

some 'units' are seen. In other hybrids in the same genus the number of chromosomes approaches the sum of the haploid numbers of the parents, since pairing at meiosis is very weak. Federley<sup>16</sup> has discovered a natural population of *Pygæra pygra* in which spermatocytes with the diploid number of chromosomes occur frequently. He is also preparing a general survey of chromosome numbers in the Lepidoptera.

E. Pfaler-Collander<sup>17</sup> has made a comprehensive cytological study of forty-five species of bugs of the family Lygæidæ and includes in her paper the novel feature of a key for the determination of the species by means of the numbers and relative sizes of the chromosomes.

Esko Suomalainen (unpublished) has made some observations on the inheritance of aneury in cats. He finds that it is due to a single gene, lethal when homozygous.

### General

Space does not allow any account of the numerous publications on plant taxonomy, geography and ecology which have appeared in Finland during the War. Taxonomists will, however, be interested to learn of the completion of the monumental "Plantæ Finlandiæ exsiccatae a Museo botanico Universitatis Helsingforsiensis", by Harald Lindberg, which now comprises no fewer than 1,457 species. G. Marklund<sup>18</sup> has continued his investigations into such apomictic groups as *Taraxacum*, adding some thirty-two new Finnish species to those already known, making more than two hundred in all, and *Ranunculus auricomus*—*R. cassubius*, of which several tens of micro-species occur in Finland.

During the War more than eighteen papers on plant ecology or geography have appeared. Among them may be mentioned I. Hustich's work on the influence of climate on the forest limit, a subject of obvious importance in a country in which timber is of such enormous economic significance.

Prof. Pontus Palmgren and his collaborators have been carrying on their extremely careful and patient observations on the behaviour of birds. Among other studies, Palmgren<sup>19</sup> has investigated the day-

and-night rhythm of migratory birds (for example, robins and thrushes) in captivity. He has found that during the winter and summer, the birds move about during the morning and evening; while in the spring and autumn (the migration seasons), they move about at night. (Migration takes place at night.) Palmgren also has noticed individual peculiarities of each bird, which remain very constant.

Prof. O. Kalela<sup>20,21</sup> has been continuing his studies on population dynamics of mammals (such as lemmings) and birds (such as grouse).

Finally, some interesting work on insect ecology, inspired by the pioneer investigations of R. Krogerus, is in progress. Such, for example, is E. Palmén's study of the immense clouds of insects, containing some quite foreign species, which from time to time drift over the coast of Finland.

In conclusion, it is with regret that one must record the deaths of F. Elfving (1854–1942), who was for so long head of the Botanical Institute of the University of Helsinki and was the first plant physiologist in Finland; K. Linkola (1888–1942), well known for his work on the influence of culture on the vegetation and flora of the district north of Lake Ladoga; and A. K. Cajander (1879–1943), author of the theory of forest types.

<sup>1</sup> *Nature*, 155, 747 (1945).

<sup>2</sup> *Ann. Bot. Soc. Zool.-Bot. Vanamo*, 16 (1942).

<sup>3</sup> *Acta Bot.*, 34 (1944).

<sup>4</sup> *Protoplasma*, 37 (1943).

<sup>5</sup> *Plant Physiology*, 16 (1941).

<sup>6</sup> *Acta Bot.*, 29 (1941).

<sup>7</sup> *Proc. Acad. Sci.*, 4 (1943).

<sup>8</sup> *Ann. Entomol.*, 11 (1945).

<sup>9</sup> *Ann. Zool. Soc. Zool.-Bot. Vanamo*, 9 (1942).

<sup>10</sup> *Ann. Acad. Sci.*, Ser. A, 55 (1940).

<sup>11</sup> *Ann. Zool. Soc. Zool.-Bot. Vanamo*, 21 (1945).

<sup>12</sup> *Ann. Acad. Sci.*, Ser. A, 54 (1940).

<sup>13</sup> *Hereditas*, 31 (1945).

<sup>14</sup> *Ann. Acad. Sci.*, Ser. A iv, 4 (1943); also unpublished.

<sup>15</sup> *Hereditas*, 29 (1943).

<sup>16</sup> *Acta Zool.*, 35 (1942).

<sup>17</sup> *Acta Zool.*, 30 (1941).

<sup>18</sup> *Acta Bot.*, 26 (1940).

<sup>19</sup> *Zeits. Tierpsychologie*, 6 (1944).

<sup>20</sup> *Ann. Zool. Soc. Zool.-Bot. Vanamo*, 8 (1941).

<sup>21</sup> *Ornis*, 21 (1944).

## OBITUARIES

### Dr. J. Davidson

THE unexpected death of Dr. J. Davidson, at the age of sixty, came as a shock to his many associates in Great Britain and in Australia.

Davidson graduated from the University of Liverpool in 1908, taking his D.Sc. degree in 1915. He worked as a research scholar at the Imperial College of Science and Technology, London, and with the Ministry of Agriculture, his work also taking him abroad to Paris, Berlin and Florence. He served during the War of 1914–18 as captain in the R.A.M.C., carrying on special entomological work particularly on the relations between mosquitoes and malaria. His work in Sinai was mentioned in dispatches.

In 1920, Davidson joined the staff of the Rothamsted Experimental Station in the newly formed Entomological Department under A. D. Imms. His work was concentrated on the biology of the bean aphid, *Aphis rumicis*, and he also collaborated with H. Henson in studying the effect of various chemical substances on aphid infestation.

