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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: The following are extracts taken from the I.A.P.P. Newsletter.

Retirement of President: Prof. Anton Quispel relinquished his presidency of IAPP early in 1984. He has recently retired from his Chair at the University of Leiden.

Anton Quispel was President from 1976 taking over from Professor Hans G. Burstrom. During this time he worked diligently for the Society advocating its policies wherever possible. He strongly supported the development of the new policies relating to developing countries which were ratified at the IAPP Council Meeting in Sydney in 1981, on the occasion of the XIIIth International Botanical Congress. He has also supported and actively implemented the policy for joint meetings of IAPP with national and regional societies of plant physiology. On behalf of the IAPP we thank him for all his efforts. He plans to maintain his scientific activities through his writing and the organization of meetings in his speciality of nitrogen fixation. On the occasion of his retirement from his Chair his associates and former students presented him with a volume entitled 'Bio-essays' which includes essays from many of his colleagues as well as a list of his publications and the Ph.D. theses he has supervised. We wish him well in his retirement.

The New President: The executive Committee canvassed opinions among leading plant physiologists on the future President. The Committee agreed he/she should come from the European plant physiological community because of the strong membership component from the European region. Among names suggested one which recurred a number of times was that of Professor Hubert A. Ziegler of the Technische Universität, Munich, West Germany. The Committee agreed he should be invited and we are pleased to announce that he has accepted. The following is a summary of his curriculum vitae.

b. 28 Septm. 1924, Regensburg, Bavaria, Germany. German. Professor of Botany. m. Dr. Ingrid Guender, Biochemist, 1955 - 1 son.

Education: University of Munich, 1946-50; Doctor rer. nat. 1950, Habilitation in Botany, 1956, University of Munich. Appointments: 1950-56, Lecturer, 1956-58, University of Munich; 1959-62 Associate Professor and Director, 1962-70 Professor and Director, Department of Botany and Botanical Gardens, Technical University, Darmstadt; since 1970 Professor and Director, Department of Botany and Microbiology, Technical University, Munich.

Memberships: Deutsche Botanische Gesellschaft (President 1968, 1969); Federation European Societies of Plant Physiology (Secretary General 1976-78); American Ass. for Advancement of Science; American Soc. of Plant Physiologists; Schweiz. Bot. Gesellschaft; Ges. Deutscher Naturforscher & Arzte; Regensburger Bot. Ges. (Honorary Member). Publications: 220 publications in scientific journals. Co-Editor: Csihak, Langer, Ziegler: 'Biologie', 3rd ed. 1981; Hoppe, Lohmann, Markl, Ziegler: 'Biophysics' 1983; Lange, Nobel, Osmond, Ziegler: Physiological Plant Ecology, Vols. I-IV, 1981-83; Co-Author: Lehrbuch der Botanik, 32nd ed., 1983 (with v. Denffer, Ehren-dorfer, Bresinsky); Co-Editor: Planta, Biochemie & Physiologie der Pflanzen, Oecologia, Progress in Botany. Honours: Member Deutsche Akademie der Naturforscher Leopoldina (since 1972); member Bayerische Akademie der Wissenschaften (s. 1973). Main fields of research: Biochemical ecology; tree physiology; phloem transport.

New Members: IAPP is pleased to welcome the Latin American Society of Plant Physiology. This regional (continental) society comprises Argentina, Brazil, Central America, Chile, Colombia, Mexico, Peru and Venezuela.

Our thanks are due to Professor A. Larque-Saavedra (Executive Committee Member of IAPP) of Mexico who was instrumental in arranging for the Latin American Society to join. The international coverage of IAPP has been considerably enhanced by this move.

