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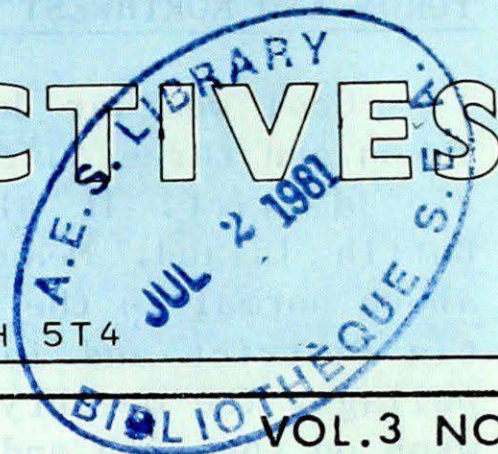
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A WEEKLY REVIEW OF CANADIAN CLIMATE

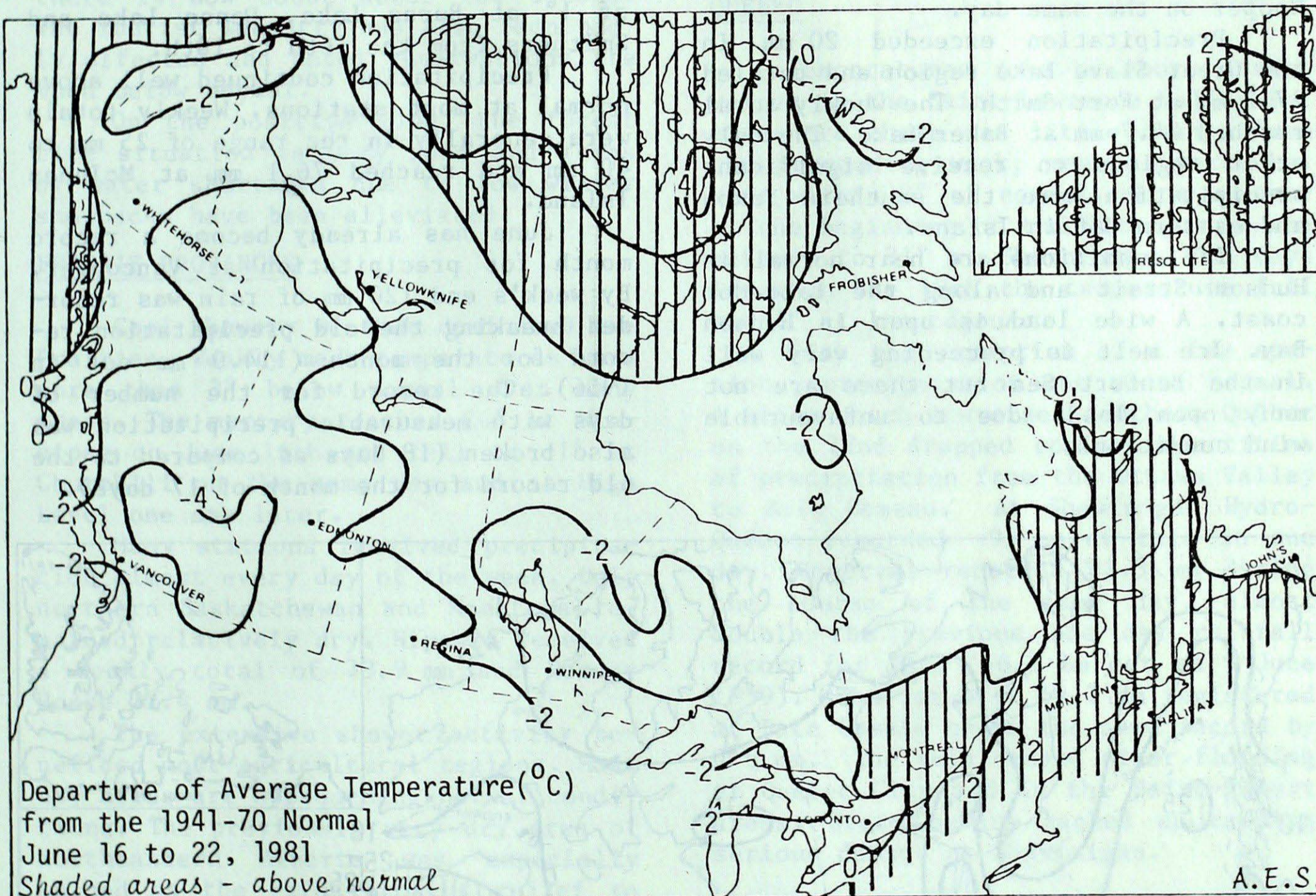
CLIMATIC PERSPECTIVES

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



JUNE 26, 1981

(Aussi disponible en français)



WEATHER HIGHLIGHTS FOR THE PERIOD - JUNE 16 TO 22, 1981

Cool unsettled weather dominates most of the country

Extensive shower activity throughout the Prairies gave welcome relief to many dry areas and benefited most agricultural regions. Northeastern Alberta was especially helped as rains brought relief to spring seeded crops suffering from moisture stress.

Disaster for berry, vegetable and hay crops is the result of too much spring precipitation in the Frazer River Valley. The first crop has been lost and the second is in trouble.

The Ontario Ministry of Agriculture reports that grain crops, particularly barley and winter wheat, look excellent. Rains are helping to keep the forest fire danger low.

Temperatures across the country varied from a maximum of 31° at Ottawa, Ontario and Sherbrook, Québec to a minimum of -8° at Cape Hooper, Northwest Territories. This week's highest precipitation total, 95 mm, was recorded at Québec City.

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON AND NORTHWEST TERRITORIES

BRITISH COLUMBIA

Cool weather dominated all of the Yukon and three quarters of the Mackenzie District. It also invaded eastern Baffin Island. Mean temperatures were above normal in the center of the Kewatin District and in the Arctic Archipelago. The mercury reached 23° at Dawson on the 16th and fell to -8 at Cape Hooper on the same day.

