

1st Prize

**THE
ACADEMY
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Class B
1st Prize

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**SUPERIOR
WHITE PAPER
EXTRA THICK
QUALITY**

BRITISH MANUFACTURE

Essay "B"

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INTRODUCTION

The Destroyed Insects

— The locust, Tsetse Fly, and Mosquito argue which of them could do the greatest harm to man.

Insects have always been the enemy of empires. They are credited with bringing about the downfall of Babylon and Assyria as well as sapping the civilisation of Ancient Greece. Over forty-four centuries have passed since the mosquito victory over Babylonia but insects still wage a ruthless and unceasing warfare to defend the Tropics against the civilising activities of the White Man. Barbarisation has an outstanding ally in the destroyed insects.

The distribution of insects is wider than that of man himself. There is no impregnable desert or swamp as far as the six-legged creations are concerned. Their three hundred million years existence has enabled them to evolve and adapt to every climate. They are found at the pole and the equator but the main insect-army — in numbers beyond computation — is massed in the tropical belt that lies between Cancer and Capricorn.

A glance at the map of the world will show that much of this area is printed in red to indicate that they are parts of the British Commonwealth of Nations. It contains such

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INTRODUCTION

'BEELEBUB'

Summons a world
conference of insects

THE INSECTS GATHER

diverse territories as The West Indies, British Honduras, British Guiana, Sierra Leone, The Gold Coast, Nigeria, Uganda, British Somaliland, Aden Protectorate, Kenya, Tanganyika Territory, Nyasaland Protectorate, South West Africa, Bechuanaland, Northern Rhodesia, India, Ceylon, Burma, The Malay States, Sarawak, North Borneo, British New Guinea, Northern Australia, The Solomon and Fiji Islands.

Most of these places have their own insect problems and it is no exaggeration to say that the outcome of the battle between man and the destroyer insects is dependant on the knowledge and resourcefulness of our Colonial Entomologists. Fortunately not all insects are harmful. Many are neutral and some even helpful, but such pests as locusts, Tsetse-flies and Mosquitoes are sworn enemies of our Commonwealth and of mankind in general.

They instinctively seek out the weak spots and it may be taken for granted that trouble in Cyprus and Egypt represents welcome news. One can ^{even} imagine Beelzebub - the fly god - summoning a world conference of insects to exploit this opportunity.

There may have been some relaxation of the order which forbids any aircraft from leaving one country or entering another without being disinfested. Some military aeroplane plying between Cyprus and Port Said or Aden may have

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BEELZEBUB —

outlines the purpose of
the meeting

provided transport to the insect delegates travelling to the 'Land of flies'.

What better Conference-place could there be than the banks of the blocked Suez Canal? Watching the soldiers of many nations, the insects can hardly fail to recall occasions on which they have decimated armies, and made fools of generals, but it is time to make Beelzebub take the chair and allow the three main destroyers to boast of the harm that they could each do to man.

All buzzing, chirping and humming ceased as Beelzebub rose to outline the purpose of the meeting. The Fly Diety had a penetrating voice that was neither a chirp, a buzz nor a hum but a blending of all three. Every word carried clearly to the outside fringe of the great insect assembly as he went on to remind the meeting of past and present relations between man and insect: of how the three speakers in the forthcoming debate had each fought valiantly against the vertebrates - especially the upstart man. The various arguments would, he said, be followed by a brief summing-up after which the meeting would be asked to decide whether the locust, the Gsetse fly or the mosquito was most entitled to describe itself as man's greatest enemy.

Beelzebub called upon the locust whose chirpy voice seemed

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THE LOCUST
opens the debate

THE LOCUST
develops his case

THE LOCUST'S speech
continued

thin and rather unpleasant but this was compensated for by the interesting way in which this grasshopper presented his case.

"What better time or place, he went on, could there be for the telling of 'the locust-story'? Was it not the enmity and hatred of Egyptians for few that ensured the locust a place in history? Have not these ancient races again deserted their insect precautions in order to wage war upon each other? The time is propitious for an all-out attack by the destroyer insects.

Our very existence has been and still is, threatened by increasing Commonwealth union. The additional prospect of international action is something which must be forestalled at all costs. The locust, Hessian-fly and Mosquito must all work together, each doing their utmost for this is the only way to repeat our victories of the past.

The locust has, you will all agree, the advantage of mobility. This enables us to locate our breeding-grounds in places far remote from human habitation where, when the climate is favourable, we hatch, multiply, swarm, ready to take the air and move forward at ten miles an hour. We are so numerous that we 'darken the sky' and 'eat up every green thing' where we alight.

This destruction of crops brings famine to man and animal. It lowers their resistance to disease and thus opens

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THE LOCUST'S speech
continued.

THE LOCUST'S speech
continued.

up the way for Gsetse-fly and mosquito to do their maximum damage. Some idea of the immense distances covered and devastation caused may help to establish our claim of being man's greatest insect pest. In the United States, a previously obscure grasshopper, the Rocky Mountain locust assumed the swarming habit, and in the single year 1874 inflicted forty million dollars worth of damage. This was increased to over two hundred million dollars before the outbreak was got under control in 1877. Another species, the Desert locust swarmed in Africa in 1925. This outbreak of locusts assumed such vast proportions that in British territory alone over six million pounds and twenty eight million man-days were lost. The average annual loss in Africa and Western Asia amounted to one and a half million pounds during this period. South Africa's loss of maize and mealies was estimated at close on three million pounds.

