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# *Fossicking Areas*

## *in Tasmania*



**MINERAL RESOURCES TASMANIA**

DEPARTMENT of INFRASTRUCTURE, ENERGY *and* RESOURCES





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# *Fossicking Areas in Tasmania*

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May 2001  
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## Fossicking Areas — General Information

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There are many localities within Tasmania where interesting lapidary and mineralogical material occur. In recognition of the recreational activity of fossicking, some of the best of these areas have been set aside for the use of fossickers.

The areas shown in this booklet have been declared official Fossicking Areas under the *Mineral Resources Development Act* 1995. This means that the areas shown are specially set aside for the use of fossickers and gem and mineral collectors. Under some circumstances, Fossicking Areas may be included in an Exploration Licence.

The areas extend from the ground surface to a depth of two (2) metres.

Explorers will be expected to use the same prospecting methods as fossickers; i.e. no costeaning, trenching or large-scale pitting. However drilling will be allowed with the written permission of the Director of Mines, subject to conditions to protect the integrity of the site.

Conditions apply to the use of Fossicking Areas. Fossickers should avoid causing undue damage to the land, and should take only a 'fair share' of material. Don't be greedy! Fossicking areas are set aside for the use of amateur fossickers and cannot sustain any degree of commercial collecting.

Please read the following conditions of use of these areas and be sure to abide by them when in the field.

## Personal Protection

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- ❑ Wear a broad-rimmed hat whenever working in the sun and use a sun-block preparation. The Tasmanian sun may feel cool, but it can burn rapidly.
- ❑ Always use appropriate clothing — take a warm jumper, raincoat and wear sturdy footwear.
- ❑ Be prepared for snow and rain at any time of year, and very sudden changes in weather, particularly in western Tasmania.
- ❑ Wear goggles or safety glasses when smashing rocks.
- ❑ Gloves will help protect your hands.
- ❑ Take extreme care when fossicking near old mine workings or pits, and avoid entering such.
- ❑ Avoid visiting the isolated areas alone, and always let someone know of your plans.

## Fossicking and Gem Clubs

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Club contacts change frequently. A list of the most recent contact addresses can be obtained from:

Registrar of Mines  
Mineral Resources Tasmania  
PO Box 56  
Rosny Park Tasmania 7018

Telephone: (03) 6233 8341  
Facsimile: (03) 6233 8338  
Email: [info@mrt.tas.gov.au](mailto:info@mrt.tas.gov.au)

## Conditions relating to Fossicking Areas

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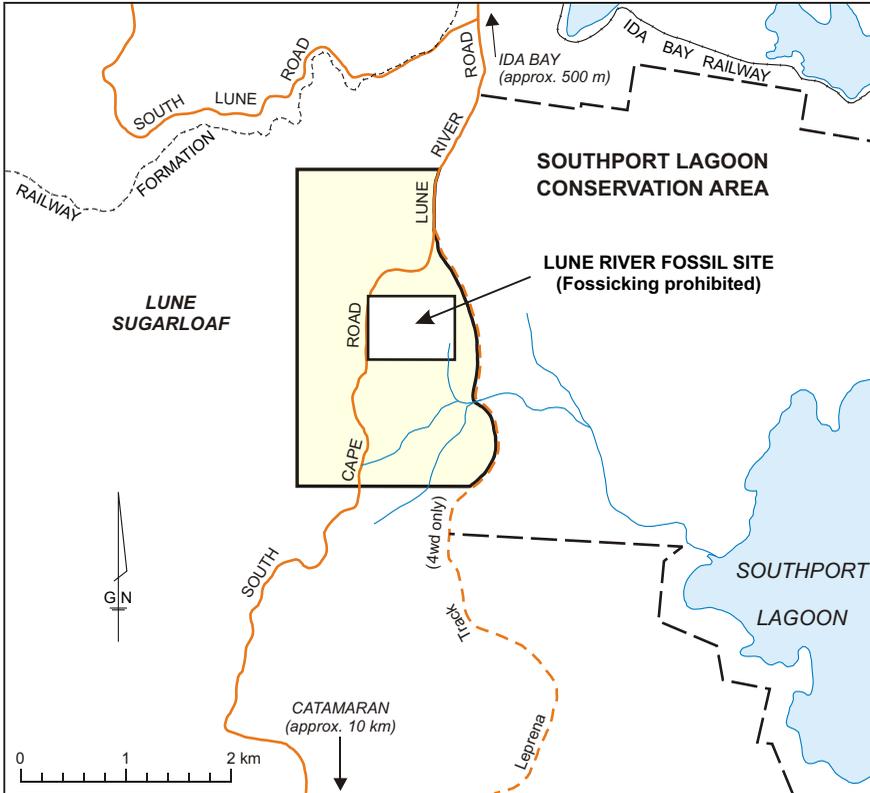
Fossickers do not need a permit to fossick in the designated *Fossicking Areas*, although the conditions on pages 6 and 7 of this booklet **must be followed**.

Fossicking outside of designated *Fossicking Areas* is ILLEGAL without a prospecting permit. Further details are available from the Registrar of Mines.

1. The areas are to be used by amateur fossickers only and commercial removal of material is prohibited.
2. Fossicking Areas are on land managed by various agencies. Fossickers should be aware that entry into some areas may be restricted due to timber harvesting, reseeded, burn-offs and so on.
3. Only hand fossicking for material is allowed. The use of power-operated equipment or mechanical machinery, or any explosives, is prohibited. All care is to be taken in the fossicking of materials and any diggings shall be restored to normal surface level before leaving the area.
4. No fossicker shall remove from any area, in a period of 48 hours, a quantity of gemstones, semi-precious stones or rocks or any combination thereof exceeding 10 kg.
5. Any material capable of being removed by hand becomes the property of the fossicker. If the material found is of such weight that it cannot be carried by hand by a single person it shall remain the property of the Crown and shall not be removed from the area nor shall it be destroyed. The presence of such material shall be reported to the Director of Mines.
6. Fossickers will ensure that run-off or drainage from the operation is discharged so as not to erode or pollute any land, stream or creek.
7. Fossickers will conduct operations in a manner so as not to cause or aggravate soil erosion.

