



FIG. 23. M41 'Photoplan' microscope by Vickers, c1975

This large instrument was introduced by Vickers about 1969, as their complete photographic system: this slightly later example is fitted for fluorescence, with the upper lamphouse containing a 50w high-pressure mercury vapour lamp, an incident-light unit attached, eyeshield present, and barrier filters installed. It weighs about 22Kg without the power supplies. The stand is totally rigid, with arm rests, focussing controls, filter carriers, illumination attachments, and the ability to carry a wide range of heads, stages, and other parts. The lower lamp-house contains a 12v100w tungsten-halogen source in centring mount: both lamps have separate power supplies. In front of each lamphouse is a heat filter and two circles of three filters. The upper house lights an incident illuminator, the lower goes up through the base via a window with two auxilliary lenses and diffuser. Coarse focussing is by rack and pinion, counterbalanced for very light operation. Fine focussing is by worm and sector lifting a single involute tooth mounted on roller bearings: this operates very freely while being quite unsusceptible to drift or vibration. The quadruple nosepiece carries Vickers objectives: 10x/0.25 Microplan, 20x/0.65 apo, 40x/0.7 Microplan, and 50x/0.95 oil flu. Many other refinements are present, but the 35mm camera back is a manual and basic Kodak 'Coloursnap' body on a shutter adapter mount. With this unit no automatic exposure unit can be used, and so the aperture for a photometer head is vacant. Apart from that, this is a very well-designed and very well-made research instrument, complete with user's manual: it is an early British approach to the large universal instrument with the built-in photographic facilities then becoming desirable. In 1969 the outfit as described cost about £700. In 1977 the cost was about £3,000.

[Science Museum inv.no 1980-1365. Signed: VICKERS PHOTOPLAN. Height overall 450, length 460mm].