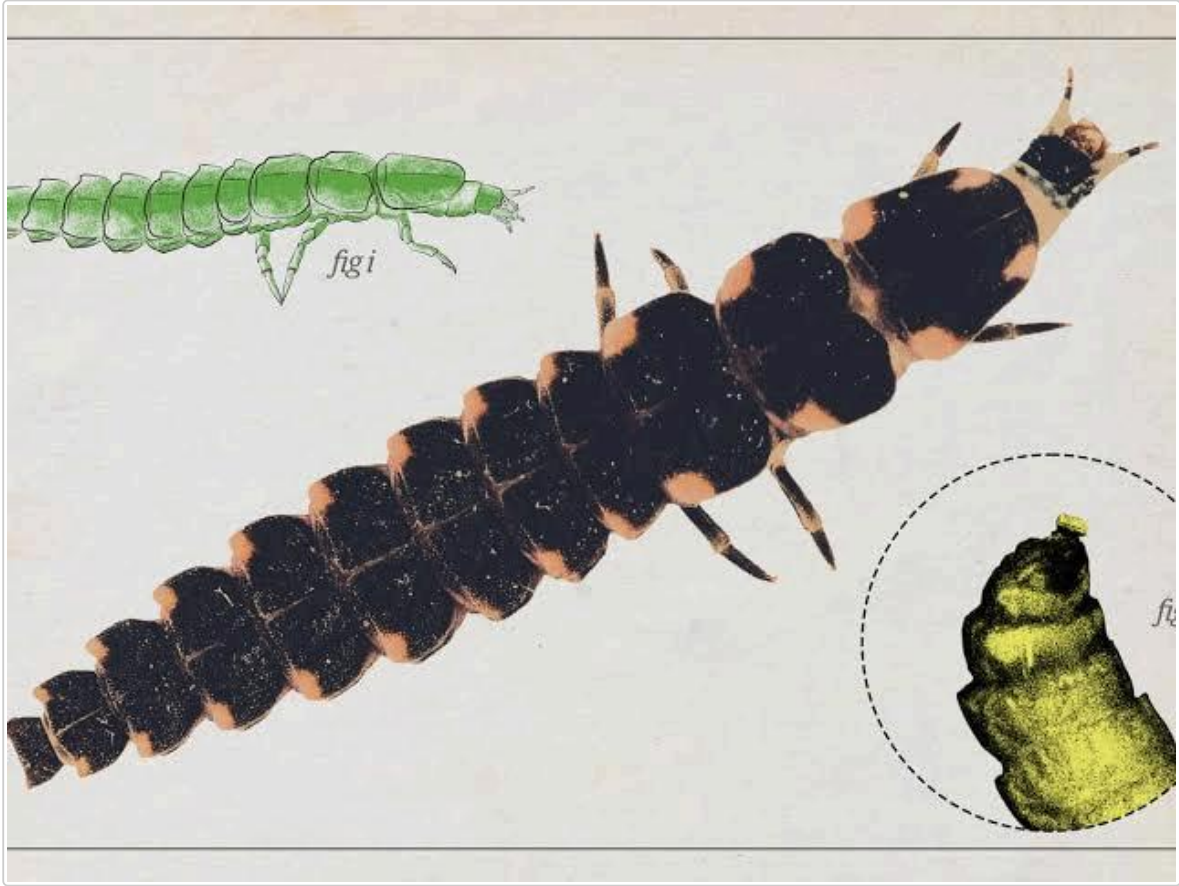


Glowworms



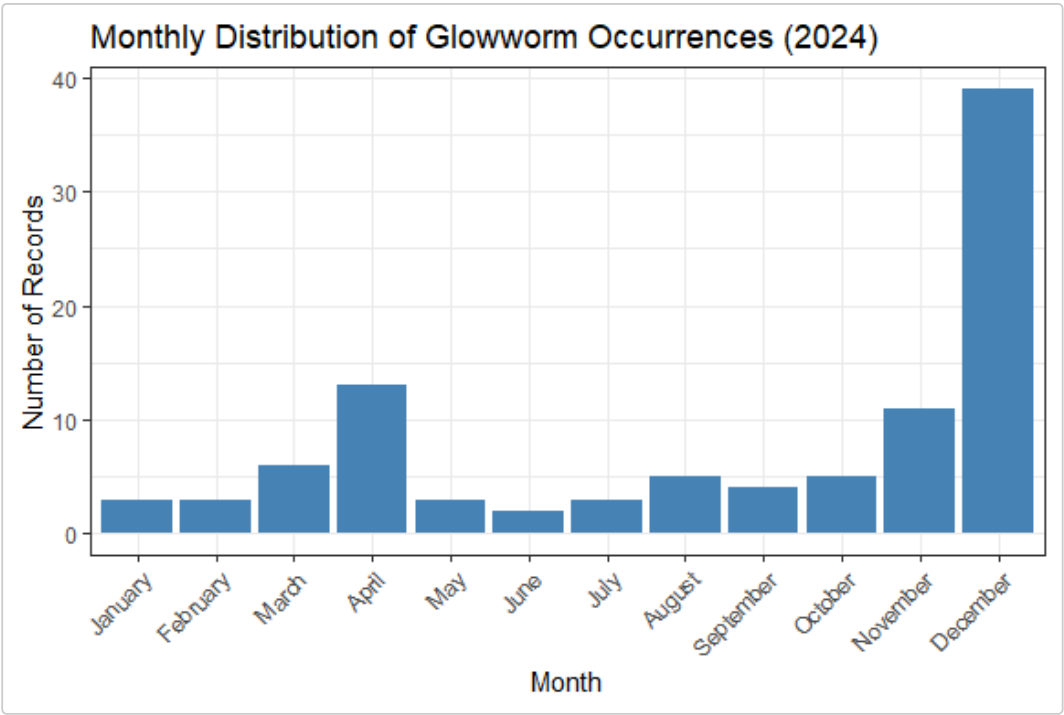
Glowworm

We are investigating occurrence data of [Glowworms](#) in Australia from the **Atlas of Living Australia**, and make a map showing the spatial locations of sightings for 2024.

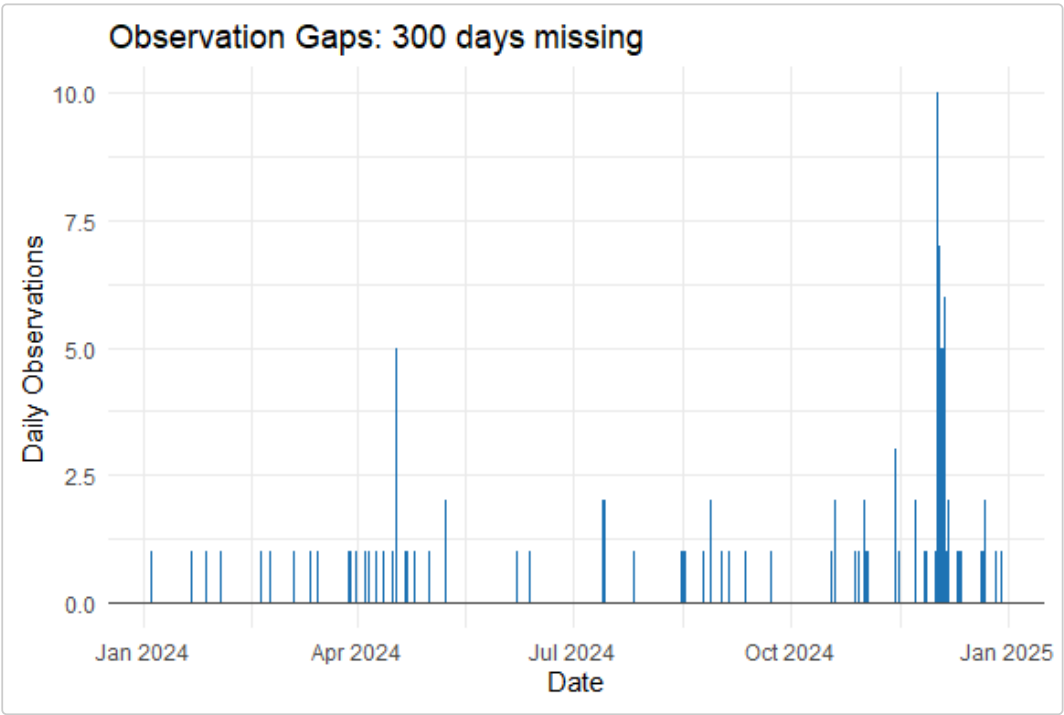
```
#> # A tibble: 6 × 5
#>   lat lon year eventDate      scientificName
#>   <dbl> <dbl> <dbl> <dtm>      <chr>
#> 1 -42.8 147. 2024 2024-12-05 11:36:00 Arachnocampa (Lucifera) tasmaniensis
#> 2 -42.8 147. 2024 2024-12-05 11:51:00 Arachnocampa (Lucifera) tasmaniensis
#> 3 -42.8 147. 2024 2024-12-05 11:48:00 Arachnocampa (Lucifera) tasmaniensis
#> 4 -42.8 147. 2024 2024-12-04 23:01:00 Arachnocampa (Lucifera) tasmaniensis
#> 5 -42.7 147. 2024 2024-12-04 22:43:00 Arachnocampa (Lucifera) tasmaniensis
#> 6 -42.7 146. 2024 2024-12-05 16:34:00 Arachnocampa (Lucifera) tasmaniensis
```

the length of the records is 97

Monthly Distribution of organism (2024)



