

ZEPHYR

JANUARY 1972 JANVIER

ZEPHYR

JANUARY 1972

Published under Authority of the Assistant Deputy Minister
Atmospheric Environment Service

Editor: B.M. Brent

	Page
Final Report on the History of the Canadian Meteorological Service Report Summer 1971	1
Explosion Near 4YD	4
Atmospheric Environment Service Featured in U.S. Periodicals	7
Tempêtes De Neige Et Nordet	7
First Female "Met Man" at Military Base Here	8
Conditional Monthly Mean Temperature Change Curves	9
Quelques Nouvelles De La Region Du Quebec	9
Washington Press Conference	10
Supplementary Precipitation Data Publication	10
MacKenzie River Valley – Beaufort Sea Climatological Study	10
WeatherShip Quadra Aids in Search for Sinking Freighter	11
La Bureau De La Météo à Ste-Foy Doté D'un Appareil Révolutionnaire	11
Personnel	13
Trivia	13

**FOREWORD TO FINAL REPORT ON THE HISTORY
OF THE
CANADIAN METEOROLOGICAL SERVICE PROJECT
SUMMER 1971**

Early in June 1971 two graduate students, William Boyle from York University and Paul Bator of University of Toronto, were hired to inspect and catalogue all pertinent information held at Headquarters pertaining to the history of the Canadian Meteorological Service and to prepare a collection of as many of these documents as possible. To do this the men surveyed and inspected annual reports, specially prepared histories and narratives, and especially the official correspondence files from the beginning in the 1840's to the mid-1930's. They worked most of the summer at the Public Archives Records Centre on Lesmill Road and through the co-operation of Mr. Chapin and his staff were able to accomplish a great deal. Before they left in early September they prepared a final report which is attached. Additional copies of this report, a card catalogue, and the collection of correspondence and letter books deemed to be of importance in the history of the Service are now temporarily archived in the Climatology Division.

M.K. Thomas.

GENERAL SUMMARY OF PROJECT

From our examination of the official files and letter books of the Meteorological Service of Canada, we have drawn a number of impressions, themes and perspectives about the origins of the Service, its operation, development, expansion, and perhaps most interestingly its members. These views are presented in an attempt to reach some understanding of the history and significance of the Meteorological Service and its place in Canadian history, and to explain the most interesting and valuable aspects of our research.

One of the initial impressions concerning the origins of the Meteorological Service is that meteorological observations in Canada began only as a by-product of the establishment of a Toronto Observatory in 1839 by the British Imperial authorities. The Toronto Observatory was established primarily to observe magnetic phenomena. It was a British military operation, observation and supervision being carried out by the Royal Artillery. In 1853 when the observatory was taken over by the Assembly of the United Canadas and placed under the administration of the University of Toronto, its main personnel remained British. It was not until 1894, with the appointment of R.F. Stupart, that the Service came under the direction of a Canadian.

Prior to 1876, when the Meteorological Service began issuing forecasts on a limited scale for Toronto and Montreal, all storm warnings originated in Washington. In fact, it appears that there was a general impression in Canada that the Service was merely a branch of the U.S. Weather Bureau. This is evident in a letter to the Hon. P. Fortin on 14 December 1878, from G.T. Kingston who vigorously condemned this impression.

However, the fact remains that the Canadian Service was far behind its American counterpart. The U.S. Weather Bureau was actually paying for observations taken in Canada, a fact which alarmed Kingston, and most likely accelerated his decision to establish a forecasting system in Canada. When Kingston applied to the federal government for funds to set up a forecast system in the Maritimes, the Minister considered the expenditure unnecessary. Since the U.S. Bureau already provided the Maritimes with storm warnings the Minister felt that the expense entailed in founding an independent Canadian system was not justified. However, for G.T. Kingston the very sovereignty of the country was at stake and he eventually succeeded in persuading the Minister to establish a Maritimes forecast system.

The importance of British and American influence on the early years of the Canadian Service cannot be overemphasized. The extent of these two influences is apparent throughout the correspondence, especially because of the necessity of close co-operation among the various meteorological services. With the advent of aviation and then the Second World War, the Canadian Meteorological Service had formed a strong and constant relationship with these two services.

