Amphibian and Reptile Conservation

RESEARCH REPORT 18/01

Jersey multi-species distribution, habitat suitability & connectivity modelling

Appendix E

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States
of Jersey

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Appendix E – Habitat Concentration Areas (HCAs)

Table E1 Matrix showing percentage (%) overlap between HCAs (including built-up areas) for each focal species. Where a prediction for a species contains ≥ 80% of a prediction from another species, that value is shown in **bold**. Species / group abbreviations are used for aesthetic purposes. These are shown below the matrix. Percentage overlap between HCAs excluding built-up areas were similar to those including built-up areas, but are not shown.

	Wt	Gs	Bv	Cp	Leb	Rs	Fc	Wf	Ss	Gwo	Po	Smo	Lo	Epo	Jb	Rr	Alt
Wt		25.7	23.0	25.2	12.7	54.1	9.0	23.5	0.9	5.9	5.1	9.0	8.0	0.6	7.8	11.4	12.5
Gs	33.6		49.1	5.9	1.8	20.5	35.9	28.9	8.2	30.7	34.5	15.5	28.2	13.7	10.6	12.3	29.5
Bv	35.3	57.6		1.4	0.5	7.7	44.2	37.5	9.4	28.9	29.2	16.4	30.7	15.5	18.2	12.1	24.8
Cp	34.6	6.1	1.3		48.6	47.7	1.0	19.8	0.0	0.2	2.0	2.8	0.4	0.2	0.1	5.8	6.2
Leb	31.8	3.4	0.7	**88.2**		45.2	0.5	17.1	0.0	0.2	0.8	2.9	0.3	0.1	0.1	5.3	4.5
Rs	43.3	12.5	4.0	27.8	14.5		2.4	33.3	0.0	0.9	3.0	4.8	1.1	0.6	0.3	9.2	7.9
Fc	24.0	72.7	76.5	2.0	0.5	7.9		45.9	17.0	45.0	50.5	24.1	46.0	27.2	4.9	13.4	38.4
Wf	18.4	17.3	19.2	11.3	5.4	32.6	13.6		3.8	10.2	12.6	10.5	10.1	7.8	0.5	10.9	12.5
Ss	13.5	**96.2**	**94.4**	0.0	0.0	0.6	**98.2**	74.8		**94.9**	**99.3**	25.4	61.3	32.4	0.0	38.2	42.8
Gwo	21.9	**87.3**	70.1	0.7	0.3	4.1	63.2	48.6	23.0		73.3	29.6	56.0	33.5	4.7	19.7	47.8
Po	16.5	**84.7**	61.2	4.7	1.1	12.1	61.3	51.8	20.8	63.3		27.8	49.6	34.2	3.2	15.8	49.7
Smo	27.6	36.3	32.8	6.3	3.5	18.4	27.9	41.0	5.1	24.4	26.5		22.5	17.4	1.8	60.2	23.5
Lo	36.1	**96.8**	**89.9**	1.2	0.5	6.1	78.0	57.7	18.0	67.6	69.4	32.9		44.2	4.8	15.6	54.4
Epo	5.5	**98.5**	**95.4**	1.4	0.2	7.4	**96.6**	**94.0**	19.9	**84.7**	**100.0**	53.5	**92.6**		0.2	4.8	**83.4**
Jb	57.0	59.1	**86.5**	0.7	0.4	2.6	13.6	4.6	0.0	9.2	7.4	4.3	7.8	0.1		3.6	16.6
Rr	29.7	24.4	20.6	11.1	5.5	30.0	13.2	36.3	6.5	13.8	12.8	51.2	9.0	1.3	1.3		9.3
Alt	24.0	43.4	31.1	8.7	3.4	18.9	27.8	30.7	5.4	24.7	29.7	14.7	23.3	17.0	4.4	6.9	

