THE UNIVERSITY OF SUSSEX
THE BULLETIN
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FUTURE UNIVERSITY FINANCE

The Government is expected to introduce major changes in university funding over the next four years which will include a cut in the universities' grant in direct proportion to the current number of overseas students. Sir Alec Merrison, chairman of the vice-chancellors' committee, has said that the Government's plans "may mark an irreversible downturn in the national and international fortunes of British universities". Below, The Bulletin reports on what universities may expect as a whole, and looks more closely at the possible effects for Sussex.

The Chairman of the University Grants Committee, Dr. E. Parkes, wrote to all universities on October 15 about the Government's intentions with regard to university funding in the four years up to and including 1983-84.

The UGC's letter makes it clear that its forecasts are based on what the Government intends to do but that no firm decisions have yet been made. However it seems clear that the steps indicated by the UGC are reasonably accurate reflections of Government policy, the consequences of which have grave implications for universities.

Briefly, the UGC has said that universities should expect:

1) that the total recurrent grant will be held for a number of years at no higher levels in real terms than that for 1979-80;
2) that student intakes in 1980 and beyond will be reduced below the level for 1979-80; and
3) that overseas students admitted in 1980-81 and thereafter, will have to meet the full cost of their education (and that the quotas proposed by the last Government will not now be introduced).

The UGC letter was sent out on the same day as the Committee of Vice-Chancellors and Principals had a meeting with the Secretary of State for Education and Science, Mr. Mark Carlisle, to discuss the CVCP's worries about the current state of universities.

The Chairman of the CVCP, Sir Alec Merrison, has since written to Mr. Carlisle expressing the alarm felt by vice-chancellors at the Government's apparent intentions. Sir Alec's letter refers to several major reasons for the concern felt by universities, as follows:

a) the details of the 1979-80 base-line being used by the UGC are not yet known to universities which not only makes any planning for this or future years impossible, but makes comment on the UGC's letter extremely difficult;
b) there is no guarantee that the Government will adjust the level of funding to cover increases in costs which are sometimes caused by Government decisions over which universities have no control;
c) that while it is certain that the number of well-qualified home students will increase over the next few years, the Government's proposals endanger the universities' ability to accept them;
d) the deduction of a substantial cost of overseas students reduces university income by one-eighth.

Sir Alec's letter expresses the CVCP's concern about the proposals for economic fees to overseas students. He says that the Government's proposals have clearly not been thought through and that their implications are very serious indeed.

"The contribution of overseas students to the life of our universities is essential; without it British universities would be quite different institutions of much less value to their country .... Our first calculations ... of the average fee which would need to be charged in order to recover the income which the UGC is taking away would approach £1,500 a year at today's prices. This is far in excess of that being charged by any university anywhere else in the world .... It might perhaps have been contemplated that the numbers of overseas students should be reduced in order to make room for home students but the method that is being used makes that impossible .... What then is going to happen to a university that is unable to pay for home students who can afford to pay? For some, the effects may well be catastrophic..." Sir Alec refers also to the grave effects that the proposed cuts will have on research and other university activities which serve the community.

"... research in universities makes a vital contribution to the nation and, particularly in those areas like medicine, science and technology, which are heavily dependent on Research Council support, itself diminishing, there is bound to be serious damage to what we can do."

Sir Alec's letter ends with an appeal to the Government to reconsider.

"The Government is on the point of a decision which may mark an irreversible downturn in the national and international fortunes of British universities .... It can be no one's interest to damage the universities by applying policy in this ill-thought-out way."

Whatever Sussex decides to do about the Government's intentions, the consequences will be significant, probably leading to major changes in University policy in a number of areas. The timetable imposed by the University Grants Committee means that, although the reactions of the various parts of the University are as yet unformulated, at least interim decisions will have to be taken by Senate and Council this term.

Planning Committee was already scheduled to consider the annual paper on Planning Assumptions at its meeting on October 31 and that paper now includes some preliminary analyses of the implications of the UGC's letter. The Planning Committee paper (P/170/8) is tentative as the Government's intentions are themselves only implied or inferred by the UGC and as some of (continued on page 2)
NON-ACADEMIC VACANCIES

The Establishment Office has issued the following list of non-academic posts within the University which are to be filled. Job descriptions for all the posts listed are displayed on noticeboards. The list was compiled at October 24.

