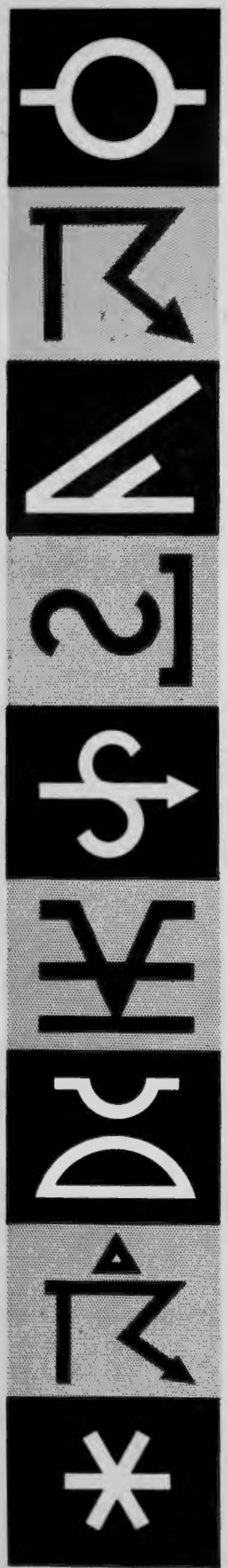

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CANADIAN WORKSHOP ON WIND ENGINEERING

Dr. H.W. Teunissen

The Canadian Workshop on Wind Engineering was held on September 23 and 24, 1976, in the auditorium of the AES Headquarters building in Toronto. The stated objectives of this meeting were twofold:

(i) to bring together Canadian workers, both producers and users of information, in the various areas of wind engineering in order that they might discuss problems which are presently receiving attention and identify those which are most in need of future study.

(ii) to provide a forum for discussion of the need for and possible structure of a formalized Canadian committee on wind engineering.

The field of wind engineering is defined as being concerned with the interactions between the wind and objects or fluids subjected to it at altitudes below about 1000 metres. It involves such problems as wind loading on buildings, bridges and other structures, drifting and accumulation of snow and sand, wind conditions at street levels in urban complexes, dispersal of atmospheric pollutants, transmission line oscillation, wind energy and wind effects on low-flying aircraft and surface vehicles. These problems involve a number of varied disciplines, such as civil engineering, aeronautical engineering, architecture, urban planning and, of course, meteorology. In recent years these problems and the relevant aspects of the many disciplines involved have been gathered under the general heading of 'Wind Engineering' in North America, while the name 'Industrial Aerodynamics' has often been used on the other side of the Atlantic. A formal body called the International Association of Wind Engineering (I.A.W.E.) has been created to coordinate wind engineering activity on a world-wide basis, while in North America, a body called the Wind Engineering Research Council (W.E.R.C.) has been formed to coordinate American, and to some extent Canadian, activity in this area.

In response to a request from the Associate Committee on Aerodynamics (A.C.O.A.) of the National Research Council, a five-man subcommittee (see 'Organizing Committee' below) was formed to attempt to establish whether or not there is any need for a formalized Canadian committee on wind engineering. This committee did not reach any clear-cut conclusions on this question and felt that it might be useful to solicit opinions from other people working in the field. Much more importantly, however, the subcommittee recognized that there existed in Canada a need to define the field of wind engineering for the wide range of workers involved in it and to bring these people together in a discussion-type meeting so that they could be made aware of each other's activities and discuss problems of mutual interest.

For these reasons, it was decided to organize a meeting in which both the 'producers' (researchers, etc.) and 'users' (architects, consulting engineers, etc.) of wind engineering information would come together to review their activities and to identify the optimum direction for future efforts. In view of the classical complaints about many scientific meetings in which most of the time available is taken up for the presentation of papers which are often incomprehensible to all but a very specialized group of participants, and in which all too little time is available for discussion, it was decided to depart from the normal format of such a meeting in an attempt to avoid such problems. The workshop was therefore designed to provide reasonably long periods of time in which the participants could engage in frank and open discussion of their mutual needs and desires for the purpose

of attaining common goals. In addition, no general call for scientific papers (in the sense of describing new results) was made.

The various areas of wind engineering were divided into eight categories, with one workshop session devoted to each. Each of these sessions began with two (or, in one case, three) brief invited presentations, one representing the producer's viewpoint and the other the user's point of view. These presentations were intended to review briefly the problems in each area and to stimulate the discussions to follow, and were thus obviously very crucial to the success of the meeting format. The names of the speakers and the session titles are listed in the workshop program below.

Finally, the question of a formal Canadian wind engineering committee was discussed at an evening dinner session at the Hotel Triumph on September 23.

Based on the attendance, the discussions that took place and the comments of many of the participants, the workshop can be declared to have been extremely successful. The original anticipated attendance was roughly 100 people, while the actual registration was 127 and represented Canada from coast to coast. Representatives of all the various disciplines were present and engaged in many useful and enlightening discussions. The invited presentations achieved their primary objectives and described very well the nature and state-of-the-art of wind engineering activities in Canada. In the evening session, the invited contribution of Prof. J.E. Cermak of Colorado State University was most helpful, since Prof. Cermak is Chairman of both the International Association of Wind Engineering and the Wind Engineering Research Council and provided information regarding the function of both of these bodies. In general it was clearly demonstrated that the format selected for the meeting can be an extremely successful one.

Because the invited presentations were designed primarily to stimulate discussion rather than to formally present scientific information, no 'proceedings' of the meeting, in the sense of a collection of papers, will be published. Rather, the presentations and discussions were summarized by rapporteurs (i.e., members of the organizing committee), whose descriptions will be edited into a final résumé of the meeting. This résumé is expected to be completed by December and will also include the organizing committee's recommendations regarding the formalized committee question. In view of the positive results of this workshop, the committee has already decided that one of it's recommendations will be that a meeting of this type be held at regular intervals, perhaps biennially.

The workshop was sponsored by the Associate Committee on Aerodynamics and in fact required considerably less support than originally planned. This resulted from the excellent attendance (registration fee $25, including dinner and coffee breaks), as well as from the contributions of A.E.S. in providing the facilities for the meeting and of the National Research Council in providing the printing requirements. Holding the meeting at the A.E.S. Headquarters was very appropriate, of course, in view of the great part played by meteorology in all aspects of wind engineering. The organizing committee, whose members are listed below and who were responsible for arranging the workshop, is grateful to N.R.C., A.C.O.A. and to A.E.S., and in particular to the staff of the Meteorological Services Research Branch of A.E.S., for their assistance in making the meeting a success.

ORGANIZING COMMITTEE

Dr. H. W. Teunissen, Atmospheric Environment Service (Organizing Secretary)
Mr. W.A. Dalgliesh, National Research Council
Prof. I.S. Gartshore, University of British Columbia
Dr. D. Surry, University of Western Ontario
Mr. R.L. Wardlaw, National Research Council

PROGRAM: *Thursday, September 23, 1976.*

0800 *Bus departs Hotel Triumph for AES*
0800 *Registration desk opens, AES Lobby*
0850 **OPENING REMARKS – W.L. GODSON, AES**
0900 *Session I:* **BUILDINGS AND STRUCTURES**
Chairman: *W.R. Schriever, National Research Council*
0900 *A.G. Davenport, University of Western Ontario*
0920 *J. Springfield, Carruthers and Wallace*
0935 *P.G. Buckland, Buckland and Taylor*
0950 *Open Discussion*

1045 *Coffee*

1115 *Session II:* **WIND-BLOWN PARTICLES**
Chairman: *B. Etkin, University of Toronto*
1115 *R.J. Kind, Carleton University*
1135 *C.J. Williams, Morrison, Hershfield, Theakston and Rowan*
1155 *Open Discussion*

1245 *Lunch*

1400 *Session III:* **STREET-LEVEL WINDS**
Chairman: *P.L.E. Goering, Peter L.E. Goering Architects*
1400 *N. Isyumov, University of Western Ontario*
1420 *G. Baird, George Baird Architects*
1440 *Open Discussion*

1520 *Coffee*

1550 *Session IV:* **METEOROLOGICAL DATA**
Chairman: *M.K. Thomas, Atmospheric Environment Service*
1550 *D.W. Boyd, National Research Council/AES*
1610 *G.E. Bristow, Atmospheric Environment Service*
1630 *Open Discussion*
1730 *Registration desk closes*
1730 *Bus departs AES for Hotel Triumph*
1800 *Cash Bar, Hotel Triumph (Ambassador Room)*

1900 *Dinner*

2030 *Special Session:* **A CANADIAN COMMITTEE ON WIND ENGINEERING**
Chairman: *I.S. Gartshore, University of British Columbia*

PROGRAM: *Friday, September 24, 1976*

0815 *Bus departs Hotel Triumph for AES*
0830 *Registration desk opens*
0900 *Session V:* **POLLUTANT DISPERSAL**
Chairman: *A.L. Scott, Imperial Oil*
0900 *F.H. Fanaki, Atmospheric Environment Service*
0920 *A.E. Boyer, Ontario Hydro*
0940 *Open Discussion*