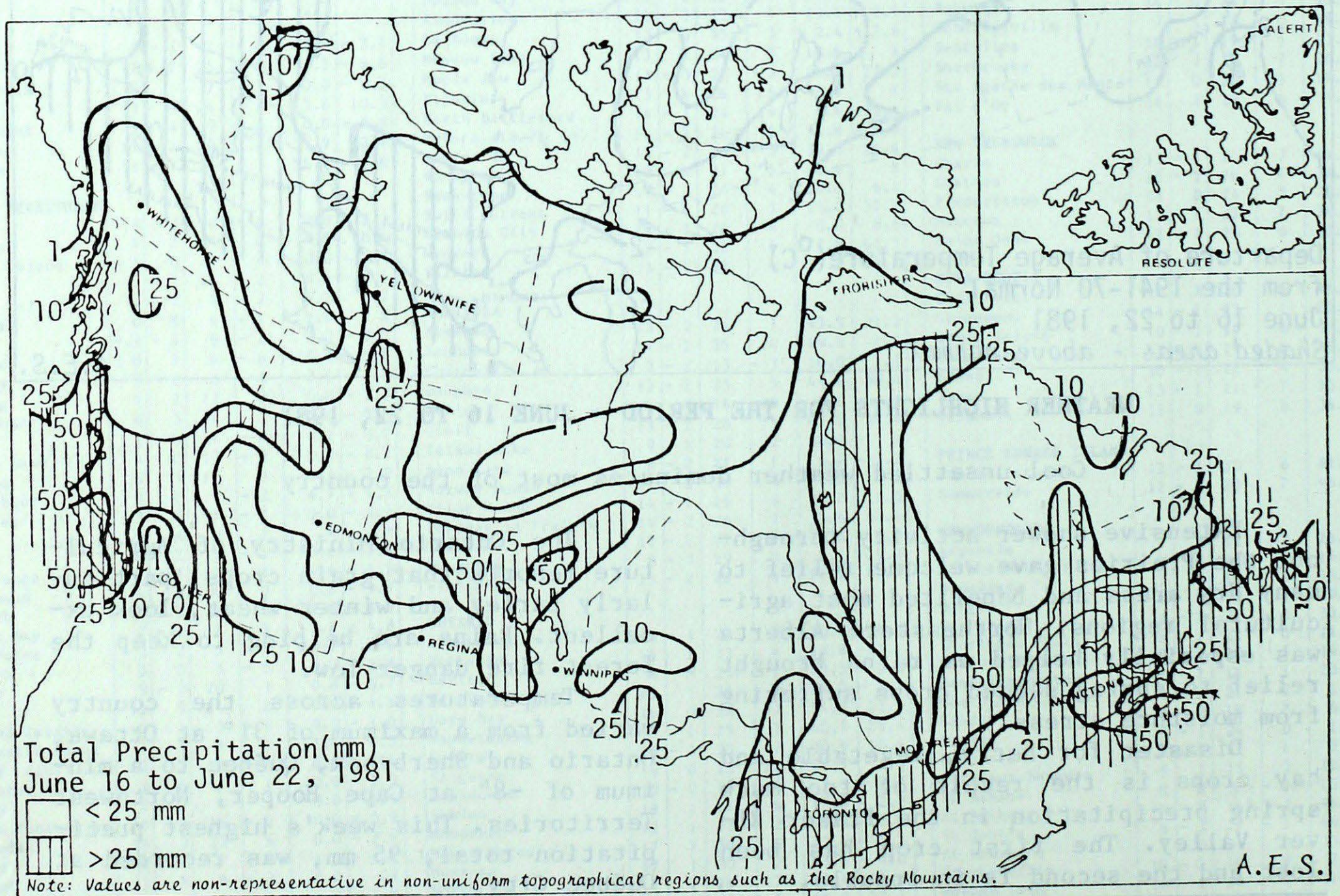
Precipitation exceeded 20 mm in the Great Slave Lake region and totaled 27.2 mm at Fort Smith. The weekly total reached 24.7 mm at Baker Lake. The only other regions to receive significant precipitation were the southern Yukon and eastern Baffin Island.

Ice conditions are near normal in Hudson Strait and along the Labrador coast. A wide lead is open in Hudson Bay. Ice melt is proceeding very well in the Beufort Sea but there are not many open leads due to unfavourable wind conditions.

The cool wet weather increased its hold on the province. Only a few northern coastal stations recorded normal weekly mean temperatures while some areas of south-central British Columbia were more than 6° below normal. Temperatures varied from a maximum of 24° at Kamloops on the 19th to a minimum of 1° at Burns Lake, Dease Lake and Smithers from the 16th to 18th.

Precipitation continued well above normal at most stations. Weekly totals were generally in the range of 25 mm to 40 mm and reached 76.1 mm at McInnes Island.

June has already become a record month for precipitation at Vancouver. By week's end 120 mm of rain was recorded breaking the old precipitation record for the month (114.0 mm set in 1956). The record for the number of days with measurable precipitation was also broken (18 days as compared to the old record for the month of 17 days).



Records have already been set for the three month period of April-May-June. By week's end 345.3 mm of precipitation had been recorded since April 1st. This broke the old 3 month record of 258.8 mm set in 1937 by 86.5 mm.

This large amount of precipitation has been a disaster for berry, vegetable and hay crops in the Frazer Valley. The first crop has been lost and there is now doubt about the second. The Tourist Industry has also been badly affected and hotel reservations are much below normal.

On the positive side, the forest fire situation is very good and fears of water shortages due to low winter snowpacks have been alleviated.

PRAIRIE PROVINCES

Cool showery weather dominated the Prairies. Weekly mean temperatures were more than 3° below normal over many areas. The mercury reached 26° at Winnipeg on June 16th and fell to -1° at Churchill on the same day and at High Level one day later.

Many stations received precipitation almost every day of the week. Only northern Saskatchewan and Manitoba remained relatively dry. Nipawin received a weekly total of 73.9 mm and Norway House 72.4 mm.

The extensive shower activity benefited most agricultural regions. Most dry areas are approaching normal conditions. The previously very dry area of northeastern Alberta was especially helped as the rains brought relief to spring seeded crops suffering from moisture stress.