The Secretary/Treasurer is also continuing correspondence with the Chinese Society of Plant Physiology with a view to their joining. He has also recently been seeking information of Indonesian plant physiologists. An exchange of newsletters has been arranged with SEAMEO-BIOTROP (South-East Asian Regional Center for Tropical Biology, Bogor, Indonesia). Professor P.N. Avadhani of Singapore (Executive Committee Member) is also encouraging other S.E. Asian and South Asian countries to seek membership or form regional associations. Our new President has many contacts in North Africa and the Middle East, an area in which IAPP is poorly represented, and he has indicated he will be seeking members from these regions.

Since the last International Botanical Congress in 1981 the IAPP has grown

from 23 national members plus 3 regional/international associations comprising 29 countries to 28 national members plus 4 regional/international associations comprising 40 countries. The greater part of this expansion has occurred by representation of the so-called developing countries. This is very gratifying and enables approaches to the UN agencies for funding of IAPP activities.

The importance of wide international representation becomes apparent when seeking funding for meetings from international agencies.

Regional Meeting of IAPP and Australian Society of Plant Physiologist (ASPP):

Theme: Plant Growth, Drought and Salinity
Location: Canberra, Australian Capital Territory, Australia
When: 13-16th May 1985
Organisers: J.B. Passioura, N.C. Turner (ASPP) and D. Graham (IAPP)

The aim of the conference will be to focus attention on the influence of drought and salinity on plant growth and production. Since plant growth depends largely on the amount of light captured by the leaves, the influence of drought and salinity on leaf growth will be emphasised. Growing cells may be affected by drought and/or salinity in several ways: they may be starved of assimilates; they may be inadequately turgid; they may suffer metabolic disruption through, say, an excessive concentration of ions in their cytoplasm; they may be under the control of other parts of the plant by means of growth regulators. Contributors will be asked to discuss their research within this framework, keeping in mind the primary focus on plant growth.

Additionally, there will be an opening session in which the agronomic and ecological importance of drought and salinity stress on a national and international scale will be evaluated and a closing session in which the agronomic and ecological importance of the various physiological mechanisms on plant production, yield and survival will be considered.

The speakers are expected to include: K. McCree (USA), T.J. Flowers (UK), R. Cleland (USA), W.J. Davies (UK), E.-D. Schulze (W. Germany), J.R. McWilliam, I.R. Cowan, P.E. Kriedmann, W.R. Barlow, D. Aspinall, R. Munns, N.C. Turner, J.B. Passioura and C.B. Osmond (all from Australia).

Planning for the meeting is well advanced. Supporting funds have been obtained from UNESCO, the Australian Development Assistance Bureau and the Australian Centre for International Agricultural Research. IAPP is contri=

buting \$750 towards running expenses and it is hoped that our new President, Professor Dr. H. Ziegler as well as the Secretary/Treasurer will be able to attend.

The meeting occurs immediately following the ASPP Annual Meeting in Canberra (8-11th May) and coincides with the Australian Biochemical Society Annual Meeting (13-16th May). Further information can be obtained from: Dr. J.B. Passioura, CSIRO Division of Plant Industry, P.O. Box 1600, Canberra City, ACT, AUSTRALIA.

Further Regional Meetings: The Secretary/Treasurer would be pleased to hear from any national or regional society prepared to sponsor a meeting.

It would be appropriate, for example, if one or more specialist plant physiology meetings could be held in association with the forthcoming XIVTH International Botanical Congress in Berlin in 1987.

In addition, meetings outside Europe which may be more attractive to developing country participants should be considered. The IUBS "Decade of the Tropics" offers prospects for symposia and collaborative research topics. There appear to be prospects for limited funding from national and international agencies providing the theme fits within categories identified as priority areas of research.

The Secretary/Treasurer is willing to approach international agencies for funding support for appropriate meetings. It is important that such approaches be made well in advance of the proposed meeting.

