



ZEPHYR

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Un Aéroport "Potager" à Churchill Falls	1
Atmospheric Services Discussed at Silver Spring	2
Central Regional Office Relocates	3
AES To Go Metric	4
Le SEA Adoptera Le Système Métrique.	5
Notices Biographiques	6
Lost: 138 Years of Meteorological Experience	7
AES Advisory Committee on Stratospheric Pollution	8
CoSAMC-VI – West Germany	9
Major Al Dow Awarded Decoration	11
International Conference on Weather Modification	12
Man and Nature – and Climate	13
Gib Henry Retires	16
M. André Marien est honoré	16
Personnel	17
Trivia	19

UN AÉROPORT "POTAGER" À CHURCHILL FALLS!

SEPT-ILES

On s'attend généralement à trouver des pommes dans un verger, des poules dans un poulailler et des avions dans un aéroport. On s'attend un peu moins à ce que le sol d'un aéroport produise des pommes de terre, mais rien ne s'y oppose . . . C'est arrivé à Churchill Falls!

En qualité de directeur de l'aéroport, Harry Swiggum s'est toujours préoccupé de la beauté de son domaine. C'est pourquoi il avait l'habitude de planter, tous les printemps, des fleurs de diverses variétés. Mais cette année il a changé d'orientation.

"La hausse du coût de la vie me donnait des soucis, explique-t-il. Il fallait que, dans mes activités, je tiens compte de la rentabilité au moins autant que de l'esthétique."

Au début, il voulait planter des "arbres de Noël". Chaque année, il en faut. Mais à Churchill Falls, ça ne se serait pas vendu, puisqu'il y a des conifères partout. Il fallait trouver autre chose.

Swiggum a donc continué de réfléchir . . . et il a trouvé. Des pommes de terre!

Bien sûr, la rentabilité prenait le pas sur l'esthétique, car les pommes de terre n'ont jamais été réputées comme plantes ornementales. Mais il faut parfois être pratique avant tout.

Le lendemain, Swiggum est arrivé à l'aéroport avec un sac de 30 livres de pommes de terre qu'il avait acheté en cours de route. Il s'est alors trouvé deux collaborateurs qu'il a réussi à convaincre de la valeur incomparable de son projet: Tom Tucker, météorologue, et Bernie Maloney, des services d'entretien de l'aéroport. Et hop! Les trois jardiniers improvisés se sont mis à préparer les pommes de terre, à les nettoyer et à les planter dans des boîtes à fleurs.

Une fois cette opération terminée, il leur restait encore une provision abondante. Que faire? Les faire cuire? Ils n'avaient pas faim à ce point. Ils ont donc planté le reste "sans grand espoir" dans un endroit bien protégé qu'ils pourraient surveiller constamment.

Quelques semaines plus tard, des pousses sortaient de terre. Encore quelques semaines de plus et elles atteignaient la hauteur mirobolante de 5 pouces.

La confiance de Swiggum grandissait au même rythme que sa moisson. Il se défendait pourtant de croire à son succès parce qu'il n'avait jamais auparavant planté une seule pomme de terre et parce que, dit-il, "nous n'avons même pas essayé de trouver une espèce pouvant s'acclimater au Labrador".

Pour un coup d'essai, c'était un coup de maître, car Swiggum vient de récolter 90 livres de pommes de terre. Ce n'est peut-être pas un record mondial, mais c'est plus que convenable dans un pays où l'été est si court. . . .

Swiggum trouvera sans doute l'hiver bien long, car il meurt d'envie de faire une autre expérience de jardinage. En attendant le printemps, il se promène avec son "manuel du parfait jardinier" sous le bras et il murmure parfois des phrases mystérieuses où il est question de pastèques

ATMOSPHERIC SERVICES DISCUSSED AT SILVER SPRING

The National Weather Service Headquarters in Silver Spring, Maryland, was the setting for important high-level meetings between officials of the national weather services of the United States and Canada on November 6 and 7.

The U.S. National Oceanic and Atmospheric Administration (NOAA) which includes the National Weather Service (NWS) was represented at the meeting by Dr. Robert M. White, NOAA Administrator and Dr. George P. Cressman, NWS Director. Mr. J.R.H. Noble, Assistant Deputy Minister, AES, headed the Canadian delegation.

During the course of the meeting, an exchange of views and information took place between the two delegations on matters of mutual interest. These included discussions on problems of coordination, at the policy level, on the broad topics of atmospheric environmental science and services in Canada and the United States. Agreement was reached on several measures to ensure continuing information exchanges and planning coordination between the two countries.

In line with a proposal that joint U.S.-Canada discussions at the senior management level be held at least once a year, it was agreed that the next NOAA/AES meeting be tentatively scheduled for October, 1974, in Toronto.



