

CLIMATIC PERSPECTIVES

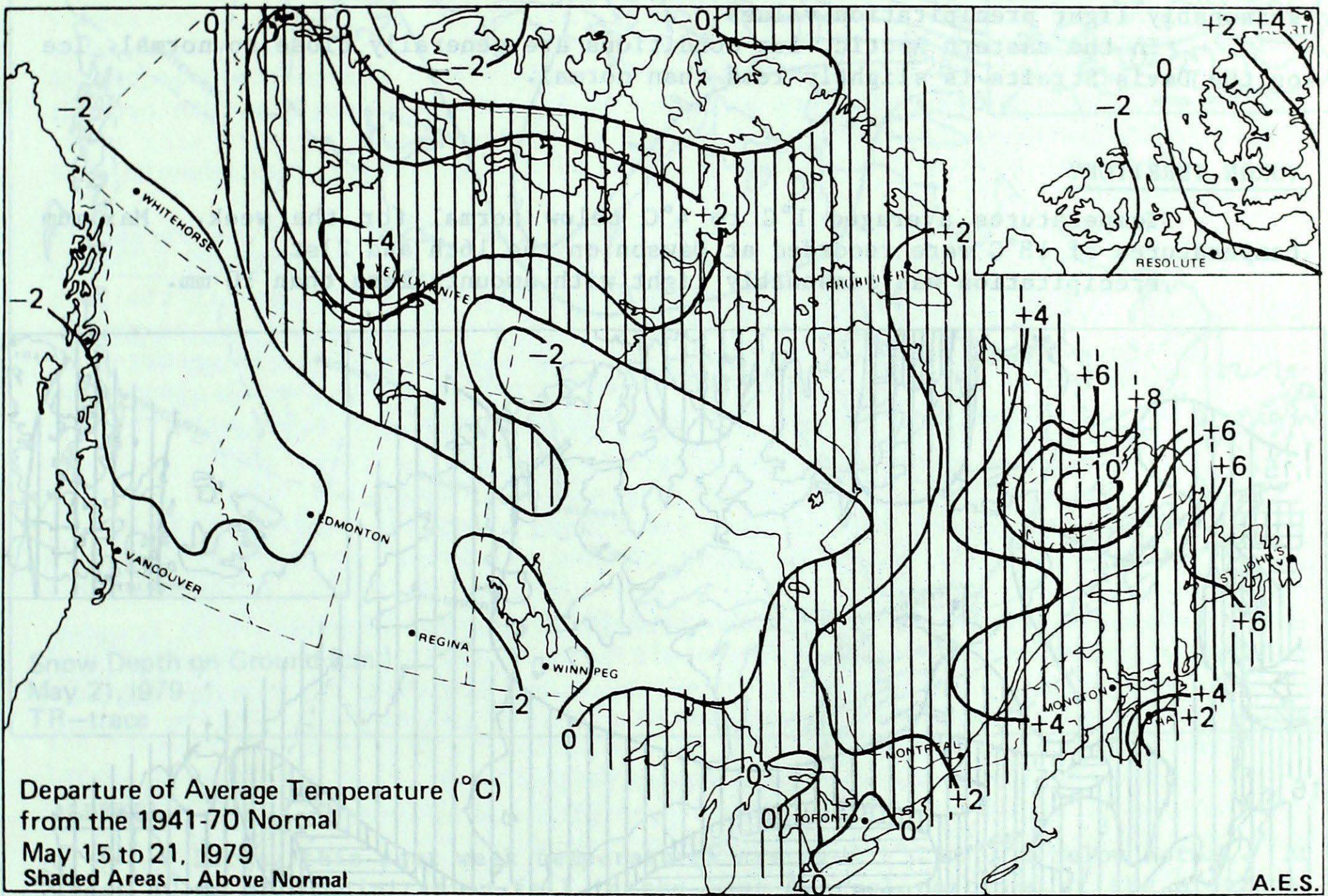
NON-CIRCULATING

MAY 25 1979

THE CANADIAN CLIMATE CENTRE,  
ATMOSPHERIC ENVIRONMENT SERVICE,  
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

MAY 25, 1979

VOL. 1 NO. 15



WEATHER HIGHLIGHTS FOR THE WEEK - MAY 15 - 21, 1979

The East Coast Enjoys Record Setting Warm Weather

Due to the presence of a broad atmospheric mean ridge pattern predominant over Canada's east coast the past week, exceptionally warm surface weather prevailed over the Atlantic provinces, Labrador and eastern Quebec. At Goose Bay, Labrador, daytime temperatures were in excess of  $30^{\circ}\text{C}$  from May 19 to May 21.

In regions bounded by the ridge and a mean trough position located over northwestern Ontario, considerable convective activity took place, resulting in many locations receiving upwards of 30 mm of precipitation.

In western Canada the prevailing mean zonal west northwest atmospheric flow brought temperatures  $1^{\circ}\text{C}$  to  $3^{\circ}\text{C}$  below the 1941-70 normal.

NOTE: The data shown in this publication are based on unverified reports from approximately 170 Surface Synoptic reporting stations of the Atmospheric Environment Service.



## NORTHWEST TERRITORIES

Most of the Territories bounded by latitudes 60°N to 70°N experienced temperatures 2°C to 4°C above normal, excluding the District of Keewatin bordering Manitoba, where temperatures averaged 4°C below normal. Temperature anomalies ranged from -3°C in the western Canadian Arctic Archipelago to +5°C at Alert on northern Ellesmere Island in the northeast.

At Norman Wells in the Mackenzie Valley the temperature rose to 21°C on the 16th. In contrast, a minimum temperature of -21°C was recorded at Sachs Harbour on the 19th.

