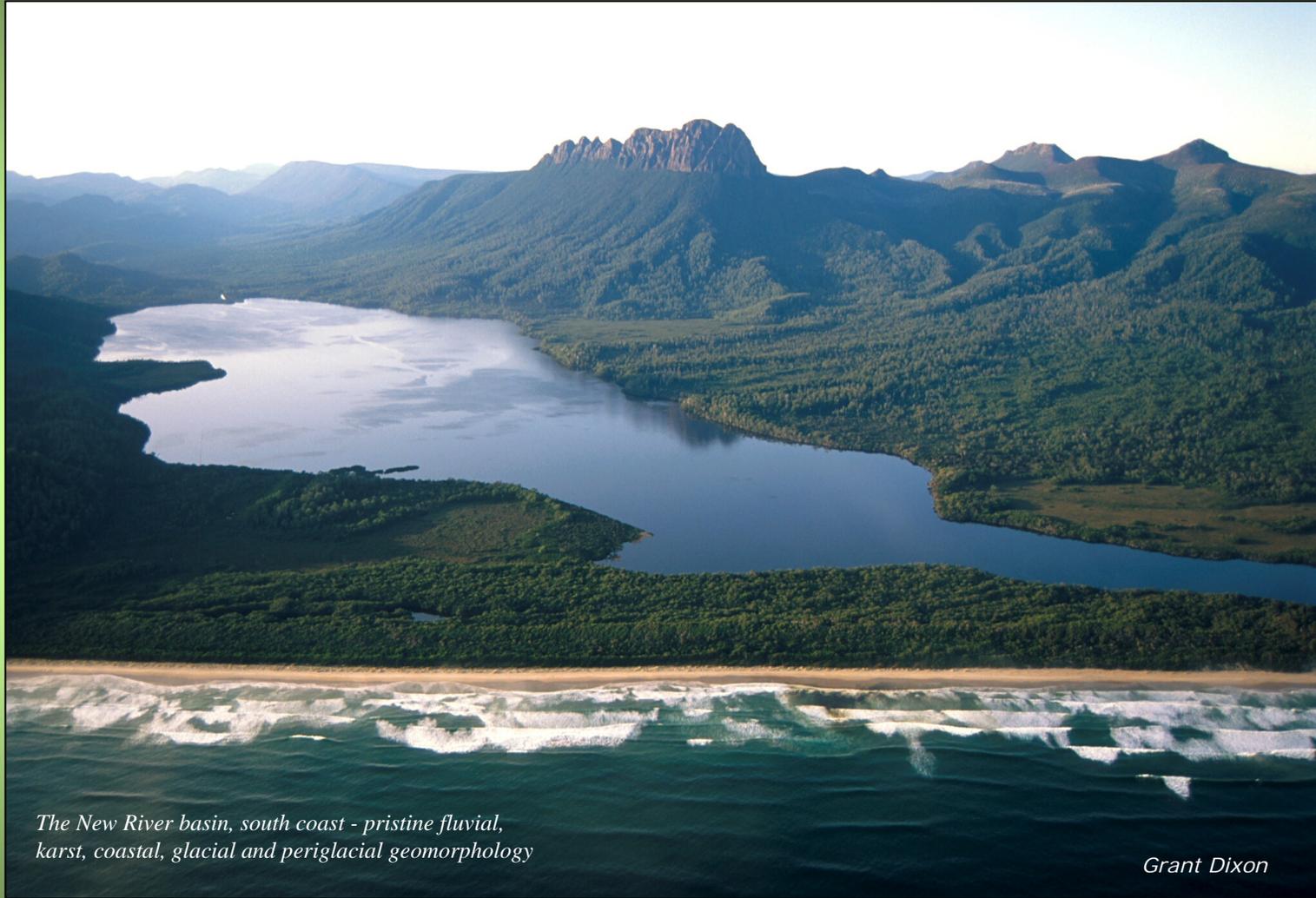


# ANZGG 13<sup>th</sup> conference in Tassie!



*The New River basin, south coast - pristine fluvial,  
karst, coastal, glacial and periglacial geomorphology*

