Environment Canada Environnement Canada

Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

May 8 to 14, 1989 — A weekly review of Canadian climate — Vol. 11 No. 20

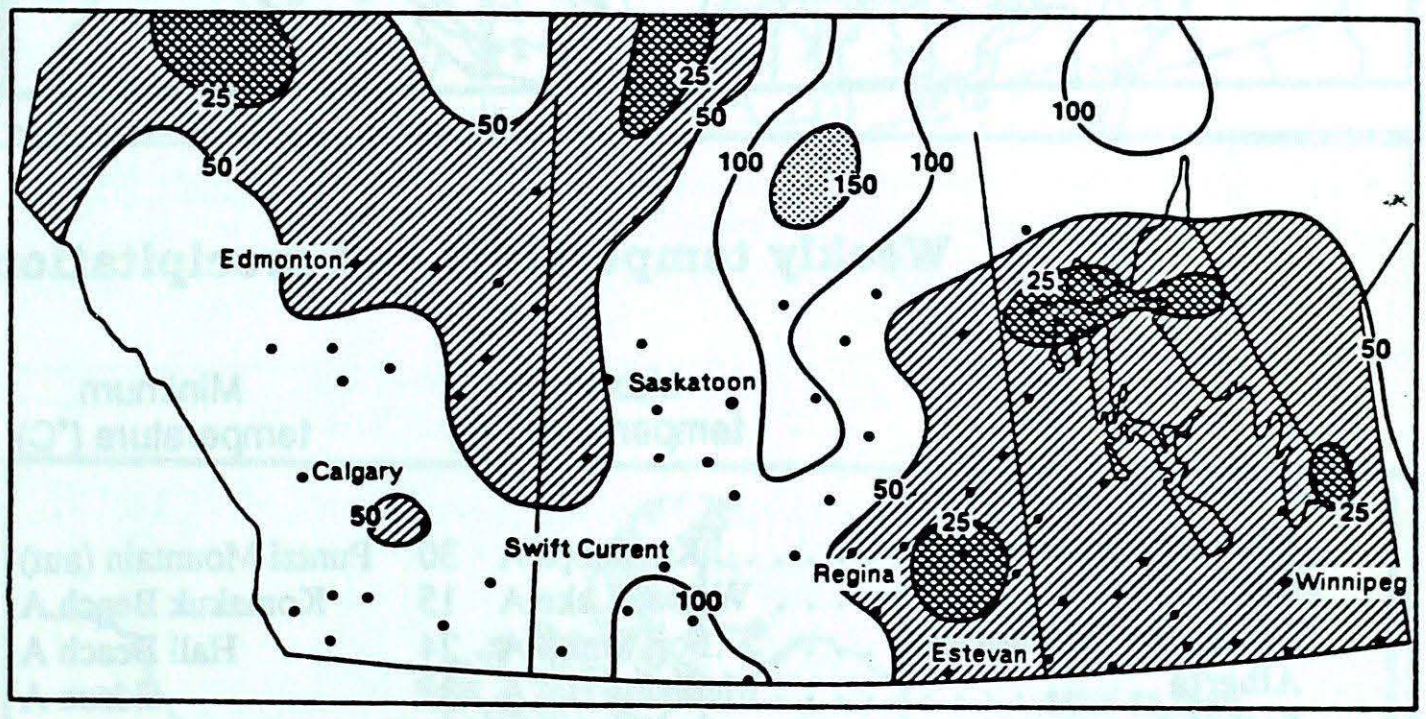
Tinder-dry in Manitoba

Behind a slow-moving ridge of high pressure, hot and dry air from the south reached the southern Prairies. Already aggravated by the dry conditions, temperatures as high as 30.7 °C combined with winds gusting to 85 km/h to fan forest and grass fires in Manitoba. The threat of forest fires is heightened in Northwestern Ontario as this ridge of high pressure moves eastwards.

Hot and dusty conditions continued across the Prairies. Top soil, with very little moisture, has been blown in the wind, causing visibility to be reduced to zero at times.

So far this year, forest fires have forced 1,300 people from their homes, and consumed an area equal in size to Prince Edward Island. The fire hazard remained severe throughout the southern half of Manitoba. The forest fire index is extreme within a region which has received only 50% of normal precipitation during the period from April 1 to May 14, 1989. The worst affected area so far this season has been in the Interlake Region where to date, an estimated 2.7 million cubic metres of softwood and 2.7 million cubic metres of hardwood have been consumed by fire.

Peter Armstrong, Canadian Interagency Forest Fire Centre



Per cent of normal precipitation, April 1 to May 14, 1989 — Winnipeg Climate Centre

Tornado in Alberta, rain in Saskatchewan

A flood of cold air behind a complex low pressure system over Alberta, spawned the first reported tornado of the season on May 10. The tornado touched down at Thorhild, about 85 km north-east of Edmonton, causing thousands of dollars of damage to farms.

As the system moved slowly eastwards, it brought much-needed rain to the dry central part of Saskatchewan, which has had dry conditions since the fall of 1987. Several stations recorded rainfalls of 20 mm or more. Heavier rain fell in the south, with Swift Current recording 40.4 mm.

