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NEWS-LETTER OF THE SOUTH AFRICAN ASSOCIATION OF BOTANISTS
NUUSBRIEF VAN DIE SUID-AFRIKAANSE GENOOTSKAP VAN PLANTKUNDIGES

INTERNATIONAL ASSOCIATION FOR PLANT PHYSIOLOGY: Extracts from the June 1983 Newsletter received from the Secretary, Dr. D. Graham of the C.S.I.R.O. in Australia.

Subscriptions were received from the following members for 1982: Australia, Austria, Belgium, Canada, East Germany, France, India (SPPB), IPGSA (The Netherlands), Japan, New Zealand, The Netherlands, Nigeria, South Africa (via S.A.A.B.), Spain, Switzerland, United Kingdom, U.S.A., West Germany.

New Members: IAPP welcomes to membership

- . India - The Society for Plant Physiology and Biochemistry represented by their Secretary, Dr. Y.P. Abrol (Nuclear Research Laboratory, Indian Agricultural Research Institute, New Delhi - 110012, India). This represents a second group of plant physiologists from India.
- . Mexico - Represented by Professor A. Larque-Saavedra (Collegio de Postgraduados, Institucion de Enseñanza e Investigacion en Ciencias Agricolas, Chapingo, Mexico) who was elected to the Executive Committee at the Council Meeting held during the XIIIth International Botanical Congress held in Sydney, Australia in 1981.
- . Nigeria - Represented by Professor F.A. Onofeghara (School of Biological Sciences, University of Port Harcourt, P.M.B. 5323, Port Harcourt, Nigeria) who also was elected to the Executive Committee at the Council Meeting in Sydney 1981. This is the first member from West Africa.
- . Singapore - The Singapore Institute of Biology, represented by Professor P.N. Avadhani, Botany Department, National University of Singapore, Lower Kent Ridge Road, Singapore 0511) who was also elected to the Executive Committee at the Sydney meeting. Professor Avadhani is actively canvassing membership in South and South East Asia for IAPP.

Future members of IAPP: Active negotiations are proceeding to widen the membership. In particular, the Chinese Society of Plant Physiology has been holding

discussions about joining and it is anticipated that the Latin American Society of Plant Physiology (Sociedad Latino Americana de Fisiologia Vegetal) will join in the near future. Thanks go to Professor Larque-Saavedra of Mexico for his efforts in negotiating with the SLAFV.

There are many countries, especially in Africa, Asia and the Middle East, for whom IAPP has no contacts. If any members can advise the Secretary-Treasurer of addresses of plant physiological societies or plant physiologists who may be prepared to form such a society, he would be pleased to follow them up.

The President: The President of IAPP, Professor A. Quispel of the University of Leiden, The Netherlands, has indicated he plans to resign as President when he retires from his Chair at Leiden in August 1983. This will be a sad loss for Ton Quispel has served IAPP well during his period of office. A fuller appreciation of his work for IAPP will appear in the next Newsletter. Meanwhile, the Executive Committee of IAPP has agreed that the next President should come from one of the European members because of their strong support and central role in the affairs of IAPP. The Secretary-Treasurer is actively canvassing for a new President and would be pleased to hear of likely candidates.

Vice-President: The American Society of Plant Physiologists has appointed Professor R.L. Jones (Botany Department, University of California, Berkeley, 94720, U.S.A.), to replace Professor W.M. Laetsch as Vice-President. IAPP welcomes Professor Jones to the Executive Committee. During a recent visit to Australia he was able to hold useful discussions with the Secretary-Treasurer on policy matters and current activities of IAPP.

The Executive Committee: To remind you the Committee comprises:

President: Prof. A. Quispel, University of Leiden, The Netherlands.

Vice-President: Prof. R.L. Jones, University of California, Berkeley, U.S.A.

Secretary-Treasurer: Dr. D. Graham, Plant Physiology Group, CSIRO Division of Food Research, North Ryde, Australia.

Members: Prof. P.N. Avadhani, National University of Singapore.

Prof. A. Larque-Saavedra, Colegio de Postgraduados, Chapingo, Mexico.
and Prof. F.A. Onofeghara, University of Port Harcourt, Nigeria.

The Executive Committee is working well. The geographic dispersion of its membership in Europe, North America, Central America, Africa, South East Asia and Australasia means that we are in touch with most areas of the world which is very helpful in promoting the policies and activities of IAPP.

