



c.m.o.s.

NEWSLETTER

s.c.m.o.



DECEMBER 1979

Vol. 7 No. 6

Contents

	<u>Page</u>
From the President's Desk	1
Executive Highlights	3
News from the Centres	4
Sustaining and New Members	6
Notices	7
Youth Science Foundation	11
Educational Opportunities	12
-University of Waterloo by Prof. M.B. Danard	
Books	13
Dictionary	15
Advertisements	16

FROM THE PRESIDENT'S DESK

I mentioned in the last Newsletter some of the activities underway to help design the Canadian Climate Program. The Climate Advisory Committee (CAC) on which the Society is represented, met in Ottawa on October 17 and the Climate Planning Board (CPB) on October 26 to further this goal. The proceedings and recommendations of the special workshop on Energy/CO₂ Impacts should be available shortly. The CPB acted immediately on one recommendation to set up a Technical Committee to oversee Canada's involvement in CO₂ Studies. The first Sector Workshop in Agriculture will have been held by the time you receive this Newsletter (Ottawa, November 22-23). Others in Energy, Oceans and Fisheries, Water (including waterfowl and inland fisheries), and Forestry are planned during the period February to May, so if you wish to have input or would like to attend any of these workshops, please contact the Canada Climate Centre. Plans are now well advanced in most areas of the country to establish Regional Climate Advisory Committees to provide input for the Canadian Climate Program and to provide liaison with the national CAC.



CMOS NEWSLETTER is a bi-monthly publication of the Canadian Meteorological and Oceanographic Society.

Editor:

Avard S. Mann
Atmospheric Environment Service
Argyll Centre
6325 - 103 Street
Edmonton, Alberta
T6H 5H6 Tel: (403) 437-1250

Cartoon by Ford Bergwall.

The Andrew Thomson Memorial Lecture which was co-sponsored by the Society, University of Toronto and the Atmospheric Environment Service on October 11, was well attended. Sir John Mason's lecture on "Numerical Modelling of Global Climate and Effects of Human Activities" kept his audience very attentive for over 1½ hours. We had hoped to publish his lecture in ATMOSPHERE-OCEAN, but this is not possible on this occasion.

The Scientific Committee had a productive meeting before adjourning to attend the Memorial Lecture. They struck two ad hoc sub-committees to study in greater depth, two very important aspects. 1) in the area of granting of research, and 2) in the area of education and training, the latter with a directive to study the feasibility of having a panel meeting for members possibly in conjunction with our upcoming Congress in Toronto.

Structuring of Committees was also an order of business at the recent Council Meeting on October 26. Council followed through with a recommendation from the AGM in May to establish a Financial Development Committee to investigate ways of developing a comprehensive financial policy to better support the various activities of the Society. Named to this committee so far are Mory Hirt, Don McIntyre (Chairman) and Leo O'Quinn. Also established was a Standing Committee on Professionalism following the recommendation of the Review and Evaluation Committee which reported at the AGM on the earlier Report of the Ad hoc Committee on Meteorological Consulting Standards in Canada. This committee will start by reviewing the functions outlined in the Report of the Review and Evaluation Committee, and initially, membership will come from representatives from the Atmospheric Environment Service, provincial governments, universities, industrial corporations, and consulting firms. If you have an interest in serving on the Professionalism or Financial Development committees, please let Randy Angle, CMOS Treasurer or myself know. Council also approved terms of reference and some immediate tasks for the Membership Committee and the Public Information Committee, both of which have representation from all Centres and optionally from Chapters. Find out who your local representatives are on these committees and give them the benefit of your ideas and help to make our society grow to be a more effective organization for the advancement of meteorology and oceanography in Canada.

Council established a new position that of Society Archivist. With the Society, or its predecessors, nearly 40 years old, and with the present trend to move the national Executive around the country, it has become increasingly difficult to keep track of our records and know the history of the Society and its activities over the years. By recognizing the need for a Society Archivist, Council hope that the history of the Society can be brought together and guidelines will be developed so that officers of the Society will endeavour to maintain all valuable files and documents for placement in the Society or National Archives.

