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HOW THE WEATHER CAN MAKE YOU FEEL SICK OR GREAT

By Manuel Escott

Reprinted from enRoute Magazine, the inflight magazine on board Air Canada flights.

Thunderstorms will move in today. The barometer is falling which means motorists should be especially alert. Some migraine sufferers can expect an attack. The rest of us may feel depressed and irritable.

This is what a weather forecast of the future may sound like in view of links being established between the weather and the way we feel and act.

People have long suspected that weather and natural cycles affect them in certain ways: The ancient folk belief of moon madness is one example. But the co-relation is now being studied closely in a new field of scientific investigation known as biometeorology.

Orthodox science tends to treat the infant field of study with some scepticism because most of the people engaged in it are not medical doctors. In fact, some scientists view it as an offshoot of the occult, like astrology.

Yet biometeorology is drawing the attention of a mounting number of scientists in the U.S., Europe and Israel. So is another budding and related science called chronobiology or the study of cycles of activity within the body. Both fields have made some interesting findings.

Low barometric pressure, for example, is now believed to trigger migraine attacks in certain people. A survey conducted in Canada for the Migraine Foundation revealed that between 30 and 40 percent of migraine sufferers were in trouble when the barometer fell to 29.95 and below, according to Rosemary Dudley, the Foundation's executive vice-president and founder.

Dramatic drops on the barometer can also cause swollen tissues, a diminished flow of blood, and a build-up of pressure within the brain, says Dr. Clarence Mills, of the University of Cincinnati. All of which adds up to that typical pre-thunderstorm feeling: headaches, tension, irritability, apathy.

A Toronto biometeorologist, Dr. Henry Durost, argues that motorists are apt to be more listless in thundery weather and therefore more prone to make mistakes.

His observation is given weight by the findings of researchers at Queen's University, Kingston, Ontario. They studied car accidents in Ontario's Frontenac County over a three-month period. An interesting pattern emerged: 81 percent of fatal crashes and 73 percent of non-fatal ones had occurred when the barometer was falling, indicating a storm centre nearby. A check of the previous three years' statistics showed similar percentages in the same weather conditions.

Electric storms also appear to cause severe disturbances in people who are mentally ill. Dr. Robert Becker, of Syracuse, New York co-related 25,000 admissions to psychiatric hospitals over a five-year period with the number of storms each month. A follow-up study of psychiatric patients in treatment revealed that their biological rhythms underwent a marked change during storms.

Dr. Becker believes that a better understanding of how electrical forces alter moods and body rhythms could lead to more effective treatment of mental illness.

Certain winds are known to blow no good at all. Indeed, some of them have bizarre and serious effects on people.

Canadian prairie dwellers believe that when the *Chinook* blows, Murphy's Law applies — everything that can go wrong will. Rosemary Dudley, of the Migraine Foundation, says there is evidence that the *Chinook* is a factor in migraine attacks.

Rates of crime, mental disorders and epileptic seizures increase when the dry, warm *Foehn* sweeps Austria, West Germany and Switzerland. And nobody takes it more seriously than the physicians of these nations: They'll do only emergency surgery when it blows.

"When the *Foehn* prevails things always go wrong," an eminent Austrian neurosurgeon has been quoted as saying. "Wounds become infected. Nurses fret. A surgeon's hands are not as sure. I don't know why it happens, but it does."

Israeli scientists have fingered the *Sharav*, a hot, dry wind that blows off the desert, as the cause of insomnia, depression, irritability, and sexual apathy. They believe the wind stimulates an abnormal production of serotonin, a chemical found in the brain and a factor in mood alteration.

And then there is the ion connection. The air around is filled with millions of electrically charged particles known as ions.

According to biometeorologists, some of these ions carry a positive charge, some a negative one. The negative ones are the good guys: They make you feel fit and cheerful. Water under pressure, for instance, releases millions of negative ions, which is probably why people feel like singing in the shower.

Positively charged ions, on the other hand, make you feel anxious and depressed, researchers say. According to their studies, certain winds such as the *Foehn* and the *Sharav*, and the presence of thunderstorms change the balance in favor of positive ions.

Air-conditioned buildings with hermetically sealed windows — the environment more and more of us are working in — also tend to cause positive ion 'pollution', biometeorologists claim.

Several firms in North America and Europe now produce negative ion generators, but their effectiveness is still in question.

"There is an apparent co-relation between ions and mood, but it has not been rigorously proven," says Dr. Elie Cass, a Toronto medical doctor and physicist who has been involved in some of the environmental research done by the Migraine Foundation.

"To get that proof it would be necessary to place a negative ion generator in a room where there is a high incidence of discomfort, and then keep careful statistics. As far as I know, this hasn't been done."

Profound weather changes in the seasons also play a key role in how we feel. Ulcers are most likely to flare up in the spring and fall. Manic depressive moods tend to strike during these two seasons. Rheumatic fever peaks in April.

The ancient belief in lunar madness has a certain validity to it. Dr. Arnold L. Lieber, of the University of Miami, conducted a time analysis of 2,000 murders in Dade County, Florida, between 1956 and 1970. His work showed that peaks in the homicide rate coincided with dates when the moon was either full or new.

And that romantic mood created by the moon, and long celebrated in song and poem may have a scientific basis. A recent U.S. study recorded that the sex drives of men between 19 and 50 rose sharply at full moon; the lunar pull was particularly strong in older men.

Researchers have found that each of us has a body rhythm, an inner cycle which may be affected by the 24-hour revolution of the earth on its axis. An individual's biorhythm is reflected in changes in blood pressure, hormone production and even body temperature.

Those inner cycles are passed on from parent to child through genes, researchers believe, but the issue is still not proven.

The study of biorhythms, however, may have significance in the future treatment of disease. If the theory that we are stronger, more optimistic at certain times of the day than others is correct, doctors may have to consider administering drugs at a time when the cycle is high, says French researcher Dr. Alain Reinberg.

University of Texas biologists have investigated how the environment acts on our minds and bodies. Their conclusion is that the pineal gland – a tiny organ shaped like a pine cone and tucked away deep in the brain – acts as a 'middleman'. What probably happens is that the gland releases some substance which acts on hypothalamic and pituitary areas of the brain.

These two glands then release hormones in response to the environmental 'messages' processed by the pineal gland.

Investigators, however, are still unsure about how environmental factors first contact the pineal. It could be through the retina of the eye or else the skin.

Just how valid is this comparatively new study into weather and health?

"It hasn't yet caught the full attention of the scientific community because it is so new and such a vast field," says Dr. Elie Cass. "But I think it will in time."

"More and more people are living in climate-controlled conditions and no real research has been done to determine the optimum environment. This research will be necessary if more of us are going to submit to climate control. And that seems a likely prospect."