Of great importance and assistance to anyone researching the history of the Meteorological Service are the brief histories and the official memoranda in the files. There are several of these brief but informative sketches, explanations and recommendations written by the directors to the Department of Marine and Fisheries and foreign agencies concerning the origins, legal status, background, and operation of the Canadian Meteorological Service. An excellent source for information on the origins of the Meteorological Service is an entire letter book dating from 7 May 1870 - 9 December 1872, which chronicles the establishment and organization of the Service. An excellent account of the early years is given in a letter written by Charles Carpmael to the British Meteorological Office on 17 March 1883.

Just as valuable for historical data and background are the Director's reports about individual staff members. These are brief but revealing descriptions of the employment records of certain employees of both the Meteorological Service and the Toronto Observatory. The salary lists of the Meteorological Service provide information on the salaries paid and increases given to the employees, an interesting insight into government financial policies.

Throughout the official correspondence there are numerous references to newspaper articles about the Service and its operation. Most of these articles are not attached to the letters but would be available elsewhere, i.e. the libraries. Likewise there are many references to articles in various journals and magazines which could be a valuable source of information. For example, the magazine *Civilian*, a publication of the Canadian Civil Servants, published an article in 1916 on the employees of the Service during the first World War. Throughout the card catalogue there are references to articles in *The Globe*, *The Empire*, *The Telegram* and various papers throughout Canada and the United States. Several of these articles have been placed in the artifact files.

All correspondence dealing with the estimates and expenditures of the Meteorological Service can provide useful information. In addition, there are many letters from the Director to the Deputy Minister requesting additional funds and increases in the expenditures of the Service. That the Service suffered from its lack of adequate financial support is an impression which clearly emerges from the files and letter books. A constant demand for increased revenue was made by R.F. Stupart during the first decade of the twentieth century. In particular, these demands centered around the inadequate salary

received by employees of the Service. This became strikingly evident during the inflationary period of the first World War. In March 1918, R.F. Stupart sent a letter to the Deputy Minister complaining of the distress that members of his staff suffered due to their abnormally low salaries. At times the economic stringency of the Federal Government reached startling proportions as, for example, in 1917 when the Deputy Minister requested justification for the purchase of four pencil sharpeners.

The role of political influence emerges throughout the correspondence as a dominant force on the development and operation of the Service. This impression is most evident during the early years of the Service in the appointment of observers in local areas. For example, the Minister of Marine and Fisheries wrote a letter to Charles Carpmael in January 1885 voicing the complaints of the Toronto members of Parliament that the Meteorological Service hired opponents of the government. Henceforth, to avoid future embarrassment, Carpmael was instructed to have all appointments approved by the Minister. This continued on a smaller scale, even after the establishment of the Civil Service Commission, when contracts from the Service were issued only to supporters of the government. The question of political influence in the operation of the Meteorological Service poses a number of interesting questions and requires close consideration in any history of the Service.

Perhaps the most fascinating sources encountered during our investigation of the official correspondence were the letters which revealed the character of the major personalities in the Meteorological Service. These are to be found in assorted letters between the Service and the Department of Marine and Fisheries and the Director and observers throughout the country. The correspondence with the government discloses the type of relationship that the Service, and mainly its Director, maintained with the Department, and how the government's policies and politics affected the Service. On a more human level, this provides us with a view of the individuals who comprised the Service. For example, Charles Carpmael, in a letter written to R.H. Scott of the British Meteorological Office on 18 May 1887, explains that the first Director, G.T. Kingston, would have preferred to teach rather than direct the Meteorological Service. Perhaps even more revealing are the correspondences to and from observers. The conflicts and relationships of various observers, such as F.N. Denison and E. Baynes Reed in Victoria, provide a fascinating insight into the human element of the Service. In addition, the correspondence which covers some of the most important events in Canadian history reflects the ideas, sentiments and prejudices of these individuals. The traumatic impact of the First World War is illustrated powerfully in many letters including those dealing with the death of R.F. Stupart's son at the Front. Some of these letters mirror events in our history such as the Halifax explosion and reflect the importance of these events on the lives of individuals. It would be interesting thematically to conjecture about the type of individual who was attracted to and helped to develop the Meteorological Service in Canada.

Due to the international nature of meteorology, the Canadian Service maintained relations with a great many foreign meteorological agencies. There is a great deal of correspondence in the official files between the Canadian Service and countries throughout the world on meteorological matters. From the earliest date the directors became involved in meteorological conferences and associations dedicated to the advancement on a world-wide scale not only of meteorology but of science in general. The Canadian Service participated in the two Polar Years in the 1880's and 1930's. Both R.F. Stupart and John Patterson played important roles at international congresses and in the International Meteorological Organization. The growth of aviation played an extremely important role in strengthening international meteorology ties. The correspondence leaves the impression that the Meteorological Service was involved on an international level far in advance of many other Canadian

organizations. The theme of international relations is definitely an important one in any overview of the Service.

