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**FUNGI COLLECTED DURING  
FOREST DISEASE SURVEYS  
IN NORTHERN ALBERTA  
AND THE DISTRICT OF MACKENZIE,  
NORTHWEST TERRITORIES**

by  
**J. A. Baranyay**

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# FUNGI COLLECTED DURING FOREST DISEASE SURVEYS IN NORTHERN ALBERTA AND THE DISTRICT OF MACKENZIE, N.W.T.

by

J.A. Baranyay<sup>1</sup>

Forest disease surveys in Alberta, the Rocky Mountain National Parks and the Mackenzie District of the Northwest Territories were begun in 1952. For the first eight years very few specimens were collected from the relatively inaccessible northern parts of Alberta or from the Mackenzie District other than at the time of a special survey of the Mackenzie River Valley in 1956. From 1960 to the present, regular collections have resulted from annual surveys of the northern regions, and in addition, three other special surveys were made in 1962 and 1966 to further clarify the occurrence of forest diseases northward to the tundra zone. The four main surveys, which have provided more than one third of the specimens and much of the detailed information on disease occurrence and life histories of the fungi of northern forests, were as follows:

COLLECTORS	DATE	Sampling locations (See Fig. 1 and Appendix 1.)
R.J. Bourchier & J.K. Robins	1956 June 14-July 8	13, 15, 20, 37-41.
J.A. Baranyay & A. Machuk	1962 July 4-21	1-11, 13-15, 18, 20-22.
Y. Hiratsuka & E.J. Gautreau	1966 July 12-17	12, 13, 16-17, 19.
J.A. Baranyay & E.J. Gautreau	1966 July 25-28	23-36.

All surveys were made with either aircraft, a cabin cruiser or automobiles for transport, with stops of from one to one-and-one-half hours at each sampling location. This report is a summary of forest disease conditions and a list of fungi found as the result of annual and special surveys in northern Alberta (north of latitude 57°) and the Northwest Territories to 1966.

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More than 1,000 specimens incorporating 360 species have been collected from 86 different hosts to 1966. The specimens were identified principally by R.J. Bourchier, L.P. Magasi, J.A. Baranyay, H.S. Whitney and Y. Hiratsuka, each of whom has served as regional mycologist at the Calgary Laboratory. Special thanks are due to Drs. Luella K. Weresub and Ruth Macrae, Plant Research Institute, Canada Department of Agriculture, Ottawa; Dr. J.L. Lowe, State University of New York, Syracuse; and Dr. John Eriksson, Botaniska Institution, Göteborg, Sweden for identifying many specimens of Telephoraceae and Polyporaceae. Thanks are also due to Dr. Eriksson for reviewing the manuscript. The specimens are deposited in the Mycological Herbarium of the Forest Research Laboratory, Calgary (CFB), with some duplicate specimens deposited in the Mycological Herbarium, Plant Research Institute, Canada Department of Agriculture, Ottawa (DAOM).

## DISEASE CONDITIONS

The most conspicuous damage observed in northern forests has been that caused by the spruce needle-cast fungus *Bifusella (Isthmiella) crepidiformis* Darker. This organism causes severe defoliation of the lower branches of *Picea glauca* (Moench) Voss and *P. mariana* (Mill.) BSP. from north of latitude 62° to the tundra zone. A distinct demarcation between diseased and healthy branches on individual trees indicates a possible correlation between snow depth and the occurrence of the disease. Other less frequently occurring spruce needle cast fungi were *Lophodermium macrosporum* (Hartig) Rehm (*Lirula macrospora* (Hartig) Darker) and *Lophodermium piceae* (Fckl.) Höhn. The most common needle cast fungus on *Pinus banksiana* Lamb. and *Abies balsamea* (L.) Mill. was *Lophodermium pinastri* (Schrad. ex Fr.) Chev. and *Hypoderella (Lirula) mirabilis* Darker respectively.

Spruce needle rusts, *Chrysomyxa ledi* de Bary, *C. Ledicola* Lagerh. and *C. empetri* (Pers.) Schroet. were present but were collected mainly on the alternate hosts. Aecial states of these rusts have not been collected north of a line joining Fort Good Hope, Kelly Lake, Blackwater Lake, Cartridge Plateau and Lac du Rocher (Fig. 1: sampling locations 37, 22, 21, 34 and 30). This was so despite there having been two trips made in the latter part of July (1962 and 1966) when it would be expected that the aecial stage would have been evident on spruce foliage. It seems that these rusts have survived without host alternation. The systemic rust, *C. woroninii* Tranz., was collected from all of its hosts up to the tundra line. This shoot rust has not been found south of latitude 57° in Alberta, and it would seem to be better adapted to northern regions than the aforementioned species.

The pine stem rust *Cronartium coleosporioides* Arth. (*Peridermium stalactiforme* Arth. & Kern) has not been found north of

