



UNIVERSITY OF NATAL

**GRADUATION/DIPLOMA
CEREMONY**

1997

SATURDAY 12 APRIL

10h00

PIETERMARITZBURG

THE ARMORIAL BEARINGS

(see front cover)

The armorial bearings of the University of Natal were awarded by the College of Arms in London.

The two black wildebeeste come from the arms of the Province of Kwazulu-Natal. They are shown in full course to symbolise movement and progress.

The two open books represent the universal heritage of knowledge and the two centres of the University, Durban and Pietermaritzburg.

The five-pointed star refers to the naming of Natal by Portuguese navigators when they landed for the first time at Durban on Christmas Day in 1497. *Stella Aurorae*, star of the dawn, symbolises the role of the University in bringing to light new knowledge and spreading the enlightening influence of education.

CONVOCATION

After being capped by the Chancellor, each graduate moves across the stage and hands to the President of Convocation or his representative a hood incorporating colours that indicate the degree being awarded and the Faculty in which it is being awarded. The President of Convocation places the hood upon the graduate's shoulders, and, at the end of the ceremony, after the Chancellor's procession has left the stage, leads a procession of the new graduates out of the hall, row by row, to symbolise their acceptance into, and future membership of, the Convocation of the University of Natal, the statutory body through which graduates have the opportunity to play a continuing part in the affairs of their University.

GRA 1/4/52

UNIVERSITY
OF
NATAL
ARCHIVES

OFFICERS

Chancellor	The Most Reverend D E Hurley OMI, DD, Archbishop Emeritus of Durban, PhL (Rome), STL (Rome)
Vice-Chancellor and University Principal	B M Gourley CTA (Witwatersrand), MBL (Unisa), CA(SA)
Chairman of Council	A Rogoff CTA (Natal)
Deputy Vice-Chancellor and Pietermaritzburg Principal	D A Maughan Brown BA (Cape Town), MA (Cantab), DPhil (Sussex)
Deputy Vice-Chancellor and Durban Principal	A C Bawa BSc (Unisa), BSc(Hons) (Natal), MSc (UDW), PhD (Durham)
Deputy Vice-Chancellor Research and Development	E M Preston-Whyte BSocSc(Hons), PhD (Natal)
Deputy Vice-Chancellor Planning and Resources	E A Ngara BA(Hons), MPhil, PhD (London)
Pro Vice-Principal Durban	P M Zulu BA(Hons), Diploma in Marketing Management (Unisa), PhD (Natal)
Registrar	G J Trotter BA(Hons) (Natal), MA (Duke)
Convocation Representative	M J Dubois BA(Hons), LLB, LLM, Dip.Maritime Law(Natal)
Orator	C O Gardner BA(Hons) (Natal), MA (Oxon)

DEANS OF FACULTIES

Agriculture	F H J Rijkenberg MScAgric, PhD (Natal)
Science	R J Haines MSc (Natal), PhD (London), FRSSAf

PROGRAMME

The Academic Procession enters the Hall

THE CHANCELLOR CONSTITUTES THE CONGREGATION

WELCOME TO GUESTS

The Vice-Chancellor

ADDRESS

The President of the Students' Representative Council

PRESENTATION OF FELLOW OF THE UNIVERSITY

The Dean of the Faculty of Science and the
Deputy Vice-Chancellor, Research and Development

PRESENTATION OF DISTINGUISHED TEACHER

The Deputy Vice-Chancellor and Pietermaritzburg Principal

PRESENTATION OF DOCTORAL GRADUANDS

The Deans of Faculties

HONORARY DEGREE

The Orator presents the Honorary Graduand
MALCOLM EDWARD SUMNER

ADDRESS

Malcolm Edward Sumner,
BScAgric, MScAgric (Natal), DPhil (Oxon)

INDUMISO COLLEGE OF EDUCATION CHOIR

Conductor : D September, BPaed(Music) (UFH)

Largo (Handel)

Plea from Africa (J K Bokwe)

PRESENTATION OF GRADUANDS AND DIPLOMATES

The Deans of the Faculties of Agriculture and Science

THE CHANCELLOR DISSOLVES THE CONGREGATION.

The Choir leads the singing of the National Anthem
(Words on the back cover of the Programme)

The Academic Procession leaves the Hall

The Convocation Procession leaves the Hall

The congregation is requested to stand, and to remain standing, while the processions enter and leave the Hall, and to remain seated until the conclusion of the ceremony.

Only officially authorised persons are permitted to take photographs during the ceremony.

Refreshments will be served in the marquee at the conclusion of the ceremony

FELLOW OF THE UNIVERSITY OF NATAL

FACULTY OF SCIENCE

(see page 18)

Breen, Charles MacKie, BSc(Hons), MSc, PhD(Rhodes)
Awarded for distinguished contributions in wetlands ecology

DISTINGUISHED TEACHER OF THE UNIVERSITY OF NATAL

FACULTY OF SCIENCE

(see page 19)

Akhurst, Edward Gordon John, BSc(Hons), BEd, PhD(Natal)
Awarded for exceptional teaching ability

DOCTORAL GRADUANDS

DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE

	<i>Discipline</i>
Bonkewitzz , Américo Néstor, BSc(Hons)(Universidad Nacional del Sur, Argentina)	Zoology
Thesis:	Behaviour and social organization of the African Jacana <i>Actophilornis africanus</i>
Supervisor:	Professor G MacLean
Daneel , Richard Adriaan, BSc(Hons)(Stell), MSc	Microbiology
Thesis:	Development of a code of practice for co-disposal to obviate inimical environmental impacts of generated gases and leachates
Supervisor:	Professor E Senior
Edwards , Trevor John, BSc(Hons), MSc	Botany
Thesis:	A revision of <i>Argyrolobium</i> (Crotalariaeae) in South Africa
Supervisor:	Professor J van Staden
Faurie , Alida Susanna, BSc(Hons), MSc	Zoology
Thesis:	A comparative study of communication in six taxa of Southern African elephant-shrews (macroscelididae)
Supervisor:	Professor M Perrin
Fortgens , Philip Hendrik, BSc(Hons), MSc	Biochemistry
Thesis:	Proteinases and extracellular matrix degradation in breast cancer
Supervisor:	Professor C Dennison
Ganief , Moegamad Shahiem, BSc(Hons), MSc(UWC)	Mathematics
Thesis:	2-Generations of the sporadic simple groups
Supervisor:	Professor J Moori

