REPORT ON RESEARCH

UNIVERSITY COLLEGE DAR-ES-SALAAM TANZANIA
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DAR ES SALAAM
TANZANIA

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FOREGWORD

The University College, Dar es Salaam, a constituent College of the University of East Africa, is now in its fifth year. During its brief life, the College has established well-staffed and housed Faculties of Law, Science, and Arts and Social Science, as well as active Institutes of Education, Public Administration, Swahili Research, and Adult Education, and a Bureau of Economic Research. Institutes of Oral History and Archaeology and Resource Assessment and Land use Planning are being planned for the future. The College has also produced and is planning a body of research literature which is a worthy contribution to international scholarship as well as to the economic, social and political development of Tanzania. Hence, this Report on Research, the first to be issued by the University College, Dar es Salaam.

Apart from its contribution to better teaching, and in most cases teaching and research are integrated at the College, there is a very practical need for research in Tanzania for the following reasons:

1) considerable work has already been undertaken, and more is needed, to prepare syllabi which are meaningful in the Tanzanian context, and useful and comprehensible to East African students in general.

2) In order to ensure a supply of qualified East Africans as lecturers in future years, students at the College are being brought into research during their undergraduate as well as post-graduate studies.

3) Until such time as the College can have a significant core of indigenous East African staff, it must attempt to retain the services of its excellent, internationally recognised staff of expatriates (coming from 18 countries), and to recruit others, by offering opportunities for research.

The Government of Tanzania, aware of the vital role that research can and should play, has been most cooperative, and free research thrives in the country.

Universities in Africa are and must be frontline institutions in planning and contributing to national development in general, not only by producing university graduates, but also by offering to the governments of the countries in which they are situated the knowledge and research expertise of their staffs. A University must know the priorities of the Government, and should be able to suggest other priorities as well. It is precisely this role that the University College, Dar es Salaam, seeks to play. Thus, the College is a national institution as well as part of a regional and international complex. We believe that our research activities reflect this commitment.

This report seeks to present recent and on-going research projects undertaken by the Staff of this College. Enquiries for details may be directed to Subject Heads in each discipline, or to the authors themselves. It should be remembered, of course, that complete and up-to-date coverage is difficult, especially in view of staff turn-over and constant reappraisal of priorities. Scholars who wish to conduct research in Tanzania should note the direction being pursued in the various disciplines, for they reflect the College's best judgment of what type of research is needed in the country. Attention is called to Appendix 2 in the Report, which describes the Research Associateship scheme at the College.

Research at the University College is supported by many governments and philanthropic organisations both in the form of grants and funding of full-time research staff. (See Appendix 1). The teaching staff is particularly fortunate in having access to special funds, administered by the College's Research and Publications Committee, which enable them to conduct modest research projects during vacations, and to employ student and clerical assistance.
This report is being distributed to academic and research institutions in Africa, and to those abroad which have a special interest in Africa. It has been compiled with the generous assistance of the College staff and the Library. Special gratitude is due to Mrs. D. Talawa and Mrs. S. Jaffer who prepared the manuscript for publication.

Martin Lowenkopf

Research Secretary to the College

January 1967
The Economic Research Bureau came into existence in December, 1965. Its objective in conjunction with the Economics staff is to carry out research in support of economic and social development and the teaching of economics in the United Republic of Tanzania and East Africa. The Bureau is committed to a programme of policy-oriented research, which is worked out in close consultation with the Government of Tanzania. During its first year, despite the time necessarily devoted to staffing and financing, a vigorous research programme has been set in motion. Its support comes from a variety of sources including the Ford Foundation, the Rockefeller Foundation, the Government of the United Kingdom, the Government of Denmark, and the IFO-Institute (Munich).

The following research studies were completed during 1966:

Mr. N. Groes : A Comment on the National Accounts of Tanganyika - Economic Seminar 1965/66, paper No. 1

The Possibilities of Monetary Policy in Tanzania - ERB Paper 66.2

The Velocity of Money and the Possibilities of Deficit Financing - (paper presented to Dag-Hammarskjold Foundation Seminar on Economic Problems of Developing Countries, Uppsala, August, 1966)


Benefits and Costs of an East African - EEC Trade Agreement - ERB (Restricted) Paper 66.1

Mr. M.J.M. Yaffey : Balance of Payments Management - ERB Paper 66.1

Tanzania's Balance of Payments, 1966-1971 - ERB (Restricted) Paper 66.2

Mr. A. Roe : Commercial Bank Borrowing and Central Bank Control ERB Paper 66.5

Dr. A.J.M. van de Laar: A Possible Framework for Tanzania's Second Five-Year Plan - ERB Paper 66.4

In addition numerous papers and memoranda were prepared on a less formal ad hoc basis for the use of the Treasury, the Bank of Tanzania, the Ministry of Economic Affairs and Development Planning, and the Ministry of Commerce and Co-operatives.

The following research projects were begun during 1966:

Dr. W.F. Hellmuth : Selected Tax and Fiscal Policy Measures in Tanzania - To result in ERB Papers.

Mr. W. Lamade: Development and Role of Agricultural Marketing Boards in Tanzania - To be published in the IFO Institute's African Studies Series.

Dr. G.K. Helleiner: Agricultural Taxation in Tanzania - To result in ERB Papers.

Measurement of Effective Protection in the East African Customs Tariff - To result in ERB Papers.

Agricultural Export Pricing Strategy in Tanzania
University of East Africa Social Science Conference, Nairobi, December 1966.


Mobilisation of Small-Scale Savings - To result in ERB Papers.


Balance of Payments Projections, Tanzania.
University of East Africa Social Science Conference, Nairobi, December, 1966.

Dr. A.J.M. van de Laar: Measurement and Evaluation of Tanzania Industrial Progress - To result in ERB Papers.

Mr. N. Groes: Monetary Policy and Financial Institutions in Tanzania - To result in ERB Papers.

Mr. I. Rosnick: Foreign Trade and Economic Development in Tanzania (teaching faculty)

Professor K.E. Svendsen: Economic Decision-making in Tanzania - (teaching faculty) ERU in 1967-68.

It is hoped that the new research to be launched during 1967 will include the following high-priority projects:

1. Economics of Tanzanian Education Policies.
3. Economics of the Tanzanian Transport System.
4. Economics of Peasant Cashew Nut Production in Tanzania.
12. Detailed Studies of Selected Tanzanian Manufacturing Industries.
EDUCATION and THE INSTITUTE OF EDUCATION

The Institute of Education is concerned with the study of Education at all levels and provides a professional centre for teachers in schools and teachers colleges. In particular, the Institute promotes educational research and discussion of schools and teachers colleges' syllabuses and teaching methods. The Institute and department of Education are closely integrated in their teaching and research activities, and co-operate closely with the Ministry of Education.

Research

Dr. E. Klingelhofer: The intelligence, values and personality structure of African school children

There are no adequate normative studies of East African Youth to be found anywhere in the literature and some minimal base line information is needed to help evaluate the problems of selection both at the University and at Secondary School level. In addition systematic study of the values and personality formation of African children is required first to preserve the information during a period of rapid change in this transitional society so that the influences of social change on individual development may be assessed. It is required, second, because the organization of personality in this Society is not well-understood and its interaction with other variates like sex, family structure, linguistic media in the schools, etc. needs to be assessed much more carefully than has been the case.

The immediate practical outcomes of the project, as now conceived are:

1. The development of some fairly broadly based data on intelligence of Tanzanian School Children.

2. An understanding of trends or patterns in personality development and suggestions for future studies.

3. Knowledge of attitudes or values of Tanzanian students.

All of these outcomes are closely related educational problems - matters of selection, method and curriculum - which are currently of great concern to the Institute of Education and the Ministry of Education. It is proposed to conduct basic normative testing at all levels of the system of state - supported education in Tanzania.

