



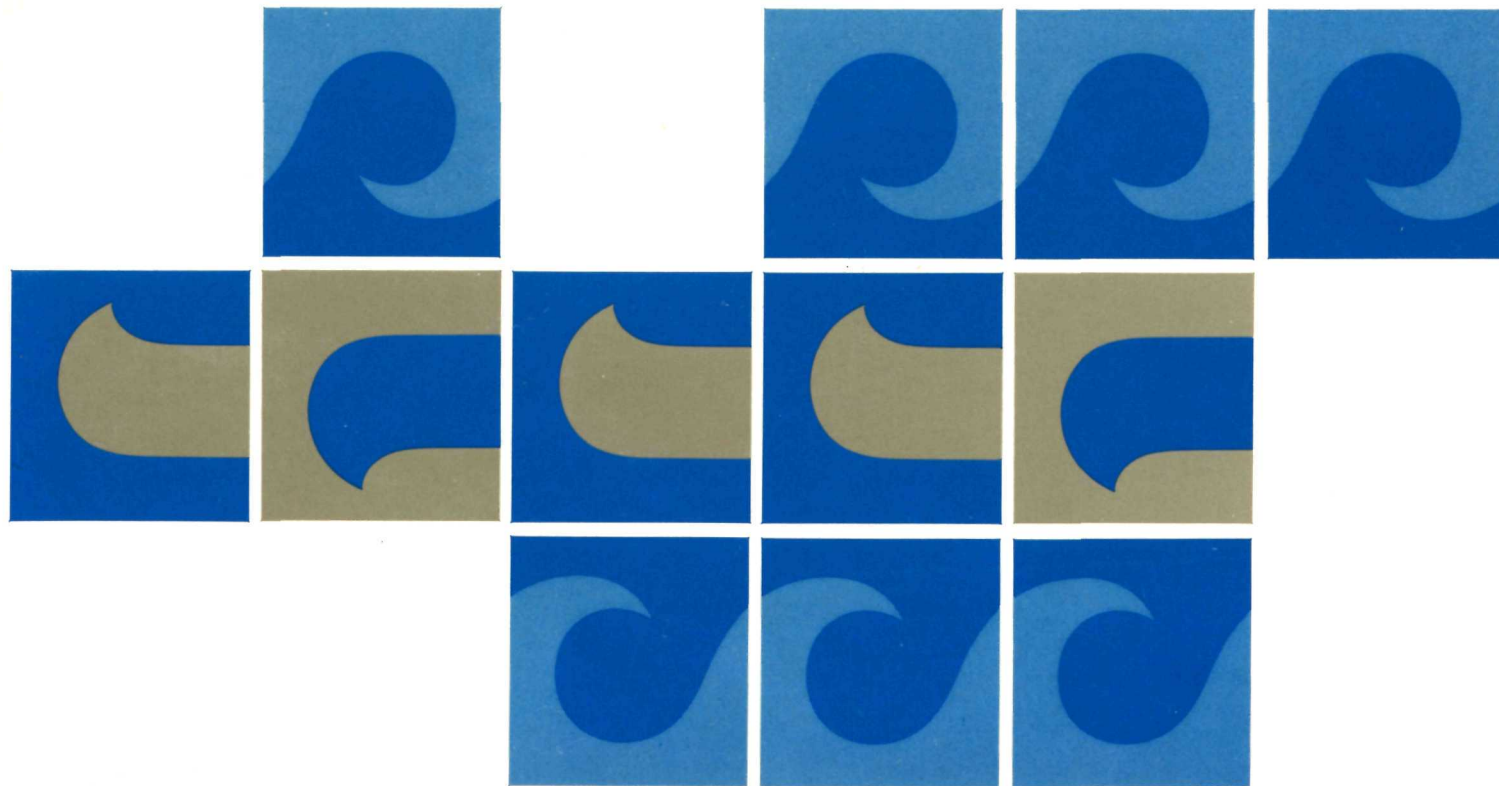
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Wild Rivers: **Alberta**



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Wild Rivers:
Alberta

Wild Rivers Survey,
Planning Division,
Parks Canada,
Ottawa, 1974



The Kootenay Plains on the North Saskatchewan River

It is difficult to find in life any event which so effectually condenses intense nervous sensation into the shortest possible space of time as does the work of shooting, or running an immense rapid. There is no toil, no heart-breaking labour about it, but as much coolness, dexterity, and skill as man can throw into the work of hand, eye, and head; knowledge of when to strike and how to do it; knowledge of water and rock, and of the one hundred combinations which rock and water can assume – for these two things, rock and water, taken in the abstract, fail as completely to convey any idea of their fierce embracings in the throes of a rapid as the fire burning quietly in a drawing-room fireplace fails to convey the idea of a house wrapped and sheeted in flames.

Sir William Francis Butler (1872)

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Foreword

Wild rivers are a priceless part of our natural heritage. These waterways, untouched by the march of man's technological progress, are the arteries of our land, and one of the main elements in its growth to nationhood.

From the copper-coloured waterfalls of the Labrador plateau, to the Canadian Shield's labyrinth of lakes and streams, to the glacial torrents cutting through the western mountains — wild rivers are all that remain unharnessed of those waterways which first made it possible for this huge and varied country to be explored and developed.

Long before Europeans laid eyes on them, these rivers served the native peoples as vital sources of both food and transportation. Later, the rivers were to carry the newly-arrived Europeans on other voyages of exploration and exploitation throughout the vast interior of the continent. And the settlers who followed travelled the same routes.

The waterways were the mainstay of the fur trade; they were the highways to the gold rushes. They did much to provide the economic nourishment through which Canada grew to its present stature.

With the advent of modern technology, some of our rivers were harnessed to serve our newfound needs. But

thousands of miles of waterways, and the land they pass through, remain essentially untouched.

Today, Canadians are gradually re-discovering these fascinating wild rivers. They are seeing nature on its own terms – enjoying its works from the vantage of its own highways. They are recreating the adventures of the explorers; struggling over the same portages as the heavily-burdened “coureurs de bois”; running rapids which once hurtled “voyageurs” and their precious cargoes toward the markets of Montréal; gently floating down majestic rivers which once carried thousands of anxious prospectors toward the promise of gold.

Parks Canada is promoting these challenging voyages of discovery, which embrace both the past and the present. Wild rivers are important to Canadians as integral components of our founding heritages.

However, a good deal of down-to-earth information about the rivers and their habits is needed before anyone attempts to navigate them. It is for this reason that Parks Canada decided to carry out surveys of wild rivers all across the country. We are publishing the results of these surveys in the present series of booklets, in order to provide a practical guide for the modern “voyageur”.

But there is one other very important point that you must bear in mind. “Wild” really is the correct adjective

to describe many of the rivers, and only experienced and well-equipped canoeists should enter these waters. You will find them a tremendous challenge. So it’s up to you. Our land and our rivers are waiting for you to explore and rediscover them.

The Wild Rivers of Alberta

With thrilling rapids and glorious mountain scenery, the wild rivers of Alberta provide great opportunities for canoeists. In spite of many rapids, few require long portages. In most cases, the upper reaches of these rivers are accessible by road. Travelling Alberta's wild rivers, the canoeist can enjoy true wilderness without getting too far from centres of supply and assistance.

During the high water levels of June and early July the rivers are full, fast and powerful. Extreme caution is necessary to avoid log jams which may occur at sharp bends. Conversely, at lower water levels from mid-July on, obstacles in the water may lie dangerously close to the surface, or be completely exposed.

For the most part these are long, strenuous and isolated trips, recommended only for experienced river canoeists.

Climate

The region enjoys an excellent recreational climate from spring through fall. Summers are generally dry; what precipitation there is takes the form of short-lived thunderstorms, and persistent bad weather is very rare. In the mountains and foothills the weather is warm, but seldom hot; as you pass downstream, the temperature rises.

July daily maximums average around 22° Celsius (73° Fahrenheit), while the minimums average about 8° Celsius (40° Fahrenheit). Measurable precipitation occurs on about 40% of summer days in the headwaters, and somewhat less frequently farther downstream.

Planning the trip

In planning a canoe trip allow 25 to 30 kilometres (15 to 20 miles) per day paddling. Always allow extra time and food for such unforeseen events as being windbound or delayed by rain.

If egress is to be by plane make sure arrangements have been made before you begin the trip.

Be sure to check in with some responsible agency (the RCMP or the Alberta Ministry of Lands and Forests*), giving them your route and expected time of arrival. And do not forget to check out with them at the end of the trip.

Permits for fires and fishing may be required. Extreme caution should be exercised in the use of fire. Campfires should only be built on rock or sand; afterwards they should be extinguished completely with water, smothered

with sand or soil, and stamped down firmly. All garbage should be packed out with you.

A sturdy canoe capable of handling well in rapids, plus equipment for its repair, are essential. Aluminum canoes were used throughout the wild rivers surveys, and proved most practical.

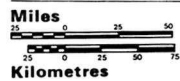
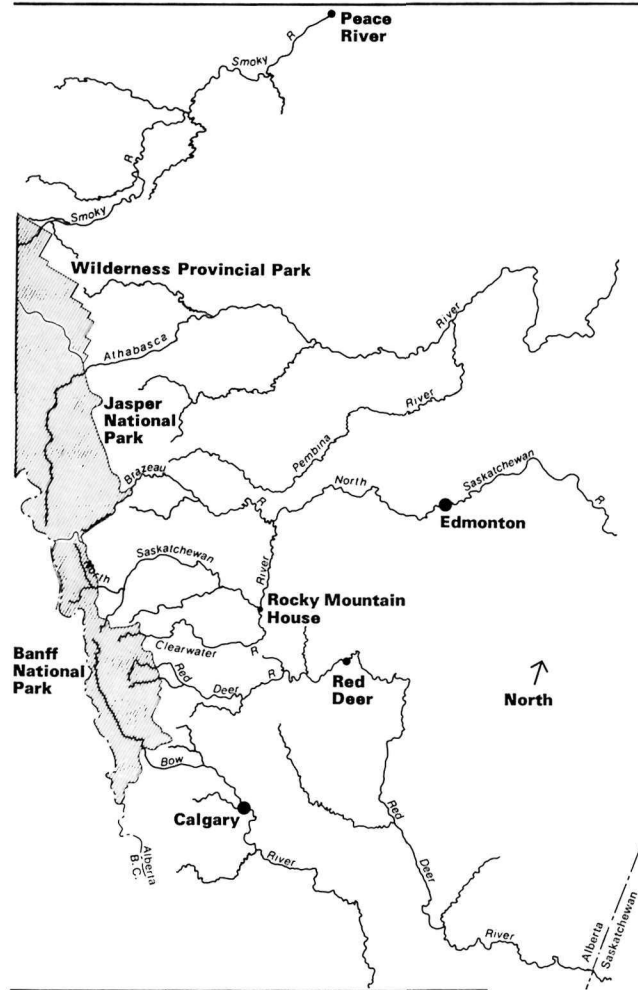
Since lining and hauling are often necessary, lengths of strong rope are essential. Several pairs of high-cut running shoes, or other sturdy footwear, which can take the abuse of rocks and constant wetness are also needed.

In the more isolated regions an emergency survival kit is advisable. The kit should contain high-energy food rations, waterproofed matches, fishhooks and line, and emergency rescue flares for signalling aircraft. These items should be well waterproofed; if the kit is small it could be worn on your belt.

Firearms are never necessary.

The national Topographic Series of maps are available from:
Canada Map Office,
Room 147, 615 Booth Street,
Ottawa, Ontario K1A 0E9

*Legislative Buildings, Edmonton, Alberta.



1 Smoky River

Smoky River

Access and egress

Maps required

Grande Cache to Peace River
(see map, page 10)

Length

7 to 12 days/456 kilometres (285 miles)/no major portages

Date of survey

late August 1973, medium flow level

Access to the Smoky River from the town of Grande Cache, Alberta, is quite simple. The town is 432 kilometres (270 miles) northwest of Edmonton and 634 kilometres (396 miles) northwest of Calgary by paved roads. The population of Grande Cache is 3,500 and all services are available. Other points of access are the Highway 34 and Highway 49 bridges, respectively 218 and 339 kilometres (136 and 212 miles) below Grande Cache.

The town of Peace River is a good point of egress, with paved roads leading from the town to Highway 2.