8. No major excavation is permitted on any natural stream bank. Banks must not be undermined.
9. There will be no fossicking in roadside gutters, or extraction from road embankments.
10. No track cutting is permitted.
11. No timber will be cut, ring-barked or removed.
12. No trees or shrubs having a trunk diameter of more than 100 mm will be cleared.
13. Rare or unusual specimens of silicified plant material found on Crown land remain the property of the Crown so as to ensure that opportunity exists for proper study of the palaeofloras of these areas. Discovery of material that is not recognised as common should be referred to the Parks and Wildlife Service.
14. Discovery of mineral specimens not recognised as common should be referred to Mineral Resources Tasmania.
15. No Aboriginal artefacts or site, or historic relics (including mining relics) or site, should be damaged or removed.
16. No speleothems (stalactites etc.) are to be removed from limestone caves, whether these be previously broken or not. Removal of speleothems is an offence and offenders can be prosecuted.
17. No excavation is to be made in any sinkhole in a karst area or within 10 metres of the entrance of any cave.
18. No fossicking is permitted within any cave, nor in any underground workings.
19. Vehicles will not be taken off formed tracks.
20. No fires will be lit without the permission of the relevant land manager.

# Lune River



## Access

This 5 km<sup>2</sup> area is located about 100 km south of Hobart, and is reached via Huonville on a good sealed road as far as Lune River. A collapsed bridge has made the Leprena Road impassable to normal vehicles after 1.5 kilometres.

## Collecting area

Over an area east of Lune Sugarloaf, starting 2 km south from the old Ida Bay township, extending east to cover flats surrounding the now disused (old) road to Catamaran. The main collecting area is in the vicinity of the junction of the South Cape and Catamaran roads, at approximately AMG reference 491 800 mE, 5 187 400 mN. Material is widespread on the surface, in outcrop, creeks and small pits.

Please note that collecting is not permitted in the wildlife sanctuary, which covers most of the area to the east of the Leprena Road. **Collecting within the proclaimed Lune River Fossil Site is not permitted.**

### *Material*

The area yields petrified fern (commonly, but incorrectly, described as manfern), agate, petrified wood and jasper. The petrified fern is highly prized in lapidary circles and this is one of the few sources of the material known within Tasmania. The material is derived from the weathering of some Jurassic basalt and sedimentary rocks.

### *Special conditions*

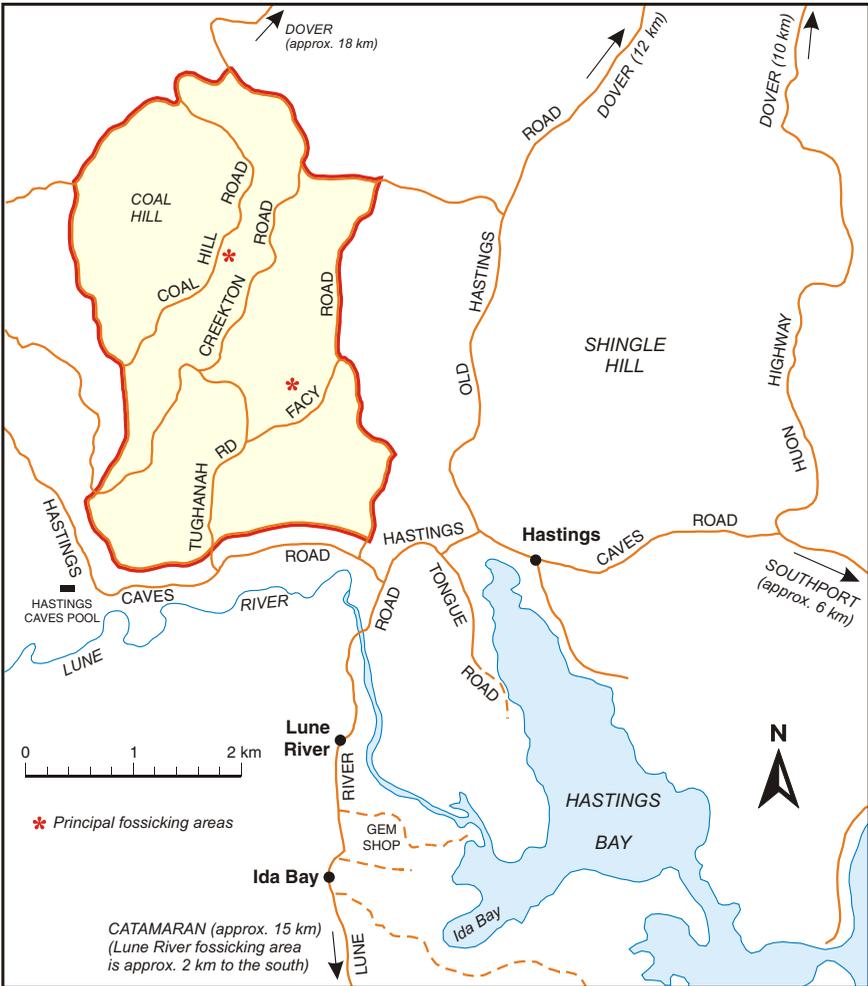
- ❑ The Southport Lagoon Wildlife Sanctuary is excluded from the Fossicking Area.
- ❑ No speleothems (stalactites, etc.) to be collected from any caves in the vicinity of this Fossicking Area.
- ❑ Unusual specimens of petrified fern must be submitted to the Parks and Wildlife Service to allow study of palaeofloras represented by these finds.
- ❑ The Fossicking Area excludes a block of private property and the Southport Lagoon Wildlife Sanctuary, as shown on the attached map.
- ❑ Open fires are not to be lit and there will be no 'burning off' to facilitate digging without the approval of the District Forester.

### *Additional information*

Fossickers sometimes journey to Benders Quarry, off South Lune Road, whilst in the area. Specimens of travertine and calcite crystals have been found in the quarried limestone. The **quarry has been closed** and the area is now National Park within the Tasmanian Wilderness World Heritage Area managed by the Parks and Wildlife Service. Collection of specimens from the quarry site is **ILLEGAL** without the permission of the Parks and Wildlife Service.

Laumontite, heulandite and other zeolites (crystals and massive forms) have been collected at another quarry on South Lune Road, operated by Forestry Tasmania. Entry into this quarry can only be made with the permission of the District Forester.

# Coal Hill



## Access

This 9 km<sup>2</sup> area is about 90 km SSW of Hobart, and is reached via Huonville on good sealed roads as far as Lune River or Dover, and then on fair unsealed roads and forestry tracks. The Lune River fossicking area is nearby. Travellers should watch out for log trucks and forestry operations.

### ***Collecting area***

Over an area around and to the southeast of Coal Hill, approximately four kilometres northwest of Hastings. Collecting is best in recently clear-felled areas.