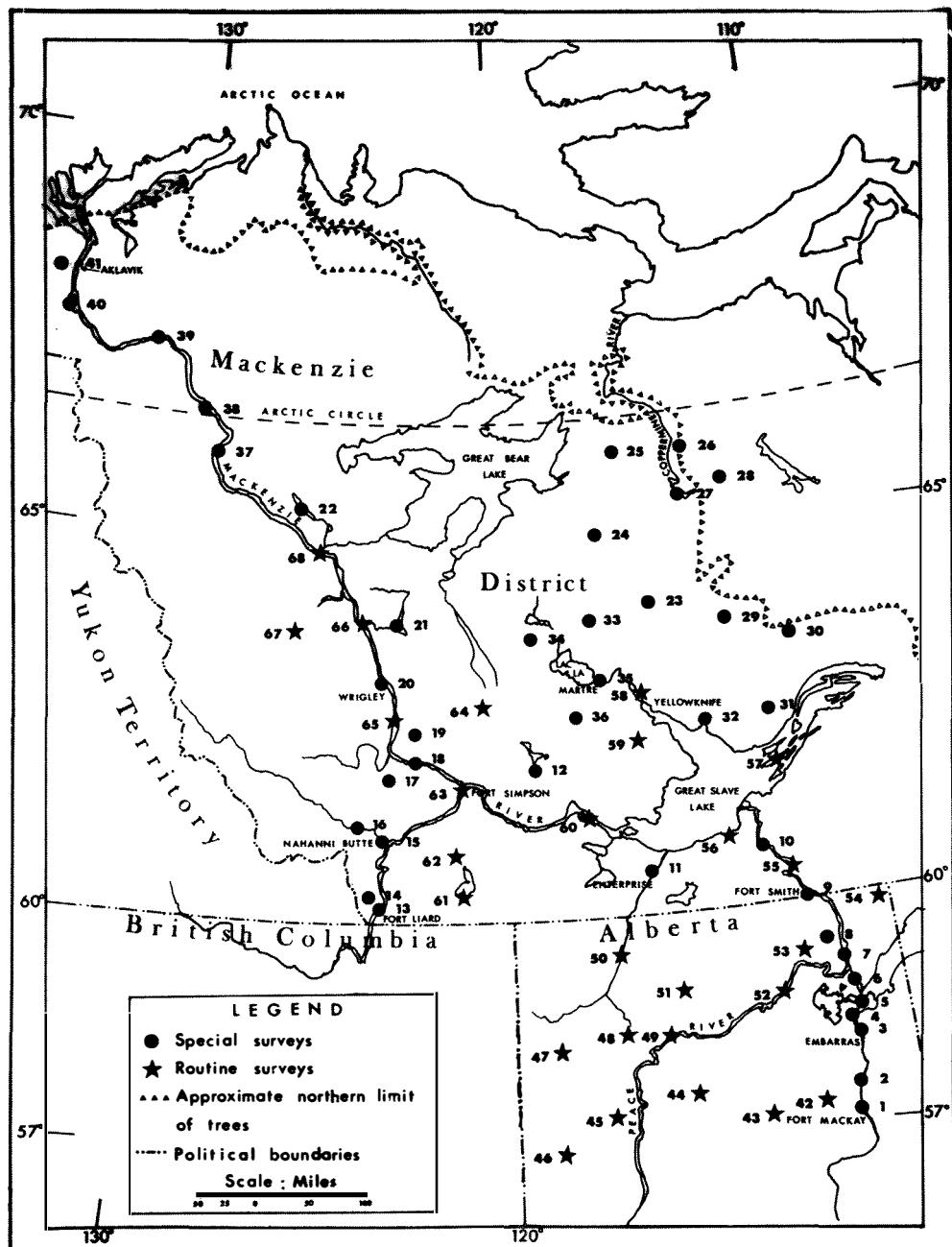


Figure 1. Sampling locations in Northern Alberta and the Mackenzie District of the Northwest Territories.

Fort Liard (Fig. 1:13), although both pine hosts (*Pinus contorta* Dougl. and *P. banksiana* Lamb.) and the alternate hosts *Castilleja* spp. are widely distributed north of this location. *P. harknessii* J.P. Moore, *C. comandrae* Pk. and *C. comptoniae* Arth. were found on *P. banksiana* to its northern limit, the latter two causing considerable damage to trees of regeneration size.

The most common and widely distributed decay fungi of conifers were *Polyporus abietinus* Dicks., *Lenzites saeparia* (Wulf. ex Fr.) Fr., *Fomes cajanderi* Karst., and *F. pinicola* (Sw. ex Fr.) Cke.

## FUNGI COLLECTED

Following is a list of fungi arranged alphabetically according to host. The name of a fungus is followed in the list by numbers in parentheses that designate sampling locations (Fig. 1, and Appendix 1). These in turn are followed by the corresponding CFB herbarium accession number. The geographical locations of collections resulting from the four special surveys (sampling locations 1-41) are shown more precisely than those for the remaining collections (sampling points 42-68), the latter represent the geographical centre of sometimes many collections within a 25-mile radius.

### ABIES BALSAMEA (L.) Mill.

- Fomes pini* (Thore ex Pers.) Lloyd  
(42); 6006.  
*Hypoderella (Lirula) mirabilis* Darker  
(1,2,3,44,48); 5577,5446,5486,4590,6332.  
*Hypoderella (Lirula) nervata* Darker  
(44); 6289.  
*Melampsora epitea* Thüm.  
(4,5); 5160,5158.  
*Melampsorella caryophyllacearum* Schroet.  
(45); 6669.  
*Peridermium holwayi* Syd.  
(44); 6514.  
*Pucciniastrum epilobii* Otth  
(2); 5368.  
*Sarcotrochila balsameae* (J.J. Davis) Korf  
(44); 6716.  
*Scoleconectria scolecospora* (Bref.) Seav.  
(2); 5376.

### ABIES LASIOCARPA (Hook.) Nutt.

- Hypoderella (Lirula) mirabilis* Darker  
(13); 5615.  
*Peridermium holwayi* Syd.  
(13); 5582.

ACER NEGUNDO L.

*Cenangium furfuraceum* (Roth ex Fr.) de Not.  
(9); 6718.

ALNUS SP.

*Corticium (Gloeocystidiellum) ochraceum* Fr.  
(15); 3007.  
*Corticium* sp.  
(68); 2898.  
*Cryptodiaporthe oxystoma* (Rehm) Urban  
(15); 4593.  
*Daedalea unicolor* Bull. ex Fr.  
(3,14); 6137,6116.  
*Exidia glandulosa* Bull. ex Fr. f. *populi* Neuh.  
(18); 5107.  
*Favolus alveolaris* (DC. ex Fr.) Quél.  
(17); 6709.  
*Hypodontia quercinum* (Fr.) John Erikss.  
(68); 2896.  
*Hypoxyylon fuscum* Pers. ex Fr.  
(8); 5404.  
*Hypoxyylon rubiginosum* Pers. ex Fr.  
(63); 4569.  
*Hypoxyylon* sp.  
(63,65); 2443,2446.  
*Laeticorticum lundellii* John Erikss.  
(22); 2911.  
*Melanconis alni* Tul. var. *marginalis* (Pk.) Wehm.  
(60); 7135.  
*Nectria cinnabarina* Tode ex Fr.  
(63); 7189.  
*Peniophora aurantiaca* (Bres.) Höhn & Litsch.  
(4); 5377.  
*Phyllactinia guttata* (Fr.) Lév.  
(35,65); 6704,6703.  
*Polyporus pubescens* Schum. ex Fr.  
(52); 5111.  
*Poria ferruginosa* (Schrad. ex Fr.) Karst.  
(68); 2937.  
*Schizophyllum commune* Fr.  
(61); 5993.  
*Troglia (Plicatuopsis) crispa* Fr.  
(44); 6879.  
*Tympanis alnea* (Pers.) Fr.  
(44); 5058.

ALNUS TENUIFOLIA Nutt.

*Phyllactinia guttata* (Fr.) Lév.  
(18); 6696.

AMELANCHIER ALNIFOLIA (Nutt.) Nutt.

*Apiosporina collinsii* (Schw.) Höhn.  
(53); 7242.

*Gymnosporangium clavipes* (Cke. & Pk.) Cke. & Pk.  
(5); 4302.

*Gymnosporangium nelsoni* Arth.  
(6); 5507.

*Gymnosporangium nidus-avis* Thaxt.  
(31); 5767.

ANDROMEDA POLIFOLIA L.

*Rhytisma andromedae* (Pers.) Fr.  
(19, 23, 24, 60); 7638, 7718, 7699, 7179.

ANEMONE DRUMMONDII S. Wats.

*Puccinia gigantispora* Bubák  
(60); 7160.

ANEMONE PARVIFLORA Michx.

*Puccinia gigantispora* Bubák  
(60); 7606.

ARCEUTHOBIVIUM AMERICANUM Nutt. ex Engelm.

*Wallrothiella arceuthobii* (Pk.) Sacc.  
(3); 5303.