EXECUTIVE HIGHLIGHTS

- It was agreed at the Council Meeting of October 26, that the society would proceed with the request for an NSERC grant. Tim Oke and Randy Angle are proceeding with financial documentation for this request.
- A new Committee on Professionalism was created to carry through the recommendations of ad hoc committee on Consulting Standards. Randy Angle will initiate the formation committee of five which will include representatives from federal and provincial governments, universities, consultants and industry.
- Subvention allocations were agreed and it was hoped that cheques would be mailed to all centres requiring support by early November.
- Council formalized the arrangement for a complimentary copy of CHINOOK to be mailed with the February Newsletter. A questionnaire will be included so that members may indicate if they would be interested in receiving the magazine on a regular basis at a special bulk subscription rate.
- Other members of the newly-created Financial Development Committee in addition to Mory Hirt are Don McIntyre and Leo O'Quinn. Council agreed to the terms of reference for this committee.
- British Columbia Mainland is the name adopted for the new west coast Centre which will take in all of B.C. except Vancouver Island and the Gulf Islands. These latter fall within the area of the new Vancouver Island Centre.
- At the October 11, 1979 meeting of the Scientific Committee, Phil Aber outlined the situation since implementation of the new AES policy on meteorological education and training. This report and subsequent discussion expressed concern over the limited number of meteorological graduates available to AES and the difficulties encountered in establishing meteorological courses. An "ad hoc" committee on meteorological education and training was established with the following members: Alistair Fraser, Tim Oke, Phil Aber, Roland List, and Mory Hirt.
- The Scientific Committee also expressed dissatisfaction with the reply from Dr. Ingraham in refusing the Society's request for a separate NSERC granting committee on atmospheric sciences. An "ad hoc" committee, consisting of Catherine Gautier, Phil Merilees, John Gregory, Keith Hage, and Ron Burling was requested to consider this problem and develop a means of re-opening this issue with NSERC.

NEWS FROM THE CENTRES

Winnipeg - George Moody reports that the annual PRAIRIE AWARD for 1978 was won by J. Anderson, Rick Radatz, and Mark Hacksley for their study entitled, "A Snowfall Forecast Technique for the Eastern Prairies and Western Ontario".

The first fall meeting of the Winnipeg Centre was held in October. Mory Hirt was the speaker and presented a talk on "Meteorology in Industrial Design". Mory's company, MEP, has recently established an office in the Grain Exchange Building and currently supplies forecast information to radio station CJOB.

On November 29, Dr. Martin Clutton-Brock of the University of Manitoba, will present a talk on "Astronomy of the Sun".

Toronto - The Toronto Centre will hold its first meeting in November with guest speaker Dr. Dave Strangway, President of the Canadian Geophysical Union, presenting a talk on "Space Physics".

Jack Donegani also notes that Dave Phillips replaces Fred Conway as Secretary-Treasurer, as reported in the last Newsletter.

The Toronto Centre is very busy organizing for XIV Congress, and one item of general interest is that tours are being organized for delegates to the Aerospace Centre, York University, AES Headquarters at Downsview and Canadian Centre for Inland Waters at Burlington.

Vancouver Island - Rick Thomson reports that almost all the work entailed in hosting XIII Congress has been wound up and that plans are well advanced for an active, but normal, 1980 season. Four speakers have been lined up and election of a new executive will be on the agenda early in the new year.

Alberta - The first fall meeting of the Alberta Centre was held in Edmonton on November 1. Horace Wilson presented a talk on recent progress in understanding the Chinook. At this meeting, two new members of the executive were elected: Carr McLeod and Tom Medlicott of the Alberta Weather Centre as Chairman and Secretary-Treasurer, respectively.

The next meeting will be held on the 29th of November with Dr. English of the University of Alberta speaking on "Climatological Change".

New Brunswick - The first fall meeting was held on November 20. Dr. R.C. Rainey and M. C. Haggis of the Centre for Overseas Pest Research, London, U.K., spoke on "Meteorology and Insect Flight".

St. John's - John Bursey reports that the first meeting of the St. John's Chapter was held September 20 with about 30 people in attendance. Dr. Warren Denner spoke on "Development of Oceanography at Memorial University".

The next meeting (October 22) schedules Dr. Colin Banfield to talk on "Synoptic Aspects of Heavy Rain over the Avalon Peninsula".

Montreal - Jean-Guy Cantin reports the following activities from the Montreal Centre:

"Le professeur R.R. Rogers, directeur du département de météorologie de l'Université McGill, fut le premier conférencier de la saison 1979/1980. Il nous a entretenu de la recherche en météorologie à l'Université McGill.

