

Moore, Domingos Leitão, Domingos Patacho, Frank Walker, Glenis Vowles, Gonçalo Rosa, Graham Foggitt, Miguel Braga, Paulo Catry, Peter Harris, Rafael Matias, Ricardo Tomé e Rui Rufino pelas observações cedidas, que permitiram obter um conjunto bastante completo de registos.

## Summary

Winter records of House Martins *Delichon urbica* in Portugal were collected and compared. An analysis of the geographical distribution showed that birds occur mainly along the coast of southern Portugal. The inter-annual variation was analysed, showing that there has been a steady increase in the number of records in more recent years. By grouping the records in 10-day periods, evidence was obtained that the species is relatively scarce in November and December, but that the number of birds seen increases markedly during January. These results were compared with the existing knowledge about the species' status within the rest of Europe.

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## *Pied Flycatcher (Ficedula hypoleuca) using the island of Fuerteventura (Canary Islands) as a 'stop-over' site during September 1989*

*O uso da ilha de Fuerteventura (Ilhas Canárias) como sítio de 'stop-over' para o Papa-moscas-preto (Ficedula hypoleuca) em Setembro de 1989*

During September 1989, a notable passage of Pied Flycatcher *Ficedula hypoleuca* was observed on Fuerteventura, an eastern island of the Canary Archipelago, which lies only 100 km from the African coast.

Fuerteventura is a semi-arid and highly eroded island, its general physiography is dominated by

plains, gentle slopes and U-shaped valleys. The climate is mainly «warm subdesert» to «desert» (Marzol-Jaén, 1984) though somewhat influenced by sea spray and proximity to the African continent. Annual rainfall is less than 140 mm and mean monthly temperatures vary between 16°C (January-February) and 24° (August-September)

(Betancor & Criado 1985). The vegetation is characterized by xerophytic and coastal scrubland, but several ravines, gardens and cultivated areas in the small towns, and gardens in the numerous coastal tourist localities have a regular water supply and important stands of vegetation, which attract migratory birds.

Between 5 and 21 September 1989, three locations in northern Fuerteventura were censused (Figure 1):

- La Oliva (UTM 28RFS053655): a vegetation patch about 800 m long in a rural setting consisting of *Acacia* sp. and *Hibiscus* sp. shrubs.
- Rosa de los Negrines (UTM 28RFS024678): a cultivated area with a small reservoir surrounded by *Arundo donax* and *Tamarix canariensis* and small groups of horticultural and ornamental trees.
- Rosa Blanca (UTM 28RFS036643): a cultivated area with fields protected against wind by hedges of *Ficus* sp. trees, and small areas of *Nicotiana glauca* and annual herbs.

In each location only one transect encompassing the most migrant potential route was selected. Its lengths varied between 0.7 and 1.2 kms. A total of 18 censuses were carried out during mornings (9) and evenings (9) along these three transects. In each «count», the total number of birds detected while walking was calculated the results being shown as abundance of birds by kilometer (linear transect without belts) (Tellería 1986).

The results of these censuses are shown in Figure 2. During the first week, a small influx of migrants was noted, but the principal «fall» took place in the next days. Numbers of flycatchers varied between 4 and 64 birds (1,3 and 20,6 birds/km respectively). The highest number was registered at Rosa de los Negrines (44 birds, 14,2 birds/km) though at La Oliva the highest proportion of birds during the study period was recorded.

Almost all birds were feeding, particularly during the morning and evening hours, and many of them were defending feeding territories. Related

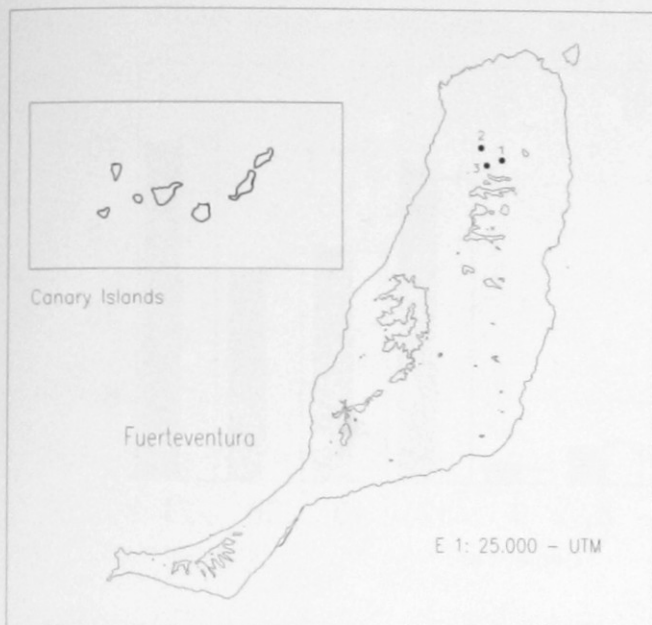
to this, Bairlein *et al.* (1983) mention a similar daily activity of migrants in a «stop-over» area in the Sahara, and Bibby & Green (1980, in Lövei 1989) suggest that this flycatcher establishes temporary feeding territories on the northern coast of the Mediterranean during «stop-over» periods.

