

THE BULGARIAN ACADEMY OF SCIENCES

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ALTHOUGH it can be said to have its origins in the foundation, in 1869 at Braila in Rumania, of the Bulgarian Literary Society, the Bulgarian Academy of Sciences did not become a model of the traditional European academy until much later. The Literary Society moved to Sofia in 1878 after Bulgaria's liberation from Turkish rule; but it was not until 1911 that the intentions of its founders were realized and it became, in fact and in name, an Academy of Sciences. From then until 1944 it remained a body of scholars, with the publication of learned periodicals and the holding of scientific meetings as its main functions.

Plans for the extension of the work and responsibilities of the Academy were discussed between 1944 and 1947, and its present form was determined by a law passed in 1947 and a decree issued in 1949. These have turned the Academy into a body controlling the activities of a number of research institutes and exercising quasi-ministerial authority over a great deal of Bulgarian science. At present its work is carried on by seven sections, each with several institutes. These are: (1) Physics, Mathematics and Technology (with three institutes); (2) Geology, Geography and Chemistry (with three institutes); (3) Biology and Medicine (with twelve institutes); (4) History, Archaeology and Philosophy (with seven institutes); (5) Law and Economics (with two institutes); (6) Linguistics, Ethnography and Literature (with three institutes); (7) *Beaux arts* (with three institutes). In the near future the section of Biology and Medicine is to be divided into two, a new section of Agrobiolgy with five institutes and a section of Medical Science with seven.

Not all these institutes are primarily research organizations. Thus the Zoological Gardens in Sofia and the Ethnographic Museum have the status of Academy institutes. In establishing new institutes it has been the policy of the Academy to proceed with some caution. Where the case for a new institute

is held to have been made, it is started with a small nucleus of workers, perhaps as few as three, and probably not in quarters of its own. It is then allowed to grow, and if its work flourishes it will be given buildings designed for it, some years after its inception. Most of the fully fledged institutes have between fifteen and twenty scientific workers headed by a director (normally, but not always, an academician) and controlled by a council upon which are represented the sectional committee of the Academy, appropriate Ministries and the heads of the institute's research teams. Such institutes may publish an annual bulletin of researches; thus the Biological Institute (until his recent death directed by Prof. M. Popov) has just issued its fifth, while the younger Institute of Morphology, under Prof. Hadjiolov, has just published its first.

The bulletins and the other publications of the Academy are well produced and the use of French and German, and to a lesser extent English, is common.

The Academy is also represented at the conferences which plan the work of institutes other than its own, and through its Presidium, Council of Co-ordination and planning commissions is coming more and more to co-ordinate the scientific life of the whole country. University departments do not come under the Academy or receive grants from it; but university teachers may use the facilities of Academy institutes for researches that can best be carried on in them.

At the present time there are forty-eight academicians, forty-six corresponding members and approximately five hundred full-time qualified workers in the Academy's institutes.

The Academy is conscious of the fact that during its re-organization it has not paid as much attention as is desirable to developing working relations with scientists abroad, and particularly with those of the West. It hopes next year to take a first step in improving its international contacts by inviting numbers of foreign scientists to visit it.

INSTITUTE OF CHEMISTRY OF IRELAND

SUMMER SCHOOL IN ORGANIC CHEMISTRY

THE Institute of Chemistry of Ireland held its first summer school during July 6-9 in University College, Dublin, the school being a refresher course on organic chemistry, with ninety-four participants. In his opening address, the president of the Institute, Prof. T. P. Dillon, of University College, Galway, stressed the necessity for chemists during their careers to return to the university at intervals to obtain some knowledge of advances made in fields of chemistry outside their special interest.

A series of four lectures on stereochemistry was given by Prof. T. S. Wheeler, professor of chemistry, University College, Dublin. He showed how hybridization of *s* and *p* orbitals gives the shapes of the methane, ethylene and acetylene molecules. He described how *sp*² hybridization is involved in the Walden inversion and explained how the original Mills-Nixon theory was no longer applic-

able. In treating of the stereochemistry of tetrahedral carbon, he discussed the necessary and sufficient conditions for molecular dissymmetry. Fisher's system of projection and his ideas as regards relative configurations were explained. Rosanoff's glyceraldehyde standard and the manner in which it is related to the serine standard by the Ingold school were described. After a discussion of absolute configuration, the stereochemistry of *cyclohexane* and the decalins was demonstrated by means of models, and the application of conformational analysis to steroids was shown. In his closing address, Prof. Wheeler outlined recent work on the absolute configuration of natural products such as the steroids. The fluorescent glass models of *cyclohexane*, decalin and steroid systems made by Mr. W. Brady, of University College, Dublin, were greatly appreciated.