

UNIVERSITY OF EAST AFRICA
UNIVERSITY COLLEGE
NAIROBI

(Incorporating the Gandhi Memorial Academy)



ANNUAL REPORT

1966-1967

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1966/67

UNIVERSITY OF EAST AFRICA
UNIVERSITY COLLEGE
NAIROBI

with which is incorporated the Gandhi Memorial Academy

Visitor:

HIS EXCELLENCY THE RT. HON. MZEE JOMO KENYATTA

Hon. LLD. (E.A.)

(Appointed December, 1964)

Chairman:

B. M. GECAGA

(Appointed January, 1963)

Principal:

ARTHUR T. PORTER, M.A. (Camb.), Ph.D. (Boston)

Bankers:

BARCLAYS BANK, D.C.O.

Solicitors:

DALY AND FIGGIS

UNIVERSITY OF NAIROBI

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FOREWORD

BY THE CHAIRMAN OF THE GOVERNING COUNCIL

In the foreword to the 1965/66 Annual Report I referred to the expansion within the College that had taken place in that year. It is gratifying to note in the succeeding chapters of this report that the process of development continued at an accelerated rate in the year 1966/67. This is particularly evident in the increased enrolments from 856 students in 1965/66 to 1,154 students in the year 1966/67.

The process of expansion was not without its attendant problems. Outstanding among these was the problem of having to sustain this development on an inadequate financial grant for recurrent expenditure. Our special thanks go to the Governments of Kenya, Uganda and Tanzania who agreed to convene a special meeting of the University Grants Committee to re-examine recurrent expenditure grants made for the triennium 1964-1967, and to the Chairman (Mr. A. L. P. Norrington) and members of the Grants Committee who reviewed the College's case with sympathy, as is evident from the recommendations made to the East African Governments for a supplementary grant to meet the deficit. The Principal and his staff faced these difficulties with fortitude and to them too, the Council owes a debt of gratitude.

On a more personal note I wish to thank the members of the College Governing Council who have continued to offer so generously their services to the College and whose support has been invaluable to the College. The College was fortunate in gaining the services of Dr. Eldon Johnson, Mr. J. E. Kariuki and the late Professor J. E. Harris, all of whom accepted appointments to the Membership of Council in the year. It was also with pleasure that Council learnt of the elevation to a peerage of Sir Charles Morris—now Lord Morris of Grasmere.

Our Visitor, His Excellency the President, Mzee Kenyatta once again bestowed on the College the great honour by his presence and consent to officiate at the ceremony for the conferment of degrees and award of diplomas and certificates. His interest in the College continues to be a source of inspiration and encouragement to us all.

B. M. GECAGA

PRINCIPAL'S REPORT

1966-67 completed the first triennium of co-ordinated development of the three Colleges as constituent members of the University of East Africa. For us here at University College, Nairobi, it was a year of consolidation as well as of growth. We began the year relieved of the spectre of a deficit, which had been a reality in the first two years. The University Grants Committee which reconvened in May, 1966, reported that there "had been serious underestimating at Nairobi at the beginning of the triennium and that a substantial supplementary grant was justified", and recommended a grant of £120,000 to avoid another deficit. We are most grateful to the three East African Governments for accepting this recommendation and making the sum available.

As in the previous years, change and enrichment continued to characterise our work. The most spectacular manifestation of this change continued to be the annual increase in student enrolment, despite inevitable difficulties in providing faculty buildings, dining halls and halls of residence. In 1964, undergraduate enrolment at the College was 625. In 1965-66 it was 856 and went up further to 1,154 in this session 1966/67.

The academic growth points during the year can be illustrated as follows: Our Department of Education, established last year, prepared students for the postgraduate Diploma in Education, and as from this year now offers Education as an undergraduate subject in the second and final years. We have also successfully negotiated a UNESCO/UNDP Project of about 1½ million dollars whereby eleven specialists, in addition to a generous supply of equipment, will be attached to the Department to assist in the task of producing qualified graduate teachers for Kenya's secondary schools and in the work of remedial training and research. Also, in our Institute of Adult Studies, we have established a third component to complement the Adult Studies Centre at Kikuyu and the Extra-mural divisions, namely, a Correspondence Course Unit, in full association with the Ministry of Education, to assist those outside our walls who can benefit from our resources. Its first project has been the development of a series of radio/correspondence courses in English, Kiswahili, History, Geography and Mathematics to prepare P3 teachers for the Kenya Junior Secondary Examination.

We have also, this year, made some progress in strengthening one of our weaker areas namely, the Social Sciences. As from this year Sociology has been introduced as a sub-department in the Department of Economics and we hope to develop it to a full department in the next triennium.

Similarly, thanks to the assistance we have received, and are receiving from the French Government, we have introduced French

as a first year undergraduate subject and we hope also to develop it into a full department or as part of a Department of Modern Languages in the future.

All these new academic developments are not in prestige areas, but in areas of direct relevance to our development and, I hope, substantiate our claim that we are a College with links with life itself. This claim we hope is further, and equally convincingly, demonstrated in the plans which were finalised during this year for our Faculty of Medicine which will accept its first class on July 1st 1967 and the plans which are now being prepared, if the recommendation of the International Agricultural Education Commission for a Faculty of Agriculture at the College, is adopted.

As part of our concern and our determination to make our contribution to the rounded progress of Kenya and East Africa, we sponsored in September, 1966, an international Conference at Kericho which was attended by more than eighty academic and government specialists from all over the world. The subjects of discussion at this conference were the inter-related problems of education, employment and rural development. The papers and proceedings of the Conference have now been published and have received and continue to receive wide interest. But equally important, the Conference has launched in our Institute for Development Studies a programme of research and action aimed at positive solutions to these crucial problems in nation development.

The pressure on accommodation was even more pressing and overwhelming than in the previous years. In 1965-66 we had to resort to doubling students in their first and second years in rooms which were originally intended for one. This year we have had to double up all our students, including final year students, at the cost of some overcrowdedness and restiveness among the students. Whenever we can find the necessary finance, we try to add an additional floor to those parts of our buildings which can bear the extra weight. But there are limits to such adaptations and ingenuity. Though bricks and mortar are no substitute for the human spirit, it cannot be denied that the human spirit still needs space and facilities. During the year, only one new hall of residence was completed, though plans are now in their final stages for three additional halls in the new session. It is earnestly hoped that adequate provision will be made in the coming triennium so that the capital projects outlined in our Second Triennium Development Plan materialise. "Without them" as the University Grants Committee emphasized, "there will not be enough room for the additional staff and students to live or work".

Our East African proportion of staff continued to increase, not only numerically but also in terms of positions of seniority and responsibility. In 1964 the number of East Africans was 19

out of a staff complement of 120. This number has increased to 36. We have proportionately more indigenous Africans in the senior cadres of the administration, more as deans, more as professors than any other institution of higher learning in this part of Africa.

In many other respects, the year has been eventful. Once again the College was honoured by the presence of our distinguished Visitor, His Excellency the President and Mama Ngina Kenyatta, at the Congregation Ceremony on October 19th.

Notwithstanding some difficulties, primarily of physical accommodation, the year was one of real achievement as the Academic Report which follows indicates. We wish to express our gratitude to all who have made this possible—to the Governments of East Africa and in particular the Kenya Government, our donors, my colleagues in the College, and not the least, to the Chairman and members of the College Council for their unstinted service at all times.

We feel we have, in this year, made definite progress towards our declared objective of becoming an institution with ever deeper and stronger links with the life and future of Kenya and East Africa, and that we are ready to respond to its needs and aspirations. There is, however, no cause for complacency. Because we try to build on strength we must always be aware of our duty to maintain that strength. We must be resourceful, persistent and courageous. For the rewards to man of knowledge have no limits. Try we must, guided by Whitehead's thought that "panic of error is the death of progress and love of truth is its safeguard".

ARTHUR T. PORTER

FACULTY OF ARCHITECTURE, DESIGN AND DEVELOPMENT

Department of Architecture Session 66/67

(a) Student Numbers and Examination Results:

1. A new intake of 13 students was received at the beginning of the session, one of whom was from Zambia. This brought the total number of students in the Department up to 40, with a further nine students away from the College undergoing their mid-course period of practical experience in offices.
2. In addition to the University Degree Examinations, during the year, certain senior students studied for and sat the External Examinations of the R.I.B.A./E.A. Institute of Architects. Three students were successful in the Intermediate Examinations, two in Part I of the Finals, one in Part II of the Finals and two further students, who have now left the Department after successfully completing the course, sat for and passed the R.I.B.A./E.A.I.A. Finals Part III Examination in professional practice and became eligible for full registration as Architects.

(b) Arrivals:

L. H. M. van Essche, B.Arch. (Cape Town), A.R.I.B.A. took up his duties at the beginning of the session as joint Year Master to the Second Year.

Departures:

S. V. Szokolay, A.R.I.B.A., left the Department at the end of the Session on completion of his two-year contract and took up research studies at Liverpool University in U.K.

Visitors:

Professor R. Gardner-Medwin, Professor of Architecture, University of Liverpool, United Kingdom.

Professor M. Danby, Professor of Architecture, University of Khartoum, Republic of Sudan.

Departmental Organisation

Following the appointment of Professor D. J. Oakley as Director of Studies during the previous year, under the Liverpool School of Architecture, Liverpool University, United Kingdom, much work was carried out in connection with the re-organisation of the Departments and in revising the Degree structure and syllabus. The year also saw the setting up and operation of the new Housing Research and Development Unit.

This Unit was largely financed by the generous help of the Kenya Ministry of Housing together with technical aid from the Danish Government and within a few months of its formulation was at work upon regional housing and planning problems of the Nairobi Area in association with the Kenya Ministry of Housing.

Student Competition Work

In addition to their normal Academic studio work, 14 students from the Third Year entered competitively for the design of a memorial library and clock tower for Kericho Township. The first prize was awarded jointly to Messrs. C. D'Souza and B. Thethy, whose work was commended by the assessing jury. The second prize was won by Mr. Z. Boga.

Students Abroad

Five students from the Department again went to Liverpool under the Liverpool/Nairobi Universities' Link arrangements to spend one year in office experience under the supervision of Liverpool University. This was made possible by the generous help of the Ministry of Overseas Development, United Kingdom.

Department of Design

Course of Study and Student Numbers

<i>First Year:</i> Common Foundation Year	..	..	..	12 students
<i>Second Year:</i> General course in Art and Design	..	..	..	16 students
<i>Third Year:</i> Graphic Design	..	..	..	4 students
<i>Fourth Year:</i> Graphic Design	..	..	..	4 students
<i>Third Year:</i> Textile Design	..	..	..	6 students
<i>Fourth Year:</i> Textile Design	..	..	..	2 students
<i>Third Year:</i> Painting	..	..	..	2 students
<i>Fourth Year:</i> Painting	..	..	..	1 student
<i>Third Year:</i> Sculpture..	..	..	..	3 students
<i>Fourth Year:</i> Sculpture	..	..	..	1 student

Examination Results (University)

2nd Year Certificate in Fine Art (E.A)	..	..	14 passes
2nd Year Certificate in Fine Arts (E.A.)	..	..	2 Fails
<i>Fourth Year:</i> Diploma in Fine Art (E.A.)	..	..	3 passes
<i>Fourth Year:</i> Diploma in Fine Art (E.A.)	..	..	1 Fail

There was an improvement in the number of staff for the subject of Textile Design when Mr. S. M. A. Sagaaf joined the Department of Design as a Special Lecturer.

Extra Curricula Activities

The Department participated in the Youth Festival and also

the Department was responsible for designing the Build Kenya Buy Kenyan publicity symbol.

Department of Land Development

A total of 29 students enrolled for courses in the Department, which continued to be in preparation of the professional examinations of the Royal Institution of Chartered Surveyors in the General and Quantity Surveying Sections. However, in March Senate gave approval to the introduction of two degree courses, viz.: B.A. in Land Economics and B.A. in Building Economics. These courses will be introduced in September, 1967, and will be of Higher School Certificate standard of entry in keeping with all other University of East Africa degrees. It is thought that both of these degrees will fill a most useful rôle in the training of professional persons in East Africa for Estate Management, Valuation, Quantity Surveying and other related activities.

As in previous years the Department remained under-staffed, for it was found impossible to recruit a person with the specialised knowledge required for the subject of Building Economics.

FACULTY OF ARTS

Department of Economics

There was a further substantial increase in student numbers at the commencement of the year. A high proportion of First Year students reading economics in 1965/6 continued to read economics during their second year. Political science, teaching for which commenced within the Department of Economics in 1964, was constituted a separate department with effect from the commencement of the year under review. The Economics Seminar held jointly with I.D.S. continued to flourish.

Changes in Staff

During the session the following persons held visiting appointments in the Department:

- Mr. J. B. K. Hunter (Glasgow University) (until 30 Sept. 1967).
- Mr. R. Posner (Michigan University) (until 30 June 1967).
- Mr. A. Rufus Waters (Rice University) (until 30 June 1967).

Two new appointments were made against establishment positions:

Mr. O. Hagen (Cand. Oecon. Cand. Jur.) (Oslo) was appointed to a Senior Lectureship.

Mr. T. C. I. Ryan, B.A. (Mod) M.A. (Dub.) was appointed to a Lectureship.

Mr. F. M. Mwihiya, B.Sc. (Moravia), M.A. was appointed Special Lecturer in Economics.

Research in Progress

Research was in progress on the following topics:

- The Economics of Smallholder Tea Production in Kenya
- The East African Labour Market
- Production Functions in the Kenya Coffee Industry
- Labour Utilisation in Agriculture
- Economic Integration in Africa
- Problems of Public Finance in Kenya

Publications during the Session

O. Hagen (a) Risk Aversion and Incentive Contracting. *The Economic Record* September 1966.

(b) Is Australian and New Zealand Income Taxation Fair to Families? *The Economic Record* March 1967.

(c) Elements of Value—*Statsckonomisk Tidsskrift* nr. 1. 1967.

- C. Howe The Use of Sample Household Expenditure Surveys in Economic Planning in East Africa, *Bulletin of the Oxford Institute of Economics and Statistics*, Vol. 28, No. 3 1966.
- R. Posner (a) IDS Paper 21 'A Study of the Labour Force on Scale Farms in Trans Nzoia'.
 (b) IDS Paper 57 'Preliminary Results of a Survey of the Labour Force on Mixed Farms in Trans Nzoia, Kenya'.
- T. C. I. Ryan IDS paper 24 'Peasant Production Plans'.
- R. Waters 'Using Critical Path Analysis', *East African Management Journal* 1967

Distinguished Visitors

Professor V. Cerniansky University of Economic, Sciences, Prague

Professor W. Booker	E.C.A. Addis Ababa
Professor F. Klassen	University of Illinois
Professor M. Perlman	University of Pittsburgh
Professor R. H. Tuck	University of Reading
Miss Edith Whetham	Cambridge University
Professor I. Wallerstein	Columbia University

Other Activities

Members of the Department participated in Courses at K.I.A. and at the East African State College.

Department of Education

Students

- (a) Postgraduate Course, 18 Students.
 Undergraduate 2nd Year Course, 9 Students.

Staff

(b) At the beginning of the year Professor Cammaerts took up the Headship of the Department. Dr. I. Hollingshead joined the staff in September, 1966, under the T.E.E.A. Scheme to help with the teaching of Mathematics Methods. Continued help on Educational Psychology was obtained from Dr. S. Desai. Thanks to the co-operation of the Department of Domestic Science. Help was also obtained from the staff of the Kenya Science Teachers College and Kenyatta College. In June, 1967, Professor Morrison returned to Canada.

(c) (For research and Progress see Faculty of Arts Hand Book 1966/67).

Visitors

- (d) External Examiner Mr. John Wilson, Institute of Education, London University.

Buildings

(e) During the year the Department moved from the third floor of Gandhi wing to the former Caretaker's flat.

(f) Professor Cammaerts and Mr. J. Anderson attended the Kericho Conference on Education Employment and Rural Development in September, 1966.

Department of English

Changes in Staff

Mr. J. E. Stewart joined the department as lecturer and Mrs. P. Lewis as temporary lecturer. Mr. J. Ngugi was appointed special lecturer.

Research in Progress

Research was undertaken in the fields of African Literature Linguistics, D. H. Lawrence, Dickens, Hardy, Tennyson and Caribbean literature. A special research project on multilingualism and the language use of secondary schoolchildren was financed by the Survey of Language Use and Language Teaching in Eastern Africa. Students have undertaken controlled research in a selected topic in the field of 'Linguistics and the use of English'.

Publications during the Session

- F. P. Gorman "Conventions in the Description of English" in *Voice and Speech*, 1967.
- B. Hughes "Teaching English Literature in African High Schools" in *East Africa's Cultural Heritage*, 1966.
- J. Ngugi Short stories in *Modern African Stories*, 1966. *A Grain of Wheat*, 1967.
- J. E. Stewart "The Quest for Gravity" in *New Blackfriars*, 1966. "The Flight to Women" in *New Blackfriars*, 1966.

Department of Government

- (a) Enrolment in the first year course was 46.
Enrolment in the second year course was 15 in International Relations and 22 in Public Administration.
- (b) Professor Maure L. Goldschmidt, Dr. Cherry Gertzel and Dr. Donald S. Rothchild were on the staff.

(c) **Publications**

Professor Goldschmidt "Democratic Theory and Contemporary Political Science" in *Western Political Quarterly*, September, 1966.

"Rousseau on Intermediate Associations" in *Nomos*, Spring, 1968.

Donald S. Rothchild "The Limits of Federalism: a study of Political Institutional Transfer in Africa" in *Journal of Modern African Studies*.

"Impact of African Federal Experiments on International Politics", given at Brussels 1967 meeting of International Political Science Association.

The Politics of Integration: An East African Documentary to be published in 1968 by East African Publishing House.

