ZEPHYR

Environment Canada / Environnement Canada

Atmospheric Environment Service

APRIL/MAY 1987

Achievements, graduations saluted

The lifeblood flowed more quickly through the veins of AES during the past two months as Awards of Merit, AES Achievement Awards, Public Service Awards and other tokens of recognition of outstanding service by AES employees were handed out both nationally and regionally. Equally important, 15 newly-trained meteorologists were handed graduation certificates by ADMA Howard Ferguson at an impressive ceremony in the AES Downsview auditorium after completion of the rigorous seven-month MOC 8 training course leading to operational careers in weather offices around the country. This issue of *Zephyr* highlights some of the major achievements of AES employees, both novices and veterans.

Left to right: Roger VanCauwenberghe, ADMA Howard Ferguson, Jacquie Blackburn, David Phillips.

A Public Service Merit Award and two AES Achievement Awards were handed out by ADMA Howard Ferguson at a recent ceremony held in the auditorium of the AES Downsview Headquarters.

The recipients were David Phillips, who received his Merit Award for his "significant contribution to the public image of the Department for his original concept, design and production of the 1985, 1986 and 1987 Canadian Weather Trivia Calendar."

Mr. Ferguson added that many congratulations have been received concerning the calendar, not only in Canada but from foreign countries as well. He concluded that so far these calendars had generated a substantial amount in revenue for the Federal Government. A cheque in the amount of $1,500 came with the award.

The two recipients of the AES Achievement Awards were Jacquie Blackburn and Roger VanCauwenberghe.

Ms. Blackburn joined the former Meteorological Service in 1955, first as a punch card operator, then a data operator and programmer. Since the late '70's she had been responsible for the management of climate data archives.

Mr. Ferguson added that under her direction the climate data system had continued to provide excellent service and that she had been responsible for overseeing the development of well over 100 utility programs that derive information from the archives.

Mr. VanCauwenberghe was commended by ADMA for "innovative meteorological sensor and data system developments over the past 15 years and his technical leadership in projects ranging from the IFYGL Lake Tower data systems to the READAC automatic weather station system." Mr. Ferguson added that Roger had pioneered the application of modular design concepts, the use of solar power generation, and the use of heating systems to keep arctic chill from weather stations.

MOC Graduates have a "rosy future"

Addressing an audience of Meteorologist Operational Course (MOC 8) graduates, instructors, weather service personnel, parents and colleagues in the AES Downsview Auditorium, ADMA Howard Ferguson said that human resources at AES were one constant factor in a world of rapid technological change.

Mr. Ferguson estimated that there would be at least as many technical innovations in the weather service during the next decade as there had to be over the past 10 years. Despite a trend to greater automation within the service, Mr. Ferguson predicted that meteorologists would have greater opportunities to deal with people as professional advisors in the future. They will also be encouraged to broaden their interests into such fields as air quality and climate change, (requiring a knowledge of chemistry) and responding to environmental emergencies.

Describing the future of young meteorologists as "rosy", ADMA told the MOC graduates that developing their expertise in operational meteorology was a challenge and would form a sound basis for their future careers in atmospheric sciences.

Referring to his own career, Mr. Ferguson said that he too had started as a duty forecaster and had never anticipated that over the years that he would get into so many different facets of meteorology.

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Canada

Pierre Martel appointed new Director General

Pierre Martel has been appointed the new director general of Policy, Planning and Assessment, replacing Gordon Shimizu, now director general, Central Services Directorate, Downsview.

Mr. Martel takes on the number one policy job at AES after some 15 years' experience in Cabinet affairs, public administration, economic analysis, and human resources policy work with the Privy Council, the Treasury Board, the Ministry of State for Science and Technology and with Environment Canada. He served with DOE in Ottawa from 1972-74 as a policy analyst for the Planning and Finance Service where he advised science managers on implementation of government science policy.

He returns to Environment Canada after spending the past five years as assistant secretary to the Cabinet Committee on Social Development and Director of Operations of the Social Development Secretariat of the Privy Council Office where, among other things, he advised the prime minister and the clerk of the Privy Council on social policy matters and other government priorities requiring Cabinet's attention.

For six years before that, Mr. Martel served as group chief, Analysis and Research, with the Staff Relations and Compensation Division of the Personnel Policy Branch of the Treasury Board.

Mr. Martel has also worked for Statistics Canada, Molson's Breweries and a hospital in Montreal. He has lectured on various topics at l'Université du Québec and other institutions in Canada.

He has a B.A. in Economics from l'Université de Montréal, an M.A. in Economics from Sir George Williams University, Montreal and an M.B.A. from the University of Ottawa. He also attended two NATO conferences in Europe (in 1973 and 1981) on management and technological subjects.

He is the author of several publications on his areas of expertise.

Mr. Martel was born in Drummondville, Quebec. He is married and has one daughter.

Repairing a bobbing weather buoy

David Watson (left) supervises repair of bobbing buoy

On Christmas Day, in British Columbia, off Hilton Point, the Douglas Channel weather buoy broke down. The trouble was an electronic failure in the buoy's "payload". The buoy was receiving its weather data but not transmitting it to the Terrace weather office. The repair crew couldn't get out to the buoy on schedule because of bad weather but on the second attempt, acting superintendent, David Watson, of Environment Canada's Marine Data Unit, together with two private sector experts, set sail for the buoy in two to three feet of water chop. Crawling onto the buoy's platform, the three repairmen had to work under teeter-totter conditions – pleasant enough in a children's playground but distracting when you have to do something more than just hang on. They conducted a day long series of tests. The unit worked fine except when transmitting. It then automatically shut down. It was decided to take the unit ashore for repairs. The next day, in much calmer water, they returned the buoy with a replacement unit. The defective unit had worked well for eight months before breaking down. It was still under warranty. The replacement unit was actually intended for a new buoy for another B.C. station, part of a project to improve marine weather forecasting across Canada. Similar buoys are to be floated on the Great Lakes. According to Watson, Environment Canada is delegating much of this work to private industry. When repaired, the unit will be put through intensive testing, in view of the fact that such units are to be installed on future buoys. Mr. Watson estimates that each unit is worth $40,000 to $50,000.

