nitrate; (4) by-product ammonium sulfate; (5) calcium cyanamid; (6) urea; (7) potassium nitrate; (8) potassium chloride; (9) sodium chloride. These materials were applied to an area infested with *Polytrichum commune* at the rate of 30 and 60 pounds of nitrogen per acre in case of the nitrogen carriers, and the chlorides were used in chemically equivalent amounts. Application was in the spring. Observations made at the close of the season showed the highest degree of toxicity from sodium and potassium nitrates used in the higher amounts, followed by the sodium and potassium chlorides in chemically equivalent amounts and by sodium and potassium nitrates at the smaller rates. The other nitrogen carriers, including calcium nitrate, showed no toxic effects.

From observations thus far made it appears that toxicity of certain nitrates for this species of moss seems to be due primarily to the sodium and potassium ions. However, the cationic effect seems to be linked somewhat with the anionic effect, for, with one exception the nitrates were more toxic than the corresponding chlorides. This observed toxicity is not an indirect effect, that is, a crowding out of moss by other vegetation, as was first supposed, but is an actual killing of the moss. The effect is immediate and in proportion to the amount of sodium nitrate applied. It is also cumulative, so that after several smaller applications the effect is similar to that of a single larger application.

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PREHISTORIC MOUNDS IN SOUTH FLORIDA

SEVERAL professors connected with the University of Miami have been working on a mound recently discovered on Key Largo which is suspiciously Mayan in character. It is a stone structure carefully constructed by aboriginal masons and is strikingly like several structures in British Honduras. The character of the pottery found in the neighborhood indicates a foreign origin, since there is no pottery clay in Southern Florida. It is black and hard like the pottery of Yucatan. Obsidian knives and other remains discovered in the vicinity of the mound are also indicative of foreign influences. Various canals and small harbors dug in this region indicate that Southwestern Florida was once inhabited by a numerous and enterprising population. The Mayans were great seamen and traders and it is more than likely that they settled in Florida. The abundance of game, especially fish and shell-fish, would have been a great attraction. There is reason for believing that the Calusas were of Mayan stock and that even the Seminole may have Calusa blood in his veins. This region will be included in the proposed National Everglades Park and it is hoped the Seminoles may be used for guards and guides.

The University of Miami, under whose auspices the preliminary researches have been made, will continue its investigations in this region and will later publish fully the results of its studies.

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SCIENTIFIC BOOKS

Comité national français de Géodésie et Géophysique. Assemblée générale du 9 mai 1931. Au Secrétariat général du Comité. Rue d'Anjou, 78, Paris 8e.

THIS publication gives the proceedings of the 1931 annual meeting of the French National Committee on Geodesy and Geophysics. These proceedings cover only some nine pages. The remainder of the volume of over 90 pages is occupied with reports of the sections dealing with the various special branches of geophysics and with membership lists. The reports themselves are summaries, or sometimes summaries of summaries, so it would be rather absurd to carry the process of summarization still farther in this review. The reviewer will therefore confine himself to making a few general remarks, based on this publication as a text, and to mentioning a few of the items found merely because they happen to be connected with fields of work in which he is especially interested or to strike his fancy as odd or noteworthy. A different reviewer would no doubt find texts for different sermons and would single out different items for special mention.

It is instructive to read publications of this sort. They bring before the reader the great diversity and the wide ramifications of geophysics and, in spite of these, its essential unity. The subjects treated in the different sectional reports vary greatly, but the membership of the sections overlaps extensively (just as it does in the case of the American Geophysical Union), and everywhere problems are encountered that concern more than one section. Geophysics extends on one side into geology and geography, on the other sides into technical physics and astronomy. If any one is to be immune from the dangers of too narrow specialization, the geophysicist ought to be.

The meeting of the French National Committee looked both to the immediate past and the near future.

Much space was given in all sectional reports to the meeting of the International Geodetic and Geophysical Union that had been held at Stockholm the year before; and much space also, especially in some sectional reports, to the plans for the International Polar year of 1932–33.

It is interesting—at least to a geodesist—to note that the French section of geodesy has the largest membership of all the sections (nearly the reverse is true of the American Geophysical Union). Not all the members of the section are professional geodesists. Perhaps the explanation is that the place of geodesy in general geophysics is something like that of anatomy in the medical sciences; that is, geodesy like anatomy, is a fundamental subject, some knowledge of which is required by the specialist in other subjects.

