



RUDOLF MARLOTH

Brochure - Brosjure

Southern African Association for the Advancement of
Science
Suider-Afrikaanse Genootskap vir die Bevordering van
die Wetenskap.

ANNUAL MEDAL AWARD CEREMONY

29 November 1996

JAARLIKSE MEDALJE TOEKENNINGSEREMONIE

SOUTH AFRICA MEDAL (GOLD) ~ RECIPIENT: PROF C F CRESSWELL

Christopher Frederick Cresswell was born in Johannesburg on 27 th March 1933. He received the following degrees at Rhodes University: BSc, Chemistry and Botany (1953), BSc(Hons), Plant Physiology (1954), MSc, Plant Nutrition (1958). He received a PhD in Plant Biochemistry in 1960 from Bristol University.

Prof Cresswell held various academic positions. He was a demonstrator at Rhodes University (1953-1955), a tutor at Bristol University (1958-1960) and a lecturer at Kings College, University of London (1960-1963). At the University of the Witwatersrand he was Senior Lecturer from 1964 to 1967, Professor of Botany and Head of the Department from 1967 to 1982 and Professor of Botany and Dean of the Faculty of Science from 1980 to 1988. He then moved to the University of Natal as Deputy Vice-Chancellor and Vice-Principal of the Durban Centre (1988 - 1993) and Deputy Vice-Chancellor and Principal of the Durban Centre (1993 - 1996). He retired in March 1996.

Prof Cresswell is a member of various professional societies and has received several awards. He received the Medal of the Fertilizer Society of Southern Africa, the South African Association of Botanists Medal, the Gold Medal of FSA Expo Natal for Science Students and the Claude Harris Leon Foundation Annual Award in recognition of Research Contributions in the areas of Photosynthesis and Nitrogen Metabolism. He has Honorary Life Membership of the Southern African Association of Botanists and was Honorary Vice-President of the National Union of South African Students from 1990 to 1992. He is Life Time Patron of the Fellows of the University of Natal and a Fellow of the Royal Society of South Africa since 1982. Volume 62, 1996 of the South African Journal of Botany was dedicated to Christopher Cresswell. At the March 1996 graduation ceremony he received the DSc Honoris causa from the University of Natal.

He was a Visiting Professor at the following institutions: University of California - Santa Cruz Campus (1969 - 1970), Ben Gurion University of the Negev (1976), University of Cape Town (1977), John Innes Research Institute - University of East Anglia, Norwich.

Prof Cresswell was a member of a three person committee established in 1974 to advise the Minister of Environmental Affairs on the National Botanical Gardens of South Africa. He is a member of the Advisory Committee to the Minister of Agriculture on the Botanical Research Institute, a member of the Steering Committee of the National Programme for Environmental Sciences's Savanna Ecosystems Project and a member of the Advisory Committee of the National programme for Ecosystems Research. He is also a member of the Steering Committee of the Nuffield Kariba Research Station, later the University of Zimbabwe/University of the Witwatersrand, Lake Kariba Research Project, an Advisor to the CSIR Sorghum Beer Research Unit and a member of the Advisory Committee of the CSIR Food Research Institute.



Prof Cresswell was very involved in university matters. He initiated the establishment of the "Science College" at the University of the Witwatersrand while Dean of Science, to assist with science education development of students entering university with an educational disadvantaged background. He was one of the drafters of the University of Natal's Mission Statement and was involved in the drafting of the Strategic Plan for the Durban Centre of the University of Natal to assist in the transformation of the University of Natal to assist in the training of students in order to meet the needs of the new South Africa.

As Chairman of the University of Natal's Research Committee he implemented major changes to assist in the quality and productivity of the research being maintained and increased as well as the levels of its publications. He introduced a number of incentive schemes to encourage young researchers as well as acknowledging the excellence of its established researchers. In the above capacity he played a key role in the establishment of the University of Natal's Education and Innovative Centre.

Prof Cresswell supervised some 42 M.Sc. graduate thesis's and 32 Ph.D. Dissertations. His publications include 115 articles in refereed international scientific journals and 218 abstracts and published conference proceedings.

A BRIEF SUMMARY OF THE RUDOLF MARLOTH MEMORIAL LECTURE

THE PASSION OF SCIENCE: SOME NEW PERSPECTIVES

by Prof C F Cresswell

Prof Cresswell paid tribute to Rudolf Marloth for his contribution to South African Science. Marloth's specific field of study was Botany. However, he was also involved in the disciplines of pharmacy, chemistry, geology and graphology and was an expert photographer.

The theme of the paper is posed by the question: Is it possible to change our 'scientific' thought climate so that we can gain new perspectives altogether?

To illustrate this theme Prof Cresswell gave a number of examples, the most pertinent of which are quoted below.

Newton, in 1679, acknowledged: 'If I have seen further than others it is because I have stood on the shoulders of giants.'

Barbara McClintock received the Nobel Prize Laureate for her contribution to the field of Genetics. Her notion of a dynamic genome and of jumping genes went against the grain of classic genetic theory and revolutionised Genetics. She said she came to her ideas by listening to her corn plants and trying to see the world from their perspective.