L'INFLUENCE DU TEMPS SUR VOTRE VIE QUOTIDIENNE

Par Manuel Escott

Article tiré de la revue enRoute distribué à bord des avions d'Air Canada.

On prévoit des orages pour aujourd'hui. Le baromètre est à la baisse, donc les automobilistes devront se montrer très prudents. Les migraineux peuvent s'attendre à des accès de maux de tête. Les autres pourraient se montrer déprimés et irritables.

Voilà un exemple de ce que pourrait être un bulletin météorologique dans l'avenir, eu égard aux liens que l'on tente d'établir entre le temps qu'il fait et notre façon d'être et d'agir.

Depuis longtemps déjà, les gens soupçonnent le temps et les cycles naturels de les affecter d'une manière ou d'une autre: l'ancienne croyance aux accès de folie provoqués par les cycles lunaires en témoigne. Cette corrélation fait présentement l'objet d'une étude scientifique connue sous le nom de biométéorologie.

Ainsi, on croit aujourd'hui qu'une basse pression barométrique suffit à déclencher des migraines chez certaines personnes. Une enquête faite au Canada par la Migraine Foundation a révélé que 30 à 40 pour cent des migraineux souffraient de maux de tête lorsque la pression atmosphérique s'abaissait à 29.95 ou moins; c'est ce qu'a déclaré Rosemary Dudley, vice-présidente du conseil de direction de cet organisme, Et selon M. Clarence Hills, de l'Université de Cincinnati, des chutes de pression atmosphérique marquées peuvent causer des enflures, une diminution du flux sanguin ainsi qu'une augmentation de la pression intra-cérébrale. Ces symptômes viennent s'ajouter aux symptômes typiques qui précèdent un orage: maux de tête, irritabilité et apathie.

M. Henry Durost, biométéorologue torontois, affirme que les automobilistes sont plus distraits au cours d'un orage, donc plus sujets à commettre des erreurs.

Des études faites par des chercheurs de l'Université Queens, à Kingston, en Ontario, viennent renforcer les affirmations de H. Durost. Pendant trois mois, ils ont étudié tous les accidents survenus dans le comté de Frontenac, en Ontario. Les résultats sont significatifs: 81 pour cent des accidents mortels et 73 pour cent des autres accidents se sont produits à un moment où le baromètre indiquait une baisse de pression, signe d'un orage aux environs. Une vérification des statistiques des trois années précédentes en arrive aux mêmes conclusions.

Les orages semblent causer des troubles graves chez les malades mentaux. Robert Becker, chercheur de Syracuse, N.Y., a établi une corrélation entre les 25 000 malades mentaux admis dans les divers hôpitaux psychiatriques au cours d'une période de cinq ans, et le nombre d'orages qui ont eu lieu chaque mois. Une étude subséquente des patients en traitement a révélé que leurs rythmes biologiques subissaient des changements importants pendant les orages.

M. Becker croit qu'une meilleure compréhension de l'influence des forces électriques sur le caractère et sur les rythmes biologiques pourrait contribuer à améliorer le traitement des malades mentaux.

Certains vents, reconnus comme nocifs, affectent les gens d'une manière à la fois étrange et grave.

Les Canadiens qui habitent les Prairies sont convaincus que lorsque le *chinook* souffle, la loi de Murphy s'applique, c'est-à-dire que tout ce qui est susceptible de mal aller va mal. Et d'après Rosemary Dudley, de la Migraine Foundation, il a été prouvé que le *chinook* déclenche des accès de maux de tête chez les migraineux.

Le taux de criminalité, de troubles mentaux ainsi que de crises d'épilepsie augmente lorsque le vent chaud et sec appelé *foehn* balaie l'Autriche, l'Allemagne de l'Ouest et la Suisse. Les médecins de ces pays sont d'ailleurs les premiers à reconnaître ce phénomène: lorsque souffle le *foehn*, ils ne pratiquent que les opérations urgentes.

Un éminent neurochirurgien d'Autriche a déclaré que le *foehn* était une source d'ennuis pour les médecins: "Les plaies s'infectent, les infirmières sont agitées et les mains des chirurgiens manquent de précision." C'est selon lui un phénomène qu'il ne peut expliquer mais qui existe néanmoins. Pour leur part, les hommes de science israéliens ont déclaré que le *sharav*, vent chaud et sec provenant du désert, était une cause d'insomnie, de dépression, d'irritabilité et d'apathie sexuelle. D'après eux, le vent stimule de façon anormale la sécrétion de sérotonine, substance chimique que l'on trouve dans le cerveau et qui agit sur l'humeur.

Il ne faudrait pas passer sous silence l'importance des ions. En effet, l'air qui nous entoure contient des millions de particules portant une charge électrique.

Selon les biométéorologues, ces particules, appelées ions, sont chargées négativement ou positivement. Les ions négatifs sont ceux qui nous rendent joyeux et en forme. Par exemple, l'eau sous pression décharge des milliers d'ions négatifs, ce qui explique probablement pourquoi les gens ont tendance à chanter sous la douche.

D'autre part, toujours d'après les chercheurs, les ions positifs amènent l'anxiété et la dépression. Leurs études démontrent que certains vents, tels le *foehn* et le *sharav*, de même que les orages, déséquilibrent l'atmosphère à l'avantage des charges d'ions positifs.

Et les édifices climatisés dont les fenêtres sont scellées tendent également à polluer l'air d'ions positifs. C'est pourtant l'environnement propre à un grand nombre de travailleurs.

Plusieurs entreprises nord-américaines et européennes produisent maintenant des génératrices d'ions négatifs, mais leur efficacité reste encore à démontrer.

"Il semble exister une corrélation entre les ions et les modifications caractérielles. mais ceci n'a pas encore été prouvé de façon absolue," déclare le docteur Elie Cass, de Toronto. Le docteur Cass, qui est médecin et physicien, s'est intéressé à certaines recherches faites par la Migraine Foundation sur l'environnement.

"Pour mettre cette corrélation en évidence, il faudrait placer une génératrice d'ions négatifs dans une pièce où règne une haute incidence de malaise et tenir des statistiques rigoureuses. A ma connaissance, ceci n'a pas encore été fait," déclare le docteur Cass.

Les changements de temps aux différentes saisons jouent également un rôle important sur notre état de santé. Les ulcères apparaissent surtout au printemps et à l'automne, de même que les états dépressifs. Et c'est en avril que l'on trouve le plus grand nombre de cas de fièvres rhumatismales.

Les anciennes croyances, voulant que certains accès de folie soient attribuables aux cycles lunaires, semblent de plus en plus plausibles. Arnold L. Lieber, chercheur de

l'Université de Miami, a fait une étude des 2 000 meurtres survenus dans le comté de Dade, en Floride, entre 1956 et 1970. Les résultats démontrent que le taux le plus élevé de meurtres coïncidait avec la pleine lune ou avec la nouvelle lune.