(N.T.S. 1:250,000 scale)

83E Mount Robson

83L Wapiti

83M Grande Prairie

83N Wingami

84C Peace River

About the river

Geography

The Smoky can be divided into 3 main physiographic units. Beginning at the Continental Divide in the heart of the Rockies, the river soon leaves the Rocky Mountains to pass through the foothills, finally traversing the relatively flat parkland of the Peace River country into which the river has cut a deep valley.

In the 104 kilometres (65 miles) from its source to the end of the mountains, the Smoky drops 710 metres (2,300 feet). Most of the way, it occupies a wide, flat-bottomed valley, but there are several unnavigable canyons near the headwaters.

The foothill physiographic unit lasts from Grande Cache to the vicinity of the Cutbank River. In the first few kilometres, mountains rise as high as 1,085 metres (3,500 feet) above the river, but they quickly subside into low, rolling hills. The banks are usually steep, sometimes exposing sandstone,

shale, or conglomerates. Sand and cobble bars become more frequent toward the end of the foothills.

Below the mouth of the Cutbank River, the Smoky traverses an area of very little relief as it enters the parklands of the Peace River district. In the last 250 kilometres (150 miles) of its course, the river occupies a valley which is often more than 150 metres (500 feet) below the level of the surrounding land. Sandstone and shale cliffs are prevalent in this section. The Smoky expands to an average width of over 120 metres (400 feet), attaining a width of 300 metres (1,000 feet) in places, and slows to a velocity of about one metre (3.3 feet) per second.

Flora

In the final part of the mountain physiographic unit, deciduous trees such as balsam poplar, aspen and birch domi-

nate the valley floor, while the higher slopes are forested with spruce. There are frequent meadows and grassy hillsides.

Below Grande Cache, the open grassy hillsides gradually yield to a very dense forest of poplar, aspen, birch and spruce. The dense, largely deciduous forest persists along the lower river, although as the Smoky enters the drier Peace River country the vegetation becomes scrub.

Fauna

The mountains are the key winter and spring range for elk, moose and big-horn sheep. Woodland caribou, wolves and wolverines also live here. Deer, bear and beaver appear farther along the river. Dolly Varden, arctic grayling and Rocky Mountain whitefish occur mainly in the upper reaches. Waterfowl are quite common and eagles and hawks can be seen.

The canoe trip



*The mouth of the Napiti River as it joins
the Smoky River*

Grande Cache to the Cutbank River (3 to 5 days/147 kilometres (92 miles) /350-metre (1,125-foot) drop in elevation)

The starting point of this river trip is just below Grande Cache Bridge, where a small road branches off to the right of the main paved road and leads to the east shore. At this point the river is 120 metres (400 feet) wide and one metre (3.3 feet) deep, with a current of $1\frac{4}{5}$ metres (5 feet) per second. The view from the river is limited to steep and densely forested hillsides.

In the first 8 kilometres (5 miles) below the Grande Cache Bridge the only obstacles are braided channels with minor rapids. Then, 8 kilometres (5 miles) from the starting point, at the mouth of Hill's Creek, there are 2 consecutive and more difficult rapids which can be run on the left side after scouting.

The Grande Cache coal mine is situated $6\frac{1}{2}$ kilometres (4 miles) below Hill's Creek. Beyond the mine, the Alberta Natural Resources Railway follows the left embankment of the river, and debris from washed-out sections detracts from the wilderness atmosphere. Frequent riffles and choppy sections occur 19 kilometres (12 miles) above the Kakwa River; but they present no serious difficulties.

Just below the first railway bridge is a short rapid with waves up to one metre (3.3 feet) high which are easily avoidable. There is a rapid $5\frac{1}{2}$ kilometres ($3\frac{1}{2}$ miles) farther downstream, which can be skirted along the left shore. Just after this the river takes a sharp bend to the left, passing through some easy white water before arriving at a more difficult rapid around a right-hand bend, 5 kilometres (3 miles) before the confluence of the Kakwa River. There are high sandstone cliffs on the inside of this curve, fol-

lowed by an open bank with huge boulders which makes a good landing point. The ledge and midstream boulders just beyond this point may be run after scouting or can be easily lined along the right bank. Just below the ledge are 2 consecutive rapids of $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) long; both can be run or lined. Beyond these obstacles, there are only a few minor riffles before the junction of the Kakwa River. Campsites are rare above the Kakwa but there is a good site at the confluence.

Immediately downstream a set of rapids commences. These have waves up to $1\frac{1}{2}$ metres (4 feet) high in places, but the worst are usually avoidable by hugging the bank. In at least two places, scouting is required to determine the best route; lining would be easy on either shore.

Below this there are a few rapids, all easily run by experienced canoeists. These lead to a longer series of rapids,

beginning about a kilometre ($\frac{1}{2}$ -mile) below, before the Cutbank River and ending a kilometre ($\frac{1}{2}$ -mile) below, where the second railway bridge crosses the river. This series of rapids is marked on the topographic map. The first rapid of the series can be skirted, although it is difficult to pick the best route in this boulder-strewn stream. About 90 metres (100 yards) before the Cutbank there is a ledge which can be run down a chute on the right after careful inspection; care must be taken to avoid the large boulders which follow immediately. The rapid just below it can be avoided in the slower-moving water between the rocks on the right.

Just below the Cutbank confluence another difficult rapid, with numerous ledges and rocks, can be run along the right. The high railroad bridge marks the end of the major rapids and the end of this section of the Smoky river. The railroad returns to the west side and immediately diverges from the river.



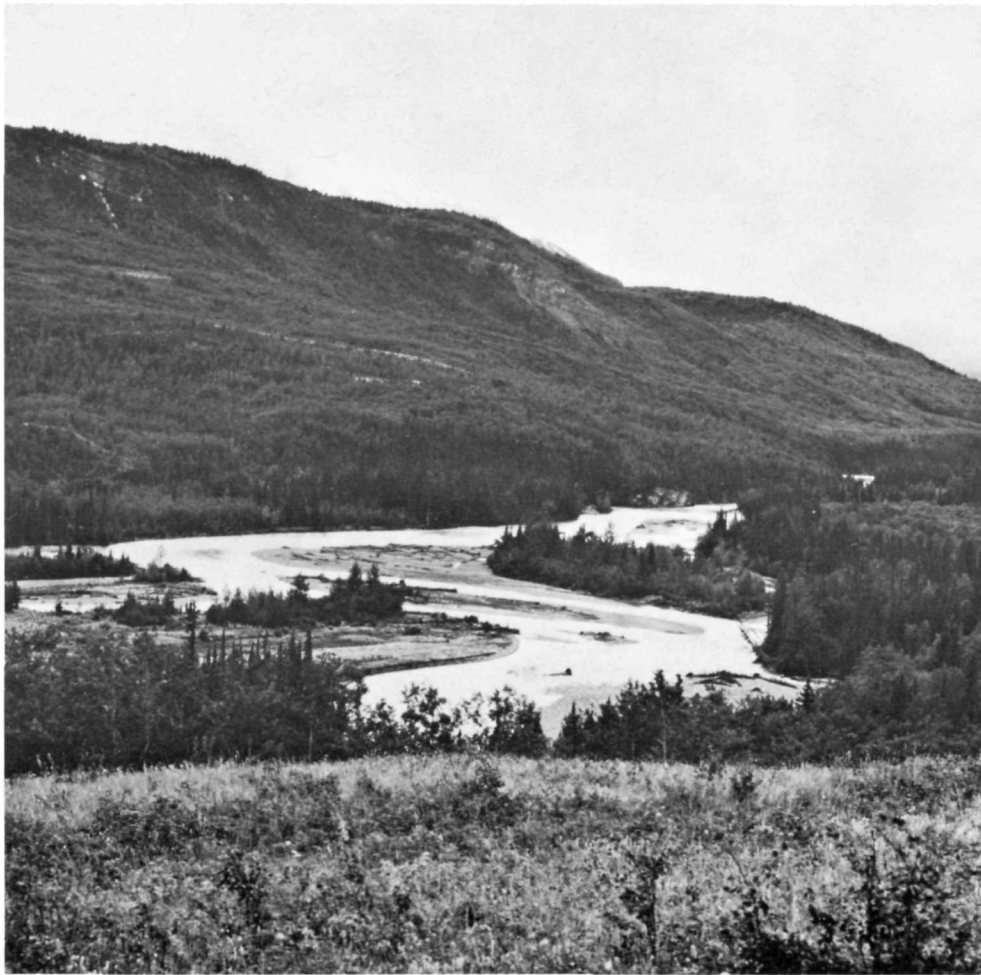
A rapid on the Smoky River, just above the junction with the Kakwa River

Cutbank River to Watino Bridge

(4 to 6 days/229 kilometres (143 miles)/240-metre (775-foot) drop in elevation)

The Smoky gradually widens to as much as 120 metres (400 feet) and slows to $1\frac{1}{4}$ metres (4 feet) per second, with a depth varying between $\frac{1}{2}$ -metre and 2 metres (2 and 7 feet). Eroded banks of sandstone and fluvial deposits alternate with wide cobble bars. The hills are seldom more than 30 metres (100 feet) high. Campsites are abundant on numerous sand bars. Small rapids and riffles are frequent. In between are long stretches of relatively still water where the current slows to one metre (3.3 feet) per second.

Signs of the 1972 spring flood are abundant, including dead trees on banks and the remains of a washed-out



bridge 25 kilometres (15 miles) below the confluence with the Cutbank River. A new steel bridge lies downstream from the old one. Farther on, the Highway 34 bridge provides good access to the river, and there is a small provincial campsite on the right bank. Occasional farm houses can be seen above the bluffs or along densely forested banks.

The paved Highway 49 crosses the river at Watino. This small village is just downstream on the left bank, and its small general store and post office are a short walk from the river. On the right bank is another provincial campground which marks the end of this second section.

Kuass Flats and Willmore Park, on the Smoky River

Watino to Peace River

(1 to 2 days/78 kilometres (49 miles) /60-metre (200-foot) drop in elevation)

In this section of the Smoky River, the scenery is wild and somewhat more interesting than in the previous 250 kilometres (150 miles). Below the Watino bridge the country remains flat for a short stretch before the hills converge. Sandstone cliffs attain heights of 180 metres (600 feet) and occasional hoodoo formations occur. Vegetation consists mainly of birch and poplar, with occasional spruce. Tracks of geese, bear, coyote and deer are present on the numerous sand bars, which also furnish very good camping spots.

In this section, the Smoky River gains speed, offering more interesting canoeing for novice paddlers. In places, the river narrows to less than 90 metres (100 yards) from its average width of 180 metres (200 yards), and the current accelerates to $1\frac{1}{4}$ metres (4 feet) per second). There are frequent rapids with occasional boulders and standing waves up to one metre (3.3 feet) high; these can usually be avoided. In the rapids, the river may accelerate to $1\frac{4}{5}$ metres (6 feet) per second, while between rapids currents of $\frac{2}{3}$ -metre (2 feet) per second are common.

About 26 kilometres (16 miles) before the meeting of the Smoky and the Peace rivers, a small campground can be reached by a dirt road which ascends the bluff on the right bank. Nearing the confluence the valley flattens

out considerably. Many large islands divide the waters at the point where they finally join.

The Peace River is about a $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) wide and has an average speed of one metre (3.3 feet) per second at a medium flow level.

The town of Peace River is situated about 8 kilometres (5 miles) downstream from the confluence. With a population of over 7,700, it offers most facilities, including a car rental agency. There is a convenient egress point on the right bank near the centre of the town, just before the railway and road bridges.

2 Brazeau River

Brazeau River

Nigel Pass to Brazeau Reservoir
(see map, page 10)

Length

8 to 13 days/219 kilometres
(137 miles)/7 to 10 portages

Date of survey

early August, at medium flow level

Access and egress

The headwaters of the Brazeau occupy a roadless area of Jasper National Park, so access is limited to pack trail. Float planes are not allowed on Brazeau Lake. Portaging canoes over a mountain pass may sound like a difficult task, but in this case it is easier than it seems. At 2,240 metres (7,225 feet) Nigel Pass is relatively low, and the total ascent from the Banff-Jasper highway is only 300 metres (1,000 feet). A good pack trail and wonderful scenery make the portage more of an adventure than an ordeal. The survey crew's baggage was packed by horse over Nigel Pass in 6 hours. However, those less prepared could easily require an entire day. Back packing might involve 2 days.

