

*Silver Peak and 'The Painted Forest.'*

# SILVERPEAKS and Maungatua Range

*Labour Day, 1923, saw a massive gathering on Silver Peak. Club weekend parties went by way of Whare Flat and Mt Allen, by Bendoran, and by Waitati-Red Hut; and on Monday they were joined on the Peak by another party of about 40 who had come by the Central Otago train to Mt Allen. About 70 Club members were joined on the top by some 30 others. The summit was crowded and the water supplies in the vicinity were severely taxed. Account of Otago Tramping Club trip.<sup>1</sup>*

## 1. Landforms

The Silverpeaks is an area of dissected hill country which has its coastal margins immediately inland from the City of Dunedin. The city's outlying hill suburbs flank Flagstaff Hill (668 m) which sits on the divide of the harbour-draining Water-of-Leith, and the Silver Stream catchment. Swampy Summit (739 m) lies to the north of Flagstaff.

These hills, and the isolated Mt Cargill to the north of the city, are remnants of the Dunedin volcanoes. The broad Silver Stream catchment drains southwards to the Taieri Plain. This, and the Waikouaiti River valley draining north and east, separate the volcanic Flagstaff-Swampy-Hightop-Double Hill chain from the schists characteristic of Central Otago.

The core area of the Silverpeaks consists of a dissected schist peneplain with sharp, narrow ridges of similar height and steep-sided V-shaped gullies between. A network of ridges radiate from Silver Peak (777 m) and Pulpit Rock (760 m) embracing most of the area. Tors occur along ridge crests and extensive rock outcrops provide a craggy western face along much of the central dividing ridge north of Silver Peak.

To the west of Christmas Creek, which drains the western faces of the central Silverpeaks, the terrain becomes gentler in relief, dipping westward from the broad Lamb Hill (764 m) towards the Taieri Gorge. The south-western sector of 'The Peaks' is lower dissected hill country, abutting the deeply incised Taieri River, before dropping to the Taieri Plain.

To the south-west, the Maungatua Range is the highest terrain in the vicinity of the greater Dunedin metropolitan area. It is an uplifted block mountain, with its scarp faces overshadowing the intensively farmed Taieri Plain which is almost at sea level. It is separated from the Silverpeaks by the Taieri River and Gorge. From a rounded summit plateau at 895 m the western flanks dip gently to the Verter Burn tributary of Lake Mahinerangi. Tors of schist dot the upper faces. The range is truncated by the deeply incised Waipori River to the south, and dissected along its northern extent by streams flowing into the Taieri Gorge.

## 2. Vegetation and Wildlife

### 2.1 Vegetation

The catchments east of Silver Peak are climatically dominated by the coastal environment with its prevailing southerly and north-easterly winds.

Within approximately 15 km of the coastline, coniferous-broadleaf forest once grew from the shoreline up to 600-700 m on the hills. The remaining forest is confined to the city flanks of Flagstaff and Swampy, and the Silver Stream and Waikouaiti catchments. Many areas have been modified by clearance for farming, and by milling for timber and firewood. Many such areas have regenerated to a kanuka or manuka woodland.

Mountain cedar lingers on higher faces where north-easterly fogs provide heavier precipitation. Changing climate, with increased effect of desiccating nor'west winds is considered to be causing a decline in this species,<sup>2</sup> with extensive die-off occurring.

Isolated stands of silver beech occupy depressions and incised stream beds on the dry western faces. The largest surviving stand is the 75 ha 'Painted Forest' on the southern slopes of Silver Peak. Burning of the surrounding tussock country has severely reduced the extent of beech and produced unnaturally low bushlines on Flagstaff and in the Waikouaiti and Silver Stream catchments. Both prehistoric and historic fires are responsible for maintaining depressed bushlines on most ridges.<sup>3</sup>

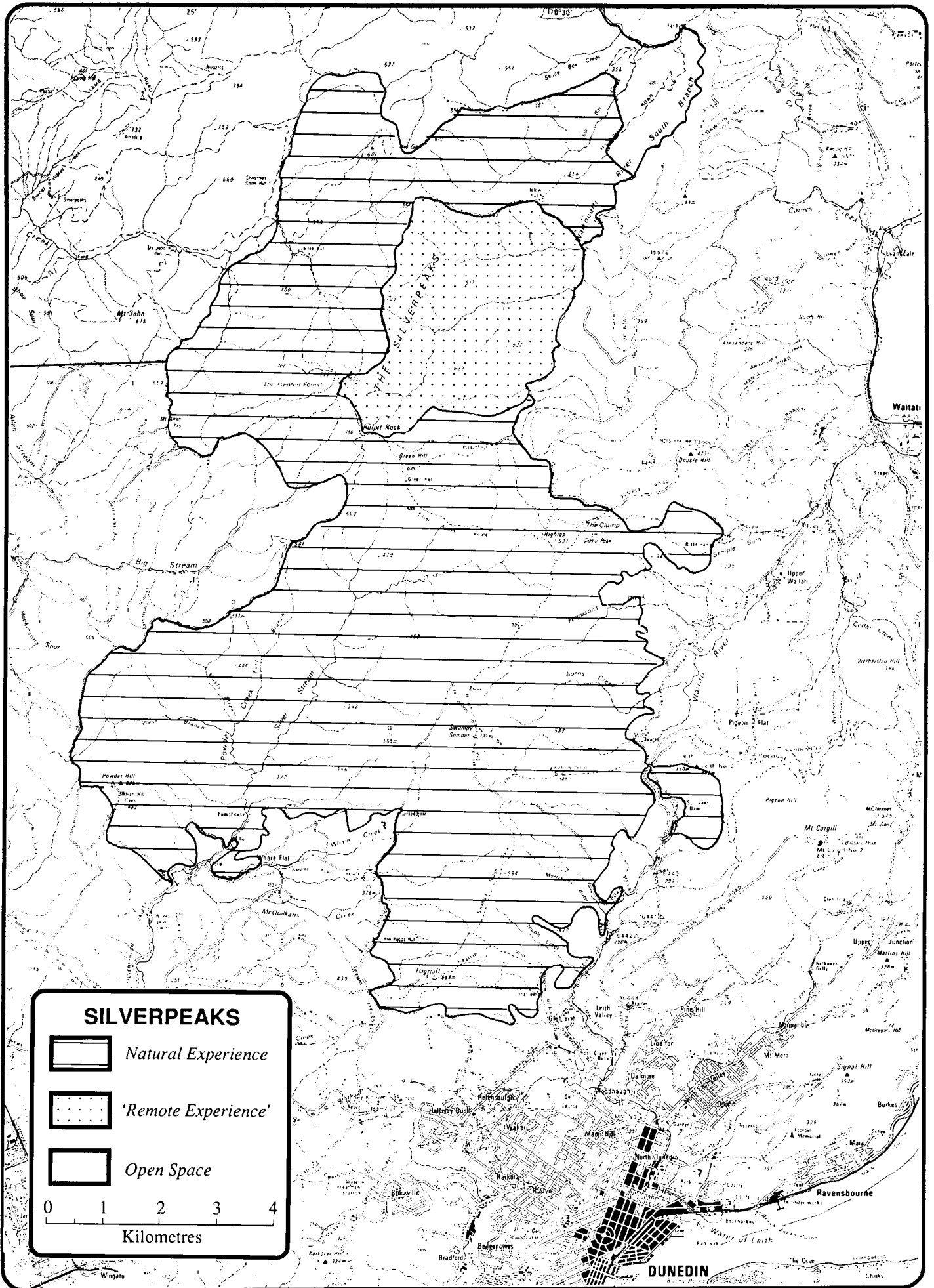
Most ridge crests and all western faces are vegetated by either narrow-leaved snow tussock-shrub associations of cassinia and flax or introduced grasses with markedly fewer woody species inland. The condition of the tussock is highly variable, ranging from largely unmodified on Swampy Summit, to very depleted especially on sunny western and northern faces. Aerial oversowing of the drier and lower country is resulting in rapid replacement by pasture species. The combination of fire and grazing since settlement has weakened tussock grassland cover, inducing invasion by manuka shrublands. Apparently the Silver Stream Valley was mainly open country until about 1870, but is now covered chiefly by tall manuka.

A number of shallow peat-filled basins with tarns survive on Swampy Summit, supporting cushion flora with sub-alpine heaths and herbs. The peat is of special scientific significance as the site of early studies to trace regional vegetation changes during the post-glacial period.

Until the advent of exotic forestry the vegetation of the Silverpeaks was largely indigenous, although substantially modified by farming, fires and timber extraction. The native forests that remain, however, comprise some of the more significant remnants on the east coast of the South Island.

*Otago Harbour from Mt Cargill walkway.*





**SILVERPEAKS**



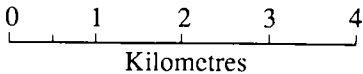
*Natural Experience*



*'Remote Experience'*



*Open Space*



Within the confines of the Taieri Gorge, between Taioma and Outram Glen, are continuous riparian native forests, some of which are untouched by European fires. Kanuka is dominant overall, however, localised stands of totara, matai, kahikatea, and kowhai are of considerable scientific and scenic importance.<sup>4</sup> Most native forests in the greater Silverpeaks area, outside of the Silver Stream water catchment, are browsed by both domestic and feral sheep, and by pigs.

On the Maungatua Range podocarp-broadleaf forest is confined to small areas above the Taieri Plain and the Waipori Valley. Ribbons and patches of silver beech occur along the eastern face, with extensive areas in the Mill Creek and Waipori valleys on the southern flank of the range. Most forest associations have badly depleted understories as a result of severe browsing from sheep, deer and pigs.<sup>5</sup>

Subsequent control operations and fencing have reduced animal populations to low levels, aiding recovery of the understory throughout most of the forest.<sup>6</sup> It appears that several centuries ago the entire Maungatua Range was forested. Log remains and extensive forest-dimpling throughout the tussock grasslands provides the more obvious evidence remaining today. Tussock grasslands dominated by the narrow-leaved snowtussock cover the extensive summit plateau and upper slopes, frequently in association with shrubs of dracophyllum-cassinia-hebe. On poorly drained areas of the summit there are cushion moors consisting of hummocky turfs of prostrate and cushion-forming species. Nearby there are usually small tarns and associated peat bogs of sphagnum species, flax and bog pine which appear to be invading the snow tussock.<sup>7</sup>

A substantial area (5600 ha) of the western Maungatuas, consisting of tussock grasslands and shrublands down to the shores of Lake Mahinerangi, was afforested in 1979-80. This is adjacent to larger exotic forests of the Dunedin City Council and Forestry Corporation on the dissected uplands south of the Waipori Valley.