Le second conférencier sera le directeur programme d'océanographie de Rimouski, monsieur Jean Lebel qui fera une brève présentation des travaux de recherches menés par les équipes de son département. De plus, il discutera de la distribution du carbone inorganique dissous dans l'estuaire moyen du St-Laurent. Cette rencontre scientifique se tiendra le 29 novembre 1979.

Monsieur S.J. Froeschl, météorologiste au Centre des Prévisions du Québec, a été confirmé comme le nouveau représentant au comité permanent d'information publique. Nous remercions monsieur A. Ouellet qui a agi comme représentant aux cours des années passées."

Ottawa - The following outline of fall activities of the Ottawa Centre has been received from Bob Jones:

"The CMOS Ottawa Centre held its first speaker meeting of the year on October 2, 1979. We were privileged to have as guest speaker, Dr. Christopher Garrett from Dalhousie University in Halifax, who talked on Oceanographic Aspects of Fundy Tidal Power. Dr. Garrett is the most recent recipient of the CMOS "President's Prize". We had a good turnout of about 35 members and visitors to hear Dr. Garrett. Prominent among the visitors were several members of the Hydraulics Laboratory of National Research Council, who were particularly interested in the topic.

Our second meeting, held on the evening of November 15, represented a significant departure from tradition for our Centre...the venue of the meeting was changed to Cornwall, Ontario! A small group of about 20 members proceeded via chartered "busette" and car to the Transport Canada Training Institute (TCTI) to tour the facility and hear Messrs. Hans Van Leeuwen and Doug Tesch discuss the current state of meteorological training in Canada. The tour of the superb training facilities at TCTI was most interesting and informative and most of the members, who toil in "lesser" surroundings, came away very envious. An informal question and discussion period around one of the Institute's bars completed the evening's activities, after which we returned to Ottawa."

SUSTAINING MEMBERS

The following are Sustaining Members of the Canadian Meteorological and Oceanographic Society:

Airflow Developments Ltd. Richmond Hill, Ont.	Greenpark Canadian Forestry Equipment Ltd. Edmonton, Alberta
Air Canada Montreal, P.Q.	Hermes Electronics Ltd. Dartmouth, N.S.
Alberta Weather Modifications Ltd. Three Hills, Alberta	MacDonald Dettweiler & Assoc. Ltd. Richmond, B.C.
Beak Consultants Ltd. Vancouver, B.C.	MacLaren, Marex Inc. Dartmouth, N.S.
Bendix-Aviation Electric Montreal, P.Q.	Philip E. Merilees Montreal, P.Q.
Bristol Aerospace Winnipeg, Man.	Neil Sargent Downsview, Ont.
Dobrocky Seatech Ltd. Victoria, B.C.	Meyer Systems Inc. Vancouver, B.C.

NEW MEMBERS

Laurent Chenaro Ile de Soeurs, P.Q.	Bernard Mongeon Montreal, P.Q.
Jacques Benoit Dartmouth, N.S.	Real Sarrazin Montreal, P.Q.
Philip John Hearn St. John's, Nfld.	Denis Vigneux Greenlay, P.Q.
Kirk James Johnstone Edmonton, Alberta	Pierre Dubreuil Montreal, P.Q.
David John Brown Ottawa, Ont.	Jean Louis Bisson Longueuil, P.Q.
Luc Prevost Montreal, P.Q.	Jean Gagnon Orleans, Ont.

NOTICES

Call for Nominations - 1979 Awards

Nominations are requested from members and Centres for the 1979 CMOS Awards to be presented at the 1980 Annual Meeting. Four awards are open for competition: 1) the President's Prize for an outstanding contribution in the field of meteorology and/or oceanography by a member of the Society; 2) the Dr. Andrew Thomson Prize in Applied Meteorology, for an outstanding contribution by a member in that field; 3) the Graduate Student Prize, for a contribution of special merit, and 4) the Rube Hornstein Prize in Operational Meteorology, for outstanding service in providing operational meteorological service. The awards will be made on the basis of contributions during the 1979 calendar year, except (4) which may be awarded, also for work performed over a period of years.

Nominations are also requested for the award of citations to individuals or groups in Canada who have made some outstanding contribution in helping to alleviate pollution problems or in developing environmental ethics.

