

## Supplementary Materials

**Table S1.** Variables considered to evaluate temporal changes of the effect of urban and peri-urban forest patch characteristics on bird species richness in the urban region of Milan (northern Italy).

Environmental variables	Variable Type	Mean	Min–Max
TYPE	Categorical	-	-
Protected area/Not protected area	Categorical	-	-
Urban/Peri-urban forest	Categorical	-	-
<u>Year 2000 UPUFs (N = 240)</u>			
Patch area	Continuous	54.7 ha	0.2–905.7 ha
Minimum distance from the nearest source area	Continuous	11.1 km	0–46.6 km
Surface occupied by forests (buffer of 1000 m)	Continuous	225.9 ha	4.8–1947.6 ha
Number of neighbouring forest patches (buffer of 1000 m)	Continuous	26	2–135
Surface occupied by urban areas (buffer of 1000 m)	Continuous	184.5 ha	0–1582.9 ha
Number of neighbouring urban patches (buffer of 1000 m)	Continuous	31	0–199
<u>Year 2012 UPUFs (N = 240)</u>			
Patch area	Continuous	47.6 ha	0.4–906.5 ha
Minimum distance from the nearest source area	Continuous	11.5 km	0–47.3 km
Surface occupied by forests (buffer of 1000 m)	Continuous	182.0 ha	1.6–1933.5 ha
Number of neighbouring forest patches (buffer of 1000 m)	Continuous	32	3–173
Surface occupied by urban areas (buffer of 1000 m)	Continuous	220.6 ha	3.2–2417.2 ha
Number of neighbouring urban patches (buffer of 1000 m)	Continuous	38	3–208
<u>Year 2000 UFs (N = 125)</u>			
Patch area	Continuous	30.0 ha	0.2–399.8 ha
Minimum distance from the nearest source area	Continuous	11.2 km	0–45.7 km
Surface occupied by forests (buffer of 1000 m)	Continuous	152.3 ha	4.8–1016.4 ha
Number of neighbouring forest patches (buffer of 1000 m)	Continuous	27	2–135
Surface occupied by urban areas (buffer of 1000 m)	Continuous	220.7 ha	16.2–1582.9 ha
Number of neighbouring urban patches (buffer of 1000 m)	Continuous	31	2–199
<u>Year 2012 UFs (N = 158)</u>			
Patch area	Continuous	22.8 ha	0.35–848.5 ha
Minimum distance from the nearest source area	Continuous	12.2 km	0–47.3 km
Surface occupied by forests (buffer of 1000 m)	Continuous	121.2 ha	1.6–1502.2 ha
Number of neighbouring forest patches (buffer of 1000 m)	Continuous	30 ha	3–173 ha
Surface occupied by urban areas (buffer of 1000 m)	Continuous	223.0 ha	13.2–2417.2 ha
Number of neighbouring urban patches (buffer of 1000 m)	Continuous	32	3–208
<u>Year 2000 PUFs (N = 115)</u>			
Patch area	Continuous	81.6 ha	0.3–905.7 ha
Minimum distance from the nearest source area	Continuous	10.9 km	0–46.6 km
Surface occupied by forests (buffer of 1000 m)	Continuous	306.0 ha	6.4–1947.6 ha
Number of neighbouring forest patches (buffer of 1000 m)	Continuous	26	4–116
Surface occupied by urban areas (buffer of 1000 m)	Continuous	145.2 ha	0–1065.7 ha
Number of neighbouring urban patches (buffer of 1000 m)	Continuous	31	0–153
<u>Year 2012 PUFs (N = 82)</u>			
Patch area	Continuous	95.5 ha	0.3–903.5 ha
Minimum distance from the nearest source area	Continuous	10.4 ha	0–45.4 ha
Surface occupied by forests (buffer of 1000 m)	Continuous	299.1 ha	4.9–1933.5 ha
Number of neighbouring forest patches (buffer of 1000 m)	Continuous	35.3 ha	5–142
Surface occupied by urban areas (buffer of 1000 m)	Continuous	215.9 ha	3.2–1375.7 ha
Number of neighbouring urban patches (buffer of 1000 m)	Continuous	48 ha	3–150 ha

**Table S2.** List of all forest-dependent bird species considered for the time-windows 1998–2002 and 2010–2014 to evaluate temporal changes of the effect of urban and peri-urban forest patch characteristics on bird species richness in the urban region of Milan (northern Italy).

<b>Species</b>	<b>1998–2002</b>	<b>2010–2014</b>
Black kite <i>Milvus migrans</i>	+	+
Common buzzard <i>Buteo buteo</i>	+	-
Common pheasant <i>Phasianus colchicus</i>	+	+
Common wood pigeon <i>Columba palumbus</i>	+	+
European turtle dove <i>Streptopelia turtur</i>	+	+
Common cuckoo <i>Cuculus canorus</i>	+	+
Eurasian Wryneck <i>Jynx torquilla</i>	+	-
European green woodpecker <i>Picus viridis</i>	+	+
Great spotted woodpecker <i>Dendrocopos major</i>	+	+
Eurasian wren <i>Troglodytes troglodytes</i>	+	+
European robin <i>Erithacus rubecula</i>	+	+
Common nightingale <i>Luscinia megarhynchos</i>	+	+
Common redstart <i>Phoenicurus phoenicurus</i>	+	+
Common blackbird <i>Turdus merula</i>	+	+
Cetti's Warbler <i>Cettia cetti</i>	+	-
Melodious warbler <i>Hippolais polyglotta</i>	+	+
Eurasian blackcap <i>Sylvia atricapilla</i>	+	+
Common chiffchaff <i>Phylloscopus collybita</i>	+	-
Spotted flycatcher <i>Muscicapa striata</i>	+	+
Long-tailed tit <i>Aegithalos caudatus</i>	+	+
Marsh tit <i>Poecile palustris</i>	+	+
Eurasian blue tit <i>Cyanistes caeruleus</i>	+	+
Great tit <i>Parus major</i>	+	+
Eurasian nuthatch <i>Sitta europaea</i>	+	+
Short-toed treecreeper <i>Certhia brachydactyla</i>	+	+
Eurasian golden oriole <i>Oriolus oriolus</i>	+	+
Red-backed shrike <i>Lanius collurio</i>	+	-
Eurasian Jay <i>Garrulus glandarius</i>	+	+
Eurasian magpie <i>Pica pica</i>	-	+
Hooded crow <i>Corvus cornix</i>	+	+
Common starling <i>Sturnus vulgaris</i>	+	+
Common chaffinch <i>Fringilla coelebs</i>	+	+
European serin <i>Serinus serinus</i>	+	+
European greenfinch <i>Carduelis chloris</i>	+	+
European goldfinch <i>Carduelis carduelis</i>	+	+