Northern Queensland fossicking Guide

A number of fossicking areas have been set aside in northern Queensland for recreational and tourist fossicking. Visitors can fossick for gem topaz at Mount Gibson and O'Briens Creek, agates at Agate Creek, moonstone at Moonstone Hill and sapphires at Lava Plains.

Fossickers require a fossicking licence in all areas. Sites that are general permission areas are subject to special conditions and all fossickers must be careful to comply with these.

If you have any questions about fossicking, contact the local mining registrar.

Agate Creek fossicking area

Agate Creek, south of Forsayth, is world-renowned for agates of superb colours and patterns.

Access

The fossicking area is about 70km south of Forsayth by a gravel road, which is suitable for conventional vehicles, but may be impassable in the wet season (see map). From the township, head south-west towards Gilberton and at 11km turn right for a further 15km to the North Head turn-off. Turn left and continue south to the Robertson River. The crossing is about 100m wide in soft sand. The Cave Creek crossing also requires care. After passing the entrance sign to the fossicking area, turn left after crossing Agate Creek.

Map

- Agate Creek fossicking area map (PDF, 1.12MB) [https://www.dnrm.qld.gov.au/__data/assets/pdf_file/0003/1232157/agate-creek-fossicking-area.pdf]

Facilities

Camping is not permitted in the fossicking area but the landholder, David Terry, allows camping nearby, adjacent to Agate Creek outside the fossicking area. Camping is not permitted elsewhere on Robin Hood station or adjoining properties. A range of accommodation options is available in Forsayth.

The creeks in the area are usually dry but water may be found in Black Rock Waterhole and Banyan Spring.

Fossicking notes

The fossicking localities occur in the basin-shaped area of Agate Pocket, which is underlain by rocks of the Agate Creek Volcanic Group, a remnant of a volcanic sequence of early Permian age. This was deposited on a basement of granitic rocks of the Robin Hood Granodiorite. Three formations are recognized: the Big Surprise Tuff, Black Soil Andesite and Thunder Egg Rhyolite. Intrusive bodies of much the same age have penetrated the volcanics, including rhyolite and the Connie May Dolerite. In later Jurassic times, the volcanics were covered by sandstones and conglomerates of the Hampstead Sandstone; these have since been stripped off and now remain only as hill cappings on the south-western escarpment bordering the pocket and at the head of Spring and Agate creeks.

Agate occurs as amygdales (filled gas bubbles) in the upper parts of basaltic andesite lava flows (Black Soil Andesite) and thunder eggs occur as spherulites in rhyolitic lava (Thunder Egg Rhyolite) which forms the north-eastern rim of the pocket.

Agates occur as nodules (solid agate) or as geodes, roughly ellipsoidal or rounded in shape in various sizes but averaging about 50mm. The agate is often multi-coloured and usually banded in straight, curved or irregular patterns. The thunder eggs in the rhyolite may contain infillings of red-brown jasper.

Black Soil Creek, Crystal Hill, Bald Hill, Simpsons, Blue Hills and Flanagans are the main areas of interest (see map). Agates can be separated from the decomposed lavas by hand digging.

Because the agate is hard and resists weathering, searching down-slope colluvial deposits may also be productive as agates are released and transported from the host lavas. The alluvium of black soil and gravel of present day drainages is also worth attention, especially after the wet season.

Special conditions

Two mining claims (MC 30027 and MC 30028) within the area are excluded from the declared fossicking area (see map); these must not be entered without the permission of the holders. Miners Homestead Lease MH 1551 is also excluded from the fossicking area.

Lava Plains fossicking area

Lava Plains, located between Mount Garnet and Greenvale, is well known as a collecting locality for sapphires. Small deposits of spinel and zircon have also been extensively worked in this area in the past.

Two general permission fossicking areas more than 120 hectares in size have been designated at Lava Plains, with the Mines Hill general permission area currently open to fossickers.

Access

Lava Plains is on the Kennedy Development Road about 60km north of the Lynd Junction between Mount Garnet and Greenvale. Park in the fenced car park off the main road and access the fossicking area through the turnstile.