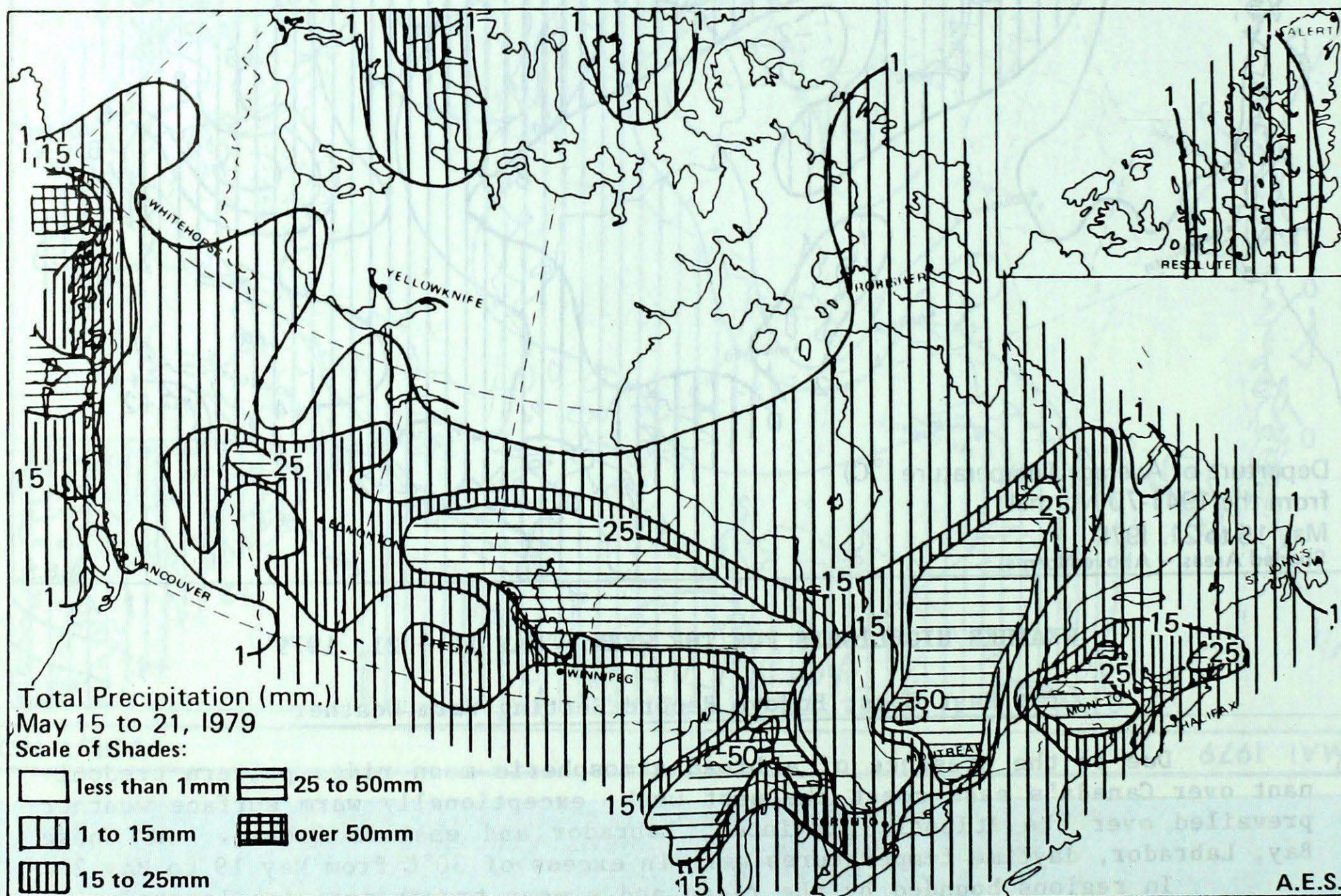
With the exception of 19.6 mm of precipitation at Sachs Harbour and 14.4 mm at Fort Simpson, most of the Territories' observing stations reported seasonably light precipitation values.

In the eastern Arctic, ice conditions are generally close to normal. Ice on the Davis Straits is slightly less than normal.

## YUKON TERRITORY

Temperatures averaged 1°C to 4°C below normal for the week. Maximum temperatures of 18°C were recorded at Dawson on the 16th and 21st.

Precipitation was seasonably light with amounts less than 10 mm.