(Seated, from left) Dr. W.L. Godson, Associate Director General, Atmospheric Research Directorate, AES; Merritt Techter, Director, Systems Development Office, NWS; H. Cameron, Director, Program Development and Evaluation Branch, AES; Dr. Cressman; Dr. White, J.R.H. Noble; L. Richards, Chief, Hydrometeorological Division, AES; H. Bindon, Director, Atmospheric Instruments Branch, AES; and Karl R. Johannessen, Associate Director, NWS, for Meteorological Operations.

(Standing, from left) Max Kohler, Associate Director, NWS, for Hydrology; F.W. Benum, Director General, Field Services Directorate, AES; and Dr. Richard E. Hallgren, Deputy Director, NWS.

CENTRAL REGIONAL OFFICE RELOCATES

Central Regional Headquarters has moved from the Revenue Building in Winnipeg to the Lakeview complex a short two blocks away. Although the move was made necessary by the expansion needs of Revenue, it also made possible the addition of much needed space to AES.

The new building (brand new) is a modest six stories with AES occupying the sixth and a portion of the fifth. Other tenants include DREE and several Manitoba Government agencies. A sauna and an exotic Japanese restaurant are located on the basement concourse level.

While not entirely out of the packing cases, the staff are enjoying their new surroundings. The office is bright and comfortable with carpeted floors and air conditioning. After experience with both open-landscaped and traditional floor plans, a compromise has been struck; several closed offices have been provided for those who require privacy but the main office area preserves the flexible open look.

Although the break from M.O.T. has been coming gradually over the past two years, the actual physical separation from the old colleagues in Transport was something of a historical moment. The M.O.T. staff hosted a farewell party for AES at the nearby H.M.C.S. Chippewa mess and the Regional Administrator, Doug Lane, bade the Met group a fond farewell. It was an enjoyable event despite the inevitable jests about the two parties celebrating their parting.

By this time next year, Central Regional Headquarters will be settled in and be able to offer their visitors unparalleled hospitality; the office will have indoor connections to the new Holiday Inn next door and to the facilities of the new Winnipeg Convention Centre across the street.



*Left: D.A. (Doug) Lane, Regional Administrator, M.O.T.
Right: J.J. (Jack) Labelle, Regional Director, AES.*

AES TO GO METRIC

The Atmospheric Environment Service is developing an action plan for the conversion to the metric system. This decision is in line with the Government's policy to make Canada a metric nation by the end of the present decade. The change is expected to be brought about by orderly and voluntary actions on the part of industry, labour, communications media, consumer associations and government departments. To aid in this implementation, a Metric Commission has been established which is gathering information on the effects of conversion on all aspects of Canadian life, to promote an overall plan of conversion, and to provide information on the new system to the Canadian public.

The new system to be adopted by Canada is called the International System of Units (SI) which is the system used by almost all the nations of the world. Mr. C.H. (Con) Sutherland has been engaged under contract to determine the internal and external implications of metrication in the AES and to recommend by September 1, 1974, a timetable for implementation of the necessary changes. Mr. Sutherland is being supported by a Headquarters committee and advice and assistance from regional offices. It is appreciated that public acceptance of the metric (SI) system will vary from rejection to enthusiastic acceptance. One of the earliest requirements will be to point out the overwhelming benefits of the system. It has been suggested that introduction of the metric units in the inland and marine forecasts and other weather information provided to the public will pave the way for more general acceptance of the conversion in other fields. It is therefore likely that some metric units will be introduced in the inland forecasts within the next year or two.

The research carried out within the AES has always been done mainly in metric units. It is expected the public will also become used to degrees Celsius to denote temperature and rainfall measured in millimetres. Nevertheless, the effort which will be required for complete conversion in the AES is considerable when the need for the conversion of published data and the necessary changes in computer programs are considered.

The Canadian economy is heavily dependent on international trade and the country's industry will benefit, in the long run, by converting to a system of measurement used by our trading partners. The last few years have seen the few remaining countries still using the Imperial or British system of units pursuing an active policy of conversion including the United Kingdom itself. Canada and the United States are expected to be the last countries to be still using the older system and by 1980, hopefully, it will be a metric world.

LE SEA ADOPTERA LE SYSTÈME MÉTRIQUE

Le Service de l'Environnement atmosphérique élabore actuellement un programme pour l'adoption du système métrique. Cette décision est conforme à la politique du gouvernement voulant que le Canada soit passé au système métrique d'ici la fin de la décennie. On s'attend à ce que ce changement s'opère de façon systématique sur la propre initiative des divers secteurs de l'industrie, de la main-d'oeuvre, des organes d'information, des associations de consommateurs et des ministères. Pour contribuer à la conversion au système métrique, on a créé la Commission du Système métrique, qui recueille des renseignements sur les répercussions de la conversion sur tous les aspects de la vie canadienne, afin de mettre en oeuvre un programme général de conversion et de renseigner les Canadiens sur le nouveau système.