ARCTOSTAPHYLOS RUBRA (Rehd. & Wils.) Fern.

*Puccinastrum sparsum* (Wint.) E. Fisch.  
(18, 25, 26, 34, 35, 50, 56, 58, 59, 60); 6690, 7698, 7697, 7195, 6688,  
6176, 7178, 5001, 6689, 7157.

ARCTOSTAPHYLOS SP.

*Chrysomyxa arctostaphyli* Diet.  
(9); 6749.

ARCTOSTAPHYLOS UVA-URSI (L.) Spreng.

*Chrysomyxa arctostaphyli* Diet.  
(11, 13, 23, 24, 25, 43, 45, 49, 50, 51, 63); 6211, 5913, 7670, 7695,  
7676, 5942, 6418, 5846, 5845, 5889, 6746.

ARTEMISIA HERRIOTII Rydb.

*Erysiphe cichoracearum* DC. ex Mérat  
(58); 6701.

ASTER CAMPESTRIS Nutt.

*Puccinia* sp.  
(60); 7607.

ASTER CILIOLATUS Lindl.

*Coleosporium asterum* (Diet.) Syd.  
(59); 7386.

ASTER CONSPICUUS Lindl.

*Coleosporium asterum* (Diet.) Syd.  
(45, 56, 60); 7388, 7235, 7159.

ASTER SP.

*Coleosporium asterum* (Diet.) Syd.  
(15, 49, 59); 7187, 5799, 6744.

BETULA GLANDULOSA Michx.

*Atopospora betulina* (Fr.) Petr.  
(60); 7171.

*Polyporus elegans* Bull. ex Fr.  
(60); 7659.

BETULA PAPYRIFERA Marsh.

*Corticium (Arthelia) epiphyllum* (Pers.) Rav.  
(68); 2962.

*Daedalea unicolor* Bull. ex Fr.  
(6, 10, 37, 62); 5369, 6149, 2940, 5962.

*Eutypella angulosa* (Nits.) Sacc.  
(42); 4941.

*Fomes fomentarius* (L. ex Fr.) Kickx  
(4, 5, 14, 42, 45, 53, 63, 66); 5371, 4352, 3929, 6009, 5963, 5905,  
2439, 4117.

*Fomes igniarius* (L. ex Fr.) Kickx  
(42, 44, 45, 66, 68); 4944, 5126, 5961, 4140, 2906.

*Polyporus betulinus* Bull. ex Fr.  
(45); 6122.

*Polyporus dichrous* Fr.  
(10); 6131.

*Polyporus elegans* Bull. ex Fr.  
(18); 4409.

*Polyporus zonatus* Fr.  
(45); 6509.

*Poria obliqua* (Pers. ex Fr.) Karst.  
(22); 2904.

*Stereum hirsutum* (Willd. ex Fr.) S.F. Gray  
(44); 5326.

*Trametes mollis* (Sommerf.) Fr.  
(45); 6106.

BETULA SP.

*Anthostoma* sp.  
(42); 5587.

- Atopospora betulina* (Fr.) Petr.  
 (18, 50, 65); 6728, 5605, 6725.
- Daedalea unicolor* Bull. ex Fr.  
 (2, 17, 32); 5342, 6713, 6004.
- Eutypella angulosa* (Nits.) Sacc.  
 (32); 5558.
- Exidia candida* Lloyd  
 (32); 5556.
- Fomes fomentarius* (L. ex Fr.) Kickx  
 (10, 14, 15); 5385, 5398, 4561.
- Fomes igniarius* (L. ex Fr.) Kickx  
 (18, 24); 5396, 7723.
- Melampsoridium betulinum* (Fr.) Kleb.  
 (58); 6697.
- Polyporus betulinus* Bull. ex Fr.  
 (44); 5190.
- Polyporus dichrous* Fr.  
 (18); 6141.
- Polyporus pargamenus* Fr.  
 (18); 5460.

#### CASTILLEJA RAUPII Pennell

- Cronartium coleosporioides* Arth.  
 (9, 45); 5502, 6306.

#### CHAMAEDAPHNE CALYCULATA (L.) Moench

- Chrysomyxa ledi* de Bary var. *cassandrae* (Pk. & Clint.) Savile  
 (23, 24, 31, 32, 36, 45, 48, 57, 58); 7730, 7692, 7680, 6915, 7192,  
 6415, 6475, 7153, 6916.

#### CHARRED WOOD

- Coniophora?arida* (Fr.) Karst.  
 (8); 6519.
- Fomes cajanderi* Karst.  
 (4); 5381.
- Fomes viticola* (Schw.) Lowe  
 (8); 6518.
- Tomentella fuliginea* (Burt.) Bourd. & Galz.  
 (39); 2907.

#### COMANDRA PALLIDA A. DC.

- Cronartium comandrae* Pk.  
 (2, 3, 49); 5097, 5496, 5659.

#### CONIFER

- Corticium sulphureum* (Pers. ex Fr.) Fr.  
 (8); 6048.
- Mytilidion* sp.  
 (45); 4325.

- Odontia* sp.  
 (45); 4357.  
*Peniophora septentrionalis* Laurila  
 (45); 4320.  
*Polyporus abietinus* Dicks. ex Fr.  
 (14); 5390.  
*Polyporus anceps* Pk.  
 (8); 6501.

CORNUS CANADENSIS L.

- Glomerularia corni* Pk.  
 (44); 6799.  
*Puccinia porphyrogenita* Curt.  
 (18); 5511.

CRONARTIUM COMANDRAE Pk.

- Cladosporium* sp.  
 (59); 7447.  
*Tuberculina maxima* Rostr.  
 (59); 7551.

CRONARTIUM COMPTONIAE Arth.

- Tuberculina maxima* Rostr.  
 (17); 7736.

ELEAGNUS SP.

- Puccinia caricis-shepherdiae* J.J. Davis  
 (63); 5873.

EMPETRUM NIGRUM L.

- Chrysomyxa empetri* Schroet. ex Cumm.  
 (13, 23, 24, 25, 30, 31, 32, 50, 58, 60, 65); 7634, 7631, 7689, 7688,  
 7690, 7674, 7686, 6208, 6207, 6732, 6742, 6722.

EPILOBIUM ANGUSTIFOLIUM L.

- Puccinia gigantea* Karst.  
 (17); 6705.  
*Pucciniastrum epilobii* Otth  
 (8, 35); 5909, 7394.

EPILOBIUM GLANDULOSUM Lehm.

- Pucciniastrum epilobii* Otth  
 (45); 7398.

GALIUM BOREALE L.

- Puccinia rubefaciens* Johans.  
 (17, 45); 6700, 6671.

GALIUM SP.

*Puccinia rubefaciens* Johans.  
(1,53); 6685, 6731.

GALIUM TRIFLORUM Michx.

*Puccinia diffiformis* Kunze  
(34); 7185.  
*Puccinia rubefaciens* Johans.  
(12); 7173.

