point of ozone cannot be below —125°. According to Troost it is —119°, while earlier, Olszewsky had placed it at —106°.

J. L. H.

CURRENT NOTES ON METEOROLOGY.

AUGUST HOT WAVE IN CALIFORNIA.

THE August number of the California Section of the Climate and Crop Service contains an account of the hot wave of that month, by George H. Wilson. This hot wave lasted one week, and was the most severe on record, throughout the Sacramento and portions of the San Joaquin Valleys. Maxima up to 120° were noted, and the temperatures were about 20° above the normal in the great valleys on August 11th. In the Sacramento Valley it is stated that birds flew into the houses, seeking shelter from the withering heat, and in a few cases they are reported to have fallen dead from the trees. During the hot wave there was a marked absence of northerly winds in the interior valleys, and as the ground was very dry, owing to a drought, the surface was effectively heated.

MONTHLY WEATHER REVIEW.

THE August number of the *Monthly Weather Review* is one of unusual interest. Among the papers it contains are the following: 'The Effect of Approaching Storms upon Song Birds,' by C. E. Linney; 'Progress in the Exploration of the Air with Kites at the Blue Hill Observatory,' by A. Lawrence Rotch; 'Destruction by Lightning in New York State during the month of August, 1898,' by R. G. Allen; 'The Measurement of the Wind,' 'Sensible Temperatures or the Curve of Comfort,' and 'Waterspouts on the Lakes,' by Professor Cleveland Abbe.

NOTES.

THE Southern Pacific Railroad Company has recently supplied ordinary meteorological instruments to 181 of its stations between Ashland, Ore.; Ogden, Utah, and El Paso, Texas. The state of the weather, direction of wind, temperature and rainfall are included in the daily record, and at nine important points pressure readings are made. Daily telegraphic reports are forwarded from each point to San Francisco. Weekly crop reports are also sent from 52 important producing centers. The Company forwards over its own wires, without charge to the government, warnings of frosts and hot northers. The meteorological observations thus collected are placed at the disposal of the Weather Bureau.

IN the September number of the *Monthly Review* of the Iowa Weather and Crop Service it it noted that of 266 head of live stock killed in Iowa by lightning during the past summer 118 were found in close contact with wire fences.

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BOTANICAL NOTES.

SOME MORE ATROCIOUS BOTANY.

IT is quite bad enough that we have textbooks on elementary botany that are so full of error that teachers have to be warned not to use them, but now we find a new source of confusion and erroneous infection in an unexpected quarter. Our attention has just been called to a recent book, 'Applied Physiology,' by Dr. Overton, published by the American Book Company, in which the author manages to bring in more than the usual number of misrepresentations and misleading statements regarding plants, commonly found in such books. The following examples will give an idea of the botanical pabulum which the Doctor supplies to his pupils:

"The greater part of all young plants is starch" (p. 26). "Each grain [of starch] is made up of layers of pure starch separated by an exceedingly thin layer of a substance like cotton, called cellulose" (p. 26). "As

a plant grows, the starch is changed into wood" (p. 26). "When yeast germs are added to bread dough they grow rapidly and produce alcohol and carbonic acid gas out of sugar, which is always found in flour" (p. 43). "Mold is a common plant which lives upon albumin. It can grow upon the coarsest kinds, as upon wood or leather, as well as upon the best, as meat or cheese. It consists of tiny rods scarcely $\frac{1}{1000}$ of an inch in length, joined end to end" (p. 383). "Bacteria produce decay." * * * * "All decaying matter is intensely poisonous from the presence of these toxins" (p. 384). "*Mold*, a microscopic plant whose filaments in their growth burrow through substances. At intervals they send up seed-stalks which form a velvet-like covering" (Glossary, p. 415). "*Nucleus*, a darker mass in the midst of a cell" (Glossary, p. 416). "*Spore*, the germ cell of a flowerless plant" (Glossary, p. 421). See "*Germs*, a common name for bacteria of disease" (p. 411). "*Starch*, a food substance composed of carbon hydrogen and oxygen in the same proportions as in sugar" (Glossary, p. 421). "*Sugar*, a sweet substance composed of carbon, hydrogen and oxygen in the same proportions as in starch" (Glossary, p. 421).

There can be no valid excuse for the publication of such stuff as the foregoing. No publishing house should allow a manuscript to go to press until it has satisfied itself that the book is reasonably free from errors, not only in the principal subject treated, but in those subjects which receive secondary consideration.

WESTERN WEEDS.

A RECENT bulletin from the Idaho Experiment Station is devoted to a discussion of 'Twelve of Idaho's Worst Weeds.' It includes: 1, Wild Oats (*Avena fatua*); 2, Prickly Lettuce (*Lactuca scariola*); 3, Russian Thistle (*Salsola kali tragus*); 4, Tumbling Mustard (*Sisymbrium altissimum*); 5, Cockle (*Saponaria vaccaria*); 6, Canada Thistle (*Carduus arvensis*); 7, Alfalfa Dodder (*Cuscuta* sp.); 8, False Flax (*Camelina sativa*); 9, Sunflower (*Helianthus annuus*); 10, Squirrel-tail Grass (*Hordeum jubatum*); 11, Common Tumble Weed (*Amaranthus albus*), and 12, Horehound (*Marrubium vulgare*). To an Eastern farmer this list will appear quite strange, as with but two or three exceptions the plants, which are among the *worst* weeds in Idaho, are of little importance as weeds in the East.