Species / group abbreviations: Wt = Western toad (*Bufo spinosus*); **Gs** = Grass snake (*Natrix helvetica*); **Bv** = Bank vole (*Myodes glareolus*); **Cp** = Common pipistrelle (*Pipistrellus pipistrellus*) (roosts); **Leb** = Long-eared bats (*Plecotus* spp.) (roosts); **Rs** = Red squirrel (*Sciurus vulgaris*); **Fc** = Field cricket (*Gryllus campestris*); **Wf** = Waxcap fungi (*Hygrocybe* spp.); **Ss** = Scaly stalkball (*Tulostoma melanocyclum*); **Gwo** = Green-winged orchid (*Anacamptis morio*); **Po** = Pyramidal orchid (*Anacamptis pyramidalis*); **Smo** = Southern marsh-orchid (*Dactylorhiza praetermissa*); **Lo** = Lizard orchid (*Himantoglossum hircinum*); **Epo** = Early-purple orchid (*Orchis mascula*); **Jb** = Jersey buttercup (*Ranunculus paludosus*); **Rr** = Ragged robin (*Silene flos-cuculi*); **Alt** = Autumn lady's-tresses (*Spiranthes spiralis*).

Distance between raw occurrence records and Habitat Concentration Areas (HCAs)

N.B. Note the use of binomial names as some species lack common names.
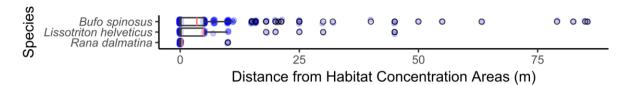

Figure E1 Boxplots showing distance (m) between raw occurrence records (2007–2017) for protected amphibian species (n=3) and Habitat Concentration Areas. Blue circles show occurrence records. Circles with black outlines show outliers. Vertical red lines show mean of all distance values. The central black vertical line in the boxplot represents the median of all distance values. Left and right vertical black lines show inter-quartile (25% and 75%) ranges. Whiskers show the data range excluding outliers. *Occurrence data source*: Jersey Biodiversity Centre / Jersey Amphibian and Reptile Group.
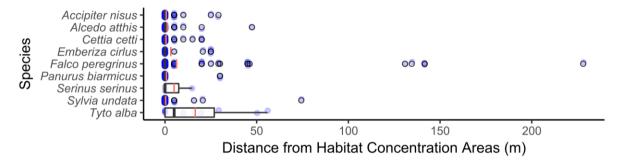

Figure E2 Boxplots showing distance (m) between raw occurrence records (2007–2017) for protected bird species (n=9) and Habitat Concentration Areas. Blue circles show occurrence records. Circles with black outlines show outliers. Vertical red lines show mean of all distance values. The central black vertical line in the boxplot represents the median of all distance values. Left and right vertical black lines show inter-quartile (25% and 75%) ranges. Whiskers show the data range excluding outliers. *Occurrence data source*: Jersey Biodiversity Centre.
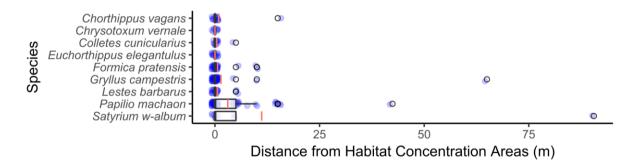

Figure E3 Boxplots showing distance (m) between raw occurrence records (2007–2017) for protected invertebrate species (n=9) and Habitat Concentration Areas. Blue circles show occurrence records. Circles with black outlines show outliers. Vertical red lines show mean of all distance values. The central black vertical line in the boxplot represents the median of all distance values. Left and right vertical black lines show inter-quartile (25% and 75%) ranges. Whiskers show the data range excluding outliers. *Occurrence data source*: Jersey Biodiversity Centre.
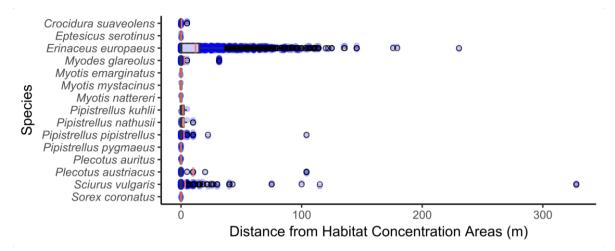
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Figure E4 Boxplots showing distance (m) between raw occurrence records (2007–2017) for protected mammal species (n=15) and Habitat Concentration Areas. Blue circles show occurrence records. Circles with black outlines show outliers. Vertical red lines show mean of all distance values. The central black vertical line in the boxplot represents the median of all distance values. Left and right vertical black lines show inter-quartile (25% and 75%) ranges. Whiskers show the data range excluding outliers. *Occurrence data source*: Jersey Biodiversity Centre / Jersey Bat Group.
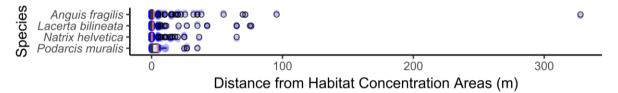

