

**Article XXII.—SOME NORTH AMERICAN CYNIPIDÆ AND  
THEIR GALLS.**

BY WILLIAM BEUTENMÜLLER.

PLATE LI.

The present paper includes the genera *Eumayria* *Belenocnema*, *Solenozopheria*, and *Compsodryoenus*, and forms the sixth installment of my papers on North American Cynipidæ.

***Eumayria* *Ashmead*.**

*Eumayria* ASHMEAD, Trans. Am. Ent. Soc., Vol. XIV, 1887, p. 147; Psyche, Vol. X, 1903, p. 153; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 68.

*Male*. Antennæ long, filiform, 18-jointed; third joint very long, strongly curved, following joints short, gradually subequal, excepting the last joint, which is slightly longer than the preceding. Thoracic and wing characters as in the genus *Dias-trophus*, excepting that there is an indistinct median line of faint punctures on the mesothorax; posterior margin of thorax straight, slightly ridged. Mesopleuræ striate. Abdomen ovate, slightly compressed beneath. The second segment occupies more than two-thirds its whole length. Third segment short, following segments very short.

*Female*. Antennæ 14-jointed and much shorter than in the male; gradually thickened, third joint not especially long, not as long nor as thick as the first and about twice as long as the fourth, other joints short, last joint large and stout, more than twice as long as the preceding, and shows evidences of being composed of three closely connected joints. Abdomen compressed, truncate posteriorly, ventral valve long and projecting. Other characters as in the male.

Type: *Eumayria floridana* Ashmead.

***Eumayria floridana* *Ashmead*.**

*Eumayria floridana* ASHMEAD, Trans. Am. Ent. Soc., Vol. XIV, 1887, p. 147; Psyche, Vol. X, 1903, p. 153; DALLA TORRE, Cat. Hymen., Vol. II, 1893, p. 106; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 68.

*Eumayria multiarticulata* ASHMEAD, Trans. Am. Ent. Soc., Vol. XIV, 1887, p. 133 (gall only).

*Male*. Black, antennæ and legs reddish, coxæ black; tegulæ yellowish brown. Head finely and evenly punctate. Mesothorax smooth, shining, parapsidal grooves distinct, widely separated at the scutellum. Median line fine, consisting of faint punctures. Pleuræ punctate and striate, subopaque. Scutellum rugoso-punctate, foveæ at base deep and separated by a distinct carina. Abdomen smooth, shining.

Wings hyaline, pubescent, veins yellowish brown. Areolet very minute, scarcely evident, cubital cell two thirds closed. Length 2.75–3.25 mm.

*Female.* Similar to the male in color, but the head and pleuræ are sometimes dark rufo-piceous. The median line on the mesothorax more distinct and the antennæ are decidedly thickened at the tip.

*Gall.* On the roots of laurel-leaf oak (*Quercus laurifolia*). Polythalamous. Hard, rounded and composed of many hard larval cells.

*Habitat:* Florida.

The types are in the United States National Museum and one male and one female are in the collection of Mrs. A. T. Slosson.

### **Belenocnema Mayr.**

*Belenocnema* MAYR, Gen. Gall. Cynip., 1881, p. 16; CRESSON, Syn. Hymen. N. Am., pt. i, 1887, pp. 26, 29; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 79; ASHMEAD, Psyche, Vol. X, 1903, p. 150.

*Dryorhizoxenus* ASHMEAD, Trans. Am. Ent. Soc., Vol. IX, 1881, p. xxv; *ibid.*, Vol. XIV, 1887, p. 133.

*Female.* Head somewhat triangular in front. Cheeks with a moderately deep groove to the mandibles. Clypeus transversely quadrate, produced over the mouth. Antennæ 14-jointed. 1st joint very stout; 2d joint small; 3d joint long and slender and considerably longer than the 1st and 2d together; 4th joint shorter than the third, remaining joints gradually decreasing in length. Mesothorax with two deep parapsidal grooves, median groove present or wanting. Scutellum rounded at tip, and with a broad groove at base, limited by an elevated anterior margin, which is connected with the margin that surrounds the scutellum. Abdomen connected with the metathorax by a short peduncle, slightly compressed, second segment covering half of the abdomen, ventral spine hairy. Wings with radial area short, open at the margin, with the veins curved inwardly. Areolet distinct. Anterior tibiæ armed with two strong spines at the tip; posterior femora quite stout; coxæ stout; claws simple.

*Male.* Antennæ 15-jointed, filiform, second joint small, slightly elongated, third longer than in the female, excised, each joint widening and truncate at the tip. Abdomen long-ovate; front tibiæ frequently unarmed; otherwise as the female.

Type: *Belenocnema treatæ* Mayr.