The south-eastern flanks of the Maungatua Range, the Taieri Gorge and eastern Silverpeaks lie within the Otago Ecological Region. The western Silverpeaks and Maungatuas are within the Lammerlaw Ecological Region.<sup>8</sup>

## 2.2 Wildlife

Along with some of the larger surviving remnants of native forest in east Otago, the Silverpeaks and Maungatuas provide important habitats for forest birds. Less common species include the South Island Robin in the lower Silver Stream catchment, and the Shining Cuckoo and Red Crowned Parakeet on Maungatua and at Waipori Falls. The robins' range has been reduced in recent years through logging operations within the Flagstaff plantations which have reduced their habitat of silver beech remnants.<sup>9</sup>

The fernbird is generally distributed throughout scrubby grasslands and swamps in both areas and appears to be able to withstand occasional fires. Its habitat has been greatly reduced in the Waikouaiti Valley by forestry development. The ubiquitous pipit and harrier hawk are found throughout the tussock grasslands. The New Zealand Falcon is regularly seen on the central ridge crests and craggy western faces of the Silverpeaks as well as on parts of the Maungatuas. At least one breeding territory is known in the northern Silverpeaks.<sup>10</sup>

Pigs and feral sheep occur throughout the area. There are goats on the Silver Stream flanks of Swampy, and on Maungatua—the result of inadequate fencing of domestic herds. Small

numbers of red deer are found throughout, plus pockets of feral cattle. Pig hunting has long been actively pursued by locals and land occupiers. Feral and domestic animals are generally having a major impact on forest regeneration and their continued presence threatens forest stability.

## 3. History and Land Use

### 3.1 Settlement

At the time of the founding of Dunedin in 1848, coastal shipping was the preferred means of communication with northern settlements, such as the Johnny Jones' whaling station and farm near Waikouaiti. However it was not long before the route over Flagstaff and Swampy had developed into a regular bullock cart and sled route; bogs and disorientating fogs notwithstanding. For many years this 'Mountain Road' was the major link northwards from Dunedin and ruts from this trail are still present on Flagstaff and Swampy Summit.

Flagstaff was known by the Ngai Tahu as 'Whakaari,' meaning "uplifted to view," however 'Flagstaff' has prevailed since the gold rush days when it was the practice to station a signaller (with flags) atop the hill to notify Dunedin's settlers of approaching coaches from Central Otago.

Settlement of the Silverpeaks proper began in 1854 with the issue of three depasturing licences west of Swampy Summit and in the South Branch of the Waikouaiti. South of a line between Swampy and Powder Hill, and all the coastal hills to the east were declared 'Hundreds' to allow closer settlement. Sawmilling in the Leith and Waitati Valleys from the 1860s onwards made inroads into forest cover, as did occasional big fires such as occurred on Mt Cargill at the turn of the century, destroying much of the mountain cedar forest.

Woodside Glen on the northern Maungatuas was first settled in 1849. The West Taieri Hundred extended from the Plain to the Maungatua summit, being subdivided into small lots. The run country proper was west and north of the range. During the mid 1850s sawmills began cutting timber on the northern slopes of the range, then extended operations southwards to the heavily forested Waipori Valley.<sup>11</sup>

### 3.2 A Pastoral Landscape

Whereas centuries of intermittent burning during Maori occupation had produced a snowtussock fire-climax vegetation west of the Flagstaff-Silver Peak divide, the introduction of stock in conjunction with burning tipped the balance against these grasslands. On moister areas manuka-kanuka with hebe, dracophyllum, flax and cassinia species at higher elevations, rapidly invaded the depleted grasslands. The palatable gave way to the unpalatable in the Silver Stream and upper Waikouaiti Valleys, resulting in abandonment of pastoralism and subsequent use for municipal water supply. Further westward burning, plus grazing resulted in short 'hard' tussock succeeding snowtussock.<sup>12</sup>

A similar, but less dramatic transition has occurred on the drier Maungatuas where burning and variable grazing pressure has produced shrubland-grassland along eastern crests, and a belt of bracken fern among silver beech and broadleaved remnants on the eastern face. On lower north-western slopes 'hard' tussock took over from snowtussock.<sup>13,14</sup> Extensive tracts of mid-altitude snowtussock grasslands which survived the initial onslaught of pastoralism are now rapidly disappearing due to pasture cultivation and exotic forest establishment.

### 3.3 Goldmining

Like most parts of Otago, the Silverpeaks did not escape attention during the goldmining era. The Taieri catchment, notably Mullocky Gully, Christmas Creek and Three O'Clock Stream, were well fossicked for alluvial gold, the former experiencing a short-lived rush. Little evidence of this activity remains except in the latter area where diversions and sluice channels armoured with hand-stacked rocks can be seen. During the 1870s a short-lived attempt at underground quartz mining occurred in Reef Creek, a tributary of Mullocky Gully. Little evidence remains today. Extensive 'paddocking' for gold occurred in the South Branch of the Waikouaiti intermittently from 1865 until 1948 with some underground mining on the valley sides. Through reversion to bush these workings are rapidly becoming concealed.

To provide horse and cart access to the Waipori goldfield and Lawrence, the 'Government Track' was constructed in the mid 1860s above the Waipori Gorge and was still in use until 1926. This is now a popular walking track.

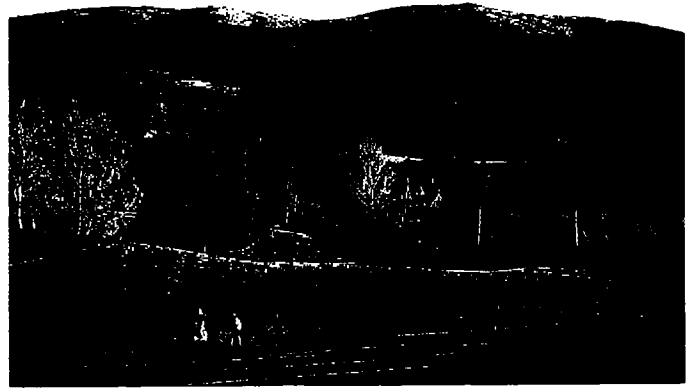
'Stick-up Gully' above Woodside Glen gained notoriety in 1861 when Garrett and his band of masked and armed bushrangers robbed, in one day, up to 15 diggers travelling between Dunedin and the Waipori and Tuapeka Goldfields. The victims were relieved of £400 of valuables and left tied to trees.<sup>15</sup>

The only goldmining of any consequence to occur on the Maungatuas was in the Verter Burn or Post Office Creek. Sluiced faces and water races traversing hillsides are evidence of a lengthy era of mining dating from 1862. The largest nugget found in Otago (26 ounces) was reputed to have come from this area in 1865.

### 3.4 The Otago 'Great Central' Railway

As part of the then Government's programme of opening up the interior for agricultural development, construction of the Otago Central Railway began in 1879, to finally reach Cromwell 42 years later. The route chosen up the Taieri Gorge runs through some of the most spectacular terrain traversed by rail in New Zealand. This presented some major engineering challenges; the most remarkable achievement being the Wingatui Viaduct across Mullocky Gully, which at the time of its construction (1887) was the largest such structure in the southern hemisphere (197 m long, 47 m high).<sup>16</sup> As well, there are many beautifully built iron girder bridges and viaducts with stone abutments and piers, 12 of which occur in the first 37 km of track through the gorge interspersed between 10 tunnels. Within one 300 m section at 'The Notches,' four bridges and a tunnel traverse the sheer gorge wall (See 4.14).

*Excursion train at the Wingatui Viaduct.*



*Flagstaff and city water reserves from Balmacewen golf course, Dunedin.*

### 3.5 Water Reserves<sup>17-25</sup>

#### 3.5.1 Water supply and recreation

One of the earliest land uses in the region was Municipal water supply. With completion of the Ross Creek Reservoir in 1867, Dunedin depended on the Ross and Wakari Creek catchments on Flagstaff for its supplies, despite these catchments being privately owned and farmed.

A rapidly expanding population led to water shortages and proposals for extension of supply areas. In 1881-82 some 6000 ha of the Leith, Waitati, Waikouaiti, and Silver Stream catchments were permanently reserved for "the growth and preservation of timber, and water supply." These extensive reserves remained in Lands Department control until 1892 when they became vested in the City Corporation.

The first extension of supply was to the Silver Stream in 1881, followed by the upper Leith and Waitati Valleys in 1906. It was not until 1918 that another 3700 ha in the crucial Ross Creek and Waitati-Leith was appropriated from private ownership. The Nicols Creek catchment in the lower Leith was the last water source close to Dunedin to be added to the supply, in 1949.

Water quantity rather than quality was the prevailing concern for many decades, with little restriction on grazing and public use of reserve areas. Most of the reserves were leased for grazing, often rent-free but with lessees "responsible for keeping down the rabbits." The prevailing official attitude of the time was "the depasturing of a suitable number of sheep does a drinking water catchment no harm." However, in regard to private lands the city "has wisely followed the practice of acquiring farms on the catchment area whenever opportunity permitted, and, as the land was usually overrun with rabbits and used for grazing sheep and cattle, the conditions were not conducive to a pure and uncontaminated water supply."

In 1918 it was recorded that the Ross Creek catchment was "principally used for dairying purposes and a water closet was discharging its contents into this stream." In that year "...the Ross Creek Reservoir is deservedly one of the most popular picnic and pleasure resorts around the city...thousands of people stroll along its banks every summer...both children and adults must obey the calls of nature, and hence the water of the reservoir are in constant danger of pollution." But it was not until 1929 that the authorities made the first moves to control direct public access to the untreated waterways and reservoirs. It was many years before public access to the water was prohibited in catchment and reservoir areas, this being to prevent sabotage after the declaration of World War II. Barbed wire fences were erected around the

reservoirs, intake areas and gates were padlocked, and prominent signs erected. After the war the question arose of reopening the water reserves to the public but “in view of previous trouble,” and with the full support of the Health Department, it was reluctantly decided that public access would be unwise.<sup>26</sup>

Up until 1949 Dunedin had relied upon restricting human habitation in the catchments and on natural filtration to obtain pure water, however, as a result of Health Department pressure, in 1953 the City Council decided to embark on a programme of making the city’s water as “pure” and healthy as possible.<sup>27</sup> Chlorination was introduced in 1956, and by 1965 all water supplies were so treated, followed by fluoridation in 1967.

A study of the management of the Silver Stream catchment in 1968<sup>28</sup> recommended increased recreational usage and suggested the planned development of picnic sites, nature trails, and tramping tracks so located as to have minimum impact on the water and timber resources. The concern by the City Council at possible pollution, fires, and maintenance costs for picnic sites, made it reluctant to relax control over access.

All three catchment areas near the City now have three “preferred lines of [health] defence” —protected catchments and impoundment, coagulation-filtration, and chlorination.<sup>29</sup>

The City Council has never formally developed an official policy on recreation in its catchments. However, a working policy has evolved within the Water Department which was expressed by the City Engineer<sup>30</sup> in 1979 as:

*Public access to the Council-owned catchments is to those areas remote from the open watercourses and water intake structures... These areas, containing the open higher altitude parts of the catchments, form the natural tramping routes... access to the intakes and watercourse is permitted for specific purposes to bona fide parties, only where careful policing of activities (by permit) can be provided... development of roading is discouraged and access by unauthorised vehicles, trail bikes, horses etc. is prohibited.*

Additionally, pig and opossum hunting is controlled by a permit system.