All nominations should reach the corresponding secretary not later than February 1, 1980.

Appel aux Candidatures pour les prix et Citations 1979

On demande aux membres et aux centres locaux de soumettre leurs nominations aux candidatures pour les prix de la Société pour l'année 1979. Il y a quatre prix: 1) le prix du président pour un travail exceptionnel en météorologie et/ou océanographie par un membre de la Société. 2) le prix de météorologie appliquée Dr. Andrew Thomson pour un travail exceptionnel dans ce domaine par un membre, 3) le prix aux étudiants gradués et, 4) le prix de météorologie opérationnelle Rube Hornstein pour un travail exceptionnel dans l'exploitation des services météorologiques.

Tous les prix seront attribués pour un travail qui a été effectué durant l'année 1979, à l'exception de (4) qui peut aussi être attribué pour un travail effectué durant une période couvrant plusieurs années.

On demande aussi des nominations de candidats susceptibles de se voir décerner une citation par la Société. Une citation peut être décernée à un individu ou à un groupe qui a apporté une contribution exceptionnelle à la solution des problèmes de la pollution, à l'amélioration de l'environnement ou au développement d'une éthique écologique.

Toutes les nominations recueillies par le secrétaire-correspondant avant le 1er février 1980 seront remises aux comités des récompenses et des citations, selon le cas.

For Awards Citations contact:

*Nancy Cutler
Atmospheric Environment Service
Downsview, Ontario.*

and for Nominations:

*Don Bauer
Weather Office
Atmospheric Environment Service
Saskatoon, Saskatchewan.*

Call for Papers

Second Conference on Meteorology of Northern New England and the Maritimes, March 21, 22, 1980, Fredericton, N.B., Canada.

A conference on the Meteorology of Northern New England and the Maritimes, hosted by the University of New Brunswick and jointly sponsored by the American Meteorological Society and the Canadian Meteorological and Oceanographic Society will be held at Keddy's Motor Inn Fredericton, New Brunswick, March 21, 22, 1980.

Papers of both a technical and non-technical nature related to the conference title are invited. Titles and abstracts should be submitted by December 15, 1979, to the Conference Chairman, Prof. R.B.B. Dickson, Department of Forest Resources, P.O. Box 4400, Fredericton, N.B., E3B 5A3, Canada.

Call for Papers

The Fourteenth Annual Congress of the Canadian Meteorological and Oceanographic Society will be held, together with the American Geophysical Union (AGU) Spring Meeting, at the Harbour Castle Hilton Hotel, Toronto, Ontario from May 22-27, 1980.

The scientific programs of the Congress will be integrated with the meteorology and oceanography sessions of the AGU meeting. The Congress Program Committee will work with AGU section chairman to review abstracts submitted by CMOS members. Sessions of special interest to our members will also be organized.

Contributed papers are solicited in all areas of meteorology and oceanography. Poster papers will be given special consideration. Send abstracts to:

AGU Meetings
2000 Florida Avenue N.W.
Washington, D.C. 20009
U.S.A.

Demande de Publications

Le quatorzième congrès annuel de la Société canadienne de météorologie et d'océanographie coïncidera avec la session de printemps de l'AGU (American Geophysical Union) et sera tenu à l'hôtel Harbour Castle Hilton de Toronto du 22 mai au 27 mai 1980.

Le contenu scientifique du congrès sera intégré aux sessions de l'AGU portant sur la météorologie et l'océanographie. Le comité d'organisation du congrès comprendra un membre de l'AGU et sera responsable de la révision des articles présentés par les membres de la SCMO. Des sessions destinées spécifiquement à nos membres seront aussi organisées.

Des articles touchant à tous les domaines de la météorologie et de l'océanographie sont demandés; une attention particulière sera accordée aux articles de type "poster"; certaines sessions peuvent être de type "poster" uniquement. Vous êtes priés de faire parvenir vos résumés à l'adresse suivante:

AGU Meetings
2000 Florida Avenue N.W.
Washington, D.C. 20009
U.S.A.

