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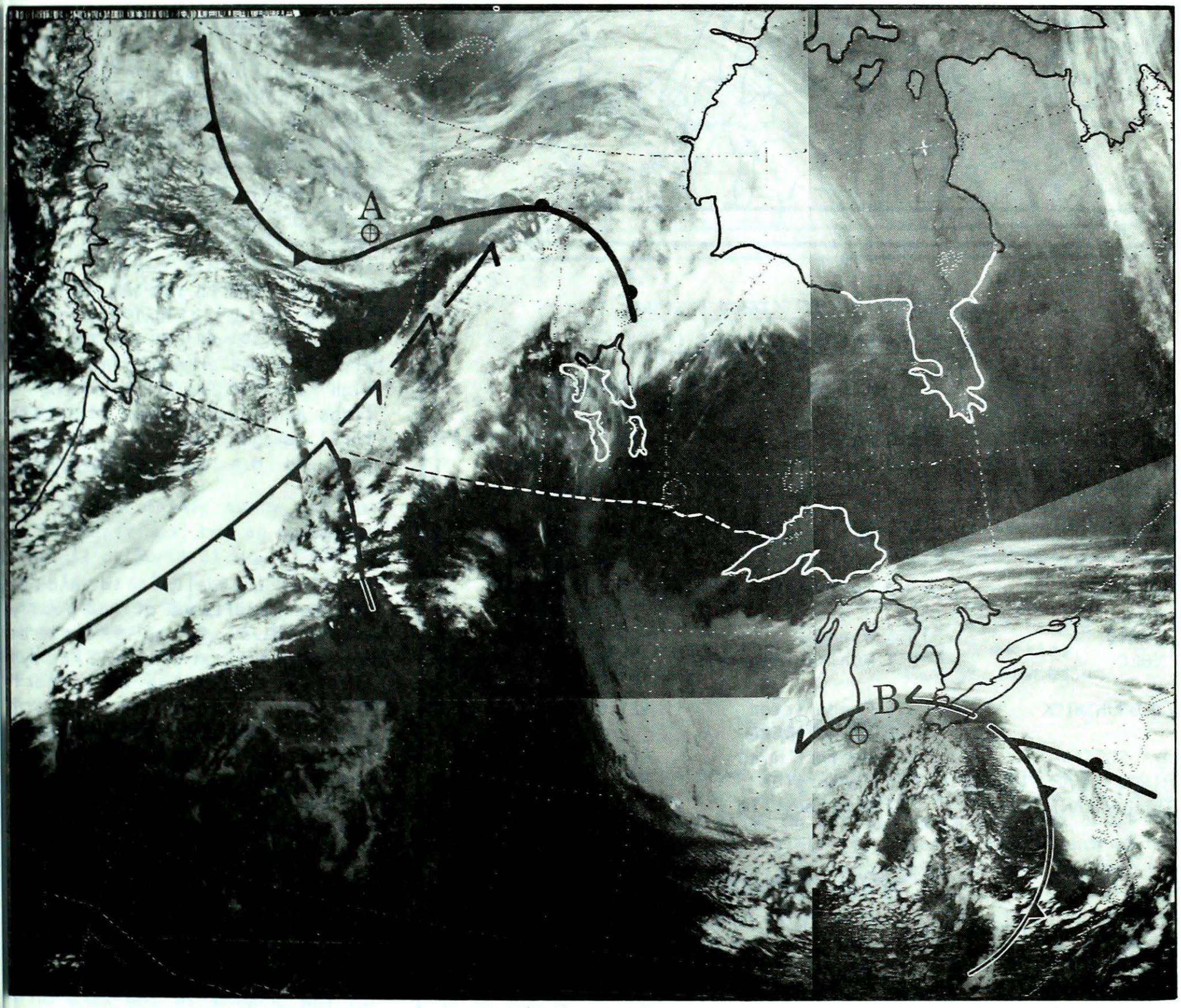
Climatic Perspectives

For the period March 19 to 25, 1985

Vol.7 NO.12

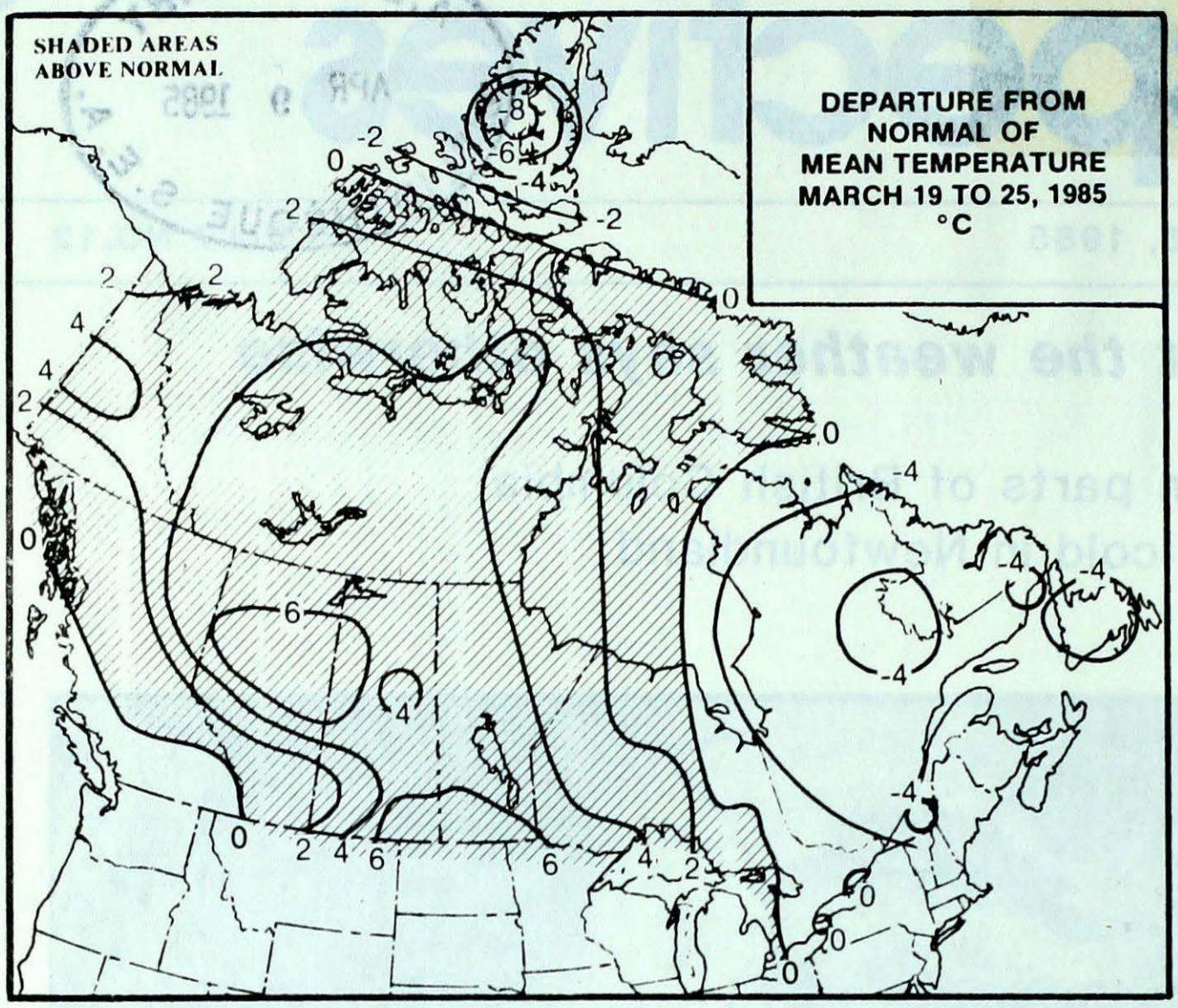
• *Spring is here but the weather says otherwise*

