

As my species presents characters widely different from any cynipidous genera known, I propose to erect a new genus for its reception. Like *Biorrhiza niger*, it secretes, when handled, a strong waspy odor.

DRYORRHIZOXENUS n. g.

Form slender; maxillary palpi 6-jointed, labial palpi 4-jointed, the third joint globular; mandibles tridentate, outer two teeth acute, inner one obtuse; areolet closed, radial area open, radial vein regularly curving upwards and thickening at tip.

♀.—Antennæ 14-jointed, filiform, pubescent, first joint stout, attached to the head by a short peduncle, second small, moniliform, third longest, slightly curved and excised, thickest at tip, the following subequal in length, uniform in thickness, terminal joint longer than penultimate, *all the joints from the fourth have a narrow bead-like annulus at tip*, quite noticeable in living, almost obsolete in dry specimens. Abdomen globose, smooth and shining, with a very short peduncle, second segment occupying half the portion of the surface; ovipositor exerted slightly beyond tip of abdomen; ventral valve well developed and projecting considerably, tip of abdomen deeply emarginate; tibiæ somewhat flattened, *armed with two large curved spines* (which are evidently used in digging), *and densely and strongly hirsute*; pleuræ smooth and shining, parapsidal grooves distinct; scutellum of moderate size, longer than wide, rugoso-punctate, depressed and bifoveolate at base, contracted in middle and elevated posteriorly, with the hinder margin round.

♂.—Antennæ 15-jointed, filiform, second joint small, slightly elongated, third longer than in ♀, excised, each joint widening and truncate at tip and without the bead-like annulus. Abdomen long-ovate, attached by a short peduncle, front tibiæ frequently unarmed; otherwise as ♀.

Dryorhizoxenus floridanus n. sp.

Galls.—Clusters of irregular somewhat wedge-shaped, soft, fleshy galls, of the consistency of a potato, surrounding the rootlets of *Quercus virens*, brittle and easily detached, varying in length from one-half to three-fourths of an inch; externally rough, irregular, and of a yellowish color; internally composed of numerous cells one above another, and separated by thick fleshy partitions.

Gall-Fly.—♀.—Length .20 inch. Slender; bright shining brownish-yellow; head finely punctate, eyes, tips of mandibles and ocelli black; antennæ brown, basal joint paler; thorax convex, smooth and shining, two deep longitudinal grooves converging towards scutellum, which is coarsely rugoso-punctate and slightly pubescent, posterior margin dark brown; abdomen smooth and shining; legs brownish-yellow, densely hirsute; wings hyaline, areolet closed, petiolate, radial area open, all the veins dark brown and bordered with brown, the brown border widening at tip of subcostal and radial veins, the blotch not quite reaching outer edge, the anal vein rather straight and thick, broken opposite middle of areolet, the brown border surrounding the broken part and extending along to near the tip of the vein.

♂.—Length .18 inch. Head finely punctate, a slight depression extending from outer ocelli over to eyes; mandibles reddish-brown; palpi paler, a few microscopical hairs on face; antennæ 15-jointed, entirely brown-black; tibiæ and

tarsi less densely hirsute, black and with the tibial spines less strongly developed than in ♀; abdomen elongate-ovate, smooth and shining, second segment occupying half the surface, other segments gradually decreasing in size; otherwise as in ♀.

Described from nearly two hundred bred specimens. The fleshy galls, when dry, are almost unrecognizable from the shrinkage in drying.

The Grape-producing Cynips.

This is a very remarkable *Cynips* producing galls on the under surface of the leaves of *Quercus laurifolia*, which very much resemble small white grapes. They make their appearance early in April, but the flies do not escape until the middle of May.

***Cynips q. racemaria* n. sp.**

Galls.—Spherical, crisp, sour and succulent, attached to the under surface of the leaves, in size and color resembling a small white grape and in consistency not unlike a green gooseberry, with a single reddish kernel in the centre. Diameter .35 to .40 inch

Gall-Fly.—♀.—Length .16 to .17 inch. Black; head rather small, deeply rugoso-punctate, vertex free from pubescence, a tuft of long pubescence back of eyes, face very slightly pubescent; antennæ 14-jointed, black and short, only reaching to tip of scutellum, third joint longest, fourth to eighth subequal, the others equal, terminal slightly longer than penultimate; thorax deeply coarsely and irregularly punctate, almost free from pubescence, requiring a high power to detect any; pleuræ less deeply and coarsely punctate; abdomen large, black and shining, apical half of second segment, and all the other segments excepting at base, finely and densely punctate, a few hairs on second segment, ventral sheath very long; legs reddish-brown, pubescent, coxæ and trochanters black, apical spurs on all legs; wings smoky or brownish-black, apices slightly paler, veins black, areolet closed, radial area open, rather narrow.

Described from numerous bred specimens which hatched in May. No males.

The only other grape-like gall known to me is *Cynips q. sculptus* Bassett, described in Proc. Entom. Soc. Phila. 1863, p. 324. The present species is at once distinguished from it by its smaller size, short 14-jointed antennæ, the difference in shape of joints, color of legs and by the punctuation of abdomen.

Cynips q. sculptus is ♀ .20 inch, antennæ 13-jointed very long, legs honey yellow, abdomen entire surface microscopically punctate. It was found by Mr. Bassett on *Quercus rubra*.

