which is flanked on either side by a drum membrane. The energies transmitted to the air of the middle ear from the deep surface of one drum membrane may pass directly to the deep surface of the other membrane.

The ability to locate a sound may be partly due to its intensity. It may also be due to a differential registration of fundamental and overtones on the two sides. A pure tone may not be located. Overtones are less readily dampened out than fundamentals as Mach's experiments seem to indicate. The relation of the position of the sound source to the head-form and diffraction into the two external canals would therefore play an important rôle in relation to the differential registration of fundamental and overtones. This was I believe worked out in part by Fite of Princeton University.

It would seem that the evidence in birds points not only to a great acuteness in hearing but also to a definite ability in determining the direction of the sound source. This in spite of the fact that birds do not possess the functional auricle of the mammal. If it be true that the sense of location for sound is so well developed in owls, woodpeckers and possibly robins, then a special significance may be attached to a confluence of the middle ear cavities. It may be that a more definite analysis of the fundamental and its overtones is due to a greater efficiency of the two drum membranes applied to a single middle ear.

The writer will appreciate and acknowledge any direct observational data on this problem of the acuteness of hearing in birds and in particular the evidence for the definiteness with which a bird may locate a sound source.

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QUOTATIONS

SCIENTIFIC ORGANIZATION

Professor W. M. Wheeler, a learned and witty American biologist, has recently addressed a genial remonstrance to his scientific fellow-citizens on their devotion to resounding phrases. His remarks deserve a wider application, and are very pertinent to ourselves. The current watchword of the elect, he says, the "highbrow" toast of the moment, is "organization." Wayward, individual pursuit of knowledge is out of fashion. It is distasteful to the bureaucratic spirit of the age, it tends to overlapping of effort, and it exalts personal reputations, possibly and regrettably those of obscure unofficial people. The committee is the thing. The problem must be set, the parts allotted, the results received, edited, and issued by the authority of men sitting round a table. There must be sub-committees and super-committees, joint committees and special committees. How else shall we control genius, encourage mediocrity, and secure "team-work"? How better can science present a respectable front to governments or offer responsible hands for grants-in-aid? A detached individual is an unstable creature; he may die, neglect to report, get off the lines, or make discoveries of a very upsetting kind. A committee is safe; its existence secures continuity and is a guarantee against the precipitate production of uncomfortable truths. But the professor fears that the child product of organization is organizers, and that in elaborating our machinery we forget its purpose. Fortunately, however, mankind is wiser than any of its generations and has a knack of creeping out of the hard shells it continues to secrete. "Organization" is the fad of to-day, and will be as ephemeral as its predecessors. "Culture" was one of these. But "culture" died, and its corrupt body became decadence when, ceasing to be a mental attitude, it became an intonation and a set of opinions. Progress was another; but that has hardly recovered from the shock of the war, which gave us good reason to distrust some aspects of modern civilization. Now even popular preachers find it safe to mock at "progress." The truth is that a conception seldom becomes crystallized in a phrase until it has outgrown its most fertilizing activity. Ideas have their cycle of life; they are born of the great, named by the dull, and killed by common usage.—The London *Times*.

In his presidential address (printed in SCIENCE for January 21 last) before the Zoological Section of the American Association for the Advancement of Science at its Chicago meeting Professor W. M. Wheeler discussed the subject of organization in research as it appears to a biologist, and pointed out some of the dangers attending post-war efforts in this direction. He mentioned the array of instincts, emotions, and interests on which the activities of the investigator depend and the great diversity of mental aptitude which necessarily accompanies the genius for different types of research. Professor Wheeler claims that any organization dealing with research should refrain carefully from interfering in any degree with the free expression of the individual's exceptional aptitudes in his own way. In these days when the amateur in scientific research is passing we need to beware of fettering in any way by government or other interference the activities of the professional scientific man.—*Nature.*

SCIENTIFIC BOOKS

Catalogue of the Coleoptera of America North of Mexico. By CHARLES W. LENG. Published by John D. Sherman, Jr., Mount Vernon, N. Y., 1920. Pp. 470; large octavo.

I don't know how many collectors and students of Coleoptera there may be in the United States—certainly not so many as in several of the European countries, and they are probably not as numerous as the collectors of Lepidoptera. But their numbers will surely increase, and the labors of the present students will be greatly facilitated by the appearance of Mr. Leng's long-expected and thoroughly admirable catalogue.

A good, up-to-date catalogue is a tremendous help and stimulus. The Coleoptera of North America have not been comprehensively listed since the American Entomological Society published Henshaw's list in 1885, more than 35 years ago, and in the meantime large groups have been comprehensively monographed, the scheme of classification has been modified in important particulars, and the names of genera and families have been changed, while the number of described species has increased from a little over nine thousand to a little less than nineteen thousand.

As a result of the publication of this catalogue, the American Coleopterists for the first time in many years know for the moment just where they stand. And what a joy it must be to them! And what a relief it is to all general entomologists! I can imagine the veteran, Samuel Henshaw, himself, sitting in the Director's Office of the M. C. *Z.* at Cambridge, heaving a deep sigh of satisfaction and saying to himself, "Good! My New England conscience is at rest. What I looked forward to years ago is done, and excellently done."

There are catalogues and catalogues. The best ones are more than mere lists, but none the less are based absolutely on the literature and do not reflect too much the individual views of the specialist author. Such is the great synonymical Catalogue of the Coleoptera of the World by Gemminger & Harold, and such is the present catalogue of which we write. Its publication is an event! It is a great big stepping stone!

One like the writer, who knows the Coleoptera only in a general way, is first of all impressed by the excellent make-up of the catalogue. It is printed upon excellent paper; and it can be obtained from the publishers in a very good binding. The topography is of a high character. These, however, while worthy of especial note, are only adjuncts to the main appreciation.

One who is not familiar with the enormous amount of work which has been done by clever men of many countries, will not in the least appreciate the difficulties which Mr. Leng had to encounter. Our conception of the general classification of the Coleoptera has undergone fundamental changes from the LeConte and Horn classification of 1883. Many new characters have been used by subsequent writers, and advanced schemes of classification, based upon these new elements, have been proposed by Lameere in Belgium, Kolbe and Gangl-