NATURAL VALUES

Mt Field National Park

landforms, flora & fauna

Parks and Wildlife Service Tasmania

DEPARTMENT *of* TOURISM, PARKS
HERITAGE *and the* ARTS

Mt Field National Park is the oldest national park in Tasmania and the second oldest in Australia. Involvement of Europeans over a long period of time has lead to extensive recreational and educational use dating from the end of the nineteenth century.

Mount Field National Park makes up some 15,880 hectares. It is an 'island' surrounded by logging and agriculture, near the edge of the Tasmanian Wilderness World Heritage Area (WHA). The park protects a number of important natural ecosystems, a rich cultural heritage and encompasses a significant water catchment.

Unique values

The park encompass natural heritage values that include;

- 13 plant species recorded as rare in Tasmania;
- the poorly reserved swamp gum (*Eucalyptus regnans*) and stringybark (*E. obliqua*) wet forest community that is also of outstanding display value;
- habitat for the the eastern barred bandicoot (*Perameles gunnii*), a mammal as vulnerable throughout Australia;
- complex karst (cave) features of high geoconservation value;
- outstanding glacial features including K Col, the Lake Fenton blockstream and the BroadRiver Valley.
- four invertebrates that are listed as either rare, threatened or vulnerable at the State level;
- wet sclerophyll forest communities of high conservation value;
- alpine and subalpine communities of high conservation value;

Landforms

The geology of the park and reserves is significant due to features such as karst systems and classic glacial landscapes such as U-shaped valleys, alpine lakes and tarns.

Outcropping to the west of the park and reserves, and underlying it as basement rock, are 400 million year old sediments including the Gordon limestone. Jurassic dolerite is common in areas above about 760 metres, with Triassic and Permian sediments occurring at lower altitudes.

The Triassic and Jurassic rocks of the park and reserves show strong links with some mountains in Antarctica, demostrating Gondwana links.

The Triassic sequence of sedimentary rocks is very uniform, non-marine in origin and contains extensive evidence of being deposited in lakes and rivers. The basalt dyke visible near Mt Bridges above Lake Seal is evidence of a recent intrusion in the faulted dolerite.

Lady Barron Falls, Horseshoe Falls and Russell Falls are composed of horizontally bedded marine Permian siltstone benches. These Permian sediments in contrast to the Triassic rocks were deposited mainly under marine conditions.

Geomorphology

Mount Field contains excellent examples of landforms produced by glaciations.

During the period of maximum Pleistocene glaciation, a permanent snowfield covered the top of the Mt Field plateau and it fed surrounding valley glaciers.

The higher peaks of the park were nunataks (rock exposed as low peaks above the snowfields).

The largest glacier, up to 12 kilometres long, formed in the Broad River Valley. The remnants of the most extensive ice action in the park are visible in the terminal moraines of the Broad River Valley and the huge cirque walls above Lake Seal.

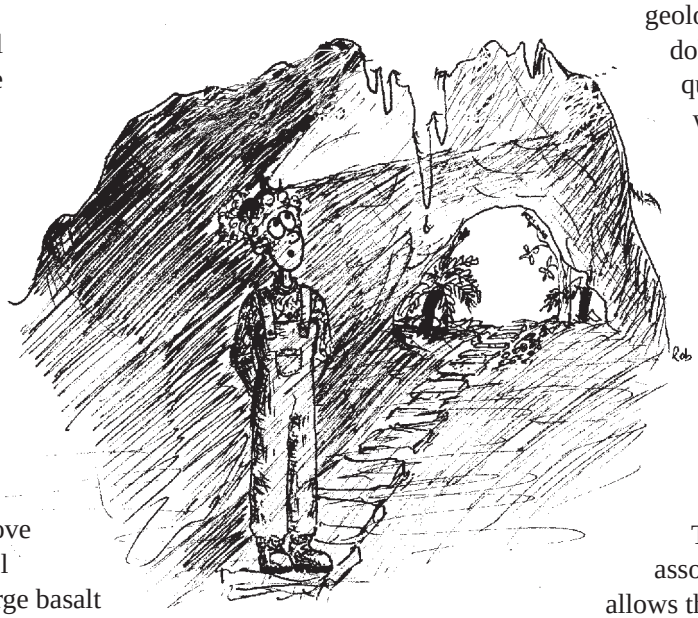
The numerous tarns on Tarn Shelf are an excellent illustration of glacial scouring. Twisted Tarn and Twilight Tarn are reminders of the glacier that flowed down from Lake Newdegate to Lake Webster. Another glacier flowed south from the Rodway

Range to form Lakes Belcher and Belton, and north from the Rodways to form the Hayes Valley and Lake Hayes.

To the east, of the park, glaciers flowed from the snowfields of Mt Field East, Kangaroo Moor and Wombat Moor, terminating just below the level of the present Lake Fenton, which was dammed by extensive block streams. The blockstream which dams Lake Fenton is considered an outstanding example of a periglacial blockstream. These block streams are a feature of the slopes of Mt Monash south of the lake. Glaciers further east produced Lake Nicholls, Lake Rayner and Beatties Tarn.

The string bog at the northern end of the Rodway Range is probably the best example of this type of landform in Tasmania. It is a series of small terraced ponds which appear to have been dammed by a combination of glacial debris, peat and vegetation, possibly on the steps of an underlying blockstream.

