Oikos

Appendix 1

Table A1. List of papers reviewed evaluating distribution models on fully spatially independent data. Type of split refers to the strategy of separating training from test data in species' distribution data. Data type is presence only (p only), presence/absence (p/a) or abundance (abd). N refers to the number of species included in the study.

Citation	Type of split	Data type	n
Duncan et al. 2009	native vs invasive	p only and p/a	5
Murray et al. 2011	split range	p/a	1
Flojgaard et al. 2009	split range	p/a	7
Barbosa et al. 2009	split range	p/a	1
Arntzen 2006	split range	p/a	38
			22
Merckx et al. 2011	split range	p/a	3
Anderson and Gonzalez 2011	split range	p only	1
Heinanen and von Numers 2009	somewhat segregated second validation set	p/a	5
Fielding and Haworth 1995	split range	p/a	6
Edwards et al. 2006	ind. collected but interspersed	p/a	4
Guisan et al. 2007	ind. data, segregated by cell	p only (training) p/a for testing	30
Lieske and Bender 2011	spatial CV	p/a	5
Sundblad et al. 2009	split range	p/a	2
Gray et al. 2009	split range	p/a	1
Littlewood and Young 2008	split range	p/a	1
Seoane et al. 2005	split range	p/a	10
Peterson 2001	split range	p/a	34
Randin et al. 2006	split range	p/a	54
Peterson et al. 2007	split range	p/a	3
Vanreusel et al. 2007	split range	p/a	2
Bulluck et al. 2006	split range	p/a	18
Freeman et al. 1997	split range	p/a	9
Thomas and Bovee 1993	split range	p only (training) p/a (testing)	1
Graf et al. 2006	split range	p/a	1
Lawler and Edwards Thomas C 2002	split range	p/a	4
Menéndez and Thomas 2006	split range	p/a	1
Vernier et al. 2008	split range	p/a	16
Whittingham et al. 2003	split range	relative abd	1
Guay et al. 2003	split range	p/a training abd testing	1
Leftwich et al. 1997	split range	p/a	1
Whittingham et al. 2007	split range	p/a	11
McAlpine et al. 2008	split range	p/a	1

Table A2. List of species included in the models.

Genus	Species	Common name
Cathartes	*aura*	turkey vulture
Colinus	*virginianus*	northern bobwhite
Zenaida	*macroura*	mourning dove
Coccyzus	*americanus*	yellow-billed cuckoo
Chordeiles	*minor*	common nighthawk
Chaetura	*pelagica*	chimney swift
Archilochus	*colubris*	ruby-throated hummingbird
Melanerpes	*erythrocephalus*	red-headed woodpecker
Melanerpes	*carolinus*	red-bellied woodpecker
Picoides	*pubescens*	downy woodpecker
Picoides	*villosus*	hairy woodpecker
Colaptes	*auratus*	northern flicker
Dryocopus	*pileatus*	pileated woodpecker
Contopus	*virens*	eastern wood-pewee
Empidonax	*traillii*	willow flycatcher
Empidonax	*minimus*	least flycatcher
Sayornis	*phoebe*	eastern phoebe
Myiarchus	*crinitus*	great crested flycatcher
Tyrannus	*tyrannus*	eastern kingbird
Lanius	*ludovicianus*	loggerhead shrike
Vireo	*griseus*	white-eyed vireo
Vireo	*flavifrons*	yellow-throated vireo
Vireo	*gilvus*	warbling vireo
Vireo	*olivaceus*	red-eyed vireo
Cyanocitta	*cristata*	blue jay
Corvus	*brachyrhynchos*	American crow
Corvus	*corax*	common raven
Eremophila	*alpestris*	horned lark
Progne	*subis*	purple martin
Tachycineta	*bicolour*	tree swallow
Petrochelido	*pyrrhonota*	cliff swallow
Hirundo	*rustica*	barn swallow
Poecile	*carolinensis*	Carolina chickadee
Poecile	*atricapillus*	black-capped chickadee
Baeolophus	*bicolour*	tufted titmouse
Sitta	*canadensis*	red-breasted nuthatch
Sitta	*carolinensis*	white-breasted nuthatch
Thryothorus	*ludovicianus*	Carolina wren
Troglodytes	*aedon*	house wren
Polioptila	*caerulea*	blue-gray gnatcatcher
Sialia	*sialis*	eastern bluebird
Hylocichla	*mustelina*	wood thrush
Turdus	*migratorius*	American robin
Dumetella	*carolinensis*	gray catbird
Mimus	*polyglottos*	northern mockingbird
Toxostoma	*rufum*	brown thrasher
Sturnus	*vulgaris*	European starling
Bombycilla	*cedrorum*	cedar waxwing
Parula	*americana*	northern parula

Dendroica	*petechia*	yellow warbler
Mniotilta	*varia*	black-and-white warbler
Setophaga	*ruticilla*	American redstart
Seiurus	*aurocapilla*	ovenbird
Geothlypis	*trichas*	common yellowthroat
Icteria	*virens*	yellow-breasted chat
Piranga	*olivacea*	scarlet tanager
Pipilo	*erythrophthalmus*	eastern towhee
Spizella	*passerine*	chipping sparrow
Spizella	*pusilla*	field sparrow
Pooecetes	*gramineus*	vesper sparrow
Passerculus	*sandwichensis*	savannah sparrow
Ammodramus	*savannarum*	grasshopper sparrow
Melospiza	*melodia*	song sparrow
Cardinalis	*cardinalis*	northern cardinal
Pheucticus	*ludovicianus*	rose-breasted grosbeak
Passerina	*caerulea*	blue grosbeak
Passerina	*cyanea*	indigo bunting
Dolichonyx	*oryzivorus*	bobolink
Agelaius	*phoeniceus*	red-winged blackbird
Sturnella	*magna*	eastern meadowlark
Sturnella	*neglecta*	western meadowlark
Euphagus	*cyanocephalus*	Brewer's blackbird
Quiscalus	*quiscula*	common grackle
Molothrus	*ater*	brown-headed cowbird
Icterus	*spurious*	orchard oriole
Icterus	*galbula*	Baltimore oriole
Carpodacus	*mexicanus*	house finch
Carduelis	*tristis*	American goldfinch
Passer	*domesticus*	house sparrow

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