Une étude corrélatrice similaire a été faite sur 2 000 meurtres commis dans le comté de Cuyahoga, en Ohio.

Et toutes les "romances à la lune" que l'on célèbre dans tant de chansons et de poèmes pourraient bien avoir une base scientifique. Aux Etats-Unis, une étude récente démontre que l'appétit sexuel des hommes âgés de 19 à 50 ans s'élève de façon significative au moment de la pleine lune: cet appétit est particulièrement marqué chez les hommes plus âgés.

Les chercheurs ont découvert que chaque être humain a son propre rythme biologique, cycle interne pouvant être influencé par les 24 révolutions de la terre sur son axe. Les biorythmes individuels se traduisent par des changements dans la pression sanguine, la sécrétion d'hormones ainsi que, dans la température du corps.

Et, toujours d'après les chercheurs, ces biocycles se transmettent de parents à enfants par les gènes; ceci, toutefois, n'est pas encore prouvé.

L'étude des biorythmes pourrait bien avoir un jour une grande importance dans le traitement des maladies. Si la théorie selon laquelle nous sommes plus forts, plus optimistes à certains moments de la journée s'avérait exacte, les médecins devraient alors songer à administrer les médicaments à un moment où le cycle est élevé, déclare le chercheur français Alain Reinberg.

Des biologistes de l'Université du Texas ont étudié les effets de l'environnement sur le corps et l'esprit. Ils en ont conclu que la glande pinéale, située dans la partie postérieure du cerveau et dont la forme ressemble à une pomme de pin, joue un rôle d'intermédiaire. Cette glande sécrète probablement une substance qui agit sur les régions hypothalamiques et pituitaires du cerveau. En réponse aux "messages de modifications" envoyés par la glande pinéale, ces deux glandes secrètent alors des hormones. Toutefois, les chercheurs n'ont pas de certitude quant à la manière dont les facteurs de l'environnement entrent en contact avec la glande pinéale: ils croient que cela se fait par la rétine de l'oeil ou encore par la peau.

Mais quelle valeur peut-on accorder à cette nouvelle étude portant sur la corrélation entre le temps et la santé?

D'après le docteur Elie Cass, le monde scientifique ne s'est pas encore pleinement intéressé à ce domaine à la fois si vaste et si nouveau. Il croit toutefois que cela viendra. Le docteur Cass ajoute également qu'un nombre toujours croissant de personnes vivent dans des conditions climatiques contrôlées, et qu'il n'y a pas un de véritables recherches de faites en vue de déterminer l'environnement le plus favorable. Ces recherches deviendront nécessaires si un nombre toujours plus grand de personnes devaient vivre dans de telles conditions. Et cette perspective semble en voie de devenir réalité.

WORKSHOP ON THE APPLICATION OF METEOROLOGICAL INFORMATION TO WILDLIFE MANAGEMENT IN ONTARIO

By Rick Lawford and Linda Maguire

A Users' workshop on the Application of Meteorological Information to Wildlife Management was organized by the Scientific Services Unit, Ontario Region and was held at 4905 Dufferin Street on November 17, 1977. The workshop drew 63 participants, including 18 from the Ontario Ministry of Natural Resources, 17 from Universities, 7 from the Zoological Gardens, as well as a number from the Canadian Wildlife Service and the Lands Directorate of E.M.S., the Central Lake Ontario Conservation Authority, the Royal Ontario Museum and the Atmospheric Environment Service.

The one-day workshop was developed to achieve two objectives. First, it was designed to familiarize wildlife biologists in the Ontario Region with the services available from the A.E.S. In addition, the workshop was intended to provide biologists with an opportunity to obtain technical information on topics such as climatic change and methods for analysing meteorological data.

After brief welcoming and introductory remarks by Messrs. Paul Johns and Rick Lawford, biologists from Wildlife Research, operational game management and the Metro Zoo, discussed the effects of the weather and climate in their areas of responsibility. According to Mr. Robin Hepburn of the Ontario Ministry of Natural Resources, biologists in wildlife management would like to use climate to explain the distribution of mammals and birds in the province. White-tailed deer were cited as an example of the possible effects of climate. During the 18th century, these deer were confined to a narrow strip of land along Lake Erie and Lake Ontario. However, in the next 1½ centuries, the northern limit for white-tailed deer moved northward to reach an east-west line through Timmins by the 1940's. Then, in the next two decades (the fifties and sixties), the northern limit receded southward to its present position through North Bay and Sudbury.

In operational game management, biologists are concerned about the severity of winters. A severe winter with heavy snowfalls will result in food shortages in the deer-feeding yards. Heavy snowfalls will also severely restrict the ability of deer and moose to obtain food from their natural sources and to flee from predators. A knowledge of these effects is necessary for managing the yards and for recommending changes in the hunting regulations.

According to Dr. John Hulley, the Metro Zoo encounters different problems because they manage their animals in the same way that a farmer manages his livestock. For example, during the winter, they must worry about heavy snowstorms and icing conditions. A build-up of snow and ice can reduce the effective height of a fence from 7 feet to 3 feet. Experience has shown that a number of species can escape from their enclosures when they have a snowbank to climb on.

After the three biologists had expressed their views of the significance of weather for their activities, four speakers described the various programs and services of the AES. First, Mr. Phil Aber reviewed the organization of the AES and the activities of each Directorate. Next, Mr. Dave Murdoch described the two AES observing networks. He made specific references to the types of instruments located at weather stations and at stations in the climatological network. Then Mr. Mike Hewson described the products prepared by the Ontario Weather Centre. Finally, Mr. Rick Lawford discussed the special

consultative and research support available to wildlife biologists through AES headquarters and the Ontario Region Scientific Services Unit.

The next set of presentations included four technical talks on subjects of special interest to biologists. Mr. Bruce Findlay reviewed the various methods for measuring climate, the ways in which changes in climate can affect wildlife habitats and procedures for developing wildlife capability classifications from climatic data. Then Mr. Gord MacKay discussed the effects of climate on a number of species and the possible impacts that climatic variations could have on wildlife. Mr. Steve Lapzak reviewed the limitations of meteorological data. In addition, he described methods for interpolating from locations where standard meteorological measurements are taken to specific sites where wildlife behaviour is being monitored. The technical presentations were concluded by Dr. J.J. Kereskes of the Canadian Wildlife Service. In his talk, Dr. Kereskes reviewed the effects of SO₂ emissions on the environment. In particular, he described the role of SO₂ in the acidity of lakes and the impacts of these changes on fish production.

The workshop concluded with an active panel discussion led by Mr. Bill Wyllie. At the outset of the discussion, Mr. K. Ross (CWS) described the activities of the Canadian Wildlife Service in the Ontario Region. The panel then proceeded to provide answers to the large number of written questions that had been submitted by the audience. Based on the questions and the comments voiced during the discussions, one would conclude that wildlife biologists are most concerned about the space and time resolution of AES observing networks, the types of data being collected by AES and the lack of readily available meteorological indices (e.g. measures of the rapidity of the onset of spring) for use in wildlife studies.