1045 *Coffee*

1115 *Session VI:* **TRANSMISSION LINES**
Chairman: *N. Souchereau, Hydro-Québec*
1115 *J.A. Watts, C. Hardy Hydro-Québec Institute of Research*
1135 *J.M. Boyd, Ontario Hydro*
1155 *Open Discussion*

1245 *Lunch*

1400 *Session VII:* **WIND ENERGY**
Chairman: *H.G. Sevier, Bristol Aerospace*
1400 *R.J. Templin, National Research Council*
1420 *J.H. VanSant, Hydro-Québec Institute of Research*
1440 *Open Discussion*

1520 *Coffee*

1550 *Session VIII:* **AIRCRAFT, SURFACE VEHICLES**
Chairman: *J.P. Uffen, de Havilland Aircraft*
1550 *L.D. Reid, University of Toronto*
1610 *K.R. Cooper, National Research Council*
1630 *Open Discussion*

1715 **CLOSING REMARKS–H.W. Teunissen, AES**

ATELIER CANADIEN SUR LE GENIE EOLIEN

H.W. Teunissen

L'atelier canadien sur le génie éolien a eu lieu les 23 et 24 septembre 1976 dans l'auditorium de l'édifice de l'Administration centrale du SEA à Toronto. Le double objectif qui avait été arrêté pour cette réunion est le suivant:

(i) réunir ceux qui, au Canada, s'intéressent au génie éolien, à la fois les producteurs et les utilisateurs d'information, pour traiter des questions qui sont à l'ordre du jour et déterminer les domaines sur lesquels devront porter les études à l'avenir.

(ii) fournir une tribune pour discuter dans quelle mesure le Canada doit se doter officiellement d'un comité du génie éolien et exposer une éventuelle structure.

D'après sa définition, le génie éolien traite des phénomènes d'interaction du vent et des objets ou fluides qui y sont exposés, à une altitude inférieure à environ mille mètres. Parmi les problèmes qui relèvent du génie éolien citons: la charge due au vent des bâtiments, ponts et autres structures, la chasse-neige, la chasse-sable et l'accumulation de neige et de sable, les vents au niveau du sol dans les complexes urbains, la dispersion des polluants atmosphériques, l'oscillation des lignes de transmission, l'énergie éolienne et les effets du vent sur les aéronefs volant à basse altitude et les véhicules de surface. Ces questions font appel à différentes disciplines, notamment au génie civil, au génie aéronautique, à l'architecture, à l'urbanisme et, bien entendu, à la météorologie. Au cours des dernières années ces problèmes et les aspects pertinents des nombreuses disciplines connexes ont été rassemblés sous le terme général de "génie éolien" en Amérique du Nord, mais de l'autre côté de l'Atlantique, on utilise souvent le terme aérodynamique industrielle. L'Association internationale de génie éolien est un organisme officiel créé pour coordonner les activités dans le cadre du génie éolien à l'échelle du monde entier. En Amérique du Nord, on a constitué un organisme appelé Wind Engineering Research Council (W.E.R.C.) pour coordonner les activités des Etats-Unis et, dans une certaine mesure, celles du Canada dans ce domaine.

A la suite d'une demande du Comité associé d'aérodynamique du Conseil national de recherches, un sous-comité de cinq personnes (voir comité d'organisation ci-dessous) a été formé pour tâcher de déterminer si oui ou non il est nécessaire de créer un comité officiel canadien de génie éolien. Les membres du sous-comité, qui ne se sont pas prononcé de façon bien définie sur la question, ont pensé qu'il serait utile de connaître l'opinion d'autres personnes travaillant dans ce domaine. Mais ce qui est bien plus important c'est que le sous-comité a reconnu qu'il fallait définir le domaine du génie éolien et réunir tous les intéressés pour une réunion-débat qui permettrait à chacun de se rendre compte des activités des autres et de discuter de problèmes d'intérêt commun.

C'est ainsi qu'il avait été décidé d'organiser une réunion au cours de laquelle "producteurs" d'information sur le génie éolien, (les chercheurs, etc.) et utilisateurs (les architectes, les ingénieurs-conseil, etc.) auraient la possibilité d'étudier leurs activités respectives et de déterminer la direction optimale vers laquelle il convient d'orienter les efforts à l'avenir. Compte tenu des plaintes que l'on entend au cours de nombreuses réunions scientifiques où une grande partie du temps est consacrée à la présentation de communications souvent incompréhensibles pour la majorité des participants à l'exception de quelques spécialistes et où il ne reste que très peu de temps pour la discussion, il avait été décidé de renoncer à un programme de ce genre pour éviter ces problèmes. On a donc prévu au programme de cet atelier des périodes assez longues pendant lesquelles les participants ont pu discuter sans réserve et ouvertement de leurs besoins et de leurs souhaits

mutuels afin d'atteindre des buts communs. De plus, aucune demande générale de communications scientifiques sur de nouveaux résultats de recherches n'avait été effectuée.

Les différents domaines du génie éolien ont été divisés en huit catégories qui ont fait chacune l'objet d'une séance de travail. Chaque séance a débuté par deux (trois dans un cas) brefs exposés présentés par des conférenciers invités, l'un relatant le point de vue des producteurs, l'autre celui des utilisateurs. Ces exposés qui avaient pour objet d'examiner brièvement les problèmes de chaque domaine et d'inciter au débat, ont manifestement décidé du succès de cette forme de réunion. Le nom des conférenciers et le titre des séances figurent dans le programme de l'atelier.

Enfin, la question de la création d'un comité officiel canadien de génie éolien a été débattue au cours d'une séance qui a eu lieu à la suite d'un dîner à l'hôtel Triumph le 23 septembre.

D'après la participation, les débats et les commentaires de nombreux participants, on peut affirmer que cet atelier a eu un très grand succès. On avait prévu qu'il y aurait environ 100 participants, mais 127 personnes de tout le Canada se sont inscrites. Il y avait des représentants de toutes les différentes disciplines qui se sont engagés dans de nombreuses discussions très utiles et très instructives. Les exposés, qui décrivaient très bien la nature des activités relatives au génie éolien au Canada et l'état des connaissances à ce sujet, ont atteint leurs principaux objectifs. La participation du professeur J.E. Cermak de l'Université de l'Etat du Colorado à la séance du soir a été des plus utiles car M. Cermak, qui est président de l'Association internationale d'aérodynamique industrielle et du *Wind Engineering Research Council,* a fourni des renseignements relatifs aux fonctions de ces deux organismes. En général, il a été clairement démontré que la forme de réunion choisie peut avoir un très grand succès.

Comme les exposés avaient pour objet de lancer les débats plutôt que de présenter officiellement des renseignements scientifiques, il n'y aura pas de "procès-verbal" sous forme de collection d'articles. Les exposés et discussions ont été résumés par des rapporteurs (c'est-à-dire des membres du comité d'organisation) dont les compte-rendus seront publiés sous forme de résumé final de la réunion. Ce résumé doit être prêt d'ici décembre; il comprendra également les recommandations du comité d'organisation relativement à la création d'un comité officiel. Etant donné les résultats positifs de cet atelier, le comité a d'ores et déjà décidé de recommander qu'une réunion de ce type ait lieu à intervalles réguliers, peut-être tous les deux ans.

Le soutien qu'il a fallu assurer à l'atelier patronné par le Comité associé d'aérodynamique a été considérablement inférieur aux prévisions grâce à l'excellente participation (frais d'inscription de 25$ comprenant le dîner et les pauses-café), à la contribution du SEA qui a fourni les installations pour la réunion et à celle du Conseil national de recherches qui s'est chargé de l'impression des documents. Etant donné le grand rôle que joue la météorologie dans tous les aspects du génie éolien, il était tout à fait opportun de tenir la réunion à l'Administration centrale du SEA. Les membres du comité d'organisation, dont les noms figurent ci-dessous et qui étaient chargés d'organiser l'atelier, remercient le CNR, le SEA et, en particulier, le personnel de la Direction de la recherche sur les services météorologiques du SEA pour leur contribution qui a permis de faire de cette réunion un succès.

