

## SECOND INTERNATIONAL CONGRESS ON ACOUSTICS, CAMBRIDGE, MASSACHUSETTS

THE Second International Congress on Acoustics, sponsored by the International Commission on Acoustics, was combined with the regular summer meeting of the Acoustical Society of America and was held in Cambridge, Massachusetts, during July 17-23, with support from Unesco and the U.S. National Academy of Sciences, and with the Massachusetts Institute of Technology and Harvard University acting as hosts.

The opening ceremony consisted of a reception of participants by the sponsoring bodies. Later, as relaxations from the technical programme, there were a sight-seeing tour, a concert and a banquet. An exhibition of books and instruments dealing with acoustics was held at Harvard. Of interest even to non-technical members of the Congress was a symposium on musical and architectural acoustics held in the Sanders Theatre of the University, where W. C. Sabine made his first measurements of reverberation time in 1895. At this symposium Prof. V. O. Knudsen showed some relics of the famous cushions, which Sabine bought up from a church that was then being refurnished and which he compared in absorbing power with an open window. Other symposia covered the subjects of bio-acoustics and noise control, speech analysis and physical acoustics. In addition, about a score of technical sessions were held involving some four hundred authors of papers and covering between them all branches of the subject, both pure and applied.

It is impossible in a reasonable space to refer to all these; but an attempt will be made to indicate those aspects of the subject which seem to be enlisting the greatest attention and showing most significant advances.

What may be called 'visco-elasticity' or 'relaxation spectrometry', according to the interests of the experimenter, continues to be a fruitful subject both in sonics and ultrasonics. The variation of absorption

of sound waves with frequency and—in the case of gases—of velocity of sound with frequency continues to provide the physical chemist with valuable data, which are proving of use also to the metallurgist, to the maker of plastics and—in respect of relaxation in vapours—to the aerodynamicist.

In this age of jet propulsion, measurements and calculations by physicists and engineers on the production of noise from a transonic or supersonic jet of gas emerging from a nozzle are numerous; so, too, are the considerations of the sounds in boundary layers and the propagation of sounds through the atmosphere, particularly when it is turbulent. In one paper mention was made of the sounds of underwater jets. Does this mean that the ship designer is returning to a mode of propulsion which he abandoned in 1885?<sup>1</sup>

Noise was, of course, apart from this special field, much discussed—in buildings, in traffic and in machinery—especially in relation to its psychological and physiological aspects.

The sessions dealing with speech and music showed a comparatively small number of research workers, many using such time as they can spare from more urgent acoustical work, and treading a rather pedestrian track of analysis and synthesis; but the number of people interested in this field seems to be increasing. The need here seems to be for more inspiration.

Authors of papers were invited to submit them for publication in the *Journal of the Acoustical Society* or in *Acustica*. The meeting was highly successful and attracted more than twelve hundred registered members, undoubtedly the largest number of students and exponents of this field of physics ever brought together. At the concluding session, it was announced that the Third International Congress would be held in Stuttgart in 1959.

<sup>1</sup> See Barnaby, S. W., *Proc. Inst. Civ. Eng.*, 77, 1 (1883).

## COMPARATIVE MARINE BIOLOGY CONFERENCE IN ROSCOFF

AT the International Congress of Zoology held in Copenhagen in 1953, members of the Zoology Section of the International Union of Biological Sciences proposed to the general assembly that a meeting should be held in 1956 to discuss the comparative biology of aquatic species throughout the area of their distribution. The plan was approved; the meeting, under the auspices of Unesco, and limited to the discussion of marine and brackish-water species, was held during June 27-July 4 at the Station Biologique, Roscoff, at the invitation of Prof. L. Fage, Prof. G. Teissier and Prof. P. Drach; the last was responsible for the organization. Prof. S. O. Hörstadius, president of the International Union of Biological Sciences, was present, together with biologists from fourteen countries.

The plan of the meeting was twofold. First, by means of papers and discussions to review various aspects of the problems involved in understanding the

distribution of species—the disciplines and approaches of the general biologist, the ecologist, the physiologist and the geneticist are all essential and complementary in this field of work. Secondly, to initiate new co-operative efforts—the possibilities of exchange of workers, co-operative schemes of work on selected species, and standardization of techniques were to be considered.

The papers were divided into groups; under the general heading of "The Biological Cycles of Marine Organisms", the biology of *Ostrea edulis*, *Mytilus* sp., *Calanus finmarchicus*, *Carcinoides moenas*, and *Nereis* sp. were considered in relation to their geographical range. Two papers dealt with algal distribution. Morphological variation and biometrical studies were introduced in a general paper by Prof. Teissier, and this was followed by communications dealing with intestine length in Clupeoid fishes, differences in widely separated populations of *Gobius minutus* and