Stormy weather in parts of British Columbia
Snow and record cold in Newfoundland



This NOAA 9 satellite picture of March 24, 1985 shows two significant storm systems. For more detail see page 3.

Canada



WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	4.0	Mayo	-32.7	Shingle Point
NORTHWEST TERRITORIES	5.0	Fort Simpson	-47.8	Eureka
BRITISH COLUMBIA	17.0	Saturna Island	-19.3	Dease Lake
ALBERTA	16.3	Medicine Hat	-20.7	High Level
SASKATCHEWAN	15.3	Estevan	-24.8	Collins Bay
MANITOBA	10.8	Portage la Prairie	-28.7	Churchill
ONTARIO	14.3	Windsor	-29.0	Moosonee
QUEBEC	8.2	Montréal/Dorval	-33.6	Kuujjuaraplk
NEW BRUNSWICK	8.1	Fredericton St. Stephen	-21.0	Charlo
NOVA SCOTIA	12.9	Western Head	-15.8	Greenwood
PRINCE EDWARD ISLAND	4.5	Summerside	-13.3	Charlottetown
NEWFOUNDLAND	3.7	Stephenville	-30.9	Wabush Lake

ACROSS THE NATION

Warmest mean temperature	5.5	Victoria, B.C.
Coolest mean temperature	-43.9	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

Except for the northeast, mean temperatures were well above normal, as much as 8° in the Mackenzie district. During the middle of the week, maximum temperatures climbed to 4 and 5 degrees in the Yukon and the Mackenzie district, respectively. In contrast the maximum temperature never rose above -40°C at Eureka. Except in the Cassiar Mountains, where 20 to 30 centimetres of new snow was reported, snowfalls elsewhere across the north were insignificant.

British Columbia

Beautiful spring-like weather of the past several weeks gave way to an unsettled weather regime. Over the weekend storm warnings were posted for the Juan de Fuca and Georgia Strait. Frequent showers of rain or snow and thunderstorms, occasionally with hail, plagued southwestern B.C. Heavy snowfalls were reported in the mountains, much to the delight of ski resort operators. On March 22 and 23, inland winds across the south gusted as high as 100 km/h, breaking tree limbs and causing other minor structural damage. Many small planes were grounded due to low level turbulence.

Prairies

The unusually mild and sunny weather conditions of the past week slowly gave way as a disturbance approached from the U.S. Daytime readings during the early part of the week reached the mid-to high teens in the west, but climbed only as high as 10°C in the east. A large area of heavy snow spread across southern agricultural districts on March 22 and 23. Snowfalls in southern Alberta and Saskatchewan ranged from 15 to 20 centimetres, while a mixture of rain and snow fell in Manitoba. Near Swift Current, the Trans Canada Highway was impassable due to more than 20 cm of new snow on the ground. In the wake of this system skies cleared, and temperatures returned to more seasonable values.

