A REGIONAL MAP BASE FOR A MIGRATORY BIRD HABITAT INVENTORY PRAIRIE PROVINCES

A report to accompany maps.

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INTRODUCTION

Under its various mandates (Migratory Birds Convention Act 1917, Canada Wildlife Act 1973 and Committee on Status of Endangered Wildlife 1983), the Canadian Wildlife Service (CWS) is responsible for the management of migratory birds and endangered species and their habitats. The Canadian Wildlife Service also oversees the protection and management of key national habitats and plays a lead role in establishing an expanding network of National Wildlife Areas (Desmeules et al. 1983). To further this goal, an essential requirement is an inventory of key wildlife areas distributed according to natural regions in Canada.

A summary of wildlife habitat information is a prerequisite to developing a broad perspective on resource management. The Canadian Wildlife Service is developing a national process to set habitat management priorities and to direct habitat protection strategies for migratory birds. In order to identify key sites and to evaluate ongoing habitat loss, Canadian Wildlife Service requires an updated inventory of the status, availability and quality of migratory bird habitats. Using a standardized habitat classification combined with information on threatened and protected status of lands, the inventory will assist resource planners and wildlife managers in setting habitat protection goals and in priorizing key habitats. Furthermore, a uniform habitat classification system will aid in predicting areas affected by development trends and impacts upon migratory birds and their habitats.

RATIONALE

Site information on migratory birds is usually treated in

isolation in respect to the surrounding landscape and ecosystem. However, the spatial and structural interaction of the surrounding biotic and abiotic features may furnish ultimate stimuli to site selection by avian species (Hilden 1965). Indices of species diversity and abundance are often correlated with spatial and vertical habitat structure (Asherin et al. 1979, Karr and Roth 1971). In theory, the distribution and quality of sites may be related to macrohabitat features which can be described and portrayed in a spatial land unit. The land units are usually delineated by assembling components of soil materials, landforms and/or plant communities, utilizing ecological land classification guidelines (Environmental Conservation Task Force 1981). Differing heirarchical levels of mapping units are necessary to portray differing habitat requirements, differing levels of bird species use and function, and to collate distribution information on several bird species groups. Furthermore, through assessment of the land unit's characteristics, managers can often predict sensitivity to disturbances, and functional suitability of the unit for furnishing essential life requisites for selected avian species. Therefore the ecological land unit provides an effective framework for integrating spatial and contectual environmental data with migratory bird use and function data.

THE MAPPING FRAMEWORK

A standardized regional land classification and mapping approach is needed within the prairie provinces to characterize habitat units for migratory bird inventory and monitoring purposes. Three heirarchical mapping levels are proposed to satisfy national and regional planning needs and to collate regional and localized habitat

information. A framework of small habitat units nested within the broader management zones permits stratification for sampling, monitoring and organizing migratory bird and habitat data according to ecological criteria. The ecological land classification approach (ELC) uses the more stable and collective characteristics of the landscape to characterize habitat units and to emphasize the functional interconnectedness of several biophysical components (Stelfox 1982). Units are defined by the environmental synthesis method (Bailey et al. 1983) which scales component classification systems to the preferred level of application. For example, sites are equated to ecosites of the ELC, habitat units to ecodistricts or subregions, and management zones to ecoregions and ecozones.

a. **Management Zones**

Management zones defined by ecozone boundaries (Figure 1) are delineated according to major gradations in surface relief, structure or lithology, broad macroclimatic zones, plant formations and major soil zones (Wiken 1985). Ecozones are divisions of ecoprovinces (Environmental Conservation Task Force 1981), or equivalent biotic provinces (Dasmann 1972) as differentiated by physiographic controls. Hence ecozones are characterized by distinctive assemblages of avian species. Marked shifts in bird species diversity occur at the southern and northern margins of the taiga (Kaiser et al. 1972) which incorporates the Taiga plains and Boreal plains ecozones.

Management zones or ecozones form the broad framework for summarizing information on migratory bird species assemblages and habitat units. These zones provide a geographic setting for a Canada-wide perspective on regional priority assessments and habitat protection strategies.

b. **Ecoregions**

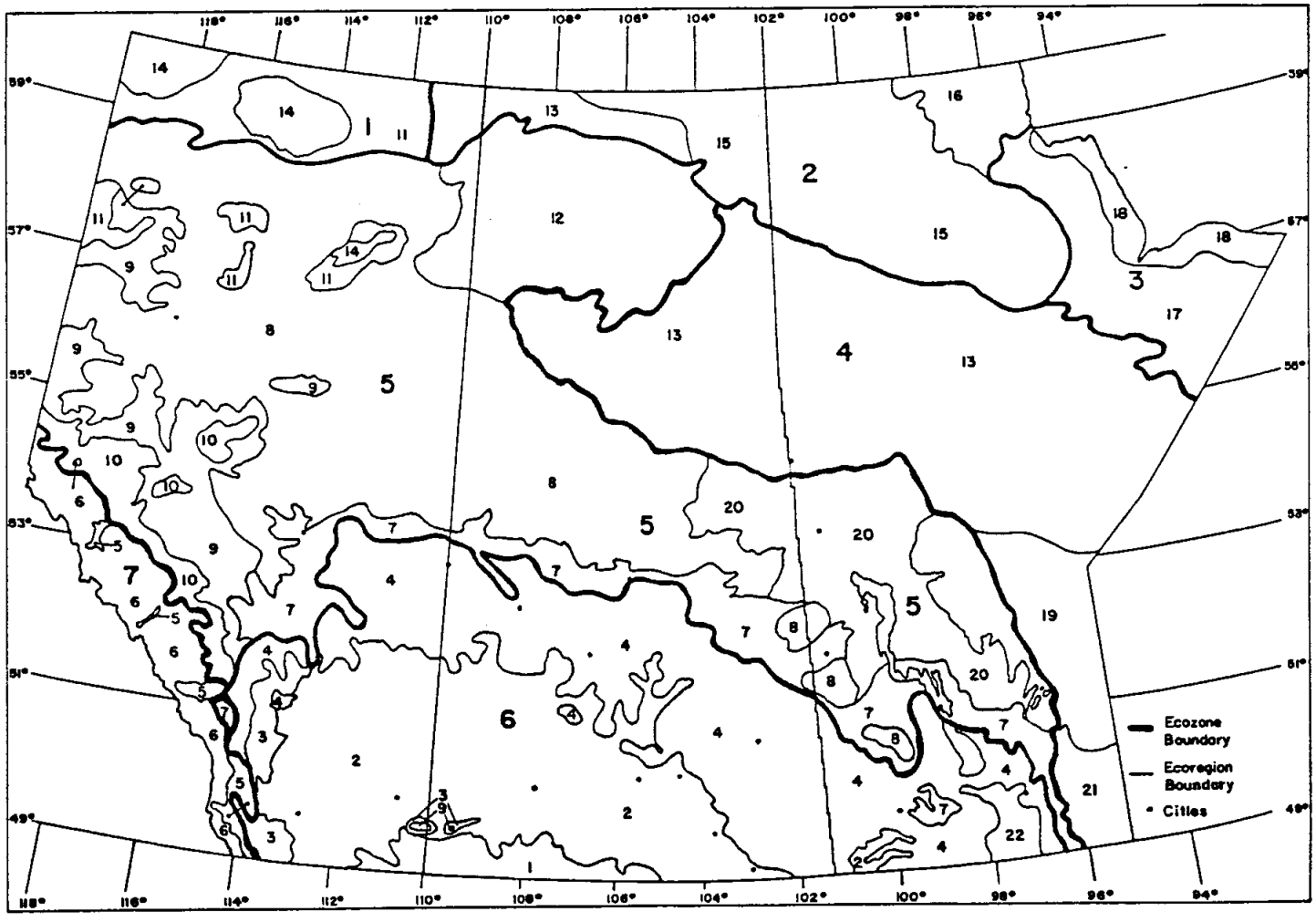
Ecoregions (Appendix 1) are the second mapping level characterized by broad divisions of land integrating macro-biota and soil indicators of latitudinal and longitudinal gradients of climatic change (Rowe 1979). According to the Environmental Conservation Task Force (1981), ecoregions are assemblages of regional landforms characterized by distinctive ecological responses to climate as expressed by development of vegetation, soils, water and fauna. Ecoregions are recognized by assemblages of soil great groups, plant regions, meso climate, large water basins and faunal communities.

Ecoregions provide a regional ecological perspective on the distribution of habitat units and avian species diversity and abundance. The ecoregions constitute the first stage of a regional mapping program to integrate bird distribution patterns, to document specialized species requirements, and to identify key habitats.

c. **Habitat Subregions**

The habitat subregion is a landscape division of the ecoregion delineated at the third heirarchical level. It is defined by elevation, relief, regional surface form, drainage and by broad genetic materials (Pedocan 1983). The subregion is similar to the physiographic section of Acton et al. (1960) and Pettapiece (1981), but modified by regional vegetation influences. Each subregion is conceptually similar to ecodistricts, but is characterized less by homogeneity of surface materials, and more by similarities in landform, vegetation components, and wetland distribution patterns. Examples of habitat subregions are glacial-fluvial-lacustrine plains, hummocky moraines, and bedrock controlled plateaus. The subregion furnishes

FIGURE I. ECOZONES AND ECOREGIONS - PRAIRIE PROVINCES



"From: Harris et al. 1983, Millar 1976, Mills 1979, Pedocan 1983, Wiken 1985 and Zoltai 1975"

Ecozones

1 - Taiga Plains
2 - Taiga Shield
3 - Hudson Plains
4 - Boreal Shield
5 - Boreal Plains
6 - Prairie
7 - Montane Cordillera

Ecoregions

1 - Short-grass Prairie
2 - Mixed-grass Prairie
3 - Fescue Prairie
4 - Parkland
5 - Montane
6 - Mountain Complex
7 - Mid-boreal Transition
8 - Mid-boreal Mixed-woods
9 - Mid-boreal Foothills
10 - Boreal Uplands
11 - High Boreal Plains
12 - High Boreal Sandplain
13 - High Boreal Precambrian
14 - Low Subarctic Uplands
15 - Low Subarctic Precambrian
16 - High Subarctic
17 - Hudson Bay Lowlands
18 - Coastal Lowland
19 - Mid-boreal Precambrian
20 - Mid-boreal Lowlands
21 - Low Boreal
22 - Tall-grass Prairie

the landscape framework for integrating broad physical habitat requirements for populations of breeding and staging birds.