- Laing, Mark Delmege, BSc(Hons)** Microbiology
 Thesis: The Epidemiology and control of *Leptosphaeria maculans*,
 cause of Crucifer Blackleg, in KwaZulu-Natal
 Supervisor: Professor F H J Rijkenberg
 Co-supervisor: Dr C A J Putter, Division of Plant Protection, FAO, Rome, Italy
- Lees, Zoë Marie, BSc(Hons)** Microbiology
 Thesis: Bioremediation of oil-contaminated soil: A South African case
 study
 Supervisor: Professor E Senior
- Maharaj, Rajendra, BSc(Hons), MSc** Entomology
 Thesis: Effects of temperature and humidity on adults of the *Anopheles*
gambiae complex (Diptera : Culicidae) in South Africa -
 implications for malaria transmission and control
 Supervisor: Professor C Appleton
- O'Regan, Brian Patrick, BSc(Oxon), MPhil(London)** Plant Molecular Biology
 Thesis: Physiological and gene expression responses to water stress in
 drought tolerant and drought sensitive maize cultivars
 Supervisor: Dr W A Cress
 Co-Supervisor: Professor J van Staden
- Raab, Conrad Edmund, BSc(Hons), MSc** Chemistry
 Thesis: Chiral Dirhodium(II) carboxamides: Efficient catalysts for
 asymmetric carbene reactions
 Supervisor: Professor N D Emslie
 Co-Supervisor: Dr G H P Roos and Professor M P Doyle
- Riganti, Angela, BSc(Hons), MSc(Rhodes)** Geology
 Thesis: The Northern segment of the early Archaean Nondweni
 Greenstone Belt, South Africa - field relations and petrogenetic
 constraints
 Supervisor: Professor A Wilson
- Slinger, Jill Hillary, BSc(Hons), MSc** Applied Mathematics
 Thesis: Modelling the physical dynamics of estuaries for management
 purposes
 Supervisor: Professor J W Hearne
- Snyman, Heidi Gertruida, BSc(Hons)(Pret)** Microbiology
 Thesis: The microbiology of *ex situ* bioremediation of petroleum
 hydrocarbon-contaminated soil
 Supervisor: Professor E Senior
 Co-Supervisor: Dr R A Oellerman

- Wright, Mark Gerald, BSc(Hons), MSc(Stell)** Entomology
 Thesis: Ecological correlates : Endophagous insects and plants in Fynbos
 Supervisor: Professor M Samways
- Yoell, Deborah Karen, BSc(Hons), MSc** Chemistry
 Thesis: The reactions and reactivity of benzyl carbamates
 Supervisor: Professor S E Drewes

DOCTOR OF PHILOSOPHY IN THE FACULTY OF AGRICULTURE

- Hu, Guanggan, MScAgric(Jiangsu Agric Univ, China)** Microbiology and Plant Pathology
Discipline
 Thesis: Ultrastructure, cytochemistry and immunocytochemistry of the interaction between wheat (*triticum aestivum*) and leaf rust (*puccinia recondita* F.sp. *tritici*)
 Supervisor: Professor F H J Rijkenberg
- Kaiser, Clive, MScAgric** Horticultural Science
 Thesis: Post-harvest manipulation of rind colour in 'Mauritius' Litchi (*Litchi Chinensis* Sonn) Fruit
 Supervisor: Professor B M Wolstenholme
- Mbowa, Swaibu, MScAgric(Uganda)** Agricultural Economics
 Thesis: Farm size and economic efficiency in sugar cane production in KwaZulu-Natal
 Supervisor: Professor W L Nieuwoudt
- Moor, Graham Malcolm, BScAgric** Agricultural Economics
 Thesis: Tenure security and productivity in the Zimbabwean small farm sector: implications for South Africa
 Supervisor: Professor W L Nieuwoudt
- Thomson, David Neville, MScAgric** Agricultural Economics
 Thesis: A study of land rental markets and institutions in communal areas of rural KwaZulu-Natal
 Supervisor: Professor M C Lyne
- Ward, John Michael Julian, BScAgric** Agronomy
 Thesis: Epidemiology and management of grey leaf spot : a new disease of maize in South Africa
 Supervisor: Professor A L P Cairns

HONORARY GRADUAND

(see page 20)

Sumner, Malcolm Edward, BScAgric, MScAgric (Natal), Dphil (Oxon)

GRADUANDS

MASTER OF SCIENCE

	Discipline
Andreka , Gunther Emil, BSc(Hons)(Pret)	Zoology
Dissertation: Spatial utilisation, habitat selection and population status of the Wild Dog (<i>Lycaon pictus</i>) population in Hluhluwe Umfolozi Park	
Supervisor: Professor M Perrin	
Barnes , Julie Megan, BSc(Hons)(Rhodes)	Plant Molecular Biology
Dissertation: The potential use of sugarcane varieties for the identification of genetic markers	
Supervisor: Professor C Botha	
* Bernardis , Francesco Luigi, BSc(Hons)	Chemistry
Dissertation: Amino-, Amido- and Oxy-bipyridyl complexes of copper, ruthenium, molybdenum and Rhodium	
Supervisor: Professor R Haines	
Co-Supervisor: Professor J S Field	
Bird , Jessica Margaret Caroline, BSc(Hons)	Geography
Dissertation: Geomorphological aspects of veld burning in Golden Gate Highlands National Park, South Africa	
Supervisor: Dr H R Beckedahl	
* Croeser , Peter Michael Colville, BSc(Rhodes), BSc(Hons)	Entomology
Dissertation: A revision of the Afrotropical Hunting Spider Genus <i>Palystes</i> L Koch, 1875 (Araneae: Heteropodidae: Palystinae)	
Supervisor: Professor D J Brothers	
Furniss , David Gordon, BSc(Hons)	Botany
Dissertation: Nitrogen fixation and cycling in Natal Valley Bushveld Acacia species	
Supervisor: Professor R Yeaton	
* Grimmer , Craig Douglas, BSc(Hons)	Chemistry
Dissertation: The functionalisation of thenyl carbamates	
Supervisor: Professor N D Emslie	
Co-Supervisor: Dr B Rahm	