GEOCAULON LIVIDUM (Richards.) Fern.

*Cronartium comandrae* Pk.  
(3,4,8,9,13,17,18,21,22,29,32,33,35,50,56,58,59,60,62,63,  
65); 4844, 5493, 5497, 5499, 7626, 6747, 5494, 5495, 5498, 7190,  
6209, 7184, 6771, 5802, 6205, 6772, 6212, 6743, 7146, 6734, 6730.  
*Puccinia comandrae* Pk.  
(7,18,23,24,32,35,65); 5509, 65-856, 66-867, 7721, 6317, 6736,  
6737.

HEDYSARUM ALPINUM L.

*Uromyces hedyari-obscuri* (DC.) Lév.  
(10,26,34); 5950, 7693, 7147.

IMPATIENS NOLI-TANGERE L.

*Puccinia argentata* (Schultz) Wint.  
(45); 7652.

JUNIPERUS COMMUNIS L.

*Chloroscypha sabinae* (Fckl.) Dennis  
(60); 6712.  
*Gymnosporangium cornutum* Arth. ex Kern  
(13); 7624.  
*Gymnosporangium tremelloides* Hartig  
(13); 7683.  
*Lophodermium juniperinum* (Fr.) de Not. (*Lophodermium juniperi*  
(Grev.) Darker)  
(13,17,23,24,25,26,35,57,58,60); 7609, 65-969, 7710, 7716,  
7729, 7724, 6714, 7152, 6878, 65-363.

JUNIPERUS HORIZONTALIS Moench

*Lophodermium juniperinum* (Fr.) de Not. (*Lophodermium juniperi*  
(Grev.) Darker)  
(58,60); 6800, 65-515.

JUNIPERUS SCOPULORUM Sarg.

*Gymnosporangium nelsoni* Arth.  
(56); 6917.

LARIX LARICINA (Du Roi) K. Koch

- Armillaria mellea* (Vahl ex Fr.) Kummer  
(50); 5978.  
*Lophodermium laricinum* Duby  
(60); 7443.  
*Melampsora medusae* Thüm.  
(32); 6321.  
*Melampsora paradoxa* Diet. & Holw.  
(11, 17, 19, 21, 22, 67); 5356, 5583, 6351, 5768, 5766.  
*Melampsora* sp.  
(9); 5471.

LARIX SP.

- Melampsora medusae* Thüm.  
(11); 5028.

LEDUM GROENLANDICUM Oeder

- Chrysomyxa ledi* de Bary  
(42); 5875.  
*Chrysomyxa ledicola* Lagerh.  
(3, 8, 9, 11, 13, 17, 19, 22, 23, 24, 25, 26, 30, 31, 32, 34, 36, 37, 43, 44,  
45, 50, 51, 54, 57, 62, 64, 65); 5106, 6717, 6745, 5504, 7625, 5907,  
5736, 5480, 5474, 7702, 7694, 7726, 7691, 7667, 7696, 7186, 7144,  
5764, 5943, 4581, 4977, 6416, 5103, 5104, 7154, 5918, 6378, 6698.  
*Chrysomyxa woroninii* Tranz.  
(19, 23, 24, 27, 30, 33, 34); 7639, 7669, 7679, 7700, 7672, 7193, 7194.  
*Exobasidium* sp.  
(19); 7637.  
*Lophodermium sphaeroides* (Alb. & Schw.) Rehm  
(60); 7457.

LEDUM PALUSTRIS L. var. DECUMBENS Ait.

- Chrysomyxa ledicola* Lagerh.  
(63); 6750.  
*Chrysomyxa woroninii* Tranz.  
(23); 7641.

LINNAEA BOREALIS L. var. AMERICANA (Forbes) Rehd.

- Venturia dickieei* (Berk. & Br.) de Not.  
(13, 53); 7618, 7225.

LINUM SP.

- Melampsora lini* (Ehrenb.) Lév.  
(17, 65); 6752, 6751.

MITELLA NUDA L.

- Puccinia heucherae* (Schw.) Diet.  
(56); 7177.

MONESES UNIFLORA (L.) Gray

*Pucciniastrum pyrolae* Diet. ex Arth.  
(58); 7459.

MYRICA GALE L.

*Cronartium comptoniae* Arth.  
(17, 29, 36, 58, 60, 62); 7643, 7191, 7148, 7259, 7158, 7145.

PERIDERMIUM HARKNESSII J.P. Moore

*Cladosporium* sp.  
(47); 7355.

PICEA GLAUCA (Moench) Voss

*Aleurodiscus amorphus* (Pers. ex Fr.) Schroet.  
(48); 6329.

*Armillaria mellea* (Vahl ex Fr.) Kummer  
(6, 56); 6710, 6190.

*Bifusella (Isthmiella) crepidiformis* Darker  
(3, 25, 26, 27, 30, 67); 7093, 7728, 7720, 7722, 7727, 5596.

*Chrysomyxa arctostaphyli* Diet.  
(9, 11, 13, 33, 37, 49, 67, 68); 319, 580, 7611, 7149, 2960, 65-118,  
5724, 2437.

*Chrysomyxa empetri* Schroet. ex Cumm.  
(36, 56); 6331, 5916.

*Chrysomyxa ledi* de Bary  
(2, 4, 5, 8, 10, 15, 17, 20, 21, 22, 45, 49, 61, 62, 67); 5438, 5454,  
5439, 5473, 5447, 4549, 5784, 5567, 5437, 5339, 5757, 5593, 5754,  
6301, 5755.

*Chrysomyxa ledicola* Lagerh.  
(15, 20, 45, 49, 50, 51, 63); 5478, 5569, 1788, 5732, 6272, 5273,  
5734.

*Chrysomyxa pirolata* Wint.  
(9, 12, 51, 60); 4276, 5295, 5099, 5258.

*Chrysomyxa* sp.  
(30); 7675.

*Chrysomyxa weirii* Jacks.  
(13, 15); 7613, 4548.

*Chrysomyxa woroninii* Tranz.  
(25, 27, 30, 34, 42); 7668, 7685, 7678, 7183, 5568.

*Coniophora* sp.  
(13); 2998.

*Corticium bicolor* Pk.  
(15); 2986.

*Corticium (Athelia) epiphyllum* (Pers.) Rav.  
(13, 18, 20, 37, 40, 41); 3025, 2901, 2979, 2952, 2931, 2947.

*Corticium galzinii* Bourd.  
(21); 6076.

*Corticium (Hypochnicium) ? geogeneum* Bres.  
(20); 2977.

