

broad, its 5 segments very low, obtuse, several times shorter than the tube; corolla globose-campanulate, greenish-white or tawny-red, about 4-5 mm. long, its segments triangular, acutish, recurved, revolute; filaments dilated, pubescent, incurved at the apex, longer than the anthers which have short tubes at the apex; drupe globose, 10-12 mm. in diameter, black, shining, sweet.

In deep forests on the mountains, North Carolina to northern Georgia. Spring; matures its fruit in the late summer.

7. GAYLUSSACIA RESINOSA (Ait.) T. & G.

Vaccinium resinosum Ait. Hort. Kew. 2: 12. 1789.

Gaylussacia resinosa T. & G.; Torr. Fl. N. Y. 1: 449. 1843.

A rigid branching shrub 3-12 dm. tall, its twigs and foliage more or less pubescent and sticky with a resinous secretion when young, leaves firm, the blades elliptic, oval or oblong, sometimes broadest above the middle, firm, obtuse or apiculate, entire, ciliate, short petioled; flowers in lateral drooping racemes; pedicels 2-8 mm. long, usually with two narrow bracts; calyx about 2 mm. broad, its 5 segments ovate, obtuse, about as long as the tube; corolla obconic, red or reddish-green, 5-6 mm. long, more or less constricted near the apex, the segments ovate, spreading or recurved, revolute, obtuse; filaments winged, pubescent, shorter than the anthers, each cavity of which is prolonged into a tube; drupes globose, 6-10 mm. in diameter, black or rarely white, sweet.

In rocky woods and hillsides, Newfoundland to the Saskatchewan, south to Georgia. Spring; matures its fruit in the summer.

New Species of Lichens from Southern California as determined by
Dr. W. Nylander and the late Dr. Stizenberger.

By H. E. HASSE.

PARMELIA SUBOLIVACEA Nyl.

Thallus similar to *P. olivacea* (L.) Ach., but differing in size of spores, these being 8-9 by 5 mic., and also in the spermatia.

On rocks, San Gabriel Mountains at 1500 meters alt. July, 1894.

HEPPIA TERRENA Nyl.

Thallus monophyllous, round, olive green, with repand border; apothecia single in the fronds, circular, depressed, dull red; spores colorless, globular, 4 mic. in diameter.

On earth, San Gabriel Mountains, ascending to 1500 meters alt.; also near Santa Monica. August, 1896.

LECANORA PLEISTOSPORA Nyl.

Thallus of separate pruinose rounded squamules light brown; apothecia from urceolate to open, flat, black or pruinose with cinerescence-scales that also cover the thick prominent entire or crenulate margin; spores minute and numerous; paraphyses thick, agglutinated, with round light brown apices; hypothecium colorless. Hym. Gel. J. + faintly yellow.

On clay soil near Soldiers' Home, Los Angeles Co. May, 1896.

LECANORA PLEOISPORIA Nyl.

Thallus of rounded, separate or approximate and angular squamules, dull brown, with whitish furfuraceous scales; apothecia from urceolate to open, flat, disk dull black and the thick margin clothed, as is the thallus, with cinerescence scales; spores about 40 in asci, globular, 10 to 12 mic. in diameter; paraphyses slender, separate, with yellowish apices; hypothecium colorless. Hym. Gel. J. + faintly yellow.

On clay. Original locality San Gabriel Mountains, at 700 meters. August, 1896.

LECANORA REDIUNTA Stiz.

Thallus crustaceous, rimose, areolate, whitish and cinerescence; apothecia black, pruinose, convex; margin entire, prominent or finally nearly disappearing; spores fusiform, blunt-pointed, colorless, 3-septate, slightly convex, 24 by 5-6 mic.; hypothecium brown. Hym. Gel. J. + yellowish.

On various barks. Original locality Santa Catalina Island. January, 1895. Also on the mainland near the coast on *Umbellularia Californica*.

LECANORA OBPALLENS Nyl.

Thallus cartilaginous of small rounded separate rugulose squamules, light chestnut, K—CaCl—; apothecia flat, black, with a prominent crenulate thalline margin; spores minute and numerous.

On earth. Santa Monica Range, near Soldiers' Home, Los Angeles Co. November, 1896.

LECANORA (PLACODIUM) SUBPYRACEELLA Nyl.

Thallus pulverulent, ochroleucous scaly, or evanescent; apo-

thecia small, disk dull orange, with a thin entire raised margin of lighter color; spores 20-24 mic., 1-septate with approximate cells.

On earth near Santa Monica. November, 1896.

LECANORA STENOSPORA Stiz.

Thallus cartilaginous, in the centre of separate rounded or approximate, then angular convex squamules; those at the circumference extending into short broad contiguous rounded lobules, citrine yellow; apothecia small depressed becoming flat and superficial, immarginate; spores minute and numerous; paraphyses short, thick, agglutinated. Similar to *L. chlorophana* Tuck. but this has a thalline margin and long slender separated paraphyses.

On granite, San Gabriel mountains, from 1600 meters upward. July, 1894.

RINODINA ANGELICA Stiz.

Thallus cartilaginous, rimose-areolate, the areoles ample and at the circumference lobed, light grayish flesh colored, upon a black hypothallus; apothecia prominent with a thick entire or crenulate thalline margin, disk brown-black; spores 1-septate, brown, blunt, ellipsoid, 28 by 12 mic.; hypothecium colorless.