Interestingly changes in abundance were registered even during the space of a morning, as indicated by significant increases in numbers in comparison to the results of previous evening censuses (Figure 2), something which clearly points to active nocturnal movements and diurnal «stop-over» periods. This strategy is used by the palearctic trans-saharan species (Biebach *et al.* 1986, Lövei 1989, Biebach 1990, Berthold 1993).

Spotted Flycatcher (*Muscicapa striata*) and Willow Warbler (*Phylloscopus trochilus*) were present also during the influx, but always at a lower density than Pied Flycatcher.

This migration of Pied Flycatchers may be related to departure from W Iberia, an important «refuelling» site for this species (Ferns 1975, Cramp & Perrins 1993). Moreover Hilgerloh's (1988) radar studies indicate birds departing from SW Iberia during the night maintain a SW flight direction, a trajectory which would bring them to the W African coast or the Canary Islands. Along the W African coast, Valverde (1957) reported the existence of palearctic migrants, including Pied Flycatcher, and Cramp & Perrins (1993) report birds of this species flying along the African coast, but do not mention the Canary Islands as an important stop-over site. However, several authors have mentioned the special importance of these islands for passerine trans-saharan migrants species, including Pied Flycatcher (i.e. Bannerman 1931, 1963, Volsøe 1950, Hooker 1958, Martín & Nogales 1993). Also, Emmerson *et al.* (1994) list a total of 309 migratory species observed in this islands, which 70,2% are regular transaharan migrants (Curry-Lindahl 1981).

There is an important breeding colony of Eleonora's Falcon (*Falco eleonorae*) in the eastern islets of the Canaries, where it has been estimated that a total of 23,000 migrants are annually



**Figure 1.** Map of the study area with the situations of the three localities (1. La Oliva, 2. Rosa de Los Negrines, 3. Rosa Blanca). / Mapa da área de estudo, com a localização dos três sítios (1. La Oliva, 2. Rosa de los Negrines, 3. Rosa Blanca).

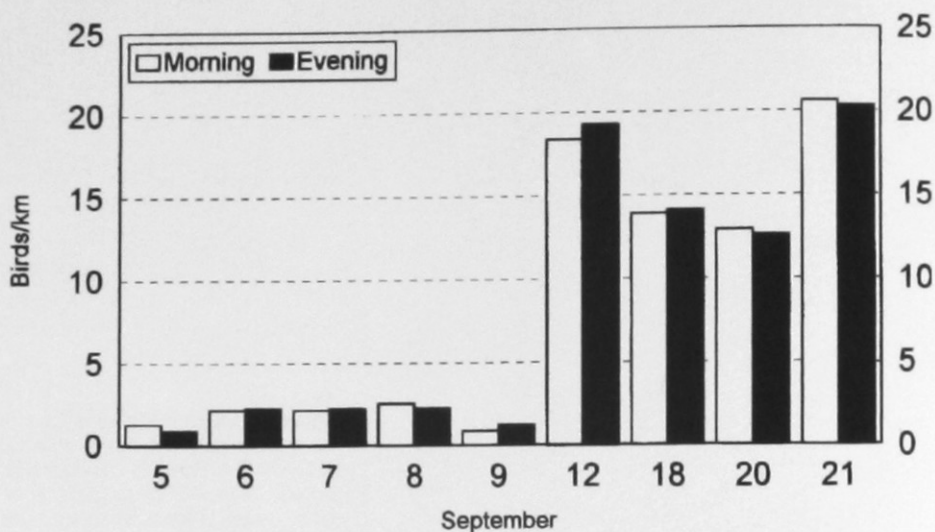
(in autumn) captured (Hernández *et al.* 1985). These facts, together with the prevalence in the Archipelago of strong NE winds in autumn, indicate that birds fly with a "tailwind" towards the Canaries, maximising long distance flight in a short time (e.g. Berthold 1993). Thus, the relatively under recorded migration of trans-saharan migrants species through the Canary Islands, may mask the existence of a "flyway" not only along the W African coast but through the Canary Archipelago also.