In the Section of Geodesy considerable attention was paid to gravity at sea. It was hoped that Dr. F. A. Vening Meinesz, of Holland, who has perfected a method for obtaining accurate values of gravity at sea by means of a specially constructed apparatus used aboard an immersed submarine, would be admitted to a French submarine to take observations and to train others in the art. At the last moment, however, these plans had to be cancelled because of objection on the part of the Naval General Staff. It may be added, however, that since the date of the meeting here reported, the work of obtaining gravity at sea has made notable progress. Many observations of gravity over the Mediterranean have been made with Meinesz's apparatus in an Italian submarine; Meinesz himself is at this writing (February, 1932) engaged in his second gravimetric campaign in an American submarine operating among the West Indies and the Bahamas; and only Meinesz's departure for the United States to take part in this campaign prevented his acting as instructor to a French hydrographer and a French naval officer who were to be sent to Holland to be trained by him. It is therefore to be supposed that eventually the French navy will participate in this important work.

Mr. Holweck and Father Lejay have developed an apparatus for the rapid determination of gravity, of which great things are hoped. In principle it is a metallic strip clamped to point upward and to execute elastic vibrations. The vibrations are greatly slowed down by means of a load applied to the strip. The slowing down varies with the intensity of gravity, hence the period of vibration under the combined effects of the elasticity and of the load may be used to determine relative gravity. The crucial question is: will the elastic properties of the metal remain sufficiently constant with age and use?

The Section of Seismology reports plans for a first-class earthquake observatory at Martinique. More observatories like this are needed in this unstable region and its nearness to Mont Pelé will add to its value. The Union of Socialist Soviet Republics in its Stockholm report tells of very extensive plans for seismological study. If fully carried out, they will add much to our knowledge.

One more item in the report of the Section of Seismology deserves mention, though it is of a quite different order of magnitude, so to speak, from the comprehensive plans of the Soviet Government. At Le Mans (in Maine, France, not Maine, U. S. A.) there was a seismological station maintained by the energies of one man and the support of the community. This one man, Mr. Jagot, did an excellent work not only in maintaining the station but in arousing popular interest in the subject and in spreading a knowledge of it. Now, being 77 years old, he feels compelled to retire. It would be a fine thing if competent amateurs in science were everywhere more numerous and were also interested in spreading a knowledge of science. Seismological institutions also might well consider whether they should not give more attention to popularizing their subject.

The Section of Seismology also reports that for lack of radio apparatus many French seismological stations are unable to take advantage of the seismological broadcasts sent out from time to time from the U. S. Naval Station at Arlington along with the daily weather forecast. By way of explanation it may be added that these messages result from international cooperation and from the collaboration of stations in the United States, Canada and the Pacific area, of the Coast and Geodetic Survey, of the Jesuit Seismological Association and of Science Service.

The report of the Section of Oceanography mentions the possibility of adapting the Favé tide-gauge, which is a pressure gauge for use at sea, to the study of surface waves, adding that experimental work on these short-period surface waves is much needed. The report also mentions the formation of an international committee to study the so-called (and miscalled) tidal waves (in French "raz de marée)." Presumably these "tidal waves" are solitary waves or small groups of waves caused by submarine earthquakes. Some less misleading term than "tidal wave" is needed and the noncommittal Japanese word *tsunami* has been suggested but has so far found no general acceptance. (This comment on nomenclature is the reviewer's, not the report's). In the report of the same section are some interesting remarks on the fallibility of water temperatures as an indication of the nearness of icebergs.

The Section of Hydrology reports a test made to

check the operations of a magician, presumably—from the context—a finder of water by means of a divining rod. As was to be expected, the so-called magic was found to yield no results of value. The section is reported to be on the lookout for further tests of this sort in order to clear away superstition and increase real knowledge. This raises the question of the duty of scientific organizations when they encounter superstitious beliefs in their special fields. Should they sit back and do nothing, on the theory that a superstitious man is immune to reason and that attempts to argue him out of his superstition are pure waste of energy, or should every opportunity be sought not only to diffuse knowledge but also to combat superstition?