Figure E5 Boxplots showing distance (m) between raw occurrence records (2007–2017) for protected reptile species (n=4) and Habitat Concentration Areas. Blue circles show occurrence records. Circles with black outlines show outliers. Vertical red lines show mean of all distance values. The central black vertical line in the boxplot represents the median of all distance values. Left and right vertical black lines show inter-quartile (25% and 75%) ranges. Whiskers show the data range excluding outliers. *Occurrence data source*: Jersey Biodiversity Centre / Jersey Amphibian and Reptile Group.
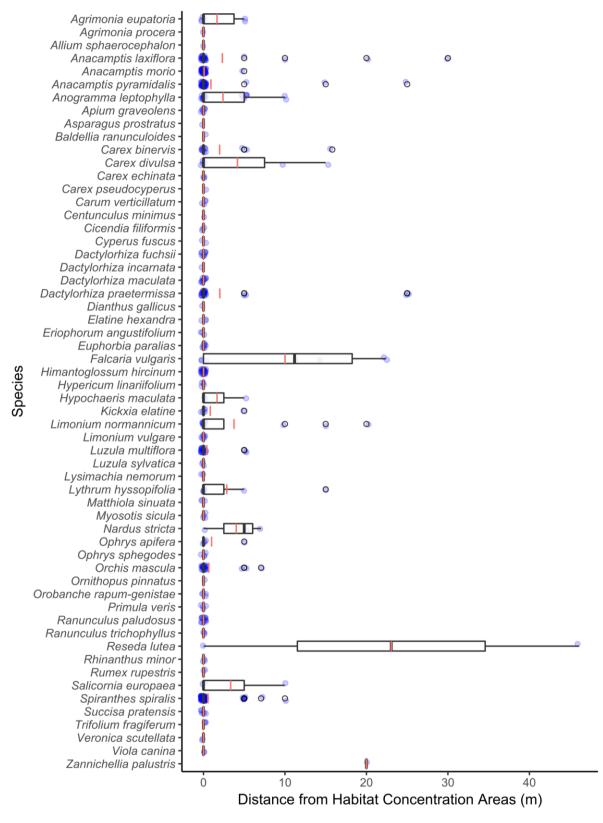
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Figure E6 Boxplots showing distance (m) between raw occurrence records (2007–2017) for protected plant species (n=58) and Habitat Concentration Areas. Blue circles show occurrence records. Circles with black outlines show outliers. Vertical red lines show mean of all distance values. The central black vertical line in the boxplot represents the median of all distance values. Left and right vertical black lines show inter-quartile (25% and 75%) ranges. Whiskers show the data range excluding outliers. *Occurrence data source*: Société Jersiaise Botany Section.
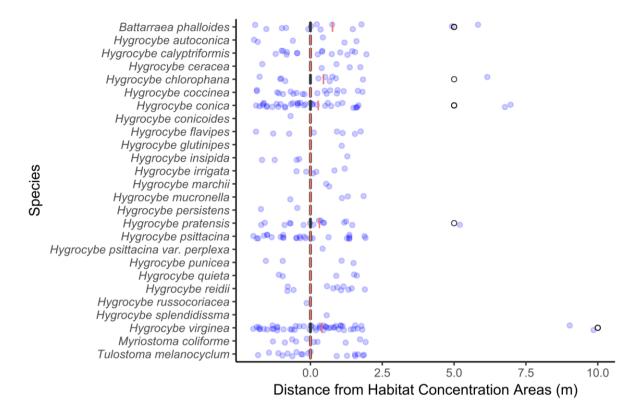
Figure E7 Boxplots showing distance (m) between raw occurrence records (2007–2017) for fungi species (n=26) and Habitat Concentration Areas. Blue circles show occurrence records. Circles with black outlines show outliers. Vertical red lines show mean of all distance values. The central black vertical line in the boxplot represents the median of all distance values. Left and right vertical black lines show inter-quartile (25% and 75%) ranges. Whiskers show the data range excluding outliers. *Occurrence data source*: Jersey Biodiversity Centre / Société Jersiaise Mycology Section.

