

GENERAL DESCRIPTION OF THE VERNON MAP SHEET AREA, 82L

The area covered by the Vernon map sheet is located in south-central British Columbia and comprises parts of the Interior Plateau to the west and the Columbia Mountains to the east. The plateau and highlands of moderate relief predominate in the western two-thirds of the area. The Thompson Plateau in the southwest is a gently rolling upland, mostly 4000 to 5000 feet in elevation, but dissected by deep, steep-sided valleys up to 8 miles wide. A distinctive feature of the area is the Okanagan Valley, which contains Okanagan, Shuswap, Adams, Mara, Little Shuswap, Ellison, Wood, Kalamalka, and Swan lakes. Bottomlands of 1100 to 1500 feet in elevation are relatively flat.

North and east of Okanagan Lake, the Thompson Plateau gives way to the Shuswap and Okanagan highlands. Relief is moderate, and a thick mantle of glacial materials covers much of the bedrock. The highlands are transitional to the Monashee Mountains, a subdivision of the Columbia Mountains.

The Monashee Mountains occupy the eastern third of the area. Relief may exceed 5000 feet and some peaks are over 9000 feet in elevation. Summits over 8000 feet are sharply defined, and a few small glaciers are found in the higher mountains. The mountains east of the Columbia River are part of the Selkirk Mountains, which occupy a very small part of the area.

CLIMATE

In this area, climate is strongly controlled by topography. The valleys are relatively dry, and are characterized by warm summers and mild winters. The uplands, particularly the mountains to the east, are moderately wet, and are characterized by cool summers and cold winters.

The driest regions are associated with the North Okanagan and Thompson valleys, where annual precipitation is generally less than 15 inches. The uplands adjacent to the Okanagan and Thompson valleys and those of the Shuswap region receive 15 to 20 inches of precipitation annually. Toward the Monashee Mountains, annual precipitation increases to 40 inches, and on slopes in the vicinity of Revelstoke, it is about 60 inches. About one-third of the annual precipitation falls as snow during the three winter months. Snow in the low western valleys is usually gone by late March, and accumulated depths seldom exceed 20 inches. Precipitation is low during the peak recreation months of July and August, whereas precipitation for June is moderate over much of the area. Most summer precipitation is in the form of thundershowers. Storms and sudden winds are a hazard to small boats on the larger lakes during the summer recreation season.

Sheltered valleys in the western part of the area have the warmest average temperatures. Mean daily July temperatures are between 60° and 70° F., whereas mean daily January temperatures vary from 15° to 25° F. The uplands tend to be 5° to 10° cooler than adjacent lowlands in every season of the year. Movements of continental air occasionally cause temperature extremes of -20° to -30° F. in winter and more than 100° F. in summer, but only for short periods of time. The last frosts are normally recorded in May, although subalpine and alpine sites may have frost in any month.

VEGETATION

Vegetation characteristic of the Montane (Dry) Forest Region predominates in the valleys of the Thompson Plateau. Below 1200 feet, the characteristic native cover is grassland or, in some places, unpalatable herbs and shrubs, including downy brome, mullein, yarrow, and sagebrush. Yellow pine is the climax forest tree species along the drier valleys and sidehills, and is often found on sites from bottomlands up to 3000 or 4000 foot elevation. Yellow pine occurs as individual trees or in thin stands with an undergrowth consisting mainly of grasses, forbs, and low shrubs. Douglas-fir and western larch are distributed extensively on moister fringes of the Montane Forest, whereas Engelmann spruce intermixes with Douglas-fir at higher elevations. Deciduous species, such as choke cherry, mountain birch, aspen, and alder, are common in moist areas along streams and lakes. When the snow has melted in early April, there is a profusion of colorful spring flowers.

On the western slopes of the Monashee Mountains and in the valleys of the Shuswap region, Montane Forest is replaced by Columbia Forest vegetation, reflecting the increase in precipitation. Vegetation typical of the moister environment predominates in bottomlands at the headwaters of the Kettle River, through Eagle Pass, and along the Columbia River south of Revelstoke. The characteristic species are western red cedar, western hemlock, and frequent associations of western white pine, western larch, grand fir, and western yew. Douglas-fir and lodgepole pine cover extensive tracts as pioneer species on old burns. Cottonwood and paper birch are common on moist valley bottoms. A dense undergrowth of devil's club, sword fern, thimbleberry, salmonberry, hardhack, and mosses is commonly associated with the Columbia Forest and makes recreation access difficult.