A similar list made by the writer four years ago for eastern Nebraska is, perhaps, still more striking. These are the weeds of the fields and pastures approximately in the order of their harmfulness, beginning with the worst: 1. Russian Thistle (*Salsola kali tragus*); 2. Sand-bur (*Cenchrus tribuloides*); 3. Milk-weed (*Asclepias syriaca*); 4. Buffalo-bur (*Solanum rostratum*); 5. Sunflower (*Helianthus annuus*); 6. Horseweed (*Erigeron canadensis*); 7. Big Ragweed (*Ambrosia trifida*); 8. Bitterweed (*Ambrosia artemisiæfolia*); 9. Squirrel-tail Grass (*Hordeum jubatum*); 10. Cockle-bur (*Xanthium canadense*); 11. Porcupine Grass (*Stipa spartea*); 12. Purslane (*Portulaca oleracea*). In this list, again, the Eastern farmer will note the absence of most of the weeds which trouble his fields. On the other hand, he has had no experience with 1, 2, 4, 5, 9 and 11, as weeds.

ECONOMIC GRASSES OF THE UNITED STATES.

PROFESSOR SCRIBNER, of the Division of Agrostology, of the United States Department of Agriculture, has just issued a valuable bulletin (No. 14) describing the grasses which are used for forage, ornamental and other purposes. No less than 252 species are included, many of which are introduced from other countries, while many, perhaps most, are natives of this country. Good figures are used to aid in

the identification of many of the species. At the end of the bulletin the most important grasses are brought together under six heads. Here there are given of Hay Grasses, 38 species; Pasture Grasses, 36 species; Lawn Grasses, 15 species; Grasses for Wet Lands, 25 species; Grasses for Embankments, 20 species; Grasses for Holding Shifting Sands, 20 species. The last list is of such general importance that it is reproduced here, with the original locality of each species added:

Agrostis coarctata (sea coast, Newfoundland to New Jersey).

Ammophila arenaria (sandy coasts of the Atlantic and shores of the Great Lakes).

Andropogon hallii (sand hills of Nebraska to Texas).

Calamovilfa longifolia (sandy shores of the Great Lakes, and sandy soil of the Western prairies and plains).

Cynodon dactylon (tropical and warm temperate regions of the globe).

Elymus arenarius (seacoasts of Europe and eastern and western North America).

Elymus mollis (Atlantic and Pacific coasts of North America, and shores of the Great Lakes).

Eragrostis obtusiflora (sandy soils in Arizona).

Imperata arundinacea (tropical and warm temperate regions of both hemispheres).

Muhlenbergia pungens (sand hills of Nebraska to New Mexico and Arizona).

Panicum amarum (sandy seacoasts, from Connecticut to Florida and the Gulf).

Panicum repens (shores of the Gulf of Mexico and in the maritime districts of southern Asia, northern Africa, southern Europe and Australia).

Redfieldia flexuosa (sandy districts of Nebraska, Colorado and Kansas).

Spartina patens (salt marshes from Maine to Florida and along the Gulf coast).

Spinifex hirsutus (sandy coasts of Australia, New Zealand and Tasmania).

Stenotaphrum dimidiatum (tropical and warmer regions of both hemispheres).

Thuarea sarmentosa (sandy coasts of Ceylon and northern Australia).

Uniola paniculata (drifting sands of the seashore, from Virginia to Florida and Texas).

Poa macrantha (sand dunes of northwestern United States).

Zoysia pungens (sandy shores of eastern Asia, Australia and New Zealand).

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CURRENT NOTES ON ANTHROPOLOGY.

INFLUENCE OF SEX ON CRIME.

IN his interesting work 'Juvenile Offenders' (New York, 1897) Mr. W. Douglas Morrison investigates the question why the criminal records of all nations show more male than female criminals. He reaches the conclusion that, after all explanations are allowed, 'the effect of sex itself on crime is permanent.'

An excellent and still more thorough analysis of this important question is presented by Miss Frances Alice Kellor in the *International Journal of Ethics*, October, 1898. She inclines to the opinion that the less criminality of women is largely apparent only, and, to the extent that it really exists, finds its full explanation in sociologic conditions and in biologic facts, not essentially dependent on sex. In other words, that woman's apparent lesser criminalty is not due to inherent moral superiority, but to diminished temptation and opportunity for criminality. Most careful students of ethnology will certainly agree with this.

THE PROGRESS OF ANTHROPOLOGY.

THE President of the Anthropological Section of the British Association this year was Mr. E. W. Brabrook. His address was a review of some of the most striking recent contributions to anthropologic science.