
Waterbird Abstracts

Seasonal and annual variations in waterbird populations of mountain and coastal wetlands of Morocco

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We conducted counts of waterbirds (grebes, ducks and coots) during autumn and spring (1997, 1999 and 2002–2004) in mountain (Middle Atlas) and coastal wetlands of Morocco, to study annual and seasonal variations in abundance, as well as in the degree of spatial dispersion of species. A total of 18 species was recorded, which exhibited a higher abundance in autumn. Most species were found both in coastal and mountain wetlands, the exceptions being the Ferruginous Duck (*Aythya nyroca*; found only in coastal wetlands) and the Ruddy Shelduck (*Tadorna ferruginea*; found only in mountain wetlands). The most abundant species showed a higher spatial overdispersion in spring than in autumn. When water levels were low, the degree of spatial patchiness of some species was high, indicating that most individuals were found in very few wetlands. As most of the wetlands that we studied hold populations of threatened species, and suffer several conservation threats (see Green *et al.* 2002, *Biological Conservation* 104: 71–82), legal protection of all these wetlands is required to ensure the conservation of waterbirds. This may be especially critical for species that rely on few wetlands during drought periods.