Bond.

### Officers Elected.

The following officers were elected:—President, Dr. F. S. Hone (S.A.); Vice-Presidents, Dr. Everitt Atkinson (W.A.), Dr. E. S. Morris (T.), Dr. A. H. Sutton (N.S.W.), and Chairmen of the State Branches, ex-officio; Hon. Secretary, Dr. J. R. Kerr; Hon. Treasurer, Mr. H. E. Prior; Federal Executive Council, the President, Secretary, and Treasurer, and Dr. J. H. L. Cumpston, Mr. Frank Shann, Dr. Jean S. Greig, Sir James Barrett, Professor H. A. Woodruff, Dr. Ethel E. Osborne; Federal Council, the officers of the association and Dr. Harvey Sutton (Sydney, New South Wales), Mr. Frank Shann (Melbourne Victoria), Mr. J. P. Marcus (S.A.), Professor H. A. Woodruff (Melbourne, Victoria), Miss Freda Bage (Brisbane, Queensland), Dr. E. S. Morris (Hobart, Tasmania), Dr. Jean S. Greig (Melbourne, Victoria), Capt. E. R. B. Pike (Brisbane, Queensland), Dr. D. G. Robertson (Melbourne Victoria), Dr. Frank H. Beare (Adelaide, South Australia), Dr. Ethel E. Osborne (Melbourne, Victoria), Dr. Gertrude Halley (Adelaide, South Australia), Miss Eleanor M. Hinder (Sydney, New South Wales), Mrs. Cowan (Perth, Western Australia), Sir James Barrett (Melbourne, Victoria), Dr. J. H. L. Cumpston (Melbourne, Victoria), Dr. W. G. Armstrong (Sydney, New South Wales), Mr. J. Brownlie Henderson (Brisbane, Queensland).

Sir James Barrett was elected President of the conference to be held in Melbourne next year.

### Health Films.

Sir James Barrett drew attention to the extraordinary success of the moving picture in public health work. Dr. Purdy and he had had an experience of this class of publicity while in Sydney. A total of £220 had been spent on films. The venereal diseases film had been shown in Sydney, and although the Minister of Health in that State was inclined to be critical, as a result of the public interest it aroused the vote had been doubled. At the screening in Melbourne the town hall had had to be closed half an hour before the lecture because the hall was full. A greater amount might have been spent, but many thousands of people had been made aware of the value of the scheme.

Capt. Pike moved that the Commonwealth Government should be approached and asked to instruct Dr. Cumpston (Commonwealth Director-General of Health) to purchase at least 10 films on health subjects while abroad. He said that the value of film was first recognised in the hookworm campaign in Queensland.

Dr. J. S. Purdy suggested that the association should obtain a series of health films, and show each film in each of the States in turn.

The motion was carried unanimously.

A vote of thanks was accorded to Dr. Hone for his services as President of the association.

Register.

25 AUG 1924

# MAN'S MINUTE ENEMIES

## Lecture by Sir James Barrett

**Sir James Barrett, although a most eminent scientist, addresses his audiences in such "unprofessional" phrases that no one can fail to grasp the full meaning of his lectures. He is also a man of many parts, for during last week he spoke on, and showed himself equally familiar with, the Rockefeller Foundation and play; and on Saturday night spoke on germ diseases before the health association in Lister Hall.**

