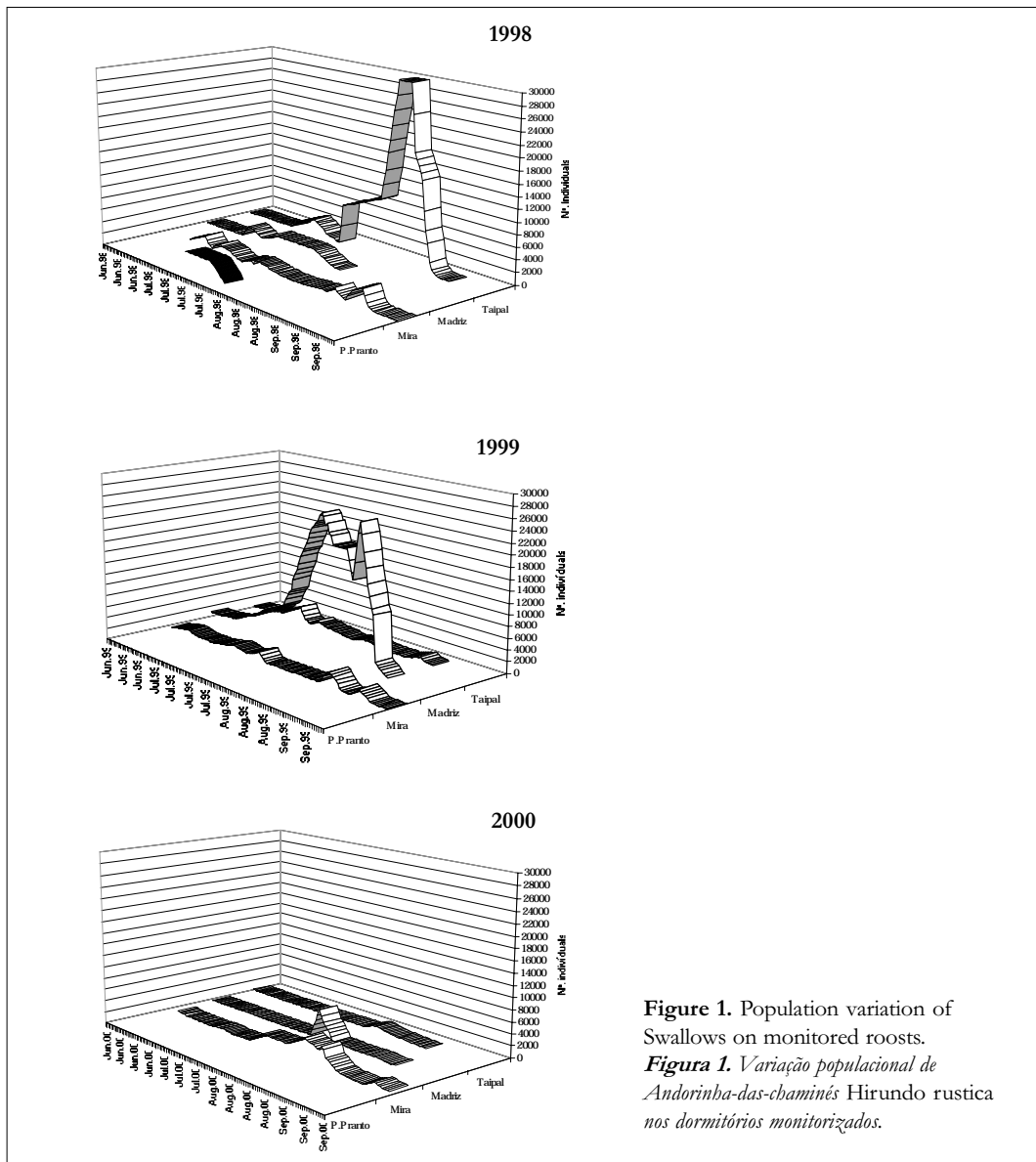


Figure 1. Population variation of Swallows on monitored roosts.  
**Figura 1.** *Variação populacional de Andorinha-das-chaminés *Hirundo rustica* nos dormitórios monitorizados.*

Madriz Marsh was the preferred one. In this roost the maximum number of the pre-migratory group was estimated at 26,000 (Figure 1).

During 2000, counts were much lower than during previous years (with 5,000 in Madriz Marsh and 4,000 in Mira) and there was no

preferred roost observed: birds dispersed through all roosts and there were no movements between them (Figure 1). During the 3 study years the pre-migratory concentration and the subsequent decrease in numbers of birds occurred during similar periods.

### Inter roost movements

During June and July of 1998, Swallows used the different roosts, moving between them, in some cases more than 40 km. During August, birds from all roosts concentrated in Taipal marsh (Tenreiro *et al.* 1999).

During 1999 the same situation was observed, this time with Madriz marsh being the preferred roost during July and especially August.

In 2000 no movements were observed between roosts.

Data from counts and movements showed that during June and July Swallows used all reedbeds as roosts. During the pre-migration period (August), birds concentrated in only one roost. During 2000, that was not observed in the studied roosts.

The increase in numbers observed after early September in Mira should be the result of an arrival of birds coming from northern populations and this situation was observed in all three study years.

The present study suggests that the reedbeds seem to be of great importance for the ecology of Swallows in the region during the pre-migratory period, and they should be protected and properly managed. The destruction of the Pedrogão do Pranto reedbed shows the need for the protection of these areas. Both Madriz and Taipal marshes have a protected status as well as the reedbed from Barra de Mira, which is included in the ZPE of Ria de Aveiro.

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### RESUMO

*Foram identificados vários dormitórios de Andorinha-das-chaminés no Centro Litoral de Portugal. Durante a pré-migração, que ocorreu em Agosto, as aves concentraram-se em apenas um dormitório (o Paul do Taipal em 1998, com um máximo de 30.000 indivíduos contados, e o Paul da Madriz em 1999 com um máximo de 26.000 aves). A migração começou em fins de Agosto – princípios de Setembro. O correcto ordenamento e gestão dos caniçais estudados, são de importância fundamental para as populações de Andorinha-das-chaminés da região estudada.*

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