- Corticium (Gloeocystidiellum) ? ochraceum* Fr.  
     (37,61); 2971,2972.
- Corticium sulphureum* (Pers. ex Fr.) Fr.  
     (10); 6042.
- Corticium* sp.  
     (13); 2997.
- Dacrymyces deliquescens* Bull. ex Duby  
     (7); 5409.
- Dacrymyces palmatus* (Schw.) Bres.  
     (8); 5406.
- Fomes cajanderi* Karst.  
     (2,5,7,10,13,15,18,50,53,67); 5413,5434,5375,5414,3932,  
     5386,5399,6010,3567,5184.
- Fomes pini* (Thore ex Pers.) Lloyd  
     (13,15,17,21,42,44); 3012,5427,5967,5353,6008,5095.
- Fomes pinicola* (Sw. ex Fr.) Cke.  
     (5,13,15,17,40,41,42,53,63,66,67); 2094,3014,4560,5825,  
     2903,2934,4939,3566,2441,5965,5101.
- Fomes roseus* (Alb. & Schw. ex Fr.) Karst.  
     (13); 4408.
- Fomes viticola* (Schw.) Lowe  
     (18); 2989.
- Grandinia (Sistotrema) brinkmannii* (Bres.) Bourd. & Galz.  
     (40); 2912.
- Hericium laciniatum* Leers ex Bunker  
     (44); 5310.
- Hymenochaete tabacina* Sow. ex Lév.  
     (38); 2905.
- Laeticorticium lundellii* John Erikss.  
     (18,21,39); 2992,2958,2908.
- Lenzites saeparia* (Wulf. ex Fr.) Fr.  
     (5,7,8,10,15,20,21,25,39,41,53,63,67); 5419,5415,5384,  
     5422,5388,5360,7717,2936,2914,3569,3899,4402,5964.
- Lophium mytilinum* (Pers.) Fr.  
     (45); 1892.
- Lophodermium filiforme* Darker (*Lirula macrospora* (Hartig)  
     Darker)  
     (49,60); 5621,7139.
- Lophodermium macrosporum* (Hartig) Rehm (*Lirula macrospora*  
     (Hartig) Darker)  
     (14,18,23,48,49); 5318,5317,7640,7338,5588.
- Lophodermium piceae* (Fckl.) Höhn.  
     (7); 7246.
- Lycogala epidendrum* (L.) Fr.  
     (7,15); 5425,5428.
- Merulius bellus* Berk. & Curt.  
     (22); 2973.
- Merulius fugax* Fr.  
     (15,22,37); 3027,3019,2991.
- Merulius* sp.  
     (63); 2445.

- Odontia hydnoides* (Cke. & Massee) Höhn.  
     (13); 3026.
- Pellicularia chordulata* Rogers  
     (18); 3011.
- Pellicularia isabellina* (Fr.) Rogers  
     (13); 3024.
- Pellicularia subcoronata* (Höhn. & Litsch.) Rogers  
     (18,20,22); 2994,2980,2949.
- Peniophora byssoides* (Pers. ex Fr.) Bres.  
     (13); 3028.
- Peniophora cremea* (Bres.) Sacc. & Syd.  
     (18); 2975.
- Peniophora (Tubulicrinis) gracillima* (Ell. & Ev. ex Rogers & Jacks.) G.H. Gunn  
     (21); 6153.
- Peniophora pubera* (Fr.) Sacc.  
     (39); 2927.
- Peniophora septentrionalis* Laurila  
     (18,21,39,41); 4439,7760,2902,2935.
- Peniophora velutina* (Fr.) Cke.  
     (10,18); 6040,2915.
- Peniophora* sp.  
     (63); 2932.
- Polyporus abietinus* Dicks. ex Fr.  
     (4,7,8,10,13,14,15,21,22,41,44,53,60); 5359,5418,5343,  
     5432,3008,5430,5401,5453,2944,2942,6896,3564,2447.
- Polyporus anceps* Pk.  
     (19); 2953.
- Polyporus schweinitzii* Fr.  
     (67); 5178.
- Polyporus volvatus* Pk.  
     (48,63); 6884,4083.
- Poria crustulina* Bres.  
     (10,21); 5393,6112.
- Poria ferrugineo fusca* Karst.  
     (10,37); 6111,2939.
- Poria xantha* (Fr. ex Lind) Cke.  
     (22); 2956.
- Pucciniastrum* sp.  
     (13,20); 7612,7610.
- Retinocyclus abietis* (Crouan) Groves & Wells  
     (2,14,15,22,45,50,53); 5444,5352,4595,2442,577,1519,3570.
- Sebacina* ? *calcea* (Pers.) Bres.  
     (8,10); 6047,6043.
- Sebacina incrustans* (Fr.) Tul.  
     (20,37,39,63,68); 2983,2961,2954,2943,2910.
- Sebacina* sp.  
     (37); 2967.
- Stereum abietinum* (Pers. ex Fr.) Fr.  
     (18); 5412.
- Stereum sanguinolentum* (Alb. & Schw. ex Fr.) Fr.  
     (15,21); 5436,6050.

*Trametes heteromorpha* (Fr.) Bres.  
(13, 15, 21); 3022, 5420, 5397.

*Trametes serialis* Fr.  
(13, 21); 2988, 6118.

PICEA MARIANA (Mill.) BSP.

- Bifusella (Isthmiella) crepidiformis* Darker  
(12, 21, 23, 24, 45, 57, 59, 60, 61); 7629, 5599, 7715, 7714, 6349,  
5608, 7248, 7254, 5601.
- Chrysomyxa arctostaphyli* Diet.  
(20, 23, 24, 30, 31, 32, 36, 37, 44, 58, 60, 61, 62); 2968, 7673, 7704,  
7703, 7642, 5007, 7138, 5725, 4596, 4749, 4745, 65-967, 7137.
- Chrysomyxa ledi* de Bary  
(21, 37); 5752, 5748.
- Chrysomyxa ledicola* Lagerh.  
(10, 15, 48, 50, 56); 5731, 5475, 5744, 5627, 5746.
- Chrysomyxa pirolata* Wint.  
(11, 50, 60); 5296, 5263, 5299.
- Chrysomyxa woroninii* Tranz.  
(12, 19, 23, 24, 61); 6364, 6460, 7701, 7687, 6467.
- Fomes pini* (Thore ex Pers.) Lloyd  
(19, 22); 6283, 2959.
- Fomes pinicola* (Sw. ex Fr.) Cke.  
(21, 22); 4115, 2965.
- Lenzites saepiaria* (Wulf. ex Fr.) Fr.  
(58); 7458.
- Lophodermium filiforme* Darker (*Lirula macrospora* (Hartig)  
Darker)  
(12, 61); 6327, 5620.
- Lophodermium piceae* (Fckl.) Höhn.  
(36); 7169.
- Polyporus abietinus* Dicks. ex Fr.  
(19, 22); 6195, 2966.
- Retinocyclus abietis* (Crouan) Groves & Wells  
(19); 6005.
- Stereum sanguinolentum* (Alb. & Schw. ex Fr.) Fr.  
(22); 2946.

PICEA SP.

- Chrysomyxa ledicola* Lagerh.  
(47); 1727.
- Fomes pinicola* (Sw. ex Fr.) Cke.  
(65); 4142.

PINUS BANKSIANA Lamb.

