

driodic Acids: By J. H. KASTLE and J. H. BULLOCK. The use of naphthalene and bromine is recommended for making hydrobromic acid, and a mixture of resin, iodine and sand for hydriodic acid.

Turmerol: By C. LORING JACKSON and W. H. WARREN. Turmerol, prepared from the crude product by distilling *in vacuo*, when treated with nitric acids yields paratoluic acid. It is considered to be an alcohol containing a benzene ring with methyl and carbon side chains in the para position.

Bromine derivatives of Resorcine: By C. LORING JACKSON and F. L. DUNLAP. It is not possible to replace two of the bromine atoms in $C_6HBr_2(OC_2H_5)_2$ by hydrogen, unless the hydrogen atom is first replaced by the nitro group. The introduction of a hydroxyl group also facilitates the replacement of the bromine. The ethoxy groups do not weaken the affinity of the bromine as the free tribromoresorcine is easily decomposed.

Trinitrophenylmalonic ester: By C. LORING JACKSON and C. A. SOCH. The method of preparation, reactions and derivatives of picrylmalonic ester, which Dittrich was unable to obtain, are given in this paper.

The artificial production of Asphalt from Petroleum: By C. F. MABERY and J. H. DYERLEY. After removing the oils used for illuminating purposes, the residue is distilled slowly while air is drawn through. Products of different specific gravity are separated and used for various purposes in which asphalt has been used.

On the Action of Phosphorus Pentachloride on Parasulphaminebenzoic Acid: By IRA REMSEN, R. N. HARTMAN and A. M. MUCHENFUSS. The product formed by the action of phosphorus pentachloride on parasulphaminebenzoic acid, when heated, decomposes in two stages, and the final product contains the nitrogen group in combination with the carbon atom instead of with the sulphone group as at first. Some light is thrown on the nature of this change by these investigations.

This number also contains a review of the work on *Chemical Technology* by GROVES and THORP. Vol. II.

J. ELLIOTT GILPIN.

PSYCHE, MARCH.

THE number is mostly occupied by the Presidential address of Clarence M. Weed on the 'Hibernation of Aphides,' summarizing previous knowledge. J. W. Folsom gives an account of the oviposition of *Thanaos juvenalis*, and a supplement is occupied by descriptions of insects, mostly New Mexican, by T. D. A. Cockerell and C. F. Baker.

SOCIETIES AND ACADEMIES.

THE NEW YORK ACADEMY OF SCIENCES.

AT the meeting of the Geological Section of the New York Academy of Sciences, held on February 17, 1896, the following papers were presented:

The first paper was read by Mr. L. McL. Luqueer, entitled 'Notes on Recent Accessions of Interesting Minerals,' with exhibition of specimens. Mr. Luqueer described in detail the minerals that he had recently discovered at the feldspar quarries in the northeastern part of Westchester county. They include uraninite, autunite, uranophane, washingtonite and the common minerals of pegmatite veins. He showed that the veins occurred in close association with an area of augen-gneiss, regarded as intrusive and now being studied by himself and Mr. Heinrich Ries.

The second paper was by J. F. Kemp, entitled 'The Cripple Creek Gold Mining District of Colorado.' The paper was illustrated by about thirty lantern views, most of which were taken by the speaker during the past summer, and by an extensive series of rocks and ores. After a brief historical review the region was described in detail, without, however, introducing anything essential that is not already contained in the Cripple Creek atlas folio of the United States Geological Survey, which was prepared by Messrs. Cross and Penrose.

J. F. KEMP,
Secretary.

THE TORREY BOTANICAL CLUB.

THE regular meeting of the Torrey Botanical Club was held on Tuesday evening, February 11th. Two new members were elected. Mr. A. A. Heller contributed an interesting paper

entitled 'Botanizing in Hawaii.' Lantern views were presented illustrating the geography and topography of the islands and a number of the more interesting plants. About twenty-five per cent. of the species collected are supposed to be undescribed. The endemic character of the flora of the islands, and of each island as contrasted with the others, was dwelt upon.