It was claimed in 1979 that a more relaxed policy on recreation would mean that the Council would have to consider providing a higher standard of treatment, estimated to cost \$5-6 million.<sup>31</sup>

The most recent and comprehensive review of public access to Dunedin’s water supply catchments was undertaken in 1979-80 by Dr Juliet Batten of Auckland, in a discussion paper published by the Forestry Council.<sup>32</sup> The Council concluded that since the compilation of an inter-departmental report on multiple use of water supply catchments in 1972,<sup>33</sup> pressure for various forms of recreation in these catchments had increased markedly in some areas, and took issue with the ‘no risk’ approach of the Health Department and its opposition to recreational use.<sup>34</sup> The Forestry Council specifically concluded:

- recreational pressure was increasing;
- there was no reason, on health grounds alone, to refuse walking and tramping access under controlled conditions;
- there was no urgent need for water-based activities, except for fishing in certain circumstances;
- water-contact activities, and off-road vehicle activities, were usually inappropriate uses;
- each catchment had to be considered separately, in the wider context of recreation demand and opportunities in the region.

Dr Batten’s assessment of existing recreational uses and regional opportunities tended to be confined to defined walkways and tracks on reserve or state forest lands and on the Otago Peninsula. Apparently the author did not appreciate actual and potential extensive recreation over the wider Silverpeaks region. Her observation that “walking and tramping potential in Dunedin’s catchments is already well utilised” may be correct in comparison with Auckland, but in terms of Dunedin’s recreational opportunities it is quite erroneous. The barbed-fences and keep-out signs remain at catchment entrances, despite a double-standard approach by the Dunedin City Council (DCC) in its provision of stiles in some ‘core’ catchments. Walking and tramping use overall is very light away from walkways in ‘fringe’ catchment areas. The deterrent effect of prohibitory structures, general lack of tracks, and public ignorance of natural attractions within the core catchments all contribute to light usage.

The greatest untapped potential was assessed to be the walking opportunities at Nicols Creek and in the Waitati-Leith for a link in the Skyline Walkway. Trout fishing at Sullivans Dam (upper Leith Valley) was identified as one water-based activity that could, “if the demand became great,” have controlled use without the necessity of further water treatment.

For catchment-based activities, Dr Batten concluded that Dunedin’s policy of free public access to ‘fringe’ areas and permit control over tramping along valleys had created no problems with regard to the maintenance of water quality. It is of interest to note that the Health Department has consistently graded these supplies as ‘A’: “completely satisfactory.”<sup>35</sup>

*‘Access Prohibited’ yet provided to DCC water reserves? (Stile lower right).*





*Mt Cargill from walkway, Flagstaff Scenic Reserve.*

### 3.5.2 Afforestation

In 1906 the City Corporation began a process of afforestation of water reserves with the dual purposes of fire and noxious weed suppression, keeping catchments free of rabbits and stock, preventing rapid run-off and drying up of springs, beautifying the landscape, and providing commercial timber supplies. This programme resulted in extensive plantations at Whare Flat and Three Mile Hill (Flagstaff) with smaller woodlots at Ross Creek and in Leith Valley. Since 1959 there has been no expansion of plantings once it was realised that afforestation reduced water yields.

### 3.5.3 Waikouaiti catchment

This catchment has never been used for water supply —the purpose of its reservation. However, the adjacent Careys Creek was used between 1912 and 1952 for the Double Hill Water Supply to the Seacliff mental hospital.

The Silver Stream, Ross Creek, Waitati-Leith catchments continue their historical roles as city water supplies, but, since completion of the Deep Stream (Lammermoor Range) water augmentation scheme in 1977 the relative importance of these catchments to the city has decreased.

## 3.6 Scenic and Other Reserves

Outside of DCC water reserves (reserves and freehold), there are few areas around Dunedin's hills that are formally reserved for recreation. Those that do exist have had rather chequered histories of revocation and misuse. It has only been in recent years that these reserves have had consistent management in terms of their classification under the Reserves Act.

The Flagstaff Scenic Reserve (98 ha) dates from 1904 when the Crown purchased 58 ha over the summit of the hill, and accepted an offer to sell another 10 ha on the city face. Another 30 ha comprising the southern shoulder was purchased in 1906. Prior to reservation the whole area was continuously grazed and burnt under freehold ownership dating from at least the time of the first Crown grants of land in 1868. Such use did not cease with reservation. Until fencing was completed with an adjoining landowner in 1916, up to 200 cattle at a time trespassed over the reserve:

*I am continually receiving complaints from ladies who are ascending Flagstaff that they are afraid of the cattle. Benjamin Rudd (1910)<sup>36</sup>*

Such complaints prompted the Lands and Survey Department to arrange for fencing off a remnant bush area, and to serve a succession of trespass notices on the offender. In 1911 signs were erected at the top of Rudd's Road (on the city face), directing visitors towards the summit.

Departmental attitudes to the reserve changed dramatically over the years. In 1906 the Commissioner of Crown Lands described the reserve as "well-known as one of the most commanding positions around Dunedin and well repays a visit." However, by 1920 the Department proposed vesting or selling the reserve to the City Corporation for tree-planting.

Departmental correspondence over this issue spanned many years. In 1930 the Commissioner was prepared to revoke reservation and sell the area to the city as the reserve is "no longer suitable owing to the destruction of forest thereon," notwithstanding that the reserve was almost entirely tussock grassland at the time of purchase. Despite strong objections from several organisations, headed by the Otago Institute (forerunner of the

Royal Society), reservation was revoked in 1930 but sale of the land was blocked by the Minister of Lands. Continuing representations were made by conservation and recreation groups who expressed total opposition to afforestation on the former reserve. In 1932 the land was gazetted as a local purpose reserve for tree-planting purposes "provided that no exotic trees shall be planted over 1500 feet (457 m) above sea-level." This face-saving provision kept the reserve free of trees as all of the reserve is higher than this elevation!

One of the major arguments advanced at the time for DCC control of the reserve was fire prevention, as the scenic reserve was regarded as the principal danger area for the Corporation's nearby Three Mile Hill plantations. The 'no-tree-planting-reserve' remained until 1976 when it was again gazetted as a scenic reserve with control remaining with the DCC.

As Flagstaff was the last major hill above Dunedin that was unroaded and retained its natural skyline, there was considerable public opposition between 1972 and 1975 to the N.Z. Electricity Department's (NZED) intention of roading to the summit and erecting a communications tower. The completion of New Zealand's first official Walkway across Flagstaff in 1975 proved particularly popular and helped to focus public attention on the natural attributes of the reserve. Concerted opposition, including technical revelations that a skyline site was unnecessary, finally forced the NZED to concede defeat and erect their tower some 240 m below the summit, being well outside the reserve. It was known at the time that this controversy deterred the Post Office from advancing plans for a new installation in the area, instead settling for upgrading an existing facility on Swampy Summit.

An on-going management issue is the role of burning in relation to maintaining the tussock grasslands within the reserve. Native and weed shrubs are actively succeeding tussock as the first step towards forest regeneration. Current scientific thinking is that periodic burning, in the absence of grazing, is necessary to maintain the dominance of snow tussock over woody species.<sup>37</sup>

Following a disastrous 'hot' accidental fire in the autumn of 1976, a controlled burn in the spring was undertaken as a comparative experiment. This demonstrated that recovery of the tussock from the 'cold' spring burn-off was considerably faster. While the DCC accepted the rationale behind the case for controlled burn-offs, this management tool was excluded from the approved management plan as it was considered to be inconsistent with the protection philosophy of scenic reserves.<sup>38</sup> Monitoring of grassland recovery and secondary succession after these fires has been undertaken. Based on data available in 1984, a prediction was made that in the absence of further fires, by the year 2026 virtually all the reserve area would support a snow tussock-scrub community with manuka the dominant species.<sup>39</sup> This prediction was affirmed by a 1988 resurvey of vegetation, but with a warning that exotic conifer forest would succeed as the ultimate climax vegetation (self-sown from adjacent plantations),<sup>40</sup> rather than native forest as had been earlier predicted.<sup>41</sup>

As a tall-tussock grassland located on a commanding hill-top close to a major city, the area has unparalleled recreational opportunities. To maintain recreational diversity within the Dunedin area, it is highly desirable that the tussock grassland setting be maintained on Flagstaff. However, legislative restraints embodied in the Reserves Act, plus any detrimental impacts on wildlife, including a fernbird population, should be fully assessed and debated before any changes to the management plan or the reserve's classification are instigated.

The most recent threat to the integrity of the Flagstaff reserve occurred in 1984. On accepting control of the Flagstaff Walkway, the DCC embarked on a 'maintenance' programme which entailed widening and reticulating an entire 5 km length. Initially this was justified for reasons of public safety and accessibility. However, it became clear that the sole reason for the 'upgrading' was ease of motorised maintenance. During the walkway's initial construction, a combination of vehicle and hand methods were used which provided a variety of tread widths and alignments. This heightened the walkers' experience of the surroundings. The majority of the walkway now has a metalled width in excess of 1 m.

*Doubtless there are Dunedin people who have climbed the 2,186 feet to the top of Flagstaff a score of times, but how many there are who, though well able have never set foot there. This highland is a wonderful gift of Nature to Dunedin, for it is probably safe to say that no other city in New Zealand has a hill of its dimensions so easy of access and so unmarked by the hand of man.*  
Alfred H Reed 1954<sup>42</sup>

Evansdale Glen Scenic Reserve on the north-eastern fringe of the Silverpeaks was the initiative of a group of citizens who purchased private property in lower Careys Creek in 1912. This was done with assistance from public subscriptions and a Government subsidy. The reserve was controlled by the Dunedin City Council for many years and proved to be "a popular rendezvous for many picnic parties from the city and elsewhere."<sup>43</sup> Originally under private ownership, a nominal charge was made by the proprietor for each person passing through the Glen.<sup>44</sup>