At any rate, the Douglas Channel buoy is now back in full operation and Terrace weather office is happy.

ZEPHYR

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Atmospheric Environment Service / Service de l'environnement atmosphérique

Scientists concerned about ozone holes

At Saskatoon, on March 19, 1987, AES launched a research balloon into the upper atmosphere's ozone layer. The helium-filled balloon was almost as high (28m) as a 10-storey building and it carried measuring instruments that radioed back data as it rose ever upward. It reached a height of 35 km where, at a command from the ground, it burst, and the instruments parachuted back to earth.

Scientists are very concerned to explain the appearance of "holes" in the ozone layer which appear for two months every year above both the Arctic and the Antarctic. The "hole" above the Arctic is much smaller. Whether these "holes" are caused by natural weather conditions above the poles or by pollution collecting over the poles is what such balloon launches as the Saskatoon launch of March 19 is trying to determine.

Canada is a world leader in ozone research and the Saskatoon launch will contribute significantly to ozone analysis.

J.G.

AES scientists carry out the pre-dawn launch of the Stratoprobe balloon in Saskatoon.

40th Anniversary of Eureka

Forty years ago three Canadians and three Americans landed at a remote site on Ellesmere Island, about 1500 kilometres north of the Arctic Circle. They went there to set up Canada's first weather station in the high Arctic. They had no idea Eureka would someday become so important.

Murray Dean was one of the first Canadians at Eureka. In 1947, he was a 28-year-old radio operator for the weather service. He remembers the day he landed there like it was yesterday.

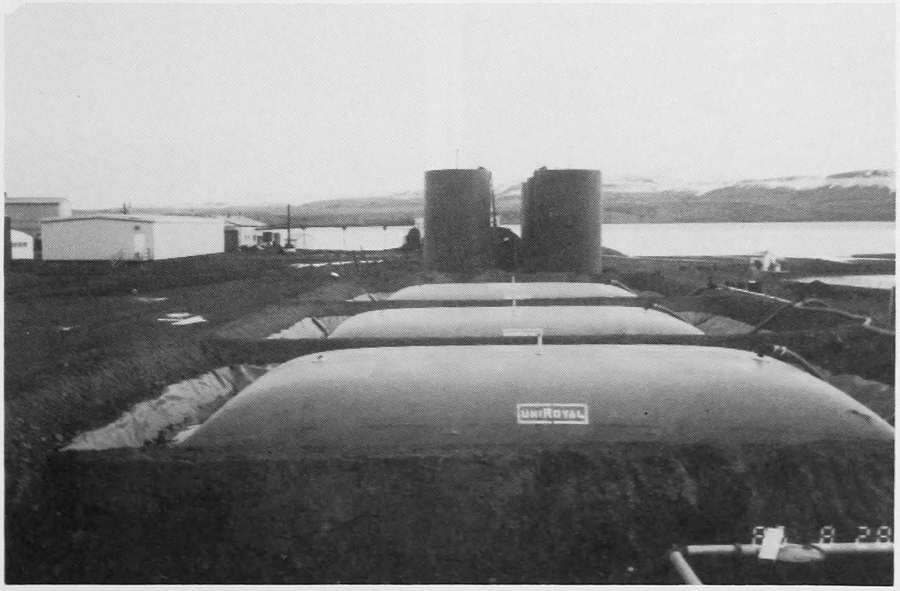
"It wasn't at all frightening or anything," he says. "The weather was pleasant. Actually, the first difficulty we ran into was discovering how hard the ground was frozen and how impossible it was to sink any tent pegs. Nevertheless, we put up a tent."

Dean added that after all the tents were put up, there was some confusion over which flag should fly over the site: the American or the Canadian.

"The American officials over there got us confused as if we were in their network, but we made it well known that this was a Canadian enterprise. The Americans were willing, of course, to concede that we were on our territory."

John Perrick is now officer-in-charge at the station. He says its major function is to release a weather balloon every 12 hours which collects and transmits information to weather centres all over the world. In addition, important scientific work is carried out at the station.

(from a CBC Radio News item)



Eureka N.W.T. weather office.

Awards continued

Other speakers at the ceremony included Jim Alexander, chief of the Professional Training Division, Anne O'Toole, head, Professional Training Section and Tom Robinson (on behalf of the graduates).

Following Mr. Ferguson's presentation of certificates to each graduate Anne O'Toole presented the James Percy Award to Peter Schwarzhoff for outstanding work in synoptic meteorology.

The MOC 8 graduates (place of recruitment in parenthesis) are seen left to right, front row: Peter Schwarzhoff (Edmonton, Alberta), Kelly Lawrence (Halifax, Nova Scotia), Tom Robinson (Hamilton, Ontario), Joanne Pottier (Montreal, Quebec), Randy Cripps (Edmonton), Alister Ling (London, Ontario), Beverly Trefan (Edmonton), Carmen Old (Edmonton, Alberta); back row: Mark Pilon (Hamilton), Edmond Chan (Vancouver, British Columbia), Randy Petersen (Victoria, British Columbia), Karl Pavasars (Toronto, Ontario), Keith Ayotte (Vancouver), Nils Ek (Edmonton), Kathleen Lawrynuik (London, Ontario).

Three Castlegar (B.C.) weather office technicians (left to right) Jim Fishwick, Tom Willson, officer-in-charge, and Jim Richards were recently presented with Achievement Awards in recognition of their outstanding performance during the extreme forest fire hazard in July 1985. The awards, presented by AES Pacific Region, are the first to a weather office in Canada for this kind of work.

May 22, 1980: A fine grey residue alleged to be volcanic ash from Mount St. Helens was scavenged out in widespread thunderstorms across the Atlantic Region. The same storms produced pea-size hail and lightning in Prince Edward Island.

May 21, 1953: Tornadoes crossed Lambton and Middlesex Counties in southwestern Ontario, resulting in 5 deaths and 41 injuries; property losses totalled $8 M in Sarnia as 12 blocks of the business district were levelled. Soldiers were called in and the riot act was read

May 28, 1934: The Dionne Quintuplets were born at Callandar Ont. On this memorable day, the afternoon temperature reached 21°, winds were strong from the West at 46 km/h and it was cloudy, light rain fell at night.

