

A landscape photograph showing a rocky hillside in the foreground, covered with green shrubs and small yellow flowers. The background features rolling hills and a clear blue sky. The text is overlaid on the image.

# Seed Collection within a Threatened Ecological Community

Challenges and Successes at the Mt  
Gibson Range and Extension Hill



# Scope

- Collect seed for progressive rehabilitation program
- Local provenance, within defined vegetation units
- Site is a Threatened Ecological Community on a Banded Ironstone Range
- Sustainable seed collection methods that do not compromise future flowering, seed set



# Local Conditions

- TEC. Vegetation Complexes of the Mt Gibson Ranges (Banded Ironstone), Mid-west region,
- Excellent support from minesite with HSEC system, supportive and knowledgeable staff, office facilities, accommodation, meals, short term seed storage area
- Good access from existing tracks and exploration drill lines
- Pre-existing flora reports with species lists
- Targets for species and quantities but flexibility in outcomes based on seasonal conditions and availability



# Challenges

- Suitable timing, when do seeds mature?
- Plant ID – diverse flora with some local endemics
- Quantities targeted mismatch with availability
- Hands on deck – flexible personnel availability vs needs
- Vehicles, movement around site
- Access to near-mine areas limited due to safety management, requiring minesite personnel to accompany seed collection team



# Outline of Strategy

- Early Spring (August) site visit to collect specimens, develop field herbarium
- On-site intel. to gauge best time to commence program
- Project team leader with significant experience, team members working under direct instruction and supervision
- Incorporation of local Traditional Owners into seed collection team
- Maintain variety of tasks each day to keep collectors engaged
- Skills transfer in plant ID, seed collection techniques
- Processing to high grade 'pure seed', storage under optimal conditions



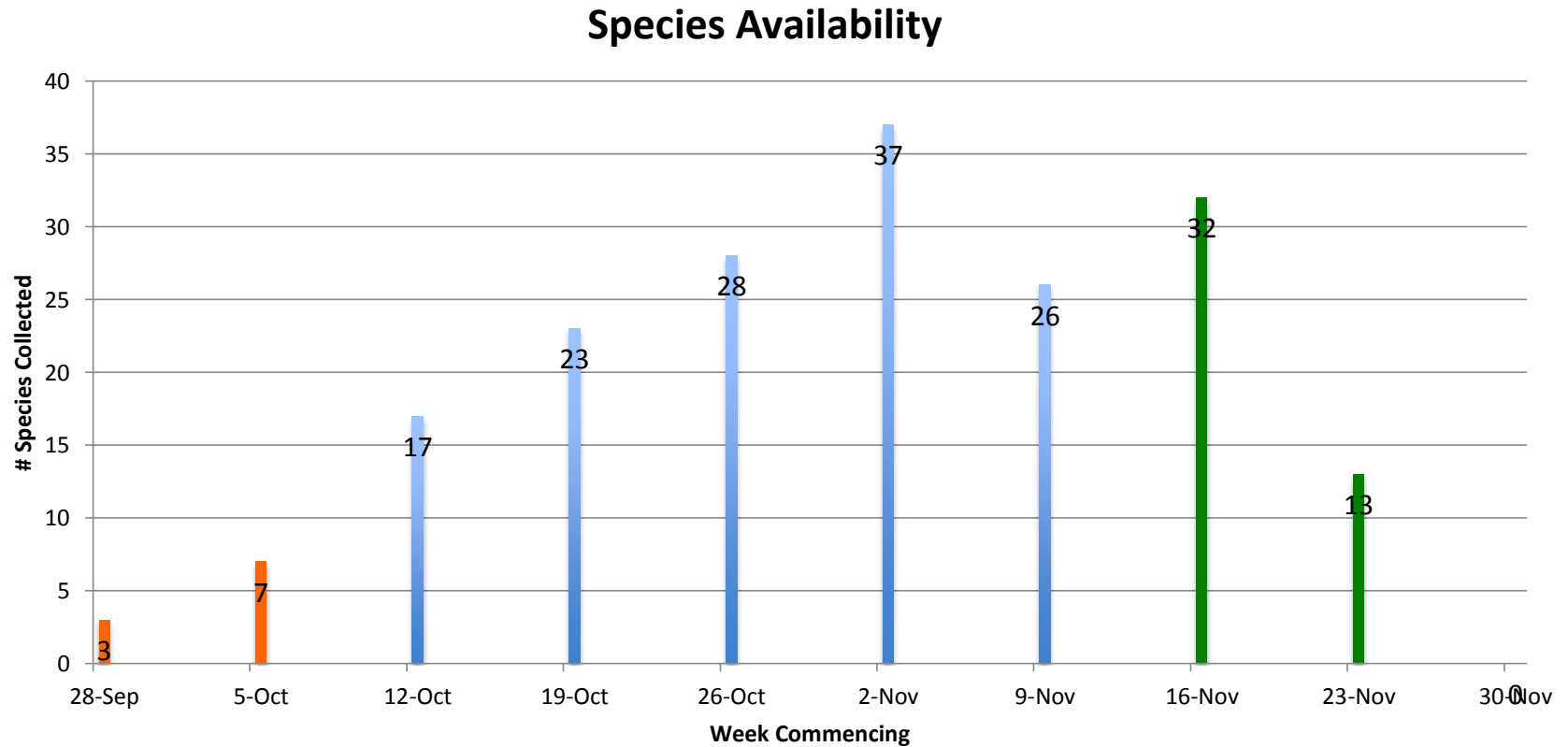
# The Flora

- Acacia dominated Scrub
- Melaleuca, Eucalyptus, Allocasuarina, Grevillea and Aluta are the other dominant perennials
- Range of annuals
- DRF species – excluded from collection program
- Some Priority Flora collected
- 82 species targeted





# Seeding Phenology 2015





# Outcomes

- 82 species collected, 38 Genera and 22 Families
- From as little a 3 g of some species to over 5 kg of other species
- 67 Geospores and 15 Bradyspores
- Around 100 Kg of local seed produced plus Santalum spp.
- Team of 14 people
- Period of 12<sup>th</sup> Oct to 23<sup>rd</sup> Nov
- Collections over a 7 week period
- 971 man hours collecting seed
- 21.5 hrs lost due to heat management
- 1 week lost due to rain
- Over 540 hrs processing
- No LTI's



# Improvements



- Commence collection program early October
- Have sufficient 4WD transport for all staff at all times
- Allow adequate time / budget for processing
- PPE for collection of *Ptilotus obovatus* – avoid respiratory issues for some
- PPE for collection of annuals – hard on backs and knees
- Full time presence on site, can not afford to miss a day as species will be lost



# A Happy Team