Le nouveau système qui sera adopté par le Canada s'appelle le Système international d'unités (SI); il est utilisé presque partout dans le monde. M. C.H. Sutherland a été engagé par contrat pour déterminer les répercussions internes et externes de l'adoption du système métrique par le Service de l'Environnement atmosphérique et pour recommander l'adoption, avant le 1^{er} septembre 1974, d'un calendrier de mise en oeuvre des changements nécessaires. M. Sutherland reçoit l'appui d'un comité de l'Administration centrale ainsi que les conseils et l'assistance de bureaux régionaux. On s'attend à une variété de réactions du public face à l'adoption du système métrique, allant du refus à l'enthousiasme. Une des priorités consistera à souligner la grande supériorité de ce système. On estime que l'introduction des unités du système métrique dans le domaine des prévisions météorologiques continentales et maritimes et d'autres données climatologiques destinées au public préparera le terrain pour l'adoption du système dans d'autres domaines. Il est donc fort probable que certaines unités du système métrique soient introduites dans les prévisions continentales d'ici un an ou deux.

Le SEA a presque toujours utilisé le système métrique dans ses recherches. On prévoit que le public s'habitue également à être renseigné sur les températures en degrés Celsius et sur les précipitations en millimètres. Néanmoins, le travail que nécessitera la conversion totale du SEA au système métrique est considérable, si on considère qu'il faudra convertir les données publiées et apporter des modifications indispensables aux programmes d'ordinateurs.

L'économie canadienne dépend largement du commerce international et l'industrie de notre pays tirera profit, à la longue, de l'adoption du système de mesure utilisé par les pays avec lesquels il entretient des relations commerciales. Au cours des quelques dernières années, les derniers pays qui utilisent encore le système impérial ou britannique d'unités, y compris le Royaume-Uni, ont déjà lancé des programmes d'adoption du système métrique. Le Canada et les États-Unis seront les derniers pays utilisant encore l'ancien système et l'on espère que d'ici 1980, le monde entier se sera mis au pas du système métrique.

NOTICES BIOGRAPHIQUES DES ANCIENS PRÉSIDENTS DE L'ORGANISATION
MÉTÉOROLOGIQUE INTERNATIONALE ET DE L'ORGANISATION
MÉTÉOROLOGIQUE MONDIALE

A. Viaut (1955-1963)

Pendant les huit années qui suivirent, l'OMM fut présidée par M.A. Viaut dont l'élection, lors du Deuxième Congrès de l'OMM, en 1955, coïncida avec la désignation de M.D.A. Davies comme Secrétaire général de l'OMM. L'expérience de M. Viaut comme premier Vice-Président et celle de M. Davies comme membre du Comité exécutif depuis 1951 ont certainement beaucoup contribué à ce que le passage de pouvoirs s'effectue sans heurts.

Né à Civry (France), le 16 octobre 1899, André Jules Armand Viaut fit ses études au collège de Tonnerre et à l'université de Paris. Entré au Service météorologique national français en 1921, il dirigea la division de prévision à partir de 1931. Il s'intéressait plus particulièrement à la météorologie aéronautique et son avis fut très souvent sollicité, notamment à l'occasion des premiers vols d'avions long-courriers. En 1939, M. Viaut fut nommé chef du Service central des opérations météorologiques, puis, cinq ans plus tard, directeur du Service météorologique français qui venait d'être réorganisé. Son rôle consista alors à organiser les activités météorologiques françaises, sous le contrôle central de la Direction de la Météorologie Nationale.

M. Viaut réussit à mener de front sa vie professionnelle en France et de nombreuses activités internationales. C'est ainsi qu'il contribua de façon considérable à l'élaboration des premiers règlements généraux régissant l'assistance météorologique à l'aviation internationale, règlements qui furent adoptés par la Commission de météorologie aéronautique de l'OMI, réunie à Berlin, en 1939. Président de la Commission régionale pour l'Europe de l'OMI, en 1946, il joua aussi un rôle prépondérant lors de la Conférence des directeurs, tenue à Washington, en octobre 1947, au cours de laquelle fut adoptée la Convention de l'OMM. (En fait, la Convention n'entra en vigueur que deux ans et demi plus tard, lorsqu'elle fut ratifiée par 30 pays, ce qui explique que l'on considère le 23 mars 1950 comme la véritable date de la création de l'OMM.) M. Viaut s'occupa très activement des préparatifs du Premier Congrès météorologique mondial tenu à Paris, en 1951. A cette occasion, il fut élu premier Vice-Président de l'OMM, en reconnaissance des grands services qu'il avait rendus à la cause de la météorologie internationale. C'est aussi pour cette raison qu'il fut considéré comme le successeur naturel de M. Reichelderfer lorsque le mandat de ce dernier prit fin, en 1955. De nombreux événements, d'une importance capitale pour la météorologie, se produisirent durant les années où M. Viaut présida aux destinées de l'OMM (jusqu'en 1963). Le plus remarquable fut le lancement du premier satellite artificiel au cours de l'Année géophysique internationale, en 1957. Cet événement amena l'Assemblée générale des Nations Unies à adopter, en 1961, la résolution qui aboutit à la création de la Veille météorologique mondiale. C'est dire combien les décisions que durent prendre les Troisième et Quatrième Congrès météorologiques mondiaux (présidés par M. Viaut, en 1959 et 1963) revêtaient pour l'OMM une importance décisive. Si elles purent être exécutées sans heurts, c'est en grande partie grâce à lui.