ONTARIO

Hot and humid weather began the week in Ontario but was quickly replaced by cool unsettled conditions. As a result, weekly mean temperatures were below normal throughout the province with the exception of eastern regions. The mercury reached 31° at Ottawa on the 16th. It fell below the freezing point at Moosonee at the end of the week.

The arrival of the cool air was accompanied by heavy rain and some damaging winds. Peterborough reported

53 mm of rain on June 15th and a 73 mm total for the week.

The Ministry of Agriculture and Food reported no problems. In fact the grain crops look excellent, particularly barley and winter wheat. Haying is in full progress although frequent showers have hampered operations somewhat. The forest fire danger remains low.

QUÉBEC

Temperatures rose to above normal values in the Saint-Lawrence Valley but elsewhere there was little change from the preceeding week; mean temperatures were within 2° of normal. Warm weather at the beginning of the week pushed the mercury to 31° at Sherbrooke. Two days later on the 18th the temperature fell to -3° at Inoucdjouac.

With the exception of a few stations, precipitation was above normal. A storm which traversed southern Québec on the 22nd dropped copious quantities of precipitation from the Ottawa Valley to Baie Comeau. At Shawinigan Hydro-Québec recorded 95 mm of rain in one day. Roberval recorded 82.3 mm during the course of the same day, almost double the previous one day rainfall record for June (46.2 mm set on 9 June 1959). The total of 44.3 mm registered at Baie Comeau broke the same record by 0.6 mm. The rain caused minor flooding at Québec City and in the Saint-Hubert areas. Storm sewers backed up causing serious damage at Shawinigan.

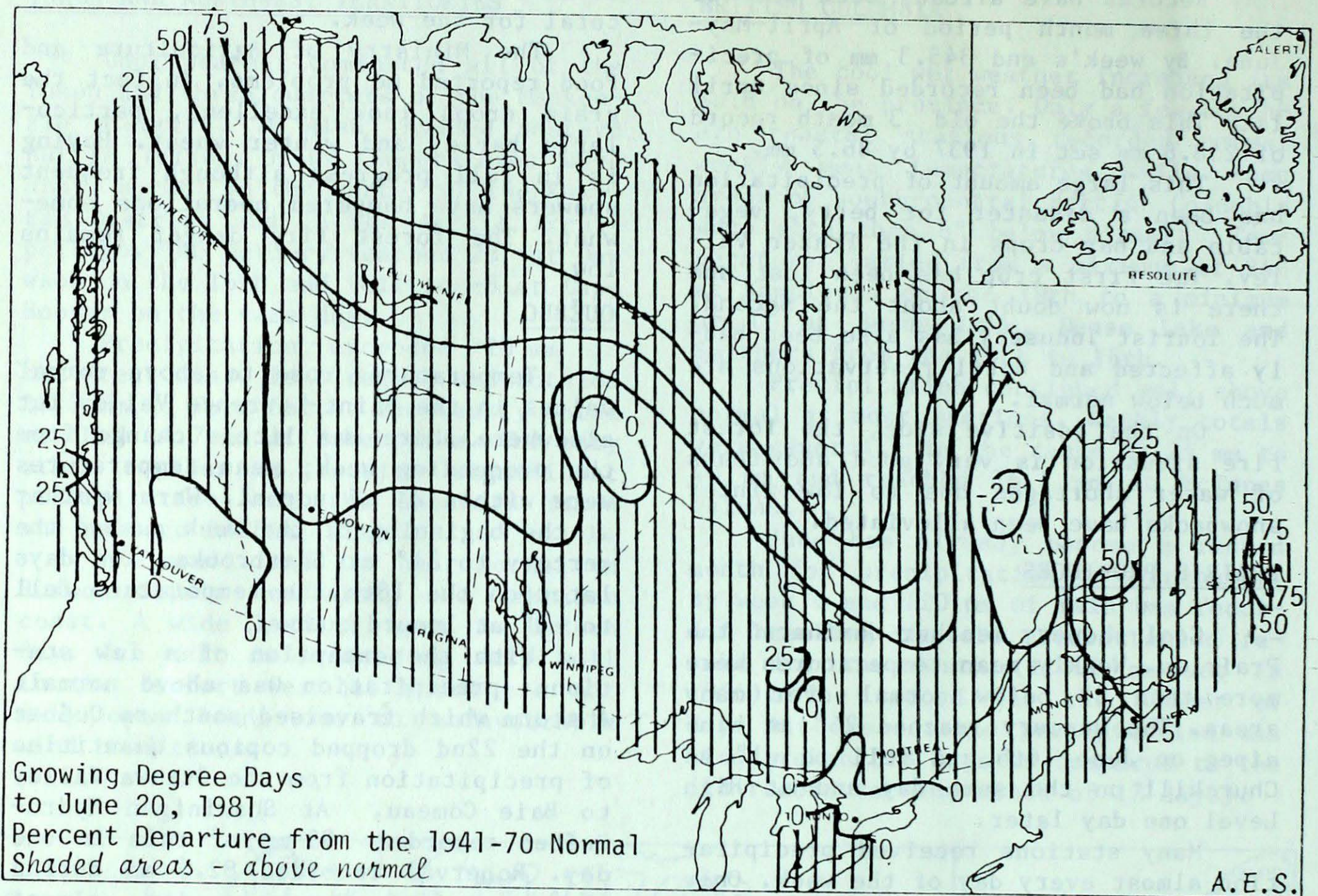
ATLANTIC PROVINCES

The weather was warm but wet this week. Only northeastern Newfoundland and northern Labrador experienced below normal mean temperatures. The mercury fell to -10° at St. Anthony on June 17th and rose to 30° at Chatham two days later.

Precipitation was extensive and a few locations have already reached their normal monthly amounts. Summerside recorded the highest weekly amount, 81.4 mm.