The workshop appeared to have achieved both of its objectives. A number of the biologists present at the workshop, indicated that they would be making more extensive use of meteorological information in the future. The increased number of requests that the Ontario Region SSU has received from biologists since the workshop, suggests that they have already begun to do so.

An internal report, which will include all of the presentations given at the workshop, is presently being edited. Anyone wishing to obtain a copy of the report should contact Mrs. Linda Maguire by calling (416)-966-5807 or by writing her at

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UTILITÉ DE LA RÉVISION SCIENTIFIQUE

Par Monique Allaire, Réviseur scientifique

Cet article fait suite à celui intitulé "Section de révision des publications en français", paru dans le numéro de novembre. Ce dernier décrivait l'organisation et les fonctions de la section ainsi que les différents types de documents traités. Cependant, à la lecture de cet article, vous vous êtes peut-être demandés pourquoi on révisé les documents traduits et vous doutez peut-être de la nécessité d'une telle étape qui semble retarder inutilement la publication d'un texte. Nous pouvons facilement répondre à cette question en donnant des exemples concrets du type de corrections effectuées par le réviseur.

Mais tout d'abord, précifions qu'il ne faut pas penser qu'un document scientifique ayant passé par les mains d'un traducteur diplômé en ressort sans erreurs. Nous ne voulons pas ici blâmer ou critiquer les traducteurs, mais nous devons prendre conscience que parfois ils n'ont pas la formation scientifique nécessaire pour connaître tous les termes d'une discipline hautement spécialisée. Par contre, leur travail est indispensable car il serait difficile, pour une personne ayant une formation uniquement scientifique, de traduire ces textes. Le travail du réviseur consiste donc à polir l'ouvrage du traducteur et à assurer l'uniformité des termes.

Donnons maintenant des exemples d'erreurs de traduction uniquement imputable à un manque de connaissance dans certaines disciplines. Nous rencontrons un premier type d'erreurs provenant de l'ignorance de certaines conventions. Par exemple, "contour" est traduit par "contour" au lieu de "isohypse", et "maritime tropical air" devient "air tropical maritime" au lieu de "air maritime tropical".

Un deuxième type d'erreurs provient de l'ignorance du vocabulaire scientifique. Prenons comme exemple "vorticity" qui est traduit indifféremment par "tourbillon, vorticité, turbulence ou même contours" alors que le juste terme météorologique est "tourbillon".

Nous rencontrons aussi un troisième type d'erreurs, cette fois non reliées à une ignorance de vocabulaire. Par exemple, citons le cas de "negative vorticity advection". Un traducteur peut très bien connaître la traduction de chacun des mots pris individuellement mais peut ignorer à quel nom se rapporte l'adjectif "negative". Comme résultat, on rencontre souvent l'expression "advection de tourbillon négatif" au lieu de "advection négative de tourbillon" qui a une signification bien différente. Ce type d'erreurs est très grave car il fausse complètement le sens du texte.

Nous espérons que ces quelques exemples ont su vous convaincre de l'utilité d'une révision effectuée par un personnel possédant une formation scientifique et nous vous conseillons de soumettre vos documents à la traduction aussitôt que possible pour ne pas être incommodés par de longs délais.

MEGAN LOVELOCK RETIRES

By Verna Gilchrist



Megan Lovelock retired on November 30, 1977 after four and-a-half years as senior library technician at AES headquarters library.

A retirement lunch, attended by thirty-five friends and co-workers, was held on November 29. Megan was presented with several gifts including a calculator, a scarf, a framed photograph of AES headquarters building, and a T-shirt with an appropriate slogan commemorating her work with WMO.

The week before, Megan was presented with a book, *The Silence and the Storm*, by AES Recreation Association executive. She was very active in RA activities.

Future plans include a trip to the West Coast by car with the prospect of retirement on Vancouver Island. Our best wishes go with Megan and her husband.

S.W. DEWAR – RETIRES

Stuart Wilson Dewar retired on December 28, 1977 after 36 1/2 years of active and varied service. Stu's career included instructing and forecasting duties at RCAF Stations during the war, forecasting duties at Edmonton and Whitehorse, two tours as OIC at Resolute Bay, participation in the 1954 joint US-Canada Beaufort Sea Expedition, acting RSGWS at Moncton, a stint with the Forecast Systems Operations Section at headquarters and finally as Head, Systems Planning & Coordination in Instruments Branch.



Stu and Irene Dewar.

A farewell party to honour Stu and Irene was held in the headquarters cafeteria on December 21. Several of Stu's colleagues paid tribute to his many talents, both at work and in his off-duty activities. A number of his former colleagues across Canada sent their best wishes and expressed fond memories of past exploits.

Stu's dedication to the AES, and his support to AES, DOT and DND instrumentation programs will be missed by all those who remain.



*Bob Vockeroth presenting memento to Stu on behalf of his many colleagues.
Au nom de ses nombreux collègues, M. Bob Vockeroth présente un cadeau à M. S. Dewar.*

WILLIAM (BILL) MOODY – RETIRES

William (Bill) Moody retired from the Public Service on December 29, 1977 following over 36 years of contribution. Bill's work history reads like a travelog, having moved 11 times during the first 22 years of his career as a radio operator.

- April 23, 1941 – Joined Dept. of Transport – Telecommunications Division. – took two weeks of observer training at 315 Bloor Street.
- May 19, 1941 – Pagwa radio range station – radio operator/observer.
- November 1941 – Kapuskasing radio range station – radio range operator.
- July 1943 – Vanderhoof radio range station – radio range operator, weather observer and CW operator.
- April 1946 – Princeton radio range station – radio range operator, weather observer and CW operator.

- September 1946 – North Bay Airport – radio operator.
- August 1949 – Sterling & Killaloe – radio range station – radio range operator.
- October 1949 – Nakina Airport – radio range operator/observer.
- September 1953 – Pagwa radio range station – radio operator/observer.
- September 1955 – Malton Airport – electronics technician.
- November 1958 – North Bay Airport – radar maintenance supervisor.
- August 1963 – Meteorological Branch, 1 Front Street – R&D electronics technician.
- May 1965 – Became Supervisor of the Headquarters Inspection Unit, a position which he held until retirement.

A luncheon was held for Bill and his wife Annie at the Beverly Hills Motor Hotel on December 14, 1977 to honour his long and dedicated service. This affair was very well attended, there being well over 100 of Bill's co-workers and other friends there to wish him well, including his daughter and son-in-law.



Photo/photographie ab Photographic

Mr. R. Vockeroth, Director of Instruments Branch, presented Bill with a framed certificate, signed by the Prime Minister, thanking Bill for his long and dedicated service.