En dépit de ses énormes responsabilités, tant sur le plan national que sur le plan international, M. Viaut trouva encore le temps d'écrire. Ses ouvrages les plus connus sont *La météorologie du navigant* et *La météorologie*. Il n'est donc guère surprenant qu'il ait continué à mener une vie très active depuis sa retraite, prise en 1964.

A. Nyberg (1963-1971)

Aux termes des règlements de l'OMM, aucun Président de l'Organisation ne peut être réélu pour plus de deux périodes quadriennales successives. M. Viaut n'était donc pas rééligible au Quatrième Congrès météorologique mondial, en 1963. Le choix se porta alors sur M.A. Nyberg, directeur de l'Institut météorologique et hydrologique suédois. Né à Vimmerby (Suède) le 11 juin 1911, Alf Erik Nyberg obtint son diplôme à l'université d'Uppsala, en 1933. A cette époque, il avait déjà une certaine expérience de la météorologie, ayant travaillé durant ses vacances dans un centre de prévision pour l'aéronautique. Il continua d'ailleurs de travailler dans divers aéroports jusqu'en 1938, date à laquelle il entra à l'Institut météorologique et hydrologique suédois, à Stockholm. Il entreprit divers travaux de recherche météorologique et poursuivit aussi ses études universitaires. C'est ainsi qu'il obtint deux diplômes supérieurs en météorologie, en 1935 et 1938, puis un doctorat en 1945. La même année, il devint professeur adjoint à l'université de Stockholm. Après avoir séjourné de 1946 à 1947 à l'université de Chicago comme chercheur, M. Nyberg regagna la Suède pour être nommé, en 1955, directeur de l'Institut de météorologie. A cette date, il avait déjà publié toute une série de communications scientifiques.

La première réunion internationale à laquelle assista M. Nyberg fut une des sessions de la Commission d'aérodologie de l'OMI, tenue à Berlin en 1939. Elu membre du Comité exécutif de l'OMM en 1955, il devint président de l'Association régionale VI (Europe) en 1956. C'est à cette occasion que ses talents de président de séance se révélèrent, ce qui devait lui être d'un grand secours durant les années où il assumait la présidence de l'OMM, de 1963 à 1971. Cette période de l'histoire de la météorologie internationale est particulièrement passionnante: le premier plan de la Veille météorologique mondiale est appliqué en 1968; de concert avec le Conseil international des unions scientifiques, l'OMM s'engage dans une entreprise de recherche entièrement nouvelle, le Programme de recherches sur l'atmosphère globale. D'énormes progrès sont accomplis dans l'exécution du Programme de coopération technique de l'OMM, et notamment la création d'un système de conception nouvelle, le Programme d'assistance volontaire; de même, le Programme d'enseignement et de formation professionnelle de l'OMM progresse considérablement; enfin, les problèmes de l'environnement, y compris ceux qui se rapportent à l'hydrologie et à l'océanographie, suscitent un intérêt accru. M. Nyberg sut contribuer au développement de toutes ces activités et son avis a toujours beaucoup de poids dans les décisions du Comité exécutif dont il continue d'être membre.

LOST: 138 YEARS OF METEOROLOGICAL EXPERIENCE THOMPSON AND TITUS RETIRE FROM CLIMATOLOGY

Retirement has become quite fashionable at AES Headquarters. In 1973 the Meteorological Applications Branch has suffered the loss of four highly valued meteorologists — Rollie Kendall in January, Clarence Boughner in June, and Harland Thompson and Robie Titus in November. Over their meteorological careers these four meteorologists accumulated a total of 138 years of experience — Boughner entered the Service in 1934, Thompson in 1938, Titus in 1940, and Kendall in 1942.

A graduate of the University of Alberta, H.A. Thompson joined the Service in 1938, and subsequently took the wartime Short and Advanced courses. He was stationed at Lethbridge, Macleod, Whitehorse, Winnipeg, Toronto/Malton, and Edmonton before becoming the Climatology Division's Arctic Meteorologist in the summer of 1960. Over the past decade, because of the increased attention paid to the Arctic by the federal government, Harland served on many scientific and policy-setting groups, on national and international levels, having to do with northern research and development, oil exploration, pipeline policy, etc. His Arctic Meteorology Section consisted of three professionals and three support staff when he retired.

