

Salt Water Crocodiles



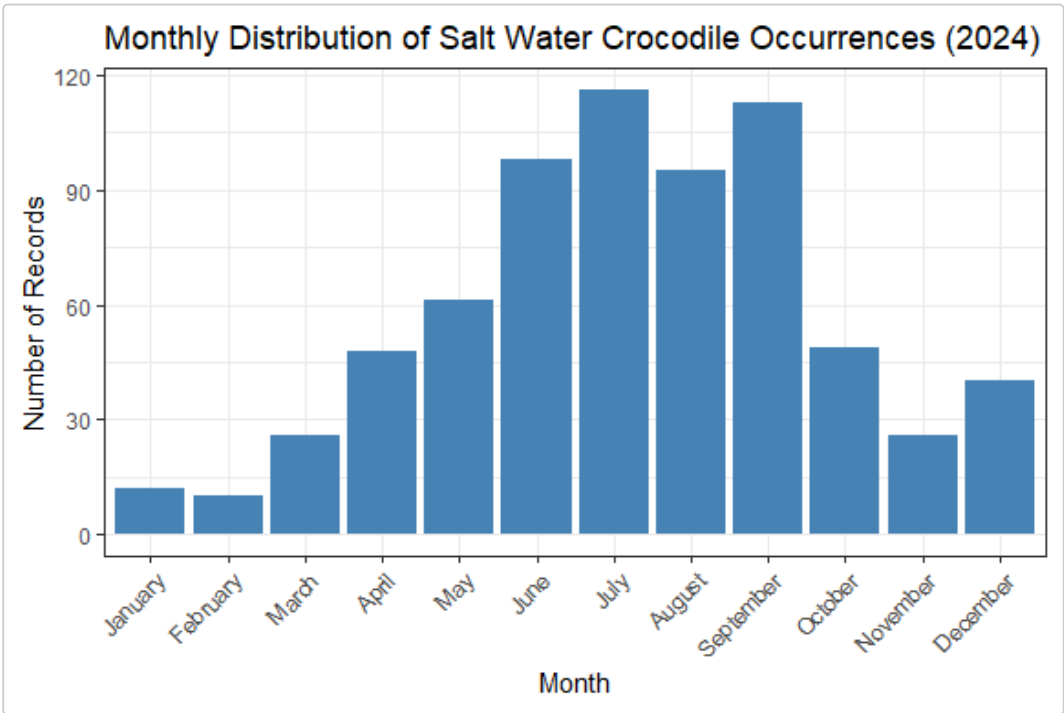
Salt Water Crocodile

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

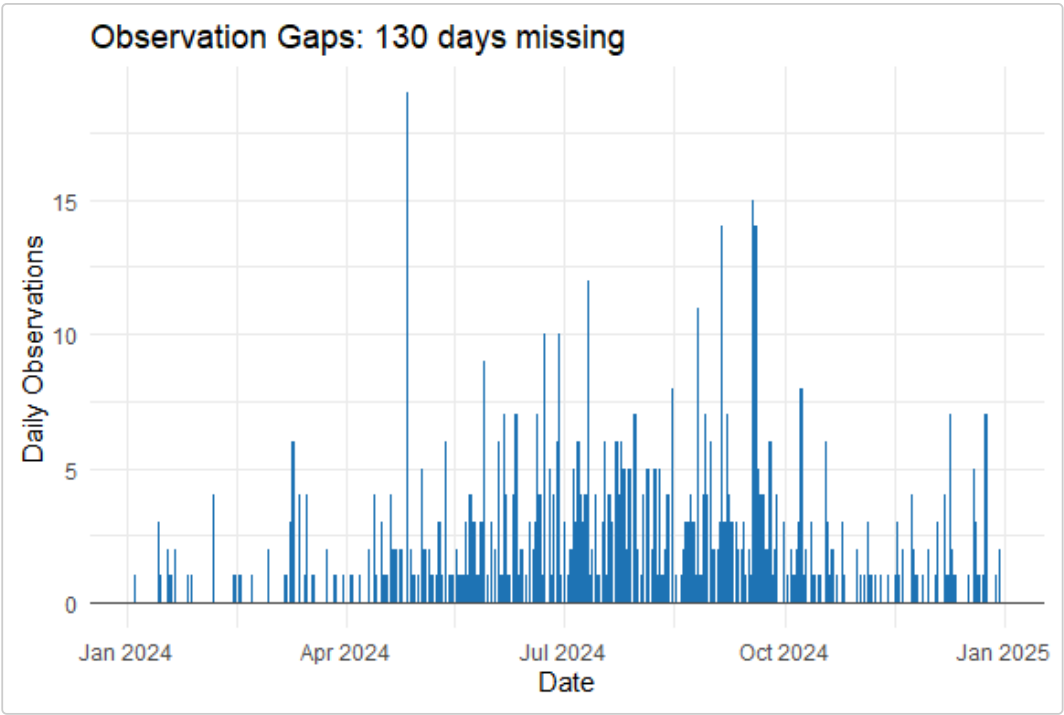
```
#> # A tibble: 6 × 5
#>   lat lon year eventDate      scientificName
#>   <dbl> <dbl> <dbl> <dtm>      <chr>
#> 1 -25  31.6  2024 2024-06-02 12:38:00 Crocodylus
#> 2 -25  31.6  2024 2024-06-01 17:14:00 Crocodylus
#> 3 -24.4 31.5  2024 2024-06-06 12:43:00 Crocodylus
#> 4 -20.8 140.   2024 2024-01-04 11:22:54 Crocodylus johnstoni
#> 5 -20.6 140.   2024 2024-03-07 21:22:00 Crocodylus johnstoni
#> 6 -20.4 149.   2024 2024-10-01 15:34:31 Crocodylus porosus
```

