

Fossicking Areas in Tasmania



FOSSICKING AREAS IN TASMANIA

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Cover: Selina Wu panning for sapphires in the Weld River. (Photo courtesy of Stephanie Sykora)



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Fossicking Areas in Tasmania

There are many localities within Tasmania containing interesting collectable geological material with interest to collectors, or with potential for lapidary purposes. 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 the areas shown are specially set aside for the use of fossickers and gem and mineral collectors, and will normally not be included in any exploration licence or mining lease application.

The areas extend from the ground surface to a depth of two (2) metres. Below the two metre limit, the ground **may** be included in an exploration licence or mining lease. Explorers will be expected to use the same prospecting methods as fossickers, i.e. no costeaning, trenching, large scale pitting or drilling without 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 long-term use of amateur fossickers and cannot sustain any degree of commercial collecting.

Please read the Conditions Relating to Fossicking Areas (page 6) and be sure to abide by them when in the field.



Panning for sapphires. (Photo courtesy of Stephanie Sykora)

Personal Protection

While fossicking can be a fun recreational activity, there are several things to remember before venturing to one of Tasmania's collecting sites:

- 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 shafts, tunnels and trenches.
- Never visit isolated areas alone and always let someone know of your plans.
- Be alert for snakes and other dangerous wildlife, steep slopes, and slippery water courses.

Fossicking and Gem Clubs

Club contacts change frequently. A list of recent contact addresses can be obtained by visiting:

Tasmanian Lapidary and Mineral Association (TLMA)
<https://tasmanianlapidarymineral.weebly.com>

Or by contacting Mineral Resources Tasmania:

Mineral Resources Tasmania
PO Box 56
Rosny Park Tasmania 7018
Telephone: (03) 6165 4800
Email: info@mrt.tas.gov.au

Conditions relating to Fossicking Areas

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 (address on page 5).

1. The areas are to be used by amateur fossickers only. Removal of material for commercial purposes 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, mechanised equipment, 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 (address on page 5).
6. Fossickers will ensure that run-off or drainage from their diggings 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. Creek and river 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 trees or shrubs having a trunk diameter of more than 100 mm will be cleared, ring-barked or cut.
12. Rare or unusual specimens of fossil material found on Crown land remain the property of the Crown so as to ensure that opportunity exists for proper study of the palaeontology of these areas. Discovery of material that is not recognised as common should be referred to Mineral Resources Tasmania (address on page 5) or the Tasmanian Museum and Art Gallery.
13. Discovery of mineral specimens not recognised as common should be referred to Mineral Resources Tasmania (address on page 5).
14. No Aboriginal artefacts or sites, or historic relics (including mining relics) or sites, should be damaged or removed.
15. 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.
16. No excavation is to be made in any sinkhole in a karst area or within 10 metres of the entrance of any cave.
17. No fossicking is permitted within any cave, nor in any underground workings.
18. Vehicles will not be taken off formed tracks.
19. No fires will be lit without the permission of the relevant land manager.



Panning in the Weld River. (Photo courtesy of Stephanie Sykora)

Lune River

ACCESS

This 5 km² area is located about 100 km south of Hobart, and is reached via Huonville on a good sealed road as far as Lune River. The Leprena Track is located 2.3 km. past the South Lune Road turn-off. The track itself continues for 1.6 km to a locked gate and a creek crossing which prevent further vehicular traffic.

COLLECTING AREA

The main collecting area is in the vicinity of the junction of the South Cape Road and Leprena Track, at approximately MGA reference 491 910 mE, 5 187 580 mN. Lapidary material is widespread, occurring on the surface, in buried gravel layers (digging tools required), or in outcrops, creeks and small pits.

Please note that collecting is not permitted in the Southport Lagoon Conservation Area, which covers most of the area east of the Leprena Track.

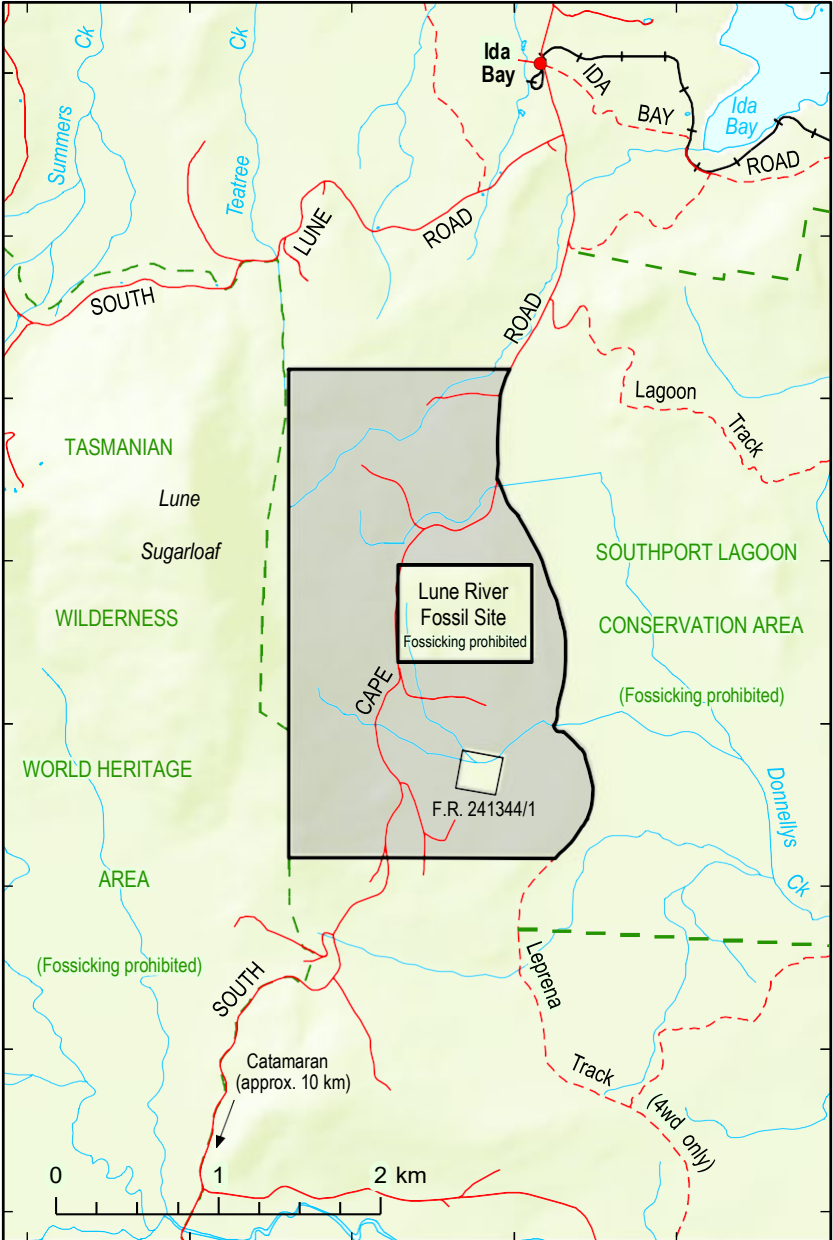
Collecting within the proclaimed Lune River Fossil Site is also not permitted.

