twenty chapters made notable contributions to our understanding of as many divisions in the astronomy of our great stellar system.

Newcomb's interest in the progress of mathematics was strong throughout his life. While an assistant in the "Nautical Almanac" office at Cambridge, he contributed valuable articles to the mathematical journals, especially on the theory and practice of probabilities, a subject applicable to every division of astronomical science. His contributions to pure mathematics were limited by other demands upon his time, and the subjects that received his attention were mainly those which related more or less intimately to celestial mechanics and probabilities. There could be no question, however, of a great underlying mathematical ability. Professor Cayley, one of the most eminent mathematicians of Cambridge University, when presenting the Gold Medal of the Royal Astronomical Society of London to Professor Newcomb in 1874, three years before Newcomb became superintendent of the "Nautical Almanac," spoke of Newcomb's memoir on the theory of the perturbations of the moon which are due to the gravitational attractions of the planets, in these words: "The memoir is, from the boldness of the conception and beauty of the results, a very remarkable one, and constitutes an important addition to theoretical dynamics." I have already mentioned the fact that Simon Newcomb was a professor of mathematics and astronomy in Johns Hopkins University in 1884, and later—altogether during 11 years.

Newcomb possessed in remarkable degree the power of writing successfully for the intelligent public. Dozens of his articles on subjects of timely interest, not "written down" to the level of the readers, but in logical, admirable, understandable language, appeared in the leading American magazines and newspapers.

Newcomb wrote several splendid text-books on astronomy. His "Popular Astronomy," a comprehensive treatise on the fundamental principles of astronomy, issued in 1878, has, in my opinion, never been equaled in merit by any other book aiming to cover, in general, the same ground. Notwithstanding the tremendous advances of the past fifty-eight years in astronomical science, the original edition remains a book which all students of astronomy could read with profit and pleasure. It has passed through eight editions in this country, it has been translated into several languages, and in Germany, between 1881 and 1922, it was made the basis of seven editions brought up to date by German astronomers.

Newcomb's work, driven by untiring energy and guided by philosophic intelligence and dependable judgment for more than a half century, placed him at the head of his profession in America, and gave him membership in a small class of the most productive astronomers of all countries and all centuries. A survey of his activities must lead to the conclusion that Simon Newcomb was intellectually a giant; and fortunately this rare quality was accompanied by deep and abiding interest, by clear visions of objectives, and by the exercise of executive ability of an extremely high order.

In closing, I venture to repeat and record the opinion prevailing throughout the learned world that Simon Newcomb was not only the leading American astronomer but the leading American scientist up to and including his time.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE SEATTLE MEETING OF THE PACIFIC DIVISION. II

By Dr. J. MURRAY LUCK
SECRETARY

AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS, PACIFIC SLOPE BRANCH

(Report by J. F. Lamiman)

The meetings were attended by about seventy-five entomologists, including the national president, L. S. McLaine. Some thirty-five papers were presented, the most interesting of which was the invitation address by Professor R. W. Doane on "Forty-five Years of Entomology."

The papers presented were on an unusually wide range of subjects, with four devoted to wireworms and their control and four on codling moth control.

In addition to the above, A. L. Strand and J. H. Pepper presented a new criterion for the classification of petroleum oil sprays; G. F. MacLeod reported on some quantitative problems of insect injuries to potatoes; R. N. Chapman discussed egg eating as a factor in the life cycle of flour beetles; F. P. Keen and R. L. Furniss reported on the effects of sub-zero temperatures upon populations of the western pine beetle; F. R. Lawson and J. C. Chamberlain discussed the flight habits and dispersal of the beet leafhopper; C. W. Getzendaner reported on recent developments in parasitizing the European earwig, and G. Allen

Mail discussed the use of thiodiphenolamine as a mosquito larvicide.

Officers elected for the ensuing year are: *President,* E. J. Newcomer; *Vice-president,* J. R. Eyer; *Secretary-treasurer,* J. F. Lamiman.

American Society of Ichthyologists and Herpetologists, Western Division

(Report by Arthur Svihla)

The eighth annual meeting of the western division of the Society of Ichthyologists and Herpetologists was held with the Pacific Division, American Association for the Advancement of Science, at the University of Washington, Seattle. One of the outstanding features of the meeting was the presentation of papers dealing with the fisheries problems of the Pacific Northwest, with the entire afternoon session given over to this function. Twenty-six papers were read during the course of the meeting.

