

The Canadian Field-Naturalist

VOLUME 75

JULY-SEPTEMBER 1961

NUMBER 3

NEW PLANT RECORDS FOR SOUTHWESTERN DISTRICT OF MACKENZIE

JOHN W. THIERET

Chicago Natural History Museum, Chicago, Illinois

AMONG the plants collected in southwestern District of Mackenzie during the 1958 and 1959 Northern Great Plains Botanical Field Trips sponsored by Chicago Natural History Museum are specimens representing either unrecorded taxa from the area or significant extensions of known range. These records are summarized in this paper. The collection numbers cited are those of the author. Numbers 4000 to 4380 were collected in August 1958 with the assistance of Chester E. Hansen; 4500 to 6175 were collected during the months of June, July and August, 1959, with the assistance of Robert J. Reich. Collections were made along the section of the Mackenzie Highway in the Northwest Territories; along the Enterprise-Mackenzie River Highway (first 82 miles of the Yellowknife highway) and the road therefrom to Kakisa Lake; along the first 17 miles of the Mackenzie River-Fort Rae highway; along Kakisa River and at Kakisa Lake; at Hay River town; and in the vicinity of Fort Providence. All specimens are in the herbarium of Chicago Natural History Museum (F).

The all-too-scanty knowledge of the flora of southwestern Mackenzie is on record in relatively few publications. Raup (1947), in his *Botany of Southwestern Mackenzie*, brought together information available to that time. Since then, most additions to the flora have been made by Cody (1957, 1961). Helpful works that, at least in part, treat plant distribution in contiguous areas are those of Cody (1960), Porsild (1943), and Raup (1935, 1936).

In the catalogue below, the arrangement of the families is based on the Englerian system. Genera are placed in alphabetical order with the families, and species are arranged alphabetically within each genus. Specimens are cited by brief data to indicate locality and by collection number. Localities given by mile alone (e.g., mile 24) refer to the Enterprise-Mackenzie River highway.

POLYPODIACEAE

CYSTOPTERIS MONTANA (Lam.) Bernh.
Black spruce—white spruce forest above Kakisa River 1½ miles below Lady Evelyn Falls, 5350.

Second record with exact locality data for southwestern Mackenzie. Our collection extends the southwestern Mackenzie range of this species some 200 miles eastward from the Nahanni Mountain collection cited by Raup (1947). Not reported from Great Slave Lake.

GYMNOCARPIMUM DRYOPTERIS (L.) Newm.
(*Dryopteris disjuncta* [Ledeb.] Mort.; *D. linnaeana* C. Chr.; *Thelypteris dryopteris* [L.] Sl.) Limestone crevices on escarpment in white spruce forest, mile 15½, 5156.

Second record for southern Mackenzie, representing a range extension of some 350 miles east-southeast from the Brintnell Lake station cited by Raup (1947). Recorded from Lake Athabaska and Great Bear Lake but not Great Slave Lake (Raup, 1936).

Mailing date of this number: 15 August 1961

EQUISETACEAE

EQUISETUM VARIEGATUM Schleich. Beach of Kakisa Lake near outlet, 6096.

Not previously recorded in the area bounded by Great Slave Lake (eastern arm) and central Wood Buffalo Park on the east and the Mackenzie Mountains on the west (Raup, 1935, 1936, 1947).

LYCOPODIACEAE

LYCOPODIUM COMPLANATUM L. Jack pine—trembling aspen forest, mile 11½, 4835.

Not previously recorded in the area bounded by the eastern arm of Great Slave Lake and central Wood Buffalo Park on the east, and Fort Liard and Nahanni Mountain on the west (Raup, 1935, 1947).

SELAGINELLACEAE

SELAGINELLA SELAGINOIDES (L.) Link Black spruce forest along Kakisa Lake road 1½ miles south of junction with Enterprise—Mackenzie River highway, 4977; black spruce forest, mile 57½, 5217; shrub zone, marly lake, mile 64, 6053a.

First records for southern Mackenzie east of the mountains. The nearest station cited by Raup (1947) is at Nahanni Mountain, some 200 miles to the northwest of our localities. Known at Lake Athabaska (Raup, 1936) and Great Bear Lake (Porsild, 1943) but not at Great Slave Lake.

SPARGANIACEAE

SPARGANIUM ANGUSTIFOLIUM Michx. In water, roadside ditch, mile 10¼, 5578; mud and shallow water along Kakisa River, 2½ miles below highway bridge, 5710; along creek, mile 23½, 5775.

First record for southwestern Mackenzie. Known at Great Bear Lake (Porsild, 1943) and from the eastern arm of Great Slave Lake (Raup, 1936).

NAJADACEAE

POTAMOGETON GRAMINEUS L. var. *MAXIMUS* Morong Kakisa Lake at outlet, in water, 5634; rapids along Kakisa River 4 miles below highway bridge, 5702.

First record of this variety from southwestern Mackenzie. Reported by Raup (1947) from Wood Buffalo Park and from Great Bear Lake.

POTAMOGETON VAGINATUS Turcz. Kakisa Lake at outlet, in water, 4615, 5675.

First record for southwestern Mackenzie. Reported from Wood Buffalo Park and Great Bear Lake (Raup, 1947).

JUNCAGINACEAE

TRIGLOCHIN MARITIMA L. Rocky slope, island in Mackenzie River 1 mile west of Fort Providence, 4134; Beach of Kakisa Lake just west of outlet, 4611; marshy area, mile 59½, 5222; among sedges, marly lakes, miles 54, 5078, 63, 5294; in exposed marl, mile 66, 4260.

Our records are the second for southwestern Mackenzie and include the first from the Mackenzie River above Norman Wells (Cody, 1960; Raup, 1947). This species is known at Great Slave Lake only from the eastern arm (Raup, 1936).