- Armillaria mellea* (Vahl ex Fr.) Kummer  
(55); 5996.
- Biatorella resiniae* (Fr.) Mudd  
(4); 5440.

- Coleosporium asterum* (Diet.) Syd.  
 (1,2,9,50); 5470,5448,6435,6859.  
*Corticium (Athelia) epiphyllum* (Pers.) Rav.  
 (11,20); 4094,4437.  
*Corticium sulphureum* (Pers. ex Fr.) Fr.  
 (8); 6520.  
*Corticium (Athelia) ? tessulatum* Cke.  
 (6); 6065.  
*Cronartium comandrae* Pk.  
 (3,29,33,45,49,50,53,58,59,60,63); 4841,7156,7155,7329,  
 1787,4327,65-117,4490,4492,6159,65-352.  
*Cronartium comptoniae* Arth.  
 (8,9,11,29,31,59,60); 5426,7151,6707,7085,7711,7585,7136.  
*Cronartium* sp.  
 (65); 2899.  
*Dacrymyces deliquescens* Bull. ex Duby  
 (18); 5408.  
*Elytroderma deformans* (Weir) Darker  
 (53); 5602.  
*Fomes cajanderi* Karst.  
 (1,8,60); 5380,5424,7446.  
*Fomes pini* (Thore ex Pers.) Lloyd  
 (4,20,56,60,65); 5485,4382,6221,5816,4398.  
*Fomes pinicola* (Sw. ex Fr.) Cke.  
 (60,65); 4144,4406.  
*Hypoderella (Davisomycella) montana* Darker  
 (9); 6428.  
*Lachnellula hahniana* Seav.  
 (3,60); 5340,4087.  
*Lenzites saepiaria* (Wulf. ex Fr.) Fr.  
 (1,8); 5378,5417.  
*Lophodermium pinastri* (Schrad. ex Fr.) Chev.  
 (6,54,55,60,61); 5395,5112,5612,7251,5636.  
*Mytilidion* sp.  
 (60); 4082.  
*Odontia ? romellii* Lund.  
 (3); 6062.  
*Pellicularia vaga* (Berk. & Curt.) Rogers  
 (2,8); 6064,6045.  
*Peniophora pseudo-pini* Werresub & Gibson  
 (2,20); 5449,4377.  
*Peniophora (Tubulicrinis) subulata* B. & G.  
 (8); 6041.  
*Peniophora velutina* (Fr.) Cke.  
 (3); 6534.  
*Peniophora violaceo-livida* (Sommerf.) Massee  
 (4); 5373.  
*Peridermium harknessii* J.P. Moore  
 (2,3,8,11,44,45,49,50,53,56,59,60,61); 7227,5105,5362,  
 4517,7349,7252,6658,579,4289,5852,6711,7241,4054,5811.

- Polyporus abietinus* Dicks. ex Fr.  
 (4,8,11,60,65); 5365,5389,4078,4074,4389.
- Polyporus anceps* Pk.  
 (61); 6125.
- Polyporus fragilis* Fr.  
 (3); 6150.
- Poria subacida* (Pk.) Sacc.  
 (3); 6053.
- Poria taxicola* (Pers.) Cke.  
 (53); 3571.
- Retinocyclus abietis* (Crouan) Groves & Wells  
 (4); 5488.
- Stereum sanguinolentum* (Alb. & Schw. ex Fr.) Fr.  
 (6); 5374.
- Trametes protracta* (Wulf. ex Fr.) Fr.  
 (8); 5423.
- Trichia botrytis* (Gmel.) Pers.  
 (11); 4089.
- Tulasnella violea* (Quél.) Bourd. & Galz.  
 (4); 5379.
- Zythia resinae* (Ehrenb.) Karst.  
 (4); 5489.

PINUS CONTORTA Dougl.

- Coleosporium asterum* (Diet.) Syd.  
 (45); 6361.
- Corticium (Aleurodiscus) livido-caeruleum* Karst.  
 (45); 4317.
- Cronartium coleosporioides* Arth. (*Peridermium stalactiforme*  
 Arth. & Kern.)  
 (13,45); 5881,4987.
- Cronartium comptoniae* Arth.  
 (45,46,50,62); 7509,6660,6194,7128.
- Hypodermella (Lophodermella) concolor* (Dearn.) Darker  
 (13,45); 7628,6855.
- Peniophora pseudo-pini* Weresub & Gibson  
 (45); 4075.
- Peridermium harknessii* J.P. Moore  
 (13,15,43,45,49,50); 5818,7164,5867,3673,5858,5864.
- Stereum sanguinolentum* (Alb. & Schw. ex Fr.) Fr.  
 (45); 4057.
- Trametes ? sepium* Berk.  
 (45); 4322.

PINUS HYBRID (P. CONTORTA X P. BANKSIANA)

- Cronartium comptoniae* Arth.  
 (17); 7630.
- Peridermium harknessii* J.P. Moore  
 (17); 7632.

POPULUS BALSAMIFERA L.

- Calcarisporium* sp.  
(13); 3000.  
*Ciborinia whetzelii* (Seav.) Seav.  
(45); 6201.  
*Cryptochaete (Peniophora) rufa* (Fr.) Karst.  
(60); 6003.  
*Eichleriella spinulosa* (Berk. & Curt.) Burt  
(61); 4450.  
*Fomes fomentarius* (L. ex Fr.) Kickx  
(44, 52); 4964, 3563.  
*Ganoderma appianatum* (Pers. ex Wallr.) Pat.  
(7, 15, 53, 63, 65); 5483, 6136, 3896, 2948, 4141.  
*Linospora tetraspora* G.E. Thompson  
(45, 48, 49); 5684, 6219, 6225.  
*Mycosphaerella populicola* G.E. Thompson  
(60); 7374.  
*Phlebia radiata* Fr.  
(13); 3015.  
*Polyporus adustus* Willd. ex Fr.  
(44, 52); 6894, 3898.  
*Polyporus pargamenus* Fr.  
(2); 5516.  
*Polyporus picipes* Fr.  
(15); 6502.  
*Poria laevigata* (Fr.) Karst.  
(52); 3568.  
*Radulum casearium* (Morg.) Lloyd  
(13); 3023.  
*Venturia populina* (Vuill.) Fabric. (= *Pollacia elegans* Serv.)  
(13, 60, 63); 7636, 7142, 5256.

POPULUS TREMULOIDES Michx.

- Aleurodiscus cerussatus* (Bres.) Höhn. & Litsch.  
(2); 6051.  
*Aporpium caryaee* (Schw.) Texeira & Rogers  
(45); 4080.  
*Ciborinia whetzelii* (Seav.) Seav.  
(3, 42, 45, 50); 7029, 6414, 6432, 7357.  
*Corticium (Gloeocystidiellum) leucoxanthum* Bres.  
(2); 6055.  
*Cryptochaete (Peniophora) rufa* (Fr.) Karst.  
(3, 10, 45, 48); 5367, 5969, 4079, 2276.  
*Daedalea unicolor* Bull. ex Fr.  
(6); 5338.  
*Didymium iridis* (Ditm.) Fr.  
(45); 4093.  
*Diplodia tumefaciens* (Shear) Zalasky  
(9); 6454.  
*Eicheriella spinulosa* (Berk. & Curt.) Burt  
(13, 45); 3009, 4323.

