threshold is lowest when the muscle is at or near room temperature (18–20° C.). Both the rise and the fall in temperature cause a remarkable rise of the threshold. In the following tables the results of two different experiments are given; it is clear that the lowered excitability, as the temperature is increased or decreased, can not be ascribed to fatigue, because the reverse change occurs on returning to room temperature.

TABLE I

Temperature ° C.	Threshold Z units
19 (Room)	19
14	35
9	45
4	71
0	99
5	80
10	60
15	40
20	36
25	43
30	49

TABLE II

Temperature ° C.	Threshold Z units
17 (Room)	29
0	250
5	185
10	54
15	35
20	32
25	40
30	71
35	344

The height of the contraction curve proves not to be related to the degree of muscular excitability, for although *within certain limits* the excursion of the lever is increased by raising or lowering the temperature and beyond these limits is decreased, the threshold of excitation under the same conditions continues to present higher and higher values. Furthermore, the increase in the height of the contraction curve may be only apparent, as shown by Kaiser,[2] who explained it as a consequence of the imperfection of the apparatus commonly used.

Further experiments will be carried out on this subject with currents of longer duration than those used in the present experiments in order to take into consideration the important evidence adduced by Lucas and Mines regarding the relation of the duration of the stimulus to its stimulating value.[3] In view of the results already obtained, however, enough support seems to exist for the following conclusions:

(a) Neither warming nor cooling increases the excitability of frog muscle—instead, they diminish it;

(b) The optimum temperature at which the excitability of frog muscle appears greatest is that at which the muscle has been maintained before the period of experiment, *i.e.*, the room temperature.

This last conclusion agrees with the conception of Abbott,[4] who states that "for every organism there is an optimum temperature at which it grows and thrives best, and this is apt to be the normal temperature in which the organism naturally occurs."

JAYME R. PEREIRA
LABORATORIES OF PHYSIOLOGY,
HARVARD MEDICAL SCHOOL

[2] Kaiser: *Zeitsch. f. Biol.*, 1896, XXXIII, 157.

[3] Lucas and Mines: *Jour. of Physiol.*, 1907, XXXVI, 334.

[4] Abbott: "General Biology," New York, 1914, 244.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE STANFORD UNIVERSITY MEETING OF THE PACIFIC DIVISION

THE eighth annual meeting of the Pacific Division of the American Association for the Advancement of Science, held at Stanford University June 25 to 28, proved to be fully up to the high standard set by previous meetings. In scientific and popular interest, social features and wholesome enthusiasm, the meeting was all that could be desired. The hospitality of the people of Palo Alto and of Stanford University and of the faculty and officers of the university, in the entertainment of the members of the association and visiting friends, was a marked feature of the meeting.

The total registration was 355. Among those in attendance from distant points were Dr. L. O. Howard, chief of the U. S. Bureau of Entomology, Washington, D. C., a former president and for many years the permanent secretary of the association; Dr. J. McKeen Cattell, president of the association; Dr. George Henry Falkiner Nuttall, Quick professor of biology, Cambridge University; and Dr. T. D. A. Cockerell, of the University of Colorado.

GENERAL SESSIONS

Although the formal opening of the meeting occurred on Wednesday, June 25, one of the affiliated societies—the Western Society of Soil Management and Plant Nutrition—began its sessions on Tuesday morning, June 24.

The registration office was opened Wednesday morning. At the noon luncheon on Wednesday a research conference was held, as has been customary. At this conference President David Starr Jordan presided, and the following named persons presented papers: Dr. Herman A. Spoehr, of the Coastal Laboratory, Carnegie Institution, Carmel, California, on "Photosynthesis"; Dr. Ernest C. Dickson, of the Stanford University Medical School, San Francisco, on "Botulism"; Professor James C. Clark, of Stanford University, on "High tension electrical transmission."