During a recent visit to S.E. Asia on behalf of ACIAR (Australian Centre for International Agricultural Research) which is developing collaborative research

with the developing countries, the Secretary-Treasurer was able to take the opportunity to discuss the current activities of IAPP with Professor P.N. Avadhani (Singapore). Professor Avadhani has formed an association of plant physiologists within the Singapore Institute of Biology which has formally joined IAPP. He is actively encouraging other groups in South and S.E. Asia to join IAPP.

Finances: The latest Bank Statement (May 1983) shows that IAPP has A\$2800 available. This is considerably greater than last year (A\$1000) and reflects the increase in subscriptions. Since finance is the key to expanding IAPP activities members must continue to improve on the present situation. Only by building up and maintaining our reserves can IAPP hope to take on new activities.

One pleasing feature during the year is that funds are beginning to flow in from the sale of the International Directory of Members of the constituent societies, mainly to publishing houses.

One interesting suggestion made to the Secretary-Treasurer is the possibility of requesting a voluntary levy from our more prosperous members. A request from the Treasurer of your national/regional association for a donation to IAPP could bring substantial returns which would be put to good use in developing IAPP policies.

IAPP International Directory: Members are reminded that the computer print-out of the Directory of Members (nearly 10,000 plant physiologists) is available through the Secretary-Treasurer. The cost is US\$60 (including postage) which is paid entirely to the American Society of Plant Physiologists on whose computer the Directory is stored. The Directory is also available to companies for US\$500 complete, or from \$300 for a partial list, again through the Secretary-Treasurer to establish the bona fides of the applicants. Part of this fee (US\$175) goes to ASPP to cover costs while the remainder comes to IAPP. A large number of companies, mainly publishing houses, have been advised of this service.

The views of members are requested on the possibility of a printed International Directory similar to the American Society of Plant Physiologists' Directory. The total cost is estimated at US\$15,000-20,000 so that sale of, say, 4,000 copies would be necessary at about \$5 each. IAPP printed such a Directory in 1965. It is suggested that such a Directory could be prepared every four years, using the information on computer-file.

IAPP Booklet Copies of the booklet entitled 'Tentative Recommendations of Terminology, Symbols and Units in Plant Physiology' are still available from the Secretary-Treasurer, price \$3 (Australian) to cover costs. Professor F.B.

Salisbury (Department of Plant Science, Utah State University, Logan, Utah, 84332 USA) is undertaking the revision of the booklet. He would be pleased to receive comments and suggestions for the revision.

IAPP Medal: An award in the form of an IAPP Medal has been suggested by Professor R. Bolduc (Canada) to give recognition to outstanding plant physiologists and, incidentally, some publicity and status to IAPP. The Executive Committee has considered this proposal and, while agreeing in principle to the value such an award would have for the international status of plant physiology, has some reservations about the implementation of the award. It is felt that an award committee would have an almost impossible task in making a selection, especially since such a committee would have to deal with the matter by correspondence. In addition, the view has been expressed that the resources available to a candidate should be taken into account in reaching a decision, to enable candidates, for example, from less developed countries to be considered. If members have any opinions on this matter, the Secretary-Treasurer would be pleased to hear from them, before taking the matter further.

IAPP Newsletter: In an endeavour to spread the news of IAPP as far as possible, extra copies of this Newsletter are again being sent to members for distribution among the various plant physiologists in your country or regional association. It is recognised that it will be impossible to furnish each plant physiologist (we do not know how many there are in the world but there are probably well over 15,000!) with his/her own copy. However, the aim is to circulate copies as widely as possible.

Secretaries of national/regional members of IAPP are urged to abstract material for their own Newsletter, where appropriate. The Forum Botanicum (Newsletter) of the South African Association of Botanists (our South African member association) reprints the IAPP Newsletter almost completely. Thank you South Africa!

National Newsletters: The Secretary-Treasurer would appreciate receiving a copy of the newsletter of your national association so that he may keep informed on activities, meetings etc. in your country or region. Future meetings of your association/society can be listed in the IAPP Newsletter which may attract international visitors to your meetings.

