

Approximate Relative Depths below Sealevel of Edge of Continental Shelf from the Banks of Florida (Cont.)

Origin and direction of profiled belt	Depth of intersec- tion of shelf sur- face and scarp in fathoms
From Beach Haven, N. J., s.e.	52
“ Intersection of 39° N.-73° 30' W. e.s.e.	48
“ Atlantic City, s.e.	53
“ Wildwood, Cape May, N. J., s.e.	50
“ Chincoteague Bay, Md., e.s.e.	42
“ Fishing Pt., Md., e.s.e.	44
“ Cedar Id., Md., e.s.e.	48
“ Cobb's Id., Md., e.s.e.	40
“ False Cape, e.n.e.	25
“ Line of soundings e. from Currituck Sd. Light	20
“ Roanoke Id., n.e.	25
“ Long Shoal Pt., Pamlico Sd., e.	30
“ Cape Hatteras, s.e.	18
“ Portsmouth Id., s.s.e.	30
“ Cape Lookout, s.s.e.	30
“ Stump Sound, s.e.	30-36
“ Cape Fear, s.s.e.	30
“ Little River, s.s.e.	30
“ Cape Romain, s.e.	24
“ Charleston, S. C., s.e.	25
“ St. Helena Id. (Beaufort) s.e.	28
“ Savannah, s.e.	30
“ St. Simon Sound, e.s.e.	27
“ Pablo Beach, Fla., e.	24
“ Halifax R. (Daytona) n.e.	25
“ False Cape, Fla., n.e.	27
“ Sebastian, Fla., n.e.	21
“ Stuart, n.e.	15
“ Card Sound, s.e.	3½
“ Up Matecumbe Key, s.s.e.	4
“ Vaca and Fat Deer Keys, s.s.e.	3

It will appear from this table that the margin of the Atlantic continental shelf, which, in the region of southern Florida, is only a few fathoms below sea level, is from 25 to 35 fathoms deep off Georgia and the Carolinas, 40 to 48 fathoms opposite Maryland, 48 to 55 off the New Jersey and Long Island coasts, and 60 to 70 fathoms deep at the outer edge of the Banks. This increase in depth confirms in a striking manner the differential tilting of the continent suggested by the broadening of the continental shelf and the narrowing of the coastal plain. It also confirms the conclusions reached by Johnson and Stolfus in a paper on "The submerged coastal plain and oldland of New England," appearing in *SCIENCE* for March 28, 1924. In this article submergence progressively greater toward the north was proved by the presence of the euesta and inner lowland wholly submerged beneath the waters of the Gulf of Maine, whereas these forms are found above sea level farther south.

These observations indicate that the margin of the shelf certainly pays scant attention to the 100-fathom depth at which it is traditionally supposed to occur, and give no support to the theory that wave base is found at the same depth.

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GEOGRAPHICAL SOCIETIES AT THE WASHINGTON MEETING

(A report for Section E appeared in *Science* for
February 6.)

The Association of American Geographers

President, Curtis F. Marbut.

Secretary, Chas. C. Colby.

(Report by the Secretary)

The twenty-first annual meeting of the Association of American Geographers reached the high-water mark both in the number of papers presented and in attendance. Forty-five papers were presented and five were read by title. Nearly 40 per cent. of the membership of one hundred and thirty-five and others to the number of approximately one hundred were in attendance at the sessions, which spread over three days and included six regular sessions, an evening round table, and a joint dinner with Section E of the A. A. A. S. The meeting was characterized by the general excellence of the papers, by active and discerning discussion and by the fact that the program proceeded according to schedule throughout. As a cross-section of productive scholarship in geography in America, the meeting indicates that important progress is being made in several aspects of the subject, and particularly as to the critical issues in economic and regional geography. Interest at the meeting centered in the special sessions devoted to tropical geography. Thirteen papers dealing with tropical problems were presented at the Wednesday morning and afternoon sessions and they constituted the basis for a round-table discussion in the evening. The papers covered problems of widely divergent character and were particularly virile because at least nine of them resulted from recent field work in the tropics. That economic development in many tropical areas is handicapped by the rainfall régime was pointed out by S. S. Visher, of the University of Indiana, and "An example of local variation of tropical climate" was discussed by J. Russell Smith, of Columbia University. Regional studies in Honduras and in western Ecuador were presented, respectively, by Nels