The materials were either injected or watered on to the sand in which the plants were grown, pyridine proving fatal to the aphids at strengths which were harmless to the plants. Observations in the course of this investigation led to the intensive work on the relation between boron and plants later carried out in the Botanical Department of Rothamsted. Besides numerous papers on the subject, Davidson published in 1925 an important monograph listing the British aphids.

In 1928, Davidson accepted the post of entomologist to the Waite Research Institute at Adelaide, Australia, and soon after was also appointed as professor of entomology at the University of Adelaide, holding both posts until his death. His Australian work again took a very practical bias, and during his first few years in the country, he dealt with a number of insect pests which were the cause of considerable economic loss. Thrips, Collembola, 'white grubs' (larvæ of beetles of the family Scarabæidæ), eelworms, and other pests attacking pastures,

cereals and fruit came under investigation, and control measures were suggested. Later he gave considerable attention to locust and grasshopper outbreaks, arising from a widespread plague of grasshoppers in South Australia during 1933-35. This led to more generalized work on the ecology of insects, particularly in relation to climatic conditions, most of his later papers dealing with various aspects of this subject.

Soon after taking up work at Rothamsted, Davidson married Johanne Therese Hornemann, one of a very musical Copenhagen family. Three sons went out with them to Australia, a girl being born later. Their musical evenings at Harpenden will long be remembered by those who were fortunate enough to be invited.

W. E. BRENCHLEY.

#### Mr. R. C. Porter

MR. RALPH CLASSON PORTER, for thirty-seven years senior lecturer in the Department of Mechanical Engineering, University of Birmingham, died at his home in Northfield on July 28, in his seventy-fourth year.

Mr. Porter was the son of the Rev. James Nixon Porter and was born at Heatley, Warrington, on August 14, 1871. He was educated at Clifton, and afterwards at the University of Liverpool, where he obtained a first class honours degree in engineering in 1892. After graduation he was for three years a premium pupil with Messrs. Beyer, Peacock & Co., Ltd., of Gorton, Manchester, and on completion of his pupillage spent a short time with the Belfast and Northern Counties Railway, obtaining running experience on the footplate. His enthusiasm for locomotives and locomotive engineering was to remain with him throughout his lifetime. For nearly four years after leaving the railway he was assistant manager of the rolling mills of the Frodingham Iron and Steel Company.

In 1899 Mr. Porter took up academic work and was appointed lecturer in engineering at the Polytechnic School of Engineering in Cairo. He left Cairo in 1901 when he was appointed lecturer in mechanical engineering at the University of Birmingham under

the late Prof. F. W. Burstall. His experience in Cairo made him especially sympathetic and understanding of the difficulties of students from the East who studied at Birmingham.

In 1901 the Department of Mechanical Engineering was at Mason College, and it devolved upon Mr. Porter to design and lay out the engineering workshops and the power station for the Department in the new University buildings at Edgbaston. The power station was responsible for the supply of heat, electric power and lighting to the whole of the University buildings, and was in addition used as a heat laboratory. During the period 1914-18 the University buildings at Edgbaston were used as a military hospital, Mr. Porter being responsible for the maintenance and for the installation of the additional plant required. When normal conditions returned, he reorganized and re-equipped the Department on a new site near the power station.

Throughout his long career as senior lecturer and director of the power station, he took a keen and active part in University life, and until his retirement represented the non-professorial staff on the University Council.

He leaves a widow and two sons, his eldest son, who was a research engineer with the L.M.S. Railway, having predeceased him.

WE regret to announce the following deaths :

Dr. William Cramer, who was associated with the Imperial Cancer Research Fund during 1914-39, on August 10, aged sixty-seven.

Mr. R. A. Rye, Goldsmiths' librarian of the University of London during 1906-44, on September 14, aged sixty-eight.

Dr. B. O. J. Schrieke, delegate for the Netherland Indies at the United Nations Conference and formerly professor of social anthropology in the University of Amsterdam and later director of the Anthropological Section of the Colonial Institute, Amsterdam, aged fifty-five.

Prof. C. E. Spearman, F.R.S., emeritus professor of psychology in the University of London, on September 17, aged eighty-two.

## NEWS and VIEWS

### Research and Development in the United States

IN his message of September 6 to Congress, President Truman called for the establishment of a new Federal Agency to implement the recommendations of Dr. Vannebar Bush's recent report, "Science—the Endless Frontier" (see *Nature*, August 4). The development of atomic energy, said the message, is a clear-cut indication of what can be accomplished by the universities, industry and Government working together. Vast scientific fields remain to be conquered in the same way to derive the full profit in the future from what we have learned. The President urged upon Congress the early adoption of legislation for the establishment of a single Federal research agency which would discharge the following functions: promote and support fundamental research and development projects in all matters pertaining to the defence and security of the United States; promote and support research in the basic sciences and in the social sciences, as well as in medicine, public

health and allied fields; provide financial assistance in the form of scholarships and grants for young men and women of proved scientific ability; co-ordinate and control scientific activities of Federal departments and agencies; and make fully, freely and publicly available to commerce, industry, agriculture and academic institutions the fruits of research financed by Federal funds. The message also called for an additional contribution of five hundred and fifty million dollars from the United States to the United Nations Relief and Rehabilitation Administration, and appealed for legislation for the early resumption of a vast programme of public works sponsored by the late President Roosevelt, urging that similar projects to the Tennessee Valley Authority should be undertaken for the development of the Columbia, Missouri and Arkansas Rivers and the central valley of California. "We shall seek," said the message also, "under the procedure prescribed in the lend-lease act and in subsequent agreements with other Govern-