On a purely scientific level, the contribution of the Canadian Service to meteorology is another important consideration. Inventions, techniques, and other scientific discoveries were advanced or supported by the Service. In particular, John Patterson was an accomplished scientist and was the inventor of the three-cup anemometer. The Service promoted the adoption of standard time by Canadian cities in 1883. Exploration of the Polar regions of Canada was undertaken by the Service, even to the employment of the famous Arctic explorer V. Stefansson. From a thematic point of view, it would be interesting to examine the scientific innovations and developments of the Service.

What did the Meteorological Service mean to the ordinary Canadian? What did it do for him? How did he regard it? These are all questions which we have tried to explore while examining the official correspondence of the Service. It is an approach which requires a great deal of attention if the history of the Service is to be related to its impact on the country as a whole. Judging from the correspondence, the Meteorological Service was above all else identified with its forecast system in the eyes of the public. For fishermen, farmers, businessmen, and tourists, these forecasts were always sought and often criticized. Farmers in Western Canada when asked by the Director in 1913 about the use of meteorology indicated that they expected something in the way of preventing crop losses due to bad weather. Shortly after this, the division of agricultural meteorology was established to aid farmers by studying the relationship of weather and crop growth. As early as the 1870's fishermen had requested storm warnings to prevent loss of their boats and equipment during bad weather. With the publication of forecasts in newspapers and in the 1920's their broadcast on radio, the Meteorological Service became an accepted part of Canadian life. It is the development of this acceptance in Canadian society and how it came about that deserves an explanation.

EXPLOSION NEAR 4YD

by

A.A. HOOVER

On 29 January 1972, a rapidly moving and deepening Atlantic storm passed northeastward very close to Ocean Weather Station 4YD (44°N 41°W). The plotted hourly reports, herewith reproduced, illustrate the explosive deepening and rapid motion of the storm. The pressure falls and rises would be almost unbelievable were it not for the known reliability of the observations. At 1910Z, a special weather observation reported an extreme fall of 14.8 mbs. in one hour.

Although deep storms in this area occur quite frequently during the winter season, the uncommon extreme tendency pattern suggested that it would be of interest to inspect this system's history and the related upper air features.

The depression appeared off the United States coast northeast of Cape Hatteras, N.C., on the 281200Z chart with a central pressure of 1010 mbs. In the next 24 hours it moved east-northeast at 50 kt. with a reliable fix at 290000Z near 39.5°N 61°W, central

pressure 1000 mb. The 291200Z fix was rather indefinite as to position and depth; it was placed at 41.5°N 48°W, central pressure 980 mbs. In the next 12 hours it moved northeast at 45 kt. and deepened intensely to about 947 mbs. by 300000Z. During this stage it passed near OWS 4YD at about 2025Z.

The 500 mb. and vorticity charts for 290000Z, 291200Z and 300000Z were inspected for changes in heights and 1000-500 mb. thicknesses associated with the low. In the 24 hours accompanying the strong surface deepening there was a change to lower heights of only 120 metres, and very little change in thickness, perhaps 40-60 metres lower. This was difficult to assess accurately, since the raob for 290000Z from OWS 4YD was not received, and this was at the most critical stage of development. However, allowing for an error in this regard, it would appear that the net change of height and thickness could not account for nearly as much deepening as actually occurred.

The effect of positive vorticity advection (PVA) was not too clear. At 291200Z it was fairly weak. Somewhat more PVA was shown over the low by 300000Z, but this was the chart on which the 4YD upper air sounding was missing. Hence, it is not certain how intense the PVA was at the time of intense deepening.

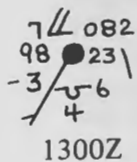
There was very little warm advection ahead of the centre at 291200Z, but it was stronger by 300000Z. Once again, the 850 mb. chart may have been analysed incorrectly because of the missing 4YD raob. Rather strong cold advection was shown at both raob times within 5° latitude to the west of the centre.