### **Belenocnema treatæ Mayr.**

*Belenocnema treatæ* MAYR, Gen. Gall. Cynip., 1881, p. 16; ASHMEAD, Trans. Am. Ent. Soc., Vol. XIV, 1887, p. 133; DALLA TORRE, Cat. Hymen., Vol. II, 1893, p. 131; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 79.

*Dryorhizoxenus floridanus* ASHMEAD, Trans. Am. Ent. Soc., Vol. IX, July, 1881, p. xxv; *ibid.*, Vol. XII, 1885, p. 291; *ibid.*, Vol. XIV, 1887, p. 133.

*Female.* Bright shining yellowish brown. Head finely punctate, eyes, tips of mandibles and ocelli black. Antennæ dark brown, basal joint yellowish brown. Mesothorax convex, smooth, shining, parapsidal grooves deep and converging toward the scutellum. Median groove fine, distinct, and running from the scutellum to the

anterior portion of the mesothorax. Prothorax and pleuræ punctate, the latter with a large shining area. Metathorax rugose. Scutellum rugose. Abdomen smooth, shining. Wings hyaline, veins brown, radial vein conspicuously bordered with dark brown. Length to 4-5 mm.

*Male.* Smaller than the female, a slight depression extending from the outer ocelli over to the eyes; mandibles reddish brown; palpi paler. Antennæ 15-jointed, wholly brown black. Tibiæ and tarsi less densely hairy, blackish, with the spines on the anterior tibiæ less developed than in the female. Abdomen elongate-ovate, smooth and shining, second segment occupying half the surface, other segments gradually decreasing in size. Length 4.5 mm.

*Gall.* (Plate LI, Fig. 1.) In clusters around the rootlet of live oak (*Quercus virginiana*). Polythalamous. Irregular in shape, somewhat wedge-shaped, soft, fleshy and of the consistency of a potato when fresh. Externally rough, irregular and of a yellowish color. Hard, brown and woody when dry. Internally composed of numerous cells one above another, and separated by thick fleshy partitions. Length from 10 to 20 mm.

*Habitat.* Florida.

The types are in the United States National Museum.

### ***Belenocnema colorado* Gillette.**

*Belenocnema colorado* GILLETTE, Ent. News, Vol. IV, 1893, p. 210; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 79.

*Female.* "General color dark rufous. Head entirely rufous, but rather lighter in color than the other parts of the body. Head: Facial carina rather prominent, labrum elevated at the free end and slightly notched, sculpturing of face consisting of fine impressed lines outlining small, more or less hexagonal areas; mandibles and palpi pale yellowish, ocelli approximate, a tinge of black about the base of each, occiput slightly tinged with black; first joint of antennæ rufous, second tinged with same color, the following joints black, third joint as long as fourth and fifth together. Thorax smooth and shining, parapsidal grooves very distinct, median groove absent; scutellum rugose, without foveæ, but with broad basal groove; pleuræ of pro- and mesothorax smooth and shining, the mesothorax striated on a small part of its surface, immediately beneath the base of the wing; the prothoracic pleuræ are sparsely punctured and near the anterior coxæ are striated. Abdomen dark rufous shading into black at the tip, the second segment bearing a few scattered hairs at the side. Wings hyaline, nervures distinct, but without smoky margins, radial nervure long and but little curved, and the radial cell long and narrow, cubital nervure reaching the first transverse areolet median in size. Legs dark rufous, the femora being lightest in color. Length 5.50 mm. C. P. Gillette."

*Habitat.* Dolores, Colorado. Pecos, New Mexico (T. D. A. Cockerell).

This species was described from a single specimen taken June 18, 1892, by Prof. C. P. Gillette. It is allied to *B. treatæ*, but differs by the absence of the median groove on the mesothorax and infuscations on the radial veins. The gall is not known. It probably occurs on the roots of oak. The type is with Prof. Gillette.

**Solenozopheria Ashmead.**

*Solenozopheria* ASHMEAD, Trans. Am. Ent. Soc., Vol. XIV, 1887, p. 149; Psyche, Vol. X, 1903, p. 212; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 77.

Allied to *Loxaulis* MAYR. Thorax with two nearly parallel, narrow parapsidal grooves, distinct posteriorly, subobsolete anteriorly. Scutellum prominent, cushion-shaped, without foveæ, but a slightly curved depression at the base. Abdomen short, much broader vertically than long, compressed. Ventral valve rather prominent and squared off at a right angle. Second segment occupies half of the whole surface, third segment hardly half as long as the second, fourth and fifth very short, others hidden. Wings with the veins as in *Loxaulis*, but the second longitudinal vein very faint and without a cubitus. Areolet very small.

Type: *Solenozopheria vaccinii* Ashmead.