- Guthrie, Iain Andrew, BSc(Hons)(Cape Town)** Botany
 Dissertation: Aspects of the structure and functioning of the Hlatikulu Vlei
 Supervisor: Dr J E Granger
- Horn, Marion Magdalena, BSc(Technion-Israel Institute of Technology)** Chemistry
 Dissertation: Muthi Compounds from indigeous Lauraceae and Rubiaceae
 Supervisor: Professor S E Drewes
 Co-Supervisor: Dr B Rahm
- * **Hunter, Charles Haig, BSc(Hons)** Microbiology
 Dissertation: Development of a laboratory river model to determine the environmental impacts of key xenobiotic compounds
 Supervisor: Professor E Senior
- Kayonga, Louis, MSc(Rwanda)** Chemistry
 Dissertation: Molluscicides and other compounds from indigenous plants
 Supervisor: Professor S E Drewes
- Khan, Fatima, BSc(Hons)** Chemistry
 Dissertation: Palladium-catalysed nucleophilic substitution of allylic carbamates
 Supervisor: Dr D Jaganyi
 Co-Supervisor: Professor N Emslie
- Khuzwayo, Bonekele Gladness, BSc(Hons)** Chemistry
 Dissertation: Palladium catalysed synthesis of ketones from olefins
 Supervisor: Professor N D Emslie
- Kriel, Karina Nicole, BSc(Hons)** Chemistry
 Dissertation: The use of ephedrine and camphor in asymmetric Diels-Alder reactions
 Supervisor: Professor N D Emslie
 Co-Supervisor: Dr G H P Roos
- Kruger, Sonja, BSc(Hons)** Zoology
 Dissertation: The feeding ecology of the African Wild Dog (*Lycaon pictus*) in Hluhluwe-Umfolozi Park
 Supervisor: Dr M J Lawes
- **le Roux, Izaak Gerhardus, BSc(Stell)** Botany
 Dissertation: Patterns and rate of woody vegetation cluster development in a semi-arid savanna, KwaZulu-Natal, South Africa
 Supervisor: Professor R I Yeaton
 Co-Supervisor: Dr J E Granger
- Lea, Kathryn Mary, BSc(Hons)** Chemistry
 Dissertation: An approach to the synthesis of chiral carbamates
 Supervisor: Professor N Emslie

* Degree awarded **cum laude**

■ Degree awarded **posthumously**

- Long, Marvin James, BSc(Hons)** Chemistry
 Dissertation: The synthesis of optically pure 1,3- diols
 Supervisor: Dr N Emslie
- Makunga, Nokwanda Pearl, BSc(Hons)** Plant Molecular Biology
 Dissertation: Molecular basis of nathocyanin production in callus and cell
 cultures of *Oxalis Reclinata*
 Supervisor: Professor J van Staden
 Co-Supervisor: Dr W A Cress
- Masendu, Hieronymo Takundwa, BSc(Z'bwe)** Entomology
 Dissertation: The role of Anopheles Arabiensis (Diptera : Culicidae) in
 Malaria transmission and control in Gokwa and Binga Districts,
 Zimbabwe
 Supervisor: Professor C Appleton
- * **McKenzie, Margaret Caroline, BSc(Hons)(Cape Town)** Environment and Development
 Dissertation: The Economic Potential of Game Hunting on a small reserve
 Supervisor: Professor J Hearne
- * **McKenzie, Peter John Campbell, BSc(Hons)** Computer Science
 Dissertation: Application of genetic algorithms to the travelling salesperson
 problem
 Supervisor: Dr D Petkov
- * **Meinesz, Richard Edward, BSc(Hons)** Biochemistry
 Dissertation: A study of the role of Redox Potential in Lysosomal function.
 Supervisor: Professor C Dennison
- Naidoo, Throshni, BSc(Hons)** Computer Science
 Dissertation: The development of a Behavioral Video Analysis System and a
 Toolbox Prototype
 Supervisor: Mr R Dempster
- Percival, Lynda Jane, BSc(Hons)(Strathclyde)** Microbiology
 Dissertation: An investigation of the dual co-disposal of a phenolic
 wastewater and activated sewage sludge with refuse and
 treatment of high-strength leachate obtained from a closed co-
 disposal landfill
 Supervisor: Professor E Senior
- Phaal, Clinton Brett, BSc(Hons)** Microbiology
 Dissertation: Complex soil-microorganism-pollutant interactions
 underpinning bioremediation of hydrocarbon/heavy metal
 contaminated soil
 Supervisor: Professor E Senior

- Pillay, Nelishia, BSc(Hons)** Computer Science
Dissertation: A computer mediated system for distance education
Supervisor: Mr R Dempster
- * **Ramsingh, Bernice Lara Rubenthri, BSc(Hons)** Chemistry
Dissertation: Reactions and reactivity of naphthyl and benzyl carbamates
Supervisor: Professor N Emslie
Co-supervisor: Dr B Rahm
- Roskrug, Carol Lynette, BSc(Hons)** Botany
Dissertation: Biochemical and ultrastructural changes associated with chilling injury in soybean seeds during imbibition
Supervisor: Dr M T Smith
- Stewart, Rosanne, BSc(Hons)** Computer Science
Dissertation: A support environment for the teaching of programming
Supervisor: Professor V Ram
- Thakadu, Olekae Tsompi, BSc(UB)** Environment and Development
Dissertation: Indigenous wildlife management knowledge systems and their role in facilitating community-based wildlife management projects in Botswana
Supervisor: Professor A Kaniki
- Uys, Debbie Caron, BSc(Hons)** Counselling Psychology
Dissertation: The effect of participation in an aerobic dance exercise program on body satisfaction in normal adolescent females
Supervisor: Mr D Wassenaar
- * **Vlok, Johannes Hendrik Jacobus** Botany
Dissertation: The role of Overstorey Proteoid shrubs in maintaining species richness in a Southern Cape Mountain Fynbos community
Supervisor: Prof R I Yeaton