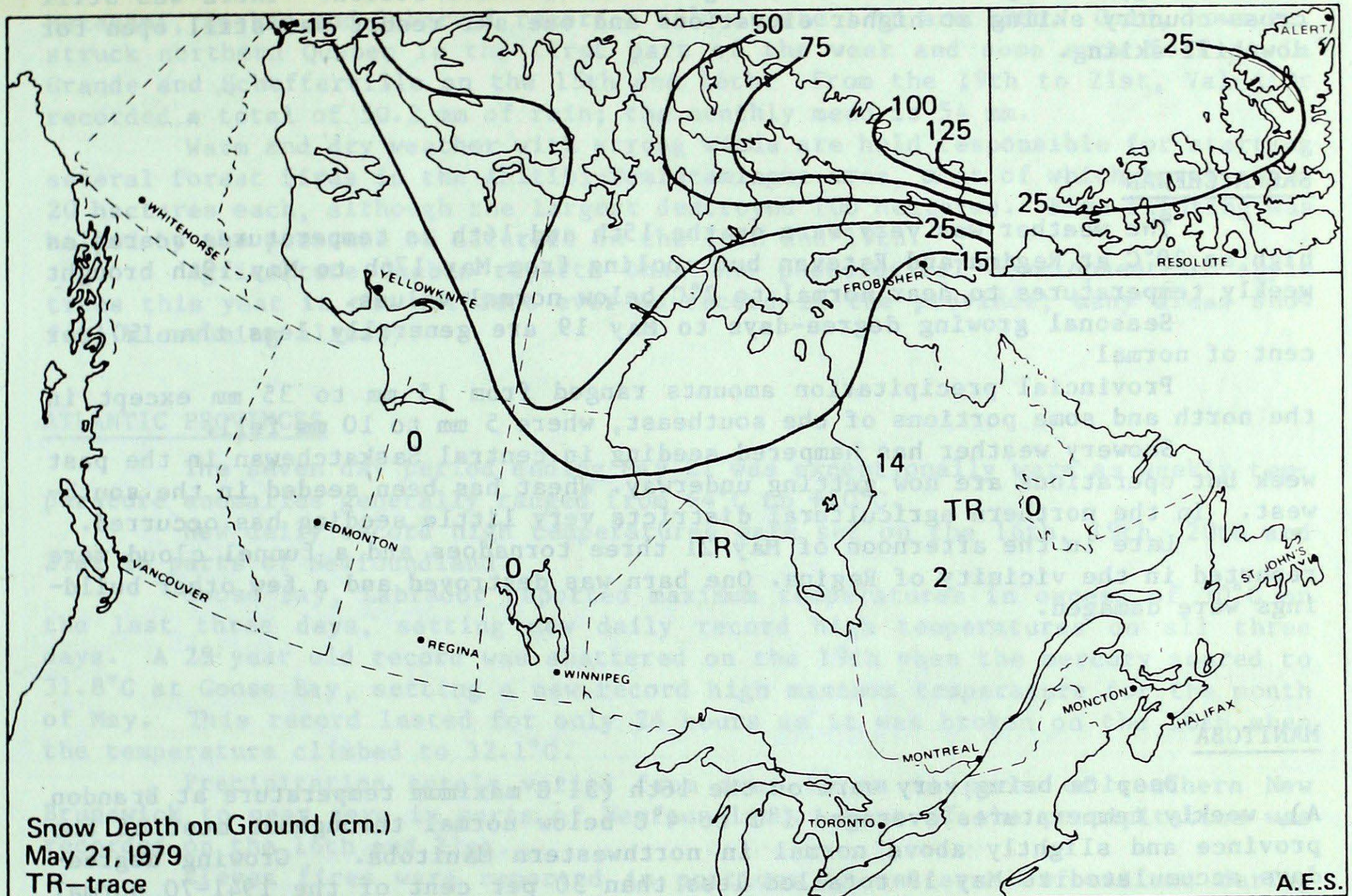
## BRITISH COLUMBIA

Normal to above normal precipitation fell throughout the central interior, central and northern coastal regions of the province; elsewhere amounts were less than 10 mm.



Temperatures averaged near normal throughout most of southern British Columbia and 1°C to 3°C below normal in the remainder of the province.

Castlegar on the 15th and Penticton on the 21st, recorded the warmest temperatures in the province during the past week when the temperature rose to 26°C.



#### ALBERTA

During this past week temperatures averaged 1°C to 3°C below normal. At least 30 mm of precipitation fell in the west central portions of the province, in the vicinity of Grande Prairie and Whitecourt and 10 - 25 mm over the eastern half of the province. Elsewhere precipitation was light.

Favourable weather has permitted farmers in most southern districts to begin field work according to reports from provincial district agriculturists. While seeding is most advanced in the Lethbridge area, several southern counties and municipal districts report operations delayed as much as two to three weeks due to wet field conditions and seeding operations are only beginning. Cold, wet conditions have inhibited even weed growth. In many areas farmers will have time for only 1 field operation prior to seeding. It is expected that less anhydrous ammonia nitrogen fertilizer will be applied due to the late seeding start but that more granular types of nitrogen will be applied after seeding.

Seeding is becoming widespread though spotty in east central Alberta. In many lowlying areas, fields are still waterlogged and are being left uncultivated. Weather delayed seeding is forcing some farmers to change their croplands in favour of crops with a shorter maturing season, such as barley and rape-seed.



During the May long weekend, campgrounds within reasonable driving distance from larger centres were filled to capacity, while camping facilities at mountain resorts were still not fully operational. Most facilities at Jasper National Park remained out of service as water and sewer lines remained frozen. At Banff, hiking was recommended only on trails at lower elevations. With the late spring, skiing enthusiasts were given an extended season. There was still cross country skiing at higher elevations and one ski resort was still open for downhill skiing.

### SASKATCHEWAN

The weather was very warm on the 15th and 16th as temperatures soared as high as 29°C at Regina and Estevan but cooling from May 17th to May 19th brought weekly temperatures to near normal to 2°C below normal values.

Seasonal growing degree-days to May 19 are generally less than 50 per cent of normal

Provincial precipitation amounts ranged from 15 mm to 35 mm except in the north and some portions of the southeast, where 5 mm to 10 mm fell.

Showery weather has hampered seeding in central Saskatchewan in the past week but operations are now getting underway. Wheat has been seeded in the southwest. In the northern agricultural districts very little seeding has occurred.

Late in the afternoon of May 21 three tornadoes and a funnel cloud were reported in the vicinity of Regina. One barn was destroyed and a few other buildings were damaged.

### MANITOBA

Despite being very warm on the 16th (31°C maximum temperature at Brandon A), weekly temperatures averaged 1°C to 4°C below normal throughout most of the province and slightly above normal in northwestern Manitoba. Growing degree-days accumulated to May 19 totalled less than 30 per cent of the 1941-70 normal throughout the agricultural districts.

With the exception of light precipitation in the extreme north and the southeast, most of the province received precipitation amounts ranging from 15 mm to 40 mm. On May 17, 20 cm of snow fell at Thompson.

### ONTARIO

Extremely variable weather conditions predominated throughout the province during the period as widespread thunderstorm activity took place on the 15th, 20th and 21st. 25 mm to 35 mm of precipitation fell in the extreme northern portions of the province, northeast of Lake Superior and in the Ottawa Valley. Wawa, on the northeastern shore of Lake Superior, measured 61.6 mm. Elsewhere precipitation amounts were normal to below normal.

Weekly temperatures averaged within 2°C of the 1941-70 normal. On the 19th, Timmins recorded a maximum temperature of 28°C; the next day the temperature rose to only 9°C.

No new flooding was reported in the province this past week.



## QUEBEC

An atmospheric circulation pattern typical of summer time controlled the weather over Quebec during the week. Abundant sunshine maintained weekly temperature means above normal; weekly anomalies reached +8.2°C at Border. Bagotville, Matagami, Quebec and Roberval recorded 28°C on the 17th and 18th. Cold, however, struck northern Quebec in the first part of the week and some snow fell at La Grande and Schefferville on the 15th and 16th. From the 19th to 21st, Val d'Or recorded a total of 50.2 mm of rain; the monthly mean is 54 mm.