LANDSCAPE CLASSIFICATION

a. Ecozones

Generalized ecozone boundaries were adapted from Wiken (1985), but more precise boundary determinations were made by grouping ecoregion units on the 1:1000,000 base map. The following list of ecozones is matched with corresponding ecoregion constituents:

1. Taiga Plains - High boreal plains, Low subarctic plains.

2. Taiga Shield - Low subarctic-precambrian, High boreal-precambrian (Lake Athabasca section), High subarctic precambrian.

3. Hudson Plains - Hudson Bay lowlands, Coastal lowlands.

4. Boreal Shield - High boreal-precambrian, Mid-boreal-precambrian and Low boreal.

5. Boreal Plains - Boreal uplands, Mid-boreal foothills, some high boreal plains inclusions, Mid-boreal mixed-woods, Mid-boreal transition, and Mid-boreal lowlands.

6. Prairie - Parkland, Mixed-grass prairie, Short-grass prairie, Fescue prairie, Tall-grass prairie and inclusions of Mid-boreal transition and foothills.

7. Montane Cordillera - Montane, subalpine and Alpine ecoregions.

Detailed descriptions of the ecozones are given by Wiken (1985).

b. Ecoregions

Ecoregion components were synthesized from a combination of climatic and physiographic gradients such as elevation, materials and moisture regimes which affect the composition, development or succession of plant communities on an area. Prevailing vegetation and

major physiographic boundaries, as well as the distribution of remnant stands of vegetation in modified areas, are ecoregion criteria.

The ecoregion boundaries were generally derived from ecoregion maps of the three prairie provinces (Strong and Leggat 1981, Harris et al. 1983, Mills 1979). However, some mapping adjustments were required due to incongruities in boundary-matching at provincial borders. The mid-boreal transition forest boundary mapped by Zoltai (1975), and the parkland-grassland boundary proposed by Millar (1976) were utilized to provide consistent linkage across the three provinces. Interposing the transition forest boundary necessitated changes in the mid-boreal mixed wood boundary as depicted by Strong and Leggat (1981) and Harris et al. (1983). Ecoregion boundaries mapped in northern Alberta by Pedocan (1983) were adopted, but a few modifications were made in northern Saskatchewan according to Rowe (1972). Separate distinctions were made between the Hudson's Bay lowlands and the Subarctic precambrian shield, due to major differences in surface materials and moisture regimes. The Alberta short-grass prairie boundaries (Strong and Leggat 1981) were rejected in favor of boundaries mapped by Harris et al. (1983), with extensions into Alberta determined by landform and solonetzic soils (Wonders 1969, Pedocan 1983). The tall-grass prairie was mapped after Bird (1961) with modifications delimiting the extent of poorly drained clay soils.

Preliminary ecoregion boundaries were then superimposed onto physiographic maps. Subdivisions were made based upon physiographic discontinuities such as lowlands versus uplands and precambrian rock-limestone rock interfaces. Minor boundary adjustments in ecoregions were taken to conform with distinctive regional landform boundaries

lying in close proximity. This utilization of common boundaries for ecoregions and physiographic divisions allowed the integration and nesting of habitat subregion units (Pedocan 1983). Where there were no obvious physiographic relationships, vegetation zonal boundaries were followed, often bisecting physiographic units. Ecoregion terminology was adapted from Strong and Leggat (1981), Harris et al. (1983), and Mills (1979) with modifications such as the low, mid and high boreal from Zoltai (1979). A description of the 22 ecoregions is presented in Appendix 1.

c. Habitat Subregions

Sources of map information for defining habitat subregions include physiographic maps for Alberta (Pettapiece 1981), Saskatchewan (Acton et al. 1960), and Manitoba (Mills 1980). Additional detail was provided by habitat region and subregion maps of Alberta (Pedocan 1983), a landscape map of southern Saskatchewan (Acton 1977), and soil landscapes and ecodistrict maps of Alberta, Saskatchewan and Manitoba (Shields and Pettapiece 1985, Shields 1982, Mills 1983). Subregions in central and northern Saskatchewan were mapped from soil survey and geomorphology maps (Schreiner 1984).

Subregions were defined by assembling soil-landscape or geomorphological units by consolidation of similar surface form patterns and broad material classes, recognizing divisions between plains (moraine, fluvial and lacustrine), hill lands (hummocky moraine or hummocky fluvial), bedrock-controlled uplands and lowlands (lacustrine, ground moraine or fluvial plain). Boundaries between uplands and plains were usually matched closely with overlays of physiographic boundaries. Generally major physiographic divisions were linked across provincial boundaries, so that only minor adjustments in

bordering subregions were necessary. Major river valleys were mapped, but they were divided into sections by ecoregion boundaries, not by physiography. Names of many of the subregion units were derived from physiographic maps (Pettapiece 1981, Acton et al. 1960, Mills 1980) from soil survey reports, and from local topographic names or drainage systems.

Subregion units mapped in the northern portions of the provinces are usually larger and more generalized, reflecting a lower intensity of biophysical surveys in those areas. More reliance was placed upon elevation and physiographic sections (Acton et al. 1960, Mills 1979) and the geomorphological units (Schreiner 1984). On the precambrian shield, subregion distinctions reflected extensive bedrock outcrops versus areas with blankets or veneers of morainal or fluvial materials and lacustrine veneers. Surface form such as slope class or relief: hummocky high relief plains versus undulating low relief plains, were additional criteria. Separations of some northern subregions were also based upon differences in elevation and differences in the relative composition of peatland forms such as veneer bog, polygonal peat plateau or horizontal fen. Lowlands in the Hudson Bay lowlands and Low subarctic ecoregions consist of a high proportion of peatlands.

Characteristics of the habitat subregion units are catalogued as a map legend under ecoregions in Appendix 2. The units are described according to elevation, surface form, genetic origin and dominant surface materials. Additional information on current vegetation cover and land use and distribution of surface water is a requirement for appraising general suitability of the subregion units for wildlife habitat evaluations (Pedocan 1983).

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Appendix 1. Ecoregions and their characteristics - Prairie Provinces.

Map No.	Ecoregion	Climatic Zone	Dominant Soils/Materials	Vegetation Dominants	Ann. pption mm	Mean Max. Temp. °C	Degree Days	Moist Deficit mm
1	Short-grass Prairie	Semi-arid Temperate	Brown Chernozems Solonetzic	Agropyron Bouteloua Stipa Carex filifolia Artemisia Phlox hoodii	260 to 380	19.1	1380 to 1750	200 to 350
2	Mixed-grass Prairie	Semi-arid Temperate	Dark brown and brown Chernozems	Stipa Agropyron Bouteloua Festuca Eleagnus Symphoricarpos	300 to 470	18.7 to 19.2	1290 to 1610	160 to 300
3	Fescue Prairie	Median-boreal Subhumid	Dark brown to black Chernozems, Brunisols	Festuca scabrella Danthonia parryi Stipa columbiana Agropyron Eleagnus Potentilla fruticosa Populus tremuloides	370 to 870	16.0 to 17.6	950 to 1330	100 to 200
4	Parkland	Subhumid Temperate	Dark brown and black Chernozems, Gleysols	Populus Salix Acer negundo Quercus Eleagnus Rosa Poa Festuca	390 to 545	18.0 to 19.5	850 to 1600	30 to 280
5	Montane	Subhumid Temperate	Eutric brunisols, black chernozems Regosols	Pseudotsuga Pinus contorta Picea Populus Betula Festuca	280 to 810	13.2 to 14.3	920 to 1120	40 to 240

Appendix 1. Continued.

Map No.	Ecoregion	Climatic Zone	Dominant Soils/Materials	Vegetation Dominants	Ann. pption mm	Mean Max. Temp. °C	Degree Days	Moist Deficit mm
6	Mountain Complex							
	Subalpine	Cool humid	Regosols Humic luvisols Eutric brunisols Limestone/shale bedrock	Pinus contorta Picea engelmannii P. glauca Pinus albicaulus Abies lasiocarpa Festuca Elymus	350 to 1230	N.D.	710 to 930	80 to 140
	Alpine	Cool humid	Regosols Brunisols Gleysols Limestone/shale	Abies lasiocarpa Betula glandulosa Larix lyallii Kobresia Phyllodoce Cassiope	570 to 970	N.D.	< 500	N.D.
7	Mid-boreal Transition	Subhumid boreal-temperate	Black and dark grey chernozems Luvisols Brunisols Organics	Populus Betula papyrifera Picea glauca Pinus banksiana Aralia Corylus	410 to 575	17.0 to 19.7	1330 to 1600	75 to 185
8	Mid-breal Mixed-Woods	Median boreal, Subhumid	Luvisols Gleysols Brunisols Organics	Populus Picea glauca P. mariana Pinus banksiana Betula Cornus Linnaea Aralia	350 to 520	17.0	970 to 1310	100 to 270

Appendix 1. Continued.

Map No.	Ecoregion	Climatic Zone	Dominant Soils/Materials	Vegetation Dominants	Ann. pption mm	Mean Max. Temp. °C	Degree Days	Moist Deficit mm
9	Mid-boreal Foothills	Boreal, Subhumid	Brunisols, luvisols, Chernozems	Populus Pinus contorta Picea glauca P. mariana Epilobium Arnica	400 to 670	14.3 to 15.4	1020 to 1140	20 to 150
10	Boreal Uplands	Cool Boreal Subhumid to Humid	Luvisols Brunisols Organics	Pinus contorta P. glauca P. mariana Betula glandulosa Alnus Elymus	440 to 770	12.1 to 14.3	740	20
11	High Boreal-Plains	Cool Boreal Subhumid to Humid	Luvisols Dystric brunisols Organic Cryosols	Pinus-Picea Abies balsamea Betula Arctostaphylos Vaccinium Shepherdia	300 to 450	14.0 to 16.0	1050	N.D.
12	High Boreal-Sandplain	Cool Boreal Subhumid	Brunisols Regosols Organics Sandplains	Pinus banksiana Picea mariana Arctostaphylos Cladonia	390	16.2	N.D.	N.D.
13	High Boreal-Precambrian	Cool Boreal Subhumid	Brunisols Luvisols Organic Cryosols Acid rock	Pinus banksiana Picea mariana Abies balsamea Betula Populus Pleurozium Hylocomium Cornus Vaccinium	415 to 560	14.9 to 17.0	700 to 1250	N.D.

Appendix 1. Continued.

