Short Communication

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Are cleared reeds Phragmites australis growing inside bush areas good for the stop-over of small birds?

Abstract

Cleared reeds are formations of reeds Phragmites australis growing at different stem density interspersed inside of bush-grass-tree masses in freshwater or brackish waters. Generally, these are considered as the early succession stage of a plant hydro series. The importance for the small-medium birds which uses these formations is huge. This is because the broad masses of reeds are reducing from the past century and birds benefit of the rich invertebrate fauna of these residual sites from the adaptive functional morphology of these birds to cope with these habitats more skillfully than other wetland birds. I summarize the habitat preferences of this vegetation type on some endangered small-medium birds at Western Mediterranean areas.

Keywords: plant succession, reeds, small-medium birds, western mediterranean

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Ignacio García Peiró
Department of Ecology & Hydrology, University of Murcia, Spain

Correspondence: Ignacio García Peiró, Department of Ecology & Hydrology, Faculty of Biology, University of Murcia, Spain, Tel (00) 34 965 451 777, Fax (00) 965 4213 20, Spain, Email ignacio.peiro@yahoo.es

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Introduction

The term cleared reed is here used to define formations of freshwater or brackish bushes, grasses or trees on which the reed is the emergent halophytic plant Phragmites australis growing at different densities and interspersed inside of bush-grass-tree masses. Generally, it is considered the early succession stage of a plant hydro series,[1] or a wetland plant transition.[2] The term 'stop-over' is used to refer to a site where birds decide to land just to rest or to refuel, or both.[3,4] The aim of this short note is to highlight the importance of these plant formations for the stop-over of small wetland birds during migration periods.[5]

Material and methods

With the purpose to summarize the cleared reed's preference for small Mediterranean birds, a simplistic research of some bibliographic references, mainly from Spain, was performed (Table 1) on which some reed features and bird's preference were settled. Cleared reeds, in general, are considered suboptimal habitats but support an important richness of bird's species at major diversity than dense reeds. These small avifaunas inside cleared reed masses pertain to a rich variety of Bird's Families. Emberizidae Family, for example, with species like Reed bunting Emberiza schoenclus strictly adapted to dense reeds in the last of past century and that Bell,[6] points out to have reached cleared dry areas in its expansion process through Europe. In Mediterranean wetlands its winter habitat uses more predominantly suboptimal cleared drier reed areas than in winter where the abundances have declined substantially in Iberian Peninsula from the past decades.[7] With reference to some endangered Acrocephalidae reed warblers, the optimal habitat for the Aquatic warbler Acrocephalus paludicola in Mediterranean France,[8] contains medium tall dry reed, growing at a low density (Table 1). All these features confirm a landscape from medium cleared reed towards pronounced bushes, typical for these palustrine birds. A brief bibliographic seek on the habitat for small-medium passerines (Table 1) indicates that cleared reeds contain major bird's diversity than dense reeds.

Table 1 Some features of Mediterranean reeds and habitat preferences for some palustrine birds

Location	Reed Type	Reed coberure	Dominant plant species	Bird's richness	Bird's diversity	Representative birds	Literature
North Iberia	Dense	90%	Phragmithes communis	Low	Low	Acrocephalus spp	Arizaga et al 2013,[4]
	Cleared	10%	Juncus spp; Aster spp; Tamarix spp	High	High	Luscinia spp; Cisticola spp	
South Iberia	Dense	60%	Phragmithes communis	Low	Low	Acrocephalus spp;	Peiro & Esteve 2001,[8]
	Cleared	40%	Sarcocornia spp; Suaeda spp; Tamarix spp	High	HIgh	Sylvia spp	
Western France	Cleared	90%	Phragmites communis; Elytrigia spp	High	High	Luscinia svecica namnetum	Musseau et al 2017 & 2018,[19-20]
Eastern France	Cleared	60%	Phragmites communis; Juncus spp: Cladium spp	High	High	Acrocephalus paludicola	Poulin et al 2010,[7]

Results

Cleared reeds are very rich in temporal species and the percentage of tropical migrants is greater than in dense reeds situated inside of water bodies.[9] Some of them are rare Afro tropical migrants warblers as the Grashopper warbler Locustella naevia which make use of these areas as stop-over sites, resting for some days.[10] and ringing captures in very early passage (February) of migrants in Southernmost Iberia like Sedge Warblers Acrocephalus schoenobaenus corroborates these assumptions,[11] pointing that cleared reeds could be a important hot-spots indicative of stop-over during migration. Breeding territories of Grasshopper warblers in scrub's Salix spp grasslands in colder climates of Northern Europa support major quantities of invertebrates than in optimal (dense) habitats and they are more feasible for feeding in suboptimal areas,[11] With reference to Turkestan-Mediterranean small reed birds, the Mustached Warbler Acrocephalus melanopogon, is noted a trend to an increase of ringing captures in cleared reeds from the last decade up to current years in wetlands of Southern Iberia (Peiró pers data) probably due to novel prey invertebrates, extinct in dense areas or due to effects of climate change. The functionality in the use of such suboptimal habitats is based in that some morphological traits,[12,13] are intra-specifically dependent in these areas, in the form that, in spite of major abundance of birds in optimal habitats, older birds are more able to enhance suboptimal habitats optimally, since longer wing-lengths abilities for faster flights, favoring dispersal and major habitat occupation.[14–16]

Conclusion

Due to the massive destruction of reed-beds in wetlands from the past centuries,[17] the remnants of reeds in early transitional stages is of importance for the stop-over of many passerines, many of them generalists migrants, and also other highly specialists with an endangered status.[12] It's important to keep connections with dense reeds in order to create a mosaic of a dynamic wetland plant system to facility the stop-over of migrants and the dispersal of sedentary species.[18–21]

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Conflicts of interest

Author declares that there is no conflict of interest.

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