Senior Clerk
Assistant Accountant
Assistant Personnel Officer
(c) Accounts Office, Community Services
(a) Graduated School in Arts & Social Studies
(b) I.D.S. (2)
(c) School of European Studies (1 or 2)
(d) Office of Counselling Services (part-time, part-year (2))
(e) Occupational Advisory Service (1A)
(f) School of Engineering & Applied Sciences (2)
(g) School of Biological Sciences (2 posts
(h) School of Biological Sciences (3)
(i) School of Biological Sciences (part-time (12))
(j) Isle of Thorns
(k) Isle of Thorns
(l) Isle of Thorns
(m) Isle of Thorns
(n) Isle of Thorns
(o) Accounts Office, Community Services
(p) Accounts Office, Community Services
(q) Accounts Office, Community Services
(r) Accounts Office, Community Services
(s) Accounts Office, Community Services
(t) Accounts Office, Community Services
(u) Accounts Office, Community Services
(v) Accounts Office, Community Services
(w) Accounts Office, Community Services
(x) Accounts Office, Community Services
(y) Accounts Office, Community Services
(z) Accounts Office, Community Services

Assistant Clerks
Secretary/Receptionist
Occupational Adviser
Assistant Librarian
Library Assistants
Technicians
Electronics Technician
Stores Technician
Teaching Laboratory Technician
Research Technician
Technical Assistant
Groundsman
General Domestic Assistant
Dining Room Assistant
Cleaner/Custodian
General Catering Assistants
Chambermaid
Cook
Evening Cashier
Cleaner
Porter

Information given after each post relates to the grade at which the vacancy will be filled.

The code given before each post indicates the person to whom applications should be sent:

(a) Miss C. Pratt, Arts & Social Studies Office, Arts D.
(b) Librarian, I.D.S.
(c) Mr. C. R. Kellet, Establishment Office, Sussex House.
(d) Business Manager, Refectory.
(e) Laboratory Superintendent, School of Engineering & Applied Sciences.
(f) Laboratory Superintendent, School of Biological Sciences.
(g) Buildings Surveyor, Estates Building.
(h) Librarian, Library.
(i) Deputy Laboratory Superintendent, School of Biological Sciences.
(j) Mrs. N. Tattershall, I.D.S.
(k) Laboratory Superintendent, School of Mathematical & Physical Sciences.
(l) Catering Manager, Refectory Building.
(m) Mrs. E. Northern, Brighton 733644.
(n) Accommodation Manager, Refectory.
(o) Community & Estates Officer, Refectory.
(p) House Keeper, I.D.S.
(q) Mike Carr, Science Office, Sussex House.

WEEKEND SCHOOLS

THE NATION STRING QUARTET
To be held at the White House, Isle of Thorns, Chelwood Gate, November 23/35.

The tutor will be Michael Hall, and the players Christopher Darvin & Susan Scott (Violin), Michael Hall (Viola) and Julian Scott (Cello).

Three works will be analysed, rehearsed and played: Quartets in F minor, op. 20/5, C major, op. 33/3 and G major, op. 77/1.

Fee is £15.00 for residents and £10.50 for non-residents. Final date for applications is November 12.

'NATURE' IN TWENTIETH CENTURY

POETRY SINCE HARDY
Stafford House, Hassocks. December 1/2.

The tutors will be Terry Hodgson, Geoffrey Hemstedt and Jonathan Dollimore.

The weekend will be devoted to the discussion of a limited number of well and little-known poems by Hardy, Eliot, Hopkins, Edward Thomas, Larkin, Ted Hughes, Seamus Heaney and others. The fee will be £13.00 for residents and £9.00 for non-residents. The final date for applications is November 22.

AGE AND OPPORTUNITY

Stafford House, Hassocks, December 1/2.

The main objects of this weekend school will be to challenge some of the popular assumptions about old age and to consider the experience of growing older and ways in which the potential of this stage of the life cycle can best be realised.

The tutor will be Dorothy Jerome, and the final date for applications is November 22. The fee will be £10.00 for residents and £9.00 for non-residents.

Further information about all these courses is available from the Centre for Continuing Education Development Building.

SPECIAL LECTURES

University Special Lecture 5.30 pm
Thursday November 1 - THE END OF WORK? - Informatics and the Protestant Ethic. Lord Avebury (Eric Lubbuck)
To be held in Molecular Sciences Lecture Theatre.

The 14th Pelham Lecture 8.15 pm
Thursday November 22 - LANDSCAPE FOR LIVING. Dame Sylvia Crowe DBE PFLA.
(In Association with the Brighton & Hove Regency Society). Admission by ticket only, free of charge, and obtainable from The Regency Society (by their members) or from the Centre for Continuing Education after November 1. This lecture is to be held in the Molecular Sciences Lecture Theatre.
NOTICE BOARD

ARE YOU OR A MEMBER OF YOUR FAMILY PHYSICALLY HANDICAPPED?

A study is underway in the University to identify some research topics for priority funding in the field of aids for the physically handicapped.

If you or a member of your family is physically handicapped your assistance would be much appreciated in identifying the shortcomings of the aids which are currently available.