Above-normal temperatures expected

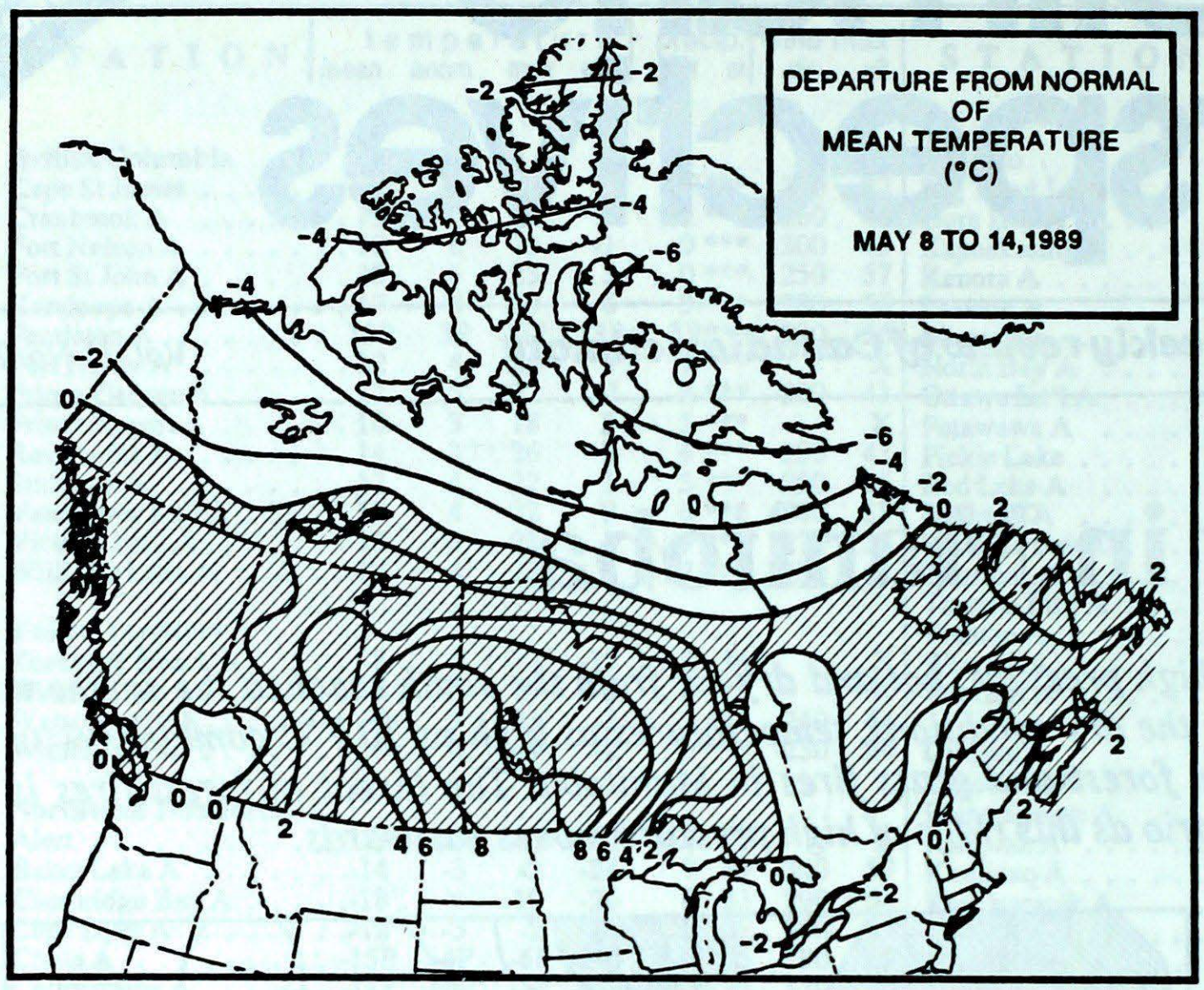
The warm temperatures being experienced over the Prairies continue to spread eastwards. Consequently, temperatures during the week of May 22 are expected to be above normal across most of the country, and near normal over British Columbia and the Mackenzie Valley, (N.W.T.). The warmest temperatures are expected to be over Ontario, Québec, and the Atlantic Provinces.

The Canadian Climate Centre's 30-day forecast to mid-June calls for warm temperatures to continue across much of the country. However, B.C., the Yukon, the western half of Alberta and the eastern half of Newfoundland will experience below-normal temperatures.

— *prepared May 17, 1989*

A. Gergye, Canadian Climate Centre

Canada



Cold continues in Ontario and Québec

Below normal temperatures in the south this spring have resulted in a slow start to the growing season. In southern Ontario, blossoms are approximately 2 weeks behind normal.The characteristic sudden profusion of leaves and flowers is not yet evident this year, as Mother Nature has taken a very relaxed approach.

In Québec, cool weather, rain, and snow have retarded farming activities. Sowing of cereal crops is 12 days behind normal. It is estimated that market garden crops will be picked 2 to 3 weeks later than normal. Nearly 50% of the alfalfa crop has been lost due to a shortage of snow cover during the winter which allowed greater frost penetration of the soil.

Jacques Miron, AES, Montréal

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Kamloops A	30	Puntzi Mountain (aut)	-5	Fort Nelson A	23
Yukon Territory	Watson Lake A	15	Komakuk Beach A	-15	Watson Lake A	26
Northwest Territories	Fort Smith A	24	Hall Beach A	-25	Fort Simpson A	15
Alberta	Medicine Hat A	31	Edson A	-4	Calgary Int'l A	9
Saskatchewan	Estevan A	30	Uranium City A	0	Swift Current A	40
Manitoba	Dauphin A	31	Churchill A	-6	Lynn Lake A	6
Ontario	Red Lake A	28	Winisk (aut)	-10	Petawawa A	29
	Sioux Lookout A	28				
Québec	Montréal Int'l A	22	Kuujjuaq A	-14	Natashquan A	53
New Brunswick	Moncton A	24	Charlo A	-1	St Stephen (aut)	74
Nova Scotia	Truro	23	Yarmouth A	2	Shearwater A	85
Prince Edward Island	Summerside A	23	Summerside A	4	Summerside A	52
Newfoundland	Comfort Cove	22	Nain A, Nfld	-10	Goose A	17
	Gander Int'l A	22				
	Goose A	22				

Across The Country...

Warmest Mean Temperature	Yorkton A (SASK)	19
Coolest Mean Temperature	Resolute A (NWT)	-17

89/05/08-89/05/14

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The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

