



Theropod track at Cabin Pool.

ACKNOWLEDGEMENTS

Text: Charles Helm, Richard McCrea, Kevin Sharman.
Geology and Palaeontology Advice: Richard McCrea,
Kevin Sharman.
Photo Credits: Jack Carrigan, Carina Helm, Charles Helm,
Linda Helm, Kevin Sharman
Tree Carving Photo: Robert Hatch
Signs: Signs & Things
Map: Kevin Sharman.
Publishing & Printing: Loraine Funk
First Printing: June 2014



Flatbed Falls

Please pack your garbage out.

Travel in groups and carry bear spray.

For more information, please contact the
Wolverine Nordic and Mountain Society at 250 242-3984
or the Tumbler Ridge Visitor Centre at 250 242-3123.

WNMS website http://wnms.pris.ca

The 27 km TR TRAIL encircles three quarters of Tumbler Ridge without having to cross over a single paved road. Spurs lead to waterfalls, rock formations, dinosaur tracks, picnic areas, riverine and creek-side portions, natural swimming pools, spectacular view-sites, and a backcountry cabin. It also passes the Lions Campground and the Golf Course restaurant. It therefore offers a tour of the special sites on Tumbler Ridge's doorstep that combine to make this such a unique community.

The TR TRAIL is a project of volunteers of the Wolverine Nordic and Mountain Society (WNMS) and the Tumbler Ridge Aspiring Geopark Society. It stitches together existing trails - some fall under WNMS, others under the District of Tumbler Ridge, others are user-maintained. Some are narrow improved game trails suitable just for hiking and running, others are shared with ATVs and snowmobiles, others with mountain bikers, cross country skiers and the Saddle Club.

The TR TRAIL was developed with generous funding for trail-head, trail-side and interpretive signage from Mountain Equipment Co-operative. Working with Northern BC Tourism, the brochures were funded through Destination BC's cooperative funding program, Community Tourism Opportunities and the District of Tumbler Ridge. The project was endorsed by Recreation Sites and Trails BC.

The trail is signed so as to be enjoyed in a clockwise direction. All signs are white-on-blue. Distance markers from 0-27 are placed at half-kilometre intervals, and directional arrows are placed at all junctions and significant corners. Small blue diamonds or flagging tape occur every hundred metres.

A few parts of the TR TRAIL are steep, and work is ongoing to improve these through staircases and hand-lines, and to install benches. In a few places it passes above steep drop-offs – caution signs warn trail-users of these hazards. Pine-beetle infestation implies a greater number of affected pine trees – avoid hiking in very windy conditions, as the risk of falling trees is greatest at these times.

In the longer term, it is planned to extend the trail to form a complete circuit around Tumbler Ridge, which will include the spur up to the Bald Spot.

There are five signposted access points to the TR TRAIL: at the start beside the Heritage Highway near the Gun Club, Flatbed Falls parking lot, Lions Campground parking lot, Golf Course parking lot, and at the end near the saddle club. These conveniently break the total distance into four legs.

Leg 1 (7 kms) – Start to Flatbed Falls parking lot:

To reach the beginning of the trail from the sign and parking area near the Gun Club, proceed along the ATV trail north of the Heritage Hwy for about 500 metres, then cross the highway with great care to the sign marked "Kevin's Trail" and the 0 km marker. The TR TRAIL initially follows Kevin's Trail, then descends to the three Flatbed Pools (Top Pool and Overhanging Rock Pool which are good for swimming and have attractive rock formations, and Cabin Pool with its dinosaur tracks). It follows the Razorback onto the "Missing Link" before diverting to the Flatbed Falls parking lot.

Leg 2 (5 kms) – Flatbed Falls parking lot to the Lions Campground parking lot:

The trail heads down to the falls, then back up to follow the Linking Trail, with an enjoyable spur down to the Mini-Falls on Flatbed Creek. There are good views of Flatbed Canyon, and eventually the trail descends down to creek level, and crosses below the Hwy 29 bridge just after passing the Bridge Pool (also good for swimming).

Leg 3 (5.5 kms) – Lions Campground parking lot to the Golf Course parking lot:

The TR TRAIL passes through deciduous forest, then climbs up to town level and follows the edge of the escarpment past TR Point, with many good views of river and foothills.

Leg 4 (9.5 kms) – Golf Course parking lot to Saddle Club:

The TR TRAIL follows some of the Wolverine cross country ski trails, before descending to the Murray River via Larry's Trail. There are spurs to two delectable riverside sites with views of the Bergeron Cliffs, then it climbs up to the WNMS Lost Haven Cabin up Linda's Trail (the roughest and most challenging section of the trail). After following Escher's Loop to a final viewpoint the trail leaves the ski trails and ends near the Saddle Club.