Cherry Gertzel

"Parliament in Independent Kenya", in *Parliamentary Affairs*, Vol. XIX, No. 4, autumn 1966.

"The Provincial Administration in Kenya" in *Journal of Commonwealth Political Studies*, November, 1966.

"Kenya's Changing Constitution" in *East African Journal*, December, 1966.

(d) **Distinguished Visitors to the Department:**

Professor Gwendolen Carter, Director, Centre for African Studies, Northwestern University, U.S.A. Professor Carter lectured on "Southern Africa".

Dr. George Bennett, Oxford University.

Professor Repert Emerson, Harvard University.

Mr. Yash Ghai, Senior Lecturer in the Faculty of Law, the University College, Dar es Salaam, was a visiting Lecturer in the Department for one term and lectured on "Administrative Law".

(e) The department was also the recipient of a sizeable donation of books from the Rockefeller Foundation.

Department of History

The staff of the Department consists of the following:

Professor K. O. Bjork Professor

Dr. B. A. Ogot Reader and Chairman of Department

Dr. G. H. Mungeam Lecturer

Dr. J. A. Kieran Lecturer

Dr. G. S. Were Lecturer
Mr. J. S. Mangat Lecturer
Mr. G. Lowther Lecturer in Archæology.

Visiting

Professor L. M. Hoskins
Dr. R. W. July

Research Fellow

Mr. B. G. McIntosh

Honorary Lecturer

Dr. A. T. Porter

Research Activities

Professor K. O. Bjork: M.A., Ph.D. (Wiscon.) has edited *Ramus Bjorn Anderson: Pioneer Scholar*. Lund Press, U.S.A., 1966. He is, at the moment, studying Scandinavians in Kenya.

Dr. B. A. Ogot: M.A. (St. Andr.) Ph.D. (London); Dip.Ed. (E.A.) his book with F. B. Welbourn, *A Place to Feel at Home*, has been published by O.U.P. His *A History of the Southern Luo Peoples, 1500-1900* Vol 1, is to be published in January, 1967, by the East African Publishing House. The work in progress include *The Transfer of Power to Kenya 1952-1963*, based on the papers of the Hon. T. J. Mboya, due to be completed in March, 1967 (to be published by André Deutch Ltd). *An Essay on the History of East Africa*; to be published in the Modern Nations in Historical Perspective series by Prentice-Hall Inc.; a chapter in volume II of the *Dawn of African History*, edited by Prof. Oliver on the *Impact of the Nilotes*, to be published by O.U.P.; joint General Editors, with Prof. T. O. Ranger, of a six-volume series of documents dealing with African proto-nationalism in East and Central Africa; and joint Editors with Dr. J. A. Kieran, of a History of East Africa, to be published by the East African Publishing House and Longmans. In addition, a number of his articles on pre-Colonial history of E. Africa have been accepted for publication.

Dr. G. H. Mungeam: M.A., Phil. (Oxon), his book, *British Rule in Kenya 1895-1912*, has just been published by Clarendon Press, Oxford. He is at the moment working on particular aspects of the administrative history of Kenya, as well as collecting material for a volume of documents on Kenya History.

Dr. J. A. Kieran: B.A. (Liv.); Ph.D. (London) has successfully completed a thesis for the degree of Ph.D. at London University on *The Holy Ghost Fathers in East Africa, 1863-1914*. He is revising and preparing it for publication by the Clarendon Press division of

O.U.P. He is also preparing a chapter for a forthcoming book, edited by Prof. W. T. B. Morgan, on the history of Kenya and East Africa generally; and he is joint editor with Dr. B. A. Ogot, of a book on the History of East Africa. He is translating and editing A. Le Roy, "Au Kilima-Ndjaru, Afrique Orientale" published in 1888, by L. de Soye et Fils, Paris, for Frank Cass series of Africana reprints and new editions. He is also preparing for publication several articles on the diplomatic and political history of 19th Century East Africa.

Dr. Robert W. July: M.A., Ph.D. (Columbia). He is preparing for publication the following material: a study of Sierra Leone influence on Nigerian society as seen in the careers of Henry Carr and Herbert Macaulay; a study of the ideas of West African historians in the 19th Century; American Negro and West Indian influences on West African thought; a biography of W. E. B. Du Bois; and a new edition of *History of Sierra Leone* by A. B. C. Sibthorpe.

Dr. Gideon S. Were: B.A., Ph.D. (Wales) has completed the revision and preparation for publication of his Ph.D. thesis on *The Abaluyia of Western Kenya and their Neighbours: their history down to 1930* (to be published by the East African Publishing House). He is carrying out research into the various aspects of the *Dini ya Msambwa*.

Mr. J. S. Mangat: B.A. (Delhi), M.A. (Oregon) is working for a London Ph.D. on *Early Indian Settlements in East Africa*.

Mr. B. G. McIntosh: M.A. (Edin.), is working on *Scottish Missionaries In Kenya, 1891-1931*, for an Edinburgh Ph.D. He is also preparing the following papers for publication: *Biographical Note on William Mackinnon; African Military Labour and Transport in East Africa, 1914-1918; Communications and Control in East Africa, 1872-1901*. He is in charge of Staff-Student Research Project in oral and documentary sources in East and Central Africa.

Mr. G. R. Lowther: M.A. (Cantab.). He has started work on the Kenya Caspian Project—a study of the origins and nature of the Kenya Caspian culture. He is preparing for publication a book on *The Nature of Archæological Explanation*, and a monograph on *Method and Inter-disciplinary Studies*, (to be published in 1967 by UNESCO); and a chapter on *Theory and Method* in Archæology of Canada: National Museum of Canada Centennial Volume.

Department of Mathematics

Professor H. W. Alexander continued to occupy the Chair in the Department. Mr. M. Alala returned from study leave. Dr. P. J.

Bushell joined the Department from the University of Sussex, England.

Research

Members of the Department were engaged in the following fields of research:

- Professor Alexander: Programmed instruction in High Schools and University Mathematics.
- Dr. M. A. Weinstein: Irreversible thermodynamics of radiation
Invalidity of the diffusion approximation for the transport of resonance radiation in the presence of reflecting boundaries
Group Theory and the structure of elementary particles.
- Dr. M. O'Reilly: Group Representation.
- Dr. A. Zajta: A generalisation of the Runge-Kutta formulæ
Elliptic modular functions and class and cyclotomic equations. Foundations of probability and the synthesis of the von Mises and Kolmogorov approaches.
- Mr. M. Alala: A generalisation of the Riemann's method. Applications of Functional Analysis to differential equations.
- Mr. A. D. Williams: Design of card reading computer circuits.
- Mr. P. R. Sanders: Automorphism of finite groups.

Publications during 1966/67

- Dr. M. A. Weinstein: (i) The Coil Planet Centrifuge (with Y. Ito, H. Harada, E. Kimura and K. Nunogaki) Nature, 1966.
(ii) Magnetic Decay in a Hollow Elliptic Cylinder. Journal of Applied Mathematics, Parts I-III, 1966.

Professor Alexander returned to Earlham College, U.S.A. Dr. M. O'Reilly left to take up a lectureship at Clemson University, U.S.A. Dr. P. J. Bushell returned to University of Sussex. Mr. E. M. Kizza went to Manchester University to read for an M.Sc. degree in Numerical Analysis.

FACULTY OF COMMERCE

Department of Accounting

(a) (i) Student Numbers

With the introduction of a new first-year course in basic accounting theory and method, taken by all first-year Economics students, student numbers increased by approximately 180. Second-year student numbers increased by 100 per cent to 40 of which exactly 50 per cent elected to take the accounting option in their final year, thus breaking the pattern of the previous two years when the proportion was 40 per cent in each year. Final year students taking the four accounting option courses increased in number from seven to ten.

Total enrolments (students times courses) will be seen to have increased from 48 in 1965/6 to 260 in 1966/67.

(ii) Examination Results

Continuing staffing difficulties again prevented the department from operating practical classes and tutorials in conjunction with lectures. In addition there was still an almost complete lack of availability of suitable books either for purchase, or in the library. The results were that although the basic theoretical ground appropriate to a two-year course was covered in lectures, final year students lacked the reading opportunities and experience in figure-work necessary for a high standard of examination performance and only five students reached honours standard (in the lower second class).

Due in part to an increased analytical content of the existing final year courses and the introduction of a final year project, the other five students were able to write papers sound enough to enable them to obtain passes despite the handicaps.

One second-year student failed, and regrettably it was again a Students' Union official, this time the president, who is to repeat the year.

(b) Changes in staff

The resignation of Mr. J. A. Alderson took effect from September, 1966, leaving Mr. C. R. Hornsby alone in the department. Advertisements for staff were unproductive and although negotiations for secondments from North American universities were commenced, the earliest possible year under discussion was 1969/70.

(c) Research in Progress

One project was commenced during the year, viz:

C. R. Hornsby An investigation into the possibility of developing an accounting algebraic language.

(d) Publications and other written works

One technical article was published in a journal, viz:

C. R. Hornsby "A Taste for Accounting" *East African Management Journal*, April, 1967, (pp. 4).

In addition, a number of papers and schedules on technical-administrative subjects was written (and in the case of the first listed, duplicated) for internal college use, viz:

C. R. Hornsby The Establishment of a Department of Accounting in the Faculty of Commerce—A Progress Report 1966/7 (pp. 6).

A complete course structure for a three-year university course for Accounting Majors (pp. 10 of schedules of course schemes and syllabi).

A classified reading scheme for 15 accounting courses (pp. 15 of schedules).

The composition of a university library basic stock of accounting texts (pp. 16 of schedules).

During the year a Teaching Materials Library was commenced and approximately 900 items of teaching materials were numbered, stencilled, indexed by a course/nature classification and (separately) by number, and a basic stock of 50 copies of each stencil filed numerically. The material consists of illustrations, problems, exercises, tests, essay topics and case studies, partly contributed by university departments from all over the English speaking world and partly prepared within the department.

(e) Distinguished visitors

Professor L. R. Amey (External Examiner) Professor of Accounting Bristol University.

Mr. A. R. Towl, Director of Case Distribution, Graduate School of Business Administration, Harvard University.

(f) Changes in Equipment

No progress was made on the adaptation of Room G.W. 103 for use as the Faculty Data-Processing Laboratory.

(g) Donations Received

An initial grant of £100 was gratefully received from the East African Teaching Materials Fund to assist in the setting-up of the Teaching Materials Library.

(h) Distinctions, Prizes, etc.

V. C. Dias was recommended for the award of the department's annual Gandhi Smarak Nidhi Prize.

(i) Careers for Graduates

The relationship of the B.Com. (Accounting Option) degree to the requirements of various accounting and secretarial professional bodies has been established and important examination and qualifying service concessions obtained. However, the proposed merger of the six major U.K. professional accounting bodies will create problems here and the department is participating in discussions on the future development of the profession in East Africa.

Arrangements have been made with a large number of professional firms, businesses and national and local government departments throughout East Africa, whereby vacation work and permanent career opportunities will be offered to B.Com. students and graduates recommended by the department.

(j) Special Responsibilities

The department accepts that it has wide social responsibilities to the community at large in the fields of financial education and professional assistance. Accordingly, Mr. Hornsby conducted courses for the Institute for Adult Studies in elementary and advanced financial accounting and was the Nairobi tutor during the Institute's "Path to Progress" TV Economics Course. He also conducted a lecture course on cost accounting for the Kenya Institute of Management, addressed a general meeting of its members and served on its Education and Training Committee.

Mr. Hornsby was treasurer of the Senior Common Room, treasurer of All Saints Cathedral, auditor to various organisations including the National Council of Women of Kenya and financial adviser to Legal Publications Ltd., a company set up by members of the Law Department to promote the publication of East African legal literature such as the East African Law Journal.

Department of Business Administration

Lecture course in the various aspects of Business Administration continued to be provided to students preparing for the B.Com. degree. Examination results continued to be satisfactory and, once again, all students obtained employment at a relatively high level, mainly in the private sector of the economy. Mr. John W. Taliaferro joined the department from the University of Vermont as a lecturer, but, even with this assistance, the problem of staff shortage remained acute, particularly as a result of the rapid build-up in student numbers. This also has inhibited the amount of original research, which has had to be confined mainly to preparation of teaching materials appropriate to conditions in East Africa.

Department of Law

The department started off the year with Mr. S. N. Waruhiu as Head of Department, Dean of the Faculty of Commerce and

Vice-Principal of the College. The numbers of students within the Faculty of Commerce had increased considerably and the total teaching hours over the previous year had been doubled.

Mr. Waruhiu announced his resignation in June and left the College in December '66 to the regret of the departmental staff and students alike. The present Acting Head was appointed and is acting to-date. Mr. Visho Sharma, whose contract in the Department of Adult Studies was coming to an end, was seconded to the department for the last two terms of the year and took over Mr. Waruhiu's lectures for that period.

Mr. G. G. S. Munoru was registered as a post-graduate student of the University of East Africa to read for a Ph.D. degree in an Industrial Law subject. Mr. Maini's book on "Land Law in East Africa" was published during the year. Mrs. M. A. Rogers was appointed Assistant Editor of the Eastern Africa Law Reports and a member of the Board of Examiners of the Institute of Municipal Treasurers and Accountants.

The department entertained the Dean of the Law School from Stanford University who was visiting East Africa.

It is hoped that next year will see an increase to the staff of the department with the consequent increase in the time spent in the essential research.

Department of Domestic Science

Eighteen new students were admitted to the first year of the Diploma Course in Domestic Science, and there were 12 second-year and an equal number of third-year students.

Research in progress: Dr. S. Desai—On Project I—Development of Self-Concept of teacher trainees.

Distinguished Visitors to Department: Professor Tibble.

Conferences

Women Engineers and Scientists—Cambridge—July, 1967, Miss Eva Ricketts.

FACULTY OF ENGINEERING

The Faculty started the 1966/67 session with 247 undergraduates. The new entrants for the 1967/68 Session joined the Faculty during the last term of the 1966/67 Session so that for the last term there were 340 undergraduates in the Faculty.

Fifty-seven students sat the final degree examinations. Fifty-three students were awarded degrees, of these four obtained First-Class Honours, 12 obtained Second-Class Honours (Upper Division), and 12 obtained Second-Class Honours (Lower Division).

During the year considerable progress was made with the new extensions which will be ready for occupation in the middle of 1968. Much equipment has arrived as the result of UNESCO Aid. Essential items of small equipment were also obtained by grants of £2,250 from the Uhuru Trust Fund.

The fifth annual Conference on Engineering Education in East Africa was organised by the Faculty with Professor Royston Jones as convenor and Mr. S. R. Smaridge as Secretary. The Conference was held at Dar es Salaam Technical College. It dealt with a wide range of subjects relating to engineering education at all levels. The emphasis was on "Practical Training for Engineers". A working party was set up to investigate the possibility of setting up an East African Council in Engineering Education.

Department of Civil Engineering

(a) The Department of Civil Engineering had 88 undergraduates. In the final examinations two students were awarded First-Class Honours. Two postgraduate students were awarded degree of M.Sc.

(b) Change in Staff

New Staff:

Mr. K. F. O'Byrne, B.E. (Nat. Univ. Ireland), formerly Vice-Principal and Head of the Mathematics Department of Strathmore College.

Mr. G. A. Crabb, B.S.A.E., M.S.A.E., M.A.S.A.E., M.E. Xi., formerly Consulting Engineer in Water Resources, Iran.

(c) Research in Progress

Professor Royston Jones Composite action in reinforced concrete structures.

Mr. P. A. Campbell Investigation of the engineering properties of exotic softwoods grown in Kenya, particularly *Pinus Patula*.

Mr. B. S. Bhogal Investigations of the swelling characteristics of expansive soils.
Road traffic generation and distribution in rural areas of Kenya.
Land use studies in relation to the transportation planning for a growing urban complex.
Deflection studies of road pavements.

Mr. S. C. Aggarwal Experimental studies on soil-cement blocks and concrete blocks for use in low-cost housing—in conjunction with the Housing Research Unit, University College.
Development of designs for maize storage silos.

Mr. G. A. Crabb Investigations of calibration techniques for current meters.
Development of normal annual daily patterns of hydrological phenomena in Kenya.
Evaluation of short and long term precipitation records for design purposes.

Mr. M. J. Baron Seismic regionalisation and earthquake engineering.

Mr. K. F. O'Byrne Investigation on wind loadings.

(d) Publications

Mr. P. A. Campbell "A provisional system of working stresses for East African Timbers". The Second East African Timber Symposium, 1966.

R. C. Vold "The bilateral load test and its application to laterite Soils." Proceedings of the Third Asian Regional Conference on Soil Mechanics and Foundation Engineering, Haifa, Israel, 1967.

(e) Distinguished Visitors

Professor A. Ward from University of Zambia.

Dean Y. Peter, Dean of Faculty of Engineering, Haile Selassie University, Addis Ababa.

Prof. R. Shalon, Israel Institute of Technology, Haifa, Israel.

Prof. G. F. Sowers, Georgia Institute of Technology.

Mr. J. Arthur Banks, President, Institution of Civil Engineers, United Kingdom.

Dr. R. Bowen, Regional Adviser on Applications of Radio Isotopes in Hydrology—International Atomic Energy Agency.

Sir Eric Richardson, Director of Education, Polytechnic, London.

Dr. E. D. Tingle, Head of the Tropical Section, Road Research Laboratory, United Kingdom.

(f) Further valuable equipment was received under the provision of the UNESCO and Donations for the Uhuru Trust Fund to the Faculty.

(g) Professor Royston Jones was appointed as member of the Board of Governors of the Kenya Polytechnic.

Special Courses and Symposia

The Second East African Timber Symposium was organised by Mr. P. A. Campbell and was attended by some 40 representatives of interested bodies.