Mr. J.K. Beattie: Selection procedures from primary to secondary schools

The research includes the preparation of objective tests, and an investigation of the comparative effects of administering tests in Swahili and English. As part of this project local personnel are being trained in the techniques of test administration.

Dr. H. Anderson: Problems of colour recognition or differentiation

This investigation seeks to ascertain if a colour recognition or differentiation problem exists among secondary school pupils which could handicap their learning, especially in the sciences. And if found to exist, it is further intended to ascertain the nature of the difficulty and possibly to devise an instructional programme for improvement.

Dr. A. Beninati and Mr. R. Mwajomba: An experiment in the introduction and evaluation of courses in new mathematics in primary schools

In co-operation with the Ministry of Education, primary school mathematics text books are being prepared and are being tested in twenty schools.
Mr. A.R. Thompson: Partnership between government, voluntary agencies and local authorities in education in Tanganyika/Tanzania since 1919.

Mr. S. Ndunguru: Programmes in the teaching of geography in secondary schools.

Institute of Education Group Research:

A large scale enquiry into the secondary school curriculum has been instituted by the setting up of a series of panels each consisting of school teachers, teachers college tutors, Ministry of Education officials and staff of University College and the Institute of Education. A curriculum workshop is being held in January, 1967. It is anticipated that a report to the Ministry of Education will be ready a few months later.

Graduate students:

Four graduate students have registered for the M.A. Degree. They are:

(a) Mr. S. Ndunguru - see above
(b) Mr. J. White - The teaching of geography in secondary schools.
(c) Mrs. L. Saul - the teaching of recent and contemporary history in secondary schools.
(d) Mr. J.K. Beattie - See above

School teaching materials:

The Institute of Education has in co-operation with the geography staff and the Ministry of Education a series of film strips on economic products in course of production. The first on Sisal is now ready. The Institute is also co-operating in the production of a survey map work book for use in schools.
GEOGRAPHY

The general aim in geography is to develop an active research programme as quickly as possible which:

(a) may serve to assist the Tanzanian government in its development programmes;

(b) builds up a store of analysed geographic data relevant to East Africa which will serve as a foundation for teaching the subject both at University and in Schools, and act as a basis for further research.

At present research programs are being initiated in the following fields:- Land use and regional planning; population problems; problems of water resources (from climatological and hydrological view points); political geography; land classification. There is room for considerable development in all of these fields and also in other aspects of biogeography and geomorphology in particular.

The faculty and the subject are new so that much of the research is in an early stage but the following publications are available or in press.

Professor L. Berry: Geographical research in East Africa in research and Development in East Africa. East African Publishing House, 1966


Mr. R. Simko: 'The United Republic of Tanzania'. Focus (in Press)

N. York.

'Notes on Recent Industrial Development in Dar es Salaam'. East African Geographical Review. April, 1967


Current Research Projects:

Professor L. Berry: Land systems in Northern Tanzania - in collaboration with Soil Science Laboratory, Oxford.

Professor L. Berry & Dr. I. Jackson: Climate and hydrology of Ruvi basin - (Part of longer project on Tanzanian hydrology)

Dr. G. Young Sing, Mr. A. Mascarenhas, & Dr. I. Jackson: The Master plan for Dar es Salaam - Land use, climate, transport problems and urban problems in relation to the master plan. To be followed up by other land use studies.

Mr. I. Thomas and Mr. A. Mascarenhas: Problems of mapping census areas. To be followed by work on other census problems, in collaboration with the Ministry of Economic Affairs and Development Planning.
Miss Hilary Page: Problems of labour migration in relation to industrial development in Arusha and Moshi.

Professor L. Berry and staff - Teaching materials project - Finance from Ford Foundation Grant, to collect teaching materials in geography at University level.

Research Associates:

Marilyn Silverstein - Syracuse University. The regional impact of new village settlements in Musoma District. Period of research - August 1966 to August 1967.

G. Dance - University of Leeds. The relationship between soils, vegetation and relief in the Tabora region. The role of other factors - local climate, groundwater movements, human activities, etc. will also be considered. Period of research - 1966 to 1969.

Chester Gregory Knight - University of Minnesota. Environmental gradients and subsistence transitions in the Tanzania - Malawi corridor.

A comparative study of agricultural systems in the Mbeya area designed to investigate the relationship between cultural and environmental factors - specifically, the risks incurred by different subsistence systems in a variety of physical environments. Period of research - August 1966 to November 1967.

Jorgen Ralid - University of Copenhagen. Land-use problems in the Lake Region of Tanzania.

A preliminary case study in Buhaya District will be followed up by a larger survey. The preliminary study will include detailed land-use mapping; an examination of intensity of cultivation and the relationships between intensively and extensively cultivated areas; a consideration of the demographic patterns in the area. Period of research - Sample study January - April 1967. Main survey - April 1967 to April 1968.

The above topics are part of a planned development in the following fields:

Population geography:

This field is of topical interest partly because the problems of movements of people in developing countries are of practical significance and also because a new census is planned in 1967 (a general and a 10% sample). Work is being carried out on the basic mapping of enumeration areas and it is anticipated that work on the interpretation of the new census material could occupy several workers. There is an urgent need for a study of the population movements to urban areas and between urban areas as well as other aspects of population migration, while the relation of population density to rate of growth and varying composition also requires further study.

Settlement Geography Rural Studies:

The organisation and viability of rural settlements, the establishment of new nucleated settlements and the development of present villages are all very important current problems and a range of geographical work on settlements is needed. This is related to a whole range of problems in fields of agriculture, land-use, settlement and communication networks which could be the bases for co-ordinated studies in this field.
Urban Studies:

Although Dar es Salaam has received fairly intensive study by a number of workers almost nothing has been done on the other towns of Tanzania, apart from student work at present in progress. There are thus excellent opportunities for studies of the towns of Tanzania.

Regional Planning and Land Use:

One of the major areas of future teaching and research will be in the field of the geographic basis of regional planning and land use. Work has just begun on regional planning and land use problems in the Dar es Salaam region.

Climatology and Biogeography:

Four main topics are suggested in these fields:

(i) Statistical analysis of spatial and temporal variations in rainfall distribution over East Africa (possibly related to hydrology).

(ii) Aspects of the synoptic climatology of East Africa.

(iii) Microclimatology in a tropical environment.

(iv) Soil, vegetation, water supply relationships.

Geomorphology and Hydrology:

Research is needed in the following topics:

(i) Rift valley geomorphology and related aspects, i.e. fault scarp features, lacustrine phenomena, volcanic geomorphology;

(ii) Hydrology of (a) Easterly flowing rivers of Tanzania (b) Lake Victoria basin (c) Selected small basins.

Political Geography:

The recent political crisis in Central Africa is changing the geography of Tanzania. Investigations need to be made into the intensification of relations between Zambia and Tanzania. These studies could include:

(a) the sharp increase in the movement of goods between the two countries;

(b) the improvement of transportation links (including road, rail and port development);

(c) the possible development of the Southern Highlands of Tanzania as this area becomes less isolated;

(d) the springing up of new settlements and services along the road from Dar es Salaam to Lusaka.
The present teaching staff in History has been recruited with a view to its research potential. To this end an effort has been made to balance archaeological, oral and archival skills and interests and to combine Tanzanian research experience with knowledge of neighbouring territories. The list below of research begun and planned by these members of staff, by the Research Fellow in Oral History and by the Research Assistant will give a detailed impression of individual research interests. Over and above these, however, a number of co-ordinated projects of research and publication are planned or underway.

Dr. Andrew Roberts, (Research Fellow in Oral History): The Early History of Tanzania. A Collation and publication of the research being done by various scholars in the field of oral history.

