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Climatic Perspectives

Monthly Review **MARCH – 1991** *Vol. 13*

CLIMATIC HIGHLIGHTS

March can be a fickle month and this year was no exception, as a wide variety of weather conditions affected the country.

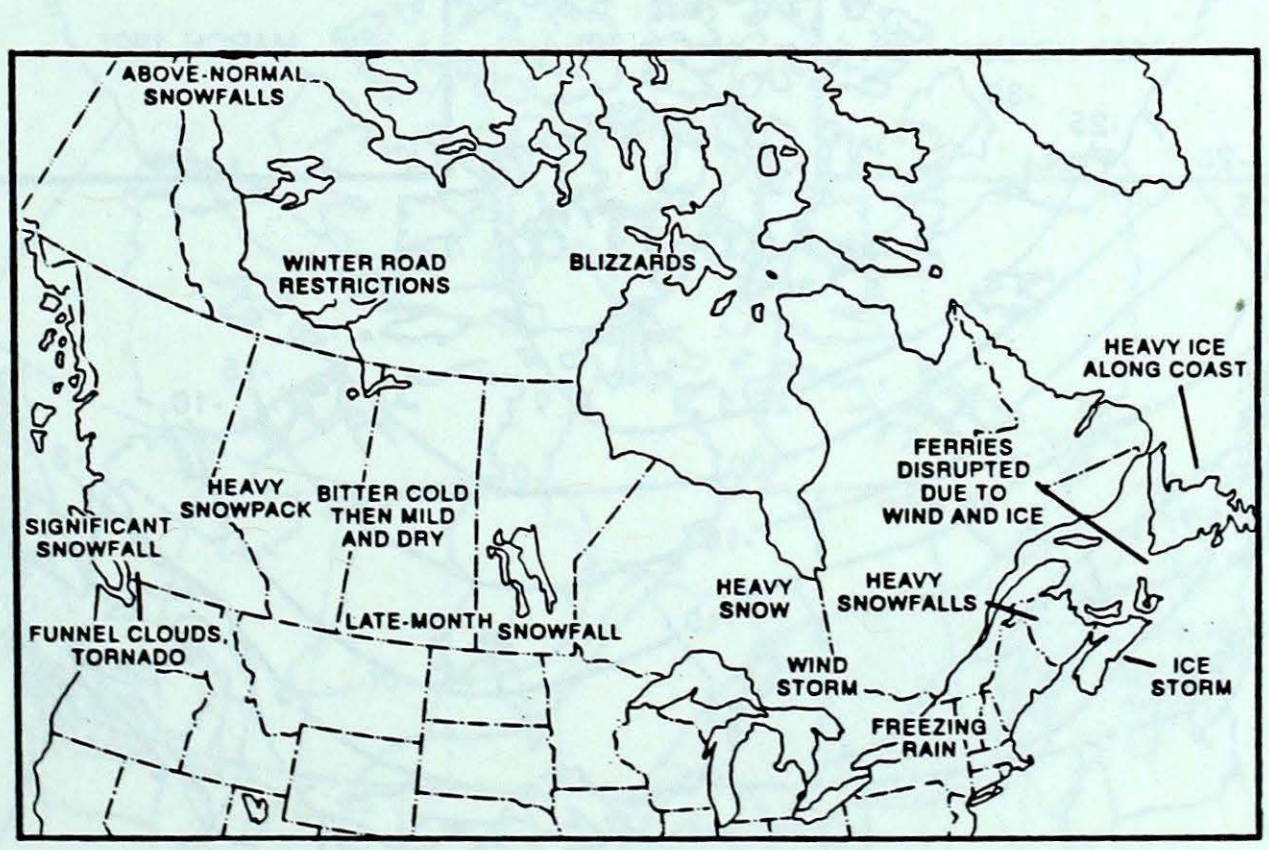
In western Canada, March definitely ushered in like a lion, as heavy snowfalls blanketed southern British Columbia and bitter cold covered the Prairies for the first couple of days of the month. On B.C.'s lower mainland this was the fourth major snowfall of the season. The Vancouver area received 15 to 25 centimetres of snow, but as much as 40 cm covered the ground near Chilliwack, east of Vancouver. In the upper Fraser Valley, Hope's 33 cm snowfall was more than twice the normal for the month. Even in balmy Victoria, where spring flowers were already in bloom, old man winter came back one more time to bury Vancouver Island's south coast with snow. It all seemed like a bad dream as 15 cm of snow covered Victoria, while outside the city as much as 35 cm was reported on the ground. On March 10, during the early afternoon, scattered thunderstorms moved across B.C.s lower mainland and spawned several funnel clouds over the Fraser Delta and a tornado touched down at Pitt Meadows, east of Vancouver. Tornadoes in this part of the country are rare at any time of the year.

On the Prairies, Arctic air spilled southwards accompanied by snow and strong winds. Temperatures dipped to the minus twenties and thirties. Ranchers were especially concerned by the cold, as the calving season was under way.

Eastern Canada did not escape the late winter storms either. During the first week, a swath of freezing precipitation coated the lower Great Lakes and the St. Lawrence Valley. Then on March 4, one of the worst ice storms in recent memory hit Nova Scotia, bringing down trees and utility lines. There were major snowfalls in New Brunswick on March 4, March 11 and 12 and again on the 24th. Total accumulations in New Brunswick this March were well in excess of 100 cm, and double the amount of snow that fell last month.

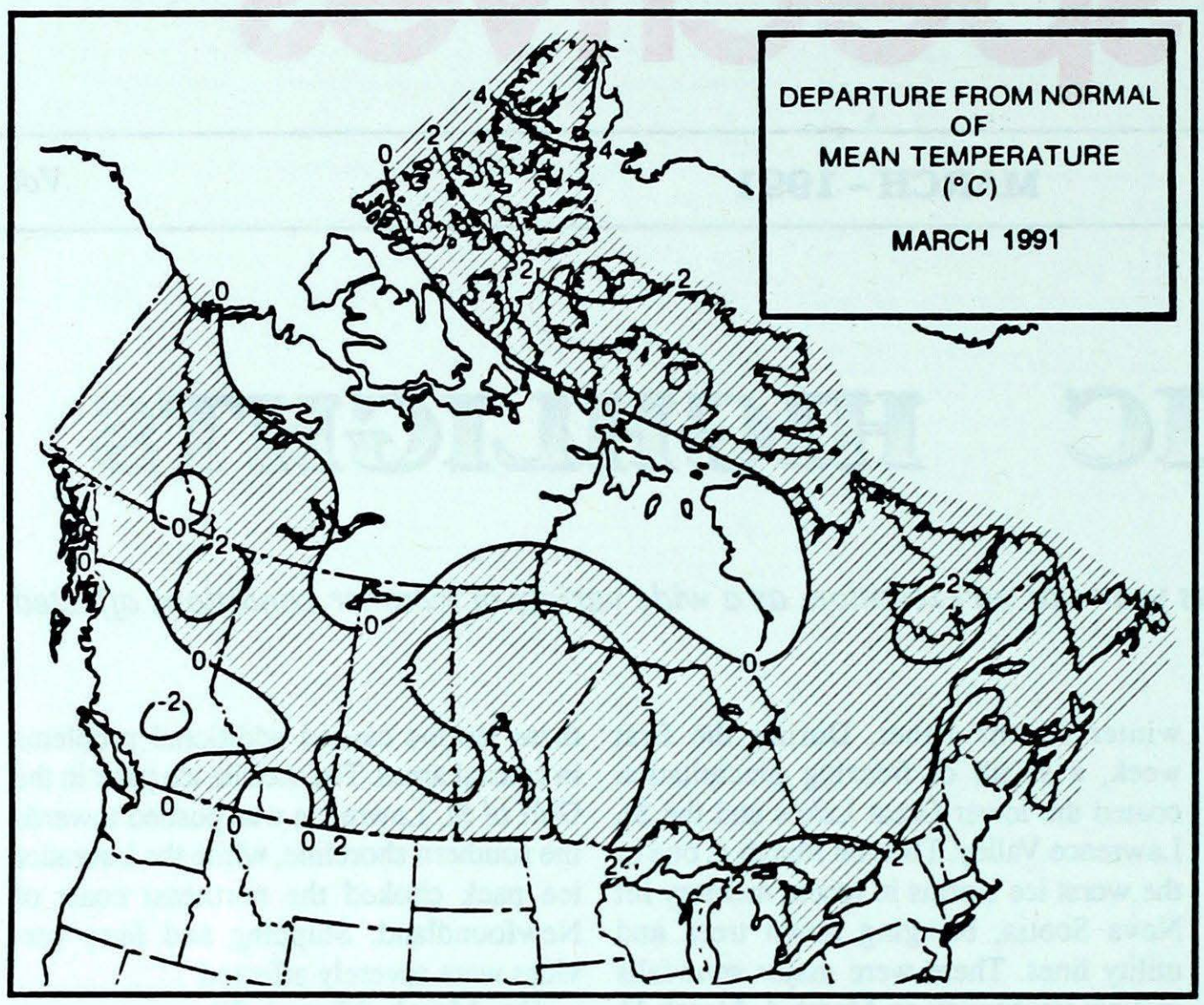
Northeasterly winds associated with these storms caused additional problems in coastal areas. The mobile ice pack in the Gulf of St. Lawrence was pushed towards the southern shoreline, while the Labrador ice pack choked the northeast coast of Newfoundland. Shipping and ferry services were severely affected.

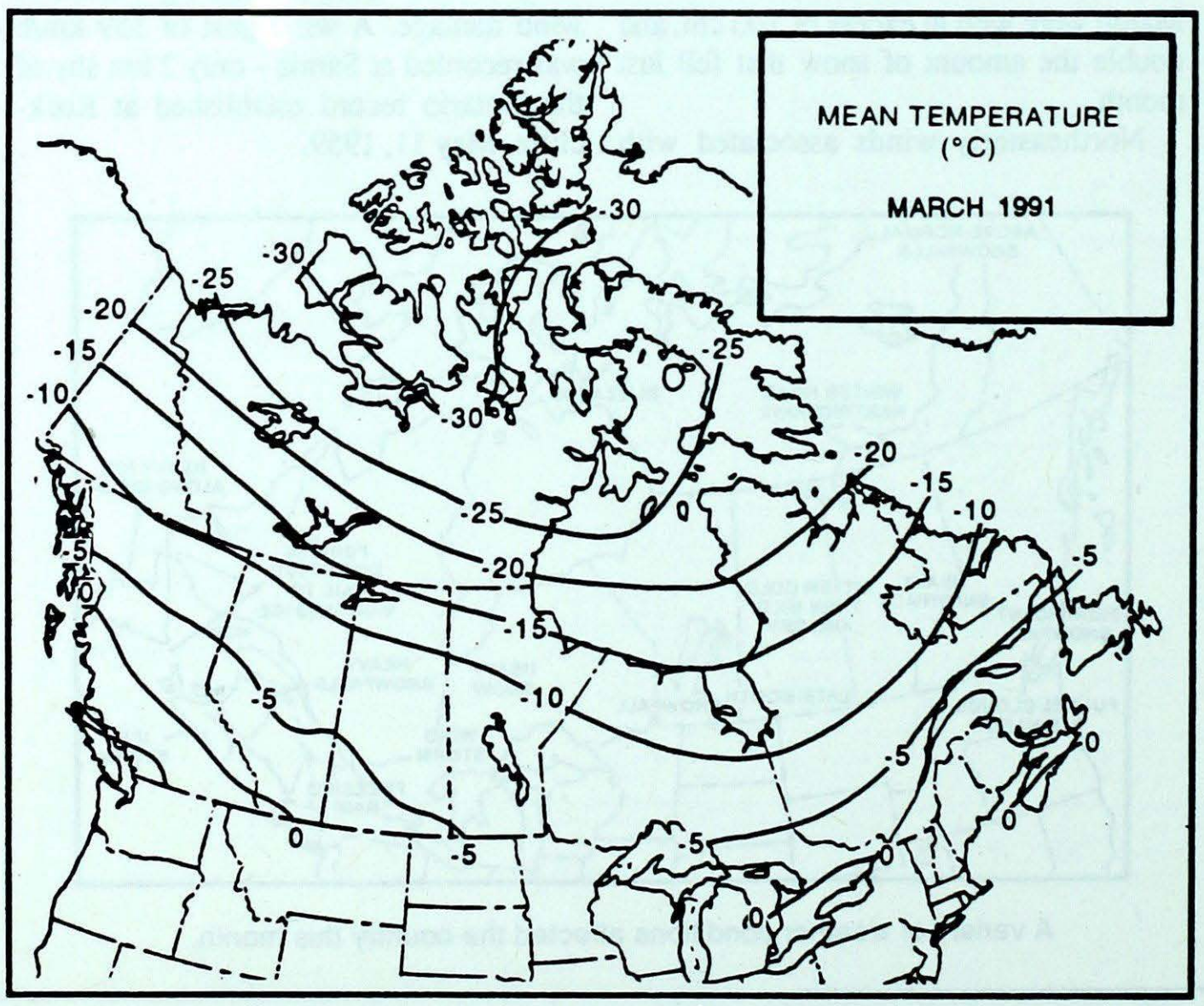
On March 27 and 28, very strong winds, in excess of 100 km/h, buffeted Ontario and Quebec causing extensive wind damage. A wind gust of 159 km/h was recorded at Sarnia - only 2 km shy of the Ontario record established at Rockcliffe, May 11, 1959.



A variety of weather conditions affected the country this month.

Canada





Across the country

Yukon and Northwest Territories

The greatest deviation of temperature and precipitation was in the far north, where both were well above average. This contrasts with the southern border areas, where temperatures and precipitation were near to below normal. In Whitehorse, March is the third month in a row with above average temperatures.

Beaver Creek recorded the highest temperature in the Yukon, with a reading of 9.0°C on the 25th. The lowest temperature occurred on the 13th, with a -45.0°C reading at Komakuk Beach on the chilly shores of the Beaufort Sea.