Map No.	Ecoregion	Climatic Zone	Dominant Soils/Materials	Vegetation Dominants	Ann. pption mm	Mean Max. Temp. °C	Degree Days	Moist Deficit mm
14	Low Subarctic-Uplands	Cold Humid	Brunisols Turbic cryosols Organic cryosols	Picea Cladonia Betula Populus Ledum Sphagnum	400 to 450	13	< 750	N.D.
15	Low Subarctic-Precambrian	Cold Humid	Brunisols Dystric brunisols Turbic cryosols Luvisols Organic cryosols Rock outcrops	Picea-Cladonia Betula Pinus banksiana Ledum Hylocomium	370 to 560	14.1 to 15.0	500 to 700	20 to 40
16	High Subarctic	Cold Humid	Turbic cryosols Dystric brunisols Organic cryosols	Picea mariana Cladonia Larix Abies Carex	340 to 450	11.9 to 15.0	< 500	10 to 20
17	Hudson Bay Lowlands	Cold Humid	Organic cryosols Organic	Picea mariana Larix P. glauca Sphagnum Betula Carex Ledum Cladonia	300 to 500	17.2	< 1000	N.D.
18	High Subarctic Coastal Lowland	Cold Humid	Regosols Organics Cryosols/marine Sediments	Larix Betula glandulosa Carex-Scirpus Sphagnum Salix	< 400	12	< 500	N.D.

Appendix 1. Continued.

Map No.	Ecoregion	Climatic Zone	Dominant Soils/Materials	Vegetation Dominants	Ann. pption mm	Mean Max. Temp. °C	Degree[2] Days	Moist Deficit[3] mm
19	Mid-Boreal-Precambrian	Subhumid to Humid Median boreal	Brunisols Luvisols Organics Acid rock outcrops	Picea-Abies Pinus banksiana Populus Quercus Fraxinus	410 to 600	18.0 to 19.5	1300 to 1445	25 to 75
20	Mid-Boreal Lowlands	Median Boreal Subhumid to Humid	Brunisols, Luvisols Organics/ Limestone Rock	Picea-Pinus Populus Ulmus Fraxinus Carex	430 to 525	16.7 to 18.8	1220 to 1445	90 to 130
21	Low Boreal	Humid-boreal-temperate	Brunisols Organic	Populus Picea glauca Abies Pinus banksiana P. strobus Betula Larix Thuja Ulmus	580 to 615	18.6 to 19.5	1485 to 1560	25 to 60
22	Tall-grass Prairie	Temperate Subhumid	Black chernozems Gleysols Solonetzic	Andropogon Spartina Sorghastrum Agropyron Poa Aster	460 to 545	19.5 to 20.5	1600 to 1680	180 to 230

1. Ecoregion soil, climatic and vegetation data obtained from Strong and Leggat (1981), Harris et al. (1983), Mills (1979), Fremlin (1974), and Rowe (1972).

2. Degree days- accumulated degree days more than 5°C.

3. Moisture deficit-average annual water deficiency in mineral soils( ]0 cm storage) May] to September 30.

Appendix 2. Map Legend - Ecoregions and Habitat Subregions (Prairie Provinces).

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
1.00	Short-grass Prairie			
1.01	Milk River Plain	3200-3500	Md.Ud.Mbv/Rm	A-cl^{5}.G-cl^{3}.R-cl^{2}
1.02	Sage Creek Plain	2800-3100	Mu.Fu.Mu	G-cl^{9}.R-cl^{1}
1.03	Pakowki Plain	2800-3000	Mk.Er.Mu	A-cl
1.04	Lodge Benchland	2500-3400	Md.Mh.Mbv/Ri-D	A-cl
1.05	Outlaw Coulee Upland	3200-3500	Mk	A-cl
1.06	Boundary Plateau	2900-3200	Mh(Fl)	A-cl
1.07	Frenchman River Plain	2800-3100	Mu.Fu	G-cl^{6}.A-cl^{4}
1.08	Wood Mountain Plateau	2600-3350	Mm-Md-Mu-Ud/R.R	R-cl^{9}.A-cl^{1}
1.09	Poplar River Plain	2500-3000	Md.(Mm)(Ud)	A-cl
2.00	Mixed-grass Prairie			
2.01	Cypress Hills Benchland	2500-3900	Md.Mm.Mbv/Ri-D	B-cl^{6}.C-cl^{4}
2.02	Chin Plain	2500-3200	Mk.Er.Eh	A-cl
2.03	Fincastle Plain	2400-2650	Lu.Fu.	A-lm^{5}.B-cl^{4}.A-sl^{1}
2.04	Verdigris Plain	2900-3200	Muh.Lv/Mu	A-cl^{7}.B-cl^{3}
2.05	Milk River Upland	3400-4600	Mm.Mh.Mbv/Rm-D	B-cl^{7}.A-cl^{3}
2.06	Three River Plain	3000-3500	Lv.Fu.Lu	B-lm^{5}.B-sl^{5}
2.07	Keho Lake Plain	3000-3400	Lu.Fu/Muh.Mm	B-lm^{8}.B-cl^{2}
2.08	Travers-Coaldale Plain	2800-3350	Mr.Lu	B-lm^{5}.B-cl^{5}
2.09	Picture Butte Plain	2800-3000	Lu	B-lm
2.10	Enchant Plain	2500-2900	Mu.Lu.Fv/Mu	A-cl^{5}.A-lm^{3}.A-sl^{2}
2.11	Suffield South Plain	2300-2500	Mk.Mu	A-lm
2.12	Medicine Hat Plain	2400-2600	Md	A-lm^{9}.R-cy^{1}
2.13	Big Stick Lake Plain	2000-2800	Lu.Fu.Lh.Fh	A-lm^{5}.A-cl^{3}.A-sl^{2}
2.14	Schuler Upland	2400-2800	Mhu.F.Lv	A-cl
2.15	Middle Sand Hills South	2000-2400	Eh.Fu	R-sd
2.16	Middle Sand Hills	2000-2400	Fh.Eh.Mu	A-sl^{6}.R-sd^{2}.A-lm^{2}
2.17	Rainy Hills	2400-2700	Mk.Fh	A-lm^{8}.A-sd^{2}
2.18	Kininvie Plain	2400-2600	Mk.Mh.	G-cl^{7}.A-lm^{3}
2.19	Matzhiwin Plain	2200-2500	Fu.Lu(E)	A-sl^{4}.A-lm^{3}.A-sd^{3}
2.20	Lake Newell Plain	2400-2700	Mu.Mk	G-cl.A-cl
2.21	Lomond Upland	2700-3000	Mk	B-cl

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
2.22	Majorville Upland	2800-3300	Mk	B-cl
2.23	Blackfoot Plain	2700-3000	Lu	B-lm
2.24	Little Bow Plain	3100-3500	Lu.Mm	B-lm^{7}.B-cl^{3}
2.25	Arrowwood Creek Plain	3100-3700	Lu	B-lm
2.26	Crowfoot Plain	2900-3200	Lm.FuFu.	B-lm^{6}.B-cl^{3}.B-sl^{1}
2.27	Wintering Hills	2800-3400	Mk	B-cl
2.28	Rosebud-Drumheller Plain	2800-3000	Lm	B-cy^{9}.R-lm^{1}
2.29	Deadhorse Lake Upland	2900-3000	Mk.Lm	B-cl
2.30	Crawling Valley Plain	2600-2900	Mk	A-cl.B-cl
2.31	Lower Berry Creek Plain	2300-2500	Fu.Lu	A-sd^{8}.G-cl^{2}
2.32	Richdale-Cessford Plain	2300-2800	Mu.Md.Mh	G-cl^{6}.H-cl^{4}
2.33	Oyen Upland	2400-2800	Mk.Mh.Lu	G-cl^{4}.A-cl^{4}.A-cy^{2}
2.34	Sibbald Plain	2200-2400	Luh.Fu.Muh	G-cl^{8}.A-cl^{1}.A-sl^{1}
2.35	Neutral Upland	2200-2600	Mk.Mb/Rm(Fu)	B-lm.B-sl
2.36	Grassy Island Plain	2100-2300	Fu	B-sl
2.37	Monitor Hills	2300-2600	Mk.Mh.	B-cl
2.38	Coronation Plain	2500-2700	Mu	H-cl
2.39	Sounding Creek Plain	2200-2600	Fu.Fv/Mu.Mu	H-sl^{3}.B-sd^{3}.G-sl^{4}
2.40	Rumsey Upland	2700-2900	Mk	B-cl
2.41	Chain Lakes Plain	2600-2850	Lm.Mk.Fu	B-cy^{5}.B-sl^{3}.B-cl^{2}
2.42	Hand Hills Upland	2900-3500	Mk.Mm.Md	B-cl
2.43	East Coulee Plain	2600-2800	Md.Mk	B-cl
2.44	Conglomerate Creek Valley	3200-3700	Ud.Rd	R-cl
2.45	Swift Current Creek Valley	2600-3400	Ud	R-cl
2.46	Shaunavon Plain	2700-3200	Mu.Md.Ed.Mh	B-cl^{6}.A-lm^{4}
2.47	Rush Lake Creek Plain	2500-2900	Ed.Md.Ud	B-lm^{5}.A-cl^{3}.R-cl^{2}
2.48	Bridge Creek Upland	2700-3200	Mh	B-cl
2.49	Wood River Plain	2500-3000	Mm.Md.Ld	A-lm^{9}.B-cl^{1}
2.50	Pinto-Lynthorpe Creek Valley	2400-2500	Ud	R-cl^{5}.R-cy^{5}
2.51	Lower Wood River Plain	2300-2600	Mh.Mk.Lu	A-cl^{7}.A-lm^{3}
2.52	Notukeu Creek Plain	2300-2600	Lu.Mu	A-cl^{4}.A-cy^{3}.A-lm^{3}
2.53	Willow Bunch-Big Muddy Valley	2100-2500	Ud.Rd	R-cl^{9}.A-cy^{1}
2.54	Amulet Hills	2300-2500	Mk.Lu	A-cl