Warm and dry weather with strong winds are held responsible for starting several forest fires in the Abitibi-Temiscamingue area, most of which burnt about 20 hectares each, although the largest destroyed 100 hectares. Fire fighting was helped by the presence of aircraft on the 18th and 19th.

Agriculture Quebec reports that the phenological development of apple trees this year is the earliest ever on record in the province; many areas show full blossoming already.

## ATLANTIC PROVINCES

The seven day period ending May 21 was exceptionally warm as weekly temperature anomalies generally ranged from +4°C to +10°C.

New daily record high temperatures were set on the 16th, 19th, 20th and 21st in parts of Newfoundland.

Goose Bay, Labrador reported maximum temperatures in excess of 30°C on the last three days, setting new daily record high temperatures on all three days. A 29 year old record was shattered on the 19th when the mercury soared to 31.8°C at Goose Bay, setting a new record high maximum temperature for the month of May. This record lasted for only 24 hours as it was broken on the 20th when the temperature climbed to 32.1°C.

Precipitation totals varied from over 40 mm in parts of southern New Brunswick to near zero in parts of Newfoundland. Most of the precipitation was recorded on the 16th and 21st.

Eleven fires were reported in portions of eastern Newfoundland during the weekend but all were extinguished by late Sunday. Some of the fires were large; most occurred in low-lying marshland and amid scrub which was reported to have dried out quickly during the weekend warm spell.

Ice has retreated north of the Straits of Belle Isle which are now open to shipping a few weeks earlier than normal, but caution due to icebergs is advised.

Ice off the Labrador coast is slightly less than normal.

### CLIMATIC PERSPECTIVES

#### Staff

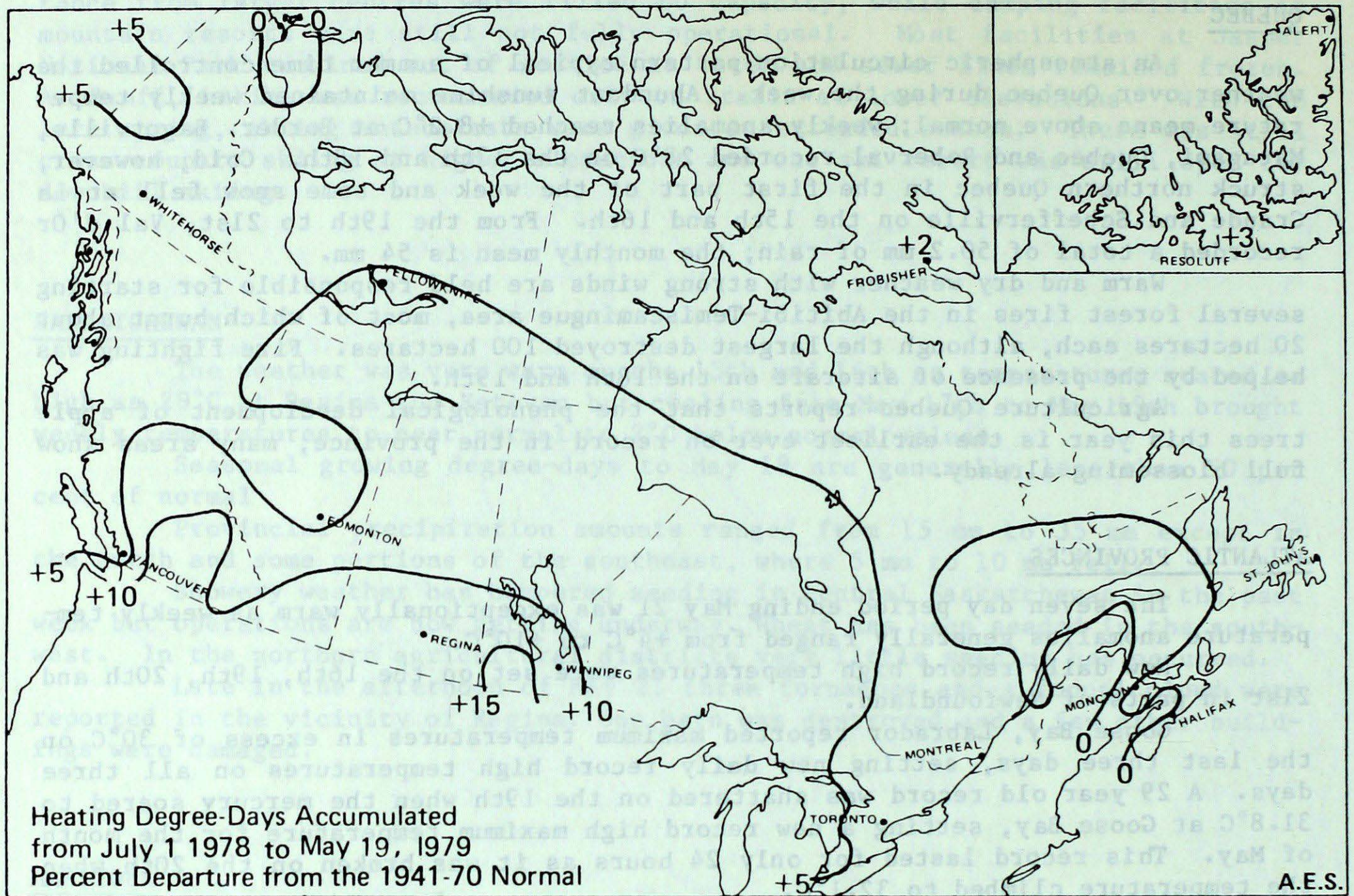
Editor:	Terry Allsopp
Assistant Editor:	Yves Durocher
Technical Staff:	Fred Richardson, Andy Radomski
Graphics and Layout:	Debra Bittle, Bill Johnson
Word Processing:	Myra D'Gabriel

#### Correspondents

Terry Mullane, (Ice Forecasting Central)  
 Norm Penny, (Pacific Region)  
 Bill Prusak, (Western Region)  
 Fred Luciw (Central Region)  
 Bryan Smith, (Ontario Region)  
 Jacques Miron, (Quebec Region)  
 J.F. Amirault, (Atlantic Region)