The trip ends at the Brazeau Reservoir, where roads head back to Drayton Valley and Rocky Mountain House.

Maps required

(N.T.S. 1:250,000 scale)
83G Brazeau
83B Rocky Mountain House

(N.T.S. 1:50,000 scale)
83C/6 Sunwapta
83C/7w Job Creek
83C/10w George Creek
83C/15 Grave Flats
83C/15e Pembina Forks

About the river

Geography

Like other rivers on the east slope of the Rockies, the Brazeau traverses 3 distinct physiographic areas between its source and its confluence with the North Saskatchewan. These are the high ranges of the Rocky Mountains, the more subdued relief of the foothills, and a very flat section at the edge of the prairies.

The mountain physiographic unit extends from the Brazeau's source, near Nigel Pass, to the end of the First Range, about 16 kilometres (10 miles) above the confluence of the Southesk River. In the 77 navigable river kilometres (48 miles) of this unit, the Brazeau descends 550 metres (1,800 feet), attaining a gradient of over 19 metres per kilometre (100 feet per mile). The major drops occur in 3 canyons which require portages. The Brazeau Gorge and Second Canyon are

particularly spectacular, and include a series of impressive waterfalls. Between canyons the Brazeau flows within a flat-bottomed glaciated trough. Throughout the unit spectacular snow-capped mountains flank the valley, towering as much as 1,500 metres (5,000 feet) above the river.

The foothill physiographic unit differs considerably from the equivalent sections of many other east slope rivers. Beginning near the mouth of Opabin Creek, the Brazeau has cut a narrow canyon through cliffs of beautifully stratified reddish-black shale which reach an average height of 60 metres (200 feet), with an overburden of light-coloured glacial till. Cobble bars furnish an abundance of good

campsites along the river. The enclosed valley continues for 75 kilometres (47 miles) with occasional breaks in the cliffs. The Brazeau averages 30 metres (100 feet) in width and perhaps $1\frac{1}{4}$ metres (4 feet) in depth in this unit, and drops 350 metres (1,200 feet), maintaining an average current of 2 metres (7 feet) per second.

The Brazeau suddenly emerges from its canyon into the flat forested lands of the last physiographic unit 22 kilometres (14 miles) below the confluence with the Cardinal River. It gradually assumes a shallow, braided channel, with a flood channel up to 180 metres (200 yards) wide, but maintains a current of about $1\frac{4}{5}$ metres (6 feet) per second all the way to Brazeau Reservoir. Adjoining hills are less than 30 metres (100 feet) high.

Flora

A trip down the entire river includes a sampling of at least 4 different ecological zones, from alpine meadows to lowland forest. The uppermost portion of the Brazeau valley is close to the alpine zone, and is graced with wide open meadows and an abundance of wild flowers and stunted spruce. The portage route through Nigel Pass crosses true alpine meadows with a characteristic flora. Not far down the valley, the spruce forest thickens, and trees attain considerable heights. Stands of lodgepole pine occasionally replace spruce on the sites of old burns, and wild strawberries are a common attraction on gravel bars. Open meadows with a variety of wild flowers are frequent along the river, until near the end of the mountain phys-

iographic unit, where the spruce forest becomes extremely dense.

In the canyon of the foothill unit, the spruce is joined by balsam, poplar, willow, aspen and birch. Wild flowers and berries are abundant on gravel bars and scree slopes.

In the flat lands before the Brazeau Reservoir, there is a densely forested area, where poplar, aspen and water birch increasingly replace spruce.

Fauna

Large mammals are one of the Brazeau River's important resources. Many of the ungulates move to the higher slopes during the summer, but some elk, moose, bighorn sheep and deer remain on the floor of the valley, along with black bear and predators such as wolves and coyotes. Tracks indicate the presence of elk in the canyon below Opabin Creek, and sheep appear to use the canyon as a wintering area. Elk

are abundant in the dense forest of the flat land unit.

Bird life present in the area includes harlequin ducks, sandpipers and dip-pers in the fast water of the upper river, and mergansers, Canada geese and kingfishers in the braided section above the Brazeau Reservoir. White-tailed ptarmigan are present on the rock slopes around Nigel Pass. The upper river offers excellent fishing for Dolly Varden, and rainbow trout are also present.

The canoe trip

Nigel Pass to Upper Brazeau Forks

(3 to 5 days/21 kilometres (13 miles) /325-metre (1,050-foot) drop in elevation)

As the Brazeau enters the meadows at an elevation of 2,000 metres (6,650 feet), it is 45 metres (150 feet) wide, about $\frac{1}{3}$ -metre (1 foot) deep, and flows at $\frac{1}{3}$ -metre (1 foot) per second. The beginning is a navigable stretch which lasts for one kilometre ($\frac{1}{2}$ -mile).

In the next kilometre the river drops 60 metres (200 feet), entering a shallow but steep-banked canyon where it runs over a boulder garden. For the following $2\frac{1}{2}$ kilometres ($1\frac{1}{2}$ miles), the river is as shallow as 15 centimetres (6 inches), and therefore un-navigable; a major portage is required to bypass this stretch. The portage begins where the pack trail crosses to the left bank, and follows that trail through the woods for 2 kilometres



The first portage of the Brazeau River trip

($1\frac{1}{3}$ miles) before emerging in a flat meadow about $1\frac{1}{2}$ kilometres (1 mile) above the Four Point wardens' cabin.

The meadows soon disappear as the Brazeau converges into a single channel, and, within a kilometre ($1\frac{1}{2}$ miles), descends 30 metres (100 feet). The river is still only $\frac{2}{3}$ -metre (2 feet) deep, and abundant boulders, plus a fast current, make banging and scraping inevitable. The ride is very exciting, but aluminum canoes are a must. This stretch ends at the Four Point wardens' cabin, situated on a low bluff on the left bank.

From here, the river slows to about one metre (3.3 feet) per second and deepens to as much as $1\frac{4}{5}$ metres (6 feet), meandering smoothly through lush meadows graced by a variety of wild flowers. The open valley floor is about $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) wide, while pine and spruce forest covers the flanks of mountains which rise



*The view from Four Point warden's cabin
along the Brazeau River*

steeply on either side. To the southwest, 3,265-metre (10,535-foot) Mount Nigel and 3,550-metre (11,452-foot) Mount Athabasca are briefly visible.

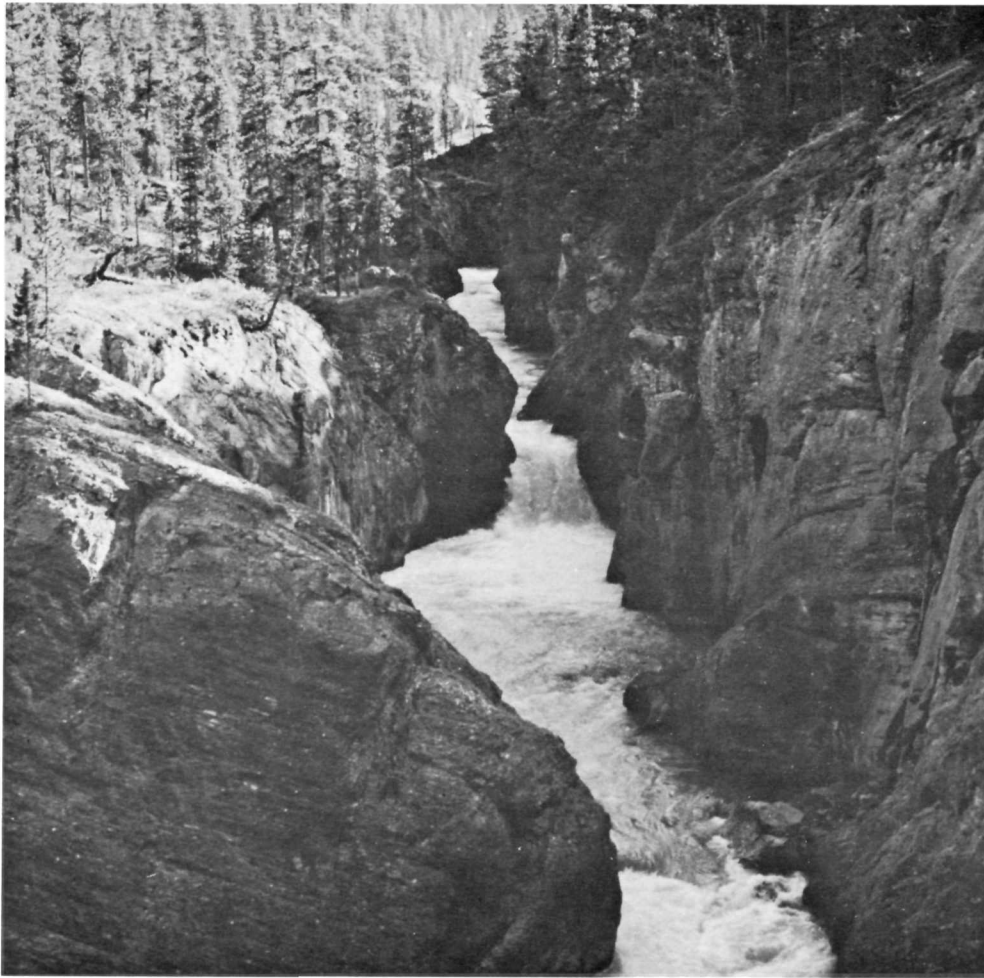
Four Point Creek considerably increases the river's volume, and for a few kilometres canoeing is relatively easy. Not long after, the Brazeau reverts to minor rapids, with frequent rocks and shallow spots, generally on corners. Lodgepole pine largely replaces spruce as the forest gradually closes in, reaching the river banks near the south end of Marble Mountain. Here there are frequent minor, shallow rapids which require bow riding or wading, and a few log ledges which may be run. The current is about 2 metres (7 feet) per second. Canoeing gradually becomes more difficult as the gradient increases to 15 metres per kilometre (80 feet per mile).

At the foot of Marble Mountain very difficult rapids begin, characterized by large boulders, strong currents and standing waves up to one metre (3.3 feet) high. Preliminary scouting is helpful. The valley narrows to little more than the river's width, which is about 23 metres (75 feet). The current averages 2 metres (7 feet) per second. Good campsites abound.

A long and very difficult rapid begins an even more challenging stretch of river along the base of Marble Mountain. A current of 3 metres (10 feet) per second makes scouting essential. This rapid can be run by expert canoeists after scouting, but a strong, high-bowed canoe is a must, as there are many very large rocks and waves. The river is full of obstacles, including large boulders and slabs of bedrock, currents which shove a canoe against rock walls, and standing waves up to one metre (3.3 feet) high which neces-

sitate frequent bailing. The portage is along a faint but adequate trail on the left bank.

Not far below this rapid are two major obstacles. The first is a smooth one-metre (3.3-foot) drop over a sloping reef, which can be lined on the left. The Brazeau enters a shallow bedrock canyon 30 metres (100 feet) past the reef, hurling itself against the left wall as the canyon veers to the right. This rapid may be passable, but an accident would be very serious; prudence dictates a 90-metre (100-yard) portage along the left bank. You can end the portage at a flat spot in the middle of this short canyon if you want to run the last stretch, or you can continue portaging for another 180 metres (200 yards), rejoining the river in a series of easier rapids.



Brazeau Gorge

A small meadow about 3 kilometres (2 miles) before the end of the section affords an excellent view of the surrounding mountains. Below the meadow, the rapids continue with a current of $1\frac{4}{5}$ metres (6 feet) per second.

An old log crib on the left, $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) downriver, marks the start of a 2-kilometre ($1\frac{1}{4}$ -mile) portage around the spectacular Brazeau Gorge. There is a convenient place to stop on the left bank, about 60 metres (200 feet) below the crib.

Brazeau Gorge is not indicated on the topographic maps, although a drop of 20 metres per kilometre (100 feet per mile) is shown. The river narrows in places to as little as 9 metres (30 feet) in width, plunging through bed-rock cliffs up to 60 metres (200 feet) high. There are at least 3 impressive waterfalls, so the gorge is completely impassable.



