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| **Title** | Species Occupancy Models (SOMs) |
| **File identifier** | The unique identifier for the metadata file |
| **Abstract** | Species Occupancy Models (SOMs) refer to combination outputs dependent on known species occurrence in the landscape, the species’ detectability (based on repeat observation), its relationship with environmental variables (covariates) such as temperature, rainfall and topography; and its predicted occurrence based on covariate analysis. SOMs predict actual occupancy, rather than merely habitat suitability: confounding factors such as inter-species competition, geographical barriers and disturbance events play a significant role in species occurrence, but are not considered in SOM.  SOM analysis is based on the RPresence analysis software developed by Darryl Makenzie (<https://www.mbr-pwrc.usgs.gov/software/presence.html> and references therein).  Derivation of SOM distribution surfaces associated with this metadata are described in detail in the NRC publication ‘NSW Forest Monitoring and Improvement Program: Final Report. Project 2: Baselines, drivers and trends for species occupancy and distribution.’ |
| **Contact** | Dr Leroy Gonsalves, NSW DPI Forest Science unit; Dr Ross Jenkins, University of New England, School of Environmental and Rural Science. |
| **Purpose** | The dataset was created as part fulfillment for the NRC project ‘NSW Forest Monitoring and Improvement Program: Final Report. Project 2: Baselines, drivers and trends for species occupancy and distribution.’ |
| **Jurisdictions** | NSW DPI and the University of New England |
| **Geographic Bounding Box** | North −28 degrees; South −37.5 degrees; West 147 degrees; East 153.5 degrees |
| **Lineage** | Species occurrence data was sourced from NPWS (1994) Fauna of north-east NSW forests (NSW National Parks and Wildlife Service), as well as unpublished data held by the NSW DPI Forest Science unit. Covariate data was sourced in the main from the State Vegetation Type Map (SVTM) Modelling Grid Collection (<https://datasets.seed.nsw.gov.au/dataset/svtm-modelling-grid-collection>) with additional data as described in ‘NSW Forest Monitoring and Improvement Program: Final Report. Project 2: Baselines, drivers and trends for species occupancy and distribution.’  Model outputs (statistical analyses and predictive surfaces) were generated using the RPresence kernel from the R Project <https://cran.r-project.org/> |
| **Extent** | The temporal extent of the species occurrence was mainly limited to 1998–1998, however, more recent microbat data (pre-2020) was also incorporated to fulfil priority species modelling requirements. |
| **Distribution Format** | Raster (ESRI Geodatabase) |
| **Keyword** | Fauna, RFA, Occupancy modelling |
| **Maintenance and Update Frequency** | Not planned |
| **Use Limitation** | SOM generates probabilistic species predictive occupancy surfaces, and does not imply species presence at any particular location. Modelling is restricted to the eastern NSW RFA areas. |
| **Resolution** | 90 m |
| **DQ Completeness** | Complete |
| **Reference System** | GDA94 |
| **Topic Category** | Biota |
| **Metadata Date** | 2021-12-16 |
| **Date Created** | 2021-07-23 |
| **Date Revised** | 2021-10-30 |
| **Date Published** | 2021-11-16 |