- Fomes fomentarius* (L. ex Fr.) Kickx  
 (45, 53); 4077, 5989.  
*Fomes igniarius* (L. ex Fr.) Kickx  
 (3, 6, 8, 11, 45); 5335, 5477, 5357, 581, 540.  
*Fomes pinicola* (Sw. ex Fr.) Cke.  
 (44, 45, 53); 5125, 4105, 6144.  
*Grandinia (Sistotrema) brinkmannii* (Bres.) Bourd. & Galz.  
 (45); 4097.  
*Hypoxyylon pruinatum* (Klotzsch) Cke.  
 (9, 45, 49, 50); 5442, 2232, 2383, 1512.  
*Lenzites saepiaria* (Wulf. ex Fr.) Fr.  
 (6); 5476.  
*Marssonina tremuloides* (Elli. & Ev.) Kleb.  
 (5, 45, 49, 60); 4312, 6670, 3832, 4384.  
*Melampsora medusae* Thüm.  
 (11, 45, 50, 59, 60); 6371, 6833, 6377, 6370, 6372.  
*Odontia eriozona* Bres.  
 (45); 4085.  
*Peniophora polygonia* (Pers. ex Fr.) Bourd. & Galz.  
 (2, 4, 6, 45); 5364, 5370, 5472, 4329.  
*Phaeophlebia strigosozonata* (Schw.) W.B. Cke.  
 (6); 6059.  
*Pleurotus ostreatus* (Jacq. ex Fr.) Kummer  
 (45); 5977.  
*Polyporus adustus* Willd. ex Fr.  
 (6, 44, 45); 5479, 5145, 4331.  
*Polyporus pargamenus* Fr.  
 (3, 6, 44, 45, 50, 65); 5341, 5482, 5186, 4056, 6121, 4397.  
*Polyporus varius* Fr.  
 (13); 7645.  
*Polyporus zonatus* Nees ex Fr.  
 (43, 45); 6100, 6127.  
*Poria ? aurantiaca* (Rosk.) Sacc.  
 (45); 4417.  
*Poria mollusca* (Pers. ex Fr.) Cke.  
 (15); 3021.  
*Poria ? reticulata* (Pers. ex Fr.) Cke.  
 (45); 4091.  
*Radulum casearium* (Morg.) Lloyd  
 (44, 45); 5288, 2194.  
*Schizophyllum commune* Fr.  
 (2, 45); 5366, 4055.  
*Sclerotium* sp.  
 (3, 45); 1564, 5884.  
*Trametes hispida* Bagl.  
 (45); 4106.  
*Trichia varia* Pers.  
 (45); 4088.  
*Uncinula salicis* (DC. ex Mérat) Wint.  
 (49); 6263.  
*Valsa sordida* Nits. (= *Cytospora chrysosperma* (Pers.) Fr.)  
 (45, 60); 6407, 6162.

*Venturia tremulae* Aderh. (=*Pollaccia radiosa* (Lib.) Bald. & Cif.)

(1, 3, 6, 8, 11, 13, 20, 45, 48, 49, 50, 60); 6610, 5506, 5492, 5098,  
5501, 7635, 7621, 7320, 7330, 5910, 7323, 5308.

POPULUS SP.

*Fomes pinicola* (Sw. ex Fr.) Cke.  
(8); 5387.

*Polyporus pargamenus* Fr.  
(8); 5383.

*Polyporus picipes* Fr.  
(16); 7646.

POTENTILLA FRUTICOSA L.

*Phragmidium andersonii* Shear  
(59); 6726.

POTENTILLA PALUSTRIS (L.) Scop.

*Marssonina potentillae* (Desm.) Magn.  
(11); 7339.

POTENTILLA PENSYLVANICA L. var. GLABRATA (Hook.) S. Wats.

*Phragmidium potentillae* (Pers.) Karst.  
(60); 7395.

POTENTILLA SP.

*Phragmidium potentillae* (Pers.) Karst.  
(49); 5798.

PRUNUS VIRGINIANA L.

*Dibotryon morbosum* (Schw.) Theiss. & Syd.  
(1); 5445.

PUCCINIASTRUM GOEPPERTIANUM (Kühn) Kleb.

*Tuberculina persicina* (Ditm.) Sacc.  
(13); 7614.

PYROLA ASARIFOLIA Michx.

*Chrysomyxa pyrolata* Wint.  
(46); 5661.

*Pucciniastrum pyrolae* Diet. ex Arth.  
(14); 5161.

PYROLA SECUNDA L.

*Chrysomyxa pyrolata* Wint.  
(36); 7161.

*Pucciniastrum pyrolae* Diet. ex Arth.  
(7,8,20,32,36,52,59,60); 6739,6738,7240,6741,7250,6724,  
7249,7162.

PYROLA VIRENS Schweigg.

*Chrysomyxa pirolata* Wint.  
(32,50,53,58,60); 6755,6387,7243,7245,7257.  
*Pucciniastrum pyrolae* Diet. ex Arth.  
(13,32,53,59); 7620,6754,7244,7247.

PYROLA SP.

*Chrysomyxa pirolata* Wint.  
(48,58); 6876,6756.  
*Pucciniastrum pyrolae* Diet. ex Arth.  
(45,55,58,63,65); 6260,6740,6757,6686,6691.

RIBES SP.

*Puccinia caricina* DC.  
(50); 6204.

ROSA ACICULARIS Lindl.

*Phragmidium fusiforme* Schroet.  
(16,20,58); 7616,7619,5003.

ROSA SP.

*Phragmidium* sp.  
(58,59); 6699,6702.

RUBUS PUBESCENS Raf.

*Phragmidium occidentale* Arth.  
(62); 7188.  
*Phragmidium rubi-idaei* (DC.) Karst.  
(20); 7615.  
*Pucciniastrum arcticum* Tranz.  
(13,15,16,53); 7682,7292,7617,7373.

RUBUS SP.

*Gymnoconia peckiana* (Howe) Trott.  
(51,52); 5686,7644.

SALIX SP.

*Conoplea geniculata* (Cda.) Hughes  
(45); 4328.  
*Corticium contiguum* Karst.  
(14); 6087.  
*Cytospora* sp.  
(58,60); 65-987,7255.

