

# Rhodes Review and Annual Report

# 1994



# **Rhodes Review and Annual Report**

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## Profile – Dr Derek S Henderson

**T**he retirement of Dr Derek Henderson from the position of Vice-Chancellor of Rhodes University, expected to take effect in April 1996, will bring to an end his 20 years in the post. As such he is South Africa's longest serving Vice-Chancellor; he was, on his installation, also the youngest.

Dr Henderson's association with Rhodes goes back even further for he studied at the then Rhodes University College, completing the degree of Bachelor of Science 1948 with distinctions in Mathematics, Applied Mathematics and Physics.

His early education took place at home, until Standard 4, and he later attended St John's College in Johannesburg, having won two scholarships. He matriculated from St John's, with five distinctions, in 1945 but stayed there for a further year, in the VIth form, and as Head Boy. At the end of that year he wrote and passed the first year examinations set by UNISA.

He tells a story of his early years, when, while being taught at home by his mother, a qualified teacher, the family was visited by the local headmaster with the truant officer in tow. His mother was able to satisfy them that her home was a registered school with a staff complement of one and one pupil; the headmaster left without the new

Standard I enrolment which he sought.

This early experience contributed perhaps towards his strongly held belief that, educationally, small can be beautiful!

"My mother taught me everything", he remembers, "except Mathematics, which I learned from my father, and Afrikaans, which I picked up from a neighbour."

### Influx of returned servicemen

Dr Henderson, with his UNISA first year behind him, registered at Rhodes as a second-year student (Rhodes was a College of UNISA until 1951) in 1947. He remembers that there were some 1 100 students at the time, but that this figure was artificially high owing to the influx of returned servicemen. After graduating he was elected as the Rhodes Scholar for the Eastern Province and went up to Lincoln College, Oxford. He was awarded the BA Hons degree with a first-class pass in Mathematics and later, in 1955, his MA. He also attended St John's College, Cambridge, where he was awarded a BA Hons in the Logic Section of the Moral Sciences Tripos and, in 1957, a further MA.

Dr Henderson entered the world of business in 1953, spending three years with the Anglo-American Corporation, the last as private secretary to Dr Harry Oppenheimer. The love of Mathematics called strongly, however, and he joined the teaching staff of the University of the Witwatersrand, lecturing in the subject, in 1957.

During that period his interest in computers was fired and, in the same year, he took up an opportunity which presented itself to study at Harvard University in the United States. He won the Gordon McKay Fellowship in 1957, the Standard Oil of Ohio Postgraduate Fellowship (1958) and the Bell Telephone Laboratories Predoctoral Fellowship (1959) while there and emerged, in mid 1960 as the holder of one of only 12 doctorates in the computer field (his Applied Mathematics thesis was entitled *Logical Design of Arithmetic Units*) awarded in the United States that year.

*continued on page 4*



*Dr Derek and Thelma Henderson with their daughters, Mrs Angela Marriner (left) and Mrs Margaret Keeton.*

*Picture: Hepburn and Jeanes*

***Dr Derek Scott Henderson is to retire from the post of Vice-Chancellor of Rhodes University, with effect from 30 April 1996.***

## Vice-Chancellor to retire in 1996

*continued from page 3*

The IBM Corporation was not slow to recognise this talent and thus began his second spell in the business world. He was a member of the architectural team that designed the IBM 360 prototype.

### First Professor

In 1962 a desire to become involved in research and teaching saw him return to Wits, as Senior Lecturer in charge of the Computing Centre. He was appointed Director in 1964 and, three years later, the first Professor of Computer Science in South Africa.



*"RHODES SCHOLAR CAPPED", read the caption to this photograph which was published in The Rhodéo on 14 May 1949; "Derek Henderson, College House Rhodes Scholar, receives his hood at the Graduation Ceremony."*

It is arguable that Dr Henderson, in the early seventies, was 'on the fast track' at Wits and could well have looked forward to eventual appointment to the highest office. What then attracted him to Rhodes?

In part, he says, it was the then immediacy of achieving the goal of Vice-Chancellorship. "But, largely", he adds, "Grahamstown and Rhodes beckoned. My memories of both were most fond", he recalls, "and I saw the challenge as stimulating. I had great faith in the University and in its already evident niche potential. Its size lends itself to a high degree of personal interaction and the attainments of its alumni are convincing evidence of its success as an educational institution."

When Dr Henderson was installed as Rhodes' third Vice-Chancellor, in 1975, his predecessor left in his care an institution in buoyant mood, due largely to the fact that student numbers had reached the long-desired level of 2 500. However, because the debt was considerable and pressing, Dr

Henderson's first task was to investigate the reasons and he found these in lax financial discipline and archaic cash flow management. Many changes were made and new management and financial systems designed and implemented. Two years later Rhodes recorded a year in which income exceeded expenditure, the first of an unbroken run of 18. This situation is one of several which Dr Henderson lists as proud achievements.

Another, in respect of which he admits to great personal pride and satisfaction, is his establishment on our campus of the first racially mixed residences in the country, at a time when it was patently illegal. As is his wont and managerial style still today he 'did the homework carefully', avoided confrontational tactics, and "I got away with it." In fact it was not so simple and ministerial emissaries from Pretoria were sent to investigate (and probably castigate) the upstart, but the logic with which he made and illustrated his carefully researched arguments had them return North of the Jukskei with promises that he would "hear from the Minister." He did not and carried on in his quiet but firm manner with the business of desegregating every aspect of campus life with which he was presented. He is equally proud that Rhodes was the first South African institution, let alone University, to extend housing subsidies and guarantees to employees of all ethnic origins.

### Impolite to be kept waiting

Dr Henderson's abhors discourtesy. He believes that many of the more usual problems of management, and especially inefficiency, are no more or less than plain bad manners. It is impolite before it is inefficient, he feels, to be kept waiting for responses and replies to enquiries.

This tenet has had its effect on every aspect of interpersonal relationships at Rhodes; on dialogue between staff, students, parents and others and it even extends to the pleasing aesthetics of the campus and the strict and pro-active maintenance programme applied to the buildings. *Mens sana in corpore sano* is a favourite quotation, and a further source of personal pride results – the appearance of both campuses of the University. The residences in particular required a great deal of early attention.

Not only the rooms but also the kitchens, common rooms and ablution facilities were thoroughly upgraded. Mrs Henderson's prior experience at the University of the Witwatersrand, as a warden, was a great asset in this connection.

Yet another satisfying achievement is that the standards of teaching and research have been enhanced during his stewardship. "Our graduates are sought after all around the world", he says. "It is because of the high academic standards which they have absorbed and the sound research which backs these. But it is also because of the other characteristics which make up Rhodes men and women, such as social graces, and the general rounding of education not taught in lecture theatres."

It pleases Dr Henderson further that, when he leaves the University, the number of black academic and research staff members at Rhodes will be approaching ten percent.

Dr Henderson's years at Rhodes have seen student numbers increase from 2 500 to over 4 500. The number of buildings has increased with ten major new ones being erected; a further 40 have been extended or renovated. What pleases him more, though, is to record that Rhodes has the highest undergraduate pass rate in the country (84% in 1991 – the latest available figures). On a pro rata basis scientific research output vies with the best. He exhibits particular pleasure, however, at the success of the University's East London Division.

### Invitation and Guarantees

When he joined Rhodes this was a project under consideration only and Dr Henderson found himself in a position where it either had to be motivated or abandoned. In typical manner he researched the matter thoroughly, drawing parallels with the Potchefstroom / Vanderbijlpark situation rather than the more obvious Durban / Pietermaritzburg circumstance. He was adamant that the second campus could only be initiated were Rhodes to be invited to the city by the East London community and sought certain financial guarantees from that quarter in advance.

Both invitation and guarantees transpired and the Division was established in 1981, with lectures being given to 40 students in facilities belonging to the Technical College. The Division was, and still remains, a separate cost centre with its own

accounting; there is no subsidy from Grahamstown. Today there are in excess of 700 students in East London who study in the University's own buildings and four faculties are sited there. Discussions concerning the provision of residence facilities are being held.

If one accepts that the character of an institution, over time, adopts many of the characteristics of its chief executive, then Rhodes has much for which to thank Derek Henderson and, to large extent, it mirrors the man. "The questions of urbanity and civility are not trivial", he says: "without them academic discourse is severely limited." The decorum and dignity of Rhodes' formal ceremonies, functions and entertainments are hallmarks. A strong commitment to committee etiquette is practised. "A University must be managed in such a manner that its academic objectives must be fostered and defended in every possible way and a congenial learning environment preserved", he adds, which is the case at Rhodes.

Endowment funds since Dr Henderson's installation have increased 25-fold. This trust in the institution by outside people finds a parallel within; staff turnover, at between 6 and 7 percent, could hardly be lower.