Finances: The latest Bank Statement shows IAPP has \$3955 available. Of this, approximately \$600 must be paid to cover secretarial, printing and postage costs. A further \$750 has been earmarked for the IAPP/ASPP Regional Meeting in Canberra in 1985. The improved finances of IAPP resulting from the increased subscriptions are beginning to have an effect, for example, in the support of the Regional Meeting. Such money can act as a "seeding fund" to encourage national and international agencies to provide further funds for such meetings. Providing IAPP Members continue to pay their subscriptions, the finances can be considered to be in a satisfactory state.

IAPP Policies: The Secretary/Treasurer is always pleased to have comment or new ideas regarding the policies and functions of IAPP.

Current matters include the question of an IAPP Medal or Prize, future Regional Meetings and activities at the International Botanical Congress in Berlin in 1987.

Plant Physiology in the Developing Countries: The Secretary/Treasurer was invited to present a lecture at the 1984 Annual Meeting of the Australian Society of Plant Physiologists on the role and status of plant physiology in the developing countries. Some of the salient points are given here.

It is a sad fact that no-one, neither UN Agencies nor IAPP, knows how many plant physiologists there are in the world. The IAPP Directory contains 9167 names with some duplication due to multiple membership of individuals in different national societies. About 5000 belong to the American Society of Plant Physiologists. This deficiency is a rather surprising state of affairs considering the discipline of plant physiology is the basis of much of plant agriculture and horticulture upon which the world's population depends for its major food supplies. Many countries, especially developing countries, were not represented when the Directory was prepared in 1980.

The 33 developed countries comprising N. America, W. Europe, Oceania, Israel, Japan and S. Africa have about 9100 plant physiologists. An FAO survey in 1978 showed that the 166 developing countries of the rest of the World have only 229 plant physiologists. Some caution is required in considering these numbers. India, which may have about 1000 plant physiologists, did not contribute to the 1978 FAO Survey. Nor are the centrally-planned countries of Asia, (including China), E. Europe and the USSR included. Also it is likely that many who could be considered plant physiologists may have chosen to be recorded under other classifications e.g. horticulturist, in the FAO survey. Nevertheless, even allowing for these shortcomings, it is clear that the numbers of plant physiologists in the developing countries is extremely low. In some developing countries in Africa, for example, there may be no plant physiologist at all. The FAO figures show an average of just over one per country in Africa (excluding S. Africa).

The very low numbers of plant physiologists in the developing countries is reflected in a lack of research publications from those countries.

In view of this information, it seems more important than ever that IAPP continue its policy to improve the status and practice of plant physiology in the developing countries. Formation of regional associations in the developing countries could help improve the status of the discipline and thereby the funding of research in such areas. While the UN Agencies are

carrying out relatively large research programmes on agricultural crops, especially through the commodity-based research centres such as the International Rice Research Institute in the Philippines, an increase in numbers of indigenous plant physiologists, or, at least, increased support and recognition of those available can only improve the world's knowledge of plants and their potential usefulness.

IAPP International Directory: Members are reminded that the computer print-out of the International Directory of Members (comprising the addresses of nearly 10,000 plant physiologists) is available through the Secretary/Treasurer. The cost is US\$60 (including postage) to individuals or societies. It is also available to companies at a cost of up to US\$500, part of which is retained by IAPP to support its activities.

IAPP Booklet on Terminology, Symbols and Units in Plant Physiology: This Booklet is being revised by Prof. F. Salisbury (Dept. of Plant Science, Utah State University, Logan, Utah, 84332, USA) and his colleagues. Prof. Salisbury has informed the Secretary/Treasurer that he will shortly begin to compile material for the booklet. He has much of this already available but would welcome comments.

International Union of Biological Sciences (IUBS): The re-organisation of IUBS mentioned in the 1983 Newsletter has occurred and, as foreshadowed then, the reconstituted IUBS agreed at its Executive Committee meeting of October 1983 to accept the International Association of Botanical and Mycological Societies (IABMS) as a constituent member with Professor N. Grobbelaar (South Africa) as Chairman and Professor Dr. K. Esser (W. Germany) as Secretary. This is fortunate since the fostering of future International Botanical Congresses depends on the IUBS.