GRAMINEAE

AGROPYRON TRACHYCAULUM (Link) Malte var. *NOVAE-ANGLIAE* (Scribn.) Fern. Disturbed soil, ferry landing (south) mile 82, 6011; grasslands, mile 17, Mackenzie River—Fort Rae Highway, 4136, 4174, 4181.

First record from the Mackenzie River above Norman (Raup, 1947). From southern Mackenzie east of the mountains, this variety has been recorded only at Fort Smith (Cody, 1957).

AGROSTIS SCABRA Willd. Grassland 4 miles northeast of Fort Providence, 4083.

First record along the Mackenzie River above Norman Wells (Cody, 1960). For Great Slave Lake this species has been reported only from the eastern arm (Raup, 1936).

FESTUCA SAXIMONTANA Rydb. Jack pine forest above Kakisa River 1½ miles below Lady Evelyn Falls, 5467; disturbed soil along road (east) to ford over Kakisa River, 4969, 5335; limestone outcrop, mile 22¾, 5174.

First records for southwestern Mackenzie. Known from Lake Athabaska, the eastern arm of Great Slave Lake, and from Great Bear Lake (Raup, 1936).

HELIOTRICHON HOOKERI (Scribn.) Henr. (*Avena hookeri* Scribn.) Limestone outcrops, miles 13½, 5573, 5574, 21½, 5615, and 22¾, 5161.

New to the flora of District of Mackenzie. Reported by Raup (1936) from a prairie at Peace Point in Wood Buffalo Park, Alberta, from which site our collections represent a range extension of some 200 miles to the northwest.

KOELERIA CRISTATA (L.) Pers. Limestone outcrops, miles 13½, 5570, 5571, 21½, 5608, 22¾, 5162, 24, 5126, 25, 4944, 26, 5534, and 28½, 4919.

New to the flora of District of Mackenzie. Reported by Raup (1936) from Wood Buffalo Park, Alberta, west of the upper Slave River, from which site our collections represent a range extension of some 200 miles to the northwest.

MUHLENBERGIA GLOMERATA (Willd.) Trin. var. *CINNOIDES* (Link) Herm. In peaty-marly soil, mile 66, 4259, 6047; in shrub zone around marly lake, mile 50, 5718; among sedges, marly lake, mile 44½, 6113.

New to the flora of District of Mackenzie. The nearest record that I have been able to find for this species is that of Moss (1953) from near Smith, Alberta, some 400 miles to the south of our localities.

MUHLENBERGIA RICHARDSONIS (Trin.) Rydb. (*M. squarrosa* (Trin.) Rydb.) Rocky slope, island in Mackenzie River 1 mile west of Fort Providence, 4125; in crevices of limestone bluff, Alexandra Falls on Hay River, 6155; grassland, mile 17, Mackenzie River — Fort Rae highway, 4191; in sedge-shrub community over marl, mile 20, 5763; at edge of marly lake, mile 50, 5397.

Our collections include the first record of this species from the Mackenzie River. Previous records in the District of Mackenzie are only two: Fort Smith (Cody, 1957) and Bear River (Porsild, 1943).

ORYZOPSIS ASPERIFOLIA Michx. Jack pine forest above Kakisa River at highway bridge, 4741; white spruce-jack pine-trembling aspen forest above Kakisa River at highway bridge, 4775; black spruce-jack pine-larch-trembling aspen forest along road to Kakisa Lake, ¾ mile from junction with Enterprise — Mackenzie River Highway, 4684.

New to the flora of District of Mackenzie. Our collections represent a range extension of some 300 miles northwest of what seems to have been the known northern limit of this species, the mouth of the Firebag River south of Wood Buffalo Park (Raup, 1936).

ORYZOPSIS PUNGENS (Torr.) Hitchc. Disturbed soil, miles 1, 4804, 11, 4824, 33, 4318, and 52, 5084; limestone outcrop, mile 12, 4855; jack pine forest above Kakisa River near highway bridge, 4742.

Our collections are the third record of this species from District of Mackenzie. It had previously been recorded from Fort Smith and Fort Simpson (Cody, 1957, 1961).

SCOLOCHLOA FESTUCACEA (Willd.) Link Grassland 4 miles northeast of Fort Providence, 4047, 4065.

Second record for District of Mackenzie. Reported by Cody (1957) from Big Island in Great Slave Lake.

TRisetum spicatum (L.) Richt. var. *MAIDENII* (Gand.) Fern. Limestone crevices, gorge of McNallie Creek, mile 23½, 5134, 5973.

In southwestern Mackenzie this variety had been known only from Brintnell Lake in the Mackenzie Mountains (Raup, 1947). It is apparently not yet known from Great Slave Lake.

CYPERACEAE

CAREX BEBBII Olney Disturbed soil, mile 6, 5949, and along road (east) to ford over Kakisa River, 5332; limestone outcrop, mile 12, 5585.

Previously recorded for southwestern Mackenzie only at Fort Simpson (Raup, 1947). Not yet reported for the Great Slave Lake region.

CAREX BUXBAUMII Wahl. Disturbed soil, miles 18, 5598, and 70½, 6036; sedge zone, marly lakes, miles 41½, 5421, 50, 5398, and 63, 5293; exposed marl, mile 66, 4258.

First records for southwestern Mackenzie. In District of Mackenzie reported only from Great Bear Lake (Porsild, 1943) and Indin Lake (Cody, 1957). The latter station is about 250 miles north of our localities.

CAREX CAPILLARIS L. Disturbed soil, mile 10, 4819.

Previously recorded, in the Great Slave Lake region, only at the eastern arm (Raup, 1936). Our collection is the first record of this species between the eastern arm and the mountains (Raup, 1947).

CAREX CONCINNA R. Br. Disturbed soil, mile 10, 4814.