Freedom of speech is strongly encouraged and defended. This defence is real; both of the only two incidents of infringement which have occurred since 1975 resulted in exemplary punishment of the offenders.

Dr Henderson is the first to acknowledge the high level of support which he has received from Mrs Thelma Henderson. They make a formidable team, a fact which did not escape the notice of the S A Teachers' Association which awarded a Centenary Award for contributions to education by the couple in 1991.

Mrs Henderson herself has done much for the University during the past 20 years. She and Dr Henderson entertain up to 1 000 guests in their home each year and many visitors to Rhodes have enjoyed their hospitality at The Lodge. It has become a happy venue for welcoming new staff, official functions, Rhodes Women's Association committee meetings, the annual cultural evening, family Bring and Braais, luncheons and dinners for the SRC and dinners prior to inaugural and Teaching Award lectures.

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## Vice-Chancellor to retire in 1996

*continued from page 5*

Mrs Henderson has served on the Flanagan Bursary Committee and the Residences Refurbishment Committee and has participated in Wardens' workshops.

Thelma Henderson is perhaps better known, however, for her community work. She has done far more for the Grahamstown community than many large organisations in much larger centres.

When the couple arrived in Grahamstown, in 1975, Mrs Henderson was asked to act as Chairman of the GADRA Educational Welfare sub-committee, at the time a small project which provided books and stationery to primary school children. After 20 years of her leadership it is today an enormous organisation which, at the beginning of 1995, awarded 650 bursaries to local students, runs a Commercial College, Matric School and primary English project and provides local schools with funds for educational projects, career guidance and advice.

In addition to this, while being actively running GADRA, Mrs Henderson has assisted other community groups, through fund raising and managerial ability, to resuscitate, re-equip and reorganise the Mekanaskop Creche and to build and re-establish the Heidi Pre-primary School, the St Mary's Day Care centre and the St Peter Claver's Nursery School.

In 1981 she became the founder Director of the Centre for Social Development (CSD), Rhodes' outreach organisation, which had been established through support from the Anglo American Chairman's Fund and the Bernard van Leer Foundation. All existing projects came under the CSD umbrella.

Since then, the CSD's work and influence have grown to amazing proportions and far too many community organisations and projects to list in this publication benefit as a result. They include mental health bodies, educare centres, service centres for the aged, a school for the mentally retarded, almost 40 farm nursery schools, home and day care centres, feeding schemes, pre-school training and adult literacy and the administration of bursaries.

Mrs Henderson has, over the years, raised in excess of R 14 million for these projects and continues to do so at the rate, currently, of some R 2.5 million annually.

Through her efforts many thousands of disadvantaged people have experienced recognisable and positive changes in their lives. A significant percentage of the population refers to her, unashamedly, as 'Nontsapho' – 'Mother of all of us'.

While not a cent of the CSD's money comes from the University, Mrs Henderson's activities are an excellent example of another aspect of Rhodes' nature; its status as a concerned member of the community in its own right. Rhodes has a well earned reputation of being a socially responsible citizen and its activities in this sphere have been expanded during Dr Henderson's time in office. In the field of education, as may be expected, much is being done through a variety of projects. It does not stop there, however, and many cultural and social avenues are explored as well. Rhodes students have been voluntarily assisting the underprivileged for more than half a century and still do so today. Staff members too give willingly of their time; it is partly the Rhodes influence on perceptions and largely the type of person which the University attracts, whether as staff member or student.

Dr and Mrs Henderson have no immediate plans to leave Grahamstown, a situation which will please many, especially those who are so dependent on the activities of the CSD and GADRA Education. But when one is as proud of the institution which Dr Henderson's successor will inherit as he himself is justly entitled to be, it may safely be assumed that he will remain vitally interested in its fortunes. While he has no intention of exercising any influence on the new Vice-Chancellor, he has some thoughts on Rhodes' future. He has always used analogy to illustrate his views: to influence people; to cajole, to persuade and, generally, to manage. He finds an appropriate quotation in the thoughts of the American Clark Kerr who wrote that economies of scale, in the University context, were most evident when dealing with up to 5 000 students. Between 5 and 15 000 they lessen and, when student numbers exceed 15 000 he suggests the establishment of a new University. Dr Henderson would therefore recommend, if asked, that Rhodes' student numbers remain below the figure of 5 000 in Grahamstown.

He quotes Edmund Burke, too, in saying that change should come about by 'insensible degrees' and in warning that the assumption of power should not occur too rapidly. He quotes from his own address to the 1993 East London graduation ceremony – *festino lente* – hasten gently.

"What is excellence?", he asks. "if not, perhaps, the accumulation of human wisdom?" He is adamant that Rhodes University should and shall continue to strive for excellence. "If one seeks merely to achieve the status of being a 'good' institution", he believes, "that 'good' will soon become 'mediocre'. The pursuit of excellence has been described as elitism, but should we rather pursue mediocrity?"

**Chris Walwyn**

# The Internet – it started at Rhodes

One can hardly open a newspaper or magazine, or turn on the radio or television these days, without being exposed to the Internet or Information Superhighway. This vast world-wide network, previously almost exclusively in the academic and research domain, is being commercialised, but the media hype surrounding it tends to obscure its very solid academic basis. Academic interest in the internet focuses on its usefulness as a research tool and also on the serious concerns underpinning its design and future growth. These range from issues related to the non-hierarchical structure of the network, to attempts to extend the address space in order to accommodate the explosion in the number of network participants.

Rhodes University has been in the forefront of internet development in Southern Africa since 1988, when the first dialup link operating over a normal

international telephone line was established. Economic and political considerations at the time dictated the use of this single PC-based link, and a small team at the University developed a series of programmes to gateway electronic mail from this link to the fledgling Uninet-ZA, comprising a small number of members from the South African university and research community. In 1991 many political barriers were removed and the traffic volume on this dialup link increased to the extent where the calls were lasting many hours each day. It was decided to install a fixed dedicated link to the USA and, due to the expertise that had been developed at Rhodes, Uninet-ZA decided to install the South African end-point of this link here, where it remains still.

Rhodes has been able to use the lessons learnt to good effect in assisting institutions in other African countries. Many of these countries are isolated by poor communications infrastructure, and while the world-wide internet is growing rapidly, there is a danger that the information gap between the network haves and have-nots is widening. Rhodes has helped in setting up and hosting network connections for universities and other organisations in Lesotho, Botswana, Swaziland, Zimbabwe, Mozambique, Mauritius, Namibia and Ghana.

Rhodes has not ignored local infrastructural growth and has an extensive local area network installed, which has been planned to allow for growth in both user demands and networking technical developments for many years into the future. It is one of the few South African universities to allow unrestricted access to both local and international networking by all its staff and students. The volume of network data at Rhodes compares very favourably to the largest SA universities. Rhodes was also the first organisation in Africa to establish a World Wide Web hypertext information server, and continues to make innovative use of the increasingly sophisticated network.

Uninet-ZA itself has grown to the extent where it now has some 55 members from the university, technikon and research community.

**Dave Wilson**  
*Director, Computing Services*



*A Rhodes student in one of the computer laboratories exploring the internet. All staff and students at Rhodes have access.*

*Picture:  
Taryn Cass*

***“The media hype surrounding it tends to obscure the very solid academic basis of the internet.”***

## Vice-Chancellor's Report

**T**he year 1994 was momentous both for South Africa and for Rhodes University. At Rhodes it was successful and active, with several new initiatives, and the largest number of graduates ever.

The sub-committees of the September 1993 Summit met regularly and many made great progress – most notably that concerned with accountability and governance. The Rhodes University Act has been changed to accommodate the appointment of an additional Vice-Principal, should the need arise, and to provide for greater student participation on Council and Senate. Representation on Council has also changed with the establishment of several Transitional Local Councils (TLCs) to replace municipalities which had representatives on the Rhodes Council.

In the field of sport, Rhodes continued to do well. A new, universally accepted non-racial constitution for the Sports Council was adopted, which effectively unified all sport at Rhodes. Unfortunately, we did

not repeat our rugby triumph over the University of Port Elizabeth in 1993, but their victory was narrow. The Rowing club won the Universities' Regatta for the third successive year and had a record-breaking fifth consecutive win of the men's title at the IGI Boat Race. Four members of the club were selected for the national squad, effectively becoming the South African coxless four and three represented South Africa at the World Student Games in Buffalo. Our oarsmen performed creditably during a European tour while other students earned provincial and national colours in hockey, volleyball, water polo, duathlon, cricket and rugby.

In September Rhodes celebrated its ninetieth anniversary. The University had, earlier in the year, acquired the portion of land above Eden Grove which we hope will be the site for new library and conference facilities. The estimated cost of the complex is about R 25 million, which the University plans to raise over the next ten years through the Centenary Appeal Fund, which was launched during the anniversary celebrations.

