

THE GAMBIA

More the people than the place

Dr R. S. Bray, Director of the Medical Research Council laboratories in The Gambia, looks at life and work there.

THE 1975 balance sheet for medical research in The Gambia shows a reasonably healthy credit. Not everyone wants to do their medical research in a tiny republic stuck out in the savannah of West Africa, but there are compensations. The research is directly about people: organisms and medical phenomena are in people not guinea pigs, and epidemiology figures large. For this you need not merely people, you need nice friendly people, and an understanding population helps to make this the Kingdom of Heaven to an epidemiologist.

The Gambia's people have a willing belief in the delights and benefits of medical research and a considerable dignity to abash the over-assertive. When it came to importing a South African worker to do some haematological investigations, it was with some misgivings that the Ministry of Health was approached about his entry. But—"Bring him in," they said, "we'll show him how nice we are". And they did: he came back the following year and is now thinking of teaching them Rugby!

There are some drawbacks, of course. The rainy season can be tiresome, though there's lots of lovely organisms rife. Distinct seasons do make epidemiology interesting, but it's hard to work full-time on parasites which insist on disappearing by February and not reappearing until July. And of course we are remote. The cut and thrust of one's peers is sorely missed—each researcher tends to be working on a sufficiently different subject to be able to make confident statements based on shaky premises with never a demur heard.

Efforts continue to be made to get onto good terms with The Gambia's neighbours. Visits to Dakar are regular for such essentials as liquid nitrogen and frog's legs. But efforts to revive some institutional form of anglophone West African co-operation in medical research move slowly. The giant to the south—Nigeria—looms over all calculations. They have their own organisations, and the knowledge that they will foot the larger part of the bill for regional co-operative efforts doesn't impel them precipitously into such endeavours. But some concrete results have emerged. A collaborative investigation on malaria and the oral contraceptive pill was initiated between the

Komfo Anokye Hospital, Kumasi, Ghana and the MRC, Gambia with IPPF acting as midwife. Equipment has been another productive source of co-operation. It isn't worth £15,000 (for a cobalt 60 source) to irradiate some malaria infected mosquitoes occasionally, so they are taken to Accra where the Ghana Atomic Energy Commission's machine is used with their enthusiastic co-operation.

Malaria figures large as always in medical research. It is still uncontrolled in Africa though the easy availability of antimalarial drugs and domestic sprays is having an effect in and around cities. The sexual forms of the malaria parasite are being studied to see how and when it arises. The major gaps in the knowledge of African malaria are the reasons for the slow and gradual acquisition of immunity, but techniques for exploration of this phenomenon are hard to come by. Work is going on to investigate malaria in the first six months of life and in pregnant women, where variations in immune status may offer some clues. Vaccination is on the horizon, and work continues on the techniques necessary for the collection of suitable antigen. Work is also done on filariasis and the onset of elephantiasis, schistosomiasis and the longevity of the worm in the face of acquired immunity, the effect of various diseases on cellular immune processes, malnutrition and the contribution of disease to the onset of marasmus, the manner in which female mosquitoes find their hosts, the contribution of mycotoxins to primary hepatoma and on the susceptibility of N'Dama cattle to trypanosomiasis.

And of course there is the grandest tropical health study of them all—Ian McGregor's 26-year-old survey of 4 rural communities in West Kiang district. This unique work brings together 26 years of morbidity and mortality data, growth statistics, endemic and epidemic disease information, serological results and medical genetics. When eventually collected and collated it will form a standard of reference for medical demography and for medical genetics unsurpassed in Africa. Already the information spun off has been of enormous importance.

Always looming, however, is the fact that 4 to 5 of every 10 children born in Black Africa die before adolescence. When projects are designed, this fact can encourage, even justify—for if an experiment works which brings the disappearance of this disease forward one month, 100,000 lives might be saved. A sobering thought. □

IN BRIEF

JET lag

EEC efforts to take the Joint European Torus (JET) fusion reactor from the design to the construction and experimental stage were still stuck firmly in the political mud last week when community ministers failed to agree on a site for the project after a 16-hour tussle in Brussels. There was agreement on building and financing the project, but national opposition to an earlier Commission finding in favour of the site at the community's joint research centre at Ispra, northern Italy, forced an impasse which the ministers finally sought to resolve by establishing a new committee; this will investigate the relative technical advantages of the contending sites and decide whether experience in fusion research and plasma physics is relevant in choosing between them. Ministers are due to meet again in mid-June, over six months after the next five-year stage of the £96-million EEC fusion research programme should have begun.

Nuclear trade measures

In Washington, a Senate sub-committee on arms control heard last week that the "Group of Seven" nuclear exporting nations—Britain, Canada, France, Japan, the Soviet Union, the United States, and West Germany—have agreed still-secret measures to extend safeguards against the misuse of exported nuclear technology. Some clue to the nature of the pact comes from new US Government principles which require foreign recipients of nuclear facilities, equipment and materials to comply with the internationally accepted safeguards already laid down by the International Atomic Energy Agency (IAEA), and to demand identical assurances from any country subsequently handed similar technology. Recipients will also be restricted from using imported facilities for explosive purposes, whether peaceful or not, as a result of the new US policy.

Serendipity in science?