The data 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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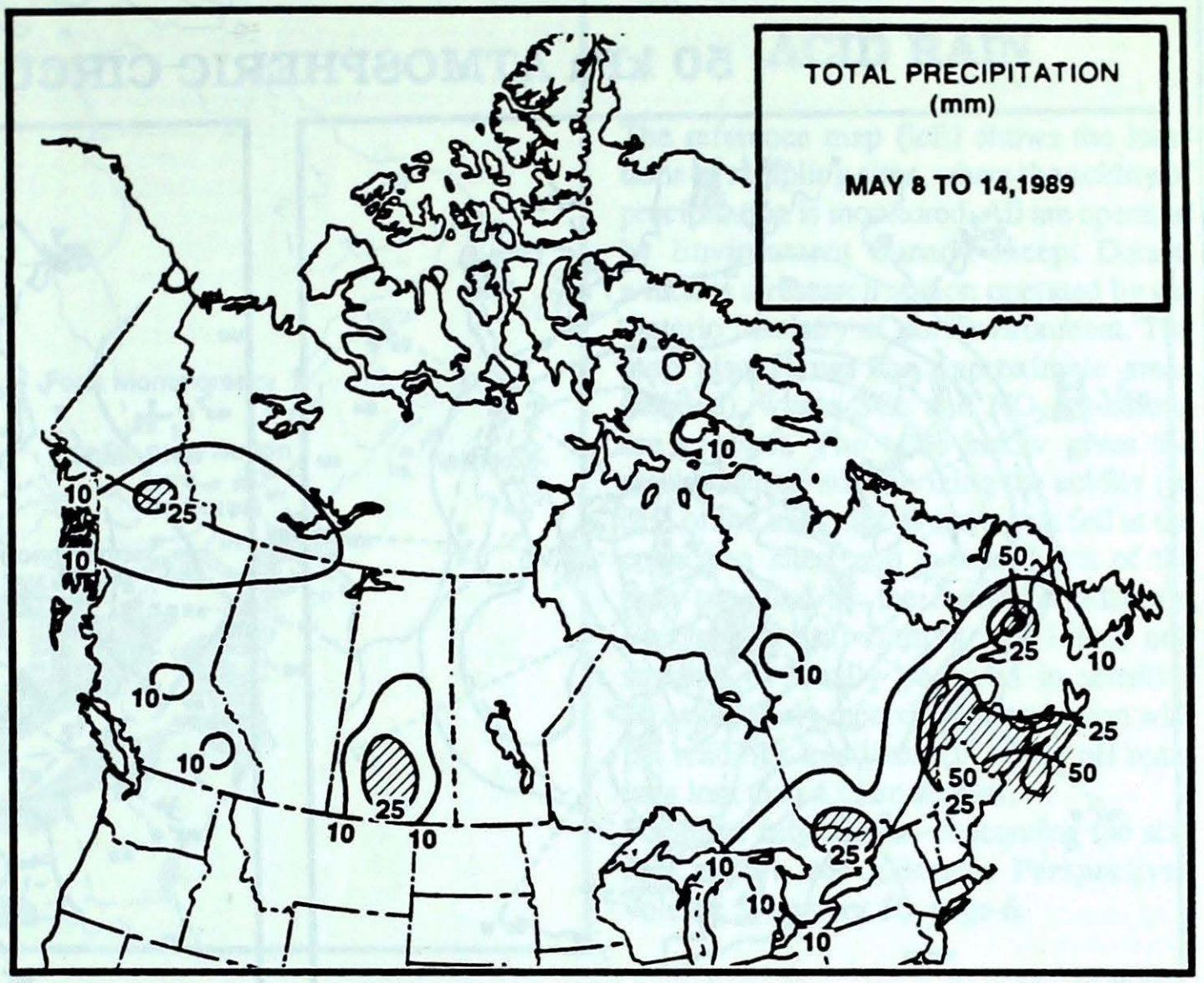