Margaret Wertheim, an Australian science journalist and physicist, remarks that often finding themselves outsiders to the field, women have made major discoveries because they were unaware that certain aspects were thought to be impossible.

To Pythagoras, numbers were not simply figurations on a page, but they provided his total framework of meaning. He attributed ethical and moral characteristics to numbers and had them serve as ethical archetypes. For example, the qualities of goodness, oddness and maleness were enshrined in the odd numbers, while evil, evenness and femaleness were represented in even numbers.

Copernicus changed our perception of the cosmos because he could not accept the lack of symmetry and harmony in Ptolemy's cosmology which reflected against 'the best and most systematic Artisan of all, namely the Creator.'

Kepler, who also held the view that only the circle was the perfect form with which to associate God, wedded the circle with the straight line that represented the material world. For him the conjunction of a straight line, representing the imperfection of the material, with the perfection of the circle brought him to an ellipse! The passions of both these men rested in theology, but the results of their thinking and working were decisive to science.

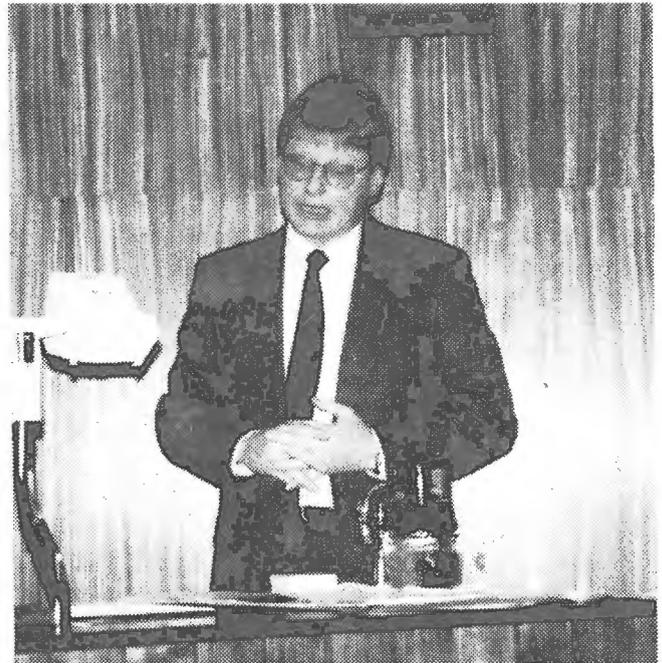
Prof Cresswell drew together the threads of his argument by stating that passion or feeling is not something that can be separated and extracted from any human activity. Therefore passion must be accepted as intrinsic to scientific endeavour.

THE BRITISH ASSOCIATION MEDAL (SILVER) RECIPIENT: JOHAN HEINRICH RICHTER ENSLIN

Johan Heinrich Richter Enslin was born in Bloemfontein, Republic of South Africa, on April 26, 1959. After matriculation at the Ben Viljoen High School in Groblersdal RSA, he studied electrical and electronic engineering at the Rand Afrikaans University (RAU). He received the B.Eng., M.Eng. (cum laude) and D.Eng. degrees from RAU in electrical and electronic engineering in 1981, 1983 and 1988, respectively. His D.Eng. thesis was entitled "Determination and dynamic compensation of fictitious power in electric power systems" which was prepared under the supervision of Prof. JD van Wyk at RAU and Prof. Dr-Ing. H-ch Skudely at the RWTH in Aachen, Germany. In October 1989 he was appointed a Y (Young Promising) researcher by the Foundation for Research Development (FRD). At the age of 36 he received in Sept 1994 the C-Class Researcher Classification from the Foundation for Research Development (FRD).

In December 1981 he was appointed as an Assistant Engineer in the South African Transport Services, and enrolled for his M.Eng. degree at the Rand Afrikaans University (RAU) in 1982. Throughout 1982 and 1983 he was first a Graduate Research Assistant and later Junior Lecturer in the Department of Electrical and Electronic Engineering at RAU. During 1983 he carried out contract research work for industry on AC machine electronics and control of drives with a high dynamic response. After completing an officer training course, up to the rank of Captain, in the South African Signal Corps, he was appointed project engineer on electronic warfare projects from 1984 to 1985. He joined the University of Pretoria in January 1986 as a Senior Lecturer in the Department of Electrical Engineering. He was promoted in July 1989 at the age of 29 directly to full professor and Head of Department of Electrical Engineering at the University of Pretoria. He kept this position until he resigned in September 1991 to take up his current position on 1 October 1991 at the University of Stellenbosch. He accepted the position as Professor of Energy Systems in the Department of Electrical and Electronic Engineering at the University of Stellenbosch, South Africa. During January 1994 to July 1994 he was also an invited Visiting Professor at the Dept. of Electrical and Computer Engineering, Oregon State

University, Corvallis, Oregon, USA. He received the 1993 "Researcher of the year" award in the Faculty of Engineering, University of Stellenbosch.



He has taught several subjects at under- and postgraduate level on aspects of basic electrical engineering, electronics, electromagnetics, power electronics, electrical machines, control systems and power systems. Several specialized short courses on aspects of power electronics, power system contamination and EMC, electrical machine control, power systems, Flexible AC Transmission and renewable energy systems have been presented to industry.

