

British Group for the Sociological and Economic Aspects of Automation Techniques (*Nature*, 179, 948; 1957). At a meeting held on December 20, Group B, the British Group for Computation and Automatic Control, was formally constituted, comprising as its members twenty-three professional and learned institutes and societies with interests in these fields.

The objects of the Group are to foster the development and applications of automatic controls, computing and data-processing equipment and programming techniques; to afford a common meeting ground for the adhering organizations; to maintain liaison with other Groups of the British Conference on Automation and Computation and with corresponding national committees of other countries; and to encourage and co-ordinate the presentation at international conferences of British papers on subjects falling within the purview of the Group. Mr. T. E. Goldup (president of the Institution of Electrical Engineers) was elected chairman of the Group, with Messrs. J. F. Coales (Society of Instrument Technology) and E. M. Renals (Institute of Cost and Works Accountants) as vice-chairmen. Mr. J. D. Green (Institute of Chartered Accountants in England and Wales) was elected honorary treasurer, and Mr. W. Bamford (Institution of Electrical Engineers) honorary secretary, and the offer of the Institution of Electrical Engineers to provide secretarial services for the Group was accepted. The chairman, the honorary secretary and one vice-chairman (Mr. E. M. Renals) were chosen to act as the representatives of the Group on the general committee of the British Conference on Automation and Computation, which will also comprise representatives of the two remaining Groups now in process of formation. The constitution of the Group provides for the election of additional member societies: those interested should communicate with the honorary secretary of the Group, at the Institution of Electrical Engineers, Savoy Place, London, W.C.2.

Transparent Magnetic Oxides

THE work going on in Prof. L. Néel's laboratory in Grenoble on ferrimagnetism in rare earth iron garnets has recently been extended in the Bell Telephone Laboratories by an investigation of their optical resonance behaviour carried out by J. F. Dillon, jun., using single crystals grown by J. W. Nielsen. These materials are remarkable in that some of them are transparent. Consequently, their Faraday rotation can be conveniently investigated, and it is found that it amounts to several degrees per mil of thickness, so that domains within the crystals can be made clearly visible, enabling the domain structure to be studied over a wide range of temperature and field conditions. Yttrium iron garnet has been most completely studied so far. It has a Curie temperature of 545° K. and a spontaneous magnetization, at 0° K. and infinite field, of 4.96 Bohr magnetons per molecule, which is close to the theoretical value of 5.0. This magnetization results from super-exchange interactions through the O²⁻ ions between Fe³⁺ ions in crystallographically different positions in the cubic lattice. The fact that yttrium iron garnet contains magnetic ions with but a single valence is of great interest, and X-ray and neutron-diffraction studies have shown that, unlike the ferrites, interactions between identical magnetic ions wholly occupying two different crystallographic sites are responsible for ferrimagnetism in the garnet structure.

Systematics and Biology of Ungulates

ABOUT sixty zoologists from Belgium, Denmark, France, Germany, Great Britain, Holland, Italy, Russia, Switzerland and the United States, attended a three-day colloquium in Paris on the "Systematics and Biology of the Ungulates" during October 23-26. The colloquium was arranged by the Comité de Direction et d'Administration of the journal *Mammalia* and the (Benelux) Société pour l'étude et la protection des mammifères, under the presidency of Prof. E. Bourdelle, with Prof. Roger Heim as président d'honneur, and Dr. Jean Dorst as secretary-general. After a reception at the Parc zoologique de Vincennes on the evening of October 23, the following three days were fully occupied in the presentation and discussion of some thirty papers embracing many aspects of the subject from classification and conservation to blood groups, placental structure, animal behaviour, and the biology of particular species. The text of these papers, together with some others the authors of which were unable to be present at the colloquium, will be published in full in *Mammalia*. The members of the colloquium agreed, as was plain from the speeches at the concluding dinner where they were the guests of the management of *Mammalia*, that the meeting was most valuable and stimulating not only in its formal business but equally in the opportunity it gave to zoologists working on the *Mammalia* for informal discussion and exchange of ideas. It is greatly to be hoped that organizations in other countries will follow the example set by their colleagues of France, and will arrange similar international meetings for the benefit of zoologists interested in the study of the *Mammalia*.

Cytological Techniques and the Apical Meristem

THE reactivity of the shoot apical meristem as ascertained by cytological and other techniques, in particular by French observers led by Plantefol and Buvat, has been discussed by Wardlaw (*New Phytol.*, 56, 221; 1957). The French school places great emphasis on the initial or meristematic ring as the active region of the apical meristem, particularly in the inception of leaf primordia and phyllotaxis. The conclusion reached in the paper under consideration is that the cytological investigations now being so vigorously pursued by the French workers and their adherents are to be welcomed as contributing new facts about the distribution of nuclear and cytoplasmic proteins in different regions of the apex; and it should be recognized that the theories and ideas which have been expounded, whether or not they are validated by further work, have given a new impetus and direction to the study of the shoot apex. The results that have so far accrued from this approach, however, tend to forfeit some of their value and objectivity, partly because of the *a priori* complete acceptance and, indeed, over-emphasis, on the part of the protagonists and their followers, of the validity of the underlying theory of phyllotaxis and apical organization, with a consequential tendency for the observations to be somewhat selective in character, and partly because the new observations have not been related to the well-substantiated body of evidence on apical ontogeny, organization and reactivity that has accrued from experimental and other investigations. Lastly, in considering the views of the French workers and criticisms of these views, it is well to bear in mind how very little is yet known about the physiology and biochemistry of the apex.