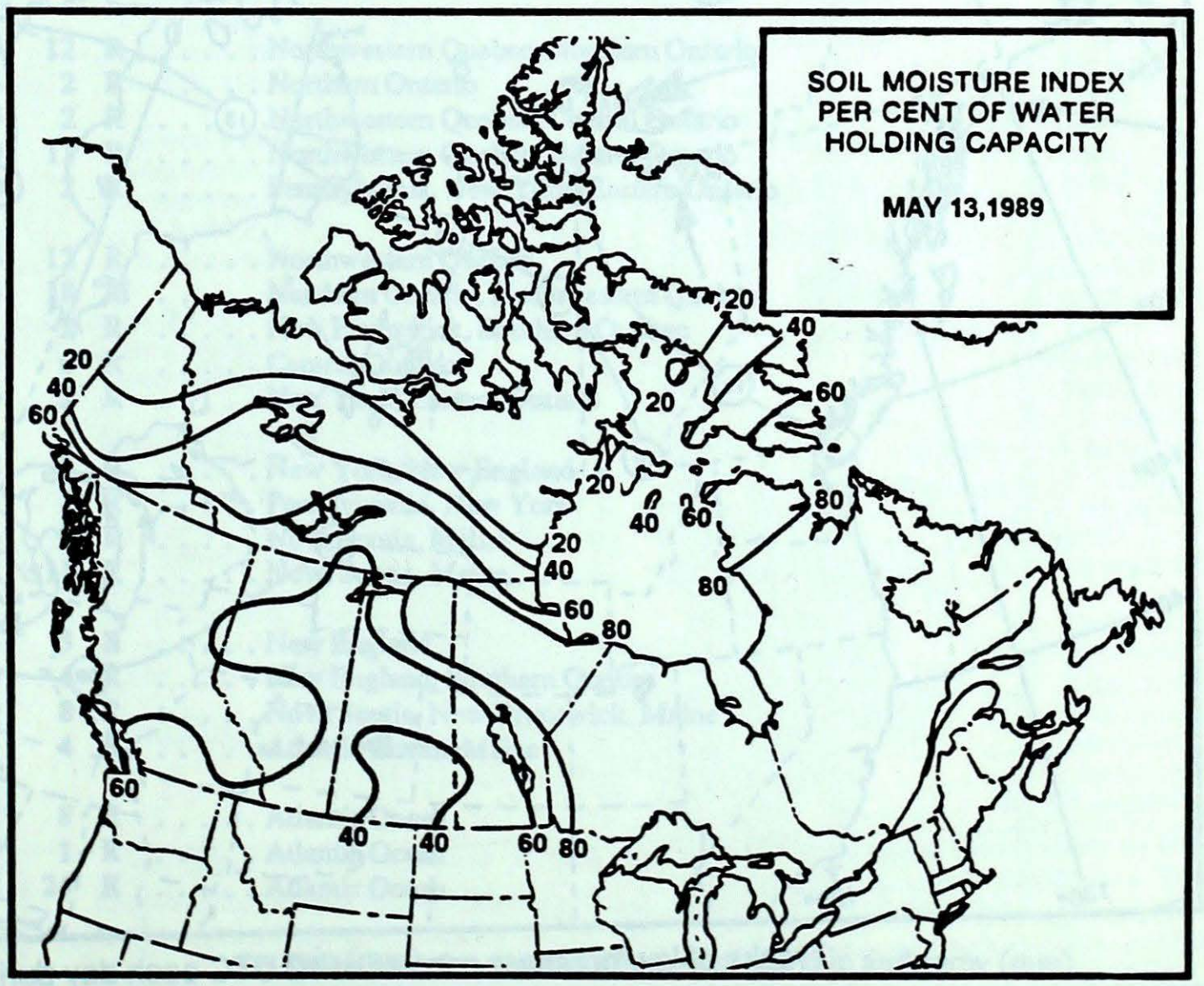
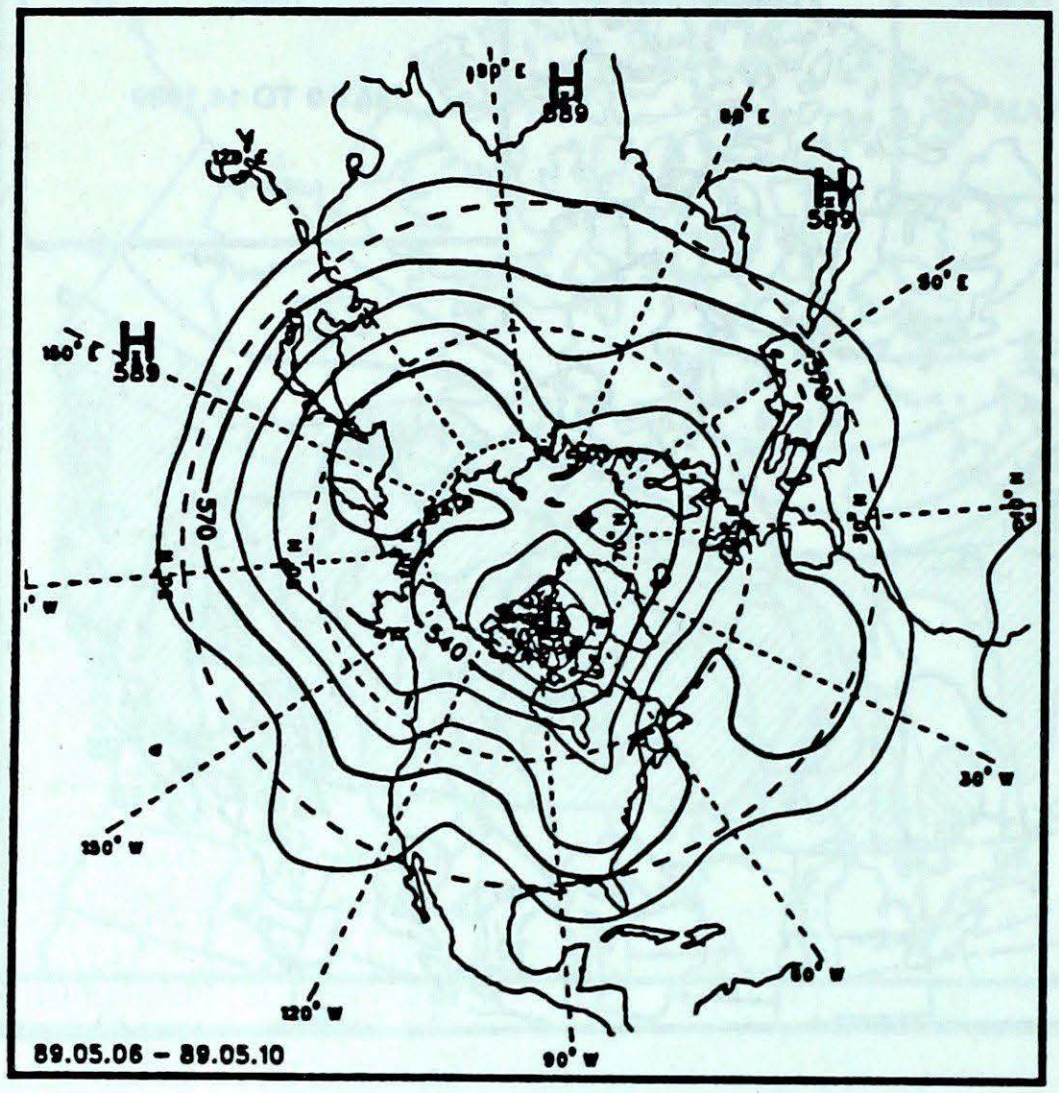
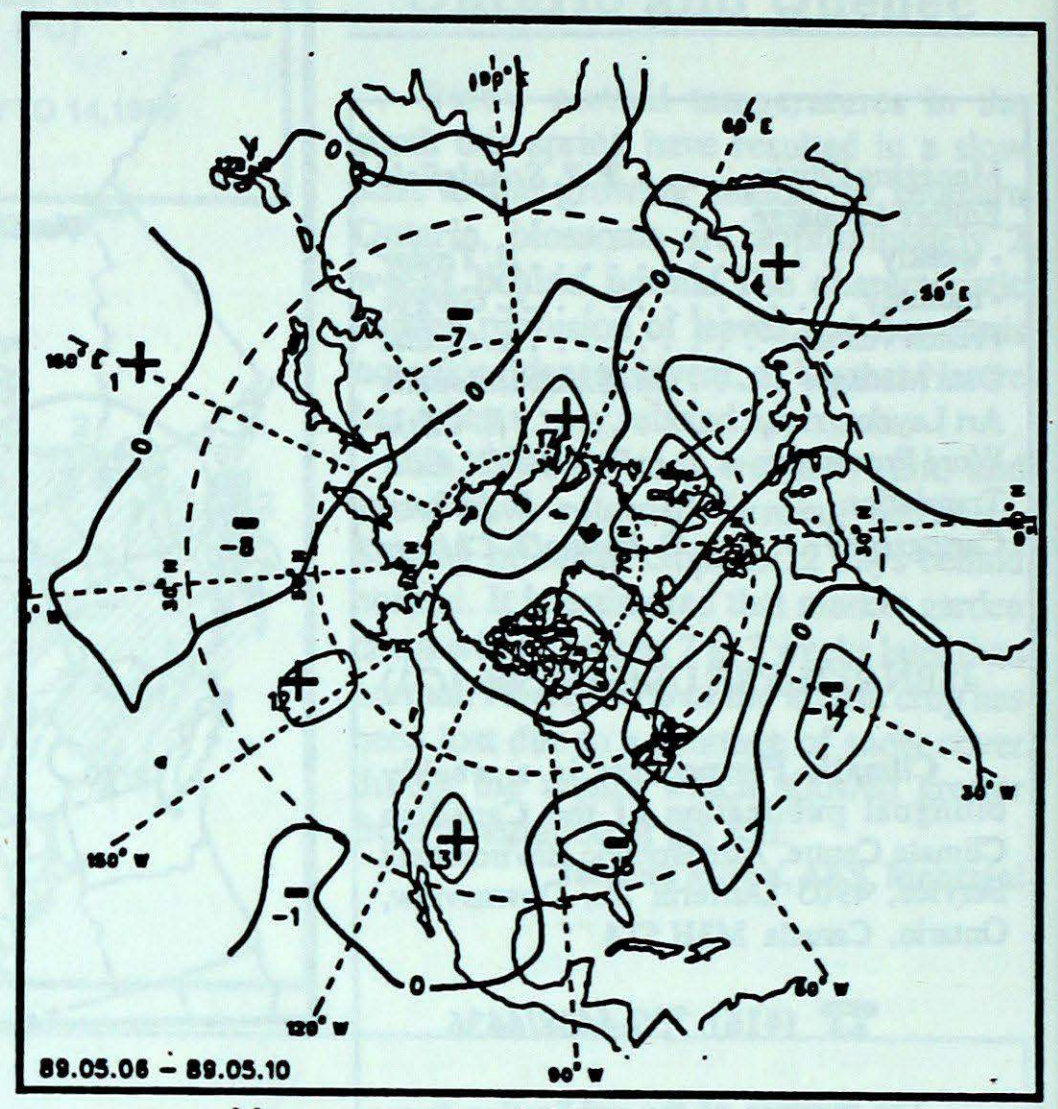