A. Bengston, of the University of Nebraska, and Hugh H. Bennett, of the U. S. Bureau of Soils. In a detailed study of the coconut industry in Trinidad, Preston E. James, of the University of Michigan, showed that the general trend toward closer adjustment of this industry to the natural environment is retarded by the planting of coconut estates in sections of the island not well suited to their culture. The problems connected with the further utilization of tropical areas were discussed for East Africa by H. L. Shantz, recently returned from that region, and for the Amazon Valley by Curtis F. Marbut, whose paper likewise was based on field experiences. Changes in routing of tropical products to American markets and the importance of market organizations and transportation facilities in the development of tropical areas on a commercial basis were illustrated by excellent papers of distinctive geographic quality by Helen M. Strong and E. S. Gregg, both of the U. S. Bureau of Foreign and Domestic Commerce. H. N. Whitford, of the same bureau, in a paper on "Geographic aspects of the production and consumption of rubber," traced the world movement of rubber from its primary markets to the various consuming centers. The interest of geographers in industrial and commercial situations and problems was illustrated by a series of papers presented at the Tuesday afternoon session. W. D. Collins, of the U. S. Geological Survey, reported upon work he is carrying forward on the relations between quality of water and industrial development in certain sections of eastern United States. Esther Anderson, of the University of Nebraska, presented a geographic survey of the beet sugar industry of Nebraska. A. E. Waller, of Ohio State University, read a paper entitled "The dams of the Miami conservancy and the vegetation of their slopes." G. B. Roorbach, of Harvard University, analyzed briefly the relation of foreign trade to present-day New England. Glenn T. Trewartha's paper on "The dairy industry of Wisconsin as an adjustment to the natural environment" displayed a gratifying directness of analysis by proceeding at once to the phenomenon to be explained, *i.e.*, the dairy industry, rather than delaying with the time-honored prologue of topography, climate, etc., which has frequently befogged the issue in such studies. Richard Hartshorne, of the University of Minnesota, summarized the conclusions of an extensive monograph recently completed by him on "The significance of lake transportation to the grain traffic of Chicago." At the joint evening session with Section E of the American Association for the Advancement of Science, President Curtis F. Marbut, of this association, delivered a scholarly address on "The promulgation, decline and renaissance of Malthusianism and its relation to the character and geographic distribution of the soil," and Nevin M. Fenneman, re-

tiring vice-president for Section E, presented an exceptionally interesting discussion under the title, "A classification of natural resources." Cartography was represented on the program by J. Paul Goode, who reported the progress in cartography being made in Poland, and by E. L. Stevenson, who showed how certain erroneous interpretations of the new world, current in the early years of transoceanic discovery, were recorded in the work of the early cartographers. One session was devoted primarily to papers of a physiographic nature, among which was a study notable for its refinement of analysis, presented by H. A. Marmer, of the U. S. Coast and Geodetic Survey, under the title "Mean sea level and its variation." Also in this group were a study of the glacial features in Evolution Basin by F. E. Matthes, of the U. S. Geological Survey, and a report of the discovery of Aniakhak Crater in Alaska by R. H. Sargent, of the U. S. Geological Survey. A discussion of the "Physiographic stages in the evolution of the San Juan Mountain region and their correlation with the physiography of the front ranges of Colorado," was presented by W. W. Atwood, of Clark University. The world-wide scope and divergent nature of the investigations being carried forward by the staff of the National Geographic Society, who were hosts for this meeting, was outlined by Gilbert H. Grosvenor, president of the society, and was evidenced by papers presented by three other members of the permanent staff of the society. Among papers that do not fall in the foregoing classifications, that of William H. Haas, of Northwestern University, on "The American Indian and geographic studies," was significant because it directed attention to the opportunity for geographical research in that field. Mark Jefferson, of the Michigan State Normal College, in a highly original thesis entitled "Malthus in the light of subsequent events," showed that the fears of Malthus that the world would become overpopulated have not been confirmed by the statistics of the ensuing one hundred and twenty years; the conclusion was reached that there is little likelihood that the world will ever be really crowded. A highly significant analysis of the future of Alaska, which was the last work of Alfred H. Brooks before his death last November, was read by his colleague in the U. S. Geological Survey, R. H. Sargent.

Important progress in the theory and technique of geographic field work was disclosed by field maps exhibited and discussed by Wellington D. Jones, of the University of Chicago, and V. C. Finch, of the University of Wisconsin. These reports of progress manifest the increasing interest of geographers in detailed regional studies in which emphasis is placed on the relationship existing between the economic activities and the natural environment for the areas in question. Reporting for the committee on geographic

provinces, W. L. G. Joerg, of the American Geographical Society, discussed the lines of approach that have been followed in outstanding attempts to delineate various types of geographic divisions.

