We are indebted to Dr. J. P. Harding for directing our attention to the original specimen from Shoreham Harbour and to the British Electricity Authority for giving us facilities in examining the vicinity of its condenser effluent at Shoreham. We also wish to thank the Dockmaster at Llanelly and the Superintendent of the Queen's Dock, Swansea, for access and useful information.

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Nov. 13.

¹ Bishop, *Nature*, **185**, 409 (1950).

² Monro, *Ann. and Mag. Nat. Hist.*, (ii), **1** (1938).

³ Broch, H., *Trans. Zool. Soc. Lond.*, **22**, 133 (1927).

⁴ Bull, H. (private communication).

⁵ Crisp, D. J. (unpublished observations).

Effect of Gamma-BHC Seed Dressings on the Germination of Cereals

DURING the development of the combined fungicidal/insecticidal seed dressing 'Mergamma', containing organomercurial and gamma benzene hexachloride, it became apparent that levels of gamma benzene hexachloride on the seed, safe in practical tests in the field and in box tests in soil, were markedly phytotoxic in conventional germination tests in sand or on damp filter-paper. This communication gives a brief summary of an extensive programme of work on this aspect with wheat, barley and oats.

(1) In the field, grain treated with gamma benzene hexachloride and sown at two to four bushels per acre germinated and grew entirely satisfactorily provided excessive dosage was avoided. 500 parts per million of the chemical on the seed gave no appreciable check to emergence and growth. 500–1,000 p.p.m. sometimes slightly checked early growth; the effect was small and disappeared by the fifth or sixth week; yields were not affected. Doses much higher than 1,000 p.p.m. did not invariably check emergence and growth.

Other results from Canada and the United States indicated that 500–1,000 p.p.m. could be safely used at seeding-rates lower than two bushels per acre.

(2) In box tests with soil, the germination of seed which had been treated with gamma benzene hexachloride at 500 p.p.m. or less was not adversely affected by storage for twelve months.

(3) In germination tests on damp filter paper or in sand at doses of 250–500 p.p.m., most seeds germinated normally, even if rather slowly in some instances. Abnormal effects on growth, varying considerably in degree, were also observed. These consisted of checking and thickening of the shoot and characteristic clubbing of the primary roots. Even when these effects were severe, secondary roots were produced in the normal manner.

As doses were increased above 500 p.p.m. the effects became more pronounced, leading to the eventual suppression of normal growth.

The amount of gamma benzene hexachloride necessary for control of wireworm attack on wheat, barley and oats in the field is of the order of one ounce per acre, giving about 500 p.p.m. and 250 p.p.m. at sowing-rates of two bushels and four bushels per acre respectively. These levels are satisfactory in the field, but are in the range that causes abnormality

in sand or filter-paper germination tests. Seed-dressings incorporating gamma benzene hexachloride are coming into general use, and seed may be submitted to standard germination tests after treatment. In such cases the appearance of abnormalities in these tests will not necessarily imply unsuitability of the seed for use in the field.

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Imprint of a Crustacean in an Alloy Casting

THE accompanying photograph shows the surface of a block of aluminium-silicon alloy cast in a sand-mould at the Royal Aircraft Establishment, Farnborough, Hants.

Although the temperature of the liquid metal was about 700°C., the casting has retained a sharply defined impression of a small creature—apparently a woodlouse—which happened to be on the surface of the sand.

[Crown copyright reserved]

To form this concavity the metal must have chilled immediately on contact with the creature, no remains of which could be found.

I felt these facts would be worth putting on the scientific record because of their possible application to the study of fossil formation in hot rocks.

I am grateful to the Editor of the *R.A.E. News* for permission to use the photograph.

CHAPMAN PINCHER

Daily Express,
Fleet Street,
London, E.C.4.
Feb. 19.