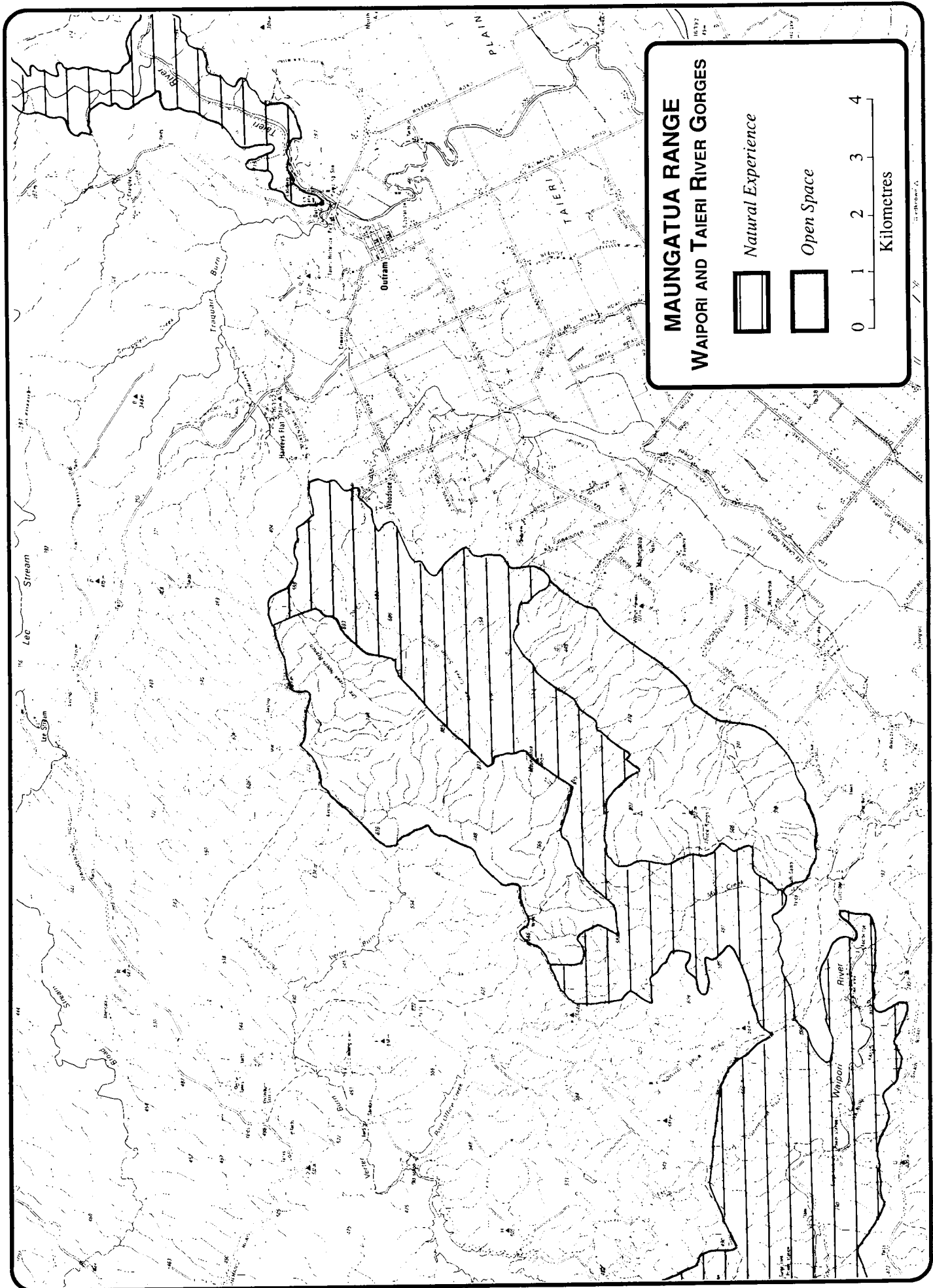
Until the late 1960s the reserve remained popular as a starting point for walks up the old water pipeline in Careys Creek and for tramps into the Silverpeaks. Rock climbing was practiced on outcrops upvalley from the reserve. Invasion by gorse and broom and destruction of a pleasant walking track along the bush-lined creek resulted from bulldozer salvage of the pipeline. Forestry development further upvalley isolated the Glen from the main Silverpeaks. The 20 ha reserve is under the control of the Silverpeaks County Council.

The **Outram Glen Scenic Reserve** on the true right bank of the Taieri Gorge dates from gazettals as recreation reserve in 1887, 1917, and 1959. This 137 ha reserve was added to in 1984 with the acquisition of a further 100 ha between Taioma and Lee Stream, resulting in reservation down one complete bank. The entire opposite (true left) bank of the forested gorge was identified by Lands and Survey as worthy of addition to the reserve.

**Maungatua Range Reserves:** There are three major reserves on the Maungatua Range. In 1984 these were proposed for collective management as the **Maungatua Range Scenic Reserve** with linkages established between these, creating a biological corridor from one end of the range to the other.<sup>45</sup> The whole proposal is a very deserving one and should result in a higher public profile for the area. However, additional landscape considerations need addressing by the relevant authorities, particularly land use and native forest protection on the commanding Taieri Plain face of the range.

On the northern end of the Range, the 273 ha **Maungatua Scenic Reserve** dates from a recreation reserve in 1889. A popular picnic area has long been established on adjacent County Council land in Woodside Glen. Short walking tracks lead into the lower forested slopes of the range. The reserve is vested in the Department of Conservation's (DOC) control.





The former 553 ha **Maungatua Scientific Reserve** on the range-crest dates from a proposal in 1962 to reserve snow tussock, bog and cushion associations primarily for scientific and educational purposes. It was gazetted in 1969. A considerable effort by the Department of Lands and Survey to contain gorse and exclude stock from the reserve has been largely successful. It has now been reclassified 'scenic.'

263 ha of beech forest and tussock in **Mill Creek**, a southern catchment of the Maungatua Range, was gazetted scenic reserve in 1984. It was formerly UCL and state forest. A further area of tussock, being part former state forest, has been allocated to DOC. A key area (115 ha) of silver beech forest in this catchment, being in private ownership, is within the proposed Maungatua Range Scenic Reserve. It provides a prominent backdrop to the lower Waipori Valley and the only forested linkage between the Maungatua Range and the Waipori Valley. It is currently subject to milling. Initiatives by DOC and conservation groups, including offers to purchase, have been unsuccessful. This recent threat to the natural character of the range has highlighted the realities of private ownership over such publically important areas.

Elsewhere excellent progress has been made towards achieving the end-to-end Maungatua Range Scenic Reserve. Purchases of key areas have been concluded, in particular a 300 ha tussock and forest block linking the former scientific reserve with the Woodside Glen.

One of Otago's largest reserves is the **Waipori Falls Scenic Reserve** to the south of the Maungatua Range. It dates from 1913 and 1925. Road access up the Waipori Gorge was completed during this period. At that time recreational motoring and picnicking was very popular for day excursionists from Dunedin. The DCC's Waipori hydro-electric scheme has been progressively constructed within the reserve. This has entailed revocation of parts of the reserve for the construction of power-houses and the Waipori Village. Construction has also occurred through and adjacent to the reserve.

Major management problems for the reserve have included accidental fires, illegal shooting and firewood collection. Of long standing concern have been high numbers of feral sheep which have had a major impact on biological values. This 1322 ha reserve was under the control of the DCC Electricity Department until 1982 when responsibility was assumed by Lands and Survey, now DOC. Approximately 30 ha of native forest, being part of the former Berwick State Forest has recently been allocated to DOC for addition to the reserve.

### 3.7 Reserve Proposals

In addition to the Maungatua proposals, of major recreational significance for the Dunedin region is the **Silverpeaks Scenic Reserve** which has been officially approved since 1984 but awaits gazettal. 2500 ha of the South Waikouaiti, Hightop and part of Swampy Summit have effectively been managed as scenic reserve successively by Lands and Survey, then DOC since the DCC agreed to relinquish control of large areas of unused water reserves. Recommended further additions include 3700 ha in the western Silverpeaks, Silver Stream catchment, from Swampy to Flagstaff, and major forest remnants of the Leith and Waitati Valleys.<sup>46</sup>

The reserve is considered to be of national significance "for its recreational value, wide variety of vegetation types, with complex histories and inter-relations, landforms and as a very important wildlife habitat."<sup>47</sup>



*Maungatua Range summit plateau.*

The attainment of such a major reserve on Dunedin's back-door, particularly the reservation of the central and western Silverpeaks, would achieve many of the planning objectives established by the Silver Peaks Regional Park Study (see also 3.15).

### 3.8 Land Tenure

The central core of the Silverpeaks and upper Leith Valley are 'timber and water reserves' administered under the Reserves Act. The reserves actually used for water supply are vested in the control of the Dunedin City Council. The balance await gazettal as scenic reserve and are under DOC's jurisdiction. The DCC is the dominant freehold owner over the upper Waitati and Leith Valleys, and in the Flagstaff-Whare Flat area. There are a substantial number of small freeholdings on lower city and valley flanks. The south-western sector of 'The Peaks' is almost entirely freehold farmland, dating from the declaration of the East Taieri Hundred in 1856.

The western and northern Silverpeaks was formerly all run country which has seen progressive subdivision and alienation of the Crown's interest right up to recent times. Small grazing runs were exchanged for renewable leases and deferred payment licences during the 1950s for part of Mt Allen, Mt John and Silver Peak Stations. Additional areas of pastoral lease on Mt Allen were reclassified in 1973 as 'farm land' leading to freeholding. The six remaining pastoral leases in the north-western 'Peaks' were reclassified in 1979-80 and with the exception of one where the lessee has for the time being opted to retain pastoral lease, all the others are now private lands.

The north-eastern 'Peaks' is a mix of former state forest due for transfer to the Forestry Corporation and sale, and freehold. The relatively small areas of scenic reserve at Evansdale Glen, Flagstaff and the Taieri Gorge are described in Section 3.6.

The Maungatua Range is a mix of reserve, state forest due for transfer to the Forestry Corporation, and private farm land. West of the summit most of the area was formerly either small grazing run, lease in perpetuity, pastoral lease, or Crown grant (freehold) going back to the time of early settlement. Substantial areas of mid-altitude tussock grassland under pastoral lease were reclassified in 1964 and 1980, resulting in freeholding of the last 'pastoral lands' on the range.

The Taieri face of the range has been freehold since the West Taieri Hundred was declared and remains freehold, or is partly reserved. South and west of the Waipori Scenic Reserve large areas are DCC forest or the former Berwick State Forest.

### 3.9 Land Use Capability

The whole Silverpeaks is predominantly Class 6, being stable hill country which is generally responsive to development by aerial oversowing and topdressing, and capable of moderate grazing. Forestry is considered a wise use of steeper areas. The steep slopes of the Taieri Gorge are Class 7.<sup>48</sup> The Otago Catchment Board considers the whole area to be suitable for either production forestry or intensive pastoral farming.<sup>49</sup> The former Forest Service similarly viewed the whole area to be suitable for forestry, with the southern Silverpeaks better suited for forestry than farming, and the northern 'Peaks' either farming or forestry.<sup>50</sup>

On the Maungatua summit and steepplands of the Taieri faces are Class 6 with moderate limitations to pastoral use. The western flanks of the range are Classes 4 and 6, the former being capable of limited cultivation but with a severe climatic hazard. The catchment board sees potential for production forestry and intensive pastoral farming over most of the range crest and eastern faces. There is also the potential for semi-intensive arable farming over the western and northern slopes.<sup>51</sup>

### 3.10 District Scheme Zoning

The Waikouaiti, Silver Stream, Waitati, and Leith Valley 'timber and water reserves,' including the present extent of the Silverpeaks Scenic Reserve and extending southwards to the Flagstaff Scenic Reserve, is zoned 'Rural E' (Scenic Appreciation) within the Silverpeaks County District Scheme.<sup>52</sup> The zone also extends westward over parts of Mt Allen and Silver Peak Stations to include the upper Christmas Creek catchment and the Big Stream Valley above the 500 m contour.

This zone was brought about as a result of strong objections from recreational groups, led by FMC affiliated clubs, to the County's intention in 1982 of zoning the whole Silverpeaks 'Rural C' (Afforestation). A request to include the Taieri Gorge on a 'Rural E' zone was considered unnecessary by the Council, despite recent forest clearance within the gorge.

Predominant uses within the 'Rural E' zone include farming, reserves, and shelter belts. Discretionary uses are controlled by non-publicly notifiable application procedures where it is the Council's policy "to protect the scenic qualities of the landscape and to minimise the visual impact of proposed buildings and structures (including tramping huts), commercial forestry and farm tracks in the visually significant parts of the district." Council's choice of 'non-notifiable' procedures precludes public knowledge of development applications, recreational-user inputs into design, as well as public objection and appeal. Council's policy for exercising its discretionary powers does, however, provide criteria to assess visual impacts of a proposal on landscape-skyline values.