Map

- Lava Plains Mines Hill fossicking area map (PDF, 425KB) [https://www.dnrm.qld.gov.au/__data/assets/pdf_file/0004/1232167/mines-hill-lava-plains-fossicking-map.pdf]

Facilities

Vehicle access and camping are not permitted within the Mines Hill general permission area.

Fossickers must carry in all equipment and water on foot.

Fossicking notes

Potential sapphire-bearing ground is generally shallow up to 1m in depth.

Gem-quality sapphires may be found in the gravel of creeks and gullies, and on the terraces adjacent to drainages. Stones may also be found in the soils in the colluvium on adjacent slopes at Mines Hill.

Deeper wash occurs in some areas of the field; however, the depth and nature of the wash may make it unsuitable for hand fossicking.

Various methods can be used to separate the gem fractions and concentrate the heavy minerals, including specking the ground surface, surface raking, shallow excavation and simple dry sieving.

With soils being generally clayey, wet sieving methods may also be necessary depending on the type of material. Some of the gravels contain abundant oversize material, including cobbles and boulders, and may be difficult to work.

Careful examination and sorting of the final concentrate is required as many of the sapphires to be found in the area may be smaller in size.

Mount Gibson fossicking area

Mount Gibson near Innot Hot Springs is well known by fossickers as a collecting locality for gem topaz.

Access

Innot Hot Springs is on the Kennedy Highway between the small townships of Mount Garnet and Ravenshoe. Mount Gibson is about 5km north-west of Innot Hot Springs.

From the highway take the Broken Gully Road and travel 1.7km to a grid/steel gate (please close gate upon entering) and continue to the main entrance sign at Condon Gully. See map below for details of tracks in the fossicking area.

Conventional vehicles should only go as far as Gibson Gully. Access by foot or 4WD vehicle is recommended beyond this point as tracks to the main diggings are steep and gully crossings are very rough, with many washouts occuring after rain.

Map

- Mount Gibson fossicking area map (PDF, 615KB) [https://www.dnrm.qld.gov.au/__data/assets/pdf_file/0015/1232160/mt-gibson-fossicking-area.pdf]

Facilities

Camping is not permitted. Accommodation is available in Innot Hot Springs.

Fossicking notes

Mount Gibson consists mainly of hornfels resulting from thermal metamorphism of sedimentary rocks of the Silurian to Devonian Hodgkinson Formation by a composite granite batholith of Permo-Carboniferous age. The hornfels occurs as a pendant within the roof zone of the batholith that, in this area, comprises a medium-grained alkali feldspar granite (Pinnacles Granite) and smaller bodies of microgranite, pegmatite and aplite.

Late stage topaz-bearing intrusions related to that appear to be the source of the gem topaz and associated cassiterite. Much of the area is strongly mineralised and many of the creeks and

gullies in the vicinity have been worked for alluvial tin (cassiterite).

Topaz, quartz and cassiterite are the main minerals found. Crystals showing good forms and clarity are common. Topaz is usually colourless but rare golden and blue colours have also been found.

Diggings are located on the lower slopes of Mount Gibson to the south-east of the trig station. This area is known as Glittering Star and contains numerous shallow pits, trenches and shafts.

Other diggings referred to as Patricia (The Crystal and Pattersons) are located less than 1km to the west. Shallow pits and trenches have been worked in 2 adjacent areas on the northern side of a small north-westerly trending ridge. At the north-western end (The Crystal), massive white quartz crops out prominently. Several shallow pits have been dug in search of vughs in the quartz outcrop but most of the pits are located in the scree slope below. Further to the southeast (Pattersons) shallow pits have been dug in scree material and quartz-greisen rock, which contains many vughs and possibly crystals.

Simple dry sieving methods are used to search for gems, as water is generally scarce.

Young's Block fossicking area

Young’s Block near Charters Towers is known as a collecting locality for gold.

Access

Young’s Block is located about 15km from Charters Towers.