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
2.55	Missouri Coteau	2000-2880	Mk.Mh	A-cl^{6}.B-cl^{4}
2.56	Missouri Coteau South	2100-2500	Mk.Md	A-cl^{4}.B-cl^{3}.A-lm^{3}
2.57	Long Creek Plain	1800-2100	Mu.Md.Ll.Fu	H-cl^{7}.B-cl^{3}
2.58	Regina Plain	1850-2000	Lu.(Fu)(Fh).Ll.(Mh)	B-cy^{9}.V-cy^{1}
2.59	Tuxford Plain	1850-2000	Lu.Mu	B-cy^{5}.B-lm^{3}.B-lm^{2}
2.60	Eyebrow Hills Upland	1950-2100	Mh	G-cl^{5}.B-cl^{3}.B-lm^{2}
2.61	Old Wives Lake Basin	2180-2300	Fh.Lu.Fu(Mh)	A-sl^{8}.A-cl^{2}
2.62	Shamrock Upland	2300-2500	Mk	A-cl
2.63	Prairie View Hills	2300-2600	Mh.Mk.Md.(Fu)	A-lm^{5}.A-cl^{5}
2.64	Antelope Lake Plain	2300-2500	Ld.Fh.Eh	A-lm^{5}.A-sl^{3}.R-sd^{2}
2.65	Bigstick Lake Sandhills	2300-2400	Eh(L)	R-sd
2.66	Great Sandhills	2300-2400	Eh	R-sd
2.67	Mantario Plain	2200-2300	Lu	A-cy
2.68	Kindersley Plain	2000-2400	Lu.Lb	A-cy
2.69	Tramping Lake Plain	1900-2300	Lu	B-cy^{4}.B-cl^{2}.B-lm^{2}
2.70	Bad Hills Upland	2200-2500	Mk	A-lm
2.71	Eagle Creek Plain	1800-2100	Lu.Fu.(Eh)	B-cy^{5}.B-lm^{3}.B-sl^{2}
2.72	Coteau Hills	2000-2600	Mk.Lh.Fh	B-lm^{4}.A-lm^{4}.A-sl^{2}
2.73	Lucky Lake Plain	1850-2000	Lu.Lh.Eh	A-cy^{6}.R-sd^{4}
2.74	Brightwater Creek Plain	1700-2000	Lu.Mu	H-lm^{6}.B-sl^{3}.R-sd^{1}
2.75	Upper Qu'Appelle Plain	1700-1850	Fu.Mu.Lu.Au	B-lm^{5}.B-sl^{3}.C-sl^{2}
2.76	Boissevain-Hartney Plain	1500-1700	Ml.Ll.Al.(Mu)	C-lm^{6}.C-cy^{2}.C-sd^{2}
3.00	Fescue Prairie			
3.01	Elkwater Lake Upland	3500-4000	Md.Mbv/Rm-D	C-cl^{8}.B-cl^{2}
3.02	Del Bonita Plain	3800-4600	Mm.Mv/Rm.Ft	C-lm
3.03	St. Mary Plain	3400-4200	Mm.Lv/Mu	C-lm^{6}.C-cl^{4}
3.04	Waterton Upland	3900-4500	Mm-Mv/R.Mu	C-lm
3.05	Pincher Plain	3200-4200	Lu.Mbv/Rm	C-cy^{8}.B-lm^{2}
3.06	Frank Lake Plain	3200-3500	Mu.Mm.Lu	C-cl^{5}.B-cl^{3}.B-lm^{2}
3.07	Serviceberry Creek Plain	3000-3400	Mu.Lu.	C-cl^{8}.C-lm^{2}
3.08	Rosebud Creek Plain	3100-3700	Mu.Lu.Mm	C-cl^{7}.C-lm^{3}
3.09	Ghostpine Plain	2800-3000	Lu.Lm.Mm	B-lm^{4}.C-cy^{3}.B-cy^{3}

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
4.00	Parkland			
4.01	Okotoks Upland	3400-4200	Mbv/Rm-D-Muh	C-cl
4.02	Strathmore Plain	2900-3200	Fu.Lm	B-sl^{7}.B-lm^{3}
4.03	Nosehill Benchland	3900-4400	Mbv/Rm-D-Mh.(F)	C-cl
4.04	Dogpound Benchland	3400-4000	Mb/Rm-D.Lu	C-cl^{6}.C-lm^{4}
4.05	Kneehills Upland	2900-3400	Mu.Mm.Fh-D	C-cl^{8}.C-lm^{2}
4.06	Delburne Upland	2900-3200	Mk.Mm.Fu	C-cl^{8}.C-lm^{2}
4.07	Castor Plain	2300-2700	Mu.Lu.Fu.	H-cl^{7}.C-sl^{2}.J-lm^{1}
4.08	Battle River Upland	2200-2600	Mk.Mu.Fh	B-cl
4.09	Neutral Hills	2400-2900	Mk/Rm.	B-cl
4.10	Ribstone Plain	2000-2300	Fuh.Mk	B-sl
4.11	Dilberry Plain	1900-2100	Eh.Fh	B-sd^{9}.B-sl^{1}
4.12	Provost Upland	2100-2500	Lu.Mk	B-lm^{8}.B-cl^{2}
4.13	Edgerton Plain	2000-2300	Mk.Lu.Fh	C-cl^{4}.C-lm^{2}.B-lm^{4}
4.14	Vermilion Upland	2000-2400	Mk.(F,L)	C-cl
4.15	Hazeldine Plain	1800-2200	Mk.Mu.Fu	C-cl^{5}.C-lm^{5}
4.16	Innisfree Plain	2100-2300	Mk.Fh	C-cl^{8}.C-sl^{2}
4.17	Birch Lake Plain	2200-2300	Mk	C-cl
4.18	Killam Plain	2200-2400	Mu.L	J-cl^{8}.B-cl^{2}
4.19	Mundare Plain	2000-2250	Mu.F.L	C-cl^{6}.J-cl^{4}
4.20	Beaverhill Lake Plain	2100-2400	Mu.L.Mbv	J-cl
4.21	Hillmond Upland	1800-2100	Mh.Fh	J-cl^{6}.J-lm^{4}
4.22	Paynton Sandhills	1800-1900	Eh	R-sd^{8}.R-lm^{2}
4.23	North Saskatchewan River Plain	1800-2000	Fu.Lu.Mu	C-lm^{9}.C-sl^{1}
4.24	Redberry Lake Upland	1800-2300	Mk.Fk.Lk	C-lm^{7}.D-lm^{2}.C-sl^{1}
4.25	Fremont Upland	2100-2300	Mk.Mh	C-lm
4.26	Cutknife Plain	2000-2300	Lu.Fh	B-lm^{4}.C-lm^{3}.B-sl^{3}
4.27	Cutknife Hills	2100-2200	Mr	B-lm
4.28	Eagle Hills	2000-2500	Mk.Fk	B-lm^{5}.C-lm^{5}
4.29	Whiteshore Lake Plain	2100-2200	Lk	B-lm
4.30	South Saskatchewan River Plain	1600-1800	Lu.Fu.Mu.(Eh)	C-lm^{4}.B-lm^{3}.B-sl^{3}
4.31	Dundurn Sandhills	1600-1700	Eh	R-sd
4.32	Hawarden Hills	1950-2050	Mh.Mk	B-lm

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
4.33	Kenaston Upland	2000-2100	Mk	B-lm
4.34	Allan Hills	1900-2280	Mk.Lk.Md	Bl-lm^{8}.B-cy^{2}
4.35	Colonsay Plain	1750-1900	Lk.Mk	B-lm^{7}.B-cy^{3}
4.36	Minichinas Hills Upland	1700-2000	Mk.Lh.Mum	B-lm^{7}.C-lm^{3}
4.37	Hoodoo Lakes Plain	1800-1900	Lu	C-cy
4.38	Red Deer Hills	1500-1600	Lk	C-lm
4.39	Melfort Plain	1050-1400	Ld	C-cy
4.40	Tiger Hills Upland	1700-1900	Mh	D-lm^{6}.F-lm^{4}
4.41	Ponass Lakes Plain	1800-1900	Mk.Mu.Md	C-lm
4.42	Lanigan Creek Plain	1700-1900	Mk	C-lm
4.43	Quill Lakes Basin	1700-1750	Md.Ad	C-lm^{8}.R-lm^{2}
4.44	Touchwood-Beaver Hills	1900-2200	Mk.Md	C-lm
4.45	Touchwood Upland	1950-2400	Mk	C-lm^{9}.F-lm^{1}
4.46	Last Mountain Plain	1700-1900	Mh	B-lm
4.47	Last Mountain Upland	1900-2200	Mk.Mh	C-lm
4.48	Buffalo Pound Upland	1800-2000	Mh.(Fh)	B-lm
4.49	Balcarres Plain	1800-2000	Lu.Mu.Fu	C-cy^{5}.C-lm^{3}.C-sl^{2}
4.50	Touchwood Slope	1750-2100	Mk-Md	C-lm^{8}.F-lm^{2}
4.51	Whitesand River Plain	1600-1800	Lu.Fu	C-sl^{4}.C-lm^{2}.C-cl^{2}
4.52	Yorkton Plain	1700-1800	Mh	C-lm^{9}.R-cl^{1}
4.53	St. Lazare Plain	1200-1600	Fl-Fuh.Mu.Fd	C-lm^{5}.D-lm^{5}
4.54	Pheasant Hills Upland	1900-2000	Mk	C-lm
4.55	Moose Mountain Upland	2000-2300	Mk.Mh	C-lm^{6}.B-lm^{4}
4.56	Pipestone Plain	1600-1900	Mk.Mh.Mu	C-lm^{9}.D-lm^{1}
4.57	Moose Mountain	2400-2700	Mk.(Lk)	D-cl^{6}.C-cl^{3}.C-lm^{1}
4.58	Gainsborough Creek Plain	1500-2000	Mk	C-lm
4.59	Souris River Plain	1800-2000	Mu.Fu	H-cl^{6}.C-lm^{3}.B-SC^{1}
4.60	Lake Souris Plain	1100-1500	Ll.Lv.Fl(Eh)	C-sl
4.61	Arrow River Plain	1400-1600	Mh.F	C-lm^{5}.C-sd^{5}
4.62	Newdale Plain	1600-1900	Mk.Mu.Mm	C-lm
4.63	Rackham Hills	1900-2100	Mk.Mm	D-lm^{6}.F-lm^{4}
4.64	Brandon Plain	1200-1500	Ld.Lv.Fl	C-sd
4.65	Brandon Lakes Plain	1000-1500	Ll-Lu.Fl.Ld	C-cy^{8}.C-sl^{2}