"There is nothing more practical than a good theory", said Mr Brezhnev, addressing the Twenty-Fifth Congress of the Communist Party of the Soviet Union last week. These words, reiterated by Academician Anatolii P. Aleksandrov, President of the Soviet Academy of Sciences, were apparently intended to justify expenditure on basic research in a Five Year Plan which urges that science should be made cost-effective and more closely linked to production. Citing examples ranging from nuclear physics and MHD-generators to cytology and genetics,

Aleksandrov stated that basic research "radically changes technology, leads to the appearance of new materials, and opens up possibilities of using new, often unexpected phenomena, which have no connection with the original field of research".

Dragon reprieve?

The death-throes of the 15-year old Dragon high temperature reactor project at Winfrith in the UK may last longer than expected if a proposal from the European Commission in Brussels is approved. The Commission wants to see the team kept together until the end of the year, mainly to allow the results of the whole project to be evaluated, but also, in turn, to

leave the way open for any possible but unlikely resuscitation. The proposed maintenance would cost about £1½ million.

BNFL complication

As British Nuclear Fuels Ltd awaits cabinet approval for its controversial Japanese nuclear processing deal, there are reports of French moves to break into the contract. Britain, being a member of the reprocessing group set up with France and Germany known as United Reprocessors Ltd, is obliged to discuss the French bid for a possible 50% share in the contract, or risk competing with France for the entire deal, worth up to £600 millions over the decade following 1980.

Dumping decision

Whatever the outcome of the BNFL negotiations, Britain is to continue dumping low activity material in the deep ocean. In a House of Commons written reply last week, the UK Energy Secretary Anthony Wedgwood Benn stated that desirable disposal rates of the "low activity plutonium contaminated solid radioactive waste", stored mostly at Windscale and Drigg in Cumbria, are well within International Atomic Energy Agency safety limits. They do, however, exceed the dumping levels arranged by the Nuclear Energy Agency of the Organisation for Economic Cooperation and Development, and Britain is to push for higher limits.

SOME members of the Council of the Royal Society for the Prevention of Cruelty to Animals (RSPCA), following their success in persuading the society to oppose fox hunting, are trying to engineer the acceptance of a similar policy towards angling. They say it is cruel and should be banned. If they are successful, the conservation of our environment, and in particular of our rivers, could suffer great damage.

Angling is by far the most popular outdoor sport in Britain, having as many as three million adherents. On an average weekend during the fishing season, there are likely to be as many as five individuals sitting patiently by our rivers and canals waiting for a fish to bite for every one spectator attending a professional football match. Although some members of angling clubs from the midlands may lighten the tedium of their coach journey home from the dykes of East Anglia by song lubricated with bottled beer, this seldom if ever leads to the sort of vandalism apparently inseparable from watching some of our more notorious soccer teams. The unobtrusive behaviour of fishermen generally is the reason why others are so surprised to learn of their numbers.

However, anglers can be aroused to effective action when their waters are polluted. Although salmon and trout can flourish only in the cleanest streams, even so-called "coarse" fish (which supply the bulk of the sport in England) are delicate indicators of pollution. There have been thousands of occasions when the first warning that some unauthorised and toxic effluent has been discharged into a river has been given by a fisherman who has spotted dead or dying fish which might never have been noticed by the river authorities. The Anglers' Cooperative has been effective in taking legal action to stop such practices. Of course anglers can only operate in

rivers pure enough to contain fish, and so our filthiest waters do not receive their attention. This is perhaps one reason for the slowness with which they are cleaned up. But once a river is clean enough to be invaded by fish, it is the angler who plays the

Angling right



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greatest part in safeguarding it and who may be responsible for further improvements.

Anglers not only outnumber other sportsmen; they also greatly outnumber all our organised environmental and wild-life conservationists. Angling is, furthermore, a sport with adherents from all social classes, including those unlikely to be involved in the more elitist forms of conservation. Yet, as I have indicated, anglers are really *effective* conservationists. It would thus be to their mutual benefit if the two groups could get together to cooperate whenever possible. If bodies like County Conservation and Naturalists' Trusts could recruit a

proportion of the anglers operating in their area, they could often quadruple their numbers and end the criticism that they are only a bunch of middle class protectionists working for their own selfish ends. The conservation bodies could help the anglers, for instance, by making waters in suitable reserves available for fishing, and by preventing bodies like the RSPCA (many of whose members are the self-same middle class conservationists) from endorsing policies likely to damage the countryside.

Presumably the move to ban angling is an attempt to benefit the fish. It might prevent a number of fish from being hooked, an experience which can hardly be pleasant, though there is disagreement about the extent to which fish and other cold-blooded animals experience what we describe as "pain". However, without the vigilance of the anglers, fish kills would almost certainly become commoner, and fish might be completely exterminated from many of our waters. It is not unreasonable to suggest that the experience of a fish, choking to death in unnecessarily deoxygenated streams, or writhing in apparent agony after exposure to poisoned effluents, could involve greater cruelty than that arising from normal fishing practices.

Today there is such pressure on our countryside and on its wildlife that all forces need to be mobilised to protect the environment. Freshwater is the habitat most endangered by pollution. It is to be hoped that those members of the RSPCA who are so strongly opposed to fishing will come to realise what would be the eventual consequence of their present policy. Fortunately they are more likely to destroy their own society than to stop a sport which has such widespread support from all sections of the community, and which contributes so much to preserving our environment.