On Wednesday evening, the retiring president, Dr. David Starr Jordan, gave an address on "Science and sciosophy,"[1] following which was given a public re-

[1] This address was published in full in SCIENCE for June 27.

ception. On Thursday evening, Dr. George Henry Falkiner Nuttall, Quick professor of biology, Cambridge University, Cambridge, England, gave an illustrated address on "Symbiosis." The address on Friday evening was given by Dr. J. McKeen Cattell, president of the American Association for the Advancement of Science, his subject being "Psychology as a profession."

On Friday evening, about 60 members and guests made an excursion to Mt. Hamilton, where they were the guests of Associate Director Dr. Robert G. Aitken and staff, of the Lick Observatory. On Saturday about 50 biologists and others made a trip to La Honda and the seashore at Moss Beach.

MEETINGS OF AFFILIATED SOCIETIES

Of the 27 societies that are affiliated with the Pacific Division of the association, formal meetings were held by 13, as follows:

American Chemical Society, California, Sacramento and Southern California Sections, at whose meetings the following program was presented:

Some factors controlling the basicity of amines: DALE STEWART.

Carbon monoxide, a product of electrolysis: ALBERT F. O. GERMANN.

The reactivity of liquid phosgene: ALBERT F. O. GERMANN.

The relation between adsorption and the co-precipitation of radium and barium sulphates: W. M. HOSKINS and H. A. DOERNER.

A critical study of the bisulfate fusion for rare metal ores: GEO. W. SEARS and LAWRENCE QUILL.

The activity coefficient of dilute aqueous solutions of hydrogen chloride, thallous chloride and lead nitrate: MERLE RANDALL and ALBERT P. VANSELOW.

The solubility of lead bromide in aqueous salt solutions and the principle of the ionic strength: MERLE RANDALL and WM. V. VIETTI.

The heat capacities of certain aliphatic alcohols: GEO. S. PARKS.

A source of serious error and how to avoid it, in the Scales method for determining nitrates: P. L. HIBBARD.

Soil analysis, its use and abuse: R. R. SNOWDEN.

Some organic reactions in the ammonia system: E. C. FRANKLIN.

Some chemical effects of ultra-violet light: CHAS. W. PORTER.

Anomalous conduct in the oxidation of sodium sulfite: S. W. YOUNG.

Some phases of the chemistry of the wheat berry: CARL L. ALSBERG.

Water resources of the Santa Clara valley: W. H. SLOAN.

(a) *The density and molecular complexity of gaseous hydrogen fluoride;* (b) *Attempts to prepare a fluo-carbonate and their bearing upon the coordination number of carbon:* JOEL H. HILDEBRAND and JOSEPH SIMONS.

AMERICAN METEOROLOGICAL SOCIETY

Under authorization of the council of the American Meteorological Society, at its Washington, D. C., meeting in April, 1924, a meeting of the society was held at Leland Stanford University, Palo Alto, California, June 26 and 27, 1924, in connection with the meeting of the Pacific Division of the American Association for the Advancement of Science.

Forenoon and afternoon sessions were held on June 26, and were presided over by the vice-president of the society, Dr. A. E. Douglass, University of Arizona, Tucson, Arizona, in the absence of the president, Dr. Willis Milham, Williamstown, Massachusetts. In the absence of the secretary, Dr. C. F. Brooks, Clark University, Worcester, Massachusetts, Mr. M. B. Summers, of the Weather Bureau, Seattle, Washington, was appointed secretary *pro tem.*

The following papers were read and discussed:

A study of long range forecasting for California, based on an analysis of past rainy seasons: L. E. BLOCHMAN.

Grassland as a source of rainfall: F. E. CLEMENTS.

Atmosphere and man: C. M. RICHTER.

Some features of the climate of Alaska: M. B. SUMMERS.

Classification of weather types: E. S. NICHOLS.

The climate of Portland, Oregon: EDWARD L. WELLS.

Anticyclonic weather in southern California: DEAN BLAKE.

Some climatic features of Arizona: ROBERT Q. GRANT.