The following were elected officers for the coming year:

President, Rolf Bolin, Hopkins Marine Station, Pacific Grove, Calif.; *Vice-president,* Major Chapman Grant, San Diego, Calif.; *Secretary-treasurer,* Arthur Svihla, State College of Washington.

Pacific Northwest Bird and Mammal Society

(Report by R. C. Miller)

The society held a half-day session on Thursday morning in conjunction with the Cooper Ornithological Club. E. D. Lumley reported his studies of the morning awakening of birds. Elizabeth L. Curtis described the structure of the sclerotic ring of the eye in a number of orders of birds. R. C. Miller reported observations on albatrosses and other sea birds. Barbara D. Blanchard described the annual cycle of behavior in two races of white-crowned sparrow. T. H. Scheffer discussed breeding records of the Pacific Coast pocket gophers. J. E. Schwartz reported on recent studies of the Roosevelt elk in the Olympic Mountains. P. P. Macy discussed the flora and fauna of the Olympics. On Thursday afternoon the society participated with several other biological societies in a joint symposium on "Plant and Animal Distribution on the Pacific Coast." W. T. Shaw, with W. P. Taylor, represented the society with a paper on the distribution of birds and mammals in the state of Washington as influenced by the topography of the state.

San Francisco Aquarium Society

(Report by A. W. Herre)

A dinner meeting on the evening of June 19 was held jointly with the Seattle Aquarium Society. It was largely attended by members from Seattle and representatives of the Portland and San Francisco societies. An address on the habits of rare and interesting tropical fishes, both marine and fresh water, suitable for aquarium study and culture, was presented by Dr. Albert W. Herre, of Stanford University. He also exhibited specimens of the smallest fishes in the world, minute gobies from Luzon, P. I. Dr. Trevor Kincaid, of the University of Washington, gave a lecture on the marine fishes and invertebrates of Puget Sound available for aquarium purposes, illustrating his remarks with colored lantern slides.

The Western Society of Naturalists

(Report by E. G. Moberg)

On Thursday afternoon, with the Botanical Society of America, the Cooper Ornithological Club and the Pacific Northwest Bird and Mammal Society, the society participated in a symposium on "Plant and Animal Distribution on the Pacific Coast." The following topics were discussed: "Geographic Distribution of Fresh-water Copepods on the Pacific Coast," by Trevor Kincaid, University of Washington; "The Distribution of Amphibia in the State of Washington," by James R. Slater, College of Puget Sound; "Life-forms and Life-zones of Plants in Western Washington," by G. N. Jones, University of Washington; and "The Distribution of Birds and Mammals in the State of Washington as Influenced by the Topography of the State," by Walter P. Taylor, of the U. S. Biological Survey, and William T. Shaw, of Fresno State College.

At sessions held on June 19, twenty-three miscellaneous papers were presented.

American Phytopathological Society, Western Division

(Report by C. E. Owens)

At the twentieth annual meeting of the society, the following officers were elected: B. A. Rudolph, *President;* C. W. Bennett, *Vice-president;* L. D. Leach, *Secretary-treasurer;* J. W. Hotson, *councilor.* Three half-day sessions were held, and twenty-four papers were presented. H. P. Severin and J. C. Freitag discussed the transmission of western celery mosaic by aphids and the properties of the virus, also the aphid vectors of celery calico. A. B. Hatch discussed mycorrhizal fungi, calling attention to the greatly increased absorbing surface on pine roots induced by these fungi and the fact that trees can not thrive in infertile soil in their absence. William Newton described the effects on tomato of a particularly virulent strain of the "potato X" virus. L. J. Klotz described an injury to citrus fruits caused by water. H. S. Fawcett and L. J. Klotz reported a new species of *Candelospora* causing decay in citrus fruits. G. A. Huber made a progress report on the control of