This project envisages the publication of a book some time in 1968 which will bring together the traditional histories of three groupings of peoples in Tanzania - the peoples of the Pangani Valley; the peoples of the Lake Tanganyika corridor; and the Kimbu-Nyamwezi grouping. Dr. Roberts will contribute a general introduction. The book is intended to meet the need for senior secondary school students and undergraduates to have access to accurate material concerning the history of the Tanzanian interior.

Professor Terence Ranger and Dr. John Iliffe, with the assistance of Mr. G. Gwassa: To collect and evaluate the oral tradition of the Maji-Maji rising.

This project is designed to make use of some 10 or 15 students resident in the Maji-Maji area as full time research assistants during Long Vacations. Working under the direction of Professor Ranger and Dr. Iliffe these students will collect oral material relating to the rising in their home areas; Mr. Gwassa will visit and co-ordinate the field workers during this collection period. The ultimate aim of the project is the publication of an account of Maji-Maji based upon oral and archival sources.

Mr. Isaria Kimambo: The collection of primary material relating to the Pangani Valley - Kilimanjaro, Pare, Usambara, etc.

For use in the regional paper of the M.A. course.

A project for a volume of documents illustrative of the early history of African politics in Tanganyika. Professor Ranger is one of the General Editors of a series of such volumes of documents for each of the six territories of East and Central Africa. Dr. Iliffe is undertaking the co-ordination of the Tanganyika volume.

A project to utilise the collection of Arabic and Swahili manuscript material gathered under the auspices of the Institute of Swahili Research and now held by the College Library. It is hoped that the College will have the services of a senior Islamic scholar in July 1967 and that he will begin the task of sorting and evaluating this material.

Research completed and in progress

Dr. Edward Alpers: The history of the Tanzanian coast and its links with the interior during the 17th and 18th centuries, especially the role of the Yao. (London doctoral thesis completed in June 1966)

Dr. Alpers plans to visit Goa during the Long Vacation of 1967 to supplement his collection of Portuguese material from Lisbon. He also hopes to stimulate oral research in southern Tanzania directed towards some of the major problems of the interior revealed by his research.
Mr. G.C.K. Gwassa : The outbreak of the Maji-Maji rising.

Mr. Gwassa worked for three months in 1966 on coastal oral tradition and plans to spend a more extended period in the field in 1967.

Dr. John Iliffe : German colonial policy in Tanganyika with special reference to the governorship of Reichenburg in 1965.

This doctoral thesis has been accepted for publication and Dr. Iliffe is engaged in revising it for this purpose. Dr. Iliffe has also been engaged on a survey and study of the archival material available for the reconstruction of the Maji-Maji rising. Articles on the outbreak and organisation of the Maji-Maji rising and on its impact upon the German administration in Tanganyika are forthcoming. Dr. Iliffe plans to commence research in 1967 on the history of African politics in twentieth century Tanzania.

Mr. Isaria Kimambo : The traditional history of Upare

To be presented as a doctoral thesis in 1967, Northwestern University.

Mr. John McCracken : The impact of Livingstonia Mission on African society in Malawi - To be presented as a thesis in 1967, Cambridge University.

From April to June 1966 Mr. McCracken worked in the Zomba Archives on the rise of African politics in Malawi and is presenting a paper on this topic to the Social Science Conference in Nairobi, December 1966.

Dr. T.O. Ranger : Revolt in Southern Rhodesia, 1966-7; A Study in African Resistance -

A book on the Shona and Ndebele risings in Southern Rhodesia to be published in April, 1967. During 1966 chapters by Professor Ranger on the rising and on early modern politics in Hatebeleland appeared in The Zambesian Past, ed. Stokes and Brown, Manchester. Papers on the significance of African reaction and resistance to the establishment of colonial rule in East and Central Africa, and upon the connections between primary resistance and modern mass nationalism, have been completed during the year and are to be published. Professor Ranger is currently engaged on the preparation of a volume of documents and commentary illustrative of the rise of African nationalist politics in Southern Rhodesia which is likely to be finished by June 1967. He is engaged in research in the National Archives, Dar es Salaam, on independent churches, ngoma and mbeni societies, witch-craft eradication movements and other movements of popular religious character in twentieth century Tanzania.

Dr. Andrew Roberts : The oral history of the Bemba - Presented as a doctoral thesis at Wisconsin University in September 1966.

In November 1966 Dr. Roberts organised the first oral field workers conference in Dar es Salaam, a report on which is available. He plans to commence his own field work in January 1967. He will visit other field workers, be responsible for providing them with information, and undertake editorial responsibility for the book described above. He will probably embark upon an individual research project on some aspect of Nyamwezi tradition.

Dr. Walter Rodney : The history of the Upper Guinea coast -

Doctorial thesis presented at the University of London in July 1966. Dr. Rodney is revising his thesis for publication.

Dr. John Sutton : Azanian culture of the Kenyan Highlands - Being revised for publication.

A long report on his work is appearing in the first issue of Azania. During the Long Vacation 1966, Dr. Sutton made a survey of potential sites in southern Tanzania; during the Long Vacation 1967 he plans further survey
and excavation in the south west.

Mr. A.J. Temu : The impact of Protestant Missions in the Mombasa area - This doctoral thesis will be presented to the University of Alberta in mid-1967.


Students registered for higher degrees of the University of East Africa

Mrs. S. Rogers : The political history of the Chagga in the Mandatory Period.

Mrs. Rogers is resident in Marangu, Kilimanjaro, and has been working for the last year on the collection of written and oral sources for Chagga political history in the Kilimanjaro area. She aims to finish her work by the end of 1967.

Mr. D. Sperling : The Islamicisation of the Wadigo of the Kenya and Tanzania coast.

Mr. Sperling has carried out a survey of mosque sites in the area south of Mombasa and proposes to embark upon a similar survey in the Tanga region during 1967. He then plans to follow up the oral evidence available upon the founding and building of these mosques. Mr. Sperling's work will be completed in late 1968 or 1969.

Applications to work for higher degrees on the history of customary law in Njombe district and on the political history of Rungwe in the Mandatory period are now being processed.

Research Associates and other researchers in Tanzania (as of December 1966) - (More detailed reports of oral research are available)

J.D. Graham : The economic and social history of Njombe district in the Mandatory period. A doctoral thesis for North-Western University. He will complete the writing up of his material in 1967.

S. Feierman : Aspects of the traditional politics of the Shambala - to be presented for a doctorate in History at North-Western Univ. In 1965 and for a doctorate in Anthropology at Oxford.

J. Gallagher : Oral research in Songea - for a Boston doctoral degree.

C.F. Holmes : The traditional history of the southern Sukuma of Kwinba and Shinyanga.

Father John Kabeya, Nzega : The Life of Mirambo, based on traditional oral sources which is being published in Swahili and English. Father Kabeya is now working on a biography of Hwana Isike.

B.A. Mikidadi : The history of the Lindi area with particular reference to Arab settlement and to French and Portuguese activity.

Father A.E.H. Shorter: The traditional history of the Kimbu. He completes his field work at the end of 1966; to be presented as a doctoral thesis for Oxford University in 1967.

Father J. Stirnimann : A study of the clans of the Upangwa district. Father Stirnimann has been engaged on this study for two years. He will spend a further two years in the district and plans to publish a monograph in German when his work is completed. He has collected much material of relevance to Haji-Haji.
Mrs K. Stahl :  Chagga connections with the coast.

Mrs. Stahl is also collecting additional material on modern Chagga political history. She will return to St. Antony's College, Oxford, in 1967 and hopes to write up this material in the form of a book of thematic essays.

Research carried out during 1966 by scholars who have left Tanzania.