From the highway east of Charters Towers, turn south on to New Queen Road (the heavy vehicle bypass road). Travel 2.7km to Millchester Road. Turn east on Millchester Road and travel 4.5km to the corner of Mafeking Road. Turn north onto Mafeking Road and travel 1.2km to the gate marking the entrance to Young’s Block.

Map

- Young’s Block fossicking area map (PDF, 844KB) [https://www.dnrm.qld.gov.au/__data/assets/pdf_file/0020/1232165/youngs-block-fossicking-area.pdf]

Facilities

Camping is not permitted. Accommodation is available in Charters Towers.

Fossicking notes

Young’s Block is situated within the Charters Towers Goldfield, an area located in and around the city of Charters Towers that has had significant historic gold production. The Charters Towers Goldfield lies along the Mosgardies Shear Zone, and it is believed the Devonian gold ore bodies were deposited by ore fluids that used the crustal structures as channel ways.

Historically, mining focused on lode gold contained within the numerous structurally controlled lodes within the Ravenswood Granodiorite complex. Mineralisation occurred at a considerable depth in fissure hosted quartz veins approximately 400Ma. Gold deposits typically occur with sphalerite, galena and chalcopyrite. The discovery of high grade epithermal gold mineralisation in the 1980s sparked further exploration within the area.

Of interest to fossickers is alluvial material as well as elluvial deposits that have formed when gold or gold-bearing material have been transported from their original source and been concentrated within the soil horizon.

The easiest method to recover the finer alluvial gold is by panning. In the dry periods when water may be unavailable, methods such as dry blowing can be utilised to recover gold.

O'Briens Creek fossicking area

O’Briens Creek near Mount Surprise is well-known for gem-quality topaz, attracting visitors from all over Australia and overseas.

Access

Mount Surprise is a small township about 200km south-west of Cairns between Mount Garnet and Georgetown on the Gulf Developmental Road. From the township go north-west across the rail line on the Mount Surprise Station road and travel 37km to cross Elizabeth Creek. Follow the sign to the fossicking area along the road to the left for a further 1.5km, passing Diggers Rest about 200m before the main entrance sign. Refer to the map for details of tracks and signs within the fossicking area and note boundary limits.

The gravel road to O’Briens Creek may become impassable in wet weather and care is required on black soil sections. Flooding of creeks and gullies occurs during the wet season. Check local conditions before setting out.

Map

- O'Brien's Creek fossicking area map (PDF, 381KB) [https://www.dnrm.qld.gov.au/__data/assets/pdf_file/0019/1232164/obriens-creek-fossicking-area.pdf]

Facilities

Camping is not permitted in the fossicking area. However, the landholder of Mount Surprise Station allows camping nearby, at a site adjacent to Elizabeth Creek with basic toilet and shower facilities, for the payment of a fee. Fossickers intending to camp should contact the landholder's agent at the camping area about 200m south-east of the Elizabeth Creek crossing. Camping is also not permitted elsewhere on adjoining properties. A range of accommodation is available at Mount Surprise.

The creeks are dry and water is not usually available on the diggings.

Fossicking notes

The rocks in the vicinity of O’Briens Creek are mapped as the Elizabeth Creek Granite of Carboniferous age. The granite is a pink medium-grained, and slightly porphyritic granite containing minor mafic minerals. Topaz and tin were deposited in veins and altered zones derived from late-stage melts and fluids during the cooling of the granite. These resistant minerals were liberated by erosion and later concentrated in creek alluvium and possibly hillwash. The area has been extensively worked for alluvial tin.

Topaz and other gemstones are found in alluvial gravels (wash), which are up to 2m deep, usually in present creeks and gullies. The wash consists of sand and gravel with some cobbles and

boulders. Colluvial or hillwash deposits also have potential to be gem-bearing. Tailings from previous tin mining operations throughout the area offer further potential for gem finds.

Other gem materials found in association with the topaz are mainly the quartz varieties, rock crystal, citrine and smoky quartz, and the beryl variety, aquamarine. Fragments of cassiterite (tin oxide) are also found.