May 27, 1967: A 60-hr deluge from the 25th to the 28th left portions of Nova Scotia with more than 75 mm of rain, Sydney had 151 mm.

May 29, 1914: CP liner Empress of Ireland collided with the Storstad and sank in 15 minutes in the St. Lawrence River 300 km seaward from Quebec City with the loss of 1024 passengers. There were reports of shallow river fog, however the weather at Anticosta and Quebec was clear with light NE winds.

Scientific Advisor receives Chernobyl award

Richard Gilbert, at that time chief meteorologist with Quebec Region Scientific Services Section, has been awarded a Certificate of Merit for his outstanding work during last year's Chernobyl radiation crisis. Formerly supervisor of the Canadian Air and Precipitation Monitoring Network (CAPMoN) he advised AES Air Quality, the Canadian Meteorological Centre and the director general of Atmospheric Research for the six weeks' emergency period. He also ran highly successful dispersion models and liaised with other government departments such as Health and Welfare Canada.

In the picture, Richard Gilbert (left) is seen receiving a plaque from ADMA Howard Ferguson at a ceremony in Montreal.

Lazarus Akeeagok (left) is seen receiving a day-time weather observer's certificate from François Guay, OIC, Iqualuit weather office. Lazarus hails from Grise Fjord and is enrolled in meteorology, mathematics and physics courses organized by Quebec Region under its Northern Careers Program. This fall Mr. Akeeagok will go to Cornwall to take the preliminary course for future AES meteorological technicians.

The AES team that helped make Environment Canada's 1986 hosting of the Federal Services Division's United Way Campaign for greater Toronto a major success, were presented with Special Achievement Awards by ADMA Howard Ferguson at a recent ceremony at the AES Downsview Auditorium.

As the largest Environment Canada component in the Toronto region, AES was given the task of running the campaign. Mr. Ferguson praised Dr. Don McKay and his team for "their excellent and dedicated efforts in bringing about success". The main achievement of the team was to raise $594,145 during the month-long campaign, a 10 percent increase over the amount raised in 1985.

Other highlights of the campaign, according to ADMA, were the co-ordination by the AES team of fundraising efforts by 46 government departments and agencies, totalling 27,844 employees; a 15 percent-raise in canvasser training to a total of 300 and finally a joint kick-off of the campaign with provincial public servants at the Canada-Ontario Games.

In the picture, award winners are seen with ADMA; front row, left to right: Don Scott, Cyndie Sinclair, Ed Elliotson, Peggy Gillard, and Brenda O'Connor; back row, Rosemary Warren, Richard Poersch, Ed Millar, Howard Ferguson, Marda King and Dr. Don McKay.

A brief graduation ceremony was held at AES Downsview March 27 for five students of the 13th Surface Inspection Workshop, held between March 9 and March 27.

Distributing the graduation certificates, Dr. Jaan Kruus, director, Data Acquisition branch, Central Services Directorate, said that the course would increase graduates' usefulness to the Regions at a faster rate than could be done with on-the-job-training and without diverting trained, experienced but overworked inspectors to give this training on the Regions. "The Regions very early recognized the value of this training and have incorporated the rather considerable cost as part of their normal budget," added Dr. Kruus. Finally he praised the performance of all the candidates.

Seen, left to right, in the picture: Guy Philpott (Atlantic Region), Brian Wilhelm (Ontario Region), Wayne Ham (Atlantic Region), Ken Henly, (Headquarters), Cecil Blackwood (Atlantic Region).

Ken Asmus wins Merit Award

Ken Asmus of Ice Reconnaissance Division has received a Public Service Merit Award in connection with field experiments on the microwave properties of moving ice conducted several years ago. The award is similar to one given to Larry Solar and mentioned in the Christmas issue of Zephyr.

Two of the experiments took place at Mould Bay, N.W.T. In these, Ken acted as weather forecaster for a helicopter operating on the east and west coasts of Prince Patrick Island. No AES weather service was available for that region and Ken "did a superb job in forecasting the weather based on minimal information" – according to his citation.

Two more experiments were conducted in the Thousand Islands area and in Newfoundland waters on board the Coast Guard icebreaker, *Sir John Franklin*.

Among other things Ken mounted two helicopters, one on skids, the other on inflated pontoons and was responsible for designing and implementing a scatterometer, a microwave radiometer, a precision thermometer and for mounting a video camera. The experiments were concluded under difficult environmental conditions and the results were later published. Finally the citation praised Mr. Asmus for his careful execution of the experimental field work and his personal dedication beyond his normal duties as an ice observer.

John Paschold, officer-in-charge, Vancouver weather office, has retired after 35 years with AES. The last 15 years were primarily involved with media and Douglas Miller of CKVU TV, Vancouver (right) was MC at Mr. Paschold's retirement ceremony held last November. Mr. Paschold holds up one of his gifts as his wife looks on.

Private Meteorology: An interview with Doug Russell

Zephyr: Privatization has become a buzz-word in the Canada of the 1980's. What does this mean for AES?

Russell: Privatization has many meanings for many people. In general it refers to the transfer of government assets and responsibilities to the private sector. It normally applies to government organizations that no longer have a public policy function or in cases where the organization is in direct competition with the private sector. For us, the objective is neither privatization per se, nor to turn over large pieces of the AES to the private sector. Rather, the goal is to stimulate development of the private sector to prepare them to meet increasing demands for meteorological services in Canada. As such the private sector will become agents of growth for the science of meteorology, and its applications. In essence, we have recognized that we cannot, and in fact should not, meet all demands by ourselves.

Zephyr: Have AES meetings with members of the private sector been successful?

Russell: Yes. The December '86 workshop attracted about 70 participants. The vast majority (90%) said that real progress had been made toward understanding each others' positions.

Zephyr: Do you see yourself as a "referee" in AES vs. private sector issues or are you the official spokesperson for AES?

Russell: First, let me say that we see ourselves working with the private sector, not against them. As such, I see my role as a facilitator of communications between the two of us.