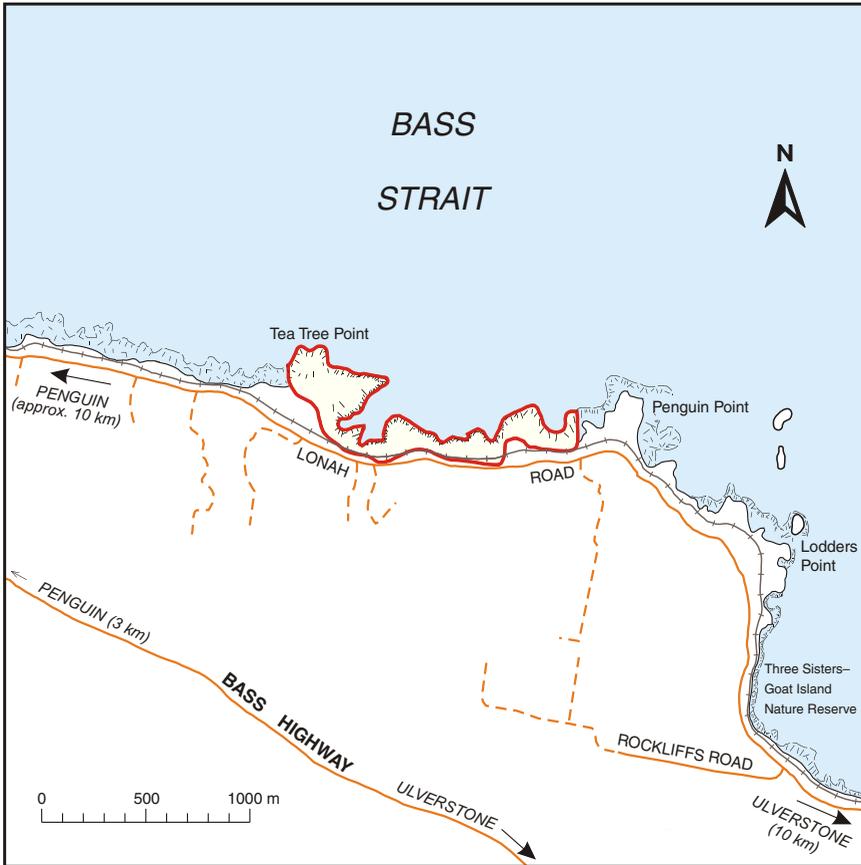
### ***Material***

The area yields fine specimens of agate and chalcedony. Some agates may contain geodes with crystalline quartz, rarely amethystine.

### ***Special conditions***

- No fossicking within 200 m of the centreline of the Hastings Caves Road.
- No fossicking to take place in any area of new plantation or regeneration until the trees are five metres tall or five years old, whichever is the sooner, subject to the discretion of the District Forester.
- No fossicking to take place within any area where a forestry operation is being carried out (e.g. logging, clearing, burning, sowing or planting).
- Fossickers abide by the Forestry safety, health and welfare regulations.

# Penguin



## **Access**

This 0.5 km<sup>2</sup> area is about 300 km NNW of Hobart, and is reached via Penguin or Ulverstone on good sealed roads. Because of the coastal location, tidal charts may need to be consulted.

## **Material**

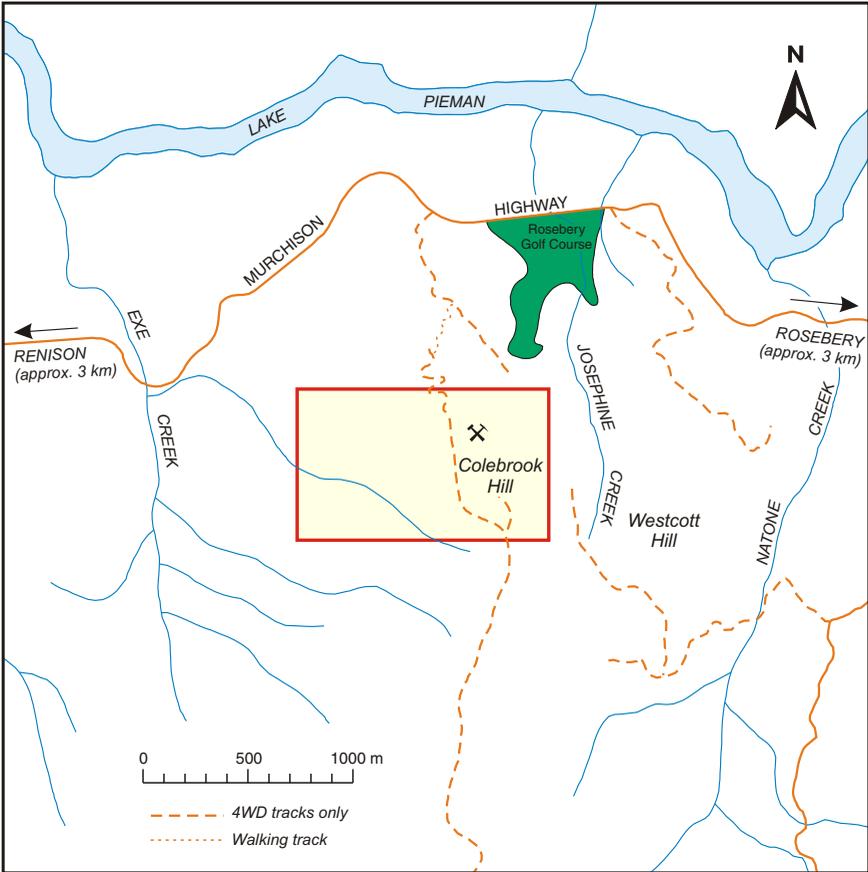
Jasper

### *Special Conditions*

Jasper occurs as small water-worn pebbles scattered along the foreshore. Pebbles are found near to, and between large, dark-coloured rocks which are a type of basalt. These foreshore rocks form part of the Penguin Geological Monument, as recognised by the Geological Society of Australia. The rocks near Tea Tree Point are part of the Motton Spillite, and include good examples of basalt 'pillows'. This location is used by teaching excursions at secondary and tertiary level, and fossickers are requested not to damage the basalt formation.

Fossickers may collect the loose jasper pebbles but must not damage the rock formations.

# Colebrook Hill



## Access

This 0.5 km<sup>2</sup> area is about 200 km northwest of Hobart, and is reached via Queenstown or Rosebery on the Murchison Highway, a good sealed road. Access to the mine is via a disused vehicular track which leaves the Murchison Highway approximately 500 metres west of the Rosebery Golf Course. Follow the vehicular track some 600 metres to the start of a walking track which heads more directly uphill until it joins another disused vehicular track leading directly past the fossicking area.

Travellers should be prepared for snow and other severe weather conditions at all times (both on the road and in the bush).