Sir James explained that the malaria germ was in man, and it was transmitted to other human beings by the anopheles mosquito. To rid a district of malaria it was first necessary to destroy the mosquito and its breeding places. That was done by draining the marshes and other places that held still water, treating that water with oil or Paris green to destroy the larvae, and preventing the mosquito from entering sleeping places by means of fly wire and nets. The malaria germ was placed below the skin by the mosquito; it then entered the blood cells, and grew and multiplied. The malaria germ was known to exist in most countries, but brought the most havoc in the tropics. Malarial fever was rife in northern Australia, and was known to exist as far south as Newcastle (New South Wales). Anopheles germs, however, had been found in the Murray Valley and on the River Torrens, Adelaide. The country where it was most rife was perhaps Palestine, and ever since the time of Mark Anthony it had been responsible for more deaths in the armies that had occupied that territory than the weapons of war. In the Great War, however, Gen. Allenby, during the occupation of the Jordan Valley by British troops, had defeated the germ by setting 2,000 men to work to drain the swamps, and Allenby's army at the end of the war was one of the most efficient known. After a man was bitten by the mosquito, it took 10 to 14 days for the germ to develop, and in that time half an army might be affected. When the Australian troops left the Jordan Valley to chase the Turks, they were badly affected with malaria, because they exposed themselves when sleeping more than the Indian troops, and after the signing of the Armistice there were 33,000 men in bed with malaria. It was estimated that there were 2,000,000 deaths a year from this cause. As the people returned to Australia from the mandated territories they would bring the malaria germ with them, and, if the mosquito were allowed to live and increase, there would be danger of infection.

### The House Fly.

The house fly, said Sir James, was the chief agent in disseminating typhoid fever. If the house fly were given the same lease of life, it would do more damage than the anopheles mosquito. How the fly existed through the winter was still a mystery. It was known that flies lived longer in the winter than in the summer, when their life was about three weeks. The fly could not propagate until the temperature rose to 60 deg., which in southern Australia lasted from about the middle of September until the middle of May. It was in that period that babies died of infantile diarrhoea. By killing all the torpid flies in winter, there would be very few to do any damage when the temperature rose to 60 deg. To breed, the fly required moisture and organic matter, and above all it preferred to lay its eggs in fresh stable manure. Manure should therefore be buried, or effective means taken to prevent the fly from breeding in it. It had only to land on to an infected article, and then eject the germs into the child's food, which could be performed in a moment, and the damage was done. The breast-fed baby did not die from infantile diarrhoea, because there was no chance of the milk being infected. The fly also carried the germs of cholera, scarlatina, and all classes of intestinal diseases. If the flies could not get stable manure, they went to garbage tins, and those should all be covered with lids to prevent their entrance. Efficient wire doors and screens should be fitted to all openings, but, if the flies did get into the house, there were many ways of destroying them. In one hospital in Egypt all the flies were cleared out in two months by an efficient sergeant by a system of traps. One trap caught 30,000 flies in a day, and another 3,000 in an hour. They found that the most effective method of killing flies in the army was by the use of an ordinary throat spray and Lotol. The best baits for traps were old fish heads outside, and beer inside the house. Prohibition did not apply to flies. (Laughter.)

### Rats.

Sir James said reliable statistics set down the rat population in most countries as about equal to the human population. There were about 45,000,000 people in the British Isles, and there were about 45,000,000 rats. It was said that each rat ate from 35/ to £2 worth of food a year. In Brisbane it was estimated that each rat ate and destroyed from £5 to £10 worth of food a year. It was an exceedingly clever animal, and difficult to destroy. All openings to buildings should be strongly screened, covered against rat invasion, and stores, verandahs, and other places should have concrete floors. Special attention should be given in this respect to warehouse cellars. A rat had been known to make a lateral drive of 45 ft. into a grain store. They could be killed in their holes with bisulphide of carbon, or poisoned, but there were objections to the latter method on account of the smell. The rats were very subject to plague and carried fleas. The fleas left the rats, got on to human beings, and infected them with the plague germ. Large sums were spent in Sydney and Brisbane, where plague was prevalent, in the destruction of rats, but he was glad to say that plague devastation was not so serious to-day as in past centuries, because they had traced the source of the trouble to the rat, and dealt with him. Rats bred four or five times a year, and had from six to 19 in each litter, and it was estimated that if a pair of rats and their progeny were allowed to breed unchecked for nine years they would produce 940,000 million. In America it was estimated that rats were responsible for damage to the extent of 35 million dollars a year.