Fortunately, the pack trail is very close to the river at the upstream end of the gorge, and makes an excellent portage route. After climbing for the first kilometre ($\frac{1}{2}$ -mile), the trail dips steeply downhill. From here a short walk toward the river leads to an open hillside which affords an excellent view of the gorge. The 3 waterfalls can also be seen from this point. Just $1\frac{1}{2}$ kilometres (1 mile) along the portage, canoeists should follow a right fork in the trail, which is in relatively poor condition compared to the main pack trail, which veers to the northwest. When you have gone a $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) down the right-hand trail, the Brazeau can be heard through the trees on the right. A 60-metre (200-foot) walk through the forest leads to a good put-in point at the head of the series of passable rapids.

Brazeau Lake

Alternatively, the trail can be followed for another 450 metres (500 yards) to a point on the west fork of the Brazeau opposite the Brazeau warden's cabin. Both forks of the river offer relatively easy canoeing, but the shorter portage to the main river is preferable.

The 2 branches of the Brazeau meet one kilometre ($\frac{1}{2}$ -mile) below the end of the portage at the Upper Brazeau Forks, where there is a splendid campsite with an extraordinary view. Here, a hike to Brazeau Lake makes an interesting side trip. The pack trail follows the north bank of the west fork, joined by the main trail from Nigel Pass, which crosses on a bridge just upstream from the cabin.

Upper Brazeau Forks to Southesk River

(2 to 4 days/56 kilometres (35 miles/240-metre (770-foot) drop in elevation)

In this second section, the Brazeau River forms the eastern boundary of Jasper National Park, although the east side of the Brazeau Valley is not protected by park status. The river's gain in volume makes canoeing somewhat easier, with the exception of a canyon and several chutes and ledges near the end of the section.

At Upper Brazeau Forks, the river has a width of 30 metres (100 feet), a current of 2 metres (7 feet) per second and a depth of one metre (3.3 feet). The first 3 kilometres (2 miles) are very easy, as it flows through a flat-bottomed valley one kilometre ($\frac{1}{2}$ -mile) wide. On all sides are towering mountains and there are many beautiful campsites.

The first of several rapids, which add excitement but few problems to the run, occurs 3 kilometres (2 miles) below the forks.

The convergence of two ridges on either side of the river, about 8 kilometres (5 miles) below Upper Brazeau Forks, signals the approach of Second Canyon. This is preceded by a short stretch of rapids, and a current of 3 metres (10 feet) per second at the mouth of the canyon. The canoeist should approach the canyon with great care, stopping on the left bank at the base of a steep, open hillside. At the top of the hill, there is a choice of two good portages.

The pack trail is about 275 metres (300 yards) back from the river, $2\frac{1}{2}$ kilometres ($1\frac{1}{2}$ miles) long, and in excellent condition. The alternative is less straightforward, but more interesting. A game trail along the canyon

rim provides a scenic route for a $1\frac{1}{2}$ -kilometre (1-mile) portage to the end of the impassable white water. The portage has a few small ups and downs, but skirts the spectacular gorge for its entire length. Second Canyon begins with a series of very difficult rapids, where the river narrows to as little as 3 metres (10 feet), plunging between the 60-metre (200-foot) cliffs. Next comes one kilometre ($\frac{1}{2}$ -mile) of continuous white water, followed by the impressive 10-metre (30-foot) Brazeau Falls and a number of smaller chutes. The portage can end below the last chute. The rest of the canyon can be run, except for a ledge just before the sharp right bend in the river, which can easily be lined along the right bank.

Below the canyon, the Brazeau slows to $1\frac{4}{5}$ metres (6 feet) per second and its rapids are easily run. The river is about 30 metres (100 feet) wide, with



Brazeau Falls

an average depth of one metre (3.3 feet). Good campsites are abundant. On the left bank a $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) below the end of the canyon, a small warden's cabin is visible from the river. Canoeing remains easy past the mouth of Job Creek, which spills over a wide alluvial fan on the right bank. Below Job Creek is a short braided stretch marked by the odd sweeper or log jam, after which the Brazeau slows down and begins to meander within a wide valley.

Skirting the base of Tarpeian Rock, the Brazeau alternates between a straight channel up to 45 metres (150 feet) wide, and braided stretches with as many as 3 channels. About $1\frac{1}{2}$ kilometres (1 mile) before Opabin Creek, a series of rapids begins. These are characterized by standing waves of up to one metre (3.3 feet) and the

occasional mid-stream boulder, usually easy to avoid. In a few places, scouting is helpful.

Opabin Creek provides a possible access route to the Brazeau. The Blackstone River Road approaches to within $6\frac{1}{2}$ kilometres (4 miles) of the Brazeau and a pack trail follows Opabin Creek down to the river.

The Brazeau begins its return to a narrow, incised valley $9\frac{1}{2}$ kilometres (6 miles) above the confluence of the Southesk River, passing beneath 30-metre (100-foot) cliffs. Just beyond a sharp right bend is a one-metre (3.3-foot) ledge which might be runnable, but can be easily lifted over on the right. There are 2 formidable chutes in succession, one kilometre ($\frac{1}{2}$ -mile) farther downstream, preceded by some low ledges. The river first converges into a narrow falls about 3 metres (10 feet) high, which are soon followed by another drop of $2\frac{1}{2}$ metres (8 feet). These chutes are impassable, requiring

a portage of 135 metres (150 yards) along the steep left bank. The right bank is unsuitable, due to steep cliffs rising 45 metres (150 feet) above the river.

At a slight right-hand bend, 4 kilometres ($2\frac{1}{2}$ miles) above the Southesk River, an impassable 3-metre (10-foot) falls necessitates a 90-metre (100-yard) portage. The easiest route is to climb a steep but reasonably open hillside on the right, and then slide the canoes 30 metres (100 feet) down to a gravel bar just below the falls.

Below the falls is a series of rapids, including a few low ledges, where scouting is helpful. The river averages 30 metres (100 feet) in width and $1\frac{1}{4}$ metres (4 feet) in depth, with a current of $2\frac{1}{2}$ metres (8 feet) per second.

The Southesk River emerges suddenly from its own canyon, affording a view southwest to the north flank of Mount Dalhousie.



View from the Falls toward the Southesk River

Southesk River to 17 kilometres (11 miles) below the Forestry Trunk Bridge.

(1 to 2 days/59 kilometres (37 miles)/300-metre (985-foot) drop in elevation)

Below the mouth of the Southesk River, the canyon narrows to force the Brazeau through a channel 12 metres (40 feet) wide. In the centre the water is smooth, and from here on, the river is relatively easy for a while, as standing waves rushing against the base of the dark shale cliffs can generally be avoided by taking the inside of the corners.

A one-metre (3.3-foot) ledge, 4 kilometres (2½ miles) below the Southesk River, necessitates lining on the right. A small rapid at the next corner is worth scouting, but can be run without trouble on the left.

Only 1½ kilometres (1 mile) farther on, a series of fast rapids precedes a major waterfall which is indicated

on the 1:50,000-scale topographic map. The rapids can be lined along the right bank to within 30 metres (100 feet) of the falls. *Canoeists should not attempt to run these rapids*, as the slippery banks would make it very difficult to stop before the falls. Just above the falls, a steep forested bank must be climbed, to begin a portage of about a 1/2-kilometre (1/4-mile) which ends at the first convenient place to descend the bank, well below the falls.

The falls are about 3 metres (10 feet) high, and the river plunges through a narrow notch in the rock, creating considerable turbulence at the base. Expert canoeists may wish to lower their empty canoes into the pool below the falls, via a high-water channel on the right, but the run is complicated by heavy, rapidly changing boils, and some unavoidable 1 1/4-metre (4-foot)

standing waves just around the corner. An accident here would be extremely serious.

Downstream from the falls, rock cliffs maintain a height of up to 60 metres (200 feet), but there are abundant campsites on gravel and sand bars. Canoeing becomes easier, with the exception of a rapid, one kilometre (1/2-mile) above Thistle Creek, where scouting is advisable before running. Thistle Creek is a small stream which enters the river via a densely forested gully. Below Thistle Creek, the Brazeau has a vigorous current of 2 1/2 metres (8 feet) per second, and is an average of 30 metres (100 feet) wide and 1 1/4 metres (4 feet) deep.

Just over 6 1/2 kilometres (4 miles) past Thistle Creek, a dangerous rapid can be bypassed by lining for 30 metres (100 feet) down the left bank. Boulders and high standing waves complicate the passage, but this rapid might be run after scouting. There is

another rapid one kilometre (1/2-mile) downstream. The cliffs briefly converge to as little as 15 metres (50 feet) apart, but there is surprisingly little river turbulence. There is another rapid 1 1/2 kilometres (1 mile) downstream, with standing waves up to 1 1/4 metres (4 feet) high; this may be run.

A rapid with tricky back-eddies on either side of the centre channel occurs a 1/2-kilometre (1/4-mile) below the mouth of Coast Creek. This rapid is the last major obstacle before the Forestry Trunk Road bridge.

The confluence of the Cardinal River offers another access point to the Brazeau, as a gravel road crosses the Cardinal on a bridge just upstream from its mouth. The Forestry Trunk Road bridge is located 5 kilometres (3 miles) downstream from the Cardinal River. The bridge is 69 kilometres (43 miles) north of the Trunk Road's junction

with the David Thompson Highway at Nordegg. An Alberta Forest Service campground is situated on the right bank at the bridge.

A sharp left bend, one kilometre ($\frac{1}{2}$ -mile) below the bridge, signals the beginning of a long white-water stretch. It begins with a rapid, with standing waves up to $1\frac{1}{4}$ metres (4 feet) high; there is a similar rapid a $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) farther downstream. Below this point the river is choppy, with frequent easy rapids characterized by large waves but few rocks. Along this stretch, the Brazeau is about 45 metres (150 feet) wide, with a mean depth of $1\frac{1}{2}$ metres (5 feet) and a current of $2\frac{1}{2}$ metres (8 feet) per second. Just after the river bends sharply to the south, $6\frac{1}{2}$ kilometres (4 miles) below the Forestry Trunk Road bridge, there are 2 consecutive ledges, totalling a drop of $1\frac{1}{4}$ metres (4 feet); these can be run or lined on

the left. The next 11 kilometres (7 miles) of the Brazeau are a continuous series of rapids interspersed with stretches of choppy water, with waves of up to $\frac{2}{3}$ -metre (2 feet) high. The major rapids have few rocks, but standing waves as high as $1\frac{1}{4}$ metres (4 feet) are often unavoidable, so the canoeist should be prepared to bail frequently. This final white-water stretch completes a generally interesting and demanding section, as the cliffs abruptly yield to low, densely forested hills, 17 kilometres (11 miles) below the Forestry Trunk Road bridge.

**Seventeen kilometres (11 miles)
below the Forestry Trunk Road
bridge to Brazeau Reservoir**

(1 to 2 days/70 kilometres (44 miles)/210-metre (680-foot) drop in elevation)

In this section, the Brazeau River leaves the foothills of the Rockies and enters the flat forested lands at the edge of the prairies. Despite a lack of topographic relief, the river and its surroundings remain invigoratingly wild. The enclosed, high-banked valley of the previous section is replaced by a wide channel, flanked by hills no more than 30 metres (100 feet) high. The forest is a dense mixture of poplar and spruce, and there are frequent open areas, suitable for campsites, along the banks or on gravel bars.

Gradually, the Brazeau assumes a braided form, expanding in places to 90 metres (300 feet) in width, and averaging a $\frac{2}{3}$ -metre (2 feet) in depth;

the current is 2 metres (7 feet) per second. At medium flow, the river is generally unobstructed, as the log jams which form during the spring flood are left stranded on the banks.

Near the mouth of Blackstone River the total width of the flood channel is several hundred metres, while the main channel may be as narrow as 30 metres (100 feet), averaging one metre (3.3 feet) in depth. Canoeing remains fast and easy, though choosing the best channel to avoid running aground requires some skill.

Above the Brazeau Reservoir the river temporarily flows through an enclosed valley, as the hills and the exposed sandstone faces, typical of this region, sometimes attain a height of 30 metres (100 feet) above the river. In the last stretch, dead and fallen trees line the banks, perhaps the result of an increase in the height of the water table due to the reservoir.