Your advice could help us to find the areas of work where limited research funds should be concentrated.

The range of aids of interest to us includes: aids for the deaf, the blind, the speech-impaired, the incontinent; artificial limbs; braces and calipers; wheelchairs; aids to prevent pressure sores; kidney machines; oxygenators and ventilators.

If you think you could help, please contact Dr. Alan Cottenden, EASHL Barn (int. tel. 07-206).

RESEARCH ASSISTANCE

The Arts and Social Studies Area's Research Support Unit keeps a register of people who are interested in providing assistance with research. This work would usually be on a part-time and short-term basis, and would normally be for members of faculty in Arts and Social Studies, though other members of the University who need help of similar kinds may also use it.

The register functions rather like a computer dating service; those available for work list their qualifications, experience and free time, and anyone who wants help is given a short list of those to approach who seem best to fit their needs.

The register is now being updated. If your name is on it already, you will be asked to complete a new form if you still wish to remain on the list; if your name is not there now but you would like it to be, please ask Marion Cox in the Social Sciences School Office (int. tel. 03-341) for a form.

Demand is fluctuating and unpredictable, so work cannot be promised; one of the commonest demands in the past has been for interviewers.

If you need research assistance, Marion Cox holds the register and is the person to approach in the first instance.

LUNCHTIME CONCERTS

Friday lunchtimes in the Meeting House. 1.15 p.m. Admission free.

November 2 Lucy Burns (soprano) Julian Elloway (organ)
November 9 Susan Hill (oboe) John Birch (organ)

Tuesday lunchtimes in the Gardener Centre. 1.15 p.m. Subscription series. Tickets (on the door) 75p, students 50p.

November 6 Julia Holmes (clarinet) with Julian Elloway (piano)
November 13 Rachel Masters (harp)

LECTURE ON THAI MUSIC

The visit of Thai musicians to the University next week includes an introductory lecture and demonstration by Dr. Donald Mitchell, Dacre Raikes and Thai musicians and dancer in the Meeting House on Monday, November 5 at 11 a.m. This event is open to the public.

COULD YOU TEACH FRENCH?

Beginners French lessons needed by 12 year old schoolboy, 1½ hours weekly on Saturdays or Sundays.

Transport arranged to and from Lewes if necessary. Contact Mrs. Thompson, 86-7135.

WINTER GRADUATION CEREMONY

The Chancellor of the University, Lord Shrewsbury, will preside at the University's Winter Graduation Ceremony in the Gardener Centre on Wednesday, December 5.

Seating at the ceremony, which commences at 11.30 a.m., is limited and apart from the supervisors of the postgraduate students receiving their degrees in person, members of faculty will not automatically be invited to attend.

However, a limited number of seats on the platform will be reserved for members of faculty and anyone interested in attending should contact Caroline Broadway (Information Officer), int. tel. 06-244, by November 23.

Members of faculty attending the ceremony will not be asked to process but will be required to wear academic dress.

COUNSELLING SERVICES

As discussions aimed at producing revised proposals for the future of the Area continue, a number of changes have taken place.

Professor K. F. Smith has taken over as Chairman of Counselling Services until the end of the calendar year. He will continue to work from his office in MAPS and his secretary, Mrs. Maree Tait, will keep his diary.

Dr. A. Ryle retired from the directorship of the University Health Service at the end of September but continues to take psychotherapy clinics run by the Health Service. Dr. K. M. Gough has been appointed Acting Director until December 31.

In the Occupational Advisory Service, Mrs. Ginny Judge has been appointed to the post of Occupational Adviser.

Some members of Counselling Services staff have told The Bulletin that they would like to meet members of faculty in order to exchange ideas about their work. Anyone who wishes to join them will find them in the Refectory Level 1 Bar from 1 to 8 p.m. on the first Monday of each month.

BLOOD DONORS

The Blood Transfusion Unit will pay a two-day visit to the campus next week.

If you wish to donate blood, come along to one of the four sessions which will take place in the Meeting House:

Tuesday, November 6
10.30 a.m. - 12 noon
2.00 p.m. - 4 p.m.

Wednesday, November 7
9.30 a.m. - 12 noon
2.00 p.m. - 4 p.m.
LATEST RESEARCH GRANTS

Research Grants totalling £1,349,868 have been awarded to the University since June and are detailed as follows:

ASTRONOMY
£1,423 from the Science Research Council for observations at the Wise Observatory Mass-To-Light Ratios of Double Galaxies, under the direction of Professor L. Mastel.

£143,435 (4 years) from S.R.C. for Research in Theoretical Astronomy, under the direction of Professor L. Mastel and Professor R. Taylor.

