
CENTENARIES

Wallace, William (1768-1843)

WILLIAM WALLACE, a British mathematician, was born of a leather-manufacturer, 23 September 1768. Having served, as a boy, in a book-bindery and then in a printing office, he learned mathematics and classics by his own industry. In 1794 he became a mathematics teacher in Perth Academy and began contributing to the *Transactions of the Royal Society of Edinburgh*. His work attracted the notice of John Playfair who secured him a teaching post in the Royal Military College in 1803. In 1819 he succeeded to the professorship at Edinburgh.

Wallace was mainly responsible for the erection of the observatory at the Carlaton Hills and of a monument to Napier, the inventor of logarithms. He invented the eidograph and the chorograph.

Wallace died at Edinburgh, 28th April 1843.

Cartwright, Edmund (1743-1823)

EDMUND CARTWRIGHT, the inventor of the power loom, was born at Marnham, 24 April 1743. He entered Oxford at 14 and

was enabled by a special act to take his degree before the prescribed age and was made a Fellow of Magdalen in 1764 and in 1779 he became rector of a provincial town.

In 1784, Cartwright paid a holiday visit to the spinning mills at Cromford. Soon after his return home, he constructed a power loom and took patent in 1785. In 1787, he set up a factory of his own at Doncaster to work with his power loom.

In 1782 Cartwright invented a wool-combing machine. It saved labour so much that some 15,000 wool-combers appealed to the Parliament for protection.

On the petition of fifty prominent Manchester firms, the Parliament granted him a sum of £10,000 in recognition of the services rendered by him to the nation by the invention of the power-loom.

Cartwright died at Hastings, 30 October 1823.

University Library,
Madras,
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S. R. RANGANATHAN.

SCIENCE NOTES AND NEWS

Preventive Methods for the Remission of Malaria.—The discovery that a deficiency in biotin, nature's most powerful vitamin, greatly increases the susceptibility to malaria and that an adequate amount of the vitamin will increase resistance to the infection, was reported this week in *Science*. Experiments on chickens and ducks, which led to the findings, are described by Dr. William Trager of the Princeton Station of the Rockefeller Institute for Medical Research.

The discovery clears up for the first time the long-standing mystery of why some individuals are more susceptible to malaria than others, and marks one of the very few instances in which a specific vitamin has been found to increase resistance to a specific disease—in this case, one that inflicts several hundred million people throughout the world. Thus there is opened for us a new avenue of approach for the prevention of malaria which promises to be of considerable value to our armed forces in lands where malaria is prevalent. Biotin is found in large amounts in egg yolks, liver, milk and, to a lesser degree, in a number of other foods.

Chickens and ducks, made biotin-deficient by being kept on an egg-white diet for two or three weeks, were subsequently inoculated with large doses of malaria parasites. They showed their peak in parasite numbers to be 50 to 100 per cent. higher than those

shown by control animals, while among the biotin-deficient animals, the parasite numbers persisted at a high level several days longer and more animals died of malarial infection than among the controls.

"Certainly the results would indicate that biotin which is a substance of known chemical nature helps determine the degree of resistance of the host to an infection with malarial parasites. The results are also of interest since they provide an example, in addition to the very few thus far discovered, of specific relations between nutritional deficiency and susceptibility to an infectious disease."

A Cure for Many Diseases.—An article in the current issue of the *Lancet* by Professor and Mrs. Florey of Oxford, describing the first extensive trial of a new drug, Penicillin, may well prove to be a landmark in medical history, writes the medical correspondent of the *News Chronicle*.

Not only is Penicillin many hundred times more potent than the Sulphonamide drugs, like M and B 693, and Sulphathiazole, but it has also cured infections such as meningitis, staphylococcal and septicæmia in which the Sulphonamide drugs had proved useless.

In one remarkable instance an airman, who had such severe blood poisoning from staphylococci that his lungs were full of abscesses, made complete recovery.