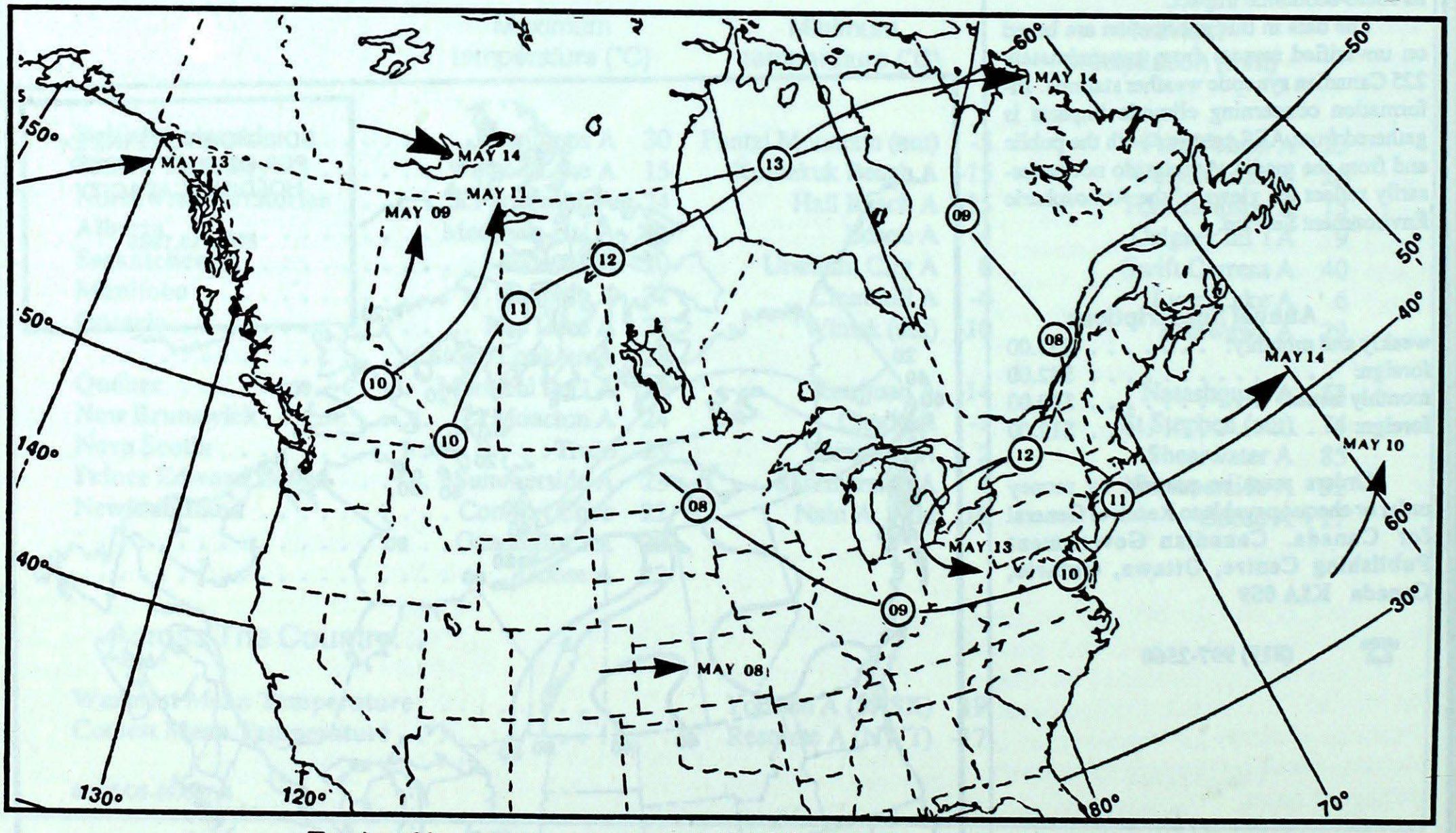
50 kPa ATMOSPHERIC CIRCULATION



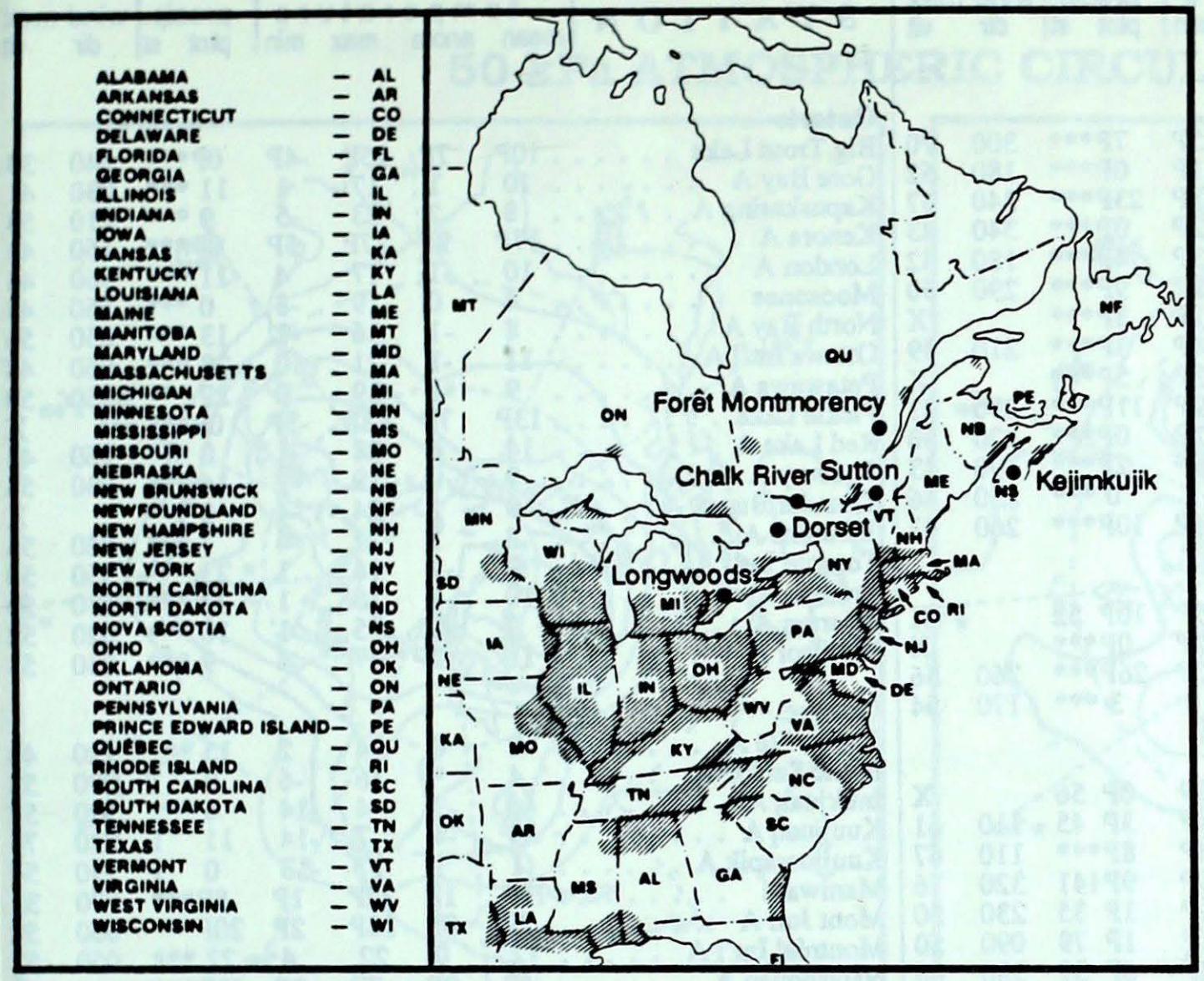
Mean geopotential height
50 kPa level (10 decametre intervals)



Mean geopotential height anomaly
50 kPa level (10 decametre intervals)



Tracks of low pressure centres at 12 UTC each day during the period.



ACID RAIN

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 acid 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 readings less than 4.7, while pH readings less than 4.0 are serious.

For more information concerning the acid rain report, see **Climatic Perspectives**, volume 5, number 50, page 6.

