SYNOPSIS OF SUBFAMILIES AND GENERA OF NORTH AMERICAN TETTIGIDAE.

(Based upon the synoptical table of Prof. Bolivar.)

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1 (2) Antennae filiform, rarely the last two articles before the extremity very little compressed.

2 (1) Face more or less oblique or perpendicular; median ocellus situated in front of the eyes.

3 (16) Anterior femora more or less compressed, carinate above.

4 (5) Frontal costa furculate between the eyes, the branches strongly diverging, forming a frontal scutellum. Subfamily CLADONOTINAE Bol.

5 (4) Pronotum largely compressed, above completely foliaceous, rounded-angulate, posteriorly truncate. Gen. *Chorophyllum* Serv.

6 (8) Antennae with twelve to fourteen articles; pronotum anteriorly truncate, or angulate, or rarely angulate produced, posterior angles of the lateral lobes turned downwards, more or less rounded, not obliquely truncate. Subfamily TETTIGINAE Bol.

7 (13) Vertex advanced in front of the eyes, wider than one of them, in profile united with the frontal costa, generally angulate anteriorly.

8 (6) Antennae with twelve, rarely thirteen articles; pronotum with the dorsal front margin angulate produced, median carina cristiform, more or less arched longitudinally, median lobule of the posterior margin of lateral lobe feebly developed, sub-humeral sinus for the reception of elytra shallow. Gen. *Nomotettix* Morse.

9 (10) Antennae with fourteen or often thirteen articles; pronotum generally not advanced upon the head to the eyes, median lobule of posterior margin of the lateral lobe well developed, the sub-humeral sinus quite deep. Gen. *Tettix* Charp.

10 (9) Vertex a little advanced in front of eyes, equal to, or considerably wider than one of them, in profile united with the frontal costa rounded, or depresso-rounded.

11 (12) Vertex considerably wider than one of the eyes, branches of the frontal costa more or less strongly divergent, antennae consisting of twelve to thirteen articles. Gen. *Neotettix* Hanc.

12 (11) Vertex equal to one of the eyes, branches of frontal costa narrowly forked, straight and evenly divergent. Gen. *Merotettix* Morse.*

* Given on the authority of Prof. A. P. Morse; a recently described genus in Journ. N. Y. Ent. Soc. vol. vii, p. 199, 1899.

13 (7) Vertex not advanced in front of the eyes; median carina of pronotum scarcely elevated.

14 (15) Body usually broad between the shoulders; vertex narrower or equally wide with one of the eyes; second femoral carinae more or less flexuous, or undulate, or lobate, or clypeate, very rarely straight.

Gen. *Paratettix* Bol.

15 (14) Vertex strongly narrowed in front, the front border nearly one-half the breadth of an eye, or less; body usually prolongate; branches of frontal costa sub-parallel, closely approximate. Gen. *Telmatettix* gen. n.

16 (3) Anterior femora above distinctly and broadly sulcate; pronotum in front produced more or less above the head, very frequently hooked, accuminate, or, to a certain extent, obtusely rounded angulate; antennae sixteen to twenty-two articles. Subfamily BATRACHIDINAE Bol.

17 (18) Body strongly tumid; dorsum of the pronotum convex, lightly punctate, lateral carinae in front of the shoulders wanting.

Gen. *Paxilla* Bol.

18 (17) Body narrower; dorsum of the pronotum, between the carina rather concave, conspersed with more or less longitudinal wrinkles, lateral carinae in front of the shoulders present. Gen. *Tettigidea* Scudd.

THE "COCOONS" OR "CASES" OF SOME BURROWING CATERPILLARS.

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From much watching of pupating caterpillars, especially of such sphingids and ceratocampids as go into the ground to pupate, I gradually came to doubt the exactness of the statements, made in many books, that such caterpillars spin "cases" or "cocoons" in the earth inside of which they transform.

Last summer I had a good supply of *Protoparce celeus* and *carolina*, *Philampelus pandorus* and *achemon*, *Ceratomia amyntor*, and *Paonias excoecatus*, with which I experimented.

Into tin boxes I put sifted earth deep enough to give ample room for cases. Into each box I put a larva ready to pupate, and wandering in search of a suitable place. All burrowed very soon, and I left the boxes undisturbed for a few days, that no unusual condition should affect the larvae.

On examining the boxes, which was very carefully done, I found, in every case, no sign of silk, and no "case" which held together at all. I found an oval cavity, smooth, and large enough to hold the pupa easily, allowing free motion of the abdominal segments and