W.R. Morris-Hale :  British educational and administrative policy during the Mandatory period.

Mr. Morris-Hale is now combining this material with League of Nations material in a doctoral thesis for the University of Geneva.

Miss A. Redmayne :  Kihehe texts for the Oxford Library of African Literature; to write several articles; and to revise her thesis for publication.

J.P. Willis :  The traditional history and social structure of the Winamwanga people.

Mr. Willis is now writing up his material for presentation as a doctoral thesis for the University of Chicago.


Mr. Willis plans a further visit to concentrate on the collection of local village histories in Ufipa.

Research Facilities in Tanzania

The National Archives of Tanzania are now housed in temporary premises in India Street, Dar es Salaam, pending the building of the permanent Archives at University College hill. Facilities for access to archival material now exist- administrative collections are rich but the Archives does not hold mission or private papers.

The National Museum, Dar es Salaam, has certain facilities for archaeological research. The Museum is to be associated with the College and the Ministry of National Culture in an Institute of Oral History and Archaeology for the encouragement and co-ordination of research in these fields.

During term weekly research seminars are held on Friday nights at the house of the Professor of History. Programmes of these seminars may be had on request.

Research Priorities in Tanzania

It may be of interest to intending researchers if some indication is given of fields which seem to the College to require study most urgently. These are :-

Further archaeological survey and excavation. A co-ordinated study of the Tanzanian Iron Age is necessary both to fill in the gaps between our knowledge of Central Africa and our knowledge of Kenya and also to follow up the important work being done by Mr. Sassoon at Engaruka. Qualified archaeologists can count upon an enthusiastic welcome from the College and the National Museum.
Sorting and assessment of the Arabic and Swahili material collected in the College Library. As indicated above the College hopes to be able to initiate this work next year. The bulk of the material, however, is very great, at present only the most general indications of its content are available.

In the field of oral history the following areas were identified by the recent meeting of field workers as particularly important:

In the south east, at present largely unexplored from an oral history point of view, it was pointed out that a study of the history of the Mahenge area was especially important; a study of the pressures that led to the Yao migrations and further study of Ngoni movements and of the Ngoni polity in Songea are also needed.

In the east-central region there is great scope for studies of Usagara, apparently a centre of common origin for several groups, and of the 19th century history of Irumba, which repulsed Mirambo and rebelled against the Germans.

In the north-west the politics and the history of the Sumbwa, Ha and Suubi need to be investigated to bring them into focus with what is already known about Buhaya and to illuminate the history and significance of the Lake Tanganyika corridor.

The most urgent need of all in the field of oral history is a thorough study of early Nyamwadi history. In the later period there is also need for study of the growth of Unyanyembe chiefdom, for town histories of Tabora and Ujiji, and so on.

Intending oral historians should write to Dr. Andrew Roberts, Research Fellow in Oral History, for further information and advice.

In the archival field a variety of opportunities exist. From the College point of view two areas are currently of special interest. One is an overall study of the effects of the first world war on African societies in Tanganyika. The other concerns the political histories of the regions. There already are two such projects on hand in connection with the political history of Kilimanjaro and of Rungwe. Dr. Austen's work on Bukoba and Dr. Maguire's work on Sukuma give us comparative studies for those areas also. A researcher working on such a regional political history, therefore, would be operating in a rich comparative field and it is hoped that the development of Dr. Iliffe's research on the central political associations will provide links between these regional politics and national developments.
INSTITUTE OF SWAHILI RESEARCH

The Institute constitutes both a continuation and a transformation of the East African Swahili Committee, a body supported and financed by the East African Governments for the past 34 years. Its purpose is primarily to initiate and carry out basic research in language, literature and lexicography; to co-operate with Governments and other bodies in tackling such questions as translating technical terms, revising school syllabuses, etc.; and to maintain the publication of the Journal 'Swahili' and such other supplementary studies as may appear desirable from time to time.

The establishment of the Institute at the University College in 1964 was made possible by a grant of £14,000 from the Calouste Gulbenkian Foundation and the Ministry of Overseas Development of the British Government, for the period 1964-1967. The Institute is directed by Dr. W.H. Whiteley, Professor of Language and Linguistics at the University College.

Research:

The Institute's main research project for the next few years will be the compilation of a new Swahili-English Dictionary. Mr. J.A. Tejani has been seconded to the Institute as a Research Fellow from the Ministry of Education, Zanzibar, and will take charge of the work of collecting and sifting data. A panel of editorial consultants, including Professors D.A. Oldenogge of Leningrad, E. Dammann of Marburg and Miss M.A. Bryan of London, will advise Mr. Tejani on the matters of principle and detail which are likely to arise during the course of the project. During the project lists of words will be published regularly in the Institute's Journal, Swahili, and a series of special publications dealing with the lexicons of particular fields will be prepared. The first of these, to appear later in 1966, will deal with nautical vocabulary, the second with technical terms for Primary Schools.

The Institute is also continuing its interest in the collection and preparation for publication of Swahili literature. It assisted Mr. J.W.T. Allen in his negotiations for a Rockefeller grant-in-aid to collect material of literary and historical significance along the East African coast; this project has already proved extremely fruitful. It has also assisted in other projects up and down the coast to collect material of literary and historical interest. At the Institute itself, work has been proceeding on the editing of a collection of Swahili songs made popular during the period 1930-1950. This work is in two parts: the first part, which appeared in September 1966, consists of the annotated texts of the songs, plus brief biographies in Swahili of the main singers; the second part will contain translations linguistic notes, and musical analyses of the songs.

Since Swahili is the national language of Tanzania and plays an important part in education, practical problems must also be given considerable attention. The Institute was instrumental in arranging a Workshop in 1965 to reconsider the content of the Swahili course in Primary Schools, and a similar workshop was organised in 1966. It is hoped in subsequent years to prepare teaching materials for the whole of the Primary School course. The scale and number of such workshops depend directly on the nature of the financial help which is available, and foundations have been approached for their support.

Publications:

The Institute's Journal, Swahili, appears twice yearly, in March and September, and contains material of both specialist and general appeal. Each issue includes some piece of new writing in prose or verse, something of interest to linguists, and material relevant to the teaching of the language. In association with the Dictionary Project, lists of words will appear regularly.
Professor W.H. Whiteley: 'Suggestions for recording a Bantu Language in the field' TNR 62 March 1964.


'Problems of a Lingua Franca: Swahili and the trade-Unions' JAL 3/Ill.

'Notes on the Ci-Miini dialect of Swahili' ALS. VI. 1965

A Study of Yao Sentences, Oxford, 1965

'Loan-words in Linguistic description - a case study from Tanzania'(exact Title of Volume not known) University of Wisconsin Press.

'Priorities for Linguistic Research in East Africa' Research and Development in E. Africa, East African Academy, Nairobi, Kenya.

'The Future of Swahili Literature' E.A.'s Cultural Heritage, EACH, 1966

'Social Anthropology, Meaning and Linguistics' MAN Vol. 1/2

'Ideal and Reality in National Language Policy : a case study from Tanzania' (forthcoming)

Problems of Multi-lingualism in Dar es Salaam, with special reference to Swahili.

Dr. J.A. Hutchinson:

Experimental material for a projected course in French for African undergraduates


Theres:

Mr. M. Abdulaziz:

A critical study of the verse of the 19th Century Swahili poet, Muyaka Bin Haji, for an M.A. Thesis of the University of London.

Miss J. Maw:

Swahili sentence structure - Research Fellow of the School of Oriental and African Studies, University of London.

Mrs. C. Scotton:

Swahili grammar with special reference to verbal extensions.
The research work done by the Institute of Public Administration and that done by the staff in Political Science complement one another. The fact that there are several joint appointments, including that of the Director/Professor, Dr. David Kimble, has made it easier to co-ordinate the work in these closely related fields. A list is given below of individual research topics and projects.