SITE	day	pH	amount		AIR PATH TO SITE
					From May 7 to 13, 1989
Longwoods	12	5.1	4	R	. . . . . Northern Ontario, Lake Huron
	13	3.7	4	R	. . . . . Ohio, Southern Ontario
Dorset *	7	4.7	12	R	. . . . . Northwestern Quebec, Northern Ontario
	8	4.4	2	R	. . . . . Northern Ontario
	11	4.5	2	R	. . . . . Northwestern Quebec, Central Ontario
	12	5.0	11	R	. . . . . Northwestern Quebec, Central Ontario
	13	3.8	2	R	. . . . . Pennsylvania, New York, Eastern Ontario
Chalk River	7	4.4	12	R	. . . . . Northwestern Quebec
	8	4.4	18	M	. . . . . Northern Ontario, Northwestern Quebec
	11	4.1	2	R	. . . . . New Brunswick, Southern Quebec
	12	4.5	6	R	. . . . . Central Quebec
	13	4.0	3	R	. . . . . New York, Eastern Ontario
Sutton	7	3.8	2	R	. . . . . New York, New England
	8	3.8	1	R	. . . . . Pennsylvania, New York
	11	4.6	3	R	. . . . . Nova Scotia, Maine
	13	4.2	11	R	. . . . . Nova Scotia, Maine
Montmorency	7	4.6	5	R	. . . . . New England
	8	3.8	4	R	. . . . . New England, Southern Quebec
	11	4.9	8	R	. . . . . Nova Scotia, New Brunswick, Maine
	12	4.6	4	R	. . . . . Atlantic Ocean, Maine
Kejimkujik	7	4.8	8	R	. . . . . Atlantic Ocean
	12	4.7	1	R	. . . . . Atlantic Ocean
	13	5.2	24	R	. . . . . Atlantic Ocean

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

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vit
British Columbia								
Cape St James	9P	1P	14P	5P	7P***		300	70
Cranbrook A	11P	0P	24P	-1P	0P***		180	52
Fort Nelson A	9P	0P	22P	-3P	23P***		340	37
Fort St John A	10P	1P	23P	-2P	0P***		340	43
Kamloops A	14P	0P	30P	3P	4P***		180	52
Penticton A	12P	0P	27P	2P	9P***		290	50
Port Hardy A	9P	0P	18P	2P	3P***			X
Prince George A	9P	1P	23P	-4P	3P***		210	39
Prince Rupert A	8P	1P	15P	3P	5P***			X
Revelstoke A	12P	1P	27P	2P	11P***		290	43
Smithers A	8P	-1P	18P	-2P	0P***		320	50
Vancouver Int'l A	12P	0P	21P	5P	2P***		190	43
Victoria Int'l A	12	1	21	2	0 ***		250	46
Williams Lake A	9P	0P	23P	-1P	10P***		260	43
Yukon Territory								
Komakuk Beach A	-11P	-3P	-7P	-15P	10P	52		X
Teslin (aut)	5P	*	13P	-2P	0P***			X
Watson Lake A	6P	0P	15P	0P	26P***		260	56
Whitehorse A	7	1	13	0	3 ***		170	54
Northwest Territories								
Alert	-14P	0P	-9P	-18P	0P	56		X
Baker Lake A	-12P	-5P	-1P	-21P	3P	45	110	61
Cambridge Bay A	-15P	-5P	-8P	-24P	8P***		110	67
Cape Dyer A	-13P	-6P	-6P	-20P	9P	141	320	76
Clyde A	-14P	-6P	-8P	-21P	1P	35	230	50
Coppermine A	-11P	-3P	-3P	-21P	1P	79	090	50
Coral Harbour A	-9P	-2P	-2P	-22P	6P	39	330	46
Eureka	-15	-2	-10	-21	0	20	280	56
Fort Smith A	11P	4P	24P	-4P	2P***		120	43
Hall Beach A	-17P	-7P	-5P	-25P	3P	41	320	43
Inuvik A	-7P	-3P	0P	-13P	5P	23	310	39
Iqaluit A	-12P	-8P	-6P	-18P	4P	6	330	67
Mould Bay A	-11P	2P	-7P	-14P	1P	21	350	43
Norman Wells A	1P	-2P	9P	-7P	5P***			X
Resolute A	-17P	-5P	-9P	-22P	1P	28	340	48
Yellowknife A	5	1	16	-3	15 ***		030	65
Alberta								
Calgary Int'l A	10	2	25	1	9 ***		340	52
Cold Lake A	13P	3P	28P	1P	3P***		160	61
Edmonton Namao A	14P	4P	27P	1P	5P***		310	52
Fort Mcmurray A	15	6	29	2	9 ***		150	54
High Level A	11P	0P	25P	-1P	1P***		360	50
Jasper	8P	0P	21P	-4P	3P***			X
Lethbridge A	12	2	26	2	0 ***		220	67
Medicine Hat A	15P	4P	31P	4P	0P***		220	56
Peace River A	12P	3P	26P	0P	3P***		300	54
Saskatchewan								
Cree Lake								
Estevan A	17	7	30	5	0 ***		160	82
La Ronge A	13	5	28	3	18 ***		180	59
Regina A	16	6	29	2	11 ***		150	93
Saskatoon A	15	5	27	5	24 ***		160	78
Swift Current A	13P	4P	27P	6P	40P***		150	72
Yorkton A	19P	10P	29P	4P	0P***		180	74
Manitoba								
Brandon A	18P	8P	29P	3P	0P***		160	74
Churchill A	0P	2P	5P	-6P	2P	11	180	59
Lynn Lake A	12P	5P	28P	-1P	6P***		170	46
The Pas A	16P	8P	27P	2P	0P***		160	61
Thompson A	12P	6P	27P	-3P	2P***		170	63
Winnipeg Int'l A	18	8	29	3	0 ***		170	74