THE BRITISH ASSOCIATION MEDAL (SILVER) ~ RECIPIENT: JOHAN H. R. ENSLIN (Cont.)

Furthermore, he is or has been a project leader on industry-supported research programmes on aspects of harmonics in power systems, dynamic compensation systems, dynamic electrical drives, renewable energy systems, space power and induction heating. His contract research in high power electronics at Stellenbosch supports 18 graduate students with a turn over of more than R 1 million per year. He has supervised and co-supervised 27 Master's and 8 Ph.D./Post.Doc. research students.

As a result of his research work he has visited, presented papers and given seminars at several international conferences, universities and industries in Europe, the UK and the USA. He is a registered Professional Engineer with the Engineering Council of South Africa (ECSA), Senior Member of the Institute of Electrical and Electronic Engineers (IEEE), Senior Member of the South African Institute of Electrical Engineers (SAIEE), Member of the "Suid-Afrikaanse Akademie vir Wetenskap en Kuns" and member of several technical working groups of the SAIEE and CIGRÉ. He is the author and coauthor of 47 papers in accredited technical journals. One paper received an IEEE Industrial Electronics Transactions Paper of the Year (1990) award and three other Best Paper Awards from the SAIEE. He has also published 69 papers in international conference proceedings and 31 in local conference proceedings. Four of these papers were invited papers. Nine patents, one in the USA and one in Germany, have been filed.

He initiated the formation of the IEEE Joint Energy Chapter in South Africa in 1989 and was also the first chairman of this IEEE chapter. He is regularly invited to chair sessions and make contributions at international conferences. He was the General Chairman for the 1996 IEEE Africon'96, held for the first time in South Africa in September 1996 at Stellenbosch. About 350 participants were present and 210 technical papers were presented at this Africon'96 conference. He was also the Technical Programme Chair for the IEEE Africon'92, held in Swaziland in September 1992, that attracted more than 160 papers from around the world.

CRITERIA FOR MEDAL AWARDS

SOUTH AFRICA MEDAL (GOLD)

"The South African Medal is awarded to a person who, during his or her life, has contributed to the advancement of science, either on a broad front or in a specialised field of the natural sciences and those human sciences which traditionally participated in the activities of the Southern African Association for the Advancement of Science. The medal shall be a gold medal and shall enjoy the status of one of the highest awards to a scientist in Southern Africa"

BRITISH ASSOCIATION MEDAL (SILVER)

"The British Association Medal is awarded to a person under the age of 40 years who is actively engaged in scientific research and who has proved evidence by way of publications, discoveries and/or skills of outstanding capability and achievement, especially when measured by international standards. The medal shall be struck in sterling silver and must enjoy the status of one of the highest awards for original scientific research in Southern Africa"

GERT FREDERICK (FRITZ) VAN ROOYEN MERIETESERTIFIKAAT :

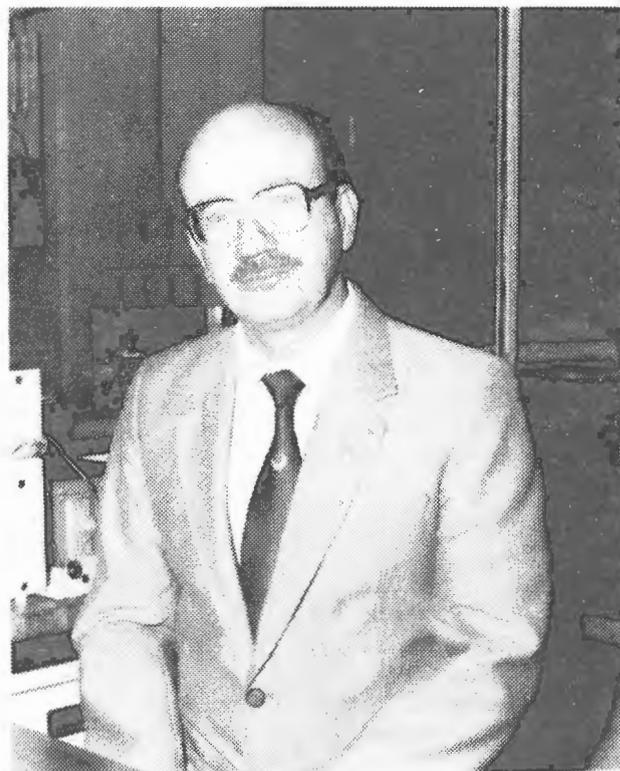
Gert Frederick (Fritz) van Rooyen is op 11 Julie 1939 gebore en matrikuleer aan die Hoër Seunskool, Cradock, in 1956 met drie onderskeidings. Hy behaal die BSc-graad in 1959 met onderskeiding in Fisika aan die Universiteit van die Oranje Vrystaat en die Msc met lof in 1962 aan dieselfde universiteit.