COMITE D'ORGANISATION

M. H.W. Teunissen, Service de l'Environnement atmosphérique (Secrétaire chargé de l'organisation de l'atelier)
M. W.A. Dalgliesh, Conseil national de recherches

M. I.S. Gartshore, Université de la Colombie-Britannique
M. D. Surry, University of Western Ontario
M. R.L. Wardlaw, Conseil national de recherches

PROGRAMME: *jeudi, 23 septembre 1976*

0800 *L'autobus part de l'Hôtel Triumph pour le SEA*
0800 *Ouverture du bureau d'inscription dans le lobby du SEA*
0850 **REMARQUES D'OUVERTURE**
0900 *Session I:* **LES EDIFICES ET LES STRUCTURES**
Président: *W.R. Schriever, Conseil national de recherches*
0900 *A.G. Davenport, Université de Western Ontario*
0920 *J. Springfield, Carruthers and Wallace*
0935 *P.G. Buckland, Buckland and Taylor*
0950 *Discussion*
1045 *Café*

1115 *Session II:* **LES PARTICULES SOUFFLEES PAR LE VENT**
Président: *B. Etkin, Université de Toronto*
1115 *R.J. Kind, Université Carleton*
1135 *C.J. Williams; Morrison, Hershfield, Theakston and Rowan*
1155 *Discussion*
1245 *Déjeuner*

1400 *Session III:* **LES VENTS AU NIVEAU DU SOL**
Président: *P.L. Goering, Peter L.E. Goering Architects*
1400 *N. Isyumov, Université de Western Ontario*
1420 *G. Baird, George Baird Architects*
1440 *Discussion*
1520 *Café*

1550 *Session IV:* **DONNEES METEOROLOGIQUES**
Président: *M.K. Thomas, Service de l'environnement atmosphérique*
1550 *D.W. Boyd, Conseil national de recherches/SEA*
1610 *G.E. Bristow, Service de l'environnement atmosphérique*
1630 *Discussion*
1730 *Fermeture du bureau d'inscription*
1730 *L'autobus part du SEA pour l'Hôtel Triumph*
1800 *Bar (aucun crédit) à l'Hôtel Triumph (Salle Ambassador)*
1900 *Dîner*

2030 *Session Spéciale:* **UN COMITE CANADIEN DU GENIE EOLIEN**
Président: *I.S. Gartshore, Université de Colombie britannique*

PROGRAMME: *vendredit, 24 septembre 1976*

0815 *L'autobus part de l'Hôtel Triumph pour le SEA*
0830 *Ouverture du bureau d'inscription*
0900 *Session V:* **LA DISPERSION DES POLLUANTS**
Président: *A.L. Scott, Imperial Oil*
0900 *F.H. Fanaki, Service de l'environnement atmosphérique*
0920 *A.E. Boyer, Ontario Hydro*
0940 *Discussion*
1045 *Café*

1115 *Session VI:* **LES LIGNES DE TRANSPORT**
Président: *N. Souchereau, Hydro-Québec*
1115 *J.A. Watts, C. Hardy, Institut de recherche de l'Hydro-Québec*
1135 *J.M. Boyd, Ontario Hydro*
1155 *Discussion*
1245 *Déjeuner*

1400 *Session VII:* **L'ENERGIE EOLIENNE**
Président: *H.G. Sevier, Bristol Aerospace*
1400 *R.J. Templin, Conseil national de recherches*
1420 *J.H. VanSant, Institut de recherche de l'Hydro-Québec*
1440 *Discussion*
1520 *Café*

1550 *Session VIII:* **LES AERONEFS ET LES VEHICULES DE SURFACE**
Président: *J.P. Uffen, deHavilland Aircraft*
1550 *L.D. Reid, Université de Toronto*
1610 *K.R. Cooper, Conseil national de recherches*
1630 *Discussion*
1715 **REMARQUES DE CONCLUSION**

GEORGE LEYLAND PINCOCK RETIRES

On September 28, 1976 the many friends and colleagues of George Pincock gathered at the Atmospheric Environment Service Headquarters to honour him and his wife, Sadie, and to wish them many happy years of retirement.

George was born and educated in Winnipeg, graduating from the University of Manitoba with an Honours B.Sc. (Maths and Physics) in 1936, an M.Sc. in Physics in 1937, and an M.A. in Meteorology from the University of Toronto in 1938. Those were the days when the Meteorologist was not subsidized in his training by the Service. He was accepted into the Service that same year and was assigned to Vancouver where he spent the war years organizing and supervising meteorological services for Canadian Army, Navy and Air Force Operations and Eastern Pacific command. From 1946 to 1951 as OIC of the DPWO and Senior Forecaster, he was responsible for the changeover into public weather services.

From 1951-1959 George provided service to the RCAF, first as Senior Meteorological Officer at Rockcliffe and later as Staff Officer Meteorology – rank Wing Commander, responsible for organization and administration of weather service program for #1 Air Division of RCAF in France.

On his return to the civilian side of Meteorology in 1960, he was appointed Meteorologist in charge of the Winnipeg District Aviation Forecast office. From this point on his career continued on the upward trend –– and he was promoted to Regional Meteorologist, Toronto Air Services, in 1965, Regional Director, AES, Ontario Region in 1971, Director, Field Meteorological Systems Branch at AES Headquarters in 1973 and Acting Director – General Field Services Directorate 1975–1976.

Presentation of Barograph to George Pincock by Don Hall on behalf of the Met. Techs./Don Hall présente un barographe à George Pincock au nom des techniciens en météorologie.

George's career spanned the years of the burgeoning of the weather service, of years of great advances in aviation forecasting, observing, research, instrument development and training methods and he grew with the service. His knowledge and experience in the field of management, organization and meteorology under DOT, RCAF, and AES made him an invaluable member of the team. And it was his encouragement of "team concept" and his warm, human qualities that have gained for him the respect and admiration of his staff and colleagues.

Many were the speeches and tributes offered to George and Sadie: J.R.H. Noble, Assistant Deputy Minister, AES praised him for his outstanding achievements; Don Ross on behalf of the Ontario Region read a tribute from a "scroll" which was then presented to them; Bill Ganong added his words of wisdom; Harry Tucker read a letter from the Chief of the Defense Staff; and Don Hall presented George with a barograph on behalf of the meteorological technicians. Other presentations on behalf of his friends were a gift certificate for a camera, a sabre saw, an atlas, some choice wines and Indian wood carvings from the Pacific Region.

George, in his speech, praised the technicians as important members of the meteorological team, whose substantial contributions often go unnoticed, and he thanked his co-workers, his leaders and his subordinates for rewarding him with such high regard. Most importantly, he paid a special tribute to his wife who, through her flexibility and willingness to move household and to adapt to changing situations made his career possible.

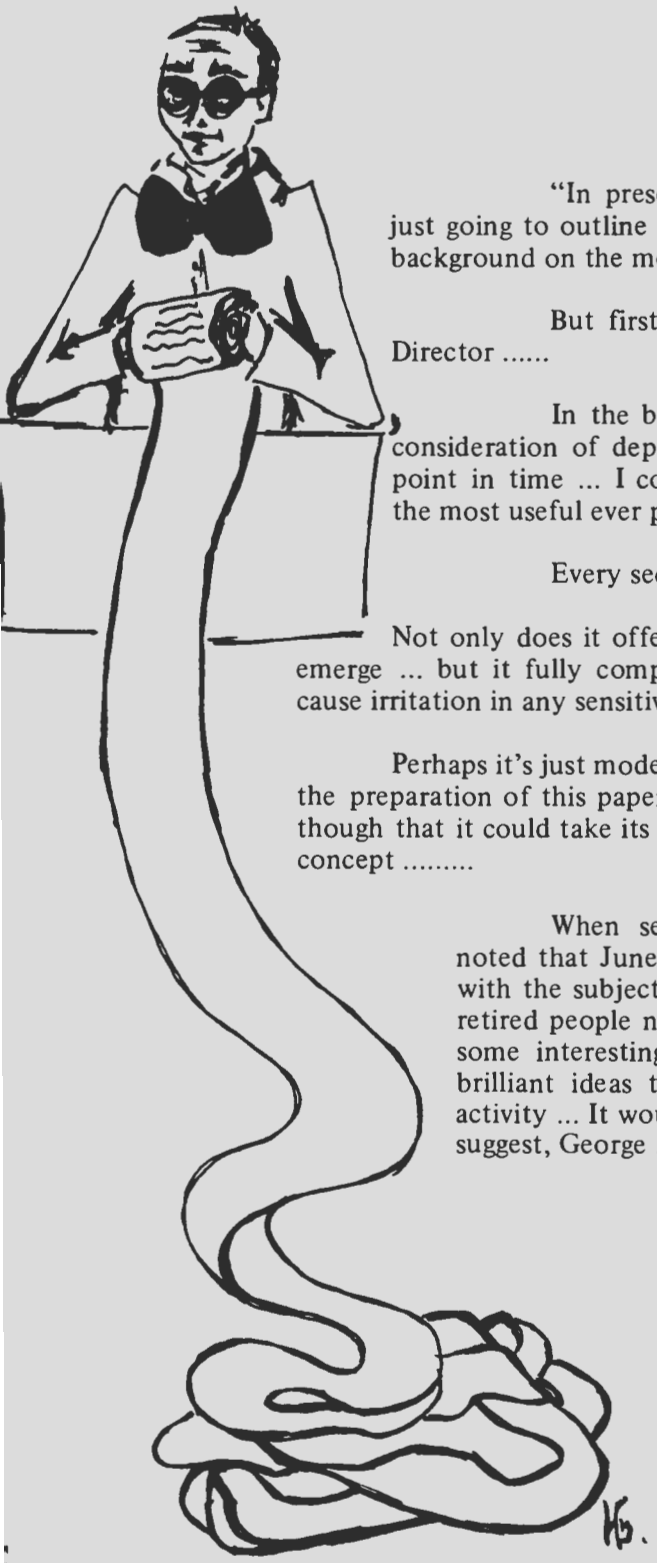
George and/et Sadie Pincock.