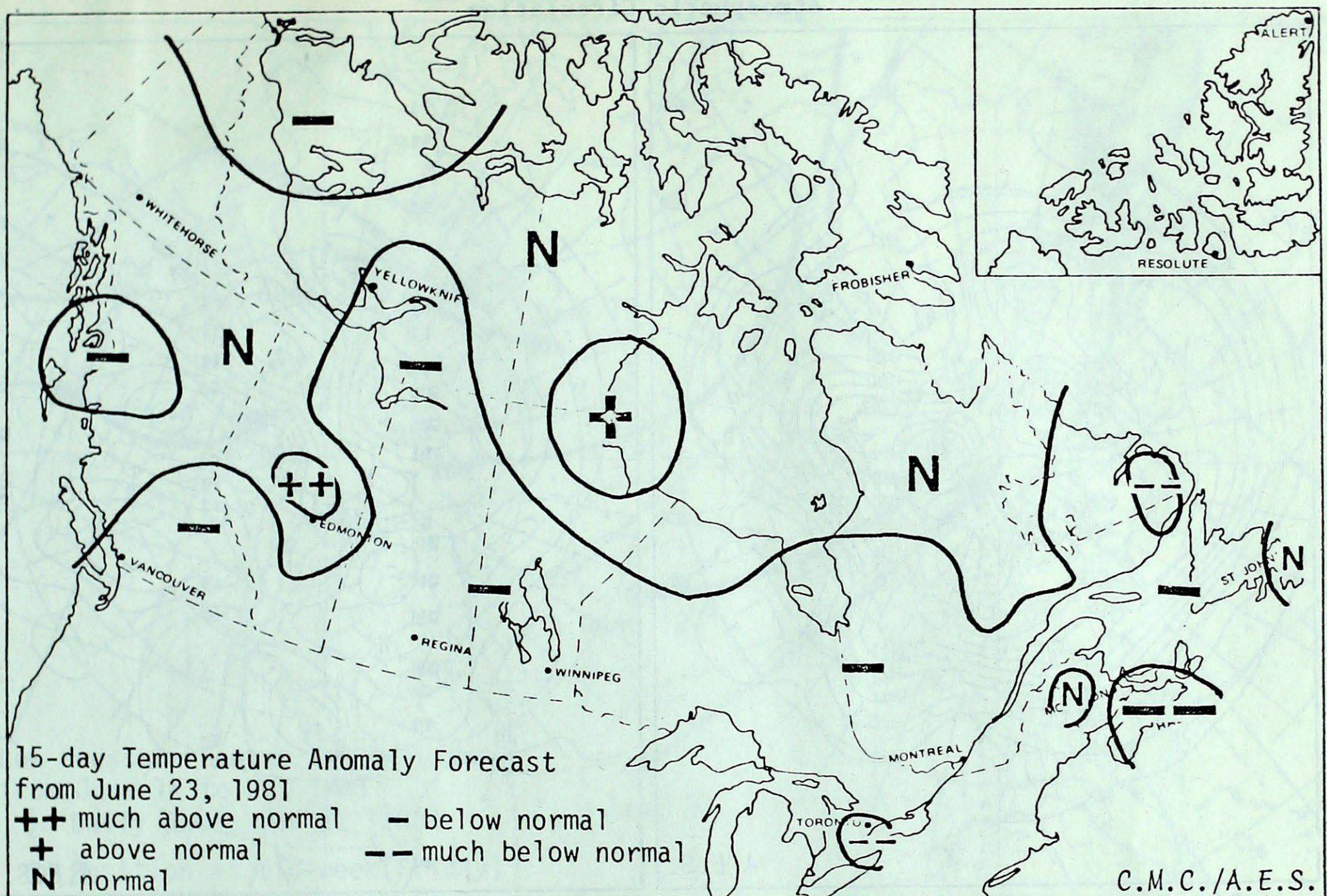
The wet weather is hampering agricultural spraying operations. Hay is now at its peak nutritional quality and the weather is creating problems for the first cut.

GROWING DEGREE-DAY SUMMARY TO JUNE 20, 1981



CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse	112.5	-29.5	234.5	29.5	114
Penticton	181.5	-57.5	574.5	56.5	91
Vancouver	165.0	-29.0	644.0	61.0	110
Edmonton	178.5	-5.5	490.5	132.5	137
Calgary	132.5	-28.5	358.5	43.5	114
Regina	180.5	-19.5	484.5	87.5	122
Saskatoon	186.5	-11.5	477.5	81.5	121
Winnipeg	210.0	-9.0	440.0	23.0	106
Thunder Bay	171.5	3.5	314.0	26.0	109
Windsor	308.5	34.5	758.5	86.5	113
Toronto	245.0	0.0	473.0	-64.0	88
Ottawa	257.0	5.0	530.0	4.0	101
Montreal	261.5	7.5	537.5	7.5	101
Quebec	225.0	20.0	425.0	32.0	108
Fredericton	221.5	21.5	452.5	63.5	116
Halifax	166.0	-11.0	324.0	16.0	105
Charlottetown	182.0	15.0	376.0	113.0	143
St John's	77.5	-15.5	218.0	98.0	182