MATERIAL

The area yields petrified fern (commonly, but incorrectly, described as man-fern), agate, petrified wood and jasper. The petrified fern is highly prized, both scientifically, and in lapidary circles and Lune River is one of the few sources of this material known within Tasmania. The material is derived from the weathering of some Jurassic lavas and sedimentary rocks and is unique in Tasmania, and therefore of geological significance.

SPECIAL CONDITIONS

- The Southport Lagoon Conservation Area is excluded from the Fossicking Area.
- Any finds of unusual fossils or other geological features should be referred to either Mineral Resources Tasmania (address on page 5) or the Tasmanian Museum and Art Gallery.
- The Fossicking Area excludes a block of private property, the proclaimed Fossil Site and the Southport Lagoon Conservation Area, as shown on the map opposite.
- Open fires are not to be lit and there will be no 'burning off' to facilitate digging without the approval of the District Forest Manager.



Lune River Fossicking Area.

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 in a 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.

Stilbite, 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 Forest Manager.



Crystalline agate.



Cross-section through a petrified log.



Colourful sample of petrified fern.

Coal Hill

ACCESS

This 9 km² 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 of forest.

MATERIAL

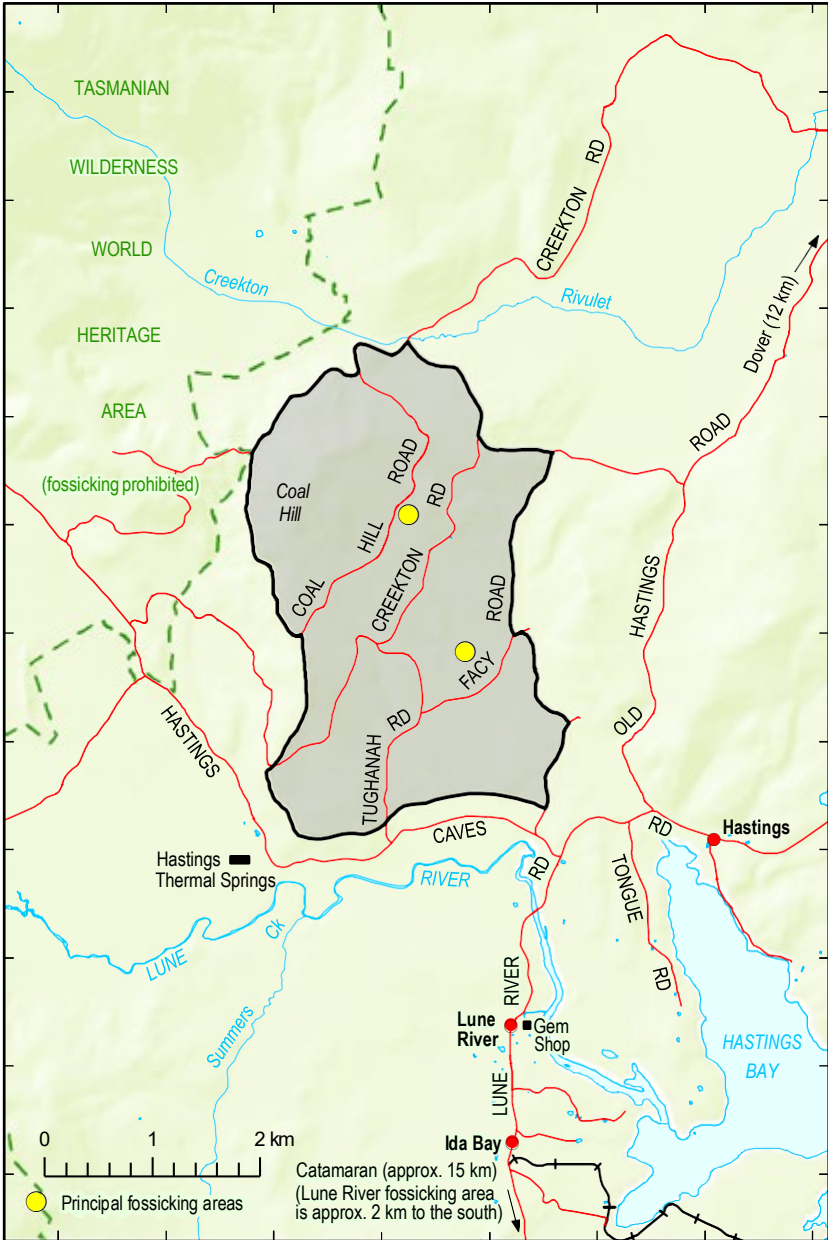
The area yields fine specimens of agate, jasper, chalcedony and petrified wood. Some agates may contain geodes with crystalline quartz and rarely amethyst.

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 Forestry safety, health and welfare regulations.



Coal Hill jasper. (Photo courtesy of Lunarix Gemstones)



Coal Hill Fossicking Area.

Penguin

ACCESS

This 0.5 km² area is located adjacent to Lonah Road between Ulverstone and Penguin in northwest Tasmania. The area is about 100 km northwest of Launceston and 20 km southeast of Burnie, and can be reached via Penguin or Ulverstone on good sealed roads. Because of the coastal location, tidal charts may need to be consulted.

MATERIAL

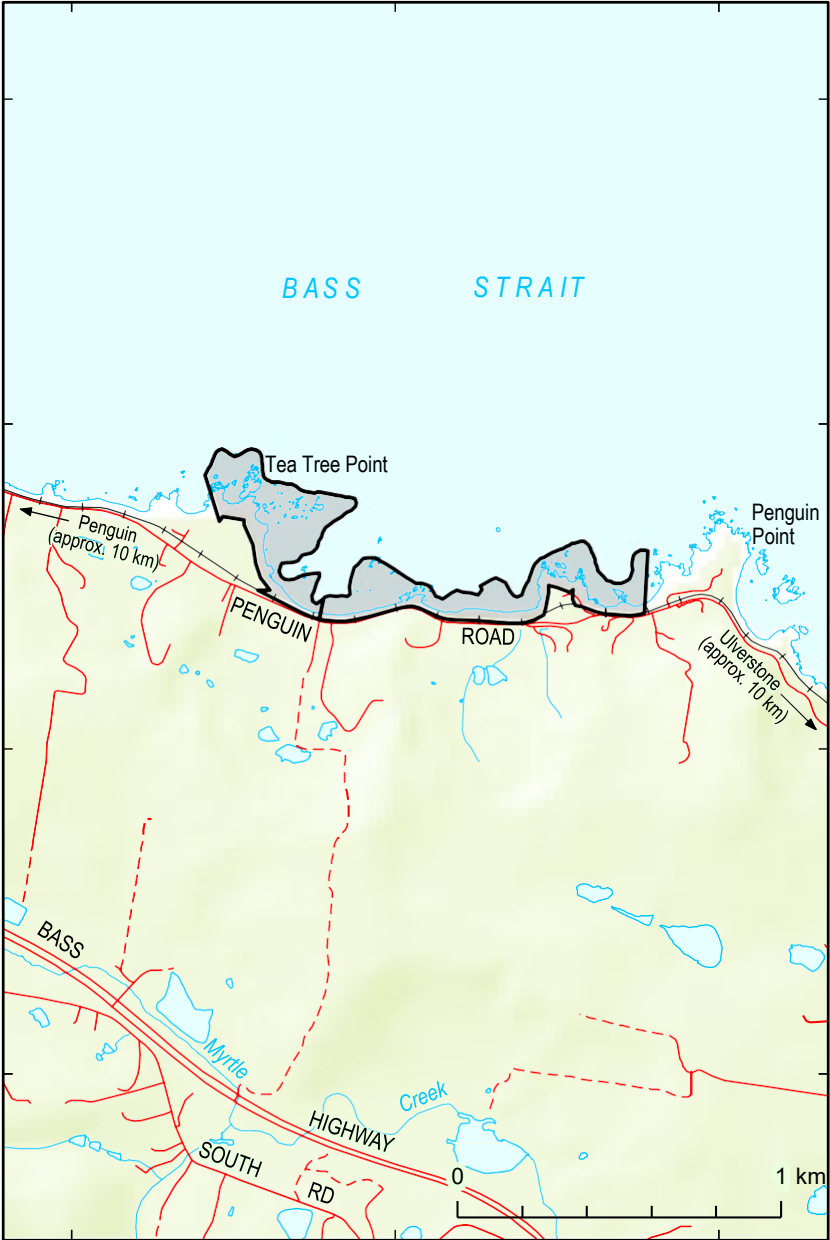
Jasper occurs as small water-worn red pebbles scattered along the foreshore. Pebbles are found near to, and between large, dark-coloured rocks which are Cambrian volcanic rocks. These foreshore rocks form part of the Penguin Geological Monument, recognised by the Geological Society of Australia as a site of special significance. 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.