A special course on Limit Analysis was conducted by Dr. Koso Thomas, Visiting Reader to the Department from Fourah Bay College, the University of Sierra Leone. This was attended by a number of professional engineers and senior students.

Department of Electrical Engineering

Staff

A larger than usual turnover of Academic Staff during the session resulted in a rather heavy teaching load and discontinuities in the undergraduate teaching programme.

Messrs. M. C. Kansara, N. Godinho left for U.K. in September, 1966, to be followed by Mr. R. K. Simmonds, Head of Department, in December, 1966, Dr. D. Taylor in April, 1967, and Dr. D. G. Smith in June, 1967. With two other vacancies carried from the previous year still not filled the department was very under-staffed. In September, 1966, Mr. A. Lyse Jr. joined the department under the Norad scheme but had to return to Norway due to domestic and medical problems, after only a month's stay.

Dr. G. J. Hawkins and Dr. T. V. Sridhar were appointed and resumed duties in January, 1967, greatly assisting in relieving the teaching load. With the burden of the undergraduate teaching to be carried by the remaining staff research work came to a standstill. The staffing situation should improve, since a team have been appointed through the Norad agency, including Professor Storm to head the department.

Students

The department accepted a total of 23 fresh students which brought the total student population in the department to 67. Of these 24 were successful in the first year, 16 in the second year and 10 obtained their final qualifications.

The University examinations were moderated by Professor E. G. Culwick from Dundee University, Scotland.

Technical Training Scheme

The Ford Foundation aided Technician Training scheme in the department closed down in phases, with successful completion by all candidates. These candidates have since been absorbed into the technical staff of the university while one was sent to U.K. for a further one-year scholarship to gain experience with the Marconi establishment.

Vacation Employment of Students

It is proving very difficult to place students in vacation employment in fields suitable to their course, the problem is particularly severe in the case of Asian and non-sponsored students. However, a few places had been found for the first- and second-year students but the problem appears to be deteriorating. In the case of the second-year students two were placed in Government establishments through financial assistance given by the Ford Foundation, for vacation work. Lack of contact between the department and industrial organisation will greatly prejudice this sphere of activity.

As the present Head of Department took over from 1st August, 1967, this report is written by Mr. H. de Souza who was Acting Head of Department during the period May-July, 1967.

Department of Mechanical Engineering

(a) Students

The rapid increase in student numbers indicated in the last report progressed through the department. Thus throughout the session there were 10 students in final year, 21 in second year, and 29 in first year. All the ten finalists graduated at the end of the Session, and a further thirty students were welcomed into the department in April, 1967.

(d) Changes in Staff

Professor C. A. Judson, Head of the Department, resigned with effect from December, 1966, to take up an appointment as Principal of a Technical College in El Salvador.

Mr. S. R. Lamond was granted study leave throughout the Session to take a course leading to the award of M.Sc. at Birmingham University. In June, 1967, Mr. R. P. Patel left for two years' study-

leave at McGill University, Canada, and in August Dr. H. M. El-Sabilgi completed his contract as UNESCO expert in mechanical engineering and returned to Cairo.

At the end of the Session Miss M. E. Wightman, who had served the department and the Department of Electrical Engineering as secretary, resigned from her appointment, and Mrs. A. M. Gacii was appointed to the post of secretary.

Professor W. B. Palmer assumed the duties of Head of Department at the end of April, 1967, after Mr. M. Vasudevan had acted as Head since the departure of Professor Judson.

At the beginning of July, 1967, Mr. N. Okolo joined the staff as temporary assistant lecturer.

(c) **Research in Progress**

Mr. M. Vasudevan continued his work on Photo-elastic studies of plastics exposed to gamma rays and Mr. R. P. Patel was completing his work on rotary atomisers. Mr. I. M. Johnson designed and developed a maize seed dresser, and Mr. P. H. Hamilton continued with his investigation into the vibration of cones. Mr. P. M. Githinji was examining the effects of wire diameters on Burnout heat flux in pool boiling.

(d) **Publications by Members of the Department**

- P. M. Githinji "Effective Assistance for Advancing Engineering Education in Africa." Kumasi Conference on Engineering Education in Middle Africa, July 1967.
- W. B. Palmer "Stress Relations along Slip-lines for a Material of Variable Flow Stress." *Int. J. Mech. Sci.*, **8**, 1966, pp. 63.
- W. B. Palmer Contribution on "A Slip-line Field Solution for Machining with Discontinuous Chips". *Proc. Inst. Mech. Engrs.* **180**, 1966, pp. 801.
- W. B. Palmer "The Presentation of Vibration Isolation." *B.M.E.E.* **5**, 1966, pp. 119.
- W. B. Palmer "Plastic Deformation when Cutting into an Inclined Plane." *J. Mech. Eng. Sc.*, **9**, 1967, p. 1-10.
- W. B. Palmer "University Government and Organisation." *British Universities Annual 1966-7* pp. 128-142.
- W. B. Palmer "Education of Mechanical Engineers." Metric Symposium, University College, Nairobi, June, 1967.

(e) Changes in Building and Equipment, 66-7

The department continued to occupy the same premises, but in January, 1967, building of the new engineering block was begun with the prospect that the department would occupy the top three floors and vacate completely the American wing.

Planning of the laboratories and their equipment in the new block was in hand, but meanwhile a further consignment of equipment was introduced to the department under UNESCO auspices.

(f) Donation

The departmental share of a grant from the Uhuru Trust Fund was used to purchase a Digital Counter and associated equipment.

Department of Surveying Photogrammetry

<i>(a) Year</i>	<i>No. of Students</i>	<i>Examination Passes</i>
Final	8	8
Second	12	12
First	16	10

In the final examination degree results were as follows

<i>Class of Degree</i>	<i>No. of Students</i>
First Class Honours	1
Second Class Honours (Upper Division)	4
Second Class Honours (Lower Division)	1
Pass	2

(b) Changes in Staff

In October, 1966, Mr. M. W. Conitz joined the Department as a UNESCO expert.

In April, 1967, Mr. O. F. Werdmuller Von Elgg joined the department as a lecturer.

(c) Research

Mr. L. P. Adams continued his research into analytical aerial triangulation and geodetic astronomy.

Mr. R. Fursdon carried out astronomical observations in Tanzania and Kenya for research purposes into the deviation of the vertical.

(d) Publications

Adams L. P. "Block Adjustment by the Direction Method." Photogrammetric Record, London, Volume V No. 29 pp. 366-372, April, 1967.

FACULTY OF MEDICINE

During the year 1966/67 the vast amount of preparatory work towards the establishment of a Faculty of Medicine was co-ordinated and completed. The original idea of establishing a medical school in Nairobi stemmed from a World Health Organisation Report written by Professor R. E. Tunbridge, Professor W. S. E. Jessop and Dr. E. Gzegorsewski, following a visit to Kenya in August, 1964, of this W.H.O. Consultant Group. In June, 1965, a medical school planning committee was established by the University College, Nairobi, under the chairmanship of the Deputy Principal, Dr. D. P. Wasawo, and during the following two years detailed plans were worked out for the establishment of a Faculty of Medicine within the College. The fifteenth and final meeting of this committee was held on 29th March, 1967. The general plan was to set up a Pre-Clinical School of Studies at Chiromo, where the Pre-Clinical Departments of the Faculty of Veterinary Science had already been established, and to develop the Kenyatta National Hospital as a major teaching hospital where the Clinical and Para-Clinical Departments of the new Faculty could be housed. Detailed planning of the necessary buildings and of the type of curriculum to be followed, and of many other considerations such as the estimated student intake in relation to the medical needs of Kenya, size of teaching staff required, and estimates of the required financial expenditure, both capital and recurrent, were undertaken by the appropriate sub-committees.

By the middle of 1966 plans had crystallised to the point where it had become apparent that the needs of the proposed Faculty of Medicine should be geared to a first-year intake of 30 students in July, 1967, increasing by approximately 15 each year over the next five years until a maximum intake of 105 would be reached in 1972. In this way it was anticipated that, allowing for a moderate failure rate, approximately 24 medical students could be expected to graduate by the end of the academic year 1971/72, and that during the academic year 1976/77 the peak production of 80 or

Estimated Student Numbers 1967-1977

<i>Year of Entry</i>	<i>1st Year</i>	<i>2nd Year</i>	<i>3rd Year</i>	<i>4th Year</i>	<i>5th Year</i>	<i>Referred</i>	<i>Total</i>
1967	30	—	—	—	—	—	30
1968	45	27	—	—	—	—	72
1969	60	40	24	—	—	—	124
1970	75	54	36	24	—	—	189
1971	90	68	48	36	24	—	266
1972	105	81	60	48	36	3	333
1973	105	95	72	60	48	4	384
1974	105	95	84	72	60	5	421
1975	105	95	84	84	72	6	446
1976	105	95	84	84	84	7	459
1977	105	95	84	84	84	8	460

more graduates per annum would commence. Such plans called for the accommodation for classes of approximately 100 each year in the two pre-clinical years and of up to 80 or more in the three clinical years of the course. Plans were prepared for the teaching of Human Anatomy, Physiology, Bio-Chemistry and Pharmacology at Chiromo, which was rapidly assuming the functions of a campus for the Biological Sciences. Two buildings were proposed, one for the teaching of Human Anatomy and Histology in close proximity to the existing building for Veterinary Anatomy, and the other for the teaching of Physiology, Bio-chemistry and Pharmacology, in similar relationship to the sister building of the Faculty of Veterinary Science. Plans for these were prepared and approved and the Anatomy building was commenced in December, 1966.

In the meantime it had been decided that certain first-year classes, particularly in physiology and biochemistry, could be given in common to both Medical and Veterinary students, and that the existing facilities of the buildings of the Faculty of Veterinary Science could be used whilst those of the new Faculty were being completed. In this manner the Medical School Planning Committee was able to plan for the admission of the first class of medical students at the beginning of July, 1967, in accordance with the wishes of His Excellency, President Jomo Kenyatta, who took a very keen interest in the establishment of the school.

At a meeting of the University Senate on 8th March, 1967, an outline of the medical curriculum was submitted by the Academic Board of the University College, Nairobi, and was approved. A month later, on 7th May, 1967, a list of 30 candidates for admission to the first-year class in medicine was approved by the University Admissions Board, and the way became clear for the commencement of studies at the beginning of July, 1967.

Early in 1967 applications for key teaching posts in the Departments of Human Anatomy and Physiology with Biochemistry were called for and essential staff members were appointed, as shown in the list given below. In view of the fact that courses in physiology and biochemistry (and to a limited extent in anatomy) were planned to be given in common with those provided for the first-year students in Veterinary Science the staffing problem was considerably eased and it was decided to defer the appointment of professorial staff until later in the year when the building programme was completed. A great debt of gratitude was felt towards the members of the Pre-clinical Departments of the Faculty of Veterinary Science for their timely help in planning for the first year of teaching.

On 18th May, 1967, at a meeting of the College Council in Nairobi, a Faculty of Medicine within the college was formally established

and proposals made by the Academic Board for the composition of the membership of the Board of the Faculty of Medicine were approved.

The year 1966/67 was therefore a very crucial one for the new Faculty, culminating in the successful launching of a first-year class of 28 students who underwent a brief orientation course at the end of June, 1967, and commenced their formal studies at Chiromo on 2nd July, 1967.

Relationship with University of Glasgow

A very important contribution towards the future development of the Clinical and Para-clinical Departments of the Faculty of Medicine was made by the University of Glasgow. Following a visit to Nairobi in 1965 by Professor Charles Fleming, Dean of the Faculty of Medicine in Glasgow University, it was decided to establish clinical teaching in the Kenyatta National Hospital of groups of final year students from Makerere University College who had started coming to Nairobi in relays of 20 or more for this purpose in July, 1965. This was achieved by seconding a succession of physicians, surgeons, obstetricians and gynaecologists, anaesthetists and pathologists from the Medical Faculty of Glasgow University, who with the help of the existing consultant staff of the Kenyatta National Hospital, commenced the first routine teaching of clinical students in Nairobi. The highest number of Glasgow University staff seconded to University College, Nairobi, at any one time was 18, and during the year 1966-67 the scheme continued to operate very successfully. A group of 23 clinical students came to reside at the Kenyatta National Hospital from 5th July, 1966, to 18th September, and another group of 23 from 19th September, to 26th November, 1966. Many of these students were Kenyans studying at Makerere who were glad of the opportunity to do a portion of their clinical training in their home country. The name of Dr. Stewart Kennedy stands out as the leader of the Glasgow staff members who numbered 13 at the time of the establishment of the Faculty of Medicine in Nairobi, when all seconded staff from Glasgow became members of the new faculty.

Relationship with the University of Padua

During the year 1966-67 a relationship with the University of Padua was established and following a visit to Nairobi of Rector Guido Ferro and some members of his staff plans were developed for substantial assistance to be given to the developing Departments of Anatomy and Biochemistry. As a result of this visit it is anticipated that important contributions towards the staffing and equipment of these new departments will become available during the year 1967-68.

Relationship with McGill University and the Montreal General Hospital

Further progress was also made with the proposal that members of the clinical teaching staff of McGill University working in the Montreal General Hospital in the fields of medicine and pædiatrics should be seconded to University College, Nairobi. Following a visit of Dr. W. Storrar, Medical Director of the Montreal General Hospital, in March, 1967, and a later visit from Dr. Alan Ross, Professor of Pædiatrics in McGill University, the way was paved for the working out of a Memorandum of Understanding between the Canadian Government and the Government of Kenya. It was hoped that this would lead to the provision of valuable assistance in the Departments of Medicine and Pædiatrics during the year 1967-68.

Relationship with the Department of External Affairs of the Australian Government

In August, 1966, the Australian Government was requested to provide the services of a medical school co-ordinator to advise the Medical School Planning Committee on all matters relevant to the establishment of the Medical School and to work in close collaboration with the consultant architect and the hospital planner in all matters affecting the medical school and the hospital, with particular regard to the integration of teaching facilities within the Kenyatta National Hospital. Following this approach the services of Professor Gordon King, formerly Dean of the Faculty of Medicine in the University of Western Australia, were offered and his appointment with University College, Nairobi, took effect in October, 1966. With the establishment of the Faculty of Medicine in May, 1967, Professor King was appointed Acting Dean.

Staff: The following is a list of appointed staff members as at the end of the 1966-67 session, immediately prior to the commencement of teaching in July 1967:

Acting Dean: Professor Gordon King, O.B.E., F.R.C.S. (Eng.),
F.R.C.O.G., F.R.A.C.S.

DEPARTMENT OF HUMAN ANATOMY AND HISTOLOGY:

Senior Lecturer and

Acting Head . . . J. M. Mungai, M.B., Ch.B. (E.A.), Ph.D. (Lond.).

Lecturer . . . J. P. A. D'Souza, M.B., Ch.B. (E.A.).

DEPARTMENT OF PHYSIOLOGY AND BIOCHEMISTRY:

Senior Lecturer in

Physiology and

Acting Head of

Department . . .

J. T. Hemingway, M.A., Ph.D. (Camb.) M.R.C.S.
(Eng.) L.R.C.P. (Lond.).

Senior Lecturer in

Biochemistry . . .

Lecturer in Physiology

G. Rumney, B.Sc. (Edin.), Ph.D. (Tel Aviv).
Alison M. Parker, B.Sc. (Hons.), (Edin.).

DEPARTMENT OF PREVENTIVE AND COMMUNITY MEDICINE:

Professor F. D. Schofield, M.A., M.B., B.Ch. (Camb.), M.R.C.P. (Lond.), M.D. (Camb.) D.T.M. & H. (Lond.).

DEPARTMENT OF MEDICINE:

Senior Lecturer and Acting Head of Department . . .

*W. C. Watson, M.B., Ch.B., F.R.C.P. (Glas.), M.R.C.P. (Lond. & Glas.), M.D. (Glas.), Ph.D. (Glas.).

Lecturers *J. C. Ferguson, M.B., Ch.B., D.R.C.O.G., M.R.C.P. (Glas. & Edin.).

*J. Runcie, M.B., Ch.B., M.R.C.P. (Glas.).

DEPARTMENT OF SURGERY:

GENERAL:

Senior Lecturer and Acting Head of Department . . .

*F. T. Crossling, M.B., Ch.B. (Aberdeen), F.R.C.S. (Eng.).

Lecturer *C. J. Wright, M.B., Ch.B., F.R.C.S. (Lond. & Edin.).

ORTHOPAEDIC:

Senior Lecturer *G. A. Abrami, M.B., Ch.B., F.R.C.S. (Edin.).

Lecturer *A. N. Conner, M.B., Ch.B., F.R.C.S. (Edin.).

ANAESTHETIST:

Senior Lecturer *A. I. Mackenzie, M.B., Ch.B. (Glas.), D.A. (Lond.), F.F.A.R.C.S.

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY:

Senior Lecturer and Acting Head of Department . . .

*D. A. M. Gebbie, M.B., Ch.B. (Glas.), M.R.C.O.G.

Lecturers *R. M. Graham, M.B., Ch.B., M.R.C.O.G.

*C. A. P. Maley, M.B., Ch.B. (Glas.), M.R.C.O.G.

DEPARTMENT OF PATHOLOGY:

Senior Lecturer and Acting Head of Department . . .

*J. S. Kennedy, M.A., M.D., M.R.C.P. (Glas.), M.C. Path.

Lecturer *G. Frank, M.B., Ch.B., M.C. Path.

(**Seconded Staff Members from Glasgow University*).

Visitors to the Medical School

The medical school received many distinguished visitors during the year under review.

Early in December, 1966, Rector Guido Ferro, of the University of Padua, accompanied by Professor Siliprandi and two other members of his staff, visited Nairobi to discuss aid to the School of Medicine.

