# The Biology of the Bullita Karst

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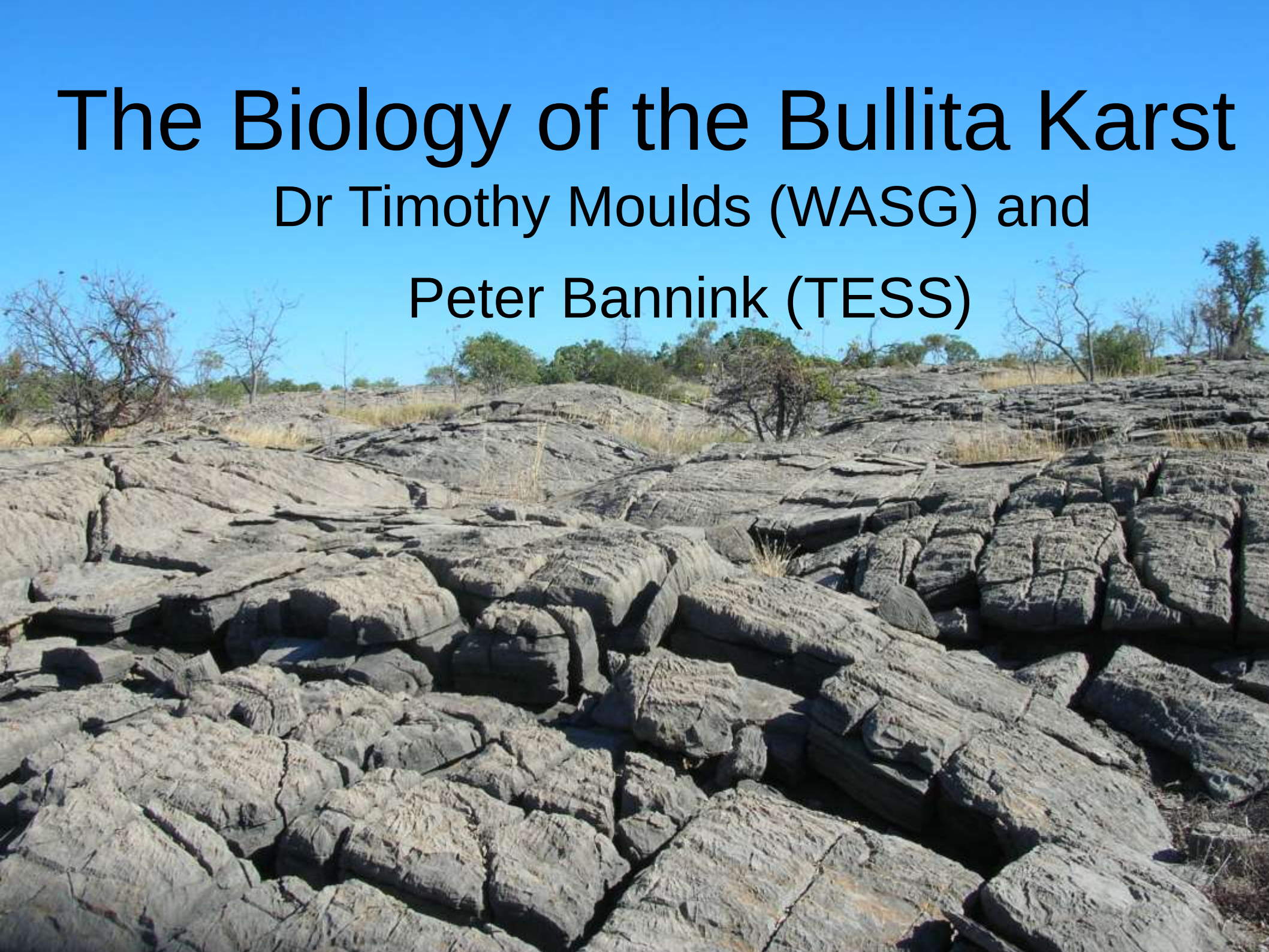
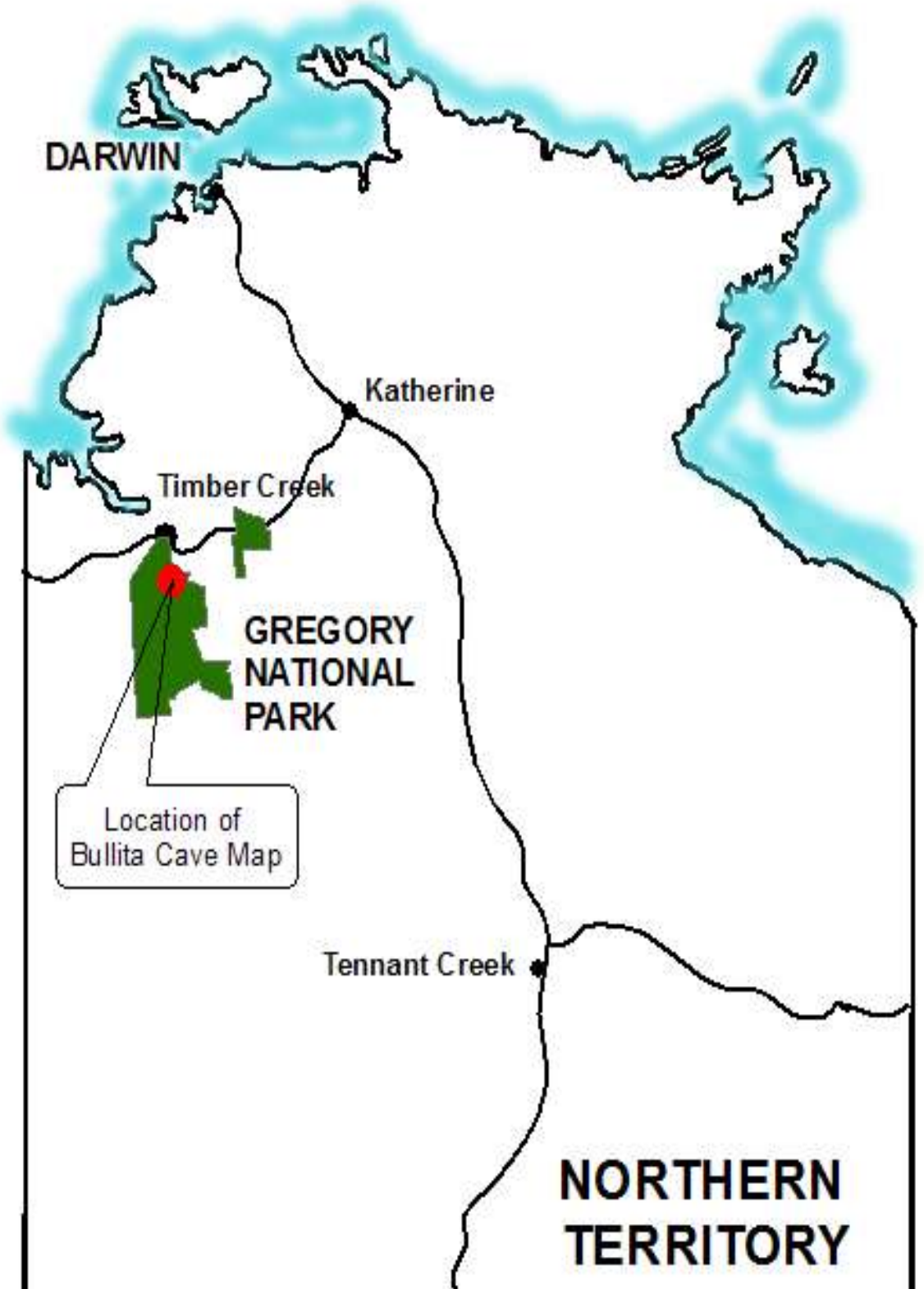