Our academic and research staff have published their work widely in learned journals and several also published books. Among the latter were *The Law of Access to Children*, by Professor Ivan Schäfer; a book on migrant women, edited by Dr Gina Buijs, Professor Etienne van Heerden's ninth novel *Die Stoetmeester*; and Dr Paul Skelton's definitive work on the freshwater fishes of southern Africa. The Institute for the Study of English in Africa (ISEA) has published the first of its series of Shakespeare texts aimed at school pupils and students for whom English is a second language.

In the latter half of 1993, Professor Gavin Stewart took up the editorship of the Daily Dispatch newspaper in East London. His replacement, Professor Guy Berger, arrived in June 1994.

At the beginning of 1994, Rhodes introduced Foundation Courses in the sciences and in commerce. These are designed to ease the entry of educationally disadvantaged students into study at university level. The sciences have themselves benefitted by the installation of a new transmission electron microscope in the Electron Microscopy Unit.



*The Vice-Chancellor's Distinguished Teaching and Research Awards for 1994 went respectively to Professor Perry Kaye (right), of the Department of Chemistry and Professor Peter Clayton, of the Department of Computer Science, who were photographed (above) with Mrs Louisa Clayton (left) and Mrs Joan Kaye, at the function.*

*Picture: Chris Walwyn*

***"The University's community involvement in Grahamstown has increased in both the scope and the variety of activities offered."***

The East London Division expanded further through the provision of additional lecturing and office space in a newly refurbished building. The elements of the primary education courses in the Faculty of Education began their move from Grahamstown to East London, and were followed by Social Work. The Institute for Social and Individual Development in Africa (ISIDA) has continued and expanded its outreach to the greater East London community.

The University's community involvement in Grahamstown has increased in both the scope and the variety of activities offered. The Rhodes University Mathematics Education Project (RUMEP), has expanded rapidly to meet the needs of primary school teachers, particularly in rural areas. An Adult Literacy Unit was established in the ISEA and has successfully collaborated with other adult education initiatives in the area.

The Centre for Social Development (CSD) trained the largest group of pre-school teachers in its history and ran a Matric School for pupils who needed either to pass matric for the first time or to improve their results. The Matric results were extremely good and included two distinctions. The Grahamstown Tertiary Education Project (GRATEP) also ran a successful Matric school, with Rhodes staff members as tutors.

The Legal Aid Clinic and the Street Law Programme have increased their activities, the former in providing legal services to those who cannot afford them, the latter raising the awareness of legal matters, mainly among school pupils. Both projects provide practical experience to students from the Faculty of Law.

LIRI Technologies has expanded the training offered to workers in the leather and footwear industries this year; they are now able to improve their training up to degree level. Six students were to complete Diploma courses at the end of 1994 and the adult education programme for factory-floor workers is in place.

With further reference to the educational theme, the JLB Smith Institute opened an Angling Museum at Knysna during the year. It includes a children's educational resource centre and displays emphasising the need for correct and sustainable management of fisheries resources.

The Institute of Social and Economic Research (ISER) has continued with research into the needs and aspirations of rural and urban people in the Eastern Cape.

The Vice-Chancellor's Distinguished Teaching and Research Awards for 1994 went respectively to Professor Perry Kaye, of the Department of Chemistry and Professor Peter Clayton, of the Department of Computer Science.

The Graduation ceremonies in both Grahamstown and East London in April and May 1994 were happy occasions. There was a record number of graduates and Honorary degrees were conferred upon Professors Emeriti Guy Butler and Rodney Davenport. Dr Govan Mbeki and Dr Michael O'Dowd (in Grahamstown) and Dr Auriol Batten in East London.

As South Africa moves into full international acceptance, the number of foreign visitors to Rhodes has increased and Rhodes staff members receive a correspondingly larger number of invitations to participate in international conferences. Particularly gratifying has been the interest in our University displayed by countries to the north of us. Rhodes ichthyologists and microbiologists were warmly received at conferences held in Dakar, Senegal, and many useful research contacts in Africa were made.

In December Dr Beau Sutherland, a distinguished Old Rhodian and Chairperson of the Rhodes University Board of Governors, died after a short illness.

While we remember them with affection and gratitude, we take comfort in the fact that both the present staff and students of Rhodes University are preparing themselves for their places in the future, in what we all hope will be a prosperous and exciting South Africa.

As Rhodes moves towards its centenary in 2004, we are confident that having weathered the storms of the past 90 years, we have the resources to build further upon what are already strong foundations of tradition and excellence.

I have announced my intention to retire towards the end of 1995, or as soon as a successor has been appointed.

***Dr Derek S Henderson***  
***Vice-Chancellor***

# Rhodes University Foundation

## Treasurer's Report

**T**he summarised balance sheet for the Foundation at 31 December 1994 reflects that the capital value of the Foundation has increased by approximately R 15 000 000 when compared with the value as at the end of December 1993. This increase is accounted for largely due to an increase in the value of the investment through market value appreciations. The value of donations during the

year, which also contributed to the increase in value, was approximately R 1 952 000. This trend follows the pattern for the previous year as the total growth in the value of the Foundation and the amount of donations received is approximately the same for 1994 as it was for 1993.

The Trustees have expended a great deal of time and energy in achieving this significant increase in the value of the funds invested. To achieve an increase in value of just short of 30% is indeed commendable. The Trustees are to be thanked for their continued effort and in particular those members of the Investment Committee who give so freely of their time and expertise for the benefit of the University.

The donations referred to above are made up of R 1 400 000 received for specific purposes and R 552 000 for general purposes. In spite of concerns that the economic conditions prevailing in South Africa during 1994 would result in a reduction in donations received, this has not turned out to be the case. Although the results were pleasing the University needs to continue to actively seek donations because of the decline in State funding and the difficulty being experienced by those persons responsible for paying the fees of the students in attendance at the University.

It is with sadness that the death during the year under review of Dr J.B. Sutherland, Chairman of the Board of Governors of the Rhodes University Foundation, is recorded. Dr Sutherland's sudden passing will be sorely felt by the University. His contribution to the Country and to Rhodes University in particular will long be remembered by those who knew him.

**H A Long**  
**Treasurer**

**Rhodes University Foundation**



*New House, the new mens' residence opened at the beginning of 1994.*

*Picture: Taryn Cass*

***"The Trustees have expended a great deal of time and energy in achieving this significant increase in the value of the funds invested."***

# Financial Statements

## SUMMARISED INCOME STATEMENT

	R thousands	
	1993	1994
<b>Income from Investments</b>	<b>3 157</b>	<b>3 530</b>
Dividends	829	1 556
Interest	2 302	1 946
Other	26	28
<b>Less expenses</b>	<b>224</b>	<b>515</b>
<b>Net Income</b>	<b>2 933</b>	<b>3 015</b>
Less: Distributed to and expended for the benefit of Rhodes University and its bursary funds	2 565	2 650
<b>Retained for re-investment</b>	<b>368</b>	<b>365</b>

## SUMMARISED BALANCE SHEET (at market values)

	R thousands	
	1993	1994
<b>Fundholders' capital employed</b>		
Foundation	31 065	38 927
University and others	21 963	28 931
	<b>53 028</b>	<b>67 858</b>
<b>Employment of capital</b>		
Investments and cash	53 360	67 747
Accounts receivable	249	661
	<b>53 609</b>	<b>68 408</b>
Accounts payable	581	2 437
	<b>53 028</b>	<b>65 971</b>

# Rhodes University Financial Report



*Cockspur Coral  
Tree Erythrina crista-galli L.  
in Quad II with St Mary Hall  
students. from left, Rashmita  
Rowjee, Alison Sutherland,  
Patience Banda and Nicky  
Gardner.*

*Picture: Hepburn and Jeanes*

***“ It is pleasing to report . . .  
student registrations  
increasing substantially over  
those of 1994”***

The Financial Report for 1994 reflects an increase in income over 1993 of R 3 600 000. Expressed as a percentage this amounts to less than 5% over the previous year. This low increase was anticipated and reported on in the previous year's report.

This very low increase in income created enormous strains on expense categories and resulted in difficulties being encountered in funding salary adjustments and grants to academic departments for running expenses and capital equipment. In an attempt to recruit a higher number of students to the University than registered for 1994 it was decided to limit fee increases for residence and tuition purposes for 1995 to below 6% when compared to 1994. It is pleasing to report that this decision appears at this stage to have had the desired effect of student registrations increasing substantially over those of 1994.

This University enjoys significant support from its publics who contribute generously to the University. These contributions do not only take the form of grants of cash but also of time and gifts in kind. The Governors of the Rhodes University Foundation continue to play an extremely important supportive role and their contribution to the University is gratefully acknowledged.