Several geomorphological sites including the escarpments and waterfalls in the lower part of the park, the Lake Fenton blockstream, the Rodway Range string bog, the large dolerite boulder being wedged apart by eucalypt roots above the ski area, K Col saddle, and the large basalt dyke above Lake Seal have high educational value and provide great opportunity to interpret the geology to visitors.



Karst and Cave Systems

The majority of caves in the area are accessible only to very experienced cavers, only Junee Cave is suitable for visits by the general public. The Junee-Florentine karst covers an area of about 18,500 ha and contains more then 500 documented cave entrances, including many deep and long caves.

Niggly Cave (375 m), which is located inside the park, is possibley the deepest explored cave in Australia.

Other important caves are Junee Cave (at Junee Cave State Reserve), Beginners Luck, Welcome Stranger, Frankcombes Cave, Cashions Creek Cave and Growling Swallet. Many of the caves are part of a much larger system which water tracing has shown to be linked to an underground stream network which is the source of the Junee River at Junee Cave.

The western part of the park is located within the karst catchment and contain numerous significant karst features of high geoconservation value. State forest adjacent to the park and reserves also contains significant caves and karst features, including caves linked to the Junee River system.

Flora

The park has long been recognised as an area with a high degree of plant diversity compared to other highland areas of Tasmania.

The diversity comes about because of various influences including the park's geographic location central to both the eastern and western plant communities of Tasmania, the range of geological substrates including dolerite, limestone, sandstone, and quartzite, and its altitudinal range which extends from lowland to alpine habitats.

The flora of the park has been quite well studied over many years, particularly due to the park's use as an educational resource by the Geography and Botany Departments of the University of Tasmania.

Changes in Vegetataion with Altitude

The change in vegetation associated with the change in altitude allows the identification of three major vegetation zones:

• the lower zone, from 158 metres to 670 metres, is composed of **tall open forest with a wet understorey**

• the middle zone, from 670 metres to 940 metres, is **closed rainforest or mixed forest**

• the upper zone, from 880 metres to 1220 metres, is **subalpine woodland.**

In common with other parts of Tasmania, species diversity and richness in the park increases with altitude.

The alpine communities found on the tops of the mountains and plateaux of the park are characterised by a mosaic of heath, herbfield, bogs and bolster moor communities.

The distribution of these communities depends upon drainage, wind protection and the depth and duration of snow lie as wellas the frequency and intensity of fires. The bolster heath, herbfield and fjaeldmark communities associated with areas of prolonged snow lie.

Cushion plants are interspersed with pineapple grass bogs and occur on the most exposed and wettest areas of the plateaux. *Sphagnum* bogs are found around alpine and sub-alpine lakes and tarns.

Endemic Plants
The subalpine forests and woodlands of the park are characterised by several Tasmanian endemic conifers including: the pencil pine (*Athrotaxis cupressoides)* found around the higher lakes and tarns of the park. The King Billy pine (*Athrotaxis selaginoides*) and several dwarf pine species including mountain plum pine *(Podocarpus lawrencii)*, creeping pine *(Microcachrys tetragona*) cheshunt pine *(Diselma archeri*) and dwarf pine *(Microstrobos niphophilus).*

Fauna

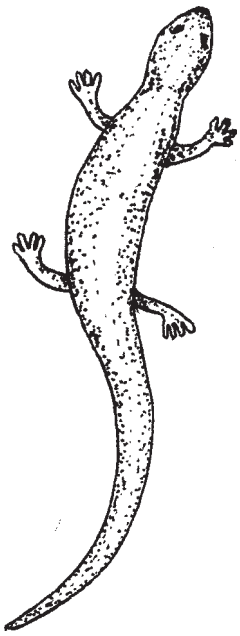
Mammals
The great majority of Tasmania's native terrestrial and arboreal mammals occur within the park. The diversity of habitats within the park's relatively small area is responsible for such a diversity of species. Species that are either extinct or endangered on the mainland are found in the park, such as the eastern quoll and the eastern barred bandicoot.

The last Tasmanian tiger to be seen in the Hobart Zoo, was trapped in the nearby Florentine Valley in 1933.

Birds
Birds have taken advantage of the range of altitudes and habitats available, and consequently many species are found within the park and reserves.

This includes 11 of the 12 Tasmanian endemic species such as the Tasmanian native hen. The ecologically important, but not endemic, black currawong, a key disperser of fleshy fruited plants, is also present in the park and reserves.

Reptiles and Amphibians
Several species of amphibians and reptiles occur, including the endemic Tasmanian froglet. Skinks in the park include two endemics, the southern snow skink, only found above 1000 metres, and the Tasmanian tree skink, found in tall wet forest.



Further Information

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Within the *Notesheet Serie*s there are various notesheets relating to Mt Field National Park.

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Images thanks and copyright to Robyn Holmes

Endemic Birds found at Mt Field

Green Rosella	*Platycercus caledonicus*
Dusky Robin	*Melanodryas vittata*
Scrubtit	*Sericornis magnus*
Yellow Wattlebird	*Anthochaera paradoxa*
Yellow-throated Honeyeater	*Lichenostomus flavicollis*
Strong-billed Honeyeater	*Melithreptus validirostris*
Black-headed Honeyeater	*Melithreptus affinis*
Black Currawong	*Strepera fuliginosa*
Tasmanian Thornbill	*Acanthiza ewingii*