Ontario

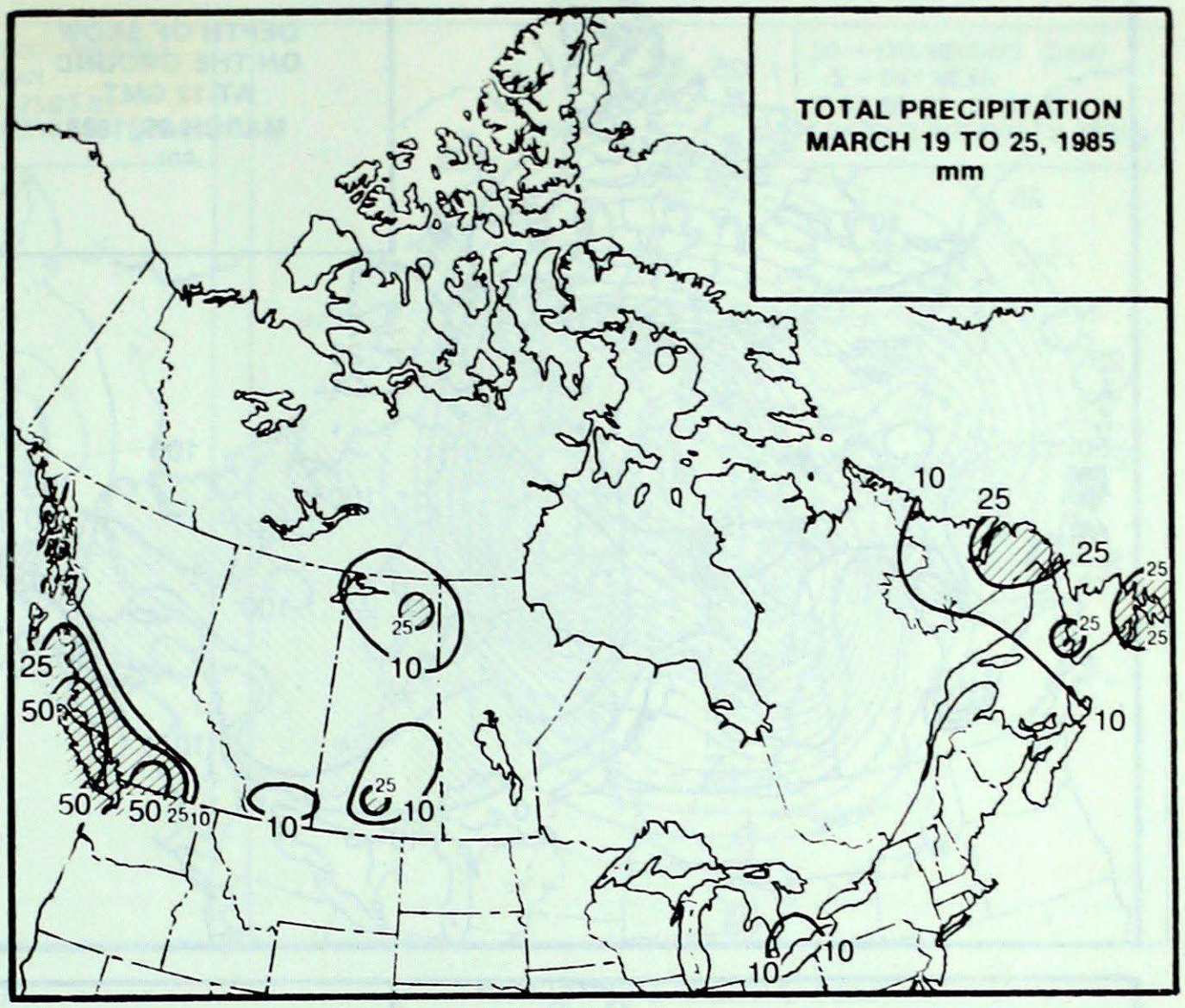
Relatively pleasant spring weather continued, with dry and frequently sunny days. The tapping of maple trees for maple syrup production was well underway. Temperatures for the week averaged near normal in the sugarbush, but cool daytime readings have not been conducive to good sap flow. A disturbance which skirted south of the border over the weekend deposited a mixture of rain and some snow in the extreme southwest.

Quebec

Sunny skies across the south heralded the arrival of spring. Montréal had 70 hours of bright sunshine this week, more than half the normal allotment for the whole month of March. Temperatures were on the cool side, ranging between 1 and 4 degrees below normal. Many areas in the south received no precipitation whatsoever. Maple syrup producers are anxiously awaiting warmer daytime temperatures to better stimulate the sap flow. Spring skiing in the Laurentians continues to be very good. Snowfalls were variable in the north.

Atlantic Provinces

It was mainly sunny and cold in the Maritimes, but an unexpected snowfall on March 21 caught many by surprise, tying up traffic and resulting in the closure of many rural schools due to treacherous driving conditions. Cold and stormy weather conditions plagued Newfoundland, while numerous low temperature records were established in Labrador. Several weather systems dumped between 15 and 40 centimetres of snow over the Island and the south coast of Labrador. Western Newfoundland was hardest hit as a storm intensified and stalled over northern Newfoundland on March 21 and 22. Stephenville was blanketed with more than 37 cm of new snow. Corner Brook was virtually closed. Winds gusting to 90 km/h created zero visibilities and two metre high drifts, bringing all forms of transportation to a halt for two days.