Brazeau Reservoir

(1½ day/12 kilometres (8 miles)/
no change in elevation)

The Brazeau Storage Dam is located 48 kilometres (30 miles) upstream beyond the Brazeau's confluence with the North Saskatchewan at Brazeau Forks. As the wild Brazeau ends at the head of the reservoir, the scene changes dramatically. Despite government clean-up operations, numerous dead trees and stumps mark the exposed shores. The upper end of the reservoir is usually very shallow, and dead trees and logs are stranded or floating in large jams everywhere. The spruce and poplar forest is very dense along the shores. A rough road, perhaps used for the clearing operations, appears to reach the head of the reservoir on the north shore. Floating debris gradually thins out toward the east end of the reservoir and the canoeist should have little trouble finding a clear route. For the last 3 kilometres

(2 miles) before the dam, a dirt road parallels the southeast shore and is accessible from the reservoir at several points. The road connects with routes to Drayton Valley and Rocky Mountain House.

3 Clearwater River

Clearwater River

Trident Lake to Rocky Mountain House
(see map, page 10)

Length

5 to 7 days/203 kilometres (127 miles)/2 to 4 portages

Date of Survey

mid-July 1973 (at medium water levels)

Access and egress

Road access to the Clearwater is limited to its lower 160 kilometres (100 miles). The all-weather Forestry Trunk Road crosses it near the Clearwater Ranger Station and again approaches the river in the Seven Mile Flats on the north bank. From here, a dirt road, the condition of which depends on the weather, crosses the Clearwater to follow the valley of Cutoff Creek for 26 kilometres (16 miles), before gradually deteriorating, just short of the Clearwater, near the mouth of Timber Creek. Winch-equipped four-wheel-drive vehicles can continue a short distance beyond Timber Creek. Otherwise a short portage may be required to reach the river.

Access to the uppermost Clearwater, within Banff National Park, is limited to a good pack trail on the north bank, and to helicopters, which are not normally permitted to land within the park. The pack trail follows the Clearwater Valley to a pass where it connects with trails from the Siffleur and Pipestone Rivers to the north and west. The egress point, Rocky Mountain House, is located on Highway 11.

Maps required

(N.T.S. 1:250,000 scale)
83 B Rocky Mountain House
82 O Calgary
82 N Golden

(N.T.S. 1:50,000 scale)
82 N/16E Siffleur River
82 O/13W&E Scalp Creek
83 B/4E Cripple Creek
83 B/3W&E Tay River
82 O/14 Limestone Mountain

About the river

Geography

Like other rivers on the eastern slope of the Rockies, the Clearwater can be divided into three distinct physiographic units. For its first 65 kilometres (40 miles), the river flows through the Rocky Mountains. Then it winds another 56 kilometres (35 miles) through the foothills, before spilling out onto the prairies for the last 95 kilometres (60 miles) of its length.

The Clearwater River's original source is a glacier on the flank of Mount Willingdon, a 3,429-metre (11,066-foot) peak. However, it is really no more than a small stream until it reaches Trident Lake, 1,887 metres (6,090 feet) above sea level, where it is swollen by the waters of Martin and Roaring creeks. Trident Lake is situated at the confluence of three glaciated valleys, each surrounded by spectacular limestone mountains over 3,000 metres (10,000 feet) high.

From Trident Lake, the Clearwater makes a swift descent through a valley 1½ kilometres (1 mile) wide, walled by high mountains. Forming a shallow braided channel in a cobble bed, the current averages 2½ metres (8 feet) per second. In the 56 kilometres (35 miles) of the mountain physiographic unit, the Clearwater drops 350 metres (1,130 feet), attaining a gradient of up to 19 metres per kilometre (100 feet per mile) in a few places. The flow rate of a mountain river usually fluctuates widely from day to day. The Clearwater's daily flow rate is uncharacteristically stable, apparently because of the effect of its large headwater lakes; however, seasonal variations in the river's flow are enormous.

Near Washout Creek, the sharp peaks of the Rockies yield to gentler, heavily forested foothills. In this unit, narrow stretches of single channel

alternate with a braided channel running through wide meadows. Bedrock reefs occasionally replace the cobble bottom, creating minor rapids.

Corkscrew Mountain marks an abrupt change from the foothills to the edge of the prairies. In its final 95 kilometres (60 miles), the Clearwater runs through extremely flat land with almost no change in the terrain. The river is braided until the last 25 kilometres (15 miles), where sandstone cliffs restrict it to a single channel. River water remains suitable for drinking until shortly before Rocky Mountain House, where agricultural runoff may introduce some bacterial contamination.

Flora

The upper Clearwater Valley is characterized by a medium-density spruce forest, interspersed with willow and

grass meadows. On the higher mountain slopes the forest yields to alpine meadows, where open areas along the banks of creeks and lakes are carpeted with a tremendous variety of wildflowers; at least 50 different species bloom near the river in mid-summer. Near the beginning of the foothill unit, lodgepole pine joins spruce in the forest, followed later by aspen and balsam poplar. On the lower Clearwater, poplar, spruce and cottonwood form an increasingly dense forest, but wildflowers – at least 50 different species – bloom near the river in mid-summer.

Fauna

The headwaters of the Clearwater River provide an excellent habitat for a variety of mammals. Sheep, goats and elk generally summer on the higher slopes, but some elk remain on the valley floor, which is also an important wintering area. Moose, deer and bear are also present, along with a large

number of small mammals, including mink, marten, squirrels and chipmunks. Beaver join the list of mammals present along the lower river.

Ducks and red-winged blackbirds nest in the marshes around Trident Lake, but the Clearwater River itself is generally too fast to offer good waterfowl habitat. Ducks, notably mergansers, are more frequent in the last 95 kilometres (60 miles).

The river supports an intensive fishery for brown, cutthroat and rainbow trout, Eastern brook trout, Dolly Varden, and Rocky Mountain whitefish. Dolly Vardens and rainbows inhabit the headwater lakes, while all six species occur in the foothill and prairie units.

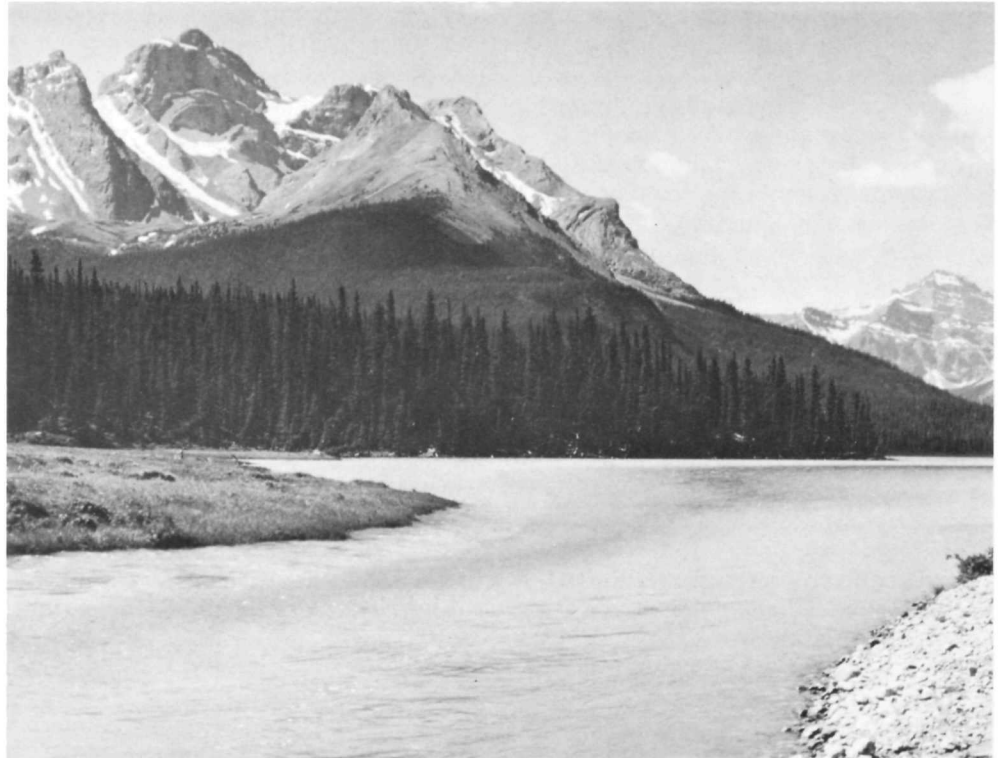
The canoe trip

Trident Lake to Timber Creek

(2 days/38 kilometres (24 miles) / 300-metre (1,000-foot) drop in elevation)

The first section of the Clearwater is not easily accessible. Trident Lake is situated southeast of Martin and Clearwater lakes, in the Clearwater Valley of eastern Banff National Park. From Trident Lake the distance to Clearwater Lake is about $3\frac{1}{2}$ kilometres (2 miles), and to Martin Lake, one kilometre ($\frac{1}{2}$ -mile). The 3 lakes are easily accessible via a horse trail adjacent to the shores of the Clearwater River, and are enhanced by spectacular mountains over 3,000 metres (10,000 feet) high and green forests of spruce.

As the trip begins from Trident Lake, the descent is swift, with a very even gradient of 7 metres per kilometre (40 feet per mile) during the first 3 kilometres (2 miles), and a velocity of $1\frac{1}{4}$ metres (4 feet) per second. The river is 15 metres (50 feet) wide with a



The outlet of Trident Lake, the start of the Clearwater River trip

mean depth of $1\frac{1}{4}$ metres (4 feet); it becomes wider but shallower as it descends.

The channel is generally single, with frequent sharp curves complicated by log jams. The steep or hummocky banks are unsuitable for camping.

In the last $1\frac{1}{2}$ kilometres (1 mile) before Malloch Creek, the river drops 30 metres (100 feet), according to the topographic maps. Nonetheless, experienced canoeists should be able to navigate the tight corners, mid-stream boulders and occasional shallow places. At low water, as in August and September, the canoes might have to be hauled over shallows.

Just before Malloch Creek, the spruce forest yields to willow meadows where good campsites can be found. There is a designated campsite on the left bank, a $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) above the confluence of Malloch Creek.

The river maintains a very fast pace and descends 15 metres per kilometre (80 feet per mile) to a point near the mouth of Indianhead Creek. At medium flow, this stretch is runnable, but requires canoes able to withstand the shock of frequent scrapings on gravel bars.

Between Malloch and Indianhead creeks, cliffs appear briefly, and the channel varies between single and braided. Usually there is only one major channel that stands out, which may be anywhere from 15 to 30 metres (50 to 100 feet) wide. Campsites are fairly abundant on low terraces adjacent to the river, or on sandy cobble bars along the braided channels.

Near Peter's Creek, sweepers are found at every corner. Most of the time whirlpools or dead water follow a tight

corner, and constant care is needed to avoid the unpleasant surprise of half-submerged logs.

At Peter's Creek the Clearwater River leaves Banff National Park. Immediately downstream, dead-heads, sweepers, log jams and tight corners persist, while hoodoos tower above good camping spots. The river is braided, with a total width of several hundred metres and an average depth of one metre (3.3 feet). The main channel is deep enough for canoeing, but is often congested with log jams and sweepers.

A new river bed is in the making 3 kilometres (2 miles) upstream from Forbidden Creek, where erosion since the spring of 1972 has suddenly cut a channel through dense forest. The Clearwater has abandoned its former stream bed on the north side of the valley and ventured to the south. The route through the trees is difficult, as

water, mud, mosquitoes, log jams and deadfalls must be crossed. However, it is possible, although it may necessitate a few short portages. This particular stretch of river is quite likely to vary from year to year.

In the last few kilometres of the section there are abundant and excellent campsites along the river.

Timber Creek to Forestry Truck Road Bridge

(1 to 2 days/53 kilometres (33 miles)/300-metre (1,000-foot) drop in elevation)

Timber Creek is the farthest point accessible by road on the Clearwater River. From there on, the mountains continue briefly on the right and for some time on the left. The river remains mostly braided, with a main channel width of 15 metres (50 feet), which provides excellent canoeing, aided by a current of up to 3 metres (10 feet) per second. As in the previous section, sweepers, stumps and log jams are the main obstacles. Willow meadows offer good campsites. Spruce gradually yields a share of the forest to lodgepole pine.

Washout Creek roughly coincides with the beginning of choppy sections, which occur where the river narrows every 90 metres (100 yards) or so.

Standing waves up to one metre (3.3 feet) high are found in these narrows.

The Clearwater soon enters a valley which widens progressively from one to 1½ kilometres (½ to 1 mile), with hills up to 300 metres (1,000 feet) high above the river, especially from Elk Creek downstream.

Before heading north along Elk Creek, the Forestry Trunk Road briefly approaches the Clearwater in the Idlewild Meadows, providing another access possibility. The canyon stretch which follows has some mild rapids.

