

NORTH COAST ENVIRONMENT CENTRE
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Nomination of

**WESTERN TASMANIA WILDERNESS
NATIONAL PARKS
by the Commonwealth of Australia**

**For inclusion in the
WORLD HERITAGE LIST**

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Prepared by:
**Tasmanian Government
Australian Heritage Commission
November 1981**

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To protect the National Estate.

Cover — Early snowfall over Cradle Mountain in the northern part of the nominated World Heritage area.

Convention concerning the protection of the world cultural and natural heritage

World Heritage List

Nomination Form

Under the terms of the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by the General Conference of Unesco in 1972, the Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage, called "the World Heritage Committee" shall establish, under the title of "World Heritage List", a list of properties forming part of the cultural and natural heritage which it considers as having outstanding universal value in terms of such criteria it shall have established.

The purpose of this form is to enable States Parties to submit to the World Heritage Committee nominations of properties situated in their territory and suitable for inclusion in the World Heritage List.

Notes to assist in completing each page of the form are provided opposite the page to be completed. Please type entries in the spaces available. Additional information may be provided on pages attached to the form.

It should be noted that the World Heritage Committee will retain all supporting documentation (maps, plans, photographic material, etc.) submitted with the nomination form.

The form completed in English or French should be sent in three copies to:

The Secretariat
World Heritage Committee
Division of Cultural Heritage
Unesco
7, Place de Fontenoy
75700 Paris

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1. Specific Location

a. **Country**

Give full name of State Party on whose territory property is located.

Australia

b. **State, Province or Region**

Give full name of State, Province or Region where property is located. If property overlaps State, Provincial or Regional Boundaries, provide names of all overlapped States, Provinces and/or Regions.

State of Tasmania

c. **Name of Property**

Local name of property and other names by which property is known, to be provided. In case a change of name has occurred, provide name(s) by which property was previously known.

Western Tasmania Wilderness National Parks

d. **Exact location on map and indication of geographical co-ordinates**

Maps and plans showing exact location and boundaries of property are essential (see 3b below). Please provide latitude and longitude co-ordinates and/or a grid reference. For grid references, the type of grid should also be given.

For properties in urban areas, the name of the town or city, and the street and number, should be added.

If an area surrounding nominated property is considered essential for the protection of the property, e.g., a buffer zone, indications should also be provided on the boundaries of this area.

145° 25'E to 146° 48'E Longitude, 41° 35'S to 43° 50'S
Latitude (See Map 1).

2. Juridical data

a. **Owner**

Specify the name and address of the current owner(s) of property.

State of Tasmania, Hobart, Tasmania

b. **Legal Status**

Indicate the category of ownership (public or private) and in the case of privately owned property, whether public acquisition is in process or being considered. Provide details of protective, legal and administrative measures envisaged or already taken for the conservation of the property (e.g., creation of national park). Give details on the state of occupancy of the property and its accessibility to the general public.

Public Ownership — National Park

The area is legally reserved as State Reserve under the National Parks and Wildlife Act (1970).

c. **Responsible administration**

Give name(s) and address(es) of body (bodies) responsible for administration of property.

National Parks and Wildlife Service, P.O. Box 210, Sandy Bay, Tasmania 7005.

3. Identification

a. **Description and inventory**

A detailed description of the property is to be provided. The property should fall into one of the following categories, defined in Articles 1 and 2 of the Convention:

3. Identification (cont.)

Cultural Heritage

"monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

"groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

"sites: works of man or the combined works of nature and of man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view."

Natural Heritage

"natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;

"geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;

"natural sites or precisely delineated areas of outstanding universal value from the point of view of science, conservation or natural beauty."

Give the size of the area of the property and, where applicable, of the buffer zone. The description should include precise details on the particular characteristics of the property. Details of the present and/or proposed use of the property should be included in this description.

The areas described as the Southwest National Park, the Franklin-Lower Gordon Wild Rivers National Park and the Cradle Mountain-Lake St. Clair National Park are each shown on Map 1. The total area is approximately 769,355 hectares in extent and is one of the last remaining temperate wilderness areas in the world.

The nominated region consists of a wide range of geological, landform and vegetation characteristics.

- (i) *Geology* — The core of the region comprises a broad belt of folded Pre-Cambrian metamorphic rocks striking generally north-south. These form the spectacular quartzite ranges of the Southwest. They are separated by often broad flat valleys of limestone, conglomerates and Tertiary sediments. In the far north east of the region, the Cradle Mountain-Lake St. Clair National Park occupies some of the westernmost portion of the flat dolerite capped Central Plateau. Throughout most of this park only erosional remnants of the dolerite plateau occur as caps on some mountains such as the Du Cane Range, Mt. Olympus, Mt. Ossa (the highest mountain in Tasmania at 1617 metres), Mt. Pelion West and Mt. Emmett.
- (ii) *Landforms* — Landforms include a diversity of glacial, fluvial, karst and coastal features.

The mountain ranges were subject to cirque and valley glaciation during the Pleistocene. Glacial landform features such as cirques, horns, aretes, moraines, overdeepened lakes, moraine dammed lakes, and "U" shaped valleys occur.

The Central Plateau is scattered with thousands of tarns their basins having been eroded by a Pleistocene ice sheet.

With the highest rainfall in Australia apart from Cape York in Queensland, the region has some impressive wild river systems, running swiftly on steep gradient beds and often carrying greater volumes of water for their length than most other Australian rivers. The larger rivers have cut across mountain ranges creating some awesome gorges, particularly in the Franklin-Lower Gordon Wild Rivers National Park. The gorges include the Great Ravine, the Irenabyss and Propsting Gorge on the Franklin River, the Humbaba and Gilgamesh gorges on the Jane River, and the Sunshine Falls Gorge on the Gordon River. There is also an impressive gorge on the lower Davey River.

Countless waterfalls, ravines, rapids, placid reaches, and river terraces occur throughout the region. Some of the streams in the limestone belts run underground or beneath natural arches.

The rugged southwest coast comprises a spectacular diversity of features. Sandy beaches alternate with precipitous rocky headlands. Steep boulder beaches, lagoons, plunging cliffs, blowholes, stacks, sea caves, gulches and marine terraces reflect differing wave conditions and rock types, and a varied geomorphic history. Port Davey and Bathurst Harbour is a classic example of a ria or drowned valley.