The work of the Astronomy Centre involves most branches of Theoretical Astronomy, including the theory of close binary stars and novae, galactic nuclei, pulsars, magnetic stars and stellar magnetism, cosmology, the origin of the chemical elements, radio sources and cosmology. The most notable work of the past few years has been the contribution made by Professor Mastel and his colleagues to an understanding of the complex processes involved in charged particles and magnetic fields which occur near to the pulsar.

£29,000 (4 years) from S.R.C. awarded to Professor L. Mastel and Professor R. Taylor to enable senior astronomers from other institutions to visit Sussex.

BIOCHEMISTRY
£13,817 (3 years) from Medical Research Council for studies on enzymes at sub-zero temperatures in aqueous/organic solvents, under the direction of Dr. R.C. Bray.

£14,974 from Cancer Research Campaign for binding of nuclear non-histone proteins to homologous DNA sequences, under the direction of Dr. A.J. MacGillivray.

£18,680 (3 years) from S.R.C. for the response in Vivo of Adp-Ribosylated Gromatin proteins to Cytotoxic Drugs, under the direction of Professor S. Shall.

£20,877 (3 years) from Cancer Research Campaign for the cytotoxic action of alkylating agents on human cells is synergistically enhanced by inhibitors of (Adp-ribose) synthesis, under the direction of Professor S. Shall.

BIOLGY
£7,425 from S.R.C. for Ion Localisation in plant cells, under the direction of Dr. T.J. Flowers and Dr. J.L. Hall.

£22,064 (3 years) from S.R.C. for the genetic investigation of cell cycle controls in the fission yeast, under the direction of Dr. P.M. Nurse.

£25,997 from S.R.C. for Research Fellow for Dr. P.M. Nurse.

£1,400 from Department of Health, Education and Welfare of the U.S.A. for Sensory physiology and biophysics, under the direction of Dr. I.J. Russell.

CHEMISTRY
£15,381 (2 years) from National Research Development Corporation for New Antibiotics from Aspergillus nidulans, under the direction of Professor A.W. Johnson.

£19,233 from S.R.C. for computer for studies of unstable species by microwave and photoelectron spectroscopy, under the direction of Dr. H.W. Kroto.

£5,900 from S.R.C. for Synthesis structure and co-ordinating ability of unstable molecules, under the direction of Dr. J.F. Nixon and Dr. H.W. Kroto.

ECONOMICS
£3,250 from Social Science Research Council for a conference on rational expectations, under the direction of Professor G. Heal.

ELECTRONICS
£126,568 (4 years) from S.R.C. for the design and implementation of a Multi-Microprocessor System, under the direction of Professor R. Grimsdale and Dr. F. Halsall.

Much has been written in the press recently about the far reaching potential applications of the "silicon chip" or microprocessor. Before many of these predictions can become reality, much has still to be learnt about how a system comprising perhaps fifty or more such devices can be engineered and programmed to operate as a single integrated unit. The team, headed by Professor Grimsdale and Dr. Halsall are to investigate the design and implementation of multiple microprocessor systems.

£13,745 from Ministry of Defence for computer generated image (CGI) visual system for helicopter simulators, under the direction of Professor R. Grimsdale and Dr. D. Woolons.

£2,027 from Link Miles Division for determining the design basis of a microprocessor digital control system, under the direction of Dr. D. Woolons.

£5,994 from S.R.C. for Computer Generation of images for graphics terminals and real-time systems, under the direction of Dr. D.J. Woolons.

HISTORY
£3,300 (4 years) from Social Science Research Council for a social history of the Italian people c. 1490 - 1760, under the direction of Mr. U.P. Burke.

MATERIALS SCIENCE
£16,500 (2 years) from National Research Development Corporation for thin film deposition control, under the direction of Professor L. Holland.

MECHANICAL ENGINEERING
£30,283 (3 years) from S.R.C. for On-Line identification of bearing characteristics, under the direction of Dr. C.R. Burrows.

£22,005 from S.R.C. for the control of a hybrid vehicle fitted with a continuously variable transmission, under the direction of Dr. C. Burrows.

£18,116 from Ministry of Defence for losses to transpiration cooled blades, under the direction of Mr. P. Neller.

£18,581 from S.R.C. for optical measurements in air flows, under the direction of Dr. J.M. Owen.

OPERATIONAL RESEARCH
£10,000 from Leverhulme Trust Fund for a Research Fellowship for Professor B.H.P. Rivett.

£18,122 (3 years) from S.R.C. for Further Development of the Theory and Applications of Hypergames, under the direction of Professor B.H.P. Rivett.