Vanaf 1962 tot 1969 doen hy navorsing op toksiese plante by die Departement van Landbouetegniese Dienste. Vanaf 1969 tot 1971 is hy verantwoordelik vir chemiese en sensitometriese kwaliteitsbeheer by die Nasionale Filmraad. Hy doseer daarna 'n groot verskeidenheid vakke vir aptekers, analitici, filmtegnici asook plofstoftegnici (1971 - 1995) aan die Technikon Pretoria. In 1977 word hy Hoof van die Departement Farmaseutiese Chemie en in 1985 Hoof van die Departement Plofstoftegnologie van die Tehnikon Pretoria. Hy word ook aangestel as 'n bestuurder van 'n Sentrum vir Uitnemendheid.

Hy tree tans deelyds op as Sekretaris vir die Nasionale Instituut vir Plofstoftegnologie (NIXT). Andersinds is hy aktief as entrepreneur met verskeie aktiwiteite, waaronder die bevordering van die wetenskap en entrepreneurskap by skoliere. Hy is tans gekontrakteer om die komende internasionale *ExpoScience Internationale (ESI '97)*, wat gedurende Julie 1997 in Pretoria plaasvind, te organiseer.

Mnr van Rooyen is ook aktief op navorsingsgebied. Hy was verantwoordelik vir die eerste amptelike navorsingsprojek aan die Technikon Pretoria in 1976 en ontvang in 1977 die eerste WNNR-navorsingstoekening aan enige technikon. Daarna was hy betrokke by talle navorsingsprojekte asook ontwikkelingswerk vir die industrie. Hy is die medehouer van drie patente. Hy lewer agt internasionale referate, plaaslik en oorsee, met elf publikasies in internasionale tydskrifte, asook verskeie ander in plaaslike tydskrifte. Hy organiseer vyf internasionale simposia vir NIXT, asook verskeie ander nasionale simposia, werksinkels en ander byeenkomste.

Hy het 'n aktiewe betrokkenheid by verskeie professionele liggamme. Hy is 'n stigterslid, voormalige voorsitter en tans sekretaris van die Nasionale Instituut vir Plofstoftegnologie (NIXT), lid van die SA Chemiese Instituut (SACI), asook van sy vakgroepe, SAAMS en



CHROMSA, lid van die SA Akademie vir Wetenskap en Kuns en Bestuurslid van die Afdeling Chemiese Wetenskappe. Hy is 'n Bestuurslid van die Suid-Afrikaanse Ballistiese Organisasie (SABO), lid van die International Pyrotechnic Association, die Society for Explosives Engineers (USA) en die Museumkomitee van die Stadsraad van Pretoria.

Mnr van Rooyen is besonder aktief op die gebied van jeugaktiwiteite. Hy lewer vanaf 1985 tot 1994 populêre lesings en "Magic shows" oor veral chemie by sowat 70 geleenthede vir bykans 12 000 hoërskool- en laerskoolleerlinge, waartydens meer as 180 skole reeds betrek is. Hy is die stigter van die Assosiasie vir Wetenskapaksie (AWA), 'n groep bekende wetenskapdemstrateurs (Science Showmen) wat as 'n groep by verskillende skole of samekomste optree met die oog om wetenskap te bevorder.

Hy is sedert 1984 betrokke by EXPO vir Jong Wetenskaplikes, vanaf 1992 as voorsitter van die Noord-Transvaal-streek, en is verskeie jare reeds nasionale ondervoorsitter. Hy is aangestel as projekbestuurder vir ESI '97, 'n internasionale EXPO vir Jong Wetenskaplikes, wat gedurende Julie 1997 hier aangebied word.

Hy was ook verantwoordelik vir die eerste formele entrepreneursopleiding van studente aan die Technikon Pretoria. Hy begin in 1992 die eerste entrepreneurskompetisie tydens die jaarlikse Noord-Transvaalse streekkompetisie van EXPO vir Jong Wetenskaplikes. Dit vind tans ook op nasionale vlak plaas. Bykans drie dosyn patente is reeds deur skoolkinders uitgeneem. Hy is ook betrokke by die opleiding van entrepreneurs by skole en konsentreer hoofsaaklik op die innoverende identifikasie van geleenthede. Hy is dan ook in samewerking met die SNO

betrokke by die stigting van Sentra vir Entrepreneurwese by skole. Mnr van Rooyen is onlangs uitgenooi om deel te neem aan die WNNR se Mindwalk-program en is op verskeie maniere betrokke by die Stigting vir Onderwys, Wetenskap en Tegnologie om die belange van Archimedes en die Museum vir Wetenskap en Tegnologie te bevorder. Hy was ook verantwoordelik vir twee TV videoproduksies vir jeugprogramme asook verskeie radiopraatjies.

Mnr van Van Rooyen het reeds verskeie toekennings ontvang, waaronder die merietetoekenning van die Transvaal Manufacturers of Chemicals Association vir bevordering van die belange van die bedryf (1988), 'n erepenning van die SA Akademie vir Wetenskap en Kuns vir wetenskaplike vakbevordering (1989) en die internasionale Detropriem toekenning van die Hongaarse Ekspert Forensiese Instituut vir algemene dienste aan die internasionale plofstofbedryf (1994).