the length of the records is 694

Monthly Distribution of organism (2024)



Data Regularity & Temporal Gaps



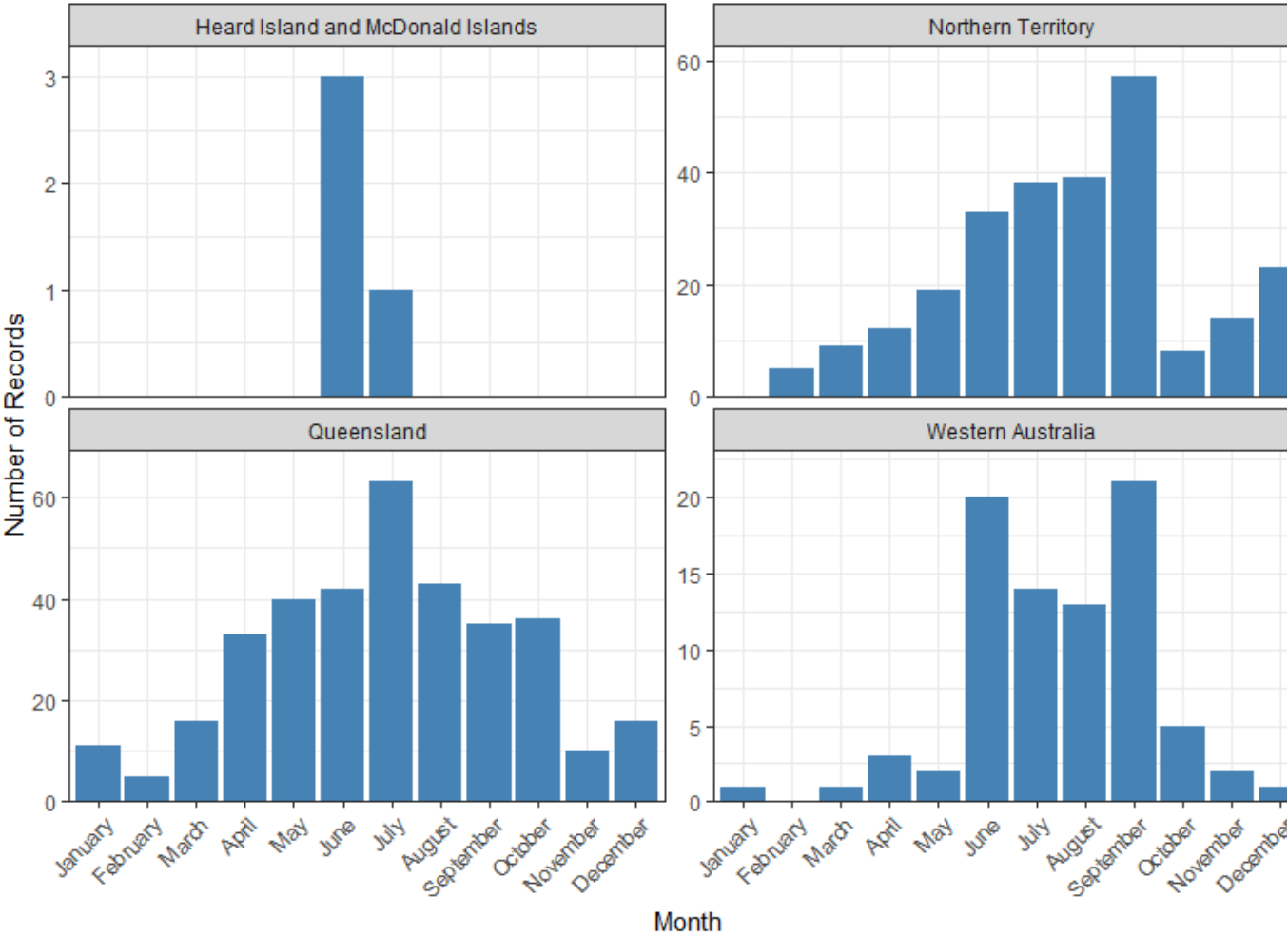
Nearest Weather Station Mapping

```
#> # A tibble: 3 × 12
#>   lat.x lon.x year eventDate      scientificName weather_station_id sname
#>   <dbl> <dbl> <dbl> <dtm>      <chr>          <chr>          <chr>
#> 1 -25   31.6  2024 2024-06-02 12:38:00 Crocodylus      949970-99999 HEARD...
#> 2 -25   31.6  2024 2024-06-01 17:14:00 Crocodylus      949970-99999 HEARD...
#> 3 -24.4 31.5  2024 2024-06-06 12:43:00 Crocodylus      949970-99999 HEARD...
#> # i 5 more variables: lat.y <dbl>, lon.y <dbl>, address <chr>, city <chr>,
#> #   state <chr>
```

