

Meetings

East African Academy

The Fourth Symposium of the East African Academy, held at Makerere University College, Kampala, Uganda (16–23 September 1966), marked the beginning of the second phase of the growth of the Academy. When, 3 years ago, the Academy was formed at Kampala, its future was in doubt. Now, however, after having held previous symposia in other East African capitals (Nairobi and Dar es Salaam), there exists a sense of accomplishment and an air of confidence that the Academy will succeed in its purpose to promote and aid scientific research.

The organizational pattern of the symposium was expanded to include new features. In addition to offering members the opportunity to discuss their specialized researches in the disciplinary sections, a general session, special plenary sessions, and the special activities introduced new dimensions to the program, thus permitting the participants discussions on topics of a general nature affecting the East Africans today. In the words of P. J. A. Rigby (chairman, Local Organizing Committee), "A symposium of this kind draws together, in discussion and the exchange of ideas, scholars from a great number of disciplines and all parts of East Africa, as well as visitors from elsewhere. Its value lies primarily, I think, in enabling an easy and immediate exchange of ideas and news between various academic disciplines; and also between (and perhaps more importantly) distinguished persons in public life, lecturers, researchers, teachers, and the public." This, indeed, is what the Fourth Symposium attempted to accomplish.

In the opening address, J. K. Babiha (vice president of Uganda) spoke for the President who was then in London attending the Commonwealth Prime Ministers' Conference. After challenging the Academy not to "look at East Africa and its problems from the dizzy heights of academic ivory

tower," the vice president invited the members of the Academy to take their rightful place in society "as the leaders of thought, as innovators in development, and above all as the engine that pulls the wagons of your less fortunate compatriots to greater heights and better life," because they were best mentally equipped to make such a contribution.

The general session was centered around the vital and topical theme of "Man in his East African Environment." The main topics included: the evolutionary and cultural aspects of man's life in East Africa, the physical influences of the environment on man, medical aspects of the environment, impact of science and technology on man, and the creation by man of modern institutions that enable him to better adapt himself to his East African environments. One of the distinguished contributors to this general theme was I. M. Lewis (University College, London); he examined the role of nationalism, urbanism, and tribalism in contemporary Africa. But perhaps the most stimulating paper was that presented by M. S. R. Hutt (Makerere University College Medical School) who traced the changing pattern of disease and the influence of shifts in environment on these.

In the second Presidential Foundation Lecture, W. K. Chagula (president of the Academy; University College, Dar es Salaam) examined the role of the elite, the intelligentsia, and educated East Africans in developing their countries, thereby echoing in some way the remarks made in the Opening Address. A new feature of the symposium was the First Distinguished Lecture. Bernard T. G. Chidzero (Resident Representative of the United Nations Development Program, Nairobi) spoke on "The imperative of international co-operation." At a time when the economic development programs of most of the newly independent countries depend to a large extent on foreign capital, Chidzero's analysis was very time-

ly. He examined the reasons for international assistance programs, and stated candidly why these must be expanded. But he warned that unless aid programs were synchronized with local efforts, they would never achieve their desired ends, namely, the gradual liberation of the citizens of developing countries from economic subservience and the denial of the amenities of life. Chidzero also spoke of the dangers of using economic assistance programs either to provide jobs for the international civil servants or as a camouflage to sabotage the political independence of the receiving countries. These two lectures form the subjects of two special pamphlets issued by the Academy.

Five physics papers were read. Peter Gracii's report on positron annihilation in liquid helium was a good balance between theory and experiment, being based primarily on work done by him in an overseas university. The results showed that 17.6 percent of the positrons form positronium in liquid helium and that the annihilation technique is useful in the examination of electronic momentum probability functions.