The New Policies:

Regional Meetings. The new policy of establishing links between plant physiologists of the more developed countries and those of the less developed countries is being pursued through the establishment of regional meetings/symposia/workshops

on problems of common interest. A list of possible topics was given in the last Newsletter and one of these - 'Plant water stress and arid-zone physiology' - has been taken up and approved by the Australian Society of Plant Physiologists. The Local Secretary will be:

Dr. J. Passioura
CSIRO Division of Plant Industry
P.O. Box 1600
Canberra, ACT 2601

He will be supported by the Secretary-Treasurer of IAPP, Dr. D. Graham. The meeting is planned to be held in Canberra, Australia, probably in May 1985, and will be associated with the Annual Meeting of ASPP. Sources of funding are now being sought by ASPP and IAPP. It is hoped to keep the meeting reasonably small and to have funds available to invite both notable speakers and others from developed countries. The Secretary-Treasurer has agreed to make a case to UN Agencies, particularly UNESCO and FAO, now that our membership is spreading among the less developed countries. Various aid-related agencies and Australian national sources will also be canvassed for financial support. Information already obtained by the Secretary-Treasurer from the International Union of Biological Sciences indicates that application for funds from IUBS would be in order and a grant application will be made by IAPP. It is hoped that a significant number of participants will come from Asia, many parts of which have substantial water-stress problems. It is proposed that a large part of the budget will be made available to support the travel of Asian scientists to Australia.

Other countries/regions may wish to initiate a meeting on a topic appropriate to their region. Please contact the Secretary-Treasurer at an early stage for IAPP support. It is likely that some limited initial funding could be provided by IAPP.

News from the International Union of Biological Sciences (IUBS):

Creation of IABMS. The President (Prof. A. Quispel) and Secretary-Treasurer (Dr. D. Graham) represent IAPP on IUBS through the Board of the Division of Botany and Mycology. As reported in the previous Newsletter, the Division was threatened in the re-organisation of IUBS. Despite representations from IAPP and other members of the Division, IUBS has made the threat a reality and the Division structure has been abolished. IUBS recognises that our Division was one of the few which functioned effectively. The Division was responsible for the International Botanical Congresses, among other activities. Fortunately, it is likely that IUBS will agree to a reconstituted Botany and Mycology group to be called the "International Association of Botanical and Mycological Societies" (IABMS) with Professor N. Grobbelaar (South Africa) and Professor Dr. K. Esser (West Germany) to remain as Chairman and Secretary, respectively. This will

permit the continuity of the successful Division of Botany and Mycology under another name and ensure the holding of the XIV International Botanical Congress in West Berlin in 1987.

IUBS Scientific Programme, 1982-85: The XXIst IUBS General Assembly held in August 1982 in Ottawa, Canada instituted six major projects for the IUBS Scientific Programme: tropical biology, medicinal plants, bio-indicators, vegetation mapping, biological nomenclature and biological education.

Of these, tropical biology, bio.indicators and biological education are particularly relevant to IAPP activities.

1. Tropical Biology. IUBS has established a 10 year programme called 'The Decade of the Tropics' with Prof. Otto Solbrig (Harvard University, Cambridge, MA 02138, USA) as Chairman. A number of 'themes' have been identified of which the following relate to IAPP members:

- (a) the means by which energy and minerals are transferred and stored within systems,
- (b) biological factors of soil fertility, and
- (c) the biology of agro-ecosystems (including aquaculture and forestry) in the tropics.

A Steering Committee is being set up and an Advisory Board will determine the direction of the programme.

2. Bio-indicators. A programme on 'Biological Monitoring of the State of the Environment (Bio-indicators)' has been established with Prof. J. Salánki (Biological Research Institute of the Hungarian Academy of Sciences, 8237 Tihany, Hungary) as Chairman. IAPP has been invited to participate and the Secretary-Treasurer has taken on the role of representing IAPP until such time as a specialist in the field can be appointed. Persons with expertise in the use of biological systems to monitor pollution and environmental hazards are invited to contact the Secretary-Treasurer.

3. Biological Education. The programme Chairman is Prof. P. Kelly, University of Southampton, SO9 5NH, UK who is coordinating projects on -

- (a) Biological Technology Education which includes primary, secondary and tertiary level teaching of biology
- (b) Health education through Biology
- (c) Biology and the Quality of Life including a survey and the production of a draft statement on the subject.