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
4.66	Tiger Hills	1200-1500	Mh-Mr	C-lm^{9}.C-cy^{1}
4.67	Boissevain Plain	1400-1800	Mu-Mr.Fu	C-lm
4.68	Turtle Mountain Slope	1800-2000	Md	C-lm
4.69	Turtle Mountain	2000-2400	Mh-Md.Mu	D-lm^{5}.F-lm^{5}
4.70	Manitou Plain	1050-1500	Mu.Ll	C-lm^{6}.C-cy^{4}
4.71	Pembina Escarpment	900-1100	Mu.Ld.Md(Lr)	C-sd^{4}.D-lm^{3}.C-cy^{3}
4.72	Pembina Hills	1100-1600	Mu.Mh	D-lm^{6}.F-cy^{4}
4.73	Neepawa Plain	1100-1300	Ll.Ld	C-lm
4.74	Lower Assiniboine Delta	800-1000	Ll-Fl.Eh	C-sd
4.75	Kelwood Ridge	1000-1200	Lr	C-lm
4.76	Turtle River Plain	900-1100	Ll	D-sl^{7}.C-lm^{3}
4.77	Westlake Till Plain	780-1050	Mr-Mu	C-lm
4.78	Whitemud River Plain	800-1000	Lr.Ll	C-lm
4.79	Delta Marshes	800-820±	Ll.Al.(Lr)	U-cy
4.80	Lily Bay Terrace	810-875	Mr	M-lm^{5}.D-lm^{5}
4.81	Shoal Lakes Plain	850-900	Mr.Mu	C-lm
4.82	Woodlands Plain	775-850	Lvl	C-lm^{5}.C-cy^{5}
4.83	Lower Red River Plain	750-900	Ll.(Fr)	C-cy^{8}.C-lm^{2}
4.84	Roseau River Plain	800-1000	Lv.Ll	D-lm^{6}.F-sl^{3}.O^{1}
5.00	Montane			
5.01	Belly River Upland	4000-5000	Mu.Mv/R.Fr	C-lm^{9}.C-sd
5.02	Porcupine Hills	3500-5000	Mv/R.Fi	C-cl^{7}.C-lm^{3}
5.03	Ghost-Waiparous Upland	4000-5000	Mv/R.Fm.Rr	Rb-lm
5.04	Kootenay Plains	4600-5200	Fr.Mv/Ri	M-lm
5.05	Athabasca River Valley	3200-4000	Fr.Mv/Ri.E	M-lm^{4}.M-sd^{3}.R-lm^{3}
6.00	Mountain Complex (Subapline-Alpine)			
6.01	Castle River Ranges	5000-9000	Mv/Rs.Fv.Ri(E)	Rb^{8}.M-lm^{2}
6.02	Highwood-Livingstone Ranges	5000-10,600	Mv/Rs.Fv.C/R.Ri	M-lm
6.03	Vermilion-Sawback Ranges	5000-10,800	Mv/Rs.Fv.C.Ri	Rb^{6}.M-lm^{4}
6.04	Icefield-Maligne Ranges	5000-12,000	Rs.I.C/M.Mv/Ri	Rb^{7}.M-lm^{3}
6.05	Smoky River Alpine and Subalpine	4000-10,000	Mv/Rs.Fv.Rs.C.	Rb^{5}.M-lm^{4}.F-lm^{1}

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
7.00	Mid-Boreal Transition			
7.01	Medicine River Plain	3000-3400	Lu.Mu.Fu	C-lm^{6}.J-lm^{2}.C-cl^{2}
7.02	Alix Upland	2600-3000	Mk	C-cl^{7}.D-cl^{3}
7.03	Buffalo Lake Plain	2600-2800	Fu.Lh	C-sl^{8}.C-lm^{2}
7.04	Wetaskiwin Plain	2400-3000	Lu.Mu.Fu.	C-lm^{6}.C-sl^{3}.F-cl^{1}
7.05	Bashaw Upland	2400-2700	Mk	C-cl
7.06	Battle River Plain	2400-2600	Mu.Fu.Mk.	C-cl^{6}.J-cl^{4}
7.07	Beaver Hills Upland	2300-2550	Mk.Mu	F-cl^{7}.D-cl^{3}
7.08	Lake Edmonton Plain	2100-2400	Lu.Lk.Muh.Fu	C-cl^{7}.D-lm^{2}.J-cl^{1}
7.09	Glory Hills	2300-2500	Lk.Mk	D-cl^{6}.F-cl^{4}
7.10	Whitford Plain	2000-2300	Mu(F.L).Eh	C-cl^{9}.R-sd^{1}
7.11	Myrnam Upland	2000-2300	Mk.(Fh)	F-cl^{5}.D-cl^{3}.D-sl^{2}
7.12	Thérian Lake Plain	1900-2200	Mk.(Mu)	F-cl
7.13	Thickwood Hills	2000-2400	Mur.Fv/Mu.Mk	F-lm^{8}.D-lm^{2}
7.14	Witchekan Plain	1900-2200	Lv.Mu.Fu.	D-cl.D-sl^{4}.U-cl^{2}
7.15	Thickwood Hills Upland	1900-2600	Mk.Mr.Mm	D-lm^{4}.F-lm^{4}.C-lm^{2}
7.16	Shell River Plain	1600-2000	Fu.Fm.Mu.Fu/Lu	D-sl
7.17	Nisbet Sand Plain	1400-1500	Eh.Fu	M-sd
7.18	Nipawin Plain	1200-1400	Eh.Lh.Fu	D-lm^{8}.D-sl^{2}
7.19	Tisdale Plain	1400-1600	Ld.Lu	D-cy
7.20	Barrier River Upland	1700-1900	Mk	F-lm
7.21	Red Deer River Plain	1100-1600	Mu-Fu.Lu	D-F,cl-sl
7.22	Porcupine Upland	1800-2200	Mk.Lk.(O)	F-lm^{7}.F-cy^{2}.O^{1}
7.23	Lac la Course Plain	1600-1800	Mu.Lu.Fu.(Fh)	D-cl^{9}.F-cl^{1}
7.24	Swan River Plain	900-1400	Md.Lu.	D-cl^{4}.D-lm^{3}.D-cy^{3}
7.25	Big Boggy Creek Upland	1700-2000	Mk	D-lm
7.26	Riding Mountain Upland	1800-2100	Mk.Mm.Mh	F-lm^{9}.D-lm^{1}
7.27	Valley River Plain	1200-1800	Ld.Lu.Md.Fr	C-lm
7.28	Riding Mountain Escarpment	1200-2000	Mdi.Mv/R	F-lm
7.29	Upper Assiniboine Delta	1000-1400	Fl-Fu-Ld.Eh	R-sd^{8}.C-lm^{2}
7.30	Dauphin Lake Plain	900-1100	Ll.Mu.Ld.Mv	C-lm^{6}.C-cy^{4}
7.31	Crane River Plain	800-900	Mr.Ml.(Ll)	M-lm^{5}.C-lm^{5}
7.32	Interlake Plain	800-900	Mr.Mu.Mv/R(OFh)	C-lm^{5}.M-lm^{5}

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
7.33	Icelandic River Lowland	715-850	Ll.Ml-Mu.Lv(OB-OF)	D-lm^{7}.D-cy^{3}
7.34	Lake Winnipeg Terrace	715-800	Lv.Ll	D-cy^{7}.U-cy^{3}
7.35	Red River Delta	715-720	Fl.Al.(Lr).Ll	U-cy
7.36	Pine Ridge Plain	720-900	Fh.Lvl.	D-cl
7.37	Caliento Plain	900-1100	Lvl.OFh	F-sl^{6}.O^{3}.C-lm^{1}
8.00	Mid-boreal Mixed woods			
8.01	Pigeon Lake Upland	3000-3300	Mm.Mu	F-cl^{8}.D-lm^{2}
8.02	Drayton Valley Plain	2800-3100	Mm.Mu.Lk	F-cl
8.03	Chip Lake Plain	2400-3000	Mm.Lk.Lu	F-cl^{8}.F-cy^{2}
8.04	Lac Ste Anne Plain	2200-2500	Mm.Mh.Lu	F-cl
8.05	Paddle River Plain	2000-2450	Lh.(OB)	D-cl
8.06	Fort Assiniboine Plain	1900-2100	Eh.Lh(Fh)	M-sd^{9}.F-cl^{1}
8.07	Barrhead Plain	2100-2300	Mu.Lu.OB	D-cl^{5}.D-lm^{4}.O^{1}
8.08	Pembina Plain	1900-2100	Lu.OB	D-lm^{8}.O^{2}
8.09	Westlock Plain	2000-2300	Mu.Mh.Lu	C-cl^{5}.D-cl^{3}.F-cl^{2}
8.10	Redwater Plain	1900-2200	Mh.Mu.Fv/Mu	M-sd^{6}.C-sd^{3}.C-sl^{1}
8.11	Thorhild Plain	2000-2300	Mu(F,L)	F-cl^{5}.F-sl^{3}.D-cl^{2}
8.12	White Earth Creek Plain	2000-2300	Mh.Mu.Fu	F-cl^{4}.D-cl^{3}.M-sd^{3}
8.13	Cache Lake Plain	2100-2300	Mh.Mu.Fh	F-cl^{5}.D-cl^{3}.M-sd^{2}
8.14	Whitefish Upland	2000-2300	Mhu	F-cl
8.15	Saddle Lake Plain	2000-2280	Mu.Mh	F-cl^{5}.D-cl^{5}
8.16	Yelling Creek Plain	1900-2100	Mu.Mr	F-cl^{6}.D-cl^{4}
8.17	Cold Lake Hills	1900-2600	Mk.Mu.Mh	F-lm^{8}.F-cl^{2}
8.18	Beaver River Plain	1700-2000	Mu.Fh	F-cl^{6}.F-sl^{3}.C-cl^{1}
8.19	Moostoos Upland	2000-2400	Muh.Mb/Ru.Fm.OB	O^{7}.P-sd^{2}.F-lm^{1}
8.20	Owl River Hills	1900-2100	Mk(OB)	F-cl.O
8.21	Missawawi Lake Plain	1800-2100	Mr.Mu.Mh	F-cl
8.22	La Biche Plain	1800-2000	Mu.Fu.Lu	O^{6}.F-cl^{4}
8.23	Lawrence Lake Plain	2000-2200	Mu.(F,L)OB	F-cl^{8}.O^{2}
8.24	Calling Lake Plain	2000-2300	OB.Mu.E	F-cl^{6}.O^{4}
8.25	House Plain	2000-2500	Mu.Mb/Ru.Fv.OB	O^{7}.P-sd^{3}
8.26	Garson Plain	1450-1800	Muh.F-Lv/M.OB	F-lm-O-(R)