In March, 1967, Professor Sir Ronald Tunbridge of Leeds, Dr. W. Storrar of the Montreal General Hospital, Professor C. M. Fleming of Glasgow University, Professor Eldred Walls and Sir

Brian Windeyer of the Middlesex Hospital Medical School, Mr. Norman Leach of the Ministry of Overseas Development and Mr. Keith Smith (Consultant Architect of Cobb, Archer and Partners in association with Watkins, Gray, Woodgate International) were all in Nairobi and took part in a series of discussions on the development of the Medical School and Teaching Hospital.

Other important visitors included Dr. Vysholid of the World Health Organisation in Brazzaville, Dr. Zake, the Minister for Education in Uganda, Professor H. M. Carey of Sydney, Professor W. St. C. Symmers of London University, and many others.

New Buildings

When the decision to start a Faculty of Medicine was taken it was decided to add new buildings to provide for the teaching of anatomy, physiology, biochemistry and pharmacology on the University site at Chiromo. The Human Anatomy Building was commenced in December, 1966, and is due to be finished in early December, 1967. It is to contain dissecting room and histology laboratory facilities for 100 students as well as adequate office and research laboratory accommodation for eight members of staff.

A building for the teaching of physiology and biochemistry (with pharmacology) will be started almost immediately and is due to be completed before the end of May, 1968.

Furthermore there are plans to erect a Biological Sciences Library and a building to contain two large lecture theatres with a cafeteria, common room and locker facilities for the students. It is expected that these two additional buildings will be provided from a donation of some £75,000 by a German Catholic organisation known as Misereor, to which the Kenya Government will add some £25,000. When these buildings are all completed the medical students of University College, Nairobi, will be as well catered for as any medical students in the world.

On the hospital side a very considerable expansion of the facilities available, both quantitatively and qualitatively, is to be undertaken in two phases over the next four to eight years. During the first phase much needed new out-patient and casualty departments are to be provided together with a new and enlarged X-ray department, intensive care unit, suite of eight new operating theatres with sterile supply units, etc. Also in the first phase, to be completed before July, 1971, a clinical sciences block will be built which will house the teaching departments and laboratories, including the routine laboratories providing the diagnostic services, for the whole hospital.

Donations

Large numbers of organisations have helped very materially in the establishment of the Medical School in Nairobi. Some of these,

such as the World Health Organisation, the Universities of Glasgow, Padua and McGill, the University of Geisen (through the Faculty of Veterinary Science in Nairobi), the British, Canadian and Australian Governments, have already been mentioned. The magnificent sum of £75,000 contributed by the German organisation known as Misereor has also been mentioned. The Ministry of Overseas Development, in addition to its substantial contribution to the success of the Glasgow Scheme by financing the travel and supplementing the salaries of seconded staff, has also made available a sum of £30,000 for the purchase of essential teaching equipment in the field of the Basic Sciences at Chiromo. An extensive collection of medical books together with a bookcase was donated by Esso Standard Kenya Limited in April, 1967. Grateful acknowledgement is made of these and of all other contributions to the welfare of the medical school which have been received from time to time.

FACULTY OF SCIENCE

Department of Botany

During the year an increased first-year intake class of 26, was the highest so far. Graduated were a small group of five students. Next year our graduates will be in the region of 15.

Dr. J. M. Waithaka joined the staff at the start of the Session, and made a fine contribution to the life of the department during the year. We were sorry to say goodbye to Miss Joan Armstrong, our V.S.O., who did not expect to have to act as chief technician before she left us. We benefited in many ways from her presence and are sorry to see her go. We look forward to the return of Mr. J. W. Agnew from his London studies before next session.

All research in the department continues as before with the notable addition of Dr. Waithaka's work on Gibberelin's indigenious plants.

Publications

- Isaac, W. E. 1967. Marine Botany of the Kenya Coast. 1. A first list of Kenya Marine Algæ. *J.E.A. Nat. Hist. Soc.*
- Otieno, N. C. 1966. Polyporaceæ of Eastern Africa: 1 the genus *Favolus* Fr. *Acta Tropica* 23: 353-364.
1966. Gasteromycetes of East Africa 1. The genus *Gastrum* Persoon. *Nytt Magasin for Botanik* 13: 65-69.
- Waithaka, J. M. (in Press). Gibberelin-like substances in *Sphagnum* Proc. *E.A. Acad.*
- Agnew, A. D. Q. 1966. The use of game trails as a possible measure of habitat utilisation by larger mammals. *E. A. Wildl. J.* 4:38-46.
1967. Contribution to the Flora of Iraq: IV.
Notes on the Geraniaceæ of Iraq. *Kew Bulletin* 21: 225-227.

Visitors to the Department

Professor E. M. Lind, a past Head of this department, made a short visit while gathering material for her forthcoming book on the vegetation of East Africa.

Dr. B. J. Hopkins, of Ibadan University, Nigeria, used this department during his sabbatical leave. He gave several advanced lectures to M.Sc. students.

Dr. Allan Mark of Dunedin University, New Zealand, spent some days here to study high altitude vegetation.

Professor Newton Barber, head of the department of botany of New South Wales University, Australia, visited the department and discussed research projects.

Professor Blodwen Lloyd Binns, visiting Professor in the University of Malawi, discussed the Flora of Malawi project with us.

In March, 1967, the first Botany Subject Conference was held in this department, attended by all academic botanists in the University of East Africa.

Other News

Dr. A. D. Q. Agnew attended the fifth A.E.T.F.A.T. triennial meeting in Uppsala, financed by the Swedish Government, in September, 1966.

Department of Chemistry

(a) (i) **Student numbers.** Again a substantial increase in the number of undergraduate students entering the department was apparent, a total of fifty-five registering for the first-year course, of whom fifty sat the examination at the end of the Session. The second year group was fifteen and the final year group thirteen.

(ii) **University examination results.** At the end of the Session, forty first-year students passed the examination and two others were able to pass at a supplementary examination in September. This pass rate was rather lower than in previous years and is attributed to an increasing proportion of students entering the department with the minimum university entrance requirements on

At the final examination, all thirteen candidates passed, one obtaining first-class honours and four obtaining upper second-class honours.

(iii) **Postgraduate students.** No new registrations of postgraduate students were recorded during the Session but the registration of Mr. S. Head was upgraded from M.Sc. to Ph.D. Mr. Head is working in the laboratories of the Pyrethrum Marketing Board of Kenya and is under the supervision of Professor P. A. Robins.

(iv) **Award to former student.** Mr. C. M. Musbally (B.Sc. 1965) was awarded the M.Sc. degree in Physical Chemistry at the University of Winnipeg, Canada.

(b) Staff Changes

Professor R. Forland of the Technical University of Norway was appointed as advisor under the Norwegian Technical Assistance Programme (Norad) and joined the department in January, 1967. Professor Forland was accompanied by his wife Mrs. K. S. Forland, herself a lecturer at Trondheim, who has also been giving active assistance in the teaching programme of the department.

As reported in the previous Annual Report, Mr. F. S. Edmunds joined the department as chief technician in August, 1966.

The Department Secretary became Mrs. A. Gomes on her marriage during the session.

Mr. N. Ngatia completed his year's initial training at Makerere University College under the Ford Foundation Technician Training Scheme and joined the department as glassblower in October, 1966.

Mr. M. N. Milkah joined the technical staff as laboratory Assistant in February, 1967.

(c) **Research in Progress**

Research projects initiated in previous years continued to progress.

(d) **Publications**

P. A. Robins.

The Chemical Utilisation of Kenyan Resources *May & Baker Laboratory Bulletin*, 1967, 7, 69-72.

D. Odhiambo and N. C. Desai. Studies in surface properties of local diatomites. Part I. Effect of Acid treatment on surface area.

Proceedings of East African Academy Vol. III 1965.

(e) **Donations received during the Session**

The department received a generous gift of equipment for physical chemistry teaching to the value of £2,250 from Norad.

(f) **Staff awards and honours**

Mr. D. Odhiambo was invited to join the delegation of the Kenya Government to the General Assembly of the United Nations in October, 1966, and was given leave of absence for the first term of the session for this purpose.

Mr. G. A. Herbin was awarded the degree of Ph.D. of the University of London in July, 1967, for his thesis entitled "The Wax Coating of Plants as a Taxonomic Criterion".

Mr. Wycliffe Bukachi successfully passed his examinations for the Science Laboratory Technicians, Intermediate Certificate of the City and Guilds Institute.

The department was host to a Chemistry Subject Conference at which seventeen members of the academic staff of the three chemistry departments in the University of East Africa met to discuss matters of mutual interest in the fields of teaching, research and departmental organisation. A report of the conference was submitted to the University Senate.

Department of Geography

Students

First Year	66
Second Year	31
Third Year	25

Total	..		122
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In addition to the above undergraduate numbers, the department had two part-time and one full-time registered M.A. students. One part-time student was registered for M.Sc. in the Faculty of Science. The undergraduate numbers show the upward trend which continued into the new triennium.

In June of the long vacation Dr. R. S. Odingo and Mr. F. F. Ojany led a party of 32 students to the Annual Field Course in Kericho area. The department is particularly grateful for the assistance given to the party by the Provincial Administration, Kenya Tea Company Limited, the Manager of East African Sugar Industries Limited, Muhoroni, and Area Officers of the Ministries of Agriculture and Land Settlement.

Examination Results

The high performance in examinations noted in the previous report was maintained in the confirmed results of 1966/67. In the First Year examinations all the B.A. students were successful and a group of 10 were selected for the 3:1:1 course in Geography. In the Faculty of Science twelve out of thirteen students were successful and one was selected to join the 3:1:1 group. In the final year 24 B.A. and one B.Sc. students registered for the examination and all were successful.

New Courses

Following approval by Senate the first group of eleven students began courses for the 3:1:1 degree in Geography. The participation of these students was reflected in the vigorous programme of the University College Geographical Society activities including a conference on "Problems of Land Use in Kenya" at which the Minister of Economic Planning and Development was represented as chief guest.

Staff

In third week of February, 1966, Professor S. H. Ominde attended the annual Board Meeting of the International Labour Institute. During the visit discussions were held with the Director of the Institute on plans for East and Central Africa International Seminar on Labour Problems in Economic Development. The Seminar was later held in April at the Institute for Adult Studies, Kikuyu.

In the second half of June, Professor Ominde represented Kenya at the United Nations Inter-regional Workshop on Programmes of Training in the Field of Population held at Elsinore, Denmark.

In the long vacation, Mr. R. A. Bullock took his study leave and spent the six months on Ph.D. research in Britain, consulting with his supervisors and research workers in related fields. He visited Departments of Geography at the Universities of Belfast, London School of Economics and King's College and Exeter. His Kenya contribution to the World Atlas of Agriculture was completed and presented. Dr. R. B. Ogendo left for London University where he successfully defended his thesis on the "Location and Structure of Agricultural Processing Industries in Kenya".

Mr. Roger Millman joined the department on a Commonwealth Research Scholarship. With the assistance of research grants from the University College, he spent the greater part of the session conducting a reconnaissance survey of the Kano Plains. He left the department in July to take up a lectureship appointment at the University of Aberdeen. During the same period Mr. Kenneth G. McVicar left the department and returned to Santa Cruz, United States, to continue work on the Social Geography of Nairobi.

Professor W. T. W. Morgan left the University College at the end of his tenure after 11 years' service. The department is deeply indebted to Professor Morgan for the firm foundation he laid for its development. During his years in the department Professor Morgan made scholarly contributions in the field of population studies and the geography of Nairobi area.

Research in Progress

Professor Ominde completed the preparation and presented the manuscript on "Land and Movements of Population in Kenya" to Heinemann Educational Publications Ltd. A paper on "Evolution of Boundaries in Kenya" was presented at the Fourth Symposium of the East African Academy and accepted for publication.

Dr. R. B. Ogendo continued with research on Industrial Geography of Kenya with a view to preparing a comprehensive publication on Economic Geography of Kenya. Mr. F. F. Ojany extended his geomorphological studies to include the western parts of Kenya. Dr. R. S. Odingo continued his study of the Settlement Schemes and Agricultural Geography in the former Scheduled Areas of Kenya Highlands.

Publications

S. H. Ominde The Population Factor in Kenya's Economic Development. *International Institute for Labour Studies*. 3 Bulletin, November, 1967.

- The Structure of Education in Kenya and some Planning Problems. *Education, Employment and Rural Development*. (Report of the Kericho Conference.)
- R. B. Ogendero Some aspects of the geography of electricity in Kenya: *East African Academy Proceedings*, Vol. 3, 1967.
Significance of Industrial Zoning to Rural Development in Kenya. *Cahies d'Etudes Africaines*, Vol. 7, No. 27, 1967.
New Kenya Primary Atlas, Longmans, 1967.
- R. S. Odingo Land Settlement and Rural Development. *Education, Employment and Rural Development*. (Report of Kericho Conference.)
The Scope of Resettlement in the Kenya Highlands. *Proceedings of the fourth Symposium of East African Academy*.
- F. F. Ojany Denudation Chronology of Cannock Chase Area. *East Midland Geographer*, Vol. 4, 1966.

Visitors

Distinguished visitors to the department included Professor Norman Pye, Leicester, Professor Peter Gutkind, Professor J. Blacking, University of Witwatersrand, Professor Kenneth Walker, International Labour Institute, Dr. D. N. McMaster, University of Edinburgh and Professor Balistine from University of Tananarive.

Department of Geology

Students and Courses

In June, 1967, four students obtained the B.Sc. General Degree, one with First-Class Honours and three with Upper Second-Class Honours, and three obtained the B.Sc. Pass Degree. Eighteen students passed the B.Sc. Part I General Degree examination. In addition to B.Sc. teaching, the department ran several courses for students in the Departments of Civil Engineering, Architecture and Zoology. A full programme of excursions was arranged, including a field class during the Easter vacation. The External Examiner in Geology was Dr. A. T. J. Dollar, of Birkbeck College, University of London.

Research in Progress

Research work consisted of seismological and petrological investigations of the Rift Valley and the preparation of an Earthquake Catalogue and a Seismic Zoning map of East Africa. Mr. L. A. J. Williams completed his thesis on "The Kilimanjaro Volcanic

Rocks of the Amboseli Area, Kenya". Mr. E. B. Rodrigues began research work on "Seismic Velocity Studies in East Africa".

Seismological Station

The recording of earthquakes at the department's World Wide Standardised Seismological Station at Chiromo continued throughout the session without interruption and seismograms were sent to the Data Analysis Center in Washington, D.C., as a contribution to international seismology. In addition the department continued to participate in the U.S. Coast and Geodetic Survey's World Epicenter Programme for locating earthquakes and determining their magnitudes. The department dealt with numerous enquiries on earthquakes and seismic risks in East Africa from Government Departments, engineering firms, insurance companies and members of the public.

Donations and Assistance

A valuable collection of geological specimens was received from the National Museum, and a research grant from the Lamont Geological Observatory is gratefully acknowledged. This was made in connection with collaborative work undertaken with Dr. Charles L. Drake and Dr. Don Tobin of Columbia University when they carried out micro-earthquake investigations in the Rift Valley. Mineral tests and field determinations were carried out on several aspects of mineral resources.

Lectures and other activities

Many lectures were given to outside bodies, and students societies on earthquakes, volcanoes and the Rift Valley, and special assistance was given to schools and the Geological Club of Nairobi. Professor Loupekine also investigated the setting-up of a seismological network in East Africa and Ethiopia and continued to serve as Corresponding Member of the International Association of Quaternary Research (INQUA).

Visitors

Mr. Basil E. Bell, E.A. Marine Fisheries Research Organisation, Zanzibar.

Professor V. V. Belousov, Academy of Sciences, Moscow University, U.S.S.R.

Dr. A. T. J. Dollar, Birkbeck College, University of London.

Dr. J. van N. Dorr, II, U.S. Geological Survey, Washington, D.C.

Professor Charles L. Drake, Columbia University.

Mr. David Epp, Columbia University.

Dr. G. Gaal, Outokumpu, Finland.

Professor G. D. Garland, University of Toronto, Canada.

Mr. C. F. Gilboy, African Research Institute, University of Leeds.

Dr. J. Gilluly, U.S. Geological Survey, Denver, U.S.A.
Professor A. V. Goriachev, Moscow University, U.S.S.R.
Mr. Pierre Gouin, Geophysical Observatory, Addis Ababa.
Professor J. E. Harris, University of Bristol.

Mr. Donald P. Heldman, Haile Selassie I University, Addis Ababa.

Mr. Hjort, Lund University.
Professor A. P. Kapitsa, Moscow University, U.S.S.R.
Professor B. C. King, Bedford College, University of London.
Mr. L. P. Kirwan, Royal Geographical Society of London.
Dr. A. A. Krasnov, Moscow University, U.S.S.R.

Dr. N. A. Logachov, Institute of the Earth's Crust, Irkutsk, U.S.S.R.

Dr. C. S. Lord, Geological Survey of Canada.
Professor E. E. Milanovsky, Moscow University, U.S.S.R.
Dr. W. H. Morton, Geological Survey of Uganda.
Mr. Ornstein, Williamson Diamond Mine.
Dr. H. Putzer, Hannover, Germany.
Dr. L. Reich, Budapest, Hungary.
Mrs. Rogers, Makerere University College.
Dr. N. M. Shukri, E.C.A. Commission, Addis Ababa, Ethiopia.
Dr. A. J. Sutcliffe, British Museum (Natural History), London.
Dr. Don Tobin, Columbia University, U.S.A.
Mr. P. Suzuki, Tokyo, Japan.

Publications

- Loupekine, I. S.: The Toro Earthquake of 20th March, 1966—UNESCO Reconnaissance Mission. *Bull. Reg. Centre Science and Techn. for Africa*, Vol. I, No. 3, Sept. 1966, pp. 38–40. Nairobi.
- Loupekine, I. S.: Earthquake Reporting in Kenya. *Bull. Reg. Centre Science and Techn. for Africa*, Vol. I, No. 4, Dec. 1966, pp. 38–39. Nairobi.