Between 3500 and 4000 feet and up to about 7000 feet, Subalpine Forest is the characteristic forest cover. The main species are Engelmann spruce and alpine fir, although lodgepole pine is extensively distributed on sites of recent fires. Mixtures with Douglas-fir occur near transitions to the Montane Forest, and associations of cedar and hemlock occur near the Columbia Forest. Larch and whitebark pine occur locally. The attractive undergrowth consists of grasses and shrubs, such as blueberries, twinberry, heather, huckleberry, and pine grass.

Open alpine meadows and bare rock predominate above 7000 feet in the Monashee Mountains.

FISH AND WILDLIFE

Moderate numbers of big game occur throughout the area. Deer, particularly mule deer, are fairly abundant in most regions, and local concentrations are found in the vicinity of Lumby. White-tailed deer are more restricted in distribution, but there are significant numbers at Lumby and in the Shuswap River valley between Shuswap Falls and Cherryville. Moose are scattered throughout the area, and fair numbers winter along the Shuswap River north of Sugar Lake and along Wap Creek north of Mabel Lake. Two subspecies of bighorn sheep occur in small localized populations. California bighorns are found in the vicinity of Shorty Creek, and Rocky Mountain bighorns occur near Chase. A few caribou are found in the high country of the Monashee Mountains, mainly in the vicinity of Peters and Greenbush lakes. In the remote parts of the Monashee Mountains, grizzly bear and mountain goat are found in moderate numbers, whereas black bear are common throughout the area.

Upland game birds that are found in the area include Ring-necked Pheasant, Blue Grouse, Ruffed Grouse, Franklin Grouse, Hungarian Partridge, California Quail, Chukar Partridge, and Ptarmigan.

Opportunities for observing and hunting waterfowl are best in the vicinity of Vernon. Concentrations, mainly of migrating ducks, are found at the north end of Okanagan Lake, on Wood Lake, and on parts of Kalamalka Lake. Other concentrations are found at Salmon Arm, Otter Lake, White Lake, Chum Lake, and Ducks Meadow. Nesting sites, of interest to observers of wildlife, are scattered.

Sport fishing capability is one of the most important recreation features of the area. Kamloops (rainbow) trout is the most important game fish, and it is found in almost all lakes and streams. Occasionally, specimens as large as 25 pounds are caught. Kokanee, a landlocked salmon, is found in the larger lakes. Lake trout (char) up to 60 pounds taken from Shuswap Lake, and Dolly Varden char are taken from all the main rivers and creeks. Whitefish are a common but less sought-after game fish in most lakes and rivers.

Spectacular fall salmon runs in the Thompson River and its tributary drainages are of special significance. The observation of spawning sockeye salmon on Adams River is an annual event. Opportunities for catching spring salmon on Shuswap Lake are presently unexploited but potential is high.

SETTLEMENT AND LAND USE

In the early 1800s, the first Europeans passed through this area along the Fur Brigade Trail from Fort Okanagan to Fort Kamloops. The first significant settlement of the Okanagan Lake region did not occur until the late 1850s, when development of and extensive ranching industry began to utilize the natural grassland and savanna of the drier regions. The Coldstream and O'Keefe ranches near Vernon date from this era.

Construction of the Canadian Pacific Railroad in the 1880s shifted the focus of settlement to northern locations, such as Salmon Arm. Small intensive farm units were created and a commercial dairy, beef, and vegetable agriculture were established. Today, dairying predominates in the vicinities of Salmon Arm and Enderby, and around Armstrong, field and truck crops have assumed an equal importance with dairy.

In the early 1900s, many of the large ranches of the Okanagan Valley were subdivided. Irrigation systems were installed, and after a period of adjustment, the fruit industry was developed. This has become a well-organized and highly specialized business with world-wide markets.

Development of the forest industry was slow, but since 1945 it has become the most important factor in the local economy. The industry utilizes logs from throughout the area and particularly from the heavily wooded slopes of the Monashee Mountains. Access to markets is primarily north via the main line of the Canadian Pacific Railway.

Although forestry and agriculture are currently the most important industries, transportation and tourism have recently become significant contributors to the economy. They are augmented by an expanding secondary industry based on the conversion of local agricultural and wood products into such items as fruit juice and plywood.