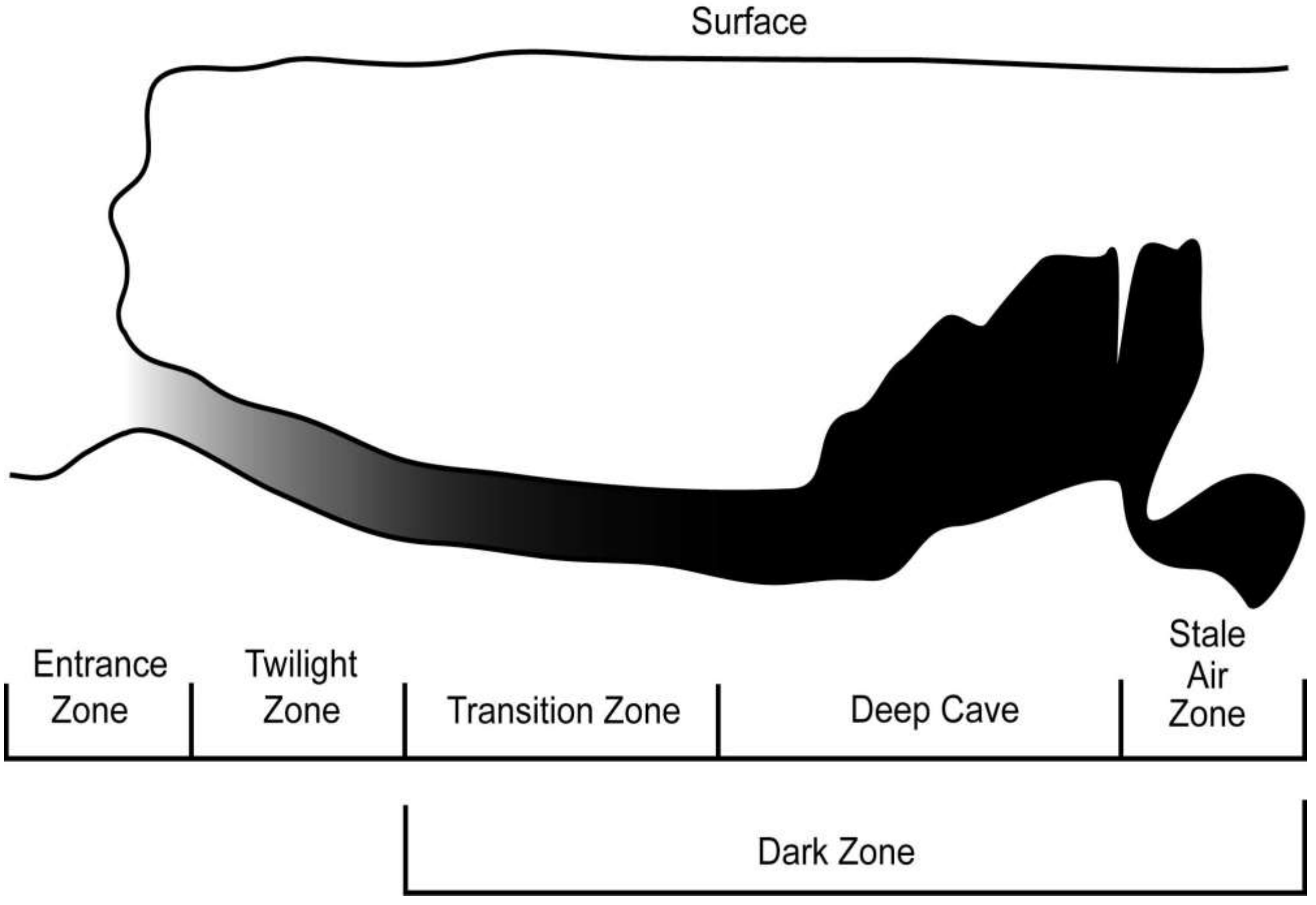
Peter Bannink (TESS)