narcissus and bulbous iris leaf diseases by Bordeaux-Penetrol spray and on the spread and adhesiveness of this spray material. This combination proved the most satisfactory of any materials tried. J. Kienholz and Leroy Childs conducted trials of various copper sprays for pea and apple scab, considering both their effectiveness and tendency to cause injury. A 2–2–2–50 combination of copper phosphate, lime and bentonite proved best. R. B. Streets discussed attempts to diagnose cotton root-rot in soils by screening out the sclerotia and indicated the apparent usefulness of heavy applications of ammonium sulfate in aiding recovery of fruit and nut trees from root-rot. R. Sprague reported on foot-rot disease of cereals in certain coastal valleys of Oregon, also on some mycological aspects of species of *Mastigosporium* on Gramineae. G. W. Fisher found that certain smut spores taken from herbarium specimens were viable after periods ranging up to 25 years. S. M. Zeller outlined studies on bark necrosis and fruit pit of pear, reported simultaneous infection of strawberry by Grinkle and Yellows, and described a new genus of Gasteromycetes. Karl D. Butler described a disease of the inflorescence of the date palm caused by a *Helminthosporium* and reported studies on ash tree cankers. Several papers, chiefly of mycological interest, were presented as follows: J. W. Hotson, "A New Species of *Arachniotus* Isolated from Contaminated Milk"; R. H. Tschudy, "Cultural Studies of the Genus *Chaetomium*"; and studies of several groups of fungi as they occur in western Washington namely, "Operculate Discomycetes," by Leon C. Snyder; "The Genus *Inocybe*," by D. E. Stuntz; "Polypores," by J. R. Roberts; and "Hydnums," by W. M. Lanphere.

AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS, WESTERN SECTION

(Report by Harry F. Clements)

The Western Section of the American Society of Plant Physiologists made its bow to the scientific world with two full days of meetings. It spent one day in a joint meeting with the Western Society of Soil Science, with attendance ranging from 35 to 70 at any one time, and during the second day it listened to papers of its members with as many as 50 attending. Officers of the section are as follows: *Chairman,* D. R. Hoagland, University of California; *Vice-chairman,* J. P. Bennett, University of California; *Secretary,* H. F. Clements, State College of Washington.

All told, there were twenty-one papers presented, including two invitation addresses by the respective chairmen of two cooperating societies. Dr. Hoagland described the work now under way at the University of California dealing with the abnormalities in plants resulting from a lack of zinc in the salt solution. He and his associates were able to reproduce these abnormalities by growing plants in solutions lacking zinc. It appears, however, that this was not a simple cause-and-effect phenomenon, since it was discovered that a hormone, free of zinc, was likewise capable of correcting the little-leaf condition of the plants used. Dr. R. E. Stephenson, chairman of the Soils Section, described the many physical factors of the Oregon soils which modify moisture conditions of these soils and in turn the nutrition of the plants.

Another report showed that xylem tissue carries the bromide ion, since for several hours after girdling the stem, the ion movement upward continued. It is after some forty-eight hours that a decrease in rate is noted, indicating that the girdle somehow affects the water course.

Some attention is being given the matter of toxic spray residues on soils of orchards. The Oregon and Washington experiment stations are studying the effects of such material as arsenic, lead and copper on plants. Efforts were made to determine the distribution of these materials in the soil as well as within the plant. This is a timely problem, and it is certain that unless inorganic sprays are dispensed with, some very radical changes in orchard management will have to be made.

In this connection work done with herbicides is of note. The toxicity of borates and arsenates is markedly influenced by the texture of the soil. Toxicity is great in coarse soils and relatively slight in heavy soils. The chlorates, on the other hand, do not appear to be affected by the texture of the soil but rather by its productivity.

The many difficulties associated with pecan production were reviewed, and from the results it appears that a proper manipulation of the carbohydrate-nitrogen relations results in a better filling of the nuts.

These, together with the many other papers of interest, stimulated a considerable amount of discussion and contributed much to the success of the meeting.

BOTANICAL SOCIETY OF AMERICA, PACIFIC DIVISION

(Report by George B. Rigg)

Sessions of the Pacific Section of the Botanical Society of America were held at the University of Washington on June 17, 18 and 19. President T. C. Frye presided. Officers elected for next year are: *President,* A. H. Hutchinson, of the University of British Columbia; *Secretary-treasurer,* L. L. Burlingame, of Stanford University; *Councilor,* H. S. Fawcett, of the California Citrus Experiment Station. The papers included a plea for conservation in publishing new species in the West; taxonomic and morphological consideration of the Characeae, the Polytrichaceae and the genera, *Eriophyllum, Arabis* and