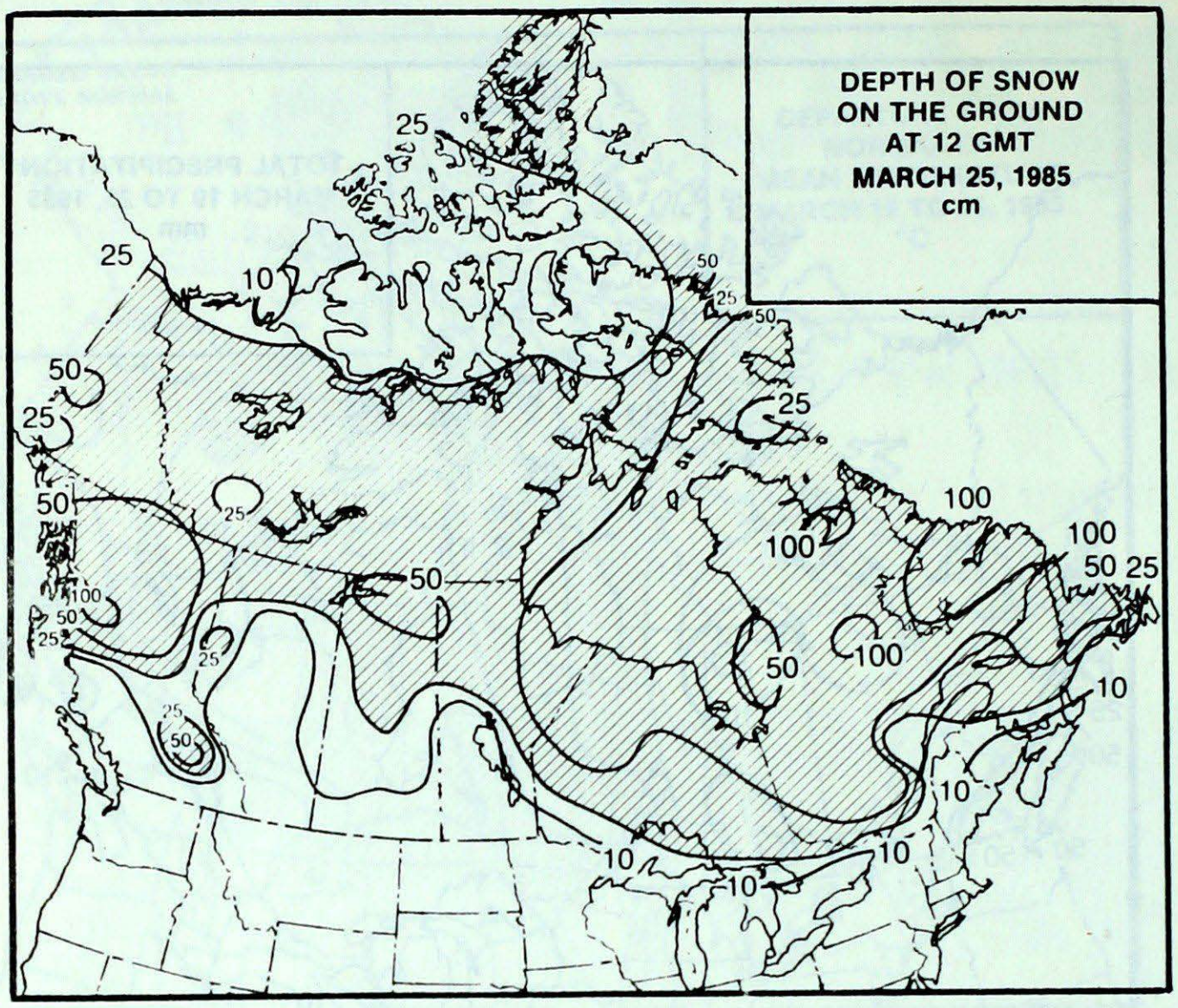


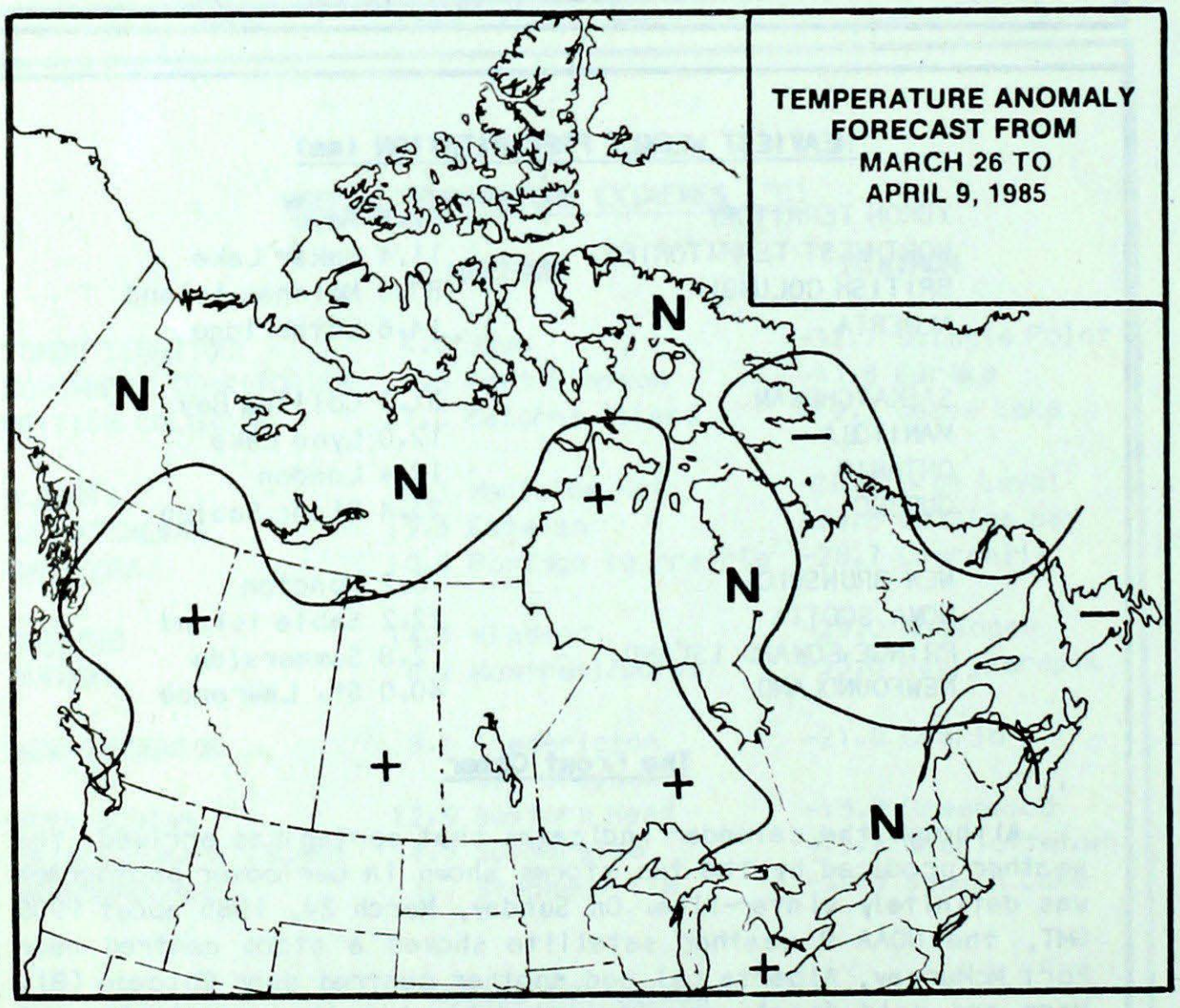
HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON TERRITORY	1.8	Mayo
NORTHWEST TERRITORIES	11.4	Baker Lake
BRITISH COLUMBIA	87.0	McInnes Island
ALBERTA	14.6	Lethbridge
SASKATCHEWAN	31.2	Collins Bay
MANITOBA	12.0	Lynn Lake
ONTARIO	17.4	London
QUEBEC	23.4	Blanc Sablon
NEW BRUNSWICK	6.2	Moncton
NOVA SCOTIA	22.2	Sable Island
PRINCE EDWARD ISLAND	2.8	Summerside
NEWFOUNDLAND	40.0	St. Lawrence

The Front Cover

Although the calendar indicates that spring has arrived, the weather produced by the two storms shown in our cover photograph was definitely winter-like. On Sunday, March 24, 1985 about 1900 GMT, the NOAA 9 weather satellite showed a storm centred near Fort McMurray, Alberta (A) and another centred near Chicago (B). Warm and cold fronts are indicated to show the organization of the cloud systems. Over British Columbia, the air flowing inland from the Pacific Ocean was very unstable and produced showers of rain and snow, thundershowers and hail. The swirls of cloud giving rise to these conditions can be seen to the west of the frontal system located over Alberta. In the Great Lakes region, storm B produced wet snow throughout southern Ontario and Michigan.