Two difficulties are more than once referred to that are familiar enough to geophysicists on this side of the Atlantic also. One is the difficulty in getting money for geophysical work; the other is the unwillingness of organizations engaged in commercial geophysical work to make their results public in order that general scientific knowledge may be advanced thereby.

The above are samples of the nuggets that may be found even by a hasty perusal of what at first glance would seem to be an exceedingly dry routine report.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

A HOLDER FOR CHICKENS AND OTHER BIRDS

IN an effort to find a practical means for holding chickens without the aid of an assistant a board was designed which can be used for confining fowls quickly and firmly in either ventral, dorsal or lateral positions.

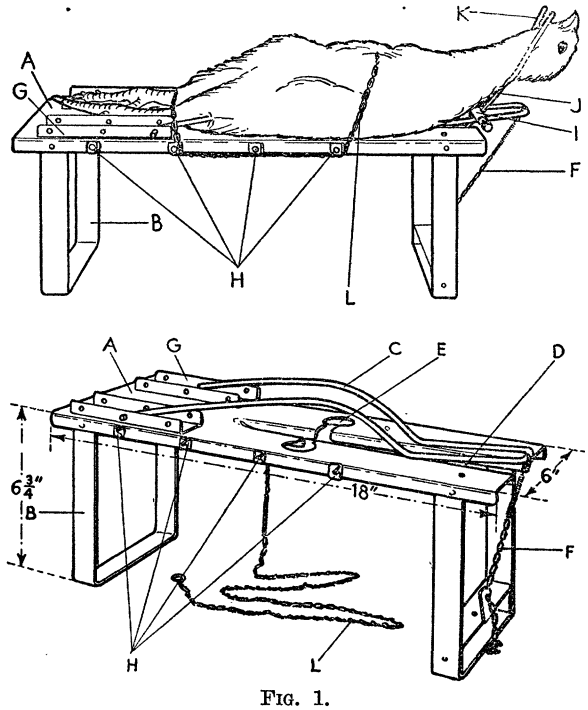

FIG. 1.

This board (Fig. 1) consists of a sheet of metal supported on legs to form a low table and a loop of metal, curved to conform somewhat to the shape

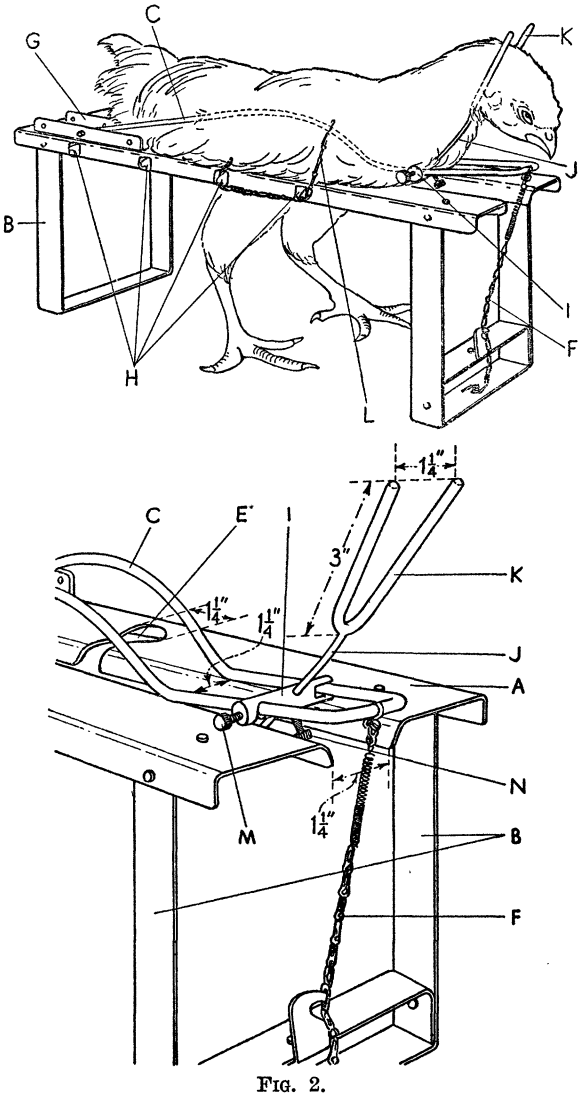

FIG. 2.