Komakuk Beach along the Beaufort reported 10.4 cm of snow, or almost four times the normal snowfall, showing why the Arctic is considered a semi-arid area. In contrast, Carcross had the least amount of snow, 2.0 cm, only 16 percent of normal. Klondike, the highway station along the Dempster received the most snow with 39.5 cm, or 132 percent of normal. Surprisingly, Blanchard, usually the snowiest station in the Yukon recorded only 24 cm during March.

Temperature and precipitation regimes in the central and eastern Arctic were quite variable. The lowest temperatures reported in the region was 45.3°C at Eureka, while Rankin Inlet in the Keewatin district reported the mildest temperature, a maximum of -7.7°C. Surprisingly the lowest temperature at Alert was only -37.9°C. In contrast, hundreds of miles to the south, in the grain growing district of Saskatchewan, Prince Albert reported a minimum temperature of -39.9° C.

Total precipitation was above normal in all areas, with the exception of Alert and Eureka. In the Keewatin district, precipitation amounts were almost three times the normal for the month. Rankin Inlet recorded the most precipitation, 24.1 mm, compared to a normal of 8.3 mm.

Hours of bright sunshine were near to well-above normal. Residents of Alert enjoyed 130.9 hours of sunshine, which is almost double the March average of 66.5 hours.

British Columbia

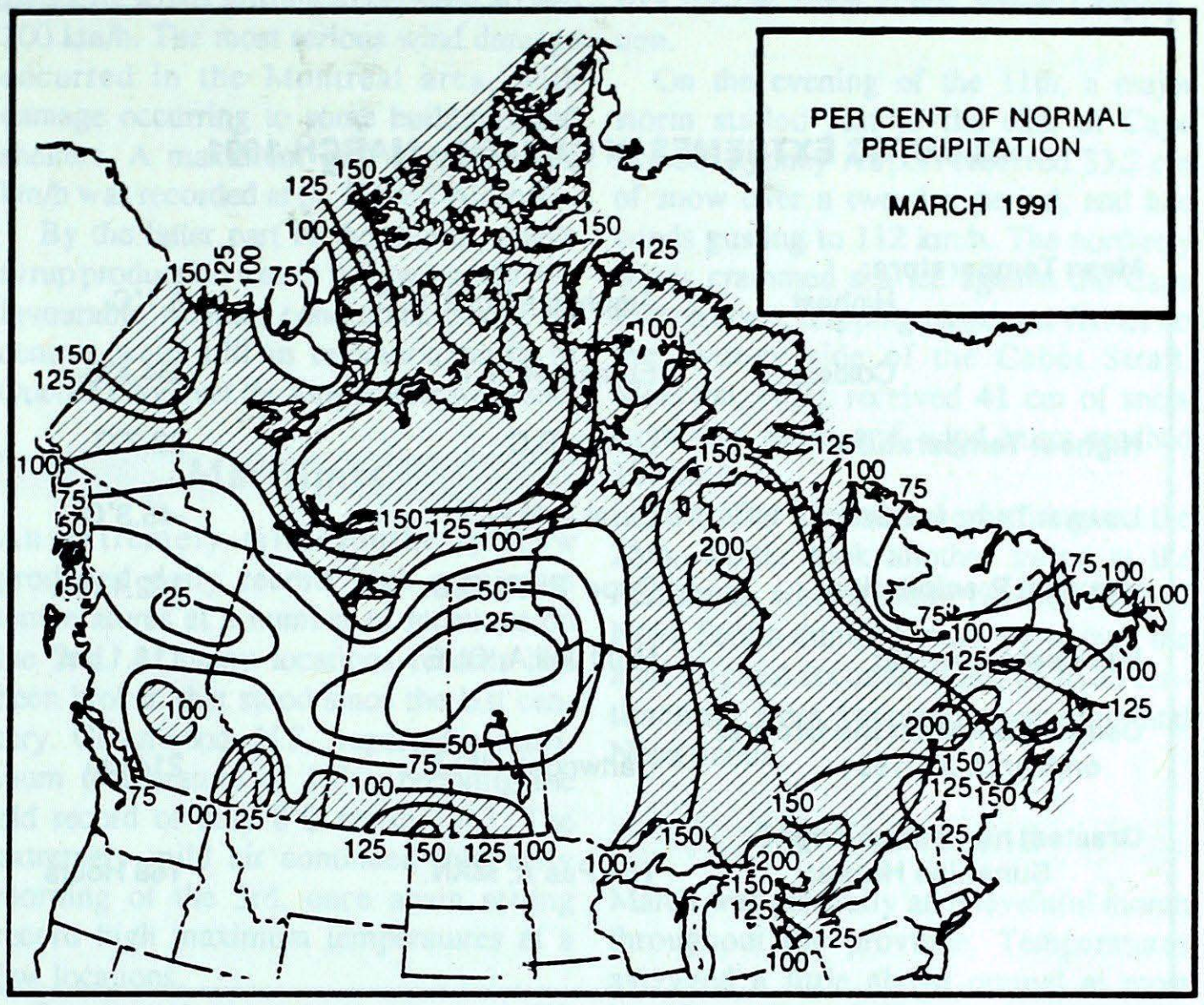
Unsettled weather was the pattern for March. Winter-like temperatures at the beginning of the month gave way to a spring-like temperature regime by month's end. A heavy snowfall on the March 1, caused many traffic problems, both in the lower mainland and on southern interior highways. Snow even fell on the south coast as late as March 10. There were also a number of funnel cloud sightings in the area on the 10th, with one reported touch-down near Pitt Meadows on the lower mainland.

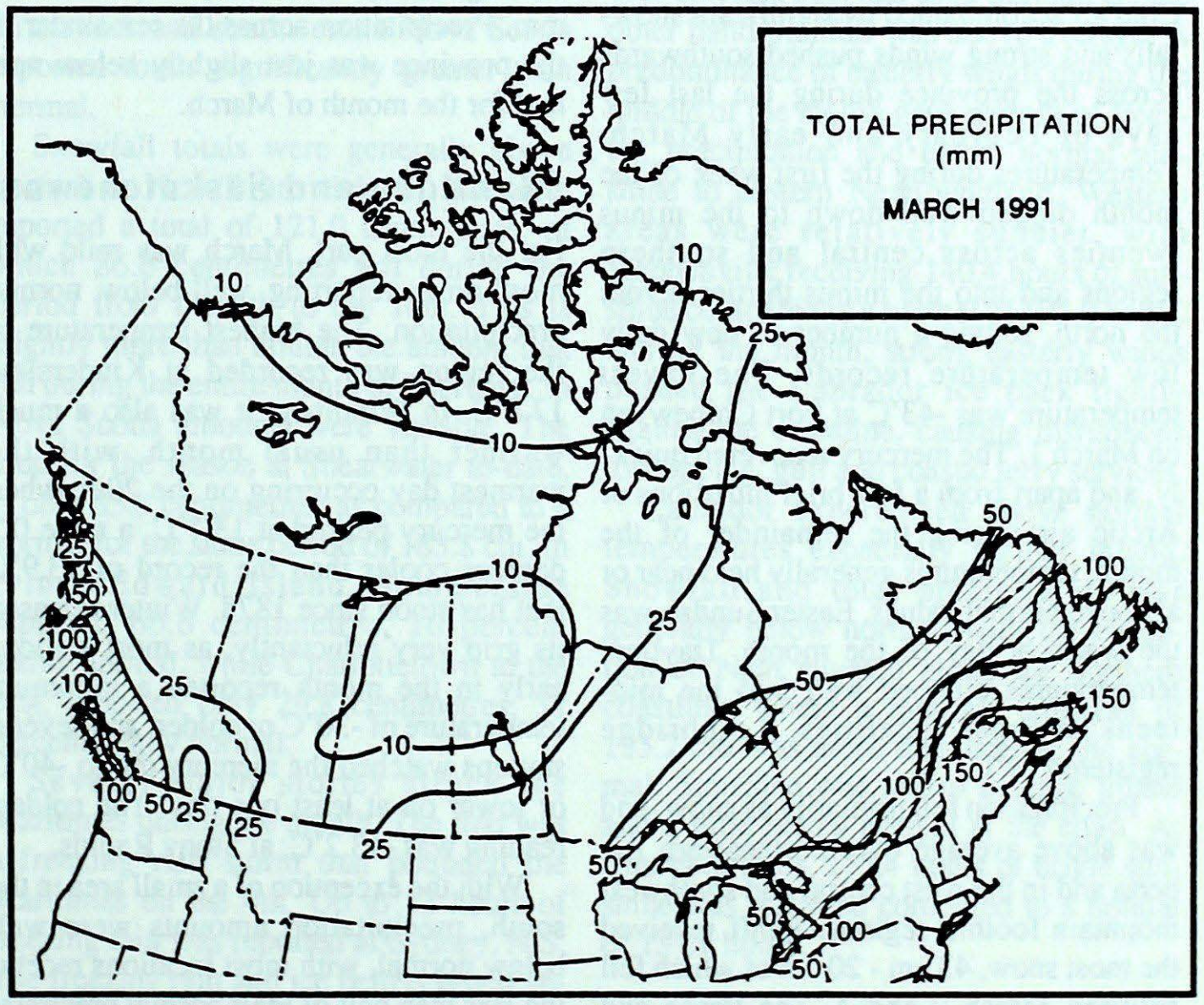
The month ended with summer-like weather in most regions, with several stations in the southern interior establishing record high maximum temperatures on March 31. Lytton established a new record monthly maximum temperature of 23.7°C, breaking the old record of 21.7°C set in 1972. The warm weather at month's end heralded the end of bush work in the north.

Precipitation was quite variable. Most of the northern half of the province and the Chilcotins reported less than half of their average. The extreme southern sections of the interior had above normal precipitation, as much as three times the normal at Cranbrook. Cranbrook's precipitation of 56.2 mm is a record high for March, breaking the old record of 35.3 mm set in 1987. On the opposite extreme, low March precipitation records were set at Mackenzie, only 5.8 mm for the month, breaking the old record of 9.8 mm set in 1981. Port Alberni also set a new record low of 75.7 mm breaking the old record of 77.7 mm set in 1982.

Most of the northern half of the province had well below average snowfalls. Mountain snowpacks, generally above normal earlier in the year, did not receive all that much additional snow this month. Southern interior valleys reported little or no snow on the ground by month's end.

Below average sunshine was recorded along the west coast of Vancouver Island. Elsewhere sunshine was relatively more plentiful. Only one sunshine record was set. Smithers had 171.1 hours of sunshine, breaking the old March record of 162.8 hours, set in 1982.





CLIMATIC EXTREMES IN CANADA - MARCH 1991

Mean Temperature:		
Highest	Amphitrite Point, B.C.	6.1°C
Coldest	Eureka, N.W.T.	-34.4°C
Highest Temperature:	Lytton, B.C.	23.7°C
Lowest Temperature:	Eureka, N.W.T.	-45.3°C
Heaviest Precipitation:	Cape Scott, B.C.	182.1 mm
Heaviest Snowfall:	Mont Joli A, QUE	118.1 cm
Deepest Snow on the Ground on March 31, 1991	Cartwright, NFLD.	214 cm
Greatest number of Bright Sunshine Hours:	The Pas A, MAN.	168 Hours

Alberta

Cold air accompanied by significant snowfalls and strong winds pushed southwards across the province during the last few days of February and early March. Temperatures during the first week of the month dipped well down to the minus twenties across central and southern regions and into the minus thirties across the north, setting a number of new daily low temperature records. The lowest temperature was -43°C at Fort Chipewyan on March 1. The mercury recovered quickly, and apart from a few brief intrusions of Arctic air during the remainder of the month, temperatures generally held near or at above normal values. Easter Sunday was the warmest day of the month. Daytime temperatures climbed well into the mid-teens at most localities. Lethbridge registered 19°C.

Precipitation fell primarily as snow, and was above average over northeastern Alberta and in the west central and southwest mountain foothill regions. Banff received the most snow, 43 cm - 20 cm of which fell between March 2 and 4. The Peace and Slave Lake regions were the driest, receiving only 4 to 8 millimetres of precipitation. Average values for March are closer to 20 mm. Precipitation across the remainder of the province was just slightly below normal for the month of March.

Manitoba and Saskatchewan

For the most part, March was mild with most areas reporting well-below normal precipitation. The highest temperature in the region was recorded at Kindersley, 17.8°C. In Winnipeg, it was also a much warmer than usual month, with the warmest day occurring on the 20th, when the mercury peaked at 13.7°C, a mere 0.2 degrees cooler than the record of 13.9°C that has stood since 1878. Winter released its grip very reluctantly, as most stations early in the month reported a minimum temperature of -30°C or colder, and several stations watched the mercury dip to -40°C or lower on at least one day. The coldest reading was -43.2°C, at Stony Rapids.

With the exception of a small area in the south, precipitation amounts were well below normal, with most locations receiving less than half of their normal precipitation for the month. Lynn Lake tallied the least, 1.5 mm, which represents only 7 percent of the March normal. In the south, precipitation amounts were closer to, or above normal. A series of snowstorms late in the month dumped 15 to 20 centimetres of wet snow across portions of the agricultural district. At Winnipeg, the snow storm boosted the total monthly snowfall to 27.8 cm, and as a result total precipitation was above normal. The highest precipitation total from the storm was 43.9 mm, at Gimli, Man. It was the highest single day snowfall of the 1990/91 winter season.

Sunshine was plentiful in all areas, ranging from 20 to 85 hours above the monthly average. The sunniest spot in the region was The Pas, with 260.1 hours of bright sunshine, compared to a normal of 175.0 hours.