The remaining four papers were geophysical in content, reflecting the fact that perhaps 80 percent of the researchers of the physics departments of the three sister colleges of the University of East Africa concern themselves with the East African environment. Denis Osborne reviewed the current work and discussed the future possibilities of the researches on the full range of geophysical problems encountered in eastern Africa and centered on the East African Rift Valley and the magnetic equator. He stressed the impact of modern technology (especially computers and satellites) on the evolution of geophysical research. He also proposed the establishment of an Institute of Tropical Geophysics, partly as a center of expertise and partly as perhaps the biggest single stimulus that could be provided for the academic health and vigor of physics in tropical universities, taking into account the need to make a unique contribution to the advancement of physics in general.

David Orr followed by presenting some results of geomagnetic micropulsation studies from Makerere, Uganda. He described the frequency of recurrence of various continuous and irregular events classified according to period. Evidence was presented which suggested that the variation of period with time

of day was different from the pattern observed at higher latitudes.

The program of ionospheric work currently under way in Nairobi was outlined by A. N. Hunter and his colleagues. There are four studies being undertaken there; vertical incidence sounding and measurements of the three components of magnetic field are both done on a routine basis. Faraday rotation and studies of the shape, size, and movements of ionospheric irregularities are also being made.

D. M. Thomson described measurements on neutron multiplicity in the Makerere cosmic ray neutron monitor. Such measurements showed a significantly greater number of "double counts" at Makerere (cut-off rigidity 14.9 Gev) compared with a higher-latitude station, such as Rome (cut-off rigidity 6.4 Gev).

L. A. J. Williams read a paper on basaltic- and felspar-free lavas. He attempted to clarify the nomenclature of these groups of lavas in Kenya.

Four chemistry papers were presented. D. Odhiambo and N. C. Desai reported on their studies of the adsorption isotherms of benzene on samples of diatomite, not treated and treated with acid. Values of isosteric heats and entropies of adsorption calculated from the isotherms were interpreted in terms of a localized adsorbed layer of benzene on untreated diatomite and on a mobile layer on samples treated with acid.

D. Moody described a medico-commercial survey, centered on natural productivity chemistry, of native medicines being undertaken by the Natural Chemotherapeutics Research Laboratory in Kampala. He outlined the importance which the newly independent African countries attach to native medicinal plants. A. J. Dandy reported on an investigation of the surface properties and catalytic activity of sepiolite. The effect of various pretreatments of sepiolite on its activity for the adsorption of pigments present in cottonseed oil was considered in relation to the changes of B.E.T. surface area and of water content occurring as a result of such pretreatments. C. E. Tamale-Ssali described rapid tests for all the important cations in their minerals and ores. The zinc complex of toluene and dithiol, with a ratio of 3 to 4 respectively, was used. This reagent has previously been used by Clark to test for such cations. He also described conditions for its use in testing minerals

and ores which could enable it to be utilized in field work.

Of the papers presented on biological sciences, about half were of a parasitological nature, indicating again the concern of the local scientist with his own environment and its influence on his activities. Moreover, the majority of these parasitological papers came from a single research institute, the East African Trypanosomiasis Research Organization. For a long time, sleeping sickness has been a barrier to human settlement and to ranching activities. The papers from this institute indicated that there is much emphasis placed on combating this scourge. A. R. Njogu's model ("Antigenic variation in *Brucei* subgroup Trypanosomes") showed how in chronic infections by *brucei* subgroup trypanosomes in mammals, parasitaemia show a sequential relapsing pattern. Some of the relapses are distinct antigenic variants. A. J. Wilson ("Immunological aspects of *Trypanosoma congolense* disease of cattle") reviewed the basic problems caused by the disease and the current knowledge of its complicated immunological pattern. The possibility of using antigenic classification for trypanosomes was discussed in relation to the ultimate goal of biological control of the disease. P. M. Mwambu reported on the results of a survey of trypanosomiasis in a fly-belt region. A point arising from the discussion of this paper is worth noting. The tsetse-fly area in Africa is generally on the increase mainly because of the encroachment of game in some places on livestock areas. The remaining parasitological papers were by A. S. Msangi ("The susceptibility of different strains of *Aedes aegypti* to infections with *Plasmodium gallinaceum*"; J. P. Thurston ("Some facts affecting speciation and distribution of parasitic helminths"); and G. B. Awachie's studies on relation between host and parasite of the *Acanthocephala*, showing that the mechanisms leading to the destruction of some or all of the larvae in these crustaceans were humoral in character.