*Grant Dixon*

A selection of Taswegian geomorphologia

## *Queenstown and surrounds*



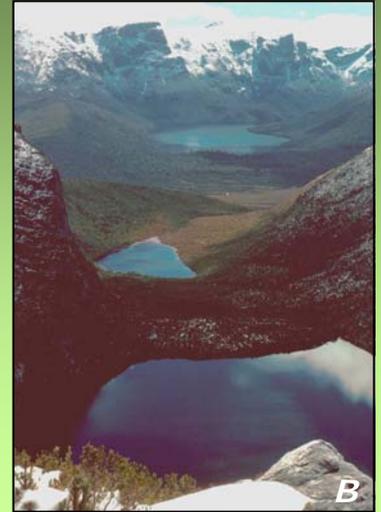
The 13th ANZGG conference will be held in Queenstown, in the rugged hinterland of the west coast. For further information and to register your expression of interest to attend, follow this link:



## *Tasmanian landforms - Glacial erosion*



**A**



**B**

***Spectacular erosional landforms have developed as a result of late Cainozoic glaciation on multiple occasions.***

***Distinctive mountain landforms have developed on columnar dolerite substrates (Cradle Mountain – A) and quartz-rich metamorphics (Schnells Ridge – B and Western Arthur Range – C).***

***Ice cap glaciation of massive dolerite sills has left a profusion of shallow tarns across the state's central plateau***



**D**



**C**

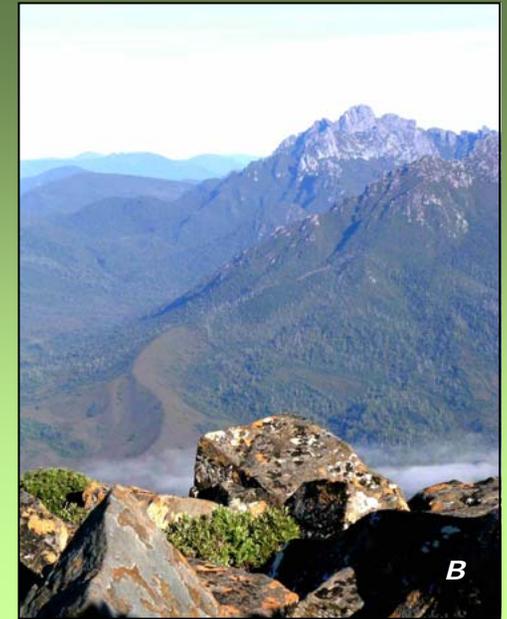
## *Glacial deposition*



*Moraines related to multiple late Cainozoic glacial periods are found in lowland settings in the centre and west of the state (Lake Judd – A, Federation Peak – B).*

*Weathering rind thickness has been used to assign relative ages to these deposits (Conglomerate Creek – c).*

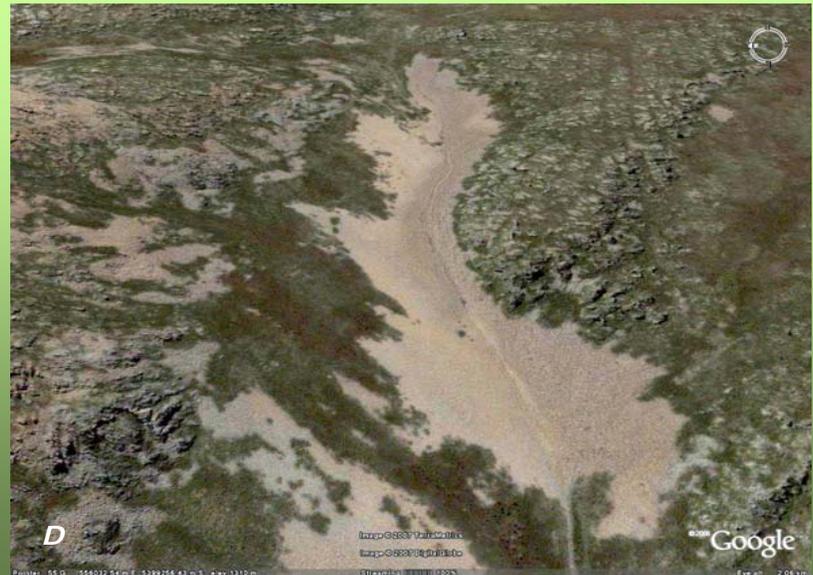
*Glacial outwash deposits dammed Lake Pedder – its landforms survive intact below the Huon-Serpentine impoundment (D).*



