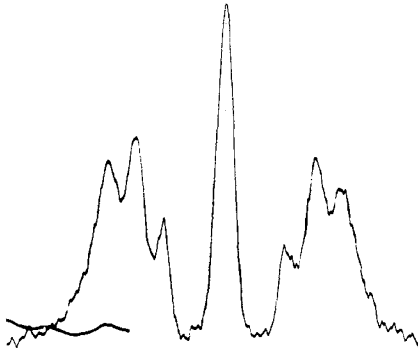


method, with a tube designed to give components which run parallel for a short distance on the plate. It is not thought probable that this source should produce components with intensities essentially different from those which might be obtained from a canal-ray tube. Its design permits the use of a micro-photometer in the ordinary way. On the plate from which the accompanying curve (Fig. 2) was



New Experiments

FIG. 2.

taken there appears to be a strong undisplaced parallel component, but, in reality, this is due to the overlapping of the images on the slit.

Quantitative measurements of the intensities by a wedge method are in progress. The present note is just to state that on this most outstanding point Schrödinger is correct.

J. STUART FOSTER.

M. LAURA CHALK

(National Research Student).

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Mar. 21.

Genes and Chromomeres in Flowering Plants.

THE objection to identifying chromomeres with genes was that there were not supposed to be enough chromomeres. In my opinion this supposition was based on post mortem changes, or on too low a working aperture in the microscope. I have studied the pachyphase (pachytene stage) in *Aloe*, *Lilium*, *Kniphofia*, and *Agapanthus* especially. The less the opportunity for change before fixation, the greater the number of cells showing the ultimate chromomeres.

These ultimate chromomeres appear about twice as broad as long, in all positions of the fibre. They differ in size; and sometimes only the scattered largest ones take the stain, and the others are nearly or quite invisible. They show equally well in iron-acetocarmine squeezes, or in smear preparations fixed in chromic-acetic-formol and stained with iron-brazilin. Their lateral extension is due to their composition out of the laterally joined homologous chromomeres of four strands, and the longitudinal divisions can sometimes be made out.

In many pachyphase cells these chromomeres are seen merged into long blocks, or into a continuous thread; but the writer considers this phenomenon to be a post mortem change. In *Aloe purpurascens* an enumeration of the ultimate chromomeres in pachyphase, by an apparently trustworthy method, gave approximately 1250 for the total in the cell. These chromomeres averaged less than a third of a micron apart, and so approached the limits of microscopical separation. At diaphase, and still more at metaphase,

the number of separable chromomeres has greatly decreased; but these are obviously compound bodies. Hence a useful working hypothesis seems to be that the ultimate chromomeres are genes.

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April 14.

Milton and Modern Science.

IF Lucretius can be quoted in NATURE as anticipating modern scientific discoveries, perhaps space may be found for a far greater English poet, John Milton.

Are not Millikan's cosmic rays foreshadowed in Bk. IV. of "Paradise Lost"? Eve has just asked (657-8):

But wherefore all night long shine these? for whom
This glorious sight, when sleep hath shut all eyes?

Adam replies:

Those have their course to finish round the Earth
By morrow evening, and from land to land
In order, though to nations yet unborn,
Ministering light prepared, they set and rise;
Lest total darkness should by night regain
Her old possession,

. . . these soft fires
Not only enlighten, but with kindly heat
Of various influence foment and warm,
Temper or nourish, or in part shed down
Their stellar virtue on all kinds that grow
On earth, made hereby after to receive
Perfection from the sun's more potent ray.

Again, Bk. XI., from v. 429 onwards, contains an excellent description of a cinema show, and the chariot of Paternal Deity (vi. 750) is a motor-car. Truly,

What the sage poets, taught by th' heavenly Muse,
Storied of old in high immortal verse

("Comus," 517), is well worth rescuing occasionally from the oblivion into which such things fall.

C. L. BARNES.

Manchester, May 13.

Ultra-Violet Transmission of New Glasses.

DR. L. C. MARTIN, in his interesting article in NATURE of April 21, on "The Ultra-Violet Transmission of Transparent Materials," makes a reference to the new glass of the Corning Glass Co., and states that it is not yet available in large pieces.

The chemical composition of this glass undoubtedly involves manufacturing difficulties at present greater than are met with in the preparation of Vita-glass and the newer ultra-violet transmitting window glasses now being marketed in Great Britain, Germany, and America. It may interest readers of NATURE, however, to know that early this year I received from the Corning Co. a sheet of the new glass, known under the name of Corex, of dimensions $8\frac{1}{2}$ in. \times $6\frac{1}{2}$ in. and 4 mm. thick, a size sufficient for many screening purposes. The sheet appeared to be quite homogeneous and clear. In thickness of 2 mm. it was found to transmit down to 0.212μ and to have the following percentage transmissions: 86.5 at 0.295μ ; 66 at 0.250μ ; 35 at 0.230μ ; and 13 at 0.220μ .

W. E. S. TURNER.

Department of Glass Technology,
The University, Sheffield, April 21.