### Tubercular Germ.

The lecturer said there were two means of conveyance of tubercular germs—bovine tuberculosis from milk, and human tuberculosis conveyed in talking and close contact between human beings. The great enemies of this germ were sunshine and fresh air. If the sun could not get into a house, it could be regarded as a potential consumption house. The policy of a political party in Victoria, who were striving to make the land tax the only tax, would have the effect of crowding the land with houses, and if that were done the consumption germ would increase immensely. With proper house construction and open spaces and playgrounds, the scourge could be effectively dealt with. In his State the Government were spending much money to discover the perpetrators of the large number of sexual crimes, crimes of violence, and robbery. It would be more beneficial if that money were spent in discovering why people did those things. There should be social medicine as well as physical medicine.

### Germs Filmed.

The lecturer threw on the screen a most interesting set of films prepared by the health authorities in the United States. They showed actual pictures of germs (enlarged many thousands of times), their methods of living, and the ways to combat them.

A vote of thanks was tendered to the lecturer at the instance of Cr. McEwin (Adelaide), and Dr. P. T. S. Cherry (Port Adelaide), who advocated that the pictures, or similar ones, should be shown in every picture theatre in the metropolitan area for the education of the people.

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25 AUG 1924

# ENEMIES TO HEALTH.

## The Fly, Rat and Mosquito.

## Lecture by Sir James Barrett.

**The ravages to health caused by the house fly, the rat, and the mosquito were graphically illustrated in a cinematographic lecture given by Sir James Barrett on Saturday evening.**

Sir James Barrett lectured at the Lister Hall on Saturday evening on "Flies, Rats, and Mosquitoes," before a fair attendance. Dr. F. S. Hone (president of the Health Association of Australasia) presided. The lecture was illustrated by some excellent films, depicting the life history of the house fly, showing how it carried infection to human food, the mosquito, and the rat. The rate at which these pests multiply was graphically shown. A humorous film with a moral showing the advantages of fresh air and exercise in combatting the germs of tuberculosis was also screened.

### The Deadly House Fly.

Sir James described the common house fly as the insect of death and the typhoid fly. There were many different kinds of flies, and the fly that worried one in the bush was not the same as the house fly. The latter caused more loss of life than anything else in the world. When a fly walked over food it strewed thousands of germs in its path. The existence of flies during the winter was still a bit of a mystery. They might be noticed in the kitchen or the scullery in a half alive condition, but when the temperature reach 60 degrees, that was from the middle of September to May, the flies began to multiply and the babies to die of infantile diarrhoea. The same condition of affairs applied all over the world. The best time, therefore, to destroy flies was in the winter before the temperature reached 60 degrees. It was now known that flies could not breed without moisture or organic matter. Above all things flies preferred to lay their eggs in stable manure where the maggot and pupa stages were passed.

The common house fly, the lecturer said, ate half its own weight and vomited over food. As it was not particular where its food came from it was understandable how it carried infection. All the fly had to do was to walk from infected material on to food, and the business was done. Breast-fed infants did not die because there was no chance of the mother's milk being infected. Bottle-fed babies, on the other hand, had to depend on milk which often stood in the house unprotected from flies. Especially was this the case when a manure heap was near the house. All that was needed was for the fly to come in contact with material infected with diarrhoea, spread the infection to the milk, and the child suffered. Intestinal diseases were the fly's specialty par excellence.

There were two methods of destroying flies. One was either to see that stable manure was placed where flies could not get at it or to see it was distributed fresh over gardens and elsewhere. The eggs in the manure would be hatched but no further eggs would be laid. The other method was to destroy them in the house by means of traps and spraying. In one military hospital in Egypt the flies were cleared out in two months. Some of the traps caught as many as 30,000 flies a day. The use of an ordinary spray and Lotol was also an effective method. The objection to traps was that the bait was filthy. Outside fish heads were used and inside beer and sugar were employed, because the prohibition business did not apply to flies.

### The Rat Pest.

Dealing with the rat, Sir James said that in England it was estimated that the rat population and the human population were equal. If there were 45,000,000 people in Britain, there would be 45,000,000 rats, and it was also estimated that each rat ate from 35/ to 40/ worth of food in a year. In Brisbane, he had been told that rats consumed from £5 to £10 worth of material a year, the rats here evidently availing themselves of the good Australian conditions.