Seasonal densities and storage of snow: H. F. ALPS.

Notes on the work of the weather bureau: MAJOR E. H. BOWIE.

A telegraphic abstract of a paper entitled "The economic value of climatology," by Ford A. Carpenter, of Los Angeles, California, was read in the absence of the author.

Among the resolutions adopted was one deploring the recent death of Dr. C. Leroy Meisinger, of the Weather Bureau. It follows:

Whereas, recently, in the line of duty and in an earnest effort to learn the secrets of the air and its ways, Dr. C. Leroy Meisinger, a Fellow of the American Meteorological Society, lost his life and meteorology one of its most worthy followers.

Therefore, be it resolved by the members of the American Meteorological Society, assembled at Leland Stanford University, June 26, 1924, that they do express their personal feeling of loss by reason of his untimely death, and their admiration of his efforts to contribute to our knowledge of meteorology; and, be it further resolved, that a copy of this resolution be incorporated in the minutes of the proceedings of this meeting, published in the Journal of the Society, and that a copy be sent to his nearest relative, that it may be known in what esteem he was held by members of the American Meteorological Society.

On Friday, June 27, the society met in joint sessions with the Astronomical Society of the Pacific, with W. S. Adams, of the Mount Wilson Observatory, presiding.

At this session papers were presented as follows:

The sun and atmospheric electricity: FERNANDO SANFORD.

Atmospheric currents observed in large telescopes: A. E. DOUGLASS.

Notes on atmospheric effects on the 100-inch telescope: FRANCIS G. PEASE.

Application of Schuster's periodogram to long rainfall records, beginning 1748: DINSMORE ALTER.

AMERICAN PHYSICAL SOCIETY

This society held sessions on Thursday that were well attended. The papers presented were of unusual interest, as may be judged from the titles which follow:

The growth of snowflakes: experimental evidence: JOHN MEAD ADAMS.

Permeability of magnetite at radio frequencies: JOHN G. KRALOVEC.

The mobility of gas ions in mixtures of ammonia and air: L. B. LOEB and M. F. ASHLEY.

A zone-jet, multi-stage diffusion pump: E. L. HARRINGTON.

Electrometer variations and penetrating radiation: JOSEPH G. BROWN.

Constancy of total photo-current from sodium with temperature change 20 C. to −190 C: ROBERT C. BURT.

Theory of the width of the modified lines in the Compton effect: G. E. M. JAUNCEY.

Soft X-rays: J. A. BECKER and E. L. ROSE.

White light interferometer fringes: W. N. BIRCHBY.

A new type of spectrograph: SINCLAIR SMITH.

Secondary standards of wave-length: HAROLD D. BABCOCK.

Methods for the rapid calculation of power series formulae for band spectra: R. T. BIRGE and J. D. SHEA.

On the simultaneous jumping of two electrons: PAUL S. EPSTEIN.

ASTRONOMICAL SOCIETY OF THE PACIFIC

The Astronomical Society held two sessions on Thursday and a joint session on Friday with the Meteorological Society. On Friday night many of the astronomers and guests visited the Lick Observatory.

Papers were presented as follows:

Note on the extension to Burnham's catalogue of double stars: R. G. AITKEN.

Forthcoming meridian circle publication of the Lick Observatory: R. H. TUCKER.

On possible changes in the short period orbit of Polaris: J. H. MOORE and E. A. KHOLODOVAKY.

Do the star streams of Kapteyn exist? C. V. L. CHARLIER.

Preliminary results from the investigation of the orbit of Comet B1922 (Skjellerup): R. T. CRAWFORD and W. F. MEYER.

The number of solutions in Leuschner's direct method for determining the orbits of disturbed bodies: R. H. SCIOBERETI.

The total solar eclipse of September 10, 1923: A. E. DOUGLASS.