The residences are run on a self-supporting basis and fees are fixed at levels required to meet running and maintenance costs. With fee increases contained to single digit figures both for 1994 and 1995 it is becoming increasingly difficult to fund a maintenance budget from student fee income. The income generated by the residences from conference and accommodation sales, particularly during the National Arts Festival, plays a significant part in the University's ability to restrict fee increases as aforesaid. It is pleasing to report that, although in 1994 there were approximately 200 empty places in the residences the position has been corrected in 1995.

***H A Long  
Registrar (Finance)***

# Summarised Operating Statements

## UNIVERSITY

	1993		1994	
	R millions	%	R millions	%
<b>Income</b>	<b>78,6</b>	<b>100,0</b>	<b>82,2</b>	<b>100,0</b>
Government subsidies	50,0	63,6	52,5	63,8
Student fees	23,3	29,6	24,2	29,5
Investment income	3,3	4,2	3,6	4,2
Other	2,0	2,6	1,9	2,3
<b>Expenditure</b>	<b>78,6</b>	<b>100,0</b>	<b>82,2</b>	<b>100,0</b>
Salaries and benefits	55,0	69,9	57,6	70,0
Academic departments, research & library grants	7,3	9,3	7,7	9,4
Operating expenses – buildings, grounds & equipment	6,2	7,9	6,9	8,4
Central administration	4,1	5,2	4,5	5,5
Loan interest & redemption	2,5	3,2	2,5	3,1
Other	3,5	4,5	3,0	3,6

## RESIDENCES

	R thousands	
	1993	1994
<b>Income</b>	<b>14 569</b>	<b>15 719</b>
Residence fees	13 289	14 092
Other	1 280	1 627
<b>Expenditure</b>	<b>14 569</b>	<b>15 719</b>
Food	4 016	4 101
Salaries and wages	4 242	4 489
Power and water	1 629	1 668
Loan interest & redemption	418	883
Laundry and cleaning	649	534
Replacement and maintenance provisions	2 699	2 857
Other	916	1 187

## BURSARIES, SCHOLARSHIPS AND LOANS

	R
<b>Bursaries and Scholarships</b>	<b>10 654 573</b>
Awarded by the University from donations or from own funds	2 687 221
Awarded to students from outside bodies	6 766 763
Awarded by Central, Provincial and Local Government	367 589
<b>Loans</b>	<b>633 000</b>
from Rhodes	122 500
from Tertiary Educational Fund of South Africa	510 500

# Chemistry – the Industrial Connection

**C**hemistry at Rhodes has a proud record dating back to 1904, when the University was founded. Ninety years on, the Department of Chemistry is responding positively to new challenges. Recent initiatives include the establishment of

a “foundation” programme and the introduction of industrial projects to develop entrepreneurial attitudes, as well as communication and team-work skills. Over the years, a strong research tradition has developed and, in 1994 alone, over 30 papers were published or accepted for publication in research journals. Of particular significance is the continuing research collaboration with the Chemical Industry. A good example of this collaboration is found in the work done by Professor Mike Brown, Professor of Physical Chemistry.

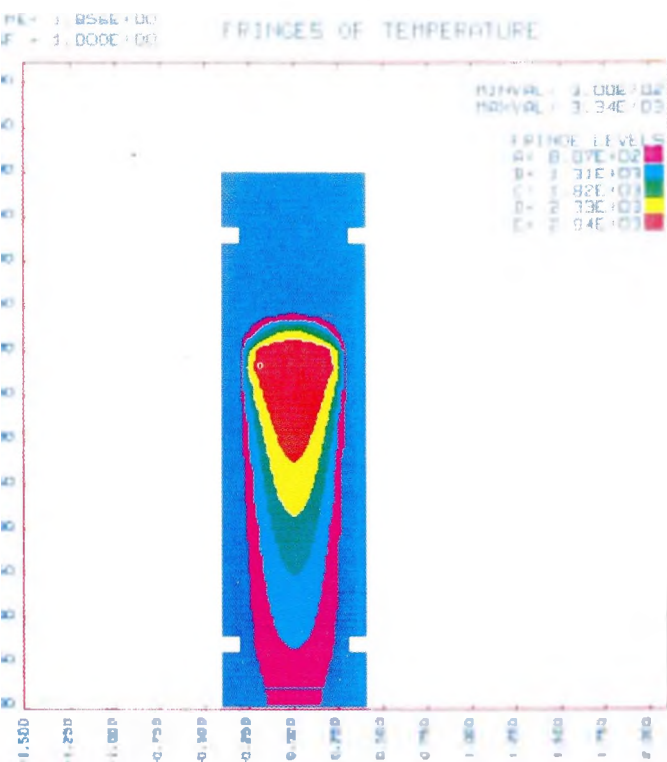
Since 1980 he has been actively involved in collaboration with AECl Explosives Ltd on the study of the complex processes occurring during the combustion of pyrotechnic systems. These systems, which are mixtures of solid fuels and solid oxidants, are of great industrial importance through their use as delay fuses in the blasting of rock.

The research has been directed at the identification of the factors which give rise to the wide range of burning rates when various fuels and oxidants are combined. This work has led to many publications, several theses, and substantial grants for the purchase of equipment for thermal analysis and related studies. In 1994, the Foundation for Research Development provided funds for the purchase of a high-temperature furnace for the thermogravimetry (TG) system. This will complement the Department's existing modern equipment for TG, differential scanning calorimetry (DSC) and high-temperature differential thermal analysis (DTA).

After several years of negotiation, the Chemistry Department was given access to a powerful finite-element code (TOPAZ) for the computer simulation of pyrotechnic reactions and other heat transfer problems associated with chemical reactions. A student has recently submitted his PhD thesis on work done in this area.

Professor Brown has also collaborated in many research projects with Dr Andrew Galwey of the Queen's University of Belfast, Northern Ireland, since first visiting Belfast in 1971. Recently Prof Brown acted as Guest Editor of a special issue of the *Journal of Thermal Analysis* in honour of Dr Galwey's 60th birthday. Dr Galwey is due to visit Rhodes in 1995 as the University's Visiting Lecturer.

In the past few years, Associate Professor of Inorganic Chemistry Des Eve and Prof Brown have collaborated on the study of the thermal decompositions of mixed transition-metal copper oxalates. The aim has been to see how incorporation of a second metal changes the behaviour of copper(II) oxalate. Two papers on this work have been published, and a student is doing his MSc on a mixed barium-copper oxalate which has potential interest as an intermediate in the synthesis of high-temperature superconductors. A member of staff from the Chemistry Department at the University of Fort Hare is working on the thermal analysis of a series of coordination compounds for his PhD at Rhodes.



*Computer simulation of combustion of a column of pyrotechnic material.*

***Over the years a strong tradition of research and collaboration with Industry has developed.***

Work is also in progress on the computer simulation of some simple decomposition processes from a crystallographic and energetic point-of-view. This was started in collaboration with the late Dr Robin English and is being continued in collaboration with Prof Leslie Glasser of the University of the Witwatersrand.

Prof Brown attended the 6th European Symposium on Thermal Analysis in Grado, Italy,

in September 1994 and was invited to become Chairperson of the Publications Committee of the International Confederation for Thermal Analysis and Calorimetry. He sits on the editorial boards of two further international journals, *Thermochimica Acta* (Elsevier) and *Drug Stability* (Radcliffe Medical Press), and has been invited to edit the first volume of a four volume *Handbook of Thermal Analysis*, for Elsevier, Amsterdam.

*In a University, research informs teaching (and vice-versa) and the staff of the Chemistry Department at Rhodes are deeply involved in both activities.*

Professor Perry Kaye, Head of the Department of Chemistry and 1994 recipient of the Vice Chancellor's Distinguished Teaching Award, leads an active research group. The projects are wide-ranging and include:-

- ❑ synthesis and physical-organic studies of heterocyclic compounds with medicinal potential (e.g. analogues of the benzodiazepines used as minor tranquilisers);
- ❑ development of novel ligands for use in the selective extraction of platinum group metals;
- ❑ asymmetric synthesis – the formation of one mirror-image form of a molecule in preference to the other; and
- ❑ applied studies in collaboration with local industry.

Dr Mike Davies-Coleman joins the Department in 1995 and, in collaboration with chemists at SmithKline Beecham Pharmaceuticals (USA), has been systematically investigating the natural product chemistry and possible pharmaceutical properties of extracts of South African marine invertebrates. So far this collaborative research programme has produced a series of interesting natural products with promising anti-inflammatory properties, while the anti-HIV and anti-cancer activity of other compounds is presently being tested.

Dr Tebello Nyokong has been engaged, during 1994, in research into the use of macrocyclic transition metal complexes as electrocatalysts. In particular, metallophthalocyanines (MPC's) were employed as photocatalysts for the oxidation of industrially important molecules such as sulphur dioxide and as agents for tumor therapy. In further work, she has investigated electrochemical methods used in the determination of toxic heavy metals and of small organic molecules such as cysteine.