Large belts of cavernous limestone exist, particularly along the Lower Franklin and Lower Gordon Rivers but significant outcrops of both limestone and dolomite occur throughout the region, for example at Precipitous Bluff, Maxwell River, Algonkian Rivulet, Erebus Rivulet, Jane River, Mt. Ronald Cross, Andrew River, Mt. Anne, Forest Hills, and the Cheyne Range.

Numerous karst features occur throughout these areas and include caves, natural arches, clints and grikes, dolines, karren, sinkholes, pinnacles, blind valleys and effluxes. Many caves have been explored, including Bingham Arch, Fraser Cave, Whitlam Cave, Lowe Cave, and Hayden Cave on the Franklin River; Damper Cave, Quetzalcoatl Conduit, The Knadgery and Reece Cave at Precipitous Bluff; Aquarius Swallet, Virgo Cave, Capricorn Cave, Scorpio Cave and Taurus Cave at Mt. Ronald Cross*.

There is a wide variety of morphology and speleothem diversity among these caves.

- (iii) *Vegetation* — The major structural vegetation formations are:

Closed-Forests: Mostly dominated by *Nothofagus cunninghamii* (myrtle), sometimes co-dominant with *Atherosperma moschatum* (sassafras) or *Phyllocladus aspleniifolius* (celery top pine) and *Dacrydium franklinii* (Huon Pine)† in riverine habitats. On infertile soils the

* Aboriginal names accepted by the Tasmanian Nomenclature Board are Kutikina (formerly Fraser), Clinnelare (Whitlam), Payaleena (Hayden), Pengana (Bingham), Proina (Lowe) and Rotuli (Neilson).

† Huon pine now *Lagarostrobos franklinii*.

3. Identification (cont.)

alliances include *Anodopetalum biglandulosum* (horizontal), *Eucryphia lucida* (Leatherwood), *Leptospermum glaucescens* (tea tree), *Leptospermum scoparium* and *Melaleuca squarrosa* (paperbark). In fire protected sites *Athrotaxis selaginoides* (King Billy Pine) sometimes forms pure stands and sometimes is co-dominant with *Nothofagus cunninghamii* or *Phyllocladus aspleniifolius*. On exposed alpine sites the formation comprises *Nothofagus cunninghamii*, *Nothofagus gunni* (deciduous beech), *Diselma archeri*, *Microstrobos niphophilus*, *Microcachrys tetragona* and *Athrotaxis selaginoides*.

Open forests: *Eucalyptus nitida* is the most widespread dominant of these forests. Other eucalypts include *E. ovata* on lowland sites, *E. delegatensis*, *E. dalrympleana* and *E. subcrenulata* on lower subalpine sites and *E. coccifera*, *E. subcrenulata*, *E. vernicosa* are to be found on highland areas.

Scrub and Shrubland: The alliances include *Anodopetalum biglandulosum*, *Bauera rubioides*, *Leptospermum glaucescens*, *Acacia mucronata*, *Banksia marginata* and *Eucalyptus nitida* on lowland sites. At intermediate altitudes the dominant plants include *Telopea truncata* (waratah), *Lomatia polymorpha*, *Nothofagus cunninghamii* and *Richea pandanifolia* (pandan). In highland communities the alliances are *Diselma archeri*, *Microstrobos niphophilus*, *Richea scoparia*, *Orites acicularis*, *O. revoluta*, *Nothofagus gunnii*, *Eucalyptus vernicosa* and *Leptospermum rupestre*.

Heaths: In the alpine heath communities, many of the dominant plants are unique to Tasmania. These include *Eucalyptus vernicosa*, *Leptospermum rupestre*, *Richea scoparia*, *R. acerosa*, *Epacris gunnii* and various alpine conifers. Cushion plants are also included in heath formations and are well developed on many of the mountain plateaux.

In heaths at lower altitudes *Sprengelia incarnata*, *Leptospermum glaucescens*, *Melaleuca squarrosa*, *Casuarina monilifera*, *Banksia marginata*, *Boronia citriodora*, *Agastachys odorata*, *Baeckea leptocaulis*, *Cyathodes spp.* and *Leptospermum nitida* occur.

Herblands and Sedgeland: The communities include grasses, sedges, ferns, and mosses. The most extensive community is sedgeland which is comprised of a number of alliances including the following species: *Gymoschoenus sphaerocephalus* (button-grass), *Restio australis*, *Empodisma minus*, *Restio monocephalus*, *Restio complanatus*, *Restio tetraphyllus*, *Leptocarpus tenax*, *Xyris spp.* and *Lepidosperma filiforme*.

PRESENT USES

The Southwest National Park, Franklin-Lower Gordon Wild Rivers National Park and the Cradle Mountain-Lake St. Clair National Park are managed by the Tasmanian National Parks and Wildlife Service for their natural and cultural values.

A wide range of activities related to these values is pursued. Large numbers of car and bus visitors travel to Cradle Mountain, Lake St. Clair and along the Lyell Highway and Strathgordon road. Large numbers travel by motor launch on the Gordon River out of Strahan and aerial sightseeing over the nominated area enables many to observe the wilderness.

Increasing numbers of people are going to the region for more active recreation, for example: mountaineering, bushwalking, caving, rock and ice climbing, rafting, canoeing and cross-country skiing. The region includes some of the best views for these activities in Australia.

b. *Maps and/or plans*

Detailed maps showing the location and boundaries of the property (see section 1d above) should be attached to this form, referring to official survey maps where possible.

For properties which are located in urban areas, it may be necessary to use in addition to a small-scale map on which the geographical co-ordinates will be indicated, a large-scale map or a detailed plan so that the location of the property will be accurately indicated. List under item 3b the maps and/or plans attached.

A detailed map showing the boundaries of the area covered by this nomination is shown on Map 1.

c. *Photographic and/or cinematographic documentation*

Supporting documentation in the form of photographs, slides, etc., may be attached. List under section 3c all such documentary items, and indicate their source.

A number of books and films have been made. The principal books and films are listed in the bibliography.

d. *History*

As far as cultural property is concerned, information may be supplied on the following:

- for monuments and groups of buildings: the period(s) represented with the date(s) of construction and name(s) of principal architect(s) if known; original condition and subsequent changes; original and later functions;
- for an archaeological site: its origin; subsequent principal changes in terms of form, group occupying site, significance, etc.; year of discovery and name of archaeologist concerned, if appropriate.