SPECIAL CONDITIONS

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



Penguin Jasper. (Photo courtesy of Mathew Latham)



Penguin Fossicking Area.

Colebrook Hill

ACCESS

This 0.5 km² area on the West Coast is about 90 km southwest of Burnie and 200 km northwest of Hobart. It can be reached via Queenstown or Rosebery on the Murchison Highway, a good sealed road. Access to the site is easiest via the Williamsford Road. There is a turnoff to the west about 4.3 km from the Murchison Highway junction, from where a four-wheel drive track is currently navigable for about two kilometres before the track becomes overgrown, with fallen trees and boggy patches. About 3.5 km along the track is a fork, and fossickers should take the western fork for another 500 metres until the mine dump is reached.

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

COLLECTING AREA

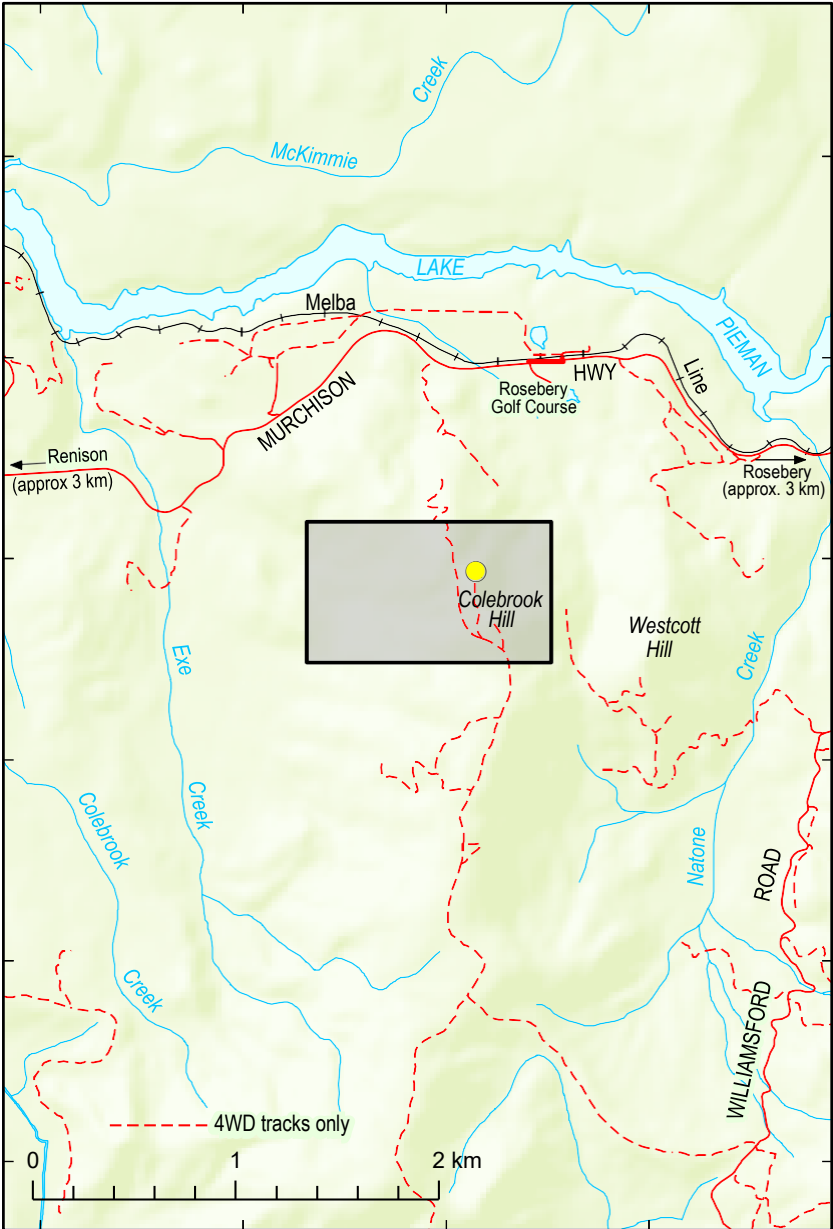
The collecting area lies near the top of Colebrook Hill, 4.5 km southwest of Rosebery. A small open cut on the southern side of the hill, close to the summit (at MGA reference 374 910 mE, 5 371 880 mN) affords a good collecting location.

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 a limurite 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 minor silver, gold, tin, lead, zinc and tungsten minerals are also present. The deposit is very complex and of great mineralogical interest.

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

- Calcite CaCO_3 — very common as white to colourless massive material, enclosing other minerals, and less commonly as well-formed rhombohedral crystals.
- Chalcopyrite 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.



Colebrook Hill Fossicking Area.

- 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 brown colour. Well-formed wedge-shaped triclinic crystals up to 20 mm in length occur, and may be very lustrous and attractive.
- Arsenopyrite FeAsS - rather abundant as massive material or as excellent orthorhombic crystals to about 10 mm, with a bright silver-grey colour.
- Quartz 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 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, olivenite (var. leucochalcite), malachite and cuprite.



Arsenopyrite - orthorhombic crystals about 10 mm, with a bright silver-grey colour.



Ferroaxinite occurs as massive or crystalline material of a deep violet brown colour (green mineral is actinolite).



Fossicking at Colebrook Hill.

