Society of Naturalists, largely through its meetings and symposia, but partly through the intangible but quite significant *esprit de corps* that has so happily prevailed among our numbers. To aid in bringing all kinds of biologists together may well be the main aim of this society.

LOCAL BRANCHES OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

By J. McKEEN CATTELL

AT the meeting of the executive committee of the American Association held in New York on October 21, the question of the organization of local branches was considered and a committee to carry out the work was appointed consisting of Otis W. Caldwell, chairman; J. McKeen Cattell, chairman of the executive committee; Henry B. Ward, permanent secretary; Burton E. Livingston, general secretary, and Karl T. Compton. Members of this committee who could remain in New York the following day discussed the situation and an informal statement of plans proposed is here made in order that they may be brought to the attention of members of the association and secure their cooperation.

Local branches are authorized by the constitution drafted by the present writer in 1918 and adopted at the St. Louis meeting on January 3, 1920. Article 6 reads: "Regional Divisions and Local Branches of the association may be formed by vote of the Council. Such Divisions and Branches may elect officers, hold meetings, appoint committees, enter into relations with other societies, and promote within their fields the objects of the Association."

In accordance with the provisions of this article of the constitution there have been established the Pacific Division, organized in 1915, and the Southwestern Division, organized in 1920. An amendment to the constitution was later adopted providing for representation on the council of the affiliated state academies of science. Previously and since there have become affiliated with the association twenty-six state academies and two city academies. The work involved in the organization of the divisions and the affiliation of the academies has been large, and it is only within the last four years that the association has had other than a part-time secretary, whose time was fully occupied in the arrangements for the meetings and other pressing work of the association. The problem of the organization of branches has not as yet been taken up seriously, though two were established many years ago—one in Rochester and one in Pennsylvania State College.

Some thirty years ago a committee of the association on local branches was appointed, of which the late Dr. R. S. Woodward, then professor of Columbia University and later president of the Carnegie Institution of Washington, and the present writer were the active members. A certain amount of work was done at that time, but it could not be taken up by the central office, for the secretary then was receiving a salary of only $1,500, and, in addition to his official work as head of the Bureau of Entomology, was carrying on research work of importance.

With a membership so large and so widely scattered over the continent it is almost essential to have local and divisional organization. The American Association has its two western divisions and its affiliated academies; it would probably be advantageous to form other divisions covering the United States and Canada. It is the problem of local branches that is of present concern, but these may become the units in a state organization, perhaps under the auspices of the State Academies of Science.

Other professional societies have a more adequate organization than the American Association. For example, the American Medical Association is organized by counties and states; no physician can be a member of the national organization unless he is a member of the state society or of the state society unless he is a member of the county society. The regional divisions of the American Chemical Society cover the country. There are educational associations in every state.

Even without a satisfactory organization the American Association has advanced greatly during the past thirty years in membership and influence. In addition to the affiliated academies there are some 140 associated societies, and the membership had increased in 1931 to nearly 20,000. The comparatively small decrease in 1932 and 1933 has been followed by a moderate gain in 1934, the total membership now being about 18,000. A membership of 20,000 should be reached within the next year or two.

The membership can be increased by the organization of local branches; but the primary object of their organization is to forward in all localities the objects of the association which, according to the first article of the constitution, are: "To promote intercourse among those who are cultivating science in different parts of America, to cooperate with other scientific

societies and institutions, to give a stronger and more general impulse and more systematic direction to scientific research, and to procure for the labors of scientific men increased facilities and a wider usefulness."

The excellent geographical index of members of the association, published in the volume of summarized proceedings recently issued, emphasizes the large membership and its wide distribution. For example, in the State of Pennsylvania the distribution of the members in places where there are five or more is as follows:

Philadelphia—(Univ. of Pa. and others)	413
Pittsburgh—(Univ. of Pittsburgh and others)	251
State College—(Pennsylvania State College)	86
Bethlehem—(Lehigh; Moravian Coll.)	36
Swarthmore—(Swarthmore)	28
Easton—(Lafayette)	21
Harrisburg	20
Lancaster—(Franklin and Marshall)	20
Bryn Mawr—(Bryn Mawr)	16
Erie	13
Haverford—(Haverford)	12
Lewisburg—(Bucknell)	11
Allentown—(Cedar Crest)	10
Reading	9
Upper Darby	9
Carlisle—(Dickinson)	8
Scranton—(Marywood; St. Thomas)	8
West Chester	8
Lansdowne	7
Washington—(Washington and Jefferson)	7
Chambersburg—(Wilson)	6
Drexel Hill	6
Gettysburg—(Gettysburg)	6
York	6
Annville—(Lebanon Valley)	5
Jenkintown—(Beaver)	5
Johnstown	5
New Wilmington—(Westminster)	5
Ridley Park	5

These data for Pennsylvania are given because in the organization of local branches it would be desirable to give special attention to centers near the place of the annual meeting, in order to increase interest in that meeting, and because it would bring the association to the attention of the scientific men of the region. Consequently towns in Pennsylvania and Ohio, together with the adjacent parts of New York and West Virginia, should now be specially considered. It may not be useful for the present to attempt to organize a local branch in Philadelphia, for in that city there are many organizations and opportunities for scientific meetings. The same situation holds for Pittsburgh, but it might be well to consider the questions involved in the establishment of a branch there at the time of the approaching meeting. The places where local branches would probably be most useful and successful are the college towns, as indicated in the list given above, such as Bethlehem, where there are 36 members; Easton, where there are 21 members; and Lancaster, where there are 20 members.