Canadian Geophysical Bulletin

Each year, abstracts of meteorological and oceanographic research activities in Canada are presented along with reports on other fields of geophysical research, in the Canadian Geophysical Bulletin. Anyone who wishes to receive this Bulletin should write to:

Mrs. M. Bradfield
Earth Physics Branch
1 Observatory Crescent
Ottawa, Ontario
K1A 0Y3

Le bulletin canadien de géophysique

Ce bulletin présente un rapport annuel de la recherche dans toutes les disciplines géophysiques, y compris la météorologie et l'océanographie. Les personnes désirant recevoir le Bulletin devront s'adresser à:

Mme. M. Bradfield
Direction de la Physique du Golfe
1, Place de l'Observation
Ottawa, Ontario
K1A 0Y3

Great Lakes '80

International Association for Great Lakes Research
Queen's University, Kingston, Ontario 19-22 May 1980

In addition to scientific sessions, the Conference Theme, "Towards an Ecosystem Management Strategy" will be addressed by a number of internationally known scientists and environmental managers. We welcome contributed papers, both on the conference theme and on any aspect of science relevant to the Great Lakes. Further information can be obtained from:

Dr. E. D. Ongley
Great Lakes - '80
Queen's University
Kingston, Ontario
K7L 3N6

CONFERENCES

Edmonton, Alberta	February, 1980	Hydrometeorology Sectorial Workshop Sponsor: Canadian Climate Centre Alberta Climatological Association
Fredericton, N.B.	21-22 March 1980	Second Conference on Meteorology of Northern New England and the Maritimes Sponsor: AMS-CMOS
Laramie, Wyoming	15-17 April 1980	Western Snow Conference
Kingston, Ontario	19-22 May 1980	Great Lakes - '80 Sponsor: International Association for Great Lakes Research (IAGLR)
Toronto, Ontario	22-27 May 1980	AGU Spring Meeting; 14th CMOS Congress
Hartford, Conn.	April 1981	Long Range Transport of Air Pollutants Sponsor: AMS-CMOS
Toronto, Ontario	16-18 June 1981	Fourth Conference Atmospheric Radiation Sponsor: AMS-CMOS

YOUTH SCIENCE FOUNDATION

Annual Report of Science Fairs' Committee - 1979

Leo O'Quinn attended the Annual Meeting of the Youth Science Foundation 15 October 1979 in Ottawa and provided this report prepared by the chairman of the Science Fairs' Committee.

"The 18th Canada-Wide Science Fair was another most successful event, held at the University of Western Ontario in London, Ontario, on May 12 to 20, 1979.

There were 171 projects entered, involving 220 junior and senior high students, all representing their various regions most ably with their high calibre, complex, and innovative work. The London District Science and Technology Fair is to be congratulated for their superb efforts in producing a very well organized and extremely interesting Canada-Wide Science Fair.

At the delegates' meeting, held on the Thursday, "The Guidelines and Procedures for the Science Fair Movement in Canada" were accepted by a motion of the delegates.

Some areas of concern which arose at the delegates' meeting were those of new regional science fairs forming within existing regional science fair boundaries, and large regionals drawing from populations greater than 250,000 sending more than four projects to the Canada-Wide.

Various sub-committees concerned with communications, fund-raising, bio-safety, regional by-laws, and the N.S.S.C. presented most interesting reports to the delegates' meeting.

Terry Allen from Calgary was elected as Vice-Chairman of the Science Fairs Committee.

Plans for the 1980 Canada-Wide Science Fair to be held at Thompson, Manitoba on May 11 to 17 are well under way. It appears that it will be a unique experience for competitors and delegates alike, with practically the whole town giving their support to the organizing host committee.

In closing, I would like to express my appreciation to David Hall, our Executive Director, for the excellent work he has carried out on behalf of the Science Fair movement this past year.

Graham Cooke
Chairman
Science Fairs' Committee"

EDUCATIONAL OPPORTUNITIES

Meteorology Training Programs at the University of Waterloo by
Prof. M. B. Danard

Meteorology courses are offered by both the Environmental Fluid Mechanics Group of the Department of Mechanical Engineering and the Department of Geography. Graduate programs include Master of Applied Science, Master of Arts and Doctor of Philosophy. Students applying for the Master of Applied Science Program (Mechanical Engineering) should have bachelor's degrees in engineering, physics, mathematics, meteorology or oceanography. Current research topics are large scale weather prediction, mesoscale wind systems, boundary layer meteorology, dispersal of air pollutants, aerosol dynamics, energy balance over lakes and public view of weather modification. Extensive use is made of numerical modelling. Fluid dynamics laboratories, turbulence measuring equipment and excellent computing facilities are available for research.

