

GRANTS RECOMMENDED BY ADVISORY
COMMITTEES.

In addition, the advisory committees have submitted a number of recommendations not included in the foregoing table. These are printed on pages xxxiv-xxxv of the confidential report to the trustees, issued November 11, 1902, and that for the southern and solar observatories in the present report:

Physics, per annum.....	\$ 250,000
Geophysics, per annum.....	150,000
Psychology, per annum.....	45,000
Physiology, per annum.....	50,000
Southern Observatory, twelve years (\$820,000), first year.....	80,000
Solar Observatory, twelve to fourteen years (\$1,280,000), first year.....	150,000
History, per annum.....	17,500
Botany, per annum.....	24,000
Exploration, per annum.....	120,000
Geology, three years, per annum.....	25,000

Total\$ 911,500
Adding this to the total amount in above
summary 2,200,398

Gives a total of.....\$3,111,898

The above total would have been still larger if all the grants had been made as requested. Frequently grants are requested for one year which, if made, would involve a number of subsequent grants before the completion of the work.

This is not intended as a close analysis of the amount of money desired. It merely shows the impossibility of making the present income of the Carnegie Institution provide for more than a small part of the grants requested.

Substantially all these applications have been carefully examined and considered. Many of the more important are explained in the first 'Year Book.'

Most of these applications have been considered unfavorably by the committee because they are not regarded as proper or useful purposes for expenditure from the income of the trust.

Some, however, have seemed to the committee only less important than the matters favorably reported upon, and these should, the committee thinks, be regarded as subjects of future consideration whenever available funds shall permit.

MEMBERSHIP IN THE AMERICAN
ASSOCIATION.

THE following persons have completed membership in the association since the publication of the last list of members, contained in Volume LII., Washington Proceedings, and corrected to June 15, 1903:

Albert, Harry Lee, professor of biology, State Normal School, Cape Girardeau, Missouri.

Allis, Edward Phelps, Jr., Palais Carnoles, Menton, France.

Anderson, William G., M.D., associate director, Yale Gymnasium, New Haven, Conn.

Ashton, Charles Hamilton, assistant in mathematics, University of Kansas, Lawrence, Kansas.

Avis, Edward S., Ph.D., president of the North Georgia Agricultural College, Dahlonega, Ga.

Bair, Joseph Hershey, Ph.D., Columbia University, New York, N. Y.

Baird, Robert Logan, Oberlin College, Oberlin, Ohio.

Balch, Alfred William, assistant surgeon, U.S.N., Navy Department, Washington, D. C.

Barek, Dr. Carl, 2715 Locust St., St. Louis, Mo.

Birge, Edward A., dean of the College of Letters and Science, University of Wisconsin, Madison, Wis.

Brown, George P., president of the Public School Publishing Co., Bloomington, Ill.

Blum, Sanford, M.D., 1243 Franklin St., San Francisco, Cal.

Cady, Hamilton Perkins, assistant professor of chemistry, University of Kansas, Lawrence, Kansas.

Cannon, W. A., Ph.D., Tucson, Arizona.

Clements, George E., M.D., 522 Capitol Ave., Springfield, Ill.

Comstock, Daniel F., 102 Huntington Ave., Boston, Mass.

Coombs, Zelotes Wood, professor of modern languages, Worcester Polytechnic Institute, Worcester, Mass.

Dozier, Melville, professor of mathematics and physical sciences, State Normal School, Los Angeles, Cal.

Easton, Christopher, deputy superintendent, Metropolitan Hospital, Blackwell's Island, New York, N. Y.

Ely, Robert Erskine, executive director, League for Political Education, 23 West 44th St., New York, N. Y.

Fox, Henry, 5603 Germantown Ave., Germantown, Philadelphia, Pa.

Frost, Arthur Barzilla, 33 Fay St., E. Cleveland, Ohio.

George, Russell D., professor of geology, University of Colorado, Boulder, Colo.

Gilchrist, John D. F., Ph.D., government biologist of Cape Colony, Department of Agriculture, Cape Town, South Africa.

Griggs, Robert F., professor of biology, Fargo College, Fargo, N. Dak.

Gruenberg, Benjamin C., teacher of biology, DeWitt Clinton High School, 60 West 13th St., New York, N. Y.

Harper, William R., LL.D., president of the University of Chicago, Chicago, Ill.

Harris, James Arthur, Shaw School of Botany, St. Louis, Mo.

Herzstein, M., M.D., 801 Sutter St., San Francisco, Cal.

Hoopes, H. E., Media, Pa.

Hotchkiss, Elmer Aro, president of Champaign County Board of School Examiners, Mechanicsburg, Ohio.

Hughes, Charles Hamilton, M.D., president of Barnes Medical College, 3857 Olive St., St. Louis, Mo.

Hulbert, C. E., secretary of department of anthropology, Louisiana Purchase Exposition, St. Louis, Mo.

Hurst, Julius H., M.D., 269 Canner St., New Haven, Conn.

Hutchinson, Susan A., librarian of the Museum of Brooklyn Institute of Arts and Sciences, Eastern Parkway, Brooklyn, N. Y.

Jones, Adam Leroy, Ph.D., tutor in philosophy, Columbia University, New York, N. Y.

Kasner, Edward, Ph.D., tutor in mathematics, Barnard College, Columbia University, New York, N. Y.

Kerr, William Jasper, D.Sc., president of the Agricultural College of Utah, Logan, Utah.

Kilgore, Benjamin Wesley, director of N. C. Agric. Exper. Station, Raleigh, N. C.

Landis, Edward Horace, instructor in physics and chemistry, Central High School, Philadelphia, Pa.

Lawrence, Florus F., chief of staff and surgeon, Lawrence Hospital for Women, Columbus, Ohio.