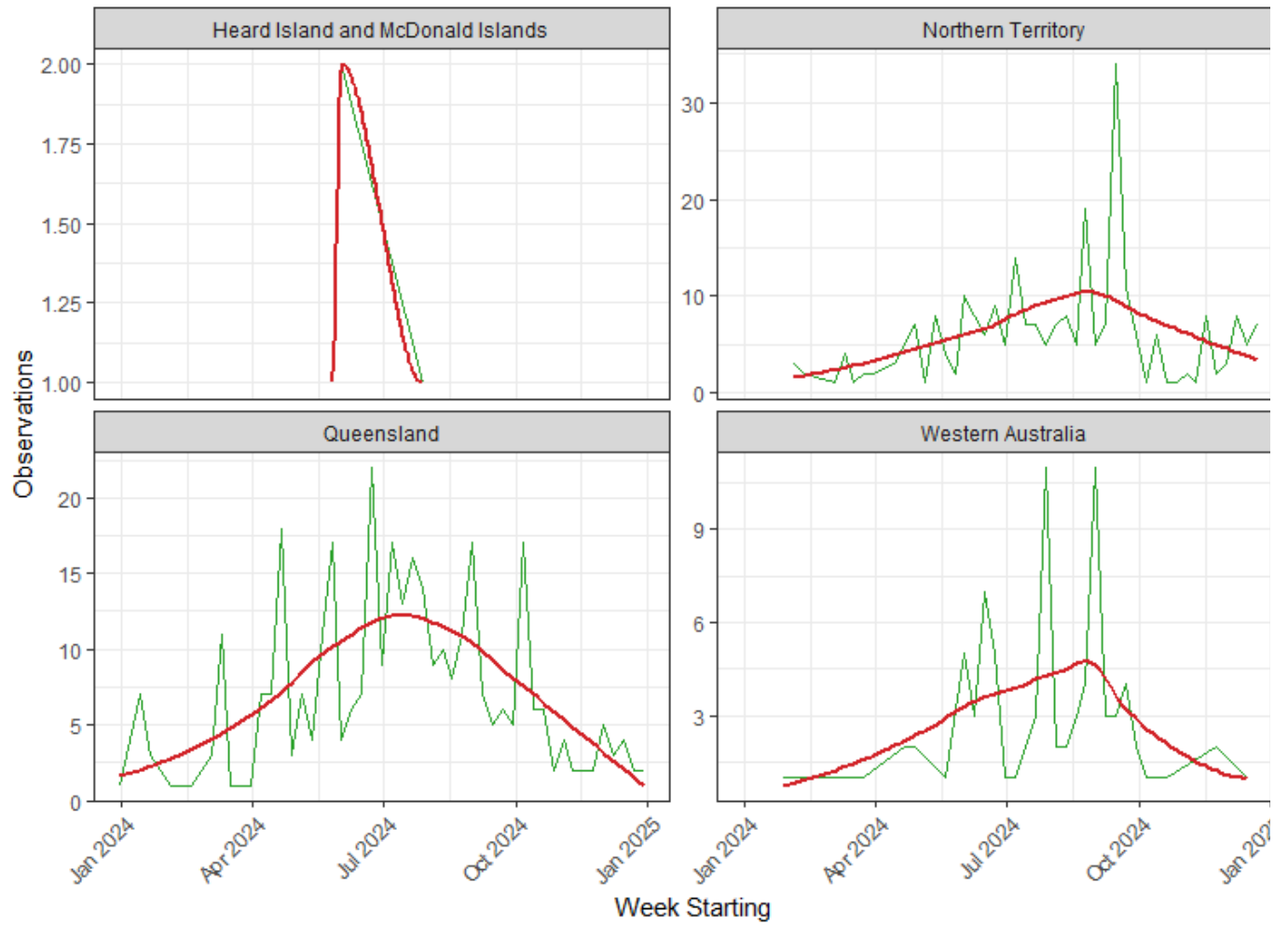
```
#>
#> State Frequency
#> 1 Queensland 350
#> 2 Northern Territory 257
#> 3 Western Australia 83
#> 4 Heard Island and McDonald Islands 4
```