Another new staff member in the Department is Dr Cheryl Sacht. She has been researching the design and synthesis of novel compounds, that incorporate the recent understandings of supramolecular chemistry, with a view to practical applications in areas such as bioinorganic chemistry (e.g. DNA-metallointercalator drugs and platinum-based anti-tumor drugs) and the selective pre-concentration and determination of precious metal ions. Attention is also being given to the synthesis and coordination chemistry of macrocyclic and acyclic receptor molecules with multiple recognition sites for the binding of organic and metal guest species.

Emeritus Professor Doug Rivett's recent research work recognises that about half of the drugs presently used originate from plants. Accordingly, for some years now, he has been isolating and determining the structure of new compounds, particularly from the family *Lamiaceae*, that may be pharmacologically active. He and his colleagues have recently corrected the structure assigned to *umuravumbolide* obtained some years ago from Rwandan *Iboza riparia* by Belgian workers, and have also isolated related new compounds from two *Syncolostemon* species.

In 1993, the Chemistry Department started a "foundation" course designed to assist first year students who experience particular difficulty with the first year curriculum. Designated Chemistry IR, the course requires students to complete Chemistry I over 2 years. It is directed by Mrs Joyce Sewry, a specialist Chemistry lecturer attached to the Rhodes' Academic Development Programme.

By attending the Chemistry IR course, students have the advantage of a small group situation. Class participation is encouraged, with the result that problem areas are identified earlier and dealt with immediately.

# The Commerce Foundation Programme

**D**uring the second half of 1993 the Academic Development Programme (ADP) and Dean of Commerce worked closely together in initiating the design of a Commerce Foundation Programme at Rhodes.

This was largely in response to the June 1993 examination results in the Faculty of Commerce, from which it was apparent that the DET students as an identifiable group were not coping with the

university courses in their existing format.

The unrest and strikes at DET schools in 1993 made the outlook for 1994 bleak. A discussion paper on the aims of a foundation programme for English second language speakers was produced and circulated amongst departments in the Faculty. This led to the formulation of a proposal for approval by the Faculty Board, Senate and the University Council. The proposed programme differed from existing programmes in that it sought not only to develop academic skills but also to develop communication and other life skills which would be of lasting benefit to the student who subsequently decided against pursuing an academic career.

Prior to the launch of the programme local educators from both the formal and non-formal sectors, local business people, NEHAWU shop stewards and other non-academic staff of Rhodes University were invited to an information meeting. The structure of the programme, admissions policy, content of the courses and student fees were discussed. Representatives of the community were invited to make suggestions about the content of the Commerce Foundation Studies course.

Minimum entrance requirements were specified as follows:

- ❑ Only non-English mother-tongue speakers from Government schools could apply;
- ❑ Mathematics must have been studied up to matric level;
- ❑ Matriculation exemption must have been obtained;
- ❑ Only first time entrants to a university could apply;

Places were offered to 25 applicants, but only 14 eventually registered at Rhodes. The financial aid office played an important role in assisting the students with various bursaries and/or loans.

The curriculum was designed bearing in mind that, for success in a BCom. curriculum, a student needs to have numerical and communication skills, as well as a knowledge of the processes and conventions underpinning commercial activities.



*Students under instruction in a Commerce Foundation class.*

*Picture:  
Taryn Cass*

***“The programme sought not only to develop academic skills but also to develop communication and other life skills which would be of lasting benefit.”***

During the first week of the first term the students received their timetable and it was discussed. The lecturers explained the rationale behind the choice of subjects, as well as the distribution of the subjects on the timetable. The programme as a whole was discussed and lecturers and students came to an agreement about the various role players and their responsibilities. A study contract was drawn up, formalising the discussions.

### **Teaching methodology:**

Active learning methods were selected for teaching the foundation subjects. A short explanation is followed by problem-solving activities. Students work in groups on chalk boards, in pairs, or individually at their desks.

They produce weekly assignments and benefit by immediate feedback from the lecturers. Continuous evaluation of student work is undertaken and one period per week per subject is set aside for individual consultations during which subject matter and general problems may be discussed.

The non-credit bearing Commerce Foundation Studies course equips students with a knowledge of the processes and conventions underpinning commercial activities. At weekly, three-hour meetings students meet and are divided into four groups, each having to choose its own business. This could be a wholesaler, a retailer, a factory or a service business. Names are chosen and logos designed. For the rest of the year each group applies theoretical knowledge to its "own" business.

The course created an opportunity for community involvement and two local business people, a woman from the small business sector and the chairman of the Grahamstown African Chamber of Commerce were guest speakers, telling students how they started their own businesses. After a lecture on the legal aspects of business, the students visited local businesses to find out from the various people which laws apply to their specific business. A lecture on production was followed by a visit to two local factories for hands on experience. Certain local businesses gave generous support towards tuition of a local student, towards the acquisition of calculators and towards student bursaries. Staff at some offered career guidance.

There is a participatory aspect to the course which is important; the Foundation Programme is

conducted as a joint venture between staff and students. The first step in implementing the programme was the formulating and signing of a study contract, making both students and staff members responsible for the programme. The lecturers, as well as the students felt that attendance should be compulsory. The students undertook to be present at each lecture and lecturers promised that they would present material in each lecture that would benefit the students and each "contracting party" accepted for their performances to each other.

Student work is evaluated on a regular basis and every aspect of the programme is monitored continuously. Students fill out a short questionnaire and general problems are discussed and possible solutions investigated.

At the end of each term, the students write an evaluation essay about all the aspects of the programme. The evaluation takes the form of short comments on each aspect, ranging from their experience of residence life to their opinion on the different academic courses. The students are allowed to use a word processor if they are worried about lecturers recognising their handwriting.

The planning and implementation of the Commerce Foundation Programme has provided a valuable learning experience for many people at Rhodes. It is a combined Commerce Faculty and ADP initiative, the ADP having played a major role in the planning phase and as a decisive part in the choice of teaching and learning strategies. The various departments provided full administrative support to the programme and to the standard of teaching and learning in the specific departments.

The end of the year results of the Commerce Foundation group were very promising. All fourteen students passed all their subjects and plan to come to continue with their studies at Rhodes. South African businesses which were approached for student bursaries, were very positive about this initiative to cater for the training of Black business people, without lowering the academic standard of the BCom degree. Indications are that the number of students following this programme will probably double in 1995.

***Esté Coetzee and Dean Sieberhagen***

# Pharmacy Administration and Practice

**P**harmacy Administration and Practice is the “laat lammetjie” in the pharmacy curriculum at Rhodes. It was introduced as a three year major in 1990 to meet the demand for a more patient-centred approach to pharmacy.

The course aims to help our students use their scientific knowledge most effectively in the challenging work environment. It is driven by the concept of pharmaceutical care: helping people make the best use of medicines.

The academic component of the course examines

the psycho-social aspects of health care at individual and community levels, effective and productive resource management and evolving health systems. Special attention is given to communication, ethics and the law as applied to the safe and effective use of medicine.

During the final year of the course, considerable attention is given to the practical dimensions of the profession. Ward rounds and the presentation of written and verbal case reports, therapeutic drug monitoring case studies, visits to various health centres and participation in immunization



Picture:  
Taryn Cass

***“The introduction of this course has opened up new and exciting research opportunities. Students are encouraged to become involved with the community.”***

and screening campaigns are some of the challenges that face our students.

A temporary pharmacy practice laboratory provides the opportunity for students to become familiar with drug products and computer dispensing programmes. It is also the place where they are trained in dispensing procedures with particular attention to communication skills. Videos allow for stimulating peer review. Journal club presentations by the students to all members of the pharmacy school are nerve racking but vital confidence building activities.

The introduction of this course has opened up new and exciting research opportunities. Major projects have investigated the use of pictograms for communication, conflict between pharmacists and doctors, noncompliance of asthmatics and epileptics.

The pictogram project is "ongoing" and has attracted international interest. Undergraduate research is actively promoted and three student projects have received recognition at national level.

Students are encouraged to become involved with the community. Marketing research projects create awareness of specific health needs and provide many students with the motivation and confidence to become involved. Voluntary community service activities by students include visits to old age homes, collection of expired drugs, drug abuse awareness talks, and most recently, a campus-wide screening and monitoring campaign.

The future? Greater significance is being attached to the maintenance of health and prevention of ill-health. The pharmacist's challenge is to meet this challenge through the safe and cost-effective use of medicine. The opportunities to do so are increasing. The Reconstruction and Development Programme with its emphasis on primary health care provide a unique South African stimulus. It is a great time to be part of a section charged with the responsibility of ensuring that students have the confidence, commitment and ability to use their scientific knowledge effectively.

***Billy Futter, Senior Lecturer***



*Students working in the pap laboratory in the School of Pharmacy.*

Picture: Billy Futter

## Catering for new health demands

Rhodes University has, for many years, prided itself on its capability of functioning *in loco parentis* with regard to the well-being of its students.