Man had no sooner got the Desert locust under control than the Red locust began to menace the Southern-half of Africa as a softening-up preliminary for our allies the Gsetse-fly and mosquito.

It must, however, be pointed out that these locust successes have not been won without heavy casualties for fear of the swarming grasshopper has united men of every

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THE LOCUST
concludes his
speech

race, creed, colour and tongue in an organised alliance against us. Man no longer attempts to scare us with the beating of tomtoms and the blowing trumpets. He has trained entomologists and set them to study the habits of every one of the twenty thousand species that make up the order Orthoptera. He has traced out remote breeding grounds on the middle Niger, and brought every manner parasite and predator against us. We are subject to a ruthless attack at all three stages of locust life. Our eggs are dug up and destroyed; next the crawling hoppers are driven into deep trenches, cut in front of them to be destroyed by spraying and flame-throwers. Then the flying locust is intercepted and dusted by arsenical compounds from aeroplanes. Even the smog or sulphur laden fumes which have proved so deadly against man himself have been tried against us.

Are we demoralised? No, a thousand times no! Our eggs are laid over so wide an area that man cannot hope to destroy more than a small fraction of them. The Spring will hatch out Billions upon Billions of hoppers ready to swarm and take wing against our old enemy man. We are ready to re-darken the sky and repeat the eighth Plague."

There was tremendous buzzing, chirping and humming as the locust finished this fighting speech. Beelzebub waited

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BEE-ZEBUB calls
on the Tsetse-fly to speak

THE TSETSE-fly
supports his claim

for it to subside and then called the Tsetse-fly to justify his claim of being man's greatest insect pest.

The steady buzz of the Tsetse-fly provided a welcome change to the high pitched chirp of the locust and the insect delegates again listened with great interest.

"I cannot do better," said the Tsetse, "than confirm that it is our intention to keep 'the dark continent' dark. We do not like the red areas of the British Commonwealth of Nations that stretch up and down and across the African Continent for they everywhere, represent a growing organisation that is bent upon control and destruction of the Trypanosome-carrying Tsetse-fly. Major Bruce of the British Army Medicine Service was the first to suspect us of being responsible for nagana in animals and African sleeping sickness in man. This was confirmed in 1895 and 1903 respectively. Up to that time we of the Glossina spp. had held undisputed rule throughout the great tracts of Central Africa. Arab invaders of Africa had retreated before us in the tenth century and the death of their horses, dogs and oxen turned back the Portuguese in the fourteenth. Livingstone too had his explorations hampered by the loss of his pack animals.

Man, himself has described us as the most menacing problem

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Isetse-fly's speech continued

that confronts Africa. It is both economic and human with many subsidiary ramifications. Our twenty one species are spread over an area of four and a half square miles and our eggs cannot be destroyed — like those of the locust — for our larvae is hatched within the mother's body.

The African sleeping sickness and nagana which we spread is so deadly that man and animal is forced to retreat before us. This results in the subsidiary problem of over-grazing in disease free land which in its turn causes soil erosion that annually turns thousands of square miles of pasture into desert.

Man has tried to oppose our attack by clearing the jungle — burning the grass, killing wild animals and moving and rehousing whole communities.

It is in the development and use of new drugs that our enemy is making the greatest headway. These are curing sleeping sickness in man and nagana in animals. Paradoxically they are also improving the health of the Tsetse-fly by reducing our chance of becoming infected with the troublesome parasites, *Trypanosoma gambiense* or *Trypanosoma brucei* every time we bite man or beast.

This would mean that man had won but we of the *Glossina* spp think that such a defeat need not worry us as long as any ill prepared territory can have self government for

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The Gnat-fly.
concludes his
speech

Beddybub calls on
the mosquito to speak.

Mosquito briefly states
her case

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the asking. We too look to the future with confidence."

Beelzebub cut short the applause to say that the two speakers had overrun their time and the mosquito would have to present her case in about half the time that had so far been taken but all the assembly were aware of Mrs Mosquito's reputation and did not doubt her ability to make a brief yet telling speech.

The querulous sing-song voice took up the challenge. "Man has," she said, "paid us the compliment of studying the *Anopheles* more closely than any other insect. We owe this attention to world-wide distribution linked with the fact that we vector so many deadly diseases. The Tsetse-fly has boasted his dual role but we spread Malaria, Dengue, Blackwater fever, Yellow fever, Filariasis, Encephalitis and other complaints. Taken together, these diseases cause more human deaths than any other agency.

Anti-mosquito measures are of course widespread and intense. But malarial activities are countered by drugs, drainage, improved sanitation and health education; while our spreading of Yellow fever meets an ever increasing opposition by the use of a vaccine that gives immunisation to man and animal.

This curtailed 'mosquito saga' is not intended to close on a despondant note and our present meeting place on the banks of the Suez Canal suggests a 'mosquito epic' in which our *Aedes aegypti* and *Aedes simpsoni* defied man's efforts to join Atlantic and

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the mosquito
concludes his speech.

Beelzebub's summing up
and result of vote

Pacific for a period of four centuries."

The applause died as Beelzebub thanked the speakers for a very clear exposition which, he said rendered any detailed summing up unnecessary.

"I," he said, "commend a single thought, never underrate an Empire which produces such men as Ross and Bruce."

The subsequent vote was too close to bolster up any destroyer's ego. The chairman cast his vote for the mosquito in order to present a deadlock.

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