O'Briens Creek, Tourmaline Gully, Crystal Gully, Swampy Gully, Six Mile Creek, McDonald Creek and Lancewood Creek are the main areas of interest to fossickers (see map).

Digging with hand tools and dry sieving are the usual methods used to search for gems.

Special conditions

Several mining claims and two mining leases within the area are excluded from the declared fossicking area (see map); these must not be entered without the permission of the holders. Posts mark the corners of each tenure. Several residence areas exist along Elizabeth Creek (see map), which are also excluded from the fossicking area.

Moonstone Hill feldspar locality

Gem-quality feldspar can be found on Moonstone Hill between Hughenden and The Lynd. The material is suitable for cutting as faceted gems or cabochons and some rarer material may exhibit the bluish adularescence of moonstone. Attractive specimens in matrix are also found. The locality is surrounded by Blackbraes National Park.

Moonstone Hill is a general permission fossicking area and fossickers must comply with the special conditions of access (see below).

Access

Moonstone Hill is a low isolated hill on the east side of the Kennedy Developmental Road (unsealed) about 90km south of The Lynd. The Reserve is 5km north of the Blackbraes turn-off, or about 16km north of the Chudleigh Park turn-off.

Look for a simple wire gate in the fence and a track leading to the hill. A sign showing the conditions that apply is erected on the reserve and boundary markers have been surveyed in.

Facilities

Camping is permitted for a maximum of 5 nights. Camping permits can be obtained from the self-registration centre at the old Blackbraes homestead, which is about 5km south to the turn-off and a further 4km to the homestead (now Blackbraes National Park). Campsites must be within the bounds of the resources reserve and not encroach the surrounding Blackbraes National Park. The best sites are probably on the eastern side of the hill out of sight from the main road. Campfires are not permitted and gas stoves or barbecues are needed for cooking.

Fossickers should bring their own water supplies and not take water from the grazing operations on the adjacent national park.

Map

- Moonstone Hill feldspar locality map (PDF, 220KB) [https://www.dnrm.qld.gov.au/__data/assets/pdf_file/0005/1232159/moonstone-hill-feldspar-locality.pdf]

Fossicking notes

Late Cenozoic basaltic volcanism is well developed in northern Queensland in 12 separate provinces. Moonstone Hill is within the Chudleigh Province, which is characterised by broad, partly dissected lava plains between numerous pyroclastic cones, some composite cones and several lava shield volcanoes. Moonstone Hill is one of several scoria vents that are surrounded by flat-lying basalt lavas, some of which were erupted from the vents. Scoria (lava with a high proportion of gas bubbles) is exposed on top of the hill and is typically reddish-brown in colour, and characterised by its vesicular texture. The feldspar occurs as megacrysts filling some gas cavities in the lava. The lava plains overlie older metamorphic rocks of Precambrian age, Palaeozoic sediments and granitoids, and Cretaceous sediments.

The feldspar from this locality has been identified as anorthoclase, an alkali feldspar in which sodium is in excess of potassium, which is unusual as anorthoclase-moonstones are uncommon and somewhat of a rarity for collectors.

Generally the material is colourless and transparent, but some is milky white to yellowish and translucent to opaque. Some specimens show a silvery-white to bluish adularescence (presumably because of separation into albite and othoclase crypto-perthitic layers) and hence can be classed as moonstone.

Gem-quality material commonly occurs as blocky cleavage fragments of 10–30 carats and rare specimens 5–6cm in length. A lot of material is unusable for cutting due to incipient cleavages, or fractures and other inclusions, but clean sizeable material is common. The material has weathered out of the host rock and can be found on the ground surface or in the soil around the lower flanks of the vent.

Specking the ground surface and simple shallow excavation and dry sieving are the best methods to use.

Special conditions

- Do not light any fires.
- Leave fences as found.
- Bring in your own water supplies and do not take water from the grazing operations on the adjacent national park.
- Do not enter the adjacent national park for fossicking or in vehicles.
- Remove all rubbish.

Northern Queensland fossicking, 28 May 2018, [https://www.qld.gov.au/recreation/activities/areas-facilities/fossicking/north-qld]