The increasing student numbers in recent years, together with changing social attitudes towards the significance of psychological stress in adolescents within an academic environment has led to the provision on the campus of specialised professional services to cater for students' needs in terms of mental health, career guidance and academic assistance.



*A student counselling session in progress.*

*Picture:  
Taryn Cass*

***A wide range of psychological support services is available to students on the Rhodes campus and has been extended as a community service to Grahamstown and its environs. Qualified personnel are available to diagnose, counsel, refer and treat outpatients.***

Recognising that the extent of services desired had expanded to the stage where they could no longer adequately be provided by the Dean of Students, the University acceded to a request from the Students' Representative Council, in 1993, that a Student Counselling Centre, staffed by a qualified lay counsellor, be established. This has, since its inception, offered short-term crisis intervention.

Rhodes' Department of Psychology has established a further facility on the campus, the Rhodes Psychology Clinic. Housed in its own premises and staffed by a director, the clinic offers qualified psychological counselling to members of the University community and folk from Grahamstown.

During the course of 1994 the infrastructure expanded further with the initiation of the Psychological Services Committee. This was an initiative of the Psychology Department which recognised that the various "agencies" on the campus would more effectively discharge their responsibilities if there was some or other form of central coordination of their activities.

The Committee, with its representation from the Psychology Clinic, the Student Adviser's office, the Hall and House wardens, the SRC Counselling Centre, the Arts and Social Science Faculties, the Sanatorium and the Department itself, feels that it has gone a long way towards achieving success as measured by the improved accessibility to counselling by those in need.

A private medical practitioner has also been invited to join.

The Committee met on four occasions during 1994. In addition to individual counselling, several workshops were presented; these addressed such matters as stress management, rape counselling, group building and examination tension, and were attended by wardens and sub-wardens. Details of anxiety and depression in individuals are recorded and monitored with a view to identifying trends and scenario planning.

At the end of its first year the Committee had already recorded much success in its efforts to coordinate psychological services on the campus. The various agencies function as a tiered system, with competent referrals taking place from one level to the next. In cases of serious mental illness, although there have been extremely few, patients in need of clinical psychological treatment are identified early and referred to the on-campus clinic or, where appropriate, to the Fort England Psychiatric Hospital or private practitioners in Grahamstown.

With changing times and a faster pace of life, young adults are being exposed to intensifying pressures and difficult influences. The various avenues provided by Rhodes to staff, students and the

community at large are being well used. Areas of concern remain anxiety, depression, eating disorders, drug abuse, stress - often examination related and interpersonal relationships. That there is a need for the counselling offered has been indicated by the increasing number of people asking for help or diagnosis, both voluntarily and after referral. In itself, this trend is a symptom of modern stress and pressure. The University recognises that individuals cannot always respond adequately if not assisted and has provided an infrastructure to help.

**Prof Chris Stones**  
**Head of Department: Psychology**

## Close relationship benefits both institutions

**R**hodes University's Department of Psychology has for some years enjoyed a close relationship with the Fort England Psychiatric Hospital in Grahamstown.

There are many benefits for both institutions. Students at Rhodes, especially post graduates, have the opportunity of working with qualified and experienced practitioners and their patients. Fort England, in its turn, is able to draw on the expertise and research inherent at the University and to keep abreast of modern trends.

Fort England is the largest Psychiatric Hospital in the Eastern Cape.

Being accredited by the South African Medical and Dental Council, it may take interns onto its staff for training purposes. This is of value to

Rhodes as those postgraduate students majoring in clinical psychology can directly benefit from this. From informal beginnings, with one Masters student in 1975, the relationship has progressed and been enhanced; in 1994, 12 post-graduate clinical students from Rhodes worked at

or closely with, the staff and patients at Fort England.



*Fort England: the largest Psychiatric Hospital in the Eastern Cape.*

*Picture: Taryn Cass*

# Community policing in Grahamstown



*Community Safety Project report-back in progress at a Community Forum meeting.*

*Picture:  
Taryn Cass*

***The Community Safety Project is helping communities to re-orientate the S A Police Service toward the idea of service and accountability to the community.***

Rhodes University, through the Faculty of Law, has become intimately involved in the Community Safety Project in Grahamstown (CSP). In this initiative it is partnered by the Community Police Forum.

The CSP came into being in September 1992 after township residents expressed dissatisfaction with the police investigation of serious crime in the area. Their perception was that there was little effective intervention by the police. The police had instituted a Liaison Forum but this had achieved little or no credibility in the eyes of the community.

In September 1992, a group from the community marched on the police station demanding enhanced efficacy from the police in so far as protection from gangs, operating without fear of reprisal, was concerned. A series of meetings which followed led to the establishment of a 'policing commission'.

This commission, after exploring community attitudes, demographics and applicable social circumstances undertook to establish a Community-Police Forum. This was blessed with a greater perceived legitimacy because it was community driven and not police driven.

The Forum established several committees and engaged in research, held workshops and embarked on liaison with many organisations and groups concerned with funding, communication with the community, juvenile justice, rehabilitation of offenders, the street children, youth programmes, the safety of senior citizens and domestic violence.

During the course of its work the concept of the Community Safety Project was first mooted and this was instituted, as a sub-committee of the Forum, in November 1994.

Its basic objective is to take community policing into 10 towns surrounding and including Grahamstown. The area is served by 16 police stations.

Its method of operation is largely to inform and educate the communities about the role of the police. Because of the historical antagonism between police and community, this was at first difficult, but considerable success has now been achieved.

In order for this to occur a basic infrastructure needed to be established which allowed for the employment by the CSP of field workers and administrators. The staffing and administration of the CSP is the responsibility of the Department of Law at Rhodes University while policy is set by the Community Police Forum.

The CSP field workers travel around the area, and by means of personal contact with community members and workshops, explain the role of the police and the responsibilities of the police and community to each other. Questionnaires designed to evaluate attitudes and expectations were distributed and analyzed and the results have indicated further areas of concern where the CSP needs to become actively involved.

### **Establishing channels of communication**

It has fallen upon the CSP to explain anew the concept of community policing to communities, because policing has been transformed in terms of the country's new constitution. The CSP lists amongst its goals the establishment of appropriate and effective channels of communication between police and community, the enhancement of community knowledge about policing issues, the determination of community attitudes to community policing, to establish the levels of police service required in the several areas where it operates, to expand the 'Grahamstown initiative' throughout the entire police district and it hopes to provide proof to other communities that is possible for police and community to work together for the benefit of ordinary people. At the date of publication of this report approximately 50 workshops have been held in more than 35 towns in the province.

A typical workshop will discuss the concept of

community policing and identified problem areas relating to community safety and may also address such topics as mediation, conflict resolution skills, listening and community policing in general.

A World Aids Day event in Grahamstown, held in December 1994, was attended by CSP field workers who noted the appreciation of the community at the large police presence and the support which they received from the public. The police mingled with the crowds on foot, a distinct change from earlier, similar, circumstances where their presence would have been resented.

Senior academic staff at Rhodes, who had recognised early in the exercise that commitment from the police would be integral to the success of the project have noted with considerable gratification that this has been freely forthcoming.

### **Grievances discussed**

Plans for 1995 include the coordination of a Day of celebration or old age citizens' day, the institution of a place of safety for young people awaiting sentencing by the courts and the establishment of a rehabilitative Youth Offenders' Programme similar to one which operates in Cradock. Court procedures considered intimidating to young people are being investigated. Regular meetings between the police and the CSP field workers have commenced already at which grievances from the public are discussed and complaints about incorrect and inefficient procedure brought into the light. Meetings are being held by the CSP at schools and, among several other youth orientated projects, the possibility of street theatre is being evaluated with input from the department of Drama at the University.

The Grahamstown programme has achieved such success that staff were invited by the Police Board to explain its workings. It is not unrealistic to anticipate that the CSP could become one of the models and set standards for similar efforts in other parts of South Africa.

**Gordon Barker**  
**Department of Law**

## Important future for African music

*The International Library of African Music (ILAM) is an institution which attempts to do something for the art of African music. The Director, Andrew Tracey, says that he was born into it and with just cause, for it was his father, Dr Hugh Tracey, who founded what has become today's internationally renowned Library.*

Dr Hugh Tracey founded ILAM in 1954, in Roodepoort on the West Rand, after he had been studying African music since 1930. In those days it was possible to get outside support, and we managed to run this little research institution completely independently from 1954 to 1978. At that point it seemed that it would be in the interest of the long-term security of the collections and of continuing the work, to bring the ILAM under the wing of Rhodes University. Since that time the ILAM has been on the campus, as part of the Institute of Social and Economic Research. The current premises are a magnificent building which was sponsored largely by the Harmony Trust.