Sir James spoke of the measures taken to protect the wharfs at Brisbane against rats, and said that the construction of concrete foundations to houses, and the screening of openings, were effective means of preventing the entry of rats. If the vermin lived in holes they could be destroyed with bisulphate of carbon. When thrown down a rat-hole it volatised and poisoned the rats. Rats were carriers of bubonic plague. A flea infected the rat with the disease, and when the rat died the flea jumped from it on to human beings. That was the reason enormous sums of money had been spent to eliminate those creatures.

### Balance of Nature.

He wondered if those people who advocated the wholesale destruction of crows ever stopped to think whether the crow was a friend or an enemy. The crow was a destroyer of carrion, and, therefore, performed a useful service. Man must not interfere with the balance of nature or the results were likely to be harmful. Every animal should be put on its trial before it was destroyed. This was the policy adopted by the British Board of Agriculture when it considered the question of destroying starlings. An examination was made of the stomachs of the birds and points were assessed in favor of their value to man against, and neutral. The result was that the good points of the bird almost equalled its bad ones, and instead of the Board advocating its extinction it recommended its reduction. In Victoria the extinction of the white cockatoo had been recommended on account of its destructiveness to grain, but he had met a farmer who had told him that in areas where there was no grain the bird had been a potent factor in destroying the onion weed. The spread of the onion weed on the other hand could be attributed to the destruction of white cockatoos.

### Consumption Traps.

Speaking of the menace of tuberculosis, Sir James criticised certain types of houses which were being built in Melbourne, which prevented the sunlight from getting into the rooms. These houses were potential consumption traps. The last Government in Victoria spent £100,000 in sanatoriums, and the present Government had already spent £43,000, but with proper house construction, with open spaces in the towns and gardens, much could be done to prevent the spread of tuberculosis. To every thinking citizen it must appear ridiculous that thousands of pounds were spent on hospitals, doctors, and nurses for curing diseases, which could be prevented. This did not only apply to physical diseases, but to social diseases as well. They had been shocked at the number of sexual crimes and robberies reported recently, and they were spending money trying to catch and punish the culprits, but did they not think the time had arrived when they should be enquiring why people did these things? There was a need for preventive social medicine.

### Malaria.

Dealing with the ravages of malaria the lecturer paid a tribute to the work of Lord Allenby during the Palestine campaign. Lord Allenby knew the risks from malaria, and took measures accordingly. By the assiduous efforts of the Army the Jordan Valley was cleared up and the mosquitoes got rid of. This was essential to carrying out the campaign, but Lord Allenby knew his job, and was removed from the interference of the House of Commons. When the advance was made from the Jordan Valley it was determined that the campaign must be short and rapid for the troops had to pass through malaria country, and it took from 10 to 14 days for the disease to develop after the patient had been bitten by the mosquito. Allenby's chief of staff kept saying, "Hurry, hurry," for he knew what was in front of them. The campaign was short and decisive, but just after the Armistice nearly half of the Palestine Army was down with malaria. The Australians suffered worst of all, as they rolled up their sleeves and opened their shirt necks, permitting the mosquitoes access to their bodies. The Indian troops, on the other hand, kept themselves wrapped up when they slept, and did not suffer to the same extent.

Malaria had not come further south in Australia than Newcastle, but the malaria mosquito had been found in the Murray Valley and in Adelaide. There was always a danger that if malaria patients were about these mosquitoes might become infected and pass the infection on to human beings. They might wonder why he stressed the importance of controlling malaria in Australia, but if the native population disappeared and were replaced in the tropical areas by other people then the control of malaria would become a political question of the first order.

Councillor G. McEwin proposed a vote of thanks to Sir James Barrett, which was seconded by Dr. Cherry, who said the Government should obtain pictures, similar to those shown by Sir James, and make it compulsory for them to be shown at picture theatres. The motion was carried with acclamation.

Sir James, in returning thanks, mentioned that in San Francisco flies had been completely exterminated. A friend of his had been there for eight days during the fly season, and he had not seen a single fly.