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

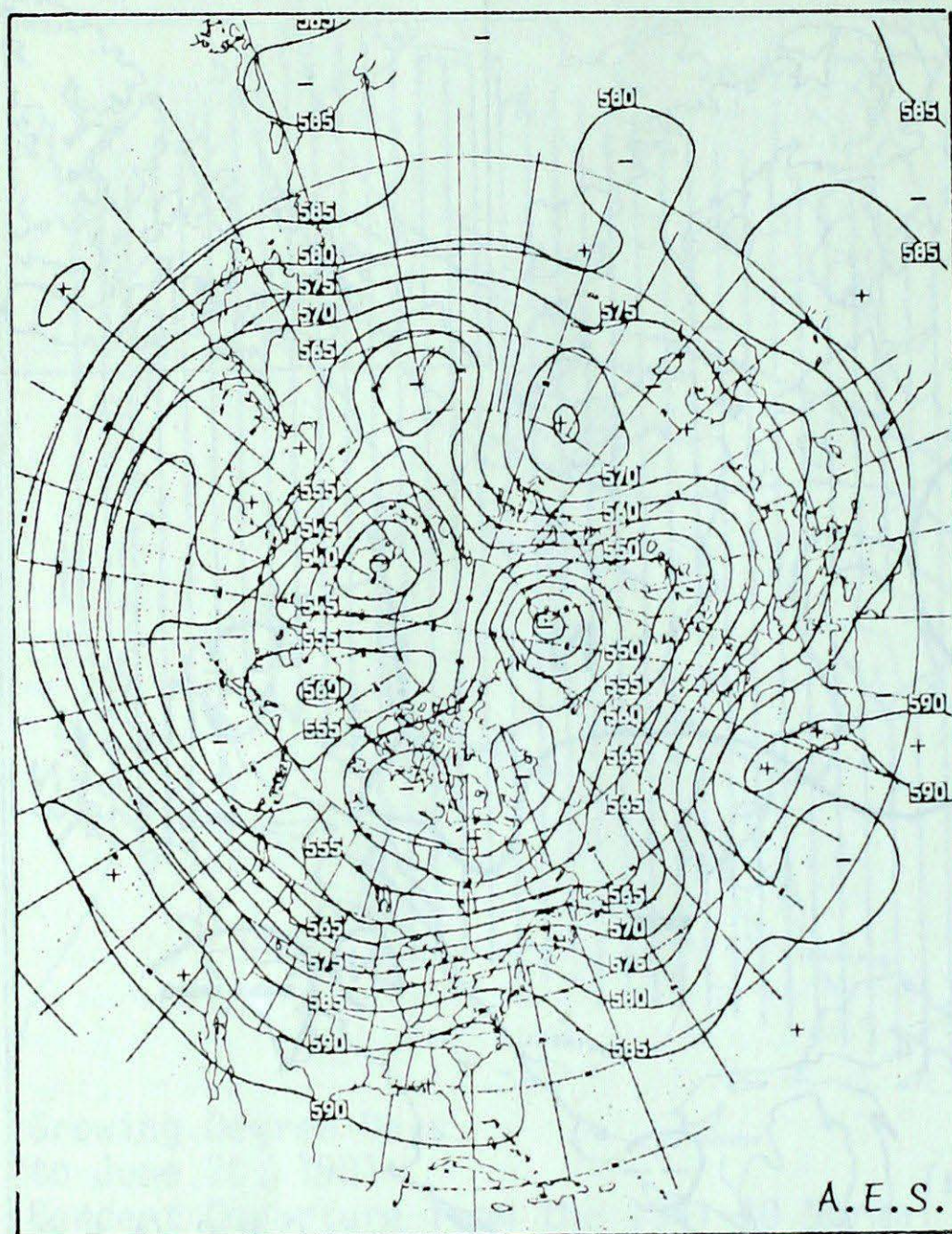
Temperature Scale

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

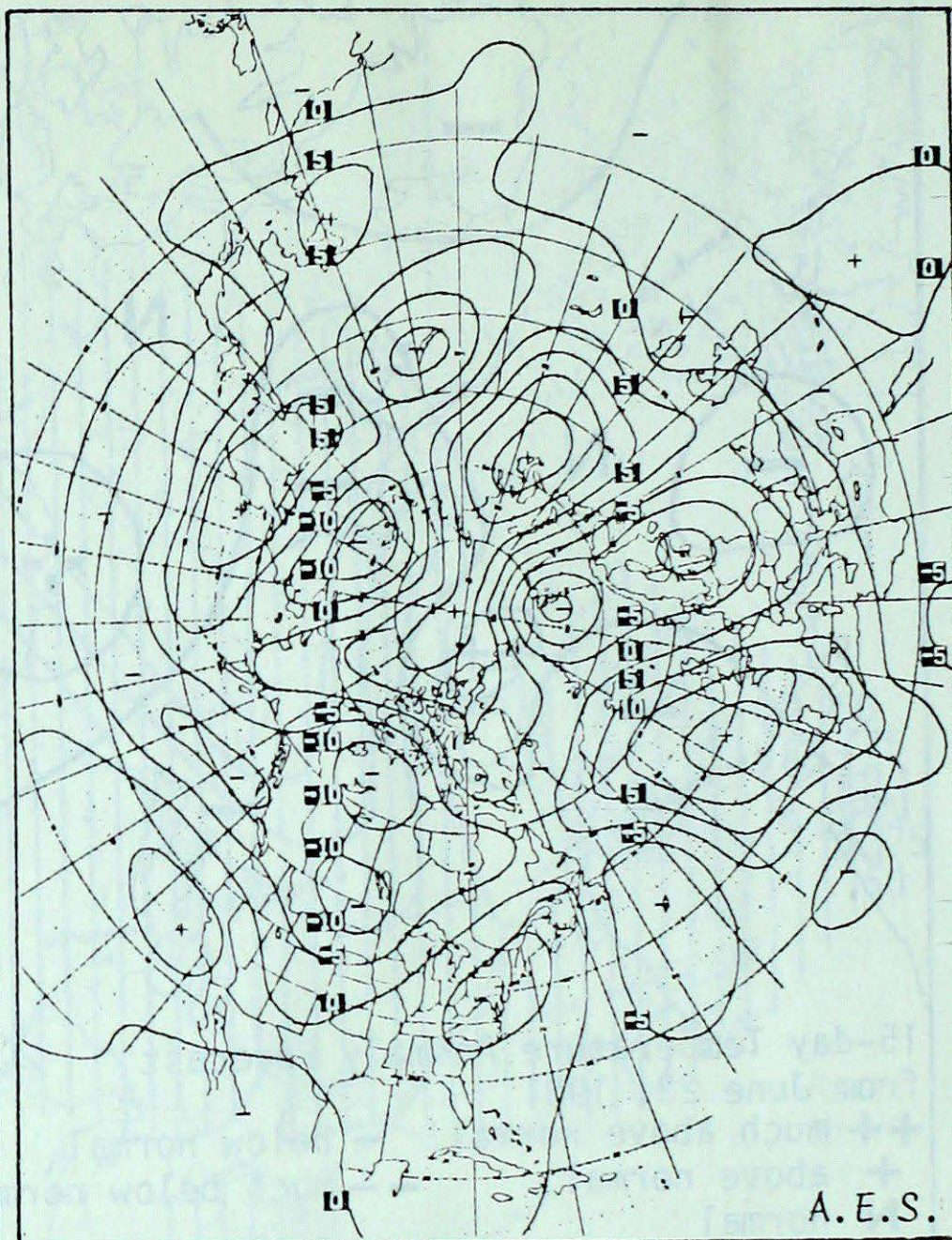
<u>Station</u>	<u>Current Temperature Anomaly Forecast</u>	
Whitehorse	Near Normal	Within 0.5° of Normal
Victoria	Below Normal	From 0.3° to 1.1° below Normal
Vancouver	Below Normal	From 0.3° to 1.1° below Normal
Edmonton	Above Normal	From 0.4° to 1.5° above Normal
Regina	Below Normal	From 0.4° to 1.5° below Normal
Winnipeg	Below Normal	From 0.5° to 1.6° below Normal
Thunder Bay	Below Normal	From 0.4° to 1.2° below Normal
Toronto	Much Below Normal	More than 1.5° below Normal
Ottawa	Below Normal	From 0.4° to 1.4° below Normal
Montreal	Below Normal	From 0.4° to 1.3° below Normal
Quebec	Below Normal	From 0.4° to 1.3° below Normal
Fredericton	Below Normal	From 0.4° to 1.3° below Normal
Halifax	Much Below Normal	More than 1.0° below Normal
Charlottetown	Much Below Normal	More than 1.3° below Normal
St. John's	Near Normal	Within 0.5° of Normal
Goose Bay	Much Below Normal	More than 1.6° below Normal
Frobisher Bay	Near Normal	Within 0.4° of Normal
Inuvik	Below Normal	From 0.6° to 1.9° below Normal