Saxifraga; the advantages of the polygonal presentation of ecological data and of angiosperm family concepts; a mineral salt hypothesis of the rôle of mycorrhizae; a description of a cross between the native Nutka rose and a cultivated rose; an account of microsporogenesis in certain cherries; the embryology of Pleuricospora; morphological changes in Chaetomiun when grown on various media; the structure of chloroplasts in garden beets; the use of the terms *monoecious* and *dioecious;* the origin of adventitious roots in cuttings of Begonia; the recovery of HCN from citrus foliage; the acidity of the marine alga Desmarestia; the phytoplankton of sea water; diatoms as indicators of bog development; the origin and development of collenchyma strands and vascular bundles in celery; and the contributions of the National Park Service to science.

Ecological Society of America

(Report by H. de Forest)

Two half-day sessions were held, with attendance ranging from 15 to 30. Several papers dealt with the Northwest. Typical profiles of coastal sphagnum bogs of Washington and Oregon were presented, and the reconstruction of the past history of plant migrations and successions in these habitats, with the need for preservation of some of the few remaining undamaged bogs, were discussed. The relation of pink salmon in southeastern Alaska to the summer and autumn rainfall, which supplies many of the streams through surface drainage, was explained in another paper. This climatic factor has a marked influence upon the spawning salmon and the subsequent brood.

Of the papers relating to other regions, two dealt with the chaparral of the Southwest. The rate of transpirational water loss in this scrub in southern California was found to be influenced chiefly by conditions which modify the soil moisture supply. Differences in internal structure of leaves of some shrubs could be correlated quantitatively with differences in slope-exposure; altitudinal differences of almost 5,500 feet had little, or no, effect.

Another paper considered the effects of temperature on reptiles of the southwestern desert. Their toleration of high temperature was found to be slight, sand temperatures of 70° C. being lethal; no heat regulation within the body was apparent.

An investigation to obtain information accounting for the synchronous fluctuations of flour beetle populations was carried out in the Hawaiian Islands. The influence of different concentrations of prey and predators on the eating of eggs of the same species was determined.

Another paper recounted the influence of the host tree on its epiphytic community in the hygrophytic forest of Java. It was concluded that the specificity of most trees as epiphyte-carriers is so great that they may be identified by their epiphyte covering.

An interesting discussion on the question of establishing a Pacific section of this society, probably including the territory from the Rocky Mountains westward, was one feature of the program. The matter will be referred to the members for a representative decision in the autumn.

Western Psychological Association

(Report by Ralph H. Gundlach)

Four half-day sessions were held at which twenty-four experimental and theoretical papers were read. Six of the papers formed a symposium around the topic, "In What Terms Are Motives and Conflicts to be Described?" A further emphasis upon the experimental attack in the animal laboratories, and consideration in precise objective terms, was variously urged by E. R. Guthrie, Calvin P. Stone, E. C. Tolman and C. S. Hall. William Griffith held that effective clinical work could be done for the present only in terms of human wants and needs. E. R. Hilgard pointed out that human problems of motives and conflicts could not help but encroach upon problems of ethics and that all practical work in, say, mental hygiene, implies a normative base.

A session was jointly held with Anthropology. Melville Jacobs traced out the movements of language among Northwest Indians. An extensive survey of color concepts was reported by V. F. Ray. Viola Garfield illustrated the changes in the culture of a primitive society with regard to property inheritance, when that primitive society came under the jurisdiction of a government agent. W. W. Elmendorf traced out the complex beliefs and practices associated with soul recovery. William Griffith reported a greater tendency toward neuroticism among the unemployed, and among youth, whether unemployed or in school, than among adult employed and among regular soldiers. C. S. Menefee showed that the use of labels, such as fascist, communist or socialist, acts to modify the acceptance of views expressed under such labels.

The remaining two sessions dealt mainly with the problems of learning, conditioning, perception, animal psychology and sense physiology.

The retiring president, Dr. Grace M. Fernald, addressed the members at the annual banquet on the topic, "The Release of Latent Abilities: a Substitute for Motivation."

Milton Metfessel, of the University of Southern California, was elected president for the ensuing year.