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vit
Ontario								
Big Trout Lake	10P	7P	25P	-4P	0P***		040	33
Gore Bay A	10	1	17	1	11 ***		030	41
Kapuskasing A	8	2	23	-5	9 ***		210	54
Kenora A	17P	9P	27P	5P	0P***		160	44
London A	10	-1	17	4	11 ***		360	48
Moosonee	4	0	19	-8	0 ***		360	44
North Bay A	8	-1	16	-1	13 ***		050	56
Ottawa Int'l A	11	-1	21	0	28 ***		060	48
Petawawa A	9	-1	19	0	29 ***		050	50
Pickle Lake	13P	7P	28P	-3P	0P***			X
Red Lake A	14	6	28	-1	0 ***		160	43
Sudbury A	9	0	19	-1	14 ***		030	54
Thunder Bay A	9	2	24	-4	0 ***			X
Timmins A	8	1	21	-4	7 ***		040	56
Toronto Int'l A	9	-2	16	1	23 ***		350	50
Trenton A	10	-1	18	1	22 ***		030	50
Wiarton A	7	-2	15	1	16 ***		020	52
Windsor A	11	-2	17	4	9 ***		030	54
Québec								
Bagotville A	8	0	14	2	15 ***		220	44
Blanc Sablon A	4	*	16	-6	8	1	090	52
Inukjuak A	-6	-3	4	-14	4 ***		190	57
Kuujjuaq A	-4	-4	7	-14	11	1	220	76
Kuujjuarapik A	1	1	17	-13	0	1	190	54
Maniwaki	11P	1P	22P	1P	8P***		070	35
Mont Joli A	7P	0P	18P	2P	20P***		060	59
Montréal Int'l A	12	0	22	4	22 ***		050	52
Natashquan A	4P	0P	7P	-3P	53P***			X
Québec A	8	-2	14	5	31 ***		070	54
Schefferville A	1	1	12	-11	2	3	320	56
Sept-Iles A	5	1	10	0	4 ***		090	76
Sherbrooke A	11	2	21	-1	15 ***		090	41
Val D'or A	7	-1	21	-4	17 ***		040	43
New Brunswick								
Charlo A	6P	0P	16P	-1P	23P***		100	48
Chatham A	9	0	19	2	18 ***		080	61
Fredericton A	11P	1P	23P	3P	48P***		030	43
Moncton A	11P	3P	24P	4P	9P***		140	50
Saint John A	10	2	22	2	43 ***		130	41
Nova Scotia								
Greenwood A	13	3	22	3	6 ***		170	48
Shearwater A	8	0	12	5	85 ***		080	46
Sydney A	8	1	20	3	4 ***		180	57
Yarmouth A	11P	3P	21P	2P	73P***		120	48
Prince Edward Island								
Charlottetown A	12P	4P	22P	4P	40P***		030	39
Summerside A	11P	3P	23P	4P	52P***		150	48
Newfoundland								
Cartwright	4	2	17	-10	8	20	350	74
Churchill Falls A	4P	1P	18P	-9P	0P	31	360	54
Gander Int'l A	9	4	22	-4	8 ***		230	56
Goose A	7	2	22	-7	17 ***		310	61
Port Aux Basques	4	0	8	1	11	1	100	70
St John's A	5	1	18	-7	1 ***		250	65
St Lawrence	5	1	15	-1	0 ***			X
Wabush Lake A	4	3	17	-6	2 ***		270	48

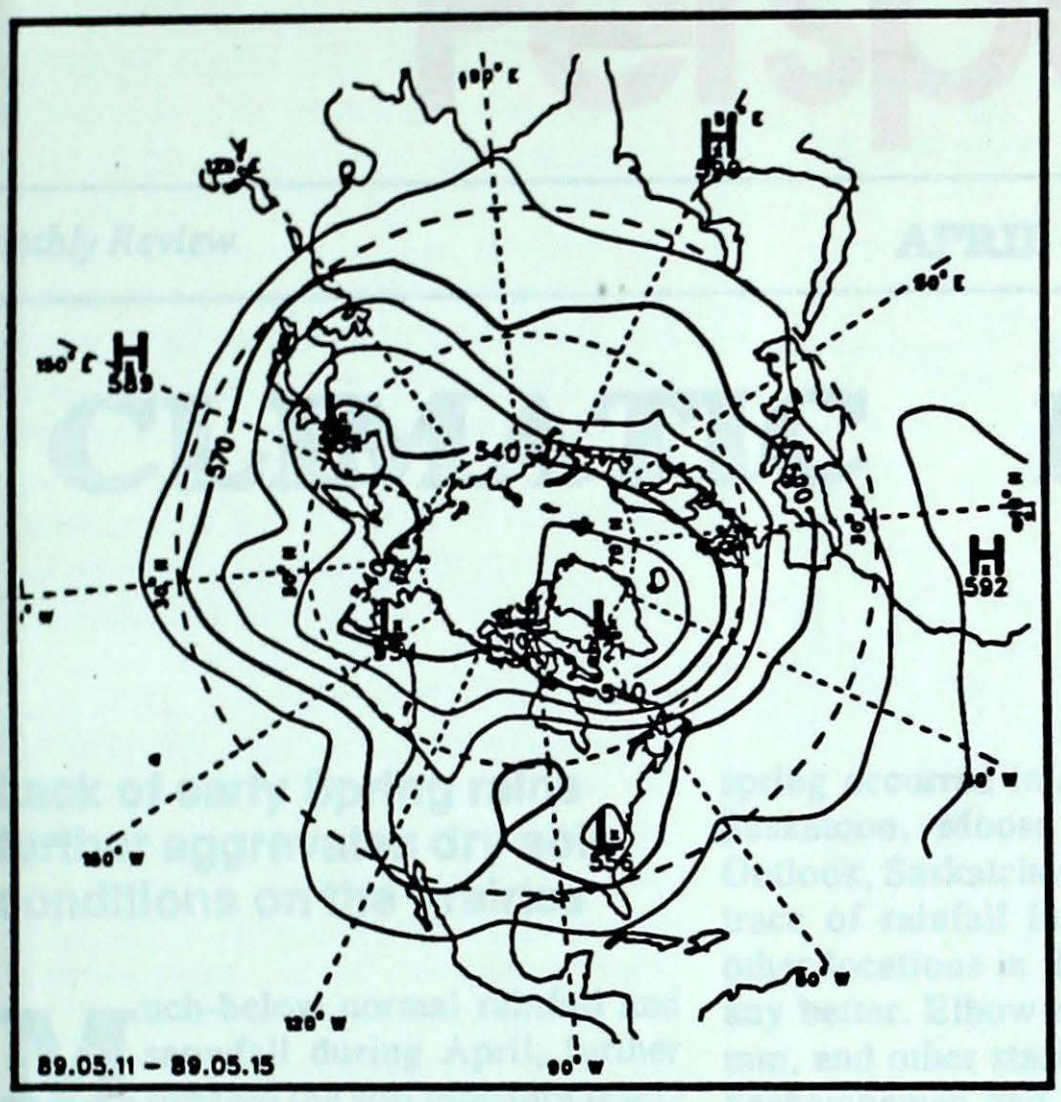
89/05/08-89/05/14

mean = mean weekly temperature, °C
max = maximum weekly temperature, °C
min = minimum weekly temperature, °C
anom = mean temperature anomaly, °C