MASTER OF AGRICULTURAL MANAGEMENT

Discipline

- Dennison, Diane Bridget, BCom(Hons)** Agricultural Economics
Dissertation: An economic evaluation of water treatment costs in the Umgeni catchment area
Supervisor: Professor M C Lyne
- * **Stockil, Ross Christopher, BAgricMgt** Agricultural Economics
Dissertation: Risk and Market deregulation: attitudes of commercial farmers in KwaZulu-Natal
Supervisor: Professor G F Ortmann

MASTER OF SCIENCE IN AGRICULTURE

Discipline

- Arnold, Gary Desmond, BScAgric** Animal Science
 Dissertation: Responses in growing pigs to lysine and threonine limiting feeds and environmental temperature
 Supervisor: Dr N S Ferguson
- Bowles, Chloe Melissa, BScAgric** Animal Science
 Dissertation: Attempts to improve the yield of bovine blastocysts by incorporating insulin, selenium and transferrin in the *in vitro* system
 Supervisor: Professor A W Lishman
- Dominy, Neil John, BScAgric** Animal Science
 Dissertation: The interactions between maturity type and pre-feedlot plane of nutrition on the growth and performance of steers
 Supervisor: Mr G Stewart
- Fushai, Felix, BScAgric** Animal Science
 Dissertation: An investigation into growth in Jersey, Holstein and Hereford heifers on kikuyu pasture (*Pennisetum clandestinum*) using n-alkanes to estimate intake and ruminal outflow rate
 Supervisor: Mr G Stewart
- Goddard, Leanne Lisl, BScAgric** Animal Science
 Dissertation: Matching the nutritional requirements to performance in broiler breeder hens
 Supervisor: Professor R M Gous
- * **Jarvel, Leander Clement, BScAgric** Range and Forage Resources
 Dissertation: Woody-grass interactions in a mesic bushclump savanna : processes and responses to bush control
 Supervisor: Professor T G O'Connor
- Kunene, Nokuthula Winfred, BScAgric(Hons)(UNISWA)** Animal Science
 Dissertation: Some factors affecting weaning weights of calves
 Supervisor: Professor A W Lishman
- Lagerwall, Gary Brian, BScAgric** Horticultural Science
 Dissertation: Banana (*MUSA* AAA: Cavendish sub-group) cultivar/density trials in three bioclimatic groups on the north coast of KwaZulu-Natal
 Supervisor: Professor B M Wolstenholme
- Letty, Brigid Aileen, BScAgric** Range and Forage Resources
 Dissertation: A comparison of in-field techniques for estimating the feed intake of young boer goats on a *leucaena leucocephala*/grass hay diet
 Supervisor: Professor P Zacharias

Marriott, David John, BScAgric Range and Forage Resources
 Dissertation: Vegetation change over fifty years in humid grasslands of
 KwaZulu-Natal (Acock's sites)
 Supervisor: Professor T O'Connor

Swanepoel, Deon Smartenryk, BScAgric Agricultural Economics
 Dissertation: Causes of bankruptcy amongst commercial farmers in South
 Africa : Management and policy implications
 Supervisor: Professor G F Ortmann

Swatson, Harry Kofi, BScAgric(Hons)(Ghana) Animal and Poultry Science
 Dissertation: The use of choice feeding and mixture experiments to evaluate
 protein sources used in broiler feeds
 Supervisor: Professor R M Gous

Van der Veen, Rudolf Hibbe, BScAgric Animal and Poultry Science
 Dissertation: Performance of feedlot cattle with reference to carbohydrate
 digestion of maize versus Hominy chop
 Supervisor: Mr P G Stewart

Van Huyssteen, Tracy, BScAgric Genetics
 Thesis: The transformation of South African soya bean cultivars with a
 synthetic basta resistance gene
 Supervisor: Professor F M Wallis

MASTER OF SCIENCE IN HOME ECONOMICS

Discipline

Hendriks, Sheryl Lee, BScHomeEcon(Hons) Dietetics and Community Resources
 Dissertation: Successful skills training in relation to women's home
 management practices and household attributes
 Supervisor: Dr J M Green

MASTER OF ENVIRONMENT AND DEVELOPMENT

Discipline

Lewis, Fonda Frances, BSocSc Environment and Development
 Dissertation: Integrating conservation and development: A study of Kwajobe
 Supervisor: Professor C M Breen

Maphanga, Koekie Constance, BEd Environment and Development
 Dissertation: People's perceptions of flood hazards and their attitudes towards
 resettlement: A case study of the community at Azalea in the
 greater Edendale complex, KwaZulu-Natal, South Africa
 Supervisor: Professor R Fincham

BACHELOR OF SCIENCE (HONOURS)