MERIETE SERIFIKAAT : MARINUS WIJNBEEK

Marinus Wijnbeek skryf soos volg:

Geagte mev S Korsman,

Baie dankie vir die wonderlike telefoonoproep vandag. Dit is voorwaar 'n groot eer wat ek ontvang. Ek neem dit dan ook met groot dankbaarheid aan.

Ongelukkig kan ek nie persoonlik die toekenning in ontvangs neem nie omdat ek en my eggenoot dan in die buiteland sal wees. Die redes hiervoor is aan u bekend.

U het my gevra om 'n kort stukkie te skrywe oor wat my gemotiveer het om ses jaar van my lewe aan wetenskap- en tegnologieverslaggewing te wy. Laat ek dit probeer onder woorde bring. Allereers is die natuurwetenskappe en die tegnologie vir my persoonlik 'n onuitputbare bron van verwondering en vreugde. Die ontwikkeling van hierdie soort kundigheid is van die hoogste beskawingsprodukte denkbaar. Die vooruitgang in wetenskap en tegnologie is 'n vertoonstuk van die mens op sy beste. Verder: So baie mense onder die gewone publiek put baie genot uit goeie stories oor die natuurwetenskappe en tegnologie. Dit was my voorreg om die lewens van baie te verryk deur hulle op 'n verstaanbare wyse 'n kykie te gee in hierdie wonderwêreld wat vir die meeste so geslote bly.

Met betrekking tot my lewensloop die volgende: Ek is in Nederland gebore en het kort na die oorlog saam met my ouers na Suid-Afrika gekom. Tydens my hoërskoolloopbaan het die voorliefde vir die Natuurwetenskappe begin. Dit het op 'n B.Sc. graad by die PU vir CHO uitgeloopt. My onderwys-vaardighede het ek ook daar gaan leer. My omswerwing in die onderwys was vele. Na die oprig van



een tegniese kollege en een technikon het ek na die SAUK gegaan. BRANDKLUIS het my lewe verander en, hoop ek, van vele ander. Ek is getroud met 'n wonderlike boerenooi wat al my dinge verstaan het en die hele moeilike pad saamgeloopt het. Ons het vyf kinders, almal is getroud en op twee na is hulle, die aangetroudes ingeslote, almal professioneel by die natuurwetenskappe en tegnologie betrokke.

Ek waardeer die feit dat u die toekenning aan my seun oorhandig. Hy sal op sy manier wel die een en ander oor my doen en late aan u vertel. Dan kry u dit baie objektief deur iemand wat my baie goed ken.

Marinus Wijnbeek

MERIT CERTIFICATE: URSULA ORTNER (POSTHUMOUS)

Ursula Ortner returned to Pretoria from Newcastle together with her family of six in December 1985.

Shortly afterwards she and her husband Herman attended their first S₂A₃ lecture following a Pretoria News advertisement. Both liked and enjoyed these lectures so much that they have attended most of them to this day. Soon both were asked to serve on the Pretoria branch and the National councils.

When Dr. P. Skoberla, who held the position of honorary Pretoria branch treasurer, passed away Ursula was asked to take over this portfolio which she gladly did from 1990 onwards.

With her bookkeeping talent she managed not only to keep the running cost of the Pretoria branch low but she also presented clear statements and budgets in time for the various council meetings.

Together with a number of other ladies from the Society she enjoyed helping in preparing the snacks that were offered after the lectures throughout the years. Ursula's aim was always to supply enough tasty snacks and other goodies at the lowest possible cost. This necessitated quite some personal work and preparations which she did with great skill and imagination.



We miss her very much and her non tiring efforts to do the best for the Society in the field of her responsibilities. We miss also her ever smiling face and her quiet determination as well as her good comments and advice at the meetings. With her we lost a really valuable person in our Society.

ANNUAL REPORT OF THE PRESIDENT

As I became president only very late in 1996, I must report on activities in which I was not involved, the few that took place during my period of office, and those I envisage for the future. The Association has had an impressive year in terms of the Pretoria branch, with its regular stimulating lectures and the tours that were successfully arranged. Dr Jones has reported on these to his branch, and they were detailed at the AGM on 29 November 1996. The branch is to be congratulated on setting a fine example to the rest of the country.

Our awards ceremony was the highlight of my experience in S₂A₃. It must surely be one of our chief activities to pay tribute to people who have been prominent in the advancement of science and therefore selected to receive certificates of merit. The recipients of the gold and silver medals have been identified as top scientists doing research in our country. Our public recognition of their value to society is an essential responsibility and honour to our association. The encouragement afforded to young researchers by the award of bronze medals is also an important function of our existence and dedication.

The awards ceremony was very well attended, and its success is to a very great extent thanks to the sustained efforts and attention to detail of Shirley Korsman, supported by her family. While there are such loyal and diligent office bearers, we are fundamentally sound. The assistance given by Eugen Hanau in preparing the venue was very time consuming and highly appreciated. Thanks to Herman Ortner for the magnificent way he has kept track of financial matters.

My first new year's resolution is to make life easier and more rewarding for those who work for us in this way, centrally our secretary. Her office and equipment must be conducive to the kind of enthusiasm she has shown.