**Research Work in Progress. - Political Science:**

**Dr. Anthony H. Rwamambo:** Tanzania's national planning and administration

The problems and processes of planned societal changes with reference to the general theories of development administration in the developing world.

**Mrs. Irene Brown:** The history of political philosophy

From Homer to Che Guevara: a new textbook for university students.

**Dr. John J. Okumu:** Party politics in Kenya, 1950-66

**Dr. James Mellen:** The foreign activities of the AFL-CIO

A study of policy formation processes, and of AFL-CIO programmes overseas, especially in Latin America & Africa, as carried out through its own independent agencies and international organisations.

**Dr. Helge Kjekshus:** Political leaders in East Africa

A study of their availability, background recruitment and promotional patterns, representativeness, skills, and political behaviour.

**Mr. Johannes Masare:** Asians in Tanzania

An analysis of their economic, political, and labour relations with Africans.

**Dr. Franz Ansprenger:** The one-party system and national development

With special reference to Tanzania's progress towards democratic socialism.

**Institute of Public Administration**

**Mr. Walter J. Warrell-Bowring:** The development of local government in East Africa

**Mr. Stanley Dryden:** The local administration of development projects

With special reference to those which involve the use of foreign aid.

**Mr. A. George Mwanza:** The development of capitalism and socialism in Tanzania

A study of economic policy, administration, and implementation.

**Dr. Claude C. Woltz:** Administrative problems and procedures

A series of case studies in Tanzania.
POSTGRADUATE RESEARCH

Research Associates:

Andrew G. Maguire: The Political history of the Sukuma, 1945-63
Fieldwork for Harvard University Ph.D. from January 1964 to March 1965, mainly in Sukumaland.

John Nellis: Political mobilisation, with special reference to public support for village settlements
Fieldwork for Syracuse University Ph.D. from February 1964 to June 1966, based in Dar es Salaam.

Rodger D. Yeager: Decision-making and political institutionalization in Tanzanian village settlements.
Fieldwork for Syracuse University Ph.D. from March 1964 to January 1965, mainly in Rwamwina and Kerege.

Norman N. Miller: Peasants in politics; leadership and mobilization in rural Tanzania.
Fieldwork for Indiana University Ph.D. from May 1964 to December 1965, based at the I.P.A.

Goran Hyden: The process of nation-building in the West Lake Region.
Fieldwork for University of Lund Filosofie Doktorexamen from October 1964 to October 1965, based in Bukoba.

John S. Saul: Direction and responsiveness: agricultural politics in Tanzania.
Fieldwork for Princeton University Ph.D. from October 1965 to September 1966, based at the I.P.A.

Raymond P. Hopkins: The tasks and responsibilities of the Government and National Assembly.
Fieldwork for Yale University Ph.D. from October 1965 to October 1966, based at the I.P.A.

David R. Morrison: The roles of selected professional groups and institutions, with special reference to the processes of policy formulation, development and legitimation.
Fieldwork for University of Sussex D. Phil. from November 1965 to December 1966, based at the I.P.A.

Hans Kepper: The role of the press in East Africa: a political and social analysis.
Fieldwork undertaken on a scholarship from the German Union of Students from February to September 1966, based in Dar es Salaam.

Mavis Kirkham: Urban politics in Dar es Salaam.
Fieldwork for University of Manchester M.A. (Econ.) from March to May 1966, based at the I.P.A.
Daniel Kaninda: Le fondement, en Afrique noire, de la persistance des regroupements politiques regionaux en marge de l'Organisation de l'Unite Africaine


C. Karel Denijs: The functioning, of TANU, with special reference to the participation of members

Fieldwork for University of Amsterdam M.A. from June to August 1966, based in Dar es Salaam.

Eva Kjellberg: The Ismaili Community of Tanzania

Fieldwork for Stockholm Fil. Kand. from July 1966 to May 1967, based at the I.P.A.

John C. Condon: An examination of the salient symbols, themes, and appeals for national unity and nation-building in Tanzania

Fieldwork for Northwestern University post-doctoral study from August 1966, continuing into 1967, based at the I.P.A.

Linda Newman: Trade Unionism in Tanzania and Kenya

Research as a member of the UK Study & Serve Overseas Scheme from September 1966, continuing into 1968, based at the I.P.A.

Caroline J. Duncan: The relevance of perception and images in inter-group tensions in Tanzania

Research as a member of the UK Study & Serve Overseas Scheme from September 1966, continuing into 1968, based at the I.P.A.

Karen A. Halvorson: A study of the educational campaigns which promote wildlife appreciation in Tanzania


M.A. Students

Two postgraduate students have registered for the degree of M.A. (University of East Africa) under the supervision of Professor Kimble:

Stanley Dryden: Local Administration in Tanzania - Date of completion: January 1967


UNDERGRADUATE RESEARCH

S.K. Arap-Ng'eny The Changing Role of Chiefs in Nandi
A.S. Dhall The Newala District: a Political History
G. Dublin The Development of the Philosophy of Julius Nyerere
A.A. Kazimoto The Political Development of Mahenge
D. Kiprono The Political Significance of Land Settlement Schemes in Kenya
M.H.K.A. Lang'at Charisma and Political Leadership: with special reference to KANU
J.L. Lavuna The Role of the Asian Community in the Political Development of Kenya
INTER-DISCIPLINARY RESEARCH

Study of Elections in Tanzania

A major research project on the Local Government Elections held in Tanzania at the end of 1966 is now under way. (In 1965 the Government had expressed its willingness to support a country-wide study of the Parliamentary and Presidential Elections. Financial support for this was sought from overseas, but without success.) At short notice the money necessary for the start of this work was made available, when the Government agreed to the balance of a subvention (for the Congress on African History) being made available for this purpose.

As a result, in December 1966 an Inter-disciplinary College Committee for the Study of Elections was established, with Professor Kimble as chairman and Dr. Rweyemamu as secretary; the members consisted of representatives from Sociology, Law, Political Science, I.P.A., Geography, I.A.E., Language and Linguistics, History, as well as the Research Secretary of the College.

A smaller, ad-hoc, Operational Committee for the Study of the 1966 Local Government Elections was set up immediately, with the following membership: Dr. Rweyemamu (chairman), George Mwanza (secretary), A.C. Mascarenhas (financial secretary), Mrs. A. Nypan, and Dr. John Okumu. Questionnaires were drawn up as a matter of urgency, and College students were enlisted to help during the vacation; the I.P.A. up-country assignments were also planned around this theme.

Future Plans

It is hoped that a conference will be held at the University College before the end of the academic year 1966-67, to decide on research priorities. Meanwhile the staff in political science and public administration are together groping towards a common programme and an understanding of the most urgent, feasible, and rewarding research work.
Sociology was taught at the University College for the first time in 1966, and sociological research itself is at an early stage in Tanzania. Faced with a dearth of basic working materials, research has to be directed to providing descriptive studies of social behaviour. Another important task for sociology in the developing nations is to describe and construct new models representing the main trends in the modernization process and to develop a theory or theories that strive to explain this process in its Tanzanian setting. It is important to work towards a theory that, for example, explains exactly what factors of an ideology facilitate or impede modernization, and how modernization in turn leads to reformulations and reinterpretations of cultural factors.

Following are research projects currently under way or soon to be commenced:

Professor C.G. Widstrand: Radio and Adult Education in Tanzania
Institute of Adult Education Dar es Salaam 1966

A study of massmedia and their role in adult education. Completed in March, 1966.