Pacific Sociological Society

The principal feature of the meeting of the Pacific Sociological Society was a symposium on "Social Se-

curity," with papers on the "Need for Social Security," by Ruth FitzSimons; "Social Movements," by Joseph Cohen; "Federal Security Payroll Taxes," by James K. Hall; "The Economic Cost of Social Security," by Clement Akerman; "How to Get Social Security," by W. A. Carrothers and Charles T. Battin; "The Administration of Social Security," by Charles F. Ernst; "Administrative Problems Under the National Social Security Act," by Edmund F. Spellacy, and "How to Administer Social Security," by Kenneth C. Cole and Paul H. Landis. Nine other papers on miscellaneous topics were presented.

AMERICAN SOCIETY OF BACTERIOLOGISTS, NORTHERN CALIFORNIA–HAWAIIAN BRANCH

(Report by B. J. Olson)

The first organized meeting of western bacteriologists was held on June 19. An attendance ranging from 55 to 70 was present at the session, which embraced an excellent representation of all phases of western bacteriology and institutions in which bacteriological work is carried out. The meeting opened with an address by the chairman, P. J. Beard, who summarized the scope of activities of the Northern California-Hawaiian Branch of the Society of American Bacteriologists. He emphasized the value of close contacts between western bacteriologists, the numbers of and distribution of western bacteriologists and the enthusiastic support of these men for this type of meeting as evidenced by their contributions to the program and attendance. An expression of opinion was requested from the group in attendance as to the desirability of an annual meeting of western bacteriologists. The ensuing discussion revealed unanimous support for such an annual meeting to be held during the summer months.

The remainder of the day was occupied by the presentation of 29 scientific papers representing the following phases of the field of bacteriology—medical, general, industrial, viruses, immunology, dairy and agricultural.

A paper dealing with the rôle of desensitization in the treatment of tuberculous guinea pigs emphasized the importance of selecting the proper antigen for use in desensitization and presented the results of desensitization with various antigens. Serological studies on the antigenic relationships of tubercle bacilli were presented and also one paper on the rapid production of tuberculin in an inexpensive synthetic medium.

The bacteriological problems of the canning industry were presented and discussed. This report gave a comprehensive view of the problems confronting the canneries, the solutions found for the problems and methods of bacteriological control now in use.

The field of general bacteriology was represented by several papers. One dealing with the water content of spores and vegetative cells aroused considerable interest and discussion, it being pointed out in the paper that no differences in the water content of spores and vegetative cells was found, and so this is not the true explanation for the difference in heat resistance between the two forms.

Various phases of industrial bacteriology were presented in papers dealing with alcohol production of yeasts, germicidal action of chlorine compounds and studies on metabolism of bacteria under controlled conditions.

The field of virus research was represented by three reports of studies on poliomyelitis and one paper on Rocky Mountain spotted fever with reference to the Weil-Felix reaction. The reports on poliomyelitis dealt with the chemoprophylaxis of poliomyelitis, the immunological relationships of the virus isolated in the recent Los Angeles epidemic and the relationship of nasal and humoral antipoliomyelitic substances. The prevention of poliomyelitis in susceptible monkeys can be most effectively carried out with a one per cent. picric acid solution installed intranasally over a period of a few days prior to the intranasal instillation of the virus. The refractory state of the nasal mucosa seems to persist for quite a few days after the application of the picric acid. The exact duration of the refractory state has not as yet been accurately determined.

Several papers were read by title at the end of the program due to lack of time for their presentation.

SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE

(Report by Earl R. Norris)

The Pacific Coast Branch and the Southern California Branch met on Wednesday morning and afternoon. Owing to the absence of officers of either section, Dr. E. R. Norris, of the University of Washington, presided at the first session, and Dr. Ira H. Manville, of the University of Oregon Medical School, at the second session.

The sessions were opened with a paper by Ira H. Manville showing the sparing action of pectin on the mucin of the mucous membranes of the alimentary tract and the gall bladder, owing to the use of its galacturonic acid in detoxification during menthol intoxication. Hazel E. Field, Robert P. O'Neal and L. Reed Brantley gave results showing the effect of cigarette smoking on blood sugar, blood chlorides and blood pressure and suggested that smoking has an influence on the endocrine system. James F. Reinhart, Louis D. Greenberg and Amos U. Christie gave a preliminary report of the ascorbic acid content of blood plasma in rheumatic fever, and J. F. Reinhart, L. D. Greenberg and Frances Baker of the ascorbic acid content of blood plasma in rheumatoid arthritis.