Near Cutoff Creek, 5 kilometres (3 miles) below the steel bridge, there is a short rapid formed by a bedrock ledge, followed by many midstream boulders. There is a series of small ledges and boulders 30 metres (100 feet) further on. The entire rapid should be runnable after scouting. Immediately downstream, the Clearwater River



The lower Clearwater River

spreads out into the Seven Mile Flat, retaining one or 2 principal channels and a current of 2 metres (7 feet) per second.

Soon, the river is flanked by 1,674 metre (5,400-foot) Corkscrew Mountain. The Clearwater then returns for the last time to a narrow valley. Along the banks, low stone cliffs alternate with gravel bars, and log jams in the main channel become larger and increasingly frequent. Conifers and poplars form the main vegetation in this stretch, with some willow growth along the banks.

The narrow valley continues for 8 kilometres (5 miles) to the Forestry Trunk Road Bridge near the Clearwater Ranger Station. The ranger station marks the end of this section, and provides a convenient access or egress point.

Forestry Trunk Road Bridge to Ricinus Bridge

(1 to 2 days/34 kilometres (21 miles)/170-metre (550-foot) drop in elevation)

This section is easily accessible from the Forestry Trunk Road, and offers good canoeing, varying from easy to difficult. Below the bridge, log jams are extremely large and numerous, and can obstruct a channel completely, requiring either portaging or hauling in order to bypass them. Canoeists should be capable of stopping quickly; otherwise these log jams can be quite dangerous.

Since the river is often cluttered and there is little change in scenery for long distances, this section is less interesting than the upper Clearwater River; however, it does offer a challenge to quick action, with a current of 2 metres (7 feet) per second. The river remains braided, with one or 2



The Clearwater River near Idlewild Mountain

main channels, 15 to 30 metres (50 to 100 feet) wide, and a one-metre (3.3-foot) average depth.

Vegetation consists mostly of spruce and deciduous species, such as poplar, aspen, cottonwood, water birch and willows. Campsites are numerous in this section, and there is an abundance of firewood.

Near Ricinus Bridge, the low sandstone cliffs typical of this region appear briefly. On the left bank just below the new bridge, a grocery store, gas station and accommodations are available. The current at this point is 2 metres (7 feet) per second.

The Ricinus Bridge is an excellent spot to finish your trip, after a particularly demanding section. Or you could take a short rest, and begin a more relaxing stretch that could terminate at either Dovercourt or Rocky Mountain House.

Ricinus Bridge to Rocky Mountain House

(1 day/55 kilometres (34 miles)/120-metre (400-foot) drop in elevation)
The highway bridge at Ricinus, reached by road via Caroline, is 120 kilometres (75 miles) southwest of Red Deer and only 40 kilometres (25 miles) south of Rocky Mountain House.

Downstream from the bridge, the channel tends to be straight and the log jams thin out somewhat.

About 25 kilometres (15 miles) below the bridge, the Clearwater River resumes a single channel, with very easy canoeing which lasts until its confluence with the North Saskatchewan River.

From 8 kilometres (5 miles) above Dovercourt Bridge, cows can be sighted in a few places and farms become more and more frequent. From here on, the river forms a deep single channel and slows to one metre (3.3 feet) per second. Sandstone cliffs framing

the Clearwater add a wild note to an otherwise peaceful part of the river.

Dovercourt Bridge is a new structure, built in 1973. The current accelerates to 1¼ metres (4 feet) per second here, and maintains this velocity for the remainder of the section. The main characteristics of the last stretch are a width of roughly 60 metres (200 feet), an average depth of one metre (3.3 feet), plus infrequent but excellent campsites. Cows, beaver and deer share this last section.

Only 3 kilometres (2 miles) separate the Clearwater Bridge and the North Saskatchewan/Clearwater confluence. Another kilometre farther downstream on the North Saskatchewan is the David Thompson Bridge, which crosses the river at Rocky Mountain House.

Rocky Mountain House has all services, including a car rental agency, motels and stores.

4 North Saskatchewan River

North Saskatchewan River**Access and egress**

Maps required

Alexandra River to Edmonton
(see map, page 10)

Length

10 to 16 days/531 kilometres (332 miles)/at least 2 portages

Date of Survey

August 1973

The Alexandra River starting point can be reached by a fire road, leaving the Banff-Jasper Highway 25 kilometres (16 miles) north of Saskatchewan Crossing. This road is not generally open to the public. The Banff-Jasper Highway adjoins the North Saskatchewan River at its confluence with the Alexandra, and crosses the river 150 kilometres (95 miles) south of Jasper and 133 kilometres (83 miles) north of Banff. The David Thompson Highway parallels the North Saskatchewan River from Saskatchewan Crossing to Rocky Mountain House, affording convenient access to the river at several places. The Forestry Trunk Road Bridge crosses the river 21 kilometres (13 miles) below the Bighorn Dam, just 13 kilometres (8 miles) south of Nordegg. Several towns along the river, including Rocky Mountain House, Drayton Valley and Edmonton, provide good egress points with convenient services.

(N.T.S. 1:250,000 scale)

83C Brazeau

82N Golden

83B Rocky Mountain House

83G Wabamun Lake

83H Edmonton

About the river

Geography

The North Saskatchewan traverses 3 distinct physiographic regions. For its first 95 kilometres (60 miles), the river follows a wide flat valley through the spectacular high peaks of the eastern Rocky Mountains. With the exception of one short canyon, the river is about 90 metres (100 yards) in width and $\frac{2}{3}$ to $1\frac{1}{5}$ metres (2 to 6 feet) in depth, and is often extensively braided with a cobble bottom. A current of $1\frac{1}{5}$ to 2 metres (6 to 7 feet) per second, and frequent easy rapids make this a beautiful canoeing section. The river has marked daily and seasonal fluctuations in water level, caused by varying rates of snowmelt. In hot spells it becomes high and very turbid, while in cooler weather it is rather low and clear. The Bighorn Dam introduces an artificial influence, beginning with the Bighorn Reservoir, which is 32 kilometres (20 miles) long. Below the dam, the river is subject to regulation

for power and flood control. This produces daily fluctuations of several metres in the river level.

A brief foothill section is marked by a narrower river valley incised 30 to 60 metres (100 to 200 feet) deep, with a similar width.

This soon yields to aspen parkland with very low hills and a valley a $\frac{1}{2}$ to one kilometre ($\frac{1}{4}$ to $\frac{1}{2}$ -mile) wide, which continues from Rocky Mountain House to Edmonton. For over 320 kilometres (200 miles) there is relatively little change in scenery. Those variations which occur are repeated throughout the last section.

Flora

The North Saskatchewan basin is characterized by a generally dense forest consisting primarily of spruce, balsam, poplar and aspen. Spruce predomi-

nates in the upper sections, with poplar and aspen becoming increasingly common farther downstream. Wildflowers are abundant.

Fauna

Banff National Park and the North Saskatchewan River in general are famous for wildlife, including mountain goats and sheep, elk, moose, deer, bear and a variety of small animals. Waterfowl, coyotes and beaver are common as well.

Tributaries of the North Saskatchewan and nearby lakes offer excellent fishing for rainbow, cutthroat, brown trout, Easter brook trout and Dolly Varden. Below Rocky Mountain House goldeye, walleye, pike and sauger replace trout as the dominant species. Downstream from Devon, river fish are seriously polluted with mercury and there is a standing Alberta Government warning against consumption of fish below Edmonton.

The canoe trip

History

In 1750, François Bigot, the Intendant of Québec, requested Le Gardeur de Saint-Pierre to explore the Saskatchewan River, in the hope of finding a route to the Pacific Ocean. As a result, the river later became a main access route for the fur trade centred on Lake Athabasca. Until the completion of the Canadian Pacific Railway in 1885, the "voyageurs' highway" was the fastest way to cross Canada. Rocky Mountain House, first established by the North West Company in 1799, was the head of navigation on the North Saskatchewan, and each summer the York boat brigades arrived to bring fresh supplies and to transport the furs down to York Factory and Hudson Bay. After the amalgamation of the Hudson's Bay and

North West companies in 1821, Fort Edmonton became the trade and transportation centre of the North Saskatchewan basin. David Thompson travelled from Lake Superior to the Pacific via the Saskatchewan. In 1806-07 he used the new post of Rocky Mountain House as a base during his search for a feasible trade route through the mountains.

Alexandra River to Saskatchewan Crossing

(1 day/30 kilometres (19 miles)/60-metre (200-foot) drop in elevation)
This entire section of the North Saskatchewan River is in Banff National Park. The first few kilometres of the Alexandra River run parallel to a fire road which offers good access to the upstream starting point. This dirt road is not generally open to the public and its use requires advance permission from Banff National Park authorities. Driving conditions on the road may require a four-wheel-drive vehicle.

From the starting point at 1,488 metres (4,800 feet) above sea level, the Alexandra River flows down a valley one kilometre (1½-mile) wide, by snow-covered peaks with thick spruce forests at their bases. Open green meadows lie at the bottom of the valley. The Alexandra River flows in a braided pattern from a glacier on Mount Rice, so the water is very cold

and the temperature fluctuates with the amount of melted snow. The braided river is a $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile) wide at its broadest point, with a current of 2 metres (7 feet per second and a depth varying between 8 centimetres (3 inches) and $1\frac{4}{5}$ metres (6 feet). Low water conditions could make navigation of the river difficult, even though no serious obstacles exist in the braided stretch.

The confluence of the Alexandra and the North Saskatchewan rivers is difficult to detect amid a maze of channels. The confluence is accessible from the Banff-Jasper Highway.

The braided channel continues to Rampart Creek $6\frac{1}{2}$ kilometres (4 miles) below the confluence, where it narrows gradually to 23 metres (75 feet) and produces a rapid that is easily negotiated. Rampart Creek Campground, situated on the left side of the river immediately upstream from this



*The North Saskatchewan River as seen
from the Alexandra River*



rapid, is the only campground along the river within the Banff National Park, and camping is restricted to this area. There is a Canadian Youth Hostel at Rampart Creek, on the east side of the Banff-Jasper Highway.

The river then flows within braided channels until shortly before the mouth of Arctomys Creek. In the straight channel below the creek, a series of mild rapids are run before arriving at a canyon $1\frac{1}{2}$ -kilometres (1 mile) long.

At the entrance to the canyon a rapid with standing waves up to $1\frac{1}{4}$ metres (4 feet) high leads into a shallow, narrow gorge where the river forms $2\frac{1}{2}$ -metre (8-foot) standing waves. A one-kilometre ($\frac{1}{2}$ -mile) portage trail begins on the left bank about 60 metres (200 feet) above the start of the canyon. Following this, canoeists may paddle for about 180 metres (200 yards) before stopping again to portage the last $\frac{1}{2}$ -kilometre ($\frac{1}{4}$ -mile).

The trail begins on the left bank, just before a footbridge crossing the river, and skirts the rim of the canyon. The canyon is the only serious natural obstacle on the entire North Saskatchewan River.

Below the canyon the river widens into a braided channel for 5 kilometres (3 miles) before Saskatchewan Crossing. The paddler facing Mount Murchison sees the Howse River entering from the southwest, and the Mistaya River from the south, $1\frac{1}{2}$ kilometres (1 mile) above the highway bridge. Under the bridge, a bit of excitement is provided by a slight rapid.

Saskatchewan Crossing to the Bighorn Reservoir

(1 day/32 kilometres (20 miles)/60-metre (200-foot) drop in elevation) The paddler leaves Banff National Park 5 kilometres (3 miles) downstream from Saskatchewan Crossing. This braided section of the North Saskatchewan River will challenge an intermediate canoeist. The river has a sand and cobble bottom, an average depth of $1\frac{1}{2}$ metres (5 feet) and a velocity of $1\frac{4}{5}$ metres (6 feet) per second. The David Thompson Highway, which follows the left bank, is rarely seen from the river.

The North Saskatchewan flows through a gradually widening valley, flanked by high mountains at its upper levels. Adjacent grasslands and numerous sand and gravel bars offer excellent campsites.

The large back-eddies of Whirlpool Point, 21 kilometres (13 miles) down-

stream from Saskatchewan Crossing, may be tricky, depending on the water level. At this point the river narrows to about 30 metres (100 feet) and is flanked by high rocks. Should a portage be required, the Highway or a trail should provide a suitable route. Farther downriver a few more such whirlpools are found where ledges extend into the river.