Temperature Anomaly Forecast

++	much above normal
+	above normal
N	normal
-	below normal
--	much below normal

This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

CLIMATIC PERSPECTIVES VOLUME 7

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Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

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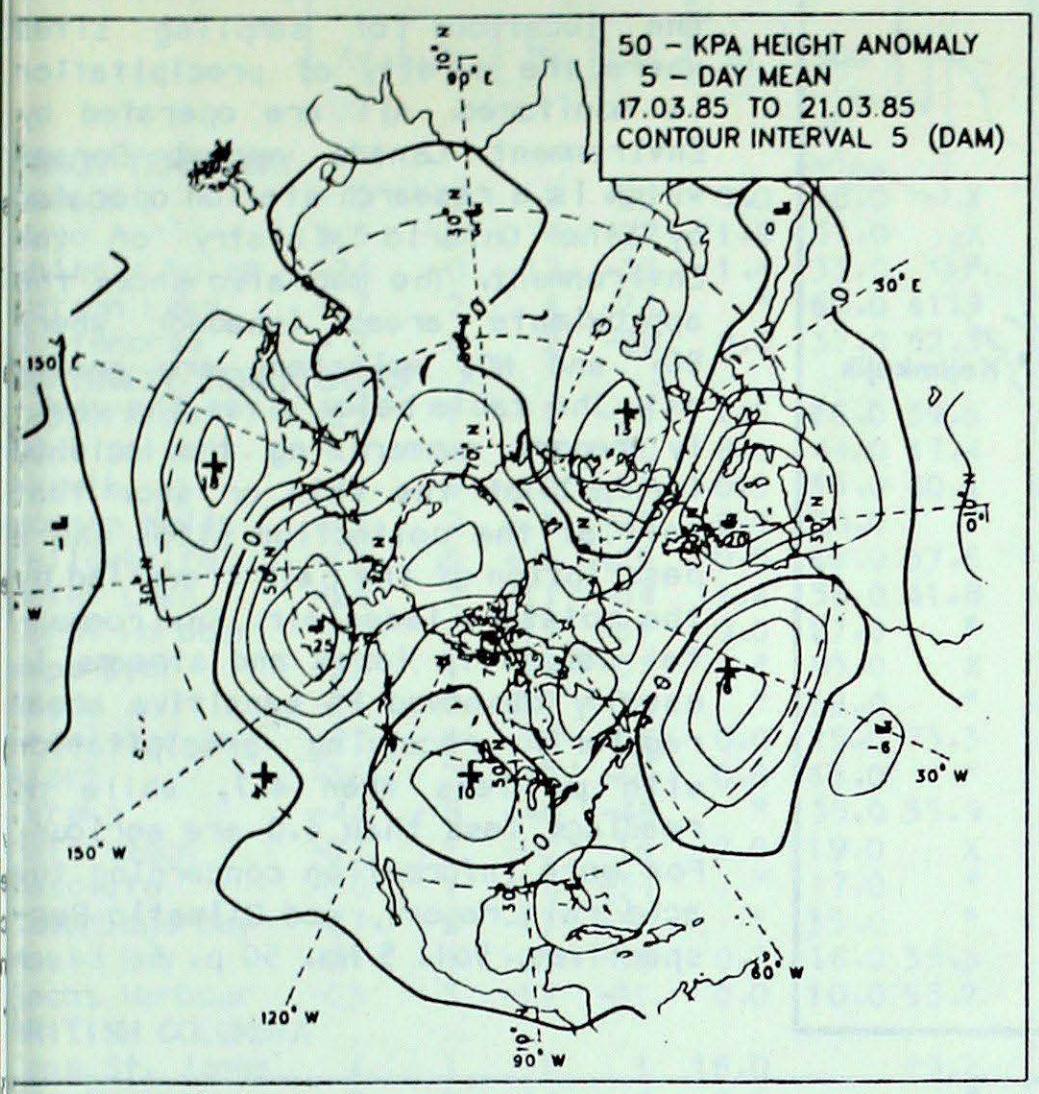
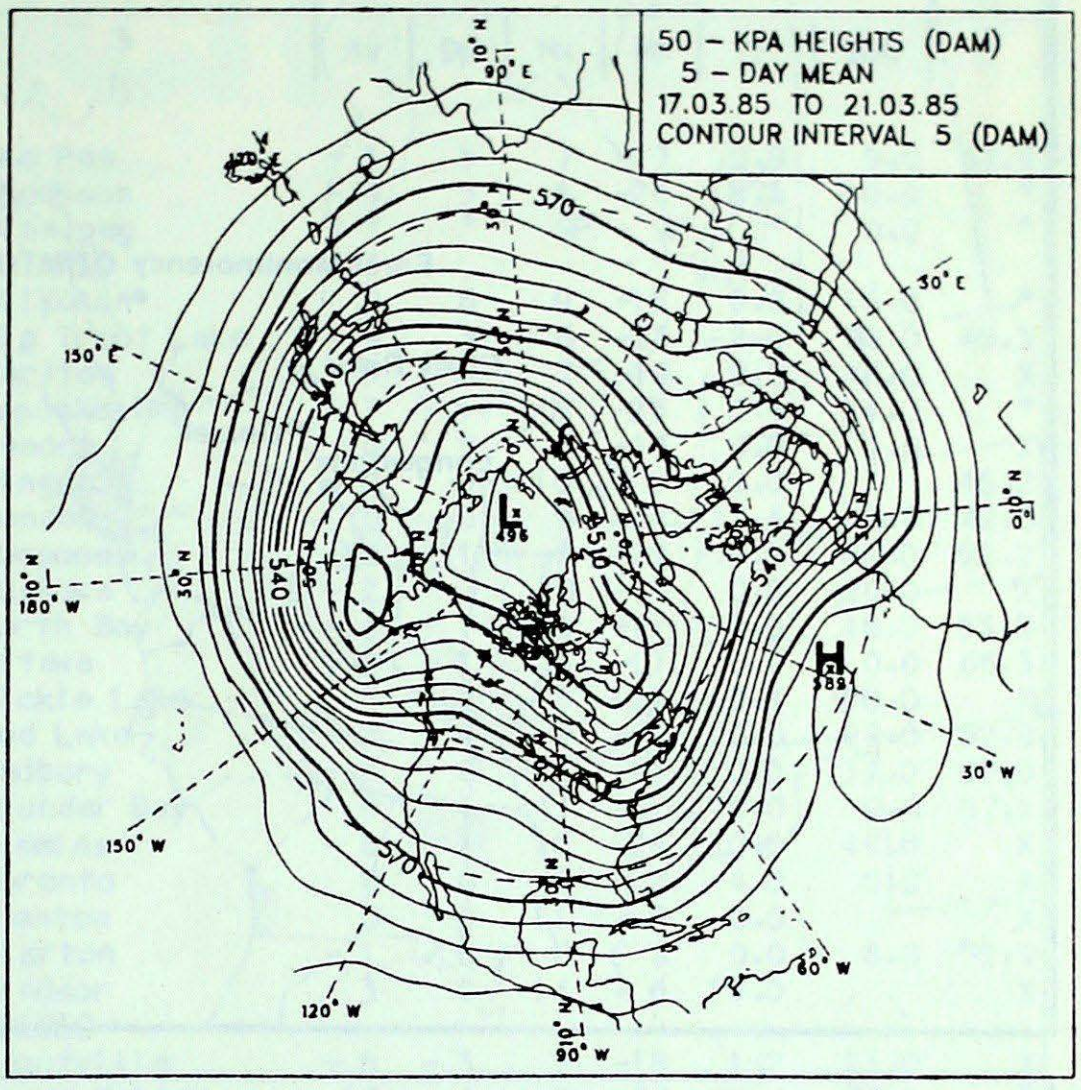
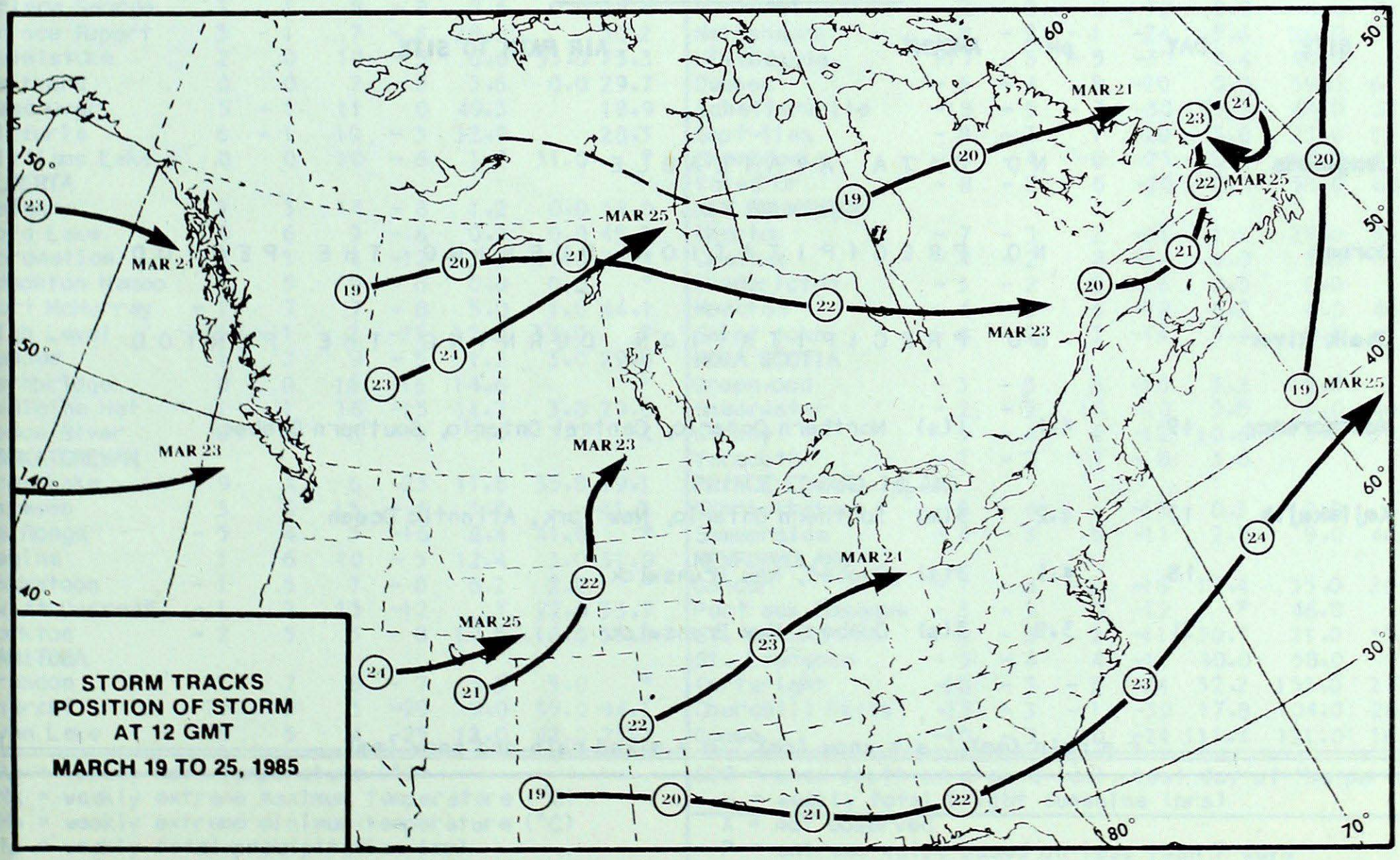
50 KPa ATMOSPHERIC CIRCULATION