The 'Rural C' (Afforestation) zone encircles the 'Rural E' zone, extending westwards to the Taieri River and Three O'Clock Stream, and south of Flagstaff. 'Rural F' (Water Quality) zones abut the Rural E in the catchments of the Waitati and Careys Creek.

On the Maungatua Range the Taieri face, summit, western slopes above approximately 600 m, and the plateau above the

Waipori Valley, including reserves, are zoned 'Rural C' (Afforestation). The Silverpeaks County Council sees commercial forestry as the "optimum purpose" of this zone. While grazing and forestry are predominant uses within this zone, no provision is made for reserves.

The balance of the Maungatua and Waipori Gorge is within Tuapeka County Council's one rural zone which permits agriculture and forestry as predominant uses.<sup>53</sup>

### 3.11 Regional Planning Scheme <sup>54</sup>

The Coastal-North Otago United Council's environmental policies for its region, including the Silverpeaks, provide for:

- public management planning for all formally protected natural or recreational areas;
- assessment of conservation needs as a high priority;
- support for recommendations arising from Protected Natural Area (PNA) or other similar surveys;
- requirements that all sites of special fisheries and wildlife interest be protected in District Schemes;
- positive recognition and protection of important natural areas within District Schemes provisions;
- high priority been given for protection of landscape values;
- promotion of protection for all threatened and endangered species and their habitats.

It is to be hoped that the policies formulated will carry over to the new Otago Regional Council to succeed the United Council.

### 3.12 Forestry Development

Excluding consideration of forestry development by the DCC on the periphery of the 'Peaks,' the Silverpeaks remained free of forestry developments until comparatively recently. The purchase of land for state forest use in the Waikouaiti and Careys Creek catchments in the mid-1960s rapidly changed the character of a large slice of 'The Peaks.' High standard circuit roading resulted in greatly reduced foot access times to the central ridge system. Since the first plantings in 1964 most of the 2100 ha block has been planted in radiata pine and Douglas fir. Forest establishment is now complete.

Although the laudable intentions in the 1977 Silver Peaks Forest Management Plan <sup>55</sup> of preserving bush areas (300 ha) have been observed, in contravention of the plan most areas of tussock and manuka zoned as 'open' have been planted, obscuring key vistas of the central Silverpeaks and coast from the road and walking tracks. Fortunately, the Hightop slopes above the forestry road, being a critical area for recreational/landscape reasons, has been left unplanted. This has now been transferred to DOC for addition to the scenic reserve. Waikouaiti River faces which were "subject to further study on the desirability of leaving these unplanted" were planted without further consultation with other interested parties. The intrusion of eucalyptus and Douglas fir along a straight-line boundary with the new scenic reserve, right down to the upper Waikouaiti River, indicated a selective disregard for management obligations. This particular landscape tract was identified in a 1978 landscape assessment <sup>56</sup> as having moderate landscape value in relation to the 'high relief uplands' of the Silverpeaks and is also known fernbird habitat. Rationalisation of boundaries with the reserve, plus removal of all of these trees is highly desirable before the Forestry Corporation's commercial interest is sold off.

The 5200 ha Mt Allen and Salisbury stations were purchased by Tasman Forestry in 1981-82 as part of a regional expansion into Otago and Southland. A major roading network was completed and 2700 ha planted before the company decided to sell off its Otago assets. The planting programme is near complete. This development has been a rapid and major intrusion into traditional tramping country, with much of it being visible from Silver Peak and Pulpit Rock. To date no change of ownership has occurred. However, several local authorities have expressed the wish to form a forestry consortium to take over and expand the plantings on Mt Allen.

The DCC's Waipori Forest commenced in earnest in 1925 and now extends over 6000 ha. The Berwick State Forest began in 1946 on the south side of Waipori Falls Scenic Reserve and the DCC plantations. An additional 6000 ha area of mid-altitude tussock grasslands on the western Maungatua was planted in 1979-80, being the first exotic afforestation on the range. The total production forests of Waipori-Berwick are now approximately 20,000 ha—the third largest exotic forest in New Zealand.

Clearance of native forests for metropolitan firewood supplies has re-emerged as a practice affecting the Silverpeaks. A substantial area of kanuka-podocarp forest in the Taieri Gorge was used for this purpose in conversion to pasture. The 'Painted Forest,' the largest remnant of silver beech in the Silverpeaks, also drew interest as a wood supply but in this case it was purchased in time for the new scenic reserve.

### 3.13 Communications Installations

Coinciding with construction of Dunedin's Momona Airport on the Taieri Plain in the 1960s, access roading was constructed on to the summit plateau of Swampy Summit for the installation of air navigation equipment. This consisted of two separate buildings plus arrays of pole and tower aeriels. A Telecom microwave link on Swampy Spur consists of a substantial building, and several aeriels, all of which are conspicuous from Dunedin and the greater Silverpeaks. The University has a space research facility to the north of the summit.

Future installations should give more consideration to design and location to reduce their impacts. Sharing of facilities may bring about similar ends. There is currently no consistency in colour schemes for buildings, however the University has commendably used a low-impact colour scheme.<sup>57</sup> This provides a useful model for other installations on Swampy.

### 3.14 Hydro-electricity

The first scheme intended to supply electricity to Dunedin was on the Lee Stream tributary of the Taieri but after partial construction of a tunnel this scheme was abandoned in 1904.<sup>58</sup> In recent years completion of the scheme has been raised as a possibility. A 45 m dam near Hindon has also been proposed, which would extend a lake 5 km upstream in the scenically impressive gorge.<sup>59</sup>

The city's main peak-load supply comes from its Waipori scheme which comprises four power stations which reuses water from the Mahinerangi dam, to produce a combined power generation of 76,000 kW. The scheme dates from 1902 when a private company was formed to supply power to Dunedin and country districts, but was taken over by the City Corporation two years later. The first installation consisted of two 1000 kW generators which first supplied power to Dunedin in 1907. Some 3.5 million superficial feet of locally sawn beech was used in the construction of fluming, which was replaced by a tunnel by 1911.

In 1923 the first high dam was completed at the head of the gorge to provide storage capacity. During the 1930s a higher replacement dam was built, to be raised in 1946 to its present-day height of 34 m, but in so doing it inundated the goldfields town of Waipori.

Additional power houses were added to the scheme in 1930, 1954 and 1955.<sup>60</sup> The DCC has steadily upgraded and replaced much of the earlier generating works. With the completion of the Deep Stream Diversion Scheme in 1984, inflows to Lake Mahinerangi have increased by nearly 20 percent, allowing greater generation from existing plant. The scheme supplies about half the city's peak demands, and about a third of its total energy requirements.

### 3.15 The Silver Peaks Regional Park Study

In response to a request in 1974 from the Otago Tramping and Mountaineering Club the Dunedin Metropolitan Regional Planning Authority commenced a planning study of the region in 1976. A discussion draft, released for limited circulation among Government departments and local authorities,<sup>61</sup> was used by the Authority as a basis for advancing reconciliation of the competing interests.

The draft document summarised the importance of the Silverpeaks resource area, in a regional context, with a 'high' rating for water catchment and for recreation, a 'moderate' rating for commercial forestry, and a 'low' rating for farming. It was concluded that as a planning objective "the protection of landscape qualities and recreational values should be given a high priority in the management of all land use areas."

Two strategies were identified to achieve the above objective. One entailed public acquisition of all parts of the area which are important for scenic, recreational and scientific purposes as a regional park, with arrangements made for existing uses of farming, water catchments and forestry to be continued where appropriate. This proposal was considered to be politically unacceptable and unlikely to be funded from central or local government sources.

The preferred strategy was to provide a framework which would cause minimum disturbance to existing ownership and legitimate land uses but which would provide controls on uses that could be detrimental to recreation and conservation.

Responses from interested parties, including landowners, were taken into account in the preparation of a revised draft document<sup>62</sup> which confirmed the regional importance of the Silverpeaks. Objectives for the future development of the area were expanded to provide:

- maximum benefit to the Dunedin region;
- a satisfactory balance in land uses;
- conservation of landscape quality;
- protection of recreational potential by setting aside lands specifically for recreational use and by allowing recreation as a secondary use of other land.

Policies were proposed to confine forestry development to existing areas, protect skylines and landscape features, reserve natural features, safeguard recreational use of ridges and their environment, provide for gregarious recreational activities in peripheral areas, maintain 'wilderness quality' by restricting vehicle use and not permitting any roads to be constructed along or across the main ridges, and recognise landscape qualities in the siting and design of roads and buildings.

The principal conclusion and recommendation of the revised draft was that the area was worthy of being designated a Regional Park.

Based on the experience of other metropolitan areas, in particular Wellington, it was concluded that it was unnecessary that all the land be in public ownership and existing land uses could continue successfully within such a park. In addition to establishing a Regional Park Investigating Group, a number of "proposals for action" were made, most of which "should be undertaken whether or not a regional park is established." These included:

- development of an appropriate rural zoning over private land;
- establishment of the proposed walkway along the main ridge, and as many as possible of other connecting routes;
- rationalisation of property boundaries;
- recreational development in exotic forests, and peripheral areas (ie Mt Allen, Taioma, Whare Flat, Leith and Waitati Valleys, Evansdale Glen);
- protection of certain areas for nature conservation, either by reservation, protected private land, or covenant, with immediate action for the protection of:
  - South Waikouaiti forests;
  - the 'Painted Forest';
  - bogs on Swampy Summit.

The inter-departmental and local authority Investigating Group instigated further resource studies and liaison with affected parties during 1978. A landscape assessment<sup>63</sup> was conducted over the 360 km<sup>2</sup> study area which made comparative rankings among 'cultural' to 'high relief' landscapes in 46 distinct landscape tracts. The study identified desirable management for each tract in light of the relative ranking and recreational opportunities. The survey established a strong correlation between landscape character and recreational attractiveness and identified additional recreational opportunities in peripheral areas, including the possibility of a farm park at Whare Flat in the Silver Stream valley.

Initially there was considerable goodwill from the major farmer-landowners to the broad objectives of the Regional Park investigation. However when the full implications on farming practices became known, collective farmer reaction replaced individual reason. As a consequence initial reservations about controls on farming practice hardened to a stance of total opposition to any scheme involving their land. The whole Regional Park concept finally foundered when the Silverpeaks County Council withdrew its involvement from the study.

Of the "actions which should be undertaken whether or not a regional park is established," the major achievements to date have been walkway establishment, the embryonic scenic reserve, and the 'Rural E' (Scenic Appreciation) zone over part of the study area.

However much remains to be done to adequately protect and manage the regionally important values as established during the Silver Peaks Study. The resource information and experience arising from these efforts provide a sound basis for further progress.



Rock climbing on 'Big Rock,' Flagstaff 1949.