Levene, P. A., M.D., 1 Madison Avenue, New York, N. Y.

Livingston, Burton E., New York Botanical Garden, Bronx Park, New York, N. Y.

Lounsbury, Charles P., government entomologist, Cape Town, South Africa.

Low, Clarence F., Liverpool, London, Globe Building, New Orleans, La.

Lowe, Houston, Dayton, Ohio.

McCaustland, Elmer J., assistant professor of civil engineering, Cornell University, Ithaca, N. Y.

MacCracken, John H., president of Westminster College, Fulton, Mo.

McKay, John S., Packer Collegiate Institute, Brooklyn, N. Y.

Martin, Louis A., Jr., instructor in mathematics and mechanics, Stevens Institute, Hoboken, N. J.

Mayo, Caswell A., 1536 Fiftieth St., Brooklyn, N. Y.

Messenger, James F., professor of psychology, State Normal School, Winona, Minn.

Metcalf, Haven, professor of botany, Clemson College, S. C.

Miner, James B., instructor in psychology, University of Illinois, Urbana, Ill.

Mitchell, Guy E., secretary of National Irrigation Association, Washington, D. C.

Mojonnier, Timothy, care of Helvetia Milk Condensing Co., Greenville, Ill.

Moulton, W. H., assistant manager, Osborn Mfg. Co., Cleveland, Ohio.

Nutting, Perley G., National Bureau of Standards, Washington, D. C.

Pegram, George B., tutor in physics, Columbia University, New York, N. Y.

Porter, Fred. B., 4911 Champlain Ave., Chicago, Ill.

Ramsey, Miss Mary C., Shoshone Agency, Wyoming.

Rankin, J. M., Atlantic Building, Washington, D. C.

Reagan, Albert B., 327 S. Lincoln St., Bloomington, Ill.

Richardson, Leon B., instructor in chemistry, Dartmouth College, Hanover, N. H.

Riley, Mrs. Matilda E., art director, St. Louis Public Schools, Board of Education Building, St. Louis, Mo.

Rogers, Howard J., chief of department of education and director of international congresses, Universal Exposition, St. Louis, Mo.

Schober, Wm. Bush, Lehigh University, South Bethlehem, Pa.

Shurtleff, Eugene, M.D., 73 Hancock St., Dorchester, Mass.

Sinclair, Cephas Hempstone, Coast and Geodetic Survey, Washington, D. C.

Smith, Alton Lincoln, assistant professor of drawing and machine design, Worcester Polytechnic Institute, Worcester, Mass.

Spaulding, Perley, Missouri Botanical Garden, St. Louis, Mo.

Stewart, George Walter, professor of physics, University of North Dakota, Grand Forks, N. Dak.

Swift, Henry D., West Falmouth, Mass.

Thompson, Benj., chief engineer, T. & B. V. Ry. Co., Hillsboro, Texas.

Tiernan, Austin K., C.E., P. O. Box 441, Salt Lake City, Utah.

Torrey, Harry Beal, Ph.D., instructor in zoology, University of California, Berkeley, Cal.

Tower, Ralph Winfred, curator of physiology, Am. Mus. Nat. Hist., New York, N. Y.

Valentine, Morris Crawford, instructor in biology, High School, 259 West 131st St., New York, N. Y.

Veath, Arthur Clifford, U. S. Geological Survey, Washington, D. C.

Vogt, Frederick A., principal of Central High School, Buffalo, N. Y.

Wadsworth, Oliver F., 526 Beacon St., Boston, Mass.

West, Max, Ph.D., Treasury Department, San Juan, Porto Rico.

Wetherill, Henry Emerson, M.D., 3734 Walnut St., Philadelphia, Pa.

Whelpley, Dr. H. M., 222 South Broadway, St. Louis, Mo.

Woodruff, Lorande Loss, assistant in biology, Williams College, Williamstown, Mass.

Wrinch, Frank Sidney, Ph.D., instructor in experimental psychology, University of California, Berkeley, Cal.

Wylie, Robert Bradford, University of Chicago, Chicago, Ill.

SCIENTIFIC BOOKS.

General Zoology. Practical, Systematic and Comparative. By CHARLES WRIGHT DODGE. New York, American Book Company. Pp. 512; 379 figs.

As stated on the title-page, this work is a revision and rearrangement of Orton's 'Comparative Zoology.' It is evidently designed for elementary instruction in high schools, academies and colleges. About one third of the volume is devoted to a brief systematic review of the animal kingdom, the remainder to 'comparative zoology,' that is, a mixture of animal physiology, comparative anatomy, embryology, ethnology, distribution, etiology, etc. In the main, the work has been carefully written, though certain statements should be revised or corrected in a possible new edition. The insect figured as a cricket (*Gryllus*) on page 109 is a locustid, and the dragon-fly on page 111 is not a *Libellula*. The bird figured on page 172 is the resplendent trogon (*Pharomacrus mocinno*) and not *Trogon elegans*, which is a very different creature. Although the classification adopted is that of Parker and Haswell, the author includes the apocryphal group Mesozoa, at least in the 'ancestral tree' on page 201, though nothing is said about it in the text. *Amphioxus* is still regarded as a vertebrate, though this term is properly applicable only to the Craniota. In the chapter on the distribution of animals there are a few sweeping and inaccurate statements. On page 441 the author says: 'Each of the three great provinces, Earth, Air and Water, as also every continent, contains representatives of all the classes; but the various classes are unequally represented.' This sets one to wondering whether the American fauna may not comprise such things as flying tunicates and aerial holothurians, and whether terrestrial cyclostomes may not be discovered in the remoter regions of the 'dark continent.' In the chapter on the origin of animal species the definition of 'organic selec-