Table E2 Priority bird species in Jersey, their status and main sites. Source: Young, H.G., Paintin, A., Sellarés, C and Corry, E. March 2018. See also (Young et al. 2011).

Species	Jersey status	Jersey Red List	Main sites
Northern shoveler	Occ breeder/winter	RED	St Ouen's Pond
Common pochard	Occ breeder/winter	RED	St Ouen's Pond, La Braye Sandpit
Great bittern	Winter	RED	St Ouen's Pond
Marsh harrier	Resident	AMBER	St Ouen's Pond, La Mielle, Grouville Marsh, Longueville, Fountain Lane, St Saviour
Peregrine	Resident	AMBER	Les Landes, Plémont, La Grosse Tête Beauport Bay, Tête de Fremont, Tête des Houges Bouley Bay
Water rail	Occ breeder/winter	AMBER	St Ouen's Pond, Grouville Marsh, Kempt Tower Ponds (La Mielle)
Ringed plover	Winter	RED	St Ouen's Bay, Grouville Bay, shingle roost near La Tour Carré
Northern lapwing	Occ breeder/winter	RED	St Ouen's Pond
Long-eared owl	Resident	AMBER	Beauport, Queen's Valley, Val de La Mare, Rozel to Le Saie, Bouley Bay to Bonne Nuit, Rue de Bauvoir, Noirmont / Noirmont Manor, Grantez, Surville Manor, St Catherine's Woods, Egypt, Les Platons, St Saviour's Hill, La Rue Froid, Grève de Lecq Woods, Gorselands, St Brelade's Bay
Common swift	Summer	AMBER	Plémont, Corbiere, Elizabeth Castle, Gorey Castle, St Helier
Sand martin	Summer	AMBER	La Braye Sandpit
Cetti's warbler	Resident	AMBER	St Ouen's Pond, La Mielle, Grouville Marsh, Longueville, Fountain Lane
Dartford warbler	Resident	(RED)	Les Landes, Noirmont, Ouaisné, all the northern gorse headlands really
Eurasian reed warbler	Summer	GREEN	St Ouen's Pond, Grouville Marsh, Longueville
Meadow pipit	Resident/migrant	AMBER	Les Landes, St Ouen's Pond, La Mielle, Les Blanches Banques
Bearded tit	Resident	RED	St Ouen's Pond
Skylark	Resident/migrant	RED	St Ouen's Pond, La Mielle, Jersey Airport
Sedge warbler	Summer	RED	St Ouen's Pond, La Mielle
Red-billed chough	Resident	-	Sorel, Les Landes, Plémont, La Mielle
Common stonechat	Resident/migrant	RED	Les Landes, Noirmont, La Mielle, Les Ormes Valley
Northern wheatear	Occ breeder/migrant	RED	Les Landes, Noirmont, La Mielle
Linnet	Resident/migrant	AMBER	Les Landes, Noirmont, La Mielle, Sorel and winter crop fields
Cirl bunting	Resident	RED	Grouville Bay (Golf Course)
Reed bunting	Winter	RED	St Ouen's Pond and winter crop fields

References

Young, H.G., Dryden, M. and Pinel, J. (2011) Conservation Status of Jersey's Birds: Jersey's bird populations in the 21st Century. Jersey: Durrell Wildlife Conservation Trust.