For property located in zones where natural disasters may occur (earthquakes, landslides, floods, etc.), provide all relevant data: for instance, in the case of property located in a seismic zone, give details on all previous seismic activity, on the precise location of the property in relation to the seismic zone, seismic calculations and analysis, etc.

As far as natural property is concerned information may be supplied on the following:

- natural history of the site;
- present and past modifications by man of the natural property including information on human population and settlements within the natural heritage site;
- history of the natural property as a conservation unit.

Aboriginal Occupation

So far no comprehensive archaeological survey of the region has been made but some important archaeological sites are already known.

Aboriginal occupation of the coast based on hunting of marine resources created numerous middens on the south coast as well as the west coast outside the study area.

During the early years of European contact, Aborigines frequented the coast but were not observed in the Franklin or Gordon Rivers area or the inland South West. However, in 1832 Sharland noted signs of a recent burn on the Loddon

3. Identification (cont.)

Plain as well as native huts in the St. Clair region and in 1840 James Calder found recently occupied huts near Frenchmans Cap.

Aborigines of the Big River tribe included the Central Plateau and Lake St. Clair area in their territorial range. A probable Aboriginal stone quarry site occurs on Mt. Rufus at 1280 m above sea level, and, at Cradle Mountain, artefacts have been found during excavations for a hut near the present "Blandfordia Lodge".

Rich archaeological deposits are known from caves on the Lower Franklin River, and a basal date from an excavation in Fraser Cave indicates human occupation of the Franklin and Gordon Rivers area at least during the last Ice Age at 19,000 years ago.

The aboriginal population had been removed from the region by the early 1830s by the missionary zealot G. A. Robinson.

European History Southwest National Park

European exploration commenced in the early 1800s particularly by sea. The main attractions of the area became pining and whaling. Whaling ceased before the turn of the century but pining, although ceasing last century around Port Davey, continued more or less up to recent times in the Franklin Lower Gordon Wild Rivers National Park, prior to the dedication of the park.

Most of the Southwest has been explored for minerals, though current mining activity is restricted to small scale tin mining at Melaleuca on the edge of the nominated area.

Franklin Lower Gordon Wild Rivers National Park

After the establishment of the Sarah Island convict settlement in 1821, convicts and their overseers worked much of the lower Gordon and lower Franklin Rivers to obtain the prized Huon pine.

A number of convicts escaped from Sarah Island and perished in the rugged hinterland. Only Alexander Pierce in 1822 and James Goodwin and a companion in 1828 managed to reach the settled districts near the Derwent River.

In 1832, Sharland criss-crossed the upper Franklin River in an attempt to climb Frenchmans Cap.

Surveyor Calder in 1840 cut a track from Lake St. Clair to the lower reaches of the Gordon in preparation for a trip to the area by Governor Sir John Franklin and Lady Jane Franklin, who travelled the route in May 1842.

The region was visited by a series of explorers, fossickers, and adventurers in later decades including geologist Charles Gould who crossed overland from the Gordon River to the Franklin River near Glen Calder and in 1859 ascended the



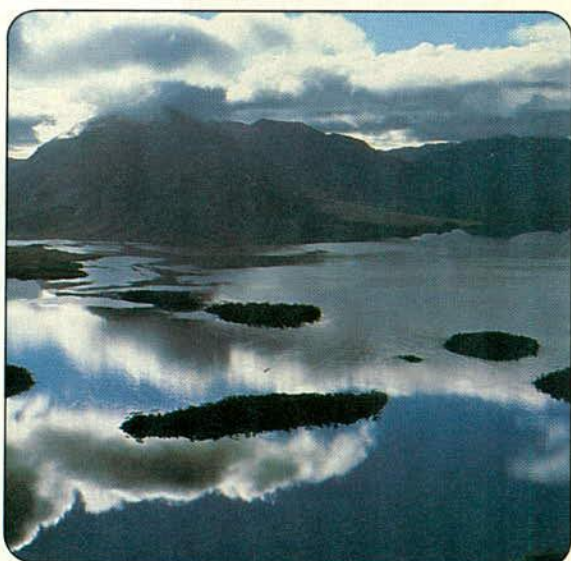
2. South Coast.



5. Dolerite peak of Mount Olympus.



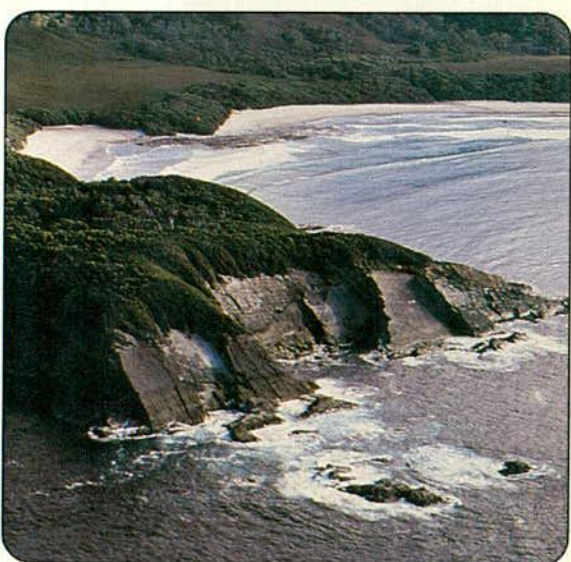
3. Promontory Lake, Western Arthurs.



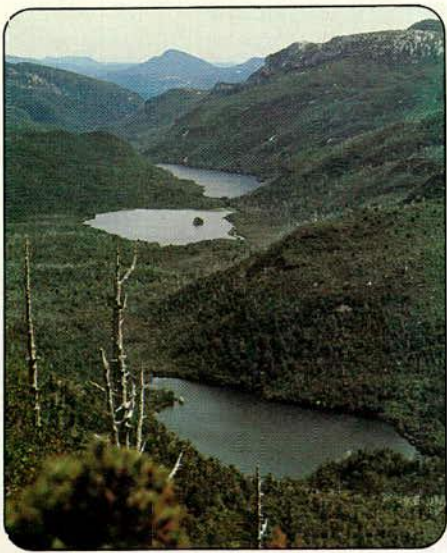
6. Bathurst Harbour, a drowned valley.