It is proposed that the local branches shall have complete autonomy in their communities. They will only be established where the resident members of the association think that it would be desirable to form a scientific center. These members would serve as a center of organization and would doubtless wish to interest in the branch other scientific men not members of the association but eligible to fellowship, and those engaged in professions and business having intellectual interests and eligible to membership. It is not intended that any pressure shall be brought on those cooperating in a local branch to join the association. It may, however, be desirable to have in a branch two classes of members—those who at the time of organization are members of the association, and those who would join in the work and who might be designated as associates of the branch. The question of finances would be settled by each branch; there might be no dues and no regular expenses, or there might be an annual fee, say of one dollar, that could be used to promote the objects of the branch. Lectures and other programs could be arranged to which admission would be charged.

The branches might be expected to seek the cooperation of other organizations in the locality. Science within recent years has been acknowledged to be through its applications the basis of our civilization. If there had been no development of methods to increase wealth there could be no universal education, no prohibition of child labor, no freedom for women, no democracy. The situation has in recent years—thanks in large measure to the organization of Science Service—become rapidly recognized by the press, which gives increasing attention to science, and to a lesser though not insignificant extent by the radio and the movie.

The local branches would presumably aim to interest in science other organizations, such as the Rotary and Kiwanis Clubs and the corresponding clubs for women. An especially promising field appears to be country and golf clubs. They have definite and useful functions in their golf, tennis and the rest, and in the social relations that are formed and promoted. Science is doubtless often the subject of conversation, but some scientific interests might be taken up as hobbies, for every science has aspects of interest to those who are members of golf and country clubs. Beginning with astronomy and extending to psychology there are portions of each science that can be

cultivated to advantage in the leisure time likely to precede or follow golf or tennis, which indeed on wet days may occupy the whole time.

If we begin with mathematics, the queen who rules over the exact sciences, and pass over compound interest and minus quantities in the red to the theory of probabilities, it may be noted that knowledge here is essential to the most expert poker and bridge playing. On an Atlantic trip the writer once plotted on a curve bids on the daily mileage and was in a position to make a bid with odds in his favor. By sheer luck he won the pool three days out of five and attained reputation as a great psychologist. In astronomy it may be noted that a large part of the observations made on falling stars and the like are reported from gulf clubs; that a telescope and other astronomical instruments could be acquired to advantage. In physics any golf or baseball player would be interested in an article printed some years ago in *The Scientific Monthly* on the course of a golf ball by the greatest living physicist, Sir Joseph Thomson. Meteorology is a branch of physics; the weather—especially on the golf links—must become again the chief topic for casual conversation, now that prohibition is out of the way. Chemistry appeals to a very wide range of human interests. As a minor example, cooking, distilling and fermentation are applied chemical sciences. Geology and geography are obviously concerned with the golf course and its hazards.

Zoology also applies directly to the situation. A bulletin board recording the date and observer of the first and last appearances of birds and insects would attract general attention. The cause of the prevalence of mosquitoes and flies is of direct interest. In botany we have not only the greens and lawns, but it would be easy to make a botanical garden about a golf course that would add much to its attractions. Physiology, anatomy and all the medical sciences can be applied, not only to what the player should or should not do, but also to how to do it properly. Psychology, concerned with behavior and social intercourse, is of interest to all, but it has aspects of special concern to those engaged in competitive sports or having leisure to discuss things in general.

It is quite possible that an impulse toward greater interest in science might be given by organizing under the auspices of country and other clubs special groups, with talks and discussions that would be of interest and might be useful in attracting new members. Adult education of itself as a formal discipline has drawbacks, but certainly any movement that will interest people in science, and the association of science with avocations and recreations such as golf and bridge, deserves encouragement.

People in the large centers perhaps have as many formal lectures as they need, though they are still interested in good lectures. For example, at a meeting in November of the National Academy of Sciences at Cleveland, a $3,000,000 music hall was filled with an audience of 1,600 to listen to a lecture by Dr. Harlow Shapley. He is doubtless the star lecturer of the academy, and, as the president said in introducing him, his work covers a wide field. If the present writer had given the lecture on relations of time and space in vision the audience might have been reduced by 90 per cent. It is obvious that Dr. Shapley could not lecture under the auspices of many local branches, but he might very well give in Boston a lecture, sent all over the country by short wave transmission, of which branches could be informed and to which members might listen in; or his slides and mimeographed notes could be supplied to a local scientific man, who, with proper credit, could base on them a most interesting lecture. Besides there are many scientific men who can talk well if given a chance. The writer once compiled a list of over a hundred psychologists competent and willing to lecture for a fee varying from $200 to $0. It is, however, to be assumed that local branches would get on best in less formal meetings, such as luncheons or dinners, at which a local scientific man, or one from a distance, might talk in a more or less informal way and be followed by still more informal discussion.

The advantages of organization through the American Association or the State Academies of Science are that it would give opportunity for cooperation. Neighboring branches might meet together. The writer, for example, once addressed at Bethlehem a joint meeting of the professors of Lehigh University and Lafayette College. Through such meetings and various forms of cooperation each branch might find out what other branches were doing and could take up the interests that were most successful. Each may learn by the trial and success method what can be done to best advantage to advance the interests of science. Those that succeed can act as missionaries to teach their methods to other communities; those that fail can remain inactive until there is a more favorable opportunity to take up the work.

The subject of promoting interest in science through local branches under the auspices of the American Association for the Advancement of Science is so large that this communication must be terminated with many things left unsaid. It represents only the point of view of the writer. An official report on the subject will be presented at the Pittsburgh meeting of the association.[1]

[1] Those members who are interested in local branches can communicate with the chairman of the newly appointed Committee on Organization, Dr. Otis W. Caldwell, 433 West 123rd Street, New York City.