Ontario

March was a wet, windy and warm month in Ontario. The early part of the month, featured one of Ontario's most extensive ice storms, with reported ice accretion of 25 mm on March 3 and 4. Another storm on March 27 and 28 packed devastating winds gusting in excess of 100 km/h. In particular, Sarnia's peak wind of 159 km/h was not only the highest wind ever recorded in southwestern Ontario, but it now stands second only to the provincial record gust of 161 km/h set at Ottawa's Rockcliffe Airport in May 1959.

However, apart from the storms, it was a pleasantly mild month. In most of southern and central Ontario, as far north as Sault Ste. Marie, it was the mildest March since 1987. At St. Catharines however, it was the warmest March since 1979, though in northern and southwestern Ontario, March was not quite as mild as last year's.

This month was also very wet. In contrast to January and February, rain was abundant everywhere except in northwestern and extreme southwestern Ontario. Total March precipitation topped 100 mm from London to Sudbury, with new records established at Sudbury and Gore Bay, 120 and 128 millimetres, respectively, with the latter being also the wettest spot in Ontario. For most other locations in this wet zone, March was the wettest since 1976.

Snowfalls were light in the south (10 to 20 cm), but near normal in central and northern Ontario (20 to 40 cm). Windsor recorded the least snow, only 1.2 cm, their smallest March accumulation since 1961. Kapuskasing's 63 cm was the provincial high - 10 cm above their monthly normal.

Moosonee's was the sunniest spot in the province, 204 hours of sunshine, 50 hours more than usual.

Quebec

The weather was mild except along the eastern shore of Hudson Bay. Only the extreme eastern portion of the province had below normal precipitation. Baie Comeau and Mont Joli recorded monthly precipitation totals of 135.6 and 149.8 millimetres, respectively. Baie Comeau and Mont Joli also had the heaviest snowfalls, 104.1 and 118.1 centimetres, respectively. A new monthly snowfall record was established at La Grande Rivière - 42.7 cm of snow compared to the 40.4 cm recorded March 1980.

Total hours of bright sunshine for the month ranged from 86 percent of normal at Sherbrooke to 121 percent of normal at Natashquan.

On March 4, twenty years to the day after the "Storm of the Century", 15 to 25 cm of ice pellets, snow and freezing precipitation fell across southern Quebec. More than 40 cm of snow was recorded at Roberval, while rainfall in excess of 30 mm was reported in the Eastern Townships, resulting in minor flooding in the region. Snow and high winds brought the Quebec City public transport system to a halt for the first time in over ten years.

On March 8, another snowstorm, with amounts of 30 to 40 centimetres accompanied by gusts of more than 100 km/h, paralysed the areas from Charlevoix to Baie Comeau on the north shore of the St. Lawrence, and from Levis to Matapedia Valley on the south shore. Wind speeds at Ile Rouge, in the St. Lawrence, reached 110 km/h. On March 20, the Matapedia Valley was again hit with a storm, which left between 25 and 30 cm of snow, once again forcing the closure of roads and schools in the area.

During the weekend of March 23 and 24, southwestern Quebec received an additional 10 to 25 centimetres of ice pellets and wet snow.

On March 28, southern Quebec was swept by winds gusting to between 80 and 100 km/h. The most serious wind damage occurred in the Montreal area, with damage occurring to some buildings and shelters. A maximum gust speed of 102 km/h was recorded at St. Hubert Airport.

By the latter part of the month, maple syrup production was in full swing with the favourable weather conditions. Some ski centres were still in operation north of Quebec City over the long Easter weekend.

Maritimes

An extremely mild southerly flow produced daily record high maximum temperatures at a number of locations on the 2nd. At many locations records had been broken that stood since the last century. Greenwood, N.S., reported a maximum temperature of 16°C, breaking the old record of only 8°C set in 1963. The extremely mild air continued into early morning of the 3rd, once again setting record high maximum temperatures at a few locations.

Precipitation totals were generally above normal with the exception of Charlottetown, P.E.I. Some areas in New Brunswick and southwestern Nova Scotia reported totals significantly greater than normal.

Snowfall totals were generally above normal in New Brunswick. St. Leonard, reported a total of 121.0 centimetres, of which 86.6 centimetres fell during the period from the 4th to the 10th. This is slightly more than double the amount that fell during the entire month of February. In Nova Scotia amounts were variable. The total for the season at Shearwater to-date, is only 83.0 centimetres, as compared to a normal for the same period of 183.8 cm. In Prince Edward Island, Summerside reported 60.6 centimetres, 10 percent above normal, while Charlottetown to the east, reported only 29.8 centimetres, 32 percent below normal.

Several major storms struck the Maritimes during the month. The first was a freezing rain storm that pounded the Maritimes on the 4th. Up to 13 hours of freezing rain was reported at Sydney, N.S. The freezing rain and ice pellets lasted approximately 24 hours at Fredericton, N.B. The storm caused many problems in Halifax, and was one of the most expensive for the Nova Scotia Power Corporation.

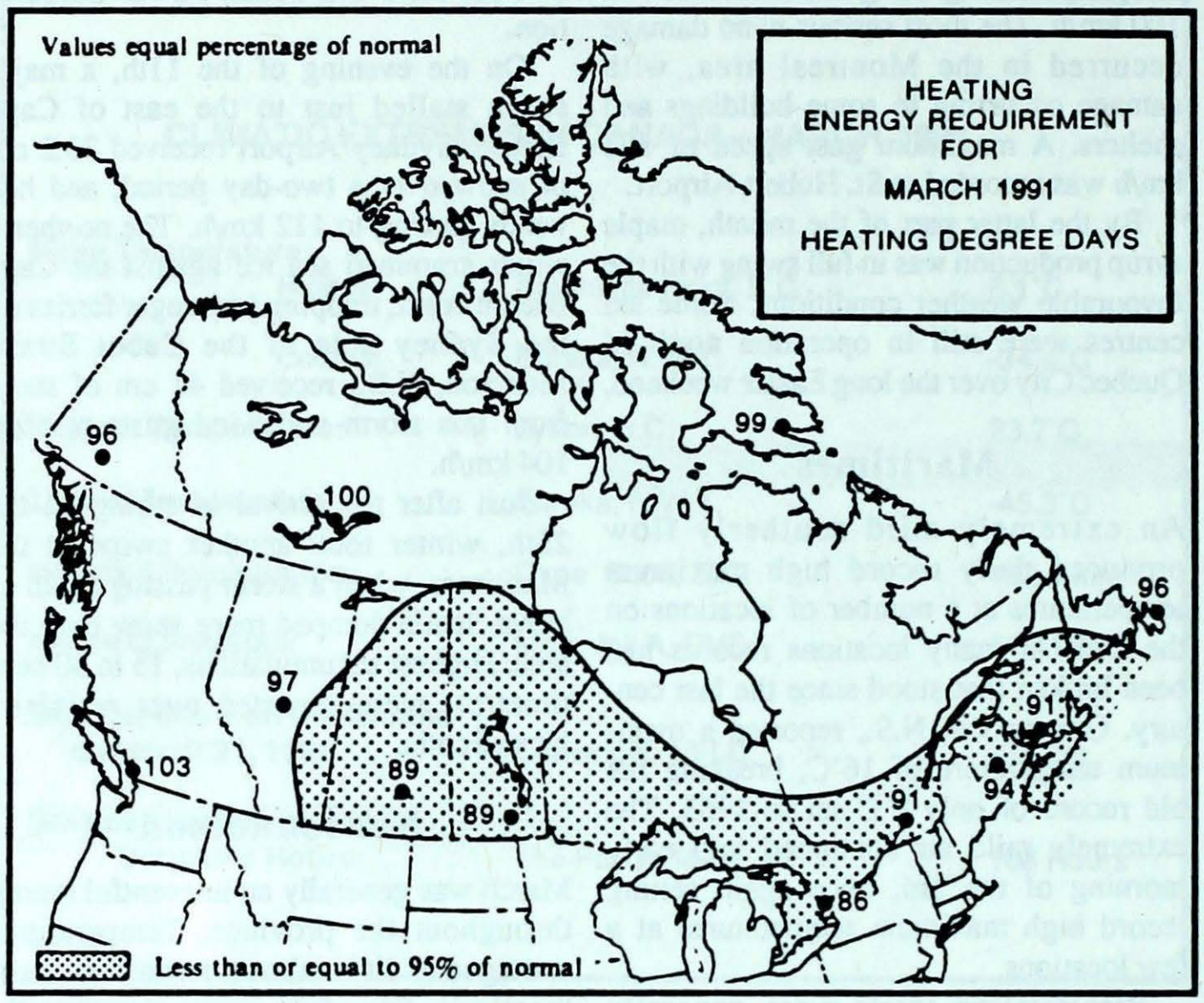
On the evening of the 11th, a major storm stalled just to the east of Cape Breton. Sydney Airport received 33.2 cm of snow over a two-day period, and had winds gusting to 112 km/h. The northerly winds crammed sea ice against the Cape Breton coast, trapping passenger ferries on the Sydney side of the Cabot Strait. Moncton, N.B., received 41 cm of snow from this storm and wind gusts reached 104 km/h.

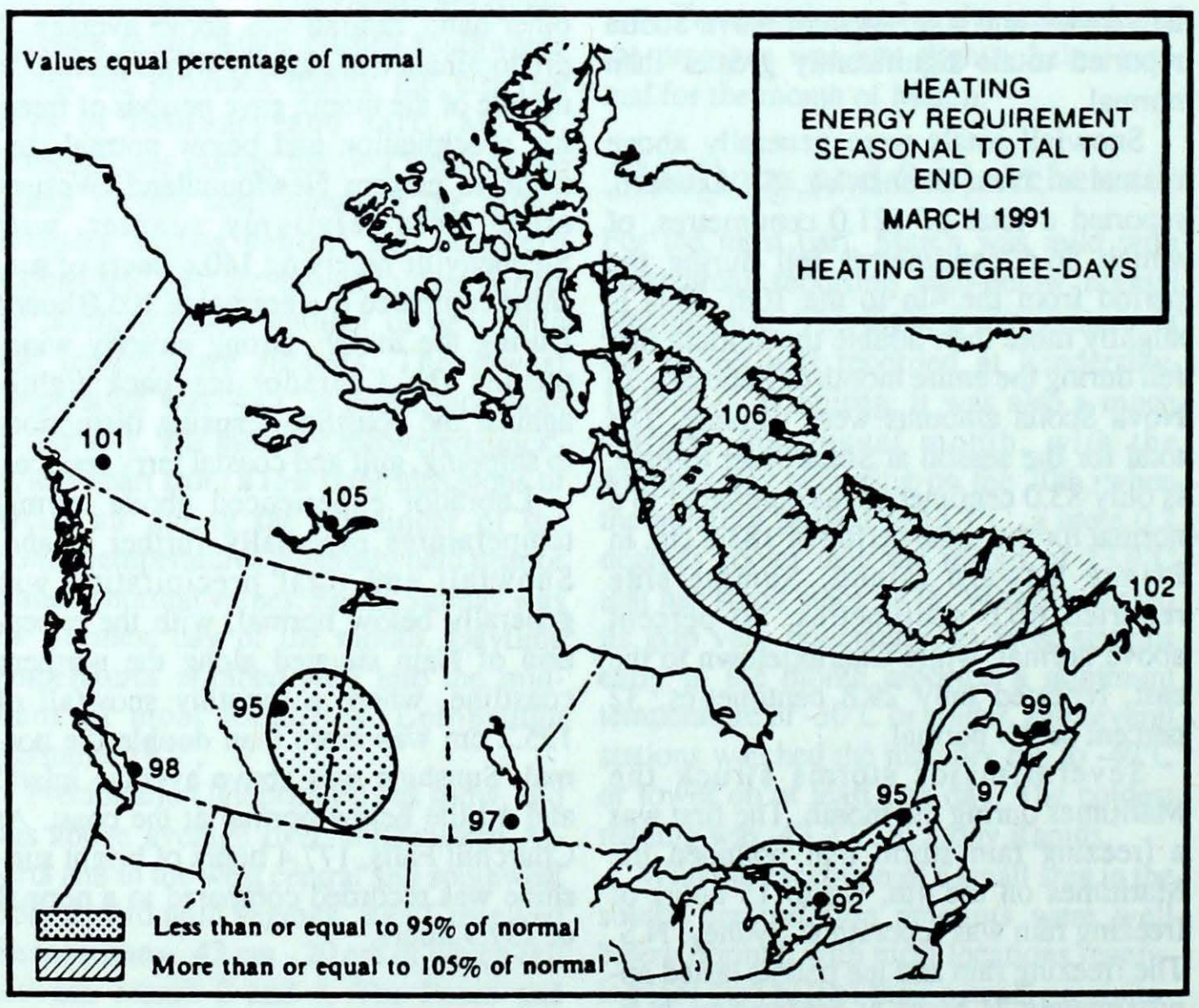
Just after the arrival of spring on the 25th, winter took another swipe at the Maritimes, when a storm passing south of Nova Scotia dumped more snow over the area. Highest accumulations, 15 to 30 centimetres, were reported over mainland Nova Scotia.

Newfoundland

March was generally an uneventful month throughout the province. Temperatures averaged a little above normal at most locations. Snowfalls were significantly below normal, with Burgeo receiving only 19.7 cm, less than half their normal. On the other hand, rainfall was above average. A predominance of easterly winds during the middle of the month gave periods of freezing precipitation and below normal sunshine to eastern Newfoundland. Western areas were relatively sunnier, with Stephenville receiving 140.4 hours of sunshine compared to a normal of 105.0 hours. During the month, strong easterly winds pushed the Labrador ice pack tightly against the coastline, causing disruptions to shipping, gulf and coastal ferry services.

Labrador experienced above normal temperatures especially further inland. Snowfall and total precipitation was generally below normal, with the exception of Nain situated along the northern coastline, where a monthly snowfall of 135.2 cm was more than double the normal. Sunshine was above average inland and a little below normal at the coast. At Churchill Falls, 177.4 hours of bright sunshine was recorded compared to a normal of 137.9 hours.