THE TR TRAIL



INTERPRETIVE HIKING TRAIL GUIDE

TUMBLER RIDGE, BC



Northern British Columbia









The first three kilometres follow **Kevin's Trail**. This probably follows an old pack trail noted on maps from the 1930s. Art Skinner was a legendary trapper in the region, and nearby are the remains of his 1930 cabin.

The **First Viewpoint (km 0.9)** is from the top of steep bluffs of unconsolidated Pleistocene (the time period characterized by repeated "Ice-Ages") glacial sediment. As these bluffs are eroded, remains of Pleistocene fossils could be exposed, such as mammoth, camel, horse and bison. On the southern horizon are Mt. Babcock and Mt. Roman – the rocks that form these mountains are over 100 million years old, from the Early Cretaceous Period. Below runs Flatbed Creek. Once a much greater river flowed here. But when the enormous ice sheets that once covered this area finally melted about 22,000 years ago, parts of the land rose, relieved of their icy burden. In this process, known as isostatic rebound, parts of the upper reaches of Flatbed Creek were "captured" by Kinuseo Creek.



Top Pool (km 3.6) is the first of many pools in Flatbed Creek along the TR Trail. It is formed by waters cascading over a river-wide ledge of thick, resistant sandstone, forming a pool below which is suitable for swimming in summer. These rocks are from the Kaskapau Formation and are approximately 95 million years old, from the Cretaceous Era. A small overhang is created downstream by this same rock layer. Across the creek, an exposed bedding plane of rock is filled with ripples, suggesting that these rocks were formed in shallow-water.



Oysterbeds (km 3.8): This "beach" is formed from the eroded, friable remains of marine rocks. Clams and other marine fossils may be found in such rocks nearby. Oysterbeds and fossil crustaceans (lobster-like) have also been found in these sediments. Fossil inoceramids discovered here contributed to the global understanding of how these giant clams attached themselves to the ocean floor. Across the creek there is an impressive section of gently dipping rock strata, with alternating sandstone and mudstone layers that tell a story of many deposition events over time.



Overhanging Rock Pool (km 4) is one of the many attractive features along the trail. Here the fast-moving waters of Flatbed Creek briefly pause as they flow beneath horizontal rock layers. The main overhanging rock is formed from the same thick sandstone bed that crossed the creek at Top Pool, and that will be encountered again at Flatbed Falls and the Mini Falls. Water depth varies from year to year. Some years it is safe to leap into the creek from one of the rocks upstream from the Overhanging Rock – always check depth before jumping, and do not dive in.

At Cabin Pool (km 5.2) an exposed rock layer is impressed with dozens of dinosaur tracks, made by theropod, ankylosaur and ornithopod dinosaurs. Deep dew-claw impressions made by the theropods are unusual. The presence of these tracks in silty sandstone with traces of plant roots indicates a swampy environment. Across the creek and downstream is the initial discovery site from 2000, where two local boys aged 8 and 11 correctly identified a dinosaur trackway. Right beside this trackway British Columbia's first dinosaur bone was encountered in 2001, now on exhibit in the Dinosaur Discovery Gallery in Tumbler Ridge. Subsequent floods have eroded these tracks and made this site less obvious.

Nominister Abbey (km 6): this ruined wooden structure is reputed (probably incorrectly) to be the hide-out of the mass murderer responsible for the 1980 Clearwater killings, before his eventual arrest in Tumbler Ridge.

Visible in the valley below from the **Razorback (km 6.3)** and the **Missing Link (km 6.5)** are iron-rich spring-fed ponds, modified by beaver activity, and a home for waterfowl and other wildlife.

Flatbed Falls (km 7.4): The same thick-bedded layer of erosion-resistant sandstone that forms the Overhanging Rock upstream is responsible for the formation of Flatbed Falls. Beneath this layer are softer, thinner deposits that are more easily eroded – these were mostly laid down in a marine environment. The falls create a plunge-pool that is suitable for jumping into after checking depth, but not for diving. Near the top of the Flatbed Falls spur trail there is a good view into the valley of Flatbed Creek as it enters Flatbed Canyon (km 8.5).

McManus bench (km 9.2) overlooks an attractive steep-sided section of Flatbed Canyon. Here the creek follows the centre of a gentle anticline (arch-shaped fold) along nearly horizontal layers of bedrock. If you look across the valley you may be able to imagine the course of an ancient river channel. There is even a pond, now spring-fed, in this ghost valley.