SOCIETY OF AMERICAN FORESTERS, CALIFORNIA SECTION

The joint session of the Society of American Foresters, California Section, with the Ecological Society, was largely dominated by discussions concerning the coming forest. S. B. Show pointed out the difficulties growing from the deliberate attempts to influence the composition of the growing stand through forest management and their relation to ecological principles. The same author, in a second paper, discussed the changes brought about by fires in the California pine forest from transitory brush fields to the reestablishment of a permanent stand different in type and composition from the original. The data presented by J. M. Miller tended to show that the rate of loss from bark beetles in thrifty mature overholders left standing in logging operations is alarmingly high. E. P. Meinecke demonstrated that the logical basis for the evaluation of loss in the young forest from killing diseases such as the white pine blister rust is not the percentage of trees killed but the effect of the killing on the density of the coming stand. *Cronartium pyriforme* was used as an illustration. In a second paper the same author endeavored to establish the physiological background for economic studies of excessive foliage reduction due to defoliating insects and to foliage diseases of fungous origin. Carl L. Alsberg suggested that theoretically the production from plant growth should be greater on a given surveyor's unit of slope than on the same unit of level land. A paper by R. W. Doane gave contributions to the life history and habits of western Ambrosia beetles with special reference to the cultivation and utilization of the Ambrosia mycelium.

Following is a list of papers presented:

Fire as an ecological factor in the pine forests of California: S. B. SHOW.

The management of forest properties in the California pine region as a problem in applied ecology: S. B. SHOW.

Excessive foliage reduction in evergreen coniferous forests: E. P. MEINECKE.

The evaluation of loss from killing diseases in the young forest: E. P. MEINECKE.

Some considerations on the relation between topography and density of vegetation: CARL L. ALSBERG.

Notes on some western Ambrosia beetles: R. W. DOANE.

Some entomological factors affecting future forests: J. M. MILLER.

THE ECOLOGICAL SOCIETY OF AMERICA

The joint symposium with the Western Society of Naturalists, on the morning of June 26, focussed attention upon plant and animal life of chaparral and broad-leaved forest and of grassland in California. Dr. Frank J. Smiley, speaking on chaparral vegetation as developed in southern California, brought out its unique floristic character and its considerable age. Dr. F. E. Clements's paper on native grassland characterized it as more extensive than any other vegetation-type and as well suited to the climatic condition of winter rainfall. Its relation to the grasslands of Arizona and of the prairie region from Miocene time to the present was indicated. These papers and the discussion made it appear that there has not been a recent tendency, due to clearing and other human factors, for grassland to extend its area at the expense of chaparral.

The two papers on the animal life were to bring out the substantial agreement of animals and plants in their response to environmental factors. The unavoidable absence of Dr. J. Grinnell prevented the reading of his paper on vertebrate animals. Dr. E. C. Van Dyke demonstrated that the insect populations of chaparral, broad-leaved forest and open grassland are strikingly different, due in part to direct relations to food plants.

The afternoon meeting with the Society of American Foresters is described in the report for that organization.

On Friday morning, a joint session with the Western Society of Naturalists was held. It is described in the report for that society.

In the Friday afternoon session of the Ecological Society, A. B. Rigg described some sphagnum bogs of the Coos Bay region of Oregon. J. M. Harper, in an account of soil-moisture in the vicinity of Palo Alto, pointed out consistent differences between the coarse soils of chaparral areas and the fine soils of grassland. A. G. Vestal reported on root relations of some California grassland plants. Forrest Shreve gave instances of the workings of depth, slope exposure, color and other factors which determine the temperature of the soil. G. P. Rixford described experiments in growing certain tropical and semi-tropical fruits in favorable situations in California. The cherimoya, sapote blanco, jujube and others seem worthy of trial.

The dinner for biologists on Friday evening was held at the Stanford Union. The field trip to the coast on Saturday was of great interest to members of the Ecological Society.