## Collecting area

The collecting area lies at the top of Colebrook Hill, 4.5 km southwest of Rosebery. A large open cut on the southern side of the hill, close to the summit (at AMG reference 374 800 mE, 5 371 700 mN) affords a good collecting location.

## Material

This location has produced Australia's best ferroaxinite specimens, some of which are world class. The deposit occurs in an unusual rock type, sometimes described as allimurite or axinite-hornfels. The rock has formed because boron-rich solutions from an underlying granite reacted with limestone or other reactive calcium-rich rock types. The mine was originally worked for copper, but silver, gold, tin, lead, zinc and tungsten minerals are also present. The deposit is very complex and of great mineralogical interest, and is presently being worked for specimen minerals, most of which need to be acid-treated to dissolve the enclosing calcite.

Minerals, many rare, that can be collected and identified in hand specimens include:

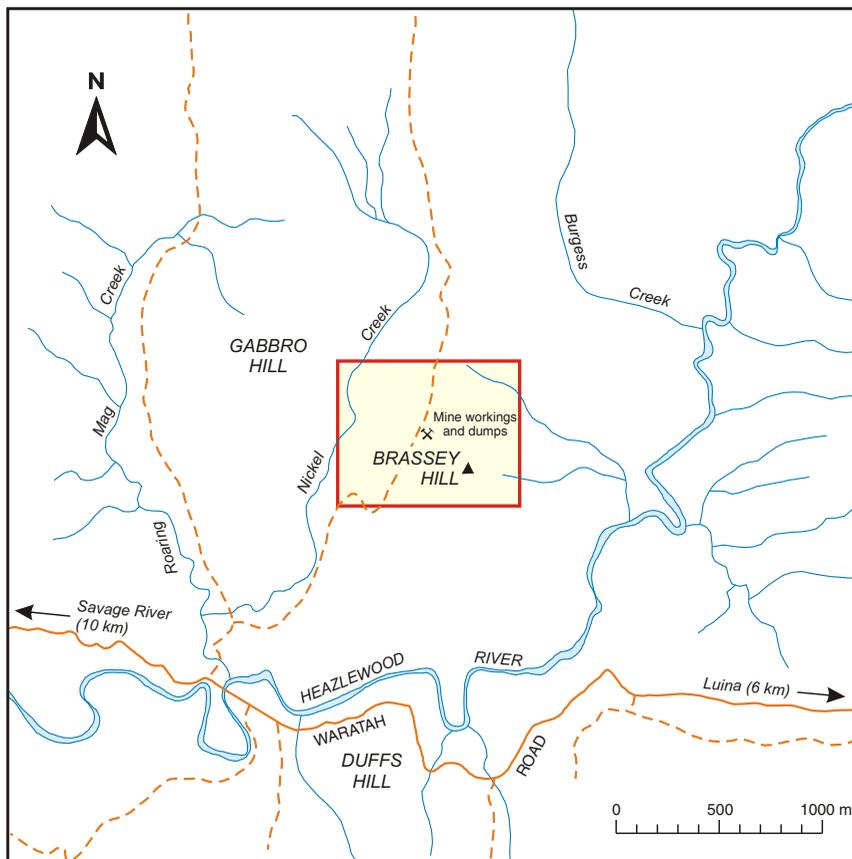
- *Calcite*  $\text{CaCO}_3$  — very common as white to colourless massive material, enclosing other minerals, and less commonly as well-formed rhombohedral crystals.
- *Chalcopyrite*  $\text{CuFeS}_2$  — common as massive or granular material with a bright brassy yellow colour and rough fracture, sometimes tarnished purplish.
- *Danburite*  $\text{CaB}_2(\text{SiO}_4)_2$  — rarely observed as pale yellow to colourless orthorhombic crystals.
- *Datolite*  $\text{CaBSiO}_4(\text{OH})$  — uncommon, as glassy white or very pale blue-green, short prismatic monoclinic crystals to about 20 millimetres.
- *Ferroaxinite*  $\text{Ca}_2(\text{Fe,Mn})\text{Al}_2\text{BSiO}_4\text{O}_{15}\text{OH}$  — this is the dominant mineral in the lodes and occurs as massive or crystalline material of a deep violet colour. Well-formed wedge-shaped triclinic crystals up to 20 mm in length occur, and may be very lustrous and attractive.
- *Loellingite*  $\text{FeAs}_2$  and *Arsenopyrite*  $\text{FeAsS}$  — loellingite is rather abundant as massive material or as excellent orthorhombic crystals to about 10 mm, with a bright silver-grey colour. Arsenopyrite has also been reported, but this mineral is difficult to distinguish without special tests.

- *Quartz*  $\text{SiO}_2$  — this is quite common as massive material and as hexagonal crystals, milky white in colour, to about 20 mm in length.
- *Tremolite-actinolite*  $\text{Ca}_2(\text{Mg,Fe})_5\text{Si}_8\text{O}_{22}(\text{OH,F})_2$  — this occurs as a massive, coarse-grained fibrous material, and as radiating aggregates and ragged to fibrous monoclinic crystals, up to a centimetre or so in size. The colour is usually a pale grey-green.
- *Scheelite*  $\text{CaWO}_4$  — this mineral has been reported to occur rarely as small groups of white tetragonal crystals.

Other minerals reportedly found at this locality include:

pyrite	pyrrhotite	bornite
galena	sphalerite	marcasite
tetrahedrite	azurite	olivinite (var. leucochalcite)
malachite	cuprite	

# Lord Brassey Mine



## *Access and collecting area*

The Lord Brassey mine is located on Brassey Hill, about 17 km west of Waratah in western Tasmania. Access to the 0.6 km<sup>2</sup> fossicking area is via a very rough and steep four-wheel drive track heading north from the Corinna Road, a few hundred metres west of the Heazlewood River picnic area. The mine is reached after travelling approximately 1.5 km along the 4WD track. Most fossicking is done on the dump adjacent to the mine (adit) entrance close to the top of the hill, at approximately AMG reference 359 300 mE, 5 408 500 mN.