The following courses are offered:

Undergraduate

Mechanical Engineering	469	Introduction to the Environmental Sciences
Mechanical Engineering	571	Air Pollution
Geography	301	Climatology
Geography	303	Physical Basis and the Geography of Water
Geography	408	Special Topics in Climatology and Natural Hazards
Geography	409	Energy Balance Climatology
Mechanical Engineering	664	Turbulent Flow
Mechanical Engineering	669	Numerical Studies in Atmospheric Dynamics
Mechanical Engineering	670	Atmospheric Dynamics
Mechanical Engineering	763	Micrometeorology
Mechanical Engineering	764	Dynamical and Physical Meteorology
Mechanical Engineering	766	Wave Phenomena in Fluid Flow
Geography	608	Climatology
Geography	609	Boundary Layer Climatology

We are planning to implement a synoptic meteorology laboratory course in order to satisfy completely the Atmospheric Environment Service's requirements for prospective employees. For further information, contact Prof. M.B. Danard, Dept. of Mechanical Engineering, University of Waterloo, Waterloo, Ontario N2L 3G1 Telephone: (519) 885-1211, ext. 3661 or 3385.

BOOKS

CAUSES OF CLIMATIC CHANGE

Edited by J. Murray Mitchell, Jr. NOAA

Covering the broad areas of climatic determinism, atmosphere-ocean-ice cap dynamics, and astronomical factors in climatic change, the monograph presents an equitably balanced and logically progressive overview of the problem of climatic change. Many climate-regulating theories are presented, including ocean properties and currents, volcanic activity, continental drift, earth-orbital relationships, CO₂ content, solar output and cosmic debris, among others.

CAUSES OF CLIMATIC CHANGE, will prove to be an indispensable reference to the scientists in such relevant fields as meteorology and climatology, physical and chemical oceanography, tectonics, volcanology, geochemistry and solar physics.

160 pages

Meteorological Monographs
Volume 8, Number 30

American Meteor-
ological Society

ESSAYS ON METEOROLOGY AND CLIMATOLOGY

In Honour of Richmond W. Longley.

Edited by K. D. Hage and E. R. Reinel, University of Alberta

This collection of essays was prepared to honour the 70th birthday and nominal retirement Richmond W. Longley. It covers a wide range of topics in the geographical sense, from Arctic Canada through the tropics to the tip of South America and in scale from an assessment of climatic change on the Canadian economy to the microclimatology of growing corn.

An excellent collection of essays on pertinent subjects by authors who are recognized for their contributions to the science of meteorology and climatology.

1978

427 pages

University of Alberta

STATE-OF-THE-ART OF ECOLOGICAL MODELLING

Proceedings of a Conference on Ecological Modelling,
Copenhagen, Denmark 1978
28 August - 2 September 1978

Editor: S. E. Jorgensen, International Society of
Ecological Modelling, Vaerloose, Denmark

LC No. 78-41208 May 1979 023443 7(F) \$90.00

Series: Environmental Sciences and Applications, Vol. 7

250 x 176 mm 700 pages approx.

Contents: Invited state-of-the-art or review papers: River models. Application of graphical methods. Application of microcosms in ecological modelling. Prey-predator models. Modelling water quality and irrigation in agriculture. Modelling the distribution and effect of toxic substances. Lake models. Modelling coastal areas and estuaries. Water quality planning models. Original papers: Models of sea and coastal areas. Modelling atmospheric pollution. Modelling atmospheric pollution. Modelling ecosystems in the lithosphere. Water management models. Lake models. Primary production models. Prey-predator models. Theoretical-mathematical problems. State-of-the-art and needs for further research.

INTRODUCTION TO MARINE POLLUTION CONTROL

Jerome Williams, U.S. Naval Academy

This book emphasizes proper management to show how marine areas can be used for certain kinds of waste disposal without destroying the oceans. It is the first interdisciplinary approach to marine pollution - covering basic physical, chemical, and biological processes of the oceans as well as economic and sociological aspects of present and future marine problems. The author also analyzes risks, benefits, and costs in terms of society's priorities.

Contents: Introduction. What Is Pollution? Marine Pollutants and Their Sources. The Effects of Pollution. Controlling Pollution. The Forces Involved in Dispersing Pollutants. Advection Processes. Diffusion and Other Predictive Models. Interaction of the Hydrosphere, Atmosphere, Lithosphere, and Biophere. Management of the Marine Environment. The Future of the Marine Environment. Index.