	<i>Discipline</i>
* Allen, Warren Gordon, BSc	Computer Science
Angus, Robyn Gail, BSc	Chemistry
Ballim, Faceza, BSc	Hydrology
Bennett, Russell David, BSc	Chemistry
Biebuyck, Paul David, BSc	Botany
Bolton, Robin George Ian, BSc	Microbiology and Plant Pathology
* Boswell, Sarah Jane, BSc	Mathematics
Breval, Liza, BSc	Biochemistry
Breytenbach, Ronel, BSc	Hydrology
Broomhall, Lynne Susan, BSc	Grassland Science
Chapman, Karen Leonora, BSc	Zoology
Chetty, Jairaj Vasudeva, BSc	Computer Science
* Clark, Tracey Norma, BSc	Chemistry
Coppin, Angela Valene, BSc	Botany
* Corcoran, Kerry Lynn, BSc, HDE	Botany
* Cradock, Kenwyn Roan, BSc	Microbiology and Plant Pathology
* Cropper, Charlotte May, BSc	Geography
Croukamp, Renate, BSc	Biochemistry
Crow, Vance Robert Thomas, BSc	Grassland Science
Danisa, Sifiso Hector, BSc	Botany
* Dobeyn, Ciranne Joy, BSc	Geography
* Duncan, Andrew Cameron, BSc	Plant Molecular Biology
Ehlers, George Archibald Clark, BSc(UOFS)	Microbiology and Plant Pathology
Eustace, Paula Margaret, BSc	Microbiology and Plant Pathology
Fleming, Christie May, BSc	Plant Pathology
Frean, Jennifer Lindsay, BSc	Zoology
Gertenbach, Jan-Andre, BSc	Chemistry
Goddard, Kevin Brian, BSc	Hydrology
* Gordon, Kathryn Jane, BSc	Applied Mathematics
Green, Stewart Christopher, BSc	Microbiology and Plant Pathology
Gush, Mark Baudert, BSc	Hydrology
Hassim, Shafeeka, BSc	Geography
* Hills, Paul Norman, BSc	Plant Molecular Biology
Kanturek-Lucas, David Christopher, BSc	Grassland Science
Kanz, Wolfgang Adrian, BSc	Grassland Science
Khumalo, Michael Zibonele, BSc	Physics
Ledwaba, Refilwe Nancy, BSc(Rhodes)	Microbiology and Plant Pathology
Little, Keith MacMillan, BSc	Geography
Makhathini, Senzo Cecil, BSc	Chemistry
Matthews, Gregory Kenneth, BSc	Hydrology
* McKechnie, Andrew Edward, BSc	Zoology
McLaren, Timothy Basil, BSc	Microbiology and Plant Pathology
Metcalf, Graham James, BSc	Hydrology
Mlondobozi, Solly, BSc	Microbiology and Plant Pathology
Mnguni, Darius, BSc	Hydrology

Mohasi , Lieketseng, BScEd(Lesotho)	Geography
Molefe , Mapitso Ntombenhle, BSc	Chemistry
Mosia , Mamoeletsi Rachel, BSc	Chemistry
Mowatt , Rosalind Colleen, BSc	Economics
Naidoo , Melanie, BSc	Microbiology and Plant Pathology
* Paulton , Anne-Mary, BSc	Chemistry
Peirson , Ian Gary, BSc	Chemistry
* Perks , Lucille Annalise, BSc	Hydrology
* Petersen , Michael John, BSc	Zoology
Pillay , Kriveshini, BSc	Chemistry
* Pillay , Che' Sobashkar, BSc	Biochemistry
Podd , Lindsey Alice, BSc	Botany
Prassas , Efthalia, BSc	Computer Science
* Price , Brendon, BSc	Biochemistry
Ramcharan , Ramona, BSc	Microbiology and Plant Pathology
Ramroop , Shaun, BSc	Statistics
Rogers , Emma Louise, BSc	Genetics
Roux , Michelle Gay, BSc	Computer Science
Rowlinson , Lisa Clare, BSc	Genetics
Sangweni , Phumelele, BSc	Microbiology and Plant Pathology
Seholoholo , Masechaba Caroline, BScEd(Lesotho)	Geography
* Slater-Kinghorn , Diane Margaret, BSc	Biochemistry
Smith , Gary Allan, BSc	Zoology
Smith , Joanne Hayley, BSc	Chemistry
Thompson , Grahame Mungo, BSc	Chemistry
Turner , Ian Michael, BSc	Geography
Vadyvaloo , Viveka, BSc	Genetics
Vanmare , Jeetesh, BSc	Chemistry
Venter , Gustaf Thomas, BSc	Grassland Science
Vickery , Rowan James, BSc	Grassland Science
Wheeler , Peter John, BSc	Chemistry
Wiggill , Cheryl, BSc	Biochemistry
Xulu , Bheki Alex, BSc	Chemistry
Zuma , Progress Nompumelelo, BSc	Chemistry

BACHELOR OF AGRICULTURAL MANAGEMENT (HONOURS)

Discipline

Evans , Graham Richard, BAgricMgt	Agricultural Management
Meyer , Mark Roland, BAgricMgt	Agricultural Management

BACHELOR OF SCIENCE IN AGRICULTURE

Discipline

Barbour , Janeen	Horticultural Science
Bota , Vireme Rechi, BSc(UNISWA)	Agricultural Science

	Crabtree, Justin John	Horticultural Science
*	Cripps, Ryan Frederick	Horticultural Science
	Dallas, Donvaé	Horticultural Science
	Date, Alan George Douglas	Horticultural Science
α	Davis, Rozanne Joy, BScEng	Horticultural Science
	Du Toit, Justin Christopher Okes	Agricultural Production
	Elworthy, Andrew Michael Raven	Agricultural Production
	Fly, David Craig	Agricultural Economics
	Gace, Robyn Lynette	Agricultural Economics
	Green, Hayden Milton	Animal Science
	Hill, Andrew David Charles	Agricultural Economics
	Horne, Graeme Ian	Agricultural Production
	Jones, Lianne Jane	Animal Science
	Longmore, Gavin Peter	Agricultural Production
	Louwrens, Peter Arnold	Agricultural Production
	Madgwick, Neil Alexander	Microbiology
α	McLoughlin, Leigh	Animal Science
	Mitchell, Dudley Ian	Horticultural Science
	Moore, Duncan Neil	Horticultural Science
	Mork, Tamara Louise	Horticultural Science
	Murray, Thomas Alan	Entomology
	Naidoo, Saraspathy	Plant Pathology
	Nelson, Lyska Michelle	Animal Science
	O'Connor, Sean Lawrence	Horticultural Science
	Radloff, Simon Colin	Horticultural Science
	Randabel, Frank	Horticultural Science
	Richings, Evelyn Walcott	Horticultural Science
	Squires, Geraldine Robyn	Horticultural Science
	Stewart, Ross Peter	Crop Science
	Strickland, Nicolette	Animal Science
	Strydom, Marc Bradley	Agricultural Economics
	Tomlinson, Kyle Warwick	Grassland Science
	Urquhart, Alistair John	Agricultural Production
	Van Niekerk, Warren	Agricultural Production/Horticultural Science
	Webster, Richard Robin	Grassland Science
	Webster, Wayne Andrew	Grassland Science
	Wieners, Dominic	Grassland Science
	Wood, Adam Carl	Agricultural Production