The President (Prof. Dr. H. Ziegler) and Secretary/Treasurer (Dr. D. Graham) will continue to represent IAPP on the Board of IABMS.

Stop Press: It is with regret that we announce that Canada has withdrawn from membership of IAPP.

MR. O.H.D. MAKUNGA, a senior lecturer in the Department of Plant Sciences at the university of Fort Hare has been elected Mayor of Alice, the first black man to become Mayor. He was born in Whittlesea, Ciskei.

Mr. Makunga joined the academic staff of Fort Hare as a Demonstrator/Technician

in the Botany Department (now Plant Sciences) in 1959, was promoted to lecturer in 1964 and to senior lecturer in 1974.

In 1981 he spent 10 weeks in the Systematic Botany Department of the University of Uppsala, Sweden, with members of a post-graduate group who were carrying out research on the status of Cerastium.

His visit to Sweden was sponsored by the Department of National Education and was part of an exchange scheme to commemorate the Fries-Weimarck/Norlindh 1930 Botany Expedition to South Africa.

It was an honour to both Fort Hare and Mr. Makunga that he was chosen as the South African representative.

This is the second time a S.A.A.B. member has acted as mayor of his home town. The other member is Prof. Kristo Pienaar who was recently Mayor of Bellville. Any others?

FLORA OF SOUTHERN AFRICA NEWS: Following a request at a meeting of F.S.A. participants held during the 10th annual S.A.A.B. congress, a list indicating the status of unrevised Western Cape flowering plant taxa is included in this issue as a Supplement.

The purpose of the list is twofold: firstly to identify which botanists are working on which group and secondly to indicate which taxa are available for revision. In the former instance it is hoped that anyone finding something of interest in a particular group will communicate that to the person concerned. In the latter instance it is hoped that a list of unrevised taxa will spur on University staff and students, other botanists including those no longer practising as such and also any keen amateurs who have a herbarium connection and who are willing to subject themselves to the discipline of taxonomy, to join the cause, i.e. to complete the F.S.A. by the end of the century!

In a few cases, the CONTACT person listed is not necessarily working on the particular group but is known to have an interest and should be approached before tackling it. Before embarking on a revision of any Southern African taxon it is also necessary to contact Dr. O.A. Leistner of the Botanical Research Institute, Pretoria, who is in charge of the F.S.A. project.

Mr. R.O. Moffett of the University of the Western Cape, who compiled the list, will be grateful for corrections and additions.

DE HOOP-NATUURRESERVAAT OOP VIR PUBLIEK: Die De Hoop-natuurreservaat aan die Kaapse suidkus sal nie weens Krygkor se aanwesigheid in die gebied vir die publiek gesluit wees nie. Toegang tot die gebied sal egter streng beheer word.

Die reservaat het drie kort dagwandelpaaie: een langs die kus, een langs die vlei en een op Potberg. Daar is geen oornaggeriewe nie. Geen besprekings is vir die wandelpaaie nodig nie en besoekers word sewe dae per week van 07h00 tot 18h00 binne die reservaat toegelaat. Gratis toegangsperritte vir die kusgebied kan van die hekwag verkry word en besoekers wat die res van die Reservaat wil besoek, kan perritte by die De Hoop-kantoor bekom. Beperkte huisvesting by De Hoop-vlei kan by die De Hoop-kantoor bespreek word. Geen oornagkampering word elders toegelaat nie weens die gevoeligheid van die veld en die brandgevaar.

Volgens die Kaapse Departement van Natuur- en Omgewingsbewing sal 'n openbare ontspanningsplan vir De Hoop voor die einde van die jaar voltooi word. (Habitat Raad).

TECHNICAL POST VACANT: A person is required to fill a technical post at the Weed Laboratory, Uitenhage. Applicants must have a knowledge of Botany and/or Zoology. Duties will be assisting with current research.