Vernon, which has a population of about 12,000, is the largest center in the area. In addition to its traditional role as a service center for the surrounding agricultural region, it has become a year-round tourist center. Revelstoke, which has a population of about 5000, is the second largest community. For many years it has been an important point on the Canadian Pacific Railroad, and recently it has become an important service center for the Rogers Pass section of the Trans-Canada Highway. Other centers that have a population of 1000 or more include Salmon Arm, Armstrong, Enderby, and Lumby. They are mainly important as small agricultural service centers.

RECREATION CAPABILITY

Shuswap Lake is one of the most important recreation features in the interior of British Columbia. With four main arms and navigable connections to Little Shuswap and Mara lakes, it offers over 200 miles of diverse and interesting shoreline. The lake has several large, clean sand beaches enhanced by flat, well-drained, and attractive backshores. Sites suitable for camping and cottaging are frequent, and opportunities for angling and boat tripping excellent. The precipitous parts of the shoreline and mountain views enhance the aesthetic attractions of Shuswap Lake.

The most significant recreation feature is the Quaaout Indian Reserve, which borders the lower Adams River and fronts both Shuswap and Little Shuswap lakes. There is a spectacular salmon run in the fall, and is popular for bathing, angling, boating, and camping is excellent. The presence of Kekule Holes as evidence of early Indian habitation, the proximity to the town of Chase and to Adams Lake, and nearby bands of bighorn sheep enhance the recreational potential of this area.

Beaches and potential camping and cottaging sites are also frequent on Okanagan Lake. However, sport fishing capability is lower and the wind hazard higher than on Shuswap Lake. The shorelands at the mouths of Whiteman, Shorts, and Equisis creeks offer extensive sites for camping as well as potential for boating, beach activities, and fishing.

The color of the water and the interesting rock bluffs of Kalamalka Lake combine to give a unique visual experience. Capability for cottaging, boating, and angling is good at the south end of the lake. Beaches at the north end and in Cosenay Bay offer excellent opportunities for shore-based activities. Cosenay Bay has a particularly beautiful setting enhanced by a variety of shoreline and landscape types.

Adams, Mabel, and Whatshan lakes also offer bathing beaches and have good capability for angling, boating, camping, cottaging, and viewing. Artificial flooding of Sugar Lake restricts the use of its shorelines to support facilities for fishing.

Other low-elevation lakes, such as Wood, Swan, and Otter lakes, generally have low capability for intensive recreation, but offer some opportunities for viewing wildlife and for canoeing and fishing.

Above 4000 feet, numerous small lakes occur on the plateau and highlands. These lakes are stocked and offer an important trout fishery as well as opportunities for canoeing and game observation. Capability for organized camping and cottaging is only moderate.

The Shuswap River system offers excellent opportunities for canoe tripping, camping, angling, and wildlife observation and hunting. Originating in an attractive alpine basin with views of glaciers and peaks of 9000 feet, the river courses in a zigzag pattern for nearly 100 miles and flows through three main lakes before entering Shuswap Lake. Mountain scenery, wildlife, camping, and fishing are the main attractions of the upper reaches, whereas canoeing in a mainly pastoral setting is offered by the lower reaches.

The South Thompson River, which is connected to the Shuswap River by Shuswap Lake, has similar canoeing and boat tripping possibilities. This is part of one of the longest stretches of navigable water in the interior of British Columbia. Angling, rock hounding, and the unique erosion of adjacent benchlands offer a scenic and interesting corridor downstream to Kamloops.

Streams tributary to the Thompson-Shuswap river system, such as the Adams, Eagle, and Salmon rivers and Wap Creek, have high capability for camping and angling. Streams of the Okanagan drainage are generally too small to have significant recreation capability.

Uplands throughout the area are well suited to a full range of extensive activities. At low elevations, the forests of the dry belt are particularly attractive for hiking and horseback riding, and cultivated lands offer a pleasing pastoral environment. Above 4500 feet, the extensive rolling plateau country of subalpine forest offers many miles for hiking and primitive travel. In winter these regions are particularly attractive for cross-country skiing. Opportunities to collect huckleberries and blueberries are very good in late summer.

In the extreme east, rugged mountainous terrain, glaciers, and frequent alpine basins offer attractive mountain viewing. Monashee Provincial Park is particularly attractive; alpine meadows, waterfalls, and small lakes are set among scenic mountain peaks almost 9000 feet high.

Capability for skiing is high throughout the Selkirk Mountains. Slopes and snowfall conditions are ideal at such sites as Silver Star Mountain, Whatshan Peak, and Mount Tod. Undoubtedly, other sites have capability for skiing, but lack of climatic data prohibits delineating them at this time.