# Periglacial systems

Active periglacial systems are found on the higher peaks (Nevada Peak – A) and frost hollows in plateau areas (Liaweenee Moor – B).

Extensive relict blockstreams encircle the higher dolerite peaks of central and NE Tasmania (Western Bluff – C, Ben Lomond Plateau, D).

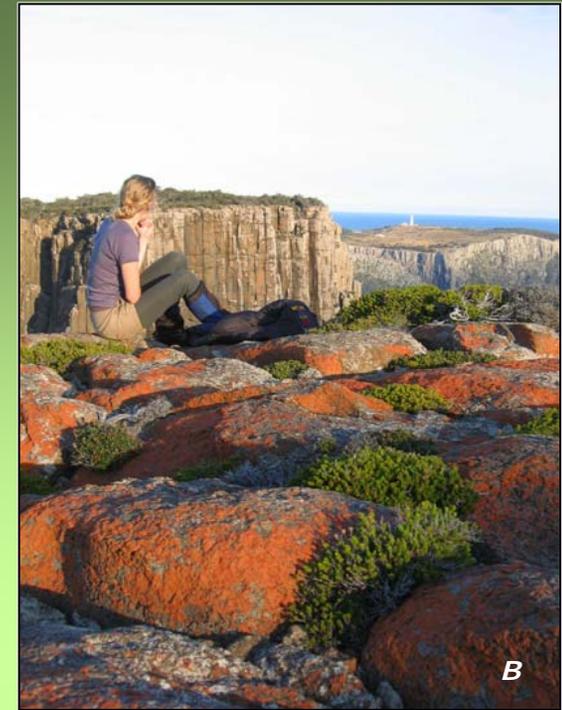


# Coastal systems

*On the hard rock coasts of Tasman Peninsula are found Australia's highest sea-cliffs –(Cape Pillar – B).*

*Boulder and sand beaches, and rocky headlands dominate the east, west and south coasts (Egg Beach, Flinders Island – A, Christmas Beach, Cape Barren Island – C).*

*Low energy systems with extensive tidal flats stretch across the northwest corner (symmetrical spits and tidal inlets, Stanley – D).*



# Fluvial systems

*Tasmania's rivers take many different forms, related to strong east-west climatic gradients, topographic variety and diverse geology.*

*Spectacular superimposed gorges (Franklin River – A) are common in mid reaches of western rivers, whilst broad, deep estuaries are found in their lower reaches (Gordon River –D).*

*Sinuously meandering gravel bed streams are wind across Tertiary conglomerates south of Macquarie Harbour (Sorell River – B).*

*Distinctive 'broadwater' sequences, with repeating pool, fan/splay and meandering reaches have developed in deep, dispersive silts and clays of the Tertiary basins in the Midlands (South Esk River – c).*



# Aeolian systems

*Active coastal dunes, often parabolic, overlies predominantly linear dunefields of Late Pleistocene age in coastal settings (Henty Dunes – A, Waterhouse dunefield – B).*

