4, 10, 15. The median is at 3, with the sum of distances 26, while the mean is at 5 with the sum of distances 30.

If a point may be discussed when no direct means for obtaining it are given (at present), a point in the plane of a distribution such that the sum of the distances from it to the members is minimum may be called a median. An example of a triangle consisting of two nearby points and a third point remote from them shows that the median and the center of population do not in general coincide, and the difference can by no means be neglected. The special distribution on a straight line and simple examples of plane distributions make it seem reasonable to believe in the absence of more complete information that the median is frequently closer to the center of greatest population concentration than the center of population is.

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THE criticism offered by Dr. Church is certainly justified, since the center of population as determined by the method described or by that of the Bureau of the Census does not give the point the sum of whose distances from the stated address of members of the group is a minimum. Without question it should have been clearly pointed out that the points determined are centroids and only roughly satisfy the minimum distance criterion. The actual determination of such points did not seem to be a feasible problem; the centers of population as determined do allow direct comparison with various positions of the center of population of the United States as determined by each federal census, the primary purpose of the study.

A method by which one might attempt to approximate the location of the point Dr. Church calls a median would be to locate what the Census Bureau designates as a "median point," that is, the point of intersection of a north and south line which divides the population into two equal parts, with an east and west line which likewise divides it into two equal parts. For the groups mentioned the median line running east and west is usually from ten to fifty minutes of latitude north of the center of population. The line running north and south may be through the center of population as with the American Speech Correction Society; about a degree and twenty minutes (roughly sixty or seventy miles) east as in the Mathematical Association of America; perhaps three degrees east in the American Association for the Advancement of Science; other groups range from no change to about two and a half degrees east. For exact determination of a mathematical point, these are large variations, but for locating a convention city various factors make the difference relatively unimportant.

Even if one knew the location of the ideal point with sums of straight-line distances of members from this point a minimum, if the problem of a proper place for a convention of the group is involved, air-line distances should be corrected to distances by a regularly traveled route (and, shall this be by rail, bus, plane, private car or steamer?). If this can be determined, there arises the need for some reasonably large city in the vicinity. The relatively small variation of median lines from centers of population make it seem probable that the centers of population determined give a sufficiently accurate general location from the point of view of minimum travel requirements. Such cities as Cincinnati, Columbus and Dayton seem well located; for most groups Chicago is to the northwest and Pittsburgh slightly to the northeast.

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THE FIRST DATING OF PRESERVED WOOD IN NEW ENGLAND

THE principle of cross-dating wood of unknown age by comparing the sequence of its ring widths with that of an acceptable record of dated rings has not been hitherto applied in the New England area. An opportunity to test the method came in 1938, when the September hurricane felled some virgin white pine not far from Wolfeboro, N. H., where buried logs of the same species were uncovered in an excavation at the site of an ancient bridge abutment. The skeleton plot method of Douglass has given the date of 1806 for the last ring formed in the trees used to build the bridge. This solution is very reasonable in the light of Wolfeboro history.

Sections of three trees were removed from a level several feet below the water line at the bridge. The wood and bark had been very well preserved in the saturated soil. The rings of each tree were measured by methods previously described.[1] The mean ring width was calculated for each of the 153 years represented by at least two trees, while the third tree had 189 rings. The growth was semi-complacent but small minima and maxima in the composite graph, found also in two or more of the individual graphs, were located on the skeleton plot[2] for comparison with the sequence of dated rings.

A record of white pine ring widths for a 260-year period was obtained from three trees at North Sutton, N. H., 39 miles southwest of the bridge at an elevation slightly higher. A cross-identification was established between this record and that of the buried pine when the outer 128 rings of the latter overlapped the inner rings of the Sutton trees. Although not sufficient in

[1] C. J. Lyon, *Ecology*, 17: 457–478, 1936; *Tree-ring Bull.*, 5: 27–30, 1939.

[2] W. S. Glock, "Principles and Methods of Tree-ring Analysis," Part I., Carnegie Institution Pub. 486, 1937.

number to give a standard scale of white pine growth in the area, these Sutton pines gave a record that cross-identified well but not perfectly with nearby white pine records of the period 1867–1934.[3] The presence of 260 rings was notable for white pine and important for the problem because of the wide overlap made possible even with trees buried more than a century.

