ditioned to the anti-aircraft guns, starting to rip his cage to bits every time they start firing.

As regards wild birds, there is a good deal of evidence that many of the larger kinds are disturbed by the sound of bombs or anti-aircraft fire. With song-birds and other passerines, however, the chief reaction seems to be to aircraft. These are treated as if they were hawks, the birds scattering downwards and crouching to avoid detection. There are two curious exceptions to this: neither robins nor any member of the swallow tribe have been seen to pay the slightest attention to aircraft. The stories of gulls giving warning of the approach of hostile aircraft are presumably based on the same reaction: their keen senses—eyes more probably than ears—detect the aeroplanes a little before they are audible or visible to human beings.

Domestic animals vary individually. Some dogs have what may be called A.R.P. sense, and distinguish perfectly between the alert and the all-clear signals. One cat has been reported in this category; at the alert she comes indoors to take shelter, but when the raiders-passed signal is given she jumps up and scratches to be let out. She is indifferent to mere noise. Other dogs show no recognition of the difference between the sirens' signals. Again, some dogs do not mind the noise of guns and bombs, or even seem to like it, while others are miserably frightened and crawl under the furniture. Some parrots definitely dislike the noise, and scream loudly and hysterically.

EARTHQUAKES OF 1940[1]

FOUR strong distant earthquakes were registered at Kew Observatory during September. They were on September 12, 19, 21 and 22. The second of these was the greatest, having a ground amplitude at Kew of 47 μ, and being estimated at a distance of 17,400 km. The second was at a distance of 6,100 km with an estimated depth of focus of about 390 km, whilst the third, probably distant about 140°, had a depth of focus of approximately 500 km. News from other observatories is awaited before the epicenters and depths of focus can be given with precision.

On September 4, two local earthquakes were felt in Palestine each of which lasted about 10 seconds. No damage has been reported and the shocks were not registered at Kew. It is reported in the press that an earthquake was felt in Copenhagen early on September 28. No damage was reported. Earthquakes are rare in this district and the shock may have been caused by fault slipping in the Sound separating Denmark from Sweden.

The coast of Chile in the neighborhood of Iquique was shaken by a violent earthquake about 6 A.M. (local time) on October 4. Reports of damage and details of the shock are not yet to hand. Chile as a whole is very liable to earthquake shocks, and Iquique has been affected on a number of occasions in the past, notably on May 9, 1877, when there was widespread destruction due to large sea waves caused by the earthquake in addition to the extensive damage done by the earthquake itself, and on January 23, 1878.

During April, May, June, 1940, forty-seven earthquakes were registered at the Riverview College Observatory, New South Wales, as compared with fifty-six in the first quarter of the year. The observatory is equipped with two Wiechert horizontal 1,000 kgm instruments, one Wiechert vertical seismometer of 80 kgm, two Mainka 450 kgm seismometers and three Galitzin aperiodic seismometers with galvanometer registration, orientated north-south, east-west and vertical. The largest two shocks of the period appear to have been on April 1 when an amplitude of 23 mm was obtained and on May 28 when an amplitude of 22 mm was reached. The shock of April 18 was felt in the region of the Duke of York Islands, New Britain, etc. The shock of May 24 is reported to have had its epicenter in Peru, and the earthquakes of June 18 and June 22 were deep focus shocks. The instruments are occasionally affected by microseisms which are at times severe. The microseisms do not often preclude the accurate reading of the seismograms, details of which are given in the observatory report.

[1] From *Nature*.

FINANCES OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

IN the annual report of President Karl T. Compton, of the Massachusetts Institute of Technology, the finances of the institute are discussed. The institute closed the year with a modest surplus. Of the budgeted expenditure of $3,333,000, slightly more than 69.3 per cent. was for academic expenses, 26.4 per cent. for plant and administration, and 4.3 per cent. for miscellaneous expenses. The yield on all investments, based on market values as of June 30, was 4.32 per cent. as compared with 3.89 per cent. a year ago.

Financial aid to students during the year amounted to $434,966, which included undergraduate scholarships to the sum of $93,830, and graduate scholarships and fellowships reaching a total amount of $111,618. Loans to students amounted to $162,843, and $66,675 was earned through the student employment service.

Commenting upon the institute's placement service for alumni and the graduating classes, Dr. Compton reported that the class of 1940 was more than 90 per cent. placed on September 1, and that the men of this class found employment in thirty different states. A number of those not placed include graduates who are entering private consulting or architectural practice.