4. Glaciated landform, Western Arthurs.



7. Menzies Bluff and Turua Beach.



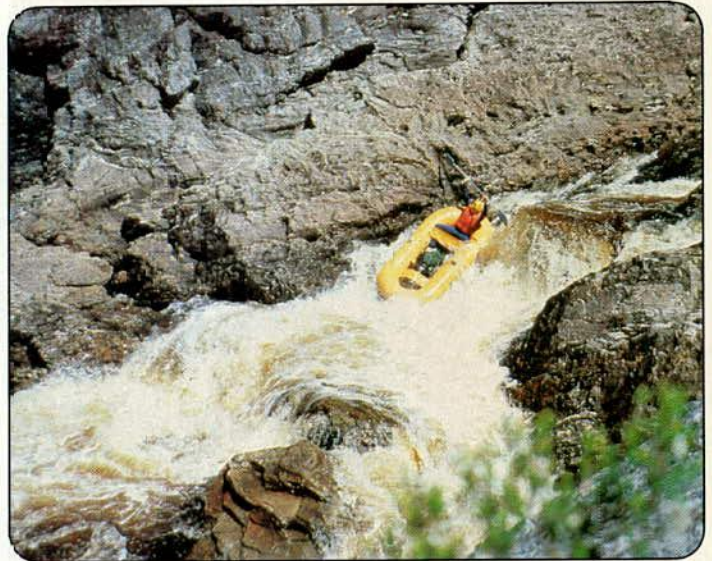
8. Lakes Magdalen and Milicent.



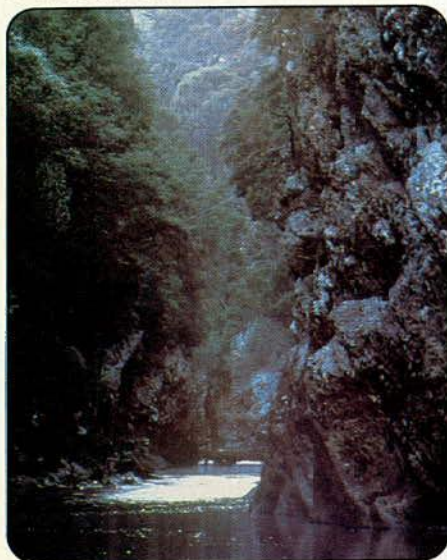
11. Irenabyss, Franklin River.



9. Waterfall, Cradle Mountain N.P.



12. Rafters on the Franklin River.



10. Franklin River, Collingwood Junction.



13. Precipitous Bluff and Prion Beach.

Franklin until his party were under Frenchmans Cap. Gould's party were the first to negotiate the Great Ravine and other gorges west of Frenchmans Cap.

In the 1880s T. B. Moore crossed the Franklin twice, making ascents of Frenchmans Cap from the west. By this time the west coast mining boom had brought a surge of activity to the area and the early decades of this century brought renewed interest in the Huon Pine and the tourist potential of the Gordon River. The first regular tourist cruises began in 1915.

During this century, the piners made extensive forays into all reaches of the rivers with the Morrison brothers of Strahan retracing Gould's boat trip upriver through the Great Ravine in 1940.

Cradle Mountain Lake St. Clair National Park

The first recorded visit to the Cradle Mountain area by Europeans may be that of Joseph Fossey and Henry Hellyer of the Van Diemens Land Company in 1828. Likewise the first recorded visit to Lake St. Clair was in 1835 by the then Surveyor-General George Frankland.

Before the end of the century a number of Europeans including artists, prospectors and timber cutters had visited the area and some settlers began using the central highlands for summer grazing of sheep.

The beauty of the area was recognised as early as 1885. In this year the Tasmanian Government instructed that all Crown land within half a mile of Lake St. Clair and Lake Petrarch be withdrawn from selection and reserved.

In 1862 there was some cutting of native conifers in the Dove Valley and this was the beginning of logging which only ceased in the last decade.

There was no logging in the vicinity of Lake St. Clair at this early stage since there were no adequate tracks.

There was a good deal of prospecting in the area of the future park at the end of the nineteenth and beginning of the twentieth century. Coal, copper, silver-lead, tungsten, tin and molybdenum were all found, but only a limited amount of copper mining occurred as a result.

Parts of tracks constructed at that time for prospecting and mining purposes have been incorporated into the walking tracks in use today.

Hunters and trappers used the area up until the early decades of this century to obtain the furs of wallaby and possums.

4. State of Preservation/Conservation

The area remains largely in its natural state apart from some hydro-electric development at Scotts Peak (on the edge of the nominated area) and hydro-electric investigation camps on the

4. State of Preservation/Conservation (cont.)

Lower Gordon River and at Mt. McCall. Some timber getting is still carried out in the Alma River catchment of the Franklin-Lower Gordon Wild Rivers National Park. An existing agreement for the extraction of sawlogs expires in 2001. Small scale mining and mining exploration occurs at various places on the periphery of the nominated area.

a. *Diagnosis*

Describe the present condition of property. In cases where the condition of the property is in imminent or potential danger, provide details.

The wilderness values on the perimeter of the region are endangered by proposed and threatened activities in adjacent "buffer zone" areas.

Such activities include for example planned forestry in the Hartz, Weld, Denison and Forth valleys; hydro-electric dambuilding on the Gordon River above the Olga River, and on the Mackintosh River. Current mining just outside the region at Melaleuca Inlet (tin) and Oakleigh Creek (wolframite) has minimal impact.

Mineral exploration has been carried out in the following areas peripheral to the nominated region: Weld River, D'Aguilar Range, South Cape Bay, Mt. Mueller and Cox Bight. Existing mining leases occur at Joe Page Bay in Port Davey and at the Jane River.

The major human modification of the region has been the construction in the early 1970s of the Middle Gordon hydro-electric power scheme which involved the damming of a magnificent section of the Gordon River outside the nominated area and the inundation of the unique Lake Pedder, to form two large impoundments. As part of this scheme a major road was constructed into the heart of the Southwest wilderness and a small town, Strathgordon, was constructed just outside Southwest National Park.

The only permanent residents in the nominated area are ranger staff at Lake St. Clair and Cradle Valley.

b. *Agent responsible for preservation/conservation*

Give name and address of body or bodies responsible for state of preservation/conservation of property (as distinct from administrative responsibility — see item 2c above).

The Tasmanian Government, through the National Parks and Wildlife Service.

c. *History of preservation/conservation*

Provide details of preservation/conservation work undertaken on property and of preservation/conservation work that is still required.