Data Regularity & Temporal Gaps



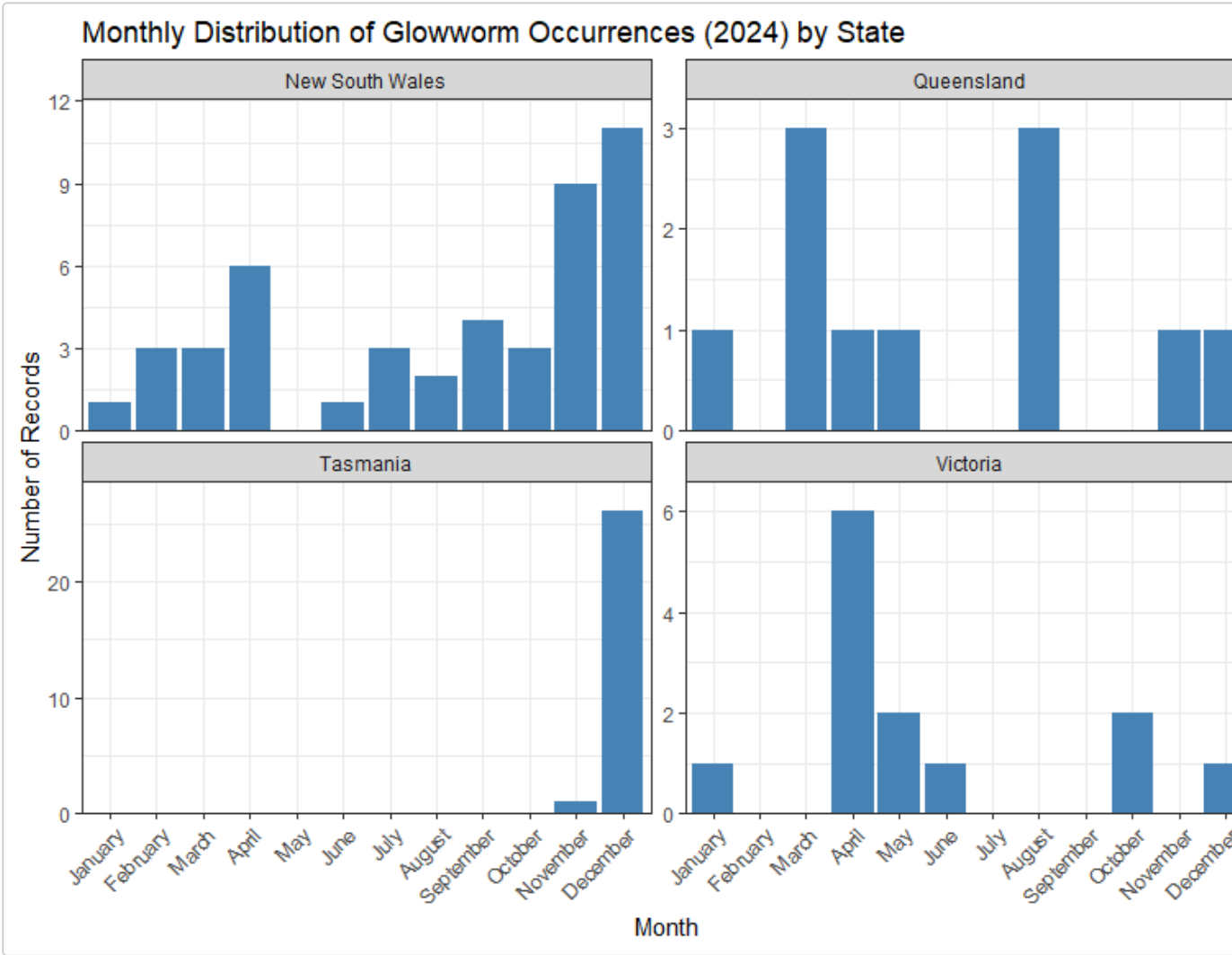
Nearest Weather Station Mapping

```
#> # A tibble: 3 × 12
#>   lat.x lon.x year eventDate      scientificName weather_station_id stname
#>   <dbl> <dbl> <dbl> <dtm>      <chr>          <chr>          <chr>
#> 1 -42.8  147.  2024 2024-12-05 11:36:00 Arachnocampa ... 949630-99999 MAYDE...
#> 2 -42.8  147.  2024 2024-12-05 11:51:00 Arachnocampa ... 949630-99999 MAYDE...
#> 3 -42.8  147.  2024 2024-12-05 11:48:00 Arachnocampa ... 949630-99999 MAYDE...
```