## *The mine and its minerals*

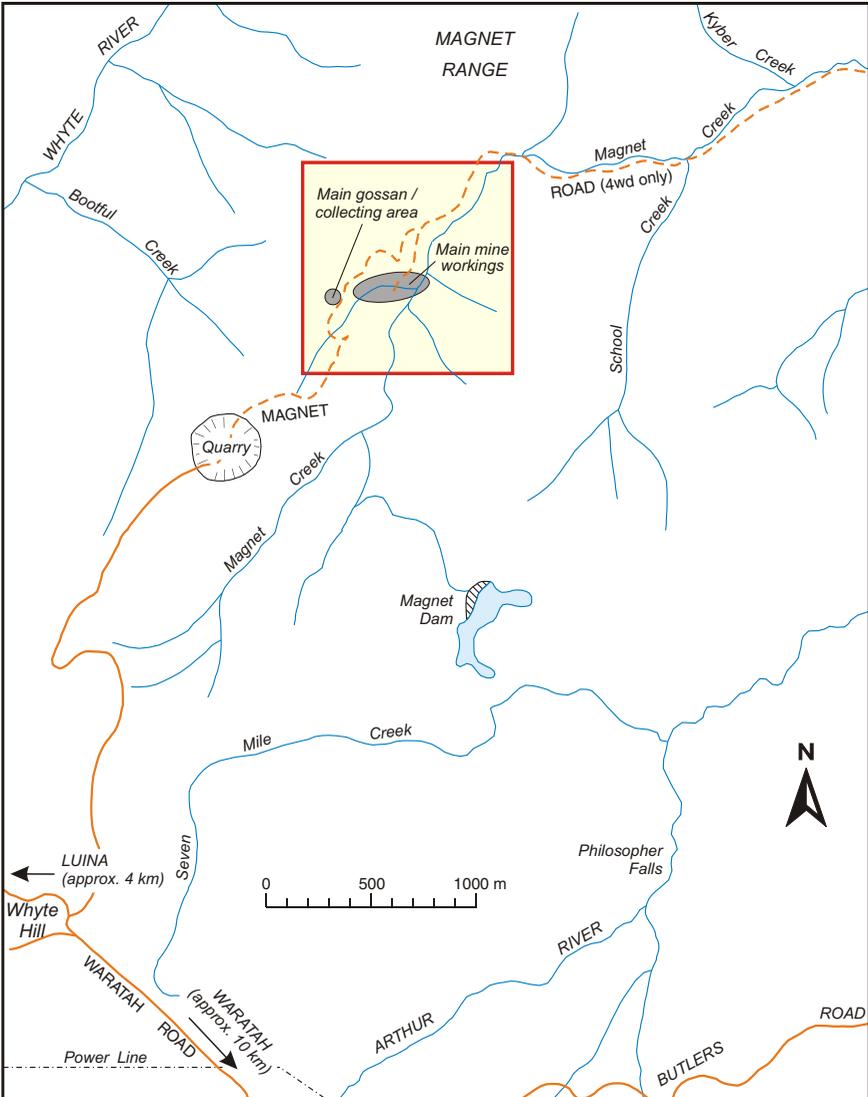
This small mine operated on a nickel sulphide occurrence in ultrabasic rocks (serpentinite and pyroxenite). The sulphide ores probably formed during deformation of these rock types, and later weathering converted some of the sulphides into carbonates. Minerals, many rare, that can be collected and identified in hand specimens include:

- *Andradite*  $\text{Ca}_3\text{Fe}_2(\text{SiO}_4)_3$  — ‘chrome’ green veinlets in serpentine.
- *Antigorite*  $\text{Mg}_3\text{Si}_2\text{O}_5(\text{OH})_4$  — apple green serpentine.
- *Awaruite* (Ni,Fe) — metallic white, rusty.
- *Chrysotile*  $\text{Mg}_3\text{Si}_2\text{O}_5(\text{OH})_4$  — white, asbestiform serpentine.
- *Clinochlore*  $\text{Mg}_6(\text{Si,Al})_4\text{O}_{10}(\text{OH})_8$  — chlorite, dark green.
- *Diopside*  $\text{CaMgSi}_2\text{O}_6$  — white veins in serpentine.
- *Dypingite*  $\text{Mg}_5(\text{CO}_3)_4(\text{OH})_2 \cdot 5\text{H}_2\text{O}$  — pale blue to white, botryoidal crusts on serpentine.
- *Heazlewoodite*  $\text{Ni}_3\text{S}_2$  — bronzy yellow metallic patches in serpentine.
- *Hellyerite*  $\text{NiCO}_3 \cdot 6\text{H}_2\text{O}$  — pale blue coatings and small crystals, <2 mm.
- *Lizardite*  $\text{Mg}_3\text{Si}_2\text{O}_5(\text{OH})_4$  — black serpentine.
- *Magnetite*  $\text{Fe}_3\text{O}_4$  — small black grains, in serpentine.
- *Molybdenite*  $\text{MoS}_2$  — small patches of massive dark grey to occasionally purple grey.
- *Opal*  $\text{SiO}_2$  — glassy veinlets in serpentine.
- *Pentlandite*  $(\text{Fe,Ni})_9\text{S}_8$  — brassy yellow metallic patches in serpentine.
- *Reevesite*  $\text{Ni}_6\text{Fe}_2^{3+}(\text{CO}_3)(\text{OH})_{16} \cdot 4\text{H}_2\text{O}$  — a lemon yellow crust on sulphides in serpentine.
- *Retgersite*  $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$  — pale to mid blue, powdery crusts.
- *Theophrastite*  $\text{Ni}(\text{OH})_2$  — a green crystalline crust on slickensided serpentine.
- *Zaratite*  $\text{Ni}_3(\text{CO}_3)(\text{OH})_4 \cdot 4\text{H}_2\text{O}$  — emerald green, blue green and olive green coatings and mammillary, stalactitic or amorphous encrustations along the shear planes and joint surfaces of the serpentine.

### *Special conditions*

1. Historic mining relics occur in this area. Fossickers are asked to respect these relics by avoiding disturbance of historic workings and not collecting artefacts (e.g. bottles, pieces of machinery, etc.) from this area.
2. **UNDER NO CIRCUMSTANCES** should fossickers enter the disused adit.

# Magnet Mine



## *Collecting area and access*

The old Magnet mine is located six kilometres directly west of Waratah, although access is by a somewhat circuitous route. The mine is reached by traversing a good unsealed road (the Magnet Road) leading off

the sealed Corinna Road opposite Whyte Hill (on which a Telecom tower has been erected). This junction is approximately 12 km west of town of Waratah. The main collecting area is the ferromanganese gossan, which is located above the ruins of the old mill beside the access road (at AMG reference 370 100 mE, 5 410 650 mN). The collecting point is reached after travelling approximately 3 km along the unsealed road and passing through a gravel pit. The Magnet Road continues back to Waratah, but the Magnet Creek crossing is usually impassable by normal vehicles.

### *Material*

The site is important as it is possibly the only known location at which yellow 'chrome' cerussite has been found in the world, and is one of only a few locations for crocoite.

This mine has been intermittently worked for silver, lead and zinc for many years, and more recently for specimen minerals. The primary ore consists of sulphide minerals in a banded carbonate vein in basic and ultrabasic rocks. There is an extensive oxidised zone developed above this, with many interesting secondary minerals in the gossan.