It is reasonable to assume, in the light of the above, that a large proportion of the deepening must be attributed to diabatic effects, which are difficult to assess in a quantitative sense. Throughout the strong deepening period the track of the storm was just along the southern edge of the Atlantic Drift. On the basis of reports from ships, the sea surface temperature was about 15°C. on the southern edge of the Drift and about 2° - 5°C. on the northern edge, providing strong warming as the air moved northwestward over approximately 250 n.m. Within about 5° latitude to the west and southwest of the low centre, there was quite strong cold advection shown on the 850 mb. charts for 291200Z and 300000Z; it was of the order of about 15°C./250 n.m. Various authors have stressed the importance of the diabatic term in this type of situation; thus, it seems reasonable to account for a large part of the deepening of this storm to the strong diabatic effects entering the process at the critical time.

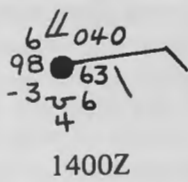
The computer-produced surface prognostic charts based on the primitive equation (P.E.) model from 290000Z input, and received at 290730Z, were inspected for accuracy on this low. Although the general trend indicated was correct, they never did deepen the low adequately. The 48-hour prognostic deepened it to an estimated 977 mbs. They were also very slow in the initiation of the deepening and in the speed of motion of the system. For instance, the 24-hour P.E. prognostic for 300000Z indicated the low would be at 42°N 45°W, central pressure 994 mbs., whereas the actual position for that time was 44°N 38°W, central pressure 947 mbs. i.e., about 6° latitude too slow and more than 40 mbs. too shallow.

OWS 4YD

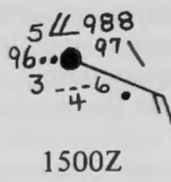
29 January 1972



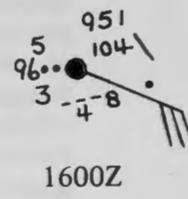
1300Z



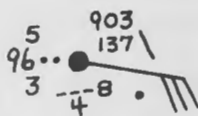
1400Z



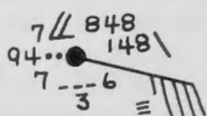
1500Z



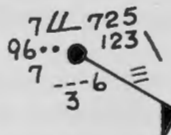
1600Z



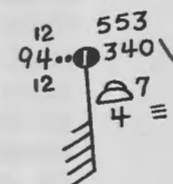
1700Z



1800Z



1900Z

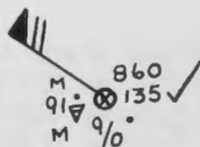


2000Z

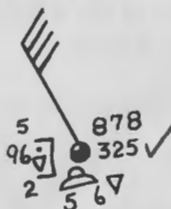
1910Z - 14.8 mb.
drop in one hour



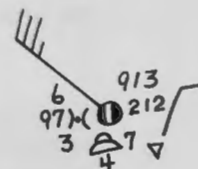
2100Z



2200Z



2300Z



0000Z

Gust 100+
Lowest pressure
2025Z 947.5 mb.

ATMOSPHERIC ENVIRONMENT SERVICE FEATURED IN U.S. PERIODICALS

Two well-known and prestigious periodicals which are published in the United States featured the AES in their December issues. "Weatherwise" carried a picture of our new Headquarters building on the cover as well as the Centennial Symbol and the subtitle "Canadian 100th Anniversary Issue". Inside were four feature articles by AES authors: "Meteorology in Canada: A Brief Review" by John Merrick, "Canadian Weather Features of the Past Century" by Morley Thomas, "Life at the Joint Arctic Weather Stations" by Dan Buss and "The Atmospheric Environment Service and Air Pollution Meteorology" by Rod Shaw. The issue also contained Canadian Cold and Heat Data.

The "Bulletin of the American Meteorological Society" under the heading of a Special News Feature devoted 6 pages to our October Symposium – "A History of Meteorological Challenges". A brief introduction on the background of the Symposium was followed by summaries of the presentations given by each of the speakers. The Bulletin also carried a description of the Opening Ceremonies for the HQs building on October 29, 1971 in addition to several pages of photographs showing people and events during the course of the week.



TEMPÊTES DE NEIGE ET NORDET

FIRST FEMALE 'MET MAN' AT MILITARY BASE HERE



Miss C.E. Klaponski

Carole Klaponski of Winnipeg is the first and only woman meteorologist at a Canadian Forces base.

She has been at Canadian Forces Base Winnipeg's weather office for less than a year but already pilots have heard about her from such distant bases as Shearwater, N.S., and Comox, B.C.

Although unique to the armed forces, Miss Klaponski is not alone as a woman weather forecaster. Women have been forecasting at Civilian airfields for several years. However, there are only a few in this predominantly male field.

