

Supplementary Electronic Material: Chapter 5

Avian responses to transitional habitats
in temperate cultural landscapes:
woodland edges and young-growth.

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Appendix E5.1 *Shrubland habitat types supporting particularly distinctive assemblages of breeding birds in Britain (updated from Mortimer et al., 2000)*

Northern uplands: Principally birch *Betula* and juniper *Juniperus* scrub which is relatively poor in bird species and strongly dominated by willow warbler *Phylloscopus trochilus* (Gillings et al., 1998, 2000; Fuller et al., 1999a).

Western uplands: Upland slopes in Wales, the Shropshire Hills and south-west England often carry mixtures of hawthorn *Crataegus monogyna* scrub and bracken *Pteridium aquilinum* (termed *ffridd* in Wales) and sometimes gorse *Ulex* which can be exceptionally rich in chats including whinchat *Saxicola rubetra*, stonechat *Saxicola torquata* and redstart *Phoenicurus phoenicurus* (Fuller et al., 2006).

Lowland heathland: Gorse *Ulex* spp. mixed with rank heather *Calluna vulgaris* supports a species-poor assemblage including Dartford warbler *Sylvia undata* and stonechat *Saxicola torquata* (Bibby, 1978).

Lowland hawthorn *Crataegus monogyna* and mixed shrubland: The bird communities are typified by high densities of warblers in the canopy-closure phase and by yellowhammers *Emberiza citrinella*, linnets *Carduelis cannabina* and common whitethroats *Sylvia communis* in the earlier stages of scrub growth.

Lowland blackthorn *Prunus spinosa*: Dense blackthorn *Prunus spinosa* appears to be a preferred habitat of nightingales *Luscinia megarhynchos* in southern England, though it also uses other scrub types and coppiced woodland (Fuller et al., 1999b; Wilson et al., 2005). In other respects the bird assemblage resembles that of hawthorn *Crataegus monogyna* scrub.

Wet shrubland: Sedge warbler *Acrocephalus schoenobaenus*, reed bunting *Emberiza schoeniclus* and Cetti's warbler *Cettia cetti* will use scrub, often in conjunction with adjacent marsh or fen vegetation, including reedbeds. Marsh warbler *Acrocephalus palustris* is an extremely rare breeder in high marsh vegetation with scattered bushes.

Coastal dunes: Sea-buckthorn *Hippophae rhamnoides* scrub, often mixed with hawthorn *Crataegus monogyna* and elder *Sambucus nigra*, can support high overall densities of birds including high densities of common whitethroats *Sylvia communis*, linnets *Carduelis cannabina* and redpolls *Carduelis flammea* (Williamson, 1967; Morgan, 1978). Densities of common whitethroats *Sylvia communis* in particular can be exceptionally high (Boddy, 1991).

Appendix E5.2 Habitat associations of young-growth specialists in southern Britain in the breeding season

‘Shrubland’ is naturally regenerating broadleaved scrub developing on farmland or downland where grazing or cultivation has ceased (coastal scrub is excluded). ‘Coppice’ is young woodland managed by rotational felling with re-growth from cut stumps; plantations are usually restocked by planting. Strength of habitat association in the period 1980–2000 is indicated by number of crosses; brackets indicate a historical or marginal association. Species with asterisks have recently declined in Britain (Fuller et al., 2005; Hewson et al., 2007). Preferred growth stages: I sparse/open <20% canopy cover, II moderately open 20–50%, III canopy closure period 50–100%, IV immediate post-canopy closure. Note that woodland generalists that use later stages of young-growth are excluded. Sources: Morgan (1975), Williamson (1975), Fuller and Warren (1991), Fuller (1987, 1992, 1995), R.J. Fuller (unpublished)

	Shrubland	Coppice	Broad-leaved plantation	Conifer plantation	Growth stage
Turtle dove* <i>Streptopelia turtur</i>	+++	++	+	+	IV
Nightjar <i>Caprimulgus europaeus</i>	(+)	+		+++	I, II
Woodlark <i>Lullula arborea</i>	(+)			+++	I
Tree pipit* <i>Anthus trivialis</i>	++	+	+	++	II
Meadow pipit <i>Anthus pratensis</i>	+			+	I, II
Duncock* <i>Prunella modularis</i>	+++	++	++	++	III
Nightingale* <i>Luscinia megarhynchos</i>	+++	++	+	+	III, IV
Cetti's warbler <i>Cettia cetti</i>	++				II, III
Grasshopper warbler* <i>Locustella naevia</i>	++	(+)	+	++	I, II
Dartford warbler <i>Sylvia undata</i>	+			(+)	I, II
Lesser whitethroat* <i>Sylvia curruca</i>	+++				III, IV
Whitethroat <i>Sylvia communis</i>	+++	+	+	++	I, II
Garden warbler* <i>Sylvia borin</i>	+++	+++	+++	++	III, IV
Blackcap <i>Sylvia atricapilla</i>	+++	+++	+++	++	III, IV
Chiffchaff <i>Phylloscopus collybita</i>	++	+++	+++	+	III
Willow warbler* <i>Phylloscopus trochilus</i>	+++	+++	+++	+++	II, III, IV
Long-tailed tit <i>Aegithalos caudatus</i>	+++	++	++	++	II, III

Appendix E5.2 (cont.)

	Shrubland	Coppice	Broad-leaved plantation	Conifer plantation	Growth stage
Redpoll* <i>Carduelis flammea</i>	+			++	II, III
Linnet <i>Carduelis cannabina</i>	++	+	+	+	I, II
Bullfinch <i>Pyrrhula pyrrhula</i>	+++	+++	+++	+++	III, IV
Yellowhammer <i>Emberiza citrinella</i>	+++	+	+	+++	II, III
Reed bunting <i>Emberiza schoeniclus</i>	+		+	+	I

Species breeding in young-growth in parts of temperate (T) or Mediterranean (M) Europe but absent from, or rare, in Britain include: *Luscinia luscinia* (T), *Luscinia svecica* (T), *Sylvia nisoria* (T), *S. crassirostris* (M), *S. hortensis* (M), *S. melanocephala* (M), *S. melanothorax* (M), *S. rueppelli* (M), *S. conspicillata* (M), *S. cantillans* (M), *S. sarda* (M), *Hippolais polyglotta* (T), *Lanius collurio* (T, M), *Carpodacus erythrinus* (T), *Emberiza caesia* (M).

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