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
8.27	Hangingstone Plain	1100-1800	Lli.OB	O
8.28	Horse River Plain	900-1600	Lli	O
8.29	Kamistikowik Upland	1900-2100	OB.Lm.Mu	O
8.30	Wabasca Lake Plain	1800-2000	OB.Lu.Mu(L)	O
8.31	Peerless Lake Upland	1900-2600	Mhu	F-cl
8.32	Utikuma Plain	1900-2300	Mu.Fv/Mu	O
8.33	Utikuma Ridge	2000-2500	Mb/Rm.Mu.Fv	$F\text{-}cl^{5}.O^{5}$
8.34	Lesser Slave Lake Plain	1900-2200	Lu.Au	$F\text{-}cl^{5}.U\text{-}lm^{5}$
8.35	Heart River Upland	2100-2500	Mm.OB	$F\text{-}cl^{8}.O^{2}$
8.36	Winigami Lake Plain	2000-2200	Lu.Mu	$F\text{-}cy^{5}.F\text{-}cl^{3}.F\text{-}lm^{2}$
8.37	New Fish Creek Plain	2000-2200	Lu.Mm.Fu.OB	$F\text{-}cy^{6}.D\text{-}cy^{3}.F\text{-}sl^{1}$
8.38	Falher Plain	1700-2000	Lu	$D\text{-}cy^{8}.F\text{-}cy^{2}$
8.39	Watino Plain	1700-2000	Lh.Eh	$F\text{-}lm^{7}.M\text{-}sd^{3}$
8.40	Rycroft Plain	1800-2100	Lh.Lu.(Mm)	D-cy
8.41	Kleskun Plain	1800-2200	Luh.Mm	$F\text{-}cy^{5}.D\text{-}cy^{4}.D\text{-}cl^{1}$
8.42	Smokey Plain	1800-2200	Fu.Lu.Eh	$F\text{-}sd^{5}.M\text{-}sd^{4}.D\text{-}lm^{1}$
8.43	Clairmount Plain	2200-2500	Lu	$C\text{-}cy^{5}.D\text{-}cy^{5}$
8.44	Silver Valley Plain	2100-2300	Lu	$F\text{-}cy^{6}.D\text{-}cy^{4}$
8.45	Worsley Plain	1900-2300	Lui	$F\text{-}cy^{6}.D\text{-}cy^{3}.F\text{-}cl^{1}$
8.46	Cardinal Lake Plain	2000-2300	Lu/Mu.Fu/Mu	$F\text{-}cl^{6}.D\text{-}cl^{3}.C\text{-}cy^{1}$
8.47	Peace River Benchland	1800-2000	Li/Lh	$D\text{-}cy^{7}.C\text{-}cy^{3}$
8.48	Whitemud Plain	2100-2500	Lu.Mu.Mm	$F\text{-}cl^{7}.D\text{-}cl^{3}$
8.49	Three Creeks Benchland	1500-1800	Li.Ld.	F-cy
8.50	Notekevin River Plain	1900-2600	Lu.Mu.Mm	$F\text{-}cl^{8}.F\text{-}cy^{2}$
8.51	Manning Plain	1500-1800	Lu.Fu(E)	$D\text{-}cy^{8}.F\text{-}sl^{2}$
8.52	Cadotte Plain	1900-2300	Lvb/Mu.(OB)	F-cl.O
8.53	Buffalo Head Hills	2000-2700	Muh(M).OB	F-cl
8.54	Bison Lake Plain	1400-1900	Lvb/Mu	F-cl
8.55	Buffalo River Plain	1200-1600	Lu.Fu.Eh	$F\text{-}cy^{4}.F\text{-}lm^{4}.M\text{-}sd^{2}$
8.56	Carcajou Plain	1000-1400	Lui.Fu	$F\text{-}cy^{7}.F\text{-}sd^{3}$
8.57	Lubicon Plain	1700-2000	Lu.OB.Mm	$F\text{-}cl^{5}.O^{5}$
8.58	Loon Lake Plain	1500-1800	Mu.Lvb/Mu.OB	O
8.59	Birch Mountains Escarpment	1200-2400	Ud.Mh.	$F\text{-}cl^{5}.R\text{-}cl^{5}$

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
8.60	Chipewyan River Plain	1500-1900	Fv/Mu.Mu.OB	O
8.61	Dover River Plain	900-1600	Lli	K-cy^{6}.U-cy^{4}
8.62	Steepbank River Plain	1000-1600	Mu.Lu.OB	O.(R)
8.63	High Hill River Plain	1500-1600	Muh.F.Lv/M	F-sd.O
8.64	Firebag Hills	1400-2200	Mhr.Fuh	F-lm
8.65	Muskeg Mountain	1300-2200	Mum.Fv/M-D.OB	O
8.66	Firebag Plain	1500-1700	Fu.OB	O
8.67	Embarras Plain	750-1000	Fh.Eh	P-sd
8.68	Fort Hills	900-1000	Fuh.O	P-sd
8.69	Peace-Athabasca Delta	700-770	Fd.Au	R-lm
8.70	Lake Claire Plain	700-1000	Ful.Eur.OF	O
8.71	Mikkwa Plain	800-1500	Lul.Lvb/Mu.OF	O^{5}.U-cl^{3}.F-lm^{2}
8.72	Jean D'Or Plain	800-1000	Lu.Au	C-lm^{6}.M-lm^{4}
8.73	High Level Plain North	900-1300	Lu.Mu.O	K-cy^{7}.M-lm^{3}
8.74	Boyer River Plain	850-1100	Lu.Eh	F-sd^{3}.M-sd^{5}
8.75	High Level Plain	1100-1400	Lu.	F-lm^{6}.F-cy^{3}.U-cy^{1}
8.76	Chinchaga North Plain	1200-1400	Liu.	F-cy^{5}.U-cy^{5}
8.77	Zama Lake Plain	1075-1200	Ll.OF	U-cy
8.78	Rainbow Lake Plain	1400-2200	Mu.Lv/Mu	O^{9}.F-cl^{1}
8.79	Keg River Plain	1400-2000	Lv/Mu.Mu	O^{8}.F-cl^{2}
8.80	Ile à la Crosse Lowland	1300-1500	Fu.Mu.	F-sl.O
8.81	Beaver River Plain	1500-1800	Mu.Mm-Fu-Lu	F-sd.F-sl
8.82	Horsehead Creek Upland	1800-2200	Mh.Mb/Rm	F-lm
8.83	Leoville Hills	1800-2200	Mh.Mm.Mu	F-lm^{9}.Rlm^{1}
8.84	Big River Plain	1600-1750	Mu.Lu.OB	F-sd.F-sl
8.85	Waskesiu Hills Upland	1700-2500	Mhm-Fd.OB	F-sd.O
8.86	Debden Plain	1600-1800	Mk.Mu.	D-lm^{6}.D-cl^{4}
8.87	Paddockwood Plain	1500-1700	Mu.Mk	D-cl^{5}.D-lm^{5}
8.88	Montreal Lake Plain	1500-1800	Mur.Fu	F-sd
8.89	Lac La Ronge Lowland	1200-1500	Fu.Mu	F-sd.F-cl.O
8.90	Whiteswan Upland	1650-1950	Mh.Mr-Fr	F-sd.F-sl
8.91	Wapawekka Hills Upland	1800-2500	Mr/Rd-Mum-Fu(OB)	F-sd.F-sl
8.92	Whitegull Creek Plain	1500-1700	Fum-Lum(Eh)	F-sd

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
8.93	Lower Torch River Plain	1300-1600	Fud.Lu-Mu.Eh	F-cy.F-sl.O
8.94	Smeaton-Weirdale Plain	1400-1600	Mu.Lu.Fu.	D-lm^{5}.D-cl^{5}
8.95	La Corne Plain	1400-1500	Fu.Fm-Lu.Eh	M-sd
8.96	Whitefox River Plain	1200-1500	Fu-Lu.Ld	D-lm^{5}.D-cl^{3}.M-sd^{2}
8.97	Carrot River Plain	1000-1150	Fu.Lu	D-cy^{6}.D-lm^{3}.O^{1}
8.98	Pasquia Hills Escarpment	1200-2000	Ud.Md.Mk.Ld(Mu)	F-cl^{8}.F-lm^{2}
8.99	Pasquia Hills Upland	1900-2100	OB/Mu	F-cl.O
8.100	Wildcat Hills	2000-2680	Mk	O.cl
8.101	Fir River Benchland	1200-1600	Mu.Ld	F-cl^{5}.D-cl^{5}
8.102	Swan River Upland	1500-2000	Mk.Md	F-lm^{7}.F-cl^{3}
8.103	Porcupine Mountain	2000-2500	Mh-Md.Lh.(Fh)(O)	F-lm^{5}.O^{5}
8.104	Duck Mountain	1800-2700	Mk-Mu(O)	F-cl
8.105	Riding Mountain	1800-2400	Mk	F-lm
9.00	Mid-boreal Foothills			
9.01	Elbow-Sheep Foothills	3400-4200	Mv/Rm-D.Mh	D-lm^{8}.C-cl^{2}
9.02	Cypress Hills Plateau	4000-4600	Eu.Ud/Ft	C-lm^{5}.C-cl^{5}
9.03	Burnstick Benchland	3500-5000	Mbv/Rm-D-Mh	I-cl
9.04	Little Red Deer River Plain	3200-4500	Mm.F.(O)	I-cl.F-cl.
9.05	Crimson Lake Plain	3200-3600	Lu.Fh.	F-lm^{5}.O^{5}
9.06	Buck Lake Upland	3000-3600	Mh.Mb/Rm	F-cl
9.07	O'Chiese Benchland	3200-3700	Mh.Mbv/Rm-Fv-D	I-lm^{9}.I-cl^{1}
9.08	Rose Creek Upland	2900-3400	Lu	F-cy
9.09	Brazeau Plain	3000-3400	Eh.Mm.Lu	M-sd^{6}.F-cl^{3}.F-cy^{1}
9.10	Elk River Benchland	3200-4200	Mh-Mbv/Rm-Fv-D	I-cl
9.11	Pembina River Plain	3200-3800	Mh.Mbv/Rm-OB	I-cl^{5}.F-cl^{2}.O^{3}
9.12	Fickle Lake Plain	3400-4000	Mm.O(Mbv/Rm)	I-cl^{8}.O^{2}
9.13	McLeod River Plain	2800-3800	Mm.Lu.O	F-cl^{7}.O^{3}
9.14	Lobstick River Plain	2600-3000	Lu-Muh.OB.(Eh)	F-cl^{7}.O^{2}.M-sd^{1}
9.15	Bigoray River Plain	2800-3000	Muh.O	O^{5}.F-cl^{5}
9.16	Cynthia Upland	3000-3500	Mh.Mb/Rm-D.Lu	F-cl^{7}.F-lm^{2}.O^{1}
9.17	Blue Ridge Benchland	2500-3600	Muh.Mv/Rm(Eh)	F-cl^{7}.M-sd^{2}.O^{1}
9.18	Windfall Plain	2200-3100	Fum.E	F-cl

