

### **Piscivorous birds in the catchment of the River Lee**

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Studies are being undertaken on four species of piscivorous birds namely the Cormorant *Phalacrocorax carbo carbo*, Grey Heron *Ardea cinerea*, Great Crested Grebe *Podiceps cristatus* and the Red-breasted Merganser *Mergus serrator*. The primary focus of the investigation is to quantify the distribution of these species in space and time. Historical data are being analysed using the recently developed Underhill and Prys-Jones Index method. However where possible the age structure of the populations within both the freshwater and estuarine sections of the River Lee is also being surveyed. Results to date show that for Cormorants and Herons there are statistically significant differences in the proportion of adult birds in Lee Reservoirs as compared to Cork Harbour. Different feeding strategies have been identified among Cormorants utilising the estuarine section of the River Lee. Preliminary analysis suggests that there may be some negative interaction between Great Crested Grebes and Red-breasted Merganser.

### **Bridled Guillemots on Inistearaght, the outermost of the Basket Islands**

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A series of counts of bridled Guillemots *Uria aalge* on Inistearaght were obtained in the 1980s and early 1990s. The proportion showing this trait is very high - approximately 11%. The present work is concentrating on the spatial distribution of bridled birds within the colony

### **Roosting behaviour in domestic fowl and guineafowl: The role of light and time and constraints on adaption**

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Ground-roosting behaviour of a semi-feral population of domestic fowl *Gallus gallus* with chicks were measured in The Gambia, West Africa (14°N latitude). While day length remained relatively constant during the study

(January-March, 1995), daylight intensity increased as the season progress resulting in an increasingly rapid decline in light intensity in the evenings. Hens went to roost significantly later in the day and at lower light levels, over the season. The results suggest that the cue to start roosting is a certain light level, constant over the season but that the 'settling period' required means that the hens finally roost at later times and lower light levels as the season progresses (Kent et al, 1997). In Ireland, the roosting behaviour of domestic fowl and Helmeted Guineafowl *Numida meleagris* were observed (52.83°N, 6.13°W). Guineafowl went to roost later, and at lower light levels than domestic hens (domestic hens  $m=630.61$  lux  $s.d.=242.44$ ; Guineafowl mean  $=14.5$  lux  $s.d.=34.26$   $t=10.67$ ,  $p<0.001$ ) The roosting behaviour of the domestic hen and the Guinea Fowl reflect the phylogenetic origins of these species and data suggest that phylogenetic constraints limit the adaptability of the domestic hen in equatorial Africa where the native Guineafowl would have greater potential.

### **Breeding waders on machair sites in Ireland, 1996**

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A survey of breeding waders on machair sites in Ireland was carried out in 1996. A total of 48 sites were surveyed in Counties Donegal, Sligo, Mayo and Galway. Census methodology was adapted from that used by Nairn et al. (1988), with up to three visits between late April and mid June. Of the sites surveyed, 18 had no breeding waders. The total number of pairs of breeding waders recorded for the remaining sites was 697. The machair plain habitat held 433 of the pairs, with 264 pairs on areas adjacent to the machair. For all the surveyed areas, Mayo held the largest number of pairs (371), followed by Donegal (260), Galway (38) and Sligo (28). Species totals were as follows: Lapwing *Vanellus vanellus* 313 pairs, Oystercatcher *Haematopus ostralegus* 166 pairs, Ringed Plover *Charadrius hiaticula* 96 pairs, Dunlin *Calidris alpina* 60 pairs, Snipe *Gallinago gallinago* 33 pairs, Redshank *Tringa totanus* 21 pairs, Common Sandpiper *Actitis hypoleucos* 6 pairs and Golden Plover *Pluvialis apricaria* 2 pairs. The average density for all species was 0.172 pairs  $ha^{-1}$ . In a national context, the machair habitat held between 20% and 34% of the Dunlin population, 7.7% of the Ringed Plover population, between 4.2% and 5.6% of the Oystercatcher population, 1.5% of the Lapwing population and less than 1% of the various national totals for the other species. A comparison of species

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