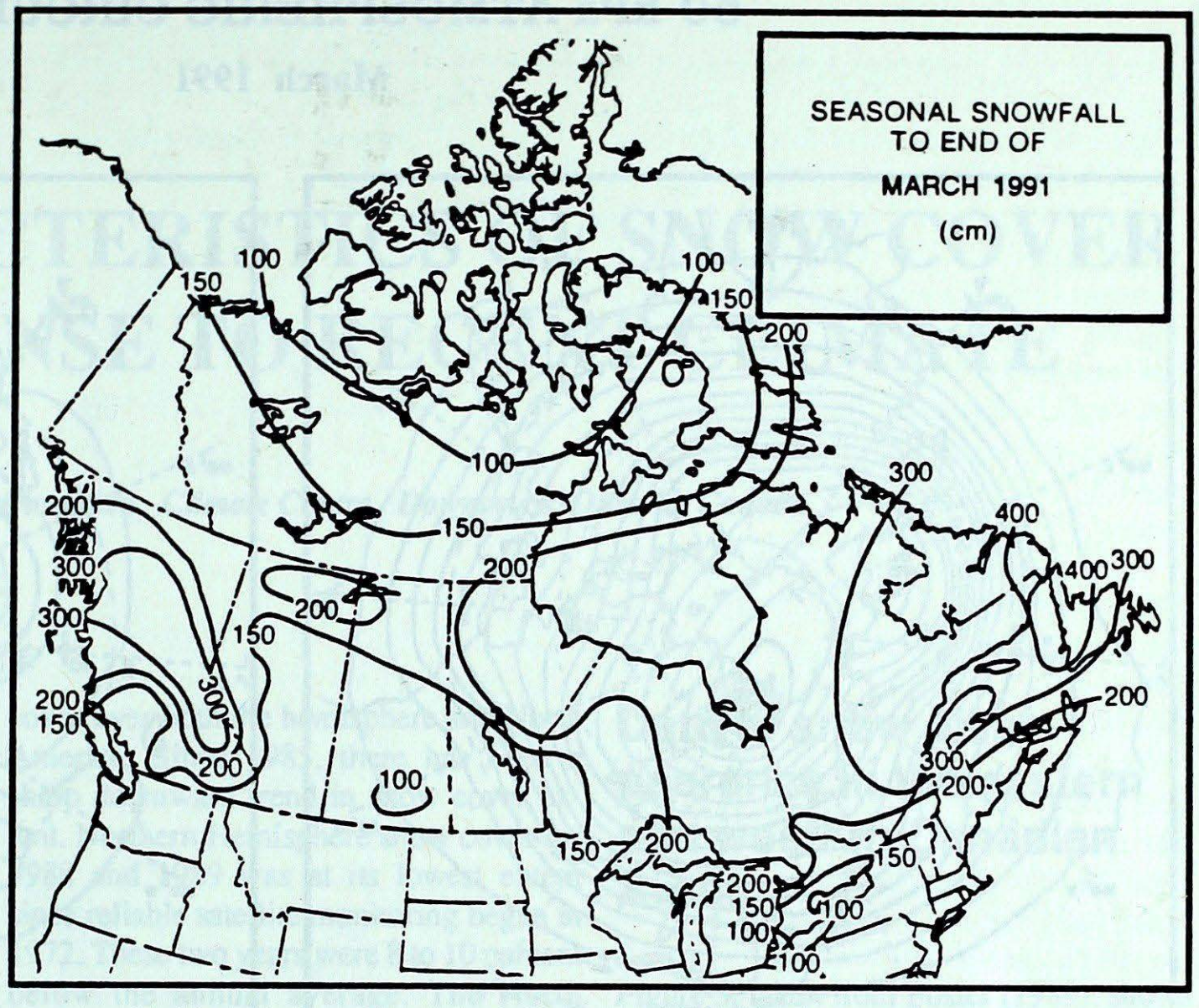


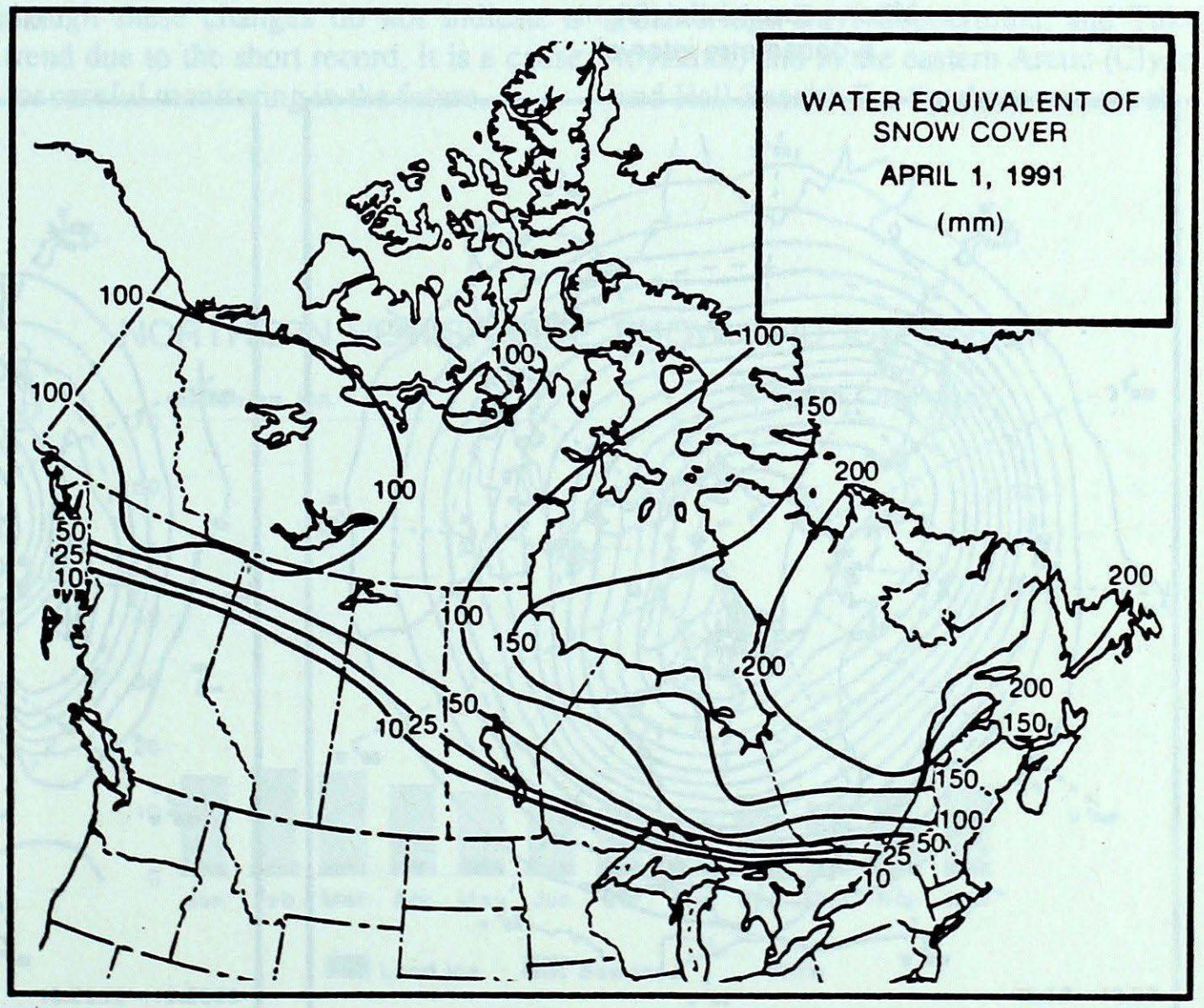
SEASONAL TOTAL OF HEATING DEGREE-DAYS TO END OF MARCH

	1991	1990	NORMAL
BRITISH COLUMBIA			
Kamloops	3272	3018	3272
Penticton	3020	2804	2983
Prince George	4515	4005	4522
Vancouver	2416	2334	2454
Victoria	2482	2415	2500
YUKON TERRITORY			
Whitehorse	5954	5591	5909
NORTHWEST TERRITORIES			
Iqaluit	8302	8115	7852
Inuvik	8314	8272	8306
Yellowknife	7535	7270	7183
ALBERTA			
Calgary	4190	3912	4478
Edmonton Mun.	4460	4181	4703
Grande Prairie	5168	4622	5267
SASKATCHEWAN			
Eastvan	4705	4398	4726
Regina	4869	4632	5054
Saskatoon	5146	4879	5242
MANITOBA			
Brandon	5292	5084	5277
Churchill	7575	7406	7361
The Pas	5750	5861	5809
Winnipeg	4957	5028	5116
ONTARIO			
Kapuskasing	5409	5423	5406
London	3223	3444	3484
Ottawa	4036	4095	4036
Sudbury	4424	4694	4590
Thunder Bay	4846	4934	4830
Toronto	3197	3472	3487
Windsor	2843	3443	3114
QUÉBEC			
Baie Comeau	5037	5180	4934
Montréal	3699	3954	3908
Québec	4289	4568	4360
Sept-Îles	5271	5447	5035
Sherbrooke	4056	4321	4408
Val-d'or	5239	5365	5176
NEW BRUNSWICK			
Charlo	4586	4735	4557
Fredericton	3818	4238	3952
Moncton	3877	4153	3885
NOVA SCOTIA			
Sydney	3519	3929	3514
Yarmouth	3002	3391	3236
PRINCE EDWARD ISLAND			
Charlottetown	3719	4148	3747
NEWFOUNDLAND			
Gander	4136	4427	3962
St. John's	3746	3993	3683

SEASONAL SNOWFALL TOTALS (cm) TO END OF MARCH

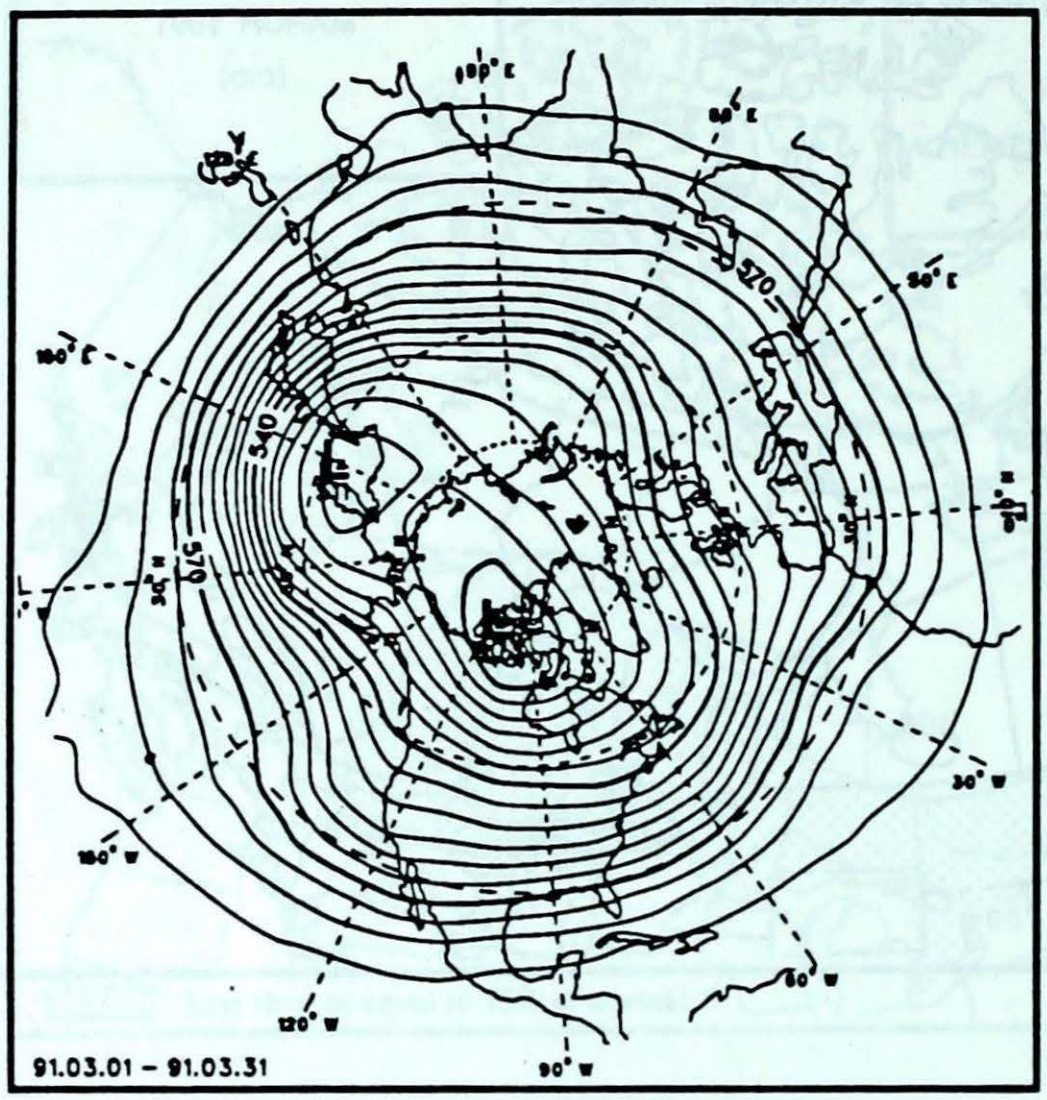
	1991	1990	NORMAL
BRITISH COLUMBIA			
Kamloops	96	51	91
Port Hardy	72	82	71
Prince George	302	239	230
Vancouver	118	51	60
Victoria	73	36	50
YUKON TERRITORY			
Whitehorse	181	153	122
NORTHWEST TERRITORIES			
Clyde	97	*	129
Inuvik	150	162	145
Yellowknife	167	145	122
ALBERTA			
Calgary	110	78	116
Edmonton Mun.	94	78	117
Grande Prairie	190	128	164
SASKATCHEWAN			
Eastvan	102	64	98
Regina	83	102	102
Saskatoon	118	62	102
MANITOBA			
Brandon	107	107	104
Churchill	204	130	150
The Pas	117	*	145
Winnipeg	97	88	112
ONTARIO			
Kapuskasing	260	334	285
London	180	217	199
Ottawa	185	224	218
Sudbury	231	258	229
Thunder Bay	275	144	193
Toronto	87	78	124
Windsor	83	108	113
QUÉBEC			
Baie Comeau	275	286	337
Montréal	197	182	224
Québec	314	300	326
Sept-Îles	421	318	388
Sherbrooke	210	295	289
Val-d'or	265	297	285
NEW BRUNSWICK			
Charlo	379	295	369
Fredericton	263	302	268
Moncton	304	294	311
NOVA SCOTIA			
Shearwater	83	176	184
Sydney	172	273	287
Yarmouth	111	228	201
PRINCE EDWARD ISLAND			
Charlottetown	186	238	301
NEWFOUNDLAND			
Gander	381	376	342
St. John's	231	232	312