PHYSICS
£191,196 (3 years) from S.R.C. for Particle-solid interactions, under the direction of Dr. M.W. Lucas, Dr. O. Palmer, Dr. P. Townsend, Prof. M. Thompson and Mr. B. Farmery.

A grant has been awarded to enable the above group to continue their work on particle-solid interactions. Their interests are linked by the 3 MeV accelerator and their individual research programmes are concerned with the structure of solids and defect properties.

The group has an international reputation and has published some 100 articles in the last 5 years.

£23,656 (2 years) from Home Office for the effects of a Solar power satellite transmission on the Ionosphere, under the direction of Dr. G.E.G. Martelli.

DETAILS OF THIS GRANT WILL APPEAR IN THE NEXT ISSUE OF THE BULLETIN

£2,010 from S.R.C. for Rocket campaign from El Arenillo, Spain (Project Manager's Salary) under the direction of Dr. G.E.G. Martelli.

£2,200 from S.R.C. for Collisions of small macroscopic bodies with orbital velocities, under the direction of Dr. G.E.G. Martelli.

£4,222 from S.R.C. for Travel for GEOS collaborative programme, under the direction of Dr. G.E.G. Martelli.
The information basic to the planning process (e.g. the final 1979-80 grant) is not yet known.

However the paper does outline several possible models, all of which show deficits on the projected budgets. Only the size of the deficit varies, according to varying assumptions on the 1979-80 grant, the level of future grants, the number of overseas students, the fees charged to overseas students, pay rises, etc.

Planning Committee is therefore being asked to consider the need for a radical re-appraisal of University expenditure which should aim for a target of £1 million savings per annum by 1983-84. Such a review would have to be well underway by June 1980, the deadline given by the UGC for universities to submit their outline proposals for five years up to and including 1983-84.

Planning Committee is also being asked to consider short term savings for 1979-80 in addition to the measures already agreed. Those short-term savings may be achieved (i) by a complete freeze on all logistic post vacancies occurring after November 1, 1979, or (ii) by a freeze with limited individual exceptions agreed at the Vice-Chancellor’s discretion, or (iii) by a more complicated package which would impose flagged savings arrangements on all areas and units, remove the Areas’ discretion to fill 50 per cent of academic vacancies, freeze non-faculty vacancies except in certain circumstances at the Vice-Chancellor’s discretion and include a levy on any area/unit balances at the end of 1979/80.

The planning process this year has been further complicated by the absence of accurate student statistics as a result of the NALGO industrial action. However, it is known that the number of new overseas students is lower this year and it is estimated that further increases in fees would underwrite that trend.

The Government, by removing a significant portion of the University's grant which it deems to cover the subsidy of overseas students and by forcing up the fee level by whatever amount fixed by Senate and Council, has on the one hand increased the University’s reliance on overseas students’ fees and on the other decreased any likelihood that the number of such students will even remain constant.

At the same time, the Government appears to require a reduction in the number of homes students in universities but on that aspect at least, no immediate action is necessary because any reduction decided upon by the University could be catered for in the summer clearing-house operation for undergraduate admissions.

In fact, the Planning Committee paper suggests an increase in undergraduate admissions in Science if possible, compensated for by a decrease in Arts. In future years, the University could conceivably continue to expand the Science intake, which it could not do in Arts without incurring capital expenditure or a reduction in the standards of provision.

In summary, there is much uncertainty as to detail but it seems that the problems of 1979-80 can be coped with without major changes, that the financial situation by 1982 will be such as to require major changes in the activities of the University and therefore that the University will need to make full use of the next few months if it is to plan a strategy for the difficult times ahead rather than drift dangerously into those times.

Part of the efforts of individuals, groups and bodies within the University will rightly be directed at attempting to change or reduce the governmental pressure foreshadowed in the UGC’s letter.

However, the University also needs to plan on the assumption that pressures will materialize fully; if anyone wishes to put ideas and suggestions to that latter end the Editor will ensure that they reach the appropriate officer, and some of them will be published.

NALGO

The Bulletin went to press during a Branch Meeting of the National and Local Government Officers Association (NALGO) on Friday, October 26, and the information which follows cannot therefore be precise.

It appears that on October 25, the Universities Committee for Non-Teaching Staff reached an agreement with NALGO over its pay claim.

The agreement is subject to confirmation and acceptance by the NALGO branches.

The National Universities Committee of NALGO was recommend-
DEADLY DINNER OF THE TROPICS

She's tiny. She's deadly. And she's programmed to attack. A Swiss scientist has discovered that the malaria mosquito brings death in a set series of mechanical moves. And he believes her patterned life-style could hold the key to her downfall - and the control of one of the world's killer diseases.

The female mosquito feeds on blood. In the tropics she can pick up the lethal malaria parasite and pass it on to the next victim of her nasty bite.