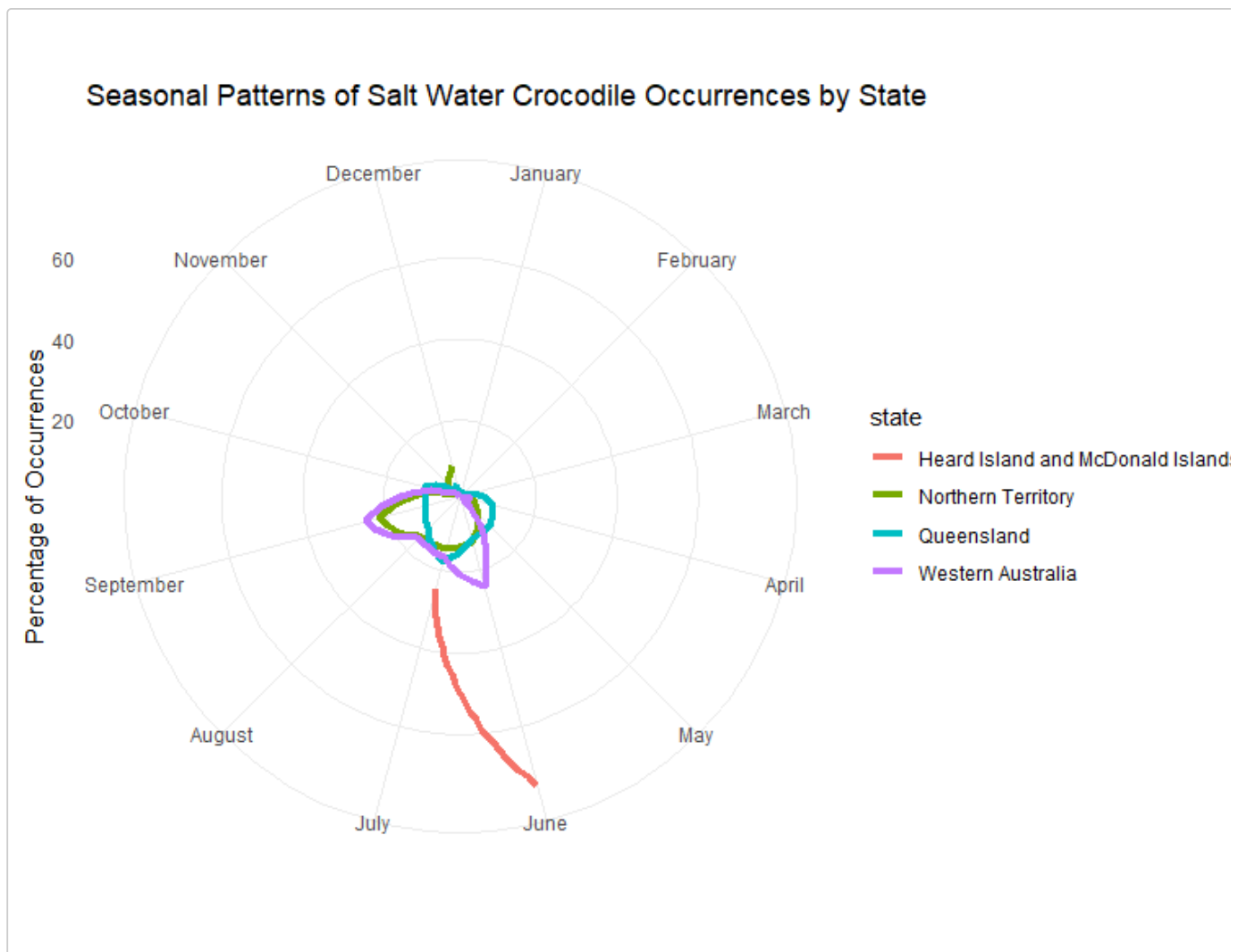
Pattern Analysis

Monthly Distribution of Salt Water Crocodile Occurrences (2024) by State



Weekly Occurrence Patterns of Salt Water Crocodile (2024) with Trend Lines





Datasets Overview

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

- `saltwater_crocodiles_2024.rda`
Contains salt water crocodile occurrence records across all states in Australia.
- `saltwater_crocodiles_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)
```
- `saltwater_crocodiles_top_weather.rda`
Focuses on weather data from the top 3 most frequently recorded stations associated with salt water crocodile occurrences.
- `weather_stations.rda`
A standalone dataset of all unique weather stations in Australia, providing reference metadata for cross-referencing.