Miss Klaponski, who graduated in mathematics from the University of Winnipeg in 1970, first became interested in weather through summer jobs with the federal transport department. After completing a nine-month course in Toronto and Trenton, Ontario, she was asked if she would mind being posted to a

federal defence base. Thus Winnipeg came to set a precedent by having the first woman weather forecaster, said a news release from the Winnipeg base.

Women in the past have asked to be posted to forces bases but were always turned down. They were often told that there were no facilities available or that they would have to give their weather briefings in locker rooms or that pilots wouldn't pay attention to strictly the weather if a woman was briefing them, said the release.

Miss Klaponski has found all of these things untrue and has thus far enjoyed her job at the base. Being a first tour, it is a learning experience as well. But it didn't take long for her to discover the various types of aircraft flown and some of their altitude and airspeed characteristics.

She has flown in a forces' Dakota aircraft and has also taken the high altitude indoctrination course. Her next aim is to fly in a forces' jet trainer to understand better some of the problems of high altitude weather.

Although not a vociferous exponent of women's lib, she is quite proud of the fact that 100 per cent of the women on her course graduated — all two of them.

Some may consider her to be a "token" female forecaster. But she points out that it is a highly specialized field. "How many women go into maths and physics?"

Miss Klaponski is an accepted member of the weather staff at the base and works all of the shifts. She issues forecasts, gives briefings to pilots for flights throughout Canada and the United States and brightens up the morning briefings for the navigation training flights. The students certainly haven't complained, said the news release.

Canadian Forces Base Winnipeg has 10 weather forecasters.

CONDITIONAL MONTHLY MEAN TEMPERATURE CHANGE CURVES

Four-hour mean temperature forecasts and hour-by-hour temperature forecasts can now be produced by meteorological technicians using semi-objective methods involving a simple technique recently developed by the Forecast Research Section. The technique requires graphs based on climatological statistics which have been produced by computer from 10 years of hourly data for each of 16 Canadian cities. It permits one to quickly draw a curve representing hourly forecast temperatures once one has been given the forecast high and low for the day, the associated times of occurrence if abnormal trends are expected, and forecast sky conditions. Four-hour mean temperatures are readily extracted. The required graphs apply to cloudy and clear conditions and consist of cumulative values of mean hourly tendencies starting from an arbitrary zero at midnight LST. Climatology Division collaborated in the required computer data processing.

QUELQUES NOUVELLES DE LA REGION DU QUEBEC

par

E.A. Lépine

Le 10 janvier 1972 le chef intérimaire du bureau météorologique de Sept-Iles, M. Réal Franc, est remplacé par M. Normand Guérin anciennement du bureau météorologique de Québec. M. Guérin laissa le bureau central d'analyse au mois d'octobre 1970 pour accepter une promotion comme technicien en exposés verbaux à notre bureau de Québec. Il se signala à cet endroit par ses nombreuses apparitions à la radio et la télévision. Depuis le début de décembre, après de longues démarches et avec l'aide de Philippe Sigouin et Gérard Desjardins, il anime au poste de télévision local (télé4) une émission d'informations sur la météorologie, à laquelle les gens sont appelés à participer en leur écrivant. Cette émission est devenue très populaire et passe en onde tous les dimanches entre 13 heures et 1315 heures. Monsieur Guérin est appelé à développer les services météorologiques pour toute la population de la moyenne et basse côte nord, services qui sont déjà bien appréciés grâce à M. Réal Franc et M. Claude Jollet.

Monsieur Réal Franc pour sa part est muté à Sherbrooke pour ouvrir un bureau météorologique urbain. Le bureau sera situé sur la rue Belvédère à côté d'un centre d'achat du même nom. Déjà la population attend avec intérêt la venue d'un tel bureau. M. Franc aura fort à faire la première année puisqu'il sera seul pour oeuvrer dans ce secteur de la province.

Une autre mutation importante s'est opérée en décembre 1971. M. Normand Gagnon, longtemps chef de la station météorologique de Baie Comeau, accepta une promotion comme technicien en exposés verbaux à notre bureau de St-Hubert. M. Ladouceur, responsable du bureau, accueille Monsieur Gagnon avec joie, ayant perdu M. Robert Boileau qui accepta une promotion au bureau météorologique de Montréal, en remplacement de Monsieur Pontbriand muté à Toronto.

En parlant de bureau de St-Hubert, celui-ci sera d'ici peu déménagé sur le côté civil de l'aéroport dans une bâtisse toute neuve et fonctionnelle. Le déménagement est prévu pour le mois d'avril.