Now Dr. Mike Jones, of the WRC's Mosquito Behaviour Programme, has found that her every action is genetically programmed. Each stage in her life is triggered by the results of her last move. Her computer-like program tells her when and where to find a mate. Only when she has mated off will she begin the hunt for blood. And once she has bitten she returns to the swamps to lay her eggs.

"If we could interfere with her body clock and the programme it controls, then we could really mess the whole system up", said Dr. Jones.

When she mates, the female receives a chemical from her partner which triggers a change in her behavior. It makes her hungry for blood, but it also turns her off sex - she only mates once.

It was already possible to prepare an extract of this substance, said Dr. Jones. But it would be expensive and impractical to distribute it to unmated females.

Sterile males, acting as "guiding males", would achieve the same results. But a more feasible idea was to develop a pesticide that imitated the natural substance. It would play a chemical con-trick on a female's body clock and stop her from mating.

Other chemicals could be developed to stop the search for blood or interfere with egg laying.

"I think the next generation of insecticides will act on the system of hormones which tell the mosquito what to do", said Dr. Jones. "They will throw the right switch at the wrong time, or stop switches being thrown."

The Mosquito Behaviour Programme was set up 12 years ago when normal insecticides failed to wipe out blood-sucking villains and conquer malaria.

Malaria still kills more than a million children each year and the number is growing.

The programme aims to find peculiarities in the insect's behavior which could be used to control them.

While Dr. Jones works on campus with laboratory bred mosquitoes, team leader Dr. Mick Gillies and Tony Wilkes spend half their time in Gambia, West Africa.

They are trying to discover how mosquitoes find their way in the dark - from swamps to distant villages and back again.

So far they have learnt that the insects detect potential victims from a distance by picking up the carbon dioxide they breathe out and the body odours they give off. Exactly which odours attract them is not yet known, but they seem to like married couples.

The mosquitoes fly upwind until they reach the source of the odours and are finally guided to their meal by body warmth.

"We have also found that they fly very close to the ground", said Dr. Gillies, "but they show a remarkable ability to surmount obstacles in their path."

In one experiment the insects were able to fly over a 20 ft high barrier - which showed that belts of vegetation would be of present in protecting villages from their nightly attacks.

"In this sort of work you have to establish a broad basis of knowledge on what insects do before you can hope to interfere with their behaviour. At the present time we are still at the stage of gathering this background information."

Mosquito bites are an every day occupational hazard for all the members of the programme.

The laboratory bred nasties are literally fed by hand when they need a blood meal.

And out in the field, in an area which used to be known as The White Man's Grave, Dr. Gillies and his helpers must take weekly doses of anti-malaria drugs.

"We have a saying in the Unit", said Dr. Gillies, "'Anyone caught with malaria will be sacked.' It's a joke, but it reminds us of the dangers."

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TEST TUBE GLOW WORMS

Campus scientists have seen the light for a brilliant medical breakthrough - thanks to glow worms. Their chemical copy of nature's light-rays will mean safer conditions for lab workers.

The test tube glow worm is the brain-child of Dr. Frank McCapa, Reader in Chemistry. He said that blood samples and serum were often analysed with radioactive iodine - dangerous because of its health risks. But, by imitating the usual glow worms, he could detect small amounts of biological material even more accurately - and in complete safety.

Many fish and insects are able to light up - eels, catfish or starlite predators.

It was Dr. McCapa who discovered what the light was and how it worked. And in less than ten years he and his team have chemically reproduced it.

It happens naturally when the 'fuel', a molecule known as Luciferin is oxidized by an enzyme called Luciferase. Dr. McCapa found that Luciferin could be synthesised and made to produce light using chemicals instead of the enzyme.

It is known as 'cold' light because it gives off no heat. This makes it ideal for emergency lighting, when a single spark could mean disaster.

Already emergency light sticks based on Dr. McCapa's discoveries are being sold commercially. The two solutions necessary for the magic lantern come in a plastic tube. They are separated by a plug at the end of the tube to break the glass and Hey Presto! Instant light.

The weird and wonderful invention has made an instant hit as the latest disco glamour item. Wound into bracelets and necklaces it shines out in the semi dark of the dance floor.

Recently, diagnostic companies have grown interested in the team's latest research - blood testing. Radioactive iodine is normally used in labs because it can detect tiny numbers of molecules. "Radioactive iodine is nasty and dangerous", said Dr. McCapa, who can now test serum simply and safely with cold light. A chemical reaction is arranged and a light appears if certain molecules are present.

Already the team has successfully tested glucose levels - and more accurately than ever before.

But Dr. McCapa sees no bright future for his discovery as far as the public is concerned. The light, which comes in a variety of pretty colours, is good enough to see by - but only just.