Development by exhortation

A study of the occurrence and content of nation-building items in the Swahili programme of Radio Tanzania. An item analysis has been made from programmes over a three-month period. Completed December, 1966.

Juvenile delinquents in Dar es Salaam, Tanzania

A study of some 100 juvenile offenders in approved schools and prisons compared with a sample of non-offenders, mainly school children. Family background, intact, broken homes, peer group and school influence are investigated.

Social drinking and illicit brewing in Tanzania


A study of thefts by public servants in Tanzania 1960 - 1965

This is a study of court material of adjudicated cases of thefts by public servants in Tanzania 1960 - 1965, supplemented by interviews with a sample of offenders serving prison sentences. Interesting variables are educational background, rate of social mobility and africanization in the civil service, co-operative societies and trade unions. Estimated completion - 1967.

Squatters in Dar es Salaam

This problem has been dealt with rather sporadically. One pilot survey has been made for a larger survey to test questionnaires and squatter areas have been mapped.

Tanzania Lorry Drivers

The sociology of a professional group. Fieldwork is planned for long vacation, 1967.
The purpose of this study is to examine the social background of various groups or categories of young people, their present social activities as well as their attitudes and aspirations in order to see whether factors such as these are related to differences in social participation and integration in society. The analysis will take into consideration how the impact of social changes affects young people's life chances, attitudes, and perception of their own role in society and in this way influences their capacities and potentialities for contributing to national development.

This exploratory study, planned to start early in 1967, may eventually be extended to a full survey with broader and more representative coverage.

Problems of Family Adaptation to Social Change in urban Tanzania

An inquiry into eventual differences in family organization and structure between comparable family units in rural and urban areas, and into the process of adaptation to urban living. One of the problems to be taken up is to what extent features of urban family organization can be traced to traditional rural patterns transferred to the town, which then interact with the conditions under which the newcomers to urban areas live. Factors that may be associated with symptoms of family disorganization as well as the successful adaptation to urban life will be given special emphasis.

The research is to begin in 1967.

The emergence of new status criteria in Tanzania.

The problems to be taken up in this study relate to the limited use that can be made of occupation as an indicator of status in communities with a low degree of economic differentiation and specialization. Questions arise as to what other criteria are used for status-placement, under what circumstances occupation is used as status criterion, and how this is combined with other and more traditional criteria. The study thus intends to outline some of the criteria for status-evaluation currently in use by various groups and communities; and second, to get a picture of the stratification systems of a few communities, or social groups, by ranking procedures, after having established criteria on which there may be some consensus.

Work on this study is to begin early 1967.

Social structure and diffusion of agricultural innovation

This study of the diffusion of new agricultural practices will place its emphasis on variations in the rate and nature of diffusion associated with differences in aspects of social structure. The project is envisaged in two stages:

1. A mapping of the diffusion of new agricultural practices to establish differential rates of acceptance and an identification of various adopter categories.

2. An investigation into factors of social structure and an analysis of the relationship between variations in these and in rates of diffusion in a few selected communities.

It is hoped that this study may provide a basis for conclusions about the effect of structural variations on diffusion and for generalizations about the factors that characterize strategic positions during the diffusion process.

Work on this project is intended to start in the latter part of 1967.
Professor C.G. Widstrand and
Miss Caroline Winter : Lyrics of Social Protest in East Africa

A content analysis of some 300 pop songs in Swahili. Project under way
and will be completed during 1967.

Mr. R. Woods : The sociological and economic factors of Land
Settlement Scheme.

Based initially on 18 months field work in a Rhodesian scheme, research
at present involves analysing the data from that scheme in addition to placing
this in a wider and more comparative context. Expected Completion : December,
1967.

A General Survey of the Sociological Problems
of Agricultural Development in Tanzania.

An intensive study including a period of field research to reveal sociolo-
gical problems of agricultural development in a part of Tanzania's Coast
Region.

A follow up study of a Village Settlement Scheme

To commence in 1967.

Research Associates:

A Visiting Japanese Research Team in carrying out a number of
sociological studies for Kyoto University:

Professor T. Yoneyama : The History, Society and Language of
the Mbulu.

Mr. S. Hino : Sociological Study of Uliji

Mr. S. Wada : Sociological Study of the Mbulu Tribe

Mr. N. Ishigo : Social Anthropological Study of Mbulu,
Nangati and Tindiga Tribes

Y. Wazaki : Social Anthropological Study of the
Swahili people.

Mr. J. Itani and others : Ecology and Sociology of Wild
Chimpanzees

Dr. J.C. Woodburn : Health, disease, population, genetics,

Mr. D. Jacobson: ecology and demography of the Hadza.

Professor E.H. Winter: Patterns of association in Moshi Township

Mr. W.F.E.R. Tenrea: The Iraaq people in Mbulu

Mr. R.G. Abrahams: History and present social relations among
the Sandawe

Miss P. Bailey: Kinship, domestic and religious organization
in Nyamwezi.

Mr. Svein Bjerke: Land Tenure on Mafia Island

Field Study of the Zinza.
(Following are research scholars from Syracuse University (U.S.A.) who have been invited by the Tanzanian Government to work in cooperation with the Rural Settlement Commission and the Village Settlement Agency. They also are Research Associates of the College.)

Mr. James Brain:
A detailed anthropological community study of a selected plot settlement.

Mr. Fred Robinson:
Attitude changes in settler populations.

Mr. Garry Thomas:
The role of local institutions in the development of viable communities in village settlement

Post-Graduate Students

Rev. L. Swantz:
Urban social change of the Zaramo in Dar es Salaam. (For the Ph.D. Degree)

Mrs. N.L. Swantz:
Ritual in the life of a Zaramo village (For the Ph.D. Degree)

Rev. C.K. Omari:
Traditional religion in Vassu - Wapare tribe. (For the Ph.D. Degree)
The teaching of Law poses rather a special problem. Whereas certain subjects may be taught by a teaching faculty who have had no prior opportunity to do research on local material, this is not possible with Law. Some law faculties in Africa have felt it possible to teach merely the English law; this College has from the beginning insisted that the entire curriculum must spring from local materials and should serve local needs. There has never been any need to consider how to "localise" the curriculum or teaching materials. They were "local" from the beginning.

Texts and articles on East African law, however, were practically non-existent. The raw materials - statutes, ordinances, regulations and judicial decisions - existed, and research into these has been necessary.

To list the research fields in which members of the staff are or have been engaged, would therefore be to list every aspect of every subject of law as applied in East Africa. There are nevertheless certain general considerations and certain areas of particular activity which it may be useful to mention.

A prior, and rather mechanical but nevertheless essential, research activity is the production of the digests, indexes, statute citators, "Cases judicially noticed" and "Words and phrases judicially defined" - in short, the entire set of research tools which lawyers expect to find in any jurisdiction. There must also be published, or at least be made available for the purpose of preparing the research tools just mentioned, all the unpublished decisions of East African courts, which, though for reasons of commercial economy did not find their way into the published reports, are nevertheless frequently decisive of future cases. These mechanical tasks are currently in hand but will take several years to complete. Until they are complete much of the other research is laborious and repetitive.

With a newly independent country there is necessarily a drive for fresh legislation in which whole areas of law may be approached from a fresh viewpoint - not merely because of the new fact of independence but also because the "fresh viewpoint" is one which was not favoured by the colonial power. The implications for law, in Tanzania, of a one-party state - the encouragement of co-operatives and small businesses as a way of opening the doors of commerce to Africans - village settlement - the implementation of principles of what might generally be termed "African socialism", in the land law, law of succession, and family law. Independence has also brought with it a determination not only to unite all the diverse tribes under a single legal system, but also to do away with distinctions in law between Africans, Asians and Europeans.