Zephyr: How does the new emphasis on encouraging the private meteorological sector affect AES plans for revenue generation? Is there any conflict here?

Russell: One portion of our plan involves turning over to the private sector the responsibility for providing specialized services for which we have received revenue in the past. Naturally, our ability to generate revenue will be adversely affected. We are seeking guidance from the Treasury Board and the Department on how to reconcile these two directions. Regardless, a clear management decision has been made that if it comes to a choice between generating revenue or supporting the private sector, then the private sector option should be chosen.

Zephyr: Why will it take five years to fit everything into shape? Must development be that gradual?

Russell: It may not take that long. In fact, the private sector is already in pretty good shape. Yet, it could be in much better shape. The plan is simply a statement of what AES will do over the next five years to make sure that conditions are right to foster the growth of private sector meteorology.

Zephyr: Has it been decided what areas of meteorology are best left to the private sector and which are more suitable for AES?

Russell: Yes. The basic service policy outlines those services that AES has a responsibility to provide. All other services are specialized and are, in principle, the domain of the private sector where they are capable and willing to provide them. Services such as municipal snow removal forecasts, specialized consultations or site – specific studies, will, where feasible, be turned over to the private sector.

Zephyr: A detailed questionnaire on barriers facing private sector meteorology was sent out. What were the results?

Russell: In a nutshell the private sector were concerned about the long lasting stability of AES's plans to support the private sector. The main message was that AES needs explicit, comprehensive plans and policies on issues which impact on the private sector and we need to apply them in a consistent manner. Another concern centred on the need to communicate with AES to ensure the private sector share a common understanding of where meteorology in Canada is headed.

Zephyr: Joint ventures between AES and the private sector have been mentioned as a possible way to stimulate private sector growth over the next five years. Do you agree?

Russell: Yes, cooperative arrangements with the private sector for a limited time will be encouraged to help develop new products, markets and services. Proposals will be judged on a case-by-case basis. The amount of resources AES can contribute will be determined in light of all the priorities within the service.

Zephyr: How will expansion of the private sector affect AES employees? Will it lessen job security?

Russell: Expansion of the private sector will not lessen AES employees' job security. There will still be many exciting challenges in the provision of our basic services. Private sector growth will in fact expand overall career choices for all people in meteorology.

Zephyr: How does AES intend to publicize the new five-year private sector plan to AES employees, private sector clients, major users and the public?

Russell: Communications is a cornerstone of the five-year plan. The plan itself will be distributed to both the private sector and to AES. In the coming months, I will be available to answer questions from employees from coast-to-coast. Regional AES contact points will be identified for dealing with the private sector. A quarterly newsletter will be started in early summer which will provide a forum for AES – private sector issues. Clear, honest communications are necessary for the plan to succeed.

Zephyr: Will AES always remain the lead as far as meteorological services in Canada are concerned or will the private sector one day become the initiator of new products and services, at least in some areas?

Russell: All developed countries have national organizations which provide essential meteorological information to meet both domestic and international needs. The AES will continue to be Canada's provider of fundamental meteorological services and as such will be the base on which all other meteorological services are founded. In the future, I fully expect the private sector to become the leader in developing new, tailored products and services to meet the specialized needs of Canadians, while we in AES will concentrate our efforts on improving our basic services.

Mr. Russel is special advisor, Private Sector Meteorology at AES.

May 15, 1986: Prolonged warm, dry, and sunny weather was a contributing factor for a large forest fire outbreak in Atlantic Canada. At one time more than 100 fires were burning,spread out of control by brisk winds. The fires consumed more than 150,000 hectares and several buildings. Thousands were evacuated, the Trans-Canada was closed and many communities were shrouded in smoke.

A DAY IN THE LIFE...

Executive Secretary

by Annette Solimene

I work as a Secretary 3 or "Sky Three" for Central Services Directorate located at AES Headquarters in Downsview. If you ask me to describe a routine day in my working life, I can state quite definitely, there is no such thing.

The directorate consists of four dissimilar branches: Training, Ice Computing and Telecommunications Services and Data Acquisition, all are located on different floors of the Downsview building. Since I must be in constant touch with the branch secretaries, you can be sure that I spend much of my time in the elevators or in the endless corridors – or dashing down to the mail room or Central Registry in the basement.

I will start by trying to describe an *imaginary* typical day: You begin it thinking or hoping that it will be a bit less hectic because the director general is in a morning meeting and that just maybe you can do some of your filing, xeroxing and catching up on the not so urgent items. How wrong!

The phone starts ringing – either routine calls or requests to set up meetings. Then comes a message that an urgent document must be picked up in records. This requires a response by the end of the day so you scramble off to make copies for the branch directors and canvass them for input so your boss can pull the reply together when he gets back from the meeting. You now attack the DG's out-basket (the work he did after you left last night and before you arrived this morning). In the pile there's a note for you to make travel reservations to Ottawa. The boss only learned of the trip early this morning, so you make several frantic calls to Marlin Travel only to get a busy signal. Half an hour later you successfully confirm the reservations. When your boss returns you brief him on what's happening. Then, confound it, the phone rings again and you're advised that the out of town meeting you've just made travel arrangements for has been rescheduled. You smile, take a deep breath and get back to Marlin to make the changes. (It isn't really so bad. It's problems like waiting for delivery of visas for the USSR or finding out what shots are necessary for AES people visiting Burundi that cause the headaches.)

Now you realize it's time to pick up the morning mail. Today you need a buggy because there's an avalanche of brown envelopes piling up in the mail room. Eventually you start going through the mail, logging, rerouting, proof reading material for signature. Meanwhile the phone keeps ringing.

The afternoon isn't much different. Instead of placing material in the boss's in-basket you are emptying his out-basket. Usually it's material that must be moved quickly, so you have to continue scurrying up elevators, downstairs, along hall-ways – it's my main exercise of the day!

Annette Solimene

Of course you have other routine duties like typing (I use an Olivetti typewriter with a memory or a WANG word processor) travel claims, filing (my best friend is the Bring Forward System – a drawerful of upcoming activities listed by date, time and branch).