Bill's staff presented him with a handmade "string weather station" to supplement his knowledge of weather conditions, but it is suspected by all that it will be much more useful as a reminder of those he supervised for so many years.

A collection taken within AES prior to the luncheon, resulted in three gifts, selected to assist Bill in his retirement. A power tool for wood crafting, to bring out his creativity and make him industrious (a 1 hp. router); an indoor combination thermometer, hygrometer and barometer to keep him aware of the state of the environment (including a suitably engraved plaque); and finally a custom made golf putter for use in his pursuit of healthy recreation.

Best wishes Bill and Annie, from all your co-workers and other friends at AES.

D.S. ROSS RETIRES

Don Ross's friends gathered at the Beverly Hills Hotel, December 13, 1977, to participate in commemoration of the occasion of his retirement.

Prior to retirement, Don was the longest serving professional meteorologist in Canada. He began his service in July, 1939, after training in Toronto, and in September of the same year he was posted to Halifax where he served along with well-known Canadian



Grace and Don Ross.

Met personnel such as Reg Noble, Ted Wiacek, Harvey Halbert and Art Grant. In the fall of 1940 Don was posted to St. Hubert and stayed on until the spring of 1941, thence to Gander where his co-workers included H. Binden, G. Henry, D. McClellan and K. McLeod. In 1942 Dorval was his next stopping place where he remained until 1966, at which time he was transferred back to Toronto, the point where it all began.

We all wished Don well in any future endeavours and supplied him with a large practical suitcase for his immediate travel plans, and a book of quotations for his leisure hours.

RETIREMENT – DR. J. CLODMAN



After 35 years of service in the AES, Dr. J. (Joe) Clodman retired on December 28, 1977.

After taking Short Course #8, Joe started his forecasting at St. Hubert in support of the war effort in October of 1943. In June of '46 he reported to Toronto for the 7th (and last) Advanced Course. This was followed by 2 1/2 years of forecasting at Dorval during which time he also added to his achievements on the Advanced Course to meet the requirements for a Masters Degree in Meteorology from U. of T. In January of '49 he commenced his "tour" at Gander which lasted 1 1/2 years before he returned to Dorval. In 1952 his growing interest in research received a big boost when he won a research meteorologist position in Toronto. The R & T group was still in its infancy then so considerable training duties were included as well. After a very active 6 years, including publishing of 12 research papers covering a wide variety of topics all related in some way or other to forecasting, Joe departed for his Ph. D. studies at New York University.

The rest is more recent history – on returning with his Doctorate in 1961 he soon became head of two of the research units of R & T (Synoptic & Dynamic). When the need for an organized approach to providing research support to the operational forecasting system resulted in formation of the new Forecast Research Section in 1969, Joe was appointed to head this up. This section soon became the Meteorological Services Research Branch which has been the leading group in developing the concept and design of a Computerized Forecast System and development of the components of the first Computerized Prediction Support System. The other two major programs of the Branch, the development of Canada's large-scale NWP models and procedures and the AES Satellite Program also grew and achieved notable results during this period.

A luncheon was held at the Beverly Hills Hotel December 15, 1977, to honour Joe and his wife, Etta. Their children, Joe's brothers and sisters and several members of their families were also in attendance along with close to a hundred of Joe's colleagues and friends. It is safe to say that Joe has been one of the driving forces of the AES and he will be sorely missed.

RETIRING! !

AL MICELI

When?

End of December

Where's the Party?

AES Cafeteria (Italian Food & Refreshments)

When?

15 December at 04:30 p.m.

Coming?

In response to this invitation, copies of which were affixed to radiosonde instruments hanging in various parts of AES Headquarters, and to a few phone calls, about ninety people gathered to mark the end of an era.

The era began in 1944, the 24th of May, to be exact, when Al, a graduate of U. of T. was recruited as a Senior Radiosonde Technician at an initial salary of \$1620.00 per year. Less than a month later, on the 20th of June, Al found himself climbing off a small aircraft at Nitchequon, where he was to spend a year.

Nitchequon in those days was a bit different from the aerological station of today. The staff totalled five men, two radio operators, two radiosonde observers and a cook. The rooms were heated by wood-burning stoves; the records show that eighty cords might be needed in a year. Snowshoes were worn in the winter for carrying water up from the lake to make hydrogen in the high pressure generator. Gerry Gill was developing the MSC Low Pressure Generator and enjoyed testing some theories during inspection visits to Nitchequon. But then, as now, food was very important and the cook could be a key figure. Shortly after Al and his OIC arrived at the station, the OIC wrote: "When Al and I arrived on 20th June we found the station much the same. The boys were preparing to get rid of the cook. As he was the fifth one in the year, it was a rather familiar occurrence. The new cook seems to be alright and . . .".

Well, Al proceeded to Southampton Island in August 1945, spent a year there and in October 1946 he went to Ft. Smith as OIC of the Radiosonde program. In the summer of 1947 he returned to Toronto, where he joined the Headquarters staff. On the 1st of January, 1952, Al assumed responsibility for the Radiosonde School over on Toronto Island, beside the lighthouse.

Al's experience and knowledge increased and in July 1961 he was appointed Supervisor of the Operations and Management Unit of the Basic Weather Division. Many Aerological Observers of that era who found themselves on Sable Island or Sachs Harbour also found themselves carrying travel documents signed "A.M. Miceli", for those were the days when there was a national pool of these observers.

In the great re-organisation of the early '70's Basic Weather disappeared and we found Al in the new CSD with the title "Head, Upper Air Standards Unit". During this, the closing chapter of the "era" the First Edition of MANUPP appeared, in both languages. At the time of his retirement, Al was the CSD member of a committee planning for the introduction of the Aerological Data Reduction System (ADRES) which will increase automation at the aerological stations.

During the party on the 15th of December, Al's career was summarised in turn by Ken Hignell, Bill Stewart (ret.), Ted Bourdon (ret.), Sonya Koster and Morley Thomas. With Al and sons John and Rob looking on, Liz Hurak presented Anna with a dozen red roses. Bob McMaster presented Al with luggage, wine glasses and a hand painted, gold radiosonde.

The formality that could have settled over an event like this was moderated somewhat by the wine, the lasagna and a group of musicians. Our society reporter describes it this way:

AES HQ cafeteria December 15 – auspicious occasion – august gathering – scintillating décor – floral arrangements – candlelight reflections in crystal stemware – selection of vintage wines – array of gourmet delicacies – abundance of elegant gowns by Dior, Givenché et al – art of the raconteur – by distinguished vintage (old) speakers – premier gala performance by the I MUSICI A ROMA ensemble – vindication of the value of extended classical training and assiduous rehearsal (in the wind tunnel).