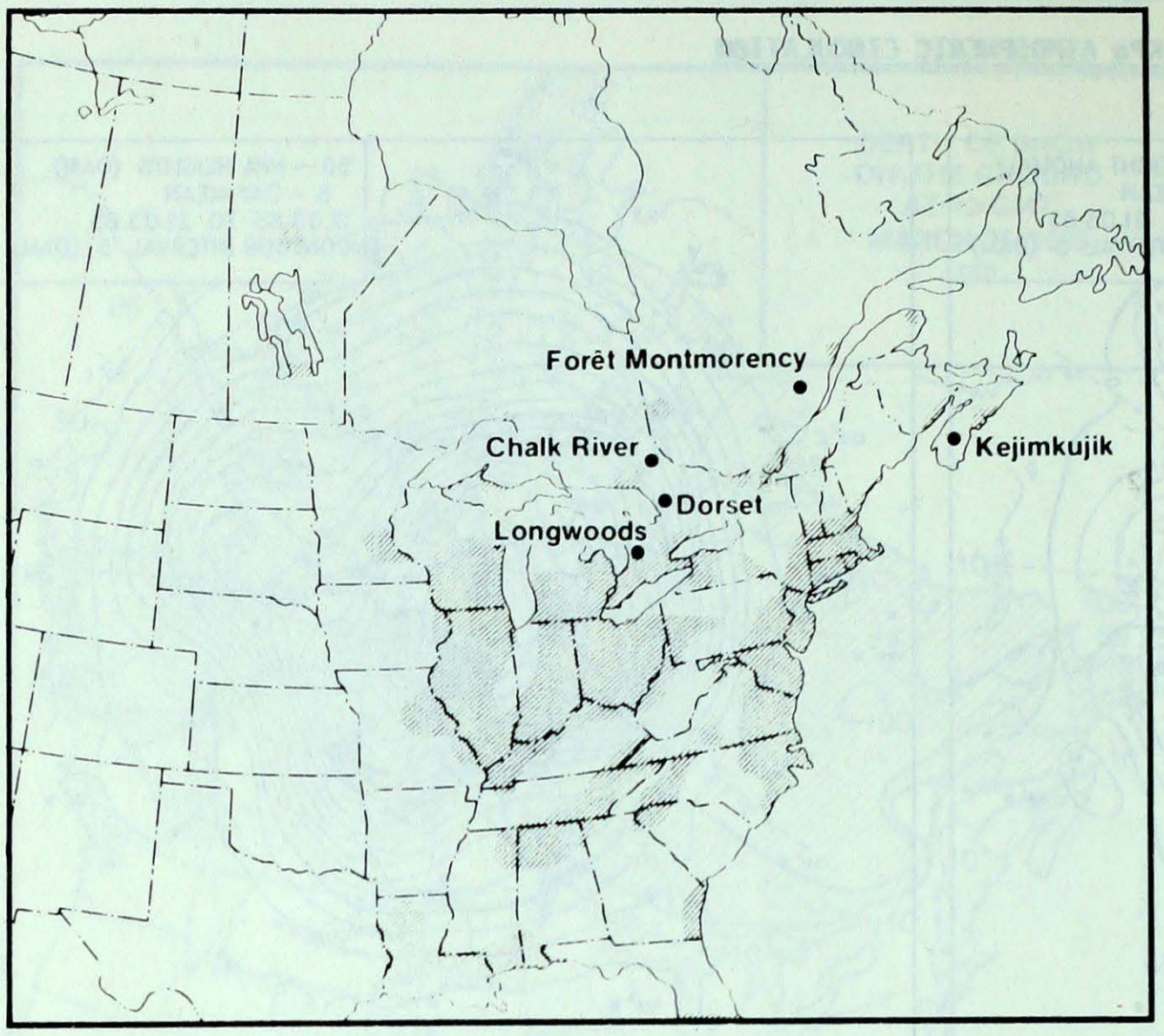


MEAN 50 KPa HEIGHT ANOMALY (dam)
March 17 to March 21, 1985



MEAN 50 KPa HEIGHTS (dam)
March 17 to March 21, 1985





ACID RAIN REPORT

The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where SO_2 and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the rain or snow that fell at the collection sites and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

MARCH 17 to MARCH 23, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods		NO DATA AVAILABLE		
Dorset		NO PRECIPITATION DURNING THE PERIOD		
Chalk River		NO PRECIPITATION DURNING THE PERIOD		
Montmorency	19	4.1	1(s)	Northern Ontario, Central Ontario, Southern Quebec
Kejimkujik	17	4.2	3(m)	Southern Ontario, New York, Atlantic Ocean
	18	4.1	3(s)	Quebec, New Brunswick
	21	3.9	3(s)	Quebec, New Brunswick