The accuracy of the cross-identification is shown by the following facts. Of the six wide rings in the buried wood, five checked perfectly with the Sutton pines, while each record for the 128 years showed one maximum not represented in the others. In the same way and for the same 128 years, of the 16 narrow rings in the buried trees, eight checked with lows in the Sutton trees, four checked with years marked by lows in the hemlock record of the Wolfeboro district and by drouths recorded in a diary, two missed agreement with the Sutton record by one year, while only two stand alone.

This relatively unimportant problem demonstrates the possibilities of the method for the area and the extent to which significant narrow and wide rings appear in sensitive trees of the New England area. The cross-identification is apparently less perfect here than in the Southwest, but valid solutions of archeological problems seem possible, particularly when the material includes a long series of rings from a native "softwood" tree.

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NOTICE OF POSSIBLE SUSPENSION OF THE RULES OF NOMENCLATURE IN CERTAIN CASES (A.(n.s.) 1)

IN accordance with a resolution adopted by the International Zoological Congress at their ninth meeting held at Monaco in 1913, prescribing that not less than one year's notice is to be given by the International Commission on Zoological Nomenclature of all applications received for the "Suspension of the Rules," the attention of the zoological profession is hereby invited to the fact that requests for the "Suspension of the Rules" have been received by the commission in the undermentioned cases:

(a) ECHINODERMATA.—*Diadema* Humphreys, 1797 (type *Echinometra setosa* Leske, 1778) to be added to the Official List of Generic Names (see Mortensen, 1937, *Ann. Mag. nat. Hist.* (10) 19: 463–469) (reference Z. N. (S.) 52).

(b) INSECTA, Neuroptera.—To be added to the Official List of Generic Names with types as shown in brackets:—*Hemerobius* Linnaeus, 1758 (*Hemerobius humulinus* Linnaeus, 1758); *Chrysopa* Leach, 1815 (*Hemerobius perla* Linnaeus, 1758) (see Cowley and others, 1937, Generic Names of British Insects, Pt. 4) (reference Z. N. (S.) 42).

(c) INSECTA, Lepidoptera.—To be added to the Official List of Generic Names with the type as shown in brackets:—*Actinote* Hübner, [1819] (*Papilio thalia* Linnaeus, 1758) (see Hemming, 1936, *Proc. R. ent. Soc. Lond.* (B) 5: 56–57) (reference Z. N. (S.) 63).

(d) REPTILIA.—*Bitts* Gray, 1942 (type *Vipera* (*Echidna*) *arietans* B. Merrem, 1820), to be added to the Official List of Generic Names, and *Cobra* Laurent, 1768, to be suppressed (Stejneger, 1936, *Copeia,* 3: 140) (reference Z. N. (S.) 121).

In adopting the resolution referred to above, the International Zoological Congress expressly stated that their object was thereby to render it possible for zoologists, particularly specialists in the group in question, to present to the commission arguments for or against the suspension of the rules proposed. Any such representations should be furnished to the Secretariat to the Commission (British Museum (Natural History), Cromwell Road, London, S.W. 7) as soon as possible and in any case within one year of this day's date. Every such communication should be clearly marked with the commission's reference number as given above.

BY ORDER OF THE COMMISSION,
(Signed) FRANCIS HEMMING,
Secretary to the Commission

SECRETARIAT OF THE COMMISSION,
BRITISH MUSEUM (NATURAL HISTORY),
CROMWELL ROAD, LONDON, S.W. 7.
27TH JUNE, 1939

SCIENTIFIC BOOKS

QUANTUM MECHANICS

Introductory Quantum Mechanics. By VLADIMIR ROJANSKY. Prentice-Hall, Inc., New York, 1938. $5.50.

THE current literature of modern physics is of such a character that one can not in general appreciate the arguments without an understanding of the physical ideas, and in many cases the mathematical methods, peculiar to quantum mechanics. Hence it is necessary that a graduate student of pure physics acquire this knowledge early in his career. While the new physical notions can and should be presented in advanced undergraduate courses on the phenomena of modern physics, the mathematical treatment must perhaps in general wait for the fuller experience of graduate study, but should certainly be begun in the first graduate year if the doctorate is to truly represent a maturity of knowledge and ability. But at this stage the study and teaching of a subject as fundamental as quantum mechanics is greatly facilitated by the use of a textbook. This volume by Rojansky represents in the re-

[3] L. Goldthwait and C. J. Lyon, *Ecology,* 18: 406–415, 1937.