BACHELOR OF AGRICULTURAL MANAGEMENT

Ardé, Lance Alan

Bastard, Guy Brian

α Degree awarded **summa cum laude**

* Degree awarded **cum laude**

Bown, Anthony Norman
 Craig, Kelvin Bruce
 De Andrade, Angelo José
 James, Duncan Richard
 Jenkin, Charles Edwin

Mitchell-Innes, Graham Henry
 Sephton, Declan Bradley
 Strudwick, Ryan Cameron
 Turner, Christopher Robert

BACHELOR OF SCIENCE IN DIETETICS

Atkinson, Lauren Anne
 Barrington, Sarah Anne
 Cuba, Zolelwa
 Fitzgerald, Catherine Anne
 Geldenhuys, Barbara-Ann
 Goolam Hoosen, Nasreen
 Irvine, Debra Mary
 Jackson, Claire Helen
 Jhajibhai, Zaheera Essop
 Logan, Nicola June

Marais, Stevan James
 Mathiane, Sibongile Johanna
 Mopeli, Dineo Alina
 Nel, Keri-Lyn
 Ntloko, Andiswa Tenjiwe
 Pillay, Kirthee
 Reddy, Yogini Nessa
 Schonfelder, Nicola
 Torgius, Laura Jayne
 Van Tonder, Deborah El-Vira

BACHELOR OF SCIENCE

Badat, Mahomed Amin
 Barker, Tanya Lynn
 Barratt, Bruce Jonathan
 Behari, Shamitha
 Bekwa, Xolisile Pretty
 Berjak, Stephen Gary (Applied Mathematics)
 Bloye, Elton Jeremy
 Brown, Mark
 Buller, Samantha Anne
 Calboutin, Julie
 Carbutt, Clinton
 Cele, Lucia
 Cheesman, Bruce Andrew
 Clulow, Alistair David
 Cumming, David James
 Czank, Kerry
 Dallimore, Karen Anita
 Dalling, Kerry Jacqueline
 Dawe, Adam Sean (Biochemistry, Plant
 Molecular Biology)
 Dessington, Antony John Lee
 Diederichs, Nicola Jane
 Dlambulo, Loyiso

Dlamini, Bonginkosi
 Douglas, James Robert Elers
 Douglas, Robyn Jane
 Du Preez, Peter John
 * Edwards, Thomas Jonathan (Genetics,
 Biochemistry)
 Edwards, Brett
 * Field, Louise Fabienne (Zoology, Botany)
 Francke, Annette (Applied Mathematics)
 Franken, Ian Norman
 Frean, Nicola Helen
 * Freese, Lynelle (Mathematics, Computer
 Science)
 Gers, Craig Jonathan
 Gqada, Silindile
 Grafton, Bradford Roger
 Greenway, Teresa Gay
 Hallows, Jason Scott
 Hawke, Georgina Frances
 * Hawthorn, Scott Raymond (Applied
 Chemistry, Chemistry)
 Hibbert, Jeremy Malcolm
 Hoets, Gregory Chase

α Degree awarded **summa cum laude**

* Degree awarded **cum laude**

- Hood, Robyn Margaret
Hoosen, Intiaz
* **Hull**, Douglas Robin Sant (Biochemistry)
Hundermark, Gregory Edward
α **Hunt**, Shirlyn Ann (Biochemistry, Chemistry)
* **Jadoo**, Rishaal (Computer Science)
Jobling, Jeremy Charles
Johnson, Julie Lynn
Jones, Gareth Glynne
α **Jooste**, Marion Cheryl (Biochemistry, Chemistry)
Kaloo, Faiyaz
Kelly, Janine Anne
Khulu, Vukani Wiseman
Khumalo, Emmanuel Sikhumbuzo
Khumalo, Promise Nomfundo
Lawrence, James Mark
Lemos, Sharon Angela Castro
Lepile, Yasmin
Loly, Karen Susannah
Longmore, Craig Douglas
Mackay, Malanie Roseland
MacLean, David
Madlala, Paulos Sizwe
Mafisa, Tsietisi Moses
Makhari, Tshenuwani
Makhathini, Mumsy Priscilla
Maree, Stella
Mathaba, Jeffrey Themba
Mathibela, Simon
* **Maughan Brown**, Anthony Michael (Geography, Psychology)
Mazibuko, Philisiwe Princess
McKenzie, Lee-Ann
Mchunu, Eric Vusi
McMaster, Megan Kay
McMaster, Margot
Meyer, Brian Robert
Mgege, Thulile Ntonhle
Mntambo, Elias Mandla
Mojapelo, Redempta Tlampe Flora
Mokone, Cornelius Zachius
Moodley, Thunicia
Mthembu, Zenzele Excellent
Mtolo, Fortune Siphesihle
Mtwa, Xolile Sibusisiwe Mary-Jane
Muir, Peter William
Naidoo, Shane
Naidu, Pramlin
Ndlovu, Menziwenkosi Stanslous
Nebbe, Cheryl
Neumann, Brendon John
Ngema, Nkonzenhle Irvan Siyabonga
Nkala, Lindiwe
Noel, Penelope Jacqueline
Nxumalo, Zanele Goodness
Padayachee, Nivashnie
Pearson, Genevieve Margaret
Penny, Clifford Graham
Pillay, Deshni
α **Pistor**, Carmen Paula (Biochemistry, Genetics)
Pott, Andrew James
Pratt, Amanda Leslie
Ramjatan, Ashadevi
Ramnath, Manilduth
Ramsingh, Chantal Maria Logeshri
Roberts, Anita Lee
Scheepers, Yunus
Schoeman, Ronelle Ruth
Scott Barnes, Catherine Jean
Sihlophe, Nhlanhla Reginald
Singh, Ashmi
Singh, Hetesh Anirooth
Sithole, Thamsanqa Mathews
Sithole, Zwelithu
Siwahla, Nandipa Muntu
Smit, Gavin
Smith, David Mark Rubin
Snyman, Paul Gerrard
Stamp, Rebecca Elizabeth Susan
Stayt, Peter Leon
Stieger, Patrick Leslie
Surendorff, Jurgen Gregor Manfred
α **Tarr**, Heather Lucy (Applied Mathematics, Physics)
Taylor, Kim Jennifer Elizabeth
Theron, Carmen Marcia
Thompson, David Ian
Thomson, Leanne
Thorpe, James Warrington
Townshend, William Ian
Tredgold, Ashleigh-Jane
Tucker, Andrew John
Uys, Roger Gregory

