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Breeding ecology of Eurasian bullfinches *Pyrrhula pyrrhula* in an Iberian hedgerow habitat

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ABSTRACT

The breeding ecology of the Iberian subspecies of the Eurasian bullfinch, *Pyrrhula pyrrhula iberiae*, is addressed for the first time. The studied population occupied a hedgerow habitat in northwestern Spain. Individuals directly watched in the study area and details of these sightings were recorded over a six-year period, and a total of 56 nests were monitored. The earliest date of nest building was within 11–30 April for all years. Fledglings were recorded leaving the nest during all the ten-day periods from the end of May to mid-August. Nest attendance, from the early building stage to when nestlings were ready to leave the nest, lasted approximately 36 days. The overall mean clutch size was 4.56 eggs. Clutch size decreased significantly at the end of the breeding season. For all egg traits, the minimum values for standard deviation were obtained in the intra-clutch analysis, and egg length was more variable than width. Nesting success increased progressively from April–May to June–July and August. The main proximate cause of nest failure was egg desertion/predation, followed by nest desertion during nest building and nestling desertion/predation. Mammals were the main agents in nests where the probable predator could be identified. Approximately half of the eggs became fledglings leaving the nest, no significant seasonal differences being observed for this parameter. In August, the ratio of juveniles to adults was 2.5–4.1, juveniles representing approximately 70–80% of the individuals seen and identified that month. The absence of significant interannual variation in important reproductive parameters could have been due to lack of interannual variation in the availability of food resources. Compared to other subspecies, mean clutch size of Iberian bullfinches is the smallest recorded in the western Palearctic, and they showed an earlier start to the breeding season and shorter mean egg length than North European and Russian populations.

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Breeding success; clutch size; egg traits; parental care; *Pyrrhula pyrrhula iberiae*; timing of breeding

Introduction

Knowledge of the breeding biology of birds contributes to our understanding of nature, helps to formulate general theories of life history evolution, can provide information on the effect of global climate change on animals, and assists in identifying demographic

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Supplemental data for this article can be accessed here.

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