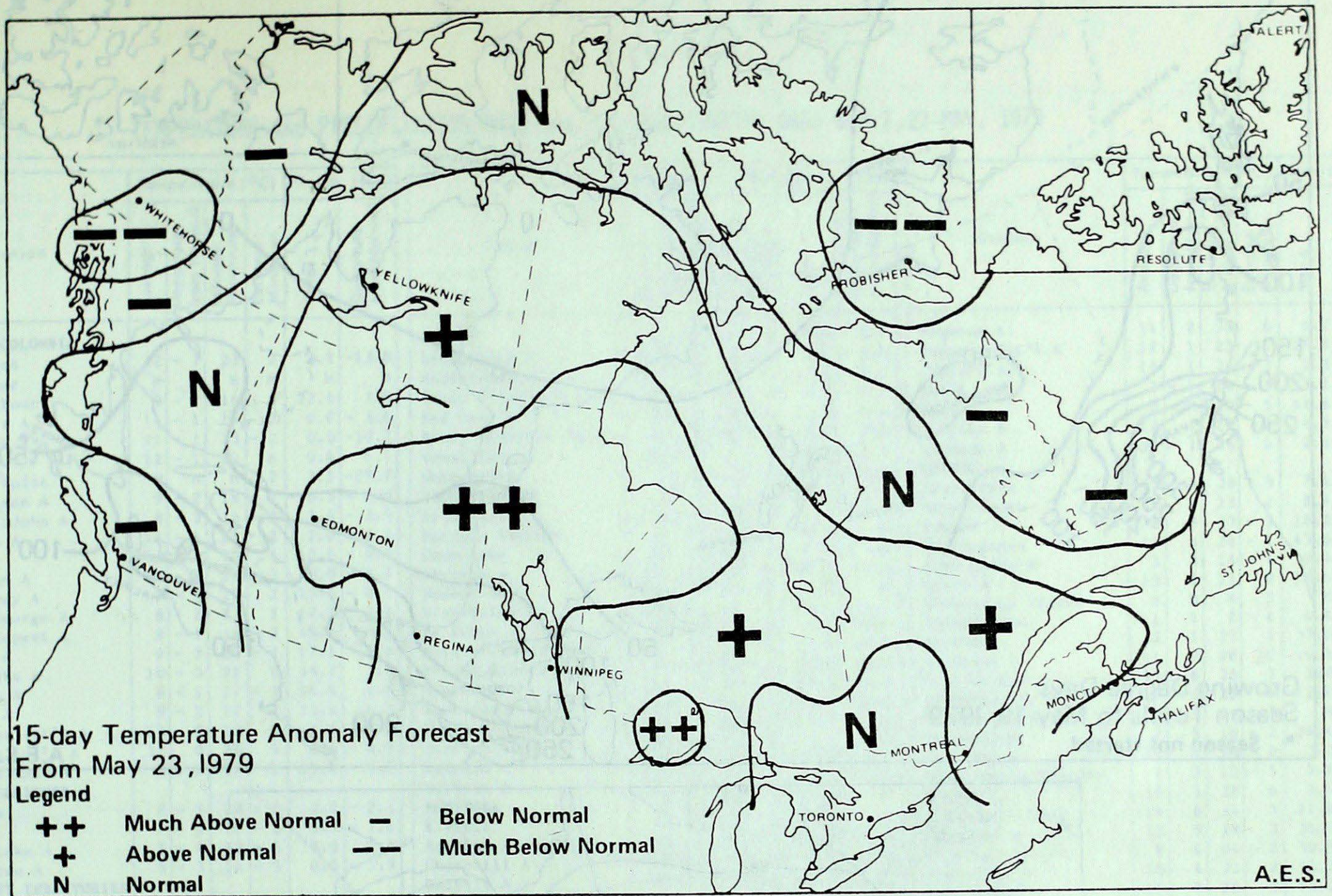
## HEATING DEGREE-DAY SUMMARY TO MAY 19, 1979



STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	534.0	-46.0	12006.0	315.0	103
Inuvik	360.5	-52.5	9432.5	-326.5	97
Whitehorse	243.5	14.5	6833.5	234.5	104
Vancouver Int'l A	112.5	-7.5	3004.5	136.5	105
Edmonton Mun A	205.5	48.5	5633.0	218.0	104
Calgary Int'l A	244.5	61.5	5544.0	435.0	109
Regina	241.5	72.5	6437.5	679.5	112
Winnipeg Int'l A	248.0	82.0	6530.5	787.5	114
Thunder Bay	223.0	25.0	6072.5	560.5	110
Windsor	84.0	-20.0	3690.0	166.0	105
Toronto Int'l A	133.0	-5.0	4162.0	177.0	104
Ottawa Int'l A	106.0	-27.0	4637.5	56.5	101
Montreal Int'l A	94.5	-31.5	4588.0	197.0	104
Quebec	123.0	-40.0	5103.5	168.5	103
Saint John, N.B.	152.0	-48.0	4546.5	-3.5	100
Halifax	160.0	-34.0	4073.5	167.5	104
Charlottetown	157.5	-49.5	4460.0	48.0	101
St. John's, Nfld.	237.5	-18.5	4605.5	161.5	104