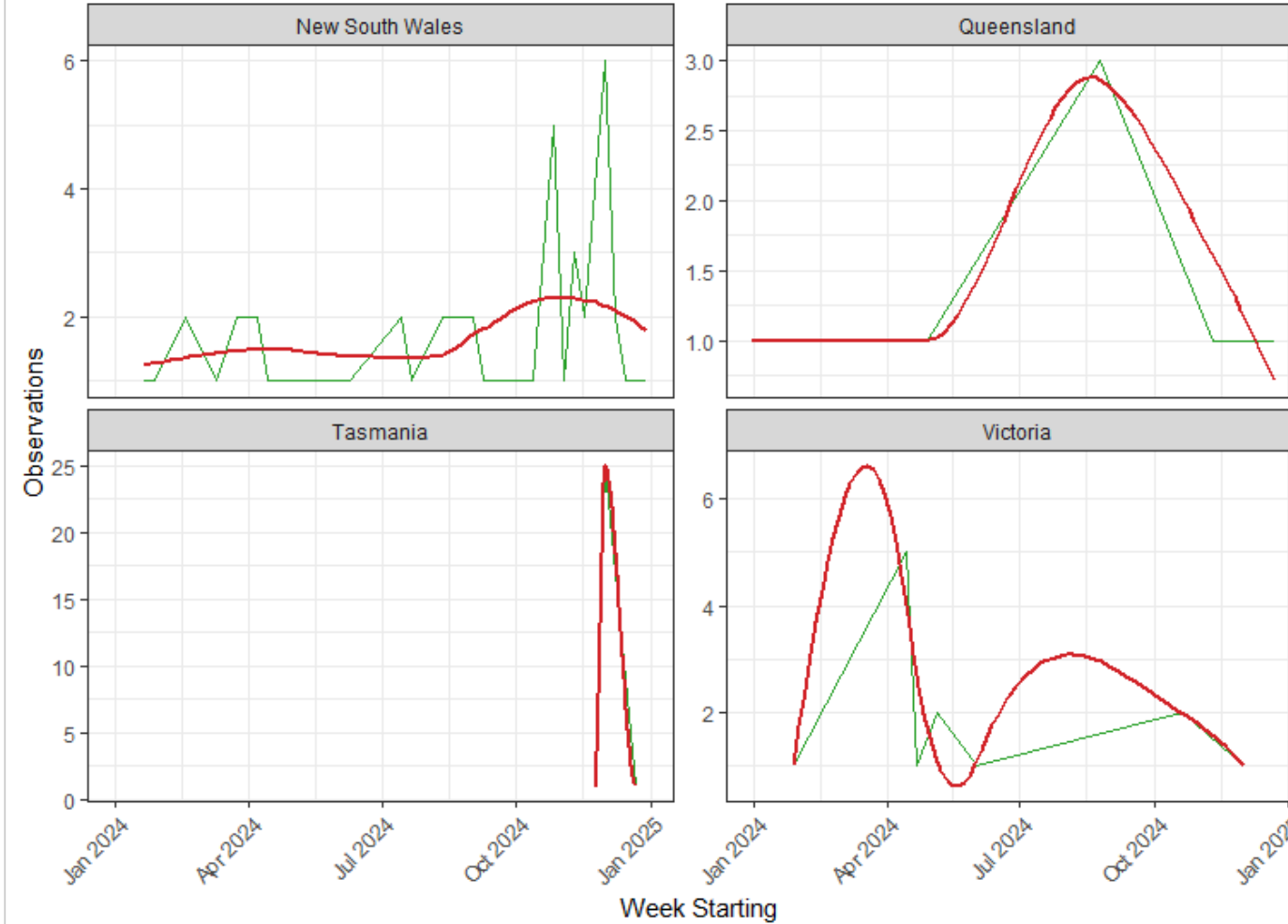
```
#> # i 5 more variables: lat.y <dbl>, lon.y <dbl>, address <chr>, city <chr>,  
#> #   state <chr>
```