Other matters we will give attention to from the first council meeting of 1997 are an intensive drive to canvass members, placing the Association firmly within the public forum by means of press releases and (we hope) a 1997 conference, more lectures, tours and the kind of controversial debate that some of our members are calling for.

The quality of research is a topic that concerns me personally, as it reflects and in turn shapes the approach to learning at school and the assumptions of scientists in all disciplines. If *science* is narrowly defined as conventional compilatory and descriptive research in the "natural" sciences, it does not promise much improvement in our human, economic and educational wellbeing. The *advancement* of science should surely not mean "more of the same". The expression *the advancement of science* means *extending the boundaries, modes and assumptions of intellectual endeavour and exploration*. There is real need for science education in South Africa, but not for memorisation of categories, labels and classifications.

Dr Ian Raper

ANNUAL REPORT - PRETORIA BRANCH - 1996

The Pretoria Branch was fortunate to obtain the services of excellent speakers on a wide variety of topics during 1996. Starting with a talk in March by Professor van Aarde on the development of an alternative to control reproduction in the African elephant, we held six lectures altogether on topics which included evolution, ancient Egyptian Science, Holography, linguistic 'fingerprinting', and a psychological perspective on humans and our interaction with our environments.

Excursions to the Planetarium in Johannesburg and to the Tswaing crater near Pretoria proved to be popular, and a number of excursions are planned for 1997.

The low point for the S₂A₃ was the tragic death of our Pretoria Branch treasurer, Mrs Ursula Ortner, in June. We miss her enthusiasm and warmth as well as her many contributions to, and sheer hard work for the society.

The committee elected at our branch AGM held in June comprises:

Chairman:	Glyn Jones
Secretary:	Erla Ortner
Treasurer:	to be appointed
Add. Members:	Freek Kok Phil Minnaar David van der Walt

A Newsletter was launched during 1996 and we hope it will become a regular feature during 1997. The members of the committee look forward to implementing a number of ideas planned during this year and hope that we will thus be able to increase the membership of the society.

We would like to express our sincere thanks to Council for their help and encouragement during the year.

Prof Glyn Jones

Nasionale Raad 1996/1997

President:	Dr Ian Raper
Vise-Presidente:	
Gauteng:	Dr F Korb
Oos-Kaap en Natal	Prof W Oelofsen
Vrystaat en Noord-Kaap:	Prof M Wingfield
Wes-Kaap	Prof J Spencer Jones
Ander streke:	Mnr E Hanau
Ere-Tesourier:	Mnr H Ortner
Ere-Sekretaris:	Mev S Korsman
Jeugvertegenwoordiger:	Mej E Ortner
Nuusbrief en Skakelwerk:	Mev E den Dulk Mnr Phil Minnaar (tydelik)
Addisionele lede:	Mnr Jac Fourie Mev A Culligan
Oud-Presidente:	Prof G van Drimmelen (Ere-lid) Prof J P F Sellschop Prof P Smit Prof J Wolfaardt
Voorsitter, Pretoria-tak	Prof G Jones

S2A3 - GENCOR BRONZE MEDAL AWARDS 1995

- 1) UNISA
Petrus Jochemus Paulus Grobler
M.Sc. Met Lof
'Functional Generalization of Dominating Sets of Graphs'.
- 2) Potchefstroomse Universiteit vir CHO
Mej Mariette Hattingh
M.Sc. (Fisika) Met Lof
'Dryf van Kosmiese Strale by 'n Golwende Neutrale Vlak in die Heliosfeer'.
- 3) Universiteit van Stellenbosch
Mej L.L. van Zyl
M.A. (Filosofie) Cum Laude
'Gesondheidsorg en Geregtigheid: n Filosofies-Etiese Ondersoek'.
- 4) Medunsa
Mr M.J. Mphahlele
M. Medical Science (Virology)
'Molecular Characterization of the VP4 (P) Genotypes of Human Rotaviruses in Southern Africa'.
- 5) University of Cape Town
Ms Jennifer Leigh Butt
M.Sc. (Medicine) (Generics)
'A Molecular Investigation of Waardenburg Syndrome in Southern Africa'.
- 6) University of Natal (Durban)
Mr M. Govender
M.Sc. (Physics)
'Radiating Solutions with Heat Flow in General Relativity'.
- 7) University of Natal (Pietermaritzburg)
Ms N.S. Whitley
M.Sc. (Maths & Applied Maths)
'Fischer Matrices and Character Tables of Group Extensions'.
- 8) Rhodes University
Mr Craig Milton Williams
M.sc. (Geology) with Distinction
'Petrogenesis of a New Amalfi Sheet: A Highly Differentiated Karoo Intrusion'.
- 9) University of Port Elizabeth
Mrs C. Hicks
M.A. (Clinical Psychology) Cum Laude
'Sources of Phycological Strength in a Disadvantaged Township Community in Port Elizabeth'.
- 10) Universiteit van Pretoria
Mnr M.P. Lotter
M.Ing (Elektroniese Ingenieurswese) met lof
'Micro-cellular CDMA Communication System Employing Complex Spreading Sequences'.
- 11) University of the Witwatersrand
Dion Brandt
- 12) Randse Afrikaanse Universiteit
Mej Louise Strydom
M.A. (Afrikaans/Filologie)
- 13) Universiteit van die Oranje-Vrystaat
Gerbrecht Elizabeth Cronje (geb. Veldman)
M.Sc.
'Effect of Thermoinhibition on Aspects of Respiratory Metabolism in Great Lakes 659 Lettuce Seeds'.

