

History of Range Administration and Research in British Columbia

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Range Administration

When range livestock herds were initially moved into British Columbia in the middle of the 19th century, operators staked out their preferred territories on a first-come basis. However, ranch-headquarter sites and winter range areas were soon at a premium and had to be acquired legally by pre-emption record, Crown grant (fee simple), or leasehold procedure from the Provincial Department of Lands. In 1880, the Province of British Columbia granted a 40-mile wide belt adjacent to the railway to the Dominion of Canada in return for its commitment to build a rail line coast to coast. The lands along the "Railway Belt" were offered by the Dominion Government to settlers. Sale or lease of lands provided returns to Canada for its high investments in serving the sparsely settled West with a modern transportation and communications (telegraph) linkage. The responsibility for resource management in Canada normally has rested with the Provincial governments. Management of the Railway Belt by the Federal government between 1882 and 1930 was an exception.

In 1930, the Dominion of Canada returned the unalienated portions of the Railway Belt to British Columbia to be managed as vacant Crown land. Deeded lands therein were by that time the nucleus of many growing towns and subdivisions. The more easily irrigated benchlands grew forage crops as the basis for a substantial cattle and sheep ranching industry. As large ranch leases issued by the Dominion expired, they were converted into Provincial grazing leases. These covered almost all of the grasslands to lower timber line along the Thompson River valley from Shuswap Lake to Lytton. The upper elevations, being timbered to some degree, became Crown Provincial lands after 1930 for use under the Forest and the Grazing Acts.

Administration of Crown (public) grazing lands was relatively haphazard prior to 1919 and came mostly through leasing under the Lands Act until passage of the Grazing Act in 1919. As far back as 1874, an amendment to the "Breeding Stock Act" of 1872 made this recognition: . . . "the bona fide proprietor of any cattle being a bona fide resident or settler in British Columbia shall have the right of depasturing such cattle on public or Crown lands".

In 1876, the new "Cattle Ranges Act" appeared. It provided for recognition of "Commons" and was a means of affording some protection from alienation for key ranges and for regulating usage where strong competition threatened damage to the resource. Eventually, amendments to this Act provided for boards of overseers to assist in administration of the

Commons and Crown range.

In 1918, under the leadership of T.D. Patullo, then Minister of Lands, T.P. MacKenzie, a New Zealander with service in the United States Forest Service, was engaged to design a Grazing Act for British Columbia. The Act was passed the following year; the "Cattle Ranges Act" and the "Crown Lands Pasture Act" of 1911 were thereby repealed. MacKenzie was named Commissioner of Grazing within the Forest Branch of the Department of Lands and headquartered in Victoria. His field contacts were intended to be made with the public through the Rangers of the Forest Branch. In 1921 he was granted an assistant and in 1922 assigned two more for the period 1923-1925. The staff travelled extensively to serve the needs of some 600 to 700 sheep- and cattle-ranch operators in the Interior. The Forest Branch was very thinly represented in the ranching country in those days. It is surmised that the Commissioner of Grazing and his assistants had to do their own work because the local representatives of the Forest Branch were over-extended in their broad territories and were not trained in range work nor amenable to involvement in range disagreements.

Concern for the range resource developed to the point where a Grazing Committee Enquiry was conducted under the Chairmanship of P.Z. Caverhill, the Chief Forester, in 1930. A recommendation that "more authority to deal with local problems should be detailed to the district officers and local field men" appears to have been given attention. After the 1931 season, the Commissioner of Grazing was called upon to relinquish his post. His former duties in Victoria were delegated by the Chief Forester, thereafter, to either the assistant Chief or to the Forester-in-charge of Protection (Operations) Division. The District Foresters and Rangers were instructed to give more time and emphasis to implementation of range-use regulations.

To bring administration closer to the ranchers, the reorganized Grazing Division was centralized at Kamloops in 1932 and headed by George V. Copley, a former assistant to the Commissioner. He had,

Mr. & Mrs. George V. Copley. Mr. Copley was Director of Grazing, B.C. Forest Service, 1932 to 1945.