Following is the full program presented:

SYMPOSIUM: VEGETATION AND THE ASSOCIATED ANIMAL LIFE IN WEST-CENTRAL CALIFORNIA

Joint session with the Western Society of Naturalists

Chaparral and broad-leaved forest vegetation of the southern coast range: FRANK J. SMILEY.

Native grasslands and their significance: FREDERIC E. CLEMENTS.

Vertebrate animal life in relation to the plant environment: J. GRINNELL.

Insect life in relation to the plant environment: EDWIN C. VAN DYKE.

Bird banding as a means in ecological studies: J. E. LAW.

Mutations and the origin of species: DAVID STARR JORDAN.

An excursion to the great barrier reef of Australia: W. E. RITTER.

Gravity as a formative stimulus in plants: G. J. PEIRCE.

Mentioning the mole: T. H. SCHEFFER.

Notes on the breeding of beavers: T. H. SCHEFFER.

The age of the oaks of the Santa Clara valley: JAMES I. W. MCMURPHY.

Color studies of lizards: SARAH R. ATSATT.

The hay-field tarweeds: An application of genetic, ecologic and quantitative methods to the taxonomy of a complex species: H. M. HALL.

Anomalies in the distribution of gulls in California Pleistocene: L. H. MILLER.

The fossil geese of the genus Branta: L. H. MILLER.

Sphagnum bogs of the Coos Bay region of Oregon: GEORGE B. RIGG.

Soil moisture in grassland areas near Palo Alto: J. M. HARPER.

Root relations of some California grassland plants: A. G. VESTAL.

Factors influencing the temperature of the soil: FORREST SHREVE.

SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE, PACIFIC COAST BRANCH

This society held one session Wednesday afternoon, with the following program:

The effect of fine grinding upon starch: C. L. ALSBERG.

Study on the manner in which the toxin of Clostridium botulinium acts upon the body. III. Further investigations of the curves of fatigue in the muscles supplied by the voluntary nervous system: E. C. DICKSON and V. E. HALL.

The effect of stenosis upon the respiration during exercise: A. W. HEWLETT, J. K. LEWIS and ANNA FRANKLIN.

The effect of cooling on the excitability of nerve and muscle: E. G. MARTIN.

Further evidence of the rôle of the hepatic internal secretion in canine anaphylaxis: W. H. MANWARING.

A new insulin fraction which is active orally when given in water solution: W. D. SANSUM.

Diet and parathyroid tetany: T. INOUYE (Introduced by DR. GEO. R. COWGILL.)

Regulation of the hydrogen ion concentration and its relation to metabolism and respiration in the starfish: LAURENCE IRVING (introduced by E. G. MARTIN).

The carbonic acid-carbonate equilibrium in sea water, with special reference to respiration: LAURENCE IRVING (Introduced by E. G. MARTIN).

On Wednesday evening the society had an informal dinner at the Stanford Union.

PACIFIC COAST ENTOMOLOGICAL SOCIETY

The ninety-fourth meeting of the society was held at Stanford University on June 25, 1924.

The morning session was called to order by President E. D. Van Dyke at 10:30 o'clock, in Room 430 of the Zoology-Entomology Building. There were 28 members and 12 non-members present. Six papers were presented as a symposium on the entomological activities on the Pacific Coast.

The afternoon session was called to order at 4 o'clock and 11 talks were given by visiting entomologists and members. Dr. L. O. Howard presented the greetings of the Entomological Society of Washington and Mr. W. M. Giffard the greetings of the officers and members of the Hawaiian Entomological Society.

AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS, PACIFIC COAST BRANCH

This society held formal sessions Thursday and Friday forenoon and afternoon, with papers as follows:

Some habits of the California lead cable borer: H. E. BURKE. (Illustrated.)

The garden centipede (Scutigerella immaculata Newp.): F. H. WYMORE. (Illustrated.)

Notes on an outbreak of cutworms: S. J. SNOW.

Cylindrocopturus jatrophae, a new economic pest: CHARLES T. VORHIES.

Forest insect control: H. E. BURKE.