A trail on the left bank leads to the scenic Siffleur Falls, situated about 5 kilometres (3 miles) upstream from the confluence with the Siffleur River. The head of the new Bighorn Reservoir is 5 kilometres (3 miles) below the Siffleur River.



Bighorn Reservoir and Bighorn Dam

(1 day/32 kilometres (20 miles) /
no drop in elevation)

This third section consists of the Bighorn Reservoir, also known as Lake Abraham. The reservoir has submerged 5,480 hectares (13,700 acres) of land that was once part of the Kootenay Plains. The reservoir basin, now meticulously cleared of brush and timber, is surrounded by high snow-covered peaks, their lower slopes covered with a spruce and pine forest. Because of the strong winds characteristic of the North Saskatchewan Valley, the reservoir may be completely unnavigable on a windy day. At least an hour should

Upstream from the mouth of the Siffleur River

be reserved for the portage over Bighorn Dam. A well-hidden rough road on the left provides a convenient route past the dam. The power house water intake is to be avoided.

For those wishing to end the trip here, the northwest arm of the reservoir serves as a supplementary spillway, affording convenient access to the David Thompson Highway.



*The Bighorn Reservoir as seen from the
Dam*

Bighorn Dam to Rocky Mountain House

(2 to 4 days/130 kilometres (81 miles)/300-metre (1-000 foot) drop in elevation)

Flow regulation at the Bighorn Dam has drastically altered the downstream character of the North Saskatchewan. Once known for its powerful rapids with huge standing waves, this section is now a relatively tame stretch. However, since the water level fluctuates up to $\frac{1}{2}$ -metre (2-feet) daily, any difficulty you encounter with the rapids will probably depend on the time you reach them. Canoeists and campers should remember that the river may rise quickly, carrying away both canoes and campsites placed below the high-water mark.

Throughout this section the river has a current of $1\frac{1}{2}$ metres (5 feet) per second, and the water is clear of the

silt which has settled in the reservoir. The braided channel occupies a wide valley until a few kilometres before the gap in the Brazeau Range; there it narrows to about 30 metres (100 feet), only to widen again below Shunda Creek. Along the banks, spruce is increasingly replaced by shrubs and poplars, while the high mountains slowly disappear beyond the horizon. The North Saskatchewan picks up volume and silt as it meets the Bighorn, Ram and Clearwater rivers. Numerous camping spots are available in the braided channel stretch.

(A series of impressive falls can be seen on the Bighorn River 8 kilometres (5 miles) upstream from its confluence with the North Saskatchewan. Hikers who wish to follow the river should ask permission from the local Indian band before crossing the Bighorn River.)

At "The Gap" the river gradually narrows as it squeezes through a break in the Brazeau Range. Here, it winds through a series of rapids and minor whirlpools with a current of $1\frac{1}{4}$ metres (6 feet) per second. The small standing waves provide an exciting ride with little danger.

In the 11 kilometres (7 miles) between The Gap and Shunda Creek, a continuous series of rapids provides interesting but relatively easy canoeing. Standing waves, up to one metre (3.3 feet) high, are the only obstacles encountered. Just above Shunda Creek, high standing waves in the right channel may be avoided by hugging the gravel bar or taking the left channel. Shunda Creek enters from a generally flat area north of the river.

From the Ram River on, frequent standing waves of up to $1\frac{1}{4}$ metres (4 feet) provide an exciting run for covered canoes. Devil's Elbow, a right-hand corner about 14 kilometres (9

miles) downstream from the confluence of the Ram River, must be run on the inside of the corner. Some of the rapids could offer more difficulty in higher water, but all of them could also easily be portaged or lined.

The present town of Rocky Mountain House, with a population of 3,200, is a 1½-kilometre (1-mile) walk from the east side of the road bridge.

Rocky Mountain House to Edmonton

(4 to 8 days/307 kilometres (192 miles)/356-metre (1,150-foot) drop in elevation)

This section of the North Saskatchewan offers relatively easy canoeing in a generally wild, though not wilderness, setting. The scenery is unappealing, but the journey is enlivened by occasional sightings of deer, coyote and beaver, as well as birds such as herons, hawks, kingfishers, and cliff and bank swallows. Farms, oil wells and the odd dirt road are often spotted below the confluence of the Baptiste River. Low, densely forested banks alternate with exposed sandstone cliffs up to 60 metres (200 feet) high. These gradually give way to a valley with a very low profile. The river has a braided channel for the first 50 kilometres (30

miles) or so, and an average current of 2 metres (7 feet) per second.

The Brazeau River is a major tributary, about 90 metres (100 yards) wide at its mouth; its relatively clear green water contrasts with the North Saskatchewan's turbid brown. The North Saskatchewan is still subjected to the regulating influence of the Bighorn Dam at this point, and to a similar influence by the Brazeau River, which is also dammed.

Blue Rapids, about 19 kilometres (12 miles) below Brazeau Forks, may once have been an obstacle, but it is now undistinguished from the rest of the river. Drayton Valley, a town of 3,700 people, lies 160 kilometres (100 miles) downstream from Rocky Mountain House. The town is 2½ kilometres (1½ miles) from the Highway

57 bridge, and offers most facilities. The ferries indicated on the topographic maps around Keephills and Hugget no longer exist, but a bridge now crosses the river about 19 kilometres (12 miles) upstream from Strawberry Creek.

Upon passing the town of Devon, paddlers will notice increasing signs of civilization as they draw nearer to Edmonton. The current is sluggish for the last 48 kilometres (30 miles). A campground at White Mud Creek provides one point of egress, although it is only $6\frac{1}{2}$ kilometres (4 miles) farther to the city's downtown section. Emily Murphy Park, on the right bank just below the Groat Road Bridge, is a convenient place to end the trip. Edmonton provides a big-city finish to a river trip, as it is both the capital of Alberta and the largest city in the province, with a population of over 450,000.

5 Red Deer River

Red Deer River

Access and egress

Maps required

Rocky Mountains to Saskatchewan River (see map, page 10)

Length

15 to 20 days/744 kilometres (465 miles)/2 to 6 portages

Date of survey

early June 1973 (at medium-to-high water levels)

The Red Deer River is accessible up to, and beyond, the boundary of Banff National Park, via a dirt road which follows the river past Mountain Aire Lodge and Ya Ha Tinda Ranch. Mountain Aire Lodge can also be reached by the Forestry Trunk Road, which runs north and south through the Rocky Mountain Forest Reserve and reaches Highway 1A, 61 kilometres (38 miles) west of Calgary. Another access route to Mountain Aire Lodge is a 41-kilometre (32-mile) dirt road, which leads west from Highway 27 near Sundre.

There are many points suitable for egress between the headwaters and the town of Empress, Alberta, the termination point of this trip. Major towns include Sundre, Red Deer, and Drumheller.

(N.T.S. 1:250,000 scale)

82O Calgary
83B Rocky Mountain House
83A Drumheller
72M Oyen
72L Medicine Hat
72K Prelate

(N.T.S. 1:50,000 scale)

(these are an asset up to Sundre, but after that are superfluous)

820/12 N & E Barrier Mountain
820/11 N & E Burnt Timber Creek
820/10 N & E Fallen Timber
820/15 N & E Bearberry

Note of caution

Water quality is satisfactory for drinking in the upper section of the Red Deer River, but below Sundre agricultural drainage into the river makes it desirable to carry drinking water.

About the river

Geography

The Red Deer River runs through 3 distinct physiographic regions: the foothills of the Rocky Mountains; the prairies; and the dry, low badlands.

Flora

The river valley is never bare of vegetation throughout the trip; only the density changes. The upper valley floor consists mainly of open meadows, interspersed with growths of poplar. Later, spruce and poplar dominate the forest, while willow frequently lines the shore. Toward the end of the trip, the hillsides in the badland region are adorned with an assortment of wild flowers, cacti, and tumbleweed.

Fauna

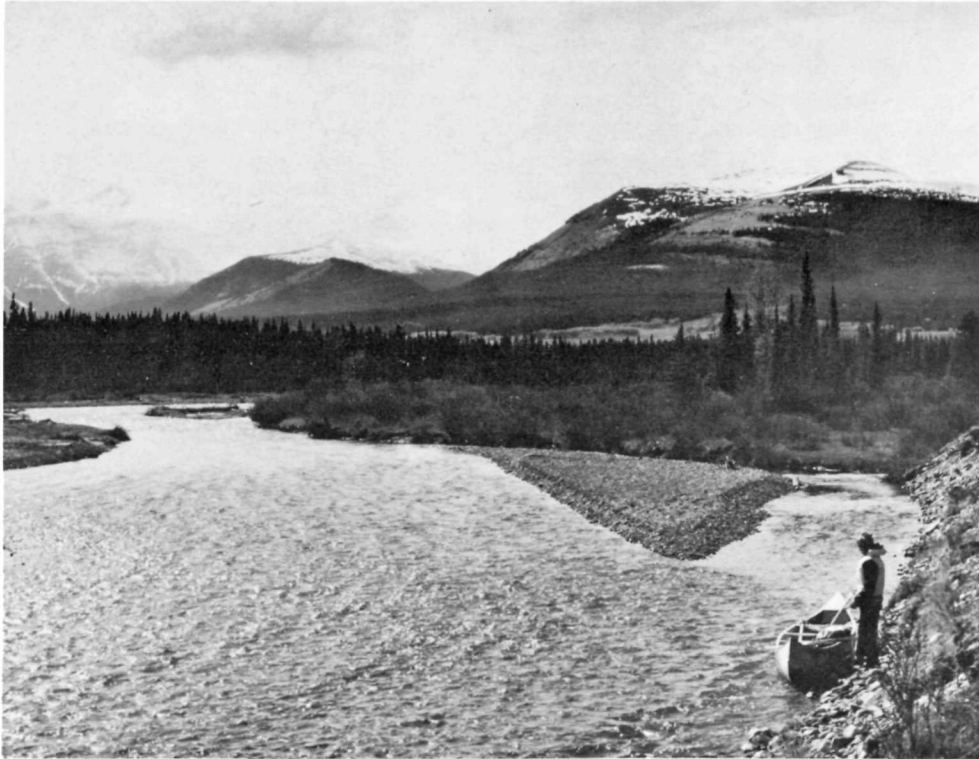
Abundant wildlife in a natural setting is a definite attraction of the Red Deer River. Although gold-eye are present, the fishing is not particularly good. However, certain tributaries are said to be quite productive, particularly where they meet the Red Deer. Wildlife along the upper reaches of the river includes sheep, goat, elk, moose and bear. Pronghorn antelope, coyotes, mule deer, white-tailed jackrabbits and badgers are among the common large mammals sighted along the lower reaches of the river. Also common are Canada geese, various ducks, great blue herons, western grebes, ring-necked pheasants, Hungarian partridges, magpies, long-billed curlews, golden eagles and a variety of songbirds.

The canoe trip

Ya Ha Tinda Ranch to Sundre

(2 to 3 days/88 kilometres (55 miles) / 511-metre (1,650-foot) drop in elevation)

From Ya Ha Tinda Ranch, a road that parallels the river can be followed to a convenient spot for a short carry down to the water. The river appears to be navigable for at least 16 kilometres (10 miles) upstream from this starting point, which is roughly 30 kilometres (18 miles) above Mountain Aire Lodge and 8 kilometres (5 miles) below the Banff National Park boundary. It might also be possible to start at Douglas Lake, depending on water levels and the experience of the canoeist.



*The Red Deer River near Ya Ha Tinda
Ranch*

At the upstream starting point, the Red Deer flows through a very wide valley, flanked by mountains well over 2,790 metres (9,000 feet) in height.

The river has cut its own channel into the valley floor and boasts walls up to 30 metres (100 feet) high in places. A braided channel, varying from 15 to 100 metres (50 to 300 feet) in width, is mainly lined with cobbles and the odd boulder. The velocity is $2\frac{1}{2}$ metres (8 feet) per second, with a mean depth of $\frac{2}{3}$ to one metre (2 to 3.3 feet).

Overall, this section is classified as difficult for canoeing. Sharp turns with overhanging sweepers or log jams, plus the odd ledge, account for this. Quite often, however, experienced canoeists can squeeze by on the inside of such turns.

Except in those places where the willow growth is too heavy, there are abundant campsites on excellent surfaces.