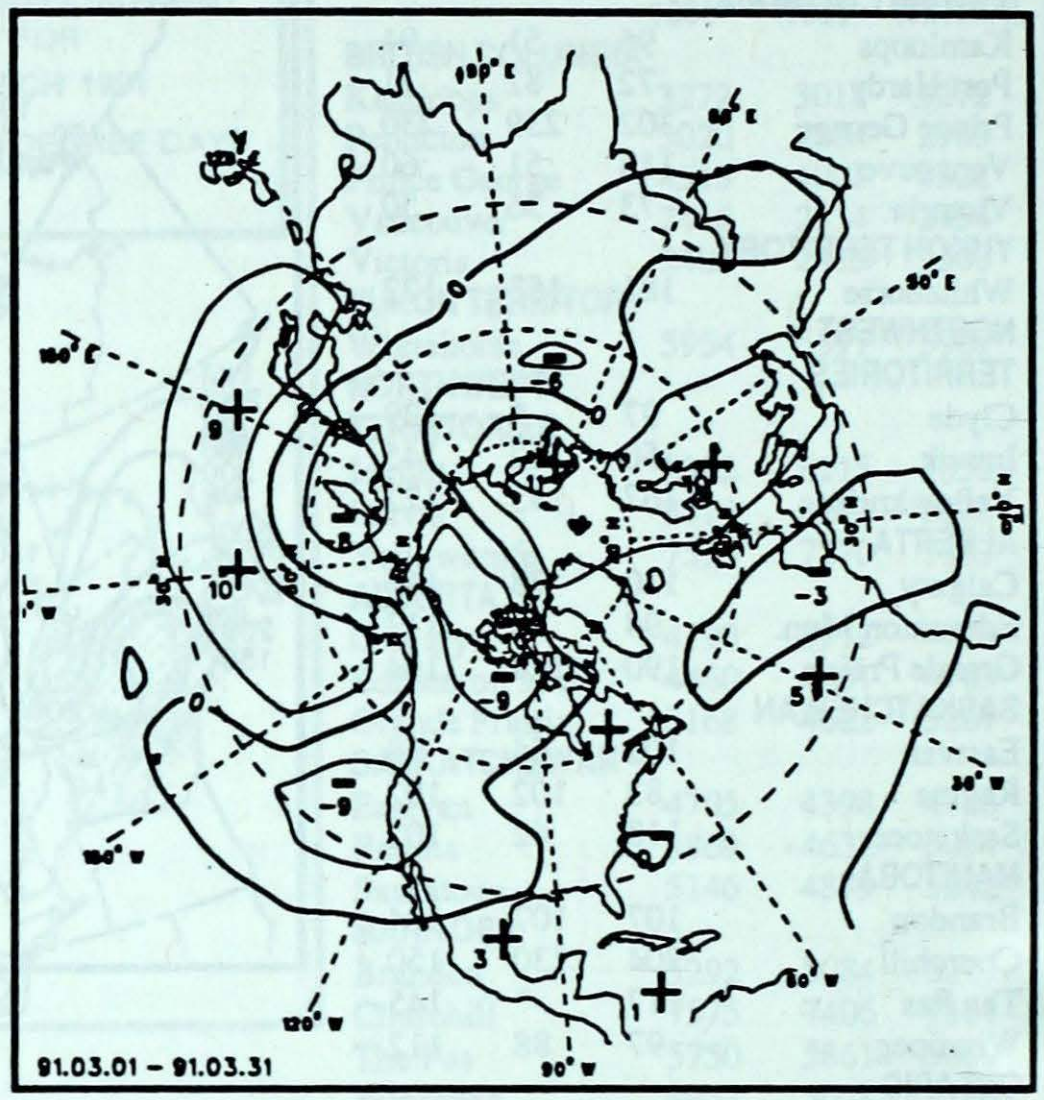


50-kPa ATMOSPHERIC CIRCULATION

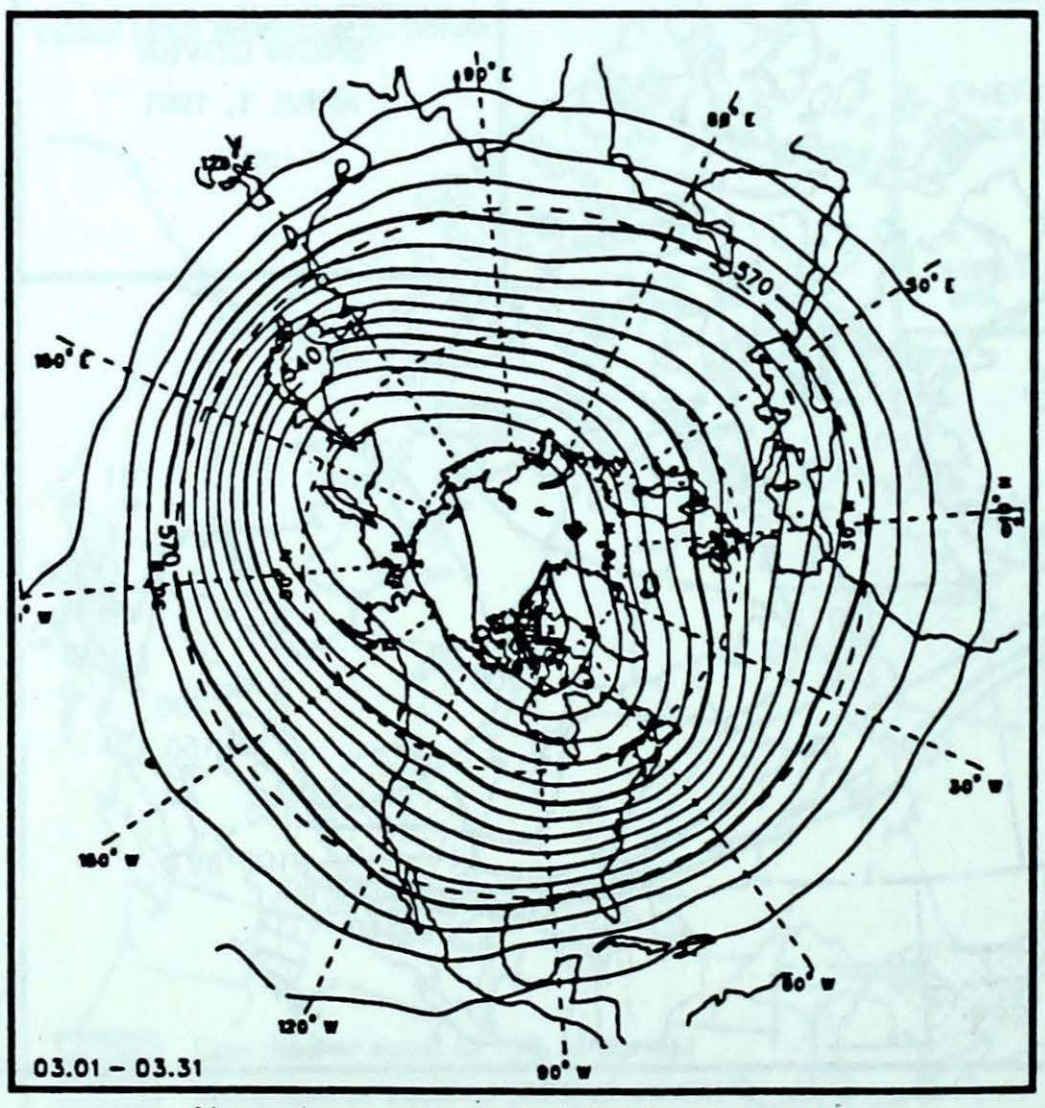
March 1991



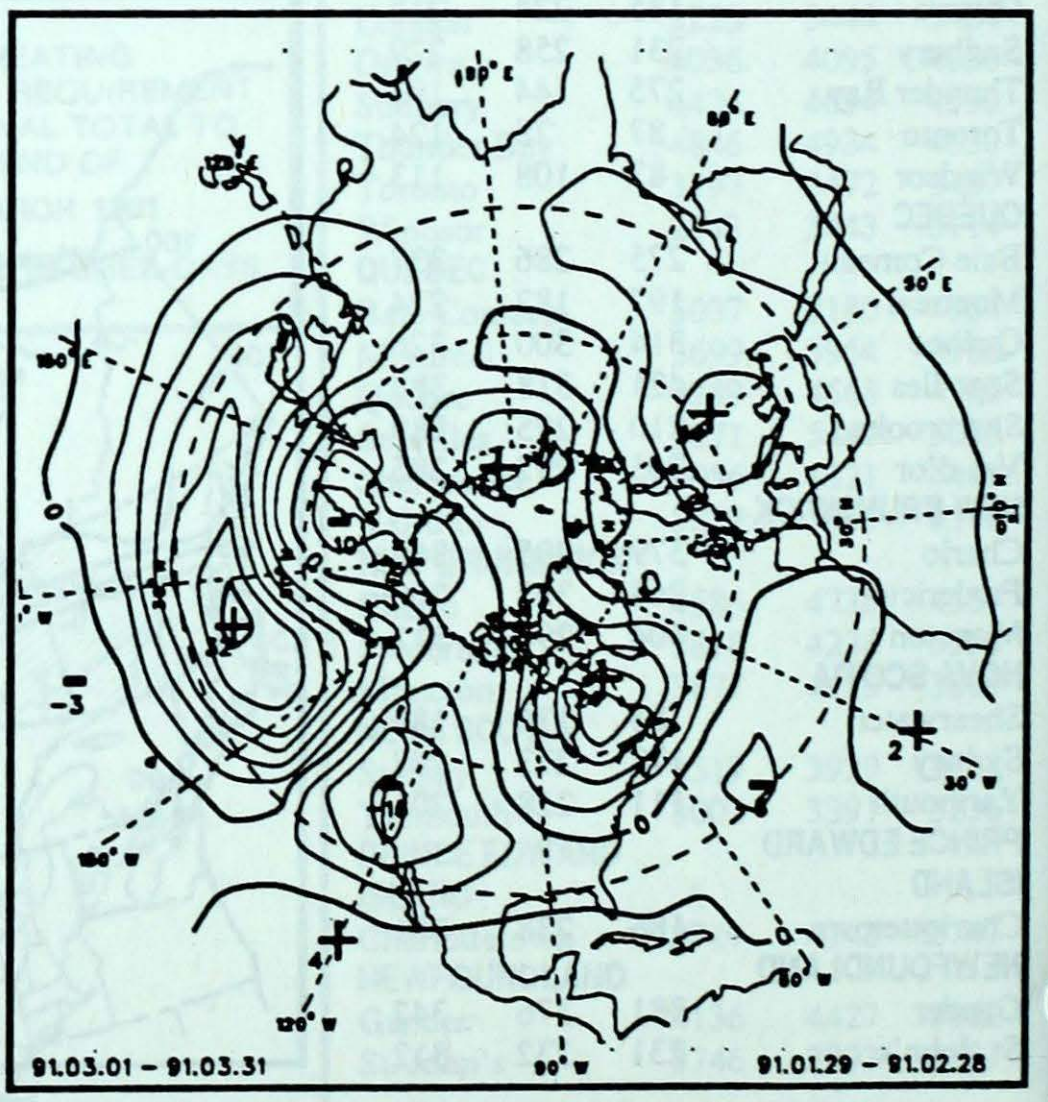
Mean geopotential heights
- 5 decametre interval -



Mean geopotential height anomaly
- 5 decametre interval-



Normal geopotential heights for the month
- 5 decametre interval -



Mean heights difference w/r to previous month
- 5 decametre interval -

SOME CHARACTERISTICS OF SNOW COVER AND RESPONSE TO RECENT CLIMATE

□ *Tom Agnew Canadian, Climate Centre, Downsview, Ontario, Canada*

Introduction

Snow cover is the most reflective natural substance to solar radiation. It is also the most transient and variable form of ice, changing the surface characteristics of large land areas of the earth in a matter of a few days. Figure 1, shows the seasonal variation of snow cover, as well as sea ice, and terrestrial ice sheets. Snow cover of Northern Hemispheric land areas varies from about 50 million km^2 in February to 5 million km^2 in August. North American snow cover area is about 22 percent less extensive than Eurasian snow cover.