Photo: OTMC Collection

## 4. Recreational Opportunities

### 4.1 Historical Patterns

Dunedin's scenic areas have long been in demand for walks and as peaceful respites from the pressures of urban life. The city's pattern of recreational areas has changed little in the last century. During the late 19th and early decades of the 20th century, the natural bush walks in the Leith Valley, Bethunes Gully (North-East Valley), Woodhaugh Gardens (lower Leith Valley), and Evansdale Glen were very popular.<sup>64</sup> During this period informal recreation predominated, whether it be Sunday strolls along Dunedin's ocean frontage, picnics at a local beauty spot, or lengthy family walks along coast or skyline hills. This latter tradition was well embodied in the energetic activities and writings of Dunedin's nationally acclaimed citizen, Sir Alfred H. Reed.<sup>65</sup>

With the emergence of the shorter working week during the 1920s and 1930s, and the resultant increase in leisure time, the pattern of recreational land use in the city changed from park-like natural areas and gardens to an emphasis on development of grounds for organised sports. However, the pattern of recreational use of Dunedin's outdoors was well established by this time and increased leisure time led to several city-based mountain and naturalists' clubs being formed with the express purpose of organising outings to Dunedin's environs. Public trams, trains, and walking provided the means of reaching local beauty spots.

The Silverpeaks were found to be ideal for hill walks of varying duration. The Otago Tramping Club started with a flourish in 1923, boasting a membership of over 150 at the end of its first year. Flagstaff, Whare Flat, Signal Hill, Mt Cargill, and the main Silverpeaks were the usual destinations.<sup>66</sup> The club was obviously meeting a need, as the trip attendances were so great that parties had to be divided, and sometimes three trips were arranged for one day.<sup>67</sup> A programme of track cutting was embarked upon by the club to provide access to hill tops above the city, and through the Silver Stream valley.

This expansion of interest in recreational walking was not matched by public reservation of land or provision of legal access. However with the exception of exotic plantations on Flagstaff-Whare Flat, Dunedin's hinterland remained undeveloped and largely natural until comparatively recent times, with very few conflicts of interest between recreationalists and the owners and occupiers of many of these areas.

## 4.2 Recreational Preferences

A comprehensive investigation of citizen recreation undertaken in Dunedin during 1974, determined that walking for pleasure ranked sixth in most popular activities with 26 percent participation, behind gardening, driving for pleasure, hotel drinking, movie watching and picnicking. This established walking as the most popular form of recreation providing sustained physical activity. The daily frequency of people participating in recreational walking was found to be double that for the average of all other activities. Tramping was ranked the twenty-second most popular activity (5 percent participation) but figured as the ninth highest ambition.<sup>68</sup>

Although no comparable survey has been undertaken since, it may be surmised from subsequent observations of the popularity of walkways around Dunedin's hills that an increased level of participation has occurred. Also a large number of citizens' walking groups have sprung up either as offshoots from existing clubs or as new entities. There are now organised opportunities for 'over 30s,' 'over 50s,' families, retired folk, rehabilitating coronary patients, mid-week walkers, WEA, and YWs. Informal activity by non-affiliated individuals by far exceeds that of all other groups. Walking for pleasure is probably now more broadly undertaken in society than most other forms of active outdoor recreation.

A 1978 study in Dunedin attempted to determine whether physical environmental factors influence people in their decision to participate in recreational walking. It was concluded that there is potential to increase the popularity of walking by up to 10 percent of the population through provision of 'natural' types of facilities very close to residential areas. The study also indicated very strong preferences for 'natural' environments in which to walk, as well as for soft 'natural' walking paths.<sup>69</sup>

Two further surveys in 1979 provided user preferences on walking track planning and development. In the Dunedin Environmental Survey the prevailing response to the question of improvements to walkways was that formations should not be upgraded. The majority also preferred no further tracking within the city's town belt, but an equal number favoured more walking tracks around the Dunedin hills. Proximity to the city was found to strongly influence frequency of use. Additional questions related to the environment ascertained that scenic features were the single largest feature liked about Dunedin, and 90 percent of respondents wanted native bush outside of reserves protected.<sup>70</sup>

The Ross Creek Walking Track Survey<sup>71</sup> found that the large majority of walkers and joggers, who were the major users, gave features such as the flora, fauna, tranquillity and the aesthetics of the environment (around the forested Ross Creek reservoir area) as their primary reasons for using the track complex. Track users were found to be willing to accept some degree of inconvenience caused by muddiness and other natural environmental features, rather than 'upgraded' facilities.

A conclusion from a 1980 national review and study of trampers, as recreationalists, was that "tramping areas near large population centres in particular, should be managed for diversity in tramping groups [experience], bearing in mind that fuel shortages (long or short-term) as well as convenience of proximity may render them subject to great pressure."<sup>72</sup>

## 4.3 Walking for Pleasure

Since 1975 the opportunities for recreational walking on the outskirts of Dunedin have been considerably extended with the progressive completion of walkways on the city's skyline hills—Flagstaff, Swampy, Mt Cargill, and at limited coastal locations. Opportunities for walking on Otago Peninsula, away from accessible beaches, remain limited despite attempts by the Otago Peninsula Trust to negotiate public foot access over private farmland. Therefore most walking opportunities near Dunedin are confined to natural forest environments within the urban area (eg. Town Belt, Ross Creek) or adjacent valleys and hills immediately inland.

There is now a 'route standard' walkway from Swampy Summit along the main spinal ridge of the Silverpeaks, 'walk standard' walkways over Flagstaff and Mt Cargill, with part of a proposed 'track standard' connection extending from Flagstaff to Leith Saddle. Completion of a planned connection to Mt Cargill, and an eventual extension to Signal Hill will provide a skyline walkway that will encircle northern Dunedin. Flagstaff and Mt Cargill walkways receive year-round use, which can be heavy at times, dependent largely on Dunedin's changeable weather. It is unfortunate that actual usage has not been quantified although almost a third of respondents to a 1979 survey in the Dunedin metropolitan area had used the Flagstaff-Pineapple Walkway during the previous two years.<sup>73</sup>

This evolving network is in part complemented by city walks. Since 1978 it has been the City Council's policy to create a connecting network of "green linkages"<sup>74</sup> and walking tracks throughout the city and its environs, complementary to the walkways system. The tracks vary in length and offer differing degrees of challenge.<sup>75</sup> However, only limited work has been done to extend existing tracks in line with this objective. In the Council's maintenance programme at Ross Creek and on Flagstaff considerable aesthetic stimulation has been removed by excessive graveling and track widening for vehicle access. As 'walking for pleasure' figures so prominently as a popular activity in the city, sensitive application of additional, modest resources by the City Council is more than justifiable to provide the opportunities desired by so many citizens.

Opening-up water catchment areas in Leith Valley for recreational walking would greatly extend the resource area available near the city. In particular the 12 m high Nicols Falls would provide a considerable attraction. They were known and visited by excursionists as early as 1870.<sup>76</sup> Visitors to the New Zealand and South Seas Exhibition of 1889-90 were taken to see the falls as a matter of course, since they were regarded at the time as the



*Nicols Falls, Leith Valley.*

city's "greatest scenic attraction." 77 For a period the private owners charged visitors for admission. During the exhibition the roads were hardly metaled and traffic raised clouds of dust. Visitors alighted at the road bridge where there was great congestion with horses, vehicles and people. Two small shops, and a Scotswoman balladeer, astride a beer barrel, vocalised nearby for the benefit of bemused visitors!

Further afield at **Evansdale Glen**, a walking track leads up Careys Creek through native forest to the 'Seacliff' dam and side tracks lead through native and exotic forests to the 'Mountain Track' Road. Public usage of these tracks has generally declined since exotic afforestation. No official attempts have been made within the DCC's exotic forests to provide walking tracks.

A popular river-side walk is available from **Outram Glen** on a recently constructed walkway as far as Lee Stream. This receives considerable use by anglers, rafters and part-day walkers.

On the **Maungatua Range** easy walking opportunities are somewhat limited by the relatively steep terrain. A short track is available at **Woodside Glen** through lower altitude forest. Several short tracks have been developed near the Berwick Forest headquarters through mixed exotic forests, including one suitable for wheelchair use. These connect to an 18 km unofficial walkway through exotic forests and the Waipori Falls Scenic Reserve to the shores of Lake Mahinerangi. The section through the reserve follows the 'Government Track' and provides considerable interest as an historic formation through native forest. The rest of the walkway is more notional than pleasurable where it traverses monocultures of pine or along forestry roads. The

Government Track and forest headquarters tracks are receiving increasing use as a result of forest promotion efforts. There is potential for further short walking tracks within the scenic reserve for river side walks away from the road and through spectacular gorge scenery.

The development of walkways and walking tracks in and around Dunedin City has provided considerable opportunities for jogging and hill running. This is an increasing activity and has led to the formation of a club concentrating on hill running.

#### 4.4 Tramping

As a large, mainly unroaded natural area close to a major metropolitan centre, the Silverpeaks' primary recreational value is for tramping. This activity is of long standing, with the area having functioned as a training ground for several generations of Dunedin trampers. It is used by a variety of youth and family groups as well as by several schools as part of their outdoor education programmes.

Activity duration can vary from afternoon walks, to round trips of 40 km or more, along tussock ridges or untracked bush, spending one or more nights in a hut, tent or rock bivouac. Three huts are maintained by mountain clubs for public use.

Although the country is not particularly high (approximately 770 m), sudden changes in weather conditions, often accompanied by dense chilling fogs or cold southerlies are a feature of all seasons. Some advance preparation is necessary, as is knowledge of route finding. Previous experience of the area is desirable for leaders of groups. A tragic reminder of the climatic hazards occurred in May 1983 when three youths lost their lives in a snow storm near 'The Gap.'

Access to the central Silverpeaks is available from a number of spur roads which penetrate into the hills a short distance, or from other roads which skirt its periphery. The unique character of the greater Silverpeaks area is the opportunity it provides to tramp in natural settings right from the hill suburbs of Dunedin. The most common approaches are from the east or north, with a variety of tracks or routes available. In the past rail access was available to the western Silverpeaks, but with the discontinuation of passenger services in 1976 usage of these more distant areas has declined.

No overall usage figures are available for the area, however, 10 percent of respondents to a 1979 survey in the Dunedin metropolitan area had tramped in the Silverpeaks region during

*Map orientation on Hightop.*

*Photo: Ewan Paterson*





*Traversing along 'Rocky Ridge' towards Silver Peak.*

Photo: Ken Mason

the previous two years.<sup>78</sup> Hut book records indicate that the area is used for day and weekend recreation by Dunedin citizens, and as a training ground for summer holiday activities further afield.<sup>79</sup> Usage is lowest in winter. Traditional patterns may be changing as a result of establishment of the central tramping route as a 'route standard' walkway.

Most routes follow the main ridges and spurs. The main spine of 'The Peaks,' being the dividing ridges between the major catchments, holds the whole tramping area together as a unit. Very few routes follow the forested Silver Stream and Waikouaiti Valleys due to difficulty in forcing a passage through the regenerating bush. Only two or three defined tracks exist in these localities, although there are several tracks and routes ascending from the forested Leith and Waitati Valleys.

The 'traditional' tramping area of the Silverpeaks began to be seriously compressed during the mid 1960s with intensification of farm development in the west, and the establishment of exotic forests in the east. These developments were predated by roading and a series of communications installations on Swampy Summit, however their impact was relatively localised. The most immediate impact of the later development was farm tracking and firebreaks, some of which obliterated traditional tramping tracks and introduced vehicular use right into the heart of 'The Peaks.' This intensifying land use accelerated through the 1970s with parts of the key spinal ridge system tracked for vehicle use. Recreational horizons rapidly shrunk, and in the absence of any rights of recreational use or influence over land use 'the trumper' began to feel endangered as a species. This led to a rearguard

defensive move of requesting a regional park study in 1974 (see 3.15), in an attempt to protect the naturalness of the settings on which continued tramping activity depended.