Robie Titus graduated from Mount Allison University at the age of 20 and in September 1940 was recruited to fill in behind the meteorologists who were being sent to the newly-opened British Commonwealth Air Training Plan Schools. Robie also took the Short and Advanced courses and over the years served at Lethbridge, Greenwood, N.S., Montreal, Goose Bay, and Halifax. In 1956 he was the successful applicant for the position of Upper Air Climatologist at AES Headquarters. Over the ensuing 17 years Robie has been responsible for not only the quality control of upper air data but also took on radiation data and two years ago, with the reorganization of Headquarters, he became responsible for the control of all surface data as well. He is leaving a section which now consists of about 20 technicians and support staff. The retirements of both Titus and Thompson become effective at the end of December 1973.

AES ADVISORY COMMITTEE ON STRATOSPHERIC POLLUTION

The committee had its second meeting on November 9, 1973 at AES. Several observers from universities were present as well as the regular committee members. Very interesting accounts of recent NO_x measurements by Professor Schiff (York University) and Professor Brewer (U of T) were given. One could surmise that stratospheric NO_x - ozone photochemistry is not at all well resolved and consequently neither is the question of potential pollution by large scale operation of supersonic transport aircraft.

The organization of research on the subject by AES was discussed. Also a Canadian workshop on the stratosphere to be held next summer at AES is under consideration.

CoSAMC-VI – WEST GERMANY – OCTOBER 1973

by M.K. Thomas

At the 1971 World Meteorological Congress several changes were made to the structure and terms of reference of the WMO technical commissions. So many changes were made to the responsibilities of the Commission for Climatology (CC1) that its name was changed to the Commission for Special Applications of Meteorology and Climatology (CoSAMC). The renamed Commission is markedly oriented towards the application of meteorology and climatology to assist in solving the problems of the environment and those in all fields of human activity. Meetings of technical commissions are usually held every four years; the sixth meeting of CC1 – CoSAMC since the World Meteorological Organization came into being in 1950 was held at Bad Homburg vor der Höhe, West Germany, from October 8 to October 20.

The Weather Service of the Federal Republic of Germany hosted the 1973 meetings which were held at the Kurhaus in central Homburg, a small spa city a few miles north of Frankfurt in the State of Hesse. There were 43 Member countries of WMO represented at the meetings by about 80 scientists and administrators. The principal delegate from Canada was C.C. Boughner, recently retired as Director-General of Central Services at Headquarters, and the delegation included G.A. McKay and M.K. Thomas.



*A Serious Canadian Delegation in West Germany – October, 1973
From left to right: G.A. McKay, M.K. Thomas, & C.C. Boughner.*

Work at technical commission sessions is largely carried out in committee, with frequent ad hoc subcommittees to smooth out contentious issues, and official plenary sessions to examine and ratify the work of the committees. At this session there were two committees — one dealing with organizational and administrative matters, chaired by Mr. Boughner, which met in the mornings, and a second, which met in the afternoons, dealing with questions of a technical nature. Simultaneous interpretation services were available in English, French, Spanish, Russian and German at all plenary and committee meetings. The meetings usually began at 9:30 in the morning and concluded shortly after 5 p.m. — all “homework” had to be done in the evenings.

Delegates to technical commission sessions are kept quite busy but they do have time for some social activities. During CoSAMC-VI the State of Hesse was host at a buffet in the local mediaeval castle and the City of Bad Homburg entertained at a banquet. The German Weather Service treated the group to a Sunday cruise on the Rhine River from Rudesheim to Koblenz to view the Rhine castles and one afternoon took the group to Offenbach to visit the Weather Service National Headquarters. The Canadian delegates stayed at hotels just out of town which permitted walks through the Hardtwalt, Friedrichsdorf, an old village being engulfed by high-rise apartments, and the countryside when time permitted.

Although there were a dozen or so items on the agenda, those dealing with (a) the biosphere and the human environment and (b) the economic benefits of special applications of meteorology and climatology proved to be the most important and time consuming. With regard to the former, the Commission was attempting to provide a WMO response to the Man and the Biosphere program and to the 1972 U.N. Conference on the Human Environment at Stockholm. This involved considerable discussion on atmospheric pollution, climatic fluctuations, land-use planning, human biometeorology, etc. On the other main subject the Commission was charged to mesh its activities with the Executive Committee Panel of Experts on the Role of Meteorology in Social and Economic Development and be prepared to eventually take over its work. Specific topics under discussion included economic modelling, transportation, energy, recreation and leisure, etc.