Snow Cover Trends

The obvious sensitivity of snow cover to climate has lead to careful monitoring of snow cover over the Northern Hemisphere, with the hope of detecting climate trends caused by CO2 climate warming. Monitoring on a continental and hemispheric scale has improved considerably since 1972, due to satellite observing systems, which allow large scale monitoring to be done relatively easily. Figure 2, taken from Robinson and Dewey (1990), is a twelve month running mean of snow cover over the Northern Hemisphere, North America, and Eurasia. The twelve month mean removes the seasonal cycle. The data shows considerable variability from year to year, with 1979 and 1985 having extensive snow cover over both the hemisphere and North America. Since 1985, there has been a sharp downward trend in snow cover extent. Northern Hemisphere snow cover for 1988 and 1989 was at its lowest extent since reliable satellite monitoring began in 1972. These two years were 8 to 10 percent below the annual average. The North American snow cover area for 1988 and 1989 was at its lowest since 1981. Although these changes do not indicate a trend due to the short record, it is a cause for careful monitoring in the future.

Date of snow disappearance in the eastern and western Canadian Arctic

Figure 3, taken from Foster (1989), shows the date of snow disappearance for Canadian stations in the western Arctic (Cambridge Bay, Coppermine, and Tuktoyaktuk) and in the eastern Arctic (Clyde and Hall Beach). For the three western sta-

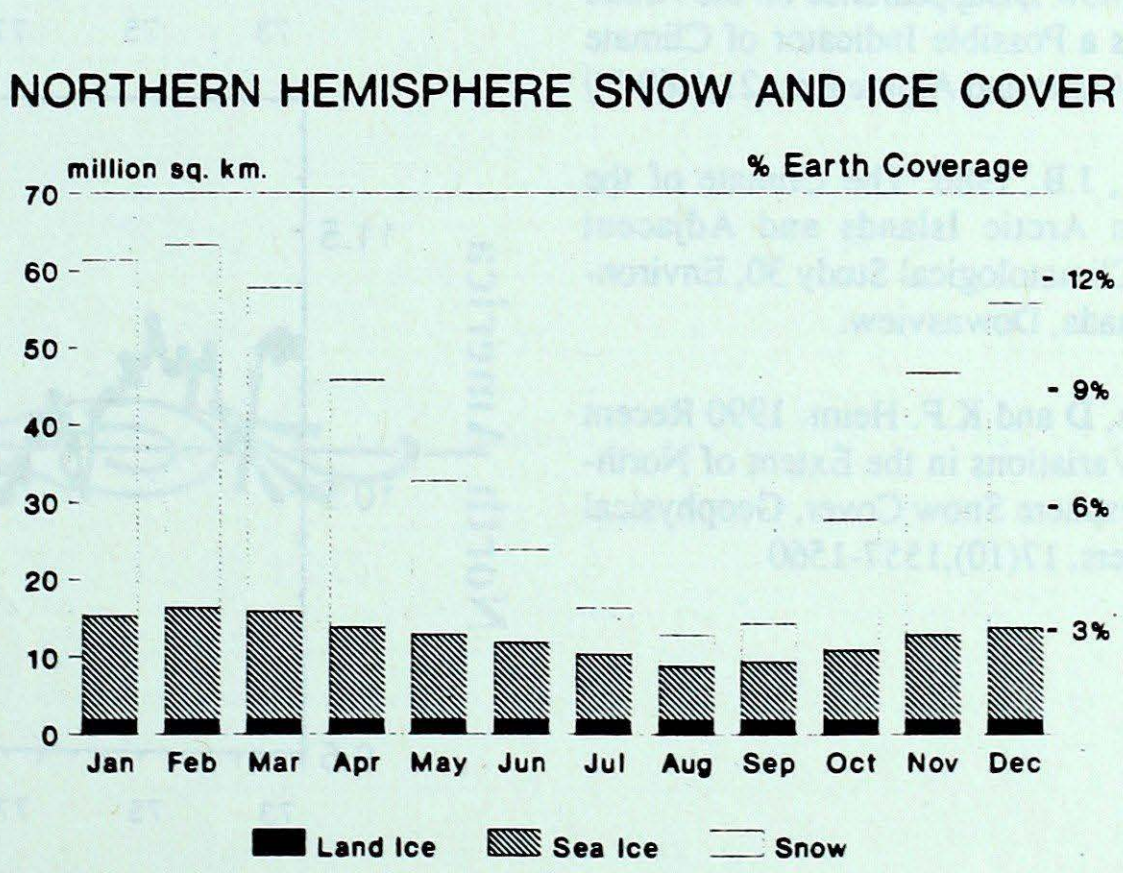


Fig. 1. Seasonal variation in snow cover, sea ice and land (glacial) ice

tions, snow melt begins earlier, around the end of May at Tuktoyaktuk, the first week in June for Coppermine, and mid-June for Cambridge Bay. The western Arctic stations also show trends towards earlier melt starting in the early 1960s. Snow cover in the western Arctic, as opposed to the eastern Arctic, melts more quickly because the climate is more continental, heating up rapidly during the onset of the warm season.

Later melt in the eastern Arctic, is no doubt caused by the high frequency of cyclonic activity that influences the region, along with the more mountanous terrain and large areas of open water in the winter, which induce wind, cloud, precipitation and lower temperatures (Maxwell, 1980). As a result, snowmelt begins in late June. The eastern Canadian stations show no long term trends. However, each curve shows two peaks. For Hall Beach the peaks occur around 1969 and in the late 1970s. For Clyde, the peaks occur in 1964 and 1978.

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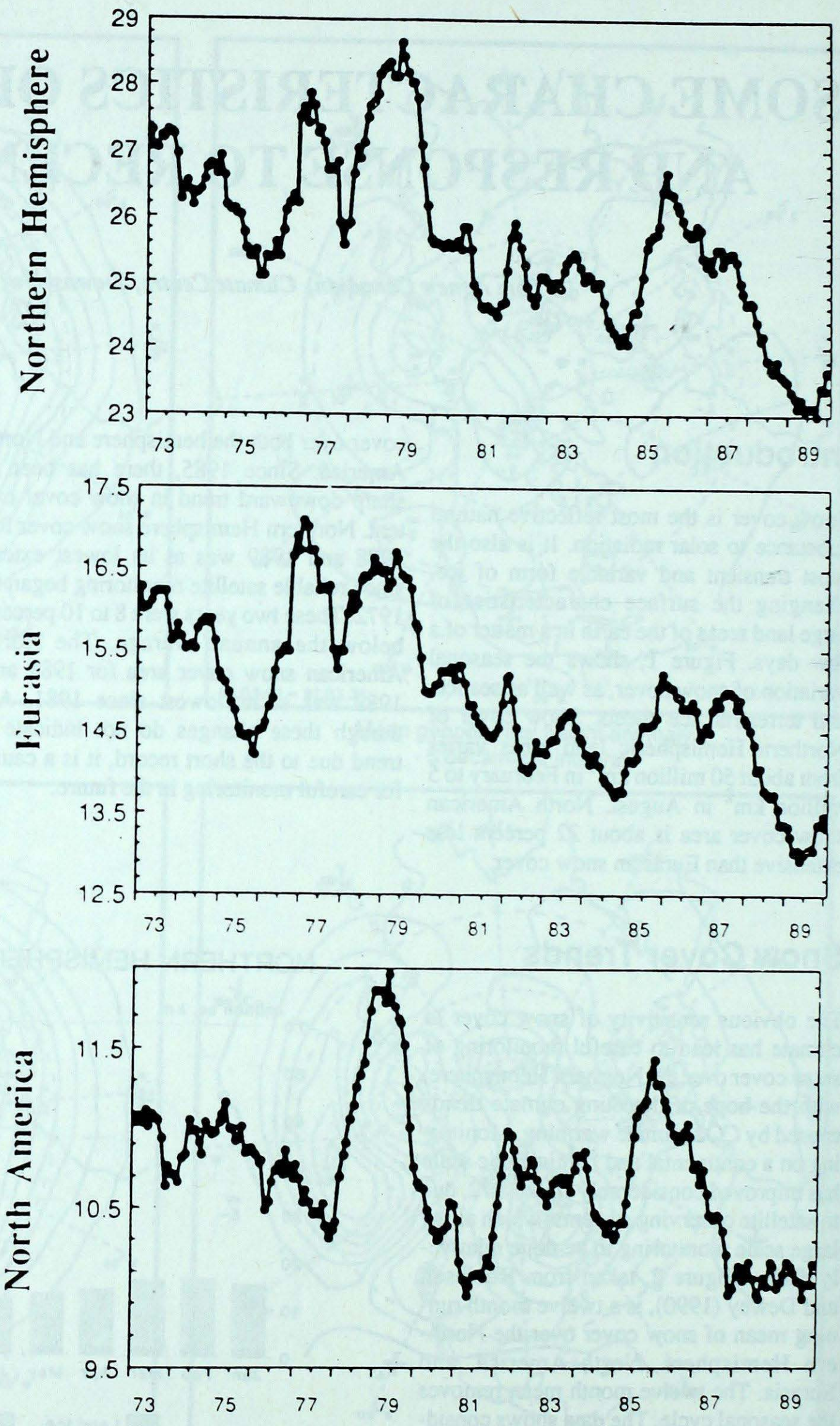

Fig. 2 .Twelve-month running means of snow cover (millions km^2) over the Northern Hemisphere for the period January 1972 through 1989.

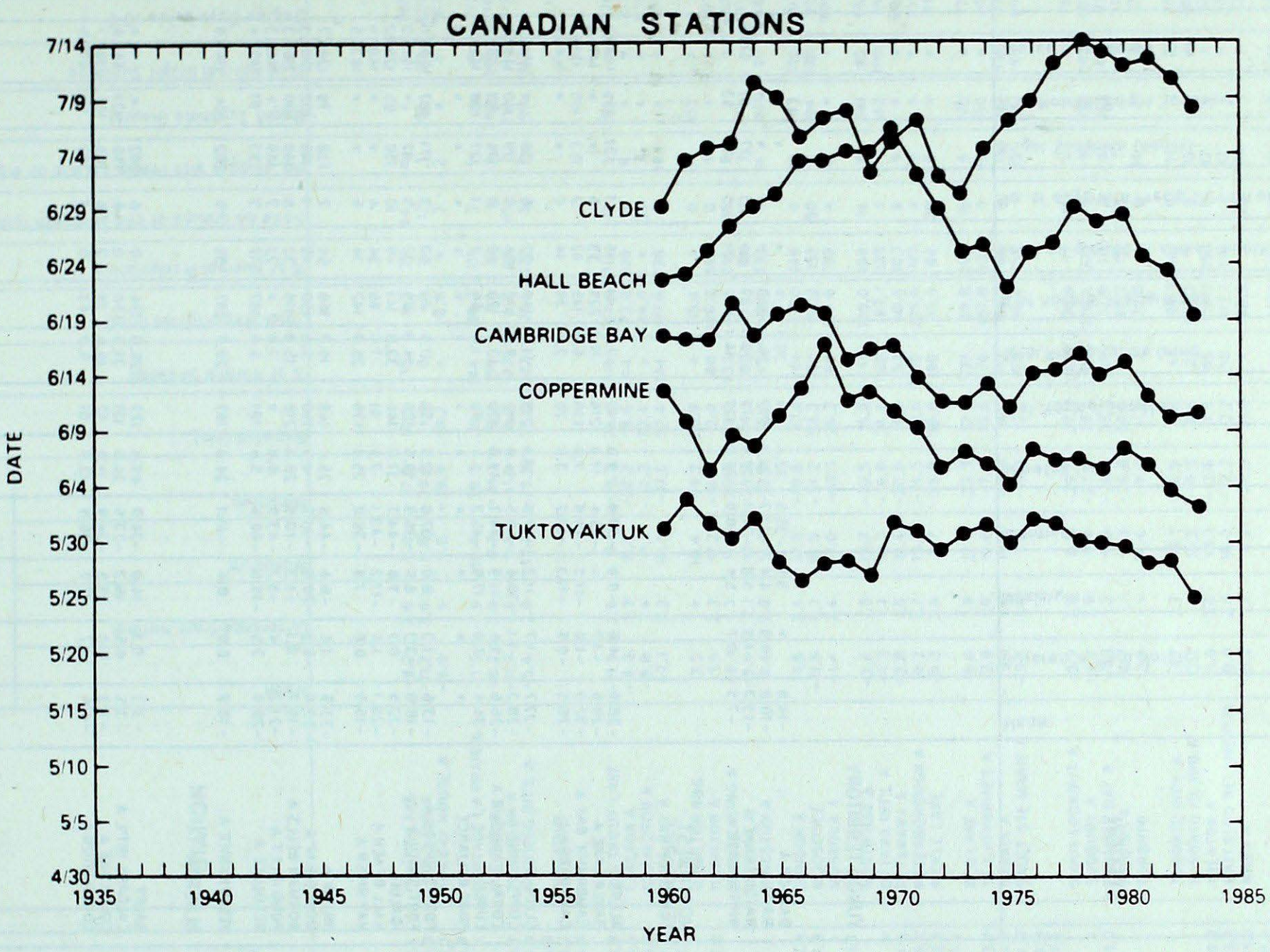

Fig. 3. Five-year running means for the date of snow disappearance for the Canadian Arctic stations: Tuktoyaktuk, Coppermine, Cambridge Bay, Hall Beach and Clyde.