Department of Meteorology

Students

- (a) There were four students for the postgraduate diploma, including one from Ethiopia.

Staff

- (b) Dr. G. O. P. Obasi arrived to take up the post of Senior Lecturer.

Research in Progress

- (c) (i) Estimation of maximum floods.
- (ii) West African squall lines.
- (iii) Heat and water balance in Nigeria.
- (iv) Lower tropospheric disturbances giving weather in East Africa.

Publications

- (d) (i) G. O. P. Obasi, "The Effect of Macro Climate on Productivity in Nigeria".
International Seminar on Occupational Health Problems in Developing Countries, Lagos, April, 1968.
- (ii) A. F. Jenkinson, "Statistics of Extremes" Chapter 6 of W.M.O. Technical Note on "Estimation of Maximum Floods". Geneva 1968.

Department of Physics

Staff Changes

The status of Dr. P. Gacii was changed from special lecturer to lecturer in physics with effect from 1st July, 1967.

Dr. A. Brock, formerly lecturer in physics, University College of Rhodesia and Nyasaland, replaced Dr. A. E. Mussett, who resigned his post as lecturer in physics.

Mr. J. Sinclair arrived in September, 1967, as a voluntary service worker for two academic years. He replaces Mr. Wynn-Williams, who returned to Cambridge for postgraduate study in Radio Astronomy.

Research

(a) Ionospheric Group:—

Professor Hunter, Dr. Kelleher, Dr. Webster and Mr. Miall.

Work has continued on the equatorial ionosphere, using transmissions from artificial earth satellites and ground-based equipment. The "East African chain" of stations at Addis Ababa, Nairobi and Dar es Salaam is providing very useful information on the variation of total electron content and irregularity structure with latitude across the geographic and magnetic equators. This work is being supported by a United States Air Force Contract.

Routine observations of the earth's magnetic field continue, sponsored by a grant from the National Aeronautics and Space Administration.

The highlight of the year was the launching of the San Marco Satellite from Formosa Bay (near Malindi) on April 26th, 1967, by the Italian Space Commission under Professor L. Broglio with the full co-operation of the Kenya Government. Under an agreement with the University College, the Mobile Tracking Station was situated near the Physics Department Research Station at Wilson Airport. During the period June 26th to July 6th, when the

ionospheric beacon on the satellite was transmitting, a 24-hour-a-day schedule was maintained by the department group to record every pass of the satellite over Nairobi. The ionospheric experiments were carried out in co-operation with Professor Checcacci of the Centro Microonde (Florence) and the data analysis work is to be in common.

Publications

- Hunter, A. N. and Webster, A. Total electron content from transmissions of satellite S66 observed at University College Nairobi. Report on Equatorial Aeronomy. 1965 pp. 152-157.
- Hunter, A. N. and Webster, A. Faraday rotation and other measurements on the ionosphere at Nairobi. *Annales de Géophysique* **22**, pp. 385-392 (1966).
- Kelleher, R. F. Correlation of Spread-F and magnetic activity at Nairobi. Report on Equatorial Aeronomy 1965, pp. 242-244.
- Kelleher, R. F. A new method of applying the correlation analysis. *Loc. cit.* pp. 272-275.
- Kelleher, R. F. and Miall, P. Preliminary results of diffraction pattern measurements at Nairobi. *Loc. cit.* pp. 283-284.
- Hunter, A. N. and Osborne, D. G. Magnetic variations in East Africa. *Loc. cit.* pp. 399-406.
- Kelleher, R. F. Preliminary results of diffraction pattern measurements at Nairobi. *Annales de Géophysique* **22**, pp. 422-426 (1966).
- Webster, A. R. Some geometrical considerations in Faraday Rotational Measurements. *J. Atm. Terr. Phys.* **29**, 793 (1967).

(b) Palæomagnetic Group:-

Dr. A. Brock, Dr. P. Gacii, Mr. P. K. S. Raja, Mr. T. A. Reilly and Dr. J. Vise.

Mr. J. P. Patel who is doing an M.Sc. by thesis has almost completed his work on the Kapiti Phonolite under the supervision of Dr. Gacii.

Dr. Brock and Mr. Reilly made a trip to the Ngorongoro crater in Tanzania to make a detailed collection through the volcanic succession exposed there. It is known that the transition from the Gauss normal to the Matuyama reversed epoch (at about 2.5 m.y.) is recorded in these lavas and a full study of this transition seemed desirable.

Mr. Reilly and Mr. Raja have completed their work on the palæomagnetism of the southern rift and of the Turkana lavas

respectively and will be submitting their theses in due course for the Ph.D. degree of the University of London.

Other Researches: Dr. A. Khan, University of Leicester, England, and his team made a second trip to this country to continue their magnetic and gravity studies in East Africa. They were assisted by the Department.

Publications:—

Radakrishnamurthy, C., Sahasrabudhe, P. W., and Raja, P. K. S.,
On the magnetic memory phenomenon in rocks
and its bearing on palæomagnetic measurements.
In press 1967.

The following papers were read at the 5th Symposium of the East African Academy and will be published in the Proceedings of the Academy.

Brock, A. On the study of secular variation in the past using palæomagnetic methods.

Brock, A. The stratigraphic significance of some recent palæomagnetic results from Palæozoic of East and Central Africa.

Patel, J. P., Reilly, T. A. and Gacii, P., Palæomagnetic studies of the Kapiti Phonolite.

Raja, P. K. S. Evidence for reversal of the earth's field based on the palæomagnetism of two dykes and their baked contact from Turkana (N.W. Kenya).

Department of Zoology

During 1966/67 the department continued to develop its research interests and specialised teaching so that by the end of the year accommodation was already becoming acute. Progress during the year can be summed up as follows:—

(a) Students

(i) Undergraduate students

The first year class consisted of 19 students reading for the B.Sc. degree of the University of East Africa and three occasional students from American Universities. In the Part I examinations held in May, 1967, 13 passed in Zoology, one sat a supplementary examination in September, 1967, and passed, one was recommended to repeat the year, and four were discontinued. Of the three occasional students, two passed the examination of which one was the best student of the year.

Final Examination

All seven finalists passed their degree examination. Of these, four obtained upper second-class honours, two lower second-class honours and one a pass degree. It is extremely encouraging to get six second-class honours degrees out of seven students.

(ii) *Postgraduate students*

Two students joined the M.Sc. course in Applied Zoology (Mammalian Ecology) in September, 1966. Of these, one resigned during the course of the year and the other successfully passed the examinations set in May, 1967.

During the year three postgraduate students were registered for the Ph.D. degree of the University of East Africa and the department was asked to supply supervision for two Ph.D. students of the University of Edinburgh who are working on the staff of the East Africa Veterinary Research Organisation at Muguga. One postgraduate student was registered for the M.Sc. degree (by thesis) of the University of East Africa and the department was asked to supply supervision for an M.Sc. student of the University of London.

An application was also received from Mr. K. S. Hocking to submit published work for the degree of the D.Sc. of the University of East Africa. Mr. Hocking at that time was Director of the Tropical Pesticides Research Institute at Arusha, and has since retired.

Mr. M. L. Modha successfully submitted his thesis for the degree of M.Sc. of the University of East Africa on "The Biology of Crocodiles on Central Island, Lake Rudolf". Mr. Modha is a member of the Fauna Research Unit of the Kenya Game Department.

(b) **Changes in Staff**

Dr. T. R. Odhiambo, who had been special lecturer in the department since July, 1965, was appointed Senior Lecturer in the department with effect from July 1st, 1967. Dr. Odhiambo is developing an active research unit concerned with the physiology and reproduction of the Tsetse fly (*Glossina*) and the desert locust (*Schistocerca*). Dr. Odhiambo is also supervising Mr. J. M. Waiyaki (TPRI) for an M.Sc. thesis on the biology and control of sugarcane lepidopterous borers.

Miss J. U. M. Jarvis, M.Sc. arrived on January 1st, 1967, under the Study and Serve Scheme of the Ministry of Overseas Development to act as demonstrator in the department.

Dr. R. Harmsen left to join the Department of Biology, Queens University, Kingston, Ontario, Canada, in August, 1966. Dr. Harmsen had been Senior Research Fellow supported by the Rockefeller Foundation and had been working on the physiology of *Glossina* with special reference to the growth of trypanosomes in the fly.

(c) **Research in Progress**

Research in progress has continued along three main lines:— in entomology, mammalian ecology, and montane ecology.

In entomology Dr. Odhiambo has been concentrating on the physiology of the Tsetse fly, supported by a grant from the Rockefeller Foundation. In addition he has been conducting a similar investigation on the desert locust, supported by a grant from the British Ministry of Overseas Development. Professor Kettle, with Mr. C. P. M. Khamala, a Research Assistant have been continuing work on the "*Culicoides* of East Africa".

Work on the ecology of the mammals has continued to go ahead with assistance of a grant from the Ford Foundation. Dr. Sale has continued his work on the rock hyraces of East Africa and is supervising Miss J. U. M. Jarvis, who is studying the "Mole-rats of East Africa". In addition Dr. Sale is advising Mr. M. E. Taylor on his research project "The Myology and Osteology of the Forelimb of the Genets and other Viverrids". Dr. Foster has continued to work on the white rhino and is making a detailed study of the giraffe population in the Nairobi National Park.

Dr. Coe was on study leave for the first term 1966/67, which he spent on Mt. Nimba in Liberia, West Africa, where he was working on the ecology of the mountain for comparison with his earlier work on Mt. Kenya. Dr. Coe has brought back a large amount of material for examination and writing up in Nairobi. In addition he is supervising Mr. L. M. Gosling, who is working on "The Behaviour of Kongoni in the Nairobi National Park" and Miss J. Angwin who is making a study of a "Bird population in Acacia Woodland of the Nairobi National Park".

Professor Kettle has been supervising the following students:

Mr. M. E. A. Materu, TPRI

Biology of two species of sucking bugs (*Acanthomia horrida* and *A. tomentosicollis*) (Coreidæ, Heteroptera) on legumes and other plants in the Arusha area of Tanzania.

Mr. V. Lopez, Kenya Veterinary Research Laboratories.

Immunity against *Haemonchus contortus* in sheep in East Africa.

Mr. D. Branagan (EAVRO)

The ecology of *Rhipicephalus appendiculatus*.

Mr. Bransby-Williams (TPRI)

Chemosterilants against *Culex fatigans* and *Anopheles gambiae*.

Mr. J. A. Hammond (EAVRO)

Studies on Fascioliasis with special reference to *Fasciola gigantica* in East Africa.

Mr. C. P. M. Khamala
Survey of the *Culicoides* of Eastern Africa.

Mr. R. H. Carcasson
Sphingidæ of East Africa.

(d) Publications

1. Coe, M. J.
Local Migration of *Tilapia grahami* Boulenger in Lake Magadi, Kenya, in response to diurnal temperature changes in shallow water.
E. Afr. Wildl. J., **5** (1967): 171-174.
2. Coe, M. J.
The Biology of *Tilapia grahami* Boulenger in Lake Magadi, Kenya.
Acta trop., **23** (1966): 146-177.
3. Coe, M. J.
Preliminary notes on the Eastern Kenya Springhare, *Pedetes surdaster larvalis* Hollister.
E. Afr. Wildl. J., **5** (1967): 174-176.
4. Coe, M. J.
Co-operation of three males in Nest construction by *Chiromantis rufescens* Gunther.
Nature, Lond., **214** (1967): 112-113
5. Coe, M. J.
"Necking" behaviour in the Giraffe.
J. Zool., Lond., **151** (1966): 313-321.
6. Foster, J. B.
The Giraffe of Nairobi National Park: home range, sex ratios, the herd and food.
E. Afr. Wildl. J., **4** (1966): 139-148.
7. Foster, J. B. and Duff-MacKay, A.
Keys to the genera of Insectivora, Chiroptera and Rodentia of East Africa.
J. E. Afr. nat. Hist. Soc., **25** (1966): 189-204.
8. Harmsen, R.
The excretory rôle of pteridines in insects.
J. Exp. Biol. (in press).
9. Harmsen, R.
A quantitative study of the pteridines in *Pieris brassicae* L. during post-embryonic development.
J. Insect Physiol., **12** (1966): 9-22.

10. *Harmsen, R.*
Identification of fluorescing and U.V. absorbing substances in *Pieris brassicae* L.
J. Insect Physiol., **12** (1966): 23-30.
11. *Hyder, M.*
New Techniques for the artificial brooding of eggs and young of oral-brooding *Tilapia* species.
E.A. Agricultural and Forestry Journal, **32** (1966): *in press.*
12. *Kettle, D. S.*
University Training in Wildlife Management. F.A.O. *Ad hoc* working party on wildlife management. Fort Lamy, Chad, February, 1967.
13. *Odhiambo, T. R.*
The case for pure research in: *Research Priorities for East Africa*, ed. by R. A. Garver. Nairobi, East African Publishing House, (1966): 11-17.
14. *Odhiambo, T. R.*
Site of action of the corpus allatum hormone at the cellular level in *Schistocerca gregaria*.
Acta Trop., **23**: (1966): 264-271.
15. *Odhiambo, T. R.*
Growth and the hormonal control of sexual maturation in the male desert locust, *Schistocerca gregaria* (Forskål).
Trans. R. ent. Soc. Lond., **118** (1966): 393-412.
16. *Odhiambo, T. R.*
Morphometric changes and the hormonal activity of the corpus allatum in the adult male of the desert locust.
J. Insect Physiol., **12** (1966): pp. 655-664.
17. *Odhiambo, T.R.*
The fine structure and the corpus allatum of the sexually mature male of the desert locust.
J. Insect Physiol., **12** (1966): 819-828.
18. *Odhiambo, T.R.*
Ultrastructure of the development of the corpus allatum in the adult male of the desert locust.
J. Insect Physiol., **12** (1966): 995-1002.
19. *Odhiambo, T. R.*
The metabolic effects of the corpus allatum hormone in the male desert locust. I. Lipid metabolism.
J. Exp. Biol., **45** (1966): 45-50.
20. *Odhiambo, T. R.*
The Metabolic effects of the corpus allatum hormone in the male desert locust. II. Spontaneous locomotor activity.
J. Exp. Biol., **45** (1966): 51-63.

21. *Odhiambo, T. R.*
The crisis of Science in East Africa.
E. A. Journal 2 (1966): 3-29.
22. *Sale, J. B.*
The habitat of the Rock hyrax.
Jl E. Afr. nat. Hist. Soc., 25 (1966): 205-214.
23. *Sale, J. B.*
Daily food consumption and mode of ingestion in the hyrax.
Jl E. Afr. nat. Hist. Soc., 25 (1966): 215-224.
24. *Rudolf Schenkel*
On Sociology and behaviour in Impala (*Aepyceros melampus suara Matschie*).
Z. f. Säugetierkunde, 31 (1966): 177-205.
25. *Rudolf Schenkel*
On Sociology and behaviour in Impala (*Melampus Lichtenstein*).
E. A. Wildl. J., 4 (1966): 99-114.
26. *Rudolf Schenkel*
Play, Exploration and Territoriality in the wild lions
Symp. Zool Soc. Lond., 18 (1966): 11-12.
27. *Rudolf Schenkel*
Zum problem der Territorialität und des Markierens bei Lägern-am Beispiel das schwarzar Nashorns und des Löwens.
Z. Tierpsychol. Band., 23 (1966): 593-626.

(e) **Distinguished visitors to the Department**

Dr. William N. Longhurst, University of California, U.S.A.

Mr. Brian Young, Director, Nuffield Foundation, London, England.

Mr. E. S. Pearson, Director, Commonwealth Institute of Entomology, London.

Judge Russell Train, President African Wildlife Leadership Foundation, U.S.A.

Professor George Petrides, Michigan State University, U.S.A.

Professor E. B. Chain, Nobel Prize Winner, Department of Biochemistry, Imperial College of Science, London.

Dr. Pong Leng-Ee, Wildlife Conservation Section of the Royal Forestry Department, Thailand.

Professor K. B. Lamb, Vice-Chancellor, University of Papua and New Guinea.

David McLellan, World Bank Mission, U.S.A.

Dr. H. O. Thomas, University of Lagos, Medical School, Nigeria.

Dr. J. N. Raybould, E.A. Malaria Institute, Amani, Tanzania.

Dr. Olu Ibukun, UNESCO, Regional Centre for Science and Technology in Africa, Nairobi.

Mr. E. A. Quist-Arcton, F.A.O., Rome.

Mr. Thane Riney, F.A.O., Rome.

Dr. De Vos, University of Waterloo, Ontario, Canada.

Dr. Alan L. Dyce, McMaster Laboratory, New South Wales, Australia.

Dr. K. C. Willet, W.H.O. Trypanosomiasis Project.

Dr. C. W. Gookel, W.H.O., Geneva.

Dr. Lloyd G. Ingles, Fresno State College, California, U.S.A.

Professor H. J. Schmutterer, University of Giessen, W. Germany.

Dr. A. Pini, Kenya Veterinary Research Laboratory, Kabete.

FACULTY OF VETERINARY SCIENCE

Department of Veterinary Anatomy and Histology

Students

The student intake was 42 compared to 34 during the previous year. This gradual increase in the student intake necessitated some changes, shortages and reorganisation, but the members of staff proved more than equal to the demand.

Staff

Dr. P. Scholz and Mr. Y. M. Bosa were present throughout the session and Miss Wangai Muta joined the Department as an Assistant Lecturer after her studies in the U.S.A.