"While there are still switches on the wall, people will press them", he said. "They are not going to synthesise complex molecules while there is electricity."
from an exceptional year and is bottled after two years in wood. After that, it matures very slowly in the bottle for up to twenty years and often longer. Crusoe Port is blended from several vintages but, like Vintage Port, aged in the bottle.

Vintage Port is the shipper's gamble. He must decide whether or not to ship a particular year, at that stage still in pipes, and then it will take many years before he learns whether his investment was worthwhile. The oldest fits of shippers are Warre, and after well over 300 years of shipping port, one presumes that their judgement must have been generally sound.

Port should be decanted because there is always a heavy deposit in the bottle. The simplest way is to filter the port through a coffee filter paper and that method certainly reduces the chance of accidents. The best and oldest vintage port needs less time to breathe, but younger port can safely be decanted the day before serving.

When I was a young comiss waiter, one of my fellow took some port in a cradle to the table. "Have you shaken that port, boy?" asked one of the old gentlemen. "No sir," said my friend, "that I will if you like." And he did. I can still see that bottle in a fine cloud of fum!

Properly decanted (and unshaken) port should be passed clockwise round the table, i.e. to the left, and thus in the opposite direction to all other wine.

I have always been fascinated by another curiosity relating to port. Twice a year, at the end of September and March, sap rises in trees. At that time, port goes out of condition even if already bottled and in a dark cellar at a stable temperature, so it is best not to drink port when the sap is rising.

The great names in port are those of the greatest shippers, Warre, Sandeman, Crofts, Taylor, Delaforce & Graham. For Vintage Port, the best years in the past fifty are 1934, 35, 45, 47, 48, 55, 60, 63 and 70, the last being a little young as yet.

John Smith
University Butler

RECENT BOOKS

Recent and forthcoming titles by Sussex authors include:

A SHORT COURSE IN GENERAL RELATIVITY by Dr. J. Foster, Lecturer in Mathematics at the University, and J.D. Nightingale, Associate Professor of Physics at the State University of New York. Published by Longman in a limp edition at £5.95.

KAZIMIERZ ADUKIEWICZ: THE SCIENTIFIC WORLD-PERSPECTIVE AND OTHER ESSAYS 1931-63 is edited, with an introduction, by Dr. J. Giedym of the School of Mathematical and Physical Sciences. Reidel, £32.

THE SULPHATE-REDUCING BACTERIA by John Postgate, Professor of Microbiology, is published by Cambridge University Press at £15.

THE WORK OF SARTRE, Volume 1: SEARCH FOR FREEDOM by Professor Istvan Meszaros is a major new study of Sartre's achievements and the debates surrounding them. A second volume, THE CHALLENGE OF HISTORY, will complete the work. In the "Philosophy Now" series edited by Professor Roy Edgley. Harvester Press, cloth £11.50, paper £4.95.

Some books of local interest:

A SUSSEX GARLAND by Tony Wales is a nostalgic collection of rhymes, recollections and recipes of the Sussex year. With more than 100 illustrations from old photographs and postcards. Godfrey Dave Assoc. £5.50.

DAVID PEACOCK'S BRIGHTON SKETCHBOOK contains more than 40 recent drawings of Brighton scenes accompanied by a genuinely informative text by John Montgomery. Perspective Press, £3.50.

A SUSSEX RIVER: JOURNEYS ALONG THE BANKS OF THE RIVER OUSE UPSTREAM FROM LEWES TO THE SOURCES is the final volume in the series of books on the Ouse by Edna and Mac McCarthy. Like the previous ones it is well illustrated with maps and drawings. Lindel Organisation, £1.50.

An exhibition of PHAIDON ART BOOKS will be held in the Bookshop from November 6 to 8.

ALL BOOKS AVAILABLE FROM

SUSSEX UNIVERSITY BOOKSHOP

HOUSE EXCHANGE

A professor of biology and education at Salem State College, Massachusetts, is interested in an exchange of homes for himself, wife and two adolescent children for the spring semester starting January 1980, and maybe June and July. Fully furnished 3-bedroom home in Hamilton, MA, 25 miles NE of Boston. If interested, write Dr. Frank L. Sullivan, 13 Norman Road, Hamilton, MA 01986. Tel. (617) 468-4613.

House desirable! Don't be bashful.
Upstairs on the inward sigh
Compost of ancient tales, and port
And sleep - and learning of a sort.

Below

In 1553 (or thereabouts) Edward III
made a treaty with Portugal allowing
Portuguese fishermen to fish for cod
off one coast of England. The wine
of Porto (known in this country as
Oporto) was shortened to port wine
and is now most commonly just called
port.