Be patient, music-lovers everywhere – advice of publication at an early date – possible recording bids by great orchestras – late night telephone calls by Bernstein – copyright, etc., prevents complete reproduction here – basic version as follows:

#1 Music by the late Joe Green*

A DUET

Lyrics – anonymous. (Earlier version "La donna è mobile")



Farewell Alberto (repeat 7 times)

Fare thee well.

Farewell (repeat 4 times)

Alberto Farewell (Note the imaginative cunning in *reversing* the basic theme!!)

Farewell (repeat 4 times)

Alberto Farewell

Alberto Fare thee well.

- #2 Music – an old Italian melody
Lyrics – anonymous (insistently)

A DUET

Farewell to old Miceli,
Oh! He launched 10,000 balloons.
We've heard his ancient stories
Sung to old Italian tunes.
He invented "significant levels"
And tropopause "one", "two", and "three".
Oh! Can this be the end of an era
In meteorologeeeee?

He'll be free now of Robert McMaster,
And the tyrant Morley "T".
The writer of these ruddy lyrics
Doesn't work for Cee-Ess-Dee!!!

*Guiseppe Verdi

The writing of this article was contracted out to a syndicate composed of; Donald Jackson, Luigi Bertellotti and Carletto Brunetti (alias; Jackson, Berthelot and Brown).

MODIFICATION ACCIDENTELLE DU CLIMAT VUE PAR LE SATELLITE LANDSAT AMÉRICAIN

Tiré de la revue Télédétection au Canada du mois de février 1977.

M. Joseph Otterman, chercheur du programme LANDSAT à l'Université de Tel Aviv, en Israël, a utilisé des données de LANDSAT et d'autres satellites, le facteur de réflexion au sol et à bord d'un avion, ainsi que des mesures de température, dans une étude qui conclut que les sols très réflecteurs du Sinaï, dénudés en raison du pâturage excessif par les animaux domestiques, sont plus frais sous les rayons du soleil que les pâtures surveillées de la région avoisinante du Néguev. La ligne entre les zones claire et sombre coïncide avec la ligne d'armistice de 1948-49 entre Israël et l'Égypte, sur laquelle une barrière a été construite.

Selon M. Otterman, sa théorie explique peut-être la formation des déserts le long de la côte méditerranéenne de l'Afrique du Nord et les courbes du cycle des sécheresses: si, à cause de la sécheresse, les animaux meurent ou se déplacent, la végétation réapparaît. La réflectivité du sol décroît alors, les températures de la surface augmentent et le régime des pluies redevient normal. Puis, la population s'accroît peu à peu, commence à faire paître ses animaux domestiques, et c'est le début d'un nouveau cycle. M. Otterman a conseillé d'étudier ce mécanisme dans d'autres régions du globe. Bien que les images thermiques du satellite météorologique NOAA-2 prouvent que le Néguev est plus chaud que le Sinaï, on prévoit une évaluation quantitative plus satisfaisante grâce à un troisième satellite LANDSAT qui transportera des instruments plus précis de mesure de la chaleur.

GEL DU SOL DETECTÉ PAR LES SATELLITES AMÉRICAINS

Des études pour la "National Oceanic and Atmospheric Administration" (NOAA) ont indiqué que les données sur la température au sol fournies toutes les demi-heures par le satellite en orbite GEOS-1 peuvent être utilisées par les producteurs de fruits et de légumes pour lutter contre le gel destructeur de récoltes. Le rayonnement de la chaleur au sol est surveillé par les capteurs à infrarouge du satellite. La mise en application de ce projet pourrait aboutir à des économies importantes. Les participants au programme de recherche sont la NASA, le National Environmental Satellite Service de la NOAA et le Service national météorologique des Etats-Unis.

THE ONTARIO REGION SSU GOES TO ECO-FAIR '77

by S. Lapczak and R. Lawford

On October 15, 1977, the Scientific Services Unit of the Ontario Region participated in an "ECO-Fair" sponsored by Seneca College. The ECO-FAIR was held at Seneca College's picturesque King City Campus. The one-day fair presented the public with an opportunity to explore Alternative Lifestyles. These alternatives were discussed in seminars and lectures. In addition, a number of government departments, industries and environmental groups presented displays showing alternatives for the future. The presentations were grouped into four main areas of interest including food and agriculture, lifestyles, energy and shelter.

The Ontario Region provided both a display and a lecture at the Fair. The display was designed to familiarize the public with the role of the AES in matters involving energy. Messrs. Steve Lapczak and Bill Wyllie prepared most of the display material. This material included posters which outlined the environmental problems associated with conventional energy sources and the uses of meteorological information in designing solar and wind energy systems. In addition, actual wind and radiation sensors and photographs of AES instrumentation were displayed. Samples of AES publications containing radiation and wind data were also made available at the display. In addition to the numerous publications handed out at the ECO-FAIR, approximately seventy requests for publications were processed after the Fair.

Mr. Rick Lawford provided a lecture on the availability and use of meteorological data for the design of solar and wind energy systems. After reviewing the environmental concerns associated with conventional energy sources, he discussed the spatial and temporal distributions of short-wave radiation and wind throughout Ontario. A number of procedures for using the available data in the design of solar heating systems and in the siting of wind generators were also described.



Ontario Region Display at ECO-Fair '77

LES PRÉVISIONS DU QUINZIÈME JOUR

TIRÉ du "CMC INFORMATION"

par R. Robinson

1. Les aperçus de température moyennes du quinzième jour pour le Canada mérédional ont été produits hebdomadairement par le CMC depuis avril 1976 à la suite d'une période de tests qui a débuté en 1974.

Afin de satisfaire les exigences du projet de la mer de Beaufort, une appréciation spéciale des techniques analogiques utilisées dans la production d'aperçus de température a été employée en 1976 et 1977 pour donner non seulement les températures mais également les configurations de circulation à basse altitude au-dessus de la mer de Beaufort au cours de la période de septembre et octobre, celle-ci étant d'importance primordiale en ce qui concerne la formation et le déplacement des glaces. Dans le cadre de cette application, les cinq meilleures analogies relatives au régime actuel à 500mb ont été sélectionnées à partir des mois correspondants de 1949 à 1972 inclusivement et les dates ont été utilisées pour trouver, séparément et ensemble, les configurations de hauteurs moyennes à 1000mb pour les périodes consécutives de quinze jours. Après les avoir transmises par télécopieur au Centre des glaces d'Ottawa, ces configurations ainsi que les tendances que révèlent les prévisions à plus court terme, ont été l'objet de discussion avec le personnel du centre des glaces dans le but d'en arriver à un accord raisonnable au sujet de la circulation et des températures. Cet accord pouvait être incorporé sur place dans un aperçu portant sur les conditions de glace dans la zone de forage.