Happy Retirement George! /Bonne retraite, George!

Photos – ab Photographic

Ontario Region "Words of Wisdom" to George Pincock on his Retirement

The original was printed on a roll of toilet tissue, and presented by Don Ross. The following version has been suitably edited to avoid the censor.



"In presenting this paper, I don't propose to read it all ... I'm just going to outline briefly some of the highlights and try to give you some background on the more important features...

But first, I should like to read the introduction by our Director .....

In the broad context of our goals and objectives and with due consideration of departmental thrusts, priorities and constraints ... at this point in time ... I consider that this paper may well go down in history as the most useful ever presented by the Ontario Region.

Every section has a practical application.

Not only does it offer a handy solution to environmental problems as they emerge ... but it fully complies with AES policy, in that, there is nothing in it to cause irritation in any sensitive area ...

Perhaps it's just modesty, but those of us who were more directly involved in the preparation of this paper are not quite so enthusiastic about it ... We do think though that it could take its place on a shelf beside the Moakler report and the 1985 concept .....

When searching for input for this paper, our research team noted that June Callwood in a couple of her recent TV programs dealt with the subject of retirement. The message that came across was that retired people need to be actively occupied and should plan ahead for some interesting activity to occupy their time ... This gave rise to brilliant ideas that planning itself could be pretty much a full time activity ... It would be a mistake to do it before retiring ... They suggest, George ... that you start now planning for 1985.

With your experience in AES you may find that '85 will come and go and you will still be back at 1980 ... Then you can start planning for 1995...There is a warning here...

You want to avoid having your plans implemented and finding yourself with nothing more to do ... The secret is to divest yourself of all control over the allocation of resources ...

Consultation with the medical profession revealed that the human body begins to manifest the degeneration of time at about age thirty ... often, on retirement, the release of the heavy pressure of responsibility seems to speed up the slowing down processes ... you should not plan to plan too much in a day ... other things too will take longer ... it will take longer to get up in the morning ... but this rule too seems to have some exceptions ... you may find it takes less time to enjoy a Labatt 50 ...

I see there is a footnote here it says this is the only place in this project where we have gained anything on our cost recovery policy.

Our Admin officer says he enjoyed reporting the receipt of a case ... "of empties" ...

On this subject of slowing down, our survey team had a discussion with Bob Graham ... He wants to warn you about it too ... He says don't deliberately try to slow down ... He made that mistake and is now trying very hard to reverse the process ... He just became aware that he had overdone it when a few weeks ago one morning, about noon, he went for a walk; to quote Bob ... "My Neighbor's dog thought I was a tree" ...

Our survey team ranged far and wide to solicit ideas for this paper ... from Dr. McTaggart-Cowan came the suggestion that whatever you do, George, you should seek some variety ... He suggests it's easy to get invited to speak to local service clubs on a subject of your choice ... He says a very safe subject is the one of climatic change ... Your not likely to ever have to eat your words ... He also says don't bother about contacting the federal Cabinet ... They are busier than ever redecorating their offices ...

Here, is one for you, Sadie ...

A survey of Senior Citizens Homes in Metro revealed that the Lady residents outnumber the men by about seven to one ... so "take care of the old man Sadie ... you mow the lawn, shovel the snow and take care of the garden ... Just let him pick the flowers." ...

Our contact with Frank Benum was not very fruitful ... the only free advice he was prepared to offer George, was "don't go into Real Estate". He did, however, offer to purchase the copy right to this document ... We had to tell him that when this paper is presented to the Pincocks it will be their property absolutely ... Knowing the generosity of the Pincocks I'm sure Frank will be welcome to use it any time he needs to ...

And now, Mr. Chairman, I should like to present this paper directly to our guests ... in doing so, George and Sadie, it is with the sincere hope that as you go through it, you will take the time to sit and reflect and remember your many friends who wish you well ...

AN IMPORTANT DATE IN OUR PAST

by

M.K. THOMAS

SEPTEMBER 4, 1876

A hundred years ago, on September 4, 1876, the first Canadian prepared storm warning was issued from the Toronto office of the Meteorological Service. Following Confederation, the new federal government assumed complete financial responsibility for observatories at Saint John and Quebec. Partial support was given to observatories at Toronto, Kingston, and Montreal, but there was no organized meteorological service. Through the efforts of Professor George T. Kingston, Director of the Toronto Observatory, a small amount of money was granted in 1871 for the development of a network of observing stations and for the promotion of meteorological research leading to weather forecasts. An exchange of weather data with the United States was commenced in 1872. Three times each day observations from seven Canadian stations were sent to the United States and data from 15 U.S. stations were relayed to Toronto. Storm warnings were prepared in Washington and upon receipt in Toronto a decision was made as to whether or not to forward the warnings by telegraph to storm warning stations on the Great Lakes, the St. Lawrence River and Gulf, and along the Atlantic coast.

In 1872-73, Professor Kingston brought into the Service two teenagers, Frederic Stupart and Bertrand Webber. These young men plotted and analyzed weather maps based on the data received in the telegraphic collection and on data received from stations by mail from different parts of Canada and the United States. By the summer of 1876 Professor Kingston felt that his small staff had enough experience to begin their own forecasts. It was thus on September 4, 1876, that Stupart (later Sir Frederic) issued the first storm warning and this was followed about a month later by public forecasts. At about this time Stupart was named the Service's "Probability Officer". It was also in 1876 that the "probabilities" began to appear in the Toronto afternoon papers and in December these were furnished to the telegraph companies and forwarded for publication in the various papers in Ontario and at Montreal. Subsequently public forecasts were made available to newspapers in the Maritime Provinces in 1877, in Manitoba in 1899, and in Saskatchewan and Alberta in 1903. In British Columbia a Victoria office first furnished forecasts to a newspaper on November 1, 1898.

ANNIVERSARY OF MARINE WEATHER WARNINGS

By A. Campbell

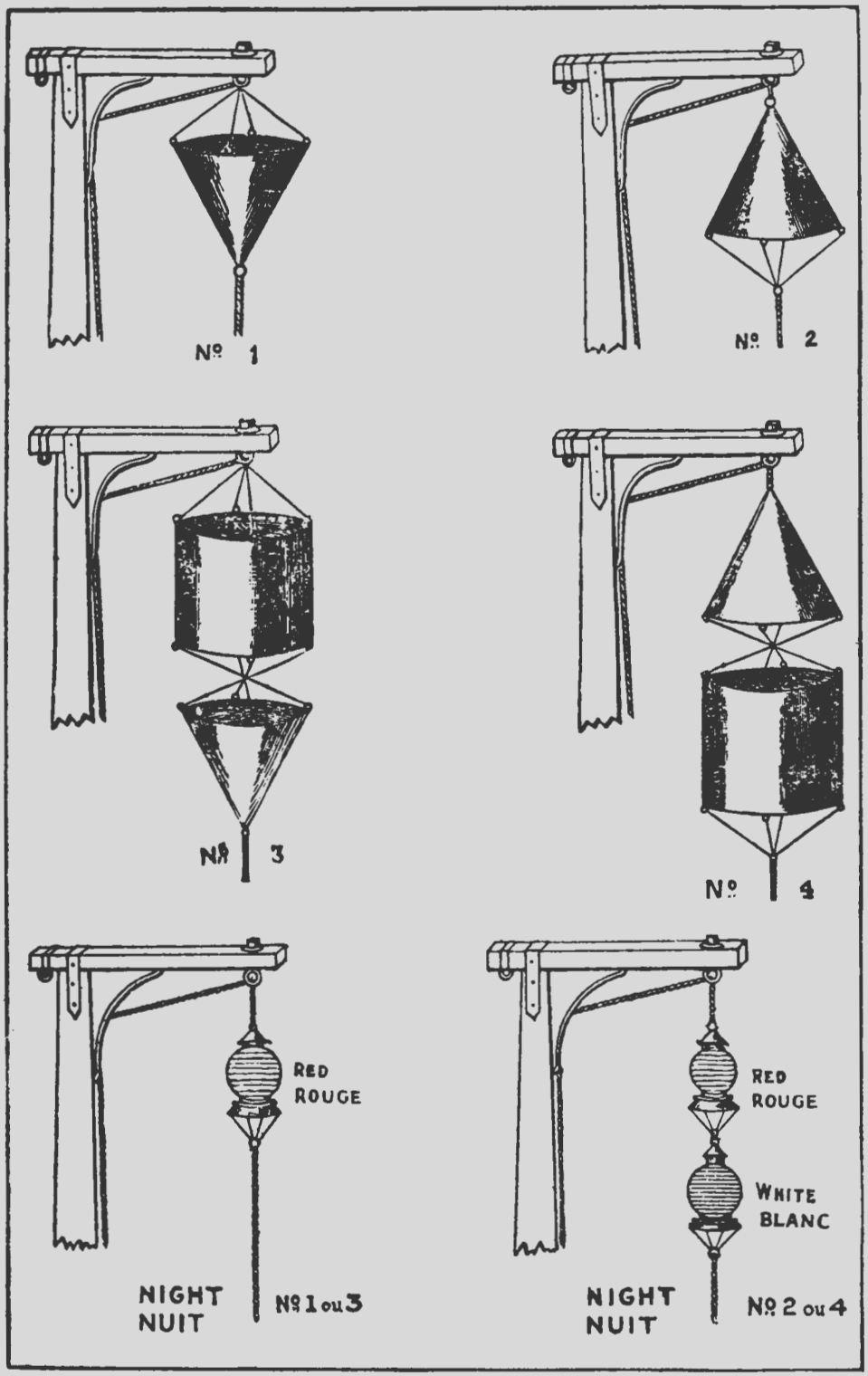
One hundred years ago, on September 4, 1876, the first storm warning was issued in Canada. Storm warnings, in the early days, were considered by mariners, especially, to be much more important than general forecasts.