Let's not forget you are trying possibly to fit in a coffee break or lunch at some point. Your main task is keeping things moving, organized and hoping desperately that a sudden visit to the building by ministerial staff won't force you to reschedule the DG's meeting you worked so painstakingly to organize.

And now a few words about my *real* work. In actual fact every day is different. And that's why I enjoy this hectic, challenging, unpredictable, eventful job.

It so happens that the director general of Central Services has been designated to decide when AES employees can go home in bad weather. If it's snowing hard in the early afternoon, the calls start coming in: "Has a quitting time been set?" "If we stay until four will snow and ice trap vehicles in the parking lot?" "If the director general is in Ottawa, who is going to make the decision?" Except for the time in April 1974 when we made a wrong call and a sudden spring blizzard trapped some 400 employees overnight in the building, things usually work out for the best. I personally have to know how to handle bad weather enquiries – at least ask people to be patient. When the calls come from AES Downsview, I know what to say. But on one occasion a call came from Health and Welfare Canada enquiring whether *they* could have permission to go home because of inclement weather. I simply read them the latest weather report and told them the responsibility rested with their own Department as to whether they could go home. One day, I must take the meteorology course for non-meteorologists. It would help me to come up with a whole lot of useful answers for the phone queries.

You certainly deal with all kinds of people. Once when I was working in the ADM's office in Ottawa for a season, an irate doctor called in to say he had specifically taken the day off to play golf because we (Environment Canada) had forecast sunny skies and he wanted to know why it was raining. He demanded an explanation. That's where your public relations skills come in. Secretaries need a superhuman mix of patience, common sense and a sense of humor.

My office is located very close to the building's main entrance. This means a lot of people wander in off the street seeking immediate answers on a wide range of topics. For example they want to know what the big sculpture outside is supposed to represent (That one's fairly easy – it's supposed to symbolize the weather) but some people want to become instant meteorologists, so I direct them to the careers section of our Training Branch. Others might simply be selling chocolates for a worthy cause and find me an easy target. Then of course there are delegations to meet in the lobby, some of them to be directed to ADMA's boardroom or the Auditorium. Sometimes, because of my knowledge of Italian and French, I am appointed instant interpreter. Languages are invaluable to secretaries. You can even undertake a little foreign correspondence.

I see my job as first of all dealing with people, second as trying to understand a little of everything that goes on in the Directorate, third, trying to deal with crises as they arise and lastly trying to project the image of the director general. You're quite right if you think that the role of a secretary has changed in recent years.

Secretaries are often asked what they think of office automation. If you are referring to increased use of word processors, and electronic mail, I am all for it. We are busy all the time and any labor saving devices introduced into the office are beneficial. But if you think that automation can assume the *real* work of a secretary, you are wrong. A secretary is a secretary, and she is irreplaceable.

World weather meetings overwhelmed Toronto in 1947

Forty years ago Toronto made its first appearance on the world meteorological scene. From August 4 until September 3, the Meteorological Division (as AES was called at that time) hosted an unprecedented number of international meteorology meetings. As the city suffered through an exceptionally hot period, approximately 189 delegates from 44 countries met in the old McMaster Building (now the Royal Conservatory of Music on Bloor street west) to pick-up the pieces of international meteorology after World War II. All 12 of the technical commissions of the old International Meteorological Organization (IMO) met and recommendations from the meetings were taken to the immediately following conference of directors in Washington, where plans were finalized for converting the IMO to the new World Meteorological Organization (WMO).

Before August 1947 all IMO meetings had taken place at cities in Europe. After the war, in 1946, at an extraordinary conference of directors in London, John Patterson director of the Canadian Meteorological Service officially invited the commissions to meet in Toronto as so much international cooperation was necessary to take advantage of the war-time advances made in the science. Before the war the national meteorological services had begun to realize that the informal nature of the IMO was not sufficient for the required cooperation necessary in modern meteorology and work had begun on drafting a convention which nations would sign and then be bound to live up to the regulations.

Sessions of the IMO committee (today's executive council) and much work by the very small secretariat took place in 1946 and early 1947. At Toronto, agreements on such items as the exchange of upper air analysis, the implementation of new weather codes, the constructions of standard barometers, weather reports from ships at sea and the standard hours of synoptic observations were forged and several hundred resolutions adopted. After Toronto an agreement was reached on a new convention for WMO and signing by the different nations began in October 1947. The convention came into force on March 23, 1950, a date which is recognized around the world as the WMO's birthday.

Today, in 1987, it is hard to realize that prior to the 1947 meetings almost all of Canada's contacts with internatinal meteorology was entirely through the director of the service. If Canada was to be represented at an IMO meeting prior to 1947 it was the director who went! The meetings in Toronto in 1947 were consequently an excellent opportunity for dozens of young Canadian meteorologists to see and meet those who were already famous, or soon to become so. Of the 50 or so Canadian delegates and observers, Warren Godson alone remains active in AES, although Ken Hare and the writer have not yet completely retired from meteorology.

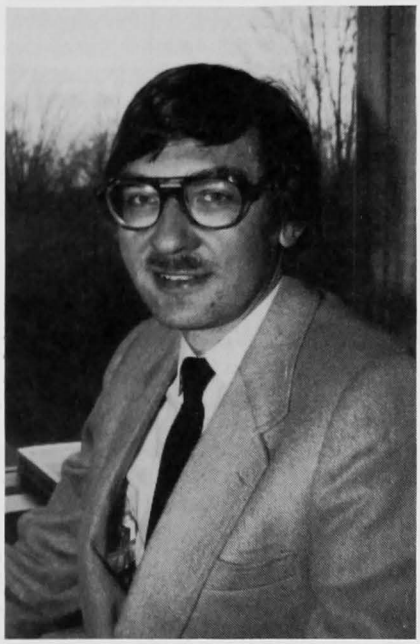
The Toronto meetings were not without a certain amount of confusion and amusement. It was hot and humid early in the sessions – Toronto daytime temperatures were over 35°C for several consecutive days with night values remaining above 22°C and of course there was no air conditioning. Perhaps the discomfort was as Andrew Thomson (Patterson's successor) had planned, for he wanted to show the delegates from the then poor European countries that meetings could be held "on a shoestring" – thus the McMaster basement in all its 19th century glory!