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
9.19	Fox Creek Benchland	2600-3400	Mm/Rm-D.Mk	F-cl
9.20	Freeman Benchland	2100-3000	Mk.Mm-D	F-cl
9.21	Iosegun Plain	2400-3000	Lvb/Mu.O.	F-cy^{6}.U-cy^{4}
9.22	Snipe Lake Benchland	2100-2600	Mu.M/Rm.O	F-cl
9.23	Pelican Mountain	2000-3000	Mbv/Rm-D	F-cl
9.24	Simonette Benchland	2600-3200	Mvb/Rm-D	F-cl^{8}.F-sl^{2}
9.25	Sturgeon Lake Plain	2200-2800	Lu.Lvb/Mu	F-cy^{6}.F-cl^{4}
9.26	Puskwaskau Hills	2200-2900	Mb/Rm.Mh	F-cl
9.27	Wapiti Plain	2200-3000	Lu.Fu.Eur.	F-cy^{5}.M-sd^{3}.F-lm^{2}
9.28	Beaverlodge Plain	2300-2800	Lu.Fu	F-cl^{6}.D-cy^{3}.F-sl^{1}
9.29	Saddle Hills	2300-3200	Mbv/Rm.Mhu.Lm	F-cl
9.30	Blueberry Plain	2300-2500	Lvb/Mum	F-cy^{7}-D-cy^{3}
9.31	Clear Hills	2300-3500	Mvb/Rm.Mhu.Ft-D	F-cy^{7}.F-cl^{3}
9.32	Chinchaga Plain	1800-2400	Lvb/Mu.Mu.OB	O
9.33	Bassett Hill	1500-2500	Mbv/Rm.Mu	F-cl^{7}.O^{3}
10.00	Boreal Uplands			
10.01	James-Red Deer Foothills	3800-5500	Mv/R.R.C	I-lm
10.02	Nordegg-Ram Foothills	3800-5800	Mv/Rm.Rm.C	I-lm^{5}.P-lm^{3}.I-cl^{2}
10.03	Gregg-Brazeau Foothills	4000-5800	Mv/RmC.F	M-sl^{7}.F-sl^{3}
10.04	Berland Benchland	3600-5000	Mbv/Rmr-D	F-lm^{9}.O^{1}
10.05	Wildhay Plain	3000-3800	Muh.Mbv/Rm-D	F-lm^{6}.O^{4}
10.06	Little Smoky Plateau	3000-4200	Fv/Rm-D.Mbv/Rm-D	U-sl^{6}.I-lm^{4}
10.07	Kakwa Benchland	3200-5000	Mbv/Rmr-D	M-lm^{9}.O^{1}
10.08	Cutbank Benchland	2700-4000	Mbv/Rm-D	F-lm^{9}.O^{1}
10.09	Mayberne Benchland	2600-4300	Mbv/Rm-D.Fv/Rm-D	F-sl^{9}.F-sd^{1}
10.10	Swan Hills Upland	3500-4300	Mbv/Rm-D.Fv/Rm-D	F-cl
11.00	High Boreal-Plains			
11.01	Milligan Hills	2400-3300	Mvb/Rm.Mhu-D	F-cl
11.02	Upper Chinchaga Plain	2400-2600	OB.Lvb/Mu	O
11.03	Halverson Ridge Upland	2500-3500	Mh/Rm.O	F-cy
11.04	Upper Notikewin River Plain	2300-2800	Mu	F-cl

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
11.05	Wadlin Lake Upland	2000-3000	Mhu.Mbv/Rm-D	F-cl
11.06	Russell Lake Upland	2400-2800	Mhu.Mbv/Rm.O	F-cl
11.07	Birch Mountains Upland	1100-2800	Mhu.Mvb/Rm-D	$F\text{-}cl^{9}.P\text{-}sd^{1}$
11.08	McIvor Upland	1800-2700	OB.Mu.Mvb/RM-D	$O^{7}.F\text{-}cl^{3}$
11.09	Salt River Plain	600-800	F.Lu.OB	$U\text{-}cl^{5}.O^{5}$
11.10	Knight's Creek Plain	700-1000	Fui.Eur.OB	$O^{8}.P\text{-}sd^{2}$
11.11	Buffalo River Plain	850-1100	Lvb/Mu.OB	$O^{8}.F\text{-}cl$
11.12	Caribou Mountain Escarpment	1100-2000	Mui.Lv/M.D.OB.Ud	$O^{6}.K\text{-}cy^{4}$
11.13	Hay River Plain - North	900-1200	Liu.O	O
11.14	Hay River Plain - South	1100-1500	Liu.O	U-cy
11.15	Mount Watt	1500-2500	Mbv/Rm-R	F-cl.Rb
11.16	Zama Lake North Plain	1100-1600	Liu.OB	$U\text{-}cy^{7}.O^{3}$
12.00	High Boreal Sandplain			
12.01	Descharme River Plain	1500-1800	Mb/Fu.Fhu.OBf	$F\text{-}sl^{9}.O^{1}$
12.02	Richardson Upland	900-1600	Fh-Fur/Er.Mv.OBf	$F\text{-}sd^{8}.O^{2}$
12.03	Lake Athabasca Plain	700-1000	Er.Eh/Fu/Er.Mr.OBf	$F\text{-}sl^{8}.O^{2}$
12.04	William River Plain	1000-1600	Mb.Fu.OBf	F-sd.Ra
12.05	MacFarlane River Plain	1000-1700	Fu.Md.OBf.Fh-D	F-sd
12.06	Fond du Lac Plain	900-1300	Md.Fuv/R.Lu/Mv.OBf	$F\text{-}sl^{8}.O^{2}$
12.07	Pasfield Lake Plain	1200-1500	Fur.Md.Er.OBf(Md/Mh)	F-sd
12.08	Cree Lake Upland	1700-2000	Md.Muh.Mvh/Fr-D	F-sd
12.09	Waterbury Lake Upland	1400-1700	Md.Muh.Mr.Fu.Fr.(OBf)	F-sd
12.10	Wheeler River Upland	1700-2000	Fuh.Md.Mh.Fur	F-sd
12.11	Clearwater River Upland	1600-1900	Fhr.Er.Rr.Mv.Md.OBf	F-sd.Ra
12.12	Snare River Upland	1500-1900	Md.Fhr.Fu.OBf-D	F-sd
12.13	Pipestone River Plain	1100-1500	Md.Fu.Lt	F-sd
13.00	High Boreal-Precambrian			
13.01	Tazin River Plain	700-1600	Mv/Rmr.R.Ob	Ra.O
13.02	Wollaston Lake Plain	1300-1600	Mb/Rm.Mv/Rm.Mh-D	$F\text{-}sd^{9}.O^{1}$
13.03	Foster Lake Plain	1400-2000	R.Mv/Rr-Mu-Fh-Lv	$Ra^{8}.F\text{-}sd^{2}$
13.04	Mudjatik River Plain	1500-2000	R.Mv.O-Mv-Fhr	$F\text{-}sd^{9}.Ra^{1}$

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
13.05	Upper Churchill River Plain	1300-1600	Mv./R.Mb/Rr	F-sd
13.06	La Ronge - High Rock Lake Plain	900-1600	Lv.Mv./R.R	F-sd^{6}.F-sl^{4}
13.07	Kississing Lake Plain	900-1300	Lv./R.Rh.(OB)	F-sl^{7}.Ra^{3}
13.08	Reindeer Lake Plain	1100-1500	Lv./R.Rh	Ra^{9}.F-sd^{1}
13.09	Goldsand Lake Plain	1100-1200	OBv(R)	O
13.10	Unagendu Lake Plain	900-1200	Mh	M-sl^{7}.Ra^{3}
13.11	Southern Indian Lake Plain	900-1250	Lvb/Rh.Rh.OB	F-cl^{8}.Ra^{2}
13.12	Pemichigumau Lake Plain	900-1100	Rhs	Ra^{5}.F-cl^{5}
13.13	Three Point Lake Plain	800-1000	Lvb/Rh.OBf.OBv.(Fr)	F-cl^{7}.O^{3}
13.14	Waskaiowaka Lake Plain	700-900	Lv/R.OB	F-cl^{9}.M-lm^{1}
13.15	Knee Lake Plain	480-800	Mu-Mr.Lv/R.OBv.Fr	O^{8}.M-lm^{2}
13.16	Stull River Plain	500-650	OBpp.(Fr)	O^{7}.M-lm^{2}.M-cy^{1}
13.17	God's Lake Plain	500-700	Mb/Rh	M-lm^{9}.M-cy^{1}
13.18	Bigstone River Plain	500-700	OBv/R	O^{8}.M-lm^{2}
13.19	Upper Nelson River Plain	670-800	Lu-Ll.Lv/Rr	F-cl
13.20	Playgreen Lake Lowland	720-800	Lv/R.OBf.OFr	O
13.21	Gunisao Lake Plain	800-900	Rh.OB	Ra^{8}.F-cl^{2}
13.22	Upper Hayes River Plain	700-800	Rh.Rr	Ra
13.23	Cobham River Plain	900-1050	Lbu-Lh.Rr(OB)	F-cl^{8}.Ra^{2}
13.24	Island Lake Plain	800-900	Rr.Mv/R.Luv(OB-OF)	M-sl^{6}.F-cl^{4}
14.00	Low Subarctic Uplands			
14.01	Petitot River Plain	1000-1500	Liu.OB	O
14.02	Cameron Hills Upland	1500-2600	Mvb/Rm.Mu.(Lv).OB	O^{8}.F-cl^{2}
14.03	Caribou Mountains	2000-3000	OB/Mbv/Rm.Mu-D	O
14.04	Birch Mountains	1800-2700	OB/Mu.Mvb/Rm	O
15.00	Low Subarctic-Precambrian			
15.01	Selwyn Lake Upland	1400-1600	R.Mv/R.(Fr)	Ra
15.02	Upper Seal River Plain	800-1500	Mbd-Mbh/Rr.Mv/R.Fr.O	F-sd^{8}.O^{2}
15.03	Little Partridge River Upland	1200-1700	Mr-Mbh-D	Ra
15.04	Tadoule Lake Plain	900-1200	OBv/Rm	O^{7}.M-sd^{3}
15.05	Big Sand Lake Plain	950-1000	Mv/Rm.Lv/Rm	M-sl^{6}.F-cy^{4}