The Mini Falls (km 10.2) forms another delightful cascade and deep pool suitable for swimming and jumping (check pool depth first) amidst impressive rock bands which are gently dipping. Fossil burrows made by worm and shrimp are abundant in rocks on the far side of the creek. The Mini Falls are created by the same thick-bedded sandstone layer seen at Top Pool, Overhanging Rock Pool, and Flatbed Falls. This allows us to work out in which layers to look for dinosaur tracks, and, not surprisingly, such predictive powers of stratigraphy have led to the discovery of further dinosaur trackways here.



South-facing slopes (km 11.3): The steep south-facing slopes below catch lots of sun and dry out quickly. Therefore they tend not to support trees, but instead are brush-covered, and are home to a different set of plants and flowers, birds and butterflies, compared to what is found in the nearby forest.

Bridge Pool (km 12.1) is just upstream from the Highway 29 bridge over Flatbed Creek. A barrier of rocks is sometimes placed downstream in summer to deepen the pool. The cliffs on the far bank display an impressive section of rock strata. The bottom layers are thin, soft, and weakly consolidated, typical of deposition in a deeper marine environment where the sediment is fine-grained and muddy. The middle layers have lighter colouration, and are thicker and firmer, features that are more characteristic of deposition in shallower marine or terrestrial (non-marine) environments. These alternating layers reflect the environment here in the Cretaceous Era, 95 million years ago, when the area was alternately a shallow ocean (the Western Interior Seaway) and sandy, muddy or estuarine shoreline, fed by rivers flowing east from the precursors of the Rocky Mountains. By contrast, the uppermost layers are sandy and very thin-bedded, with low-angled cross-bedding, likely representing fluvial sediments deposited by streams flowing off the Pleistocene glaciers in the last Ice Ages. They have not been hardened into rock like the underlying layers.

The Big Flat (km 12.5): In 1914 Samuel Prescott Fay described this area as "It is without doubt the finest flat I have ever seen in the foothills." He was on his pioneering expedition of exploration from Jasper to Hudson's Hope, travelling down the Murray Valley (en route he provided the first written description of Kinuseo Falls). Later authors wrote of a face carved into a tree in this area, and in time this remarkable carving was registered as a provincial archaeological site. This didn't stop the tree from being mindlessly felled during the construction of the campground in the early 1980s. Thankfully the carving was salvaged, and spent time in Simon Fraser University and Fort St John before being repatriated to Tumbler Ridge in 2004. It is housed in a prominent location in the Tumbler Ridge Community Centre. While



such tree carvings are known from British Columbia's coastal regions, this is the only known inland example of historic First Nations tree carving.

The trail climbs out of the flat area onto the level of Tumbler Ridge and proceeds towards Tumbler Point, with some fine views of the forest and Flatbed Creek below, above more brushy south-facing slopes.

Tumbler Point (km 15): The valley below was the arm of a mighty lake, Glacial Lake Peace, which formed as the great glaciers melted and were impounded against a wall of ice. The valley was filled with sands and gravels deposited by streams flowing from the glaciers, and the river has been cutting down through these since the glaciers retreated. In many places flat terraces occur some distance above the current river and creek level. These "lacustrine terraces" represent old lake levels. The relatively level surface of the trail you have been walking on suggests such a terrace. Bank Swallows nest in the bluffs below and can usually be seen flying around Tumbler Point in summer.

The foothills in the distance to the south are (from left to right) Quintette Mountain, Roman Mountain, Mt Babcock and Mt Kostuik. They are all in older sedimentary rocks, over 100 million years old, and form one of the sites of the extensive metallurgical coal deposits that are responsible for the existence of Tumbler Ridge. The coal is the greatly-compressed, slow-cooked remains of the forests in which the dinosaurs roamed.

The trail proceeds beyond TR Point above the final reaches of Flatbed Creek as it enters the Murray River (km 15.1). Note the old creek channel to the left, and the current creek course on the right. This was created abruptly during a flood in 2006

Where the trail reaches another bench (km 15.6) there is a view to the western horizon of the flat-topped bulk of Mt Spieker, another coal-bearing mountain. Below you is the Murray River Valley, where it is joined by the Wolverine River Valley. Note how closely the Wolverine River approaches the Murray. Yet it veers away and only flows into the larger river more than two kilometres downstream. Maybe in the next flood it will break through at this point. Geological change is often a slow process, but in the case of such river courses, change can be extremely rapid.