Previously recorded, in the Great Slave Lake region, only at the eastern arm (Raup, 1936). Our collection is the first record of this species between the eastern arm and the mountains (Raup, 1947).

CAREX CRAWFORDII Fern. Disturbed soil along road (west) to ford over Kakisa River, 4287.

First record, with exact locality data, for District of Mackenzie.

CAREX INTERIOR Bailey Sedge and shrub zones, marly lake, mile 61, 5276.

New to the flora of District of Mackenzie.

CAREX LASIOCARPA Ehrh. var. *AMERICANA* Fern. Shallow pond and along creek, mile 44, 4303; on island in Kakisa River 4 miles below highway bridge, 5683; gravelly-marly

shore and shallow water of lake, mile 40½, 5430; sedge and shrub zones, marly lakes, miles 50, 5389, and 61, 5275.

New to the flora of District of Mackenzie. Reported by Cody (1957) from just south of the N.W.T. border in Alberta near Fort Smith.

CAREX LIMOSA L. Sedge and shrub zones, marly lakes, miles 41½, 5414, and 61, 5280.

Previously unreported for southwestern Mackenzie. In southern Mackenzie this species is known from the eastern arm of Great Slave Lake (Raup, 1936) and from Great Bear Lake (Porsild, 1943).

CAREX PRATICOLA Rydb. Grasslands, miles 13-14, 5033, and 17, 4202, Mackenzie River—Fort Rae highway.

Second record for District of Mackenzie with exact locality data. Reported by Raup (1947) from Fort Simpson.

CAREX SARTWELLII Dewey Disturbed soil, mile 18, 5600.

Apparently previously unrecorded for District of Mackenzie. Raup (1935) reported this species from Peace Point in Wood Buffalo Park, some 175 miles south of our locality.

ELEOCHARIS ACICULARIS (L.) R. & S. Beach of Kakisa Lake west of outlet, 5667.

Previously recorded, in southwestern Mackenzie, only at Fort Simpson (Raup, 1947). Not yet recorded for Great Slave Lake.

ELEOCHARIS PALUSTRIS (L.) R. & S. Shore of Kakisa Lake east of outlet, 5663; shore of Kakisa River 1½ miles below highway bridge, 5712.

Only two stations have previously been reported for this species in southwestern Mackenzie: Fort Simpson and Fort Liard (Raup, 1947). It is not recorded from Great Slave Lake.

ERIOPHORUM VAGINATUM L. ssp. *SPISSUM* (Fern.) Hult. Marsh, mile 43, 4307; marsh above south shore of Kakisa Lake, 4652, 4678; stream bed along road (east) to ford over Kakisa River, 4564; black spruce forest along Kakisa Lake road about 1½ miles from junction with Enterprise—Mackenzie River highway, 4978.

First records for southwestern Mackenzie. Known in Wood Buffalo Park and on the lower Mackenzie (Raup, 1947).

ERIOPHORUM VIRIDI-CARINATUM (Engelm.) Fern. Shallow water and sedge zone, marly lake, mile 50, 5385.

First record for southwestern Mackenzie. Recorded for Great Slave Lake only at the eastern arm (Raup, 1936).

SCIRPUS CESPITOSUS L. var. *CALLOSUS* Bigel. Sedge zone, marly lakes, miles 41½, 5415, 44½, 5120, and 63, 5298; black spruce—larch forest, open, along road to Kakisa Lake ¾ mile from junction with Enterprise—Mackenzie River highway, 4715; mile 59½, 5225.

First records for southwestern Mackenzie. On Great Slave Lake, known only from the eastern arm (Raup, 1936).

SCIRPUS VALIDUS Vahl. Beach of Kakisa Lake near outlet, 5650, 5670; exposed marl, mile 30, 5528, 6145; marly lake, mile 50, 5391; beach and shallow water, small lake, mile 61½, 5281.

Apparently the first records, with exact locality data, from the Great Slave Lake and upper Mackenzie River region above Fort Norman (Raup, 1947).

JUNCACEAE

JUNCUS ALBESCENS (Lange) Fern. Black spruce—white spruce forest along road (east) to ford over Kakisa River, 5320; disturbed soil, mile 44, 5755.

Previously unrecorded, in southeastern Mackenzie, east of the mountains. The only other Mackenzie basin record seems to be that of Raup (1936) from the eastern arm of Great Slave Lake.

JUNCUS NODOSUS L. Beach of Kakisa Lake just east of outlet, 5656; disturbed soil, west channel of Hay River, south of Hay River town, 6126.

Previously unrecorded with exact locality data, in southwestern Mackenzie, between Fort Smith and Fort Simpson (Raup, 1947).

JUNCUS STYGII L. var. *AMERICANUS* Buch. Among sedges, marly lake, mile 44½, 6114.

New to the flora of District of Mackenzie. Our collection represents a northwestward extension of some 300 miles from the previous northwesternmost record for this species, Lake Athabaska (Raup, 1936).

LILIACEAE

Tofieldia glutinosa (Michx.) Pers. Marshy area, mile 36, 4314; among sedges, marly lakes, miles 50, 5383, and 63, 5296.

First records, with exact locality data, from southwestern Mackenzie outside the mountains (Raup, 1947). Not yet known from Great Slave Lake although collected in Wood Buffalo Park in Alberta (Raup, 1936).

ORCHIDACEAE

CYPRIPEDIUM CALCEOLUS L. var. PUBESCENS (Salisb.) Fern. Black spruce-white spruce-larch forest along Kakisa River 1½ miles below Lady Evelyn Falls, 4601; black spruce-larch forest along Kakisa Lake road ¾ mile from junction with Enterprise — Mackenzie River highway, 4712.

First record, with exact locality data, for the region of the upper Mackenzie River, Great Slave Lake, and Lake Athabaska (Raup, 1947). The nearest station cited by Raup is at Nahanni Mountain, some 200 miles northwest of ours.