For history of reservations, see the attached Tables 1, 2 and 3.

d. **Means for preservation/conservation**

Under this item information should be provided on actual or pending laws or policies which establish the property as a conservation unit, on the technical means available, on the institutional context in which the property is managed, as well as on the financial resources available for preservation/conservation of the property.

The National Parks and Wildlife Act (1970) and Regulations, The Aboriginal Relics Act (1975) and Regulations (1978).

e. **Management plans**

Give details of any relevant existing local, regional or national plans (urban development, land reform, etc.) and their implications for the property.

Management plans for reserves are a statutory requirement of the National Parks and Wildlife Act (1970). A draft plan for the Southwest National Park has been prepared and is to be reviewed.

A management plan exists for the former Lyell Highway State Reserve, which is now incorporated within the Franklin-Lower Gordon Wild Rivers National Park.

A management plan for the Cradle Mountain-Lake St. Clair National Park is presently being prepared.

5. **Justification for inclusion in the World Heritage List**

A statement to be made on the significance (i.e., its "outstanding universal value" in the terms of the Convention) of the property that justifies it for inclusion in the World Heritage List. Property will be evaluated against the following criteria adopted by the World Heritage Committee:

- a. For *cultural property*, outstanding universal value will be recognised when a monument, group of buildings or site — as defined in Article 1 of the Convention — submitted for inclusion in the World Heritage List is found to meet one or more of the following criteria. Therefore, each property should:
 - (i) represent a *unique artistic or aesthetic* achievement, a *masterpiece* of the creative genius; or
 - (ii) have exerted considerable *influence*, over a span of time or within a cultural area of the world, on *subsequent developments* in architecture, monumental sculpture, garden and landscape design, related arts, or human settlement; or
 - (iii) be *unique, extremely rare, or of great antiquity*; or
 - (iv) be among the most characteristic examples of a *type* of structure, the type representing an important cultural, social, artistic, scientific, technological or industrial development; or
 - (v) be a characteristic example of a significant, *traditional* style of architecture, method of construction, or *human settlement*, that is fragile by nature or has become vulnerable under the impact or irreversible socio-cultural or economic change; or
 - (vi) be most importantly *associated* with ideas or beliefs, with events or with persons of outstanding historical importance or significance.

In every case, consideration must be given to the state of preservation of the property (which should be evaluated relatively, in comparison to the state of preservation of other property dating from the same period and of the same type and category).

In addition, the property should meet the test of *authenticity* in design, materials, workmanship and setting; authenticity does not limit consideration to original form and structure but includes all subsequent modifications and additions, over the course of time, which in themselves possess artistic or historical values.

- b. For *natural property*, outstanding universal value will be recognised when a natural heritage property — as defined in Article 2 of the Convention — submitted for inclusion in the World Heritage List, is found to meet one or more of the following criteria. Therefore properties nominated should:
 - (i) be outstanding examples representing *the major stages of the earth's evolutionary history*. This category would include sites which represent the major "eras" of geological history such as "the age of reptiles" where the development of the planet's natural diversity can well be demonstrated and such as the "ice age" where early man and his environment underwent major changes; or
 - (ii) be outstanding examples representing significant ongoing *geological processes, biological evolution and man's interaction with his natural environment*. As distinct from the periods of the earth's development, this focuses upon ongoing processes in the development of communities of plants and animals, landforms and marine and fresh water bodies. This category would include for example (a) as geological processes, glaciation and volcanism, (b) as biological evolution, examples of biomes such as tropical rainforests, deserts and tundra, (c) as interaction between man and his natural environment, terraced agricultural landscapes; or
 - (iii) contain *unique, rare or superlative natural phenomena, formations or features or areas of exceptional natural beauty*, such as superlative examples of the most important ecosystems to man, natural features

5. Justification for inclusion in the World Heritage List (cont.)

(for instance, rivers, mountains, waterfalls), spectacles presented by great concentrations of animals, sweeping vistas covered by natural vegetation and exceptional combinations of natural and cultural elements; or

- (v) *be habitats where populations of rare or endangered species of plants and animals still survive.* This category would include those ecosystems in which concentrations of plants and animals of universal interest and significance are found.

It should be realised that individual sites may not possess the most spectacular or outstanding single example of the above, but when the sites are viewed in a broader perspective with a complex of many surrounding features of significance, the entire area may qualify to demonstrate an array of features of global significance.

In addition to the above criteria, the sites should also meet the conditions of *integrity*.

- *The areas described in (i) above should contain all or most of the key interrelated and interdependent elements in their natural relationships; for example, an "ice age" area would be expected to include the snow field, the glacier itself and samples of cutting patterns, deposition and colonisation (striations, moraines, pioneer stages of plant succession, etc.).*
- *The areas described in (ii) above should have sufficient size and contain the necessary elements to demonstrate the key aspects of the process and to be self-perpetuating. For example, an area of "tropical rain forest" may be expected to include some variation in elevation above sea level, changes in topography and soil types, river banks or oxbow lakes, to demonstrate the diversity and complexity of the system.*
- *The areas described in (iii) above should contain those ecosystem components required for the continuity of the species or of the objects to be conserved. This will vary according to individual cases; for example, the protected area for a waterfall would include all, or as much as possible, of the supporting upstream watershed; or a coral reef area would be provided with control over siltation or pollution through the stream flow or ocean currents which provide its nutrients.*
- *The areas described in (iv) above should be of sufficient size and contain the necessary habitat requirements for the survival of the species.*

a. **Cultural property**

The region contains significant Aboriginal archaeological sites.

Fraser Cave on the Lower Franklin River is one of the six archaeologically richest limestone cave sites in the Western Pacific. A radiocarbon date from the base of part of the cave deposit indicates human occupation in the area about 21,000 years ago. This is now one of the oldest dates in Tasmania for human occupation.

This area is dense forest, but at the peak of the last glacial maximum when the cave was occupied first, the environment almost certainly was open. Further research is proposed into the archaeology, palynology and fauna of this complex and well-preserved cave deposit. It may be claimed already that an antiquity of 21,000 years establishes southern Tasmania as the most southerly known penetration of the earth's land surface during ice age times. The earliest date for Tierra del Fuego is some 11,000 years later. This rich archaeological site therefore offers significant testimony to human adaptability. At that time this bare region must have been windswept and cold, with glaciers on the adjacent mountains and the Antarctic pack-ice extending to within 1000 km of Tasmania.