Murray River viewpoint (km 15.9): North-facing slopes are usually moist and thickly vegetated, but this is not the case here. The Murray River is actively washing away at the thick sands and gravels that form the river bank, and slides and small rock-falls are common. This explains why the trail avoids the edge here, as it is unstable, especially in spring at times of repeated freeze-and-thaw. Decades from now, as this process continues, it may no longer be possible to walk on a flat trail to Tumbler Point.



The **Tumbler Ridge Golf Course (km 17.6)** was developed in the early 1980s with the arduous toil of volunteers. They used a series of terraces to carve out a very scenic 9-hole course. The scenery would have been even better if they had built it on the valley rim, but this would have been disastrous – mudslides are frequent as the Murray River erodes its banks, and the buildings and fairways were wisely built a distance away from the rim.

The Wolverine Cross Country Ski Trails follow a series of terraces perched above the river valley. These trend in a north-south direction. Ridges on these benches are known as eskers, and are the remains of glacial melt-water channels in which rocks and pebbles were deposited (km 20)

Larry's Trail (km 20.4): Valley-bottom vegetation is dominated by huge Cottonwoods, which grow to a great height provided the capricious Murray River does not change course and obliterate them. It is inspiring to consider that the waters of this river encounter no human-made obstacle in their course to the distant Arctic Ocean via the Peace, Slave and Mackenzie Rivers.

On the slopes of Mt. Bergeron to the north is the spectacular line of the 95 million-year-old **Bergeron Cliffs**, a thick layer of terrestrial (non-marine) sandstone deposits. Dinosaurs inhabited the land, not the sea, and we could therefore guess that dinosaur prints and perhaps bones may occur in or beside such rock layers. In this case, such an educated guess would prove correct.

At the first short spur trail to the **Murray River** (km 20.8) a large slide can be seen upstream. Closer by is a wetland which is flooded in spring and after heavy rains, but usually dries up by the end of summer. This is a good place to look for wildlife.

For the next few hundred metres (km 21) the river bank is being actively eroded by the fast-flowing river. The trail needs to be relocated further inland every few years. It then passes through areas with intriguing vegetation, and over flood channels, where flagging tape indicates the way ahead.



The second spur trail leads left to the **Murray River** (km 21.8). Here, as the river curves left, it encounters a transition. Upstream for the past few kilometres it has passed through Pleistocene deposits from the last Ice Age, characterized by soft sediments and mudslides. It now encounters bedrock, into which it carves cliffs, lined by multiple layers of thinly bedded marine strata of the early Late Cretaceous Kaskapau Formation, 95 million years old.

The ascent up **Linda's Trail (km 22.2)** is the longest and roughest of the whole TR Trail, but provides interesting, different terrain. Here the land is hummocky, bumpy, and the trees are smaller than elsewhere. This is an old mudslide, now colonized by vegetation and stable enough to support trees.

At one point the trail crosses a mildly active mudslide (km 22.6) where it has to be re-created each spring. Still higher up there is a sand dune (km 22.7), another legacy of the Pleistocene melt-water channels or possibly of winds blowing sands off the glaciers. Then the trail veers right and follows a well established game trail to climb up to more level ground.



Lost Haven Cabin (km 22.8) provides an enticing cross country skiing destination in winter, and is a hub for hikers, mountain bikers and horseback riders in summer. It has a wood-shed, indoor stove and outdoor barbeque area. Water is collected from rainfall only, so please be extremely careful with fires.

Escher's Loop provides further views (km 23) of the Murray Valley and Mt. Bergeron, as it traverses more benches and eskers.

The **Final Viewpoint (km 24.1)** at the end of a spur off Escher's Loop offers a bench that overlooks the valley as the Murray River courses northwards. It is three days by canoe to the next bridge through pristine wilderness, a magnificent canyon, past an impressive example of rock faulting, and waterfalls. A river-boat trip forms an ideal way to enjoy these treasures. Bridging the valley here is the powerline from Capital Power's Quality Wind Project (the turbines are visible in the distance). This is the fourth-longest such span in Canada.



A short series of boardwalks leads across a wet spot and tiny creek (km 25.1), which disappears into the ground nearby. It emerges as a spring way below, at the bottom of the sand level near Linda's Trail

After leaving the ski trails, the TR Trail ascends gently and passes close to the **Saddle Club (km 26.5)**. This was one of the first clubs to be formed in the infant Tumbler Ridge in 1984. It boasts forty paddocks. Resident and visiting horseback riders enjoy the trails and help keep them well maintained. The TR Trail ends at **km 27**, just before Mackenzie Drive.