

under ether, chloroform, nitrous oxide, etc., than has as yet been made. Scientific literature has frequently contained accounts of isolated individual experiences reported most often because of their strangeness. A very large number of descriptions of the ordinary experiences is what is now desired, and to this end blanks have been prepared on which replies to certain simple questions may be written. All persons, and especially hospital surgeons, officers of medical societies, and instructors in medical schools, are respectfully requested to send to the undersigned for as many of these blanks as they care to distribute among persons who have been under an anæsthetic. These will be gratefully sent, and received when filled out.

GEORGE V. N. DEARBORN.

PHYSIOLOGICAL LABORATORY,
HARVARD MEDICAL SCHOOL,
Boston, Mass.

NOTE ON THE PIGMENTS OF THE COCCID
CHIONASPIIS FURFURA, FITCH.

I HAVE just had occasion to examine some specimens of *Chionaspis furfura* sent me by Professor C. A. Keffer, from Tennessee, and in so doing, I found some pigments which may be of interest to others than coccidologists. The female *C. furfura* is brown-pink, but on being placed in liquor potassæ immediately becomes olive-green. The addition of hydrochloric acid at once restores the brown-pink color, showing that the two are simply acid and alkaline phases of one pigment, the living female having an acid reaction. These two colors are strikingly like those seen in the feathers of certain birds, namely the jacana, and the herons of the subgenera *Hydranassa* and *Butorides*; the resemblance being so close as to suggest that the maroon and green colors of these birds are likewise due to two phases of a pigment closely similar to that of the *Chionaspis*. The eggs of *C. furfura*, abundantly present in the material examined, are purplish-pink, with orange portions due to an oil or fat. The oil retains the same brilliant orange color even after boiling in caustic potash, but collects in globules varying from 6 to 60 μ diameter. The purplish-pink pigment is turned Prussian-green by liquor potassæ, but in a short while this again alters to a

clear indigo blue. The latter change is hastened by boiling. On adding hydrochloric acid, the blue becomes reddish-purple. The egg-pigment is therefore similar to that of the mother insect, yet apparently not identical.

T. D. A. COCKERELL.

MESILLA PARK, NEW MEXICO, March 31, 1900.

CURRENT NOTES ON PHYSIOGRAPHY.

PORTO RICO.

R. T. HILL has prepared some 'Notes on the Forest Conditions of Porto Rico' (U. S. Dep't Agric., Forestry Bull. 25), which are prefaced by a description of the island's configuration and by a plate taken from a relief model. The discontinuous axial sierra, steeper to south than north and mostly of volcanic rock, is of rugged aspect, less than 3500 feet in height. The mountains do not rise to a single crest line, but form a sea of conical peaks and beaded ridges, elaborately dissected by numerous ravines and valleys between knife-edged spurs of graded slope. Here habitations find no place in the narrow valley floors but occupy the mountain sides, where heavy rainfall and deep-weathered tenacious soil support a luxurious vegetation; coffee and tobacco are cultivated to the very summits. The sierra is surrounded by a narrow and broken 'collar' of limestone, forming coastal hills of heights up to 500 feet or more, round or dome-like in form, with few ravines; here the surface is sheeted with a thin red argillaceous residual soil. South of the sierra, where the climate is relatively dry, the hills are mostly covered with thorny vegetation or chaparral. Longitudinal valleys sometimes separate the hills from the sierra; transverse valleys divide the hills into groups separated by wide alluvial floors which open into triangular plains (filled estuaries) occupied by sugar plantations on nearing the coast. A great part of the island has been cleared of its original forest. The 3268 square miles of the island contain 26,650 farms, which therefore average 7.4 to the square mile; but much land once cultivated, is now 'ruinate' from long use without fertilizers or from soil-washing.

The 'Water Resources of Porto Rico' are described by H. M. Wilson (Water Supply and