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
15.06	Partridge Breast Plain	780-1000	Mh/Rm	M-sl
15.07	Knife Lakes Plain	600-1000	OBv/R.(Mh/R)	M-sl^{5}.o^{5}
15.08	Limestone River Plain	400-900	OBv/R.OBp.Lv.Lh.Fr	o^{8}.F-sl^{2}
16.00	High Subarctic			
16.01	Caribou River Plain	500-1000	Mh.Rm.OBv	M-sd^{8}.o^{2}
16.02	Lower Seal River Plain	100-500	Mh.Mv/Rm.OBpp	M-sl^{5}.o^{5}
16.03	West Coast Flats	0-100	OFh/Sl	o^{9}.M-sd^{1}
17.00	Hudson's Bay Lowlands			
17.01	Owl River Lowlands	50-400	OBpp.OBp.(OBv)	o
17.02	Lower Nelson River Plain	100-300	OBp/Sl.(OBv).(Sr)	o
17.03	Wigwam Creek Plain	200-500	OBv/Sl.(Sr)	o
17.04	Kettle River Plain	500-600	OBv/Sl	o
18.00	Coastal Lowlands			
18.01	Rupert Creek Lowland	50-100	OFr.OFh/Sl	o^{7}.R-sd^{3}
18.02	Kaskattama River Lowland	50-200	OFh/Sl	o^{5}.R-sd^{5}
18.03	Cape Tatnam Beaches	0-50	Sr.OFh	R-sd^{7}.o^{3}
18.04	Port Nelson Beaches	0-50	Sr.OFh	R-sd
18.05	Cape Churchill Beaches	0-50	Sr.OFh	Rb-sd
19.00	Mid-Boreal Precambrian			
19.01	Poplar River Plain	720-850	OBf.Ru	o
19.02	Bloodvein River Plain	700-1050	Rh.OBf	Ra^{7}.F-cl^{3}
19.03	Mantario Lake Upland	960-1300	Rhr.Mv/Rm.OBf	Ra^{6}.M-sl^{4}
19.04	Manigotagan Lake Plain	900-1000	Lh/R.Rm.OBf	Ra^{7}.F-cl^{3}
19.05	Wanipigou River Plain	700-800	Ll.OBf	F-cl^{5}.o^{5}
20.00	Mid-Boreal Lowlands			
20.01	Mossy River Plain	1250-1450	Mlu-Ll.Fur(OB)	o^{9}.F-sl^{1}
20.02	Delta Beaches	850-1000	Fu-Mu(OB)	F-sl^{6}.o^{4}
20.03	Suggi Lake Lowland	850-1200	Mlu/R-Ll	o^{7}.Rb^{2}.F-sl^{1}

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
15.06	Partridge Breast Plain	780-1000	Mh/Rm	M-sl
15.07	Knife Lakes Plain	600-1000	OBv/R.(Mh/R)	M-sl^{5}.O^{5}
15.08	Limestone River Plain	400-900	OBv/R.OBp.Lv.Lh.Fr	O^{8}.F-sl^{2}
16.00	High Subarctic			
16.01	Caribou River Plain	500-1000	Mh.Rm.OBv	M-sd^{8}.O^{2}
16.02	Lower Seal River Plain	100-500	Mh.Mv/Rm.OBpp	M-sl^{5}.O^{5}
16.03	West Coast Flats	0-100	OFh/Sl	O^{9}.M-sd^{1}
17.00	Hudson's Bay Lowlands			
17.01	Owl River Lowlands	50-400	OBpp.OBp.(OBv)	O
17.02	Lower Nelson River Plain	100-300	OBp/Sl.(OBv).(Sr)	O
17.03	Wigwam Creek Plain	200-500	OBv/Sl.(Sr)	O
17.04	Kettle River Plain	500-600	OBv/Sl	O
18.00	Coastal Lowlands			
18.01	Rupert Creek Lowland	50-100	OFr.OFh/Sl	O^{7}.R-sd^{3}
18.02	Kaskattama River Lowland	50-200	OFh/Sl	O^{5}.R-sd^{5}
18.03	Cape Tatnam Beaches	0-50	Sr.OFh	R-sd^{7}.O^{3}
18.04	Port Nelson Beaches	0-50	Sr.OFh	R-sd
18.05	Cape Churchill Beaches	0-50	Sr.OFh	Rb-sd
19.00	Mid-Boreal Precambrian			
19.01	Poplar River Plain	720-850	OBf.Ru	O
19.02	Bloodvein River Plain	700-1050	Rh.OBf	Ra^{7}.F-cl^{3}
19.03	Mantario Lake Upland	960-1300	Rhr.Mv/Rm.OBf	Ra^{6}.M-sl^{4}
19.04	Manigotagan Lake Plain	900-1000	Lh/R.Rm.OBf	Ra^{7}.F-cl^{3}
19.05	Wanipigou River Plain	700-800	Ll.OBf	F-cl^{5}.O^{5}
20.00	Mid-Boreal Lowlands			
20.01	Mossy River Plain	1250-1450	Mlu-Ll.Fur(OB)	O^{9}.F-sl^{1}
20.02	Delta Beaches	850-1000	Fu-Mu(OB)	F-sl^{6}.O^{4}
20.03	Suggi Lake Lowland	850-1200	Mlu/R-Ll	O^{7}.Rb^{2}.F-sl^{1}

Appendix 2. Continued.

Map Symbol	Ecoregion/ Habitat Subregion	Elevation (Ft.)	Genetic - Surface Materials Form	Soil Development and Textural Class
20.04	Namew Lake Plain	830-900	Ll.Mu.R(OBf)	F-sd.Rb
20.05	Upper Saskatchewan Delta	850-950	Ll.Flf.(OFh)	F-cl.O
20.06	Overflowing River Lowland	800-1250	OBf.Ml.(Mu)(Mv)	O^{8}.D-cl.^{1}D-sl^{1}
20.07	The Pas Moraine	800-1050	Mu(Lr).OBf	M-lm^{6}.O^{4}
20.08	Summerberry Lowland	830-860	Fl.OFh	O
20.09	Moose Lake Plain	770-1000	Mh.Mv/R.Rl.OBf-OF	M-lm
20.10	Hargrave Lowland	670-950	Ll.Mu.Fr.OBf(OF)	O
20.11	Grand Rapids Lowland	680-850	Ll.(Mu).OFh	O
20.12	Winnipegosis Plain	780-1050	Ml-Mu.OFh	M-lm^{7}.O^{3}
20.13	Swan Lake Plain	850-1250	Lv.OBf	M-lm^{9}.O^{1}
20.14	Duck Mountain Escarpment	1250-2000	Md	F-lm
20.15	Waterhen Lake Plain	720-900	Mu.Mlr.Mv/R.OBf	M-lm^{5}.D-lm^{5}
20.16	Lake St. Martin Lowland	800-900	Mr	M-lm
20.17	Sturgeon Bay Lowland	715-800	OBf.OBd.Mr(OFh)	O^{9}.D-lm^{1}
20.18	Mantagao Lake Plain	800-950	Mu.Mr.Mv/R(OBf)	D-lm^{7}.M-lm^{3}
20.19	Fisher River Plain	715-800	Lr.Mr.OBb.(Ll)	F-cy^{6}.M-lm^{4}
20.20	Grindstone Point Lowland	715-750	OBd.Mh.Ll.(Rr.)(Lr)	O^{7}.F-cy^{3}.M-lm^{1}
21.00	Low Boreal			
21.01	Bedford Hills	1050-1250	Fh-Fl.Mu(Eh)Lv.OBf.OFh	F-lm^{6}.F-sl^{2}.M-sl^{2}
21.02	Brokenhead River Plain	850-1100	Lv.OFh	D-lm^{4}.F-sl^{3}.O^{3}
21.03	Lac Du Bonnet Plain	720-950	Ll.OFh	F-cy^{3}.U-cy^{4}.D-lm^{3}
21.04	Whiteshell River Plain	900-1100	Rh.Lv/R.(OBb)	Ra^{7}.M-sl^{2}.O^{1}
21.05	Whitemouth Lake Lowland	1050-1150	OBf.OFh./Ll.Mu.Lv(Lr)	O
22.00	Tall-grass Prairie			
22.01	Red River Valley	770-920	Ll.Fl	C-cy^{7}.C-lm^{3}

Appendix 2. Concluded. Explanation of Map Legend Symbols.

Genetic Materials - Surface Form[1]

Materials

C - Colluvial
E - Eolian
F - Fluvial
L - Lacustrine
M - Morainal
R - Rock
S - Marine
U - Undifferentiated
A - Recent Alluvium
I - Icefield

O - Organic
OB - Bog
OBf - Flat bog
OBp - Plateau bog
OBpp - Polygonal peat plateau
OBv - Veneer bog
OF - Fen
OFr - Ribbed fen
OFh - Horizontal fen

Surface Form Modifier

f - fan
l - level
i - inclined
u - undulating
m - rolling
h - hummocky
r - ridged
s - steeply inclined
t - terraced
b - blanket
v - veneer
d - dissected
k - kettled
D - deeply dissected topography-(geological) if used without modifier

Symbols

. = Units following dots are significant component.

() = Units in parentheses are obvious but occupy small proportion of area.

- = Between components mean and/or, e.g., F-L.

/ = Refers to component overlying another.

Soil Development Class[2]

A - Brown chernozem
B - Dark brown chernozem
C - Black chernozem
F - Gray luvisol
G - Brown solonetz
H - Dark brown solonetz
I - Brunisolic gray luvisol
J - Black solonetz

K - Gray solonetz
M - Eutric brunisol
P - Dystric brunisol
R - Regosol
U - Gleysol
O - Organic (peat)
Ra - Acid rock
Rb - Basic rock

Textural Class[2]

sd - sand, loamy sand, gravelly sand
sl - sandy loam, fine sandy loam
lm - loam, v.f. sandy loam, silt loam
cl - clay loam, v.f. sandy clay loam, silty clay loam, silt
cy - clay, silty clay, heavy clay

Subscripts refer to proportions of classes in complex (1-9 or 10 to 90%).

1. Genetic Materials and surface form terms adopted from Pettapiece (1981), Mills (1983), Pedocan (1983) and Shields (1982).

2. Soil development and textural class terms adopted from Shields (1982).