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

Atmospheric Circulation



7-day Mean 50 kPa Height Map
(in dam) June 15 to 21, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) June 15 to 21, 1981

The main west-east upper level flow continued to be depressed further south than is normal at this time of year; the exception being the Maritimes. A cool unstable airmass covered most of western and central Canada. Unsettled showery weather conditions were the predominant feature for most of the week as pulses traversing the upper flow moved inland from the Pacific. Mean temperatures and 50 kPa heights remained below normal throughout the period.

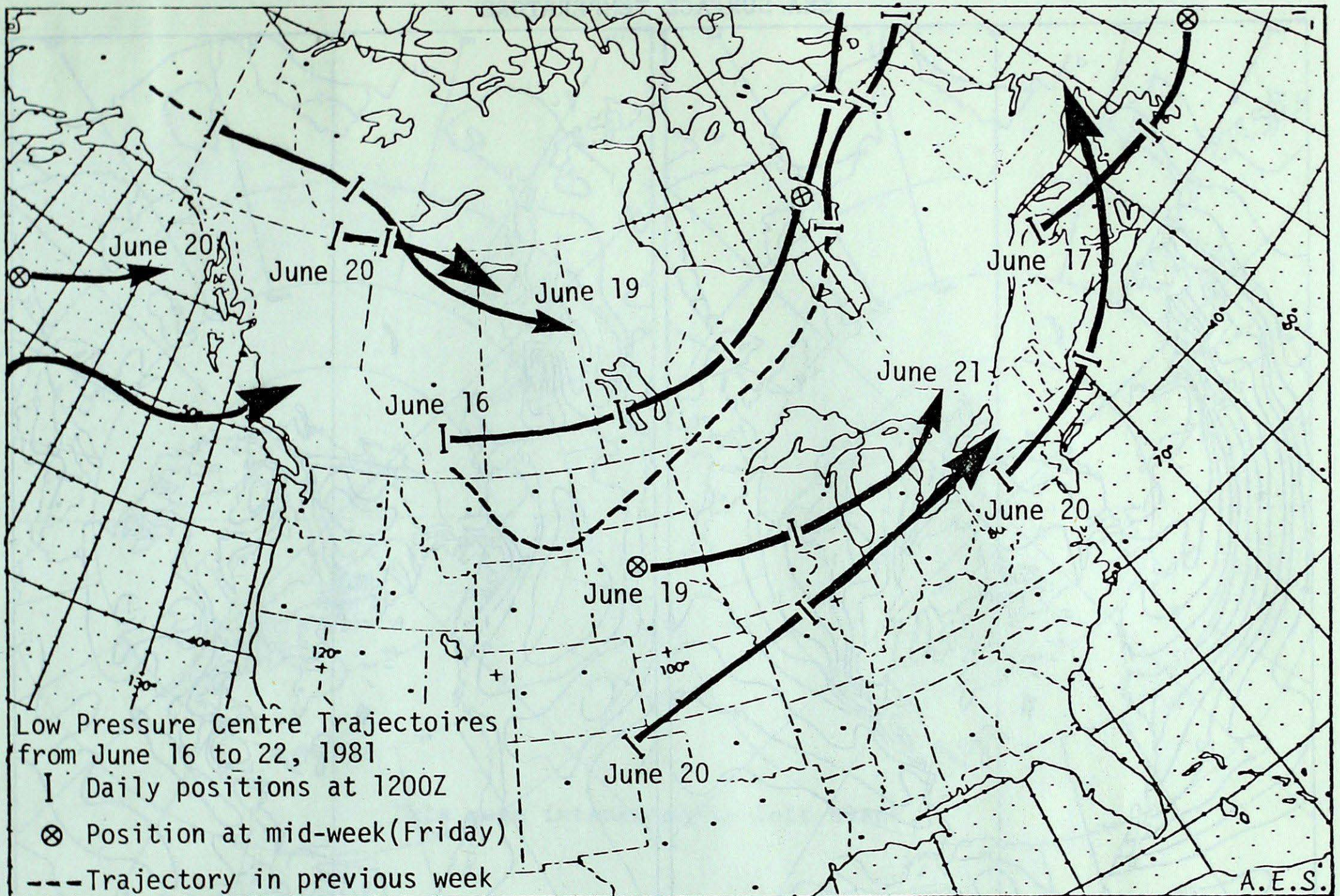
Eastern Ontario, southern Quebec and the Atlantic Provinces enjoyed considerably warmer weather. Mean temperatures were above normal, due to a rela-

tively more southwesterly flow and positive 50 kPa height anomalies.