**Solenozopheria vaccinii Ashmead.**

— Osten Sacken, Ent. Zeit. Stettin, Vol. XII, 1861, p. 416.

*Solenozopheria vaccinii* ASHMEAD, Trans. Am. Ent. Soc., Vol. XIV, 1887, pp. 134, 149; Psyche, Vol. X, 1903, p. 212; DALLA TORRE, Cat. Hymen., Vol. II, 1893, p. 57; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 77; BEUTENMÜLLER, Am. Mus. Journ., Vol. IV, 1904, p. 108, fig. 45; Ins. Galls Vicin. N. Y., 1904, p. 22, fig. 45; FYLES Rep. Ent. Soc. Ont., 1904 (1905), p. 95, fig. 16; JARVIS, Rep. Ent. Soc. Ont., 1906 (1907), p. 72.

*Female.* Slender, pale yellowish brown with the surface microscopically rugose, but not shining. Ocelli and eyes brown. Antennæ 13-jointed, very slightly and gradually thickened toward the tip, with the terminal two thirds infuscated. Thorax with two narrow parapsidal grooves, much more distinct posteriorly than anteriorly. Scutellum cushion-shaped with a curved depression at the base, finely rugoso-punctate. Abdomen with the terminal segments brown. Tibiæ and posterior femora infuscated with a darker shade of brown on their upper edges. Wings hyaline, pubescent, radial cell open, cubitus obsolete, veins brown; the first cross-vein stout, and margined with a faint yellowish cloud. A slight yellowish cloud in the break of the second longitudinal vein, the areolet and base of the radial cell, all enclosed in the same colored cloud. Length 2.25 mm.

*Gall.* (Plate LI, Figs. 2-8.) On the stems of various kinds of blueberry (*Vaccinium pennsylvanicum*, *V. corymbosum*, *V. canadense*, *V. vacillans*), and huckleberry (*Gaylussacia dumosa*, *G. frondosa*, *G. resinosa*). Polythalamous. Green and fleshy when fresh, brown, hard and pithy when old and dry. Irregularly rounded, and usually kidney shaped. Concave at the place of attachment to the stem, turning the same downward. Diameter 12 to 25 mm.

*Habitat.* Canada to Florida and Texas.

The gall is usually very abundant, but the true gall-maker seems to be difficult to obtain. I have had hundreds of the galls, but have not as yet succeeded in rearing the gall-fly. The galls are mostly always infested by a species of guest-fly, which cause the larvæ of the gall-maker to succumb before reaching maturity. The gall-fly is known only by a single female, in the United States National Museum.

**Compsodryoxenus Ashmead.**

*Compsodryoxenus* ASHMEAD, Proc. U. S. Nat. Mus., Vol. XIX, 1896, p. 129; Psyche, Vol. X, 1903, p. 155; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 78.

Head and thorax closely, confluent punctate or slightly rugose. Antennæ filiform, 13 or 14-jointed, third to sixth joints nearly of equal length, those beyond gradually shortening. Parapsidal grooves delicate, but distinct. Scutellum cushion-shaped, separated from the mesonotum by a transverse groove. Pleuræ punctate. Abdomen compressed, ventral valve very prominent, pointed, plow-shaped. Wings with the vein at base of marginal or radial cell arcuate and surrounded by a brown cloud; margins of basal vein clouded and a brown spot before the break in the anal vein. Claws entire.

Type: *C. maculipennis* Ashmead.

**Compsodryoxenus maculipennis Ashmead.**

*Compsodryoxenus maculipennis* ASHMEAD, Proc. U. S. Nat. Mus., Vol. XIX, 1896, p. 129; Psyche, Vol. X, 1903, p. 155; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 78.

*Female.* Head brown, cheeks pale yellowish brown, closely punctate, somewhat rugose. Antennæ 14-jointed, pale yellowish brown, reaching the base of the abdomen. Thorax brown, transversely rugulose or closely and confluent punctate, parapsidal grooves fine and distinct, lateral groove distinct. Scutellum rugose. Abdomen brown, compressed. Legs: middle and posterior tibiæ and femora brown, remaining parts pale yellowish brown. Wings hyaline, veins brown, margins of basal vein a spot before the break of the anal vein, and a large blotch at the base of the marginal cell, including its basal nervure, brown. Length 2.6 to 4 mm.

*Gall.* On twigs of live oak (*Quercus* sp.) Polythalamous. Irregularly rounded or elongate, hard woody swellings, very much like that of *Andricus coxii* Bassett.

*Habitat:* Arizona.

The types are in the United States National Museum.