Lord Brassey Mine

ACCESS

The Lord Brassey mine is located on Brassey Hill, about 17 km west of Waratah in western Tasmania. Access to the 0.6 km² fossicking area is via a very rough and steep four-wheel drive track heading north from Waratah Road, about 300 hundred metres west of the Heazlewood River picnic area. The mine is reached after travelling approximately 1.5 km along the 4WD track.

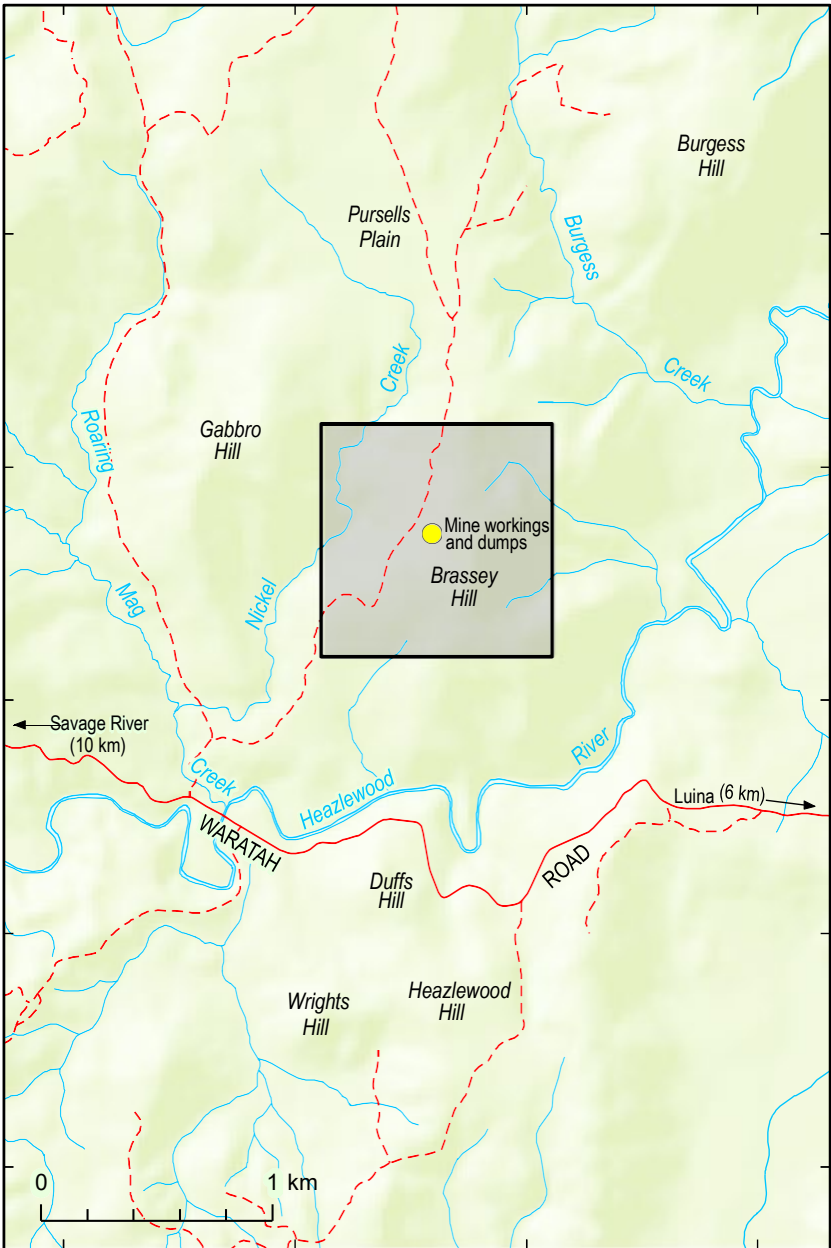
COLLECTING AREA

Most fossicking is done on the dump adjacent to the mine (adit) entrance close to the top of the hill, at approximately MGA reference 359 410 mE, 5 408 680 mN.

THE MINE AND ITS MINERALS

This small mine operated on a nickel sulphide occurrence in ultrabasic rocks (now mostly serpentinite). The sulphide ores probably formed after 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 serpentinite.
- Antigorite $\text{Mg}_3\text{Si}_2\text{O}_5(\text{OH})_4$ — apple green serpentinite.
- Awaruite (Ni,Fe) — metallic white, rusty.
- Chrysotile $\text{Mg}_3\text{Si}_2\text{O}_5(\text{OH})_4$ — white, asbestiform serpentinite.
- Clinocllore $\text{Mg}_6(\text{Si,Al})_4\text{O}_{10}(\text{OH})_8$ — chlorite, dark green.
- Diopside $\text{CaMgSi}_2\text{O}_6$ — white veins in serpentinite.
- 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 serpentinite.
- Heazlewoodite Ni_3S_2 — bronzy yellow metallic patches in serpentinite.
- 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 serpentinite.
- Magnetite Fe_3O_4 — small black grains, in serpentinite.
- Molybdenite MoS_2 — small patches of massive dark grey to occasionally purple grey.
- Opal SiO_2 — glassy veinlets in serpentinite.
- Pentlandite $(\text{Fe,Ni})_9\text{S}_8$ — brassy yellow metallic patches in serpentinite.



Lord Brassey Mine Fossicking Area.

- Reevesite $\text{Ni}_6\text{Fe}_{16}^{3+}(\text{CO}_3)_2(\text{OH})_2 \cdot 4\text{H}_2\text{O}$ — 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.

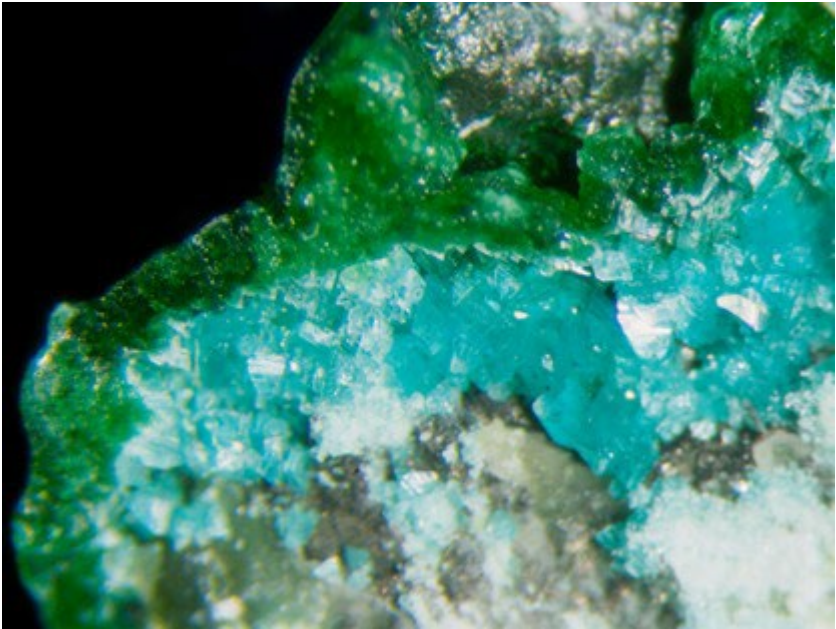
SPECIAL CONDITIONS

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.