SALICACEAE

All our willow collections were identified by George W. Argus.

SALIX GRACILIS Anderss. (*S. petiolaris* Sm.) Grassland 4 miles northeast of Fort Providence, 4107, and mile 17, Mackenzie River — Fort Rae highway, 4172, 4172a.

Second record for District of Mackenzie, representing a range extension of some 200 miles northwest from the Fort Smith locality cited by Raup (1947).

SALIX LASIANDRA Benth. var. LANCIFOLIA (Anderss.) Bebb Beach of Kakisa Lake just west of outlet, 4612, 4613; gravel bar in Kakisa River just below ford, 5183.

First record of this variety for District of Mackenzie.

SALIX MACCALLIANA Rowlee Grasslands 4 miles northeast of Fort Providence, 4066, and along Mackenzie River — Fort Rae highway, miles 16, 5034, and 17, 4160; *Salix* zone, small pond, mile 42, 5409; disturbed soil, mile 54, 4720; marsh, mile 8, 4812, 4812a.

Second record for District of Mackenzie. Reported by Cody (1957) from Fort Smith. Our collections represent a range extension of some 200 miles to the northwest.

SALIX PEDICELLIS Pursh var. TENUESCENS Fern. Shrub zone, marly lake, mile 54, 5072.

First report of this variety from District of Mackenzie, although it is known in Wood Buffalo Park, Alberta (Argus, in a letter).

SALIX RETICULATA L. Forested slope above Kakisa River 1½ miles below Lady Evelyn Falls, 4606.

First record between the eastern arm of Great Slave Lake and the mountains (Raup, 1936, 1947).

BETULACEAE

BETULA OCCIDENTALIS Hook. (*B. microphylla* sensu Raup) Grassland, mile 16, Mackenzie River — Fort Rae highway, 5035.

Not previously recorded in the area between the eastern arm of Great Slave Lake and central Wood Buffalo Park on the east and Nahanni Mountain on the west (Raup, 1935, 1947).

POLYGONUM COCCINEUM Muhl. Shore of Hay River, mile 49, Mackenzie Highway, 4362, 6163.

New to the flora of District of Mackenzie. Our collections represent apparently a considerable northward extension of the known range of this species. *Polygonum coccineum* is not recorded for the Peace River and Liard River regions (Raup, 1934) or for the Athabaska — Great Slave region (Raup, 1936). Breitung (1957), in his catalogue of Saskatchewan plants, reports it only from the southern portion of that province.

CHENOPODIACEAE

CHENOPODIUM GLAUCUM L. var. SALINUM (Standl.) Boivin Gravel bars in Kakisa River 1½ miles below Lady Evelyn Falls, 5488, and just above highway bridge, 5745; on beach of Kakisa Lake near outlet, 5636; on shore of Kakisa River 3 miles below highway bridge, 5706.

The only previous record for District of Mackenzie is that of Cody (1960) from Norman Wells, some 425 miles to the northeast. The northernmost Alberta record is from McMurray (Raup, 1936), about 350 miles southwest of our localities.

CHENOPODIUM HYBRIDUM L. var. GIGANTOSPERMUM (Aellen) Rouleau Gravel of road bed, mile 60, 6069.

New to the flora of District of Mackenzie. Recorded by Cody (1957) from Fort Fitzgerald, Alberta, some 200 miles southeast of our area.

CARYOPHYLLACEAE

ARENARIA DAWSONENSIS Britt. Disturbed soil, miles 4, 5559, 10, 4815, 52, 5093, and 59½, 5227; drying marl, mile 30, 5512, 5520; gravel bar in Kakisa River 1½ miles below Lady Evelyn Falls, 5510.

Previously recorded for southwestern Mackenzie only at Brintnell Lake and Lone Mountain (Raup, 1947). Known from Wood Buffalo Park, the eastern arm of Great Slave Lake (Raup, 1936) and Great Bear Lake (Porsild, 1943).

ARENARIA RUBELLA (Wahl.) Sm. (*A. verna* L. var. *pubescens* [C. & S.] Fern.) Limestone outcrops, miles 12, 4843, 25, 4947, and 28½, 4916.

Previously recorded with exact locality data, from southwestern Mackenzie, only in the mountains (Raup, 1947). Known from the eastern arm of Great Slave Lake and from Lake Athabasca (Raup, 1936).

CERASTIUM ARVENSE L. Disturbed soil, mile 19, 4877; limestone outcrops, miles 12, 4857, and 28½, 4933.

Previously recorded in District of Mackenzie, only at Fort Smith (Cody, 1957), Great Bear Lake, and the Mackenzie River delta (Porsild, 1943). Known from Wood Buffalo Park (Raup, 1936).

CERASTIUM NUTANS Raf. Disturbed soil along road (east) to ford over Kakisa River, 4900.

Second record for District of Mackenzie. Previously recorded from near the junction of the Mackenzie and Trout rivers (Cody, 1961).

LYCHNIS GILLETII Boivin Limestone outcrops, miles 20, 4885, 22, 5772, and 28½, 4908 (tentative determinations by Gilbert Bocquet).

First record of this species for District of Mackenzie. No *Lychnis* is listed by either Porsild (1943) or Raup (1936, 1947) for southern Mackenzie, although these authors record several species of this genus from Great Bear Lake, Lake Athabaska, and Wood Buffalo Park.

RANUNCULACEAE

CALTHA NATANS Pall. Roadside pool, mile 10¼, 5577.

First record for southwestern Mackenzie. Cody (1957) reports it for the north and southeast shores of Great Slave Lake. Not known elsewhere in District of Mackenzie.

