

Biometría, fenología y razón de sexos del Ruiseñor Bastardo *Cettia cetti* en carrizales del Valle del Tajo (España central)

A. VILLARÁN

Biometry, phenology and sex ratio of Cetti's Warbler *Cettia cetti* in reedbeds of the Tagus Basin (central Spain)

Data were analysed from 228 ringing records and 66 recoveries of Cetti's Warbler Cettia cetti obtained in an area of reedbeds in central Spain. Biometrical measurements show clear sexual dimorphism, males being larger and heavier than females. Both wing-length and body weight show bimodal distributions. These data suggest that in central Spain, birds with wing-length greater than 59 mm or body mass heavier than 14 g can be reliably sexed as males. Similarly, birds with wing-length shorter than 57 mm or body mass lighter than 12 g can be sexed as females. The percentage of females increased in autumn and winter, suggesting that females carried out dispersal movements to this reedbed area after breeding. This is reflected in a decrease in mean population wing-length and body mass in autumn and winter. No significant differences were found in mean wing-length within either sex during the annual cycle. However, mean body mass in females varied through the year. Females were heavier in spring (during the breeding season) and lighter in autumn (during dispersal movements).

Key words: Cetti's Warbler, *Cettia cetti*, biometry, phenology, sex ratio, central Spain.

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Diferencias biométricas relacionadas con el sexo y la edad en una población ibérica de Pechiazul *Luscinia svecica cyanecula*

J. GARCÍA, B. FUERTES & M. JUAN

Sex- and age-related differences in the biometrics of an Iberian breeding population of Bluethroats *Luscinia svecica cyanecula*

Measurements of maximum wing chord, third primary length, tarsus length and body mass were analysed for 93 Bluethroats *Luscinia svecica cyanecula* captured at two localities in the Montes de León (León, NW Spain). Comparison of the measurements of males and females showed differences in maximum wing chord and third primary length; these are revealed as useful measurements for discriminating the sexes. In contrast, no significant sexual differences emerged in the measurements of tarsus length and body mass. Comparison of these same measurements between young and adult males produced differences only in the length of the third primary.

Key words: Bluethroat, *Luscinia svecica cyanecula*, biometry, León, Iberian Peninsula.

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INTRODUCCIÓN

El Pechiazul *Luscinia svecica* es una especie polítípica de amplia distribución

en latitudes medias y altas del Paleártico occidental y en Alaska, pero limitada a unas pocas localidades de montaña en el límite sur de su distribución (Cramp

Sexing juvenile Great Tits *Parus major* on plumage colour

J. DOMÈNECH, J. C. SENAR & E. VILAMAJÓ

The Great Tit *Parus major* has been the target of many kinds of studies. Unfortunately, as in many other passerine species, juveniles (3J) show a duller plumage, less intensely coloured than that of adults, which do not allow sexing of the birds; this prevents many kinds of studies in which the sex of the birds is of importance. Given that in cardueline finches body plumage coloration, in conjunction with wing length, has been proved to be useful for sexing juvenile birds (EURING age 3J), in this paper we test the usefulness of these characters for sexing juvenile Great Tits. The data are based on 127 juvenile Great Tits (28 of them with colour data) captured in a suburban area of Barcelona (NE Spain) from 1997 to 1999. When using wing length, the percentage of individuals correctly classified by discriminant analysis was 74%. Using colour data alone allowed correct classification in 89% of cases. Stepwise discriminant analysis including plumage colour data and wing length classified 93% of cases correctly. The results show the presence of plumage dichromatism in juvenile Great Tits. This supports our earlier suggestion that plumage colour may be used to sex juveniles in several species, as in cardueline finches and probably other tits (e.g. Blue Tit *Parus caeruleus*). This paper also shows the usefulness of a digital chromameter for field measurement of colour, since it allows the user to obtain quantitative data that can improve the percentage of correctly sexed juveniles.

Key words: Great Tit, *Parus major*, sexing juveniles, plumage colour, discriminant analysis, chromameter.