Under no circumstances should fossickers enter the disused adit.



Fossickers at Lord Brassey.



Zaratite (emerald green) and Hellyerite (pale blue crystals < 2 mm) on a sample from Lord Brassey.



Zaratite (bright green opaline coating, no crystals).

Magnet Mine

ACCESS AND COLLECTING AREA

The old Magnet mine is located six kilometres directly west of Waratah in western Tasmania, although access is by a somewhat circuitous route. The mine is reached by traversing an unsealed road (the Magnet Road) leading off the sealed Waratah Road opposite Whyte Hill (on which a Telstra tower has been erected). This junction is approximately 12 km west of Waratah. The track is steep and badly eroded and is best restricted to 4WD vehicles.

The main collecting area is the ferromanganese gossan, which is located above the ruins of the old mill beside the access road (at MGA reference 370 210 mE, 5 410 830 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 is almost impassable due to washouts.

MATERIAL

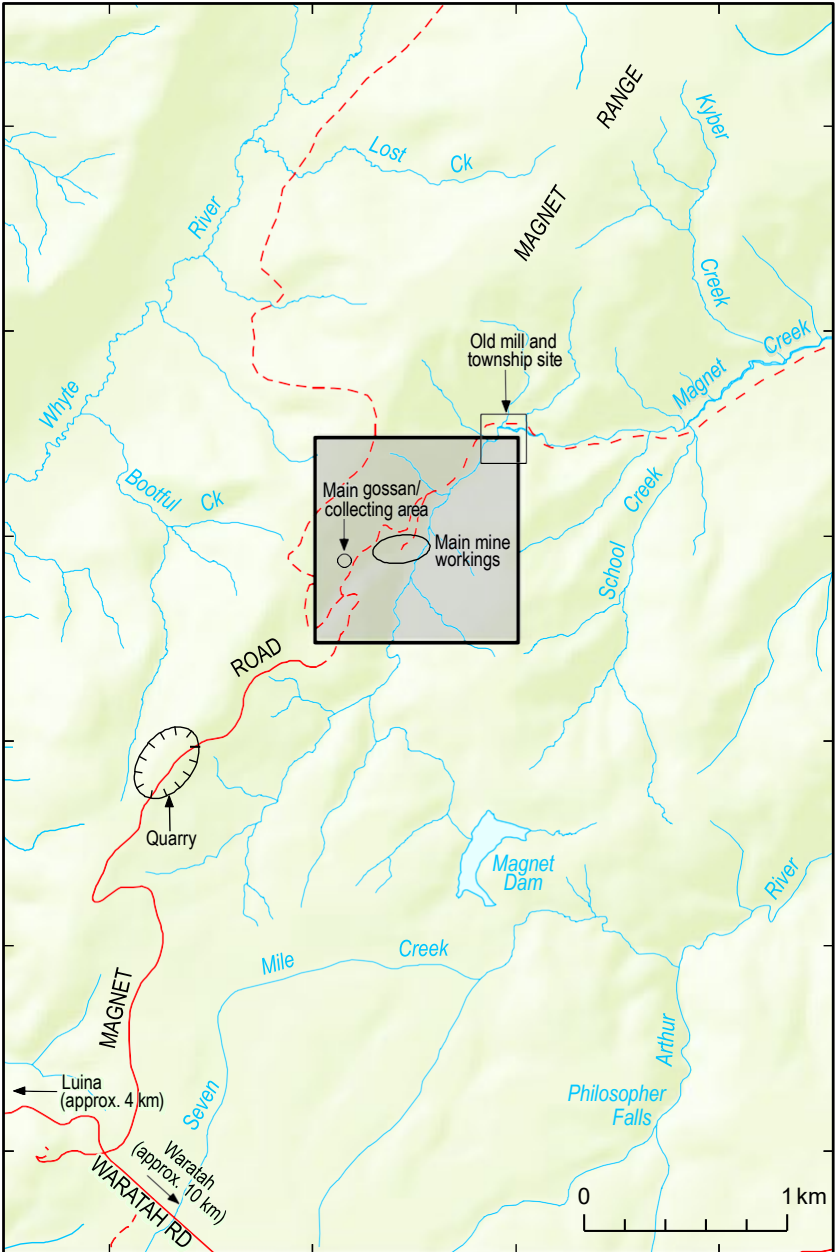
The site is important as it is one of only a few publicly accessible locations for crocoite and yellow cerussite.

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 PbSO_4 — occurs uncommonly as attractive white orthorhombic crystals to a few millimetres, with crocoite, pyromorphite and embolite.
- Argentite (acanthite) Ag_2S — small patches and scales of this metallic grey mineral occur in galena.
- Arsenopyrite FeAsS — occurs commonly as small prismatic crystals to a few millimetres in vugs 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 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.



Magnet Mine Fossicking Area.

- Chalcophanite $(\text{Zn,Mn,Fe})\text{Mn}_2\text{O}_5 \cdot 2\text{H}_2\text{O}$ — this mineral occurs as finely drusy masses of lustrous purplish black hexagonal crystals on gossan, with small cerussite crystals. It is also massive and dark brown.
- Chalcopyrite CuFeS_2 — this mineral occurs as fine grains in primary ore, with sphalerite and siderite.
- Chlorargyrite 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/magnesiochromite $(\text{Fe,Mg})\text{Cr}_2\text{O}_4$ — occurs as small, lustrous, black crystals to one millimetre in the green country rock.
- Coronadite $\text{PbMn}_8\text{O}_{16}$ — this mineral is present in the gossans as massive or stalactitic, hard black material.
- Crocoite PbCrO_4 — this mineral occurs rarely 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 $\text{Ca}(\text{Fe,Mg})(\text{CO}_3)_2$ — 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 PbS — this metallic grey mineral with perfect cubic cleavages was an important primary ore of lead, and is still common there.
- Goethite $\text{FeO}(\text{OH})$ — an important constituent of the gossans. Usually massive, powdery yellow to brown and black when massive.
- Greenockite/hawleyite 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 $Pb_2(CO_3)Cl_2$ — 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 $PbAl_6(SO_4)_4(OH)_{12}$ — this powdery yellow-brown mineral occurs uncommonly on gossan.
- Proustite Ag_3AsS_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 Ag_3SbS_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 MnO_2 — this powdery brown-black mineral occurs in the gossan.
- Quartz SiO_2 — fine quartz crystals occur in some veins.
- Rhodochrosite $MnCO_3$ — recorded as a primary mineral in the ores, sometimes termed ‘manganosiderite’, grading into siderite. A pinkish mineral with pearly cleavages.
- Siderite $FeCO_3$ — recorded as a primary mineral in the ores, sometimes termed ‘manganosiderite’, grading into rhodochrosite. A brownish mineral with pearly cleavages.
- Silver 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 ZnS — common in the primary ores with galena, siderite, etc. It is black and coarsely crystalline, with good cleavages.
- Smithsonite $ZnCO_3$ — this mineral is rare in the gossans, but occurs as translucent grey hexagonal-rhombohedral crystals lining cavities.