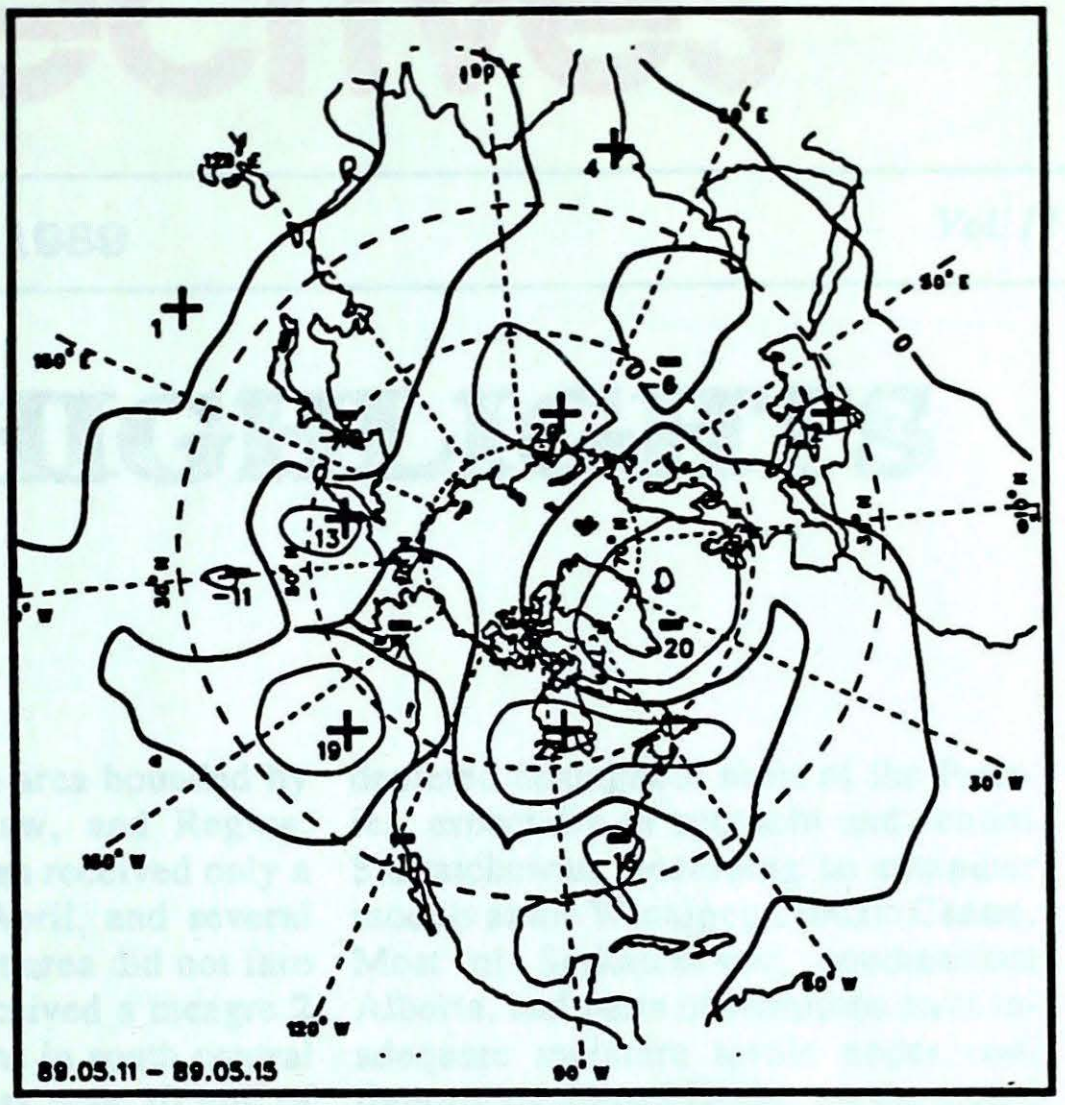
ptot = weekly precipitation total in mm
st = snow thickness on the ground in cm
dir = direction of max wind, deg. from north.
vit = wind speed in km/h

- Annotations -
X = no observation
P = less than 7 days of data
* = missing data when going to printing.

50 kPa ATMOSPHERIC CIRCULATION



Mean geopotential height
50 kPa level (10 decameter intervals)



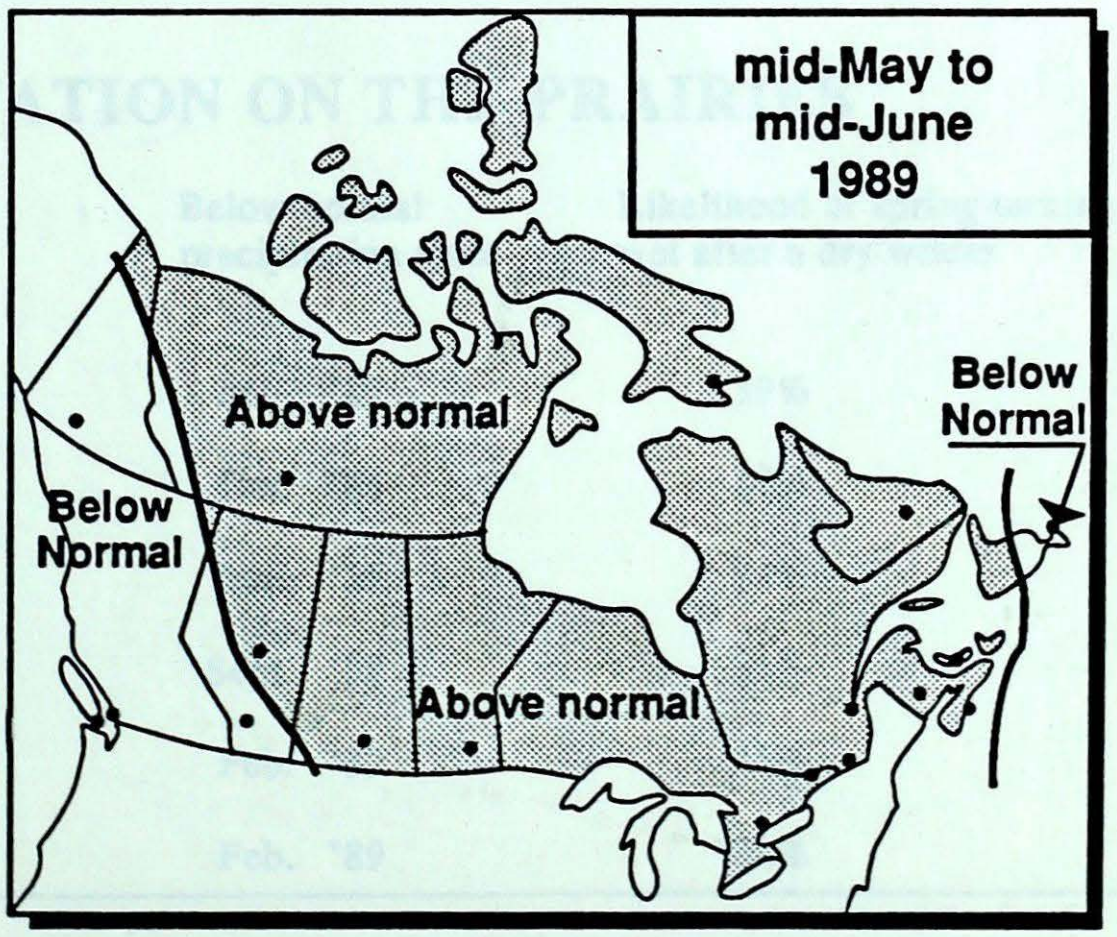
Mean geopotential height anomaly
50 kPa level (10 decameter intervals)

Environment Canada / Environnement Canada
Atmospheric Environment Service / Service de l'environnement atmosphérique

MONTHLY TEMPERATURE FORECAST

Normal temperatures for mid-May to mid-June, °C

Whitehorse	9	Toronto	15
Yellowknife	9	Ottawa	15
Iqaluit	-1	Montréal	16
Vancouver	14	Québec	14
Victoria	13	Fredericton	13
Calgary	11	Halifax	11
Edmonton	13	Charlottetown	12
Regina	14	Goose Bay	8
Winnipeg	14	St. John's	8



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