To go back a bit, modern meteorology began with the introduction of the first weather maps in 1870. In Canada, observations were received at this time from 6 stations extending from Lakes Huron and Erie to Quebec and reports were received also from 15 stations in the United States.

The first warnings were issued by the Washington Weather Bureau but by 1876 the Canadian Service had developed sufficiently to take over the work. The first storm warning message was issued September 4, by R. Frederic Stupart who, as Sir Frederic Stupart, was later the Director of the Canadian Service for 56 years until his retirement in January, 1929.

The storm warning messages were disseminated by a system of visual signals developed by Captain Fitzroy of the Royal Navy. Storm warnings were announced by a display of wicker baskets of different shapes and sizes on poles at or near harbours. The baskets were in the shapes of a cone and a drum and constructed of heavy basket weave, probably willow withes, that were relatively light in weight. They were painted black for daytime use and at night red and white lamps were used. The presence or absence of cone or drum or their relative positions on the mast constituted a simple code to express forecasts of storm winds, including their direction (see diagram). This system of visual storm warnings continued in use in Canada until 1953. It is interesting to note that 1,463 storm warnings were issued in 1897 to the various districts where signals were displayed and it is reported that 1,251 (or 85%) were verified.

Cone and Drum.



Weather Warnings/Avertissements météorologiques

Moderate gale at first easterly or southerly/grand frais provenant de l'est ou du sud.
Moderate gale at first westerly or northerly/grand frais provenant de l'ouest ou du nord.
Strong gale at first easterly or southerly/fort coup de vent provenant de l'est ou du sud.
Strong gale at first westerly or northerly/fort coup de vent venant de l'ouest ou du nord.

LA SOUFFLERIE A COUCHE LIMITE DES TEMPETES MOINS DESTRUCTIVES

Par Louis-George Desternes
Tiré de Science Dimension, 1976/4

"Qui observe le vent ne sème pas, et qui considère les nuages ne moissonne pas", dit l'Ecclésiaste. Le Dr. A.G. Davenport, de l'Université de Western Ontario, ne semble pas être d'accord: il passe son temps à observer le vent et les idées qu'il a acquises à la suite de ses observations sont exploitées par de nombreux ingénieurs. La description de ses travaux est plus prosaique que celle d'un "observateur du vent". Il préfère "l'aérodynamique industrielle" ou "le génie éolien" puisque son domaine d'intérêt est l'influence du vent sur différentes structures comme, par exemple, les toits, les tours, les édifices élevés et les ponts suspendus. Du point de vue de l'environnement, le Dr Davenport étudie la dispersion des polluants dans l'atmosphère, l'influence refroidissante du vent dans les climats chauds et le moyen d'éviter les difficultés hivernales que nous rencontrons dans nos cités canadiennes bien venteuses.

Le vent est tout simplement un mouvement de déplacement de l'air et il se produit pour différentes raisons. Il y a des vents qui s'étendent sur des milliers de milles; ils ont leur origine dans des conditions à l'échelle globale comme les différences de pression existant entre divers points du globe, les échauffements inégaux du soleil aux différentes latitudes et les forces naissant de la rotation de la terre. Le vent peut également se produire en un point particulier et provenir des différentes vitesses de refroidissement des eaux et des terres dans les régions côtières, de l'arrivée d'air froid dans les vallées, le soir, ou d'autres caractéristiques topographiques.

Le vent peut changer et s'il peut donner ici une brise fraîche durant une chaude journée, il peut causer ailleurs une catastrophe. En 1941, le pont de Tacoma Narrows, dans l'état de Washington, s'est rompu sous l'action d'un vent de 64 km/h. En 1958, des rafales de vent ont causé pour 600 000 dollars de dommages à l'édifice Union Carbide à Toronto. Il est donc nécessaire que les ingénieurs et les architectes comprennent et évaluent les effets variés du vent sur leurs constructions. Un résultat des recherches du Dr Davenport a été d'introduire des modifications dans le Code national du bâtiment du Canada et la condition exigée que tous les édifices dépassant 400 pieds (120m) de hauteur et ceux qui sont d'un grand allongement soient analysés pour trouver leur réponse dynamique.

Le Dr Davenport et ses collaborateurs peuvent procéder de plusieurs manières pour déterminer l'influence du vent sur un édifice. Dans le cas d'un édifice existant déjà, des mesures exécutées avec soin sont faites quant aux contraintes et aux déflections qui existent dans l'édifice soumis à l'action du vent. En outre, l'influence du vent sur l'édifice peut être simulée dans une soufflerie. La soufflerie à couche limite de l'Université de Western Ontario a été développée en 1965 par le Dr Davenport grâce à des subventions du Conseil national de recherches. C'est une soufflerie de 100 pieds de long (30 m) dont la veine d'essais rectangulaire a 8 pieds (2,4m) de largeur et 7 pieds (2,1 m) de hauteur; elle est équipée d'un ventilateur situé à une extrémité pour simuler les différentes vitesses du vent. La soufflerie s'appelle "soufflerie à couche limite" du fait que l'on rencontre dans les premiers 1 500 pieds (450m) audessus du col, c'est-à-dire à la région où le vent a une influence sur les édifices.

Des maquettes aéroélastiques des édifices étudiés sont construites à une échelle réduite d'environ 1/400 et la mesure des déformations des maquettes sous l'action du vent simulé est possible. Grâce à la technique des maquettes, une contrainte ou une déformation de la maquette est reliée à l'influence du vent dans le cas de l'édifice grandeur réelle et soumis à des conditions atmosphériques appropriées.

A mesure que les ordinateurs continuent d'avoir de plus en plus d'influence dans la recherche scientifique, il est naturel de se poser la question: Est-ce que ces prévisions ne pourraient pas être calculées théoriquement? Le Dr Davenport a répondu: "Alors qu'il est possible de définir un modèle pour ordinateur d'un pont ou d'une tour, il est difficile de réaliser un modèle mathématique complet du vent car c'est trop compliqué et imprévisible. Lorsque j'ai commencé ma recherche, les ingénieurs intéressés à prévoir l'influence du vent faisaient leur estimation en se basant sur un vent constant. C'est ce que nous pourrions appeler la "théorie statique du vent" car on suppose qu'un édifice subit une pression constante due au vent. Cependant, même dans les vents les plus stables, les édifices du voisinage introduisent de la turbulence et d'autres effets aléatoires. Ce sont ces effets qui peuvent s'accumuler et déterminer des vibrations induites par le vent dans un édifice, pouvant conduire à des ruptures structurales. La turbulence est difficile à simuler à l'aide d'un ordinateur, en un temps relativement court, et à un coût raisonable. Nous plaçons plutôt la maquette de la structure et celle des édifices du voisinage dans une soufflerie après les avoir équipées de capteurs électroniques. L'ordinateur est utilisé pour analyser la masse des données que nous obtenons au cours de la simulation en soufflerie."

Durant l'étude de la Tour du CN à Toronto, de nouveaux matériaux de construction ont été utilisés et il est devenu important de quantifier leur comportement dans la construction finale. Du béton de très haute qualité a été employé dans la construction et l'étude à l'aide d'une maquette a permis d'établir une relation entre la rigidité de la tour et différents paramètres du mélange constituant le béton. Une telle étude peut permettre d'économiser des sommes substantielles. Ainsi, par exemple, des études sur maquettes peuvent conduire à penser que, en se servant de moins de béton ou d'un acier plus léger, il est possible d'obtenir une structure sûre. Les économies dans un tel cas seraient très supérieures au coût de l'étude et, ce qui est plus important, de nouveaux codes pour des bâtiments semblables dans le monde entier, pourraient voir le jour. Le cas de la Tour du CN est particulièrement intéressant pour le Dr Davenport car il a pu faire une étude étendue de la tour durant sa construction et mettre ses prévisions en parallèle. Actuellement, ses collègues font des mesures précises des mouvements, sous l'action du vent, de la tour maintenant construite.