- Daedalea confragosa* Bolt. ex Fr.  
 (10,22); 6143,6507.
- Exidia recisa* (Dittm.) Fr.  
 (5); 5109.
- Fomes igniarius* (L. ex Fr.) Kickx  
 (13); 5968.
- Melampsora epitea* Thüm.  
 (1,10,11,21,24,25,32,34,35,37,45,50,57,59,60,63); 5100,  
 5860,7237,5484,7713,7712,6727,7180,6687,5826,4214,1513,  
 5877,7175,4383,6729.
- Polyporus pargamenus* Fr.  
 (14); 5487.
- Poria* sp.  
 (14); 5391.
- Rhytisma salicinum* (Pers.) Fr.  
 (18,22,34,50,55,57,58,60); 5500,5468,7181,5658,5863,5862,  
 65-989,5297.
- Uncinula salicis* (DC. ex Mérat) Wint.  
 (58); 6676.

#### SAMBUCUS SP.

- Nectria cinnabarina* Tode ex Fr.  
 (63); 7182.

#### SHEPHERDIA CANADENSIS (L.) Nutt.

- Puccinia caricis-shepherdiae* J.J. Davis  
 (9,59,61,63,66); 5859,6305,5879,5886,6748.

#### SOLIDAGO DECUMBENS Greene

- Coleosporium asterum* (Diet.) Syd.  
 (9,36,53); 7393,7396,7387.

#### SOLIDAGO SP.

- Coleosporium asterum* (Diet.) Syd.  
 (45); 5771.

#### VACCINIUM SP.

- Pucciniastrum goeppertianum* (Kühn) Kleb.  
 (45); 6826.

#### VACCINIUM VITIS-IDAEA L. var. MINUS Lodd

- Pucciniastrum goeppertianum* (Kühn) Kleb.  
 (13,45); 7623,6683.
- Pucciniastrum vaccinii* (Wint.) Jørst.  
 (9,12,57,58); 7260,7622,7239,65-985.

#### VIBURNUM EDULE (Michx.) Raf.

- Puccinia linkii* Klotzsch  
 (55,61); 5952,6684.

## APPENDIX I

### Sampling Locations

Map No.	Location	Latitude	Longitude
1	Fort Mackay, Alta.	57°11'N	111°37'W
2	Peterson's Cabin, Alta.	57°31'N	111°32'W
3	Embarras, Alta.	58°12'N	111°23'W
4	Embarras Portage, Alta.	58°27'N	111°28'W
5	Embarras River, Alta.	58°30'N	111°15'W
6	Slave River Mile 231, Alta.	58°55'N	111°10'W
7	Slave River Mile 251, Alta.	59°13'N	111°23'W
8	Pine Lake, Alta.	59°33'N	112°14'W
9	Fort Smith, N.W.T.	60°00'N	111°53'W
10	Slave River Mile 421, N.W.T.	60°47'N	113°10'W
11	Enterprise, N.W.T.	60°33'N	116°08'W
12	Horn Mountains, N.W.T.	62°07'N	119°14'W
13	Fort Liard, N.W.T.	60°15'N	123°28'W
14	Fisherman Lake, N.W.T.	60°20'N	123°45'W
15	Nahanni Butte, N.W.T.	61°05'N	123°23'W
16	Nahanni Hot Springs, N.W.T.	61°15'N	124°02'W
17	Little Doctor Lake, N.W.T.	61°53'N	123°16'W
18	Camsell Bend (30 miles S.E. of), N.W.T.	62°08'N	122°40'W
19	Ebbutt Hills, N.W.T.	62°20'N	122°13'W
20	Wrigley, N.W.T.	63°16'N	123°37'W
21	Blackwater Lake, N.W.T.	63°54'N	123°20'W
22	Kelly Lake, N.W.T.	65°17'N	126°00'W
23	Zinto Lake, N.W.T.	64°10'N	116°25'W
24	Ellington Lake, N.W.T.	64°58'N	117°21'W
25	Augustus Lake, N.W.T.	66°22'N	116°43'W
26	Vaillant Lake, N.W.T.	66°13'N	114°30'W
27	Redrock Lake, N.W.T.	65°28'N	114°10'W
28	Itchen Lake, N.W.T.	65°33'N	112°50'W
29	Icy Portage (10 miles south of), N.W.T.	63°20'N	114°05'W
30	Lac du Rocher, N.W.T.	63°25'N	111°30'W

Map No.	Location	Latitude	Longitude
31	Desperation Lake, N.W.T.	62°35'N	112°25'W
32	Yellowknife, N.W.T.	62°27'N	114°21'W
33	Faber Lake, N.W.T.	63°56'N	117°15'W
34	Cartridge Plateau, N.W.T.	63°53'N	119°34'W
35	Lac la Martre, N.W.T.	63°08'N	117°16'W
36	Lac Levis, N.W.T.	62°37'N	117°51'W
37	Fort Good Hope, N.W.T.	66°15'N	128°38'W
38	Jct., Gillis River & Mackenzie River, N.W.T.	66°40'N	129°40'W
39	Jct., Travallant River & Mackenzie River, N.W.T.	67°28'N	131°10'W
40	Wright's Mill, N.W.T.	67°40'N	134°35'W
41	Aklavik, N.W.T.	68°12'N	135°00'W
42	Gardiner Lake, Alta.	57°32'N	112°30'W
43	Birch Mountains, Alta.	57°30'N	113°10'W
44	Wadlin Lake, Alta.	57°44'N	115°35'W
45	Battle River Tower Area, Alta.	57°28'N	117°40'W
46	Notikewin Tower Area, Alta.	56°52'N	118°39'W
47	Assumption, Alta.	58°40'N	118°36'W
48	High Level, Alta.	58°31'N	117°08'W
49	Fort Vermilion, Alta.	58°24'N	116°00'W
50	Watt Mountain Tower, Alta.	58°37'N	117°30'W
51	Margaret Lake, Alta.	58°56'N	115°25'W
52	Fifth Meridian, Alta.	58°40'N	114°00'W
53	Peace Point, Alta.	59°07'N	112°25'W
54	Andrew Lake, Alta.	59°55'N	110°05'W
55	Brûlé Pointe, N.W.T.	60°32'N	112°27'W
56	Pine Point, N.W.T.	61°01'N	114°15'W
57	Simpson Island, N.W.T.	61°59'N	111°57'W
58	Rae, N.W.T.	62°50'N	116°03'W
59	Mile 109.5 Yellowknife Hyw., N.W.T.	62°14'N	116°02'W
60	Fort Providence, N.W.T.	61°21'N	117°39'W
61	Trout Lake, N.W.T.	60°35'N	121°10'W
62	Cormack Lake, N.W.T.	60°56'N	121°37'W

Map No.	Location	Latitude	Longitude
63	Fort Simpson, N.W.T.	61°52'N	121°23'W
64	Bulmer Lake, N.W.T.	62°45'N	120°50'W
65	Jct., Root River & Mackenzie River, N.W.T.	62°26'N	123°18'W
66	Jct., Blackwater River & Mackenzie River, N.W.T.	63°57'N	124°10'W
67	Wrigley Lake, N.W.T.	63°51'N	126°10'W
68	Fort Norman, N.W.T.	64°54'N	125°34'W

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