The Spine-bearing Potato Gall.

Another potato gall, varying greatly in size, found on the terminal twigs of *Quercus laurifolia*. It very much resembles the live oak potato gall, *Cynips q. batatoides* nob.; but is easily distinguished from it and all others by the spiny, succulent tubes which issue from the

fleshy part of the gall. These often become quite large, but are generally eaten by birds, or become broken off by the swaying of the branch in the storms and winds. As they mature the galls become irregular, crack and turn black with age, ultimately killing the twig upon which they are situated. At this stage there is a small black ant that gnaws into and makes it the abode of her countless progeny.

Cynips q. clavigera n. sp.

Galls.—Abrupt, irregular, woody, tuber-like swellings, varying greatly in size, from a half to an inch and a quarter long by almost the same in width, attached to the terminal twigs and branches; externally (at the beginning of the season), it is smooth and resembles very much the gall of *Cynips q. batatoides*, but later in the season it becomes rough with deep fissures, through which issue spiny, succulent tubes, which secrete a sticky honey-like substance; internally, at first it is white and soft but becomes brown and hard with age; the tubes are thickened at base in the centre of which the larva resides.

Gall-Fly.—♀.—Length .08 inch. Reddish-brown; head and thorax very finely punctate, face slightly aciculate, converging towards mouth; antennæ long, 15-jointed, first joint as long or almost as long as third, second globular, slightly longer than wide, joints four to eight subequal, from nine to fourteen short, equal, apical smallest; thorax, parapsidal grooves distinct, two longitudinal furrows converging towards scutellum; pleuræ punctate; scutellum finely rugoso-punctate and bifoveolate; abdomen brownish-black on dorsum, reddish-brown beneath, smooth and shining and of a very peculiar shape; viewed from above it is as usual, but viewed sideways it is much deeper than long, with the ovipositor projecting at an angle of forty-five degrees; with a quarter inch glass the segments show that they are finely microscopically punctate; wings hyaline, veins yellowish, areolet closed, the closing vein being faint and nearly hyaline, radial vein and subcostal extend to costal edge but the subcostal does not extend along the margin to radial vein, hence is open; legs reddish-brown.

Described from one specimen taken from gall May 3d.

The Cone Gall.

A black or brownish-black conical gall, issuing from the bud axils of the larger branches of *Quercus laurifolia* and *Q. phellos*, was discovered early in April. They present a very anomalous appearance on the branch.

From numerous specimens gathered early in the season, I have bred many parasites, principally *Figites*, but no *Cynips*, and my description is made from a dried specimen obtained by opening one of the galls.

Cynips q. conifera n. sp.

Galls.—Hard, conical, black or brownish-black galls, less than half an inch or more long, by a quarter of an inch or more in diameter at

base, issuing from the bud axils on the larger branches. Some of the specimens are curved in a regular hook at tip.

Gall-Fly.—♀.—Length .10 inch. Brownish-yellow, finely punctate, pubescent back of eyes, face slightly pubescent; antennæ 15-jointed, third joint longest, four to ten subequal, the following equal, apical joint slightly longer than penultimate; thorax: parapsidal grooves distinct, two longitudinal furrows, pleuræ aciculate; scutellum roundish, elevated posteriorly, rugoso-punctate, bifoveolate with the basal and posterior margins dark brown; abdomen smooth and shining; ovipositor slightly exerted; wings hyaline, veins stout, brownish, areolet almost closed, radial area open; legs brownish-yellow.

The Lemon-like Gall of the Willow Oak.

By this popular name, I designate another gall on *Quercus phellos*, yellow in color and not unlike a lemon in shape.

***Cynips q. citriformis* n. sp.**

Galls.—Globular, smooth, shining yellowish galls, from seven-eighths to an inch in length, by three-eighths to half an inch in diameter, attenuated to a sharp point at tip and with a single kernel in the centre, held in place by a few thin, radiating, spiculate filaments.

Gall-Fly.—♀.—Length .20 inch. Robust, head and thorax brownish-black, deeply and coarsely rugoso-punctate, eyes black, cheeks and face pubescent, palpi brownish; antennæ 13-jointed, reddish-brown, first joint stout as long as fourth, second globular, third longest, fourth to eighth subequal, the following to thirteenth short, equal, thirteenth more than twice the length of penultimate, all joints pubescent; thorax slightly pubescent, parapsidal grooves indistinct, longitudinal furrows obsolete; scutellum almost round, bifoveolate, rugoso-punctate and slightly pubescent, pleuræ rugoso-punctate, pubescent; wings hyaline, veins yellowish, areolet closed, petiolated, radial area open, a dark brown spot extending across the base from tip of subcostal, basal vein thick, along costal for short distance dark brown; abdomen bright shining reddish-brown, microscopically punctate, a few short hairs at base of second segment; legs reddish-brown, pubescent, posterior pair a shade darker.

Described from three bred specimens which issued from galls during the first week in May. No males.

The following additions to the Library of the American Entomological Society were announced:—

Proceedings of the Boston Society of Natural History, vol. xx, pp. 417—448. From the Society.

Canadian Entomologist, vol. xiii, Nos. 5 and 6. From the Society.

Psyche, vol. iii, No. 81, January, 1881. From the Editors.

Le Naturaliste Canadien, vol. xii, No. 140, Mars—Avril 1881. From the Editor.