

## ROYAL PHOTOGRAPHIC SOCIETY'S EXHIBITION

THE ninety-seventh annual exhibition of the Royal Photographic Society was opened in London on September 12 for one month and will also be shown in the City Art Gallery of Leeds during October 25–November 23 and in the Art Gallery of Bristol during December 6–31. The exhibition is divided into seven sections: pictorial, scientific, medical, nature, stereoscopic, record and kinematic photography, with a total of 849 exhibits.

Within the Scientific Section, exhibits confined to photographic applications of physics and chemistry are small in number, though not in quality, while entries of biological interest are reasonably well represented. The Aerodynamics Division of the National Physical Laboratory is showing three prints consisting of *Schlieren* patterns of the air disturbances emanating from aerofoils mounted in an air current of Mach number 1.6. Two of these prints are in colour and show the various regions of compression and rarefaction by making use of the familiar technique which employs polarized light for the exposure. P. H. Harris shows an electron micrograph of a sheet of etched aluminium foil in which the etching had eaten away the metal, apparently by boring it out in the form of minute tunnels. A. V. C. Cross is exhibiting a series of photomicrographs in which are shown the gradual erosion of a film of rosin naphtha varnish by sea water. A number of aerial survey photographs by Hunting Aerosurveys, Ltd., principally concerned with the site for a dam in Iraq, are of considerable geological interest. In addition, an aerial photograph of the ruined Palace of Persian Kings of Persepolis gives a strong impression of the beauty and splendour that such a building must have possessed in ages past. One of the biological exhibits by H. J. Howard consists of a series of four photomicrographs of progressively increasing magnification from  $\times 10$  to  $\times 350$  of the apparently simple bird's feather. First the shafts of the feather, then the barbs and finally the barbules are progressively brought into prominence, the fibres of the last interlocking almost at right angles to produce an intricate and effective protection. The selective absorption of silver on the gills of a freshwater crab is shown in an exhibit by S. F. Bush, yet the particulars of what is clearly a process of considerable interest to the chemist are left unexplained. A good example of phase-contrast microscopy by B. A. Jarrett consists of the micro-organism *Stentor coelestis*, in which it can be seen how movements of the cilia enable the cell to swim. An excellent series of colour transparencies by G. H. McLean shows the effects of five different diseases on the leaves of the sugar-beet plant.

In the Medical Section, many of the exhibits hold more than a morbid interest to the lay spectator, because they adequately describe some cycle or technique rather than illustrate some more-or-less distasteful specimen under an obscure Latin title. For example, a virus culture technique shown by the Institute of Ophthalmology, London, is most clearly demonstrated in a series of pictures in which, starting with an eleven-day old fertile incubated egg, part of the shell has been cut away and the egg inoculated. Incubation was continued for about three days, after which the membrane was covered with virus lesions.

Perhaps one of the most noteworthy exhibits is from the Hospital for Sick Children, Great Ormond Street, London, in which photographs of a patient taken as a boy and also as a man forty-seven years later show what was probably the first successful surgical removal of a brain tumour with survival over this period. From the same hospital there is also shown, in another exhibit, the system employed for the identification and recording of the particulars of each patient. The technique employed in testing such antibiotics as aureomycin, chloromycetin, penicillin, streptomycin and terramycin is shown by S. E. Veronique. Small paper disks impregnated with the antibiotic are placed on the surface of agar upon which *Staphylococcus* is seeded, and the clear area around the paper disks in which growth of the organism is inhibited is a measure of the effectiveness of the antibiotic. The Manchester Royal Infirmary is showing how enlargement of a radiograph can prove to be worth while, and illustrates this with  $\times 10$  enlargements of pathological bone specimens originally exposed on ordinary commercial fine-grain film. Further exhibits by the Institute of Ophthalmology demonstrate techniques and apparatus for retinography and keratography together with colour prints of the human retina. A series of mounts from Guy's Hospital, London, are interesting in that they record limiting movements of the hand, foot or eye either by taking more than one exposure on the same negative or else registering the pictures showing extremes of movement and making tracings from the separate pictures. Photographs of some of the appliances which come to the aid of a hand deprived of normal movement are also shown by K. G. Moreman.

There are numerous excellent exhibits in the Nature and Record Sections of the Exhibition which make it difficult to review with justice; but perhaps the entries on the life-histories of marsh fritillary, gipsy moth, vapourer moth and emperor moth by S. Beaufoy and J. D. C. Boyes deserve special mention.

## MODERN METHODS IN THE TREATMENT OF TUBERCULOSIS

THE figures for tuberculosis mortality (England and Wales) since the end of the Second World War show a marked decline. In 1946 the deaths from respiratory tuberculosis were 19,365; in 1950 they were 14,079. In 1946 the deaths from other forms of tuberculosis (bone and joint disease, meningitis, glandular disease) were 3,485; in 1950 they were 1,890.

The mortality from tuberculosis in England and Wales, moreover (with the exception of temporary set-backs during two World Wars), has been steadily declining since 1912, when the national scheme for combating tuberculosis, now merged in the National Health Service, was established. Even allowing for the potential influence of a hypothetical epidemiological cycle, it is not unreasonable to assume that increased knowledge and wisely directed administration have contributed to this decline.