Ce n'est pas seulement l'édifice terminé qui intéresse l'ingénieur dirigeant la construction mais la construction elle-même et c'est la raison pour laquelle le Dr Davenport est fréquemment consulté par les industriels durant le stade de planification d'une tour, d'un pont ou d'un radio-télescope. Dans le cas d'un pont suspendu, par exemple, la période la plus critique ne se produit pas au moment où la circulation routière est la plus intense mais durant la construction. Le Dr Davenport a été contacté durant les premières phases de la planification du pont suspendu Murray McKay à Halifax. Ce pont présentait plusieurs innovations structurales donnant un poids par pied carré (par m^2) de route égal à la moitié du poids habituel. En outre, une nouvelle technique de construction a été essayée; il s'agissait d'assembler des sections entières du pont plutôt que de monter le pont pièce par pièce comme on le fait habituellement. Des essais exécutés par le Dr Davenport et ses collaborateurs ont démontré qu'une telle construction serait sûre et le pont a été terminé en un temps record, le tablier suspendu ayant été terminé en moins de deux mois ce qui, par les méthodes traditionnelles, aurait pris jusqu'à une année.

En entretenant des relations étroites entre les industriels de la construction et le laboratoire, le Dr Davenport peut atteindre deux buts: une meilleure compréhension du comportement physique du vent et de l'écoulement de l'air autour des objets et des contributions immédiates aux codes du bâtiment et à la solution des problèmes individuels de construction. Cet observateur canadien du vent a bien semé et les fruits de son travail seront récoltés pour des années à venir, non seulement sous la forme d'avantages économiques, mais sous la forme d'une amélioration générale de la qualité de la vie de nos cités.

WENDELL SMITH RETIRES

A luncheon, attended by friends and colleagues, was held for Wendell Smith on the occasion of his retirement from AES. This was followed by a presentation in the AES auditorium.

Mr. J.R.H. Noble praised Wendell for his contributions to instrument meteorology and recalled many anecdotes, referring to himself and Wendell as the Senior Citizens of AES.

R.E. Vockeroth paid tribute to him and pointed out that a valued member of AES – the man who introduced the ceilometer, dew point hygrometer and the transmissometer – was now lost to us.

Wendell was presented with models of a transmissometer, fashioned into a set of book-ends, a scientific calculator and some liquid refreshment.

Evelyn Smith "the great lady behind the great man" was presented with an orchid and a silver maple leaf pin.

The Smith's are beginning their retirement embarking on an extended trip to Australia and New Zealand.

We wish them the best of luck and many happy years of retirement.

Wendell Roy Smith was born in Alberta, and grew up in southwestern Ontario. He joined the Meteorological Division, Air Services Branch, of the Department of Transport on June 21, 1940. Along with N. Powe, N.V. Jefferson, and P.J. Sandiford, he was in the first of what later developed into a series of Short Courses. L.B. MacHattie was the instructor.

After preliminary training and airways experience he began training for upper air work in October 1941, on the Canadian (MSC) radiosonde developed by R.C. Jacobsen and G.C. Gill. In February 1942 he set out for Fort Nelson, B.C., with G.C. Gill and E.A. Johnston. The trip was not without incident. The Office received a teletype message next morning stating that three of five barometers they were carrying had been broken and replacements were necessary. In March the Fort Nelson upper air station became operational – the first in Canada. The construction crew still working on the airport, and seeing the radiosonde releases, dubbed the trio "The Balloonatics". He remained at Fort Nelson for 16 months as Officer-in-Charge.

The next move was in 1943 to Arctic Bay, at that time the most northerly outpost in the British Commonwealth. Seven whites (including two Hudson's Bay Company staff) and several eskimo families were the sole occupants of the station. Wendell headed up a group that went in to relieve U.S. Weather Bureau staff. The group took in lumber to build a dwelling for the additional personnel. In the operation of the station it was necessary to use initiative, often adapting to the purpose whatever was at hand. The group had to manage its own food supply and obtain medical advice from Pangnirtung when necessary. A case in point was when it became necessary to amputate an eskimo's gangrenous finger. Radioed instructions about anaesthetizing, details of the necessary cutting, and follow-up suturing contributed to the success of the operation. Radio reception was often excellent, especially during the three-month polar night, when the British, German, and Japanese war

Wendell and /et Evelyn Smith.

communiques were picked up quite regularly. At other times reception was virtually non-existent. The observations were sent out in code and were used by forecasters along the east coast to facilitate the movement of troops and supplies across the Atlantic to Europe. On the way out from Arctic Bay by the Hudson's Bay steamer Nascopie the vessel was followed by a German U-boat until picked up by R.C.N. escort at Cartwright in Labrador.

There were other postings: Nitchequon, and two periods on Sable Island. Both trips to the latter station were in mid-winter and took 16 and 18 days from Halifax because of storms in the North Atlantic.

By 1946 Wendell had moved to the newly-organized Instrument Division, travelling now mainly for installation, repair, trouble-shooting and inspection. This included stays of varying lengths of time at Churchill, The Pas, Whitehorse, Norman Wells, Baker Lake and Moosonee. The day after he left Baker Lake the whole community was quarantined because of an outbreak of fever.

While working in upper air he developed a new receiver for the MSC radiosonde, and also adapted both airborne and ground equipment to RAWINsonde use for

Wendell Smith with transmissometer book-ends/Wendell et ses transmissiomètres en appuis-livres.

measuring winds aloft with the MSC sonde in addition to the usual upper air parameters. Then early in 1956 the first rotating beam ceilometer in Canada was installed at the then Malton airport. After some preliminary circuit changes and rather critical optical alignment procedures the equipment began to function as intended. It has become a very useful airport instrument. A short time later the first transmissometer was installed, also at Malton. This equipment was much harder to handle than the ceilometer since the optical adjustments were more critical and the level of mechanical stability not so high. It required several years and conferences with the U.S. Weather Bureau to make the transmissometer behave, but it too has become a standard airport instrument – used as sensor for the Runway Visual Range system. This small, wired-programme computer marked the introduction of solid-state digital techniques into this Service. Over 80 installations of the system are presently in operation, with 100 planned.

The problems of operation, modification, and redesign of some aspects of ceilometer, transmissometer, and RVR system occupied his time until the early 1970's. Then he became involved with the propagation of sound, remote sensing, and meteor scatter communications, until his retirement October 1 of this year.

ENFIN, UNE MAITRISE EN FRANCAIS

Par Pierre Sormany

L'ampleur des problèmes relatifs à la compréhension et la protection de notre environnement augmente sans cesse le besoin de spécialistes capables de travailler sur les problèmes qui se posent à l'échelon local et régional. Le Québec, en ce secteur, ne peut se contenter de se fier sur les connaissances acquises ou vérifiées ailleurs.

Puisque l'air constitue un élement essentiel de la biosphère, il est important de connaître l'atmosphère comme milieu, et aussi les caractéristiques que ce milieu peut présenter à la dimension du Québec. L'enseignement et la recherche, dans le domaine des sciences de l'atmosphère, dépassent donc aujourd'hui le cadre de la météorologie et de la climatologie fondamentales.

Il y a quelques mois, l'Université du Québec annonçait donc la mise en place, pour cet automne, du premier programme de maîtrise en sciences de l'atmosphère offert par une université francophone au Québec. Il est bien sûr trop tôt pour en parler abondamment, le programme ne commençant qu'avec la nouvelle année scolaire, mais il convient de souligner que, pour la première fois, la gestion de ce programme a été assumée conjointement par trois constituantes de l'Université du Québec: Chicoutimi, Rimouski et Montréal.

En chaque endroit, le programme comporte un tronc commun (des activités obligatoires dans les disciplines fondamentales de ce domaine), ainsi que des activités (optionnelles) axées sur le champ de spécialisation propre de la constituante en question. Ainsi, l'UQAM s'intéressera particulièrement aux problèmes atmosphériques reliés à la pollution urbaine, l'UQAR retient comme premier champ d'intérêt le bilan thermique du climat marin, alors que l'UQAC se penchera sur l'atmosphère du Moyen-Nord.

Seconde innovation: le cours était accessible non seulement aux étudiants en sciences pures (physique, biologie, mathématiques et chimie) ou appliquées (génie), mais aussi aux étudiants de sciences humaines (géographie, notamment). Si l'étudiant ne possède pas toutes les connaissances exigées comme pré-requis aux différents cours inscrits au programme, l'Université du Québec offrira un séminaire et un cours de propédeutique.

Pour l'instant, le programme est encore centralisé à Montréal. Les activités régionales ne commenceront qu'au prochain trimestre, c'est-à-dire pour la session d'hiver 1977.

LONG SERVICE AWARD PRESENTATION

A Long Service Award Presentation was held in the AES Headquarters auditorium on Monday, October 18, 1976. Long Service Awards are presented to employees in recognition of 25 years' service in the Federal Public Service. Mr. J.R.H. Noble presented these awards. Listed below are the employees who received awards this year.