Extensive undisturbed midden deposits occur on the south and south-west coast. Studies of aspects of these are likely to significantly increase the knowledge of Tasmanian prehistory.

b. **Natural property**

The region comprises most of the last great temperate wilderness remaining in Australia and one of the last remaining in the world.

The three National Parks form a large primitive area with its land and waters and its native plant and animal communities

substantially unmodified by humans and their works. It is large enough to survive as wilderness and to maintain genetic diversity despite influences from surrounding areas and to permit the experience of solitude.

The region satisfies all four criteria required for nomination to the World Heritage List.

- (i) It is a representative of a major stage of the earth's evolutionary history and contains the most glaciated area in Australia. During the last glacial period, the coast of the south west was cut deeply by drainage from the high central plateau, and in the post-glacial sea rise produced by the melting of the polar ice, this coast was subsequently flooded. Port Davey and Bathurst Harbour with their complex of inlets and islands are perfect examples of drowned river valleys.

To the east of this Western coastal platform rise the Western Ranges, a series of ridge-like mountain ranges running parallel to the west coast. As a result of the high rainfall the base of folded Precambrian rock has been exposed and the river systems have excavated valleys along the strike of soft rock, leaving the hard rocks such as white quartzites, quartz, schists and conglomerates to form ridges. The streams in consequence run parallel to the ranges with only major rivers cutting through to the sea. In a sense, this backbone of folded and contorted quartzite is the essence of the South West, bearing the scars of glaciation, abounding in cirques, horn peaks, glacial lakes (often with white sandy beaches) and forming moraines and out-wash plains in many of the valleys.

Glacial ice has contributed to spectacular landform features in the Cradle Mountain-Lake St. Clair National Park and on Frenchmans Cap in the Franklin-Lower Gordon Wild Rivers National Park. Hundreds of lakes and tarns on the west of the Central Plateau are the legacy of a glacial ice cap. The mountains and peaks of Frenchmans Cap and the Cradle Mountain-Lake St. Clair National Park were partly sculpted during Pleistocene glaciations. Depositional landforms in the Cradle Mountain-Lake St. Clair National Park include extensive moraine deposits particularly in the valley above Lake St. Clair. Many of the lower lakes in this National Park have been formed by damming moraines.

There are many geological sites of local, State, national and international significance. A meteorite impact crater with silicate glass fields and 100 m of lacustrine sediments occurs in the upper Andrew River valley and is of international significance. Karst is a scarce resource in Australia and therefore the limestone and dolomite karsts of the Franklin-Lower Gordon Wild Rivers National Park and the Southwest National Park can be seen as nationally important. What is known of the region's geological structure and lithology includes features of importance in

5. Justification for inclusion in the World Heritage List (cont.)

the interpretation of the geology of Tasmania and South eastern Australia. For example the only Tasmanian occurrence of eclogite, a rock rare in Australia, is near Bills Creek within the Franklin-Lower Gordon Wild Rivers National Park. The occurrence is important within the framework of Tasmanian geological history. Rare and unusual rocks within the metamorphosed Precambrian sequences include a quartz-muscovite-epidote schist from Wilson Bight, a calcite-chlorite-phengite quartzite from the Gordon River, an actinolite-epidote-sphene schist, from the Gordon River and a hornblende-plagioclase schist from Bond Bay while a Precambrian meta-dolerite dyke occurs at Kathleen Island. Metamorphic relationships in Precambrian rocks opposite Trumpeter Island are important in establishing the sequence of geological events.

- (ii) The nominated region is an outstanding example of one of the few remaining temperate areas which is of sufficient size for natural processes to continue. The geology and climate of the three Parks have resulted in a unique environment which contains 83% of Tasmania's wilderness area.

The principal vegetation types in the region include temperate rainforests, sedgelands, and alpine heaths which are the Australian strongholds of Gondwana land elements of the flora.

The *Nothofagus* rainforests constitute a primeval vegetation type in Australia which is being gradually replaced by the "Australian element" type of flora.

The temperate rainforests, dominated by *Nothofagus cunninghamii* extend from sea level to over 1000 metres altitude, but occur principally along river valleys, and fire protected slopes.

An impressive tract of *Nothofagus cunninghamii* lowland rainforest occurs along the Lower Franklin and Lower Gordon Rivers. These forests require fire intervals of no less than 300 years to reach maturity but such closed-forests have been in retreat since the middle Holocene probably due to increasing fire frequency as well as climatic change and decreasing soil fertility. Human activities in remote areas and the use of intense fires to promote commercial eucalypt regeneration have hastened the trend.

Tasmania has custodial responsibility for maintaining Australia's last remaining large areas of cool temperate rainforest.

The sedgeland consists predominantly of buttongrass, a tussock sedge with distinct round "buttons" of seeds on the ends of long stalks. The buttongrass plains cover a large area of poorly drained peaty soils and have replaced the forest in some areas which have a history of recurrent fires.



14. Myrtle Beech.



17. Alpine heath community in flower.



15. Huon pine, perhaps 2,000 years old.



18. Cushion plant, alpine heath community.



16. Pencil pines and deciduous beech.



19. Deciduous beech in Autumn.



20. Aerial view of Franklin River.



23. Kutikina Cave.



21. River near archaeological sites.



22. Stratigraphy, Kutikina Cave.



24. Deena Reena Cave, Franklin River valley.

The alpine heath or montane moorland consists mainly of dwarf shrubbery comprising many plants unique to Tasmania such as *Eucalyptus vernicosa* (the smallest species of the genus), *Leptospermum rupestre*, *Richea scoparia*, *R. acerosa*, and *Epacris gunnii*. Patches of coniferous forest occur sporadically throughout the higher altitude areas.

- (iii) The region contains unique, rare and superb natural features and areas of exceptional natural beauty. Virtually all other areas in the temperate zone have been so substantially modified by man that their pristine wilderness characteristics have been destroyed.

The geology is varied in terms of age, lithology and structure but tectonic, geochemical and geomorphic processes have worked on the structural geology to produce a variety of scientifically interesting and aesthetically stimulating landforms and landscape types. In a region so diverse, wild, distinctive and spectacular it would be an arbitrary exercise to list particular landscapes as outstanding.

- (iv) The region contains a diversity of habitats where populations of rare and endangered species of plants and animals still survive.

Lakes, lagoons and tarns are one of the regions habitat types. For example, three meromictic lakes on the Lower Gordon River, which have been studied in detail, are the only ones reported in Tasmania, and two of them are thought to be the shallowest meromictic lakes in the world. Such waterbodies possess biological and limnological importance.