RANUNCULUS CIRCINATUS Sibth. var. *SUBRIGIDUS* (W. Drew) L. Benson Pool along Kakisa River 2½ miles below highway bridge, 5709.

First record from the Mackenzie River area above the delta. In southern Mackenzie the only other records of this plant are from Yellowknife and the Salt River (Cody, 1957).

RANUNCULUS FLAMMULA L. var. *OVALIS* (Bigel.) L. Benson Beach of Kakisa Lake east of outlet, 5635; disturbed area along stream on road (west) to ford over Kakisa

River, 5002; shore of Kakisa River ¾ mile below highway bridge, 5716; along stream, mile 46, 5114.

Apparently the first record of this variety for District of Mackenzie. Our plants have leaves as broad as 5.7 mm, thus distinguishing them from the narrower leaved var. *filiformis* (Benson, 1948).

RANUNCULUS GMELINII DC var. *LIMOSUS* (Nutt.) Hara In shallow water and on mud around pool, disturbed soil, ferry landing (south), mile 82, 6018. Young leaves and stems heavily pubescent; petals 5.2 mm long, 3.8 mm broad.

First record of this variety for District of Mackenzie. Reported from Wood Buffalo Park in Alberta by Benson (1948).

RANUNCULUS LAPPONICUS L. Shrub zone, marly lake, mile 50, 5396.

Not previously known in southwestern Mackenzie outside the mountains, from which Raup (1947) cites but one specimen. Known from Great Slave Lake only at the eastern arm (Raup, 1936).

CRUCIFERAE

ARABIS DRUMMONDII Gray Grassland, mile 13-14, Mackenzie River—Fort Rae highway, 5029.

Previously recorded, in the Mackenzie River lowlands, only at Fort Simpson (Cody, 1961). Not known elsewhere in southern Mackenzie except at Brintnell Lake.

BRASSICA CAMPESTRIS L. (*B. rapa* L.) Weedy area, Lady Evelyn Falls on Kakisa River, 6103.

Second record for District of Mackenzie. Reported by Cody (1957) from Yellowknife.

CARDAMINE PENSYLVANICA Muhl. Islands in Kakisa River 4 miles below highway bridge, 5455, 5686.

First record for the Mackenzie River lowlands. Previously recorded, for District of Mackenzie, only from near Fort Smith and Hay River (Cody, 1957).

DRABA LANCEOLATA Royle Limestone outcrops, miles 20, 4884, 26, 5533, and 28½, 4915.

Previously recorded, for southern Mackenzie, only in the mountains at Brintnell Lake (Raup, 1947) and from the eastern arm of Great Slave Lake (Raup, 1936).

ERYSIMUM INCONSPICUUM (Wats.) MacM. (*E. parviflorum* Nutt.) Slope above Kakisa River just below ford, 5206.

This is apparently the first record of this species, with definite locality data, from southwestern Mackenzie. From the Great Slave Lake area, known only from Yellowknife River (Raup, 1936).

LEPIDIUM RAMOSISSIMUM Nels. Gravel of road fill, mile 51, 5380.

New to the flora of District of Mackenzie.

DROSERACEAE

DROSERA ANGLICA Huds. Among sedges or in marl, at edge of marly lakes, miles 41½, 5410, 42, 6141, and 50, 5393.

Previously unrecorded for southern Mackenzie. This species has been collected at Lake Athabaska (Raup, 1936) and at Great Bear Lake (Porsild, 1943).

SAXIFRAGACEAE

RIBES HUDSONIANUM Rich. forma *glabrum* f. nov. *A. Ribes hudsonianum* foliis, bracteis, squamis gemmarum, et inflorescentiis glabris differt. District of Mackenzie. N.W.T., Canada: disturbed soil in trembling aspen—white spruce forest above Kakisa River 1½ miles below Lady Evelyn Falls, J. W. Thieret & R. J. Reich 4560 (type in herb. F).

RIBES TRISTE Pall. White spruce forest, mile 82, 6019.

Previously unrecorded with exact locality data along the Mackenzie River above Wrigley (Raup, 1947). Known from the eastern arm of Great Slave Lake and from Fort Smith (Raup, 1936).

ROSACEAE

GEUM TRIFLORUM Pursh Limestone outcrops, miles 20, 4880, 24, 5625, and 28½, 4913.

New to the flora of District of Mackenzie. Reported by Raup (1936) from Wood Buffalo Park. Our collections represent a range extension of 200 miles to the northwest.

POTENTILLA ARGUTA Pursh Disturbed soil over limestone, mile 25½, 5974; grassland 4 miles northeast of Fort Providence, 4113.

New to the flora of District of Mackenzie. Our collections represent a range extension of about 250 miles northwest from Wood Buffalo Park where this species is "common in dry prairies and rock crevices" (Raup, 1936).

PRUNUS PENSYLVANICA L. Limestone outcrops, miles 12, 4852, and 13, 5595; limestone escarpment, mile 25, 4940; slope above Kakisa River just below ford, 5199.

Previously recorded, for District of Mackenzie, only along the Liard River between Nahanni Butte and Fort Simpson (Raup, 1947). This species is known also at Wood Buffalo Park (Raup, 1936).

PRUNUS VIRGINIANA L. Disturbed soil, mile 25, 4950; limestone escarpment, mile 25, 4939; limestone outcrops, miles 19½, 5139, and 20, 4886.

New to the flora of District of Mackenzie. Previously unverified beyond the lower Athabaska River (Raup, 1947). Our collections thus represent a range extension of some 275 miles to the northwest.

LEGUMINOSAE

ASTRAGALUS DASYGLOTTIS Fisch. (*A. agrestis* Dougl.; *A. goniatus* Nutt.; *A. hypoglottis* sensu Raup). Grassland, Mackenzie River—Fort Rae highway, mile 13-14, 5030, and 17, 4169, 4201.