The salary will be between R9648 & R12 600 depending on experience. Phone: 0422-61114.

CHANGE OF EDITOR AND ADDRESS: As from the beginning of 1985 the editor of Forum Botanicum will be Miss W.G. Welman and her address will be Private Bag X101, Pretoria, 0001.

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REDAKSIE/EDITOR

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STATUS OF UNREVISED WESTERN CAPE TAXA (FLOWERING PLANTS)

(Monotypic genera excluded)

- | | |
|----------------------------|---------------------|
| A - Available for revision | 2 - advancing |
| 0 - unknown | 3 - well advanced |
| 1 - starting | 4 - near completion |
| | 5 - completed |

FAMILY	GENUS/ TAXON	NO. OF SPECIES	CONTACT & HERB	STATUS	
Poac.	Bromus*		Linder	PRE	0
	Vulpia*		Stace	REA	0
	Pentameris	5			A
	Pseudopentameris	2			A
Cype.	Trianoptiles	3			A
	Epischoenus	8			A
Rest.	All genera		Linder	PRE	}
			Esterhuysen	BOL	
Lili.	Urgineae		Obermeyer	PRE	3
	Lachenalia		Barker	BOL	4
	Eriospermum		Perry	NBG	2
	Bulbinella		Perry	NBG	2
	Albuca		Müller-		
			Doblies	B	3
	Massonieae		Müller-		
			Doblies	B	2
	Androcymbium		Müller-		
			Doblies	B	0
	Gasteria		van Jaars-		
			veld	NBG	2
	Haworthia	200	Bayer(good		
			collection)	NBG	A
Haem.	Wachendorfia	5	Nordenstam	S	A?
Amar.	Most genera		Müller-		
			Doblies	B	3
Hypo.	Non Hypoxis		Snijman	NBG	2
Teco.	Cyanella		Schelpe	BOL	1
Irid.	Most genera		Goldblatt	MO	}
			de Vos	STEU	
			4		
	Aristea	49	Vincent	NU	A
			(Summer Rainfall)		

FAMILY	GENUS/TAXON	NO. OF SPECIES	CONTACT & HERB	STATUS
Orch.	Most genera		Schelpe BOL Hall BOL Linder PRE	4
Sali.	Salix		Immelman PRE	1
Prot.	Most genera		Rourke NBG	4
Sant.	Thesidium	8 } 150 }	Hilliard NU	A
	Thesium		(Summer Rainfall)	A
Bala.	All genera		?Oliver STE	0
Raff.	Cytinus		?Oliver STE	0
Aizo.	Adenogramma	10		A
	Polpoda	2		A
	Pharnaceum	25		A
	Coelanthum	3		A
	Galenia	27		A
	Acrosanthes	5		A
	Aizoon	15		A
	Tetragonia	40		A
Mese.	Most genera		Ihlenfeldt HBG Hartman HBG Glen PRE	3 3 3
Cary.	Silene		Bocquet G	3
	Spergularia	4		A
Brun.	All genera		Hall BOL	0
Rosa.	Cliffortia	108		A
	(need improving)			
	Grielum	6		A
Faba.	Virgilia		van Wyk FFS	4
	Cyclopia		van Wyk FFS	0
	Podalyria		S. Schelpe BOL	2
	Liparia		Dahlgren C	1
	Priestleya		Dahlgren C	1
	Coelidium		Dahlgren C	4-5
	Amphithalea		Dahlgren C	1
	Rafnia		Richardson RU	1
	Lebeckia		Dahlgren C	1
	Wiborgia		Dahlgren C	1
	Hypocalyp tus		Dahlgren C	4
	Loton onis		van Wyk FFS	1
Gera.	Pelargonium		v.d. Walt STE	3
Oxal.	Oxalis	300		A
Zygo.	Zygophyllum	50		A
Ruta.	Most genera		Williams BOL Bean BOL	3 3