On n'a pas vérifié d'une manière formelle, à CMC en tout cas, les aperçus de circulations analogiques, mais l'évaluation (très) subjective qui en a été faite porte à croire que la performance générale, si modeste soit-elle, n'est pas auréolée de succès ni entachée d'un échec. A tout le moins, cette démarche analogique a permis une sélection rapide, qui n'est pas du tout irraisonnable, de solutions qui pourraient être utilisées comme base pour une prévision finale.

3. Un programme de vérification plus objectif continue de contrôler les résultats des aperçus de température produits régulièrement. En ce qui concerne l'échantillon comprenant la période de novembre 1976 au début de septembre 1977 - 43 prévisions vérifiées comportant 70 stations respectives - les 3010 anomalies prévues (en degré C) montraient une corrélation de .4 avec les observations correspondantes. De plus, la table de contingentement ci-dessous exprime les résultats obtenus en terme des cinq domaines d'égale population utilisés dans les aperçus. Le degré de performance dans son ensemble (en rapport avec la probabilité ou la climatologie) que l'on peut déduire est proche du degré atteint précédemment d'après des échantillons de grandeur semblable. Des différences régionales intéressantes apparaissent dans les données cependant en règle générale, la performance des prévisions semble être meilleure dans l'ouest et moindre dans l'est. Les régions qui ont montré un degré de performance comparable ont été regroupées. Leur degré de performance varie de près de zéro au-dessus du Canada Atlantique à près de deux fois la moyenne nationale au-dessus de quelques parties de l'Alberta.

4. A cause de leurs limites à la fois sur le plan de la performance et de l'information, les aperçus ne constituent pas un idéal aux yeux du prévisionniste ou de l'utilisateur. Ils assurent néanmoins une meilleure évaluation que celle qui tient simplement de la climatologie et ils se sont avérés utiles dans des domaines comme l'agriculture où les conditions moyennes, distinctes des variations journalières possèdent une valeur lorsqu'il s'agit de planifier des activités.

CFWO PORTAGE LA PRAIRIE CELEBRATES 25 YEARS SERVICE



Looking on as Col. Litt wields the knife to cut the cake are left to right: O.L. Shewchuk, Sgt. S.T. Penney, and Sgt. A.A. Gaudet.

On the 18th November 1977 at 00Z CFWO Portage la Prairie completed 25 years of continuous weather observations.

To commemorate this milestone, the Base Commander Colonel R.G. Litt was present at a cake-cutting ceremony that was 'provided' by the Met staff.

The 1952 synoptic report for 0030Z represented the weather conditions thusly:
(use old code to decode)

85135	80409	06504
11135	86211	69402
70000	88004	

The 1977 synoptic report for 00Z represented the weather conditions as:
(use new code to decode)

71851	83410	48777	13252
874XX	54118	69798	70483
20100	40052		

Was there any significant difference in the weather 25 years later?



Volunteers – Important People

THE _____ COMMUNITY TELEVISION CHANNEL (CATV 8) _____ OF

KAMLOOPS, B.C. IS PLEASED TO PRESENT THIS TO

THE STAFF OF THE KAMLOOPS WEATHER OFFICE

IN RECOGNITION AND APPRECIATION

FOR OUTSTANDING VOLUNTEER SERVICE TO OUR ORGANIZATION AND THE COMMUNITY.



Mayor
City of Kamloops

Certified by

Date

VIP

VOLUNTEERS – IMPORTANT PEOPLE

Walter Frymire and the Staff of the Kamloops B.C. Weather Office were involved in a public affairs broadcast on a Radio/T.V. program, station CFJC in Kamloops. This broadcast explained the "Wind Chill Factor" and its uses – particularly as applied to school children. As a result School district 24 superintendent has decided that all schools will be provided with the chart to determine the amount of outdoor activity for the children, as well as deciding whether or not to open the school if the factor is extremely high.

The Staff of the Weather Office has been presented with a citation in recognition of their Public Service.

PERSONNEL

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

77-DFE-WPNA-CC-31	Weather Observer Presentation Technician EG-ESS-5 Inuvik Weather Office D.A. MacLeod
77-DFE-WPNA-CC-70	Officer-In-Charge EG-ESS-6 Inuvik Weather Office K.D. Haslam
77-DFE-WPNA-CC-15	Weather Operation Technician EG-ESS-5 Alberta Weather Office W. Laidlaw
77-DFE-WPNA-CC-49	Senior Meteorologist MT-5 Alberta Weather Office J.M. Bullas J.C. McLeod D.J. Bentley

76 DOE-TOR-CC-140	Ontario Regional Headquarters M. Helferty
77-DFE-WIN-CC-506	Upper Air Inspector EG-ESS-7 Central Region J.F. McLeod
77-DFE-WIN-CC-528	OIC Alert EG-ESS-6 F. Risbey
77-DFE-WIN-CC-529	Supt. General Weather Services MT-8 Central Region D. Henry
77-DFE-WIN-CC-544	Finance Unit CR-3 Central Region H. Pukin

The following transfers took place:

Les mutations suivantes ont été effectuées:

F.S. Porter	MT-5	From: De To: A	METOC Halifax Gander Weather Office
H.J. Wilson	EG-ESS-6	From: De To: A	Inuvik Regional Office Edmonton
A. Saulesleja	MT	From: De To: A	Maritimes Weather Office AES Headquarters, Downsview
A.J. Arsenault		From: De To: A	Goose Bay Sydney, Nova Scotia
M.C. Howe		From: De To: A	Goose Bay Sydney, Nova Scotia
R.K. Brannen		From: De To: A	Sydney, Nova Scotia Goose Bay
G. Gordanier	EG-ESS-4	From: De To: A	Moosonee The Pas
T. Roach	EG-ESS-4	From: De To: A	Isachsen Moosonee

P. Kyle	EG-ESS-4	From: De To: A	The Pas Western Region
D.A. McLeod	EG-ESS-4	From: De To: A	Baker Lake Western Region
V.A.C. Sakellarides	EG-ESS-3	From: De To: A	Winnipeg Regional Headquarters Quebec Region
F. Winkler	EG-ESS-3	From: De To: A	Sachs Harbour Hall Beach
L. Baker	EG-ESS-3	From: De To: A	Sable Island Mould Bay

The following are on temporary duty or special assignment:

Les personnes suivantes occupent temporairement ces postes ou sont en stages spéciaux:

W.S. Appleby	Acting Chief Meteorologist, Maritimes Weather Office.
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Recent Graduates of AOTC:
Nouveaux diplômés de CFOA:

W.A. Hurlburt	To: A	Hall Beach
F. Schultz	To: A	Eureka
K.R. Bull	To: A	Isachsen

Retirements:
Départs à la retraite:

D. Ross	Retired	Ontario Regional Headquarters
A.M. Miceli	Retired	Meteorological Applications Branch, Central Services Directorate, AES Headquarters, Downsview
V.G. Biernes	Retired	Pacific Weather Centre
R. Allen	Retired	OIC North Bay Weather Office

Deceased:
Décès

Herbert Bergum	Deceased	Central Services Directorate, AES Headquarters, Downsview
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ANNUAL RECREATION ASSOCIATION CHILDRENS' CHRISTMAS PARTY

The festive season got off to a good start this year with the arrival of Santa at AES Headquarters on Sunday, Dec. 11 for the Annual R.A. Childrens' Christmas Party.

