after exposure to light 66-90 per cent gorged. To our knowledge, this phenomenon has not previously been observed.

By utilising this method of obtaining large numbers of gorged females, and feeding the larvæ on boiled bakers' yeast, we can breed *Culex pipiens* very successfully under laboratory conditions. About 20 per cent of the egg rafts are fertile, and the mortality from eggs to imagines is not more than 10 per cent. Starting with hibernating females, we have now raised the third generation of imagines, each generation having comprised thousands of individuals.

P. TATE.
M. VINCENT.

Molteno Institute,
University of Cambridge,
Aug. 1.

[1] *Trans. Soc. Trop. Med. and Hyg.*, **24**, 470; 1930–31.
[2] *Zool. Anz.*, **18**, 8; 1914.
[3] *Trans. Soc. Trop. Med. and Hyg.*, **23**, 203; 1929.

Bionomics of *Trochus niloticus*, Linn.

I HAVE been greatly interested in Dr. C. Amirthalingam's communication [1] about the breeding of *Trochus niloticus* in the Andaman Sea. My own statements on the breeding of this species in the waters of the Great Barrier Reef were based on work done by Mr. F. W. Moorhouse, at that time a member of the Great Barrier Reef Expedition and now Marine Biologist to the Government of Queensland. This work has recently been published,[2] and in addition to much information about the habits and growth of this animal, Mr. Moorhouse states that it appears "to be a winter-breeder, the season extending from March to July at least, and each animal possesses a protracted spawning period". During this period the surface temperature of the water round about Low Isles where these observations were made ranged from about a maximum of 28° C. in March to a minimum of about 20° C. in July.

Dr. Amirthalingam does not give any temperature figures in his letter, but states that spawning begins in the Andaman Seas in April when the temperature is near the maximum for the year before the outbreak of the south-west monsoon. He will doubtless give full temperature records in his final report, which, with Mr. Moorhouse's paper, should go far towards the full elucidation of the bionomics of *Trochus niloticus*, information urgently required in view of the great economic importance of this animal.

C. M. YONGE.

Marine Biological Laboratory,
Citadel Hill,
Plymouth, Aug. 10.

[1] NATURE, **130**, 98, July 16, 1932.
[2] Moorhouse, F. W., 1932. "Notes on *Trochus Niloticus*." G. Barrier Reef Exped., 1928–29, Sci. Repts., Brit. Mus. (Nat. Hist.) III., pp. 145-155.

Prevention of Blight in Seed Potatoes

IN Jersey, seed potatoes are usually dug when the haulms are green. If blight (*Phytophthora infestans*) is present on the foliage at this time, serious losses may occur in the seed boxes owing to the fungus spores falling on the tubers at digging-time. Losses of fifty to seventy-five per cent are not uncommon.

Experiments carried out at the States Experimental Station, Glenham, have shown that this loss may be almost entirely eliminated by dipping the 'seed' twice, soon after digging, in a 1 per cent dilution of formaldehyde (1 pint of 40 per cent formaldehyde in 99 pints of water) or in a neutral mixture of copper sulphate and caustic soda (4 : 1¼ (about) : 40). Preliminary trials have indicated that dipped and undipped 'seed' sprout equally well.

The method is being tried on a large scale this year. The tubers are dug, placed in the seed boxes, and taken to the farm the same day, where they are dipped before being stored. Four men are able to unload, dip, and stack 360 boxes of seed in one hour.

T. SMALL.

States Experimental Station,
Glenham, Jersey, C.I.,
Aug. 15.

Sir Richard Threlfall and Sir Horace Darwin

MANY of us have read with much interest the understanding obituaries of Sir Richard Threlfall that appeared in NATURE of Aug. 13. Both obituaries dwell on his inventiveness and powers of work. When looking through some old papers to-day, I found a letter from Sir Richard to his friend the late Sir Horace Darwin. In the course of a conversation on a continuous gas calorimeter, which must have taken place about 1900, Darwin suggested that it was advisable to link up automatically the quantity of water heated by the gas flame with the quantity of gas burnt. Threlfall did this, and obtained a recording calorimeter which was far in advance of any other instrument for many years. The letter was evidently written by Threlfall to Darwin after one of the concentrated periods of work referred to in the first obituary notice. It was accompanied by a clear sketch and notes in Threlfall's handwriting.

"Birmingham,
April 7th, 1903.

MY DEAR DARWIN,

Let it be granted that I am an ass—this will prevent your being able to claim to have discovered it after reading the rest of the letter. I have been looking out for more than a year for a neat mechanism to replace that hydraulic gear I use with my instruments, but I never really tried at it till last Sunday, and I was lucky enough to get a very simple device. I think it might work in with some of your things, the recorder, *e.g.*, so I will tell you about it, please regard it as a sort of exchange (a poor one I know) for your hints on the gas meter. The problem was:

Given one clock, and the power of making two electric contacts: to operate a shaft by the clock in either direction of rotation, to lock the clock when neither contact is made. Also the magnets worked by the contacts must not require too much current; the inertia of everything must be small so as to start and stop quickly.

I hope you may find the thing of use—I never knew a simple device which had all the advantages at once and consistently—before.

Yours very truly,

R. THRELFALL."

The sketch and notes were made by a man who was a mechanic, and were sent to one whom Threlfall knew would appreciate and approve of small but important points in design.

I think it will be agreed that the letter shows a delightful spirit of friendship between the two distinguished inventors.

ROBERT S. WHIPPLE.

45 Grosvenor Place, S.W.,
Aug. 18.