α Degree awarded **summa cum laude**

* Degree awarded **cum laude**

* **Van Popering**, Lee-Anne (Biochemistry,
Plant Molecular Biology)
Ward, Jonathan David
West, Gavin Justin
Wethered, Robyn
Whittaker, Ryan William

Wilson, Ian Grahame
Wright, Karin Diane
Zammit, Ryan Michael
Zondi, Maria Tholakele
Zondi, Albert Bongani
Zondo, Velile Ambrose

DIPLOMATES

POSTGRADUATE DIPLOMA IN DIETETICS

Armstrong, Wendy, BScDiet
Bell, Paula Lynne, BScDiet
Botes, Jacoba Elizabeth, BScDiet
Butler, Barbara Clare, BScDiet
Castelyn, Ulindi, BScDiet
Clark, Catherine Jeanne, BScDiet
Clark, Virginia Renée, BScDiet
Cullen, Joanna Caroline Morgan, BScDiet
Dlamuka, Gugulethu Thobekile, BScDiet
Duffield, Nicola Lesley, BScDiet
Essery, Lynda Rae, BScDiet
Frank, Janis Sheryn, BScDiet
Goldsworthy, Michelle, BScDiet
Horner, Carolyn Ann, BScDiet
Humphrey, Cara Gael, BScDiet

Jogiat, Ruwaida, BScDiet
Lalla, Priya BScDiet
Longtoft, Cheryl-Ann, BScDiet
Marais, Lee-Ann Clare, BScDiet
+ **Megaw**, Katherine Elizabeth, BScDiet
Meyer, Kim Jo-Anne, BScDiet
Naidoo, Nerini, BScDiet
Oldham, Sally Louise, BScDiet
Rael, Brigitte, BScDiet
Rasenyalo, Jumaima Moleboheng, BScDiet
Reddy, Yogini Nessa, BScDiet
Robinson, Adèle Caroline Stephanie, BScDiet
Savage, Leigh-Ann, BScDiet
Zwanepoel, Lizette, BScDiet

UNIVERSITY DIPLOMA IN RURAL RESOURCE MANAGEMENT

Cele, Gideon Nobleman, BA(UNIZUL)
Cele, Posselt Siphos, BA(UNIZUL)
Dipa, Nomabhadhi Priscilla
Hlongwane, Kwazi Clement
Khumalo, Lucky Romeguis Boniface
Maphanga, Elphas Bhekizitha
Mbelu, Duduzile Lucia
Mkhize, Nikiwe Virginia
Mncwabe, Mloni Maurice
Mncwango, Nomusa Gladness

Mnguni, Jennicah Buyisiwe
Moso, Tankiso Henry
Mthethwa, Mlungisi Norman
Nhlengethwa, Saulos Thulani
Nzimande, Khethokuthula Michael
Rathogwa, Mbilaelo
Sokhetye, Mongezi Bhelu
+ **Thompson**, Benedict
Xaba, Zwelibanzi

* Degree awarded **cum laude**

+ Diploma awarded **with distinction**

UNIVERSITY FELLOWSHIPS

University Fellowships have been instituted in order to give special recognition to members of the permanent academic staff for distinguished work of special merit in their chosen fields. The standard of the work is judged primarily by publications and the contribution those have made in the particular field. Public presentation of work in the performing and fine arts may be regarded as equivalent to research and publications.

CHARLES MACKIE BREEN

Professor Charles Breen's research career has been both brilliant and multifaceted. His scholarly contribution to knowledge in his own discipline alone would warrant a University Fellowship. It is, however, as much for proactive and often catalytic interventions in the most pressing concerns of the country, and especially in the promotion of rural community development in the KwaZulu region, that we honour him today.

Born in Zambia, Charles Breen completed a BSc degree and subsequently an Honours degree in Botany at Rhodes University where he was appointed Junior Lecturer and later Lecturer in Botany. An MSc and a PhD followed, and in 1972 he was appointed Senior Lecturer in Plant Ecology in the Department of Botany at the University of Natal in Pietermaritzburg. In 1986 he was appointed as the second Director of the Institute of Natural Resources, also at this University. During an illustrious research career, Breen has published some seventy papers in either national and international journals, or in edited scholarly collections. He has, in addition, a formidable array of technical reports to his credit and is constantly asked to give expert evidence to influential public bodies such as the Water Research Commission, the Natal Parks Board and the Department of Water Affairs and Forestry. He was at one time the President of the Limnological Society of Southern Africa and the National Representative of the International Society for Theoretical and Applied Limnology. He has served on the Editorial Board of four national and international journals. He played a leading role in the establishment of the Consortium for Estuaries Research and Management and he is currently Managing Director of the Kruger National River Research Programme. The University recognised his coordinating and leadership skills when he was seconded to establish the School for Rural Community Development and, more recently, he played a major role in the establishment of the School of Environment and Development, whose board he chairs.