Confinement of use has intensified activity on the remaining undeveloped areas, with exotic forest and roaded areas generally being avoided, or traversed only as of necessity to reach natural country beyond. Due to proximity to Dunedin and the absence of comparable terrain within 80 km of the city, the Silverpeaks in their somewhat disfigured state, continue to function as the prime tramping area for the Dunedin metropolitan region.

As already noted, the Taieri Gorge downstream from Lee Stream is tracked and receives considerable use. The remaining gorge upstream to Mullocky Gully is untracked, requiring bush navigation and 'boulder hopping' to traverse it. This gorge route was traditionally one of the main western approaches to the Silverpeaks but, with large scale afforestation on Mt Allen Station cutting-off the Taieri from the main 'Peaks,' tramping use has declined. However the gorge remains ideal for introductory training in tramping skills, specifically bush navigation, gorge travel and river crossing. For the latter two activities the Taieri River provides the only such opportunities near Dunedin. The untracked Lee Stream gorge provides a smaller scale setting for these activities.

Historically the Maungatua Range has received only moderate use by trampers, and generally only as day-long ascents from the Taieri Plain. Ascents are normally from either end of the range at Wesleydale or Woodside Glen, occasionally entailing end-to-end traverses. With an end-to-end reserve along the range, and greater public information it is likely that usage will increase.





OTMC Bushcraft Course at former Green Hut.

Photo: Don Greer

It is interesting to note that up until the early 1960s, when farm and forestry development had not made major in-roads into the tussock grasslands of the Barewood Plateau (Taieri uplands) and Silverpeaks, an annual 80 km tramping marathon was conducted between Berwick and Merton on the coast. This was via the Maungatua Range, southern Silverpeaks and the 'Mountain Track.' Such an event would not be seriously contemplated by trampers today.

#### 4.5 Rock Climbing

The 'Big Rock' on the western face of Flagstaff received early attention for chimneying and bouldering. This is now only occasionally visited.

In the central Silverpeaks there are numerous schist outcrops from Pulpit Rock and along the western faces of 'Rocky Ridge' which provide climbs of varying height and difficulty. These are occasionally explored by a few adventurous souls who are prepared to venture on foot further afield than Dunedin's mecca of rock climbing at Long Beach. There are also several large outcrops above bushline in Woodside Glen that deserve attention.

#### 4.6 Skiing

A heavy snowfall on Flagstaff in 1932 attracted 15 skiing enthusiasts. The event convinced those present that there was sufficient interest in Dunedin to warrant formation of the Otago Ski Club.<sup>80</sup>

This was not the first time that skis had been used on Dunedin's hills. Members of the Otago Tramping Club skied on Flagstaff and Swampy during the winter of 1925.<sup>81</sup> Memories of the 'big snows' of 1939 and 1945 prompted a group of enthusiasts to build a 'ski' hut and a ski run in 1946 on the tramping club's Ben Rudd property on Flagstaff. Unfortunately the 'big snows' ceased with completion of the work.<sup>82</sup>

In most years there are a few days each winter on which it is possible to ski on the hills around the city. The prospect of a few hours fun near home is relished by many enthusiasts. Snow conditions deteriorate rapidly, although adequate snow cover can

persist for several consecutive days. Traverses between Flagstaff and Swampy are not infrequent. A combination of snow and scrub skiing has even been used to reach the former Green Hut site! A more pleasurable experience is the 5 km downhill run along the road off Swampy Summit.

The higher elevations of the Maungatua Range normally result in a snow-cap through part of each winter. Drift snow and more general cover after fresh snowfall can provide good cross-country skiing conditions within a half hour drive of Dunedin.

#### 4.7 Hunting

Pigs provide the main interest in the Silverpeaks for the recreational hunter. Former state forest and reserve areas are allocated on a block basis and individual arrangements are made on private lands, where compatible with poisoning operations. Lamb losses due to pig predation used to be very high after a lapse of control during World War II but are now only of intermittent concern to farmers.

Hunting blocks in the Waipori Falls Scenic Reserve and Waipori and Berwick forests are in heavy demand for possum, feral sheep, pig and deer hunting. This is controlled by permits and blocks, which are 'oversubscribed' due to their proximity to Dunedin.<sup>83</sup> Mill Creek is popular for deerstalking despite limitations on access. Some live deer capture has occurred in the former Maungatua Scientific Reserve.

#### 4.8 Picnicking and Camping

Roadside picnicking and camping opportunities in the region are somewhat limited, despite the obvious need for developed areas near Dunedin.

Evansdale Glen, despite being admirably suitable, receives only light use possibly due to the proximity of competing coastal attractions. The Scout Association used to make available a picnic area on its property at Whare Flat. This has been closed due to vandalism. The DCC has semi-developed open glades in the area which also receive their share of use and abuse. As the nearest forested locality to Dunedin there is a potential for considerably greater picnic facilities on areas at Whare Flat and in the nearby plantations. The limitation is finance for development, maintenance and supervision.

Outram Glen receives very heavy use for picnicking and swimming. This popularity also attracts the 'common-or-garden' vandal. Smashed facilities and broken bottles are normal contributions to the local scene.

Picnic areas are provided in the Maungatua and Waipori Falls scenic reserves and receive heavy use at times. Some informal camping occurs on favourable openings along the Waipori Falls Road both in and outside the reserve. A serviced picnic area is provided near the Berwick Forest headquarters in an open glade surrounded by a variety of exotic forest. Camping areas are available by arrangement with the Forestry Corporation (Timberlands) within a 470 ha Recreation Area.

Lake side picnic areas, with facilities, are provided by the DCC in its Waipori Forest on the shores of Lake Mahinerangi.

#### 4.9 Off-Road Vehicles

The formation of firebreaks and farm tracking resulted in an upsurge in off-road vehicle use during the 1960s. Initially this was confined to Hightop-Swampy-Flagstaff, but then the central Silverpeaks became accessible to these vehicles. With the advent of trail bikes capable of penetrating untracked areas the quiet

domain of the trumper became increasingly threatened. More active reserves management, including fencing and walkways, has substantially removed these machines from popular walking areas in the eastern Silverpeaks. However, the central peaks has now become the regular venue for organised 'enduros.' Outside of these events, only occasional riders visit this area, apparently because there are many other suitable areas for this activity closer at hand to Dunedin and the Taieri.

The sub-alpine bogs in the former Maungatua Scientific Reserve have received considerable damage from trail bike use, but this activity has been largely curtailed by completion of boundary fencing.

There is an obvious need for suitable outlets for trail bike and 4WD vehicle use near Dunedin, however, their indiscriminate use close to residential areas, in the vicinity of walking tracks, or in natural areas is increasingly objected to by the wider community. Forestry areas provide the most obvious locations for concentrating off-road vehicle recreation. Closer subdivision, farm and forestry development is rapidly reducing 'wild' grass and shrubland areas where a variety of machine-riding experiences can be obtained. The remaining natural areas are more important for conservation and non-mechanised recreation, than for machine recreation. For a description of motorcyclists' and 4WD recreationalists' needs see Aukerman and Davison (1980).<sup>84</sup>

#### 4.10 Horse Riding

Most grass and shrubland areas of the Silverpeaks and Maungatua, excluding formed walkways and fragile environments, appear suitable for horse riding. Such activity would most probably be compatible with walkers and trampers when limited to low numbers, however there does not appear to be any appreciable demand by horse riders for upland areas. A pony club has its headquarters on the lower slopes of Flagstaff, with its members using parts of the nearby DCC forests. The hill country in the vicinity of Hindon is used by a commercial trail riding venture.

#### 4.11 Canoeing and Rafting

The Taieri River between Sutton and Outram ranks as "an important national recreational and scenic asset worthy of some recognition."<sup>85</sup> The Otago Catchment Board is of this view mainly because of its outstanding schistose landscape.

The rugged, boulder-strewn gorge upstream from Hindon has rarely, if ever, been navigated, while the reach between Taioma and Outram is particularly popular. Grade 2 and 3 rapids provide the best local white water conditions for Dunedin canoeists,<sup>86</sup> and the location of the only commercial rafting operation in east Otago. Jet boat access upriver is often used for this operation. Unfortunately the water quality for these contact sports is often doubtful; low flows during summer and autumn tending to

*South Waikouiti catchment and Pulpit Rock (centre) from Green Ridge.*



restrict activities. As noted earlier this lower gorge is important for gorge tramping and river crossing instruction.

The New Zealand Recreational River Survey<sup>87</sup> ranks the Taieri between Hindon and Outram as a 'C Category River,' having high recreational values and picturesque scenic value. Any hydroelectric development, such as that proposed at Hindon, would inundate the impressive river gorge for a 5 km reach. Other than the Lee Stream proposal, no other developments have been contemplated in the lower gorge.

Lake Mahinerangi is suitable for lake cruising with backdrops of either pasture or exotic forest. Low lake levels at times expose an unpleasant shore line. The lower reservoir in the Waipori Gorge can provide pleasant canoeing when full, otherwise tree trunks and extensive muddy beaches become exposed. Below the last (No. 4) powerhouse the river is used for canoeing in high flows with Grade 2 and up to Grade 3 chute-type rapids.<sup>88</sup> By manipulation of water flows with the DCC Electricity Department, Dunedin canoe clubs have established a permanent slalom course on a section of the river. This has been successfully used for national white-water championships. At other times canoe use is dependent on hydroelectric operations.

#### 4.12 Fishing

Fishable reaches of several small rivers and streams within easy access of the greater Dunedin area are under heavy angling pressure. The Taieri is regionally important for fishing due to high visitation, closeness to home, good access, and opportunities for solitude within some reaches.<sup>89</sup> The Waipori River is locally important as it receives high use, with high rankings for scenic beauty and feelings of solitude in the bushed middle reaches.<sup>90</sup>

#### 4.13 Driving for Pleasure

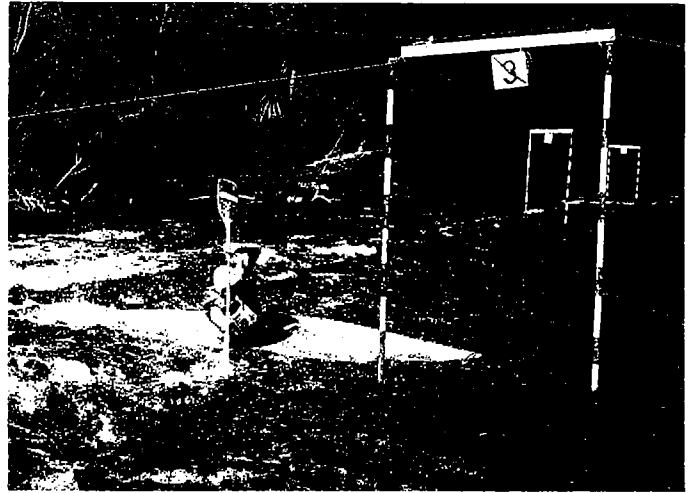
This activity ranked as the second most popular recreational activity in the Dunedin Recreational Study, being undertaken by just under a third of the survey sample.<sup>91</sup>

Of the 'periphery' roads within the region, the Leith and Waitati Valley Roads, Whare Flat-Flagstaff, Silver Peaks State Forest, and Waipori Falls Roads receive the most recreational use. In addition, the Northern Motorway into Dunedin provides a striking perspective of the partly forested Waitati Valley, the mountain cedar forests of Leith Saddle, and of the eastern faces of Swampy and Flagstaff.

