

3. The group of societies forming the naturalists constitutes a great natural subdivision of the American Association for the Advancement of Science, representing a definite phase of the work and aims of this general society, but in no sense subordinate to it. The American Association should act for the Naturalists where its aid is demanded, but the relations of the two societies must be so adjusted that there shall be no danger of encroachment on the dignity, powers or functions of the Naturalists. The broader society can obtain good results only by a generous attitude of service to its coordinated sections.

4. The Society of Naturalists should then be preserved as an important group, but in a modified form.

5. The organization of the society should be made more representative and efficient by including all of the members of all affiliated societies. It should not then be restricted, from chiefly accidental causes, to a special list of names. As a matter of fact all naturalists are welcomed and actually take part in its dinners, discussions, etc. They should then be recognized as members. At present even a few of the officers of some of the affiliated societies are not rated as members of the naturalists.

6. The naturalists should appoint a committee to bring about a new coordination between their affiliated societies and also to secure a proper adjustment with the American Association for the Advancement of Science.

7. As soon as the affiliated societies will take this necessary action to place the Society of Naturalists on the footing it should occupy, the membership should be as follows: The membership of the society should still be published, but, since identical with that of its affiliated societies, by simply giving the titles of these societies, and referring to their lists and that of the American Association for addresses, etc. A few who are members of the naturalists, but not of the affiliated societies, should, of course, be added. In addition there should be a statement of the constitution, aims and acts of the society and its function of organizing cooperation in bio-

logical undertakings where combined action is desirable, should be clearly formulated and recognized.

8. The Society of Naturalists should no longer be obliged to collect dues, except from members not belonging to the affiliated societies. Even with its annual fee of one dollar it does not now receive the amount which should come to it under a different organization.

9. The affiliated societies should collect a small annual fee in addition to their own, to be devoted to the purposes of the Society of Naturalists, thus recognizing its usefulness. This would probably give a larger annual total than is now collected from its restricted membership.

10. The society should make the *American Naturalist* its official organ, and this journal should set aside special sections for the publication of articles and discussions bearing on the problems of the society. Dr. McMurrich, the late president of the society, has recently (see *SCIENCE*, March 5, 1908), pointed out in an able manner advisable lines for future development. He has also well expressed the feeling of many members that this society is an important factor in the scientific and educational development of this country, and the above suggestions are not intended to conflict in any way with the common desire that the society shall continue to remain independent, even though a readjustment of its external relations shall permit a more effective cooperation.

H. McE. KNOWER

*Secretary to the American
Society of Naturalists*

NEWS FROM KILAUEA

THIS volcano is now in action. Since 1894 there has been no exhibition at all comparable with that now apparent. Hon. L. A. Thurston, than whom there is no better judge of the conditions, writes as follows to the *Advertiser* issued May 29:

Within the last few weeks the central pit has filled up by the rising of molten lava within its walls until its floor is now only about 200 feet below the floor of the main crater.

At this level, 200 feet below the spectator,

there is a lake of molten lava, in the shape of the figure eight, approximately 800 feet long by 400 feet wide. Near the center of the northern lobe of the lake is an island some 78 feet in length, in the shape of a half moon. Within the little bay formed by the points of this island there is an almost constant boiling of the molten lava, with explosive bursts of gas every minute or so, which throws masses of the molten fluid into the air some 30 to 40 feet, and scatters it over an area of approximately 100 feet in diameter. Immediately after each outburst of gas a tremendous suction draws the lava from a radius of 100 feet of the bay into a vortex like that of a maelstrom, great cakes of lava 15 or 20 feet in diameter being turned up on edge, sucked in and disappearing like chips down a whirlpool.

Immediately north of the island, at a distance of not more than 100 feet therefrom, there is a gigantic outpouring of lava from beneath, without any bubbles or explosions. It looks like an enormous spring, the lava simply welling up and flowing off in all directions. The current is so rapid that the surface of the lake does not have time to cool, except in spots, and these spots are at frequent intervals upheaved by convulsions from beneath, and the black crust engulfed in the liquid lava beneath. The crusts striking the banks of the lake, which are from four to six feet high, are either shoved bodily upon the banks, like ice cakes in the Arctic, or upturned on edge and swallowed up in the fiery depths below. At intervals boiling spots appear at various points on the lake; engulfing the black cakes of lava floating thereon. The outpouring of the lava from the great spring is so great that the level of the liquid lava is raised faster than the surrounding banks can retain it, and at frequent intervals the banks give way and torrents of lava flow out into the surrounding territory in the pit, until that portion of the pit is raised to a level that stems the flood.

This action has been going on now for several weeks, the lake constantly enlarging and the floor of the pit being raised by the overflows of lava.

The brilliancy of action can be judged from the fact that a lantern is not needed in crossing the rough floor of the crater, the light from the lake being more than sufficient to show the trail in its details. The glare of the lake can also be seen any clear night from Hilo and Honuapo, at distances of 31 and 35 miles, respectively.

The probability is that this brilliant display can be seen for several weeks or months

yet; but it would be well for visitors to lose no time in starting for the volcano for fear of disappointment. It will be many years before another equally good opportunity is likely to present itself.

C. H. HITCHCOCK

HANOVER, N. H.,

June 10, 1908

SCIENTIFIC BOOKS

Air-ships, Past and Present. By A. HILDEBRANDT. Translated by W. H. STORY. Pp. 364; 222 illustrations. New York, D. Van Nostrand & Co. Price, \$3.50 net.

There have been hitherto few satisfactory books in English upon aerial navigation and information in newspapers has not always proved accurate. We now have, however, a book by a thorough expert, Captain Hildebrandt, instructor in the Prussian Balloon Corps, who wrote the work in 1906, and it was found so good as to warrant translating into English by Mr. W. H. Story. There are twenty-six chapters and profuse illustrations.

The greater portion of the book is naturally devoted to balloons. These vessels have now been developed to almost adequate speed and efficiency in the "dirigible air-ships" of the present day and the European nations are providing themselves with war aerial navies which are described and illustrated by Captain Hildebrandt, in a popular way so as not to repel untechnical readers.

He begins with the early history of the art, this referring chiefly to flying machines, and then gives two chapters to the hot-air balloon and its subsequent supersession by the hydrogen balloon. In the fourth chapter the theory of its flotation is taken up and formulæ are given for calculating the "lift" at different heights, or with different atmospheric pressures. Also for the effects of temperature upon the enclosed gas. Then four chapters contain the history of the dirigible balloon, with copious illustrations of the vessels which have marked the gradual increase in speed. This was twenty-two miles an hour for the French "Lebaudy" in 1906. Since then it has been increased by increased sizes to about thirty miles an hour, which must be very near