S2A3 - GENCOR BRONZE MEDAL AWARDS 1996

- 1) University of the Orange Free State
Karin Jacobs
M.Sc. (Mikrobiologie) Met Lof
'The Occurrence of Ophiostomatoid Fungi on Conifers with Special Reference to Species in Japan'.
- 2) Universiteit van Pretoria
Paul van der Merwe Sauer
M.Sc. (Wiskunde)
'The Complexity of Counting over Polynomially Bounded Processes'.
- 3) Potchefstroomse Universiteit vir CHO
Mev S.D.M. Cerisier
M.Ing. (Chemistry) met Onderskeiding
'The Electrochemical Generation of Ferric Ions in Cooling Water as an Alternative for Ferric Chloride Dosing to Effect Flocculation'.
- 4) Universiteit van Stellenbosch
Mnr D.H. Malan
M.Ing. (Elektries/Elektronies)
- 5) University of Cape Town
Ms Eva Plaganyi
M.Sc. (Marine Biology) with Distinction
'A Model of Copepod Population Dynamics in the Southern Benguela Upwelling Region'.
- 6) UNISA
Mr R.P. Raghubir
- 7) Rhodes University
Annemarie de la Criox
M.Sc. (Chemistry) with Distinction
'Computer Modelling of the Thermal Decomposition of Solids'.
- 8) University of Durban-Westville
Mr T.S. Pather
M.Sc. (Chemical Engineering) Cum Laude
'Coal Pyrolysis - The Influence of Bed Depth on Volatiles Produced by low Pyrolysis'.
- 9) University of Natal (Durban)
Mr Bruce Burton
M.Sc. (Electrical Engineering) Cum Laude
'Analysis and Practical Implementation of a Continually Online Trained Artificial Neural Network to Identify and Control VSI Fed Induction Motor Stator Currents'.
- 10) University of Natal (Pietermaritzburg)
Mr Merlyn Moodly
M.Sc. (Physics) Cum Laude
'Phase Transitions in Induced Lattice Gauge Models'.
- 11) University of the Witwatersrand
Susan van der Heever

- 12) **Randse Afrikaanse Universiteit**
- 13) **University of Port Elizabeth**
Mr M.A. Vockerodt
M.Sc. (Computer Science) Cum Laude
'Design and Implementation of an Environment for Speech Storage and Recognition'.
- 14) **University of Fort Hare**
Mr J. Hansen-Quartey
M.Sc. (Soil Science) with Distinction
'The Effect of Introduction of African Wormwood (*Artemisa afra*) on the Rhizosphere of Agricultural Lands'.

1962	Biesheuvel	Simon	Dr
1963	Elsdon-Dew	R	Prof
1964	van der Plank	J E	Dr
1965	van Drimmelen	Govert C	Prof
1966	Fitzsimons	V F M	Dr
1967	Tobias	Phillip V	Prof
1969	Koch	C	Dr
1970	Neitz	W O	Dr
1971	Ahrens	L H	Prof
1972	Nabarro	F R N	Prof
1973	Plumstead	E P	Dr
1974	Sellschop	J P F	Prof
1976	Söhnge	A P G	Prof
1977	Codd	L E	Dr
1978	Halliday	E C	Dr
1979	Frahn	W E	Prof
1980	Bothwell	T H	Prof
1981	Pretorius	Victor	Prof
1982	Joubert	Danie M	Prof
1983	Gear	J H S	Dr
1984	Grant	W L	Dr
1986	Stutterheim	Nico	Dr
1987	Hewitt	F	Dr
1989	Warner	Brian	Prof
1990	Garbers	Cristoph F	Dr
1991	Stoker	Pieter X H	Prof
1992	Arndt	Reinhard R	Dr
1993	Ellis	George F R	Prof
1994	Kew	Michael C	Prof
1996	Cresswell	Christopher F	Prof