r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT MARCH 26, 1985

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
UKON TERRITORY							
awson	- 9	1	1	-25	0.0	58.0	X
ayo A	- 5	5	4	-22	1.8	31.0	X
hingle Point	-24	0	-12	-33	1.4	33.0	*
atson Lake	- 7	2	4	-24	*	65.0	41.9
hitehorse	- 7	0	2	-20	0.0	37.0	52.3
ORTHWEST TERRITORIES							
oppermine	-25	1	-11	-34	1.5	26.0	39.6
ort Smith	- 8	4	0	-20	8.6	44.0	47.4
nuvik	-21	3	-10	-33	0.6	35.0	40.4
orman Wells	-15	2	- 1	-25	0.0	26.0	*
ellowknife	-12	5	- 2	-25	0.0	45.0	57.6
aker Lake	-24	2	-11	-34	11.4	56.0	41.8
oral Harbour	-21	2	-13	-31	0.0	17.0	*
ape Dyer	-23	1	-16	-31	*	93.0	X
lyde	-25	0	-17	-31	*	58.0	*
robisher Bay	-27	- 5	-16	-35	0.0	25.0	73.3
lert	-36	- 2	-30	-43	0.8	46.0	*
ureka	-44	- 8	-40	-48	*	35.0	35.9
all Beach	-27	2	-16	-36	2.0	19.0	X
esolute	-30	1	-20	-37	*	17.0	*
ambridge Bay	-27	2	-17	-36	*	35.0	*
ould Bay	-31	1	-21	-38	0.2	18.0	35.3
achs Harbour	-25	3	-17	-31	0.0	10.0	55.2
RITISH COLUMBIA							
ape St. James	4	- 1	8	1	16.0		29.2
ranbrook	2	0	14	- 6	5.1		*
ort Nelson	- 3	5	6	-13	10.6	57.0	23.9
ort St. John	- 1	5	7	- 6	9.6	8.0	X
amloops	5	0	15	- 3	2.7		27.2
enticton	3	- 2	14	- 6	7.6		*
ort Hardy	4	- 1	10	- 1	57.2		18.5
rince George	1	1	8	- 8	2.6	0.0	28.6
rince Rupert	3	- 1	7	- 4	28.5		30.2
evelstoke	2	0	10	- 5	6.6	53.0	13.3
mithers	0	0	7	- 8	3.6	0.0	29.7
ancouver	5	- 1	11	0	49.3		18.9
ictoria	6	- 1	10	- 3	32.9		28.3
illiams Lake	0	0	10	- 6	1.2	31.0	*
LBERTA							
algary	1	3	14	- 8	1.2	0.0	38.0
old Lake	0	6	9	- 6	0.0	0.0	45.3
oronation	- 3	1	4	-12	3.2	15.0	24.4
dmonton Namao	1	5	9	- 6	0.0	0.0	*
ort McMurray	- 1	7	7	- 8	5.0	1.0	44.1
igh Level	- 5	- 1	2	-21	12.0	33.0	*
asper	1	2	9	- 5	1.2	3.0	29.6
ethbridge	0	0	16	-16	14.6		*
edicine Hat	1	1	16	-15	11.2	3.0	29.6
eace River	0	7	8	- 9	5.4	3.0	X
ASKATCHEWAN							
ee Lake	- 9	X	6	-23	11.8	35.0	19.1
stevan	3	6	15	- 4	3.2		41.3
a Ronge	- 5	4	5	-16	8.4	41.0	*
egina	1	6	10	- 5	12.4	3.0	31.9
askatoon	- 1	5	7	- 8	6.2	2.0	*
wift Current	- 1	2	13	-12	*	22.0	33.7
orkton	- 2	5	5	- 8	17.5	16.0	35.3
ANITOBA							
randon	1	7	8	- 7	3.3	5.0	*
urchill	-15	3	3	-29	9.0	35.0	44.1
ynn Lake	-10	5	4	-25	12.0	42.0	23.7
The Pas	- 3	5	7	-17	0.9	9.0	37.9
Thompson	- 9	5	5	-28	8.3	30.0	*
Winnipeg	*	*	9P	- 9P	*	0.0	*
ONTARIO							
Atikokan	0	6	9	-15	0.0	16.0	*
Big Trout Lake	- 9	3	6	-23	2.0	88.0	45.3
Earlton	- 5	0	7	-19	0.0	44.0	X
Kapuskasing	- 7	- 1	8	-25	0.4	24.0	*
Kenora	0	5	8	-13	0.0	3.0	X
Kingston	0	0	10	- 9	0.0		46.2
London	0	0	9	- 7	17.4	1.0	42.6
Moosonee	-10	- 1	7	-29	0.0	86.0	52.2
Muskoka	- 2	0	10	-15	0.0	20.0	X
North Bay	- 4	- 1	5	-17	0.0	48.0	53.5
Ottawa	- 2	- 1	8	-11	0.0	0.0	66.3
Pickle Lake	- 5	3	7	-22	0.4	50.0	X
Red Lake	- 2	4	9	-23	0.0	29.0	52.0
Sudbury	- 5	0	5	-17	0.0	37.0	62.0
Thunder Bay	0	4	11	-10	0.0	0.0	57.1
Timmins	- 6	1	10	-24	0.0	48.0	X
Toronto	0	0	8	- 8	4.0	0.0	X
Trenton	0	0	11	- 8	0.0		X
Wiarton	- 1	0	6	- 8	0.0	6.0	52.9
Windsor	3	0	14	- 6	17.0		X
QUEBEC							
Bagotville	- 8	- 3	3	-18	1.2	23.0	X
Blanc-Sablon	-10	- 4	- 3	-24	23.4	76.0	*
Inukjuak	-19	- 1	-10	-30	2.6	66.0	48.8
Kuujjuaq	-20	- 4	- 9	-31	5.2	117.0	36.1
Kuujjuarapik	-17	- 3	- 4	-34	6.2	27.0	26.7
Maniwaki	- 5	- 2	7	-20	0.0	37.0	63.2
Mont-Joli	- 6	- 3	2	-17	0.8	12.0	47.6
Montréal	- 2	- 2	8	-12	0.0	0.0	70.8
Natashquan	- 8	- 3	- 1	-24	5.6	20.0	*
Nitchequon	-17	- 5	- 5	-30	4.4	100.0	*
Québec	- 6	- 4	5	-20	0.0	59.0	62.9
Schefferville	-18	- 5	- 7	-30	5.2	45.0	34.3
Sept-Iles	- 8	- 3	1	-20	3.8	33.0	57.5
Sherbrooke	- 6	- 4	6	-23	0.0	17.0	65.1
Val-d'Or	- 8	- 2	6	-20	0.4	53.0	60.2
NEW BRUNSWICK							
Charlo	- 7	- 3	2	-21	1.0	28.0	59.7
Chatham	- 4	- 2	8	-14	0.0	3.0	63.1
Fredericton	- 3	- 2	8	-16	0.0	0.0	*
Moncton	- 4	- 3	6	-12	6.2	4.0	46.3
Saint John	- 4	- 2	7	-14	3.4	0.0	*
NOVA SCOTIA							
Greenwood	- 3	- 3	8	-16	3.2	2.0	X
Shearwater	- 2	- 3	10	-10	3.5	0.0	40.9
Sydney	- 5	- 4	4	-12	10.6	5.0	39.7
Yarmouth	- 1	- 2	7	- 8	3.6		*
PRINCE EDWARD ISLAND							
Charlottetown	- 5	- 4	4	-13	0.3	10.0	*
Summerside	- 4	- 3	5	-11	2.8	9.0	40.6
NEWFOUNDLAND							
Gander	- 7	- 4	2	-16	19.4	35.0	20.1
Port aux Basques	- 5	- 3	0	-12	*	46.0	*
St. John's	- 6	- 3	2	-11	30.7	21.0	19.4
St. Lawrence	- 5	- 4	4	-11	40.0	58.0	X
Cartwright	-10	- 3	- 3	-24	32.2	151.0	27.8
Churchill Falls	-15	- 3	- 1	-30	17.8	104.0	26.2
Goose	-10	- 3	0	-24	111.4	121.0	16.9

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

X = not observed
P = extreme value based on less than 7 days
* = missing