## 15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

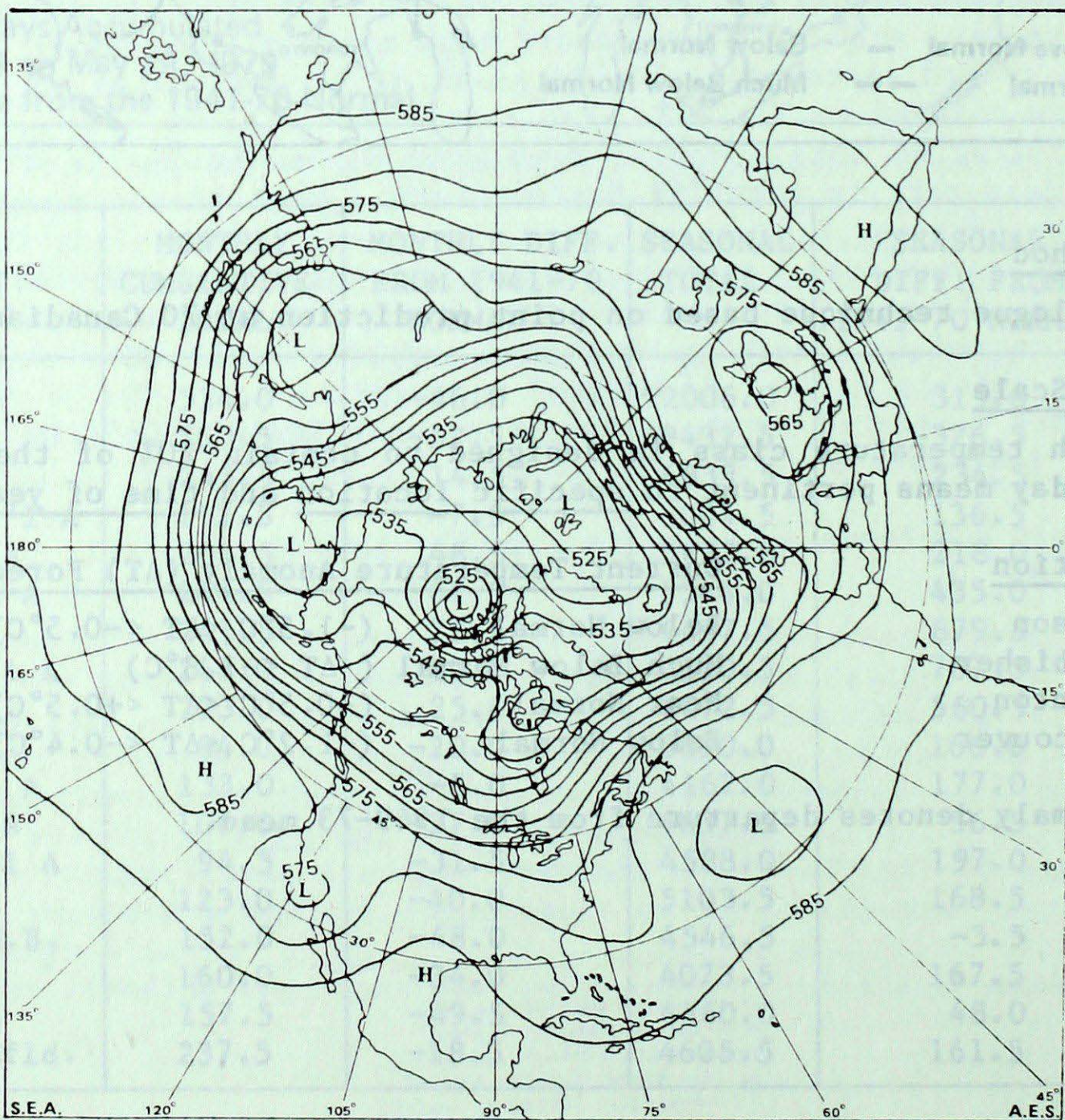
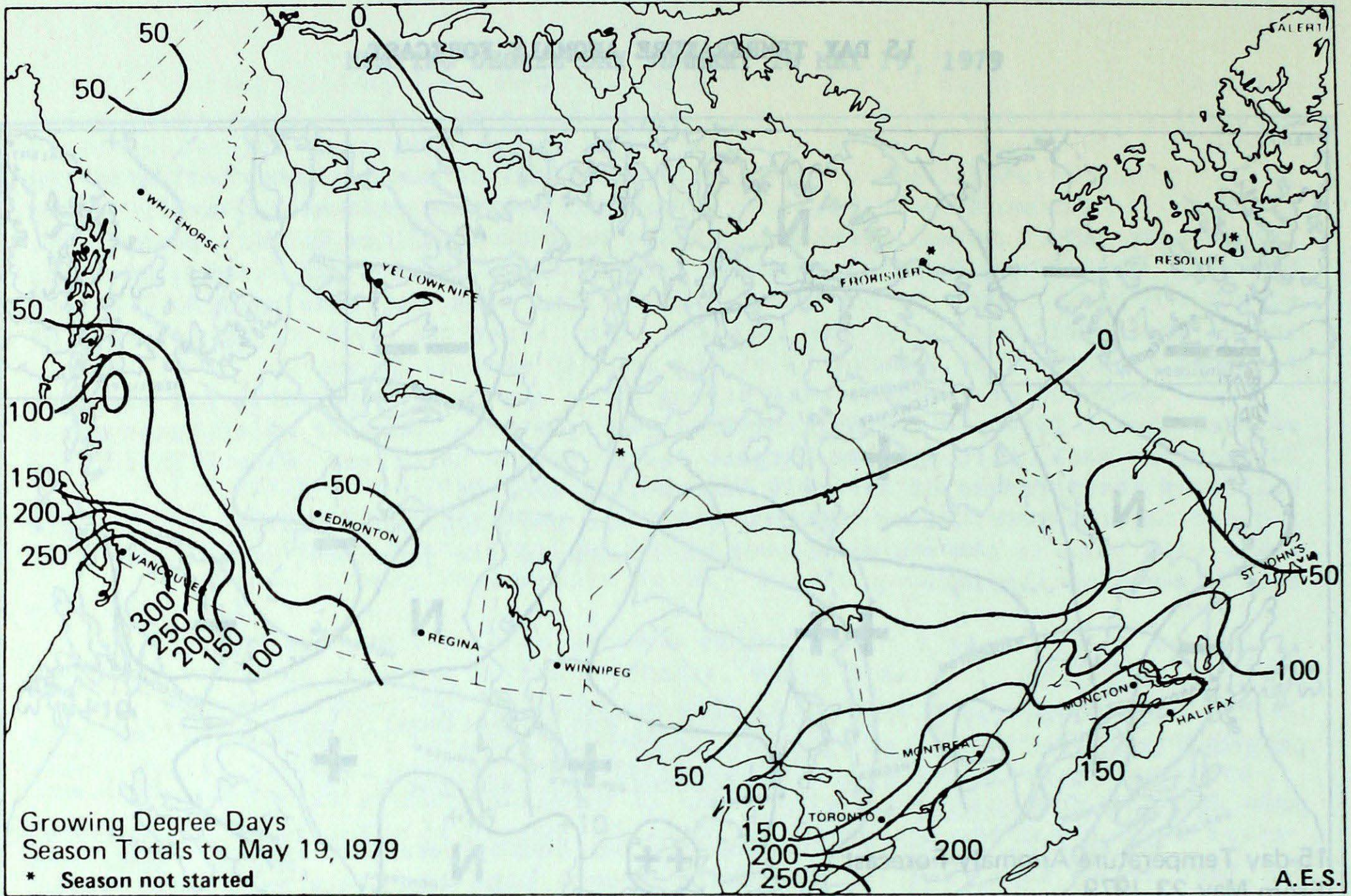
Temperature Scale

Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

<u>Station</u>	<u>Current Temperature Anomaly (<math>\Delta T</math>) Forecast</u>
Dawson	Below Normal ( $-1.5^{\circ}\text{C} < \Delta T < -0.5^{\circ}\text{C}$ )
Frobisher	Much Below Normal ( $\Delta T < -1.8^{\circ}\text{C}$ )
Trenton	Near Normal ( $-0.5^{\circ}\text{C} < \Delta T < +0.5^{\circ}\text{C}$ )
Vancouver	Below Normal ( $-1.2^{\circ}\text{C} < \Delta T < -0.4^{\circ}\text{C}$ )

Note: Anomaly denotes departure from the 1949-73 mean.





50 kPa (500 mb) Height Map (decametres) 7 Day Mean  
May 14 to 20, 1979



## TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. 22 MAY, 1979

Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
<b>BRITISH COLUMBIA</b>							Jasper	7	-2	15	-3	7.4	-0.2	Timmins A	11	2	28	0	6.7	-8.2
Abbotsford	12	-1	23	2	2.2	-13.8	Lethbridge A	11	-1	25	0	2.3	-8.0	Toronto Int'l A	12	-1	23	1	17.8	-1.8
Blue River	M	M	M	M	M	M	Medicine Hat A	12	-1	26	0	17.4	8.7	Trenton A	14	1	24	3	5.5	-19.6
Bull Harbour	9	-1	16	4	22.4	3.0	Peace River A	9	-1	17	0	1.0	-7.2	Trout Lake	3	-1	14	-3	33.2	22.3
Castlegar A	14	-1	26	2	0.0	-3.8	Red Deer A	8	-2	19	-1	11.2	0.4	Wawa A	8	M	20	-5	61.6	M
Cranbrook A	11	-1	23	-2	0.0	-10.7	Rocky Mountain House	7	-3	16	-4	7.9	-2.8	Warton A	12	1	26	0	14.5	-1.0
Comox A	12	-1	20	6	0.4	-6.1	Vermilion A	9	-1	19	-1	17.9	11.8	Windsor A	15	1	26	6	2.4	-17.5
Estevan Point	M	M	M	7	3.1	-29.7	Whitecourt	7	-3	15	0	36.8	28.6	<b>QUEBEC</b>						
Fort Nelson A	9	-2	18	-1	3.5	-1.9	<b>SASKATCHEWAN</b>							Bagotville A	15	5	28	3	7.4	-9.9
Fort St. John A	8	-3	16	-2	2.8	-3.6	Broadview	10	-1	28	-2	3.7	-3.0	Baie Comeau	11	4	23	2	8.4	-8.5
Kamloops A	14	-1	25	2	2.0	-2.2	Buffalo Narrows	7	M	16	-1	8.6	M	Border	8	8	23	-3	18.2	12.4
Lytton	15	-1	25	6	0.0	-4.8	Cree Lake	6	M	13	-3	3.5	M	Chibougamau	11	M	26	-1	43.0	M
Pentlton A	14	0	26	3	0.0	-6.7	Estevan A	12	0	29	2	21.4	12.0	Fort Chimo A	3	3	14	-4	9.4	1.7
Port Hardy A	9	-1	18	2	13.5	-0.3	Hudson Bay	8	-2	22	-2	M	M	Gaspé A	13	5	27	0	19.0	13.0
Prince George A	8	-2	17	1	17.7	7.3	Kindersley	11	-1	25	1	24.4	21.5	Grindstone Island	M	M	M	5	M	M
Prince Rupert A	8	-1	14	2	42.4	13.1	La Ronge A	7	0	17	-5	8.1	0.0	Inoucdjouac	-1	1	2	-4	4.4	0.6
Quesnel A	9	-3	18	-2	17.1	9.6	North Battleford A	11	-1	24	2	21.6	17.2	Maniwaki	12	1	25	1	37.0	18.1
Revelstoke A	10	-3	21	0	14.7	3.4	Prince Albert A	9	-2	22	-2	34.9	29.3	Matagami A	11	M	28	0	14.3	M
Smithers A	8	-2	17	-1	14.4	6.4	Regina A	11	0	29	-2	17.8	10.5	Mont Joli A	15	6	25	3	3.0	-14.5
Terrace A	9	-2	17	4	11.4	4.3	Saskatoon A	11	-1	24	1	15.6	10.2	Montréal Int'l A	16	2	25	4	12.4	-8.3
Vancouver Int'l A	13	0	20	6	1.6	-11.5	Swift Current A	11	-1	24	1	11.1	4.8	Natashquan A	10	5	24	3	M	M
Victoria Int'l A	12	0	20	4	0.4	-6.9	Uranium City	9	M	17	0	0.2	M	Nitchequon	7	5	18	-2	26.4	12.5
Williams Lake A	8	-2	17	1	11.4	5.7	Wynyard	10	-1	25	-2	3.7	-0.2	Port Menier	10	4	20	0	3.3	-16.8
<b>YUKON TERRITORY</b>							Yorkton A	9	-2	27	-1	8.9	2.0	Poste de la Baleine	1	0	13	-5	9.8	1.2
Dawson A	8	-1	18	-2	2.2	-2.1	<b>MANITOBA</b>							Québec A	16	5	28	6	3.4	-20.8
Mayo A	7	-2	17	-2	3.3	-1.0	Bissett	7	M	22	-5	15.3	M	Rivière du Loup	14	6	24	3	27.8	9.4