First record of this species for the Mackenzie lowlands above Norman Wells. In southern Mackenzie known only from Alexandra Falls (Cody, 1957) and the junction of the Nyarling and Little Buffalo rivers (Raup, 1947).

ASTRAGALUS TENELLUS Pursh Disturbed soil, west channel of Hay River, south of Hay River town, 6129.

First record of this species from Great Slave Lake. Previously known, in southwestern Mackenzie, only at Fort Simpson (Raup, 1947).

OXYTROPIS CAMPESTRIS (L.) DC. var. *VARIANS* (Rydb.) Barneby Crevices in limestone cliff, gorge of McNallie Creek, mile 23½, 5781, 5960.

First record of this variety for southern Mackenzie. Barneby (1952), in his distribution map of *O. campestris*, credits var. *varians* only to the northern third of District of Mackenzie. Specimens from Great Slave Lake and the Canol Road cited by Raup (1947) simply as *O. campestris* might possibly be referable to var. *varians*.

LINACEAE

LINUM LEWISII Pursh Disturbed soil, west channel of Hay River, south of Hay River town, 6128.

Apparently the first record, with exact locality data, from Great Slave Lake. Raup (1935, 1947) records this species from Fort Simpson and from Wood Buffalo Park.

CALLITRICHACEAE

CALLITRICHE HERMAPHRODITICA L. (*C. autumnalis* L.) Shallow water along Kakisa River just below Lady Evelyn Falls, 4017, and 1 mile below highway bridge, 5714; shore of Mackenzie River at ferry landing (south), mile 82, 4240; in stream, mile 54, Mackenzie highway, 4352; along McNallie Creek, mile 23½, 5780.

Previously unreported from southern Mackenzie. Known in the Mackenzie delta region, in Wood Buffalo Park, and at Great Bear Lake (Raup, 1947).

VIOLACEAE

VIOLA NEPHROPHYLLA Greene Black spruce—larch forest along Kakisa Lake road ¾ mile from junction with Enterprise — Mackenzie River highway, 4709 (det. N. H. Russell).

New to the flora of District of Mackenzie. Raup (1935) reported this violet from Wood Buffalo Park (Moose Lake) from which station our collection represents a range extension of some 175 miles to the northwest.

ONAGRACEAE

EPILOBIUM ANGUSTIFOLIUM L. forma *ALBIFLORUM* (Dumort.) Haussk. Weed, vegetable garden, off mile 18, Mackenzie highway, 6137.

First record of this form for southern Mackenzie. In our plant, the petals were white, the sepals whitish, and the full-grown capsules were green (not purple tinged as in nearby plants of forma *angustifolium*).

EPILOBIUM PALUSTRE L. var. *OLIGANTHUM* (Michx.) Fern. (*E. palustre* L. var. *monticola* sensu Raup). Disturbed soil, mile 76, 6029.

First record from the Mackenzie lowlands above Norman Wells. Raup (1947) records this taxon from Wood Buffalo Park in Alberta. He cites but a single collection of var. *palustre* for southwestern Mackenzie, one from the Little Buffalo River.

UMBELLIFERAE

CICUTA DOUGLASH (DC.) Coult. & Rose (*C. occidentalis* Greene) Gravel bar, Kakisa River, above highway bridge, 6094; beach of Kakisa Lake at outlet, 5643.

New to the flora of District of Mackenzie. Reported by Raup (1947) from Wood Buffalo Park in Alberta.

PRIMULACEAE

DODECATHEON PULCHELLUM (Raf.) Merrill (*D. pauciflorum* [Dur.] Greene; *D. radicum* Greene) Limestone outcrops, mile 20, 4882, and 28½, 4922; black spruce—larch forest, along Kakisa Lake road ¾ mile from junction with Enterprise — Mackenzie River highway, 4707; disturbed soil, mile 20, 5776.

Previously recorded, in District of Mackenzie, only from the junction of the Nyarling and Little Buffalo rivers and from Fort Resolution (Raup, 1947), some 100 miles eastward from our collections.

LYSIMACHIA THYRSIFLORA L. Island in Kakisa River 4 miles below highway bridge, 5690.

First record from the Mackenzie lowlands. In the Northwest Territories known previously from Fort Rae (Raup, 1947) and Yellowknife (Cody, 1957).

PRIMULA INCANA Jones Grasslands 4 miles northeast of Fort Providence, 4117, mile 17, Mackenzie River — Fort Rae highway, 4166; disturbed marshy area, ferry landing (south), mile 82, 6000.

First records from the Mackenzie River above Fort Norman (Cody, 1960). Not yet recorded, with exact locality data, from Great Slave Lake although known at Wood Buffalo Park (Raup, 1947).

GENTIANACEAE

GENTIANELLA CRINITA (Froel.) G. Don ssp. *MACOUNII* (Holm) Gillett Rocky slope, island in Mackenzie River 1 mile west of Fort Providence, 4132; Kakisa River just below highway bridge, 6092; beach of Kakisa Lake near outlet into Kakisa River, 6098.

New to the flora of District of Mackenzie. The nearest localities for this taxon cited by Gillett (1958) are in central Alberta, some 525 miles to the south. The minutely papillose calyx-keels and the acute upper leaves distinguish this plant from *G. detonsa raupii*, the only fringed gentian recorded by Gillett for District of Mackenzie and which we collected (5998) on the shore of the Mackenzie River at the ferry landing (south), mile 82.

LOMATOGONIUM ROTATUM (L.) Fries Grassland, 4 miles northeast of Fort Providence, 4058, 4085, 4090.

Along the Mackenzie River the only other record of this species with accurate locality data seems to be that of Cody (1960) from Norman Wells.

POLEMONIACEAE

COLLOMIA LINEARIS Nutt. Slope above Mackenzie River at Fort Providence, 4224; disturbed soil, mile 66, 5233; disturbed soil, mile 26, 5782.

