

rado in 1875 by A. S. Packard, jun.; on the distribution of *Tineina* in Colorado; new *Entomotraca* from Colorado; descriptions of new *Tineina* from Texas, etc.; *Tineina* and their food-plants; and an index to the described *Tineina* of the United States and Canada. He also contributed a number of papers to the *Journal* of the Cincinnati society of natural history, of which he was a member, and at one time president. The most important of these papers were: on the tongue (*lingua*) of some Hymenoptera; on *Pronuba yuccasella* Riley, and the habits of some *Tineina*; his annual address as president of the society on the metamorphoses of insects, as illustrated in the tineid genus *Lithocolletis* of Zeller; descriptions of some new *Tineina*, with notes on a few old species; illustrations of the neurulation of the wings of American *Tineina*; and on the antennae and trophi of lepidopterous larvae. Many of these papers are illustrated by his own drawings. A lawyer by profession, he found time to do much excellent work in science, and formed a large collection, which has been for some years in the Museum of comparative zoölogy at Cambridge. He was also proficient as a microscopist and a botanist. He leaves a wife and three sons, and his loss will also be felt by all the entomologists of the country.

—Dr. John A. Warder, for many years one of the most prominent horticulturists and foresters in the west, died at his home at North Bend, O., on July 14, in the seventy-second year of his age. He has been identified with the west, and especially with Cincinnati, for nearly fifty years. He was president for many years of the Horticultural society, and has written many papers on botanical and kindred subjects. He was one of the founders of the American forestry association, always took an active interest in its proceedings, and contributed many papers to its meetings.

—Professor Simon Newcomb has taken passage for home in the *Bothnia*, which sails to-morrow from Liverpool to New York. He was to attend the meeting of the French association for the advancement of science at Rouen, just closed. Prof. E. C. Pickering, who has been spending the summer in Europe, will return in October.

—"At the end of May," says Dr. G. Hinrichs in his July Iowa weather bulletin, "this year's growing season, counted from April 1, was sixty degrees in the aggregate ahead of last year's. We had gained nothing more at the end of June; for last year's June was moderate, the same as this season's June. But during July we gained in the aggregate one hundred degrees over last year's July; so that, on the 1st of August of this year, we have received in the aggregate one hundred and sixty degrees of heat more than last year at this period. This fact, together with the fair sky and generally favorable distribution of rainfall, accounts for the greatly superior condition of our crops this year.

"The storm-record," he adds, "has been given in sufficient detail to help to dispel the exaggerated notions of danger from whirlwinds in Iowa. It will readily be seen, that if squalls extending simulta-

neously over a large storm-front, and progressing for hours like a huge wave, are heralded as 'tornadoes' at every place they reach, people at a distance will soon wonder that towns exist at all in the north-west, and our own people will be scared into expensive tornado insurance. In time our buildings will be substantial enough to withstand our summer squalls and winter blizzards successfully. As to genuine tornadoes, they are rare, and very limited in extent."

—For some months the electricians of Paris have held a monthly dinner. These dinners owed their origin to Count Hallez-d'Arros, and were attended by no organized society, but were re-unions of those interested in electrical science. Lately it has been thought better to give the gatherings more stability by some manner of permanent organization; and at the June meeting a *Société des électriciens* was formed.

—During the past year, original investigations in the following subjects, among others, have been carried on in the physical laboratory of Johns Hopkins university under the direction of Professor Rowland and Dr. Hastings: on the photography of the spectrum by means of the concave grating (the photographs of the spectrum, so far made, extend down to *B*, the original negatives being about $\frac{2}{3}$ the scale of Angström's map from *B* to *b*, equal to Angström's from *b* to *G*, and $1\frac{1}{2}$ Angström's from *G* to the extreme ultra-violet; they show 150 lines between the *H* lines, and give the 1474 and *b*₃ and *b*₄ widely double and the *E* line indistinctly double); on the determination of the B. A. unit of electrical resistance in absolute measure; the determination of the specific resistance of mercury; the variation of the specific heat of water with the temperature; the relative wave-lengths of the lines of the spectrum by means of the concave grating; the effect of difference of phase in the harmonics on the timbre of sound; and on the variation of the magnetic permeability of nickel by change of temperature.

—Professor Palmieri announces the existence in the lava of Vesuvius of a substance giving the spectrum line of 'helium,'—an element hitherto recognized only in the sun. He considers the late disaster at Ischia to be due to subsidence of land consequent on the unusual activity of Mount Vesuvius.

—There will shortly be published by Allen & Co. of London a book by A. H. Swinton, entitled 'The influence of the sun on natural phenomena.' One may judge of the book's value by the following quotation from the prospectus: "The multitude who read the morning's newspaper may find in it some reason for their successes and losses, further than blind fatality."

RECENT BOOKS AND PAMPHLETS.

Cogniaux, A. *Petite flore de Belgique à l'usage des écoles.* Mons, Manceaux, 1883. 232 p. 12°.

Cock, A. de. *Flora der Dendervalle. Analytische sleutel der familien en geslachten (zaadplanten af phanerogamen).* Gand, Meyer-Van Loo, 1883. 108 p. 8°.

Dandois de Mellet. *Du rôle des organismes inférieurs dans les complications des plaies.* Bruxelles, 1883. 332 p. 8°.