During the course of the session six working groups and sixteen rapporteurs were appointed to handle the work of the Commission over the next four years. Mr. McKay will be Chairman of a Working Group on Climatic Fluctuations and Man, while Mr. Thomas will continue as a member of the Working Group on Guides and Technical Regulations. Professor T.R. Oke of the University of British Columbia was appointed rapporteur on Applications of Climatology to Urban Problems. Dr. H.E. Landsberg of the United States was re-elected President of the Commission, while the new Vice-President will be Dr. Roy Berggren of Sweden.

MAJOR AL DOW AWARDED DECORATION

Major Alvin Dow, Staff Officer Meteorology at 1 Canadian Air Group Headquarters in Lahr, West Germany recently received the Canadian Forces Decoration from Brigadier-General Gérard C.E. Thériault, Commander, 1 Canadian Air Group.

The Canadian Forces decoration (CD) is awarded for twelve years of meritorious service in the Forces. Major Dow, who is also the senior meteorology officer at the Lahr NATO airfield, is the first Met man to earn a CD with the Air element. "Metmen" are normally seconded to the Forces for a 5-year, fixed term of service.

Joining the RCAF early in 1941 as an airframe technician, Major Dow saw service in Canada, England and Northern Europe including the Normandy invasion with 83 Group, Second Tactical Air Force.

Released in November 1945 he resumed his education graduating from the University of Saskatchewan in 1950 with a Bachelor of Education. The following year the same university granted him a Bachelor of Arts in physics and maths.



*Left: Major Al Dow
Right: Brigadier-General Thériault*

Al Dow taught high school math in Regina in 1951 and 1952 but his past enjoyable association with the military prompted him to join the Meteorology branch of DOT in 1952.

He has since served in such diverse spots as Fort Nelson, Shilo, North Bay and Chatham in Canada as well as Colorado Springs where, as the first exchange weather officer he won a NORAD Certificate of Achievement.

He also saw service at 2 (F) Wing, Grostenquin, France from 1956 to 60 and has been at Lahr since 1971.

Major Dow will leave Lahr for Moncton in 1974 where he will assume the position of Superintendent of observational Services, Atlantic Region, Department of Environment.

In reflecting on his military career, Major Dow likes to recount the time a military doctor told him, with some concern, that his eyesight was deteriorating. On advising the MO that he was a Met officer, Major Dow was astounded, and amused, to hear the doctor say "Oh well, good eyesight is not important for your profession".

Canadian Forces Information Services

**WMO - IAMAP
International Conference on Weather Modification**

Tashkent, October 1-7, 1973

by Dr. R.S. Schemenauer, Cloud Physics Research Division, A.E.S.

Tashkent, a city of 1,400,000 people, is the capital of the Soviet Republic of Uzbekistan in Central Asia. The presence of a hydrometeorological institute and a number of universities plus a very pleasant climate made Tashkent an excellent location in the U.S.S.R. for the conference.

The eight sessions at the conference dealt with all aspects of man's attempts to modify clouds and precipitation. The sessions were:

1. Fog dispersal
2. Rain enhancement
3. Snow enhancement
4. Hail suppression
5. Other aspects of weather modification
6. Technical and operational aspects of weather modification
7. Physical, statistical and economic evaluations of weather modification
8. Ice nuclei technology.

Listening to the papers presented at the conference one has reason to be optimistic that the desired results are possible in all areas of weather modification. However, one very strong impression that came out of the conference was that to provide convincing results in any weather modification experiment one needs a good statistical design and a physically valid seeding procedure. One or both of these elements has been missing in many weather modification experiments and programs to date.

One point that was felt to be on the one hand obvious and on the other hand often overlooked was that one cannot produce the desired effect on clouds unless the proper cloud conditions are present initially. This means that it is very important to be able to predict what nature will do on its own and to be able to measure existing cloud parameters and dynamic fields before any modification program can produce maximum benefits. Much more work also has to be done on determining the benefits to be derived from weather modification programs. This is an extremely complex problem because of the many variables involved: different cloud and precipitation types, different crops, different stages of crop growth, downwind effects, psychological effects, etc.

It was obvious from the world-wide representation at the Tashkent Conference that the potential benefits from weather modification are high enough that virtually every country in the world has some interest in the artificial stimulation or suppression of clouds and precipitation. This is putting tremendous pressure on scientists to become involved in operational weather modification programs with the result that good field experiments may become rarer and as a consequence much more valuable in the near future. Perhaps an indication of the diversity of world interest in and commitment to weather modification programs is given by the distribution of papers presented at the conference: 43% were from the U.S.A., 36% from the U.S.S.R. and 21% from the rest of the Western world.

It was felt that it would be both desirable and essential to hold another international conference on weather modification in about two years time. In the intervening period much work should be done towards improving our understanding of the microphysics and dynamics involved in cloud and precipitation formation. Hopefully this would eventually result in a realistic three-dimensional computer model of these processes which could be used for forecasting cloud and precipitation development and for simulating weather modification experiments.

