

preserved through use. On two of the reservations, the forest experts point out, the opportunities are excellent for growing cedar and pine for spar buoys and piling, to be used in the work of the Lighthouse Bureau itself. All parts of the reservations can not be devoted to forests. Some areas will have to be left clear for protection from fire, while others immediately adjacent to the beacons themselves will have to be left bare in order that the lights may not be obscured.

A CONTRIBUTION on the great glaciers of Alaska is Bulletin 526 of the U. S. Geological Survey, "Coastal Glaciers of Prince William Sound and Kenai Peninsula, Alaska," by U. S. Grant and D. F. Higgins. The report is profusely illustrated with photographs and with maps of the individual glaciers, as well as two comprehensive maps of Prince William Sound and the southwestern part of Kenai Peninsula, showing the location of scores of glaciers. The report is in fact a guide and handbook to this wonderful scenic region which must prove invaluable to the tourist. Many valuable data and important measurements of glaciers in the United States, Alaska and elsewhere have been brought together from time to time, and it is probably the general impression that since the vast ice sheet which covered the northern part of North America began its retreat the glaciers of the continent have been continually shrinking. It is therefore interesting to note from the illustrations and descriptions in Bulletin 526 that some of these Alaskan glaciers are progressing and growing larger rather than retreating, many huge forests being upturned and devastated by the irresistible advance of the ice. In other glaciers the retreat within a period of ten years has been more than a mile. The great magnitude of some of these glaciers is seen in the descriptions, which indicate the height of the tidal ice cliffs that form the termini of the glaciers as being from 300 to 400 feet. Slowly moving down the mountain valleys, some of them steeply pitched and others relatively flat, these stupendous ice fields include billions of tons of ice. Many young Americans can find here memorials of their alma mater, for along Col-

lege Fiord are Yale Glacier, Harvard Glacier, Smith Glacier, Bryn Mawr Glacier and Vassar and Wellesley glaciers.

#### UNIVERSITY AND EDUCATIONAL NEWS

AS noted in SCIENCE last week, the governor of Pennsylvania has signed a bill appropriating the sum of \$1,226,000 for the next two years, to the Pennsylvania State College. Two years ago the college received \$800,000, out of which \$200,000 was to be applied for the purpose of paying off a long-standing debt, so this year's appropriation is practically double that given two years ago. This is only in keeping with the great increase in students, as last year's enrollment, including summer school for teachers, was 2,535. The increase has been among the largest in the United States.

PROFESSOR LYMAN P. POWELL, head of the ethics department at New York University, has accepted the presidency of Hobart College.

THE following resignations have recently occurred at the Alabama Polytechnic Institute: Professor Jesse M. Jones, recently appointed head of the department of animal industry, has resigned to become field agent in cooperative farm demonstration work in the states of Maryland, Kentucky and West Virginia for the U. S. Department of Agriculture. L. W. Shook, formerly field agent in live stock work, has resigned to accept a similar position with the North Carolina Station, and Mr. T. C. Bottoms, herdsman, has resigned his position to take up similar work at the same station. Mr. J. M. Johnson, assistant in the department of animal industry during the past year, has resigned to pursue graduate work in the University of Missouri.

DR. G. E. GIBSON, of the University of Edinburgh, has been appointed instructor in chemistry in the University of California.

MR. R. A. JEHL, of the Kansas State Agricultural College, instructor in plant pathology, has been appointed instructor in plant pathology at Cornell University.

PROFESSOR R. M. BROWN, of the geography department of the State Normal School, Worcester, Mass., has been appointed as head of

the department of geography at the Rhode Island Normal School, Providence, R. I.

At University College, Reading, Mr. S. B. McLaren, assistant lecturer in mathematics at Birmingham University, has been appointed professor of mathematics, and Mr. R. C. McLean lecturer in botany.

#### DISCUSSION AND CORRESPONDENCE

##### THE NAME OF THE SHEEP MEASLE TAPEWORM

COBBOLD in 1866 described a cysticercus from the muscles of sheep in England and named it *Cysticercus ovis*. The same species was later described by Maddox (1873) under the name of *Cysticercus ovipariens*. Other authors have considered the parasite to be either *Cysticercus cellulosæ*, the intermediate stage of *Tænia solium*, in an unusual host, or *Cysticercus tenuicollis*, the intermediate stage of *Tænia marginata* or *hydatigena*, in an unusual location (muscles instead of serous membranes). Recent investigations by the present writer have proved that the parasite in question is neither *C. cellulosæ* nor *C. tenuicollis* but the intermediate stage of a distinct species of dog tapeworm. The correct name of this tapeworm would, therefore, seem to be *Tænia ovis* (Cobbold, 1866). B. H. RANSOM

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##### NOTE ON THE ORIENTATION OF BOMBILIUS TO LIGHT

WHILE on the hills east of Berkeley, Cal., I observed, among numerous insects visiting the flowers of certain shrubs, that there were several flies which kept hovering for a considerable time in almost exactly the same position. The flies proved to belong to a species of *Bombilius*. The instinct of hovering is not rare among the Diptera, especially the Syrphidæ, but what especially attracted attention was the accurate orientation of the hovering insects to the rays of light. In all the numerous cases observed the flies had their backs turned toward the sun, and in all cases the hovering occurred in the direct sunlight. Whenever a shadow was thrown upon a hovering fly it immediately darted elsewhere.

Occasionally the flies alighted on the ground, when they rested with the back exposed to the sun as before. When a shadow was thrown on them they would soon fly to a sunnier spot. In a few cases I caused them to orient obliquely to the sun's rays by slowly moving an object so that its shadow was thrown on only half the body of the insect; the body would then be turned so as to face more nearly the center of the shaded region. In basking in sunny spots and in orienting negatively to the rays of light the behavior of *Bombilius* resembles that of the mourning-cloak and other butterflies described by Radl and Parker. Like the mourning-cloak, *Bombilius* under ordinary circumstances is positively phototactic. It will fly or walk toward the light as so many other Diptera do, but when resting on the ground in the sunshine or hovering in the air it assumes a negative orientation. It is of interest to find such striking similarities of behavior in two distantly related orders of insects.

When resting on the ground or hovering, *Bombilius* often darts quickly at passing insects. It is not very discriminating as to the objects of its approach and was several times seen to follow after honey-bees and twice after yellow-jackets. When the fly meets a member of its own species the two often spin around in a rapid whirl, but when a mistake is made the pursuit is immediately abandoned. I have caused *Bombilius* as well as other species of hovering flies to dart after small pebbles that were tossed in the air. This behavior is probably associated with the instinct of mating, since it occurs in non-predatory as well as predatory species.

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#### SCIENTIFIC BOOKS

*Handwörterbuch der Naturwissenschaften.* Herausgegeben von E. KORSCHOLT, *Zoologie*; G. LINCK, *Mineralogie u. Geologie*; F. OLT-MANNS, *Botanik*; K. SCHAUUM, *Chemie*; H. TH. SIMON, *Physik*; M. VERWORN, *Physiologie*, und E. TEICHMANN, *Hauptredaktion.* Jena, Verlag von Gustav Fischer. 1912.