They suggest that ascorbic acid blood levels below 0.7 mg. per 100 cc are probably subnormal; in both conditions mentioned above lower values were found. A simplified respiration apparatus for work with small animals was described by M. Kleiber, who also reported, with H. Goss, on the fasting catabolism of phosphorus deficient rats. A. J. Lehman reported the preparation of extracts of urine and tissue having a marked effect upon blood pressure. Victor E. Hall read a paper on the influence of cold on the metabolic action of dinitrophenol, indicating that dinitrophenol interferes with the temperature-regulating mechanism. In reporting a genetic study of pubescent age in albino rats, Calvin P. Stone showed how rats by selection might be differentiated into two groups having a tendency to early and late maturing. O. Larsell had a number of photographs and diagrams illustrating the effect on the central nervous system of experimental limb amputation in foetal mammals; the amputations in the foetal stages were made possible by the use of marsupials. D. Warner, C. J. Robinson and Mildred Ellis read a paper on the results of long-continued asparin feeding to rats.

Five other papers were reported by title only.

WESTERN SOCIETY OF SOIL SCIENCE

(Report by S. C. Vandecaveye)

Four half-day sessions, two of these jointly with the Western Section of the American Society of Plant Physiologists, were held with an attendance ranging from 25 to 70. In a session devoted to soil morphology and classification, studies were presented on the morphological and chemical characteristics of certain soils, the physical properties and the management of the soil, and the economic approach as factors in soil classification and rating. Of particular interest was a paper by C. C. Nikiforoff pointing out that the coastal province, due to the Cascades, forms an independent physiographic unit in which the inversion of the horizontal soil zones does not show any marked vertical zonality. The morphological characteristics of the major soil groups in western Washington were further pointed out and discussed in the course of a full day field trip attended by 22 members.

A report of studies carried on at the University of California indicated that certain soils are capable of fixing soluble potassium in non-replaceable form. Tomatoes and barley were found to be able to absorb nearly all this fixed potassium in some of these soils but not in others. The anomalous behavior of magnesium in electrodialysis of soil colloids was reported from the State College of Washington. While exchangeable magnesium, like other exchangeable alkaline earth cations, is completely removable by extraction with neutral salts, it was not capable of complete removal from the exchange complex by electrodialysis.

The possible seriousness of spray residue accumulations in irrigated orchard soils was pointed out in two papers resulting from studies carried on at the Oregon State College and the State College of Washington, respectively. Lead arsenate spray accumulations seem to be confined largely to the cultivated surface layer of soil. Toxic effects on barley were found to be roughly in proportion to the concentration of the water soluble arsenic in the soil. Trees and their fruits appeared to be capable of assimilating both lead and arsenic. Barley tops absorbed appreciable quantities of arsenic but only traces of lead, while the roots absorbed large amounts of both.

Interesting results of studies on soil organic matter transformation, carried on by the University of Arizona and the State College of Washington, were presented and showed in general that the soil type, the nature of the organic residue, the temperature and the moisture affect the rate of decomposition and the nature of the soil flora. From work done at the University of Idaho it was shown that the addition of available phosphorus to calcareous soils produced a definite increase in the phosphorus and protein content of alfalfa. In a study of 30 non-irrigated orchard soils at the Oregon State College it was found that a favorable top soil is not sufficient to assure good tree growth without irrigation. In heavy soils much of the moisture classed as usable may never be used, because neither the roots can get to the moist soil nor can the moisture move to the roots.

The following officers were elected for the ensuing year: *President,* P. L. Hibbard, University of California, Berkeley; *Vice-president,* Robert Gardner, Colorado State College, Fort Collins, Colorado; *Secretary-treasurer,* S. C. Vandecaveye, State College of Washington, Pullman, Washington.

OBITUARY

HIRAM DRYER McCASKEY

FOR the second time within the year it has been our sad duty to pen an obituary notice of one who has devoted a part of his life and energies to the arduous and often dangerous work in our Far Eastern tropical dependency, the Philippines. Hiram Dryer McCaskey, who died recently at his estate, Boh Da Orchards, near Central Point, Oregon, had not been active in geological or mining work for several years. His most recent work had been done in connection with the U. S. Geological Survey in charge of the metallic mineral resources section. In his earlier years he served as the