The Silver Peaks Landscape Assessment<sup>92</sup> identified opportunities for harmonious management of farm and forest landscapes as viewed from public roads. The upper Leith and Waitati Valleys ranked highly in this assessment. It is highly desirable that the small-scale blend of natural-cultural landscapes in the Leith and Waitati valleys be maintained, by controls on the siting of buildings, higher protective status for native forest, and the retention of bush ribbons in gullies and along road verges.

#### 4.14 Railway Excursions

Since the cessation of passenger services on the Otago Central Railway, the Otago Excursion Train Trust has run return sight-seeing trips through the Taieri Gorge. The diesel-drawn early 1900s carriages stop at regular intervals throughout the rugged gorge for sightseeing and photography. These excursions are very popular and many thousands of Dunedin residents and visitors have taken advantage of this very scenic service. Unfortunately doubts exist as to the long-term future of the line and with it this novel experience.



Slalom course, Waipori River.

## 5. Zoning

### 5.1 Natural Experience

Three separate areas are zoned 'natural experience':

#### 5.1.1 Silverpeaks Scenic Reserve

The recommended 'eventual' reserve proposal (6284 ha) is the full extent of salvageable natural areas left in the Silverpeaks. The full proposal, if implemented, would satisfy upland recreational needs.

The reserve should exclude vehicle use within its boundaries, with the exception of service vehicles on Swampy, and ensure as far as practicable, restoration of the original landforms and vegetation where vehicle tracking has occurred in 'high relief' areas.

The proposed reserve is of regional recreational significance, and of national biological significance. Control and management of this major asset should remain with DOC.

#### 5.1.2 Taieri River Gorge

The forested Outram-Taieri, and Lee Stream gorges are of regional significance due to the diversity of forest and river activities that occur within the zone, and the virtual absence elsewhere in eastern Otago of river gorges.

Reservation appears to be the most appropriate mechanism to protect the setting and provide for public use.

#### 5.1.3 Maungatua Range and Waipori Falls Scenic Reserves

The full extent of reserve extension proposals should fully accommodate existing active recreational uses, provided conveniently located foot access becomes available through private lands. However full landscape protection requirements are not met by the Maungatua Range Scenic Reserve proposal. Buffering and landscape management is also required along the Taieri Plain face and upper western slopes.

The biological corridors concept embodied in the reserve proposal will ensure linkages between diverse settings for recreational walking, similar to those found in the Silverpeaks, but on a more confined scale.

## 5.2 Open Space

### 5.2.1 North-western Silverpeaks and upper Taieri Gorge

The extensive tussock grasslands adjacent to the northern boundary of the Silverpeaks Scenic Reserve and lower Three O'Clock Stream catchment is zoned 'open space.'

Although few rights of public use exist over this private land, it is hoped that landowner consents will continue to be given for the relatively light tramping use this area receives. However, as all equivalent areas are developed throughout eastern Otago, demand for recreational use over this semi-natural grassland could become greater.

To remain attractive for recreational use, the tussock grassland setting needs to be retained. Remnant coniferous-broadleaf forests centred on the Mt. Misery Creek catchment deserve protection as components of the broader landscape.

Planning controls over farm roading, woodlots and forestry are desirable within the river corridor to retain the 'open space' character as viewed from the river and railway. Hydroelectric development on this reach of the Taieri would destroy its wild character. A water conservation order from Pukerangi downstream to Outram is highly desirable.

### 5.2.2 Maungatua Range: Taieri face-upper western slopes.

Such an imposing feature as the Maungatua Range requires an integrated approach for landscape protection. While the Maungatua Range Scenic Reserve proposal takes in most of the native forest on the Woodside faces, its straight-line boundaries exclude numerous fingers of beech and broadleaved forest above West Taieri. As important components of the total Maungatua massif, protective arrangements over this forest are highly desirable. Of overriding concern is the maintenance of a harmonious blend of pasture, 'finger-forests,' and tussock grassland above. Planning controls on non-farming uses such as forestry, and on building siting and colour are equally desirable.

The headwaters of Lee Stream and the Verter Burn are relatively high-altitude tussock grasslands (approximately 600 m) extending up to the range crest and abutting the reserve along much of its western boundary. Although capable of forestry development, the limitation of altitude may make it unattractive for this use. However pasture improvement is likely to continue by non-cultivation means. Much of the area can be suitable for cross country skiing and it provides a buffer from wilding tree spread from any forest establishment that may occur on the lower western slopes in the future.

Compatible land management between the reserve and this private land might be achievable by good neighbourly relations between DOC and the individual land owners. However, forestry should be excluded by planning controls.

## 5.3 Cultural Experience

The exotic Silver Peak and Flagstaff forests and their immediate environs (eg Evansdale Glen and Whare Flat), plus the Recreation Area in the Berwick Forest are zoned 'cultural experience.' (The Mt Allen forest is not included in this zone due to its relative remoteness.)

Expansion of recreational facilities/activities within these areas is highly desirable in view of their proximity to a large urban population. These forests have a potential for providing for a wide range of recreational opportunities which are not dependent on natural settings.

## 5.4 Remote Experience

While not satisfying Government or FMC criteria for formal definition as 'Remote Experience Areas,' two areas within 'natural experience' zones deserve recognition. Three bush tributaries of the South Waikouaiti lying between Pulpit Rock and Yellow Ridge are untracked. These provide excellent opportunities for bush navigation training, or just for roughing it.

The untracked Taieri Gorge between Mullocky Gully and Lee Stream is very suitable for wild river gorge travel. No comparable opportunity exists in the region. Both areas, being within reserves, should remain free of tracks.

## 6. Recommendations

### Silverpeaks Scenic Reserve

6.1 That DOC initiate the progressive establishment of the 1984 proposal to the full extent of the recommended eventual boundaries. This is a matter of national significance for nature conservation and recreation. A high priority should be given to the allocation of government finance for successful completion of negotiations to purchase all private lands within the "recommended eventual boundaries."

6.2 As a matter of urgency, reserve-former state forest boundaries in the upper South Waikouaiti-Hightop area be rationalised, with the objective of removing tree plantings within 'Landscape Tract 8.'"

6.3 That management planning for the 'core' scenic reserve area take account of the necessity to maintain diversity in tramping opportunities within the broader Silverpeaks-Dunedin region. In this regard the untracked South Waikouaiti catchments should remain untracked.

### Water Supply Areas

6.4 That the Dunedin City Council formally recognise that, because of comprehensive water quality protection and monitoring, there is no longer a necessity to restrict non-polluting public uses from core water catchment areas.

6.5 That the DCC, as a first step in a progressive relaxation of control, permit managed public recreation in the two supply catchments with greatest actual and potential usage, being the Silver Stream and Nicols Creek.

6.6 That the DCC and DOC collaborate in the above areas for the purpose of providing public recreation consistent with the maintenance of a municipal water supply.

6.7 That in the longer term the DCC consider transferring to DOC the management of water supply reserves within the 'eventual boundaries' of the Silverpeaks Scenic Reserve.

### Note:

- Offence and bylaw provisions of the Health Act 1956, Sections 6 and 19, and bylaws under the Reserves Act 1977 provide the means to control public use consistent with water supply.

**6.8** That all present and future domestic water supply areas within the new scenic reserve be managed primarily for nature conservation and water supply, and secondly for recreation.

#### *Firebreaks*

**6.9** That no further firebreaks be constructed within the 'eventual boundaries' of the Silverpeaks Scenic Reserve.

#### *Note:*

- Active management of scenic reserves adjacent to water supply areas should result in decreased fire incidence.
- A DCC proposal to construct firebreaks suitable for vehicle access between Swampy Summit and Hightop, and along the Green Ridge to Pulpit Rock ridge, is unnecessary in view of the scenic reserve abutting the Silver Stream catchment. It would also destroy another section of the key spinal ridge which holds the central Silverpeaks together as a walking and tramping area.

#### *Flagstaff*

**6.10** That pine and larch plantations above approximately 460 m, east of the Flagstaff-Whare Flat Road, be progressively removed and not replanted.

#### *Note:*

- These are visual intrusions into the tussock grasslands and on skylines and also provide major seed sources for wilding tree spread throughout the Flagstaff Scenic Reserve. (One private plantation and the upper extent of DCC plantations are involved.)

#### *Swampy Summit*

**6.11** That greater sharing of existing communications installations be pursued, and landscape treatment of existing facilities be undertaken.

**6.12** That future communications installations be confined to Swampy Summit, on the proviso that their siting and any roading does not further damage bog areas.

#### *Silverpeaks County District Scheme*

**6.13** That non-notifiable discretionary uses in the Rural E (Landscape Appreciation) Zone be replaced by conditional uses.

**6.14** That the Rural C Zone in the north-western Silverpeaks (as defined by FMC's 'open space' zone) be revoked in favour of Rural B (Pastoral).

**6.15** That both banks of the Taieri Gorge, between Little Mt Allen and Nenthorn Stream up to an elevation of 320 m, be zoned as Rural E. This is to ensure that exotic forestry does not obscure the spectacular, craggy features as viewed from the Otago Central Railway and river.

#### *Water Conservation Order*

**6.16** That the regional water board initiate a water conservation order over the Taieri River between Pukerangi and Outram in recognition of nationally important landscape and recreational values.

#### *Recreational Roads and Dunedin Environs*

**6.17** That the cultural-natural interface in the upper Waitati Valley, Leith Valley, and the city face of Flagstaff be managed to maintain harmonious landscapes. The means may include:

- higher protective status for publicly controlled native forests;
- covenants over private native forest;
- removal of higher altitude and isolated blocks of DCC plantations to allow reversion to bush.

**6.18** That 'key vistas' along the Mountain Road within the Silver Peaks State Forest be cleared of obscuring exotic trees in accordance with the prescriptions of the management plan.

#### *Bush Remnants*

**6.19** That bush remnants in the Mt Misery Creek and the adjacent Waikouaiti Valley be protected.

#### *Recreational Development Areas*

**6.20** That the DCC initiate a recreational development programme in its Flagstaff-Whare Flat forests, to cater for a variety of recreational activities.

#### *Outram Glen Scenic Reserve*

**6.21** That all remaining native forest between Taioma and Outram and in the lower Lee Stream be reserved.

**6.22** That no further walking track formation be undertaken along the Taieri Gorge between Mullocky Gully and Lee Stream so as to retain opportunities for wild river tramping near Dunedin.

#### *Maungatua Range*

**6.23** That the full Maungatua Range Scenic Reserve proposal proceed, with provision for public foot access at regular intervals from the Taieri Plain.

**6.24** That the Rural C zones in the Silverpeaks County District Scheme be replaced with Rural B zones on the Taieri faces and western tops as defined by FMC's 'open space' zones.

**6.25** That bush remnants on the Taieri faces and Waipori Valley, outside of currently established reserves, be protected as a matter of high priority.

*Possum Hut.*

Photo: Ken Mason



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