In all of these fields of governmental legislative activity there has been of course a continuing interest and research activity within the Faculty, whose members are frequently consulted by Government or are invited to sit on Government committees. The research into customary law (aided by a Documentation Project in which all former primary and district court records are now sent to and indexed at the Faculty) in the fields of land law, family law and succession, is being conducted not so as to crystallise and preserve the various tribal laws, but so that the unification among the tribal laws, and eventually the unification between customary law and the imported common law, may be done on a more rational basis.

In addition to the fields of law mentioned in the preceding paragraph, it could be said that the areas of greatest research activity in the Faculty have been the following - Constitutional law, administrative law, with particular reference to local government; labour relations; control of natural resources; and international trade and economic development.
In all this research the comparative method has been regarded as central, and great emphasis has been placed on building up a research library in which the legislative and judicial experience of other countries - especially common-law countries - is available for comparative study.

Research:

Mr. J.S. Read with Mr. Henry Morris of the School of Oriental and African Studies, University of London: A study of the development of the laws in constitution of Uganda.

Mr. Y.P. Ghai and Mr. J.P.W.B. McAuslan: Development of the Laws and Constitution of Kenya


Publications:

Professor A.B. Weston: 'Law in Swahili - Problems in Developing the National Language'. 1 E.A. Law Journal, 60 - 75.

J.S. Read: 'Some Aspects of Murder in East Africa.' 1 E.A.L.J. 37 - 59

'Minimum Sentences in Tanzania'. 1965 J.A.L. 20

'Crime and Punishment in East Africa' 10 Howard L.J. 154

Mr. Y.P. Ghai: 'Constitutional Proposals for a One Party State in Tanzania' (with J.P.W.B. McAuslan). 1 E.A.L.J. 124 - 147

'The Future Prospects, being ch. 6 of Portrait of a Minority - Asians in East Africa ed. D.P. Ghai, 1965


Mr. J.P.W.B. McAuslan & ( Mr. Y.P. Ghai ) : Constitutional Proposals for a One Party State in Tanzania 1 E.A.L.J. 124 - 147


Mr. S.S. Picciotto: "The Congo Since Independence" E.A.L.J. Vol.1 No. 3

Mr. J. Daley: Casebook on Agency in East Africa
Some of the proposed research projects in Botany are:-

(a) Preparing a check list and then a key to plants growing on the campus of the University College, Dar es Salaam, subsequently to be expanded into a check list and guide to the flora of the Dar es Salaam district.

(b) Making a herbarium collection of the plants of Tanzania with a view to eventually preparing either a regional flora (perhaps of provinces T3, T6 and T8 of the Flora of Tropical East Africa) or a flora of Tanzania.

(c) Investigations of East African plant communities (e.g. mangrove swamps) with a view to producing materials for teaching in schools and universities courses.

(d) Autecological studies of East African plants (e.g. Dodonaea viscosa, Cassia kirkii, etc.)

(e) A general survey of the marine benthic algae of Tanzania.

Research projects in progress:


D. Kumar. Variation in endogenous fiberellins in plants having both erect and vine-like habits.

A. McCusker Zonation in Tanzanian mangrove swamps.

A punched card key to flowering plants families. Variability in Dodonaea Viscosa.

B.J. Harris & V.F. Malima "Variability in Cassia kirkii and in Blenharis maderaspensions"

Tanzanian thalloid liverworts. Chromosomes of East African balbous plants.

Research Associate:

G. Dance. The relationship between soils, vegetation and slope of the land in Tabora region, Tanzania.

This is the proposed title of an M.Sc. thesis for the University of Leeds; U.K., under the supervision of Dr. S.R. Eyre. Investigation period in Tanzania: 1966-69.
CHEMISTRY

The principal research theme in Chemistry is the investigation of chemical properties of importance or interest in Tanzania, especially of natural products.

Current Research

Dr. J. Hill, Dr. N.H. Anderson & Mr. A.W. Hassanali: Study of the chemical constituents of plant materials used in Tanzania for native medicine.

This is a long-term project begun in late 1966; some results, however, may be expected over the next year or so. Also expected to join the project will be a Goldsmiths' Post-Doctoral Fellow, not yet appointed. Cooperating in this research are a Dar es Salaam anthropologist, the Government Chemist of Tanzania, and the College Department of Botany. There apparently has been little or no previous chemical work on the 8 or 10 species already collected and identified botanically.

Future Research Projects

Upon obtaining X-ray diffraction equipment, a study of Gaylussite, a mineral found at Amboseli, on the Kenya-Tanzania border, will be launched.

A new member of staff, expected in 1967, proposes to start research on the kinetics of reactions of free radicals in flames.
Current Research:

Use of operators in the solution of the heat conduction equation and allied equations, eigenvalues of a Bessel Function product by computer, supersonic aerodynamics of wing-body combinations, applications of the theories of dislocations and of elasticity to the study of the strength of materials, analytical number theory, group theory - the relationship between absolute rank and chain conditions.

Publications:


There are several activities of great importance which must be mentioned, though they are not research in the strict sense of the word:

Statistical problems and computing problems: The Department is taking an active lead in the "Computer Revolution" at the University College.

New School Mathematics: The Department has taken an extremely valuable lead in the teaching of mathematics in schools and, to date, has held two Mathematics Institutes concerned mainly with the introduction of new Mathematics programmes into the first two years of secondary school together with Maths teaching at Higher School Certificate level.
The major research interest of the Department is in Geophysics. This is considered relevant to the intellectual and economic needs of Tanzania. One member of staff conducts research on theoretical physics and provides an important balance to the teaching emphasis within the Department. The Physics Chief Technician and a temporary Research Assistant have concentrated on studies of the deterioration of science equipment in the tropics. This is relevant to industrial development and to science education in many parts of the country.

Mr. F. Hibberd: A study of electron content in the ionosphere by the measurement of Faraday rotation of signals from satellites.

Recording commenced in Dar es Salaam in January 1966. In June 1966 Mr. Hibberd visited Addis Ababa to set up similar equipment for comparative measurements at the Haile Selassie I University. Similar work is in progress at the Department of Physics in University College, Nairobi. Information from Addis Ababa, Nairobi and Dar es Salaam is collected in Nairobi and prepared there for analysis on a computer. Preliminary results are interesting and the chain of stations allows variation with latitude near the equator to be studied in detail. It is expected that a fourth station will be established temporarily at Asmara.

Dr. D.G. Osborne: Analysis and interpretation of magnetic variation data from equatorial areas.

A vector proton magnetometer is on loan to the Department from the Department of Geodesy and Geophysics of the University of Cambridge and was set up by Mr. Hibberd at the University College, Dar es Salaam. In addition values of magnetic field have been taken at several different locations in Tanzania by Mr. Gardiner and Dr. Osborne and the information sent for the World Magnetic Survey to the National Aeronautical and Space Administration in the United States in exchange for satellite magnetic data.

Some geophysics equipment has been offered to the University College by the Soviet Academy of Sciences.

Dr. Osborne is Reporter for the Working Group on the Equatorial Electrojet in Commission IV of the International Association of Geomagnetism and Aeronomy.

Dr. H.B. Hooper: Nuclear reactions at medium energies, proceeding by direct-interaction mechanisms.

For this work Dr. Hooper collaborates with his former colleagues in the University of Manchester.

Mr. N. Gardiner & Mrs. H.G. Morrison: Instrumentation

A number of environmental chambers to test methods for storing scientific equipment in a tropical environment have been set up. Information about tropical deterioration was sought from research centres and from more than three hundred manufacturers. In April and May 1966 a survey was made of tropical deterioration and a report prepared for Unesco on the "Deterioration of Laboratory Equipment in the Tropics". To obtain information for this report Dr. Osborne visited a number of Universities and research institutions in West Africa and the Caribbean with assistance from Unesco.