Rock collecting, primarily for agates and geodes, is possible in the vicinities of Westwood, Monte Lake, Robbins Range, and Monte Creek. Favorite sites are the rock cuts along the highway and along the South Thompson River, where artifacts are also found.

As a result of the volcanic origin of much of the Interior Plateau, numerous rock formations are evident. Examples include crevices in Red Rock Mountain, the Camel's Hump volcanic plug four miles west of Lumby, rock pillars at Pillar Lake, a lava flow near Bonneau Lake, and interesting lava formations at Bruer Creek and Bison Lake.

DESCRIPTION DU TERRITOIRE DE LA FEUILLE DE VERNON - 82L

Le territoire représenté sur la feuille de Vernon est situé dans le centre-sud de la Colombie-Britannique et comprend des parties du plateau intérieur à l'ouest et de la chaîne Columbia, à l'est. Le plateau et des hautes terres au relief modéré sont les éléments dominants des paysages dans les deux tiers ouest du territoire. Le plateau de la Thompson, dans le sud-ouest, est une région de hautes terres légèrement vallonnées dont l'altitude varie en moyenne entre 4' 000 et 5' 000 pi. Des vallées profondes, aux versants escarpés et d'une largeur pouvant atteindre 8 miles entaillent ces hautes terres. La vallée de l'Okanagan qui renferme les lacs Okanagan, Adams, Mara, Ellison, Wood, Kalamalka, Swan, Shuswap et le Petit lac Shuswap est magnifique. Les terres situées entre 1' 000 et 1' 500 pi d'altitude ont un relief assez plat.

À l'est et au sud du lac Okanagan, le plateau de la Thompson se heurte aux hautes terres Shuswap et Okanagan. Le relief y est modéré et une épaisse couche matérielle glaciaire recouvre presque entièrement la roche en place. Ces hautes terres sont une région de transition qui sépare le plateau de la chaîne Monashee, une subdivision de la chaîne Columbia.

La chaîne Monashee occupe tout le tiers oriental du territoire. Les dénivellations peuvent dépasser 5 000 pi et certains sommets en atteignent jusqu'à 9 000. Au-delà de 8 000 pi, les sommets se découpent très nettement et on trouve quelques petits glaciers sur les plus hautes montagnes. Les montagnes situées à l'est de la rivière Columbia font partie de la chaîne Selkirk qui n'occupe qu'une très petite partie du territoire.

CLIMAT

La topographie influence fortement le climat. Les vallées sont plutôt sèches; des étés chauds et des hivers doux les caractérisent. Les hautes terres et plus particulièrement les montagnes, à l'est, sont modérément humides et soumises à des étés frais et des hivers froids.

Les régions les plus sèches sont les vallées de l'Okanagan-Nord et de la Thompson où la précipitation annuelle est habituellement inférieure à 15 po. Les hautes terres voisines des vallées de l'Okanagan et de la Thompson et celle de la région de Shuswap reçoivent chaque année 15 à 20 po d'eau. À mesure qu'on se rapproche de la chaîne Monashee, la précipitation augmente jusqu'à 40 po et sur les versants proches de Revelstoke, elle en atteint environ 60. Environ le tiers de la précipitation tombe sous forme de neige pendant les trois mois d'hiver. Dans les basses vallées de l'ouest, la neige est habituellement dispersée vers la fin de mars et la couche de neige atteint rarement plus de 20 po d'épaisseur. La précipitation est faible en juillet et août, mais les plus importants sur le plan de la récréation, et elle est modérée en juin presque sur tout le territoire. La majeure partie de la précipitation d'été tombe aux cours d'orages. Pendant les mois d'été, des tempêtes et des vents imprévus peuvent mettre en danger les petites embarcations qui se sont aventurées sur les plus grands lacs.

Ce sont les vallées abritées de l'ouest du territoire qui enregistrent les températures moyennes les plus élevées. Les températures quotidiennes moyennes varient, en juillet, de 60 à 70° F. et, en janvier, de 15 à 25. Tout au long de l'année, il existe une différence de 5 à 10 degrés entre les températures enregistrées dans les basses terres et les hautes terres voisines, plus fraîches. Des températures extrêmes de -20 à -30° en hiver et supérieures à 100° en été, sont explications par les mouvements des masses d'air continental; ces températures ne durent toutefois pas longtemps. Les derniers gels se produisent habituellement en mai; dans certains secteurs alpins et subalpins, le gel peut toutefois survenir en tout temps.