Flora

Approximately 165 plant species endemic to Tasmania have been reported in the area and 29 of these are only to be found in the Southwest. A further 19 species are considered endemic to the Central Plateau, part of which is included in the Cradle Mountain-Lake St. Clair National Park.

Some of these endemic plants are rare and endangered.

Some of these plants include:

Lomatia tasmanica: a tall shrub known only from dense rainforests on the ranges between Port Davey and the southern coast.

Isophysis tasmanica: an attractive small plant with deep purple delicate flowers which grows only in the most exposed and infertile mountain soils.

Acradenia frankliniae and *Dacrydium franklinii*: These 2 trees are mainly confined to riverine habitats and their population strongholds occur in the Franklin-Lower Gordon Wild Rivers National Park.

5. Justification for inclusion in the World Heritage List (cont.)

Leptospermum riparium
Colobanthus affinis
Epilobium perpusillum
Lindsaea trichamanoides
Oreomyrrhis sp.

Other species known only from the West and South-West include:

Aciphylla procumbens
Dichosciadium ranunculaceum, var. *tasmanicum*
Diplaspis cordifolia
Oschatzia saxifraga
Nothopanax gunnii
Anodopetalum biglandulosum
Archeria eriocarpa
Archeria hirtella
Epacris corymbiflora
Epacris mucronulata
Leucopogon milliganii
Prionotes cerinthoides
Sprengelia distichophylla
Eucalyptus vernicosa
Microlaena tasmanica
Orites milliganii
Anemone crassifolia
Gewn talbotianum
Phelbalium oldfieldii
Euphrasia hookeri
Pimelea milliganii
Gaimardia fitzgeraldii
Haemodorum distichophyllum
Blandfordia punicea
Milligania longifolia
Microlaena tasmanica

Endemic plants from the highlands of the Central Plateau, West and South-West are:

Diselma archeri
Microcachrys tetragona
Microstrobos niphophilus
Athrotaxis cupressoides
A. selaginoides
A. laxifolia
Actinotus moorei
Ewartia catipes
Archeria serpyllifolia
Dracophyllum mimum
Richea acerosa
Trochocarpa cunninghamii
T. gunnii
Pernettya lanceolata
Mitrasacme archeri
Plantago gunnii

Cenarrhenes nitida
Pimelea pygmaea
Centrolepis monogyna

Fauna

Only one systematic survey, the Lower Gordon River Scientific Survey, has been conducted in a part of this region. Nevertheless, knowledge of the vertebrate fauna at least is reasonably complete and is sufficient to stamp this area as of great importance for the conservation of Australian fauna.

Twenty-one species of native mammals have so far been recorded in the region, representing some two-thirds of the 32 species in Tasmania.

The rare Broadtoothed rat *Mastacomys fuscus* is confined to the button-grass sedgeland and adjacent ecotonal communities. This region is the species Tasmanian and Australian stronghold. The endangered White-footed Dunnart has been recorded in the region but little is known of its population or habitat.

Endemic species occurring in the area include the Tasmanian Devil *Sarcophilus harrisii* and Long-tailed Rat *Pseudomys higginsii*. Other species of note include the Pademelon Wallaby *Thylogale billandierii*, Bettong *Bettongia gaimardii* and Barred Bandicoot *Peremeles gunnii* which are all rare or endangered on the Mainland Australia. The lizard species *Pseudonoia palfreymani* occurs only on Pedra Branca.

The Orange-bellied Parrot *Neophema chrysogaster* is an endangered species which breeds only in Southwest Tasmania. This bird is one of the rarest parrots in the world with a known population in the vicinity of 200 birds.

Two other species, the Ground Parrot and Azure Kingfisher utilise habitats which are restricted to western Tasmania.

The Azure Kingfisher frequents undisturbed riverine habitats now restricted to the Franklin-Lower Gordon Wild Rivers and Southwest National Parks. The Ground Parrot is a bird of the buttongrass sedgelands and its stronghold is Southwest Tasmania.

Signed (on behalf of State Party)

Full name

Title

Date

TABLE 1

**PROGRESS OF RESERVATION
SOUTHWEST NATIONAL PARK**

| | | | |
|-------------------------------------------------------------------------------------------------------|-------------------|------------|------------------------------|
| Lake Pedder National Park | 23 March, 1955 | 23,880 ha | |
| Lake Pedder National Park Extension (subsequently known as Southwest National Park) | 16 October, 1968 | 191,625 ha | Remaining area 191,589 ha |
| Partial Revocation | February, 1969 | 36 ha | |
| Southwest National Park | | | |
| Reproclamation and extension | 3 November, 1976 | 372,300 ha | |
| Extension | 17 November, 1976 | 27,140 ha | |
| Extension | 1 December, 1976 | 3,800 ha | |
| Extension | 13 May, 1981 | 442,240 ha | TOTAL AREA |

TABLE 2

**PROGRESS OF RESERVATION
FRANKLIN-LOWER GORDON WILD RIVERS NATIONAL PARK**

| | | | |
|-----------------------------------------------------------------------------------------------------------------|---------------|------------|-------------------|
| Gordon River State Reserve | 3 May, 1939 | 4,822 ha | |
| Frenchmans Cap National Park | 14 June, 1941 | 13,000 ha | |
| Lyell Highway State Reserve | 3 May, 1939 | 7,284 ha | |
| The above reserves incorporated in the proclamation of the Franklin- Lower Gordon Wild Rivers National Park. | | | |
| Franklin- Lower Gordon Wild Rivers National Park | 13 May, 1981 | 195,200 ha | TOTAL AREA |

TABLE 3

**PROGRESS OF RESERVATION OF CRADLE MOUNTAIN-
LAKE ST. CLAIR NATIONAL PARK**

SANCTUARY AND CONSERVATION AREA STATUS

Animals and Birds Protection Act, 1919

| | | |
|--------------------|---------|---------|
| 31 May, 1927 | +63,943 | 63,943 |
| 11 September, 1934 | +38,851 | 102,794 |
| 23 June, 1936 | +21,854 | 124,648 |
| 20 December, 1939 | +12,626 | 137,274 |

Note: Proclamations under the Scenery Preservation Act since 1940 and the National Parks and Wildlife Act since 1970 have also covered the protection of fauna.