MAN AND NATURE – AND CLIMATE

The Manitoba Museum of Man and Nature is young as museums go. Conceived as part of the Centennial complex in downtown Winnipeg, it first opened its doors in 1968 with the christening of an ultra modern planetarium. Development has been vigorous since then, and by the end of this year an additional four sections, or "galleries", will be in operation. The image of the museum is a dynamic one, with lavish use of colour and sound in its displays, displays which not only illustrate the human history of the province but present the natural history in an informative and entertaining manner.



General View of Display.



Left to Right: Ray Walkden, Prairie Weather Central, Dr. George Lammers, Manitoba Museum of Man and Nature, Hugh Fraser, Central Region, HQs.

It was with pleasure that the Central Region received a request from this popular institution for assistance in establishing a climate display in the Earth Sciences Gallery; this follows the museum's policy of relying heavily on outside expertise to ensure that its exhibits are authentic.

Hugh Fraser of Central Regional Headquarters and Ray Walkden of the Prairie Weather Central developed the content and basic design of the exhibit in consultation with Dr. George Lammers, Chief of Natural History for the Museum. It was Dr. Lammers task to integrate the climate display into the Earth Sciences theme and to oversee the transformation of the ideas into reality by the museum's art department.

The theme of the display is climate as opposed to day to day weather services, but in keeping with the museum's approach every effort was made to feature light, motion and audience participation. It was also decided to keep written text to a minimum.

The first panel is a question and answer board featuring average and extreme conditions recorded; there are two maps, one for Manitoba and one for Canada, and when the button is pushed on the question panel, the answers light up at the appropriate locations on both. This type of unit has always been popular with the public, and once a visiting school class gets started, it is sometimes difficult to drag them away from the board.

Set in the corner is a revolving unit whose three panels explain the major air flows which control the climate of Manitoba and carry on to some of the more significant local influences. Colour in paint and plastic is used to good effect.

The instrument section contains a simple array of some of the basic instruments used to measure Canada's climate: a mercury barometer; an anemometer with flashing light indicator; a standard rain gauge; and a Stevenson screen with maximum and minimum thermometers. For the most part, these instruments are well used and no longer suitable for field use; at first it was thought to refurbish them but the museum wisely decided to mount them as is and this lends an air of authenticity.

Central Regions inspection staff assisted with installation and put the anemometer in working condition. Wind is supplied by two fans which operate alternately to provide two different wind directions and two speeds. A note invites the public to read the indicators and explains how the speed is counted. Not least is the illustration of a radiosonde release which has been added for interest. Alongside an artistic line drawing of a rising balloon is a photo of a Technician desperately chasing a balloon across a windswept arctic landscape. This striking picture was provided by Andy Borm of Central Region Headquarters; Andy, who has had Arctic experience, still spends much of his time there in the supply season.

This year close to half a million people will visit the Manitoba Museum of Man and Nature, over one hundred and sixty thousand of them school children. The contribution of this fine display to the public's understanding of meteorology is by no means a small one.

GIB HENRY RETIRES

T.J.G. (Gib) Henry is retiring from the AES after 36 years of service. Gib's retirement marks an important milestone in the history of the Service and, in particular, of the Research Directorate. Gib's first appointment after joining the then Meteorological Service was to Botwood, and later Gander, Newfoundland where he was instrumental in devising the method of upper-air prognosis used by the trans-Atlantic wartime flights. He later served at Dorval prior to coming to Toronto in 1947. He continued his research endeavours throughout the years and published many papers on various aspects of his work.

On Wednesday, Nov. 14, close to 100 of Gib's friends and colleagues gathered for an informal reception at AES Headquarters to honour Gib and his wife Elva on the occasion of his retirement. Dr. J. Clodman presented Gib with a Texas Instruments electronic pocket calculator designed to provide him with some home-style computation power.

M. ANDRÉ MARIEN EST HONORÉ

Le 14 septembre 1973, à l'occasion de la vingt-cinquième année de service de M. André Marien au sein du gouvernement canadien, plus d'une centaine de personnes se sont réunies à l'hôtel "Le Seville" dans la banlieue de Montréal pour fêter cet événement.

Un buffet chaud et froid était au menu suivi d'une musique de danse pour satisfaire tous les goûts.



Sur la photo nous voyons M. Leaver, le directeur du Centre Météorologique Canadien présentant un certificat de service à M. Marien.

M. Marien s'est joint au service météorologique après avoir servi 5 ans dans la marine canadienne.

Il débuta comme assistant météorologiste au C.A.O. et est maintenant chef de la section de pointage du CMC.