MARCH 1991

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
BRITISH COLUMBIA													
ABBOTSFORD A	5.6	0.0	19.9	-3.7	19.3	169	96.8	69	0	15	129	116	385.4
ALERT BAY	4.2	-1.0	13.2	-3.4	9.7	93	67.4	55	0	16	*	*	426.9
ANPHITRITE POINT	6.1	-0.1	12.6	-1.2	6.8	151	179.8	52	0	22	*	*	370.2
BLUE RIVER A	-1.3	-0.3	16.3	-18.5	58.2	157	54.6	80	32	9	101	105	*
CAPE ST JAMES	4.6	-0.3	10.9	-4.0	18.9	205	98.4	76	0	17	128	*	415.7
CAPE SCOTT	4.7	-0.7	10.8	-3.8	34.6	298	182.1	66	0	17	*	*	412.4
CASTLEGAR A	3.1	0.1	20.4	-7.6	29.6	107	32.2	57	0	8	117	95	463.0
COMOX A	4.3	-0.7	12.9	-4.5	25.6	249	67.8	61	0	12	129	*	422.9
CRANBROOK A	-0.5	-1.3	16.7	-14.9	49.3	326	56.2	335	0	8	168	102	574.2
DEASE LAKE	-6.0	1.4	6.1	-32.3	9.8	37	7.0	31	71	4	137	103	751.3
FORT NELSON A	-6.9	2.9	10.0	-28.1	16.2	55	13.3	55	40	4	175	*	770.7
FORT ST JOHN A	-5.0	1.6	13.5	-27.8	14.4	44	13.5	45	0	3	178	*	712.8
HOPE A	5.2	-0.4	22.0	-6.0	46.0	295	117.8	80	0	15	105	104	396.1
KAMLOOPS A	3.5	0.0	21.7	-12.0	11.2	249	11.9	123	0	5	179	123	451.0
KELOWNA A	3.0	0.4	20.1	-10.1	2.6	41	12.4	62	0	4	148	110	466.0
LYTTON	3.8	-1.4	23.7	-13.3	35.8	389	37.2	111	0	4	144	99	440.5
MACKENZIE A	-2.2	2.2	9.8	-26.0	4.0	9	5.8	12	17	2	170	136	693.0
PENTICTON A	3.9	0.0	20.1	-7.9	8.7	198	17.1	99	0	5	144	103	435.9
PORT ALBERNI A	4.7	-0.4	17.5	-6.8	53.2	429	75.7	35	0	11	131	*	412.7
PORT HARDY A	3.9	-0.5	13.3	-3.0	8.4	76	81.2	57	0	15	119	118	436.9
PRINCE GEORGE A	-2.8	-1.0	14.8	-19.1	19.4	65	15.0	41	0	3	154	111	644.5
PRINCE RUPERT A	1.7	-1.4	10.1	-10.5	28.0	108	146.5	76	0	15	130	138	504.5
PRINCETON A	1.0	0.0	18.1	-18.5	23.0	176	21.0	111	0	5	158	*	*
REVELSTOKE A	0.9	0.1	16.6	-9.3	63.0	201	47.4	68	0	8	119	117	529.8
SANDSPIT A	3.4	-0.5	9.0	-4.1	0.2	2	52.8	53	0	10	136	112	456.5
SMITHERS A	-2.2	-0.9	11.7	-8.9	18.7	84	18.0	70	0	6	171	140	625.3
TERRACE A	0.9	-0.6	9.8	-12.2	21.8	49	47.6	57	0	11	144	132	531.8
VANCOUVER INT'L A	5.4	-0.4	13.8	-2.6	19.0	288	106.4	105	0	16	149	116	391.8
VICTORIA INT'L A	5.5	-0.2	14.6	-2.3	14.0	230	66.5	93	0	12	134	93	386.8
VICTORIA MARINE	5.7	-0.6	13.7	-1.7	0.0	0	80.8	71	0	14	*	*	380.4
WILLIAMS LAKE A	-3.5	-2.5	16.4	-23.9	37.2	170	25.8	115	0	5	153	94	665.1

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
YUKON TERRITORY													
DAWSON A	-14.8	*	5.9	-35.5	32.4	*	20.2	*	*	*	*	*	*
MAYO A	-10.8	0.9	4.4	-32.7	27.2	252	20.6	200	*	*	*	*	*
WATSON LAKE A	-13.2	-1.9	5.8	-30.1	22.0	79	20.1	87	59	5	77	57	872.5
WHITEHORSE A	-7.5	0.7	5.4	-28.9	20.8	127	14.1	104	29	5	81	53	712.1
NORTHWEST TERRITORIES													
ALERT	-28.6	4.6	-9.9	-37.9	3.0	42	2.8	41	16	1	131	195	1445.4
BAKER LAKE A	-29.6	-1.7	*	-43.4	17.9	216	17.1	225	33	6	*	*	1474.0
CAMBRIDGE BAY A	-32.3	-1.0	-17.5	-44.9	7.0	130	6.8	145	42	2	193	105	1558.1
CAPE PARRY A	-28.5	-0.9	-17.1	-42.2	3.0	28	2.4	39	14	0	*	*	1440.6
CLYDE A	-27.7	-1.7	-11.2	-47.8	13.1	218	11.4	190	22	6	158	*	1415.8
COPPERMINE A	-28.2	-1.1	-10.6	-40.5	14.8	142	9.8	100	104	5	179	110	1432.8
CORAL HARBOUR A	-26.6	-1.4	-11.9	-44.7	13.0	120	13.0	120	40	8	176	88	1382.0
EUREKA	-34.4	3.0	-17.9	-45.3	1.4	58	1.4	64	7	1	127	108	1622.3
FORT RELIANCE	*	*	*	*	*	*	*	*	*	*	*	*	*
FORT SIMPSON A	-13.6	1.3	8.0	-37.0	12.5	59	11.5	61	53	3	171	107	1006.0
FORT SMITH A	-18.0	-3.2	6.6	-36.9	19.6	123	14.3	99	72	5	82	*	1013.0
IQALUIT	-22.5	0.2	-3.6	-44.7	37.0	146	32.8	141	49	10	150	85	1254.2
HALL BEACH A	-28.1	1.4	-12.2	-43.1	7.5	61	7.6	65	34	4	*	*	1407.9
HAY RIVER A	-15.5	0.8	7.9	-39.0	25.9	135	25.9	142	74	6	*	*	1037.5
INUVIK A	-23.6	1.4	-6.6	-44.6	25.4	169	19.2	160	54	7	138	79	1289.7
MOULD BAY A	-33.0	-0.2	-20.8	-41.7	4.5	150	3.6	150	18	1	145	132	1585.3
NORMAN WELLS A	-19.7	0.1	-1.3	-40.9	28.6	210	15.3	119	32	5	169	100	1169.3
POND INLET A	-27.2	*	-5.7	-43.9	8.8	*	7.6	*	22	2	169	*	1402.3
RESOLUTE A	-28.9	2.5	-16.0	-40.6	5.6	181	5.6	187	12	3	133	91	1455.4
YELLOWKNIFE A	-18.9	0.0	0.4	-41.1	24.0	167	20.7	167	55	6	202	104	1144.9
ALBERTA													
BANFF	-3.3	0.1	14.0	-24.0	43.0	173	26.0	124	0	6	202	*	*
CALGARY INT'L A	-3.5	0.5	16.2	-23.5	24.0	121	21.0	130	0	6	196	121	665.0
COLD LAKE A	-7.3	0.3	15.5	-34.9	11.0	52	15.6	78	2	6	185	107	782.7
CORONATION A	-4.4	2.7	17.0	-26.8	12.0	51	9.0	43	0	1	202	111	692.5

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STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
EDMONTON INT'L A	-6.0	0.7	15.7	-27.3	11.8	63	14.0	88	0	6	196	114	742.4
EDMONTON MUNICIPAL	-4.4	0.6	15.6	-27.8	23.4	*	20.8	112	0	7	189	112	69.3
EDMONTON NAMAO A	-5.1	0.5	15.5	-28.3	3.8	22	20.6	114	0	6	*	*	717.2
EDSON A	-5.2	-0.5	15.9	-31.1	30.0	92	21.6	95	5	5	176	115	719.8
FORT CHIPEWYAN A	-13.3	-0.5	8.0	-43.0	31.6	192	29.2	158	*	*	*	*	*
FORT MCMURRAY A	-8.1	1.1	14.8	-36.7	13.0	54	23.1	112	9	2	202	122	809.9
GRANDE PRAIRIE A	-6.7	0.5	11.1	-31.9	4.1	18	3.4	16	11	6	184	*	766.0
HIGH LEVEL A	-10.2	0.8	10.4	-35.3	18.8	90	15.2	77	28	4	195	112	873.8
JASPER	-3.3	-0.6	14.3	-23.0	26.4	180	17.6	110	0	4	203	*	669.2
LETHBRIDGE A	-2.4	0.3	14.0	-16.6	12.4	47	19.2	79	4	4	101	*	435.0
MEDICINE HAT A	-1.1	1.7	17.5	-21.2	22.6	123	23.1	125	0	6	202	125	588.9
PEACE RIVER A	-7.7	0.8	15.1	-31.6	5.8	28	5.8	34	0	3	*	*	795.5
RED DEER A	-5.7	0.5	15.7	-25.9	20.7	102	14.8	76	0	6	*	*	735.7
ROCKY MTN HOUSE A	-6.5	-1.9	14.5	-30.2	9.8	33	5.0	19	10	3	*	*	1072.4
SLAVE LAKE A	-5.5	0.8	1.7	-32.2	6.6	24	7.8	38	0	3	193	115	727.6
WHITECOURT A	-4.6	1.3	15.5	-29.4	30.5	120	21.2	88	4	4	*	*	702.0
SASKATCHEWAN													
BROADVIEW	-5.8	2.3	15.4	-29.5	31.0	175	25.6	160	0	7	213	123	737.8
CREE LAKE	-12.5	1.0	8.0	-42.0	7.8	37	7.8	54	41	3	214	120	947.3
ESTEVAN A	-3.7	2.2	17.3	-26.2	32.4	187	30.4	158	9	5	198	107	*
HUDSON BAY A	-6.6	*	12.6	-36.2	11.4	*	6.8	*	0	2	215	*	761.7
KINDERSLEY	-3.5	3.1	17.8	-26.4	6.6	45	3.5	24	0	1	172	*	*
LA RONGE A	-8.5	2.2	11.6	-37.5	1.6	7	3.6	19	3	1	*	*	802.3
MEADOW LAKE A	-9.9	*	14.2	-40.4	11.6	*	8.2	*	4	6	195	*	860.7
MOOSE JAW A	-3.4	2.2	17.0	-28.8	21.2	115	23.8	136	0	6	198	119	662.7
NIPAWIN A	-10.1	*	7.1	-40.2	5.6	*	2.0	*	9	1	216	*	871.4
NORTH BATTLEFORD A	-8.6	0.0	15.4	-34.3	7.8	37	7.6	37	2	4	*	*	823.7
PRINCE ALBERT A	-9.4	0.9	9.7	-39.9	6.3	32	4.4	23	8	2	186	113	851.2
REGINA A	-5.1	2.7	13.8	-27.0	36.2	198	30.8	173	*	6	192	123	714.8
SASKATOON A	-5.6	3.0	16.2	-29.1	10.0	54	10.6	58	0	2	*	*	730.3
SWIFT CURRENT A	-2.9	2.8	16.4	-26.7	20.0	94	19.4	97	0	5	197	125	647.5
WYNYARD	*	*	*	*	*	*	*	*	*	*	*	*	*
YORKTON A	-8.2	1.4	9.5	-30.8	17.2	66	16.4	63	17	7	178	107	813.2
MANITOBA													
BRANDON A	-7.2	1.5	8.5	-31.5	25.7	130	26.3	131	6	5	179	*	780.2
CHURCHILL A	-18.2	2.2	3.4	-39.2	12.6	68	8.2	45	16	1	196	104	1123.7
DAUPHIN A	-6.1	3.0	13.4	-32.9	28.2	116	21.2	87	0	6	197	112	746.1
GILLAM A	-13.0	3.5	7.3	-37.2	6.2	20	3.8	19	25	1	*	*	990.6
GIMLI	-7.2	*	10.8	-28.8	48.8	*	43.9	*	6	7	204	105	780.0

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
ISLAND LAKE	-9.2	2.8	8.0	-37.6	10.6	19	9.2	29	44	4	*	*	768.2
LYNN LAKE A	-11.7	3.0	8.8	-39.7	1.9	8	1.5	10	12	1	206	111	920.5
NORWAY HOUSE A	-9.0	*	9.6	-36.9	10.2	*	8.6	*	3	2	*	*	983.5
PORTAGE LA PRAIRIE	-5.5	1.9	10.4	-30.3	39.1	144	30.2	111	3	5	*	*	727.3
THE PAS A	-8.2	3.0	8.7	-34.1	10.7	38	7.5	32	1	3	260	149	810.4
THOMPSON A	-11.7	2.5	9.5	-41.6	6.8	23	6.8	33	45	1	216	111	919.6
WINNIPEG INT'L A	-5.4	2.8	13.7	-29.9	27.8	132	27.6	122	5	7	198	112	*
ONTARIO													
BIG TROUT LAKE	-11.9	2.6	8.1	-35.2	26.4	116	24.6	114	12	5	184	*	926.6
EARLTON A	-6.3	1.3	8.4	-28.2	19.6	44	73.0	126	5	8	*	*	753.0
GERALDTON A	-8.8	*	11.1	-32.3	32.4	*	34.0	*	39	7	*	*	828.7
GORE BAY A	-2.1	2.2	10.0	-17.5	32.4	104	127.8	238	2	10	*	*	622.6
HAMILTON RBG	2.5	*	18.4	-9.2	20.8	*	115.4	*	0	11	153	*	*
HAMILTON A	1.5	2.3	17.2	-10.4	12.0	60	108.0	140	0	9	*	*	509.9
KAPUSKASING A	-8.1	1.3	11.0	-30.6	63.2	133	91.5	165	45	9	*	*	808.9
KENORA A	-5.0	2.1	13.1	-29.9	24.1	82	27.1	90	11	7	*	*	711.3
KINGSTON A	0.4	2.0	11.4	-12.8	14.0	43	113.6	132	0	14	141	99	545.7
LONDON A	1.5	2.4	17.9	-10.6	17.1	61	111.0	148	0	12	133	110	511.1
MOOSONEE	-11.6	0.7	10.8	-34.2	53.2	161	57.0	152	50	7	204	138	917.3
MUSKOKA A	-1.4	2.4	12.0	-19.1	25.3	69	120.8	182	*	12	*	*	609.4
NORTH BAY A	-3.4	1.9	13.7	-22.5	15.8	41	100.0	164	14	8	141	95	662.5
OTTAWA INT'L A	-1.3	1.7	10.7	-16.0	24.4	68	87.1	129	*	11	148	100	597.3
PETAWAWA A	-2.8	1.5	11.4	-20.6	16.0	53	68.4	103	6	9	*	*	640.3
PETERBOROUGH A	0.2	2.7	13.2	-14.5	19.8	85	105.6	147	*	12	*	*	554.4
PICKLE LAKE	-8.2	2.5	8.7	-33.0	38.0	99	35.0	84	38	5	*	*	812.5
RED LAKE A	-6.8	1.9	12.0	-33.3	32.8	137	29.8	103	16	6	198	*	770.2
ST CATHARINES A	2.9	1.8	19.6	-7.4	13.6	76	107.8	132	0	10	150	*	467.7
SARNIA A	2.1	1.8	19.2	-9.0	8.8	40	56.2	84	0	11	145	114	494.1
SAULT STE MARIE A	-3.5	1.4	7.4	-18.1	32.2	106	90.4	154	1	15	141	93	664.7
SIOUX LOOKOUT A	-5.5	2.8	8.8	-29.0	27.3	85	26.9	77	16	6	*	*	729.2
SUDBURY A	-4.0	2.0	9.9	-23.4	29.7	85	120.4	218	9	9	156	102	680.8
THUNDER BAY A	-5.1	1.2	8.8	-24.0	23.6	69	52.6	117	2	6	149	86	716.7
TIMMINS A	-6.7	1.7	11.3	-28.0	56.5	105	88.9	151	55	7	*	*	770.6
TORONTO	2.6	*	14.4	-9.4	11.0	*	119.0	*	0	14	*	*	477.3
TORONTO INT'L A	1.7	2.7	18.1	-10.6	9.2	41	98.1	161	0	11	*	*	507.5
TORONTO ISLAND A	2.2	*	14.2	-8.9	6.6	31	133.2	*	0	12	*	*	489.5
TRENTON A	1.0	2.0	13.1	-12.6	17.4	65	110.2	153	0	12	*	*	527.8
WATERLOO WELLINGTON	0.9	2.8	18.0	-12.3	12.2	50	112.1	137	1	12	*	*	531.0
WAWA A	-5.2	*	8.2	-24.3	31.0	*	98.6	*	25	11	*	*	721.4
WIARTON A	-0.2	2.6	18.1	-13.3	24.4	57	99.0	152	0	12	140	101	571.5
WINDSOR A	3.8	2.6	21.9	-2.2	1.2	6	43.6	61	0	8	*	*	441.3