### *Collecting*

Minerals that can be collected on site include:

- ❑ *Anglesite*  $\text{PbSO}_4$  — occurs uncommonly as attractive white orthorhombic crystals to a few millimetres, with crocoite, pyromorphite and embolite.
- ❑ *Argentite* (acanthite)  $\text{Ag}_2\text{S}$  — small patches and scales of this metallic grey mineral occur in galena.
- ❑ *Arsenopyrite*  $\text{FeAsS}$  — occurs commonly as small prismatic crystals to a few millimetres in vughs in siderite and quartz.
- ❑ *Boulangerite*  $\text{Pb}_5\text{Sb}_4\text{S}_{11}$  — this grey metallic sulphide usually occurs as fibrous or fine-grained bands with galena.
- ❑ *Cerussite*  $\text{PbCO}_3$  — this mine is famous for its 'chrome cerussite', which occurs rather abundantly as very attractive crystalline aggregates of yellow crystals, possibly coloured by traces of chromium. More normal white to colourless cerussite also commonly occurs at the mine.
- ❑ *Chalcophanite*  $(\text{Zn},\text{Mn},\text{Fe})\text{Mn}_2\text{O}_5 \cdot 2\text{H}_2\text{O}$  — this mineral occurs as finely drusy masses of lustrous purplish black hexagonal crystals on psilomelane, with small cerussite crystals. It is also massive and dark brown.

- *Chalcopyrite*  $\text{CuFeS}_2$  — this mineral occurs as fine grains in primary ore, with sphalerite and siderite.
- *Chlorargyrite*  $\text{AgCl}$  — this mineral forms waxy masses and crusts, varying from yellow to green when fresh, darkening to violet brown with exposure to light. It is an important secondary silver ore in the gossans. It has been called ‘embolite’, the bromian variety.
- *Chromite*  $\text{FeCr}_2\text{O}_4$  — occurs as small, lustrous, black crystals to one millimetre in the green country rock.
- *Crocoite*  $\text{PbCrO}_4$  — this rare mineral is comparatively common here as attractive, fine, monoclinic prismatic crystals to 50 mm, with a bright orange to red colour. The crystals occur as entangled masses, as single crystals on gossan, or intergrown with yellow ‘chrome cerussite’. Terminated crystals, unusual for this mineral, also occur.
- *Dolomite*  $\text{Ca}(\text{Fe},\text{Mg})(\text{CO}_3)_2$  — common as a gangue mineral in the primary ore, with a white to brown colour, often described as ankerite. These banded ores may make attractive specimens.
- *Galena*  $\text{PbS}$  — this metallic grey mineral with perfect cubic cleavages was an important primary ore of lead, and is still common.
- *Goethite*  $\text{FeO}(\text{OH})$  — an important constituent of the gossans. Usually massive, powdery yellow to brown and black when massive.
- *Greenockite/Hawleyite*  $\text{CdS}$  — this occurs as a bright yellow powdery coating on gossan.
- *Lepidocrocite*  $\text{FeO}(\text{OH})$  — this mineral occurs as red patches with anglesite on goethite.
- *Mimetite*  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$  — relatively common in the gossans as small, colourless to yellow, orange, red and brownish-green hexagonal prismatic crystals, containing a little chromium. Sometimes described incorrectly as vanadinite, endlichite, pyromorphite or carminite.
- *Muscovite*  $\text{KAl}_3\text{Si}_3\text{O}_{10}(\text{OH})_2$  — the green, Cr-rich variety ‘fuchsite’ can be collected in altered wallrock samples on the dumps.
- *Phosgenite*  $\text{Pb}_2(\text{CO}_3)\text{Cl}_2$  — another rare secondary lead mineral recorded in the gossans as rather large adamantine, brown to colourless crystals on galena. Rarely reported, but probably mistaken for anglesite or cerussite.
- *Plumbojarosite*  $\text{PbAl}_6(\text{SO}_4)_4(\text{OH})_{12}$  — this powdery yellow-brown mineral occurs uncommonly on gossan.

- *Proustite*  $\text{Ag}_3\text{AsS}_3$  — this ‘ruby silver’ mineral was reported as rare prismatic hexagonal crystals and thin coatings, sometimes with native silver. The fresh mineral is an attractive scarlet vermilion, but darkens to black with exposure to light. It has reportedly been recently collected.
- *Pyrargyrite*  $\text{Ag}_3\text{SbS}_3$  — this ‘ruby silver’ mineral is very similar to proustite in appearance and occurrence. It was reported here as rare crystals and in association with galena and native silver.
- *Pyrolusite*  $\text{MnO}_2$  — this powdery brown-black mineral occurs in the gossan.
- *Quartz*  $\text{SiO}_2$  — fine quartz crystals occur in some veins.
- *Rhodochrosite*  $\text{MnCO}_3$  — recorded as a primary mineral in the ores, sometimes termed ‘manganosiderite’, grading into siderite. A pinkish mineral with pearly cleavages.
- *Romanechite (psilomelane)*  $\text{BaMn}_9\text{O}_{16}(\text{OH})_4$  — this mineral is present in the gossans as massive or stalactitic, hard black material.
- *Siderite*  $\text{FeCO}_3$  — recorded as a primary mineral in the ores, sometimes termed ‘manganosiderite’, grading into rhodochrosite. A brownish mineral with pearly cleavages.
- *Silver*  $\text{Ag}$  — ‘native’ silver was an important secondary mineral in this deposit, where it occurred as hair-like patches in sphalerite. It is a silvery metal, often tarnished grey or black.
- *Sphalerite*  $\text{ZnS}$  — common in the primary ores with galena, siderite, etc. It is black and coarsely crystalline, with good cleavages.
- *Smithsonite*  $\text{ZnCO}_3$  — this mineral is rare in the gossans, but occurs as translucent grey hexagonal-rhombohedral crystals lining cavities.