M. Arbour de notre bureau de Val d'Or est toujours seul pour donner des exposés verbaux. M. Denis Blanchard muté, de la section des glaces au bureau de Val d'Or pour une courte période d'un mois, du milieu de novembre au milieu de décembre, a accepté une promotion et remplacé M. Robert Bourbonnais comme officier météorologique du port de Montréal. M. Bourbonnais est retourné aux glaces.

Comme on voit, ici au Québec nous sommes en pleine expansion: 1970 a vu la naissance d'un bureau météorologique à Sept-Iles; 1971 deux nouveaux bureaux, à Val d'Or et à St-Hubert; 1972 un bureau météorologique à Sherbrooke.

WASHINGTON PRESS CONFERENCE

An international press conference was held at the National Academy of Sciences, Washington, D.C., on January 21 to make the first formal announcement of the International Field Year for the Great Lakes. Dr. Robert White, Administrator, NOAA, chaired the conference and spoke of the importance of the Great Lakes to the U.S. Mr. J.P. Bruce, Director, CCIW, replied for Canada and stressed the relationship between the IFYGL and the IJC Lake Pollution Reference. Mr. T.L. Richards followed with a description of the IFYGL Scientific Program and Dr. E.J. Aubert, Director of NOAA'S IFYGL Project Office, described the Data Acquisition Systems and Field Operations Plan. The conference was attended by science writers and reporters from both Canada and the United States who questioned, at length, the panel of speakers and IFYGL representatives.

SUPPLEMENTARY PRECIPITATION DATA PUBLICATION

The third issue of this new series covering the period October 1969 to March 1970 was distributed during the month. This was the first issue to include computer-produced tables of Fischer & Porter precipitation gauge data. The fourth issue in the series has been prepared for printing and should be available shortly. The fifth issue of the series (October 1970 to March 1971) is now ready for typing and preparation for printing. It is expected that the sixth issue will be available by the end of February. This will bring the publication of this series up to the proposed schedule.

MACKENZIE RIVER VALLEY - BEAUFORT SEA CLIMATOLOGICAL STUDY

Extensive use is being made of available climatological information and applicable computer techniques for this study. However, due to a sparsity of data and a strong bias toward coastal and valley locations, it has been necessary to adapt short term and irregular data and to develop synoptic approaches based on physical relationships in order to obtain meaningful probability estimates of precipitation, temperature, wind and durations of critical weather events.

Based on relationships for such climatic controls as vegetation, orography, the nature of the immediate and adjacent surfaces, solar input, radiation balance and the dynamics of weather systems, the analyses and mapping of temperature regimes, including a chapter on Arctic temperature inversions, have been completed. Adjustment of precipitation patterns with elevation and slope and mapping on a seasonal basis are well advanced.

WEATHERSHIP QUADRA AIDS IN SEARCH FOR SINKING FREIGHTER

The Canadian Weathership Quadra, under the command of Captain Randolph Dykes, was the first ship involved in the search for the 7,629-ton freighter Dona Anita which went down in raging seas Sunday January 10, 120 miles west of Vancouver Island.

The Japan-bound Dona Anita's British captain radioed for help at 3:15 a.m. Sunday and the Quadra rushed from its weather monitoring station farther out in the Pacific, and arrived near the Liberian-owned freighter's last known position at 10:45 a.m. — all that was spotted were two empty life-rafts, many broken wooden planks and an oil slick that measured five miles by three — no bodies were seen.

Search craft were hampered by snow, sleet and rain whipped by 55 mph winds, gusting to 70 sweeps 40 to 50 feet high, and the Quadra had to transfer an injured crewman to a helicopter. Twenty-year-old steward Sylvester Gutkowski of Victoria suffered second-degree burns to more than half of his body when a coffee urn overturned while the Quadra was searching for survivors.

A life-ring picked up by Quadra was delivered to the rescue centre Tuesday before the ship left for its post on weather station "Papa" 800 miles out in the Pacific.

The Quadra will again sweep through the area of the sinking on her way to relieve weather ship "Vancouver," and a final search will be made by the Vancouver on her way back to port.

LE BUREAU DE LA MÉTÉO À STE-FOY DOTÉ D'UN APPAREIL RÉVOLUTIONNAIRE

par
Raymond Brancon

Le Bureau météorologique de l'aéroport de Québec, à Sainte-Foy, a été doté, mercredi dernier, de l'unique prototype d'un appareil électronique révolutionnaire qui a reçu le nom de thermographe — hygrographe enregistreur à longue distance, appelé à rendre les plus grands services dans les stations météorologiques nationales.