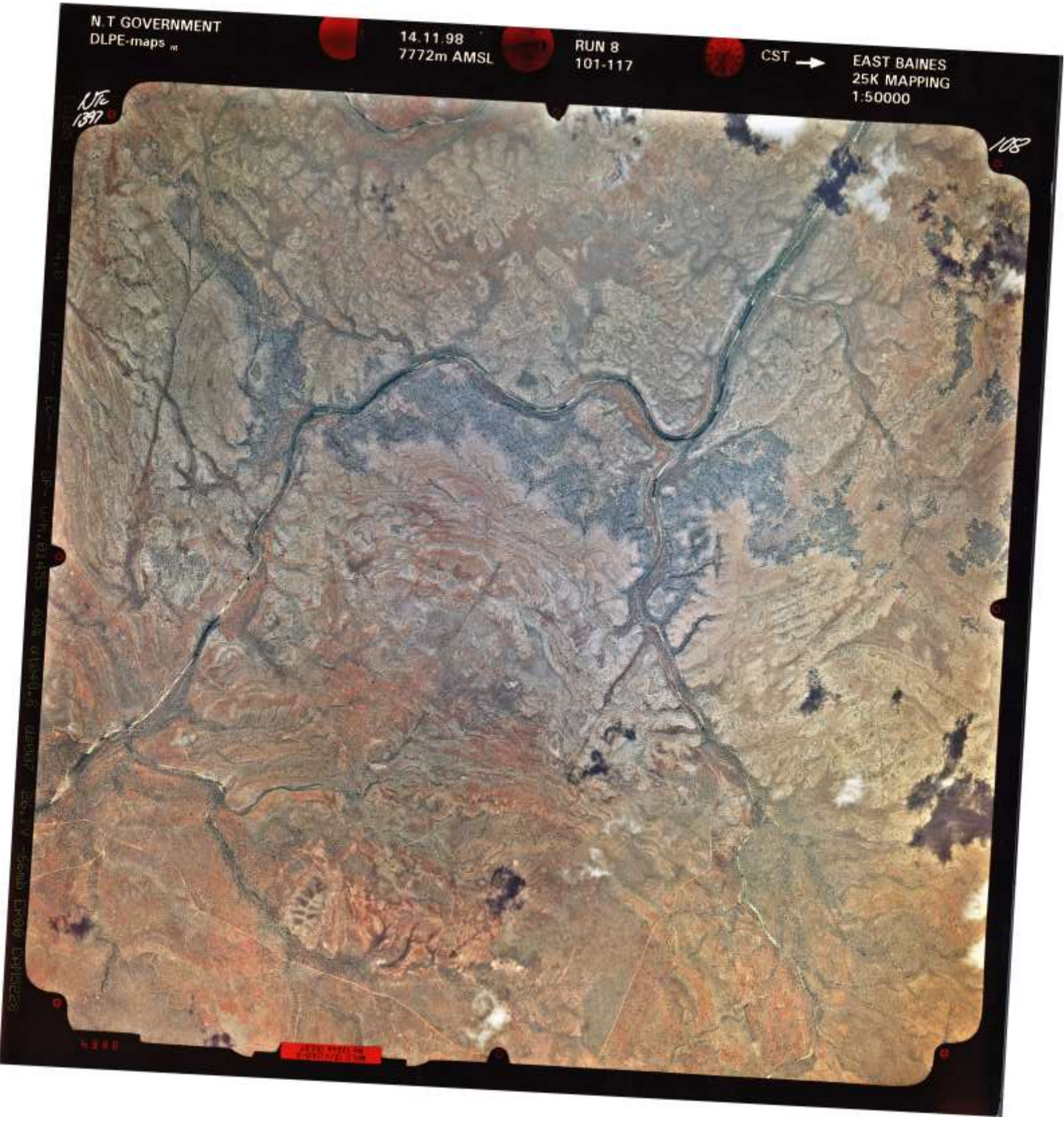

DARWIN
Katherine
Timber Creek
GREGORY
NATIONAL
PARK
Location of
Bullita Cave Map
Tennant Creek
NORTHERN
TERRITORY