F. A. Mutere discussed reproduction in the equatorial free-tailed bats. A 1-year investigation revealed that reproduction in *T. pumila* was seasonal; the highest reproductive periods coincide with the two rainfall peaks typical of Uganda. Investigations over 3 years of *T. condylura* indicated a seasonal and bimodal breeding. Research on bats in East Africa was em-

phasized because at least 14 different viruses have been isolated from bats at the East African Institute of Viruses. Also, it was discovered that such viruses are able to pass from mother to offspring through the placenta.

M. Hyder discussed his findings on the thyroid-stimulating hormone. He examined, first of all, the effects of the hormone on thyroid slices *in vitro* and also the effect of thyroxine.

J. Okedi dealt with the biology of the Mormyridae in an East African lake and emphasized how little is known about limnology of East African lakes.

Quite distinct was Banage's paper ("Territorial behavior and population in grey-backed fiscal shrike"). The study led to the conclusion that territory regulates the breeding population of the shrike in relation to the habitat resources.

F. P. G. Aldrick-Blake gave a brief account of the social organization in blue monkeys (*Cercopithecus mitis stuhlmanni*). When further results are available, it may well be that generalizations in primatology will shift. Thus far, such generalizations have been based largely on research with terrestrial or semi-terrestrial species.

Botanical research was summarized in two papers by N. C. Otieno ("Gastromycetes of Eastern Africa") and N. C. Otieno with J. Angwin ("The anatomy of common pasture grasses in Kenya"). In the paper on Gastromycetes, the author presented macroscopic and microscopic characters which could facilitate the identification of the species. He hoped that such identification would stimulate collections and study.

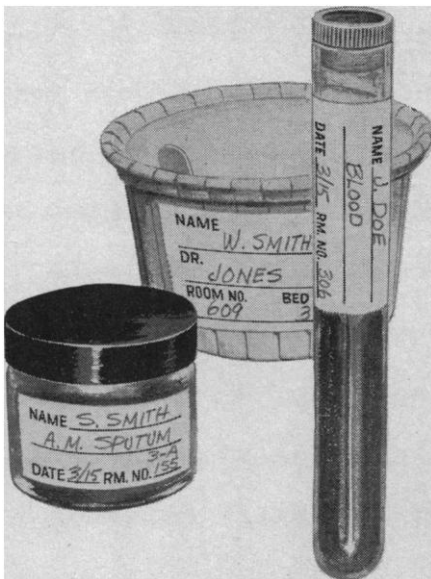
Geographical papers included one by S. H. Ominde on the "Evolution of boundaries of Kenya" which showed how factors other than the natural physical factors have played a great role in boundary erection. R. B. Ogendo ("The significance of industrial zoning to rural industrial development in Kenya") and R. A. Bullock ("Population geography and planning") dealt with some of the problems caused by economic diversification and economic development. R. S. Odingo in "The scope of resettlement in the Kenya Highlands" outlined some of the problems the government faces in its efforts to resettle its people as a result of population pressures in closed tribal land units.