Other reported minerals (not all confirmed) include:

ankerite	matlockite	pyromorphite
symplectite	aragonite	pharmacosiderite
acanthite (argentite)	phoenicochroite	tetrahedrite
minium	stibnite	jamesonite
	kottigitte	

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.



Magnet Mine fossicking.



Magnet Mine mimetite.



Magnet Mine cerussite.

Weld River

ACCESS

This 2 km² area is adjacent to the Tasman Highway at Moorina in northeast Tasmania, and is about 250 km NNE of Hobart and 70 km northeast of Launceston. The area can be reached by the Tasman Highway, either via Scottsdale or St Helens.

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.

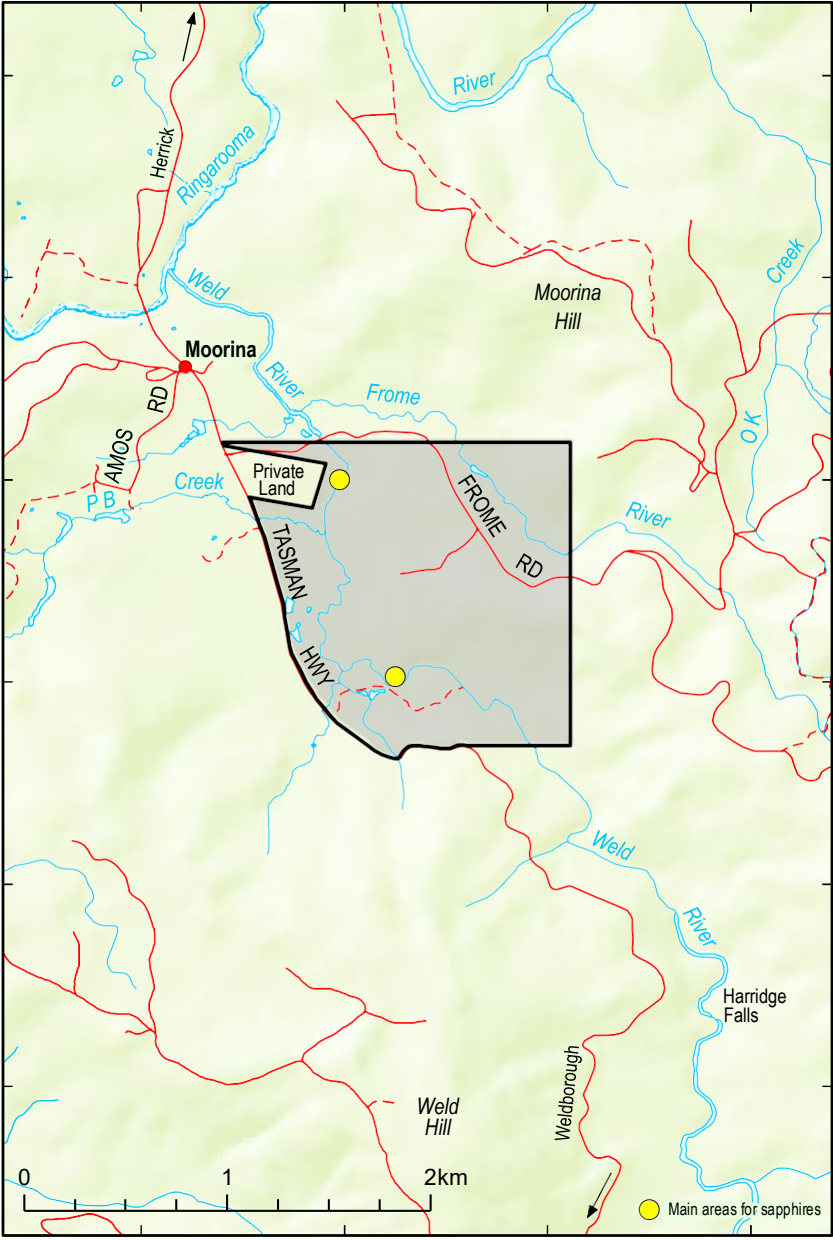
MATERIAL

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') Al_2O_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.

Spinel (pleonaste) $(\text{Mg,Fe})\text{Al}_2\text{O}_4$ — 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 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.



Weld River Fossicking 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 BeAl_2O_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.

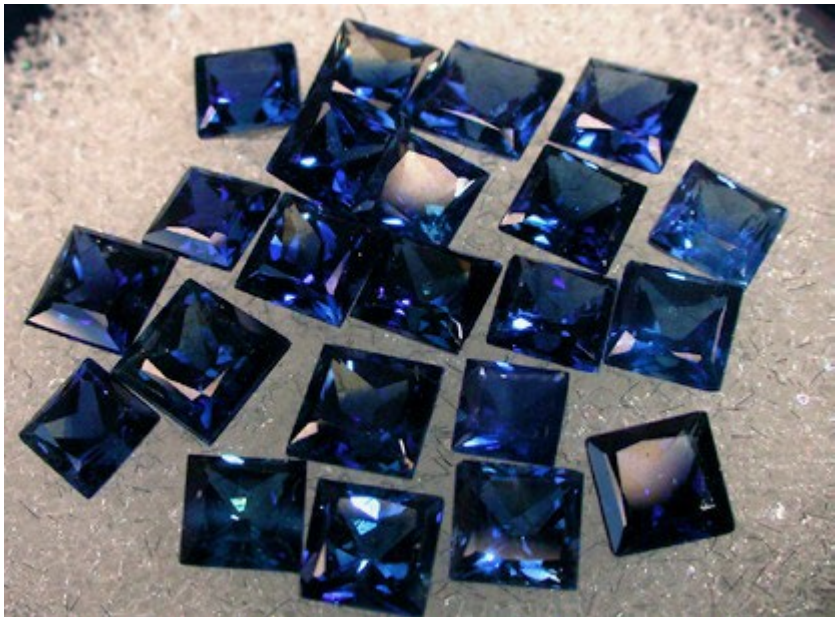
Zircon ZrSiO_4 — this is one of the more common heavy minerals in the alluvial materials, and occurs as angular to well-rounded grains up to a few millimetres in size. The colour is usually pale pink to reddish brown, and tetragonal crystals are often seen. The mineral has a mixed origin; some is derived 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.



Panning in the Weld River. (Photo courtesy of Ryan Beruldsen)



Uncut sapphires and topaz, won from river sediments.



Weld River cut sapphires.

Killiecrankie Bay

ACCESS

This 1 km² area is 30 km north of Whitemark on Flinders Island in Bass Strait, 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 (MGA reference 572 610 mE, 5 592 080 mN).

MATERIAL

The area yields topaz crystals and pieces (known colloquially as ‘Killiecrankie Diamonds’), along with smoky quartz and rare zircon and beryl. The main product from this area is the topaz.