RECIPIENTS OF THE S2A3 SOUTH AFRICA MEDAL - GOLD

1908	Theiler	Arnold	Sir
1909	Bolus	Harry	
1910	Beattie	John C	Sir
1911	Peringuey	Louis	
1912	Roberts	Alexander W	
1913	Rogers	Arthur W	
1914	Marloth	Rudolph H	Dr
1915	Lounsbury	Charles P	
1916	Sim	Thomas R	
1917	Gilchrist	John D F	Prof
1918	Innes	Robert T A	
1919	Moir	James	
1920	Warren	Ernest	
1921	Lister	Frederick S	Sir
1922	Evans	Illyd B P	
1925	Young	Robert B	
1927	Porter	Annie	Miss
1928	Green	Henry H	
1929	Broom	Robert	Dr
1930	Du Toit	Alexander L	
1931	Fantham	Harold B	Prof
1932	Bews	John W	
1933	Pijper	Adrianus	Dr
1934	Du Toit	Petrus	
1935	Phillips	Edwin P	Dr
1936	Hewitt	John	
1937	de Villiers	Cornelius G S	Prof
1938	Kirby	P R	Prof
1939	Dart	Raymond A	Prof
1940	Roberts	Austin	Dr
1941	Bleek	Dorothea F	Miss
1943	Schonland	B J F	Prof
1944	van Riet Louwe	C	Prof
1945	Barnard	Keppel H	Dr
1948	Janse	A J T	Dr
1949	De Kock	G van der W	Dr
1951	Dyer	R A	Dr
1952	Skaife	S H	Dr
1953	Gillman	Joseph	Prof
1954	Compton	R H	Prof
1955	De Meillon	Botha	Dr
1956	Lawrence	R F	Dr
1957	Drennan	M R	Prof
1958	Levyys	Margaret R	Dr
1959	Hesse	Albert J	Dr
1960	Meiring-Naude	S	Dr
1961	Warren	F L	Prof

RECIPIENTS : BRITISH ASSOCIATION MEDAL - SILVER

	<i>Paterson</i>		
1932	Peterson X	Nellie F	Miss
1933	Alper	Tikvah	Miss
1935	Orford	Margaret	Miss
1936	West	Oliver	Mr
1937	Wells	L H	Dr
1938	Murray	Joan M	Miss
1939	Cloete	J H L	Dr
1940	Malan	M E	Miss
1943	Pentz	K	Miss
1946	Kritzinger	C C	Miss
1949	Smit	A L	Mr
1950	Toerien	M J	Mr
1952	Theron	J G	Mr
1953	Tobias	Phillip V	Dr
1955	van Dijk	D E	Mr
1966	Hawkins	D M	Mr
1967	Beaton	G R	Mr
1968	Lamprecht	de V B	Mr
1974	Crocker	I T	Mr
1976	Contrafatto	G	Mr
1980	Mitchell	D	Prof
1981	Vraba	Elisabeth	Dr
1982	Copley	Bruce	Dr
1983	Clark	James B	Dr
1984	Robinson	T J	Dr
1986	Bruton	M N	Prof
1987	Pauw	Christoff	Dr
1989	Anderson	Ronald	Prof
1990	McNamarra	Derek A	Prof
1991	Oellermann	Ortrud R	Prof
1992	van Deventer	Jan S J	Prof
1993	Herbst	Barend M	Prof
1994	Connell	Simon	Dr
1996	Enslin	Johan H R	Prof

HISTORICAL OVERVIEW

- 1902: The Association is established under the auspices of the British Association for the Advancement of Science. The first president was Sir David Gill. Some other presidents of note were: Gen J Smuts (1925), Jan H Hofmeyer (1929), Dr. R Broom (1933), Dr. S M Naude (1956) and Prof. D M Joubert (1979/80).
- 1903: The first " Report of the South African Association for the Advancement of Science" is published.
- 1905: The British Association visits South Africa and a fund is established for the South Africa Medal (Gold) to commemorate this event.
- 1907: The recipient of the first gold medal was Sir Arnold Theiler. Since then this medal has been awarded 77 times, notably to: Rudolph Marloth, Robert Broom, Austin Roberts, Meiring Naude, Phillip Tobias, and two member who are still actively involved with S₂A₃ and serves on its Council, Prof. G van Drimmelen and Prof. J Sellschop.
- 1908: The "Report" is replaced by the South African Journal of Science. In this Journal South African scientists can publish the results of their research. (S₂A₃ is no longer directly involved with the publishing of this Journal, but members can subscribe to it at a special discount price).
- 1929: The second visit of the British Association leads to the establishment of the British Association Medal Fund. This silver medal is awarded to young scientists under the age of 40 in recognition of their work.
- 1932: The first recipient of the BA Medal was Miss Nellie Paterson. This medal has been awarded 34 times up to 1996.
- 1947: Introduction of merit Certificates. These certificates are awarded to persons who have made a significant contribution towards the advancement of Science, or the Association.
- 1980: The first EXPO for Young Scientists. S₂A₃ played a major role in establishing this very popular, yearly competition for school children.
- 1981: The first sponsored S₂A₃ Bronze Medals are awarded. These medals are awarded every year to the best Master's study student at each of South Africa's 21 Universities (including the TBVC States). The Sponsor at the moment is Gencor.
- 1984: Through a bequest made by Dr Marloth the Marloth Fund is established. This fund sponsors the yearly Marloth commemorative lecture and brochure.
- 1991: IFAAST (International Federation of Associations for the Advancement of Science and Technology) is founded in Hong Kong, with S₂A₃ as one of the founding members.
- 1992: Through a legacy of Dr. Craib, the Craib Fund is established for Mammal Research. The first payment was made to Prof Skinner of the Mammal Research Centre at the University of Pretoria in 1992.

THE AIMS OF S₂A₃

- * To create a meeting ground for the scientist and the layman interested in science;
- * To encourage the pursuit of science amongst the youth;
- * To command and recognise those who have excelled in their scientific field.

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