**Compsodryoxenus brunneus Ashmead.**

*Compsodryoxenus brunneus* ASHMEAD, Proc. U. S. Nat. Mus., Vol. XIX, 1896, p. 129; DALLA TORRE and KIEFFER, Gen. Ins. Hymen. Fam. Cynip., 1902, p. 78.

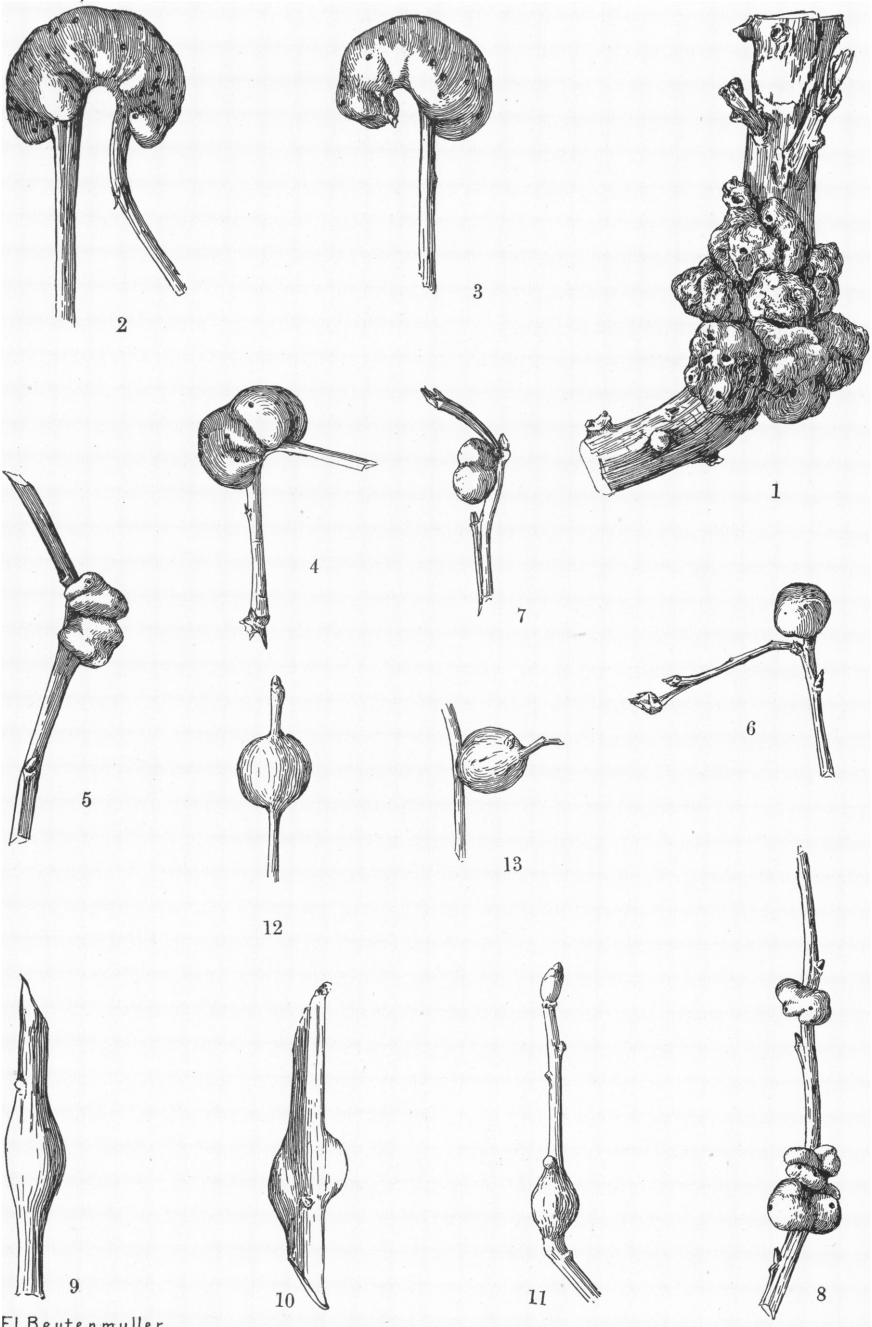
*Female.* Head, antennæ, thorax and legs pale or light brown, the antennæ toward tip dusky, the pleuræ blackish, the abdomen black, polished, the posterior legs dusky or darker than the others. Wings hayaline, marked as in *C. maculipennis*.

*Gall.* (Plate LI, Figs. 9-13.) On the branches of oak (*Quercus chrysolepis*). Polythalamous. Very hard, ovate or elongate woody swellings.

*Habitat.* California.

The types are in the United States National Museum.





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1. *Belenocnema treatæ* Mayer.

2-8. *Solenozopheria vaccinii* Ashm.

9-13. *Compsodryoxenus brunneus* Ashm.