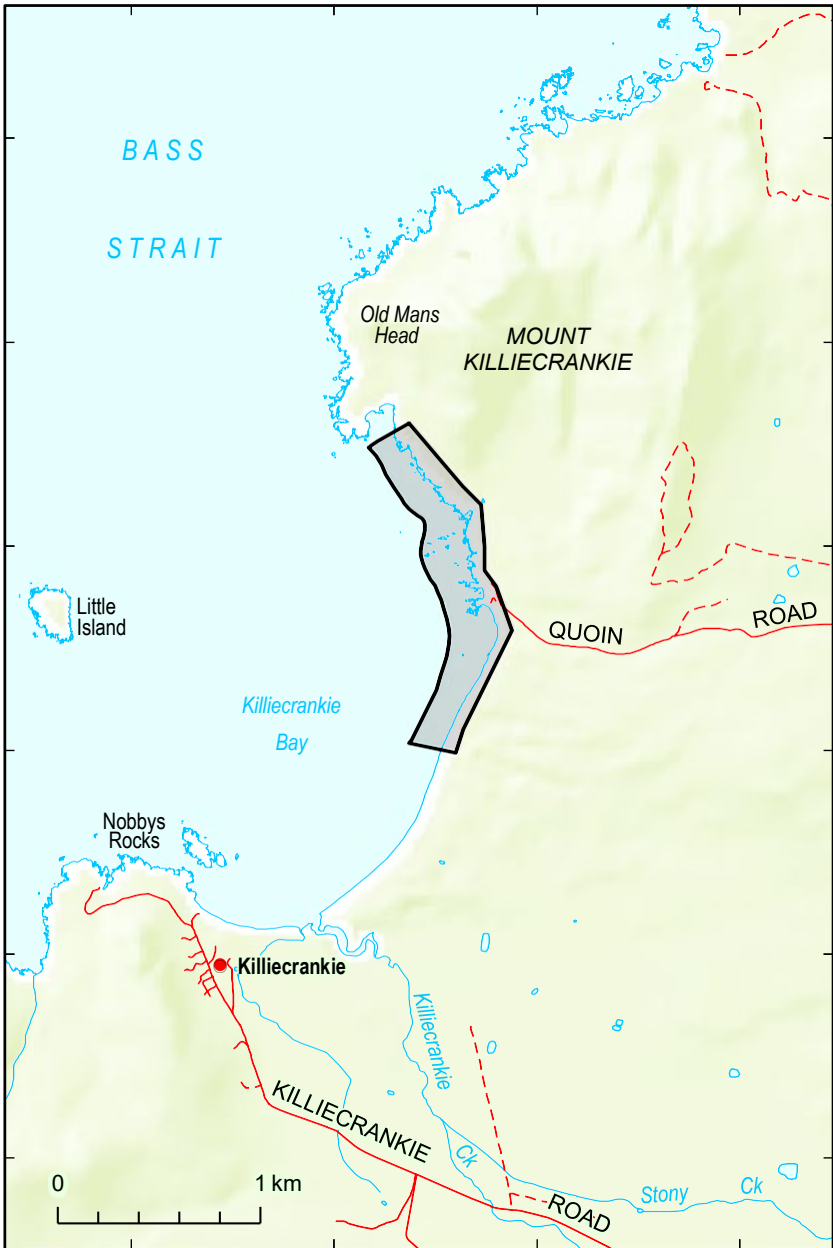
Topaz $\text{Al}_2\text{SiO}_4(\text{OH},\text{F})_2$ — this occurs as glassy, well-formed orthorhombic crystals or waterworn pebbles, usually colourless to pale blue but also translucent white or in pale shades of pink and yellow. Crystals up to about 20 mm in size are abundant, and some up to 80 mm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

ADDITIONAL INFORMATION

Topaz occurs in other locations around Killiecrankie Bay, including another area of potential interest to fossickers, the old Tanners Bay tinfield nine kilometres to the south of Killiecrankie.



The creek draining Diamond Gully in Killiecrankie Bay. (Photo courtesy of Mike Vicary)



Killiecrankie Bay Fossicking Area.



Following a pegmatite vein in granite outcrop; digging off coarse pebbles and panning fine material below the high tide mark. (Photo courtesy of Emily McPhee)



The results of a trip to Killiecrankie Bay. Waterworn “Killiecrankie diamonds” (topaz). (Photo courtesy of Mathew Latham)



Cut “Killiecrankie diamond” (topaz). (Photo courtesy of Tony Forsyth)

Weymouth

ACCESS

This 0.5 km² area, on the shoreline of Bass Strait at Weymouth, is about 200 km north of Hobart and 50 km north of Launceston. It can be reached via Pipers River on sealed roads. Because of the coastal location tidal charts may need to be consulted.

COLLECTING AREA

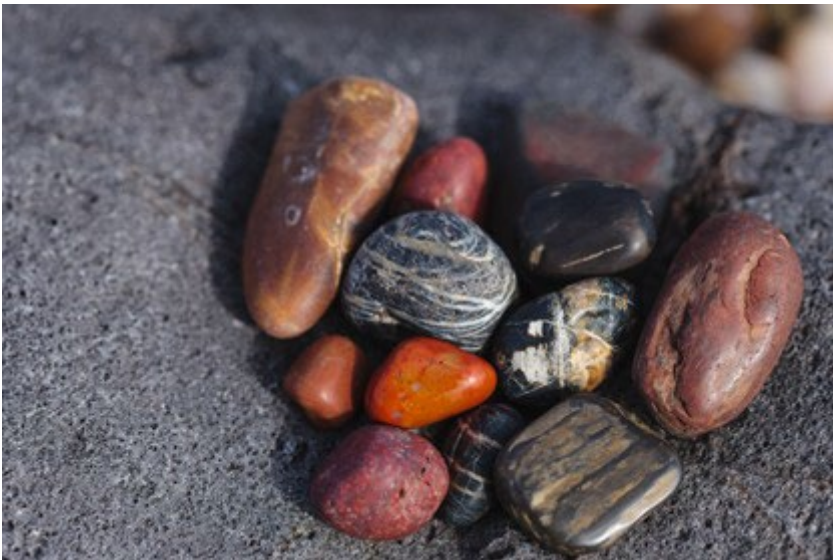
The main collecting area is on a beach west of Weymouth at approximately MGA reference 511 310 mE, 5 460 580 mN.

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.



Samples of chalcedony, fine-grained quartz and petrified wood collected at Weymouth. (Photo courtesy of Kelly Marie Slater)



Weymouth Fossicking Area.

Gladstone Hill

ACCESS

This 8 km² area in northeast Tasmania is about 90 km northeast of Launceston and 250 km NNE of Hobart. It can be reached on good sealed roads via Scottsdale or St Helens, using the Tasman Highway and Gladstone Road, or via Bridport using Waterhouse Road.

COLLECTING AREA

The main collecting area is around the old tin workings associated with Ah Kaw Creek, Mt Cameron Creek and Alhambra Creek (MGA reference 583 510 mE, 5 464 180 mN).