Dr. Arthur Hollick, through Dr. Britton, submitted a paper on 'New Leguminous Pods from the Yellow Gravel Sandstone at Bridgeton, N. J.' The paper was illustrated by specimens belonging to the genera *Lonchocarpus* and *Mezoneurum*.

H. H. RUSBY,
Recording Secretary.

BOSTON SOCIETY OF NATURAL HISTORY.

A GENERAL meeting was held February 5th; forty-four persons present. Mr. Herbert Lyon Jones spoke of the biological adaptations of desert plants to their surroundings, mentioning first the food of plants, their adaptations for retaining moisture, and the adaptations that go to preserve the moisture. The struggle of plants in tropical regions was noted; also the struggle of desert plants against inorganic nature. The effects of the amount of rain, the variations in leaf surface, and the protections afforded to leaf and to stem were discussed. Where the rainfall is limited to a few inches the leaves are thickened and covered with a coating of wax; in some regions of considerable rainfall the plants suddenly put out delicate leaves. The Australian Acacias show the most numerous adaptations of leaf surface; in some Cacti the leaf surface is entirely wanting, the function being performed by the stems.

The protection afforded to leaf and stem by coatings of wax is always thick in desert plants, and the hairy coatings form a striking adaptation in many plants, and are best shown in the plants of the Mediterranean flora.

The fertilization of desert plants was described in detail, also the distribution of their seeds and fruits; and Mr. Jones closed with remarks explanatory of the fine series of lantern slides illustrating the biological adaptations of desert plants to their surroundings.

SAMUEL HENSHAW,
Secretary.

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA, FEBRUARY 18.

A PAPER entitled as follows was presented for publication: 'Contributions to the Life History of Plants, No. XII.,' by Thomas Meehan: 1. Fecundity of *Heliophytum Indicum*; 2. Origin of the Forms of Flowers; 3. Spines in the Citrus Family; 4. Flowers and Flowering of *Lamium purpureum*; 5. Cleistogamy in *Umbelliferae*; 6. Rhythmic Growth in Plants; 7. Pellucid dots in some species of *Hypericum*; 8. Honey Glands of Flowers; 9. Varying Phyllotaxis in the Elm; 10. Special Features in a Study of *Cornus stolonifera*; 11. Folial Origin of Cauline Structures; 12. Polarity in the leaves of the Compass and other plants; 13. Hybrids in Nature; 14. Origin and Nature of Plant Glands; 15. Nutrition as affecting the Forms of Plants and their Floral Organs; 16. Some Neglected Studies.

Mr. D. S. Holman exhibited a new stage for the microscope devised for the purpose of studying large objects and widely spread preparations. It can be adapted to all instruments provided with square stages and has a motion of two inches each way.

Preparations of minerals containing diatoms in transverse section and other microscopic arrangements of diatoms prepared by Mr. John A. Schulze were exhibited by Mr. F. J. Keeley.

Prof. Edw. D. Cope described specimens of fossil reptilia from the Permian and Trias. They belonged to the order *Cotylosauria* which had been described by him in 1879, and was afterwards characterized by Seeley from African types. The order embraces the families *Elginiidæ*, *Pariasauridæ*, *Diadectidæ* and *Pariotichidæ*, the distribution and characters of which were dwelt on. New genera of *Diadectidæ* were described under the names *Bolbodon* and *Diatomodon*, the teeth of which, as well as of the other genera of the family, were illustrated. The *Platodontia* may have been derived from the *Diadectidæ*. The roof over the temporal fossa and the foramen for the temporal eye were illustrated by specimens. The molar teeth of a species of *Empedias*, the cranium of *Bolbodon tenuitectis* and the lower jaw of *Diatomodon* were exhibited. Another form described under