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from 1926 to 1931, served as District Forester over the Cariboo Forest District, headquartered at Williams Lake. The work in those days in the Cariboo District was mostly range work since nearly half of all the livestock registered as users of Crown range in the Province were located there. The Forest District was later split between the Kamloops and Prince George Districts but reestablished again in 1972. Copley continued to be the senior grazing specialist for the Forest Service (former Branch) until his retirement from Kamloops in 1945.

In 1937-38, Copley phased in two assistants who had agricultural degrees from the University of British Columbia. There was some succession and some leave of absence for War service. Copley carried on alone from 1942 until 1945. He was succeeded in 1945 by W.C. Pendray, who had obtained his field experience under Copley beginning in 1937. Pendray was assisted by H.K. DeBeck. Five more agricultural graduates were hired over the Director of Grazing Division in 1949. He continued in that post until his retirement in 1975. Centralization of



Wilf C. Pendray, Director of Grazing, B.C. Forest Service, 1945 to 1974.

Director at the capital city deemed necessary because growth in permanent staff needed the attention of a full time provincial coordinator.

Experienced personnel were gradually located at Nelson (1947), Prince George (1956), Dawson Creek (1964), and Smithers (1978). Numbers of professionals were seldom adequate to handle the work load; heavy reliance had to be placed on Forest Rangers and their assistants to implement, monitor, and enforce the requirements of the Grazing Division for compliance with the Grazing Act.

Public concern for well-managed rangelands was growing as ecological and environmental awareness spread in the 1960's. The Provincial government in 1973 responded to pressure by naming a Task Force under the chairmanship of Dr. Alastair McLean to recommend changes for range administration. The committee recommended a broader role for the Grazing Division, beyond administration, to include more emphasis on management, planning, and improvement. Even while the Task Force was in session, there were elements in some government departments as well as amongst users and public interest groups which favoured shifting the responsibility from the Forest Service to Agriculture or into a new combination involving Range, Land Management, and Fish and Wildlife agencies. As if to improve its hold on Grazing administration, the Forest Service created new positions and filled them with agrologists. One position was added to each of the Prince George and Nelson offices to augment the two already there. The Cariboo Forest and Grazing District was created in 1972 out of adjacent sectors of Prince George and Kamloops. It was staffed with eight agrologists, similar to that at Kamloops, both districts having somewhat comparable areas and workloads.

By February 1978, the Range Branch (former Grazing Division) consisted of 24 agrologists and six range technicians, all at regional locations. They are responsible for the Province's 23.5 million acres of rangeland. A director and assistant director, located at Victoria, report to the Chief Forester. In the district offices Range Branch professionals (agrologists) are responsible for about 1 million acres on which about 70 range permittees run an average of 108 animals each. Responsibilities of the agrologists include initial inventory and update, integrated resource planning, range development, allocations, enforcement, and educational aspects of Crown rangeland management.

After World War II the numbers of beef cattle permitted on Crown range rose rapidly to a peak in 1966. Part of the increase could be attributed to new areas brought under Forest Service jurisdiction. The cattle increase had less than full impact on range condition because there was a decline in sheep and horse permits and in the numbers of trespass horses pasturing on Crown range. Also, increased logging activity created both improved access and forage production on summer ranges and shortened grazing permit seasons, and upgraded stock and range management practices lessened the impact which expansion of cattle numbers in those years had upon range.

Two major factors have contributed to a decline in numbers of beef cattle on Crown range since 1966. The reduction of some 10,000 head was less than the decline in net yearly usage resulting from Forest Service restrictions on length of grazing season. This reduction was intended to assist in the recovery of depleted ranges. On the other hand, range cattle herds rose from an 84-head average in 1966 to 108 head in 1977 (based on grazing permits). A noteworthy increase in operator numbers and in livestock on range permits since 1970 has been shown for the northern Interior. Community pasture developments have contributed appreciably to this trend.