MATERIAL

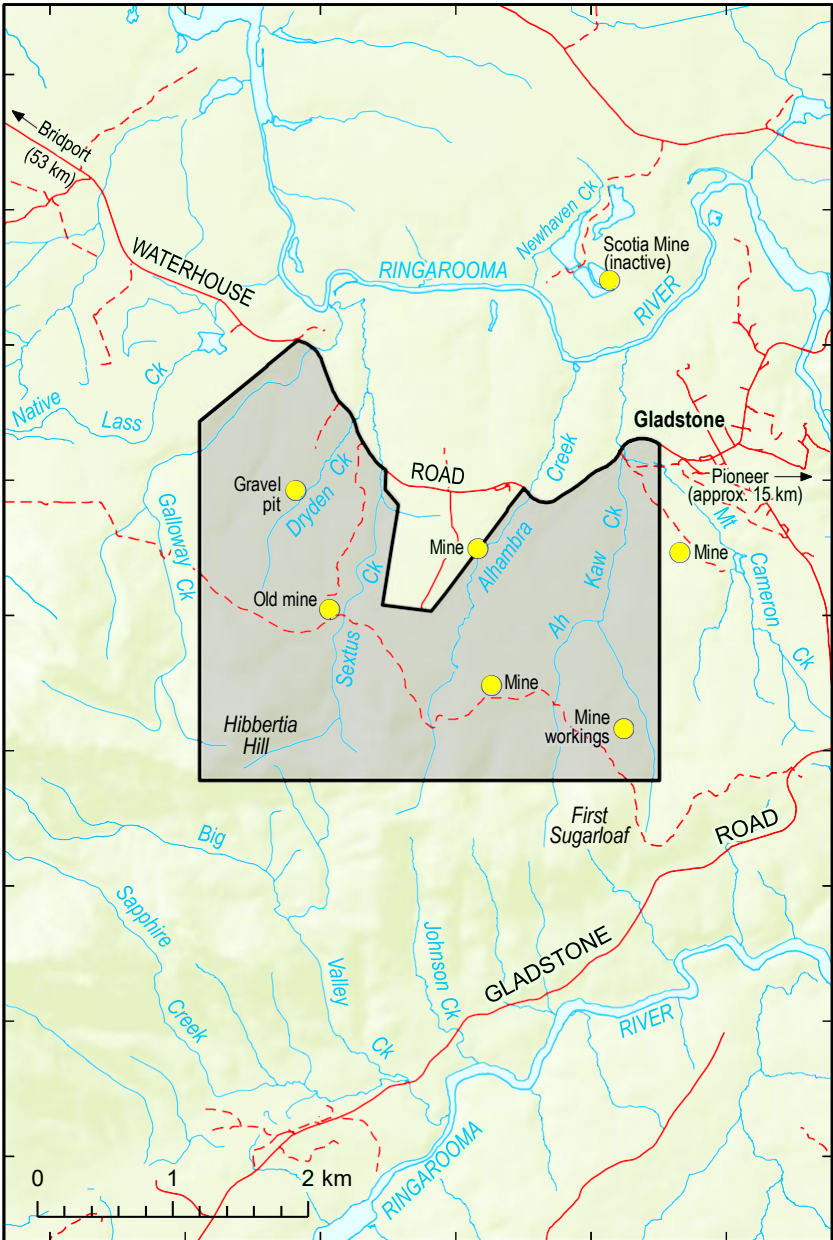
The area has yielded good specimens of smoky quartz, clear quartz, amethyst, topaz and jasper. The area is particularly renowned for large crystals of smoky quartz.

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.



Gladstone Hill smoky quartz. (Photo courtesy of Mathew Latham)



Gladstone Hill Fossicking Area.

Tunnel Marsh

ACCESS

The area is about 80km NW of Hobart, and is reached on sealed roads via Bothwell or Ouse, and fair unsealed roads thereon.

COLLECTING AREA

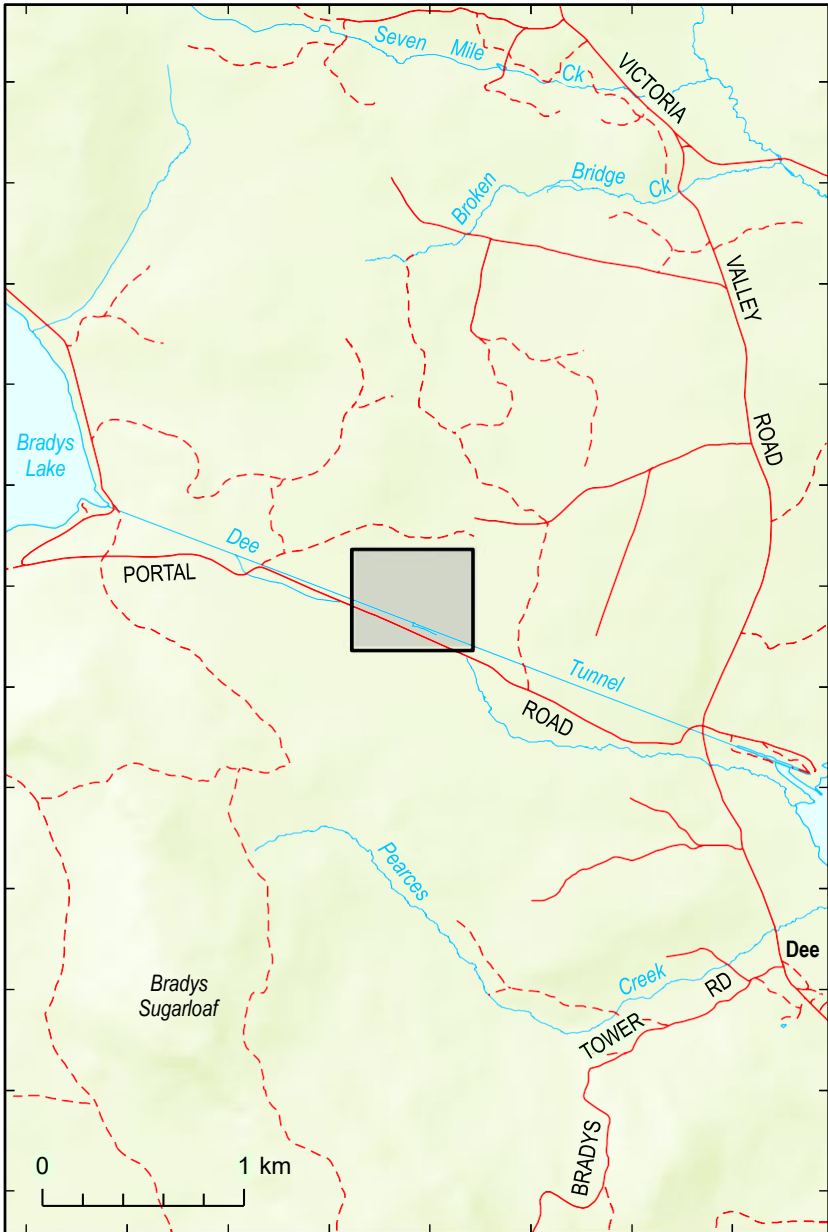
Interesting material occurs over most of Tunnel Marsh (MGA reference 462 410 mE, 5 323 480 mN).

MATERIAL

Agate, jasper and petrified wood are found over most of Tunnel Marsh and are extracted by shallow digging. The material is generally inferior to that found at Lune River.



Tunnel Marsh agate. (Photo courtesy of Mathew Latham)



Tunnel Marsh Fossicking Area.



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