Research in Progress

Research on the East African game ruminants was continued. The very good relationship between this Department and the Kenya Game Department continued to flourish. The morphology and function of the stomach of 25 species of East African game and domesticated ruminants were studied extensively. New avenues started opening up with the co-operation of other departments, for instance when material was collected for the pathology and parasitology sections of the department of clinical studies. Material was also collected for Mr. F. I. B. Kajanja who was at that time lecturing at the University of London, but was to join the department for the beginning of the 1967/68 session.

Publications

R. R. Hofmann: Comparisons of Rumen and Omasum structure in East African Game Ruminants in Relation to their feeding habits. Symposium Zoological Society of London, (Nov., 1966) No. 21, page 179-194; London.

R. R. Hofmann: "Zur Topographie und Morphologie des wiederkauermagens im Hinblick auf Seine Funktion (Nach Vergleichenden Untersuchungen am Material Ostafrikanischer Wild-tiere)".

Hatilitations-Schrift, Vet. Med. Fakultät Giessen, November, 1966; im Druck als Beiheft zum Zentralblatt f. Vet. Med.

Visitors

Prof. P. Walter, Head of Department of Histology and Embryology, University of Munich, visited the department.

Donations

During the 1966/67 session the department received a very generous donation from the Federal German Government under the Giessen-Nairobi Partnership Agreement. This donation amounted to approximately £6,000 and this was mainly spent on the following

items: a long wheel-base Land-Rover, optical equipment, histological apparatus.

Department of Animal Husbandry

Students

Thirty-eight students started the course on 1st July, 1966. Of these 37 passed their final examinations and one failed.

Staff

Two Norwegians: Mr. Bjarne Gjelstad and Dr. Ketil Gravir joined the Department of Animal Husbandry in March and April consecutively; the latter as a Lecturer in Animal Genetics and Breeding and the former as a Senior Lecturer in Animal Husbandry. Mr. Abdullah N. Said joined the department as an assistant lecturer in April, 1967. We have also had a few changes in the junior staff. Five joined the department at various grades and three left the department.

Research

Investigation of the seasonal variation in reproductive activity of five breeds of sheep at Kabete (Dr. Carles).

Examination of tooth eruption and related aspects of growth in the Zebu, from data collected at EAVRO, Muguga (Dr. Carles).

Examination of the effects of delayed castration on the growth of crossbred beef steers (Dr. Carles).

Studying Boran data collected at EAVRO, Muguga, to establish the heritability of, and the genetic correlations between different production traits including fertility (Dr. Gravir).

Investigating fluorosis in sheep and the possibility of alleviating fluorine intoxication by the aid of $AlCl_3$. (Prof. Slagsvold, Mr. Bergh and Mr. Said).

Examining the water content in the faeces from different breeds of sheep (Prof. Slagsvold).

Testing the effectiveness of different preservatives for ensilaging grass (Prof. Slagsvold, Mr. Gjelstad and Mr. Bergh).

Participating in an investigation initiated by the Swedish A.I. Team on the infertility problem in cattle, by analysing samples of different feeds (Prof. Slagsvold, Mr. Bergh).

The Nutrition Research Laboratory was remodelled and re-equipped. There was also remodelling and equipping of the building at present being used for fluorine experiments at the Faculty of Veterinary Science.

Department of Veterinary Physiology and Biochemistry

(a) Our student numbers continued to increase and the pass mark was satisfactory.

(b) Dr. E. Monty left at the end of the year at the termination of his contract.

Dr. K. Otte arrived at the latter part of the year to replace Dr. C. Hammer, who left about the same time to return to Germany.

Mr. C. Katongole joined the staff as an assistant lecturer towards the end of the year.

Mr. C. S. Giattas left the staff.

(c) **Research:** The following projects were undertaken:—

By Dr. A. M. Harthoorn.

- (i) Radiotelemetric studies on the Physiology of wild as compared to domestic animals.
- (ii) Restraint and anæsthesia of large hoofed animals.
- (iii) The Semi-domestication of wild ungulates.

By Dr. R. H. Udall.

Fractionation of the plasma proteins of range cattle in relation to climatic and nutritional variations.

By Dr. D. E. Monty.

The effect on maternal uterine activity of hormones infused into the fetal circulation.

By Mr. C. S. Giattas

Comparative studies of temperature adaptation in a variety of domesticated animals (including man).

By Dr. C. Hammer

- (i) Vitamin A and Carotin storage in the liver and blood of wild animals.
- (ii) I.C.S.H. content in pituitary glands in relation to the Leydig-cell volume.

(d) **Publications**

A. M. Harthoorn Manipulation of animals for experimental purposes Chap. X of the International Biological Programme Handbook. "A practical guide to the Study of the Productivity of Large Herbivores", London, 1966.

- A. M. Harthoorn The Husbandry of Wild Animals. Section for the International Biological Programme Handbook. "A practical guide to the Study of the Productivity of Large Herbivores, London, 1966.
- A. M. Harthoorn Restraint of Undomesticated Animals. *Journ. Amer. Vet. Med. Assoc.* 149: (No. 7): pp. 875-880. 1966.
- A. M. Harthoorn The Use of Drugs in Conservation. *Journ. Fauna Preservation Society (Oryx)* VIII (No. 4) pp. 223-227, 1966.
- A. M. Harthoorn The Tsavo Elephants. *Journ. Fauna Preservation Society (Oryx)* VIII (No. 4) pp. 233-236, 1966.
- A. M. Harthoorn Large animal restraint—a prerequisite for conservation and research. *Africana* 2 (No. 7): pp. 19-21, 1966.
- A. M. Harthoorn East Africa's new International Tissue Library. *Africana* 2 (No. 8) pp. 15-19, 1966.
- A. M. Harthoorn The problem of to what extent the profession should be involved in Wildlife especially as concerns disease control. With Dr. P. E. Glover. Kenya Veterinary Association meeting July, 1966.
- A. M. Harthoorn Section for the book "Veterinary Anæsthesia" edited by L. R. Soma, University of Pennsylvania (in press).
- A. M. Harthoorn F.A.O. Animal Health Monograph. Submitted for publication.
- A. M. Harthoorn Comparative pharmacological reactions of certain wild and domestic mammals to the baine derivatives in the M. series of compounds. *Federation Proceedings* 26: pp. 1251-1261, 1967.
- (e) Distinguished Visitors to department: as at Kabete.
- (f) The new wing for Surgical Physiology was completed. Preparations were made for the new Medical School.

Department of Clinical Studies

The number of final-year students increased to 18, and all but one successfully completed their examinations by June, 1967. The third year comprised 20 students.

Mr. M. W. M. Prentice joined the teaching staff as a junior clinician at the beginning of the year; during its course Dr. W. A. Greig and Mr. D. D. Lawson each spent six months in the department on short-term secondment from Glasgow University.

The end of the year saw the departure of Prof. McIntyre, and his replacement as Head of the Department by Prof. Greig. Messrs. T. A. Miller and T. Kyle left the staff, and Dr. J. E. Schneider arrived from Colorado to replace Dr. W. A. Aanes.

Both the small-animal and large-animal clinics continued to be busy; the small-animal clinic alone dealt with 4,457 cases during the year.

Publication

R. Lemke. Ueber das Vulva-Karzinom beim Rind (Carcinoma of the vulva in cattle) *Veterinär—Medizinische Nachrichten*, 1967, Heft 1, pp. 62-72.

Department of Veterinary Pathology and Microbiology

Students

In the 1967 professional examinations for the Bachelor of Veterinary Science 34 students passed the second-year examination in Pathology and Microbiology and 22 students passed the third-year examination in Pathology and Clinical Studies.

Staff

The following members of staff who had been seconded to the department completed their assignments and returned to their respective Universities:

Dr. W. B. Martin and Dr. N. C. C. Sharp from Glasgow University.

Dr. T. T. Kramer and Dr. T. Galvin from Colorado State University, U.S.A.

Dr. P. Hoppe from University of Munich.

This year the following additional members of staff have been appointed:

Professor E. Weiss as the Head of Department.

Dr. H. Krauss—Reader in Virology.

Dr. O. Bwangamoi—Lecturer in Pathology.

Dr. L. K. Nagy—Senior Lecturer in Bacteriology.

Dr. J. M. Cheney—Visiting Lecturer in Parasitology.

Research in Progress

Dr. P. K. Bitakaramire continued with the Fascioliasis project with emphasis on Pathogenesis of chronic bovine fascioliasis and Immunology of *Fasciola gigantica* started two years ago.

Dr. O. Bwangamoi conducted researches on skin diseases of domestic animals in East Africa.

Dr. H. Frank's research work included:

- (a) Experimental studies on the Pathogenesis and Pathology of œsophagus tumours associated with *Spirocerca lupi* infection in dogs.
- (b) Studies on the incidence and pathology of Spirocercosis in wild animals.
- (c) Studies on the pathologic anatomy and histology of various Filarial lesions in East Africa game animals.

Dr. H. Krauss initiated the studies of the Aetiology of Onderi disease and with Dr. Wandera they are investigating the ætiology of Ovine Pulmonary Adenomatosis.

Dr. L. K. Nagy conducted a survey of the incidence of brucella infection in Kenya cattle.

Dr. G. M. Mugera with Dr. P. Nderito conducted researches in Cycad Carcinogenesis in various animals.

- (a) Poisonous plants in Kenya Livestock.
- (b) Urinary bladder, tumours in Kenya cattle.

Dr. G. M. Mugera's research work also included diseases of goats in East Africa and survey of tumours of domestic animals in Kenya.

Research work on pneumonia of sheep in Kenya was actively continued by Dr. J. G. Wandera during the year, with the help of Dr. Krauss, giving more emphasis on the ætiology pulmonary adenomatosis and its pathogenesis. Dr. Wandera also conducted a survey of diseases of sheep in East Africa.

Publications

The department had the highest number of publications ever achieved in the Faculty of Veterinary Science, which indicate a great increase in research activities.

1. Bitakaramire, P. K. (1967): A new technique for the recovery of *Fasciola gigantica* Eggs from cattle fæces. *Bulletin of Epizootic Diseases of Africa*: Vol. XV, No. 4.
2. Bitakaramire, P. K. (1967): Bovine Fascioliasis in Kenya. *Bulletin of Epizootic Diseases of Africa*: Vol. XVI, No. 1; Proceedings of Third International Conference, World Association for the Advancement of Veterinary Parasitology.
1. Bwangamoi, O. (1967): Spirocercosis and its association with fibrosarcoma in a dog. *J. Small Anim. Pract.* 8, pp. 396-398.

INSTITUTE OF ADULT STUDIES

This is the first report of the fully integrated Institute of Adult Studies (formerly two separate Departments) which now consists of three units.

(1) Adult Studies Centre, Kikuyu

- (a) One-Year Course 1966/67 was attended by 16 students. Of these 12 gained the Certificate of Adult Studies, five gained mature age entrance to the University for degree work and five gained mature age entrance for the Makerere Diploma in Social Work.

C.A.S. Passes

Ayoo, J. W. O.

Kiagayu, A. M.

Kigge, A. J.

Kinyua, C. K.

Mingala, J. A. O.

Mwandoro, P. M.

Mwathi, J.

Ngaywa, J. O.

Ochieng', F. N.

Ogore, R. K.

Okoth, S. O. M.

Ruben, A. O.

Mutulu, J. (repeat from 1966)

Mature Age Entrants Degree

Ayoo, J. W. O

Gor, S.

Kigge, A. J.

Ngaywa, J. O.

Ogore, R. K.

Diploma in Social Work

Kinyua, C. K.

Ming'ala, J. A. O.

Mwandoro, P. M.

Mwathi, J.

Ochieng', F. N.

Successful candidates were presented with their certificates by the Principal, Dr. A. T. Porter, at a ceremony at the Adult Studies Centre on 18th October, 1967.

(b) Short Courses, Seminars and Conferences

Seven short courses with a total of 121 students were arranged, and the Centre was also heavily utilised by other organisations (393 people from outside organisations).

Of special interest was the Institute's One-Day conference in November, 1966, to discuss the future policy and programmes. It was attended by over 50 representatives from Government, industry and other organisations concerned with adult education. As a result of this conference the Institute produced a new *Policy Statement* and a *Handbook of Major Courses and Seminars*.

(2) Extra-Mural Centres

Extra-Mural classes were organised from the four Extra-Mural Centres in Nairobi, Mombasa, Nakuru and Kisumu. The Centres offered 169 different classes with a total enrolment

of 2,931 students. Various lecture programmes and week-end seminars were also arranged.

In co-operation with the Engineering Faculty three symposiums were organised on "Soil Mechanics" on "Structural Timber" and "Think Metric".

(3) Correspondence Course Unit

The Correspondence Course Unit was established in May, 1967, with generous financial assistance from the United States Agency for International Development. Three senior staff were recruited from the University of Wisconsin under a contract between A.I.D. and that university. All three will have local counterparts by mid-1968. Also working full-time with the Unit are five graduate secondary school teachers seconded from the Ministry of Education.

The Unit acts as a service unit, providing expertise in correspondence/radio instruction and an administrative machine to process courses. Priorities for this Unit have been carefully worked out in consultation with the Ministry of Education. Its primary tasks in the first three years will be:—

- (a) Kenya Junior Secondary Examination courses for the Ministry of Education directed primarily to P3 teachers in the first instance.
- (b) Certificate of Adult Studies courses for the College's own extra mural students.
- (c) Experimentation with first-year degree level courses.

The K.J.S.E. courses (complete with five half-hours of radio programmes over the Voice of Kenya each week) will be launched in early 1968.

The establishment of the Correspondence Course Unit opens up new possibilities for all sections of the Institute. In particular the idea of integrating several media of instruction—correspondence, radio, extra-mural classes and residential courses—can now be put into practice.

Changes in Staff

With the integration of the Institute, Paul Fordham, formerly Principal of the Adult Studies Centre, was appointed Director, and P. V. Mbatha was appointed Acting-Director, in charge of the Adult Studies Centre.

P. Kinyanjui (formerly trainee tutor) took up appointment as a lecturer (Radio/TV) and D. Macharia (formerly trainee tutor) took up appointment as lecturer in charge of Extra-Mural Centre, Nairobi.

New Members of Staff

M. Moore, part-time tutor (from October, 1966), in charge of Extra-Mural Centre, Kisumu.

A. Krival, visiting senior lecturer (from May, 1967), in charge of Correspondence Course Unit.

N. Michie, visiting lecturer (from May, 1967), Correspondence Course Radio/TV.

During the year the following members of staff discontinued their service within the Institute:

J. Okach, who was a temporary lecturer, was granted Leave of Absence (September, 1966) to study for a postgraduate diploma in Adult Education, University of Edinburgh.

G. Muriuki was granted Leave of absence (October, 1966) to study for M.Phil. in African History, University of London.

V. B. L. Sharma took up an appointment within the Department of Law, U.C. Nairobi (January, 1967).

B. Harvey returned to the Department of Adult Education, University of Nottingham (June, 1967) after his two years of secondment.

Publications

Paul Fordham "Continuing Education for Youth and Adults" (with J. Sheffield) in "Education, Employment and Rural Development", E.A.P.H. 1967.
"Correspondence Education for Adults in Kenya" in "Home Study" (forthcoming).

P. V. Mbatha and P. Kinyanjui attended the Dag Hammarskjold Seminar in Sweden on "The Use of Correspondence Instruction in Adult Education; Means, Methods and Possibilities" and read papers.

Donations

We highly appreciate the support given to us by the Kenya Government, the Dulverton Trust, the Leverhulme Trust, the Carnegie Corporation and the United States Agency for International Development. Without such continued generous support it would not be possible for the Institute to sustain its work at the present level.

For further details about the work of the Institute see "Annual Report 1966/67 of the Institute of Adult Studies" (published 1968).

THE INSTITUTE FOR DEVELOPMENT STUDIES

Social Science Division

The Institute consists of two divisions—a Social Science Division under the Directorship of Dr. B. F. Massell and a Cultural Division headed by Dr. B. A. Ogot. The Institute had prime responsibility for the initiation and direction of research programmes of an interdisciplinary nature and for projects in co-operation with the Kenya Government.

The Social Science Division conducted research and seminars concerning economic, political and social development problems in Kenya. Illustrative of the work which was being conducted in this division was: attitudes toward family size and knowledge, attitudes and practices of contraception in rural Kenya; statistical analysis of the social and medical characteristics of clients of the family planning association of Kenya; the Kenya Government's protection policy for local industry; case studies of the tinned fruit and vegetable industry and the pulp, paper and packaging industries; economic value of hunting and tourism in East Africa; private returns to higher education in Kenya; the rôle of harambee schools in the educational development of Kenya; wildlife viewing as a form of land use; employment and wages in Kenya; incomes policy and income distribution; a comparative study of institutional arrangements for the application of social science research to public policy and problems of national development.

Staff

During the 1966/67 academic year, the Social Science Division had a professional staff consisting of ten economists, one demographic sociologist and two political scientists. On 1st July Professor James S. Coleman replaced Dr. Benton F. Massell as Division Director.

Financing

The Institute is financed by grants from Rockefeller Foundation, A.I.D., O.D.M., Population Council and the Social Research Vote of the College.

Publications

Occasional Papers

1. Judith Heyer

The Economics of Small-Scale Farming in Lowland Machakos.

Supplement to 1. J. Heyer

Input-Output Data from 16 Small-holdings in Masii Location, Machakos District, 1962/63.

2. B. F. Massell and
J. Heyer

Household Expenditure in Nairobi: A Statistical Analysis of Consumer Behaviour.