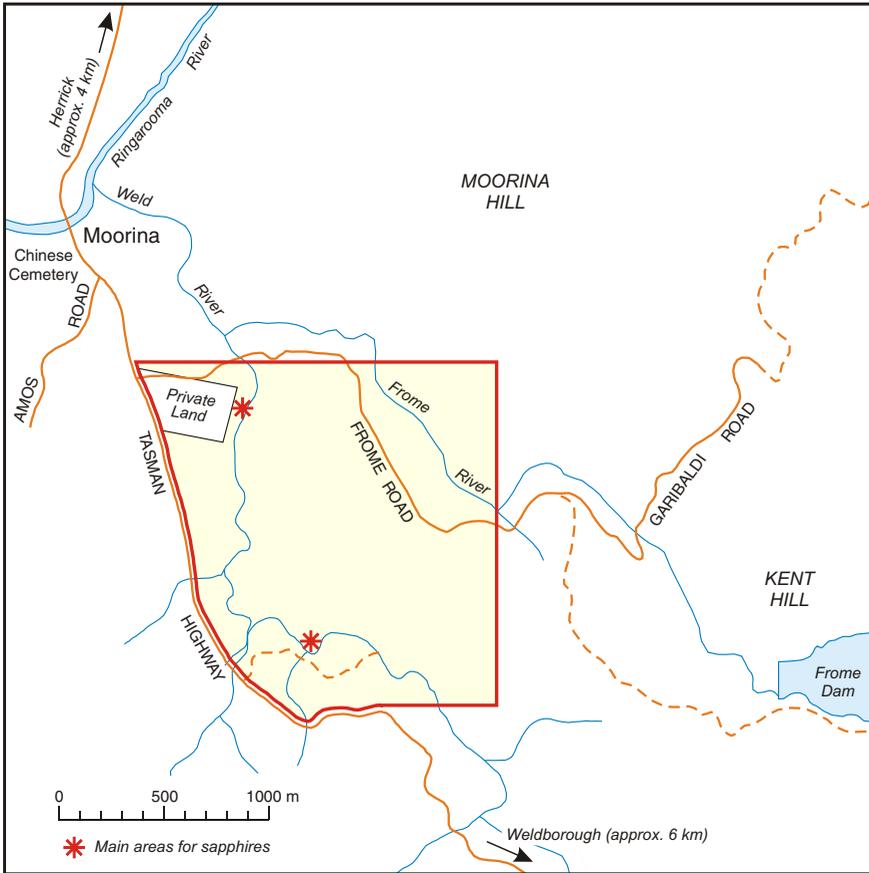
*Other reported minerals (not all confirmed) include:*

vanadinite (endlicheite)	matlockite	pyromorphite
carminite	aragonite	pharmacosiderite
ankerite	phoenicochroite	tetrahedrite
symplesite	stibnite	jamesonite
acanthite (argentite)	kottigite	beresovite
minium		

### ***Special conditions***

Historic mining relics occur in this area. Fossickers are asked to respect these relics by avoiding disturbance of historic workings and not collecting artefacts (e.g. bottles, pieces of machinery, etc.) from this area.

# Weld River



## Access

This 2 km<sup>2</sup> area is about 250 km northeast of Hobart, and is reached via Scottsdale or St Helens on good sealed roads.

## Collecting area

The two main collecting areas are shown on the accompanying map. One is reached from Frome Road, which leaves the Tasman Highway opposite the Moorina Golf Course, by walking along the banks of the Weld River. The other is reached via an all-weather track which leaves the Tasman Highway approximately two kilometres south of Moorina.

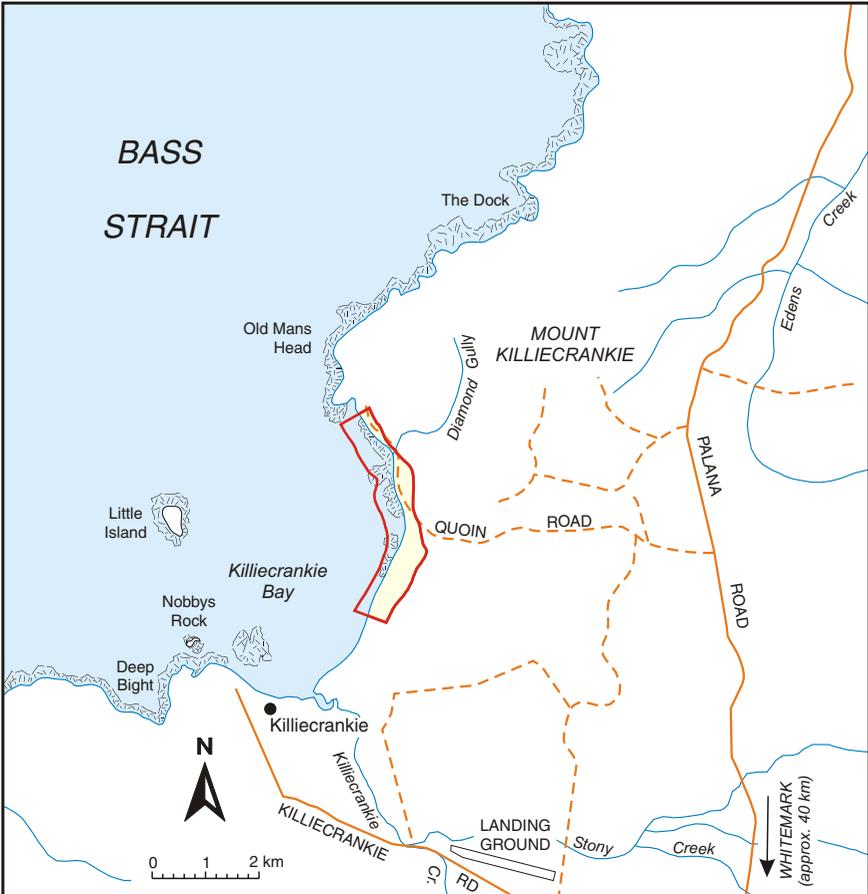
## Material

This area has extensive alluvial deposits which were worked for tin for many years. The alluvial material was derived by weathering and erosion of granite, basalt and other rock types.

- *Corundum* ('Sapphire')  $\text{Al}_2\text{O}_3$  — this is one of the most sought after minerals in the area, and is moderately common as subrounded to well-rounded grains, usually small but rarely up to a few centimetres in size. The colour is usually a dark blue, but is sometimes green or parti-coloured. Some dark grains show chatoyancy from included rutile, and may be termed 'star sapphire'. Tabular fragments of hexagonal crystals are often seen. The mineral is thought to originate deep in the crust and was brought to the surface in Tertiary basalt. Some pink stones found in the area have been described as ruby.
- *Hercynite*  $\text{FeAl}_2\text{O}_4$  — this is one of the more common heavy minerals in the alluvial materials and occurs as subrounded to well-rounded grains up to about a centimetre in size. The colour is usually opaque black in hand specimen, but it may be blue, green or brown in transmitted light. Hercynite was known as 'blackjack' amongst tin miners. Well-formed octahedral crystal fragments are often seen. The mineral is thought to originate deep in the crust and was brought to the surface in Tertiary basalt.
- *Cassiterite*  $\text{SnO}_2$  — this was the major economic mineral in northeast Tasmania, and tin mines were widespread in the area. It is still abundant as a major constituent of the heavy black alluvial sands, occurring as subrounded to well-rounded grains up to a few millimetres in size. Cassiterite is usually a dark brown to black colour, but is sometimes ruby red ('ruby tin'). The mineral originated in the tin-bearing granites common in the area.
- *Topaz*  $\text{Al}_2\text{SiO}_4(\text{OH},\text{F})_2$  — this occurs as occasional small glassy grains to a few millimetres in size, usually colourless, pale blue or translucent white. It was derived from the tin-bearing granite.
- *Chrysoberyl*  $\text{BeAl}_2\text{O}_4$  — this rare mineral has been found as small grains in alluvial materials. It superficially resembles sapphire but is always pale green. Some grains are red under artificial light, indicating that they are the variety 'alexandrite'. Some stones exhibit a 'cats-eye' chatoyant effect, and are known as 'cymophane'. Their origin is uncertain, but may be in deep-seated rocks, brought up with sapphires etc., although some other beryllium minerals have been recorded in some of the tin granites.