Poly.	Polygalaceae	<u>3</u>	Johnson	TRANSKEI	0
Euph.	Succulents		Leach	NBG	3
	Clutia		Koutnik	BOL	1
	Lachnostylis		Koutnik	BOL	1
Anac.	Rhus		Moffett	UWC	4
Cela.	Maytenus	20			A
	Cassine	16			A
	Pterocelas=				
	trus		Van Wyk	PUC	0
Rham.	Phyllica	150			A
	(needs im=				
	proving)				
Thym.	Most genera		Peterson	GB	4
Apia.	Hermas	6			A
	Arctopus	3			A
	Lichensteinia	7			A
	Rhyticarpus	3			A
	Sonderina	4			A
	Polemannia	3	Burttt	E	A
	Annesorrhiza	12			A
	Peucedanum	30			A
Eric.	All genera		Oliver	STE	3
Ascl.	Astephanus	3			A
	Eustegia	3			A
	Stapeliaceae		Leach	NBG	4
	Fockea		Court	RU	4
Bora.	Lobostemon	28	Grau	M	A?
	Echiostachys	3	Koutnik	BOL	A?
Stil.	Stilbe		Rourke		1
Lami.	Most genera		Codd	PRE	4
	Leonotis		Iwarrson	UPS	4
Scro.	Aptosimum		Brown	WIND	1
	Peliostomum		Brown	WIND	1
	Diascia		Schelpe	BOL	1
			Hilliard	NU	5
	Hemimeris		Schelpe	BOL	1
	Nemesia		Schelpe	BOL	1
	Oftia	3			A
	Freylinia	5	van Jaarsveld	NBG	A?
	Manulea	60	Hilliard	NU	A
	Sutera	100	(Summer Rainfall)		A
	Polycarena	40			
	Zaluzianskya	36	Hilliard	NU (Summer)	A
Sela.	Selago	100			A
	Walafrida	40			A
	Minor genera		Hartley	UWC	1
Rubi.	Canthium		Kok	PRU	3
	Anthospermeae		Puff	WU	4

Camp.	Merciera		Tulin	UPS	1
	Roella		Tulin	UPS	1
	Prismatocarpus		Tulin	UPS	1
	Siphocodon		Tulin	UPS	1
			Bean	BOL	0
	Wahlenbergia		Tulin?	UPS	0
	Lightfootia		Tulin?	UPS	0
	Microdon		Tulin	UPS	1
Lobe.	Cyphia	40			A
	Lobelia		Phillipson	UFH	1
	Monopsis		Phillipson	UFH	1
Aste.	Corymbium		Weitz	UWC	3
	Pteronia		Lowry	J	2
	Charieis	3			A
	Gymnostephium		Grau	M	1
	Printzia	8			A
	Helipterum		Nordenstam	S	0
	Heli chrysum	250	Hilliard	NU	A?
	Stoebe	34			A
	Disparago	7			A
	Elytropappus	8			A
	Metalasia		P.-O. Karis	S	2
	Amphiglossa	3			A
	Nestlera	18			A?
	Heterolepis	2			A
	Osmitopsis	8	Bremer	S	A?
	Eroeda	6			A?
	Athanasia	50			A
	Lidbeckia	2			A
	Matricaria	12			A
	Hippia	7			A
	Peyrousia		Bremer	S	0
	Stilpnophytum		Bremer	S	2
	Senecio		Vincent	NU	A
	(Summer Rainfall)				
	Kleinia		Vincent	NU	A
	(Summer Rainfall)				
	Gymnodiscus		Nordenstam	S	3
	Othonna		Nordenstam	S	3
	Steirodiscus		Nordenstam	S	3
	Stilpnogyne		Nordenstam	S	3
	Calenduleae		Norlindh	S	0
	Arctotideae		Norlindh	S	0
	Alciope	2			A?
	Marasmodes	5			A?