Watson Lake A	5	-4	12	-5	8.8	2.6	Brandon A	9	-2	31	-3	18.8	11.8	Roberval A	15	5	28	3	35.7	18.4
Whitehorse A	5	-3	14	-5	0.0	-1.9	Churchill A	-4	-2	4	-9	0.2	-7.1	Schefferville A	8	6	21	-2	30.9	19.8
<b>NORTHWEST TERRITORIES</b>							Dauphin A	8	-3	22	-3	21.7	13.7	Sept-Îles A	10	4	21	2	11.1	-7.1
Alert	-6	5	2	-15	0.0	-1.8	Gillam A	2	M	13	-9	11.0	M	Sherbrooke A	15	3	26	2	11.2	-22.0
Baker Lake	-4	2	5	-15	0.0	-2.4	Gimli	6	-4	23	-3	26.7	15.4	Val d'Or A	12	3	26	1	50.6	34.4
Cambridge Bay A	-5	4	3	-18	0.4	-1.3	Lynn Lake	5	1	14	-5	8.0	-3.1	<b>NEW BRUNSWICK</b>						
Cape Dyer	-5	M	1	-13	4.0	M	Norway House	4	M	16	-6	27.4	M	Charlo A	12	4	23	1	28.4	4.5
Chesterfield Inlet	-3	3	5	-11	0.0	M	Pilot Mound	9	-1	28	-1	14.0	3.6	Chatham A	15	5	27	4	24.6	6.1
Clyde	-6	0	4	-12	3.1	-0.2	Portage la Prairie	9	-2	28	-1	11.3	2.2	Fredericton A	16	5	25	4	38.1	20.6
Coppermine	-3	2	7	-16	1.6	-1.0	The Pas A	6	-3	18	-1	37.5	30.3	Moncton A	15	5	24	3	24.2	7.6
Coral Harbour	-4	1	4	-12	0.0	-3.8	Thompson A	4	1	15	-5	20.2	7.3	Saint John A	14	5	22	6	44.2	23.3
Ennadai	-7	-4	2	-17	0.0	-5.6	Winnipeg Int'l A	9	-3	27	-3	8.7	0.5	<b>NOVA SCOTIA</b>						
Eureka	-8	1	-1	-15	1.6	1.2	<b>ONTARIO</b>							Greenwood A	16	5	23	8	14.5	-1.2
Fort Simpson	10	1	19	-1	14.4	5.1	Armstrong A	6	-1	18	-4	M	M	Shearwater A	11	2	15	7	14.2	-6.6
Fort Smith A	10	1	18	-1	5.6	-0.4	Atikokan	9	2	26	-4	3.0	-8.9	Sydney A	13	5	24	3	25.2	6.2
Frobisher Bay A	-1	2	3	-6	7.1	3.0	Earlton A	12	2	27	2	6.6	-6.8	Truro	15	6	22	8	M	M
Hall Beach A	-7	M	0	-16	0.0	M	Geraldton	6	-1	17	-4	13.4	-8.0	Yarmouth A	14	4	20	9	11.9	-7.3
Hay River A	7	1	19	-1	0.0	-3.5	Gore Bay A	10	-1	18	1	28.6	17.2	<b>PRINCE EDWARD ISLAND</b>						
Inuvik A	4	2	15	-5	0.0	-1.9	Kapusking A	10	1	24	-1	30.9	11.4	Charlottetown	14	5	23	2	17.0	1.2
Mould Bay	-13	-3	-10	-20	0.7	-0.5	Kenora A	9	-2	24	-1	7.0	-2.5	Summerside	14	5	23	4	22.6	6.9
Norman Wells A	10	3	21	1	0.0	-3.8	Kingston A	13	1	22	3	12.0	-16.2	<b>NEWFOUNDLAND</b>						
Resolute A	-10	-1	-3	-19	4.1	1.7	Lansdowne House	5	-1	16	-3	25.4	12.8	Battle Harbour	7	4	19	0	5.4	-9.5
Sachs Harbour	-10	-3	-1	-21	19.6	19.2	London A	12	-1	24	2	15.6	-5.1	Cartwright	12	9	27	1	1.4	-14.7
Yellowknife A	10	4	18	2	0.0	-3.3	Moosonee	8	2	27	-4	16.8	3.1	Deer Lake	13	7	27	0	8.9	-6.5
<b>ALBERTA</b>							Mount Forest	11	0	23	1	M	M	Gander Int'l A	15	8	27	4	2.4	-10.7
Banff	7	-1	17	-3	6.6	-4.2	Muskoka A	11	0	24	-1	9.2	-13.1	Goose A	16	10	32	3	0.6	-16.5
Calgary Int'l A	9	-2	22	-2	20.0	10.8	North Bay A	13	2	25	2	12.4	-4.7	Hopedale	7	6	22	-3	1.0	-10.4
Cold Lake A	10	-2	18	1	9.0	1.6	Ottawa Int'l A	14	1	24	2	35.2	15.0	St. Anthony	9	M	22	0	10.0	M
Coronation A	9	-2	22	0	16.0	10.9	Petawawa A	13	M	27	-1	23.6	M	St. John's A	13	8	23	6	0.9	-15.7
Edmonton Mun. A	10	-2	18	3	21.5	16.7	Pickle Lake	7	-1	23	-1	26.7	10.6	Stephenville A	12	5	19	5	12.4	-8.2
Edmonton Namao A	9	-3	17	2	21.1	17.0	Red Lake A	8	-2	24	-3	15.4	6.3	Wabush Lake	12	9	25	-3	24.4	15.4
Edson A	7	-2	16	-3	5.2	-5.8	Simcoe	13	-1	23	4	M	M							
Fort Chipewyan	8	1	17	-2	5.2	-8.0	Sioux Lookout A	8	-2	24	-2	9.8	-5.0							
Fort McMurray A	9	-1	18	0	17.9	7.9	Sudbury A	12	2	24	3	5.0	-6.7							
Grande Prairie A	8	-3	17	1	31.0	25.0	Thunder Bay A	10	1	25	-3	1.8	-14.7							

M-Denotes missing data