ILAM is partially funded by the University but the librarian's post and all project or development money are reliant on fund raising from outside. A small amount is earned by the sale of recordings and other publications.

ILAM operates in four main areas. Firstly it is an archive, of any materials relating to music and the performing arts in Africa, especially recordings, books, audio-visual items, and musical instruments. Its geographic area is the whole African diaspora, but the natural focus is on Southern Africa. All types of music are archived in principle but, because resources are limited, it is not possible to house everything which might be desired. The torrent of popular ephemeral music recordings pouring out of every country in Africa would fill the small building several times over every year. The focus is thus primarily on documenting the more traditional aspects of music.



*Andrew Tracey with some of the African musical instruments in his collection, at the International Library of African Music  
Picture: Taryn Cass*

ILAM welcomes students, musicians, researchers, and does not charge for the academic use of its materials. Much time is accounted for in responding to queries about African music from all over the world. The archive room is fire-proofed and temperature-controlled. Most of the recordings in the archive are original recordings made by Dr Hugh Tracey. The earliest, from 1930, were made by ploughing a groove into an aluminium disc, and are now quite unplayable. The first tapes date back to the late 1940's, and are still in good condition.

The book collection is not large, but it does include most of what has been written on the subject over the years, much in the form of articles. Since a full time librarian, Ms Gege Kekana, was appointed in 1986, a efficient card cataloguing system has been implemented.

A second string to ILAM's bow is research, both in the Library itself and in the supervision of post-graduate work.

Thirdly, ILAM publishes African music. Among the results are two record series, the *Music of Africa*, a popular series of 25 records which are about to be brought out on Compact Disc. The Library's own series, the *Sound of Africa*, consists of 213 records from Central, Eastern and Southern Africa. Many universities and African studies institutes around the world have this series. Originally all on disc, it is today sold on tape cassette. This series represents a large proportion of all existing recordings of African traditional music. Another publication, now in its 27th number, is called *African Music*. It was first published in 1954, and is still the only academic journal in the world entirely devoted to African music. ILAM also publishes the proceedings of its Symposia on Ethnomusicology, which are

themselves presented annually in September at changing venues. In 1995 the venue will be the University of Zululand.

Finally, ILAM is a teaching institution. It teaches sections of courses for several academic departments at Rhodes, particularly Anthropology and Music. In addition, individuals are also welcome; anyone who wants to learn something about African instruments, transcription, field research or recording techniques.

The Museum is also home to the impressive and interesting collection of musical instruments started by Dr Hugh Tracey and added to over the years.

While the research must and will continue, the greatest need now is to develop the educational side of ILAM. A cultural archive has to be more than just a repository. It has to be kept alive by constant renewal and interaction with the people who bear the tradition. The emphasis must move towards reinvesting the knowledge, skills and experience that this Library contains, and will contain in future, back to the people. A two-way flow must be established in drawing from the people, and giving back in a cycle of mutual enrichment. This must take both an academic and a practical form. ILAM's immediate need is for another trained member of staff, an ethnomusicologist. The office space exists but funding for the post is not yet in place and must be sought outside the University. ILAM seeks a benefactor committed to the support of African cultural development at degree level.

**Andrew Tracey,  
Director: ILAM**

***"I have been inside African music most of my life. I have known many black people better because of it. I have tried it and I know that it's good and relevant; it works and it has the greatest importance for the future of the well-being of all of us. I also happen to be rather fond of it."***

**– Andrew Tracey**

# Investigating global warming

**T**he Southern Ocean is a vast ocean surrounding the Antarctic continent and influencing the weather and ecology of much of the southern hemisphere. It includes the southern Pacific, Indian and Atlantic Oceans and has a special significance for South Africa because it dominates our weather and supplies part of the nutrients which support the west coast fisheries. The Southern Ocean Group was established at Rhodes University with the objective of understanding and quantifying the massive food chains which exist in the seas south of Africa and around Antarctica.

From small beginnings in 1983, when Rhodes'

Professor Brian Allanson began exploratory research on Marion Island, the project is today active in an area which includes some 27 groups of islands and huge populations of sea birds and animals. The focus of research is on the plankton which are at the base of these food chains and which are integral to the health of the entire planet.

An early project examined food webs at Marion Island which has some of the largest penguin rookeries in the world. Every year penguins, elephant seals and millions of other predators come ashore at the Prince Edward Islands to moult and to breed. The islands provide a unique opportunity to examine the food webs which support all these predators. One of the central factors proved to be the West Wind Drift, the ocean current which encircles the Southern Hemisphere. The West Wind Drift brings food to the islands from "upstream". Feeding by the predators is so intense it results in a "food shadow" downstream of the islands.

The work on Marion Island was completed about four years ago and there was a switch to problems of a global scale in a joint programme with the University of Cape Town. Among other things this project investigates aspects of global warming and the exchange of carbon dioxide between the atmosphere and the ocean. The sea appears to act as a huge biological sink for carbon dioxide, with both the sea water and the microscopic organisms in it absorbing the gas from the air.

Global warming is one of the major environmental concerns of today with the threat of major sea level rises and dramatic shifts in world weather patterns, especially rainfall. Over the last 50 years, concentrations of carbon dioxide in the atmosphere have risen dramatically as a result of the use of fossil fuels and deforestation in many parts of the world. Deforestation is important, because trees can remove carbon dioxide from the atmosphere. But we do not rely only on trees for this.

In the process of photosynthesis the thousands



*The Antarctic salp, **Salps thompsoni**. When food is abundant, salps can become so clogged by food that they literally starve to death. The lower animal has been entered by a small crustacean which researchers believe may help to unclog it.*

***"... a huge biological sink for carbon dioxide, with both the sea water and the microscopic organisms in it absorbing the gas from the air."***

*Picture:  
R U Electron  
Microscope Unit*

of microscopic plants, or phytoplankton, in each litre of sea water take up carbon dioxide in just the same way. Grazing of the phytoplankton by planktonic animals, such as krill, moves this carbon higher up the food chain. Then, when the grazers die or release faecal pellets, the carbon sinks into the deep ocean sediments where it remains trapped for hundreds or thousands of years. This process is called the biological pump and understanding how it works helps us to predict how quickly global warming will occur. If the biological pump worked faster and more efficiently, levels of carbon dioxide would be reduced significantly.

Usually photosynthesis by phytoplankton is limited by nutrients, but the Southern Ocean is unique as the phytoplankton there leave three-quarters of the available nutrients in the water. If iron is added to the water this can stimulate the phytoplankton to use more carbon dioxide, because iron is essential for chlorophyll synthesis and the uptake of nutrients.

Research by the Southern Ocean Group, under the auspices of the multi-national Joint Global Ocean Flux Study, has seen three research projects initiated which are focusing on the biological means of reducing the carbon dioxide over-concentrations. Dr Renzo Perissinotto, who is based in the Department of Zoology and Entomology at Rhodes, believes that phytoplankton could prove to be part of the solution to the problems of global warming, if they can be manipulated to absorb more carbon dioxide. Should this be possible, the atmosphere's ability to reflect radiation away from the earth efficiently can be improved and the expected rise in global mean temperatures, of between one and two degrees in the next century

may be retarded. Dr Perissinotto visited the Antarctic for the third time recently and his research, on the relationship between the Antarctic marine ecosystem and global climate is part of the first phase of the international ten-year programme.

Food chains in cold climates are short, consisting of phytoplankton, which are consumed by zooplankton, which in turn are consumed by fish, penguins, seals and whales. So it is possible to obtain fairly complete data in a relatively short period of time, an important consideration with the several threats inherent in the results of global warming hanging over the future of mankind.

There are already large permanent polynyas (stretches of open water surrounded by ice) in the Antarctic pack ice. There have always been polynyas in summer but for the past three or four years they have not frozen over in winter. This summer there has been a break up of huge areas of the permanent ice shelf which surrounds the Antarctic. All of this may mean that the ice is melting as temperatures rise. This could pose a serious problem for coastal areas as sea-levels will rise. But help may be at hand as the ecosystem adjusts to these new conditions. The Antarctic salp is a planktonic grazer which removes carbon from surface waters more efficiently than krill. Salps favour relatively warm waters and as sea temperatures have risen over the last decade, salp numbers have increased. This may create a feed-back system capable of reducing carbon dioxide build-up.

Watch this space!

**Christopher McQuaid**  
**Director: Southern Ocean Group**



*Antarctic Emperor  
Penguins (left).*

*Picture:  
Renzo Perissinotto*

# Securing our country's literary heritage

**I**n the late 1950s Professor Guy Butler realised that many South African literary manuscripts were being collected by repositories outside South Africa and he identified the need for the establishment of a local archive for the preservation of literary materials.