Arrangements had been made for the foreign delegates to have accommodation in the University of Toronto Devonshire Place residences but at least one delegation soon moved out and went to the now demolished Barclay Hotel on Front Street which featured show girls in those days.

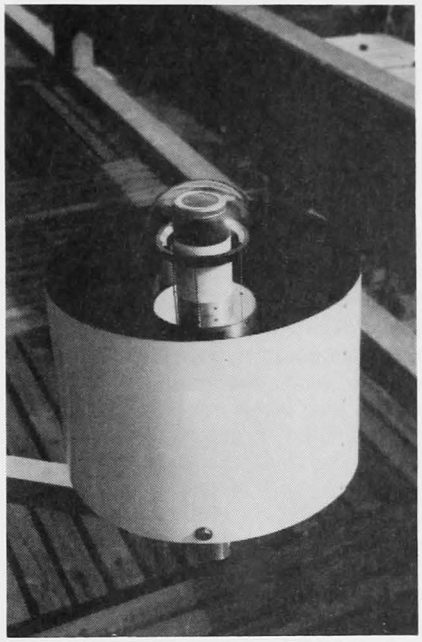
Canada continues to host meetings of the MWO technical commissions; the most recent was the Commission for Instruments and Methods of Observations (CIMO) session held in Ottawa in the summer of 1985. But for sheer magnitude of size and expense, relative to personnel, finances and available accommodation, great credit must be given to John Patterson and Andrew Thomson for "pulling off" the 1947 meetings. Perhaps because of that exposure to international meteorology, AES people have contributed more to WMO than might be expected of a country of Canada's size over the past 40 years.

Morley Thomas
AES Historian

The participants of the commission for synoptic weather information (Toronto 1947, photo WMO)



The Micropower Sunshine Sensor



John M. Cook, Information Technology Section (ASCL/I) is a professional engineer who came directly into AES in 1968 on graduating from the University of Windsor. His manner is serious, though he is quite capable of tolerating and smiling through humorous interruptions.

In 1969, John began inventing the Micropower Sunshine Sensor as an improved replacement for the Campbell Stokes sunshine sensor, still in general use. The "old" sensor is a crystal ball partly encircled by a paper form. When the sun is shining, and as the sun moves across the sky, its heat, refracted by the crystal ball, burns in a line on the paper form. Frost or snow on the crystal ball impedes the effectiveness of reflection. The device is non-automatable, the paper form must be changed every day by human hand, and the burn-line data is hard to interpret.

John's Micropower sensor does away with all that. It is fully automated and can be hooked into an automatic station or a standard rain gauge recorder. It is an electronic device and consists basically of eight sensor cells and four printed circuit boards. It is enclosed in a glass case, the dome of which protrudes above an encircling shield that excludes ground level water or snow reflection. As the sun moves, its light strikes each of the eight cells one by one. A reading results from comparing the brightness of an illuminated cell with the brightness of cells still in the shade. Sunshine input is picked up by the circuit boards and fed into a multiplexer, an amplifier, a crystal clock, a scaler, a relay, and so on to OUTPUT. The fourth circuit board protects the device from transients such as lightning.

The Micropower Sunshine Sensor is an original invention of John M. Cook. It is innovative in concept and design and elegantly worked out. It bears no relation to the Campbell Stokes sensor. In fact John has conceived and constructed his sensor from scratch. It certainly deserves the name "Cook Micropower Sunshine Sensor".

The Cook sensor was originally a low priority project, worked on intermittently among John's other duties. It was completed in 1980. Since then it has been subject to extensive verification against an ultra-accurate suntracking pyrheliometer. At present, there is one mounted at a convenient location on the Downsview building roof.

ZEPHYR BREEZES

Mike Balshaw

This year's theme for the World Meteorological Organization's Day, (March 23) was Meteorology as a Model of International Cooperation. Jean-Guy Coté, advisor on Inter-governmental Affairs, is always glad when good AES examples can be cited to support the theme of WMO Day. Two of these immediately sprang to mind. Mike Balshaw, regional director, AES Central Region, led a team of world weather experts to Geneva, Switzerland and to Africa last fall to plan and make recommendations for a future African Centre of Meteorological Applications for Development. In addition Cliff Hines, supervisor of Electronic Equipment, also of AES Central Region, was whisked down to Madagascar off the coast of East Africa for a few weeks, a year earlier to install some high frequency transceivers, vital for the operation of that country's weather service. The two instances cited are examples of two very different types of Canadian meteorological expertise required around the world. The first involves participation in the planning of major projects like ACMAD on a continent-wide scale. The second illustrates the ability of Canadian specialists to fly in at short notice and carry out work of an entirely practical nature, not hesitating to rough it where necessary.

May 6, 1536: Jacques Cartier sailed for home after spending a severe winter near Quebec. He and his men suffered from the intense winter cold and scurvy; 25 died before spring arrived.

May 14, 1986: A blizzard with 80 km/h winds and knee-deep snow surprised south-central Alberta The 2-day storm stranded motorists and left dozens of communities without utility services. More than 1 million people were affected by the blizzard, described as the worst spring storm in Alberta history.

In England, the Eagle Star Insurance Company insured a church garden fete against rain. When the fete was enjoyed under a cloudless sky, the vicar asked that his money be refunded on the grounds that, as the sun had shone uninterruptedly all day long, the insurer had run no risk. The Eagle Star underwriter complained that the vicar was trying to put him out of business.

From a letter received by the Canadian Climate Centre – "We would appreciate it if you could provide us with the weather records for the area between Sydney, Nova Scotia and Saint John's, Newfoundland, including the island of St. Pierre and Miquelon, up to 10:00 a.m. local time, June 19, 1986. Would you kindly include certified copies of the area forecast, the winds aloft forecast, the synoptic surface analysis, terminal forecasts for Sydney, N.S., St. Pierre and Miquelon, and Saint John's and Cornerbrook. Could you also kindly provide us with records relating to any weather-related NOTAMS and records of any pilot reports for that area on that day".
Coming right up, sir!

Soo weather office staff are all wet!

