Title	Habitat Models for the Northern Comprehensive Regional Assessment (CRA) 1999
Alternative	

# title(s)

Title

Core Areas of Forest Habitat for Priority Fauna and Flora in NE NSW 1999

#### Abstract

This is a collection of 171 habitat quality models for fauna species that were mapped across forest areas in the Upper North East (UNE) and the Lower North East (LNE) NSW during the Comprehensive Regional Assessment (CRA) in 1999. They are 100m grids stored in MGA Zone 56 projection. 34 models are mapped on public tenure and 137 over all tenure. The 'public land' fauna models were those that modelled fairly on public land, some using Presence-Absence modelling, and were restricted to public land because the systematic surveys were carried out there (eg. primarily NEFBS, State Forest EIS, CRA). Some all-tenure (Presence-only) models were most likely have been cut to public land if it was considered that they modelled better there. In this case there would be two versions of the same model, but only one was used in the CRA.

It was decided that the flora models would not be published due to their poor quality and their need for updating with better records in the time since.

Note that a revised edition of approximately a third of the models were produced in 2008: https://iar.environment.nsw.gov.au/dataset/revised-northern-cra-habitatmodels-2008

The original models were produced as part of a Comprehensive Regional Assessment (CRA) for the Regional Forest Assessment (RFA) process. The specific objective of these models was to identify core areas of forest capable of sustaining viable populations of priority species.

Habitat quality models were derived using known distributions of species combined with abiotic, biotic, terrain, habitat and geographic layers within a GIS. These known species-habitat relationships were then used to model predicted distributions and thus areas of significant habitat for the species of concern. Flora and fauna experts were used to validate the models and define areas of high-quality habitat for each species. The models are either mapped across All Tenure (at) or Public Tenure (pt). Each species model is named with the Catalogue of Australian Vertebrates (CAVS) code.

Fauna models were developed using logistic regression models (generalised additive models) of species presence and absence to mapped environmental features. Where statistical models were judged by the expert panel to be inadequate, qualitative or expert models were derived. Additionally, fauna experts were used to identify habitat quality. Probability levels were used where appropriate to define high (class 1), intermediate (class 2), and marginal (class 3) habitat.

Flora models were produced using a combination of GAM inference of species sightings with mapped environmental features and a boolean overlay of selected environmental features along with expert review. Expert judgement was employed to categorise flora habitat into two classes of potential habitat: Occupied habitat (class 1) that shows validated point localities or population areas with a surrounding buffer to account for local seed bank or regeneration. High quality habitat (class 2) which is the rest of the model constructed using the boolean overlay of environmental layers.

See Table 3A (pg.33-38) in report for full a breakdown of species models, methods used and assessment of model confidence.

The report notes that models were not validated due to time constraints and that results should be viewed as a "minimum estimate of high-quality habitat for the purposes of the CRA."

The official report, Modelling areas of habitat significance for vertebrate fauna and vascular flora in north-east NSW 1999, expands on the methodology and outputs. The report is stored for internal access under P:\Corporate\Products\Biodiversity\Habitat\CRA Northern

MODELLING AREAS OF HABITAT SIGNIFICANCE FOR VERTEBRATE FAUNA AND VASCULAR FLORA IN NORTH EAST NSW A project undertaken as part of the NSW Comprehensive Regional Assessments, April 1999 Project number NA 23/EH

The fauna species modelled are as follows:

• 0021 Rose-crowned Fruit-Dove • 0023 Superb Fruit-Dove • 0035 Brush Bronzewing • 0174 Bush Stone-curlew • 0183 Black-necked Stork • 0196 Black Bittern • 0223 Red Goshawk • 0241 Osprey • 0248 Powerful Owl • 0250 Masked Owl • 0253 Sooty Owl • 0258 Musk Lorikeet • 0264 Red-tailed Black-Cockatoo • 0265 Glossy Black-Cockatoo • 0268 Gang-gang Cockatoo • 0302 Turquoise Parrot • 0324 Forest Kingfisher • 0345 Little Bronze-Cuckoo • 0350 Superb Lyrebird (edwardsii) • 0351

