Dr. Baker suggests, very great. Such tests should always be performed first on a macroscopic scale, with the concentration of one of the reagents low enough for the colour generated to be only just perceptible. If the coloured substance formed is dichroic there will be a change in hue as well as a decrease in intensity of colour, and a similar change may be expected on a microscopic scale.

D. A. WEBB.

School of Botany,
Trinity College,
Dublin. Sept. 21.

High-Angle Edge Flaking of Flint

THE communication by Mr. J. Reid Moir on this subject in NATURE of July 17 raises some interesting points.

The flint knappers of Brandon for more than a century past have severed their gun-flints from the parent flake at an obtuse angle platform-scar varying from 120° to 150°. Their blows, however, were delivered with an iron hammer on a flake held down on an iron anvil. The use of a punch enables a regular series of short scars to be formed at an angle of about 120°, as may be seen from the lateral edges of Danish axes. My own experiences in removing flakes by direct percussion forming platform-scar angles up to 140° were published in 1938¹.

Mr. Moir rightly states that the detachment of such flakes requires a heavy blow on a large nodule of flint. Palæolithic man apparently rarely used such blows, and usually only on the butt end of thick implements. Out of 1,800 measurements of platform-scar angles made in eighteen different human industries, only twenty scars were found with angles of 110° or more, or 1.1 per cent of the total. At the same time the percentage of angles of 90° and more varied from 0 to 18 per cent in the different industries, all the remaining angles being acute.

In flaked flints from Eocene deposits the percentage of high-angle flake-scars of 90° and more varies from 54 to 62 per cent. The age of these deposits rules out percussion by human agency.

In flaked flints of later Tertiary age from Puy Courny, the Kent Plateau, and below the Crag of Norfolk and Suffolk, the percentage of high-angle flake-scars of 90° and more varies from 62 to 70 per cent.

The high proportion of high-angle scars in the Tertiary flints contrasts sharply with the paucity of high angles in the human industries, and suggests that the Tertiary flaking was due to soil movement under pressure arising from solifluxion, foundering, or ice action. Laboratory experiments confirm the facility with which high-angle flake scars can be produced by rotating a flint edge under pressure against a hard surface.

ALFRED S. BARNES.

Dormers, Holwood Park Avenue,
Farnborough, Kent.

¹ Barnes, A. S., *L'Anthropologie*, 48, 222 (1938).

Identification of Male Schistosomes in Uncommon Sites

IN view of the difficulty of identifying adult schistosomes except by the shape of their *ova*, the presence of adult males in a site where only one species is known to occur strongly supports the

opinion that the worms may belong to that species, even though easily identified adults belonging to another species are present in the same host.

Two adult male schistosomes were found¹ in a puppy's eyelid after it had been treated with cercariae, some of which developed into typical adult examples of *Schistosomum hæmatobium* in the liver. These had probably migrated from the liver as the adults of *Schistosomum spindale* are wont to do before accumulating in the nasal veins.

Although nasal schistosomiasis has not been reported in South Africa, ova typical of *Schistosomum spindale* are found either entirely alone or in combination with *Schistosomum hæmatobium* ova in the human subject and the larvae have been recorded in pond-snails², but variation in the number of testes in the adult males renders their identification difficult.

F. GORDON CAWSTON.

Britannia Buildings,
West Street,
Durban. July 24.

¹ Cawston, F. G., *J. Trop. Med. and Hyg.*, 28, 406 (1925).

² Porter, Annie, "The Larval Trematode found in Certain South African Mollusca with special reference to Schistosomiasis (Bilharziasis)" (1938).

The Welsbach Mantle

A THIN platinum wire immersed in flame gases acquires a temperature far greater than that corresponding to the mean molecular translational energy of the gases. The explanation appears to be that an abnormal dissociation exists in flame gases and that the products of the abnormal dissociation combine upon its surface^{1,2}. This perhaps throws light upon the problem of the luminosity of the Welsbach mantle. A mixture of ceria and thoria in the Welsbach mixture proportions is an effective catalyst in the combination of hydrogen and oxygen³, and it seems probable that when a mantle is immersed in flame gases high temperatures are reached at the active centres on its surface.

There is little or no abnormal dissociation in flame gases resulting from the combustion of over-rich inflammable mixtures^{1,2}, and it is of interest to note that the Welsbach mantle loses its selective radiating properties when placed in the reducing part of the flame³. The experiments of Nichols with niobium oxide show similar results³.

W. T. DAVID.

Engineering Department,
University,
Leeds. Sept. 29.

¹ "The Abnormality of Flame Gases", *Proc. Inst. Mech. Eng.* (in the press).

² NATURE, 152, 278 (1943).

³ Minchin, *Trans. Faraday Soc.*, 35, 163 (1939).

Bulb Correction in Capillary Tube Viscometry

IN a recent letter¹ Mr. A. C. Merrington points out that, when a material for which the viscosity decreases greatly with increase in rate of shear is investigated in a capillary viscometer, the resistance offered by the bulbs is a greater fraction of that offered by the capillary than when a true fluid is tested in the same apparatus. He thinks it possible that in some cases where anomalies have been reported in the relationship of flow-rate to capillary