D. Aston
Ms. S. Bendyna
G. Bristow
F.J. Brunning
P. Chirka
C. Drouin
H.W. Gee
H. Gerger
E.W. Gillies
W.F. Harvey
Ms. R.S. Inouye
W.J. Johnson
Ms. M. Landry
G. McPherson
A. Missio
J.E. Parker
Ms. O. Poulton
A.W. Ring
Ms. M. Schurter
D.G. Tesch
R.T. Tsuda
V.R. Turner
R.E. Vockeroth
D.H. Walsh

Also eligible for Long Service Awards this year were 4 from DND.

I.A. Clysdale
F.L. Cushing
O.L. Shewchuk
N.C. Turko

Front row/A l'avant:
(L to R/de g. à d.) M. Landry, A. Missio, P. Chirka, J.R.H. Noble, S. Bendyna, C. Drouin, E. Gillies.
Back row/A l'arrière:
(L to R/de g. à d.) M. Schurter, G. Bristow, G. McPherson, J.E. Parker, F.J. Brunning, R.E. Vockeroth, D. Aston, D. Walsh.

LONG SERVICE AWARD PRESENTATION – GANDER

Seven employees from the Gander weather office, with services totalling more than 175 years, were honoured Sept. 13, when they were presented with Long Service Awards. This award is presented to an employee who has completed 25 years of service. On hand for the presentation were J.A.W. McCulloch, regional director of the Atmospheric Environment Service for the Atlantic Region and George Baker, MP for Gander-Twillingate.

Mr. Baker, John Elliot, Officer in charge of the Gander weather office, and receiving awards: E.E. Humby, Senior technician; J.A. Peach, supervisor and forecaster; C.R. Bowring, supervisor technician; E.S. Parsons, supervisory technician; E.S. Lanning, communicator; F.W. Hoskins, technician; J.A.W. McCulloch. Missing from the photo is S.A. Barnes, a communicator with the Gander weather office, who was also honoured for his service.

M. Baker, John Elliot, responsable, bureau météorologique de Gander, et les récipiendaires: E.E. Humby, technicien supérieur; J.A. Peach, superviseur et prévisionniste; C.R. Bowring, technicien en chef; E.S. Parsons, technicien en chef; E.S. Lanning, communicateur; F.W. Hoskins, technicien; J.A.W. McCulloch, directeur, région de l'Atlantique. S.A. Barnes, un communicateur travaillant au bureau météorologique de Gander, reçut aussi un certificat de long service, mais n'apparaît pas sur la photo.

RETIREMENTS

Humphrey J. Harris

Humphrey J. Harris, Meteorological Technician at the Victoria International Airport Weather Office, is retiring effective September 24, 1976, after 25 years of employment with AES.

Humphrey was born in London, England, but came to Canada at the age of fourteen and spent his youth on a homestead in Alberta's Peace River district. During the war years he served in the Merchant Marine, returning to marry Rosina Fitchett in Vancouver during the spring of '46. Humphrey joined the Met Service at Vancouver in 1951, spending five years in Prince George and seven years at Victoria Gonzales before being transferred to the Victoria International Airport in 1963.

To mark the occasion of Humphrey's retirement, fellow employees have arranged a dinner to be held Friday, September 24, 1976.

Friends and colleagues are invited to join in wishing Humphrey and Rose a long and happy retirement.

L.B. MacHattie

Les MacHattie has announced his retirement from federal meteorology after a career of over thirty-six years, the last twenty-two of which have been with the Canadian Forestry Service, mainly in forest fire research.

Les will be leaving the Service on November 12 and the Forest Fire Research Institute will mark the occasion with a luncheon on November 5.

Bob Meyer

Bob Meyer, Regional Communications Officer, Pacific Region, is retiring November 1, 1976 after 35 years of Service. Bob served in both Central and Pacific Regions and during his career he has made many friends in AES, MOT, DOC and CN/CP Telegraphs.

A reception has been planned for October 28, to mark the occasion and to wish him many happy years of retirement.

FIELD SERVICES DIRECTORATE ADMINISTRATIVE SERVICES MEETING

During the period October 6–8, Administrative and Financial Officers from all Field Services Directorate Regions, Canadian Meteorological Centre and Field Services Directorate Headquarters as well as from the Administration Branch attended the Second Annual Field Services Directorate Administrative Services Meeting which was held at Atmospheric Environment Service Headquarters, Downsview, Ontario.

The meeting was organized by the Office of the Director General, Field Services Directorate and provided an extensive agenda which covered a wide range of topics in the field of Finance, Material, Personnel and General Administration.

One of the primary objectives of this meeting was to determine and recommend practices and procedures which would improve the functions of Administrative Services Units within the Field Services Directorate organization. Other objectives included:

(a) reviewing administrative procedures and systems;

(b) clarifying administrative relationships and improving communications between Headquarters and the Regions; and

(c) developing compatable administrative procedures.

This meeting served as a very useful platform for exchanging ideas, information and guidelines between Headquarters and the Regions.

Standing: Don Barrett, Al Verge, Harold Humber, Lorry Sheperd, Ann Russell, Ken Hignell, Bridgett Chambers, Merv. Tinck, Ed. Millar, Dick Shimoda, Luc Landers, Les Tibbles, Wil Martiniuk, Helen Podehl, Jerry Trembly, Bruno Major, Dan Roherty, Louise Kindree, Roy Lee, Al Keating.

Seated: Catherine Simmons, Kay Rockett, Cal Carter, Peter Chirka, Keith Maughan, André Jacques, Brent McVean, Ken Appleyard, Gisele Marcella.

Photo: ab Photographic

DISPARITION PROCHAINE DU MARCHE AMERICAIN DES CANETTES D'AEROSOLS

Le seul fait que la Food and Drug Administration et l'Agence pour la protection de l'Environnement des Etats-Unis aient annoncé cette semaine leur intention de règlementer sous peu l'utilisation de fréon dans les cannettes d'aérosols, provoquera probablement une baisse importante dans l'utilisation de ces contenants sous pression a affirmé hier au DEVOIR M. Sherwood Rowland, le premier chercheur à soutenir que le fréon peut endommager la couche d'ozone qui protège notre planète.

M. Rowland a aussi indiqué que la gigantesque production nord-américaine de fluorocarbones est un danger beaucoup plus grave que celui qui proviendra éventuellement des gaz d'échappement des avions de transport supersoniques.

Jusqu'à maintenant, dit-il les millions de tonnes de ces produits synthétiques presque inertes sont demeurés dans les basses couches de l'atmosphère mais inévitablement ces gaz vont diffuser vers les hautes altitudes où ils seront détruits par les rayons ultraviolets. Cette destruction entraînera la libération de chlore qui transformera les molécules d'ozone (03) en oxygène ordinaire (02).

Cette destruction de l'ozone rendra la statosphère beaucoup plus transparente aux rayons ultraviolets et on craint que ces rayons, en parvenant jusqu'au sol, ne multiplient les cas de cancers de la peau et n'affectent la vie animale.

On craint aussi des modifications importantes des climats parce que la stratosphère se refroidira (les rayons ultraviolets la traversant au lieu de la chauffer). Inversement, les couches basses se réchaufferont parce que les fluorocarbones comme le fréon empêchent la perte de chaleur du sol sous forme de rayons infrarouges.

Considéré un peu comme un illuminé et un prophète de malheur au début en 1973-74 le professeur Rowland a vu sa position se raffermir progressivement dès que d'autres équipes de chercheurs se sont penchées sur la question pour parvenir à des conclusions semblables.

Ses idées ont été définitivement "consacrées" au cours de l'été dernier quand un comité de la National Academy of Sciences des Etats-Unis, après avoir scruté de près les connaissances actuelles en la matière est arrivé à la conclusion que les fluorocarbones comme le fréon représentent effectivement un danger très grave pour toute la planète. Qui plus est la NAS soulignait aussi que ce danger est purement gratuit puisque les cannettes d'aérosols au fréon ne sont nullement indispensables.

Le professeur Rowland estime que le gouvernement américan n'interdira probablement pas l'utilisation du fréon dans les réfrigérateurs domestiques qui représentent moins de un pour cent de la production américaine de fréon. Par contre il estime que les systèmes industriels de réfrigération pourront faire appel à des gaz de rechange dont on achève la mise au point.

Dans un certain nombre de cas, il sera possible de substituer d'autres produits au fréon même dans les cannettes d'aérosols, a-t-il dit, mais il faut faire très attention au danger d'explosion soit par incendie, soit par suite d'une pression excessive.

En conclusion, il a souligné qu'il est beaucoup plus simple d'avoir recours à des systèmes d'application à bille (pour les désodorisants, par exemple) ou à des atomiseurs manuels.