As Director of the Institute of Natural Resources Charles Breen has been responsible for drawing together a team of committed and highly professional researchers trained in both the natural and social sciences. Their collaboration has given substance to the vision of transdisciplinary and interdisciplinary research which originally informed the establishment of the Institute of Natural Resources. In addition, he has fostered a research body capable of responding to the needs of the market - and one which has developed a reputation for research excellence, reliability and the prompt delivery of research results. In this, the Institute has been one of the vehicles through which the University of Natal has become involved in wide ranging research partnerships with various stakeholders in both environmental and developmental arenas. The Institute has also forged links with black rural communities and has responded to growing calls to explore new research paradigms including participatory and action research. These initiatives have called for sensitive and dedicated leadership. Above all, both his own research and, under his direction, that of the Institute of Natural Resources has been informed by scholarly rigour and a respect for scientific excellence. It is fitting, therefore, that the University of Natal recognises the contribution to research and research leadership made by Charles MacKie Breen.

DISTINGUISHED TEACHERS' AWARDS

Distinguished Teachers' Awards have been instituted in order to give special recognition to members of the permanent academic staff for exceptional teaching ability. Recipients are elected for the award by their peers and representatives of the student body.

EDWARD GORDON JOHN AKHURST

Professor John Akhurst has long had the learning skills of undergraduate students at heart. From his background as a scientist, schoolteacher and academic, he has drawn the best of his experiences to develop an approach to teaching that is matched by few other lecturers at this University. Not only has he been responsible for the development of the Biology 100 course in the Department of Zoology and Entomology, but he has motivated the whole Department to upgrade its approach to teaching, resulting in a revision of the Department's courses, as well as cooperation between this Department and the Department of Botany, which will have far-reaching benefits for the training of biologists. Some comments from past students reflect the esteem in which he is held:

"His lectures are full of fun, but at the same time you are able to understand them."

"He is a dedicated teacher who is always willing to help a student in difficulty."

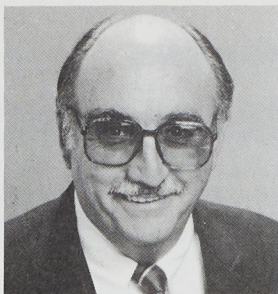
"His lectures involve much student participation and require individuals to think things out carefully."

"Not only is he one of the most creative and inventive lecturers, but he also stands as an authoritative figure who is respected by all students."

"From him students learn more than Biology. For me he is a distinguished teacher."

His peers speak equally highly of his achievements and as one referee exclaimed "The University is indeed very fortunate to have the expertise and commitment of a teacher such as Professor Akhurst." Not only is he the students' teacher but he is clearly also the teachers' teacher.

It is for these signal accomplishments that we recognize Professor John Akhurst as a Distinguished Teacher of the University of Natal.



**CONFERMENT OF THE DEGREE OF
DOCTOR OF SCIENCE IN
AGRICULTURE *honoris causa* UPON
MALCOLM EDWARD SUMNER**

Malcolm Sumner was a student at this campus. He gained a first class BSc Agriculture degree in 1955, and a Masters degree, *cum laude*, in Soil Physics in 1957. From 1955 to 1958 he was a Lecturer in the Department of Soil Science. Then he went to the University of Oxford in the United Kingdom, where he gained a doctorate in 1961. After a postdoctoral fellowship in the Netherlands, he returned to this campus, where he became first Senior Lecturer, then Associate Professor, then (in 1971) Professor and Head of the Department of Soil Science and Agrometeorology.

By the mid-1970s he had produced many scientific papers, supervised numerous graduate students, received several prizes and twice been a visiting professor at US universities.

In 1977 he became Dean Elect, but in the same year he took up the post of Professor in the Department of Crop and Soil Sciences at the University of Georgia, Athens, USA. In the twenty years that he has been at Georgia his publications have multiplied; he has now published two books, edited four, and written 31 chapters in books and over 200 journal articles. He has become a truly international figure in the several fields of his expertise. He has given invited lectures and graduate enrichment seminars at universities all over the world, has held five further visiting professorships, has given numerous keynote addresses at international conferences, has become a member of many professional societies and has been appointed to a variety of committees, has been much in demand as a consultant, and has won several prestigious prizes and awards. He is a Fellow of the American Society of Agronomy and of the Soil Science Society of America, and he has received both the Soil Science Research Award and the Agronomic Research Award. In 1991 the University of Georgia bestowed upon him its highest academic honour when he became Regents' Professor.

He is at the moment a member of various international research committees, and he is on the editorial boards of *Trends in Agricultural Sciences*, *International Agrophysics*, and *Soil Use and Management*.

The University of Natal honours Malcolm Sumner for his outstanding contributions to international research in soil agronomy.

Gaudeamus Igitur

Gaudeamus igitur, juvenes dum sumus;
Gaudeamus igitur, juvenes dum sumus;
Post jucundam juventutem, post molestam
senectutem,
Nos habebit humus, nos habebit humus.

Ubi sunt qui ante nos in mundo fuere?
Ubi sunt qui ante nos in mundo fuere?
Vadite ad superos transite ad inferos,
Ubi jam fuere, ubi jam fuere.

Vita nostra brevis est, brevi finietur:
Vita nostra brevis est, brevi finietur:
Venit mors velociter, rapit nos atrociter,
Nemini parcetur, nemini parcetur.

Vivat Academia, Vivant Professores,
Vivat Academia, Vivant Professores,
Vivat membrum quodlibet, vivant membra
quaelibet,
semper sint in flore, semper sint in flore.

National Anthem of South Africa

Nkosi sikelel' iAfrika
Maluphakanyisw' uphondo lwayo
Yizwa imithandazo yethu
Nkosi sikelela
Thina lusapholwayo.

Morena boloka
Setjhaba saheso
Ofedise dintwa lematshwenyeho.

O se boloke, O se boloke
Setjhaba saheso
Sethjaba sa, South Afrika,
South Afrika.

Uit die blou van ons hemel
Uit die diepte van ons see
Oor ons ewige gebergtes
Waar die kranse antwoord gee
Sounds the call to come together
And united we shall stand
Let us live and strive for freedom
In South Africa our land.