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### Resumo

A migração outonal do Papa-moscas-preto *Ficedula hypoleuca* foi estudada na ilha de Fuerteventura (ilhas Canárias) durante o mês de Setembro de 1989. Foram escolhidas três localidades no extremo Norte da ilha, tendo-se realizado censos durante a madrugada e a tarde com os resultados sob a forma de número de aves por distância percorrida (aves/Km). Durante os primeiros dias foram observadas algumas aves solitárias, mas na segunda semana foi notória a chegada das aves, registando-se valores de 14,2 aves/Km numa das localidades. A existência de diferenças entre os resultados dos censos vespertinos e os matinais seguintes e o facto de as aves demonstrarem actividade alimentar e territorial, coincide com as ideias sobre os ligares de paragem (*stop-over sites*) dos migradores trans-sarianos, com deslocamentos nocturnos e paragens diurnas. O arquipélago das Canárias, e especialmente as suas ilhas mais orientais, poderão constituir um local de passagem importante para esta espécie e outras trans-sarianas que regularmente são observadas em períodos de migração, formando assim parte da rota de voo (*flyway*) ao largo da costa ocidental africana.



**Figure 2.** Morning and evening abundances of birds during the study. / *Abundância de aves durante a manhã e o anoitecer.*

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## *Recenseamento de aves aquáticas em algumas zonas húmidas de Marrocos - Abril de 1993*

*Waterfowl censuses in some Moroccan wetlands - April 1993*

Um número significativo de aves aquáticas frequenta Marrocos, tanto em migração como durante o Inverno. Aqui encontram alimento em abundância, devido à intensiva produção de fitoplâncton resultante das correntes quentes das Ilhas Canárias. Este fitoplâncton suporta, para além de outros seres vivos, moluscos e pequenos crustáceos, que constituem uma parte importante da alimentação das aves aquáticas (Alerstam 1993).

As comunidades de aves aquáticas de Marrocos têm sido objecto de diversos recenseamentos (por ex. El Agbani *et al.* 1990, 1992, Beaubrun *et al.* 1988, Cabo & Sanchez 1985, Dakki *et al.* 1991), tendo a população de limícolas invernantes no litoral marroquino sido estimada em 87000. Este valor representa cerca de 1,3% do total da população invernante da Europa Ocidental, Marrocos, Mauritânia e Guiné-Bissau. Nestes dois últimos países invernam aproximadamente 50% (3.214.000) do total de aves estimadas nas regiões atrás referidas (Alerstam 1993). Um número significativo destas aves utiliza as zonas húmidas de Marrocos como locais de passagem e/ou muda de plumagem (Pienkowski

*et al.* 1975, Smit & Piersma 1989), conferindo particular importância ornitológica a este país.

Durante a primeira quinzena de Abril de 1993 foi efectuado um recenseamento de aves aquáticas em algumas zonas húmidas de Marrocos. As contagens foram realizadas com particular destaque, nas salinas de Larache, nos sapais do rio Loukos e nas lagoas entre Sidi Moussa e Oualidia (33° 00' N, 8° 44' W), devido à sua importância ornitológica e à sua relativa proximidade da Europa.

A data de realização deste recenseamento coincidiu com o período de migração primaveril (Cramp & Simmons 1983). As contagens, quando possível, foram realizadas de carro, ou a pé. Como material óptico utilizaram-se binóculos (10x50) e um telescópio (30x). Foram contadas todas as aves aquáticas das 7 zonas visitadas à excepção das espécies mais comuns de gaivotas (Guíncho-comum *Larus ridibundus*, Gaivota-de-asa-escura *L. fuscus* e Gaivota-argêntea *L. cachinnans*).

Na sequência de uma campanha de marcação com anilhas de cor, de Perna-longa *Himantopus himantopus* a decorrer em Portugal por parte do Instituto da Conservação da Natureza, prestámos