It is expected that this research on instrumentation will lead to a small instruction manual on the protection and use of science teaching equipment in the tropics.
Research Associates

Mr. W.T.C. Sowerbutts &
Mr. R.C. Searle : A gravity and magnetic survey directed towards
study of the earth's crust and upper mantle in
the vicinity of the Rift Valley.

Messrs Searle and Sowerbutts are from the joint Geophysics Re-
search Unit of the Universities of Leicester and Newcastle.

Members of the Physics Department have collaborated with Mr. Searle and Mr. Sowerbutts in a magnetic survey of the Kilimanjaro Region.
The University College, Dar es Salaam, is the only college in the University of East Africa with easy access to the sea. Not unnaturally, therefore, much of the zoological interest centres on the wealth of biological material immediately available on the local shores and in the coastal waters. For this purpose a Marine Biology Station has been established which not only caters for the academic requirements of undergraduates, but also, incorporates a Fisheries Institute. This Institute has been developed in co-operation with the Government of Tanzania and aims at the economically desirable end of exploiting Tanzania's marine wealth by developing and instructing in modern techniques in this field.

In order to avoid an imbalance in the undergraduate curriculum, courses are also given in Land and Mammal Ecology in field stations at Amani and Serengeti, respectively.

Professor I. Griffiths and Dr. Madge Greenfield are concerned with researches on growth phenomena using the techniques of histochemistry, microphysiology and the electron microscope. Currently, the emphasis of their work is moving towards marine organisms. Dr. Ilse Walker is investigating the genetics and behaviour of marine micro-organisms and Dr. N.D. Jago is primarily interested in the taxonomy and zoogeography of African locusts, from an ecological standpoint.

The Department also has a number of research students investigating problems in fish bionomics, fish physiology, polyplophorom behaviour, holothurian physiology and dipteran genetics.

Recent publications include:


"Introduction to Histochemistry". (Hutchinson Press)


"Concomitant localization of DOPA oxidase and Adenosine triphosphatase in Cryostat sections". Stain Tech. (1965) 40, (30), 97-104.


"A key, checklist and synonymy to the species formerly included in the genera Caloptenopsis l. Bolivar, 1869, and Acorypha Kraus, 1877 (Orthoptera, Acrididae, Calliptaminae). Eos Madrid (in press).


UNIVERSITY FIELD STATION AT AMANI

The University College Dar es Salaam, rents accommodation and facilities from the East African Malaria Institute at Amani in the Eastern Usambaras, for use as a field station and a base for research work and ecology courses. The departments of Zoology, Botany, Physics and Geography jointly use these facilities and it is possible that other subjects may wish to do so in the future.

The Amani area includes a considerable stretch of untouched forest with a unique fauna and flora and is important for the following reasons:-

(a) The Lepidoptera of the Amani area are extremely rich and include many endemic species. The same way be said of the beetles (Coleoptera) and Orthoptera (grasshoppers and their allies). Many of these groups show evidence of former zoogeographical continuity of the Usambara wet forest with that of Congo and West Africa, and of Southern Africa.

(b) The bird fauna has been well investigated and includes at least 5 rare endemic forest species known only from this area and having relationships with other African faunas of great evolutionary interest.

(c) The flora is of inestimable importance and provides a series of unique associations at 600-1300 ft., 1300 to 1500 ft., and 1500 ft. and above. Many species are intolerant of dry conditions and are related to forms known from West Africa.

(d) The micro-climatology and hydrology provide a fruitful field of study especially in comparison with adjacent areas which have been deforested.

It is clear that the field station will play an important part in the teaching and research programme of the College and it is hoped to establish other such centres in the future.
APPENDIX I

Benefactors who have contributed to research at University College, Dar es Salaam:

Government of Tanzania
The Rockefeller Foundation
The Ford Foundation
The United Kingdom Ministry of Overseas Development
United States Agency for International Development
IFU - Institute, Munich, Germany
The Carnegie Corporation of New York
The Government of Canada
The Government of Denmark - Foreign Assistance Board
Norwegian Agency for Overseas Aid
U.N.E.S.C.O.
Scandinavian Institute of African Studies, Uppsala University
Norwegian Agency for International Development
The Calouste Gulbenkian Foundation
The Goldsmiths' Company of London
Tanganyika Planting Company Ltd.
Department of Geodesy and Geophysics, University of Cambridge
Educational Services Inc., Newton, Massachusetts

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United Kingdom Government
United States Government
African Service Institute
Finland Government
Danish Government
Tanganyika Shell
B.P. Tanganyika
African-American Universities Program
U.N.E.S.C.O.
Lint & Seed Marketing Board, Tanzania
Project for the Staffing of African Institutions of Legal Education and Research (U.S.A.)
APPENDIX 2

INFORMATION FOR SCHOLARS WISHING TO CONDUCT RESEARCH IN TANZANIA

The University College, Dar es Salaam, operates a Research Associate scheme for scholars wishing to conduct research in Tanzania. In order to obtain such associateship the following information is required of prospective researchers:

1) Curriculum Vitae;

2) Concise statement of the proposed project, and to what end it is being carried out;

3) The period of research, and places in Tanzania in which work is intended, e.g. Archives, Mwanza Region, among the Hehe tribe, in coffee-growing area of Rungwe District, etc.;

4) Type of enquiry, e.g. interviews with government officials or members of public; local government records; questionnaires (scholars are reminded that over-long questionnaires are an imposition on and inconsiderate of busy government, party and para-statal officials, and should be carefully tailored to avoid abusing Tanzanian hospitality);

5) Source of support for travel to and upkeep in Tanzania;

6) References (names of two or three persons of academic standing)

If the candidate and research project meet the approval of the University College, Research Associateship will be bestowed upon him or her. This process may take several months, depending upon vacation periods during which the various College approving bodies do not meet.

The Research Associate undertakes the following obligations to the University College:

1) Occasionally to help with seminars related to the Research Associate’s speciality, both at the College and, where possible, in the University College’s Adult Education and other Institutes and Bureaux in the College;

2) To deposit copies of relevant publications or theses in the College Library within a reasonable time of completing field work (either the Research Associate, his sponsor, or his parent institution should declare acceptance of this obligation at the time of application for Associateship);

3) To keep in close contact with the College, which will appoint a local adviser, during the period of Associateship and to report to the College at least once each year during term time;

4) To conduct himself discreetly and with consideration towards the people and Government of Tanzania.

5) To remit a Research Associate registration fee of Tanzanian Shs. 300.00 or equivalent.¹

The College, upon granting Research Associateship undertakes to:

(1) Facilitate immigration procedures of the Associate;

(2) Seek Tanzania Government approval of the researcher and his project, and authorisation to conduct research in area(s) where it is proposed;

¹Equals £15 or $42.00
(3) Assign a local adviser and to guide and assist Associates, both formally and informally;

(4) Grant the privilege of using the College Library and other research facilities the College may offer for furtherance of the research project.

(We are unable, at present, to provide accommodation at the College for Associates.)

In general, research scholars should allow at least four months from the date of their application before planning to arrive in Tanzania, should not arrive before receiving advice of Tanzania Government approval of their research, and they must have received their visas and/or entry permits to Tanzania before they leave for Tanzania. They are also asked to be somewhat flexible regarding research subjects. It is the declared intention of this College to contribute to the economic, social and political development of Tanzania through, inter alia, the conduct of research which may serve the nation. Thus, we may suggest alternative research projects -- consistent, of course with the applicant's interest -- in which there is apparent Government, as well as academic, interest.

For further information, as well as submission of applications for the status of Research Associate, please write:

The Research Secretary,
University College,
P.O. Box 9184,
Dar es Salaam,
Tanzania.