- *Zircon*  $\text{ZrSiO}_4$  — this is one of the more common heavy minerals in the alluvial materials, and occurs as angular to well-rounded grains up to a few millimetres in size. The colour is usually pale pink to reddish brown, and tetragonal crystals are often seen. The mineral has a mixed origin; some is derived from granite, while some of the coarser zircon is thought to originate deep in the crust, and was brought to the surface in Tertiary basalt. This is shown by Tertiary ages obtained from fission track dating.

# Killiecrankie Bay



## Access

This 1 km<sup>2</sup> area is 30 km north of Whitemark on Flinders Island, about 400 km NNE of Hobart, and is reached via air or sea and then on unsealed roads. Because of the coastal location tidal charts may need to be consulted.

## Collecting area

The main collecting area is among granite boulders on the foreshore in the vicinity of Diamond Gully Creek (AMG reference 572 500 mE, 5 591 900 mN).

## ***Material***

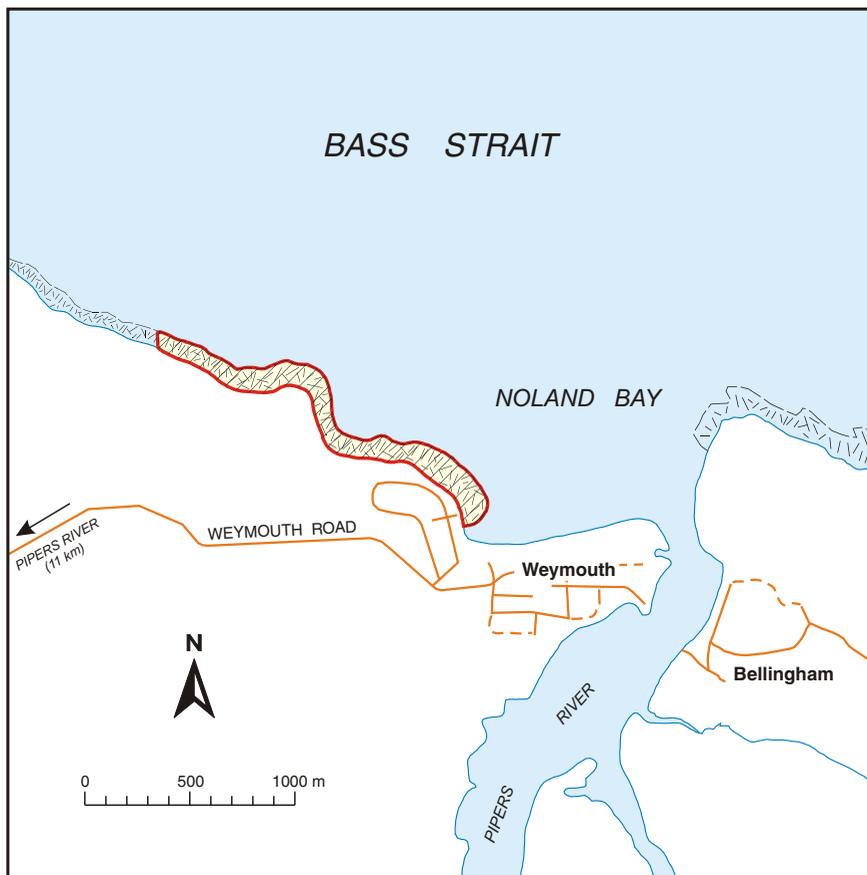
The area yields topaz crystals and pieces (known colloquially as ‘Killiecrankie Diamonds’), along with smoky quartz, zircon and beryl. The main product from this area is the topaz; the most common form is colourless but pale blue and pink forms have been found.

- *Topaz*  $\text{Al}_2\text{SiO}_4(\text{OH},\text{F})_2$  — this occurs as glassy, well-formed orthorhombic crystals or waterworn pebbles, usually colourless to pale blue but also translucent white or in pale shades of pink and yellow. Crystals up to about 20 mm in size are abundant, and some up to 80 mm have been reported. The topaz was derived from tin-bearing pegmatite in the local granites.

## ***Additional information***

Topaz occurs in other locations around Killiecrankie Bay. Another area of interest to fossickers is the old Tanners Creek tin mine.

# Weymouth



## *Access*

This 0.5 km<sup>2</sup> area is about 200 km north of Hobart, and 50 km north of Launceston and is reached via Pipers River on sealed roads. Because of the coastal location tidal charts may need to be consulted.

## *Collecting area*

The main collecting area is on a beach west of Weymouth at approximately AMG reference 511 200 mE, 5 460 400 mN.

### ***Material***

The area has yielded fine-grained quartz pebbles, petrified wood and some agates and chalcedony, all of which are regarded as important sources of tumbling material for lapidarists.

### ***Special conditions***

This area is surrounded by private property. Public access to the foreshore can be obtained from public roads at the eastern end of the fossicking area.

# Gladstone

## *Access*

This 8 km<sup>2</sup> area is about 250 km NNE of Hobart, and can be reached via Scottsdale, Bridport or St Helens on good sealed roads.

## *Collecting area*

The main collecting area is around the old tin workings from Ah Kaw Creek and Mt Cameron Creek to Alhambra Creek (AMG reference 583 400 mE, 5 464 000 mN).

## *Material*

The area has yielded good specimens of smoky quartz, clear quartz, amethyst and jasper. The area is particularly renowned for large crystals of smoky quartz.

## *Special conditions*

Historic mining relics occur in this area. Fossickers are asked to respect these relics by avoiding disturbance of historic workings and not collecting artefacts (e.g. bottles, pieces of machinery etc.) from this area.