Second record with exact locality data for District of Mackenzie. Collected by Raup (1947) at Fort Simpson. Not yet recorded from Great Slave Lake but certainly to be expected there.

LABIATAE

STACHYS PALUSTRIS L. var. *NIPIGONENSIS* Jennings Grassland 4 miles northeast of Fort Providence, 4042, 4063, 4101; along Kakisa River 2½ miles below highway bridge, 5744.

First record of this variety for District of Mackenzie. We collected also the var. *pilosa* (along shore of Hay River, mile 49, Mackenzie Highway, 4364), which is distinguished from var. *nipigonensis* by its oblong to oval (rather than lanceolate) leaves.

SCROPHULARIACEAE

EUPHRASIA aff. *SUBARCTICA* Raup Rocky slope, island in Mackenzie River 1 mile west of Fort Providence, 4130.

First record of a species of *Euphrasia* for southwestern Mackenzie. *Euphrasia subarctica* is reported by Raup (1936) from Lake Athabaska and the eastern arm of Great Slave Lake. Of our collection of *Euphrasia*, the monographers of North American *Euphrasia*, P. F. Yeo and P. D. Sell, have written to me: "Specimen 4130... has the general characters of *E. subarctica* Raup, but all the plants in the series seen lack long glandular hairs, which usually densely cover the leaves in this species, and if they do not, are present on at least some plants in all the samples we have seen. We are therefore not able to accept these specimens as being definitely *E. subarctica*, but they might be recorded as showing affinity with the species."

VERONICA SCUTELLATA L. forma *VILLOSA* (Schum.) Penn. Beach of Kakisa Lake just east of outlet, 5646; along Kakisa River just below Lady Evelyn Falls, 5460; in mud along creeks, miles 23½, 5773, and 45, 5725; disturbed soil, miles 60, 6068, and 76, 6028.

First record of this form for District of Mackenzie.

LENTIBULARIACEAE

PINGUICULA VILLOSA L. Black spruce — larch forest along Kakisa Lake road ¼ mile from junction with Enterprise — Mackenzie River highway, 4701.

First record for southwestern Mackenzie outside the mountains, whence Raup (1947) records a single specimen from Brintnell Lake. Reported by Raup (1936) from the eastern arm of Great Slave Lake and by Porsild (1943) from Great Bear Lake.

PLANTAGINACEAE

PLANTAGO SEPTATA Morris Limestone outcrops, miles 21½, 5606, and 28½, 4907.

First records for the Great Slave Lake region. On the upper Mackenzie River reported from Fort Simpson (Raup, 1947). Known also from the Mackenzie delta, Great Bear Lake, and Fort Norman (Porsild, 1943; Raup, 1947) in District of Mackenzie.

RUBIACEAE

GALIUM LABRADORICUM Wieg. Among sedges, marly lake, mile 43, 4958; edge of stream, along road (west) to ford over Kakisa River, 5003; disturbed soil along stream, mile 19½, 5677; disturbed peaty soil, mile 6, 5954, and 42, 6143.

New to the flora of District of Mackenzie. Recorded from just south of the Mackenzie-Alberta border near Fort Smith by Cody (1957).

CAPRIFOLIACEAE

LONICERA DIOICA L. var. *GLAUDESCENS* (Rydb.) Butters Jack pine forest, mile 27½, 4938; jack pine forest, mile 56, 5010a; jack pine forest, mile 71, 5070; limestone outcrop, mile 24, 5130; sandy soil along road (west) to ford over Kakisa River, 5207; among jack pines, mile 13, 5596.

Previously recorded with exact locality data from only Fort Smith and Fort Simpson (Raup, 1947) in District of Mackenzie.

LOBELIACEAE

LOBELIA KALMII L. In marl or among sedges, marly area, mile 20, 5764; in marl among sedges, marly lake, mile 44½, 6110.

Known from only two other localities in District of Mackenzie, at the north arm of Great Slave Lake and "between southern extremities of Franklin Mts." (Raup, 1947).

COMPOSITAE

ANTENNARIA PULCHERRIMA (Hook.) Greene
Disturbed soil, mile 20, 5767.

Our collection is the first record of this species from the Great Slave Lake area. Reported by Cody (1961) from Fort Simpson. Raup's (1947) only record is from Lone Mountain. Elsewhere in District of Mackenzie known only from Great Bear Lake (Porsild, 1943).

ANTENNARIA SUBVISCOSA Fern. Grassland, mile 17, Mackenzie River — Fort Rae highway, 4194a.

Second record for District of Mackenzie. Reported by Raup (1947) from Brintnell Lake.

ARTEMISIA CAMPESTRIS L. ssp. *BOREALIS* (Pall.) Hall & Clem. Limestone outcrops, miles 13½, 5569, 21½, 5609, and 24, 5627.

Previously unrecorded for southwestern Mackenzie. Raup (1936) cites specimens from the eastern arm of Great Slave Lake.

ARTEMISIA LUDOVICIANA Nutt. var. *GNAPHALODES* Nutt.) T. & G. Disturbed soil, mile 9½, 6117.

Our collection represents the second record of this species from District of Mackenzie and a range extension of some 150 miles northwest from the other Mackenzie collection, one from Fort Smith (Cody, 1957).

ASTER ALPINUS L. var. *VIERHAPPERI* (Onno) Cronq. Limestone outcrops, miles 13, 5589, 15, 5757, 21½, 5605, 22¾, 5158, 23½, 5962, 24, 5628, 25 1/10, 6149, and 26, 4334, 5531.

Previously recorded with exact locality data, for District of Mackenzie, only at Nahanni and Lone Mountains (Raup, 1947) and at Great Bear Lake and Bear River (Porsild, 1943).