A tongue of very warm and moist air which penetrated the lower Great Lakes Basin and adjacent areas of the St. Lawrence Valley early in the week was displaced by a slow moving frontal zone; heavy shower and thunderstorm activity accompanied the front. Subsequently, weather systems developing in the American plains followed a more southerly track across the lower Great Lakes and the Maritimes. This resulted in cooler and changable weather conditions over much of the eastern half of the country.

Andy Radomsky

LOW PRESSURE CENTRE TRAJECTORIES



CLIMATIC PERSPECTIVES

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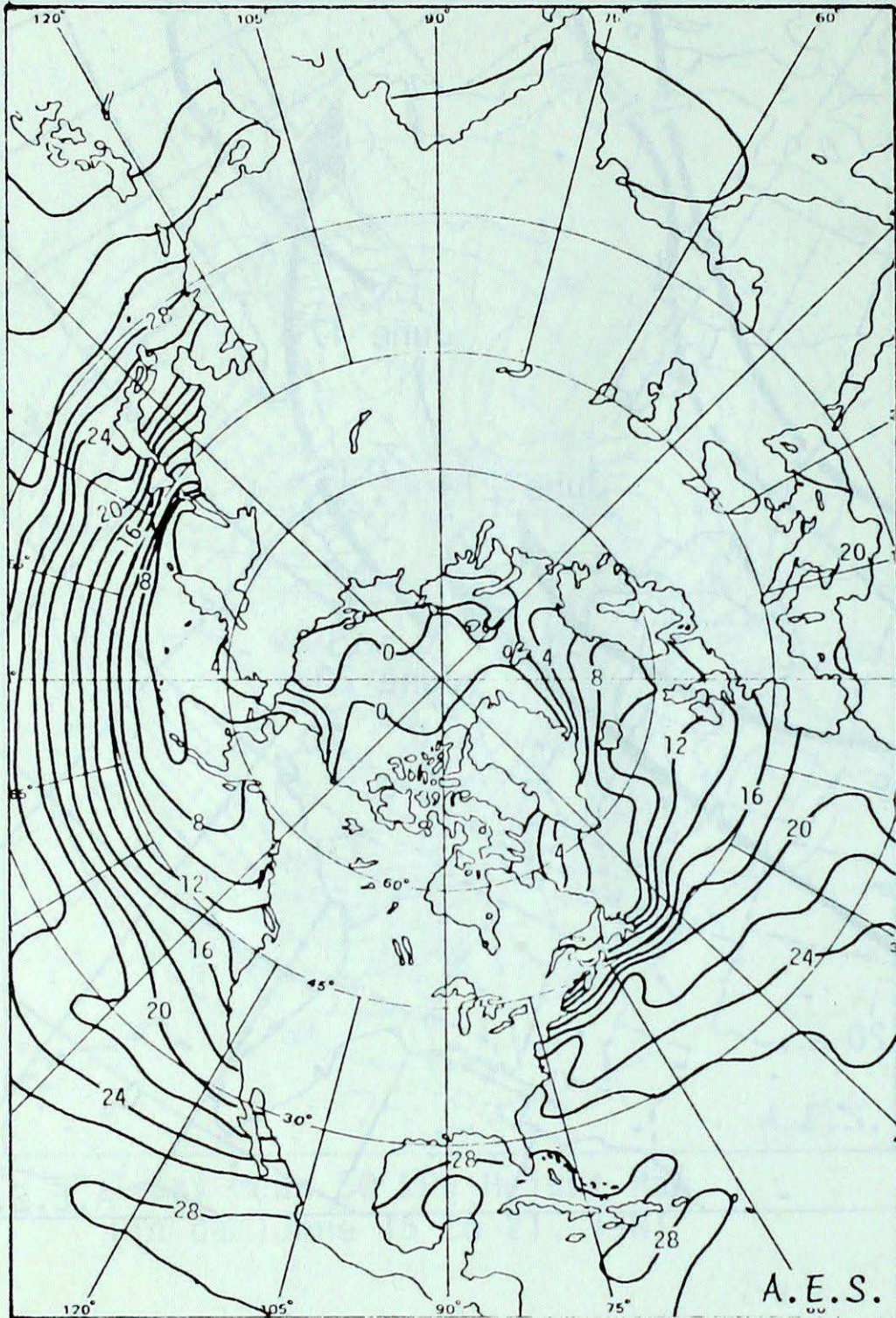
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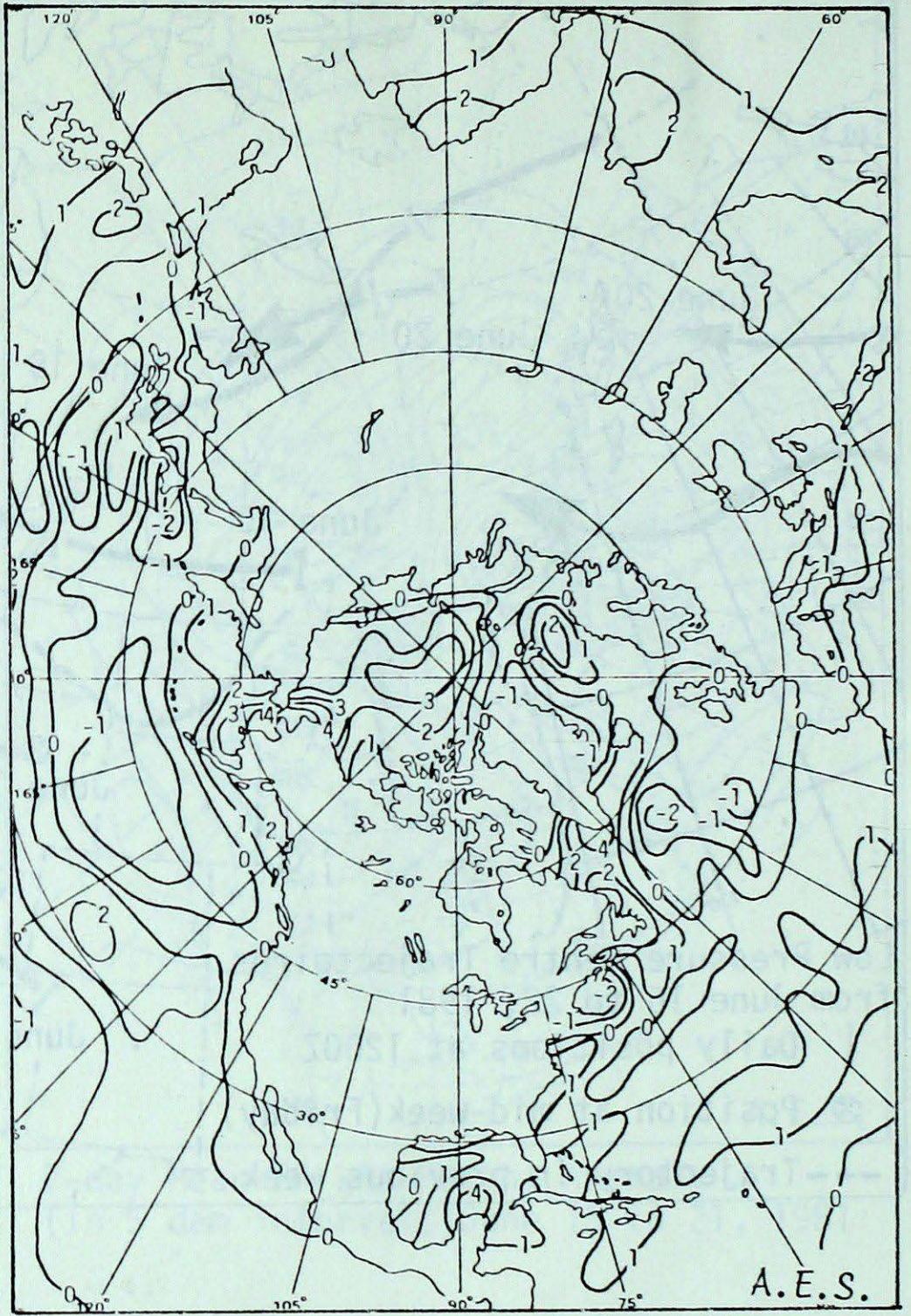
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SEA SURFACE TEMPERATURE