Among the urgent needs of the institute are a new building for the department of chemical engineering, the largest in the institute, which is now greatly overcrowded. Plans for such a building have already been

drawn and should the necessary funds be obtained, the new quarters would relieve congestion in a large part of the educational buildings on the eastern side of the institute. Attention was called to the need for new biological laboratories and the opportunities that could be realized by an increase in research funds of $200,000 a year or more.

Dr. Compton also pointed out that the large waiting list is evidence of the need of an additional dormitory unit, which could be immediately filled.

ACQUIREMENT BY HARVARD UNIVERSITY OF A DEPOSIT OF FOSSILS IN NORTHERN FLORIDA

DR. THOMAS BARBOUR, director of the Harvard Museum of Comparative Zoology, announces that a rich deposit of fossils in Gilchrist County, northern Florida, dating back some 18,000,000 years to the Miocene era, has been purchased by Harvard University for research purposes. The deposit, on a forty-acre farm site, contains the only reasonably complete store of Miocene fossils so far reported in the United States east of the Rocky Mountains. In preliminary excavations, Dr. Barbour and members of the museum staff found remains of several primitive horses, camels, dogs and rhinoceros. The deposit is expected to give the first good picture of land-life on the eastern seaboard during the Miocene period. All other eastern Miocene deposits are primarily of marine life.

Dr. Theodore E. White, of the museum staff, will work at the site this winter under a grant from the Milton Fund of Harvard University. Several years of excavation will be required to piece together the picture of the fauna as found in the fossil bones.

Fragments from the deposit have been on exhibit for some years at the museum of the Florida Geological Survey. These were seen several years ago by Dr. Barbour, who, with the aid of Mr. and Mrs. William E. Schevill, of the museum, located the site and made preliminary excavations. Last winter Drs. Barbour and White excavated for a longer period, finding some complete skulls and long bones. The specimens found at the end of the work last winter were better preserved than those found earlier, and it is probable that further digging will disclose material still better preserved.

EQUINE ENCEPHALOMYELITIS AND MOSQUITOES

EVIDENCE as to the guilt or innocence of mosquitoes in transmitting equine encephalomyelitis will be analyzed at the eleventh annual Conference of Mosquito Abatement Officials in California, to be held at the University of California at Berkeley, on December 16.

Speakers and their subjects, announced by S. F. Dommes, Jr., secretary, are as follows:

Epidemiology and Distribution of Human Cases, Dr. H. L. Wynns, chief, Bureau of Epidemiology, California State Department of Public Health.

Distribution of Cases in Horses and the Economic Importance of Equine Encephalomyelitis in Horses, Dr. C. U. Duckworth, administrator, Division of Animal Industry, California State Department of Agriculture.

Relationship of Distribution of Cases and Mosquitoes, Thomas H. G. Aitken, University of California.

Investigations of Equine Encephalomyelitis in Kern County, Dr. W. C. Buss, epidemiologist, Kern County Health Department.

Present Information on Experimental Transmission of Equine Encephalomyelitis by Mosquitoes, Dr. Malcolm H. Merrill, California State Department of Public Health.

Professor W. B. Herms, head of the Division of Entomology and Parasitology of the University of California, will introduce the symposium, and a summary of the discussion is to be presented by Dr. Bertram P. Brown, director of the California State Department of Public Health.

Representatives from twenty-five mosquito abatement districts and from health departments and universities in California ordinarily attend the conference. This year, invitations have also been sent to state universities and health departments in Washington, Oregon, Montana, Idaho, Nevada, Utah, Arizona, Colorado and New Mexico.

Methods of organizing mosquito abatement districts, experiences in mosquito control as a health department function and various operating problems will also be considered at the conference. William Reeves, a graduate entomologist at the University of California, will report on research on the Pacific Coast "tree-hole" mosquito, *Aedes varipalpus.*

THE ROLE OF DENTISTS IN NATIONAL DEFENSE

THE American Dental Association at its recent meeting in Cleveland used as a general theme the national defense and the special role of the dental profession in it. A nation-wide dental health census, conducted by the Committee on Economics, indicated that "the nation, from a dental standpoint, is woefully unprepared to meet the exacting requirements in industry and the military services in a time of possible national emergency." Although the data from this survey have not been entirely worked over, Dr. R. M. Walls, chairman of the Committee on Economics, told the House of Delegates of the association that "after careful consideration of the figures now available, we must face the fact that an immediate effort must be made by dentistry to meet a situation which may have a serious effect on the whole defense program."

Because of the national condition thus indicated, and drawing on experience in the last war concerning