Discussion Papers

- J. W. Harbeson Land Resettlement and the Politics of Rural Development.
- B. F. Massell Expenditure Patterns in the Central Province of Kenya: A Preliminary Analysis.
- H. Karani A Projection Model for the Kenya Economy: Implications of the Kenya Development Plan, 1966-1970.
- L. R. Cliffe
C. Gertzel
J. W. Harbeson
P. Marris
J. Nottingham. }
D. F. Heisel }
D. Rothchild }
J. U. Heyer }
H. C. A. Somerset }
P. Marris }
J. W. Harbeson }
J. E. Anderson }
D. M. Etherington }
B. F. Massell }
J. R. Clarke and F. Mitchell. }
B. F. Massell }
B. F. Massell }
J. R. Clarke }
B. F. Massell }
- Proposals for Local Government Reform in Kenya.
- Demographic Trends and Educational Needs.
- From Federalism to Neo-Federalism in East Africa.
- Alternative Development Strategies for Lowland Machakos Farms.
- The Effects of Elementary School Quality on Secondary School Achievement.
- Lending Money.
- Land Resettlement and Development Strategy in Kenya.
- Primary School Leavers in Rural Areas.
- The Calculation of Smallholder Tea Yields* in Kenya by Multiple Linear Regression Analysis.
- On Growth Models and Multipliers: The case of the Missing Constraint.
- Foreign Investment and Economic Growth: The Case of Mr. Newman.
- Some Remarks on the Theory of Effective Protection.
- Farm Management in Peasant Agriculture: An Empirical Study.
- East Africa: Estimation of Import Duties on Transferred Goods. (Restricted Distribution).
- A Note on Two Sources of Bias in Estimating Income Elasticities from

- Cross-Section Data on Households Producing at Least Partly for Subsistence.
- N. O. Jorgensen I.C.D.C. Its Purpose and Performance.
- B. F. Massell Determinants of Household Expenditure in Rural Kenya.
- D. P. Ghai Analytical Aspects of an Incomes Policy for Kenya
- D. C. Rogers Rates of Return to Educational in the United States: A Theoretical and Empirical Study.
- J. W. Harbeson The Kenya Little General Election: A Study in Problems of Urban Political Integration.
- Public Seminars**
- Carl Rosberg Africa's Contribution to Political Science.
- Cliffe, Gertzel, Harbeson, Koff and Maluki The Kenya Little General Election.
- D. M. Etherington An Interim Report on the Economic Survey of Smallholder Tea Production in Kenya.
- P. Temu and V. Alvis The Marketing of Selected Basic Food Crops in Kenya.
- H. Karani The Howe-Karani Projection Model: revised after the new development plan.
- R. Clough The Economic Implications of the Transfer of Land from European to African ownership.
- Ralph Clark Sugar Price Policy.
- W. Cerniansky New Methods of Project Evaluation.
- J. W. Harbeson Settlement Schemes—Some Approaches to the Problems.
- B. F. Massell and J. U. Heyer. Household Expenditure in Nairobi—A Statistical Analysis of Consumer Behaviour.
- Dharam Ghai Analytical Aspects of an Incomes Policy for Kenya.
- T. Balogh Educational Planning.
- Dudley Seers The Brain-drain from Developing Countries.

Dan Rogers	Rates of Return to Educational in the United States: A Theoretical and Empirical Study.
Staff Seminars	
T. Dow and D. Heisel	Fieldwork Problems in Attitude Surveys on Family Planning in Kenya.
J. Miller	Protection Policy Project.
F. Mitchell	Kenya Tourist Industry.
L. Cliffe	Political and Administrative Aspects of Rural Development at the District Level.
H. Dahl	Capital Imports Prognosis for Kenya, 1970 and 1975.
D. P. Ghai	Employment and Output in the Non-Agricultural Sector in Kenya.
R. Clarke and F. Mitchell.	The Newman Model and other Models.
F. Mitchell	Tourism Models.
E. Maluki	The Effectiveness of Self-Help Schemes.
R. Clarke	The Imputation of Import Duties.
J. Miller	Effect of the Kenya Government's Industrial Protection Policy.
H. Dahl	Capital Import Projections for Kenya.
N. Jorgensen	Public Financing of Small Scale Enterprises—Purposes and Problems.
P. Temu	The Marketing of Selected Agricultural Commodities for Kenya.
L. Brownstein	Primary School-Leavers after K.P.E.
Judith Heyer	Agricultural Price and Marketing Policy in Kenya.
Z. Onyonka	Agricultural Credit for Large Scale Farmers in Kenya.
Bob Posner	The Labour Force in Large Scale African Agriculture.

Current Research

Economics

Marketing of Selected Food Crops by V. Q. Alvis and P. Temu.

Products studied were maize, beans, bananas and English potatoes. One of four similar studies directed by the Stanford Research Institute, which aimed to study the distribution channels of commodities at every stage and to assess the efficiency of the marketing performance.

The Economic Value of Hunting by J. R. Clarke and F. Mitchell.

This study attempted to evaluate the returns to the economies of East Africa from the outfitted safari industry and to relate these returns to particular pieces of land.

Employment and Output in the Industrial Sector in Kenya by D. Ghai.

An evaluation of changes in factor proportions in the industrial sector of Kenya with a view to making medium-term projections for the demand for labour.

Kenya's Agricultural Price and Marketing Policies by J. Heyer.

A study of price and marketing policies for Kenya's major crops, with a view to indicating the likely effects of current policies, making recommendations for change where these do not appear to be in line with stated development goals.

The Kenya Government's Protection Policy for Local Industry—

A Case Study of the Tinned Fruit and Vegetable Industry by J. Miller.

The study was confined to an examination of the following three direct methods used by the Kenya Government to protect customs duty refunds on imported materials; quantitative restrictions on competing imports. Two major aspects of the tinned fruit and vegetable industry were examined: (1) the decision-making process whereby the three forms of protection have been applied to this industry, and in particular the procedures and criteria used to evaluate the industry's requests for protection; and (2) the effect which such protection has had upon production, prices and Government revenues, leading to a comparison of the costs and benefits of protecting the industry in question.

Economic Value of Game Viewing as a Form of Land Use by F. Mitchell.

The aim of this study was to calculate the GDP of Game Viewing and to allocate the GDP gains to particular areas of land so that wildlife can be compared with other forms of land use.

Agricultural Credit for Large Scale Farmers in Kenya by Z. Onyonka.

The study dealt mainly with the operations of the Agricultural Finance Corporation and the Land and Agricultural Bank of Kenya. The rôle of commercial banks as a source of agricultural credit was briefly examined.

Rate of Return to University Education in Kenya by D. Rogers.

An investigation of the economics of a programme of loans to students to finance their University education.

The Rôle of Harambee Secondary Schools in the Educational Development of Kenya by J. E. Anderson (Dept. of Education).

A study of the Harambee (Local Co-operative Self-Help) Seco-

dary Schools, and their relationship to national planning and employment.

Political Science

Nationalism and Nation Building in Kenya: The Case of Land Reform by J. Harbeson.

A study of the formation of land settlement policies in Kenya; their relationship to problems of the transfer of power and nation building; and social, economic and administrative developments on selected settlement schemes and settlement scheme co-operatives in the former European areas.

The Kenya Little General Election: A Study in Problems of Urban Political Integration by J. Harbeson.

A study of the background, conduct, and issues of the Kenya Little General Election of 1966 in the two urban constituencies: Nairobi and Nakuru.

Self-Help Schemes in Machakos: A Process of Nation-building in Kenya by E. I. Maluki.

This research examined the grassroots structures and functions of self-help schemes. Emphasis was put on: the type of leadership; democratisation process; project priorities; organisational arrangement.

Kenya Little General Election in Machakos by E. I. Maluki

A study of the Kenya Little General Election of 1966 in the Machakos constituencies.

The Little General Election of 1966 by L. Cliffe (EAISR) and C. Gertzel (Dept. of Government).

A study of the 1966 Kenya elections. Published in 1967 by the East African Publishing House.

Family Planning Attitudes among Rural Africans in Kenya by D. F. Heisel.

A survey of knowledge, attitudes and practices of family planning among rural Africans in Kenya. Interviews from seven regions of the country were analysed, totalling approximately 1,500.

Family Planning Attitudes among Asian Secondary School Students by D. F. Heisel.

A survey of attitudes toward family planning among secondary school students in the Nairobi area. About 200 interviews were included.

THE LIBRARY

Staff

Mr. D. A. R. Kemp, Librarian of the College library since its inception, resigned at the end of November, 1966. Mr. J. Ndegwa, Deputy Librarian, was appointed acting librarian as from 1st December, 1966.

Mr. R. M. Omwakwe, previously librarian at the High Court was appointed Assistant Librarian in the College library w.e.f. 1st February, 1967.

Lack of enough qualified librarians restricted the amount of professional service that could be given. This situation will be bettered only when there are enough trained librarians to fill the professional posts offered by the College.

Stock

Even with the above-mentioned shortage of staff, the library was able to add about 11,200 publications into its stock during the year under review. Over 1,200 journals were being currently received.

Use of the Library

A total of 143,534 users are recorded to have come to the College libraries, exclusive of the Adult Studies Centre, Kikuyu, where no figures were kept. Of these, 22,566 used the sub-libraries at Chiromo and Kabete.

The increase in use made seating accommodation extremely inadequate in the main library, particularly at certain peak periods when students had to be turned away for lack of seats. It is hoped that in the near future, at least part of the upper floors at present being put to non-library functions will be released to the library and turned into reading rooms.

Outside users

People outside the College who applied for permission to use the library continued to increase, particularly graduates and secondary school teachers. To safeguard the interests of College users, it was decided that the total number of non-College users should not at any time be allowed to exceed half the College population. This will be a continuing problem until a good library service for the public is established.

Borrowing

A total of 46,243 books were borrowed by users for reading outside the libraries at the Main College, Chiromo and at Kabete. No figures were available for the library at the Adult Studies Centre, Kikuyu. Of the above total 37,569 books were borrowed from the main library, 5,362 from Chiromo and 3,312 from Kabete. The higher figure for Chiromo as against Kabete is probably

due to the fact that the Chiromo Library is not open during the evenings and students have to borrow the books so as to use them in the main library in the evening.

Sub-Libraries

The new Kabete library building was completed and occupied in January, 1967. This provided adequate space for reading and shelving which made an advantageous difference to the users of the library.

The space for the library at Chiromo was even more inadequate during this year with the increase of books and numbers of students. This situation will become better only when the library has its own building.

The library at Kikuyu continued to be staffed by part-time assistants. While this may be satisfactory at the present, the time is quickly approaching when a full-time library assistant will be required there.

Gifts of publications

Nearly five-and-a-half thousand items were donated to the library. While it is not possible to list all the donors, it is appropriate to mention with thanks the assistance given by the Rockefeller Foundation (through Prof. Bjork), the U.S.S.R. Embassy, S.C.A.A.P., the E.S.A. Bookshop and the British Council, who donated a considerable number of publications to the Library.

Bindery

The bindery is now working at the rate of about 300 volumes a month. There is still a back log of periodical volumes, but this is slowly being dealt with. Apart from periodical volumes, the bindery has also dealt with repairs of books and binding theses for higher degrees for members of staff and graduate students.

Staff Activities

Mr. J. Ndegwa, Acting Librarian, attended an Inter-African Conference on Documentation in the Social Sciences held in Dakar in April, 1967. The conference was arranged by the Government of Senegal and financed by UNESCO.

Mr. J. Abukutsa, Assistant Librarian, is working on a bibliography on Kenya coffee as a thesis to be presented to the Library Association (U.K.) for his Fellowship.

MEN'S HALLS OF RESIDENCE

The Academic Year 1966/67 found about 800 men residing in the Halls of Residence on the main campus with another 70 men at Kabete. The continued increase in student numbers meant that only final-year students could reside in single rooms.

Three new halls (6, 7 and 8) were under construction during this year. Hall No. 6 is scheduled for completion in September, 1969, with Halls 7 and 8 due to be completed in March, 1968. A total of 404 students will be housed in double rooms in those three halls.

An important function during this year was the dedication of Elgon Hall. Chief participants in the ceremony were Sir Edward Peck, British High Commissioner, the Hon. J. J. Nyagah, Minister for Education, and our Principal, Dr. Arthur T. Porter. As the dedication plaque notes, Elgon Hall was built with funds provided by British people.

One of the goals of the Halls is to provide an opportunity for the development of student leadership. Toward that end a number of halls established Student Hall Committees with the aim of governing the Halls in co-operation with the warden and for generating Hall spirit through various group activities. It is hoped that these students committees will operate in all the Halls during the 1967/68 academic year.

This year also marked the end of an era as the Hall bade farewell to Dr. M. J. Coe, a warden for the last eight years. We will miss his interests and talents as well as his leadership in the rôle of senior warden. But Dr. Coe will be continuing as a member of the Zoology Department.

WOMEN'S HALLS OF RESIDENCE

Enrolment

During the 1966/67 session there were approximately 117 resident students. The increase in residential enrolment since 1965 was 27. This total composed of the following:—60 B.A., 25 Dom. Sc., nine B.Sc., seven F. Art, five B. Com., four Edu., three Vet., two Occasional (B.A.), one Arch., one Eng., out of which 61 were African, 53 Asian and 3 European.

Changes in Staff

Mrs. Donna Bradley, from Canada, was appointed Assistant Warden in January, 1967.

Changes in Building and/or Equipment

Doubling-up

In August, 1966, all the 96 rooms were doubled-up in order to accommodate the increase in the number of students expected during the 1967/68 session, bringing the total accommodation capacity to 192.

Games Department

Staff Movement

The Games Tutor, Mr. Cooper, left the College to join the B.A.T. as public relations officer (sports) after a long stay at the College. In his place came Mr. K. Gottwald, a German volunteer as Assistant Games Tutor.

Games Union Officials

Executives

President	D. A. Owenje.
Vice-President	M. Weinstein.
Secretary	Diana Monks.
Treasurer	Mathias B. Keah.
Member	Norah Ngaira.
Member	J. O. Remedios.

Captains (Women)

Norah Ngaira	Netball.
Alice Baraza	Hockey.
Diana Monks	Athletics.
Almas Hesham	Table Tennis.
N. Rayani	Lawn Tennis.
P. Samji	Swimming.
Roshan Rajabali	Badminton.

Captains (Men)

D. A. Owenje	Athletics.
S. Malai	Basketball.
G. W. Ssebbowa	Boxing.
Z. Jamal	Badminton.
D. Vyas	Cricket.
M. B. Keah	Soccer.
M. B. Bandali	Table Tennis.
J. O. Remedios	Hockey.
G. Wamuti	Lawn Tennis.
B. D. Carey	Swimming.
F. N. Pirani	Volleyball.

Fourth University Games

The fourth University Games that ought to have been staged here were cancelled, the main reason being that the three sister University Colleges could not agree on a convenient date.

Inter-Hall Championships

These were lively and encouraging. The results were:—

Rogers Hall	6 wins	(Cricket, Tennis, Basketball, Hockey, Boxing and Squash).
Kabete Hostel	3 wins	(Marathon Walk, Table Tennis and Athletics).
Radhakrishnan Hall	2 wins	(Volleyball and Swimming).
Hall No. 5	2 wins	(Badminton and Cross-Country Race).
Nyerere Hall	1 win	(Soccer).

Games Dinner

The annual dinner was held on 17th June, 1967. The Guest of Honour was the Hon. Daniel Arap Moi, the Vice-President of our Republic. The climax of the dinner was the awarding of the colours, presentation of the trophies and the crowning of Mr. M. B. Keah and Miss Norah Ngaira, as Sportsman and Sportswoman of the year respectively.

Other colour awards were:

J. Githara; D. A. Owenje; Z. Hemani; J. Chapman; G. Ssebbowa; V. C. Dias; H. M. Vyas; C. Obure; J. Gobba; A. Odongo; A. S. Martin; E. Ayodo; P. Fernandes; Z. Jamal; B. D. Carey; T. P. Sooknah; N. Quadros; A. Genani; R. Rajabali; L. Sequira; A. Baraza; P. Samji; J. Angevine and A. Musau.

Outside Participation

The soccer team entered two teams (A and B) in the Football Commercial League, and gained third and fourth places respectively. Our Basketball team in the inter-College and Schools Competition gained second place in Division I. The Cricket "A" team did extremely well in their "Cricket Commercial League" because they were the runners-up in Division II.

Naivasha Marathon Walk

This annual event started at Nairobi Post Office and ended at Bell Inn Hotel at Naivasha on 27th January, 1967. The full distance was 54 miles that was won by Abdul Samji in the time of 12 hours 11 minutes. The women's course (25 miles) was won by Miss Khadija Begum in the time of 5 hours 55 minutes.

In the relays, the fastest lap was done by Dr. Sharp (11 miles—1 hr. 54 min.) at a speed of 5.79 m.p.h.

UNIVERSITY EXAMINATIONS, 1967

FACULTY OF ARTS

UNIVERSITY COLLEGE, NAIROBI

I. Single Subject

(a) B.A. (*Economics*)

Second-Class Honours (Upper Division)

RAJAN, Nizar

Second-Class Honours (Lower Division)

D'SOUZA, Anthony R.

FERNANDES, Jose P. A. A.

GEORGE, Esanye S.

SHIVJI, Farida I. K. (Miss)

(b) B.A. (*History*)

Second-Class Honours (Upper Division)

KARANJA, Eluid A.

MASINDE, David

MBALANYA, Alice O. (Miss)

MWAURA, Peter N.

NGAIRA, Jemimah (Miss)

Second-Class Honours (Lower Division)

ARAP MAGUT, Philip E. K.

MUKELA, Augustine

NDUNGU, Joseph B.

II. Double Subject

Second-Class Honours (Upper Division)

JANMOHAMED, Karim K.

MASIGA, Elizabeth S. (Mrs.)

Second-Class Honours (Lower Division)

CHANDARIA, Manjula (Miss)

DMANJI, Zaitonn A. (Miss)

FAZAL, Leila S. (Miss)

JIWANI, Shamshudin H. M.

KAMAU, Jackson Ng'ang'a

KASSAM, Kutub

KATEGILE, Francis

KIOKO, Douglas D.