Judging by the number of children present this year (161 to be exact) this event has become one of the most popular events at Headquarters.

Cartoons and "Jingles" the Clown provided the entertainment for the children who waited eagerly for the arrival of Santa.

Finally he arrived with a "Ho" "Ho" "Ho". Gifts, balloons and goodies were provided to all.



A word of thanks should be extended to the Committee who worked so hard to make this event a success, with a special thanks to Ruth McNaughton, Patricia Terry, the Clowns, Santa's Helper and (not to be forgotten) Santa, alias Bob Higgs.

Ebenezer Scrooge



Don S. Ross presents W. Reg. Allen with framed certificate signed by the Prime Minister L-R Reg. Allen, Mrs. Allen and D.S. Ross.

IN MEMORIAM

Herbert O. Bergum

Herbert O. Bergum passed away on December 2, 1977. He was 41 and had been a meteorologist since 1960. In his 17 year career he had worked in all AES Directorates. This included forecasting duty at Cold Lake, Alta., Bagotville, Que., North Bay, Ont., Esquimalt, B.C. and Edmonton, Alta. He had administrative assignments in the Research Directorate and in Training Branch. He did project work for the Instruments Branch and the Hydrometeorological Projects Section, his last assignment. In 1974 he was the secretary-treasurer for the MT Group national executive.

Herb was unfortunate to have been plagued with respiratory problems all his life. In spite of this he maintained a cheerful disposition and worked hard at his every endeavour. A respiratory failure caused his death. It was therefore fitting that his many friends and co-workers at AES Headquarters and the MT Group of the PIPSC made donations to the York Toronto Lung Association in his memory.

EXTRAIT DU RAPPORT ANNUEL DE LA RÉGION DU QUÉBEC

Afin de rendre la vie plus agréable à nos techniciens-observateurs qui sont affectés, à titre de célibataires, dans nos stations isolées, nous leur avons fait parvenir des récepteurs télévisions à cassette, afin de pouvoir capter des programmes variés que nous enregistrons à la station de Ste-Agathe, sur cassettes. Nous avons de tels récepteurs maintenant à quatre stations, Clyde, Cape Dyer, Border et Inoucdjouac.

SUGGESTION AWARD PROGRAM

During 1977, 55 suggestions were received, of which 6 have already received their cheques. More awards are yet to be made.

Listed below are the six suggestions which have been adopted and awards received to date:

No. 562 – G.A. Bell (\$20.80)

Suggestion: That 3 signs be located at the Sydney, N.S. Airport to assist unfamiliar pilots in finding assisting offices.

No. 710 – L. Solar (\$124.80)

Suggestion: That fluorescent GLO markings, paint or ribbon, be put on guy wires of all navigation marine light beacons where there is a chance of vehicles or aircraft running into the guys.

No. 778 – D. Kochman (\$41.60)

Suggestion: That the MARS I system be up-dated for increased efficiency and that the new test procedures be implemented.

No. 781 – H.P. Schmidt (\$160.00)

Suggestion: That the shift cycle at the Prairie Weather Centre be re-organized whereby all would share equally in the workload and be afforded the opportunity to work in ODIT unit.

No. 820 – G. Kearey (\$499.20)

Suggestion: That a time activated solenoid water valve be used to control the demineralyser water intake at Aerological Stations that make use of demineralysed water for the electrolyser.

No. 829 – A.A. Aldunate (\$295.36)

Suggestion: That obsolete satellite data now held on 10" reels be respooled onto empty 7" reels resulting in considerable savings in the cost of expendable materials.

TRIVIA

You will find what passes for bravery is plain ignorance about danger.

A stage is what many a teen-aged girl thinks she should be on, when actually it's something she's going through.

No matter how much you try to improve on Mother Nature, you're not kidding Father Time.

Do you still remember when a capsule traveled inside a man?

Change is not always an improvement; sometimes an old setup is actually better than adding a new upset.

A miser must be a fellow who stays at home and lets the rest of the world go "buy".

When a fellow is completely wrapped up in himself he makes a mighty small package.

Some people never get interested in anything unless it's none of their business.

Big wheels could be little cogs that continued to grow.

LES PROVERBES QUÉBÉCOIS

"Remets jamais à demain ce que tu dois faire aujourd'hui."

"Après la pluie, le beau temps".

"Il faut se tourner la langue sept fois avant de parler."

"Une réputation perdue ne se retrouve plus."

"Lorsqu'on attend après son voisin pour dîner on dîne bien tard."

"Si les cochons avaient des ailes, ça ferait des beaux serins."

Ne remets jamais à plus tard ce que tu dois faire immédiatement.

Après les ennuis, la joie.

Bien réfléchir avant de se prononcer.

Petite histoire morale: Un jour l'eau, le feu et la réputation vont en forêt. L'eau dit: "Si vous me perdez, je serai sous terre", le feu dit: "Si vous me perdez et voyez de la fumée au-dessus de la terre, je serai là," la réputation

dit:” Si vous me perdez et me cherchez, ne
comptez plus me retrouver.”

Il ne faut compter que sur soi-même.

Pour se moquer d'une supposition absurde.

ON BECOMING A CITIZEN

By Anita Myra D'Gabriel
Dec. 14, 1977

Thrilled and nervous as a bride
Renouncing any others,
Solemn-faced, resurgent mind,
Surrounded by my brothers.

Young and old, fair and dark,
From many other lands;
We swore allegiance to a flag
And became Canadians.

My nation, born of freedom,
Given to all who seek
For justice and understanding
Though they be strong or meek.

I see a nation before me
Whose greatness is only excelled
By the nation that it can be
When our spirits have rebelled.

Rebelled against iniquity,
Vowed to heal and teach,
Fought against an enemy
Our Godly souls impeach.

There is no room for laggards,
For those who will not give
Their time and their emotions
So liberty can live.

We all can build together
If God is in our hearts,
A nation of endeavour
With a new and glorious start.

SYNOPSIS FOR BRITISH COLUMBIA

Wondrous windy wet warm winter weather which whipped washed and walloped and province overnight will be with us through the "west" of the week. Temperatures continued on the mild side on Monday with Cranbrook setting a new record maximum of plus 6 degrees and Hope reporting the warmest temperature in the country at 9 degrees. Winds up to 85 kilometers per hour were reported along the coast last night as one of a series of storms reached the coast. This storm will barely have time to move eastwards across the province before the next one arrives tonight.