

of contamination were likely to be high due to heavy rainfall and where characteristics of unproductive pastures cause an enhanced concentration of radioactivity. The mean ratio of strontium-90 to calcium in milk produced at 32 special sites ranged from 50 to 210 pc. strontium-90/g calcium. It is stressed that the sites are not representative of areas of high rainfall generally. The concentration of caesium-137 in milk changed in a similar manner to strontium-90, the mean concentration for the twelve months ending December 1963 being 135 pc./l. For individual zones the values ranged from 74 to 220 pc./l., but at special sites the mean concentration for 1963 ranged from 340 to 1,250 pc./l. No iodine-131 could be detected during the period.

Closing the Balgy Gap

THOSE who have explored the wild but magnificent countryside around Upper Loch Torridon, Wester Ross, north-west Highlands of Scotland, may well remember the lonely track separating Shieldaig at the west end of the Loch from the hamlet of Torridon itself, a distance of $7\frac{1}{2}$ miles along the south side of the Loch, completely impassable to the motorist, generally traversed on foot. Normally, Shieldaig is reached via Strome Ferry or by sea, Torridon via Ashnasheen and Kinlochewe, or again by sea. The 'gap' between Shieldaig and Torridon is known as the 'Balgy Gap', named after the River Balgy which runs through the area. A new road has now been constructed and opened which closes this 'gap' and thus gives access to some of the most beautiful, but generally unknown, country in Wester Ross. From Shieldaig the new road passes through the intermediate village of Annat and crosses three rivers, Balgy, Allt Coire Roill and Torridon, by means of three reinforced concrete bridges. Balgy Bridge is 101 ft. long, made up of two 24-ft. end spans and a central span of 53 ft. including a suspended section 33 ft. long. The deck slab is solid reinforced concrete of varying thickness 12-27 in. Allt Coire Roill Bridge is a two-pin portal frame structure spanning 36 ft. over the stream. Torridon Bridge, replacing an old iron structure, is built on a marked skew. Its total length is 123 ft. embodying a central span of 80 ft. between raking main supports. The deck slab in this case varies from 33 in. to 15 in. In *Concrete Quarterly* (No. 59, October-December 1963. Published by the Cement and Concrete Association, London) there is an article describing and illustrating each of these bridge structures, including photographs and elevation drawings. It is evident that the successful closing of this Balgy 'gap' is to form the basic pattern of similar road and bridge construction, planned to link up otherwise inaccessible places in the Highlands reached only by roads involving long detours. The second 'closure' is already in hand, on the shores of Loch Moidart, between Kinlochmoidart and Lochailort, Inverness; when this road is completed, it will open up another relatively unknown mountainous and coastal area of commanding scenic beauty south and east of the Sound of Arisaig.

Laboratory Methods for Work with Nematodes

If many zoologists and plant pathologists have given scant attention to the soil-inhabiting and plant-parasitic nematodes the main reason must be that they are difficult to handle. This is due partly to an awkward size and shape and partly to a marked fragility before mechanical and osmotic forces, so that implements and reagents must be used with care and skill. Hence the appearance in 1949, as the Ministry of Agriculture and Fisheries *Technical Bulletin* No. 2, of *Laboratory Methods for Work with Plant and Soil Nematodes*. Compiled by the late Tom Goodey, its 19 pages plus 10 half-tone illustrations sold for 9d. New editions followed in 1951 and (compiled by J. B. Goodey) 1957, and recently a fourth edition has been published. (Fourth edition. By Dr. J. Basil Goodey.

Pp. iv + 72 + 12 plates. London: H.M.S.O., 1963. 8s. 6d. net.) This justly reflects the increasing interest in the group now taken by workers in many countries. The new edition shows many additions and substitutions in comparison with the third edition, the greatest increase being concerned with methods of culturing nematodes. But the general plan remains: successive chapters deal with collection and extraction from plant material and soil, estimating soil populations of *Heterodera*, handling, staining and mounting nematodes, culture methods, nematocidal assay, and microscope drawings. Several new photographs have been added. Sample checks suggest that the text is commendably free from errors.

High-speed Photography

A RECENT issue of the *Journal of the Washington Academy of Sciences* (53, No. 7; October 1963) outlines details of a camera that has a working equivalent of 8 million pictures per second. The camera is at present being used by U.S. Army engineers to study the physical forces which interact within explosives as they detonate under various conditions. The key to the development is a complex synchronization system for co-ordinating lighting with the detonation of the explosive. Two 5,000-V pulsers are timed to fire at a precise instant during rotations of a turbine that spins an optical mirror at 5,500 revolutions per second. The turbine is run by high-pressure nitrogen gas, and brilliant illumination is obtained by detonating an auxiliary explosive charge in a 3-ft. tube of argon gas. The shutter is closed by another explosive charge.

Bibliography of Yaws

SINCE Castellani first identified *Treponema pertenue* in 1905 as the causative agent of yaws, medical literature has contained much information on the epidemiological, clinical and pathological aspects of the treponematoses in relation to therapy and public health control. Yaws has become a subject of international concern for two main reasons. One is that it is a widespread disease in the less-developed parts of the world, especially of the countries that have just attained or are about to attain independence. The other is that the advent, in 1948, of long-acting penicillin made the elimination of yaws as a public health problem possible; even a single injection enables treponemical blood levels to be maintained for a period longer than the incubation period of the disease. The World Health Organization has assisted health administrations in many countries in their yaws eradication and control campaigns. It has also been interested in the intensified laboratory and epidemiological research devoted to yaws and other treponematoses over the past decade, which is due, at least in part, to the new perspectives opened by penicillin. New developments in knowledge and in methods of control of yaws make a bibliography of world literature on the subject desirable, both to acquaint workers in the field with what has been done and to provide a basis for further advances. That prepared recently by the World Health Organization contains more than 1,700 references covering material published between 1905 and 1962 (Pp. 106. Geneva: World Health Organization; London: H.M.S.O., 1963. 8 Sw. francs; 13s. 4d.; 2.75 dollars). In the compilation, important medical references have been systematically searched to make it as comprehensive as possible. As a general rule, titles of articles and books are given in the original language. The references are arranged alphabetically by the author, each item being numbered. A combined subject and geographical index in English and in French can be found at the end of the bibliography, referring to the item numbers. So far as possible, pharmaceutical preparations have been entered in the index under the name appearing in the *Cumulative List of Proposed International Non-proprietary Names for Pharmaceutical Preparations* (Geneva: World Health Organization, 1962).