The river enters a steep valley with a 465-metre (1,500-foot) cliff at a point 16 kilometres (10 miles) above Mountain Aire Lodge. This valley continues for about 8 kilometres (5 miles), and loaded canoes might encounter difficulties negotiating some of the sharp turns and choppy water sections. Cold water is a major factor here, and should be considered when you are deciding whether or not to run rapids.

There is a ledge which merits scouting 8 kilometres (5 miles) above Mountain Aire Lodge. Should you decide against running it, either shore allows easy walking. Although campsites are infrequent in this long, steep valley, the situation changes as the confluence of the Panther River is reached. (The Panther River was the site of the 1972 Canadian White-water Slalom Championship).

The river is easily navigated as far as the Forestry Trunk Road bridge at Mountain Aire Lodge. An island im-

mediately precedes the bridge, making the approach difficult. Converging currents are funnelled through a gap 3 metres (10 feet) before the bridge, and unpredictable currents and standing waves should be studied before the run is attempted. At the time of the survey, these rapids changed from impassable to runnable within a 24-hour period, which indicates the degree to which the river level can fluctuate within a short time.

Mountain Aire Lodge offers meals, rooms, gas and oil, a limited supply of groceries and a telephone.

The Alberta Forest Service has set up a campground approximately 1 $\frac{1}{4}$ kilometres ($\frac{3}{4}$ -mile) downstream from the Lodge on the left bank; it offers campsites, tables, wood, fireplaces and outhouses. Canoeists wishing to use this campground should stop not far

beyond the bridge, as they will find it next to impossible to do so later on.

The next 8 kilometres (5 miles) of river follow a straight channel that winds sharply in places, creating difficult corners due to swift currents. Many minor rapids occur, with frequent standing waves of up to 1 $\frac{1}{4}$ metres (4 feet).

About 8 kilometres (5 miles) below Mountain Aire Lodge there is a ledge adjacent to a large boulder on the left bank, known locally as "Big Rock"; it requires scouting. Here, water is funnelled through a narrow passage, and a hidden boulder located at the base of this 1 $\frac{1}{2}$ -metre (5-foot) drop is a definite hazard. An easy carry on the left bank is an alternative. There is a similar ledge 3 kilometres (2 miles) farther on, and though it might be attempted in covered canoes, it should also be thoroughly scouted; an easy carry on the left shore is recommended instead.



The Red Deer River 21 kilometres (13 miles) below Mountain Aire Lodge

Farther downstream, a series of ledges stretching for 180 metres (200 yards) might be run, depending on water levels. However, regardless of water level, the rapids should be scouted. Campsites along this latter stretch are quite frequent.

Prior to reaching a pipeline 3 kilometres (2 miles) farther on, there are frequent minor rapids, the more difficult ones occurring at sharp corners. They can usually be avoided safely by "hugging" the inside shores when turning.

The submerged pipeline is distinguished by a clear-cut 10-metre (30-foot) right-of-way, which runs perpendicular to each shore, and should serve as a warning of the 2-part rapid immediately downstream. The first part can be bypassed via the left channel at high water, while the second, less than 30 metres (100 feet) away,

should be lined for 30 metres (100 feet) along the left shore. The $1\frac{1}{4}$ -metre (4-foot) standing waves offer an exciting ride for covered canoes or kayaks. (This rapid was also a site of the 1972 Canadian White-water Slalom Championships.)

The remainder of this stretch, to a point 21 kilometres (13 miles) downstream from Mountain Aire Lodge, passes through steep banks up to 30 metres (100 feet) high. It is characterized by frequent $\frac{2}{3}$ -to-1-metre (2-to-3.3-foot) standing waves, usually avoidable on inside corners. Minor ledges occur, but are runnable during medium flow conditions.

At the 21-kilometre (13-mile) mark there is a small ledge which requires scouting. Immediately following is a very difficult section which should be run only after careful inspection and planning. The left bank of this section is very irregular and quite steep in places; if lining or portaging is neces-

sary, the right bank is best. The current here is 2 metres (7 feet) per second.

For the next few kilometres, the Red Deer River cuts through steep banks up to 60 metres (200 feet) high. The river offers generally easy canoeing, with the current maintaining a velocity of 2 metres (7 feet) per second.

The valley broadens 13 kilometres (8 miles) above Coalcamp Creek, as the straight channel now takes on a braided shape. Poplars are quite dense here, but they give way to clearings that make favourable campsites. Rapids here are not difficult, but log jams and sweepers are still a hazard.

A ledge, located 3 to 5 kilometres (2 to 3 miles) above Coalcamp Creek, should be approached with caution, as the current just above it is extremely

swift. Should a portage be necessary, both banks offer equally easy routes.

Immediately upstream from Coalcamp Creek, a $1\frac{1}{4}$ -metre (4-foot) ledge, easily observed from the adjacent road, is hardly detectable from water level. Significant undertow here could be dangerous, should a canoe get caught at the ledge's base. Either shore can be portaged easily, and in low water levels the left side of the ledge might possibly be run after careful scouting.

As many as 5 channels at a time occur in the braided section below Coalcamp, and cobble bars should be approached carefully. Campsites abound in this section, as dense spruce and poplar stands repeatedly give way to large open clearings. The mean river depth at medium-to-high flow is $\frac{2}{3}$ to one metre (2 to 3.3 feet). Approximately 8 kilometres (5 miles) upstream from

Sundre, slumping 9-metre (30-foot) banks that come right to the water's edge contribute an enormous amount of silt to the Red Deer River. Canada geese, great blue herons, hawks and a variety of ducks are frequent in this last stretch, and there is much evidence of beaver populations.

The town of Sundre, barely visible from the river, serves as a convenient spot to end a challenging white-water trip, or to begin a more relaxed trip downstream.



*The Red Deer River 8 kilometres (5 miles)
above Sundre*

Sundre to Red Deer

(1 to 2 days/112 kilometres (70 miles) /233-metre (750-foot) drop in elevation)

Downstream from Sundre, the first 32 kilometres (20 miles) of braided river challenge the canoeist's ability to select channels that do not run out of water. Sweepers still await careless paddlers, but are generally easy to avoid.

Signs of civilization become increasingly frequent, beginning with an oil rig on the left bank, 11 kilometres (7 miles) below Sundre, and followed 13 kilometres (8 miles) later by the Garrington Road bridge.

The river resumes a straight channel 32 kilometres (20 miles) below Sundre. The current of $1\frac{4}{5}$ metres (6 feet) per

second persists, but there are no rapids from this point to Red Deer. Low, willow-lined banks continue to alternate with 15-to-30-metre (50-to-100-foot) cliffs and the occasional farm. Cattle, geese, ducks and red-tailed hawks are frequently sighted along the river.

The confluence of the Red Deer and Little Red Deer rivers is popular with local fishermen, as goldeye can be taken here, especially when the water is clear. The remainder of the countryside is somewhat uninspiring.

Below Penhold Bridge, agriculture becomes more obvious. Roughly 14 kilometres (9 miles) before Red Deer the river is spanned by a C.P.R. railway bridge which is one of the longest train trestles in Western Canada.

The city of Red Deer is preceded by the main highway bridge connecting Calgary and Edmonton. Once in the city, the river flows under a train bridge and two city road bridges. Immediately downstream from the second road bridge, the Lions Club Campground, now maintained by the City of Red Deer, offers the weary paddler an excellent campsite, with fireplace and wood plus showers and fresh water.

Red Deer to Drumheller

(3 to 4 days/211 kilometres (132 miles)/178-metre (575-foot) drop in elevation)

The river from Red Deer to Drumheller can be classified as easy canoeing. What this section lacks in challenging water, it gains in a varied display of wildlife, particularly waterfowl.

Heading toward the town of Burbank, approximately 21 kilometres (13 miles) past Red Deer, flat densely forested banks become steeper, with occasional slumping sandstone cliffs reaching heights of 10 to 30 metres (30 to 100 feet). At a sharp right turn near Burbank, the grey shale of the Paskapoo formation is well exposed, and the banks reputedly contain fossil leaves.

A canyon section, with banks as high as 120 metres (400 feet), begins a few kilometres below Burbank. Although a few minor rapids at the head of the

canyon create standing waves of up to one metre (3.3 feet), these can usually be avoided on the inside of the corners. The canyon is alive with animals and birds. Mule deer are often sighted, as well as numerous ducks, geese, magpies, swallows and hawks.

Farther downstream, oil rigs, telephone and electrical wires, plus a ski hill, rob the surrounding of any real wilderness feeling.

Just below the end of the canyon, 90 metres (100 yards) beyond Joffre Bridge, an aeration weir should be scouted, as it may cause problems; it appears runnable, except at low flow levels.

An obvious widening of the river valley occurs beyond Joffre Bridge. The occasional 30-metre (100-foot) bank offers relief. These same high cliffs, 16 kilometres (10 miles) down

from the bridge, afford an excellent view of the river valley, both upstream and down.

About 8 kilometres (5 miles) above the Heatburg railroad bridge, coal seams appear, accompanied by bright sections of red and yellow shale. Progressively drier and sandier hills anticipate the badlands, but the thick willow stands which line the banks remain. An abundance of driftwood facilitates camping here.

The Nevis natural gas plant can be seen from a distance, 80 kilometres (50 miles) downstream from Red Deer, as one approaches Content Bridge. Here, fresh water can be obtained at a local campground adjacent to the historic site of Tail Creek Town.

Leaving Content Bridge, the river is 90 metres (100 yards) wide and very smooth, with a current of $1\frac{1}{4}$ metres (4 feet) per second and a depth of one metre (3.3 feet). An 8-kilometre (5-mile) canyon, located just below Big

Valley Creek, boasts impressive 180-metre (600-foot) hills. These hills afford excellent opportunities for climbing, exploration and photography.

Drumheller has 3 campsites, of which 2 are directly accessible from the river. The most attractive one has adjacent showers and washrooms, and is located on the right bank just below the highway bridge.



The Red Deer River 25 kilometres (15 miles) below Drumheller

Drumheller to Empress

(4 to 6 days/331 kilometres (207 miles)/108-metre (350-foot) drop in elevation)

At Willow Creek, 16 kilometres (10 miles) downstream from Drumheller, campsites are available, but permission should be obtained from the local farmer. At low water, Willow Creek affords easy walking to the highway, where there are some excellent examples of very large hoodoos.

The next 16 kilometres (10 miles) below Willow Creek offer a view of spectacular hills. These are adorned by an assortment of wild flowers, cacti and different shrubs, and petrified wood is exposed in the coulee bottoms. The rock formations here give fascinating evidence of both the last Prairie glaciation and the remarkable rate of erosion since that time.

Near Dorothy Ferry, located 37 kilometres (23 miles) downstream from Drumheller, the hills begin to recede from the Red Deer River as the country flattens out. Care should be exercised when approaching and passing the ferry, as a cable spans the river about $\frac{2}{3}$ -metre (2 feet) above the water level. Campsites are available and the summer water temperature is around 15°C (60°F). At Bullpound the C.P.R. line, which parallels the river from Drumheller on, crosses to the right bank.

Just past the Steidville Bridge, which marks the western boundary of Dinosaur Park, the change in scenery is dramatically sudden. Here the Red Deer River's best badlands are encountered, enhanced by an abundant variety of birds and waterfowl. The park stretches for 27 kilometres (17

miles) along the river, and reaches up to 7 kilometres (4 miles) inland. Dinosaur Park encompasses 8,800 hectares (22,000 acres) of the most representative parts of the badlands. It is the highlight of the trip, an extremely interesting area, for which 1 or 2 days should be set aside.

Near the mouth of Alkali Creek, 16 kilometres (10 miles) below Buffalo Bridge, the country becomes slightly more rugged. Contrary to the map's indication, no bridge exists just beyond the creek. Continuing downstream, the river turns sharply north into the "Big Bend". Prevailing winds from the northwest can render this stretch exhausting. But the hills invite hiking, and the sandy points at river bends afford excellent campsites. Driftwood is somewhat rare in this stretch, and campsites must be chosen with this in mind.



The new Highway 41 bridge located about 8 kilometres (5 miles) upstream from Empress provides one egress point. However, the Empress bridge is the more convenient of the two, as it is just 1½ kilometres (1 mile) from the centre of town.

The Red Deer River 16 kilometres (10 miles) above Tolman Crossing

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Notes

Notes

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