In 1978, the Forest and Grazing Acts were rewritten and passed by the Legislature. The Acts emphasize pursuit of maximum productivity goals for forest and range resources. The management and protection of the above resources with regard to immediate and long-term economic and social benefits are of concern. Resource use is planned and consultation and cooperation with other ministries, agencies, and the private sector to achieve coordination and integration with other resource values.

A number of changes from the previous Acts affect range livestock operators. Ten-year licenses may be issued over areas for which a planned grazing system has been developed. The holder may apply for a new licence in the third or ninth year with review and decision about replacement to be rendered within 1 year's time.

A qualified grazier's consistent use and satisfactory range management performance determine reissuance of a 10-year licence or the upgrading from permit tenure (1 to 5 years) to licence tenure.

Short-term permits with potential for renewal at expiry prevail for ranges awaiting planning and development, those where known diversion to other uses is pending and in cases where operators have shown poor herd stability or range management. Users are compensated by government for 95% of the quantity of a reduced use privilege for the unexpired term when brought about by diversion of rangeland to an incompatible use. New areas which are opened or those

which are vacated and considered available are advertised publicly to applicants. All tenures, prior to renewal, are publicized to give opportunity for citizen concerns to surface before new grazing permit or license conditions are drafted. A structured form of reviewing appealed decisions has been established. Field level decisions are reviewed at the regional manager level and his decisions, when appealed, reviewed by the Chief Forester. Any further appeal may be made to the Minister, who must appoint a three-man appeal board. The board will serve its decision on the Minister and the appellant and may order either to pay costs to the other.

Range Research

The need for research on range problems was recognized in British Columbia in 1931 when L.B. Thompson and Dr. S.E. Clarke of the Dominion Range Experiment Station at Manyberries, Alberta, carried out a survey of range conditions in the Province at the request of the B.C. Forest Service and the B.C. Department of Agriculture. T.P. MacKenzie, after an intensive survey recommended that the rangelands controlled by the Provincial government tuberculosis sanatorium near Kamloops be used for research studies. An agreement between the Dominion Department of Agriculture and the Provincial Government was signed to establish a research program in 1935, utilizing the Sanatorium beef herd.



Ed. W. Tisdale, officer-in-charge, Range Experimental Substation, Kamloops, B.C., 1935 to 1940.

A substation of the Range Experimental Station, Manyberries, Alberta was established and a research program carried out under the supervision of Dr. S. E. Clarke. Dr. E.W. Tisdale (past president and Fellow of the Society for Range Management) was appointed officer-in-charge. Range management and livestock divisions were formed and the first studies in plant community, range condition and range carrying capacity were initiated. Dr. V.C. Brink, now professor emeritus at the University of British Columbia, was closely associated with these studies. The disbanding of the Provincial beef herd and wartime economy moves by the Federal government resulted in the closing of the sub-station in 1940, with Tisdale moving to the Experimental Station at Swift Current, Saskatchewan. However, between 1941 and 1947 Tisdale and students employed by the station made summer trips to Kamloops and continued many of the studies of plant communities, seeded areas, and exclosures.

Research activities for the cattle industry were re-established in 1947 when a Dominion Experimental Station



Alastair McLean, (left) research scientist (1948 to present) and Tom G. Willis, (right) superintendent (1947 to 1961), Range Research Station, Kamloops, B.C.

was established at Kamloops. An expanded program of research on problems of the range livestock industry was undertaken and included range livestock husbandry, dryland and irrigated cultivated forage crops for hay and pasture, range plant ecology, and research on range and crop soils and soil fertility. The program was conducted under the direction of T.G. Willis, superintendent and field husbandry specialist. M.A. MacDonald in animal science and Alastair McLean in plant science were the Station's other initial scientists. Within 5 years, specialties of soils and agronomy were added.

By agreement with the British Columbia Forest Service and the Tranquille Livestock Association the Dominion Experimental Farm Service obtained grazing use of a Forest Reserve. In addition, the Station obtained title to about 1,160 acres of rangeland and grazing control over about 3,800 acres of order-in-council from the Provincial government.