He began by assembling a collection of manuscripts which came to be known as the 'Thomas Pringle Collection'. This collection was entrusted to the safe keeping of the National English Literary Museum (NELM) at the time of the museum's inception in 1974. Since that time the museum has dramatically increased its holdings, thereby preventing many national treasures from leaving South Africa.

As unique primary sources of information, literary manuscripts give invaluable (and enthralling)

insights into the hearts and minds of authors, as well as into the process of literary creation. In addition to collecting manuscript materials which provide evidence of the process of literary composition (such as various manuscript drafts, authors' diaries, notebooks and correspondence), NELM also collects manuscript materials (such as publishers' contracts and printers' proofs) which document the process of publication.

One of the constant fascinations of literary study is the tracing of the various stages in the genesis of a literary work, as such a work invariably undergoes several metamorphoses and when finally published can sometimes differ considerably from the author's first draft ideas.

Researchers visiting NELM are able to consult the manuscripts of a broad spectrum of South African authors who use English as their means of expressing their imaginative ideas in writing – the museum's holdings range from the manuscripts of internationally renowned writers of the ilk of the celebrated dramatist Athol Fugard to the manuscripts of workshoped children's stories.

It is interesting to note that alongside its papers relating to literary luminaries such as Olive Schreiner, Sir Percy FitzPatrick and Roy Campbell, NELM houses the manuscripts of a considerable number of authors whose literary talents were influenced and fostered while they studied at Rhodes University.

The museum's large collection of Butler manuscripts is complemented by the manuscripts of old Rhodians such as Sydney Clouts, Leon Gluckman, Yvonne Burgess, Colleen Roebuck, Anthony Akerman, Charles Ould, Geoffrey Hutchings and Hugh Finn.

NELM is looking forward to the time when NELM's valuable manuscripts will be housed in the new 'state of the art' library complex which will be built to mark Rhodes University's Centenary.

**Ann Torlesse, Archivist  
National English Literary Museum**



*NELM's  
archivist, Ms  
Ann Torlesse,  
at work in the  
Library*

*Picture:  
Basil Mills*

***"The museum has dramatically  
increased its holdings, thereby  
preventing many national treasures  
from leaving South Africa."***

# Rhodes conquers Kilimanjaro

On the 12th of January 1995 six members of the Rhodes University Mountain Club stood atop Africa's highest peak. Mount Kilimanjaro at an altitude of 5 985 metres above sea level. At 00h00 on January 12th, the team kitted up ready to face the strong winds and the falling snow outside the hutin which they had spent the previous few hours. The wind chill factor had brought the temperature down to about -15°C. At an incredibly slow pace we began to tackle the 1 000 metre scree slope ahead of us. We trudged on slowly taking one step forward and sliding half a step backwards through the darkness. Five hours later we crossed the ridge of the crater, Gillman's Point, at an altitude of 5 700 metres to see the crater, a kilometre wide, covered in snow. To the North of the crater rim ice-cliffs of glaciers 10 to 30 metres high rose up in a stepped-like formation. The crater walls were covered in a thick layer of fresh snow and ice patches.

The summit, however, was still two kilometres away and 200 metres higher. Slowly-slowly (*Pole-Pole*) we trudged along the outer crater rim watching the sun's rays glisten against the

glaciers and snow formations. With thinning air and the supply of oxygen now at about half that at sea level every step demanded physical exertion. Each 20 metres of progress forced a break where the climbers had to rest on their ski-poles gasping for enough oxygen to enable the next few steps.

As we reached the summit Gillian McGregor performed a cartwheel to land on the 'Roof of Africa', and, with the wind howling around us we signed the register and took photos of the group behind the Rhodes University flag had been brought along, as well as everything we could see.

Within 20 minutes the freezing wind had driven us off the summit and within 20 minutes we were already starting our descent.

After conquering Kilimanjaro the group left for a week's tour of Kenya, experiencing Africa at its wildest.

*by John Stringer*



*Peter Schultz, John Stringer, Simon Lewis and Jeremy Lewis, (back, left to right) with Greg Lewis, Gillian McGregor and Sarah Lewis, – the members of the successful expedition from Rhodes to Mount Kilimanjaro.*

*Picture: Gillian Lewis*

# Information and Statistics

## Officers of the University

<b>Chancellor:</b>	Dr G W H Relly
<b>Principal and Vice-Chancellor:</b>	Dr D S Henderson
<b>Vice-Principal and Pro-Vice-Chancellor:</b>	Dr M A H Smout
<b>Chairman of Council:</b>	Mr L S Dorrington
<b>President of Convocation:</b>	The Hon Mr Justice T M Mullins
<b>Registrar:</b>	Dr K S Hunt

## Grahamstown campus

<b>Year founded:</b>	1904
<b>Students:</b>	3 653
<b>Men:</b>	1 815
<b>Women:</b>	1 838
<b>Academic Staff:</b>	268
<b>Administrative and Technical Staff:</b>	406
<b>Service Staff:</b>	462
<b>Halls of Residence:</b>	8
<b>Residences:</b>	36
<b>Students in residence:</b>	1939
<b>Grounds (Hectares):</b>	203

## East London campus

<b>Director:</b>	Dr S Fourie
<b>Year founded:</b>	1981
<b>Students:</b>	442
<b>Men:</b>	214
<b>Women:</b>	228
<b>Academic Staff:</b>	21
<b>Administrative and Technical Staff:</b>	8
<b>Service Staff:</b>	4

## Deans of Faculties – at 31 December 1994

<b>Arts:</b>	Prof I Macdonald
<b>Commerce:</b>	Prof P van der Watt
<b>Divinity:</b>	Dr M Donaldson
<b>Education:</b>	Prof P Irwin
<b>Law:</b>	Prof R Harker
<b>Pharmacy:</b>	Dr B Wilson
<b>Science:</b>	Prof R Hepburn
<b>Social Science:</b>	Prof G Antrobus

## Research Institutes and other organisations:

- Academic Development Programme, including Computer-based Education Unit
- Albany Museum
- Biopharmaceutics Research Institute
- Centre for Social Development
- Dictionary Unit for South African English
- Hermann Olthaver Institute for Aeronomy
- Institute of Social and Economic Research, including Development Studies Unit  
International Library of African Music
- Institute for Social and Individual Development in South Africa
- Institute for the Study of English in Africa
- Institute for Water Research
- JLB Smith Institute for Ichthyology
- LIRI Technologies
- Molteno Project
- National English Literary Museum
- Rhodes University Mathematics Education Project
- Southern Ocean Group

A total of 174 staff members is employed in the Institutes, 12 of whom are funded by Rhodes University.

*Rhodes Review is published annually by the  
Public Relations and Development Division of  
Rhodes University,  
Grahamstown, South Africa.  
ISSN 0035-4678 © Rhodes University*

*Cover photograph: The interior of the Chapel of St Mary and All the Angels, on Founders' Day 1994  
(the University's 90th anniversary),*

## Enrolment for 1994

### Grahamstown and East London

	Arts	Commerce	Divinity	Education	Law	Pharmacy	Science	Social Science	TOTAL
Undergraduates									
1993	1 219	833	41	112	5	324	442	257	3 233
1994	1 140	839	40	111	3	326	408	230	3 097
Graduates									
1993	310	60	32	183	100	5	231	60	981
1994	308	63	34	220	96	5	236	45	997
Total									
1993	1 529	893	73	295	105	329	673	317	4 214

## Academic Awards for 1994

A total of 1 184 degrees, diplomas and certificates was obtained by members of the University community in respect of the year ended December 1994. These were awarded and conferred by the Chancellor, Dr G W H Relly at four graduation ceremonies in Grahamstown, on 21 and 22 April and one ceremony in East London, on 13 May 1995.

	Arts	Commerce	Divinity	Education	Law	Pharmacy	Science	Social Science	TOTAL
Undergraduate diplomas and certificates									
1993	4	1	2	35	-	-	-	-	42
1994	4	-	1	31	-	-	6	-	42
Bachelors' degrees									
1993	350	185	5	10	1	23	106	69	749
1994	278	197	3	20	-	38	94	49	679
Postgraduate diplomas and certificates									
1993	41	23	-	54	-	-	-	1	119
1994	20	32	-	64	-	-	-	-	116
Second degrees									
1993	93	13	14	44	34	-	68	43	309
1994	119	13	8	6	33	-	68	18	265
Masters' degrees									
1993	25	2	4	26	-	-	29	2	88
1994	20	2	-	15	-	-	24	3	64
Doctorates									
1993	7	1	1	1	-	1	15	-	26
1994	4	1	-	-	1	2	10	-	18
Total diplomas and certificates									
1993	45	24	2	89	-	-	-	1	161
1994	24	32	1	95	-	-	6	-	158
Total degrees									
1993	475	201	24	81	35	24	218	114	1 172
1994	421	213	11	41	34	40	196	70	1 026
Total awards									
1993	520	225	26	170	35	24	218	115	1 333