"C'est un honneur, pour l'aéroport de Québec et notre Bureau météorologique local, d'avoir été choisi, le premier de tous les aéroports du Canada, pour recevoir en priorité cet instrument météorologique des plus perfectionnés," nous a déclaré M. Antoine Hone, qui



M. Antoine Hone, chef du Bureau météorologique à l'aéroport de Québec.

assume depuis ses débuts, il y a une douzaine d'années, la direction du Bureau météorologique de Québec. Celui-ci est appelé à prendre une certaine expansion avec les travaux de l'ordre de quelques millions de dollars, qui débiteront au printemps, pour la construction de la nouvelle aérogare.

Avant l'installation de cet appareil inventé par un ingénieur météorologiste canadien, M. Larry Wiggins, du Service de l'Environnement atmosphérique à la Météorologie nationale à Toronto, le technicien météorologiste de l'Ancienne - Lorette devait se rendre, quatre fois par jour, en traversant les pistes de l'aéroport, dans l'abri où sont installés des instruments enregistreurs, pour y lire les données de température et du point de rosée, et le pluviomètre.

Dorénavant, températures de l'air et point de rosée, ces deux facteurs essentiels en météorologie, seront continuellement enregistrés sur un diagramme, à chaque instant. Non seulement les lectures du thermomètre et de l'hygromètre seront connues à n'importe quel instant du jour, mais aussi on pourra relever les températures maximale et minimale de n'importe quelle période. De plus, une lecture directe de ces deux mêmes éléments peut se faire très facilement. Avec ces deux lectures, on obtient immédiatement le pourcentage d'humidité relative de l'air.

Le nouvel appareil, relié à un abri thermométrique sur le terrain d'aviation, repose, dans sa conception, sur deux principes essentiels: d'une part, le thermomètre métallique ou thermistor donne la lecture de la température atmosphérique; d'autre part, on obtient le pourcentage d'humidité relative au moyen d'une bobine sur laquelle est enroulé un fil d'or fin imprégné d'un produit chimique, le chlorure de lithium; on y fait passer le courant dont les variations permettent d'obtenir la concentration d'humidité dans l'air, selon la concentration de vapeur d'eau.

Le nouveau site des instruments est à environ 700 pieds de la station d'observation devenue automatique.

Désormais, sauf en certains cas, le technicien n'aura plus besoin de se rendre sur le lieu où sont abrités les instruments, car la plupart des autres instruments sont à lecture à longue distance, enregistrée au bureau même.

Ce même technicien observateur pourra désormais fournir de meilleurs services aux usagers, de plus en plus nombreux: ministères provinciaux et fédéraux, villes et municipalités pour leur service de voirie en hiver, postes de radio et de télévision, journaux, agriculteurs, stations de ski, compagnies ferroviaires, les forces armées, compagnies de navigation, etc.

Les observations synoptiques faites à l'aéroport de Québec sont, rappelons-le, diffusées aujourd'hui dans la plupart des pays du monde.

M. Antoine Hone invite le public à venir voir l'appareil thermographe - hygrographe enregistreur à longue distance, dont il n'existe qu'un seul du genre au Canada. Des explications seront fournies sur place, au Bureau météorologique, par lui-même et des techniciens en météorologie.

PERSONNEL

January 1972

The following has accepted positions as a result of a recent competition.

71-MET-CC-60 Meteorology (MT) 5
 BMetO
 CFB Moose Jaw
 - J. Dmytriw

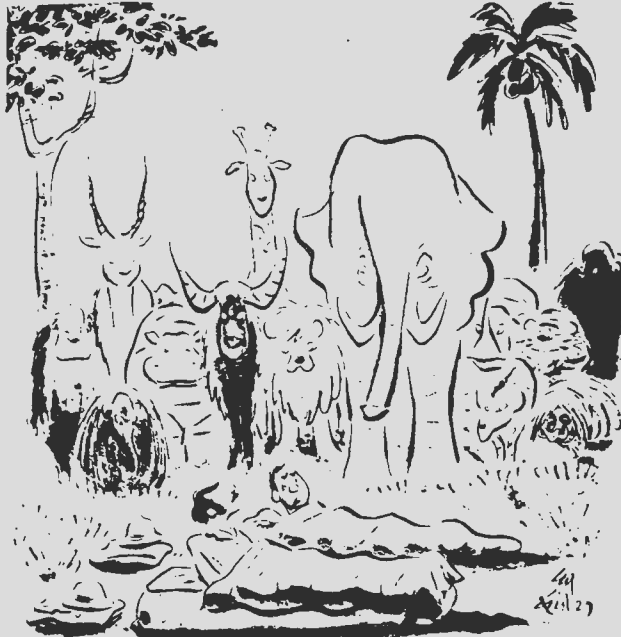
The following transfer took place:

J.R. Sandilands To: Climatology Division AES HQs
 From: Goose Bay

TRIVIA

THE PICK OF **Punch**

Copyright 1972, Toronto Sun Syndicate



"It's that damned water mattress of yours!"



"I'll say that for Thompson—he's loyal."

'JUST THE USUAL ERRORS,' B.C. WEATHERMAN EXPLAINS

The weatherman is having his highs and lows these days, but there's nothing unseasonable about that.

Because he predicted three to six inches of snow for Vancouver Monday and then had to settle for a skimpy inch doesn't mean his weather eye is failing — even if it seems he's been misreading the stars with eye-catching regularity in these past few uncommonly cold and snowy weeks.

Gordon Muttitt is B.C.'s chief weather forecaster, and he can look back on 29 years of his own predictions and mispredictions, secure in the conviction that the weatherman has not been guilty of an unusual lot of errors recently — only the usual lot.

"I don't know where this idea originated that we are making a lot of mistakes these days," he said in an interview Tuesday.

"The truth is, we are making the normal number of errors, but that's all. It's just that people don't notice (the errors) when the weather is clement, but when they begin to get tired of inclement weather, they begin to look for someone to lash out at, and that could be the weatherman."

Muttitt said the weatherman is just as likely to predict showers on a summer day when not a drop falls as he is to over-estimate the force of a winter snowstorm.

"But people are more conscious of the weather in the winter and so they are more critical (of mispredictions)," he said, "even though our average rate of accuracy has been working out at very close to normal lately."

Muttitt noted by way of example that an accurate temperature prediction — as defined by the weather office — for Vancouver would come within three degrees of the actually achieved temperature.

For Cranbrook or Prince George or other centres where temperatures vary more widely within one 24-hour period, the allowable discrepancy is closer to six degrees.

"We're very good on temperatures, but people in Vancouver are not that concerned with temperatures," Muttitt said.

"Because of our mild maritime climate, people don't place that much stress on extremes of heat and cold. What people here want to know about is precipitation."

"In Edmonton, where I used to forecast, temperatures are much more important. When it gets too cold, they close down the schools, the buses stop running and the stores have sales."

Department of Transport weather offices are located in 25 communities in B.C., but the main centre for forecasting in the province is located in DOT facilities at Vancouver International Airport.

Muttitt heads a team of 25 forecasters who employ equipment ranging from thermometers and wind vanes to photograph-recorders tuned into the United States ESSA-8 weather satellite.

And the "weatherman" for each working shift is actually three separate meteorologists who interpret the data independently and then arrive at the forecast more or less by consensus.

"We've certainly come quite a way since I started," Muttitt said. "The satellites have been quite a help, but they are not a panacea."

"They help in analyzing the data, but they don't make predictions for us. What we could use is a network of computers which can assess all the factors on a global scale."

Muttitt pointed to photographs taken Monday by ESSA-8, which clearly indicated a front of storm clouds out in the North Pacific.

"These are wonderful photographs but they don't tell us everything about what was happening out there with the winds. We thought the winds would work in such a way as to bring the storm through Vancouver, but they didn't push it that far down."

"We forecast a fair bit of snow, but we got less out of it than that. The storm passed north of us and dropped eight inches on Terrace and 9.6 inches on Prince Rupert, for instance."

Muttitt noted that the winter so far has been harsher than normal for Vancouver. December had a record number of days of snow — 15, compared to an average of

two – and the mean low temperature for the month was 33.1 degrees, or 5.8 degrees colder than normal.

“These are quite startling figures, but we don’t know what causes them,” he said. “It probably has something to do with the global heat balance – the amount of heat in the northern hemisphere – but beyond that there’s not much we can say.”

Does that mean we’re in for a long, cold winter?

“Oh, you’ve got to be kidding. It could mean that, or it could mean nothing. Right now, I wouldn’t even hazard a guess, much less a prediction.”