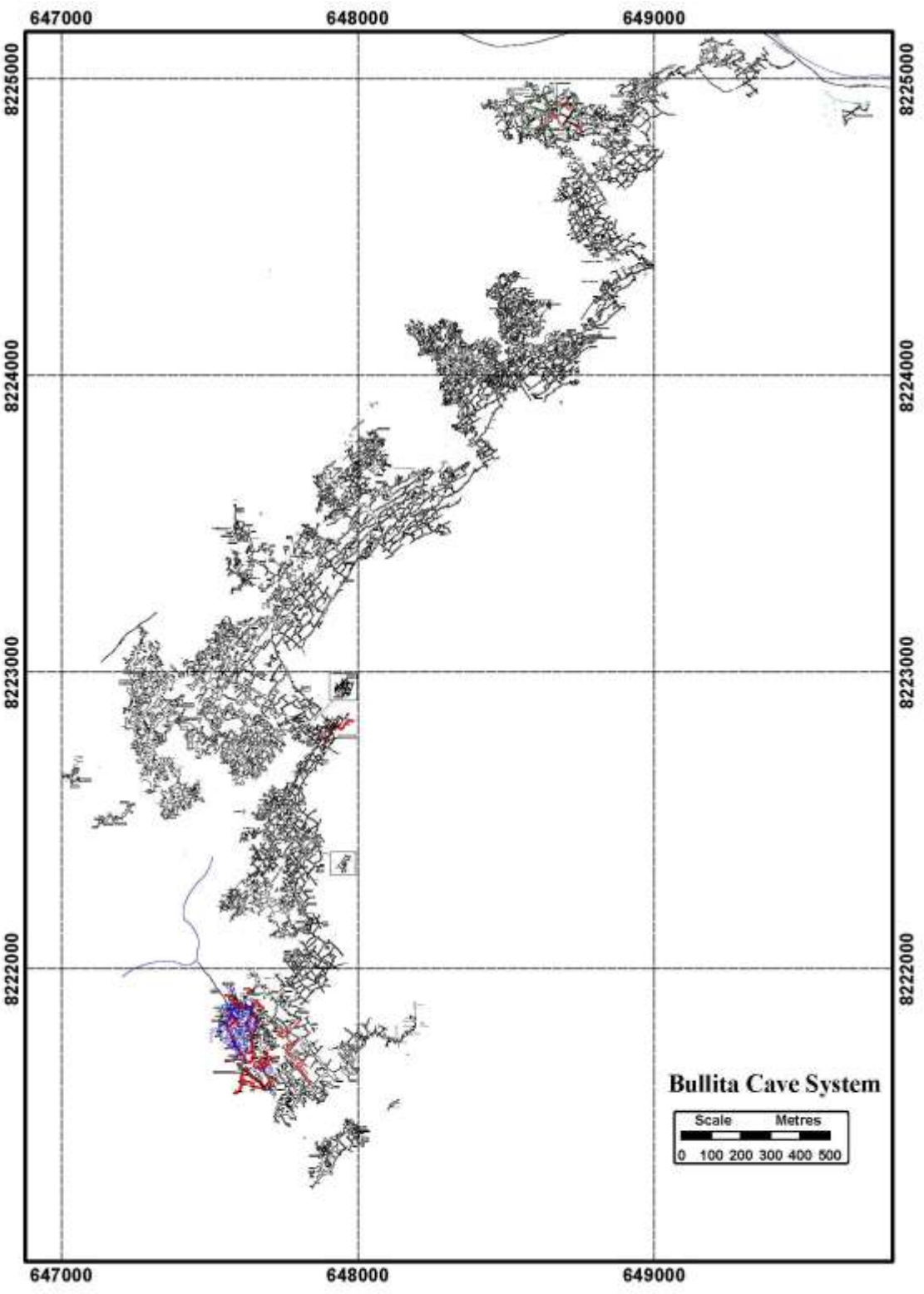
# Ecological Zones of Caves



# Adaptations to living in the Dark

- Morphological adaptations include:
  - Elongation of appendages
  - Loss of wings
  - Loss of pigmentation
  - Loss of eyes
  - Increase in other sensory structures
- Animals that show morphological adaptations are called **Troglobionts**


N.T GOVERNMENT
DLPE-maps
14.11.98
7772m AMSL
RUN 8
101-117
CST
EAST BAINES
25K MAPPING
1:50000
NTE
1397
108


647000
648000
649000
8225000
8224000
8223000
8222000
Bullita Cave System
Scale
Metres
0 100 200 300 400 500

# Collection History

- Collected by several different people since early 1990's
- Peter Bannink and TESS through early 1990's
- Arthur Clarke has collected invertebrates
- Tim Moulds 2006


# Collection Methods

- Mostly opportunistic with no systematic collecting
- Series of pitfall traps in 2006 – unbaited and baited with tuna

# The cave environment

- BAA04, BAA35, and BAA38 sampled by Bannink
- Northern and Main Block sampled by Moulds
- Temperature (16° – 24° )
- Humidity (45% – 90%)

# What was found?

- Collecting recorded over 200 individuals between the two collections.
- Includes seven (7) classes, 18 orders, 42 families and 53 species.
- The majority of taxa do not exhibit any troglomorphisms and are found in the vicinity of cave entrances and twilight zones


MOULDS

# Stygobionts and Troglobionts

- Six potential troglobiontic and stygobiontic species
- Hydrobid snail, a scorpion, a polydesmid millipede, a platyarthrid isopod, an amphipod, and a meenoplid planthopper.
- The scorpion is the third troglobiont scorpion known from mainland Australia

# Summary

- The diversity of subterranean fauna in Bullita is significant
- This is esp true when considering the limited collecting in an extensive tropical cave
- Further collecting especially if undertaken in a co-ordinated and systematic manner will undoubtedly reveal additional species.

# Acknowledgements


- Thankyou to all the cavers who have exoplored and mapped the Bullita karst over the past 20+ years, without you this work would not have been possible.
- Thanks to TESS and Peter Bannink for most of the photos used in this presentation
- Thanks to all the taxonmists and researchers who have identified material collected from Bullita.
- The NT NPWS who support the annual expeditions to Bullita.