Extraterrestrial Life: IUBS has joined with the International Astronomical Union in forming a joint committee on Extraterrestrial Life. The IUBS Secretariat is collecting information on current research activities and the names of individuals/institutions active in this field for a meeting to be held in late October 1983. Please send such information directly to:

Executive Secretary
IUBS Secretariat
51 Boulevard de Montmorency
75016 Paris, France.

Stephen Hales Gravestone: Professor E.T. Pengelley, University of California, Riverside, USA who has been researching the history of biology, reports that the gravestone of Stephen Hales, founder of modern plant physiology, has seriously deteriorated and the inscription has become illegible. The grave is in the Parish Church of St. Mary in Teddington, Middlesex, England where he was vicar for 51 years. Professor Pengelley has undertaken to raise the funds for restoration of the gravestone, with the approval of the present vicar of the church, Rev. Ramond Carter. IAPP has contributed an initial token sum of US\$50. Other national associations have made substantial contributions, however the present limited funds available to IAPP preclude a more substantial contribution at present. The progress of this project will be reported in future Newsletters.

Indian Silver Jubilee: The Indian Society for Plant Physiology (Secretary, Dr. G.S. Sirohi) celebrated its Silver Jubilee with a Seminar on "Plant Physiology in Coming Years" in January 1983 in New Delhi. The Secretary-Treasurer sent a letter of congratulations on behalf of IAPP.

Future National Meetings: The Secretary-Treasurer welcomes information on future meetings of your national/regional association. Contact address is given in brackets.

Australia (ASPP): Sydney, May, 1984 (Dr. I. Wardlaw, CSIRO Division of Plant Industry, P.O. Box 1600, Canberra City, ACT 2601).

U.K. (S.E.B.): (a) Symposium: Controlling events in meiosis. University of Reading, 20-22 September, 1983 (Dr. J.A. Bryant, Botanical Secretary S.E.B., Plant Science Dept., Univ. College, P.O. Box 78, Cardiff CF 1 XL, U.K.).

(b) Birmingham, 4-6 January, 1984

(c) Cardiff, 3-5 April, 1984

U.S.A. (ASPP): University of California, Davis, 12-17 August, 1984.

Future International Meetings

- 1983: 3rd International Mycological Congress
28 Aug.-3 Sept., Tokyo, Japan.
(Prof. K. Tubaki, Inst. of Biological Sciences, Univ. of Tsukuba, Sakura-Mura, Ibaraki 300-31, Japan).
- 10th International Congress of Plant Protection
20-25 November, Brighton, U.K.
(Mrs. R.A. Bishop, Frank Bishop Conf. Planners Ltf., 144/150 London Rd., Croydon CRO 2DT, Surrey, U.K.)
- 4th International Conference of Phytopathology
17-24 August, Melbourne, Australia.
(Dr. G. Weste, Botany Dept., University, Parkville 3052, Vic. Australia).
- 1984: 8th International Biophysics Congress
27 Aug.-4 Sept., Bristol, U.K.
(Dr. H.C. Watson, Dept. of Biochem., Medical School, The University, Univ. Walk, Bristol BS8 1TD, U.K.).
- 3rd European Congress of Biotechnology
Sept. Location undeter.
(Dechema, POB 970.146, Frankfurt-Main, D-6000, Fed. Rep. Germany).
- 3rd International Congress on Cell Biology
26-31 August, Tokyo, Japan.
(Secretariat, 3rd International Congress on Cell Biology, C/o Japan Convention Services, Inc., Nippon Press Ctr. Bldg., 2-1, 2-chome, Uchisaiwai-cho, Chiyoda-ku, Tokyo 100, Japan).
- 1985: 13th International Congress of Biochemistry
August, Amsterdam, The Netherlands.
- XXII IUBS General Assembly & Scientific Symposia
25-31 August, Budapest, Hungary.
(IUBS Secretariat, 51 bd. de Montmorency, 75016 Paris, France).
- 1986: 22nd International Horticultural Congress
11-20 August, Davis, Cal., USA.
(Conf. Services, Memorial Union, 4th Floor, Univ. of California, Davis Ca 95616, USA).
- 1987: XIV International Botanical Congress
24 July - 1 Aug., Berlin, FRG.
(Botanisches Museum Berlin-Dahlem, Königin-Luise-Str. 6-8, D-1000 Berlin 33, FRG).