The wine very quickly became almost
a national drink in England and for
centuries it has been the custom for
the Sovereign's health to be drunk
in port in preference to other wines.
Indeed, Pellissier said:
"Port, port! No Briton ought
Consider he's done his duty
Until he's felt beneath his belt
A bottle of the rare old fruitly!"

After the grapes are crushed, and
the pipes and stalks removed, the
juice starts to ferment, at which
point it is run off into large vats.
After that, the longer the wine is
allowed to ferment, the drier it
becomes, so in order to get the
sweeter wines, the fermentation
process is halted.

In the following Spring, the wine is
fed with a little Brandy and then
transferred from the vats to single
casks, or to use the vernacular,
pipes. When the wine is young, it
has a full, deep colour, but time
mellowes the colour to Ruby through
Twany to Light Twany.

You should therefore be able to tell
the age from the general name of the
wine, but unfortunately in many of
the cheaper kinds, Twany Port has
been reached by the addition of
White Port to Ruby Port (White
Port is, of course, made from
white grapes) which complicates
what would otherwise have been a
simple matter.

However, Ruby Port is the youngest
and sweetest and the best are full of
flavour. Better quality Twany is aged
in wood for many years and its flavour
is more delicate. Vintage Port comes
GARDNER ARTS CENTRE

One of the most riveting moments in last year's Leeds Piano Competition (even for those of us condemned to sit at home and watch it on the telly) was the performance of the Tschaikovsky concerto by the flamboyant Brazilian, Diana Rasso.

There can't have been anyone watching who was not rooting for her, and, no doubt, mine was not the only household in which there was great gnashing of teeth when it was announced that she had won the second prize!

Since then Miss Rasso has been capitalising on that success on both sides of the Atlantic and I like to think that, when it was announced that she was to appear in this country, the Gardner Centre was one of the first on the telephone.

Her recital on November 8 includes works by Beethoven, Liszt and Chopin but, alas, the Tschaikovsky piano concerto as we can't afford the orchestra!

This concert is preceded on Sunday, November 4, by a performance of Thai classical music by a group from the Sirirajrangsri University of Prammang, formed more than 20 years ago by professors and students in the University who wished to preserve the ancient musical heritage of their country. This is their third U.K. tour and they will be coming to us from the Snape Maltings where they are to give their first concert.

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Little did I know, when we first presented THE INCREDIBLY PASSABLE MAX, Moray Watson's one-man play about Max Beerbohm, that I would finish up lugging scenery through the kitchen of the Café Royal, but that was exactly what happened last week when we gave a charity performance in London in aid of Action Research for the Crippled Child.

Reputedly the famous Yellow Book was conceived by Beardsley, Wilde and Beerbohm in the opulent splendour of the Café Royal and there are several references to it in Beardsley's writing.

It seemed fitting, therefore, that we should be giving a performance there, although I shall treasure as long as I live the bemused expressions on the faces of a collection of Spanish waiters as we humped our costumes and props down the corridors of that revered establishment. How could they know that, in 1979, the return of Max Beerbohm to the Café Royal was an event of almost historical importance!

By the time this edition goes to press the ROCKY HORROR SHOW will have arrived and opened for a week of eight performances, ending on November 3. In London, the show is still packing them in, but this new production has just started a national tour and has already clocked up the largest advance booking of the current Gardner Centre season.

However there are still seats available for most performances but I can only advise you to hurry round to the box office or you will be in danger of missing what has already been described as the naughtiest show in town!

This is followed, on November 5, by a week of Laurence Olivier films, including Hamlet, Othello, Henry V, Taming of the Shrew, The Divorce of Lady X, a 1936 movie in which Sir Laurence co-starred with Merle Oberon and Sir Ralph Richardson. The films cover a thirty year period in the career of our most distinguished actor, and go at least some way towards celebrating the honorary doctorate which he received from the University in 1978.

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The exhibition of Patrick Caulfield Graphics, scheduled for a November 14 opening, has now been postponed until next year so that necessary structural repairs can be carried out in the Art Gallery, but during this period the display of Chris Lowe's colour photography will go ahead as planned in the foyer exhibition area. Meanwhile the exhibition of John Edmond's wonderfully bold and colourful paintings continues until November 10.

Nigel Stannard
Administrative Director

THE BULLETIN

The Bulletin is published fortnightly during term-time by the Information Office for the information of members and employees of the University.

Contributions to The Bulletin are welcomed. If you have any news items, feature articles, information or anything else you would like to see appear in The Bulletin, please contact Jennifer Payne or Janet Barrington, Room 104, Sussex House (int. tels. 05-12) or 05-254).

The next issue will be published on Tuesday, November 13, and copy for inclusion should reach the Information Office by noon on Tuesday, November 6.

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