Albert's Lyrebird • 0355 Rufous Scrub-bird • 0376 White-eared Monarch • 0385 Hooded Robin • 0396 Pale-yellow Robin • 0413 Little Shrike-thrush • 0443 Greycrowned Babbler • 0498 Chestnut-rumped Hylacola • 0598 Painted Honeyeater • 0603 Regent Honeyeater • 0610 Mangrove Honeyeater • 0686 Paradise Riflebird • 0868 Forest Raven • 1008 Tiger Quoll • 1017 Brush-tailed Phascogale • 1033 Dusky Antechinus • 1045 Common Planigale • 1136 Yellow-bellied Glider • 1150 Eastern Pygmy-possum • 1162 Koala • 1165 Common Wombat • 1175 Long-nosed Potoroo • 1187 Rufous Bettong • 1215 Brush-tailed Rock-wallaby • 1245 Parma Wallaby • 1259 Whiptail Wallaby • 1280 Pteropus poliocephalus • 1282 Pteropus alecto • 1290 Nyctimene robinsoni • 1294 Syconycteris australis • 1303 Rhinolophus megaphyllus • 1324 Nyctinomus australis • 1329 Mormopterus norfolkensis • 1336 Nyctophilus bifax • 1353 Chalinolobus dwyeri • 1354 Chalinolobus nigrogriseus • 1361 Scotoeanax rueppellii • 1362 Scotorepens greyii • 1364 Scotorepens balstoni • 1369 Kerivoula papuensis • 1372 Falsistrellus tasmaniensis • 1377 Vespadelus pumilus • 1401 Pale Field-rat • 1455 New Holland Mouse • 1466 Eastern Chestnut Mouse • 2124 Eulamprus tryoni • 2139 Underwoodisaurus sphyrurus • 2182 Tympanocryptis diemensis • 2245 Hypsilurus spinipes • 2287 Varanus rosenbergi • 2294 Ophioscincus truncatus • 2453 Lampropholis caligula • 2467 Cautula zia • 2468 Ctenotus eurydice • 2550 Eulamprus kosciuskoi • 2559 Eulamprus tenuis • 2615 Austrelaps ramsayi • 2645 Cacophis harriettae • 2665 Drysdalia coronoides • 2675 Hoplocephalus bitorquatus • 2676 Hoplocephalus bungaroides • 2687 Saltuarius swaini • 3007 Assa darlingtoni • 3008 Mixophyes fleayi • 3039 Litoria littlejohni • 3042 Heleioporus australiacus • 3073 Mixophyes balbus • 3075 Mixophyes iteratus • 3107 Philoria kundagungan • 3109 Philoria sphagnicolus • 3117 Pseudophryne bibronii • 3166 Litoria aurea • 3168 Litoria booroolongensis • 3169 Litoria brevipalmata • 3186 Litoria subglandulosa • 3202 Litoria olongburensis • 3217 Litoria piperata • 3219 Litoria revelata • 9004 Saproscincus challengeri • 9006 Philoria pughi • 9007 Philoria richmondensis • 9029 Scotorepens sp 1 • 9058 Lampropholis elongata • 9059 Elseya georgesi • 9060 Elseya purvisi • 9061 Emydura sp 1 • 9103 Elseya sp 2 • 0017 Black-breasted Button-quail • 0025 Wompoo Fruit-Dove • 0230 Square-tailed Kite • 0234 Pacific Baza • 0246 Barking Owl • 0261 Double-eyed Fig-Parrot • 0309 Swift Parrot • 0314 Marbled Frogmouth • 0405 Olive Whistler • 0428 Barred Cuckoo-shrike • 0519 Eastern Bristlebird • 0619 Yellow-tufted Honeyeater • 1025 Vespadelus troughtoni • 1133 Greater Glider • 1137 Squirrel Glider • 1234 Redlegged Pademelon • 1260 Black-striped Wallaby • 1341 Miniopterus schreibersii • 1346 Miniopterus australis • 1357 Myotis adversus • 1438 Broad-toothed Rat • 1464 Hastings River Mouse • 1500 Grassland Melomys • 1531 Dingo • 2293 Coeranoscincus reticulatus • 2552 Eulamprus murrayi • 2640 Acanthophis antarcticus • 2677 Hoplocephalus stephensii • 2723 Tropidechis carinatus • 2764 Saproscincus galli • 2765 Saproscincus rosei • 3108 Philoria loveridgei • 3137 Crinia tinnula • 3184 Litoria freycineti • 3190 Litoria jervisiensis

#### Resource locator

Data Quality Statement Name: Data Quality Statement

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Data quality statement for Habitat Models for the Northern Comprehensive Regional

Assessment (CRA) 1999

Function: download

Modelling Areas
of Habitat
Significance for
Vertebrate Fauna
and Vascular
Flora in NE NSW CRA 1999

Name: Modelling Areas of Habitat Significance for Vertebrate Fauna and Vascular

Flora in NE NSW - CRA 1999

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Official report regarding the production and objectives of CRA Habitat Models.

Function: download

<u>Download</u> <u>Package</u>

Name: Download Package

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Data (Raster) and Report

Function: download

Unique resource identifier		
Code	9b040966-41ca-4592-a8da-55d16749fa01	
Presentation form	Map digital	
Edition	1	
Dataset language	English	
Metadata standard		
Name	ISO 19115	
Edition	2016	
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/9b040966-41ca-4592-a8da-55d16749fa01	
Purpose	Identify core areas of forest capable of sustaining viable populations of priority species.	
Status	Completed	
Spatial representation type	grid	
Spatial reference system		
Code identifying the spatial reference system	4283	
Spatial resolution	100 m	
Topic category		

Keyword set		
keyword value	ECOLOGY-Habitat	
	FLORA-Native	
	FAUNA-Native	
	FORESTS	
Originating controlled vocabulary		
Title	ANZLIC Search Words	
Reference date	2008-05-16	
Geographic location		
West bounding longitude	150.13916	
East bounding longitude	153.69873	
North bounding latitude	-33.561423	
South bounding latitude	-28.054409	
NSW Place Name	NE NSW	
Vertical extent information		
Minimum value	-100	
Maximum value	2228	
Coordinate reference system		
Authority code	urn:ogc:def:cs:EPSG::	
Code identifying the coordinate reference system	5711	
Temporal extent		
Begin position	1999-01-04	
End position	N/A	
Dataset reference date		
Resource maintenance		
Maintenance and update frequency	Not planned	
Contact info		
Contact position	Data Broker	
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water	
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Responsible party role	pointOfContact	

#### Lineage

Each species model was produced using a unique combination of methodologies, data inputs and assessments. Please refer to the attached report for further information.

### Limitations on public access

# Responsible party

Contact position Data Broker

Organisation name NSW Department of Climate Change, Energy, the Environment and Water

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Metadata date 2024-07-05T03:27:57.283956

#### Metadata language