Those in the Sault Ste Marie weather office are community-active people. Zephyr has reported their goings-on before. This time, senior meteorological technician Don Simard, an executive of the local Aquatic Club and father of two competitive swimmers, organized and co-emceed the CAT-SSMAC CHALLENGE CUP, a swim meet divided into three categories described by Simard as follows – "Those who could swim; those who thought they could swim; and those who knew they couldn't swim".

This was a two-day event. It was no minor affair either. Sixty-eight teams, 270 swim-suited bathers, competed with shark-like ferocity. There were teams consisting of "city hall, police, firemen, government offices, doctors, nurses, lawyers, the media, teachers, local businesses, and even "Team Skeleton" from a funeral home. The weather office team – Ron Houghton, Wayne Whittaker, Terry Smith, Don Simard, and Steve Speirs – were called "The Crazy Chinooks". There were prizes for the best costumes, the slowest team and the fattest team. Any way you could make a fool of yourself – there was a prize for it.

$5,000 was raised to promote competitive swimming in the Soo. The Crazy Chinooks just missed the bronze medal in their category by 0.3 seconds. Their category was – those who knew they couldn't swim!

Left to right: Don Simard, Terry Smith, Ron Houghton, Wayne Whittaker, missing from photo: Steve Speirs

In our spoof of the centennial edition of the Canadian Weather Trivia Calendar, (below) we needed to know what day of the week January 1, 2085 fell on.

First we consulted AES Downsview librarian Daphne Sanderson, who worked through some complicated charts in a book called Astronomical Tables of the Sun, Moon and Planets by Jean Meeus. In less than 15 minutes Daphne was able to tell us that she felt pretty sure that this day, some 96½ years in the future, fell on a Monday.

Just to be doubly certain we checked with an official of the Canadian Life and Health Insurance Association in Toronto. Explaining he worked in 28-year cycles this person required an hour or so to come up with the "right answer": January 1, 2085 would be on a Monday.

Lest there be the slightest shadow of doubt, Zephyr called the Toronto Metropolitan Reference Library. Looking up this important date in its People's Almanac perpetual calendar, it hit a snag: Listings only go as far as the year 2080. But this is pretty close. Over such a short time-span, the calculation can be done in your head. Again the answer was a Monday. With three Monday answers in a row even the worst cynics were silenced.

When science teacher Paul Chrysler of Upper Canada College, Toronto's large private boys' school, entered the lobby of the AES Downsview building, he seemed a bit taken aback to see displays of weather radar and ancient weather instruments. All the same he asked both the commissionnaire and communications assistant Darlene Lavigne where the tour was to begin. He needed to know because he had a bus-load of 40 students outside the front door. After some hurried checking, it was found that no AES tour had been arranged. Mr. Chrysler then mentioned that the tour topic was aeronautical engineering. He was quickly directed to the University of Toronto's Aerospace building, just behind AES where the real tour, on "Fusion" was soon underway.

Says Aerospace Centre librarian Judy Mills, in charge of tours at the Centre, "This is not the first time there has been a mix-up between the two buildings. Once, on a teachers' only visit, an educator strayed from the main party and apparently spent the entire morning roaming through the AES building."

May 18, 1950: The highest Red River flood in modern times crested at 9.2 m above normal near Winnipeg; 100,000 people were evacuated; the damage to 5000 homes and buildings was estimated at $100 M.

May 19, 1780: This was Black Friday famous in Northwestern North America as a result of western forest fires; noon was almost night-time chickens went to roost, and people were fearful of Divine wrath.

Canadian Weather Trivia Calendar

(Centennial edition, with apologies to Dave Phillips)

JANUARY 2085

SUN	MON	TUES	WED	THURS	FRI	SAT
	1 1999 Crowds celebrate New Year's Day on the streets of Quebec City. Roller skates and go carts replace ice skates and toboggans. Maximum temperature 12C. Absolutely no snow. NEW YEARS DAY	**2** 2030 Canadian travel agency organizes first boat cruises of New York harbour with close-ups of the radio transmitter tower atop the Empire State Building, now submerged in 300 metres of water.	**3** 2020 Edmonton organizes its first strawberry festival Outside feasting and dancing. Maximum temperature 17C.	**4** 2082 Baseball's Grapefruit league comes to Southern Canada to celebrate the game's 200th anniversary; 25 major league U.S. teams come to Toronto, Leamington, Chicoutimi, Kitimat, Red Deer and Moosemee to begin spring exhibition games.	**5** 2017 Environment ministers of several provinces mourn the acid rain death of Canada's one millionth lake. Prime Minister Sheila Copps promises to raise the matter with President Juanita Gomez at the next Canada-U.S. summit	**6** 2081 Artificial snow poured on to the sidewalks of Montreal to commemorate the 50th anniversary of the city's last snow storm. Most young children stare in disbelief at the strange white stuff on the ground. Ottawa announces plans for a new National Museum of Snow and ice.
7 2079 Two million entry applications receilved from people all over the world after an article in the National Enquirer describes Canada's climate as the "best in the world"	**8** 2084 Canada's High Arctic weather stations register record high temperatures - under polar night: Resolute +9C; Mould Bay +8; Eureka +7 and Alert +6. Aircraft prevented from landing at Alert for third day in a row because of Arctic Haze.	**9** 2055 Record early tornado shaves St. Catherine's Ont. Nobody injured and property damage slight. But severe weather watchers now put on alert for 11 months of the year, starting January 1, 2056	**10**			

CHANGEMENT DE PERSONNEL / STAFF CHANGES

Nominations/Avancements
Appointments/Promotions

R. Daley (RES-4) Directeur/Director, CCRD, Downsview, Ont.

D.J. Russell (MT-7) Conseiller spécial/Special Advisor, ASPS, Downsview, Ont.

P. Martel (EX-2) Directeur général/Director General, APDG, Ottawa, Ont.

B. Mongeon (MT-5) Météorologiste/Meteorologist, BM1/W01, Whitehorse, Yuk./Y.T.

J. Steele (EG-7) Superviseur prog. techn./Supvr. Tech. Programs, BM1/W01, Whitehorse, Yuk./Y.T.

F. Froude (EL-6) Techn. rech./Research Technologist, ARQT, Downsview, Ont.

D. MacTavish (CH-2) Chimiste/Chemist, ARQA, Downsview, Ont.

D. Robinson (EG-5) Techn. en aér./U/A Tech., SM2/WS2, Fort Nelson, C.-B./B.C.

W.L. Scott (EG-6) Techn. en mét./Met. Tech., Vancouver, C.-B./B.C.