ÉCOLOGIE

La végétation caractéristique de la forêt montagne (sèche) prédomine dans les vallées du plateau de la Thompson. En-dessous de 1 200 pi, la prairie est le couvert végétal indigène caractéristique, remplacé à certains endroits par des espèces désagréables au goût comme le brome des toits, la molène, l'achillée et l'armoise. Le pin cembro est l'essence de la forêt climax le long des vallées et des versants plus secs et il croît sur différents sites, depuis les fonds de vallée jusqu'à une altitude de 3 000 à 4 000 pi. Le pin cembro croît seul ou forme des peuplements clairsemés associés à un sous-bois composé surtout de graminées, d'herbes et d'arbustes bas. Le sapin de Douglas et le mélèze occidental croissent sur toutes les bordures humides de la forêt montagne tandis que l'épinette d'Engelmann et le sapin de Douglas d'entremêle en altitude. Les espèces à feuilles caduques telles que le cerisier de Virginie, le bouleau, le peuplier et l'aulne sont communes dans les secteurs humides, sur les bords des cours d'eau et des lacs. Après la fonte des neiges, au début d'avril, le sol se couvre d'un tapis de fleurs très coloré.

Sur les versants occidentaux de la chaîne Monashee et dans les vallées de la région de Shuswap, la forêt montagne cède la place à la forêt colombienne dont la composition traduit une augmentation de la précipitation. La végétation typique d'un milieu plus humide prédomine dans les basses terres du cours supérieur de la rivière Kettle, dans le défilé Eagle et le long de la rivière Columbia, au sud de Revelstoke. Les essences caractéristiques sont le thuya géant, la pruche de l'Ouest et le pin argenté, le mélèze occidental, le sapin grandissime et l'occidental qui sont fréquemment associées. Le sapin de Douglas et le pin de Murray sont les espèces pionnières sur le site d'anciens brûlis; elles occupent de vastes étendues. Le peuplier et le bouleau à papier sont communs dans les fonds de vallée humides. Un sous-bois dense composé de bâton du Diable, de polystichum, d'airelles, de potentille et de mousses est communément associé à la forêt colombienne et rend l'accès plus difficile.

La forêt subalpine est le couvert forestier caractéristique des terrains dont l'altitude inférieure varie entre 3' 500 et 4' 000 pi et qui peuvent atteindre jusqu'à 7' 000. Les principales essences sont l'épinette d'Engelmann et le sapin blanc d'Amérique bien que le pin de Murray soit abondamment représenté sur les brûlis d'apparition récente. Ces essences se mêlent au sapin de Douglas dans les régions de transitions adjacentes à la forêt montagne et s'associent au thuya et à la pruche près de la forêt colombienne. Le mélèze laricio et le pin à écorce blanche croissent par endroits. Le sous-bois ne manque pas d'attrait; il est composé de graminées et d'arbustes: bleuets, linne boréale, bruyères, gadelliers, grosses et calamagrostes.

Dans la chaîne Monashee, les prairies alpines déboisées et la roche à nu sont les principaux éléments des paysages au-delà de 7 000 pi d'altitude.

POISSON ET GIBIER

Le potentiel de pêche sportive est l'un des principaux atouts du territoire dans le domaine de la récréation. La truite arc-en-ciel est la principale espèce pêchée et on la trouve dans la plupart des lacs et des rivières. On a parfois capturé des spécimens pesant jusqu'à 25 livres. Dans les plus grands lacs, on trouve un saumon d'eaux douces, le saumon nerka. Des truites grises pesant jusqu'à 60 livres ont été pêchées dans le lac Shuswap et on trouve l'omble d'Orion dans les principaux cours d'eau. Les corégones sont des espèces communes dans la plupart des lacs et rivières mais elles sont moins recherchées.

La présence de populations de saumons dans la rivière Thompson et ses affluents, l'automne, est un spectacle d'une importance toute particulière. L'observation du saumon rouge dans la rivière Adams, à l'époque du frai est un événement annuel important. Les possibilités de pêcher le saumon quinnat sur le lac Shuswap ne sont pas exploitées à l'heure actuelle mais le potentiel est élevé.

Des populations médiocres de gros gibier habitent le territoire. Le cerf et plus particulièrement le cerf mulet est le plus abondant dans la plupart des régions et des groupes plus importants apparaissent dans les environs de Lumby. Le cerf de Virginie est réparti plus inégalement mais il y en a un bon nombre à Lumby et dans la vallée de la rivière Shuswap, entre Shuswap Falls