Approx. 256 pp. (1-01904-6) Jan. 1979 \$30.00 (tent)

DICTIONARY - by Simon M. Kevan

CMOSUDOMAOT

Installment 6

- Anemometer - Ther Mometer's sister. *N.T.
- Degree - An amount or an extend which, even when positive, is only comparative. E.E.
- Fishing Rod - A stick with a hook at one end and a fool at the other. S.J.
- Fjord - A Norwegian automobile. E.E.
- Flood - A superior degree of dampness. Specifically, a great storm described by Berosus and Moses, when, according to the latter's rain-guage, there was a precipitation of moisture to the depth of one-eighth of a mile in twenty-four hours for forty days. The former did not measure, apparently, for he simply explains (in pretty good Greek) that it rained cats and dogs. The learned author of the cuneiform inscriptions from the Mesopotamian mounds draws a number of carpet-tacks on a brick to signify that it was "quite a smart shower considering the season."
- Hail - Fellow, well met. *H.H.W.
- Hot Wire - A miniature hot rod. *N.T.
- Ionosphere - A profound statement uttered by a weatherman who sat on a weather balloon. *S.K.
- Max and Min - The terrible twins (Fashionable names for a meteorologist's twin children). *N.T.
- Mesosphere - An introspective condition which occasionally develops in weathermen who have been left out too long in the cold and dark. *S.K.
- Oceanographer - A scientist to whom the sea's bottom is even more important than the moon's behind. E.E.
- Rain - "of terror" *H.H.W.
- Seasons - Spring is a virgin, Summer a mother, Autumn a widow, and winter a step-mother. (Polish Proverb)
- Spring - That season of year when farmers and golfers start their plowing. S.H.
- Summer - That time of year when the chair gets up when you do. S.H.
- Tidal Bore - What over-enthusiastic oceanography graduate students can become when discussing their research. *S.K.
- Weather - The Climate of an hour. A permanent topic of conversation among persons whom it does not interest, but who have inherited the tendency to chatter about it from naked arboreal ancestors whom it keenly concerned. The setting up of official weather bureaus and their maintenance in mendacity prove that even governments are accessible to suasion by the rude forefathers of the jungle. A.B.
- From a Montana Newspaper: "Tomorrow we may expect strong northwest winds reaching a gal in exposed places." S.H.

ADVERTISEMENTS



YOUNGE OFFSHORE FORECASTING SERVICES LTD.

P.O. Box 6261, Stn. D. Calgary, Alberta T2P 2C8 269-2609

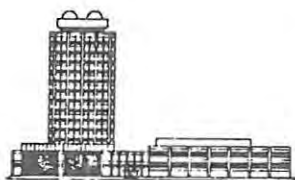
Younge Offshore Forecasting Services Ltd. are seeking an experienced meteorologist who is looking for challenge and responsibility in a business environment.

As the "right hand man", you will be working closely with the owner of the company, and will be required to use your expertise in both technical and administrative affairs.

The company is well financed and can offer you an excellent salary and the opportunity to join a small group of professionals in one of the country's most dynamic and promising businesses.

If you respond to this challenge and have a Masters or Ph.D. in Meteorology with several years weather forecasting experience, you will be given preferential attention.

The salary offered to you will reflect your experience and ability and relocation expenses will be paid by the company. If you are interested in this opportunity, please forward your qualifications, in confidence, to M. Younge, Younge Offshore Forecasting Services Ltd., P.O. Box 6261, Station "D", Calgary, T2P 2C8, Telephone 269-2609.



UNIVERSITY OF TORONTO

DEPARTMENT OF PHYSICS

ASSISTANT PROFESSORSHIP IN DYNAMIC METEOROLOGY

Requirements: Research experience in atmospheric dynamics and teaching experience in meteorology.

Duties: To establish a research program in dynamic meteorology, to teach graduate and undergraduate courses, and to supervise graduate students.

The starting date for this regular University position is July 1, 1980; applications with vitae should be submitted not later than January 31, 1980. Inquiries and applications should be directed to Prof. R.L. Armstrong, Chairman, Department of Physics, University of Toronto, Toronto, Ontario M5S 1A7, Canada.