Historians were also present at the

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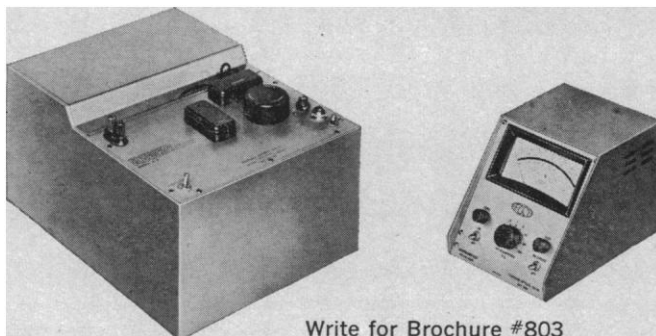
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conference. T. O. Ranger ("Towards the historical study of traditional religion in East and Central Africa") stated that it was time the historian considered seriously the study of African religious systems in his particular historical environment; the history of religions can throw real light on the political history of the period under study.

M. S. Kiwanuka on "Nationalism, tribalism, and violence in Africa" discussed one of the most important topics in Africa today. In "The function of myth in nation building," F. W. Welbourn argued that in Africa today, only the myth of 'Africanism' is the one most likely to succeed, even if it has tinges later of Christianity and Marxism, and has to face the stiff challenge of competing nationalisms. R. C. Soper ("A survey of our present knowledge and future prospects, concerning the Early Iron Age in East Africa") reviewed the evidence for the earliest iron-using or presumed iron-using peoples in East Africa and assessed their significance in the light of recent and current research. The author stated that the most urgent need for researchers in this field is to fit the known cultural manifestations into a chronological and geographical framework. This task can only be accomplished by locating and excavating stratified sites, in practice caves and rock-shelters, and then dating by means of a sufficient number of radiocarbon readings.

Papers on economics were presented by W. A. J. Okumu and W. Muriithi. Okumu reported on the proposed central bank of Kenya, and on the policy of economic assistance. Muriithi dealt with the contemporary East African scene; his paper discussed the problems of equity and growth in the context of developing economies and the current interest in manpower planning.

In the only paper read on languages, ("The relevance of Kiswahili in present day East Africa") S. Chiraghdin made a strong plea for actively promoting Kiswahili as an established academic subject in the educational institutions in East Africa. In his opinion, this is the prelude toward greater use of the language in all the phases of national life.

Special sessions and special activities were new additions to the program of the Academy. Throughout the duration of the symposium, exhibitions of the latest books, periodicals, and scientific instruments were presented by local representatives of overseas publishers and

manufacturers, as well as the local firms. Because of the value of this program, it is hoped to be repeated in an expanded form.

Also, as a sign of its interest in the teaching of science to high school pupils, the Academy held a panel discussion on the topic "The Academy and high school Science." A number of high school science teachers and pupils from schools in Uganda were invited to lectures presented by members of the University and by the UNESCO Science expert from Dar es Salaam. Discussions centered around the current status of science and the efforts being made in East Africa to present it with improved scientific techniques. P. E. Vernon (University of London) discussed methods of selection for secondary education.

At the Annual General Meeting, the following persons were all reelected: W. K. Chagula (University College, Dar es Salaam), president; Thomas R. Odhiambo (University College, Nairobi), secretary; B. A. Ogot (University College, Nairobi), treasurer; and R. S. Odingo (University College, Nairobi), assistant secretary. Reuben J. Olemba (Makerere University College) was elected editor of the Academy. J. D. Rubadiri (Makerere University College) was named the new chairman of the Research and Studentships Committee.

The opening address and papers presented at the general session will appear in a special publication of the Academy. The Presidential Foundation Lecture and the first Distinguished Lecture will be the subjects of two special pamphlets issued by the Academy. Papers presented in the three disciplinary sessions (physical and chemical sciences, biological sciences, and the arts and social sciences) will be published separately as *Proceedings* of the Fourth Symposium.

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Forthcoming Events

April

7-9. American Psychosomatic Soc., 24th annual mtg., New Orleans, La. (The Society, 265 Nassau Rd., Roosevelt, N.Y. 11575)

7-9. American Soc. of Internal Medicine, annual, San Francisco, Calif. (A. V. Whitehall, 3410 Geary Blvd., San Francisco 94118)

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