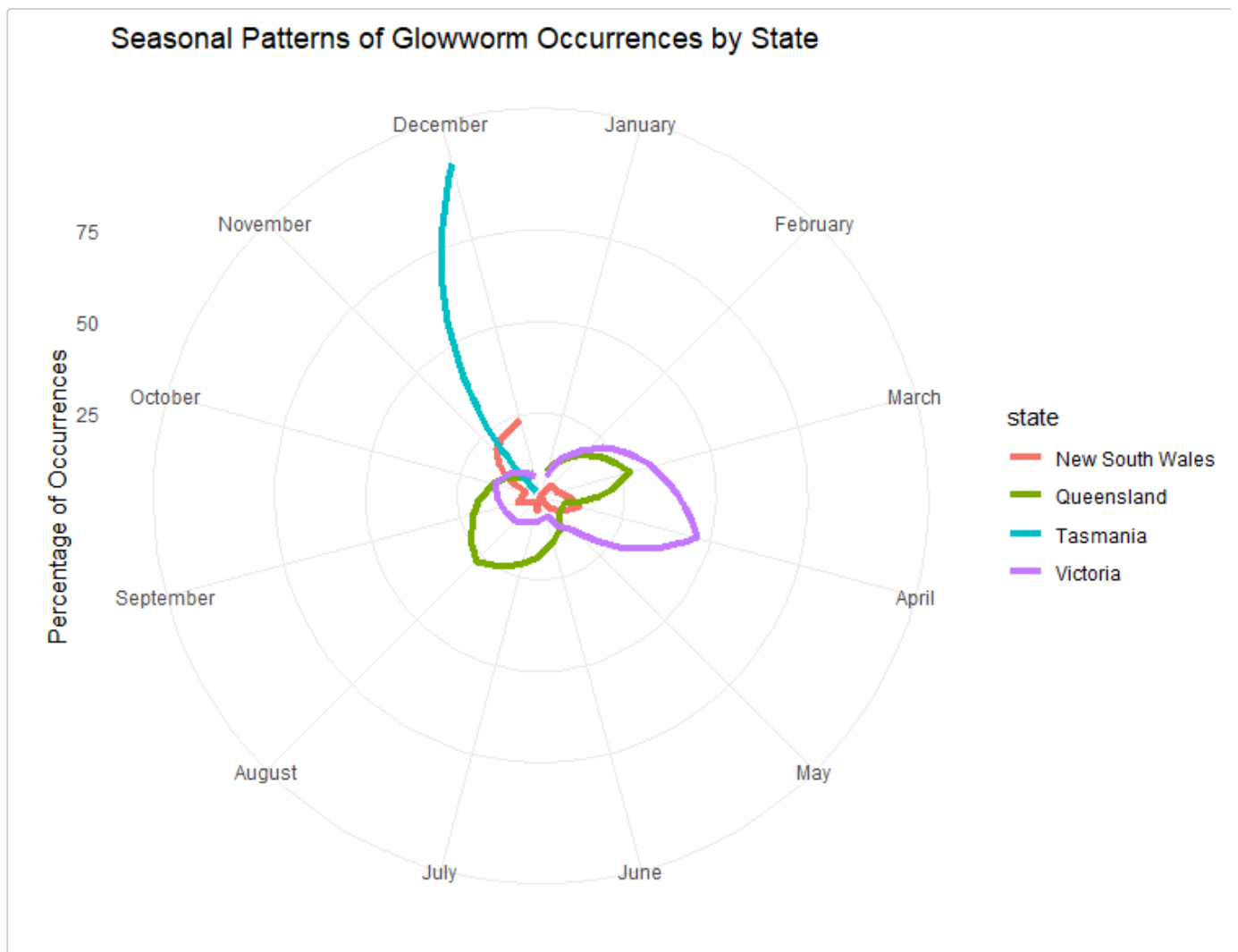
```
#>           State Frequency  
#> 1 New South Wales      46  
#> 2      Tasmania       27  
#> 3      Victoria       13  
#> 4      Queensland      11
```

Pattern Analysis



Weekly Occurrence Patterns of Glowworms (2024) with Trend Lines





Datasets Overview

We have organized the glowworm occurrence and weather station data into the following structured datasets, stored in the `data/` directory:

- `glowworms_2024.rda`
Contains glowworm occurrence records across all states in Australia.
- `glowworms_2024_ws.rda`
An enhanced version of the occurrence data, merged with the nearest weather station information, including:

```
--Station ID (weather_station_id)
--Station name (sname)
--Geographic details (lat.y, lon.y, address, city, state)
```
- `glowworms_top_weather.rda`
Focuses on weather data from the top 3 most frequently recorded stations associated with glowworm occurrences.
- `weather_stations.rda`
A standalone dataset of all unique weather stations in Australia, providing reference metadata for cross-referencing.