

## FORAGING ASSEMBLAGES OF BIRDS IN DIFFERENT OLIVE PLANTATIONS DURING THE SECOND HALF OF MARCH

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Overall, 40 bird species were recorded along 17 transects in three types of olive plantations. 27 species belong to the breeding though we could still record 4 wintering species, 9 more species used the olive plantations as a stopover site. Regarding foraging guilds, were distinguished 7 different groups. Granivorous birds (7 species), were the most abundant and frequent, specially *Serinus serinus*, and they were specially abundant in orchards with an abundant herbaceous cover (mean cover 25.3%). Nine species were classified as foliage gleaning insectivorous, and they occurred mainly in the old and deserted olive orchards. Seven ground foraging insectivorous species, six aerial insectivorous, two frugivorous birds and ground foraging omnivorous and zoophagous species make the rest of the foraging guilds.

**Key words:** ornithocoenoses, olives, foraging strategy, migration

### Introduction

Single-crop farming usually provides a low food supply, especially for insectivorous birds. The intense management (frequent spraying, pruning, mowing, etc.) to increase productivity of single-crop farming results in poor foraging webs, in comparison to traditional and less intensive farming styles. For this reason ecologists paid only few attention to this relatively simple ecosystem. However, because of the simplicity, single crop farming can be a good model system to investigate the role of different factors, e.g. on animal diversity.

Olive plantations may be a good example for a simple structured ecosystem due to very intensive agricultural management. They consist of regularly distributed, usually low trees (two to three meters in height) with almost no herb layer. Olive tree plantations (*Olea europaea*, var. *europaea*) make up a large part of S Spain and many central- and north-european bird species migrate or overwinter there (Muñoz-Cobo 1987, Rey 1993, Muñoz-Cobo & Purroy 1980). Since olive fruits are actually an important food for many of them (Jordano & Herrera 1981, Herrera 1984, Jordano 1988, Rey 1995) olive plantations may somehow compensate for the loss of original mediterranean shrubs and wild olive scrublands.

There are several studies investigating bird communities in olive plantations (Muñoz-Cobo 1987, 1992, Rey 1992, 1993, 1995, Rey & Valera 1999, Valera 1992) and also papers