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STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
QUEBEC													
BAGOTVILLE A	-5.4	1.1	9.9	-19.2	70.2	147	95.6	186	21	10	155	*	723.6
BAIE COMEAU A	-5.5	1.2	4.8	-21.1	104.1	172	135.6	175	85	11	136	91	728.5
BLANC SABLON A	-5.3	0.5	4.4	-23.2	61.4	74	72.8	64	32	12	*	*	721.6
CHIBOUGAMAU CHAPAIS	-9.5	1.3	8.4	-26.0	41.4	94	64.0	142	64	9	185	*	851.8
GASPE A	-3.8	*	9.1	-22.0	71.6	*	91.9	*	42	10	150	*	675.5
INUKJUAK A	-21.4	-0.8	-3.7	-35.8	40.0	444	35.1	390	44	10	174	109	1230.5
KUUJJUAQ A	-17.5	0.2	4.6	-35.5	22.8	85	23.2	89	33	7	179	109	1075.0
KUUJJUARAPIK A	-17.2	-0.1	4.1	-40.4	25.5	126	31.2	149	30	6	171	101	1091.5
LA GRANDE IV A	-14.4	*	5.3	-40.3	47.2	*	42.0	*	660	12	161	*	1004.5
LA GRANDE RIVIERE A	14.2	*	5.3	-36.4	29.5	*	42.7	*	42	8	202	*	1016.6
MANIWAKI	-3.1	2.0	10.3	-20.6	25.4	75	84.4	164	7	8	159	110	652.9
MATAGAMI A	-10.1	*	9.4	-31.6	37.2	*	57.0	*	48	12	181	118	872.0
MONT JOLI A	-4.3	0.7	7.7	-16.6	118.1	187	149.8	208	41	13	127	98	692.5
MONTREAL INT'L A	-0.7	1.8	12.4	-13.9	39.7	111	94.7	129	0	12	143	92	579.6
MONTREAL MIRABEL I/	-1.9	*	10.9	-15.5	33.8	*	111.8	*	6	11	187	*	617.8
NATASHQUAN A	-5.0	1.2	7.0	-23.8	39.2	68	83.0	102	45	11	171	*	7142*
QUEBEC A	-2.8	1.7	7.7	-15.5	46.2	85	94.2	116	68	12	149	106	647.2
ROBERVAL A	-5.4	1.5	9.9	-19.2	70.2	119	95.6	157	21	10	155	*	723.6
SCHEFFERVILLE A	-13.5	1.6	2.8	-39.3	35.2	84	27.8	67	80	11	153	93	976.5
SEPT-ILES A	-5.6	1.0	3.9	-20.7	64.9	93	84.0	101	54	9	163	*	730.6
SHERBROOKE A	-1.7	2.6	12.2	-14.8	21.4	40	95.5	130	72	13	118	*	610.7
STE AGATHE DES MONT	-3.8	1.7	8.4	-19.5	45.8	70	118.0	123	58	11	154	101	677.1
ST HUBERT A	-0.8	1.6	12.3	-13.4	28.2	*	102.7	129	0	13	146	*	582.7
VAL D'OR A	-7.6	0.7	10.0	-28.2	37.0	78	78.0	132	34	12	156	100	793.6
NEW BRUNSWICK													
CHARLO A	-3.5	2.0	9.9	-19.0	72.9	96	116.8	127	44	13	139	94	665.0
CHATHAM A	-2.1	1.2	12.1	-14.3	103.4	153	159.4	164	3	14	121	83	621.2
FREDERICTON A	-1.3	1.1	11.9	-14.0	82.4	169	147.5	174	2	14	107	*	597.5
MONCTON A	-1.9	1.0	12.5	-14.5	106.4	157	176.4	157	3	14	120	87	618.4
SAINT JOHN A	-1.2	1.3	9.4	-12.6	61.0	122	145.8	128	1	17	122	85	592.2

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
NOVA SCOTIA													
GREENWOOD A	0.4	1.3	16.0	-12.5	71.5	149	99.5	118	5	14	*	*	545.0
HALIFAX INT'L A	0.1	1.7	11.6	-9.4	36.0	79	150.1	117	0	12	*	*	556.2
SABLE ISLAND	1.6	0.9	11.0	-5.2	56.8	199	167.1	144	0	19	91	78	509.2
SHEARWATER A	0.7	1.5	10.1	-8.3	24.4	63	152.4	130	0	11	116	79	537.8
SYDNEY A	-1.0	1.5	10.9	-17.8	55.1	86	164.5	125	0	14	108	85	589.4
YARMOUTH A	1.4	1.1	11.3	-6.4	33.9	104	164.7	167	0	14	106	78	510.1
PRINCE EDWARD ISLAND													
CHARLOTTETOWN A	-1.2	1.9	9.6	-11.3	29.8	48	77.6	81	6	13	*	*	594.1
SUMMERSIDE A	-1.3	1.5	8.6	-10.0	60.6	110	116.8	138	3	15	137	97	598.2
NEWFOUNDLAND													
BONAVISTA	-1.9	0.8	8.1	-13.5	52.6	134	122.6	140	7	14	*	*	614.7
BURGEO	-1.1	1.5	9.3	-15.0	19.7	41	162.8	108	0	12	*	*	594.1
CARTWRIGHT	-6.5	1.6	11.0	-23.8	41.7	49	55.9	60	214	11	117	94	760.7
CHURCHILL FALLS A	-10.6	2.5	6.9	-32.9	41.4	64	40.8	61	99	6	177	129	891.0
COMFORT COVE	-3.0	0.6	8.2	-18.6	68.2	99	123.7	123	82	17	*	*	648.2
DANIELS HARBOUR	-3.4	1.1	7.6	-17.6	36.2	59	64.8	86	2	14	119	104	663.9
DEER LAKE A	-3.5	1.0	10.0	-22.6	38.8	72	61.0	77	18	12	*	*	666.8
GANDER INT'L A	-2.8	0.7	7.5	-15.9	38.4	53	88.8	81	4	14	96	92	644.2
GOOSE A	-7.0	1.6	10.7	-27.5	55.4	74	50.0	69	60	5	146	*	776.5
MARY'S HARBOUR	-5.9	0.6	5.0	-23.1	30.0	40	56.4	62	73	12	*	*	741.9
PORT AUX BASQUES	-1.5	1.2	7.3	-13.0	31.0	60	117.0	112	2	13	191	*	612.9
ST ANTHONY	-5.3	1.4	2.1	-19.5	49.8	80	67.0	64	62	12	*	*	720.6
ST JOHN'S A	-1.6	0.7	11.9	-12.2	42.2	65	116.8	89	0	14	93	98	606.2
ST LAWRENCE	-1.0	0.8	7.4	-12.2	25.8	58	89.7	76	0	14	*	*	584.0
STEPHENVILLE A	-1.7	1.1	9.8	-20.9	38.1	65	95.4	117	6	10	140	134	609.0
WABUSH LAKE A	-10.7	3.1	5.7	-31.4	59.1	99	41.6	73	47	9	151	103	889.7

AGROCLIMATOLOGICAL STATIONS

MARCH 1991

STATION	Temperature C				Snowfall (cm)	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	Degree days above 5 C	
	Mean	Difference from Normal	Maximum	Minimum							This month	Since jan. 1st
BRITISH COLUMBIA												
AGASSIZ	5.8	-0.3	21.0	-4.0	27.8	121.2	82	0	13	137	110.6	146.8
KAMPLOOPS	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
SIDNEY	5.7	0.0	15.0	-2.0	7.0	68.1	101	0	14	132	94.0	122.0
SUMMERLAND	*.*	*.*	19.5	-8.0	11.0	12.8	86	0	4	164	30.8	36.1
ALBERTA												
BEAVERLODGE	-5.7	0.4	12.5	-28.0	9.8	7.8	32	3	1	181	2.0	2.5
ELLERSLIE	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
LACOMBE	-5.0	1.0	16.5	-26.0	9.5	6.5	34	0	3	201	3.4	3.4
LETHBRIDGE	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
VEGREVILLE	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
SASKATCHWAN												
INDIAN HEAD	-6.6	1.3	12.5	-30.0	45.9	23.6	108	0	7	**	0.0	0.0
MELFORT	-8.3	1.9	10.0	-36.0	3.0	3.0	17	0	0	170	0.0	0.0
REGINA	-6.8	1.4	14.0	-29.5	31.0	31.2	194	0	7	**	2.0	2.0
SASKATOON	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
SCOTT	-6.4	2.5	15.0	-30.0	4.5	9.7	51	0	4	161	3.0	3.0
SWIFT CURRENT	-2.5	2.2	16.5	-26.5	16.4	13.9	90	0	5	168	12.9	12.9
MANITOBA												
BRANDON	-5.7	2.7	10.7	-30.1	26.1	26.1	111	0	4	**	0.0	0.0
MORDEN	-3.7	5.3	15.0	-27.0	20.4	21.2	89	5	***	4	*.*	*.*
GLENLEA	-6.0	0.7	14.0	-31.0	28.2	28.2	100	7	7	183	1.0	1.0
ONTARIO												
DELHI	2.1	2.4	18.0	-11.0	10.8	98.2	116	0	12	**	20.7	24.3
ELORA	0.0	2.7	0.0	*.*	84.4	0.3	0	95	***	**	*.*	*.*
GUELPH	0.5	2.4	17.6	-12.6	49.8	142.1	227	0	14	138	13.4	14.7
HARROW	3.7	2.5	20.5	-8.5	8.2	62.0	83	0	11	156	33.2	43.9
KAPUSKASING	-8.5	1.1	11.0	-31.0	44.6	95.4	177	48	9	183	0.0	0.0
OTTAWA	-1.0	1.9	10.5	-16.2	22.7	73.7	124	9	***	2	*.*	*.*
SMITHFIELD	1.6	3.0	14.7	-12.2	2.0	157.2	185	0	11	**	9.2	9.6
VINELAND	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
WOODSLIE	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*

STATION	Temperature C				Snowfall (cm)	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	Degree days above 5 C	
	Mean	Difference from Normal	Maximum	Minimum							This month	Since jan. 1st
QUEBEC												
LA POCATIERE	-4.1	0.3	8.0	-16.0	66.3	123.9	184	28	13	142	0.0	0.0
L'ASSOMPTION	-1.5	2.2	10.5	-15.0	23.9	121.7	175	9	***	3	*.*	*.*
LENNOXVILLE	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
NORMANDIN	-6.8	1.9	7.5	-25.5	47.3	76.0	128	32	12	162	0.0	0.0
STE.CLOTILDE	*.*	*.*	*.*	*.*	*.*	*.*	**	***	***	**	*.*	*.*
NEW BRUNSWICK												
FREDERICTON	-1.0	1.5	14.5	-15.5	46.6	171.6	212	2	14	119	3.5	3.5
NOVA SCOTIA												
KENTVILLE	0.8	1.8	15.0	-10.0	68.7	145.5	148	4	16	116	*.*	*.*
NAPPAN	-0.4	1.9	11.0	-14.0	86.4	125.2	139	10	15	125	0.5	0.5
PRINCE EDWARD ISLAND												
CHARLOTTETWN	-0.5	2.2	10.0	-13.0	28.4	82.2	97	6	13	137	0.8	0.8
NEWFOUNDLAND												
ST.JOHN'S WEST	1.8	3.8	-3.7	-13.0	45.4	163.8	109	0	19	83	*	*.*