

layers and waves; (b) local convectional currents, essentially vertical, due to thermal controls: causes and conditions; (c) effects of topography upon air movements, combining both horizontal and vertical elements, due to mechanical controls: effects of friction, topography, and character of surface; vertical and horizontal movements in general in relation to flight.

*Weather Forecasting:* Explanation of daily weather map; principles of forecasting explained by reference to type maps, for United States and for Europe; general characteristics of cyclones and anticyclones; tracks; velocities of progression.

*Non-Instrumental Local Forecasts:* Barometric tendency; veering and backing winds; changes in wind velocity; weather proverbs.

*Clouds:* Types; cloud classification; methods of determining cloud heights and velocities, and results; value as weather prognostics; fair and wet weather clouds; fog, special consideration of cumulus and cumulo-nimbus.

*Forecasts of Wind Velocity and Direction Aloft:* Direct observation by means of pilot balloons, kites and cloud movements; directions of cloud movements in cyclonic and anticyclonic systems in the United States and in Europe; estimates based on surface conditions and on general knowledge of upper air currents; "gradient wind;" diurnal variation in wind velocity and direction; changes due to progression of cyclones and anticyclones; wind and cloud directions and night flying.

*Favorable and Unfavorable Weather for Flying:* Wind; clouds; haze, etc.

*Laboratory Work* is given at Blue Hill Observatory (10 hours) by Alexander G. McAdie, Abbott Lawrence Rotch, professor of meteorology, Harvard University, and director of the Blue Hill Meteorological Observatory, Readville, Mass.

#### THE DANIEL GIRAUD ELLIOT MEDAL

At a meeting of the council of the National Academy of Sciences, held June 19, 1916, the gift of Miss Margaret Henderson Elliot of \$8,000 to establish a fund in memory of her father, Daniel Giraud Elliot, was accepted. This money was given to be held in trust and

invested in order that there should be an income annually for a medal to be known as the Daniel Giraud Elliot Gold Medal, and an honorarium to be awarded by the National Academy of Sciences.

The conditions under which the gift is to be administered are contained in the following two paragraphs of the deed of gift:

One such medal and diploma shall be given in each year and they, with any unexpended balance of income for the year, shall be awarded by the said National Academy of Sciences to the author of such paper, essay or other work upon some branch of zoology or paleontology published during the year as in the opinion of the persons, or a majority of the persons, hereinafter appointed to be the judges in that regard, shall be the most meritorious and worthy of honor. The medal and diploma and surplus income shall not, however, for more than two years successively, be awarded for treatises upon any one branch of either of the sciences above mentioned. Professor Henry Fairfield Osborn, of New York, the scientific director of the American Museum of Natural History in New York City and the secretary of the Smithsonian Institute at Washington for the time being, are appointed as such judges. Vacancies at any time occurring in the number of the judges shall be filled by the council of the said National Academy of Sciences, and in each case of a vacancy it is the wish of the said Margaret Henderson Elliot that the council will, if practicable, appoint to the position an American naturalist eminent in zoology or paleontology.

As science is not national the medal and diploma and surplus income may be conferred upon naturalists of any country, and as men eminent in their respective lines of scientific research will act as judges, it is the wish of the said Margaret Henderson Elliot that no person acting as such judge shall be deemed on that account ineligible to receive this annual gift, and the medal, diploma and surplus income may in any year be awarded to any one of the judges, if, in the opinion of his associates, he shall, by reason of the excellence of any treatise published by him during the year, be entitled to receive them.

The council of the academy has accepted the gift and has appointed as the three judges for the bestowal of the medal and honorarium: President Henry Fairfield Osborn, of The American Museum of Natural History. Secretary Charles D. Walcott, of the Smithsonian

Institution of Washington.  
Director Frederic A. Lucas, of The American Museum of Natural History.

The income from this gift to the academy will be sufficient to award the first medal and honorarium at the April meeting, 1918. Dr. Henry Fairfield Osborn has been designated by the president of the academy to act as chairman.

#### WESTERN AGRONOMIC WORKERS

THE second annual meeting of western agronomic workers will be held at the Washington State Agricultural College, Pullman, Washington, and the University of Idaho, Moscow, Idaho (only nine miles apart), on July 31 and August 1 and 2, inclusive. The geographic scope of the gathering is the eleven western states occupying the territory from the Rocky Mountains to the Pacific Ocean.

The following topics will be discussed during the session:

1. Where and to what extent is it possible to eliminate summer fallow?
2. Rotation systems for irrigation sections.
3. Rotation systems for coast and intermediate sections.
4. Rotation systems for dry land.
5. Organic matter and nitrogen content of soil as affected by cropping systems.
6. Irrigation and alkali studies.
7. Methods and organization for supplying and distributing superior seed.
8. Possible extended use of new crops and the production of crops in the United States formerly supplied from other countries.
9. Cooperation among the states for investigating new problems.
10. The practical application of our investigations.
11. Better marketing, a factor for increasing food supply.
12. Collegiate courses in agronomy.

#### SCIENTIFIC NOTES AND NEWS

THE Albert medal of the Royal Society of Arts for the current year has been awarded to Orville Wright, "in recognition of the value of the contributions of Wilbur and Orville Wright to the solution of the problem of me-

chanical flight." The report of the council says: "The largest share in the honor of having invented the aeroplane must always be given to the two brothers, Wilbur and Orville Wright."

M. LECLAINCHE has been elected a member of the section of agriculture of the Paris Academy of Sciences, to succeed M. Chauveau.

DR. WILLIAM J. MAYO, of Rochester, Minn., has been summoned to Washington to confer with the government officials relative to the formation of a central medical staff in Washington, the purpose of which will be to obtain the best medical service for American soldiers while in the field.

DEWELL GANN, JR., of the medical department of the University of Arkansas, secretary of the Arkansas Academy of Sciences, has been commissioned a first lieutenant in the Officers' Reserve Corps, and expects assignment to a medical unit in France.

MR. BARRINGTON MOORE, associate curator of woods and forestry in the American Museum of Natural History, has gone to France to give his services in a forestry regiment.

PROFESSOR ELIOT BLACKWELDER, of the University of Illinois, is at present in California as a geological member of an advisory commission appointed by the governor of California to investigate the petroleum resources of the state.

MR. KARL P. SCHMIDT, assistant in herpetology in the American Museum of Natural History, has been appointed a member of the New York State Food Commission.

THE *Geographical Review* gives information concerning field work by botanists as follows: Professor F. E. Clements, who has accepted a position in the department of botanical research of the Carnegie Institution, is in the west and will devote the summer largely to grazing problems in connection with the national emergency. Incidentally he hopes to complete the task of securing material for a monograph he is planning to write on the bad lands. Dr. O. E. Jennings, of the Carnegie Museum of Pittsburgh, is spending the summer in botanical exploration and collecting