N. Dalley (CS-3) Analyste fonct. sup./Senior Systems Analyst, Vancouver, C.-B/B.C.

K. Kottick (CR-4) Commis/Clerk, AWAC, Downsview, Ont.

M. Headley (DA-PRO-2) Op. systèmes gestion/Management Systems Operator/AWAC, Downsview, Ont.

R. Tessier (EG-6) Techn. sup. des glaces/Sr. Ice Tech., ACIF, Ottawa, Ont.

C. Schmidt (AS-2) Agent d'admin./Admin. Officer, ACIF, Ottawa, Ont.

N. Hameer (ST-OCE-3) Opér. trait. de textes/Word Processor Operator, MSRB, Downsview, Ont.

E. Coatta (EG-7) Dir. services climat./Supt. Climate Services, SSD, Vancouver, C.-B./B.C.

G. Livesey (EG-6) Spéc. service mét./Wea. Service Specialist, BM4/W04, Prince George, C.-B./B.C..

G. Wood (EG-6) Spéc. service mét./Wea. Service Specialist, BM4/W04, Prince George, C.-B./B.C.

A. Mediati (SCY-2) Secrétaire/Secretary, ARPX, Downsview, Ont.

I. Fung Fook (SCY-2) Secrétaire/Secretary, AWDH, Downsview, Ont.

D. Aguilar (EG-7) Surintendant de projets/Project Superintendant, QAEOI, St-Laurent, Qc/Que.

M. Roch (MT-6) Chef d'équipe/Shift Supervisor, CMC, Dorval, Qc/Que.

P. Pommainville (MT-3) Météorologiste/Meteorologist, MWC, Bedford, N.-É./N.S.

G. Philpott (EG-6) Agent mét. de port/Port Met. Officer, MAED P/N, St. John's, T.-N./Nfld.

M. Desjardins (EG-3) Techn. en aér./U/A Tech., SM1/WS1, Sable Island, N.-É./N.S.

V. Duguay (EG-3) Techn. en aér./U.A. Tech., SM1/WS1, Sable Island, N.-É./N.S.

W. Gash (EG-1) Techn. en mét./Met. Tech., SM3/WS3, Churchill Falls, T.-N./Nfld.

C. Dicaire (MT-2) Météorologiste/Meteorologist, PRWC, Winnipeg, Man.

J. Mushinski (EG-7) Techn. en mét./Met. Tech., Winnipeg WO, Winnipeg, Man.

B. Fehr (EG-6) Techn. en mét./Met. Tech., Winnipeg, WO, Winnipeg, Man.

B. Johnson (EG-6) Techn. en mét./Met. Tech., Winnipeg WO, Winnipeg, Man.

D. L'Esperance (ST-OCE-3) Opér. trait. de textes/Word Processor Operator, RPN, Dorval, Qc/Que.

Postes temporaires ou intérimaires/ Temporary or Acting Positions

R. Campbell (EG-2) Techn. en mét./Met. Tech., SM3/WS3, Dease Lake, C.-B./B.C.

B. Grogan (SCY-3) Secrétaire/Secretary, ACDG, Downsview, Ont.

L. Smith (SCY-3) Secrétaire/Secretary, ARQD, Downsview, Ont.

A. Solimene (CR-4) Commis/Clerk, ACSD/A, Downsview, Ont.

Retraites/Retirements

H. Tymofichuk, CMCFC, Dorval, Qc/Que., oct./ Oct. 1986

J. Bourgeau, CMCFT, Dorval, Qc/Que., oct./Oct. 1986

M.E. Eddy, MAES, Bedford, N.-É./N.S., oct./Oct. 1986

B. Sproule, ACIF, Ottawa, Ont., déc./Dec., 1986

P. Goy, Vancouver Wea. Office, Vancouver, C.-B./ B.C., déc./Dec. 1986

A. Beaton, ACIF, Ottawa, Ont., janv./Jan. 1987

M. Plante, CMCFC, Dorval, Qc/Que., janv./Jan. 1987

F.W. Hoskins, NWC, Gander, T.-N./Nfld., mars/ March 1987

J.P. Gallant, MAEM, Bedford, N.-É./N.S., avr./April 1987

Congés autorisés/Leave of Absence

C. Green, AHRS, Downsview, Ont., Congé de maternité/Maternity Leave

C. Beaudoin, RPN, Dorval, Qc/Que.

Départs/Departures

D.K. Dawson, Directeur général régional/Regional Director General, PAED, to RDG, Pacific, Vancouver, C.-B./B.C.

C. Mauer, W.C. 1, Edmonton, Alb./Alta.

P. Lacasse, W.C. 1, Edmonton, Alb./Alta., Pour Revenu Canada/to Revenue Canada

O. Hunt, ARQA, Downsview, Ont.

B. Burns, Directeur générale regional/Regional Director General, WAED to RDG, Western and Northern, Edmonton, Alb./Alta.

Mutations/Transfers

D.M. Pollock (SM) ACIF, Ottawa, Ont.

W. Benjamin (MT-3) Météorologiste/Meteorologist, ALWC, Edmonton, Alb./Alta.

L. Birmann (SCY-2) Secrétaire/Secretary, ACIR, Downsview, Ont.

D. McDonough (CR-4) Commis/Clerk, ARPD, Downsview, Ont.

M. O'Brien (PE-3) Chef/Head, AHRS, Downsview, Ont.

J. Blanchette (EG-3) Techn. en aér./U/A Tech., SM2/WS2, Stephenville, T.-N./Nfld.

P. Berthelot (EG-4) Techn. en aér./U/A Tech., SM1/ WS1, Shelburne, N.-É./N.S.

S. Miller (MT-3) Météorologiste/Meteorologist, MWC, Bedford, N.-É./N.S.