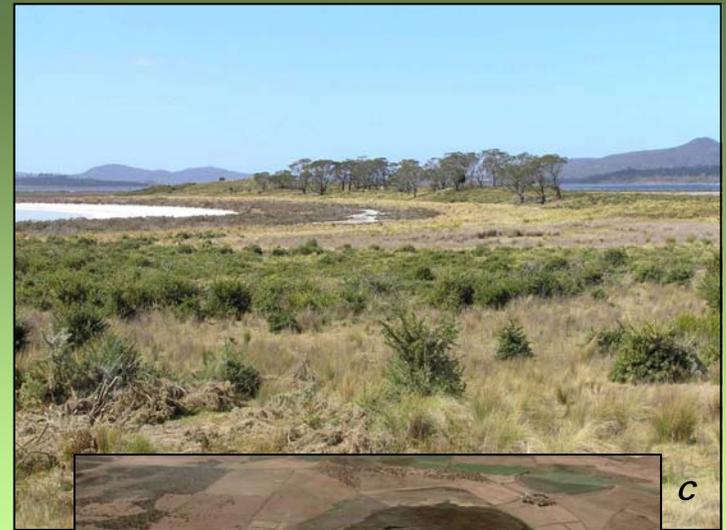
*Relict inland systems, commonly deflation hollows and associated lunettes are of last glacial age (Moulting Lagoon area – C, Longford – D, sub-alpine Lake Ada – E).*



A



B



C

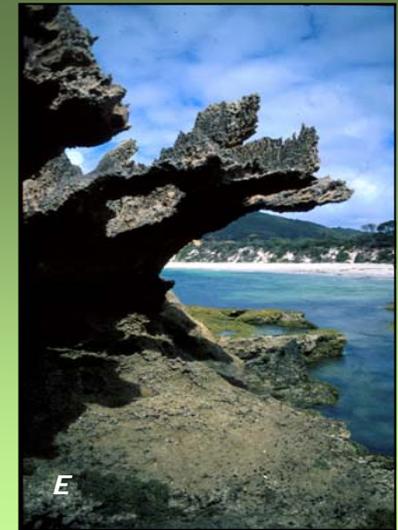
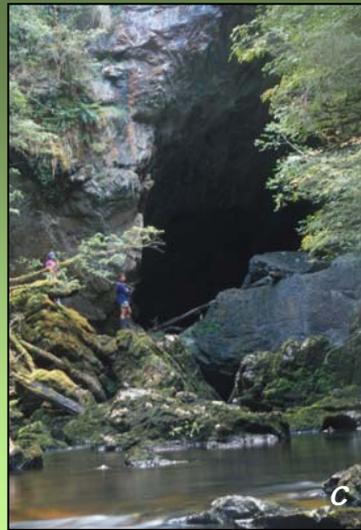


D



E

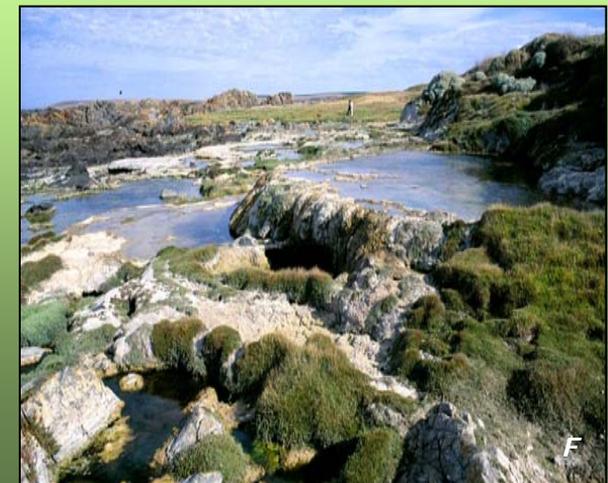
# Karst systems



*Tasmania's karst is diverse and spectacular. Kubla Khan at Mole Creek (A, B) is one of Australia's best decorated caves.*

*Mountain karst systems include the Weld Arch (C) and Vanishing Falls (G) in the southwest. Beautiful springs emerge onto sub-alpine plains at the Vale of Belvoir (D).*

*Coastal karst in aeolian calcarenite is common on Bass Strait islands (E, F).*



# Neotectonics

*Western Tasmania has been one of Australia's most active neotectonic regions, with late Cainozoic uplift rates in the order of 100m per million years.*

*Spectacular flights of marine (Birchs Inlet – A) and fluvial terraces (Spero River – B) are found south of Macquarie Harbour.*

*Pleistocene fault scarps tens of metres high are also found in the southwest (Lake Edgar Fault – C, unnamed scarp, D'Aguilar Range, D).*