SOUTH AFRICAN INSTITUTE OF ECOLOGISTS: SAIE's recent Bulletin focuses attention on a tricky problem facing the Institute. Since the establishment of the S.A. Council for Natural Scientists (SACNAS) in 1982, the Board of SAIE has endeavoured to obtain clarity regarding the status of ecology as a distinctive scientific profession in relation to the terms of the Act under which the Council was promulgated. Although SACNAS has recognized animal production and more recently microbiology and plant production as distinct professions, there is a problem with the recognition of such interdisciplinary fields such as ecology, genetics, cytology etc.

THE CENTRE FOR RESOURCE ECOLOGY, UNIVERSITY OF THE WITWATERSRAND: The Centre was initiated in 1979 and began functioning properly in 1980. It was established within the Department of Botany (in accordance with a University policy that all research units form part of a teaching Department), but has students from other Departments as well. It receives its funds from the University, the CSIR and from contract research.

The raison d'etre for the Centre is threefold: Its primary objective is the formulation and continued progression of research aimed at developing concepts and principles of southern African ecology: secondly, to provide post-graduate teaching in theoretical and applied ecology: and, third, to act as a consulting group in the application of ecological principles in natural resource management.

The staff of the Centre consist of the Director (Professor Brian Walker), Senior Research Officer (Dr. Norman Owen-Smith), a Research Officer (Dr. Tom Smith), a research assistant (Neil Pendock) and a technician (Liz Sole). There are currently 28 higher degree students, 12 of them registered for M.Sc. and 16 for Ph.D. degrees. About half of them are based at the University and the other half are in the field, or are registered part-time and based where they are employed. Three of the research projects are in Zimbabwe, three are in Botswana and the remainder are spread all over South Africa, but with a focus in the savanna region. Eleven of the current group of students have come to the Centre from outside South Africa (the USA (2), UK(3), The Netherlands, Switzerland, Israel and Zimbabwe (3)).

Research is developing along two main lines, one related to applied ecology and the other to theoretical ecology. With regard to applied ecology, the two major areas of interest are resource management (e.g. optimal harvesting, multiple species stocking rates), and integrated resource analysis and planning (e.g. goal programming in catchment area planning, pattern analysis of satellite digital data, optimum ranch size, the use of computerized overlay techniques in land capability analysis).

The theoretical side encompasses all aspects of ecology, but the main areas of interest are population dynamics, vegetation - herbivore interactions, and the stability properties of communities and of complex systems. Since 1980 members of the Centre have produced some 44 publications, in addition to a series of internal pre-publication papers, produced for our own benefit and restricted circulation.

One Ph.D. and four M.Sc.'s have so far been completed, and this year will see the completion of ten more.

One of the main, group efforts has been the development of a document entitled "Concepts of Southern African Ecology". It is currently in its third draft form, and the intention is to eventually publish it as a combined product of the Centre.

Each year the Centre holds a symposium at some appropriate venue, during which new members present their research projects, working groups develop and write-up various concepts, and informal discussions and field excursions take place. So far the venues have been the Klaserie Private Nature Reserve, the Tuli Conservation Area (Botswana), and St. Lucia. This year we hope to convene in the Kasungu National Park, Malawi. There is, after all, no reason why we should not enjoy the ecosystems which constitute our research material! (SAIE BULLETIN).

APPLICATIONS FOR THE KIRSTENBOSCH JUBILEE PRIZE: The prize with a value of R1,500, is financed out of the Kirstenbosch Jubilee Fund of the National Botanic Gardens of South Africa and came into being in 1963 through contributions from the public of South Africa and is still expanding, with the object of promoting the aims of the National Botanic Gardens with particular reference to research.

The object of the prize, in the first instance, is to recognize botanical and horticultural contributions to the study of the country's indigenous flora and, secondly, to promote further study, research, publication in this field.

Applications must be directed to: The Director, National Botanic Gardens of South Africa, Kirstenbosch, Private Bag X7, CLAREMONT 7735, to reach him by 30 September 1983, and must mention age, nationality and other personal particulars and give two references; and must be accompanied by a short curriculum vitae, certified copies of academic and professional qualifications, a list of publications and a short exposition of concluded and planned research.

Applicants must please request those people who supply references to send confidential reports direct to the Director, to reach him not later than 17 October 1983.

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