Malaria: GEORGE E. STONE.

Arsenical residue and codling moth control: E. R. DE ONG.

Experiments on the efficacy of lead arsenate in protecting apples against codling moth injury: RALPH H. SMITH. (Illustrated.)

Studies of parasites of the alfalfa weevil in Europe: T. R. CHAMBERLIN.

The tule bill bug (Calandra discolor Man.). W. B. TURNER. (Read by C. M. PACKARD.)

The effect of weevily beans on the bean crop and upon the dissemination of the weevils, B. obtectus and B. quadrimaculatus: A. O. LARSON.

The possibilities of weevil development in neglected seeds in warehouses: C. K. FISHER.

Insects in cereal food products: R. W. DOANE.

The life history and biology of Echocerus cornuta: DAVID SHEPHERD.

The thurberia boll weevil and thurberia boll worm problem in Arizona: CHARLES T. VORHIES.

Lygus elisus on cotton in the Pacific region: E. A. MCGREGOR.

Calcium cyanide as a soil fumigant for wireworms: ROY E. CAMPBELL.

The citrophilus mealy bug as a pest of citrus: H. M. ARMITAGE.

Facts concerning fluctuation in numbers of beet leafhopper in a natural breeding area in the San Joaquin valley in California: H. H. SEVERIN.

Unique features of the program of this very active society were the first annual Pacific Coast championship ball game, played on the Faculty Club House Diamond, Friday afternoon, between the federal entomologists and the state entomologists. It is said the score stands 22 to 0 in favor of the state entomologists.

Following the conclusion of this arduous struggle the participants and their guests took part in an old-fashioned barbecue at the Faculty Club.

The meeting was probably the best the Pacific Coast branch has ever held, being notable both for the large attendance, which exceeded any previous meeting, and the number of distinguished entomologists present. Much benefit and pleasure were derived from the presence of these visiting members. Nineteen interesting and instructive papers were presented, together with two motion pictures on insect control. Newly elected officers are: *Chairman,* Leroy Childs; *vice-chairman,* Stanley Freeborn. The secretary is Roy E. Campbell.

SEISMOLOGICAL SOCIETY OF AMERICA

This society held one session Friday morning with the following program:

Origin of the earthquake forces in California: BAILEY WILLIS.

An absolute seismograph: PAUL KIRKPATRICK.

The torsion seismometer: J. A. ANDERSON and H. O. WOOD.

Some experiments with Milne-Shaw seismographs: E. A. HODGSON.

BOTANICAL SOCIETY OF AMERICA, PACIFIC DIVISION OF PLANT PHYSIOLOGICAL SECTION

Sessions were held on Friday forenoon and afternoon with the following program:

Gravity as a formative stimulus: G. J. PEIRCE.

Experiments in bud correlation: F. E. CLEMENTS.

A study of the conductive tissues in the stems of Bartlett pear, and the relationship of food movement to dominance of the apical buds: F. E. GARDNER.

Are cambial activity and food reserve correlated? E. L. PROEBSTING.

Root growth in the cotton in relation to the oxygen supply and to temperature: W. A. CANNON.

Physiological conditions in sphagnum bogs of the northwest coast: G. B. RIGG.

The molecular structure of the cell wall: O. L. SPONSLER.

Some remarks of the absorption of ions and the energy relations involved: D. R. HOAGLAND and A. R. DAVIS.

An apparatus for the growth of plants in a controlled environment: A. R. DAVIS and D. R. HOAGLAND.

The influence of potassium in the culture solution upon the formation of diastase by wheat: A. R. DAVIS and J. L. DOUGHTY.

The absorption of ions by plants in light and in darkness: A. R. DAVIS and O. E. NAY.

Combinations of single salt solutions as culture media for the growth of wheat: L. J. H. TEAKLE.

Observations on growth of plants with continual renewal of culture solutions: L. J. H. TEAKLE.