ASTER HESPERIUS Gray var. *LAETEVIRENS* (Greene) Cronq. Limestone bluffs along Hay River at Alexandra Falls, 4375 (det. Arthur Cronquist), 6159; along Hay River near mile 49, Mackenzie Highway, 6168, 6169.

New to the flora of District of Mackenzie. The previously known Canadian range of this species included only Saskatchewan and Alberta, according to Cronquist (1955).

ASTER PANSUS (Blake) Cronq. Grassland, 4 miles northeast of Fort Providence, 4087, 4104 (det. Arthur Cronquist).

New to the flora of District of Mackenzie. According to Cronquist (1955), the previously known northern limit for this species was "e. Wash and s. B.C. to Mont."

CREPIS ELEGANS Hook. Along road to Louise Falls from Mackenzie highway, about 35 miles south of Hay River, 6153.

Previously unrecorded in the Great Slave Lake region. The nearest known station in southwestern Mackenzie is at Fort Simpson, some 190 miles to the northwest (Raup, 1947).

CREPIS TECTORUM L. Disturbed soil, mile 23½, 5959; gravel pit, mile 30, 6116; disturbed soil, mile 30, Mackenzie highway, 5140.

Our collections are the second record of this introduced weedy species in District of Mackenzie. Cody (1957) reported it from Fort Smith.

ERIGERON COMPOSITUS Pursh var. *GLABRATUS* Macoun Crevices atop limestone bluff, gorge of McNallie Creek, mile 23½, 5961.

First record of this variety for District of Mackenzie. Cronquist (1947) does not record it for the Northwest Territories.

SENECIO EREMOPHILUS Rich. Disturbed soil, along road (east) to ford over Kakisa River, 5327 (determined by T. M. Barkley).

Second record for District of Mackenzie. Previously recorded from the Salt River, about 175 miles southeast of our locality (Cody, 1957).

SENECIO PLATTENSIS Nutt. Grassland, mile 13-14, Mackenzie River — Fort Rae highway, 5031 (det. T. M. Barkley).

New to the flora of District of Mackenzie.

SENECIO TRIDENTICULATUS Rydb. Limestone outcrops, miles 12, 4844, 19, 4875, and 28½, 4912, and on summit of escarpment above south shore of Kakisa Lake, 4674; jack pine forest, mile 56, 5009 (determinations by T. M. Barkley).

New to the flora of District of Mackenzie.

SONCHUS ARVENSIS L. var. *GLABRESCENS* Guenth., Grab., & Wimm. (*S. uliginosus* Bieb.) Disturbed soil, mile 54, Mackenzie highway, 4344, 6172.

New to the flora of District of Mackenzie. Moss (1959) states that this plant has become very common in Alberta during the past 20 years.

TARAXACUM LACERUM Greene Disturbed soil along road (east) to ford over Kakisa

River, 4558; limestone crevices, gorge of McNallie Creek, mile 23½, 5133.

Previously reported, in southwestern Mackenzie, only in the mountains and at the

mouth of the North Nahanni River (Raup, 1947). Our collections extend the range some 250 miles to the southeast. Not recorded from the Great Slave Lake region.

REFERENCES

- BARNEBY, R. C. 1952. A revision of the North American species of *Oxytropis* DC. Proc. Calif. Acad. Sci., Series 4. 27:177-309.
- BENSON, L. 1948. A treatise on the North American Ranunculi. Amer. Midl. Nat. 40:1-261.
- BREITUNG, A. J. 1957. Annotated catalogue of the vascular flora of Saskatchewan. Amer. Midl. Nat. 58:1-72.
- CODY, W. J. 1957. New plant records for northern Alberta and southern Mackenzie District. Can. Field Nat. 70:101-130.
- . 1960. Plants of the vicinity of Norman Wells, Mackenzie District, Northwest Territories. Can. Field. Nat. 74:71-100.
- . 1961. New plant records from the upper Mackenzie River Valley, Mackenzie District, Northwest Territories. Can. Field Nat. 75:55-69.
- CRONQUIST, A. 1947. Revision of the North American species of *Erigeron*, north of Mexico. Brittonia 6:121-300.
- . 1955. Part 5. Compositae. in C. L. Hitchcock, *et al.*, Vascular plants of the Pacific Northwest. University of Washington Press, Seattle.
- GILLET, J. M. 1958. A revision of the North American species of *Gentianella* Moench. Ann. Mo. bot. Gdn 44:195-269.
- MOSS E. H. 1953. Marsh and bog vegetation in northwestern Alberta. Can. J. bot. 31:448-470.
- . 1959. Flora of Alberta. University of Toronto Press, Toronto.
- PORSILD, A. E. 1943. Materials for a flora of the continental Northwest Territories of Canada. Sargentia 4:1-79.
- RAUP, H. M. 1934. Phytogeographic studies in the Peace and upper Liard River regions, Canada. Contr. Arnold Arbor. 6:1-230.
- . 1935. Botanical Investigations in Wood Buffalo Park. Bull. nat. Mus. Canada 74.
- . 1936. Phytogeographic studies in the Athabaska-Great Slave Lake region. I. Catalogue of the vascular plants. J. Arnold Arbor. 17:180-315.
- . 1947. The botany of southwestern Mackenzie. Sargentia 6:1-275.

Received for publication 26 July 1960





Thieret, John W. 1961. "New Plant Records for Southwestern District of Mackenzie." *The Canadian field-naturalist* 75(3), 111–121.

<https://doi.org/10.5962/p.341948>.

View This Item Online: <https://www.biodiversitylibrary.org/item/89075>

DOI: <https://doi.org/10.5962/p.341948>

Permalink: <https://www.biodiversitylibrary.org/partpdf/341948>

Holding Institution

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Sponsored by

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Ottawa Field-Naturalists' Club

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.