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INTRODUCTION

Juveniles of many passerine species display duller plumage, less intensely

coloured than the adults, and this prevents sexing (Busse 1984, Pyle et al. 1987, Svensson 1992, Jenni & Winkler 1994). This can be a constriction for stud-

The relationship between body mass and some weather variables in Blackcaps *Sylvia atricapilla* wintering in orange groves in south-eastern Spain

I.G. PEIRÓ

*The body mass and fat score of Blackcaps *Sylvia atricapilla* wintering in suburban orange groves in south-eastern Spain was studied in relation to some environmental factors (temperature, precipitation and photoperiod) using stepwise multiple regressions. Analyses were carried out on average values for the different individuals trapped within the same day to avoid pseudo-replication. The variation in body mass was significantly predicted by mean temperature on day of capture, mean temperature five days before capture and minimum temperature two days before capture ($R^2 = 0.980$; $p = 0.001$). Fat score was significantly related to maximum temperature on day of capture ($R^2 = 0.822$; $p = 0.002$). Temperature seems to play an important role as a proximate or short-term factor in the regulation of body mass of Blackcaps wintering in SE Spain.*

Key words: Blackcap, *Sylvia atricapilla*, body mass, weather, temperature, south-eastern Spain.

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INTRODUCTION

Body mass of passerines is subject to temporal changes as a response to variations in their metabolic demands in order to face important stages in their life cycles (e.g. migration, moult, breeding, Dawson *et al.* 1983, Gosler 1991,

1994), and it also depends on variations in the environmental conditions (Dawson & Marsh 1986, Gosler 1996).

The body mass of passerines has been related to environmental parameters such as temperature (Jenni & Jenni-Eiermann 1987, Peach *et al.* 1992, Robson 1996), day-length amplitude (Rogers

Influencia de las temperaturas mínimas en un grupo invernante de Gaviota Sombría *Larus fuscus* y Gaviota Reidora *Larus ridibundus* en el río Guadiana (sudoeste de España)

I. GALVÁN

The influence of minimum temperatures on a wintering group of Lesser Black-backed Gulls *Larus fuscus* and Black-headed Gulls *Larus ridibundus* on the River Guadiana (south-west Spain)

*Analysis is presented of the influence of minimum temperatures on the number of wintering Lesser Black-backed Gulls *Larus fuscus* and Black-headed Gulls *Larus ridibundus* and on the proportion of adults in the groups observed at a resting area located on the River Guadiana (south-west Spain). A significant negative correlation was found between the minimum temperatures and the number of individuals of the two species, as well as between the minimum temperatures and both age classes (adult and subadults) of Black-headed Gulls; in contrast, only subadult, not adult, Lesser Black-backed Gulls were affected by this variable. The increase in the number of gulls in the resting area could be related to the increase in the physiological cost of keeping warm and to the decrease of resources when the temperatures drop.*

Key words: Minimum temperatures, ages differences, Lesser Black-backed Gull, Black-headed Gull, Guadiana river.

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INTRODUCCIÓN

La Gaviota Sombría *Larus fuscus* y la Gaviota Reidora *Larus ridibundus* son dos

especies de carácter sinantrópico que utilizan el interior de la Península Ibérica como área de invernada. Ambas especies han experimentado una expansión

Bird predation on cryptic larvae and pupae of a swallowtail butterfly

C. STEFANESCU

*Cryptic coloration in Lepidopteran larvae and pupae has presumably evolved because of a selective pressure exerted by accurate visual predators, most likely birds. To what extent birds are primary predators of swallowtail butterflies (Papilionidae) is, however, a controversial subject. Experimental work has shown that birds ignore or reject unpalatable larvae with warning colours, but their impact on those species with cryptic larvae is still largely unknown. In a study of the population ecology of the Scarce Swallowtail butterfly *Iphiclides podalirius*, predation of larvae and pupae by the Great Tit *Parus major* was recorded on several occasions. Direct observations, together with indirect evidence, indicate that the impact of this bird on the butterfly population was very important and, on an evolutionary timescale, may have represented a strong selective pressure favouring the cryptic coloration of larvae and pupae. Moreover, the data presented conclusively demonstrate the total ineffectiveness of the larval osmaterium as a defence mechanism against predation by the Great Tit.*