Mean Sea Temperature
from mid-May to mid-June 1981



Sea Surface Temperature Anomalies
from mid-May to mid-June 1981

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING GOOD P.M. T. JUNE 25, 1981

Station	Temperature (C)				Precip (mm)			
	High	Low	Avg	Wet Bulb	Wet Bulb	Wet Bulb	Wet Bulb	Wet Bulb
Algonquin	20	10	15	10	0.0	0.0	0.0	0.0
Bark Lake	19	10	15	11	0.0	0.0	0.0	0.0
Beeton	21	11	16	12	0.0	0.0	0.0	0.0
Belleville	22	12	17	13	0.0	0.0	0.0	0.0
Berthelburg	23	13	18	14	0.0	0.0	0.0	0.0
Brampton	24	14	19	15	0.0	0.0	0.0	0.0
Brimley	25	15	20	16	0.0	0.0	0.0	0.0
Burlington	26	16	21	17	0.0	0.0	0.0	0.0
Carleton Place	27	17	22	18	0.0	0.0	0.0	0.0
Cornwall	28	18	23	19	0.0	0.0	0.0	0.0
Drummondville	29	19	24	20	0.0	0.0	0.0	0.0
Dundas	30	20	25	21	0.0	0.0	0.0	0.0
Elmira	31	21	26	22	0.0	0.0	0.0	0.0
Fergus	32	22	27	23	0.0	0.0	0.0	0.0
Galt	33	23	28	24	0.0	0.0	0.0	0.0
Gatineau	34	24	29	25	0.0	0.0	0.0	0.0
Georgetown	35	25	30	26	0.0	0.0	0.0	0.0
Guelph	36	26	31	27	0.0	0.0	0.0	0.0
Hamilton	37	27	32	28	0.0	0.0	0.0	0.0
Hastings	38	28	33	29	0.0	0.0	0.0	0.0
Kingston	39	29	34	30	0.0	0.0	0.0	0.0
Kitchener	40	30	35	31	0.0	0.0	0.0	0.0
Knoxville	41	31	36	32	0.0	0.0	0.0	0.0
Koff Lake	42	32	37	33	0.0	0.0	0.0	0.0
LaSalle	43	33	38	34	0.0	0.0	0.0	0.0
Leamington	44	34	39	35	0.0	0.0	0.0	0.0
London	45	35	40	36	0.0	0.0	0.0	0.0
Markham	46	36	41	37	0.0	0.0	0.0	0.0
Medford	47	37	42	38	0.0	0.0	0.0	0.0
Middleton	48	38	43	39	0.0	0.0	0.0	0.0
Mississauga	49	39	44	40	0.0	0.0	0.0	0.0
North York	50	40	45	41	0.0	0.0	0.0	0.0
Oshawa	51	41	46	42	0.0	0.0	0.0	0.0
Peterborough	52	42	47	43	0.0	0.0	0.0	0.0
Plympton	53	43	48	44	0.0	0.0	0.0	0.0
Rimouski	54	44	49	45	0.0	0.0	0.0	0.0
St. Catharines	55	45	50	46	0.0	0.0	0.0	0.0
Sarnia	56	46	51	47	0.0	0.0	0.0	0.0
Shelburne	57	47	52	48	0.0	0.0	0.0	0.0
Simcoe	58	48	53	49	0.0	0.0	0.0	0.0
St. Thomas	59	49	54	50	0.0	0.0	0.0	0.0
Stratford	60	50	55	51	0.0	0.0	0.0	0.0
Sudbury	61	51	56	52	0.0	0.0	0.0	0.0
Toronto	62	52	57	53	0.0	0.0	0.0	0.0
Trenton	63	53	58	54	0.0	0.0	0.0	0.0
Uxbridge	64	54	59	55	0.0	0.0	0.0	0.0
Windsor	65	55	60	56	0.0	0.0	0.0	0.0
Yamaguchi	66	56	61	57	0.0	0.0	0.0	0.0
York	67	57	62	58	0.0	0.0	0.0	0.0

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