Willis was in charge of the Station until 1961. Dr. R.H. Handford took over in 1962 and directed the establishment until 1970. Dr. J.E. Miltimore was Director from 1970 to 1973, Dr. D.E. Waldern until 1978, when he was succeeded by Mr. K. Dawley, who transferred from the sub-station at Prince George until his untimely death 7 weeks later. The number of scientists on staff has ranged between three and six over the years.

In 1962 the Range Station was amalgamated administratively with the Federal Entomology Laboratory, housed about 7 miles away and was renamed a Research Station. The research of a number of these scientists was not directly related to the ranching industry. As a result, this laboratory was phased out over a number of years and finally closed in 1971. Research on warble flies and wood ticks was moved to the Research Station, Lethbridge, Alberta.

The present staff of the Research Station consists of six scientists covering the specialties of range cattle nutrition and husbandry, range management, range plant ecology, dryland and irrigated forage crops for hay and pasture, range and crop soil fertility plant biochemistry, plant physiology, and integrated resource use involving livestock, forestry, and wildlife.

Although many ranges are still in only fair to poor range

condition, there has been a significant improvement in the overall condition of the rangelands of British Columbia in the past 40 years. For example, no longer do we see the extensive acres of cheatgrass (*Bromus tectorum*) and other annual weeds. This improvement is largely a result of improved range management and application of the results

of research. Greater use of controlled grazing and sound range management and implementation of sound range improvement practices have raised the condition of both rangelands and livestock. These changes have led us from a period of exploitation to one of managed grazing on the ranges of British Columbia.



A Home Where Marsupials Can Roam

Greg Siepen

In New South Wales, Australia, some rural land managers direct their activities at not only producing income but also producing wildlife. This is done in co-operation with the National Parks and Wildlife Service (N.S.W.), which is not only responsible for national parks and historical sites (European and Aboriginal), but also for looking after Australian native animals which occur in the State.

Each property selected because of its high wildlife value and positive attitude of the owner is made into a "Wildlife Refuge", with the National Parks and Wildlife Service assisting in wildlife management by providing information and advice on maintaining and increasing wildlife on the farm. In some cases finance can be supplied to achieve these aims but often there is no economic gain to the property owner in increasing wildlife.

Although the Wildlife Refuges in the United States are on Government lands, in New South Wales over 90% are privately owned farms on which the owner makes a living as well as maintains the wildlife still occurring on his property. The concept of the "Wildlife Refuge" is different in Australia as no unauthorized hunting is allowed. Hunters can shoot on Game Reserves either run by the National Parks and Wildlife Service or privately owned. The main value of a refuge is the retention of wildlife areas to assist those areas being protected in national parks and using these areas for research, education and enjoyment.

In New South Wales alone, over two thirds of the State is occupied by private rural producers, leaving a very small part for national parks, forests, and nature reserves where our unique plants and animals can be conserved. Most of the national parks are isolated from each other. Encouraging rural land managers in between these parks and reserves to conserve the remaining natural areas and rehabilitating low-grade wildlife areas on their properties links the bigger national parks and nature reserves with "wildlife pathways."



A huge Belah tree (Casuarina cristata) offering shade for stock and wildlife such as red and western grey kangaroos, which are common on wildlife refuges in the dry part of Australia.

These pathways are vital to the survival of many Australian animals which are nomadic or migrate with the flowering seasons of the Eucalypts and wattles.

One refuge owner, who lives in the semiarid part of New South Wales, has spent 20 years improving his property for wildlife. His production of beef also has increased over these years. Keenly interested in nature, he sought the assistance of the National Parks and Wildlife Service and his property was made a refuge in 1968. A Plan of Management was devised to manage the land not only for beef production but also for wildlife conservation.

The Management Plan concentrated on improving the marginal areas for wildlife by planting native shrubs for food and shelter for the birds and marsupials, and allowing long

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Editor's Note: It is interesting to note that in Australia, National Wildlife Refuges are privately owned, while in the United States they are publicly owned.