SCENIC AND STATE RESERVE STATUS

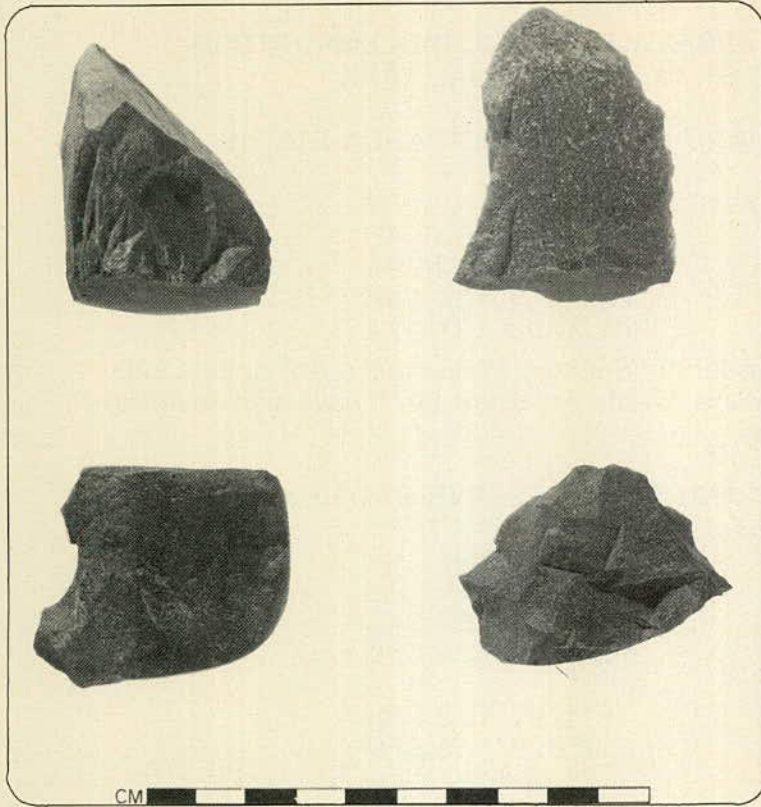
Under Scenery Preservation Act 1915

| Date of gazettal | Hectares | |
|------------------------------------------------------------------|----------|---------|
| | Changes | Total |
| 16 May, 1922 | +63,943 | 63,943 |
| 3 May, 1936 | +60,705 | 124,648 |
| 3 May, 1939 — Wolfram mine | -1,295 | 123,353 |
| 3 July, 1940 | +12,626 | 135,979 |
| 4 September, 1940 — St. Clair Lagoon | -255 | 135,724 |
| 21 April, 1948 — Pencil Pine | +2,191 | 137,915 |
| 15 October, 1952 — Dove River | +367 | 138,282 |
| 12 August, 1970 — private property acquired, Cradle Valley | +184 | 138,466 |
| 18 August, 1971 — Re-proclaimed as | | 124,850 |

Under National Parks and Wildlife Act, 1970

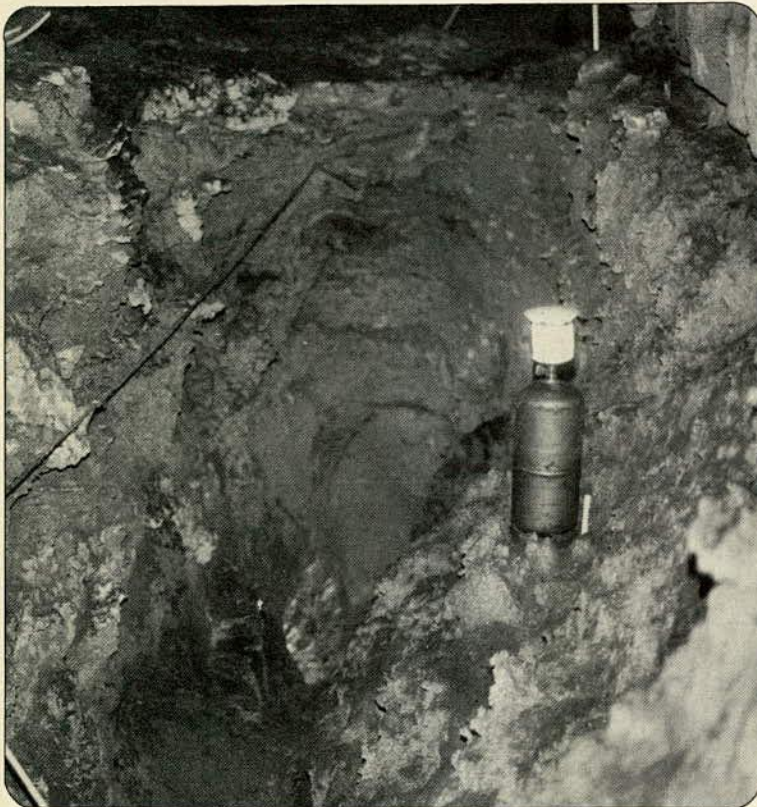
| | | |
|--------------------|--------|---------|
| Area re-calculated | | 124,848 |
| 17 April, 1974 | +1,214 | 126,062 |
| 28 December, 1977 | +107.2 | 126,169 |
| 22 February, 1978 | -1,214 | 124,955 |
| 22 February, 1978 | +1,250 | 126,205 |
| 24 June, 1981 | +5,710 | 131,915 |

ha TOTAL AREA



25.

Stone tools from Kutikina (previously Fraser) Cave, Franklin River Valley. The stones were obtained from smashed river pebbles and then flaked to make a variety of core-scrapers and sharp-edged flakes, suitable for cutting up carcasses and manufacturing wooden artefacts. Bone tools also have been found, which may have been used for making skin cloaks. These stone tools came from a layer of limestone rubble in the middle of the excavated section, dated to about 17,000 years ago, the peak of the last glaciation. (Photo D. Markovic courtesy R. Jones.)



26.

This ice age occupation deposit has been revealed by natural erosion in the largest cave yet discovered on the Franklin-Gordon system, a 700 metre long limestone cave now named Deena Reena, Aboriginal for tear-drop. Deena Reena lies about 15 kilometres south of Kutikina Cave and is almost twice as large. The human occupation debris is up to five metres thick and consists of stone tools, animal bones and ancient campfires. Charcoal from above the base of the deposit has been radiocarbon dated to 20,500 years old. This cave, like Kutikina, was inhabited at the peak of the last ice age. (Photo R. Jones.)

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