Key words: Great Tit, *Parus major*, Scarce Swallowtail butterfly, *Iphiclides podalirius*, predation, NE Spain

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INTRODUCTION

Butterfly larvae and pupae are often subject to very heavy mortality as a result of parasitism and predation by both invertebrates and vertebrates (e.g. Warren 1992). Swallowtail butterflies (family Papilionidae), in particular, have been the subject of several detailed

studies aimed at determining their main predators (Feeny *et al.* 1985, Scriber *et al.* 1995). Available information shows that birds are indeed important predators of the pupal stage (West & Hazel 1982) and it has even been hypothesised that green pupae evolved from the ancestral brown condition as a result of the natural selection imposed

■ A bracket for filming nests

A.J. REDONDO & L. ARIAS DE REYNA

*Parental feeding patterns and the interactions among nestlings are of great importance in any study of the parent-offspring relationship in altricial birds. Video-recording provides a useful tool for recording this behaviour at the nest. Here, we describe a bracket for holding a video-recorder, successfully used in a study with the Azure-winged Magpie *Cyanopica cyanus* nesting in trees. The bracket did not seem to have any negative effects on the birds, as no differences were detected in chick development or predation rates between nests in which the device was, or was not, used.*

Key words: Video-recording of nests, Azure-winged Magpie, *Cyanopica cyanus*.

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Nowadays video appears to be an essential tool in studying animal behaviour. In recent studies of bird behaviour, specifically those dealing with aspects of reproduction, more and more authors are recording their data using video-tapes, which they can analyse in detail later (Hofstetter & Ritchison 1998, Krebs et al. 1999). Indeed, there is even a software programme for extracting this sort of data (the Observer Video-Pro-System).

Video recordings have frequently been used for studying captive birds (Hirose & Balsam 1995, Mondloch 1995, Lehner 1996), but researchers are increasingly beginning to use them in their fieldwork, and parental care is one

of the subjects in which this method is being used more and more.

The main problem encountered when trying to make recordings of a nest is how to set up the camera in such a position that the inside of the nest can be seen with the minimum of interference to the occupants' behaviour.

Our proposal is based on the case of nests situated in trees, where the use of a telephoto lens, with the camera placed at some distance, would, in most cases, require altering the structure of the tree which hides the nest, with the resulting increased risk of predation.

A form of bracket is described for holding the camera to the tree. This model allows the observer to place the

Posible elección del territorio de cría por parte de la hembra en el Aguilucho Cenizo *Circus pygargus*

J. BOSCH

Possible selection of breeding site by female Montagu's Harriers *Circus pygargus*

In Montagu's Harrier Circus pygargus, males usually return from the African winter quarters some days before the females. Some authors state that the males establish the nesting territory and that the female apparently selects the nest site. This note describe a breeding pair in the NE of the Iberian Peninsula in 1986, where before the arrival of the female, the male was established in a territory also occupied in previous years. A few days after the male mated with a female, and immediately before egg-laying, it seems that this pair established a new nesting territory 4.5 km away from the male's initial territory.

Key words: Montagu's Harrier *Circus pygargus*, nesting territory choice, breeding behaviour.

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Los machos del Aguilucho Cenizo *Circus pygargus* suelen llegar a los territorios de cría unos días antes que las hembras (Delamain 1929 in Cramp 1980, Robinson 1950 in Newton 1979, Noval 1975, Pandolfi & Pino d'Astore 1990, Bort 1995), aunque también se dan casos en los que la pareja llega simultáneamente al área de cría (Weis 1923 in Cramp 1980, Arroyo 1995, pers. obs.).

Aparentemente son los machos los que se establecen en un territorio y eli-

gen el área para anidar (R. Khan in Cramp 1980, Bort 1995), si bien la ubicación del nido parece que corre a cargo de la hembra (Arroyo 1995, Bort 1995, Del Hoyo et al. 1995). Sin embargo, Delamain (1929, in Cramp 1980) menciona que la búsqueda del lugar del nido se da cuando la pareja vuela bajo por su territorio y que es el macho el que decide y muestra el lugar a la hembra. La tarea de construir y dar forma al nido corre a cargo de la hembra, limitándose