Rocks, frequent, ascending to 1800 meters altitude.

LECIDEA DOLODES Nyl.

Thallus of small convex distinct squamules, becoming crenate and imbricated, light chestnut color; apothecia black with a raised somewhat lighter colored margin, flat to slightly convex and immarginate; spores simple, globular, in tubular asci, 7-9 mic. in diameter; paraphyses distinct, capillary.

On bark of *Abies*, San Gabriel mountains, at 2000 meters alt. August, 1896.

LECIDEA SUBPLEBIA Nyl.

Thallus pulverulent, rimose-areolate, dull white, K—CaCl—; apothecia from flat to slightly convex, black, with a thin crenulate black margin, this finally disappearing; spores 10-12 by 6-7 mic., simple; hypothecium colorless; paraphyses articulate with small globular heads.

On earth and calcareous pebbles near Santa Monica. November, 1896.

LECIDEA CATALINARIA Stiz.

Thallus of subglobular entire or crenulate globules, distinct or approximate, pale citrine yellow; apothecia small to middling,

flat, with a thin entire or slightly sinuate margin, becoming convex, conglomerate, and the margin disappearing; spores ovoid, ellipsoid, 14-18 by 9-10 mic., colorless; paraphyses with dark globular agglutinated heads; hypothecium brown.

On sandstone, Catalina Island. January, 1895.

LECIDEA (BIATORA) PHAEOPHORA Stiz.

Thallus pulverulent, dirty white, rimose; apothecia slightly convex, contiguous and angular by approximation, dull flesh color, the thin lighter margin disappearing; spores blunt, ellipsoid, colorless, 16 by 7 mic.; hypothecium colorless.

Rocks, Catalina Island. January, 1895.

LECIDEA SQUALIDA PERSIMILANS Nyl.

Thallus of turgid convolutions forming rugulose cushions, light olive green; apothecia prominent, flat and medium size with a thin margin, becoming large, convex, subglobular, contorted and lobed, the margin disappearing, black with a brownish bloom; spores acicular, thickened at one end, straight or slightly curved, 60 by 5-6 mic., 5-8-septate, colorless.

Earth on rocks. San Gabriel Mountains at 1800 meters alt August, 1896.

ARTHONIA SUBDISPUNCTA Nyl.

Thallus whitish, cinerescens, finely furfuraceous; apothecia roundish or oblong, slightly elevated, black; spores 1-septate, obovate, colorless, 11 by 4 mic.

On the stalks of *Leptosyne gigantea* Kellogg, at Point Dumas near Santa Monica. (This is also a new station for that composite in Los Angeles county, it being heretofore accredited solely to Catalina Island.)

VERRUCARIA PLUMBARIA Stiz.

Thallus of white appressed scales, forming an ashy gray, smooth surface, bordered by a narrow rim of black hypothallus; apothecia black, small, shining, subglobular with a minute orifice at apex; perithecium dimidiate; spores ellipsoid, acute at both ends, 14-16 by 5 mic., each spore-cell constricted, colorless, in tubular spore-sacs; paraphyses capillary, distinct.

On *Quercus agrifolia* and other barks, abundant. Near Santa Monica.

VERRUCARIA INDUCTULA Nyl.

Thallus smooth, rimose-areolate, dull brownish; apothecia elevated, pustular, entirely covered by thalline structure; perithe-

cium dimidiate; spores colorless, muriform 32 by 14 mic; paraphyses capillary; hypothecium colorless, K—, CaCl—, J+; spores yellow.

On shale, Santa Monica Range.

VERRUCARIA SUBMURALIS Nyl.

Thallus rimose-areolate, dull olive green to blackening; apothecia prominent, the bases covered by thallus; perithecium black, exposed at apex, with minute aperture, dimidiate; amphithecium brown; spores obovoid, ellipsoid, colorless, simple, 32 by 14 mic. Hym. Gel. J. + vinous; spores yellow.

On granite, San Gabriel Mountains at 1500 meters alt. July 1884.

VERRUCARIA SQUAMELLA Nyl.

Thallus of small crenate lobulated imbricated dull greenish squamules; apothecia innate, one to several in each squamule, the orifice indicated by a minute dark dot; spores simple, oblong, ellipsoid, colorless, 20–24 by 8 mic.; paraphyses indistinct.

On shaded earth among moss near Santa Monica. February, 1897.

The Botanical Society of America.

The third annual meeting was held at the University of Toronto on Tuesday and Wednesday, August 17 and 18, 1897, under the presidency of Prof. J. M. Coulter.

The address of the retiring president, Prof. C. E. Bessey, on "The Phylogeny and Taxonomy of the Angiosperms," was delivered on Tuesday evening.

The following were elected active members: Bradley Moore Davis, University of Chicago; Sir William Dawson, Montreal; Dr. James Ellis Humphrey, Johns Hopkins University; Prof. Daniel T. MacDougal, University of Minnesota; Prof. Frederick C. Newcombe, University of Michigan; Prof. Henry H. Rusby, New York College of Pharmacy; Prof. Harry L. Russe; University of Wisconsin; Dr. Joseph N. Rose, U. S. National Museum; Mr. Walter T. Swingle, U. S. Department of Agriculture.

The report of the Treasurer showed a balance of \$684.15.