

to deterioration at a rate almost unknown in temperate latitudes. A single rainy season can completely destroy the fertility of a tropical soil unwisely exposed.

Soil Destruction in Malaya

THE damage done to agricultural land by various forms of mining is considered by Sir Lewis L. Fermor in his exhaustive "Report upon the Mining Industry of Malaya" (Kuala Lumpur: Gov. Press, 1939. 6s.). The destruction of land by the stacking of waste rock and gangue is small because the prevalent forms of tin-mining result in floods of water, heavily charged with silt, either as coarse as sand or as fine as mud. This silt, carried by the effluent water, chokes streams and causes flooding to such an extent that silt-retention schemes, necessitating dams or weirs, are obligatory. But much damage has been done in the past, and some is still being done, especially in the mining process of destroying hillside by water under hydraulic pressure. Again, the removal of the top layers of soil and their mixing with lower layers, which is unavoidable in the process known as dredging, render the whole surface within a mining concession unfertile by the time the land is returned to agricultural use. Against these objections to mining must be placed the fertilizing value on flooded land of a thin deposit of silt. The writer is insistent that rubber cultivation is equally harmful, in fact more so, in ruining land by encouraging soil erosion and leading to the removal of fertile surface layers. Clean weeding, a fetish of the rubber planter, causes soil removal between the rows of trees, and can be prevented only by the wise use of cover crops. Sir Lewis estimates that rubber cultivation has caused the addition of 33,000,000 tons of silt to the river systems since 1905, while tin-mining has contributed only 16,000,000 tons. The debris from the rubber lands is both coarse and fine, and does more harm than the fine silt from the mines, some of which is carried to sea, and some of which fertilizes the land.

Newton's Letters

IN *Osiris* (7, 523-555; 1939) M. Jean Pelseneer, whose interest in the subject is well known, has reproduced some nine letters from Newton's unpublished correspondence. Four documents are shown in reduced facsimile, and all are accompanied by explanatory notes. The first four letters, between Newton and Oldenburg, are taken from the Portsmouth Collection in the University Library, Cambridge. The next two, between Newton and Hooke, are in the Library of the Historical Society of Pennsylvania at Philadelphia. Of all these the main theme is optical. Two other letters between Newton and Hooke come from the Pierpont Morgan Library in New York; their subject-matter is of very minor interest. For the period covered by these eight letters (1672-78) little original material bearing on Newton's life has been published. The ninth document is a joint report signed by Newton and Halley on the performance of a magnetic needle. This is an official paper dated 1712, and preserved in the Public Record

Office. It is two years since M. Pelseneer, writing in *Ciel et Terre*, pointed out with a reference to Stukeley's *Memoirs of Sir Isaac Newton's Life*, edited by A. H. White and then lately published, that the story of Newton and the apple certainly did not originate in the fertile imagination of Voltaire.

Early History of Antarctic Exploration

THE criticisms levelled by Prof. W. H. Hobbs at certain English explorers of West Antarctica of the early part of last century (*Trans. Amer. Phil. Soc.*, 31, Part 1, Jan. 1939) were discussed in *NATURE* of April 29, 1939, p. 731. A much fuller and a most scholarly treatment by Mr. A. R. Hinks of Prof. Hobbs's strictures appears in the *Geographical Journal* of October under the heading "On Some Misrepresentations of Antarctic History". The title indicates the nature of the conclusions which Mr. Hinks reaches. From a study of relevant documents, including original maps, he shows conclusively that Prof. Hobbs's claim that Palmer and not Bransfield discovered the Antarctic continent is false and that there is no foundation for Prof. Hobbs's contention that the chart signed by Bransfield which is in the Hydrographic Office is not genuine, and that Prof. Hobbs has no justification for discarding the account of Bransfield's voyage which appeared in the *Literary Gazette* (vol. 5, November 1821). No argument that Prof. Hobbs brings to this discussion can shake the authenticity of the documents on which Bransfield's claim to the discovery of Trinity Land, the first sighting of the Antarctic continent, is founded. Mr. Hinks raises many other points in his articles, including Prof. Hobbs's aspersions on the good faith of J. Weddell, whose discoveries conclusively stand the test of any inquiry and criticism. The article may be accepted as a final reasoned answer to the attacks made by Prof. Hobbs on these English navigators of Antarctic seas.

Germany's Oil Supplies

IN a carefully reasoned article published in the November issue of the *Industrial Chemist*, Dr. A. J. V. Underwood explains why in his opinion it is unlikely that Germany's belligerent activities will be suspended owing to shortage of oil. The present rate of production of oil and alternative fuels in the German Reich is estimated as 4,300,000 tons. This figure includes potential production of plants expected to be in operation by the end of this year. If plants which are likely to be in production by the end of 1940 or beginning of 1941 are included in the estimate, the potential rate of production of oil from all sources becomes 6,550,000 tons per year. In addition, imports of oil are at present available to Germany from Estonia, Rumania and the U.S.S.R. These with home-produced oil bring her total resources to 7,000,000 tons a year. If home production is increased as is anticipated, Germany will have access to 9,300,000 tons of oil a year. In 1938 Germany, including Czechoslovakia, consumed 7,900,000 tons of oil. This is substantially less than the 9,300,000 tons per annum poten-