NICOLAO, Melea O.

PREMJI, Zaitoon F. I. (Miss)

RAJABALI, Roshan N. (Miss)
REMEDIOS, Maria Gloria Juanita (Mrs.)
WECHÉ, Martin L.
YUMBA, Choshi A.

Pass

ADATIA, Lutafali K.
AMERSI, Anis (Miss)
BONAYA, Tola W.
BWALYA, Lazarus W.
CHUULU, Daniel B.
DAYA, Parin A. N. (Miss)
DIMBA, Henry P.
DIN, Jamila F. (Miss)
DOSSA, Malek S. (Miss)
FARIA, Ana I. De L. (Miss)
GANJI, Nizarali L.
ITENGEJA, Joseph F.
JIVANI, Doulat I. M. (Miss)
KHADUDU-WERE, Francis B.
KUNGU, Samuel J. K.
LALANI, Nabat K. J. (Miss)
MUNDIA, Liembelo
NARAN, Parviz H. J. (Miss)
NASSER, Safana A. G. (Miss)
NDUURU, Jane F. A. (Miss)
NG'AMBI, Frank C.
ODONG, George Stephen
OHBI, Kuldeep S.
OKELLO, Gilbert H.
PHILLIPOSE Mariam (Miss)
RAJPAL, Satish K.
SHAH, Madhula H. (Miss)
SUMAR, Malek S. L. (Miss)
THOBANI, Nizar I. K.
WADHVA, Davendra N.

UNIVERSITY EXAMINATIONS 1967

FACULTY OF COMMERCE
UNIVERSITY COLLEGE, NAIROBI

Bachelor of Commerce

Second-Class Honours (Upper Division)

KING'ORI, George

Second-Class Honours (Lower Division)

ADOLWA, Hoseah M.
BIRYABALEMA, Enoch B.
BUKUWA-MASAABA, Festus
DIAS, Vivian C. V.
GITHONGA, Erastus N.
KASSAM, Amir M.
KATALIKAWE, Bernard K.
KEAH, Mathias B.
KOLA, Sylvano O.
MARANGA, Charles M.
MKIZUNGO, Thaddeus
NENSY, Sadrudin I.
OBINJU-BENGO, Charles
ODOI, Nathan
OGWAPIT, Justin Joseph
TIBESIGWA, Edison K.

Pass

ASSENGA, Mathew J.
GITHAIGA, Gilbert M.
KAJUBA, Keberi
MPAGI, Edward
TWAHIRWA, David K.
WACIRA, Fortunatus K. M.

UNIVERSITY EXAMINATIONS, 1967

FACULTY OF ENGINEERING
UNIVERSITY COLLEGE, NAIROBI

I. B.Sc. Engineering (Civil)

First-Class Honours

DHALLA, M. S.
MAWENYA, A. S.

Second-Class Honours (Upper Division)

BUDHEV, K. K.
SIFA-ROBERT, J.

Second-Class Honours (Lower Division)

DESAI, Y. D.
FERNANDES, P. L. T.
HEMANI, Z. A.
KASSAM, A. M.
KASSAM, M. H.
WANJOHI, I. G.

Pass

DEVANI, N. C.
HUNJAN, R. S.
KAUNGA, G. M.
KEMIBARO, I. M.
KOTECHA, P. V.
MANJOTHI, A. E.
MAWANI, F. M. L.
MIRASSANO, G. R. A.
MUNUPE, O. L. J.
NSABABERA, S. M.
OKWAKOL, M.
OTONGLO, S. M.
REHAL, K. S.
VARMA, J. K.
WALJI, A. M.

II. B.Sc. Engineering (Electrical)

First-Class Honours

SOOD, V. K. B.

Second-Class Honours (Upper Division)

ALOO, C. R. S.
MEHTA, K.

Second-Class Honours (Lower Division)

MGAYA, F. M.

Pass

ALMASSY, K. O.

JANI, K. B.

KARIM, B.

KIBULA, M.

JIWA, S. A.

SOOKNAH, T. P.

III. B.Sc. Engineering (Mechanical)

Second-Class Honours (Upper Division)

CHAMPANERI, R. D.

MAKOI, E. N.

PATEL, H. K. J.

VARIA, R. M.

Second-Class Honours (Lower Division)

KWESIGA, S. M.

MANJI, N. K.

NJUE, J. K.

PATEL, M. K. H.

Pass

KAYANDA, N.

ODUOR, S.

IV. B.Sc. Engineering (Survey)

First-Class Honours

SHERURAH, Gideon K.

Second-Class Honours (Upper Division)

FRANCOIS, Camille Pierre

GAYLOR, John H.

MIR, Abdul Waheed

TARSOO, Shah I. A.

Second-Class Honours (Lower Division)

OBEL, John D.

Pass

PATEL, Mahendra C. C.

NJAU, Edwin

UNIVERSITY EXAMINATION, 1967

FACULTY OF SCIENCE
UNIVERSITY COLLEGE, NAIROBI

B.Sc. General

First-Class Honours

RODRIGUES, E. R.

Second-Class Honours (Upper Division)

BHOGAL, P. S.
CHEEMA, S. (Miss)
JOSHI, S.
MENDENS, A. J.
QURESHI, J. N.
RUDNAI, J. A. (Mrs.)
SOMAIYA, S. H.
VYAS, D. M.
VYAS, H.
WYATT, J. R.

Second-Class Honours (Lower Division)

CHAMPSI, P. M. P.
GAMBHIR, B. M.
KIMARU, P. M.
NG'ETHE, J. C.
NHWANI, L. B.

Pass

ESHWANI, G. S.
JAMAL, Z. R.
LALJI, A. K.
MAHERALI, N. J.
MUCIIRI, H.
MULOKWA, W. N.
NDUATI, J.
NYONI, E.
ONGOM, D. L.
SOMJI, R.
WAIREGI, W. J.

FACULTY OF ARCHITECTURE, DESIGN AND
DEVELOPMENT UNIVERSITY COLLEGE, NAIROBI

Diploma in Fine Art

Second-Class

BIRD, S. H. (Miss)
OKELLO, G.

Third-Class

SANDHU, K. A. S. (Miss)

FACULTY OF ARTS
UNIVERSITY COLLEGE, NAIROBI

Postgraduate Diploma in Education

AHLUWALIA, N. (Miss)
ALANDO, S. A.
AZIZ, M. A.
CHUMO, J. K.
GITHAE, M. (Miss)
KAGIRI, S. N.
KINYUA, K. M. (Miss)
LALANI, Z. (Miss)
MAHINDA, W. G.
OBUDHO, R. A.
MOGAL, G. F. (Mrs.)
MULINDI, H.
NDUNGU, J. W.
OWUOR, S. M. (Mrs.)
WANJUI, E. M. (Mrs.)

PRIZES AND AWARDS

1. Gandhi Smarak Nidhi Trust Scholarships

These are two prizes worth Shs. 3,000/- each, awarded for outstanding academic merit, on the strength of performance at the first University examination.

2. Gandhi Smarak Nidhi Trust Bursaries

The Gandhi Smarak Nidhi Trustees award ten new bursaries, each worth Shs. 2,000/- every year to needy students not receiving full government support. The bursaries are renewable every year, subject to good academic progress.

Renewals 1966-1967

SANDHU, K. (Miss)
D'SOUZA, C.
BOGA, Z.
KHATRI, C. K. (Miss)
KHATRI, S. K. (Miss)
CHAMPSI, P. M.
SOMAIYA, S. M.
VARMA, S.

New Bursaries 1966-1967

GILL, K. S.
RAVAL, C.
BHALLA, K. (Miss)
VYAS, N. (Miss)
KOCHAR, S. K. (Miss)
SHEIKH, U. P. (Miss)
GREAVES, P. (Miss)
MATHARU, P. S.
NASSER, L. G. (Miss)
KHAMAR, U. M.
SALEHMOHAMED, Z. (Miss)
MISTRY, B.
PICURDO, V. J.
SIRA, K. S.
DA COSTA, B. C.

3. Gandhi Smarak Nidhi Trust Prizes

These are prizes worth Shs. 100/- each, awarded on departmental basis for best performance in the examinations.

FURTADO, I.—Botany/Zoology
MONKS, D.—Botany/Zoology
THIND, K. S.—Chemistry
KIMANI, S. G.—Geography

PARFAIT, J. A.—Physics
CUNDASAWMY, N.—Mathematics
GITONGA, E.—Law
PATEL, D. C.—Electrical Engineering
MIR, A. W.—Land Survey
VYAS, M. D.—Accountancy
HABIB, A.—Economics
TESHA, L. H.—Physiology/Biochemistry
BUNTING, J. M.—Physiology/Biochemistry
PATEL, B. (Mrs.)—Education
KEAH, M.—Business Administration
ALLIDINA, M.—English
RODRIGUES, V. (Miss)—Domestic Science
NAMATOVU, T. (Miss)—Animal Husbandry
GARGA, V. K.—Civil Engineering
SOOD, V. K.—Medical Engineering

4. East African Railways and Harbours Travel Scholarships

These are scholarships awarded annually to six students of the University of East Africa (two from each constituent College). Holders travel as widely as possible in East Africa by the services of the E.A.R. & H. in order to make specific studies and widen their outlook and experience. Award consists of a free return second-class pass plus Shs. 2,000/- for each scholar.

UNIVERSITY OF EAST AFRICA
UNIVERSITY COLLEGE NAIROBI
Incorporating the Gandhi Memorial Academy

REVISED
SUMMARY OF STUDENT NUMBERS BY FACULTIES, TERRITORIES AND SEX
1966/67

Faculty						Kenya		Uganda		Tanzania		Other African Countries		Non-African Countries		Total by Sex		Grand Total	
						M	W	M	W	M	W	M	W	M	W	M	W	M	W
1. ARTS																			
	1st Year	..	..	..	..	54	24	9	1	2	1	—	—	5	5	70	31	101
	2nd Year	..	..	..	..	48	24	5	—	8	—	8	—	—	—	69	24	93
	3rd Year	..	..	..	..	25	12	2	—	3	12	7	—	—	—	37	24	61
	Total					127	60	16	1	13	13	15	—	5	5	176	79	255	
2. ARCHITECTURE, D & D																			
Architecture																			
	1st Year	..	..	..	..	7	—	2	—	3	1	1	—	—	—	13	1	14
	2nd Year	..	..	..	..	4	—	5	—	—	—	—	—	9	—	9	—	9
	3rd Year	..	..	..	..	6	—	4	—	2	—	2	—	—	—	14	—	14
	3rd Year RIBA	..	..	..	..	1	—	1	—	—	—	—	—	—	—	2	—	2
	4th Year RIBA	..	..	..	..	—	—	1	—	1	—	—	—	—	—	2	—	2
	5th Year RIBA	..	..	..	..	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total					18	—	13	—	6	1	3	—	—	—	40	1	41	
Design																			
	1st Year	..	..	..	..	2	8	2	1	—	—	—	—	—	—	4	9	13
	2nd Year	..	..	..	..	5	3	6	—	—	—	2	—	—	—	13	3	16
	3rd Year	1	1	—	1	—	—	—	—	—	—	1	2	3	
	4th Year	—	3	2	—	—	1	—	—	—	—	2	4	6	
	Total					8	15	10	2	—	1	2	—	—	—	20	18	38	

UNIVERSITY OF EAST AFRICA
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REVISED

SUMMARY OF STUDENT NUMBERS BY FACULTIES, TERRITORIES AND SEX
1966/67

Faculty					<i>Other African Countries</i>	<i>Non- African Countries</i>	<i>Total by Sex</i>	<i>Grand Total</i>
	<i>Kenya</i>	<i>Uganda</i>	<i>Tanzania</i>					
Development								
1st Year	7 —	7 —	— —	— —	— —	— —	14 —	14
2nd Year	10 —	2 —	1 —	1 —	— —	— —	14 —	14
3rd Year	— —	2 —	— —	— —	— —	— —	2 —	2
4th Year	— —	— —	— —	— —	— —	— —	— —	—
Total	17 —	11 —	1 —	1 —	— —	— —	30 —	30
3. COMMERCE								
B. Com. 1st Year	26 1	21 3	24 2	— —	— —	— —	71 6	77
2nd Year	15 —	10 —	15 —	1 —	— —	— —	41 —	41
3rd Year	9 —	9 —	5 —	— —	— —	— —	23 —	23
Total	50 1	40 3	44 2	1 —	— —	— —	135 6	141
Domestic Science								
1st Year	— 14	— 2	— 3	— —	— —	— —	— 19	19
2nd Year	— 5	— 1	— 4	— —	— —	— —	— 10	10
3rd Year	— 8	— 2	— 2	— —	— —	— —	— 12	12
Total	— 27	— 5	— 9	— —	— —	— —	— 41	41
4. ENGINEERING								
1st Year	50 1	19 —	40 —	2 —	— —	— —	111 1	112
2nd Year	26 —	20 —	34 —	— —	— —	— —	80 —	80
3rd Year	28 —	10 —	15 —	— —	3 —	— —	56 —	56
Total	104 1	49 —	89 —	2 —	3 —	— —	247 1	248

UNIVERSITY OF EAST AFRICA
UNIVERSITY COLLEGE NAIROBI
Incorporating the Gandhi Memorial Academy
REVISED

SUMMARY OF STUDENT NUMBERS BY FACULTIES, TERRITORIES AND SEX
1966/67

Faculty		Kenya	Uganda	Tanzania	Other African Countries	Non- African Countries	Total by Sex	Grand Total
5. SCIENCE								
1st Year	.. .. .	37 12	8 —	11 —	1 —	3 1	60 13	73
2nd Year	.. .. .	18 12	7 —	7 —	— —	1 1	33 13	46
3rd Year	.. .. .	17 1	3 —	8 —	— —	— 1	28 2	30
Total	.. .. .	72 25	18 —	26 —	1 —	4 3	121 28	149
6. VETERINARY SCIENCE								
1st Year	.. .. .	9 —	19 —	9 —	4 —	— —	41 —	41
2nd Year	.. .. .	10 —	13 1	8 —	5 —	1 —	37 1	38
3rd Year	.. .. .	6 —	9 1	4 —	2 —	— —	21 1	22
4th Year	.. .. .	7 —	7 —	2 —	2 —	— —	18 —	18
Total	.. .. .	32 —	48 2	23 —	13 —	1 —	117 2	119

TOTAL UNDERGRADUATES
POSTGRADUATE STUDENTS

1,062

Dip. Ed. .. .. .	.. 12 6	— —	— 1	— —	— —	12 7	19
Dip. Met. .. .. .	.. 1 —	2 —	— —	1 —	— —	4 —	4
Higher Degrees (excluding Staff registered for Higher Degrees, as was on 1/11/66)	69						69

92

Grand Total 1,154

GIFTS AND DONATIONS TO THE COLLEGE 1966-1967

£2,262 by the U.S.A.I.D. for research and teaching in the Faculty of Veterinary Science.

£65,000 by the Carnegie Corporation to the Institute of Adult Studies for four years to the 1969/70 academic year.

131,400 dollars by the Carnegie Corporation for research in Human Development in the Department of Education for three years to the 1969/70 academic year.

£1,000 by the Gandhi Memorial Academy Society for Gandhi Memorial Lectures.

£2,500 by the Kenya Government for secretarial staff in the Department of Education.

£10,000 by the Kenya Government for the Housing Research Unit in the Department of Architecture.

£8,000 by the Kenya Government for the new Faculty of Medicine.

£600 by Munitalp Foundation for the purchase of a Land-Rover for Dr. M. Hyder to carry on research on Tilapia.

£2,000 by Nairobi City Council—continuation of yearly fellowship grant to enable the College to appoint City of Nairobi fellows for the 1966/67 academic year.

£15,000 by the Norwegian Agency for International Development to the Department of Animal Husbandry.

£28,500 by the British Ministry of Overseas Development for the Glasgow University College, Nairobi Economic Link for two years.

£962 by the British Ministry of Overseas Development for Miss Jarvis under "Study and Serve Overseas Scheme".

£35,000 by the Rockefeller Foundation—continuation of Core support for the Faculty of Veterinary Science.

£3,850 by the Rockefeller Foundation for Research in Musicology and Linguistics.

£18,800 (third grant) by the Rockefeller Foundation for research in Economics and Related Social Science.

35,000 dollars by the Rockefeller Foundation for Immunology experiments on East Coast Fever.

3,500 dollars by the Rockefeller Foundation to the Department of History for books on American and African history.

The following Grants by the Rockefeller Foundation through the University of East Africa Special Lectureship Scheme:—

£50 G. S. Munoru.

£255 G. M. Mugeru.

The following grants by Ford Foundation through the University of East Africa Teaching Materials Fund:—

£1,200 to the Department of History.

£400 Dr. M. J. Coe.

£200 Dr. J. S. Kennedy.

£3,100 Dr. N. C. Otieno.

£179 Dr. R. H. Udall.

£100 Mr. C. R. Hornsby.

£1,990 Dr. T. R. Odhiambo.

£400 Mr. K. M. Maini.

£350 Dr. Okot Bwangamoi.

£200 by the Meghjiibhai Foundation to enable college personnel to attend appropriate courses at the new Management Training and Advisory Centre at Parklands.

Shs. 300/- by the Mt. Kenya Diocese for the work of Churches' Chaplaincy in the College.

Shs. 1,000/- by Esso Standard Ltd. for a Domestic Science Department Brochure.

The following donations to enable the College to provide more sports facilities for students:

Shs. 20,000/- by B.A.T. (Kenya) Ltd.

Shs. 300/- by Ahmed Bros. Ltd.

Shs. 1,000/- by Express Transport Co. Ltd.

Shs. 10,000/- by Magadi Soda Co. Ltd.

A film projector by the British High Commission to the Students' Union.

UNIVERSITY OF NAIROBI