WESTERN SOCIETY OF NATURALISTS

The meetings were held at Stanford University on June 26 and 27. A symposium with the Ecological Society was held on Thursday morning; on Thursday afternoon there was a session for the reading of papers, and on Friday morning a joint meeting. In addition to the papers listed in the symposium on vegetation and the associated animal life in west-central California, in joint session with the Ecological Society of America, the following papers were presented:

The whales of the California coast: BARTON WARREN EVERMANN.

The Pan-Pacific Union food conservation congress to be held at Honolulu in August: BARTON WARREN EVERMANN.

Effect of gestation and lactation on activity and food consumption: J. R. SLONAKER.

Effect of compulsory work during gestation on mother and young: J. R. SLONAKER.

Motor deficiency effects in the guinea pig: A. W. MEYER.

Thyroxin as a depressor of cell division: H. B. TORREY.

Thyroxin as an accelerator of pigment: H. B. TORREY.

A remarkable development of the sporophyte in anthoceros: D. H. CAMPBELL.

Notes on life history of Ascarida perspicillum (Rud.): J. E. GUBERLET.

Mitosis in endamoeba dysenteriae: C. A. KOFOID AND OLIVE SWEZY.

Inheritance of reversal of geotropic response: E. B. BABCOCK.

The influence of pituitary gland removal on development of rana: B. M. ALLEN.

Ciliary currents in starfish: LAURENCE IRVING.

Multiple allelomorphs in the silkworm: ISABEL MCCRACKEN.

Exhibition of the hybrid Xiphophorus helleri × *Platypœcilus rubra:* ISABEL MCCRACKEN.

Progeny of species hybrids in crepis: MARGARET MANN.

On Friday evening, the Western Society of Naturalists and Ecological Society gave a dinner in the Stanford Union, and on Saturday the members of the two societies and their friends went on a field trip to La Honda, Moss Beach and other points of zoological, botanical and ecological interest in the Santa Cruz mountains and along the seashore.

The following officers were elected for the next year: *President,* Nathan Fasten, Oregon Agricultural College, Corvallis; *Vice-president,* H. M. Hall, Carnegie Institution of Washington, University of California, Berkeley; *Secretary-treasurer,* C. O. Esterly, Occidental College, Los Angeles, California; *Members of Executive Committee,* H. B. Torrey, University of Oregon, Eugene, and G. B. Rigg, University of Washington, Seattle.

While the Pacific Division of the American Phytopathological Society, the California Academy of Sciences, the Cooper Ornithological Club, the Lorquin Natural History Club, the Pacific Fisheries Society, the Sierra Club, the Utah Academy of Sciences and certain other affiliated societies did not hold separate sessions, their members contributed to the programs of various other societies.

OFFICERS OF THE PACIFIC DIVISION OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE FOR 1924–25

President—C. E. Grunsky, president of the California Academy of Sciences, and president of the American Society of Civil Engineers, 57 Post Street, San Francisco, California.

Vice-president and Chairman of the Executive Committee—Joel H. Hildebrand, professor of chemistry, University of California, Berkeley, California.

Members of the Executive Committee—Walter S. Adams, director, Mount Wilson Observatory, Pasadena, California (1928); Robert G. Aitken, associate director, Lick Observatory, Mount Hamilton, California (1927); Bernard Benfield, consulting engineer, Kohl Building, San Francisco, California (1929); William M. Dehn, professor of chemistry, University of Washington, Seattle, Washington (1925); Harvey M. Hall, Carnegie Institution of Washington, 1615 Loma Avenue, Berkeley, California (1926); Ernest G. Martin, professor of physiology, Stanford University, California (1929); Emmet G. Rixford, professor of surgery, Stanford University, 1795 California Street, San Francisco, California (1928).

The place and time of the 1925 meeting of the Pacific Division have not been determined further than that the meeting will be held either at Eugene or Portland, Oregon, sometime in June.

BARTON WARREN EVERMANN,
Acting Secretary