All the regular Washington sessions were held in the buildings of the National Geographic Society. The Association of Geographers is greatly indebted to President Gilbert H. Grosvenor and the members of the society staff for their hospitality which did much to insure the success of the meeting. The officers for 1925 are: *President*, R. H. Whitbeck, University of Wisconsin; *vice-president*, H. L. Shantz, U. S. Bureau of Plant Industry; *secretary*, Chas. C. Colby, University of Chicago; *treasurer*, V. C. Finch, University of Wisconsin; *editor*, Almon E. Parkins, George Peabody College for Teachers; *councilors*, George R. Mansfield (U. S. Geological Survey), Wellington D. Jones (University of Chicago), Oliver E. Baker (U. S. Bureau of Agricultural Economics), Ellsworth Huntington (Yale University) and Curtis F. Marbut (U. S. Bureau of Soils).

The National Council of Geography Teachers

President, W. R. McConnell, Miami University.

Secretary, George J. Miller, State Teachers College, Mankato, Minn.

(Report by George J. Miller)

Three sessions were held this year and each was characterized by strong addresses. The first session was devoted primarily to a discussion of geography as a social science in the junior high school and secondarily to a discussion of an illustrative type of detailed regional study. The distinctive contribution that geography has to make as a social science, and concrete illustrations of how the objectives of social science could be attained, were presented in the first paper. The inability of Dr. Rugg to attend and present his plan for a general social science course brought keen disappointment. The objectives of geographic instruction; the use of geographic principles in the study of cities, together with concrete illustrations; the organization of geographic material for teaching, and criteria for judging a geography text were the outstanding topics of the second session. The preliminary report of the committee to establish geography standards for the first six grades indicates that a very thorough study of the subject is in progress and that a final report of constructive value will be the outcome. The banquet and evening session marked the climax of a most eventful and profitable meeting, both from the standpoint of fellowship and from that of the character and interest of the discussion. For the first time in the history of the National Council the importance of "teacher training" for college and university instructors was ably presented and

discussed. The grave need of giving such training to all who become university and college teachers and reasons why our higher institutions should recognize this need and provide adequate instruction was presented by Dr. Colby, of the University of Chicago. The presence of teachers—grade, high school, normal school, college, university—from widely scattered portions of the United States emphasized the national character of the council and contributed greatly to making the 1924 meeting one of the most successful in its ten years of existence. Dr. A. E. Parkins, of George Peabody College for Teachers, was elected president for 1925.

**ZOOLOGICAL SOCIETIES AT THE
WASHINGTON MEETING**

(A report for Section F appeared in *Science* for February 6.)

The American Society of Zoologists

President, R. S. Harrison.

Secretary, W. C. Allee, University of Chicago, Chicago, Ill.

(Report by W. C. Allee and H. W. Rand)

The American Society of Zoologists held sessions for the general program of papers on the mornings of Monday, Tuesday and Wednesday, December 29 to 31, and also Monday and Tuesday afternoons. Wednesday afternoon a session was devoted to a symposium on "Sex determination and sex differentiation," the participants being as follows: J. H. Schaffner, of Ohio State University; C. B. Bridges, of Columbia University; A. F. Shull, of the University of Michigan; W. W. Swingle, of Yale University; C. R. Moore, of the University of Chicago. The last session of the zoologists occurred Thursday morning in joint meeting with the Ecological Society of America. The program included 14 papers on miscellaneous ecological subjects. The entire zoological program, exclusive of the joint ecological program and the symposium papers, included 89 papers distributed by subjects as follows: general and comparative physiology, 29; endocrinology, 9; cytology, 6; embryology, 7; comparative anatomy, 9; protozoology, 9; parasitology, 17; evolution, 2; science teaching, 1. The annual zoologists' dinner took place Wednesday evening at the Hotel Raleigh. The dinner address was delivered by the retiring president of the society, Professor M. F. Guyer, of the University of Wisconsin, on "Soma and germ." Monday evening, at the City Club, was held a conference initiated and arranged by H. S. Colton, on problems of teaching zoology, with particular reference to the aims of teaching in the elementary college course. The discussion was led by R. A. Budington, E. C. Conklin, A. F. Shull and C. P.