PERSONNEL

The following transfers took place:

R. Winterer	From: Canadian Armed Forces To: Resolute Bay WO
A.B. Cooper	From: Frobisher Bay WO To: Maritimes Weather Office
B.F. Stenton	From: Goose Bay WO To: Gander WO
W.H. Hartman	From: Goose Bay WO To: CFB Edmonton
J. Pelto	From: Goose Bay WO To: CFB Trenton
P.A. Lachapelle	From: Resolute Bay WO To: Arctic Weather Central
B.M. Burns	From: Central Services Directorate To: Field Services Directorate (Management Development)

Assignments from UQAM #1 were as follows:

W. Geadah	Montreal WO
R. Gilbert	Montreal WO
Y. Jakimow	AES HQ Project
G. Labrecque	Winnipeg WO
A. Laferriere	Toronto WO
R. Leduc	Maritimes WO
C. Lelievre	Edmonton WO
R. Martell	CFB Ottawa
A. Sevigny	Montreal WO
H. Tourigny	22 NRWC, North Bay

The following have been declared top-ranking candidates in recent competitions:

73-DOE-TOR-INV-905-7214	Meteorologist 9 Staff Officer Meteorology Atmospheric Environment Service Department of Environment Ottawa, Ontario R.C. Harvey
73-DOE-TOR-CC-221	Meteorologist 8 Regional Superintendent Scientific Support Unit Western Region Headquarters F.E. Burbidge
73-DOE-TOR-CC-263	Meteorologist 7 Shift Supervisor Pacific Weather Central Vancouver, B.C. P. Haering
73-DOE-TOR-CC-244	Meteorologist 10 Chief, Forecasting, Computers, Communications Division Field Services Directorate, AES Headquarters P.I. Johns
73-DOE-TOR-CC-217	Meteorologist 10 Chief, Observational Systems Division Field Services Directorate AES Headquarters H.B. Kruger
Genot 219	Meteorologist 5 Officer-in-Charge Calgary Weather Office Calgary, Alberta S.M. Checkwitch

TRIVIA

WEATHER PROVERBS

The lark soaring high heralds a blue sky (Japan, U.K.)

Wild geese moving south: cold weather ahead; moving north: winter is nearly over (U.S.A.).

Swarms of mosquitoes, a sign of rain (China).

When squirrels lay in a large store of nuts, expect a cold winter (Finland, Greece, Norway, U.S.A., Sweden).

A heavy November snow will last till April (U.S.A., France).

A good day can be told from its dawn (Syria).

Mushrooms galore, much snow in store; no mushrooms at all, no snow will fall (Germany, U.S.S.R.).

Three foggy or misty mornings indicate rain (U.S.A.).

When no clouds mask the Milky Way, it will be fine for a week and a day (Japan).

A year of snow a year of plenty (France, Byelorussia, Germany, Italy, Ukraine, Spanish-speaking countries).

Les Expressions Diverses

Une liste d'expressions diverses comprenant des proverbes, des locutions, des dictons, des gallicismes, des canadianismes, des régionalismes, des anglicismes et même des barbarismes.

Expression	Signification ou équivalent
Rire comme un fou	Rire fort
Bougonner pour rien	Etre de mauvaise humeur
Va faire un tour	Va-t-en
Il n'a pas la langue dans sa poche	Il dit exactement ce qu'il veut dire
C'est un temps de chien	Il pleut, il neige ou il fait froid
C'est bien de valeur	C'est malheureux
Le temps se chagrine	Le ciel se couvre; il va pleuvoir
Sortir de ses gonds	Etre en grande colère
Une tête de pioche	Une personne opiniâtre
Nous sommes tassés comme des sardines	Il y a trop de monde
Tu rêves en couleur	Tu es idéaliste

Tout compte fait
Jette un coup d'oeil
Ce n'est pas la mer à boire

Après avoir analysé tous les éléments
Regarde!
Ce n'est pas une chose impossible.

To Air is Human

Recently A.E.S. Headquarters shipped an article to the Toronto Weather Office, Malton, in a carton marked "AIR EXPRESS".

Chuckles From the Mailroom

Dear Lady and Gents:

I would greatly appreciate it if you who work there could send me a big packet of information on what it is you do there. I am sending this request because of the urgent threats of my socials teacher "Uncle Andy." Please send the information to:

Gregory Schroeder
Kelowna, B.C.

Dear Mr. Morrissey:

Thank you for letting Mr. Burling come to our classroom. I really liked the film and instruments but the thing we liked the most was the real weather map. The weather map was so confusing, I don't know how the people can draw such a thing.

Yours truly
Terry Wade

DAMAGE TO STEVENSON SCREEN BY PORCUPINES MCKALE RIVER, B.C.

The screen was at the McKale River Hydro Met Site, which is approximately 10 miles NNW of McBride, B.C. It was installed 12 ft. above ground on a steel pipe stand with an aluminum ladder leading up to it.

This was the second screen at this site to be so damaged, and as you can see a very neat job of eating the slats out of it has been done. On one visit to the site by the technician-observer, there was a porcupine sitting inside the screen.

To foil any further such damage the observer is now removing the ladder after each monthly visit.



YUMMY?

B.C.