NWS VISITS AES

by L. Berthelot

Mr. William Pogermon, Sub-Station Program Manager of the National Weather Service (NWS), and his assistant Mr. Keith Shoun spent three days visiting AES Headquarters and a few Southern Ontario Climatological Stations. The purpose of the visit was to establish contacts at AES Headquarters and to discuss topics of mutual interest.

The NWS Sub-Station Program is comparable in operation to the AES Climatological Station Program. The NWS program is somewhat more diversified as it is involved in the measurement of hydrological parameters for flood control, as well as for climatology and agriculture. As expected, the NWS network is much more extensive than its Canadian counterpart. It is made up of some 13,000 stations spread over all 50 states compared to the 2500 Canadian stations.

Messrs. Pogermon and Shoun spent two days at AES Headquarters discussing the various aspects of operating our climatological network, such as the instrumentation, setting of standards, metrication, and the processing and archival of data. It soon became apparent that most of the problems experienced in the operation of our Climatological Network are also prevalent south of the border, but on a much larger scale. One day was spent touring the Climatological Stations at the Royal Botanical Gardens in Hamilton and the Vineland station in the heart of the Niagara fruit belt. The programs at these two stations provide a good overview of the Canadian operations. Mr. Paul Shalapata of the Ontario Regional Headquarters acted as guide, chauffeur and photographer for this outing.

The mutual exchange of information proved to be useful to everyone involved.

Discussing the Evaporation Program – Hamilton RBG

Left to right/de gauche à droite: L. Berthelot – AES HQ, J. Lamoureux – Climat Obs. R.B.G., J. Kotylak – AES HQ, K. Shoun – NWS, W. Pogermon – NWS.

Photo Courtesy/la photo est une gracieuseté de: P. Shalapata

PERSONNEL

The following have accepted positions as a result of competitions:
Les personnes suivantes ont accepté ces postes après concours:

75-DOE-TOR-CC-178	Duty Forecaster MT-4 METOC Centre Halifax T.A. Danks
76-DOE-WIN-CC-517	Officer-in-Charge MT 5 Resolute R.D. Holdman
76-DOE-WIN-CC-527	Officer-in-Charge MT 6 Regina D.A. Bernachi
76-DOE-WIN-CC-542	Officer-in-Charge EG-ESS-4 Hudson Bay B. Nowosad
76-DOE-WIN-CC-WC-546	Supervisor, Transportation & Administration AS-1 Resolute L.R. Stevenson
75-DOE-TOR-CC-148	SSO Met. Air Command MT 7 Winnipeg (DND) J.R. Lauder
76-DOE-TOR-WC-227	Director, Met. Application Branch MT-9 Central Services Directorate AES, HQ G.A. McKay
76-DOE-AES-V-CC-113	Supervising Operations Technician EG-ESS-6 Pacific Weather Centre F.P. Hollinger
76-DOE-AES-V-CC-111	Officer-in-Charge EG-ESS-4 Dease Lake Weather Station D. Watson
76-DOE-CMC-136	Weather Information Clerk CR-3 Pacific Weather Centre R. Lee

76-DOE-TOR-CC-110	Ice Forecasting Central, Ottawa MT 4 Ottawa, Ontario R.J. Woodrow
76-DOE-TOR-CC-159	Division Secretary ST SCY 2 Observational Services Division Field Services Directorate, HQ Miss S. Annis
76-DOE-TOR-CC-29	Officer-in-Charge EG-ESS 6 Hamilton Weather Office T. Dwyer
76-DOE-TOR-CC-121	Communication CM 5 Ontario Weather Centre S.K. Gillespie

The following transfers took place:
Les transferts suivants ont été effectués:

M. Degrosbois	FROM: De CMC TO: A National Capital Region EG-ESS 5
C. Lelievre	FROM: De Arctic Weather Centre TO: A Bureau de prévisions du Québec MT 2
J. Dmytriw	FROM: De CFB Moose Jaw TO: A 12th Weather Wing, Col. Springs, Colorado
G.M. Toth	FROM: De CFB Cold Lake TO: A M.Sc. Educational Leave
R.E. Jones	FROM: De CFB Summerside TO: A M.Sc. Educational Leave
P. Chen	FROM: De CFB Cold Lake TO: A M.Sc. Educational Leave
R.D. Paterson	FROM: De CFB Shearwater TO: A M.Sc. Educational Leave
A. Malinauskas	FROM: De Canadian Forces Germany TO: A Ontario Weather Centre
A. Rutkus	FROM: De Ottawa Weather Office TO: A DMETOC, Sr. Staff Officer Admin.

J. Bendell	FROM: De Ontario Weather Centre TO: A TCTI
T. Collins	FROM: De Toronto Island Weather Office TO: A Ontario Weather Centre
A.M. Keating	FROM: De Ontario Weather Centre TO: A FSD, HQ Management Development

Separations:
Démissions et retraites:

R. Richard	Retired September 10, 1976 QAED
J.A. McCallum	Retired OIC, DRE Suffield
H.J. Harris	Retired September 25, 1976 Pacific Region
R.G. Meyer	Retired Pacific Region
A. Bradshaw	Retired October 30, 1976 Western Region
H. Sabraw	Retired Quebec Region
H. Rodrigue	Retired Quebec Region
L.B. MacHattie	Retired Canadian Forestry Service
M. Clark	Resigned September 25, 1976 Pacific Region
S. Mack	Resigned October 26, 1976 Padific Region

REMEMBERING BEA

Born : October 19, 1917 – Died: October 23, 1976

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BEA DAWSON was a soft-spoken, sensitive and compassionate person. Her personal charm and enthusiasm for life will always be remembered. Above all, she was a lady.

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Bea entered the Service in November 1955. Her most recent position was with Central Services Directorate in AES Headquarters in Toronto as an I/O Control Operator.

TRIVIA

Buzz Words for Bureaucrats

(Academic programming with governmental inputs)

0 systematic	0 evidential	0 avoidance
1 interfaced	1 hypothetical	1 synthesis
2 programized	2 motivational	2 survey
3 multi-disciplinary	3 adjustive	3 methodology
4 conceptualized	4 institutional	4 analysis
5 low key	5 confrontational	5 framework
6 disadvantaged	6 empirical	6 procedures
7 departmentalized	7 professional	7 reaction
8 orchestrated	8 manpower	8 determinism
9 maximized	9 rhetorical	9 integrity

Think of a three-digit number. Select corresponding word from each column, and you will be able to write or speak with "orchestrated rhetorical integrity."

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Expressions Diverses

Expression	Signification ou Equivalent
C'est un gars fiable	Il a le sens des responsabilités
C'est simple comme bonjour	C'est très simple
Ne pas avoir froid aux yeux	Etre téméraire
Quelques tomates	Quelques dollars
La barre du jour	L'aube
Le temps se chagrine	Le ciel se couvre, il va pleuvoir
Sortir de ses gonds	Etre en grande colère
Tuer le temps	Faire quelques chose de futile
Un feu de paille	Enthousiasme qui ne dur pas
Tenir bon	Ne pas se décourager
Ça ne tient pas debout	C'est faux
Ne pas mâcher ses mots	Parler avec grande franchise

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Worry about the future doesn't improve the future –– it merely spoils the present.

When schemes are laid in advance, it is surprising how often the circumstances fit in with them.

Not every cloud has a silver lining. Sometimes a cloud just has more cloud.

Often, a few reverses serve to start one forward.

When April rains come, some people see only muddy puddles, while others see the flowers.

Outdoor buffet: where guests end up eating in a lap-hazard manner.

Sometimes you have to go out on a limb; that's where the fruit is.

An unbiased person: someone who has the same bias we have.

Q. What are: Selective Separators of dissimilar Environments?
A. Windows

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Proverbes Québéçois

"Proverbe" ––vérité d'expérience ou conseil de sagesse pratique et populaire commun à tout un groupe social, exprimé en une figure elliptique généralement imagée et figurée.

Les proverbes, compris au sens large, expriment collectivement au niveau verbal la relation existante entre les individus d'une société et le monde avec lequel ils sont en rapport. Plus précisément, les proverbes renvoient à des attitudes particulières, des manières de voir et de ressentir, des désirs et des craintes souvent inconscientes face aux événements et aux phénomènes de la vie de tous les jours. Même si les proverbes ne peuvent pas tout nous dire de ceux qui les utilisent, du moins peuvent-ils, en tant que partie verbalisée de la culture, éclairer des traits culturels, des caractères individuels et collectifs propre à une société donnée. Ils peuvent nous renseigner également sur le système de valeurs en usage au sein de la société.

"Il ne faut pas mettre trop de fers au feu". Il ne faut pas trop en entreprendre.

"L'amitié, c'est l'amour en habit de semaine." L'amitié ne nécessite pas de grands frais comme l'amour et est quand même agréable.

"Dis-mois qui tu hantes, je te dirai qui tu es." On est semblable à ceux qu'on fréquente.

"L'or n'a pas d'odeur." L'argent n'a que faire de la morale.

"Mieux vaut être tête de souris que queue de lion. " Vaut mieux être à la tête d'une petite entreprise que subalterne dans une grosse.